

**A PRELIMINARY INVESTIGATION OF
HISTORICAL GRANULAR RESOURCE USAGE
IN THE NORTHWEST TERRITORIES AND YUKON**



D002348

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Natural Resources and Economic Development
Hull, Quebec**

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EXECUTIVE SUMMARY

This report deals with the research and collection of historical information on granular resource usage in Yukon and the Northwest Territories. The need for this historical information is discussed, and the research procedure is summarized.

Existing systems used for collecting information related to granular resource usage, both manual and computer-based, are examined, and their suitability for dealing with granular resource usage information is discussed.

Historical databases have been prepared for both the Northwest Territories and Yukon, and the data is summarized briefly.

Although limited historical data on granular resource usage was obtained from research at the regional offices, additional sources of information were identified. These additional sources of information should be researched in order to develop a comprehensive historical database. In addition, minor changes can be implemented in the regional offices to simplify the process of transferring information to the historical database.

CONCLUSIONS

A limited amount of information on historical granular resource usage was obtained from research conducted at the regional offices. Complete information from 1985 to 1988 inclusive and 1984 to 1988 inclusive were obtained in Whitehorse and Yellowknife respectively.

Sources for obtaining additional information (archival files, data sharing with EMR, consultation with major users) have been identified.

Collection of granular resource usage information is currently undertaken in both regional offices. However, not all of the necessary data is collected and summarized with existing systems

RECOMMENDATIONS

In order to obtain additional granular resource usage information (both historical and current data) it is recommended that:

- Archival Land Use Permit files available on microfiche be researched and the Granular Resource Usage Databases be updated with any useful information they contain.
- An information sharing agreement be set up with Energy Mines and Resources, Mineral and Metal Statistics Branch, in order to augment information obtained by DIAND regional offices.

In order to improve the ongoing collection of granular resource usage information, it is recommended that:

- The quarry permit ledgers currently in use in both regional offices be modified to include all granular usage information.
- A simplified version of the Land Use / Quarry Permit Database Management System be prepared for the NWT regional office.
- The possibility of recording 'processing' and 'end use' of materials, in addition to a physical description of material types, be discussed with regional personnel.
- The possibility of introducing a classification of standardized terms for recording material type be discussed with regional personnel.

1. INTRODUCTION

In the past, little concern was given to the management of granular resources in Canada's North. This was due mainly to the fact that granular materials occurred on public lands and were usually available locally at nominal cost.

Recently, several factors which potentially affect granular resource management have been introduced. Local shortages, particularly of higher quality granular materials, have resulted in longer transportation distances and increased costs. Current land claims negotiations may result in the transfer of this resource to private landholders, and may also result in a higher basic cost.

Granular resource management is now considered an important part of resource management in Canada's North. Granular resources are defined here as any naturally occurring material disposed of under the Territorial Quarrying Regulations, including any unconsolidated surficial material such as sand and gravel, and consolidated material that is quarried (building stone, rip-rap, crushed rock) and used as a building material. Granular resources are a valuable commodity, essential for the development of Canada's North, and must be managed accordingly.

Management of any resource requires that factors such as supply and usage (or historical demand) be fully understood. Currently, a considerable amount of information regarding the supply of granular resources in many parts of the Northwest Territories and Yukon is held by DIAND. Unfortunately, this is not the case with usage.

Some information regarding granular resource usage is collected at the regional office level through the administration of Territorial Quarrying Regulations. Because the collection of granular resource usage information is secondary to the administration and enforcement of the regulations, little work has been done to organize, analyze, or use this information.

1.1 PROJECT OBJECTIVES

Several primary objectives were identified early in the project. These objectives were to compile historical information on granular resource usage in the Northwest Territories and Yukon, and to investigate the potential of collection of this data on an ongoing basis.

During the project a number of sub-objectives were established. These included researching historical granular resource usage in the Northwest Territories and Yukon, creating a computerized database and transferring the historical information into the database, preparing an overview of applicable filing and data management systems in the regional offices (those systems related to the collection of granular resource usage information), establishing systems in the regional offices so that collection of usage data can be performed as a part of day-to-day office activities, and documenting research activities and systems to facilitate follow-up.

1.2 NEED FOR USAGE DATA

Granular resource usage data is needed for several reasons, including administration, statistics, and planning and management.

Administration of granular resources involves the collection of royalties based on actual usage. Therefore, usage data is required to correctly calculate royalties, and to facilitate "better book-keeping".

Since granular materials are a public resource, their use should be better documented in order that reasonably complete statistics on usage are available, and to provide accountability to the public.

Usage information is also required for resource planning and management at several different levels.

At the local level, it allows Resource Management Officers to keep track of the amount and the type of material remaining in individual sources, and to plan for the development of new sources.

At the regional level, it can be used to determine usage patterns of granular resource users, and as an aid in local and regional resource and land use planning and management.

On a larger scale, a historical usage data is necessary for any granular demand forecasting studies (see section 1.3), as well as for inter-regional or territorial resource planning and management.

1.3 GRANULAR RESOURCE DEMAND FORECASTING

Granular resource demand forecasting is a useful tool in determining future demand of granular resources. It is used periodically to determine if the existing known supply of granular materials will meet the forecast future demand over a specified time period, and consequently, if additional supplies must be proven or if usage must be controlled.

There are several methods (or models) of granular resource demand forecasting. All of the models require historical granular resource usage data.

The direct forecast model generally involves a direct survey of producers and consumers of sand and gravel in the study area. The survey attempts to determine past, present, and future production and usage of aggregate by all producers and consumers of granular resources in the study area. Demand for granular resources is based on this information.

The econometric forecast model is prepared by estimating statistically the historical relationship between granular resource demand and per capita real gross product of the political region containing the study area (ie. province or territory). This relationship is then used to forecast aggregate demand based on a given forecast of the per capita gross product.

In order to prepare an econometric model for an area within a given region (eg. a regional municipality within a province), the following historical data are required: Granular resource usage or production for the region, real gross product (RGP) for the region, population of the region, and per capita real gross product (PCRGP)

of the region. Forecasts of RGP and population are then used to calculate a forecast PCGRP, which is then used to calculate a forecast of granular resource demand. If a forecast PCRGP can be directly obtained from a reliable source, then population and RGP are not required.

The input/output forecast model is considerably more in-depth and time-consuming than the econometric forecast model.

A projection of the gross product of the political region containing the study area is determined by multiplying projections of population and per capita income (comparable to per capita real gross product). The proportion of the RGP going into the construction industry is forecast, giving the value of construction for the political region, and then the distribution is broken down by the various types of construction.

The proportion of the total value of construction for the study area is estimated out that of the political region, and is divided into the different types of construction. Finally, each set of construction figures is multiplied by a calculated input factor, to give the quantities of granular resources required for the region and the study area.

1.4 SCOPE AND ORGANIZATION OF REPORT

This report will describe the research process involved in building a historical granular resource usage database, describe and summarize the data collected, and identify sources of data which can be investigated in the future. In addition, it will describe existing methods of collecting granular resource usage data in the Regional Offices, document changes that were made to these methods, and recommend additional changes to improve the future collection of this important data.

The report is organized three main sections following the introduction. The first section is a description and analysis of existing methods of collecting granular resource usage information, focusing on both manual and computerized systems. The second section describes the research undertaken for creating a usage database, and gives a brief overview of the data obtained. The

third section outlines areas where future work may be undertaken.

2. REGIONAL OFFICES -- DATA MANAGEMENT AND FILING SYSTEMS

2.1 FILING SYSTEMS

Key to the collection of historical data and preparation of improved systems is an understanding of filing systems applicable to the collection of granular resource usage information. These systems are summarized, and their suitability to the collection of this information is discussed.

2.1.1 Territorial Land Use Permit Files

Territorial Land Use Permit files contain all information and documentation related to Land Use Permits. Where a Territorial Quarrying Permit has been issued under the Land Use Permit, they also include associated quarry permits and returns.

In the Whitehorse office, a typical Land Use Permit file contains:

- A copy of the Land Use Permit and operating conditions
- A copy of the Quarrying Permit and operating conditions
- A copy of all related correspondence in chronological order

The permits and conditions are located on the left hand leaf of the file, with the correspondence on the right.

In the Yellowknife office, the content of the files is as follows:

- A land use permit worksheet (a summary of information)
- A copy of the Land Use Permit and operating conditions
- A copy of the Quarrying Permit and operating conditions
- A copy of all related correspondence in chronological order

Unlike the Whitehorse office, copies of the permits and conditions are not separated from the regular correspondence. All information is arranged chronologically on the right hand leaf of the file, while the land use permit worksheet is located on the

left.

2.1.2 Land Use Permit Ledgers

Land Use Permit ledgers are currently in use in both regional offices. These are used to summarize information related to individual Land Use Permits, and to provide a quick reference for information.

In the Whitehorse office, the following information is summarized by the Land Use Permit ledger:

- Date permit application received
- Applicant (or permittee)
- Land Use Permit Number
- RMO district
- Application and land use fees
- Receipt number
- Location of operation and remarks
- Commencement, expiry, and close dates.

In the Yellowknife office, the following information is summarized by the Land Use Permit ledger:

- Land Use Permit Number
- Applicant (or permittee)
- Date permit application received
- Type of operation and land use area (location)
- RMO district
- NTS map reference
- Application and land use fees
- Issue, expiry, and proposed commencement dates.
- Inspection dates
- Remarks, including closed and cancelled dates

2.1.3 Quarry Permit Ledgers

Quarry permit ledgers are currently in use in both regional offices. These are used to summarize data related to the issuance of Territorial quarry permits.

In The Whitehorse office, quarry ledgers summarize the following information:

- Applicant (or Permittee)
- Quarry permit number
- Associated land use permit number
- RMO district
- Application and final royalties and fees
- Receipt number
- Location and remarks
- Amount of material applied for (issued) under the quarrying permit
- Amount of material used
- Issue, commencement, expiry, and close dates.

In The Yellowknife office, quarry ledgers summarize the following information:

- Quarry permit number
- Permittee
- Issue date
- Quantity of material applied for (issued) under the quarrying permit
- Type of material
- Location of quarry operation
- Associated land use permit number.

Ideally, the quarry ledgers should contain complete granular usage information, however, this is not the case. The ledger in use in the Whitehorse office lacks information on the type of material quarried. The ledger in use in Yellowknife lacks information on the amount of material actually used in an operation.

2.2 COMPUTER BASED DATA MANAGEMENT SYSTEMS

Recently, considerably greater emphasis has been placed on using computers as tools for managing information in the regional offices. Several computerized data management systems were examined in both regional offices, and a database management system was prepared for the Whitehorse office.

2.2.1 NLTS / PLIS Database Management System

The Northern Land Transaction System (NLTS) and Permit and Lease Issuance System (PLIS) are currently in place in the Yellowknife regional office. The NLTS is used to document information related to land transactions such as land leases and land use permits. The PLIS is a database system which enables the preparation of Permit and Lease. Both are complex, fully menu-driven database management systems.

At present, both of these systems are in various stages of development, and are not fully functional. They do not contain the information requirements for creating and updating granular resource usage databases, and a considerable amount of externally contracted programming would be required to incorporate these requirements.

2.2.2 Land Use Database Management System

The Land Use / Quarry Permit Database Management System was developed specifically for the Land Use section of DIAND in Whitehorse, as part of this project. The system was designed with three objectives: To automate the storage and retrieval of information related to the issuance of Territorial land use and quarrying permits, to reduce time spent by office staff on various duties through the use of automated database procedures, and to provide an efficient method for creating and updating granular resource usage databases.

The system was tailored to suit the requirements of the Whitehorse office. A simple schematic view of the database relations is included (Figure 1). Solid arrows indicate permanent relationships between program databases, which are created and maintained by the menu-driven program environment. Dashed arrows indicate temporary database relationships used for the creation and update of the granular resource usage database from the program, which are not a part of the operating program environment databases.

A proposed database schematic for the Yellowknife office is included (Figure 2). This may not be required, pending completion

Figure 1. Database Schematic
Yukon Territory

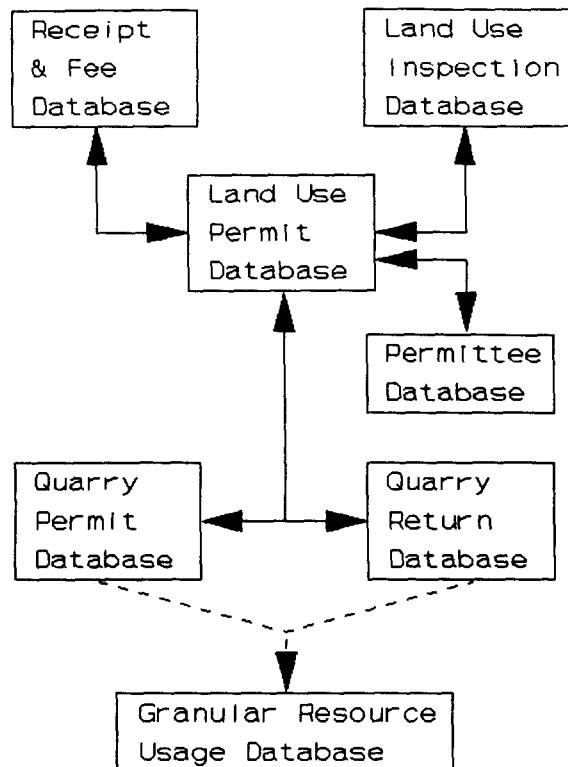
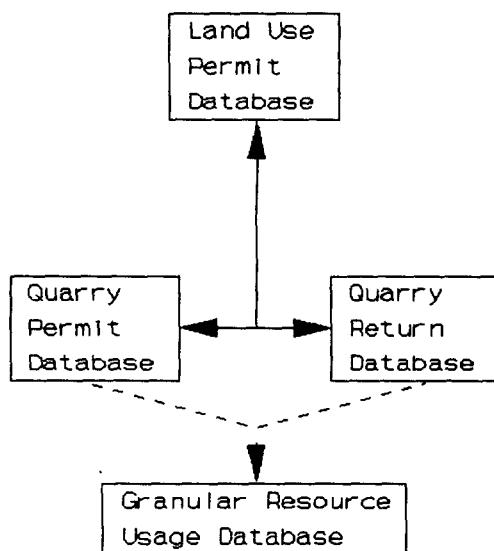


Figure 2. Database Schematic
Northwest Territories (Proposed)



of the NLTS, and whether the NLTS can or will be modified to accommodate the collection of granular resource usage data.

2.2.3 Other Database Systems

Two other database systems were available at the Whitehorse regional office, neither of which were previously, or are currently in use. The first system which dates back to 1984 is a menu driven program using dBaseII. Unfortunately, it was inoperable, and it is unknown if any useful information is contained within it. The second system consists of two databases in dBaseIII+ format. This system contained a small amount of summary data from 1988 quarry and land use permits. It was decided that there was insufficient data to justify using it, as time required to convert it to the format required by the usage databases would have been greater than the time required to enter the data anew.

3. HISTORICAL GRANULAR RESOURCE USAGE DATABASE

One of the project objectives was the creation of a historical granular resource usage database. It was decided that a separate database of usage information based on information contained in existing ledger sheets was appropriate. The databases have been designed to provide for easy transfer of data from manual filing systems to computerized database systems.

The granular resource usage databases contains a minimum of the following information:

- Applicant (or permittee)
- Quarrying permit number
- Associated land use permit number
- Amount of material applied for under the quarrying permit,
- Amount of material used under the permit
- Type of material
- Location of quarry operation
- Issue date of permit.

Copies of the complete databases for Yukon and NWT are located in appendices A and B respectively.

3.1 RESEARCH PROCEDURE

Both the extent of information and its format differed somewhat in between regional offices.

In Whitehorse, a considerable amount of usage data was contained in quarry permit ledgers (as entries under Volume - Used). However, information on material type was not summarized, and had to be researched on a manual file-by-file search basis.

The research procedure in the Whitehorse office involved several steps. First, the quarry permit ledgers were checked, and a list of quarry permits without entries under volume used was prepared. Second, Land use permit files were consulted to determine actual usage from quarry returns and/or quarry fee balance statements. If quarry returns or balance statements were not present in the files, an estimated amount for usage was determined based on other information in the files, or previous usage and reporting patterns of the individual permittee.

The Yellowknife office had complete quarry permit ledger sheets dating back to January 1981. These contained all necessary information except volume used under each quarry permit.

The research procedure in the Yellowknife office involved the following steps: Each Land Use Permit file was consulted, and the volume used was determined from quarry return sheets, quarry fee balance statements or associated correspondence. If this information was not available, an estimated amount for usage was determined, as described above.

3.2 COVERAGE OF DATABASE

At present, the granular resource usage databases include only information from quarrying returns under territorial quarrying regulations. Therefore, granular resource usage from quarries and pits that do not fall the jurisdiction of the Territorial Quarrying Regulations (territorial, municipal and other pits on reserved, leased or private lands) is not included in the database. This does not mean that the information is not useful. It can be reasonably assumed that the proportion of total usage represented

by usage under quarry permits remains constant from year to year, therefore the information contained in the granular resource usage databases will reflect total usage in the Territories. It may be useful to determine the historical relationship between total usage and usage under the Territorial Quarrying regulations.

The Yukon database is complete for the years 1985 through 1988 inclusive. The database continues to the present, but is incomplete since many quarry returns are currently outstanding. The actual amount of usage from the outstanding quarry returns can be updated to the database after it is collected in the regional office.

The NWT database is complete for the years 1984 through 1988 inclusive. The database spans 1981 to the present, but lacks a significant portion of the required information on usage outside the 1984 - 1988 time period. Information on usage after 1988 can be updated when the outstanding quarry returns are received by the regional office.

3.3 QUALITY OF DATA

The key information in the granular resource usage databases (amount used and material type) is of variable quality. All other ancillary data can be considered accurate and of good quality.

The quality of the amount used data is documented in an additional field identified as data_qual (data quality). Data quality "0" indicates that the usage data was obtained directly from quarry returns or quarry fee balance statements, and is of good quality. Data quality "1" indicates that the usage data was obtained indirectly from land use inspection reports and other correspondence. It generally involves an interpretation that either no material, or the full amount requested, was used, and can be considered of fair quality. Data quality "2" indicates that the amount used was a "best guess" based on general past usage and data reporting patterns of the permittee, and can be considered poor quality.

Data quality for material type is extremely difficult to determine. This is mainly the result of personal biases or

preferences in assigning names for different material types. For example 'sand and gravel', 'pit run gravel', and 'gravel and sand' are all terms which may be used to describe similar materials, in this case a naturally occurring gravel with a considerable amount of sand present. Additionally, materials which differ in composition may be assigned the same name.

In the Whitehorse office, there was a tendency to describe material types by the end use of or processing applied to the material, rather than a physical description of the material itself (ie. surfacing aggregate, crushed gravel, rip-rap, general fill).

In the Yellowknife office, simple descriptive terms are used to indicate material type (ie. clay, shale, gravel, sand).

In terms of granular resource usage information, it is better to have physical descriptions of the actual materials used in an operation (ie. coarse sand with gravel, fine sand and silt, clay, coarse gravel), so that it can be related to supply information. This does not mean that end use / processing description are not valuable. An ideal situation would be to have a physical description of the material to be used, and the processing (if applicable) and end use also indicated (ie. coarse sand and gravel, crushed and screened, used as surfacing aggregate)

Finally, a classification of material type, processing, and end use descriptions could be introduced in order to standardize this information.

3.4 DATA PRESENTATION

Figures 3 and 4 are summary plots of granular resource usage by year in Yukon and the Northwest Territories respectively. Dashed lines indicate total amount of material applied for under quarrying permits, and solid lines indicate total amount of material used under quarrying permits (dotted lines are estimates). It is interesting to note that the general trends of amounts applied for and usage are similar, apart from a large anomaly for 1986 in the Yukon (This is the result of a single quarry permit applied for 10,000 m³, but used over 1 million m³). This relationship may be valuable in performing short term demand

Figure 3: Granular resource usage, Yukon

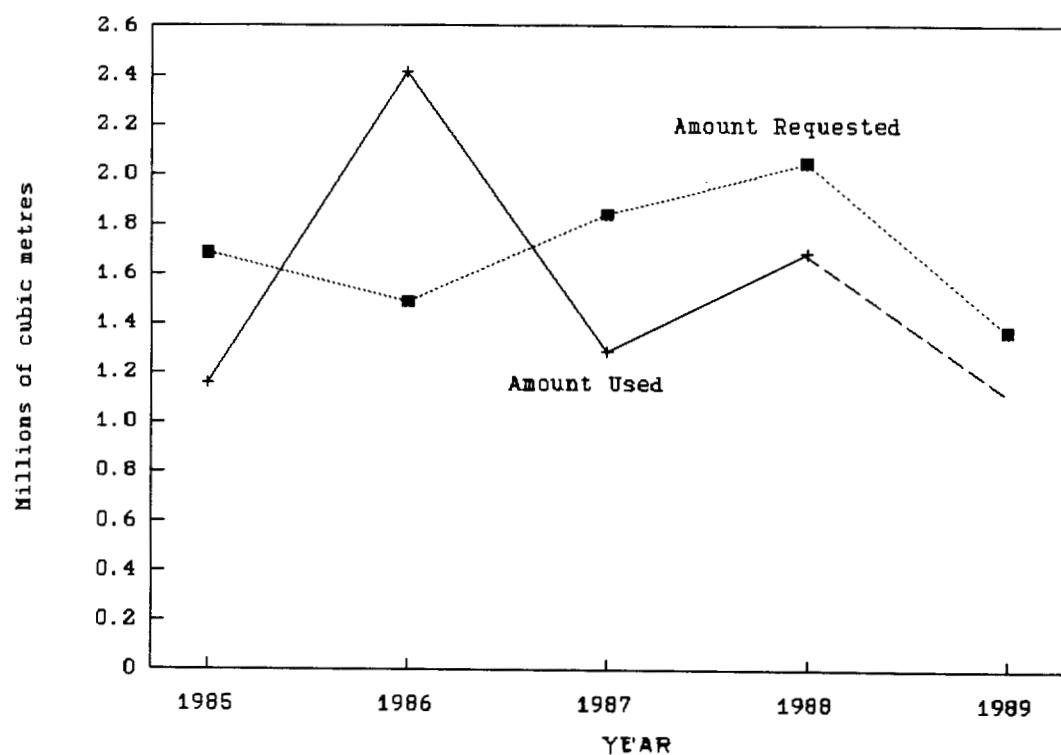
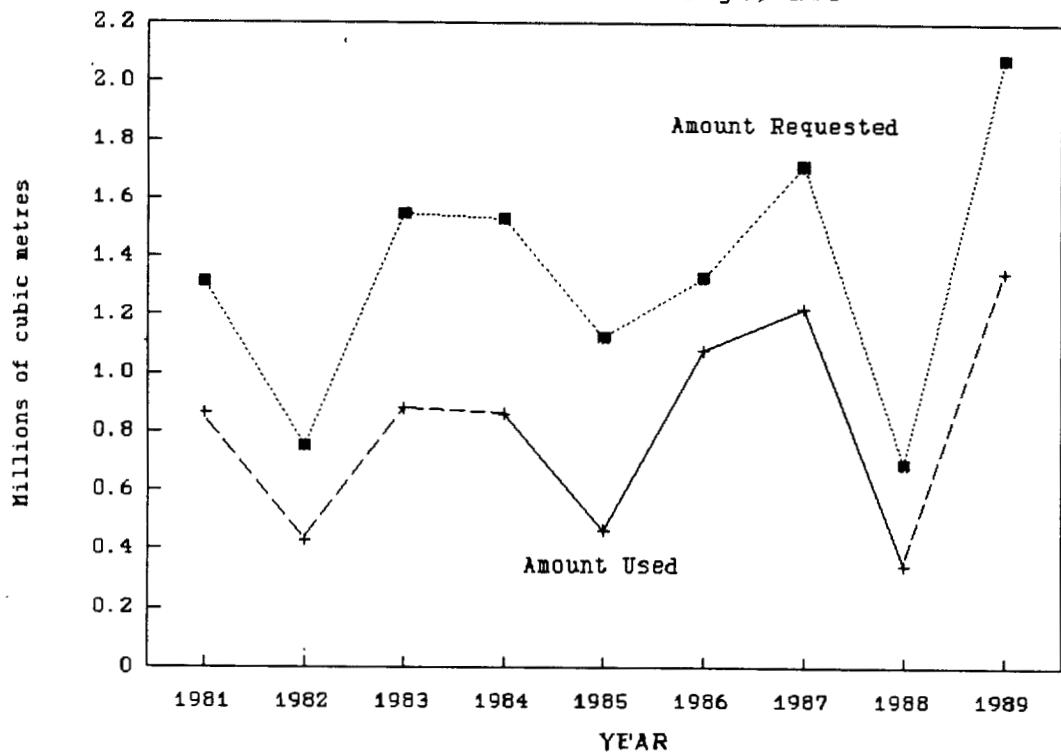


Figure 4: Granular resource usage, NWT



forecasting. For example, actual usage may be forecast based on the amount of material requested under the quarry permit applications received over a given time period. It could also be used as an aid in long term forecasting. If a direct survey of consumers indicates a given demand for granular resources over a specific time period (say 5 years), a forecast "actual usage amount" may be calculated for the same time period.

3.5 SOURCES FOR ADDITIONAL DATA

Several sources which may contain valuable historical usage data were identified.

Land Use files from both regional offices prior to 1982 are stored on microfiche in the regional offices, and in National Archives in Ottawa. A preliminary investigation can be conducted to determine whether these files contain reasonable amounts of data.

Energy, Mines, and Resources, Mineral and Metal Statistics Branch, conducts an annual census of operators of sand and gravel pits, and quarries. The Northwest and Yukon Territories were first included in 1985.

This census includes information from operators of pits under jurisdiction of the Territorial Quarrying Regulations, as well as operators on Territorial, leased and private lands. It is not known, however, if all operators actually respond to this census.

A meeting was held with representatives of the Mineral and Metal Statistics Branch to investigate the feasibility of a data sharing agreement. If an agreement is put in place, the information from EMR can be compared with the granular resource usage databases to determine where coverage overlaps, and where additional coverage occurs.

4. FUTURE WORK

In almost all aspects of this project, items were identified which could lead to future work. Some of these follow directly from the recommendations of the report, but others, although not included in the recommendations, may be worthwhile looking into.

- Continue to research different sources of historical granular resource usage data, in order to augment the data already collected

- With additional historical usage data, determine the feasibility of conducting a demand forecasting study

- Investigate the relationship between amounts applied for under territorial quarrying permits, and actual amounts used. Determine if this relationship may be useful in some aspects of demand forecasting.

- Identify major users with disproportionate numbers of outstanding quarry returns (ie. those who do not report actual usage). Contact these users, outlining the importance of this information, and attempt to solve this problem. Also, determine if any modifications to existing reporting forms are required to ensure better reporting.

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APPENDIX A

GRANULAR RESOURCE USAGE DATABASE LISTING

YUKON TERRITORY

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -			- Used -		Data Quality
					Amount	Vol Volume	Units	Amount	Vol Volume	
85527	YA5Q633	01/10/85	Yukon Territorial Government - Highways	crushed aggregate	5000	5000	M	5000	5000	0
85528	YA5Q634	01/10/85	Yukon Territorial Government - Highways		10000	10000	M	6600	6600	0
85528	YA5Q634	01/10/85	Yukon Territorial Government - Highways		7000	7000	M	6200	6200	0
85529	YA5Q635	01/17/85	Yukon Territorial Government - Highways	crushed aggregate	7000	7000	M	6600	6600	0
85530	YA5Q637	01/21/85	Yukon Territorial Government - Highways	rock	5000	5000	M	4250	4250	0
85531	YA5Q639	01/30/85	Department of Public Works Canada	crushed aggregate	20000	20000	M	20900	20900	0
85532	YA5Q647	02/06/85	Department of Public Works Canada		51000	51000	M	45000	45000	0
85533	YA5Q652	02/18/85	Yukon Territorial Government - Highways	crushed aggregate	31850	31850	M	19615	19615	0
85533	YA5Q652	02/18/85	Yukon Territorial Government - Highways	pit run gravel	130000	130000	M	110528	110528	0
85534	YA5Q655	02/18/85	Yukon Territorial Government - Highways	pit run aggregate	67000	67000	M	40058	40058	0
85535	YA5X659	02/18/85	Department of Public Works Canada	common borrow material	20000	20000	M	18000	18000	0
85536	YA5Q664	02/28/85	Department of Public Works Canada	borrow material & rip rap	61100	61100	M	58000	58000	0
85537	YA4E624	03/04/85	Yukon Territorial Government - Highways	borrow material	52000	52000	M	55105	55105	0
85538	YA5Q652	03/07/85	Yukon Territorial Government - Highways	aggregate	36150	36150	M	0	0	0
85539	YA5E671	03/07/85	Department of Public Works Canada	granular material	140000	140000	M	0	0	0
85540	YA4F502	03/12/85	Canamax Resources	gravel	25000	25000	M	116000	116000	0

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -		Vol Units	- Used -		Data Quality
					Amount	Volume		Amount	Volume	
85541	YA5Q673	03/18/85	Yukon Territorial Government - Highways	crushed aggregate	20000	20000	M	20167	20167	0
85542	YA4Q476	04/16/85	Yukon Territorial Government - Highways		6000	6000	M	3503	3503	0
85543	YA3Q356	04/22/85	OP Contracting		150	150	M	150	150	1
85544	YA5Q697	04/24/85	Yukon Territorial Government - Highways	pit run gravel	7000	7000	M	7108	7108	0
85545	YA5Q698	04/24/85	Yukon Territorial Government - Highways	crushed aggregate	28800	28800	M	25000	25000	0
85545	YA5Q698	04/24/85	Yukon Territorial Government - Highways	crushed aggregate	24500	24500	M	22000	22000	0
85546	YA5Q699	04/25/85	Yukon Territorial Government - Highways	surfacing aggregate	20000	20000	M	20000	20000	2
85547	YA5Q701	06/02/85	Yukon Territorial Government - Highways	common fill	250	250	M	0	0	0
85548	YA5F703	05/03/85	Mount Skukum Gold Mining Corp.		3820	3820	M	0	0	0
85549	YA5F704	05/03/85	Dale Leyten	gravel	350	350	M	350	350	1
85550	YA5Q706	05/06/85	Municipality of Haines Junction	sand & gravel	8000	6000	Y	8000	6000	0
85551	YA5Q708	05/08/85	Yukon Territorial Government - Highways	aggregate	90000	90000	M	90000	90000	2
85552	YA5Q709	05/08/85	Yukon Territorial Government - Highways	granular material	81000	81000	M	3400	3400	0
85553	YA5Q710	05/13/85	Champagne Aishihik Enterprises Limited	sand & gravel	1000	750	Y	1000	750	0
85554	YA4Q542	05/24/85	Bluestone Holdings Limited		2000	1500	Y	2000	1500	2
85555	YA5Q713	05/24/85	Wally Stock	gravel	100	75	Y	150	113	0
85556	YA3Q402	05/27/85	Yukon Territorial Government -		10000	10000	M	10000	10000	1

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -		Vol Amount	- Used -		Data Volume	Quality
					Vol Volume	Units		Vol Amount	Vol Volume		
Highways											
85557	YA4Q476	05/27/85	Yukon Territorial Government - Highways		2600	2600	M	0	0	0	
85558	YA5Q715	05/29/85	Dave Brickner	clay	100	75	Y	100	75	0	
85559	YA5Q718	05/30/85	Yukon Territorial Government - Highways	granular material	10000	10000	M	10000	10000	0	
85560	YA5Q719	06/04/85	Kluane National Park	top soil	230	230	M	230	230	0	
85561	YA5Q720	06/04/85	Yukon Territorial Government - Highways	aggregate	54000	54000	M	53430	53430	0	
85562	YA5X659	06/10/85	Department of Public Works Canada	granular material	25000	25000	M	0	0	0	
85563	YA5Q727	06/11/85	Yukon Territorial Government - Highways	crushed aggregate	30000	30000	M	30159	30159	0	
85564	YA5Y672	06/12/85	Prophet River Forest Products		1200	1200	M	0	0	0	
85565	YA5Q730	06/18/85	Ken roberts	gravel	772	772	M	772	772	0	
85566	YA5Q731	06/18/85	Ken Roberts	top soil	100	75	Y	75	56	0	
85567	YA5Q732	06/18/85	Henry Henkel		100	100	M	0	0	0	
85568	YA5Q733	06/18/85	Yukon Territorial Government - Highways	gravel	3000	3000	M	3000	3000	0	
85569	YA5Q735	06/20/85	Yukon Territorial Government - Highways	pit run gravel and rip rap	23000	23000	M	23000	23000	0	
85570	YA5Q737	06/24/85	Yukon Territorial Government - Highways	pit run gravel and rip rap	1500	1500	M	1500	1500	2	
85571	YA5Q740	06/27/85	Green Valley Trailer Park		190	190	M	190	190	0	
85572	YA5X664	06/27/85	Department of Public Works Canada	stream bed gravel	2000	2000	M	2000	2000	2	
85573	YA5Q744	07/05/85	St. Elias Firearms Association	gravel	500	375	Y	500	375	0	
85574	YA5Q745	07/05/85	Yukon Territorial	gravel	14000	14000	M	14000	14000	2	

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -		Vol. Units	- Used -		Data Quality
					Amount	Volume		Amount	Volume	
				Government - Highways						
85575	YA5Q748	07/08/85	Yukon Territorial Government - Highways	surfacing aggregate	10000	10000	M	10000	10000	0
85576	YA5Q634	07/05/85	Yukon Territorial Government - Highways		19000	19000	M	12800	12800	0
85577	YA5Q753	07/15/85	Yukon Territorial Government - Highways	crushed aggregate	8000	8000	M	6900	6900	0
85577	YA5Q753	07/15/85	Yukon Territorial Government - Highways	crushed aggregate	10000	10000	M	8900	8900	0
85578	YA4Q564	07/19/85	Campground Services Limited		152	152	M	152	152	0
85579	YA3Q353	07/25/85	Carl Scanlon		200	200	M	200	200	1
85580	YA5Q757	07/25/85	Yukon Territorial Government - Highways	granular material	18000	18000	M	18000	18000	1
85581	YA5Q758	08/06/85	Yukon Territorial Government - Highways	aggregate	20000	20000	M	0	0	0
85582	YA5Q768	08/06/85	Yukon Territorial Government - Highways	granular material	4000	4000	M	4000	4000	2
85583	YA4Q534	08/20/85	Mountain View Motor Inn	sand & gravel	200	150	Y	200	150	0
85584	YA5X783	08/29/85	Yukon Territorial Government - Renewable Resources	gravel	200	200	M	200	200	0
85585	YA5X688	09/04/85	Yukon Territorial Government - Highways		665	665	M	665	665	2
85586	YA5Q786	09/09/85	Vic Hotte	sand & gravel	2500	1875	Y	2500	1875	0
85587	YA5Q791	09/26/85	Yukon Territorial Government - Highways	crushed aggregate	10000	10000	M	10000	10000	2
85588	YA5Q792	09/27/85	Champagne Aishihik Enterprises Limited	sand & gravel	2000	1500	Y	2000	1500	0

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -		Vol Units	- Used -		Data Quality
					Amount	Volume		Amount	Volume	
85589	YA5Q799	10/15/85	Department of Public Works Canada	granular material	234000	234000	M	204530	204530	0
85590	YA5Q806		Yukon Territorial Government - Highways	screened aggregate	5000	5000	M	14640	14640	0
85591	YA5Q807	10/24/85	Farwest Holdings Limited	gravel	3000	2250	Y	3000	2250	0
85592	YA5Q811	11/04/85	Yukon Territorial Government - Highways	gravel & aggregate	166000	166000	M	0	0	1
85593	YA5Q823	12/12/85	Destruction Bay Community Club		0	0		0	0	0
86594	YA6Q828	01/15/86	Yukon Territorial Government - Highways	aggregate	10000	10000	M	15393	15393	0
86595	YA6Q828	01/15/86	Yukon Territorial Government - Highways	aggregate	35000	35000	M	10662	10662	0
86596	YA6Q832	01/21/86	Yukon Territorial Government - Highways	borrow material	160260	160260	M	466900	466900	0
86597	YA6Q835	01/22/86	Yukon Territorial Government - Highways	crushed gravel	11000	11000	M	16634	16634	0
86598	YA6Q835	01/22/86	Yukon Territorial Government - Highways	gravel	15900	15900	M	17167	17167	0
86599	YA6Q837	01/22/86	Yukon Territorial Government - Highways	crushed aggregate	30000	30000	M	0	0	0
86600	YA4Q476	02/05/86	Yukon Territorial Government - Highways	gravel	12600	12600	M	0	0	0
86601	YA6Q655	02/24/86	Yukon Territorial Government - Highways	borrow material	10000	10000	M	1133500	1133500	0
86602	YA6Q850	03/05/86	Yukon Territorial Government - Highways	BST aggregate	10000	10000	M	10000	10000	0
86602	YA6Q850	03/05/86	Yukon Territorial Government - Highways	BST aggregate	18000	18000	M	18000	18000	0

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -		Vol Units	- Used -		Data Quality
					Amount	Volume		Amount	Volume	
86603	YA6Q851	03/05/86	Yukon Territorial Government - Highways	pit run gravel	2105	2105	M	4300	4300	0
86604	YA6Q851	03/05/86	Yukon Territorial Government - Highways	pit run gravel	1986	1986	M	2600	2600	0
86605	YA6Q851	03/05/86	Yukon Territorial Government - Highways	pit run gravel	7728	7728	M	6300	6300	0
86606	YA6Q852	03/07/86	John Clunies-Ross	top soil	12000	9180	Y	15	11	0
86607	YA6Q855	03/18/86	Yukon Territorial Government - Highways	crushed aggregate	5000	5000	M	3000	3000	0
86608	YA6Q857	03/24/86	Robert Hassard	gravel	500	375	Y	500	375	0
86609	AA9A999	04/04/86	Far West Holdings	crushed gravel	2000	1500	Y	2000	1500	0
86610	YA6F866	04/07/86	Canamax Rsources	gravel	98095	98095	M	0	0	0
86611	YA6Q868	04/07/86	Yukon Territorial Government - Highways	borrow material	9250	9250	M	9250	9250	2
86612	YA4Q476	04/10/86	Yukon Territorial Government - Highways		2500	2500	M	1900	1900	0
86613	YA4Q501	04/14/86	Yukon Territorial Government - Highways	river gravel	30000	30000	M	0	0	1
86614	YA6Q877	04/23/86	Department of Public Works Canada		5000	5000	M	0	0	0
86614	YA6Q877	04/23/86	Department of Public Works Canada		2500	2500		0	0	0
86615	YA6E878	04/25/86	Yukon Territorial Government - Highways	gravel	45000	45000	M	20000	20000	0
86616	YA6Q883	05/05/86	Yukon Territorial Government - Highways	pit run gravel	6000	6000	M	2000	2000	0
86617	YA6Q889	05/09/86	Yukon Territorial Government - Highways	granular material	190760	190760	M	28000	28000	0
86618	YA6Q891	05/12/86	Yukon Territorial Government -	aggregate	10000	10000	M	10250	10250	0

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -			- Used -		Data	
					Amount	Volume	Units	Amount	Volume	Quality	
Highways											
86619	YA6Q895	05/20/86	Yukon Territorial Government - Highways	granular material	35000	35000	M	40767	40767	0	
86620	YA6Q900	05/22/86	Yukon Territorial Government - Renewable Resources	gravel	7000	7000	M	12400	12400	0	
86621	YA6Q902	05/12/86	Beat Lederberger	granular material	5000	5000	M	5000	5000	0	
86622	YA6Q877	05/27/86	Department of Public Works Canada	granular backfill & rip rap	10500	10500	M	10500	10500	0	
86623	YA6Q905	05/30/86	Yukon Territorial Government - Highways		1000	1000	M	1000	1000	2	
86624	YA6Q907	06/02/86	John Smith	top soil	100	100	M	0	0	0	
86625	YA5Q732	08/06/86	Henry Henkel		100	75	Y	100	75	0	
86626	YA6Q910	06/05/86	Yukon Territorial Government - Highways	surfacing aggregate	10000	10000	M	3000	3000	0	
86627	YA6Q916	06/11/86	Robert Burton	sand & gravel	200	150	Y	84	63	0	
86628	YA6Q920	06/16/86	Yukon Territorial Government - Highways	surfacing aggregate	20000	20000	M	20000	20000	2	
86629	YA6Q921	06/18/86	C & I Construction Limited	gravel	11100	8492	Y	8400	6300	0	
86630	YA6J859	06/20/86	Yukon Territorial Government - Renewable Resources	gravel	5000	5000	M	5500	5500	0	
86631	YA6Q924	06/23/86	Yukon Territorial Government - Highways	granular material	20000	20000	M	20000	20000	0	
86632	YA6Q924	06/23/86	Yukon Territorial Government - Highways	granular material	20000	20000	M	20000	20000	0	
86633	YA6Q926	06/26/86	Yukon Territorial Government - Highways	granular material	10000	10000	M	18000	18000	0	
86634	YA6Q927	06/27/86	Yukon Territorial Government -	surfacing aggregate	15000	15000	M	13000	13000	0	

Quarry Land Use Permit	Permit Date	Permittee	Material Type	- Applied For -		Vol Units	- Used -		Data Volume	Quality
				Amount	Volume		Amount	Volume		
			Highways							
86635	YA6Q930	07/07/86	Yukon Territorial Government - Highways	granular material	2000	2000 M	2000	2000	2	
86636	YA5Q735	07/07/86	Yukon Territorial Government - Highways	granular material	37000	37000 M	20000	20000	0	
86637	YA6E658	07/14/86	Yukon Territorial Government - Highways	pit run gravel	2650	2650 M	0	0	1	
86638	YA6X860	07/14/86	Yukon Territorial Government - Renewable Resources	granular material	10000	10000 M	10000	10000	0	
86639	YA6Q935	07/17/86	Champagne Aishihik Enterprises Limited	sand & gravel	1000	750 Y	750	563	0	
86640	YA6Q936	07/18/86	Ray Chaychowsky		100	100 M	100	100	0	
86641	YA6Q937	07/21/86	Yukon Territorial Government - Highways	pit run gravel	1200	1200 M	1200	1200	2	
86642	YA6E882	07/25/86	Yukon Territorial Government - Highways	gravel	500	500 M	3400	3400	0	
86643	YA6Q942	07/30/86	Yukon Territorial Government - Highways	granular material	56400	56400 M	56400	56400	0	
86644	YA6Q943	07/31/86	Yukon Territorial Government - Highways	gravel	10000	10000 M	10000	10000	0	
86645	YA5Q706	07/31/86	Municipality of Haines Junction	sand & gravel	8000	6000 Y	8000	6000	0	
86646	YA5Q708	08/01/86	Yukon Territorial Government - Highways	gravel	10000	10000 M	3500	3500	0	
86647	YA6Q947	08/08/86	Campground Services Limited		152	152 M	152	152	0	
86648	YA6Q950	08/15/86	Yukon Territorial Government - Highways	granular material	10000	10000 M	10421	10421	0	
86649	YA6E879	08/19/86	Yukon Territorial Government - Highways	gravel	100000	100000 M	80000	80000	0	

Quarry Land Use				Material Type	- Applied For -		Vol Units	- Used -		Data Quality	
Permit	Permit	Date	Permittee		Amount	Volume		Amount	Volume		
	86650	YA6D869	08/22/86	Nadahini Mining Corporation	gravel	10500	8033	Y	9960	7470	0
	86651	YA6Q956	08/29/86	Yukon Territorial Government - Highways	granular material	40000	40000	M	40000	40000	2
	86652	YA5F03?	09/02/86	Mount Skukum Gold Mining Corp.		10000	10000	M	25755	25755	0
	86653	YA6Q957	09/02/86	Kluane National Park	pit run gravel	150	150	M	150	150	0
	86654	YA6Q967	09/15/86	Alaska - Yukon Trading Company	top soil	130	98	Y	130	98	0
	86655	YA6Q966	09/12/86	Ed Griffiths	gravel	500	375	Y	0	0	0
	86656	YA6Q968	09/15/86	Rock Creek Agricultural Farms		300	225	Y	300	225	0
	86657	YA5Q786	09/23/86	Victor Hotte	sand & gravel	1500	1500	M	1500	1500	0
	86658	YA5J787	09/19/86	Yukon Territorial Government - Renewable Resources	gravel	300	300	M	300	300	1
	86659	YA6Q979	09/23/86	Mountain View Motor Inn	sand & gravel	300	225	Y	300	225	0
	86660	YA6X980	10/03/86	Yukon Territorial Government - Highways		10000	10000	M	10000	10000	2
876	86661	YA6X980	10/10/86	Yukon Territorial Government - Highways	sand & gravel	40000	40000	M	49000	49000	0
877	86662	YA5Q806	10/10/86	Yukon Territorial Government - Highways	aggregate	5000	5000	M	1800	1800	0
876	86663	YA6X980	10/15/86	Yukon Territorial Government - Highways	broken rock	10000	10000	M	16000	16000	0
87679	86664	YA6Q891	10/16/86	Yukon Territorial Government - Highways	aggregate	6000	6000	M	6000	6000	0
87681	86665	YA6X980	10/21/86	Yukon Territorial Government - Highways	gravel	10000	10000	M	0	0	0
87682 YA	86666	YA6F981	10/27/86	Yukon Territorial Government - Highways		5000	5000	M	5000	5000	2

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -		Vol Units	- Used -		Data Volume	Quality
					Amount	Volume		Amount	Volume		
Highways											
86635	YA6Q930	07/07/86	Yukon Territorial Government - Highways	granular material	2000	2000	M	2000	2000	2	
86636	YA5Q735	07/07/86	Yukon Territorial Government - Highways	granular material	37000	37000	M	20000	20000	0	
86637	YA6E658	07/14/86	Yukon Territorial Government - Highways	pit run gravel	2650	2650	M	0	0	1	
86638	YA6X860	07/14/86	Yukon Territorial Government - Renewable Resources	granular material	10000	10000	M	10000	10000	0	
86639	YA6Q935	07/17/86	Champagne Aishihik Enterprises Limited	sand & gravel	1000	750	Y	750	563	0	
86640	YA6Q936	07/18/86	Ray Chaychowsky		100	100	M	100	100	0	
86641	YA6Q937	07/21/86	Yukon Territorial Government - Highways	pit run gravel	1200	1200	M	1200	1200	2	
86642	YA6E882	07/25/86	Yukon Territorial Government - Highways	gravel	500	500	M	3400	3400	0	
86643	YA6Q942	07/30/86	Yukon Territorial Government - Highways	granular material	56400	56400	M	56400	56400	0	
86644	YA6Q943	07/31/86	Yukon Territorial Government - Highways	gravel	10000	10000	M	10000	10000	0	
86645	YA5Q706	07/31/86	Municipality of Haines Junction	sand & gravel	8000	6000	Y	8000	6000	0	
86646	YA5Q708	08/01/86	Yukon Territorial Government - Highways	gravel	10000	10000	M	3500	3500	0	
86647	YA6Q947	08/08/86	Campground Services Limited		152	152	M	152	152	0	
86648	YA6Q950	08/15/86	Yukon Territorial Government - Highways	granular material	10000	10000	M	10421	10421	0	
86649	YA6E879	08/19/86	Yukon Territorial Government - Highways	gravel	100000	100000	M	80000	80000	0	

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -		Vol Units	- Used -		Data Quality
					Amount	Volume		Amount	Volume	
86650	YA6D869	08/22/86	Nadahini Mining Corporation	gravel	10500	8033	Y	9960	7470	0
86651	YA6Q956	08/29/86	Yukon Territorial Government - Highways	granular material	40000	40000	M	40000	40000	2
86652	YA5F03?	09/02/86	Mount Skukum Gold Mining Corp.		10000	10000	M	25755	25755	0
86653	YA6Q957	09/02/86	Kluane National Park	pit run gravel	150	150	M	150	150	0
86654	YA6Q967	09/15/86	Alaska - Yukon Trading Company	top soil	130	98	Y	130	98	0
86655	YA6Q966	09/12/86	Ed Griffiths	gravel	500	375	Y	0	0	0
86656	YA6Q968	09/15/86	Rock Creek Agricultural Farms		300	225	Y	300	225	0
86657	YA5Q786	09/23/86	Victor Hotte	sand & gravel	1500	1500	M	1500	1500	0
86658	YA5J787	09/19/86	Yukon Territorial Government - Renewable Resources	gravel	300	300	M	300	300	1
86659	YA6Q979	09/23/86	Mountain View Motor Inn	sand & gravel	300	225	Y	300	225	0
86660	YA6X980	10/03/86	Yukon Territorial Government - Highways		10000	10000	M	10000	10000	2
86661	YA6X980	10/10/86	Yukon Territorial Government - Highways	sand & gravel	40000	40000	M	49000	49000	0
86662	YA5Q806	10/10/86	Yukon Territorial Government - Highways	aggregate	5000	5000	M	1800	1800	0
86663	YA6X980	10/15/86	Yukon Territorial Government - Highways	broken rock	10000	10000	M	16000	16000	0
86664	YA6Q891	10/16/86	Yukon Territorial Government - Highways	aggregate	6000	6000	M	6000	6000	0
86665	YA6X980	10/21/86	Yukon Territorial Government - Highways	gravel	10000	10000	M	0	0	0
86666	YA6F981	10/27/86	Yukon Territorial Government - Highways		5000	5000	M	5000	5000	2

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -			- Used -			Data Quality
					Amount	Volume	Units	Amount	Volume		
86667	YA6X980	11/03/86	Yukon Territorial Government - Highways	gravel	30000	30000	M	30000	30000	0	
86668	YA6Q008	11/05/86	Farwest Holdings	gravel	3000	3000	M	3000	3000	0	
86669	YA6E941	12/09/86	Yukon Territorial Government - Highways	crushed rock	19000	19000	M	35000	35000	0	
86670	YA5Q709	12/10/86	Yukon Territorial Government - Highways	granular material	8600	8600	U	8600	8600	0	
86671	YA6X980	12/15/86	Yukon Territorial Government - Highways	granular material	75000	75000	M	25000	25000	0	
87672	YA6X980	01/22/87	Yukon Territorial Government - Highways		125000	125000	M	0	0	0	
87673	YA7Q032	02/02/87	Yukon Territorial Government - Highways	borrow & granular material	252000	252000	M	252000	252000	2	
87674	YA6X980	02/10/87	Yukon Territorial Government	broken rock	10000	10000	M	4900	4900	0	
87675	YA6X980	02/10/87	Yukon Territorial Government	sand & gravel	100000	100000	M	0	0	0	
87676	YA6X980	02/23/87	Yukon Territorial Government	sand & gravel	150000	150000	M	100000	100000	0	
87677	YA7Q049	02/25/87	Yukon Territorial Government	pit run gravel	20000	20000	M	20000	20000	2	
87678	YA7Q053	03/10/87	Yukon Territorial Government	river gravel	84000	84000	M	84000	84000	2	
87679	YA5W672	03/13/87	Prophet River Forest Products		1200	1200	M	0	0	0	
87680	YA7Q055	03/17/87	Yukon Territorial Government - Highways	pit run gravel	6500	6500	M	14200	14200	0	
87681	YA7Q055	03/17/87	Yukon Territorial Government - Highways	pit run gravel	8400	8400	M	20500	20500	0	
87682	YA7Q055	03/17/87	Yukon Territorial Government - Highways	pit run gravel	4700	4700	M	12300	12300	0	

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -		Vol Units	- Used -		Data Quality
					Amount	Volume		Amount	Volume	
87683	YA6Q924	03/17/87	Yukon Territorial Government - Highways		5000	5000	M	0	0	1
87684	YA7Q032	04/01/87	Yukon Territorial Government - Highways	borrow material	15000	15000	M	15000	15000	2
87685	YA6Q889	04/02/87	Yukon Territorial Government - Highways	crushed aggregate	34000	34000	M	34681	34681	0
87686	YA7Q066	04/02/87	Yukon Territorial Government - Highways	granular material	21000	21000	M	0	0	1
87687	YA6X980	04/06/87	Yukon Territorial Government - Highways	sand & gravel	25000	25000	M	0	0	0
87688	YA6X980	04/06/87	Yukon Territorial Government - Highways		0	0		0	0	0
87689	YA6Q889	04/07/87	Yukon Territorial Government - Highways	granular material	210000	210000	M	52238	52238	0
87690	YA7Q070	04/02/87	Yukon Territorial Government - Highways	gravel	15000	15000	M	15000	15000	2
87691	YA7Q076	04/13/87	Yukon Territorial Government - Highways	granular material	21000	21000	M	0	0	1
87692	YA7Q080	04/23/87	Yukon Territorial Government - Highways	granular material	3000	3000	M	300	300	0
87693	YA7Q083	05/06/87	Yukon Territorial Government - Highways	granular material	87200	87200	M	72000	72000	0
87694	YA5Q811	05/06/87	Yukon Territorial Government - Highways	pit run gravel	80000	80000	M	81000	81000	0
87695	YA7Q085	05/08/87	Yukon Territorial Government - Highways	aggregate	42000	42000	M	25000	25000	0
87696	YA6E879	05/22/87	Yukon Territorial Government - Highways	gravel	50000	50000	M	26000	26000	0

Quarry Land Use Permit	Permit Date	Permittee	Material Type	- Applied For -		Vol Units	- Used -		Data Quality
				Amount	Volume		Amount	Volume	
87683	YA6Q924	03/17/87	Yukon Territorial Government - Highways		5000	5000 M	0	0	1
87684	YA7Q032	04/01/87	Yukon Territorial Government - Highways	borrow material	15000	15000 M	15000	15000	2
87685	YA6Q889	04/02/87	Yukon Territorial Government - Highways	crushed aggregate	34000	34000 M	34681	34681	0
87686	YA7Q066	04/02/87	Yukon Territorial Government - Highways	granular material	21000	21000 M	0	0	1
87687	YA6X980	04/06/87	Yukon Territorial Government - Highways	sand & gravel	25000	25000 M	0	0	0
87688	YA6X980	04/06/87	Yukon Territorial Government - Highways		0	0	0	0	0
87689	YA6Q889	04/07/87	Yukon Territorial Government - Highways	granular material	210000	210000 M	52238	52238	0
87690	YA7Q070	04/02/87	Yukon Territorial Government - Highways	gravel	15000	15000 M	15000	15000	2
87691	YA7Q076	04/13/87	Yukon Territorial Government - Highways	granular material	21000	21000 M	0	0	1
87692	YA7Q080	04/23/87	Yukon Territorial Government - Highways	granular material	3000	3000 M	300	300	0
87693	YA7Q083	05/06/87	Yukon Territorial Government - Highways	granular material	87200	87200 M	72000	72000	0
87694	YA5Q811	05/06/87	Yukon Territorial Government - Highways	pit run gravel	80000	80000 M	81000	81000	0
87695	YA7Q085	05/08/87	Yukon Territorial Government - Highways	aggregate	42000	42000 M	25000	25000	0
87696	YA6E879	05/22/87	Yukon Territorial Government - Highways	gravel	50000	50000 M	26000	26000	0

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -		Vol Units	- Used -		Data Quality
					Amount	Volume		Amount	Volume	
87697	YA7Q095	05/28/87	United Keno Hill Mine	gravel	1000	1000	M	1000	1000	2
87698	YA7Q096	06/01/87	Champagne Aishihik Enterprises Limited	gravel	1000	750	Y	420	315	0
87699	YA7Q101	06/08/87	Yukon Territorial Government - Highways	granular material	10000	10000	M	600	600	0
87700	YA7Q102	06/08/87	Yukon Territorial Government - Highways	granular material	2000	2000	M	0	0	1
87701	YA7Q107	06/18/87	Yukon Territorial Government - Highways	surfacing aggregate	20000	20000	M	16000	16000	0
87702	YA7Q108	06/18/87	Yukon Territorial Government - Highways	pit run sand, gravel	5000	5000	M	0	0	0
87703	YA5Q710	06/19/87	Champagne Aishihik Enterprises Limited	gravel	300	225	Y	300	225	0
87704	YA5J787	06/23/87	Yukon Territorial Government - Renewable Resources	sand & gravel	150	113	Y	150	113	0
87705	YA7Q109	06/23/87	Champagne Aishihik Enterprises Limited	top soil	1000	1000	M	1000	1000	2
87706	YA5S820	07/02/87	Tom Bradley	gravel	1000	1000	M	1000	1000	0
87707	YA7Q117	07/10/87	Ron Newsome	sand & gravel	1000	750	Y	1000	750	0
87708	YA7X113	07/10/87	Yukon Territorial Government - Highways	gravel	5500	5500	M	2000	2000	0
87709	YA7Q118	07/14/87	Bluestone Holdings		2000	2000	M	2000	2000	0
87710	YA7F039	07/16/87	Canamax Rsources	gravel	98000	98000	M	184000	184000	0
87711	YA7E122	07/17/87	Yukon Territorial Government - Highways	granular material	10000	10000	M	0	0	1
87711	YA7E122	07/17/87	Yukon Territorial Government - Highways	granular material	48000	48000	M	48000	48000	2
87712	YA7Q123	07/17/87	Yukon Territorial Government - Renewable Resources		0	0		0	0	0

Quarry Land Use Permit	Permit Date	Permittee	Material Type	- Applied For -		Vol Units	- Used -		Data Quality	
				Amount	Volume		Amount	Volume		
87713	YA67Q85	07/22/87	Robert Hassard	gravel	500	500	M	500	500	0
87714	YA7Q128	07/24/87	Yukon Territorial Government - Highways	granular material	20000	20000	M	20000	20000	0
87715	YA7Q129	07/24/87	Yukon Territorial Government - Highways	granular material	14000	14000	M	0	0	2
87716	YA7Q135	07/29/87	Yukon Territorial Government - Highways	pit run & crush	10000	10000	M	40000	40000	0
87717	YA7Q137	08/04/87	Municipality of Haines Junction	sand & gravel	8000	8000	M	8000	8000	2
87718	YA7Q138	08/05/87	Tana Contracting	sand & gravel	300	225	Y	170	128	0
87719	YA7Q032	08/06/87	Yukon Territorial Government - Highways	pit run gravel	1000	1000	M	0	0	2
87720	YA6Q936	08/07/87	Ray Chaykowsky		100	100	M	100	100	0
87721	YA7Q144	08/11/87	C & I Construction Limited	gravel	600	600	M	0	0	0
87722	YA7X113	08/20/87	Yukon Territorial Government - Highways	rock	5500	5500	M	6500	6500	0
87723	YA7X113	08/20/87	Yukon Territorial Government - Highways	pit run gravel	2500	2500	M	2000	2000	0
87724	YA7Q153	09/03/87	Yukon Territorial Government - Highways	gravel	27000	27000	M	13500	13500	0
87725	YA7Q155	09/03/87	Yukon Territorial Government - Highways	pit run gravel	2000	2000	M	0	0	0
87726	YA7Q156	09/08/87	Yukon Territorial Government - Highways	gravel	25000	25000	M	0	0	1
87727	YA7Q157	09/08/87	Yukon Territorial Government - Highways	gravel	27500	27500	M	18000	18000	0
87728	YA7E139	09/08/87	Yukon Territorial Government - Highways	sand & gravel	20000	20000	M	20000	20000	2

Quarry Land Use Permit	Permit Date	Permittee	Material Type	- Applied For -		Vol Units	- Used -		Data Quality	
				Amount	Volume		Amount	Volume		
87729	YA7Q159	09/10/87	Trade North Contracting	gravel	2500	2500	M	2500	2500	0
87730	YA7Q160	09/16/87	Allen Lueck		1000	1000	M	1000	1000	2
87731	YA7Q101	09/22/87	Yukon Territorial Government - Highways	granular material	17000	17000	M	17000	17000	0
87732	YA6F981	09/22/87	Yukon Territorial Government - Highways		3000	3000	M	0	0	1
87733	YA5Q786	09/28/87	Victor Hotte	gravel	1500	1500	M	1500	1500	0
87734	YA7Q163	09/23/87	Victor Hotte & Sons	gravel	1000	1000	M	1000	1000	0
87735	YA7Q162	09/23/87	Yukon Territorial Government - Highways	granular material	6000	6000	M	6000	6000	0
87736	YA7Q164	09/22/87	Carl Scanlon	top soil	100	100	M	100	100	2
87737	YA7Q167	09/25/87	Yukon Territorial Government - Highways	gravel	23500	23500	M	310	310	0
87738	YA7Q168	09/29/87	Beat Lederberger	aggregate	200	200	M	200	200	0
87739	YA7Q169	09/30/87	Yukon Territorial Government - Highways	gravel	5000	5000	M	4000	4000	0
87740	YA7Q170	09/30/87	Municipality of Haines Junction	sand & gravel	3400	2550	Y	3400	2550	0
87741	YA6Q979	10/02/87	Mountain View Motor Inn	sand & gravel	200	150	Y	200	150	0
87742	YA7Q173	10/02/87	Yukon Territorial Government - Highways	gravel	8000	8000	M	8000	8000	2
87743	YA7S133	10/14/87	Yukon Territorial Government	granular material	250	250	M	400	400	0
87744	YA5Q792	10/19/87	Champagne Aishihik Enterprises Limited	sand & gravel	2800	2800	M	2800	2800	0
87745	YA7Q182	10/19/87	Champagne Aishihik Enterprises Limited	gravel	1000	750	Y	1000	750	0
87746	YA7X176	10/20/87	Yukon Territorial Government - Highways	granular material	1000	1000	M	1000	1000	2

Quarry Land Use Permit	Permit Date	Permittee	Material Type	- Applied For -			- Used -		Data Quality	
				Amount	Volume	Units	Amount	Volume		
87747	YA7Q186	10/29/87	Champagne Aishihik Enterprises Limited	gravel	1000	750	Y	1000	750	0
87748	YA7E086	11/17/87	Yukon Territorial Government - Highways	river gravel	1000	1000	M	1000	1000	0
87749	YA7Q197	12/02/87	Yukon Territorial Government - Highways	rip rap	22000	22000	M	22000	22000	0
88750	YA7Q156	01/19/88	Yukon Territorial Government	gravel	10000	10000	M	10000	10000	2
88751	YA8Q223	02/16/88	Mike Crawshay	sand & gravel	100	75	Y	100	75	0
88752	YA7X043	02/23/88	Department of Public Works Canada		22000	22000	M	22000	22000	0
88753	YA6X980	03/02/88	Yukon Territorial Government - Highways	white channel (river) gravel	100000	100000	M	100000	100000	0
88754	YA7F175	03/11/88	C & I Construction Limited	rock	750	750	M	200	200	0
88755	YA8Q242	03/18/88	Yukon Territorial Government	crushed aggregate	16000	16000	M	16000	16000	2
88756	YA8Q243	03/18/88	Yukon Territorial Government		34000	34000	M	23000	23000	0
88757	YA8E220	03/22/88	Department of Public Works Canada	borrow & granular material	50000	50000	M	50000	50000	2
88758	YA8E230	03/22/88	Yukon Territorial Government		10000	10000	M	184300	184300	0
88759	YA8Q247	03/22/88	Yukon Territorial Government	granular material	37600	37600	M	37600	37600	1
88760	YA7Q173	03/22/88	Yukon Territorial Government	granular material	11500	11500	M	0	0	1
88761	YA8X253	04/05/88	Hyland Forest Products		2000	2000	M	0	0	0
88762	YA8E257	04/12/88	Yukon Territorial Government - Highways	granular material	130000	130000	M	130000	130000	2
88763	YA8Q242	04/12/88	Yukon Territorial Government - Highways		3000	3000	M	0	0	1

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -		Vol Units	- Used -		Data Quality
					Amount	Volume		Amount	Volume	
88763	YA8Q642	04/12/88	Yukon Territorial Government - Highways	gravel	3500	0		0	0	1
88764	YA8Q243	04/13/88	Yukon Territorial Government - Highways		3800	3800	M	87	87	0
88765	YA8Q260	04/13/88	Yukon Territorial Government - Highways	pit run gravel	16000	16000	M	0	0	0
88765	YA8Q260	04/13/88	Yukon Territorial Government - Highways	pit run gravel	16000	16000	M	16000	16000	0
88766	YA8Q261	04/13/88	Yukon Territorial Government - Highways	pit run gravel	5000	5000	M	4400	4400	0
88767	YA8Q262	04/13/88	Yukon Territorial Government - Highways	surfacing aggregate	16000	16000	M	16000	16000	0
88768	YA8Q264	04/14/88	Farwest Holdings	aggregate	2000	2000	M	2000	2000	0
88769	YA8Q265	04/14/88	Kluane RV Kampgrounds	gravel	1000	1000	M	200	200	0
88770	YA7Q032	04/19/88	Yukon Territorial Government - Highways	borrow material	30000	30000	M	0	0	1
88771	YA8E268	04/20/88	Yukon Territorial Government - Highways	rip rap	400	400	M	400	400	0
88772	YA7Q153	04/21/88	Yukon Territorial Government - Highways	borrow material	15000	15000	M	20000	20000	0
88773	YA6Q924	04/21/88	Yukon Territorial Government - Highways	granular material	45000	45000	M	45000	45000	0
88774	YA8Q269	04/21/88	Yukon Territorial Government - Highways	borrow material	50000	50000	M	50000	50000	0
88775	YA6Q966	04/22/88	Ed Griffiths	peat moss	500	375	Y	600	450	0
88776	YA8Q276	04/28/88	Gammie Trucking	gravel	3000	2250	Y	1200	900	0
88777	YA5Q732	04/29/88	Henry Henkel		100	75	Y	100	75	0
88778	YA8Q280	05/03/88	Yukon Territorial	pit run &	11800	11800	M	11800	11800	0

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -		Vol Units	- Used -		Data Quality
					Amount	Volume		Amount	Volume	
			Government - Highways	crushed aggregate						
88779	YA8G281	05/03/88	Yukon Territorial Government - Highways	pit run gravel	19000	19000	M	19000	19000	2
88780	YA8Q243	05/03/88	Yukon Territorial Government - Highways		4000	4000	M	2750	2750	0
88781	YA7Q101	05/03/88	Yukon Territorial Government - Highways	granular material	12000	12000	M	0	0	1
88782	YA8Q284	05/06/88	Yukon Territorial Government - Highways	gravel	5000	5000	M	0	0	0
88783	YA8Q286	05/10/88	Yukon Territorial Government - Highways	surfacing aggregate	50000	50000	M	3236	3236	0
88784	YA8F288	05/10/88	MW Orbanski Ltd.	granular material	1400	1050	Y	1400	1050	2
88785	YA8X253	05/10/88	Hyland Forest Products		1000	1000	M	100	100	0
88786	YA8Q297	05/26/88	Yukon Territorial Government - Highways	pit run gravel	10000	10000	M	10000	10000	2
88787	YA5F771	05/27/88	Dick Ewing		0	0		0	0	0
88788	YA8Q298	05/27/88	Mike Crawshay	sand & gravel	100	75	Y	100	75	1
88789	YA8F282	05/27/88	Fortymile Placers	rock	9000	9000	M	9000	9000	0
88790	YA7Q153	05/31/88	Yukon Territorial Government - Highways	granular material	5000	5000	M	5000	5000	0
88791	YA6Q936	06/02/88	Ray Chaykowsky		100	100	M	100	100	0
88792	YA8Q300	06/06/88	Farwest Holdings	sand	2000	2000	M	0	0	0
88793	YA8Q303	06/10/88	Yukon Territorial Government - Highways	granular material	27300	27300	M	27300	27300	0
88794	YA8Q242	06/14/88	Yukon Territorial Government - Highways	pit run gravel	50000	50000	M	50000	50000	2
88795	YA8Q242	06/14/88	Yukon Territorial	granular	2000	2000	M	0	0	2

Quarry Land Use Permit	Permit Date	Permittee	Material Type	- Applied For -		Vol Units	- Used -		Data Quality	
				Amount	Volume		Amount	Volume		
			Government - Highways		material					
88796	YA8Q243	06/14/88	Yukon Territorial Government - Highways	355000	355000	M	277000	277000	0	
88797	YA8Q243	06/14/88	Yukon Territorial Government - Highways	2000	2000	M	1000	1000	0	
88798	YA8F233	06/14/88	Berdoe Enterprises	granular material	2500	2500	M	0	0	2
88799	YA8Q306	06/16/88	Ewing Transport	top soil	1000	750	Y	450	338	0
88800	YA7I072	06/15/88	Rancheria Hotel Limited	granular material	4980	4980	M	0	0	0
88801	YA7Q109	06/17/88	Champagne Aishihik Enterprises Limited	top soil	1000	1000	M	1000	1000	0
88802	YA8E307	06/17/88	Department of Public Works Canada	granular material	100000	100000	M	35000	35000	0
88803	YA8E309	06/20/88	Yukon Territorial Government - Highways	pit run gravel	54000	54000	M	54000	54000	0
88804	YA8Q310	06/21/88	Sidco Exploration Limited		125	125	M	125	125	2
88805	YA8W279	06/21/88	Dachin Dageh Enterprises Limited		2000	2000	M	2000	2000	0
88806	YA6Q857	06/22/88	Robert hassard	gravel	500	375	Y	500	375	0
88807	YA8F315	06/28/88	Champagne Aishihik Enterprises Limited	granular material	1000	1000	M	1000	1000	1
88808	YA8Q316	06/29/88	Big Foot Construction	sand & gravel	100	75	Y	100	75	1
88809	YA8E317	06/29/88	Yukon Territorial Government - Highways	pit run gravel	26000	26000	M	26000	26000	2
88810	YA8Q318	07/04/88	Yukon Territorial Government - Highways	sand & gravel	15000	15000	M	15000	15000	0
88811	YA7F039	07/04/88	Canamax Rsources	granular material	50000	50000	M	0	0	1
88812	YA8Q319	07/04/88	Teslin Lake Hotel & Motors	gravel	2000	1500	Y	2000	1500	0

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -		Vol Units	- Used -		Data Quality
					Amount	Volume		Amount	Volume	
88813	YA8Q243	07/06/88	Yukon Territorial Government - Highways		10000	10000	M	0	0	0
88814	YA8Q321	07/06/88	Teslin Indian Band	sand & gravel	1000	750	Y	1000	750	0
88815	YA8Q322	07/07/88	Yukon Outfitting		0	0		0	0	0
88816	YA8Q323	07/08/88	Deadman Creek Enterprises	sand & gravel	1000	750	Y	1000	750	0
88817	YA7E122	07/11/88	Yukon Territorial Government - Highways	sand	300	300	M	300	300	2
88818	YA8Q260	07/11/88	Yukon Territorial Government - Highways	granular material	200	200	M	200	200	2
88819	YA8X328	07/18/88	Terry Kabanak		500	500	M	500	500	0
88820	YA5F771	07/22/88	Joris Brinkerhoff	granular material	1500	1500	M	0	0	0
88821	YA8Q331	07/25/88	Yukon Youth Centre	peat moss	1000	1000	M	0	0	1
88822	YA8Q332	07/27/88	Yukon Territorial Government - Highways		0	0		0	0	0
88823	YA8Q243	07/27/88	Yukon Territorial Government - Highways		10000	10000	M	10000	10000	2
88824	YA8E333	07/28/88	Yukon Territorial Government - Highways	pit run gravel	113500	113500	M	144962	144962	0
88825	YA8Q303	08/01/88	Yukon Territorial Government - Highways	granular material	3800	3800	M	3800	3800	2
88826	YA8Q334	08/02/88	Yukon Territorial Government - Highways	pit run gravel	1800	1800	M	1800	1800	2
88827	YA8Q337	08/08/88	Yukon Territorial Government - Highways		0	0		0	0	0
88828	YA8E220	08/16/88	Department of Public Works Canada	granular material	125000	125000	M	0	0	1
88829	YA8Q347	08/22/88	Yukon Territorial Government - Highways	granular material	25000	25000	M	25000	25000	2

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -		Vol Units	- Used -		Data Quality
					Amount	Volume		Amount	Volume	
88830	YA8Q348	08/23/88	Teslin Indian Band	gravel	650	488	Y	650	488	0
88831	YA8Q350	08/24/88	Cascade Industries Limited	granular material	1000	1000	M	1000	1000	2
88832	YA6F896	08/24/88	Mount Skukum Gold Mining Corp.		16700	16700	M	16700	16700	2
88833	YA8Q337	08/29/88	Yukon Territorial Government - Highways	granular material	9000	9000	M	0	0	1
88834	YA8Q363	09/08/88	Yukon Territorial Government - Highways	aggregate	15000	15000	M	15000	15000	2
88835	YA8Q364	09/08/88	Yukon Territorial Government - Highways	aggregate	10000	10000	M	10000	10000	2
88836	YA8X259	09/09/88	Northwestel Inc.	granular material	450	450	M	450	450	1
88837	YA8Q367	09/14/88	The Yukon Electrical Company Limited		3180	3180	M	3180	3180	2
88838	YA8Q363	09/14/88	Yukon Territorial Government - Highways	pit run gravel	10000	10000	M	10000	10000	2
88839	YA8Q368	09/15/88	Victor Hotte	gravel	1500	1125	Y	500	375	0
88840	YA7Q163	09/19/88	Victor Hotte	gravel	1700	1275	Y	200	150	0
88841	YA8Q371	09/20/88	Yukon Territorial Government - Highways	granular material	30000	30000	M	30000	30000	0
88842	YA8Q367	09/20/88	The Yukon Electrical Company Limited		5000	5000	M	5000	5000	0
88842	YA8Q367	09/20/88	The Yukon Electrical Company Limited		1400	0		1400	0	0
88843	YA9Q504	09/20/88	Yukon Territorial Government - Highways	granular material	46000	46000	M	43903	43903	0
88844	YA8Q372	09/21/88	The Yukon Electrical Company Limited	clay	300	300	M	150	150	0
88845	YA8Q373	09/21/88	The Yukon Electrical Company Limited		200	200	M	100	100	0
88846	YA8Q262	09/22/88	Yukon Territorial Government -	surfacing aggregate	7000	7000	M	4800	4800	0

Quarry Land Use Permit	Permit Date	Permittee	Material Type	- Applied For -		Vol Units	- Used -		Data	
				Amount	Volume		Amount	Volume	Quality	
Highways										
88847	YA6Q979	09/27/88	Mountain View Motor Inn	gravel	200	150	Y	100	75	0
88848	YA7Q144	09/28/88	C & I Construction Limited	gravel	600	600	M	0	0	1
88849	YA8Q377	09/28/88	C & I Construction Limited	granular material	1000	1000	M	0	0	0
88850	YA8Q381	10/06/88	Yukon Territorial Government - Highways	granular material	10000	10000	M	10000	10000	0
88851	YA8Q382	10/06/88	Yukon Territorial Government - Highways	granular material	9000	9000	M	9000	9000	2
88852	YA8J209	10/05/88	Yukon Territorial Government - Renewable Resources		1000	1000	M	0	0	1
88853	YA8Q384	10/11/88	Rod Watson	gravel	200	200	M	200	200	0
88854	YA8Q386	10/13/88	Kluane RV Kampgrounds	sand & gravel	250	188	Y	250	188	1
88855	YA8Q223	10/14/88	Mike Crawshay	gravel	200	150	Y	200	150	1
88856	YA7W165	10/14/88	Hyland Forest Products	gravel	500	500	M	500	500	1
88857	YA8Q388	10/18/88	Halferdahl and Associates	granular material	220	220	M	220	220	0
88858	YA8E389	10/19/88	Yukon Territorial Government - Highways	granular material	10000	10000	M	10000	10000	2
88859	YA8Q391	10/21/88	Yukon Territorial Government - Highways	granular material	5000	5000	M	5000	5000	2
88860	YA7Q170	10/25/88	Municipality of Haines Junction	sand & gravel	2584	2584	M	2584	2584	2
88861	YA8S342	10/26/88	Yukon Territorial Government		500	500	M	500	500	1
88862	YA7Q182	10/27/88	Champagne Aishihik Enterprises Limited	gravel	1000	750	Y	1000	750	2
88863	YA8Q396	11/01/88	Champagne Aishihik Enterprises Limited	gravel	300	300	M	300	300	1

Quarry Land Use Permit	Permit Date	Permittee	Material Type	- Applied For -			- Used -		Data	
				Amount	Volume	Units	Amount	Volume	Quality	
Highways										
88847	YA6Q979	09/27/88	Mountain View Motor Inn	gravel	200	150	Y	100	75	0
88848	YA7Q144	09/28/88	C & I Construction Limited	gravel	600	600	M	0	0	1
88849	YA8Q377	09/28/88	C & I Construction Limited	granular material	1000	1000	M	0	0	0
88850	YA8Q381	10/06/88	Yukon Territorial Government - Highways	granular material	10000	10000	M	10000	10000	0
88851	YA8Q382	10/06/88	Yukon Territorial Government - Highways	granular material	9000	9000	M	9000	9000	2
88852	YA8J209	10/05/88	Yukon Territorial Government - Renewable Resources		1000	1000	M	0	0	1
88853	YA8Q384	10/11/88	Rod Watson	gravel	200	200	M	200	200	0
88854	YA8Q386	10/13/88	Kluane RV Kampgrounds	sand & gravel	250	188	Y	250	188	1
88855	YA8Q223	10/14/88	Mike Crawshay	gravel	200	150	Y	200	150	1
88856	YA7W165	10/14/88	Hyland Forest Products	gravel	500	500	M	500	500	1
88857	YA8Q388	10/18/88	Halferdahl and Associates	granular material	220	220	M	220	220	0
88858	YA8E389	10/19/88	Yukon Territorial Government - Highways	granular material	10000	10000	M	10000	10000	2
88859	YA8Q391	10/21/88	Yukon Territorial Government - Highways	granular material	5000	5000	M	5000	5000	2
88860	YA7Q170	10/25/88	Municipality of Haines Junction	sand & gravel	2584	2584	M	2584	2584	2
88861	YA8S342	10/26/88	Yukon Territorial Government		500	500	M	500	500	1
88862	YA7Q182	10/27/88	Champagne Aishihik Enterprises Limited	gravel	1000	750	Y	1000	750	2
88863	YA8Q396	11/01/88	Champagne Aishihik Enterprises Limited	gravel	300	300	M	300	300	1

Quarry Land Use Permit	Permit Date	Permittee	Material Type	- Applied For -		Vol Units	- Used -		Data Quality
				Amount	Volume		Amount	Volume	
88864	YA7Q096	11/01/88	Champagne Aishihik Enterprises Limited	gravel	1000	750 Y	1000	750	2
88865	YA7Q137	11/01/88	Municipality of Haines Junction	sand & gravel	8000	8000 M	0	0	1
88866	YA8Q397	11/01/88	Yukon Homes Limited	gravel	750	750 M	750	750	0
88867	YA8Q400	11/08/88	Yukon Territorial Government - Highways	granular material	10000	10000 M	0	0	0
88868	YA8Q410	11/24/88	Spirit Lake Enterprises		1050	788 Y	1050	788	0
88869	YA8Q415	12/05/88	Terry Scanlon	granular material	480	480 M	480	480	1
88870	YA8E419	12/15/88	Department of Public Works Canada	granular material	39000	39000 M	0	0	1
		12/15/88	Department of Public Works Canada	pit run gravel	49000	49000 M	49000	49000	1

APPENDIX B

GRANULAR RESOURCE USAGE DATABASE

NORTHWEST TERRITORIES

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -		Vol Units	- Used -		Data Quality
					Amount	Volume		Amount	Volume	
84001	N82P800	01/04/84	Interprovincial Pipe Line (NW) Limited	Granular Material	7847	5885	Y	7847	5885	2
84002	N80Q363	01/17/84	Amoco Canada Petroleum Company Limited	Gravel	2500	1875	Y	2500	1875	2
84003	N83Q048	01/24/84	Government of North West Territories	Gravel	30000	30000	M	30000	30000	2
84004	N82P806	02/07/84	Interprovincial Pipe Line (NW) Limited	Gravel	3924	2943	Y	3924	2943	2
84005	N82P800	02/07/84	Interprovincial Pipe Line (NW) Limited	Gravel	9155	6866	Y	9155	6866	2
84006	N83Q056	02/08/84	Government of North West Territories	Gravel	60000	60000	M	60000	60000	0
84007	N83A994	02/17/84	Northcor Energy Limited	Granular Material	15000	11475	Y	15000	11475	2
84008	N84Q069	02/20/84	Government of North West Territories	Rock	6000	6000	M	5100	5100	0
84009	N84Q090	02/23/84	Panarctic Oil Limited	Gravel	13750	10519	Y	13750	10519	1
84010	N84Q087	02/24/84	Canadian National Railways	Gravel	10000	7650	Y	5500	4125	0
84011	N82P807	03/05/84	Interprovincial Pipe Line (NW) Limited	Granular Material	2616	1962	Y	2616	1962	2
84012	N84Q097	03/09/84	D Storr and Sons	Gravel	1950	1463	Y	1950	1463	0
84013	N83A045	03/12/84	Northcor Energy Limited	Clay	5700	4275	Y	5700	4275	2
84014	N83A051	03/12/84	Northcor Energy Limited	Clay	5200	3900	Y	0	0	2
84015	N84A066	03/12/84	Northcor Energy Limited	Clay	7000	5250	Y	7000	5250	0
84016	N84Q080	03/12/84	Mackenzie Mountain Service and Rentals	Sand & Gravel	5000	3750	Y	5000	3750	2
84017	N82Q653	03/12/84	Dept. of the Airforce	Gravel	5000	3750	Y	5000	3750	2
84018	N81Q491	03/15/84	Northstar Service and Construction	Gravel	1000	750	Y	1000	750	2
84019	N84Q095	03/21/84	Government of North West Territories	Gravel	75000	75000	M	25000	25000	0

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -			- Used -			Data Quality
					Amount	Volume	Units	Amount	Volume		
84020	N84Q096	03/21/84	Government of North West Territories	Gravel	40000	40000	M	40000	40000	1	
84021	N83Q932	03/22/84	Echo Bay Mines Limited	Gravel	5000	3750	Y	5000	3750	2	
84022	N83P933	03/26/84	Interprovincial Pipe Line (NW) Limited	Gravel	39236	30016	Y	39236	30016	2	
84023	N84Q106	03/26/84	Aklavik Construction	Gravel	2740	2055	Y	1100	825	0	
84024	N84Q091	03/28/84	E Gruben Transport	Gravel	25000	19125	Y	0	0	0	
84025	N84Q133	04/09/84	Government of North West Territories	Gravel	15000	15000	M	0	0	0	
84026	N82Q823	04/12/84	Giant Yukon Mines	Sand & Gravel	35000	35000	M	0	0	2	
84027	N84Q135	04/12/84	Carter Industries	Gravel	20000	15300	Y	17500	13388	0	
84028	N84Q094	04/10/84	D Storr and Sons	Sand Fill	1300	975	Y	1300	975	0	
84029	N84Q136	04/17/84	NTCL	Gravel	10000	7650	Y	4507	3380	0	
84030	N84Q154	04/27/84	Robinson's Trucking	Rock	50000	38250	Y	22000	16830	0	
84031	N84Q155	04/27/84	Curry Construction	Rock	25000	19125	Y	0	0	0	
84032	N84Q152	04/27/84	Rod's Contracting	Gravel	2500	1875	Y	2500	1875	2	
84033	N84C088	05/04/84	Nanisivik Mines Limited	Shale	1000	750	Y	0	0	0	
84034	N84Q162	05/07/84	Larry Wheaton Trucking	Clay and dirt	5000	3750	Y	742	557	0	
84035	N84Q159	05/08/84	Government of North West Territories	Clay	3300	2475	Y	3300	2475	0	
84035	N84Q159	05/08/84	Government of North West Territories	Sand	83865	64157	Y	83865	64157	0	
84036	N84Q174	05/14/84	Government of North West Territories	Gravel & Sand	1000	750	Y	1000	750	1	
84037	N84Q173	05/14/84	Government of North West Territories	Common Fill	3500	2625	Y	3424	2568	0	
84038	N84E151	05/15/84	Government of North West Territories	Rock Fill	700	525	Y	0	0	0	
84039	N83Q946	05/23/84	Heron's Trucking	Gravel	3409	2557	Y	0	0	2	
84040	N84Q184	05/25/84	Philip Norwegian	Gravel	200	150	Y	372	279	0	
84041	N84Q182	05/25/84	Rowe's Construction	Gravel	3000	2250	Y	3000	2250	0	

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -			- Used -			Data Quality
					Amount	Volume	Units	Amount	Volume		
84042	N84Q147	05/25/84	Government of North West Territories	Rip Rap	300	225	Y	300	225	0	
84043	N83C940	05/28/84	AMAX Northwest Mining Company Limited	Shale	25000	19125	Y	0	0	2	
84044	N84Q179	05/29/84	Nanisivik Mines Limited	Sand	150	113	Y	150	113	0	
84044	N84Q179	05/26/84	Nanisivik Mines Limited	Shale	2400	1800	Y	1405	1054	0	
84045	N83Q937	05/31/84	W Burrill and Sons	Gravel	5000	3750	Y	5000	3750	2	
84046	N83Q932	06/01/84	Echo Bay Mines Limited	Gravel & Sand	10000	7650	Y	10000	7650	2	
84047	N83Q931	05/25/84	Northern Industries Limited	Gravel	1000	750	Y	1000	750	2	
84048	N84Q185	06/01/84	Carter Industries	Gravel	3000	2250	Y	1000	750	0	
84049	N84Q186	06/01/84	Alert Transport	Gravel	400	300	Y	0	0	0	
84050	N84Q187	06/01/84	Alert Transport	Gravel	200	150	Y	0	0	0	
84051	N77E513	06/01/84	Government of North West Territories	Gravel	15000	15000	M	0	0	0	
84052	N83E927	06/15/84	Government of North West Territories	Gravel	226000	226000	M	226000	226000	2	
84053	N84Q189	06/13/84	Pope's Company Limited	Gravel	1000	1000	M	120	120	0	
84054	N82Q785	06/11/84	Echo Bay Mines Limited	Gravel & Sand	20000	15300	Y	0	0	2	
84055	N84Q188	06/18/84	D Storr and Sons	Gravel	500	375	Y	0	0	1	
84056	N84Q198	06/20/84	Territories construction and transit	Gravel	3000	2250	Y	130	98	0	
84057		06/19/84	Esso Resources Canada Limited	Sand	458000	350370	Y	0	0	2	
84058	N84Q183	06/21/84	Cullaton Lake Mine	Sand	5000	3750	Y	3000	2250	0	
84059	N84Q06	07/04/84	Lirettes Trucking	Gravel	500	375	Y	2000	1500	0	
84060	N84Q207	07/06/84	Ritchie Excavation	Topsoil	250	188	Y	250	188	1	
84061	N84Q208	07/09/84		Gravel	3000	2250	Y	1450	1088	1	

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -			- Used -			Data Quality
					Amount	Volume	Units	Amount	Volume		
84062	N84Q210	07/13/84	D Storr and Sons	Sand & Gravel	500	375	Y	2500	1875	0	
84063	N83Q897	07/01/84	Transport Canada	Gravel	2100	1575	Y	0	0	2	
84064	N83Q969	07/16/84	E Gruben Transport	Clay	2000	1500	Y	2000	1500	2	
84065	N84Q197	07/18/84	Government of North West Territories	Common Fill	10000	10000	M	9844	9844	0	
84066	N82Q785	07/20/84	Echo Bay Mines Limited	Gravel & Sand	80000	61200	Y	80000	61200	2	
84067	N83Q959	07/05/84	Aljon Holdings	Gravel	2000	2000	M	2000	2000	2	
84068	N83P906	07/25/84	Interprovincial Pipe Line (NW) Limited	Sand	850	638	Y	850	638	1	
84069	N83P906	07/25/84	Interprovincial Pipe Line (NW) Limited	Sand	1500	1125	Y	1500	1125	1	
84070	N84T208	08/07/84	Petro Canada	Sand & Gravel	8000	6000	Y	19000	14535	0	
84071	N84Q217	08/08/84	Points North Transport	Gravel	900	675	Y	900	675	0	
84072	N83Q953	07/04/84	Aljon Holdings	Gravel	2000	2000	M	0	0	2	
84073	N84Q220	08/22/84	W Burrill and Sons	Gravel	3000	2250	Y	2100	1575	0	
84074	N83G980		Terra Mines Limited	Gravel	10000	7650	Y	0	0	2	
84075	N83P906	10/05/84	Interprovincial Pipe Line (NW) Limited	Granular Material	11216	8580	Y	11216	8580	2	
84076	N83P906	10/05/84	Interprovincial Pipe Line (NW) Limited	Granular Material	3910	2933	Y	3910	2933	2	
84077	N84G222	09/28/84	Government of North West Territories	Granular Material	14000	14000	M	23540	23540	0	
84078	N84G221	09/28/84	Government of North West Territories	Granular Material	50000	50000	M	0	0	0	
84079	N84Q229	10/01/84	Government of North West Territories	Gravel	10000	10000	M	1300	1300	0	
84080	N82Q775	09/28/84	Rowe's Construction	Gravel	2000	1500	Y	2000	1500	2	
84081	N84Q231	10/09/84	Government of North West Territories	Sand & Gravel	8500	8500	M	10000	10000	0	
84082	N80Q410	10/18/84	Government of North West Territories	Granular Material	30000	30000	M	30000	30000	2	
84083	N84Q244	10/19/82	Trebacha College	Gravel	2000	2000	M	2586	2586	0	

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -			- Used -			Data Quality
					Amount	Volume	Units	Amount	Volume		
84084	N83Q016	10/29/84	Panarctic Oil Limited	Gravel	7000	5250	Y	7000	5250	2	
84085	N83S991	10/05/84	Echo Bay Mines Limited	Gravel	26200	20043	Y	0	0	2	
84086	N83Q986	10/12/84	Aljon Holdings	Gravel	2000	1500	Y	0	0	2	
84087	N84G222	11/07/84	Government of North West Territories	Gravel	5000	5000	M	5000	5000	2	
84088	N83Q032	11/13/84	Amoco Canada Petroleum Company Limited	Gravel	5000	3750	Y	5000	3750	2	
84089	N84Q264	11/23/84	Echo Bay Mines Limited	Gravel & Sand	80000	61200	Y	72920	55784	0	
84090	N83Q019	12/06/84	Northern Industries Limited	Gravel	1000	750	Y	0	0	2	
85001	N83P906	01/04/85	Interprovincial Pipe Line (NW) Limited	Rock	3990	2993	Y	3990	2993	2	
85002	N83P906	01/04/85	Interprovincial Pipe Line (NW) Limited	Rock	27230	20831	Y	27230	20831	2	
85003	N80Q363	01/16/85	Amoco Canada Petroleum Company Limited	Gravel	2500	1875	Y	2500	1875	2	
85004	N84A280	01/21/85	Exco Energy Limited	Gravel	15000	11475	Y	0	0	0	
85005	N83A011	01/23/85	NSM Resources	Gravel	50000	38250	Y	0	0	2	
85006	N85Q296	02/06/85	Canadian National Railways	Gravel	7000	5250	Y	0	0	0	
85007	N84A253	02/06/85	Northcor Energy Limited	Gravel	4000	3000	Y	4500	3375	0	
85008	N84Q188	02/11/85	D Storr and Sons	Gravel	2000	1500	Y	2000	1500	0	
85009	N84A287	02/11/85	Petro Canada	Sand & Gravel	70000	53550	Y	34000	26010	0	
85010	N85Q308	02/15/85	D Storr and Sons	Gravel	500	375	Y	4846	3635	0	
85011	N85Q312	02/22/85	Stan Dean and Sons	Topsoil	3000	2250	Y	2000	1500	0	
85012	N85Q313	02/22/85	Aljon Holdings	Gravel	1000	750	Y	2000	1500	0	
85013	N85Q315	02/27/85	Hamlet of Fort Franklin	Gravel	1000	1000	M	1000	1000	1	
85014	N84Q090	02/28/85	Panarctic Oil Limited	Gravel	13233	10123	Y	0	0	0	

Quarry Land Use				Material Type	- Applied For -		Vol Units	- Used -		Data Quality
Permit	Permit	Date	Permittee		Amount	Volume		Amount	Volume	
85015	N85Q308	03/13/85	D Storr and Sons	Gravel	4050	3038	Y	4050	3038	0
85016	N83P906	03/18/85	Interprovincial Pipe Line (NW) Limited	Sand	1500	1125	Y	1500	1125	1
85017	N84Q162	03/26/85	Two-Way Enterprises	Clay and Topsoil	5000	3750	Y	288	216	0
85018	N83E927	04/15/85	Government of North West Territories	Gravel	280000	280000	M	0	0	2
85019	N85Q328	04/03/85	Government of North West Territories	Shale	5000	5000	M	2500	2500	0
85020	N82Q823		Giant Yukon Mines	Gravel	10000	10000	M	10000	10000	2
85021	N85Q336	04/04/85	Stan Dean and Sons	Rip Rap	1600	1600	M	0	0	0
85022	N85E344	04/04/85	Government of North West Territories	Rip Rap	4000	4000	M	4000	4000	1
85023	N85Q320	04/15/85	Tatra Leasing Limited	Gravel	650	488	Y	1465	1099	0
85024	N85Q135	04/12/85	Carter Industries	Gravel	2500	1875	Y	2500	1875	0
85025	N84Q136	04/30/85	NTCL	Gravel	8000	6000	Y	400	300	0
85026	N84Q204	04/26/85	Rod's Contracting	Gravel	2000	1500	Y	2000	1500	0
85027	N77E515	05/03/85	Government of North West Territories	Gravel	30000	30000	M	30000	30000	2
85028		05/07/85	Government of North West Territories	Common Fill	2200	2200	M	2200	2200	2
85029	N84Q174	05/29/85	Nanisivik Mines Limited	Shale	1480	1110	Y	1480	1110	1
85029	N84Q174	05/29/85	Nanisivik Mines Limited	Sand	75	56	Y	75	56	1
85030	N85Q354	05/24/85	Armando Berton	Gravel	5000	3750	Y	5000	3750	0
85031	N85Q356	05/24/85	Carter Industries	Gravel	1000	750	Y	500	375	0
85032	N85Q357	05/27/85	Aljon Holdings	Gravel	10000	7650	Y	0	0	0
85033	N84Q159	05/27/85	Government of North West Territories	Granular Material	111665	85424	Y	111665	85424	1
85034	N84Q185	05/29/85	Carter Industries	Gravel	3000	2250	Y	3000	2250	0
85035	N85Q360	06/03/85	Government of North West Territories	Rock	30000	30000	M	9000	9000	0

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -		Vol Units	- Used -		Data Quality
					Amount	Volume		Amount	Volume	
85036	N84Q154	06/05/85	Robinson's Trucking	Rock	20000	15300	Y	10000	7650	0
85037	N85Q355	05/17/85	Government of North West Territories	Gravel and Shale	50000	50000	M	25000	25000	0
85038	N85Q358	06/14/85	Fred H Ross and Associates	Gravel and Shale	11830	9050	Y	11830	9050	0
85039	N83Q992	06/18/85	Northstar Service and Construction	Dolomite	10000	7650	Y	7565	5674	0
85040	N83Q993	06/18/85	Northstar Service and Construction	Dolomite and Clay	4000	3000	Y	4000	3000	1
85041	N84Q189	06/21/85	Pope's Company Limited	Gravel	1000	750	Y	2000	1500	0
85042	N85Q369	06/21/85	Brian Heron	Gravel	3000	2250	Y	300	225	0
85043	N85Q382	06/25/85	Northern Industries Limited	Gravel	1000	750	Y	710	533	0
85044	N85Q364	06/26/85	Bill Jenson	Gravel	2900	2175	Y	2900	2175	0
85045	N85Q365	06/26/85	OT Repair and Supply	Gravel	5000	3750	Y	5000	3750	0
85046	N84Q095	06/27/85	Government of North West Territories	Granular Material	50000	50000	M	34150	34150	0
85047	N83Q959	07/05/85	Aljon Holdings	Gravel	2000	1500	Y	2000	1500	2
85048	N85Q373	07/03/85	Transport Canada	Gravel	2000	2000	M	0	0	0
85049	N85Q385	07/03/85	D Storr and Sons	Gravel	5000	3750	Y	5000	3750	2
85050	N85Q386	07/04/85	Sachs Harbour Settlement Council	Gravel	3550	2663	Y	3550	2663	1
85051	N85Q379	07/05/85	Inuvialuit Inn Limited	Gravel & Sand	3000	2250	Y	3000	2250	1
85052	N85Q366	07/08/85	Government of North West Territories	Sand	1000	1000	M	200	200	0
85053	N85Q389	07/09/85	W Burrill and Sons	Gravel	2480	1860	Y	2480	1860	0
85054	N85Q387	07/10/85	Stan Dean and Sons	Gravel	500	375	Y	3000	2250	0
85055	N85Q371	07/10/85	Rowe's Construction	Gravel	5000	3750	Y	4400	3300	0
85056	N83Q953	07/14/85	Aljon Holdings	Gravel	2000	1500	Y	0	0	2
85057	N82Q823	07/15/85	Giant Yukon Mines	Sand & Gravel	4000	3000	Y	4000	3000	2
85058	N85Q391	07/19/85	Soo Construction	Gravel	1000	750	Y	1426	1070	0

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -		- Used -		Data	
					Amount	Volume	Units	Amount	Volume	Quality
85059	N85Q390	07/24/85	Chet Construction	Gravel	5000	3750	Y	5000	3750	0
85060	N85Q38X	07/31/85	Government of North West Territories	Gravel	5000	3750	Y	4572	3429	0
85061	N85Q388	08/01/85	Ritchie Excavation	Topsoil	1000	750	Y	550	413	0
85062	N85Q395	08/01/85	Government of North West Territories	Gravel	5000	3750	Y	5000	3750	0
85063	N85Q399	08/02/85	Town of Inuvik	Sand	2400	1800	Y	2200	1650	0
85064	N84Q207	08/02/85	Territories Construction	Gravel	1550	1163	Y	1550	1163	1
85065	N85Q402	08/07/85	Aero Asphalt	Gravel	125	94	Y	125	94	0
85066	N85Q407	08/09/85	D Storr and Sons	Shale	2600	1950	Y	2600	1950	0
85067	N83G980	09/07/85	Terra Mines Limited	Common Fill	10000	7650	Y	0	0	2
85068	N84Q220	08/22/85	W Burrill and Sons	Pit Run Gravel	3000	2250	Y	1200	900	0
85069	N84Q182	08/21/85	Rowe's Construction	Gravel	3000	2250	Y	3000	2250	0
85070	N85Q411	08/26/85	Wellex Limited	Pit Run Gravel	150	113	Y	155	116	0
85071	N84Q090	08/28/85	Panarctic Oil Limited	Gravel	2500	1875	Y	2500	1875	1
85072	N85Q412	08/30/85	John Plowman	Gravel	500	375	Y	425	319	0
85073	N85Q408	09/03/85	Government of North West Territories	Gravel	15000	15000	M	15000	15000	1
85074	N84Q209	09/04/85	Territories Construction	Gravel	5000	3750	Y	0	0	1
85075	N85Q415	09/12/85	Alvin Broadhead	Gravel	1000	750	Y	1000	750	0
85076	N85Q407	09/16/85	D Storr and Sons	Shale	20800	15912	Y	20800	15912	0
85077	N85P406	09/18/85	Interprovincial Pipe Line (NW) Limited	Granular Material	5000	3750	Y	5000	3750	0
85078	N85Q429	09/20/85	Government of North West Territories	Gravel	2000	1500	Y	300	225	0
85079	N85Q426	09/25/85	Stanley Stevens	Sand	300	225	Y	0	0	2
85080	N84Q090	09/25/85	Panarctic Oil Limited	Gravel	8000	6000	Y	8000	6000	1
85081	N85Q436	10/02/85	Lloyd Hanson	Gravel	1500	1125	Y	1500	1125	0
85082	N85Q437	10/02/85	Lloyd Hanson	Gravel	1000	750	Y	0	0	0

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -		Vol Units	- Used -		Data Quality
					Amount	Volume		Amount	Volume	
85083	N85Q435	10/04/85	Nahanni Air Services Limited	Sand, Gravel, Clay	1000	750	Y	800	600	0
85084	N83F991	10/15/85	Echo Bay Mines Limited	Gravel	22500	17213	Y	22500	17213	2
85085	N85Q418	10/21/85	Government of North West Territories	Gravel	50000	50000	M	3000	3000	0
85086	N83Q886	10/12/85	Aljon Holdings	Gravel	2000	1500	Y	0	0	2
85087	N85Q445	10/22/85	Chet Construction	Gravel	2000	1500	Y	2000	1500	0
85088	N85Q453	10/25/85	Carter Industries	Gravel	4000	3000	Y	7000	5250	0
85089	N85Q454	10/25/85	Carter Industries	Gravel	3000	2250	Y	0	0	0
85090	N85E434	10/29/85	Nanisivik Mines Limited	Shale	2000	1500	Y	2000	1500	2
85091	N85P405	10/31/85	Interprovincial Pipe Line (NW) Limited	Gravel	10000	7650	Y	9500	7125	0
85092	N83Q032	11/04/85	Amoco Canada Petroleum Company Limited	Gravel	5000	3750	Y	5000	3750	2
85093	N84Q244	11/12/85	Trebacha College	Gravel	2500	1875	Y	0	0	0
85094	N83Q016		Panarctic Oil Limited	Gravel	6000	4500	Y	6000	4500	2
85095	N80Q363	11/20/85	Amoco Canada Petroleum Company Limited	Gravel	2500	1875	Y	2500	1875	2
85096		12/10/85	Terra Mines Limited	Rock	50000	38250	Y	0	0	2
85097	N84E175	12/11/85	Public Works Canada	Gravel	62000	62000	M	0	0	0
85098	N84E175	12/11/85	Public Works Canada	Rock	3000	3000	M	3000	3000	0
85099	N85P406	12/13/85	Interprovincial Pipe Line (NW) Limited	Gravel	8895	6671	Y	11063	8463	0
85100	N85Q480	12/13/85	Northern Industries Limited	Gravel	1000	750	Y	36	27	0
85101	N85Q462	12/19/85	Tatra Leasing Limited	Gravel	100	75	Y	100	75	0
85102	N85Q490	12/23/85	Tatra Leasing Limited	Shale	221	166	Y	221	166	0
85103	N85Q467	12/27/85	D Storr and Sons	Rock	4680	3510	Y	3924	2943	0

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -		Vol Units	- Used -		Data Quality
					Amount	Volume		Amount	Volume	
85104	N85Q472	12/30/85	Government of North West Territories	Gravel	30000	30000	M	500	500	0
86001	N86Q512	01/20/86	Fort Franklin Dene Development Corporation	Gravel	2500	1875	Y	2500	1875	0
86002	N85P405	01/21/86	Interprovincial Pipe Line (NW) Limited	Gravel	29800	22797	Y	45532	34832	0
86003	N84G222	01/21/86	Government of North West Territories	Granular Material	5000	5000	M	0	0	0
86004	N84G222	01/21/86	Government of North West Territories	Granular Material	5000	5000	M	0	0	0
86005	N84A252	01/22/86	Northcor Energy Limited	Gravel	1000	750	Y	0	0	0
86006	N85F477	01/24/86	Cominco Limited	Sand	400	300	Y	400	300	0
86007	N85Q495	01/30/86	Government of North West Territories	Gravel	6000	6000	M	6000	6000	1
86008	N86Q502	02/07/86	Petro Canada	Gravel	10000	7650	Y	0	0	0
86009	N85P405	02/12/86	Interprovincial Pipe Line (NW) Limited	Gravel	700	525	Y	655	491	0
86010	N85Q312	02/22/86	Stan Dean and Sons	Topsoil	3000	2250	Y	2000	1500	0
86011	N84Q264	03/01/86	Echo Bay Mines Limited	Gravel & Sand	50000	38250	Y	21758	16645	0
86012	N86E509	02/17/86	Government of North West Territories	Gravel	30000	22950	Y	29018	22199	0
86013	N86Q523	02/17/86	Government of North West Territories	Granular Material	4000	4000	M	3000	3000	0
86014	N85A447	02/18/86	Sulpetro Limited	Clay	12353	9450	Y	12353	9450	0
86015	N84E175	02/20/86	Public Works Canada	Gravel	5000	5000	M	30000	30000	0
86016	N86Q514	02/27/86	Government of North West Territories	Shale	15000	15000	M	0	0	0
86017	N86Q510	03/05/86	Transport Canada	Aggregate	80000	80000	M	65000	65000	0
86018	N86Q523	03/06/86	Government of North West Territories	Granular Material	2000	2000	M	1550	1550	0
86019	N85Q336	03/17/86	Stan Dean and Sons	Sand & Gravel	1000	1000	M	3556	3556	0
86020	N83E927	03/17/86	Government of North West Territories	Gravel	1000	1000	M	1000	1000	1

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -			- Used -			Data Quality
					Amount	Volume	Units	Amount	Volume		
86021	N86E539	03/18/86	Government of North West Territories	Gravel	16000	16000	M	32600	32600	0	
86022	N86E539	03/18/86	Government of North West Territories	Shale	2000	2000	M	5000	5000	0	
86023	N86E539	03/18/86	Government of North West Territories	Shale	500	500	M	9400	9400	0	
86024	N86E539	03/18/86	Government of North West Territories	Shale	1000	1000	M	400	400	0	
86025	N86E539	03/18/86	Government of North West Territories	Sand	800	800	M	0	0	0	
86026	N86E539	03/18/86	Government of North West Territories	Rock	6000	6000	M	0	0	0	
86027	N84Q162	04/01/86	Two-Way Enterprises	Clay and Topsoil	5000	3750	Y	675	506	0	
86028	N86Q547	04/10/86	D Storr and Sons	Granular Material	9100	6825	Y	5000	3750	0	
86029	N86Q544	04/15/86	Aero Asphalt	Gravel	9800	7350	Y	3000	2250	1	
86030	N84Q154	04/24/86	Robinson's Trucking	Rock	10000	7650	Y	5000	3750	0	
86031	N84Q179	05/29/86	Nanisivik Mines Limited	Sand	150	113	Y	150	113	0	
86031	N84Q179	05/29/86	Nanisivik Mines Limited	Shale	2400	1800	Y	2250	1688	0	
86032	N85Q429	04/28/86	Government of North West Territories	Sand	5000	3750	Y	900	675	0	
86033	N86Q561	05/02/86	Nordzone Consultants	Gravel	4500	3375	Y	100	75	0	
86034	N84Q136	04/30/86	NTCL	Gravel	5000	3750	Y	300	225	0	
86035	N86Q556	05/13/86	Government of North West Territories	Sand	250000	250000	M	0	0	0	
86036	N86Q570	05/21/86	Carter Industries	Gravel	2500	1875	Y	2000	1500	0	
86037	N85Q429	05/22/86	Government of North West Territories	Gravel	20000	15300	Y	2500	1875	0	
86038	N85Q470	05/26/86	Giant Yukon Mines	Sand & Gravel	3000	2250	Y	4568	3426	0	
86039	N86Q567	05/28/86	Government of North West Territories	Clay	40000	30600	Y	40000	30600	0	
86040	N85Q369	05/29/86	Brian heron	Gravel	3000	2250	Y	1600	1200	0	

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -			- Used -			Data Quality
					Amount	Volume	Units	Amount	Volume		
86041	N85Q357	06/02/86	Aljon Holdings	Gravel	10000	7650	Y	2000	1500	0	
86042	N84Q217	06/11/86	Points North Transport	Gravel	2500	1875	Y	2500	1875	0	
86043	N86Q576	06/11/86	Lirettes Trucking	Gravel	1000	750	Y	2200	1650	0	
86044	N84Q209	06/12/86	Transport Canada	Gravel	5000	3750	Y	3800	2850	0	
86045	N86Q576	06/13/86	Carter Industries	Gravel	3000	2250	Y	2000	1500	0	
86046	N86Q565	06/03/86	Mackenzie Mountain Service and Rentals	Gravel	300	225	Y	300	225	2	
86047	N85Q368	06/16/86	Aljon Holdings	Gravel	1000	750	Y	0	0	0	
86048	N86Q590	06/23/86	Aljon Holdings	Gravel	1000	750	Y	0	0	0	
86049	N86Q589	06/25/86	Fred H Ross and Associates	Gravel and Shale	15000	11475	Y	6100	4575	0	
86050	N77E512	06/27/86	Government of North West Territories	Gravel	30000	30000	M	0	0	2	
86051	N77E512	06/27/86	Government of North West Territories	Gravel	30000	30000	M	30000	30000	2	
86052	N86Q586	07/02/86	Nanisivik Mines Limited	Dolomite	2616	1962	Y	625	469	0	
86053	N86Q589	07/03/86	Nordzone Consultants	Shale	523	392	Y	400	300	0	
86054	N77E512	07/07/86	Government of North West Territories	Gravel	1500	1500	M	1500	1500	2	
86055	N77E512	07/07/86	Government of North West Territories	Gravel	30000	30000	M	0	0	2	
86056	N85Q389	07/08/86	W Burrill and Sons	Pit Run Gravel	2000	1500	Y	2000	1500	0	
86057	N77E512	07/09/86	Government of North West Territories	Gravel	4750	4750	M	4750	4750	2	
86058	N86Q598	07/11/86	Hamlet of Sachs Harbour	Gravel	14000	10710	Y	14000	10710	1	
86059	N86Q593	07/14/86	Government of North West Territories	Gravel	10000	7650	Y	1050	788	0	
86060	N86Q571	07/15/86	Laval Fortin Limited	Rock	2400	1800	Y	0	0	2	
86060	N86L571	07/15/86	Laval Fortin Limited	Sand & Gravel	59000	45135	Y	59000	45135	2	
86061	N86Q597	07/18/86	Tatra Leasing Limited	Shale	1308	981	Y	2143	1607	0	

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -		Vol Units	- Used -		Data Quality
					Amount	Volume		Amount	Volume	
86062	N86E539	07/16/86	Government of North West Territories	Gravel	11000	11000	M	11000	11000	0
86063	N85Q476	07/21/86	Giant Yukon Mines	Sand & Gravel	2000	1500	Y	2000	1500	2
86064	N86Q588	07/25/86	Pope's Company Limited	Gravel	1000	750	Y	0	0	0
86065	N85Q388	07/29/86	Ritchie Excavation	Topsoil	230	173	Y	110	83	0
86066	N85C439	07/30/86	Nanisivik Mines Limited	Shale	1000	750	Y	1000	750	2
86067	N86Q603	07/31/86	Northern Backhoe Ltd.	Gravel	12000	9180	Y	0	0	0
86068	N86Q592	08/01/86	Kirk Motors Limited	Gravel	2000	1500	Y	0	0	0
86069	N86Q60X	08/08/86	Northstar Service and Construction	Gravel	5000	3750	Y	0	0	2
86070	N86E539	08/13/86	Government of North West Territories	Gravel	5000	3750	Y	6000	4500	0
86071	N85Q382	08/14/86	Northern Industries Limited	Gravel	710	533	Y	252	189	0
86072	N84Q182	08/20/86	Rowe's Construction	Gravel	7000	5250	Y	2300	1725	0
86072	N84Q182	08/20/86	Rowe's Construction	Aggregate	3000	2250	Y	2300	1725	0
86073	N86Q607	08/22/86	Tatra Leasing Limited	Gravel	576	432	Y	606	455	0
86074	N84Q182	08/22/86	Rowe's Construction	Gravel	10200	7803	Y	10200	7803	0
86075	N84E175	09/03/86	Public Works Canada	Common Fill	20000	15300	Y	25377	19413	0
86076	N84E175	09/03/86	Public Works Canada	Common Fill	80000	80000	M	91891	91891	0
86077	N84E175	09/03/86	Public Works Canada	Common Fill	120000	120000	M	72760	72760	0
86078	N86Q611	09/04/86	W Burrill and Sons	Gravel	1500	1125	Y	1500	1125	0
86079	N84Q159	09/05/86	Robinson's Trucking	Rock	20000	15300	Y	8191	6143	0
86080	N85Q390	09/08/86	Chet Construction	Gravel	2000	1500	Y	2000	1500	0
86081	N86Q612	09/09/86	Hamlet of Sachs Harbour	Gravel	300	300	M	300	300	0
86082	N83Q992	09/10/86	Northstar Service and Construction	Dolomite	10000	7650	Y	10000	7650	1
86083	N85Q476	09/12/86	Giant Yukon Mines	Sand & Gravel	2000	1500	Y	2000	1500	2

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -			- Used -			Data Quality
					Amount	Volume	Units	Amount	Volume		
86084	N84Q096	09/15/86	Panarctic Oil Limited	Gravel	2000	1500	Y	400	300	0	
86085	N86Q613	09/16/86	Northstar Service and Construction	Sand and Clay	1000	750	Y	0	0	0	
86086	N86E539	09/17/86	Government of North West Territories	Rock	6000	6000	M	5700	5700	0	
86087	N85F29X	09/19/86	NCPC	Gravel	20000	15300	Y	0	0	2	
86088	N86Q616	09/23/86	Government of North West Territories	Clay	1500	1125	Y	1500	1125	0	
86089	N86Q618	09/23/86	Northstar Service and Construction	Gravel	3000	2250	Y	3515	2636	0	
86090	N86Q565	10/02/86	Mackenzie Mountain Service and Rentals	Gravel	1000	750	Y	1000	750	2	
86091	N86E614	10/07/86	Government of North West Territories	Granular Material	12000	12000	M	12000	12000	2	
86092	N85Q445	10/15/86	Chet Construction	Gravel	2000	1500	Y	1000	750	0	
86093	N85Q371	10/15/86	Rowe's Construction	Gravel	5980	4485	Y	4000	3000	0	
86094	N77E513	10/16/86	Government of North West Territories	Granular Material	5000	5000	M	1500	1500	0	
86095	N86Q62X	10/17/86	Chet Construction	Gravel	2000	1500	Y	2000	1500	2	
86096	N86Q625	10/28/86	E & R Construction Limited	Gravel	4000	3000	Y	200	150	0	
86097	N85Q38X	10/30/86	Stan Dean and Sons	Gravel	3000	2250	Y	280	210	0	
86098	N86E539	11/03/86	Government of North West Territories	Gravel	5000	5000	M	5000	5000	1	
86099	N86Q556	10/31/86	Government of North West Territories	Sand	15000	15000	M	241000	241000	0	
86100	N85Q454	11/03/86	Carter Industries	Gravel	4000	3000	Y	7000	5250	0	
86101	N85Q454	11/03/86	Carter Industries	Gravel	3000	2250	Y	500	375	0	
86102	N84G222	11/04/86	Government of North West Territories	Granular Material	10000	10000	M	15383	15383	0	
86103	N84G222	11/04/86	Government of North West Territories	Granular Material	7000	7000	M	10272	10272	0	
86104	N86S627	12/01/86	Echo Bay Mines Limited	Gravel	10500	8033	Y	1810	1358	0	

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -		Vol Units	- Used -		Data Quality
					Amount	Volume		Amount	Volume	
86105	N86Q626	11/21/86	Government of North West Territories	Gravel	50000	50000	M	50000	50000	1
86106	N86Q628	11/27/86	Government of North West Territories	Gravel	50000	50000	M	50000	50000	1
86107	N86Q567	11/28/86	Government of North West Territories	Rock	30000	30000	M	30000	30000	0
86108	N83Q032	12/02/86	Amoco Canada Petroleum limited	Gravel	2500	1875	Y	0	0	2
86109	N86Q644	12/24/86	Panarctic Oil Limited	Gravel	2000	1500	Y	0	0	0
86110	N86Q647	12/31/86	Pope's Company Limited	Gravel	5000	3750	Y	1680	1260	0
87001	N85P406	01/07/87	Interprovincial Pipe Line (NW) Limited	Gravel	20000	15300	Y	17936	13721	0
87002	N84E175	01/09/87	Public works Canada	Gravel	48000	48000	M	40609	40609	0
87003	N84E175	01/09/87	Public Works Canada	Gravel	21000	21000	M	20702	20702	0
87004	N85P405	01/23/87	Interprovincial Pipe Line (NW) Limited	Gravel	45000	34425	Y	44581	34104	0
87005	N87Q652	01/26/87	Government of North West Territories	Gravel	50000	38250	Y	50000	38250	0
87006	N86E539	01/26/87	Government of North West Territories	Gravel	3500	2625	Y	3500	2625	0
87007	N85Q480	01/29/87	Northern industries Limited	Gravel	200	150	Y	200	150	0
87008	N84Q279	01/30/87	Echo Bay Mines Limited	Gravel	4000	3000	Y	0	0	0
87009	N87Q667	02/04/87	Government of North West Territories	Gravel	20000	20000	M	20000	20000	0
87010	N86Q648	02/05/87	Government of North West Territories	Gravel	6000	6000	M	5300	5300	0
87011	N86Q649	02/06/87	Government of North West Territories	Gravel	3000	3000	M	0	0	0
87012	N86Q567	02/11/87	Government of North West Territories	Rock	40000	40000	M	40000	40000	0
87013	N85Q312	02/21/87	Stan Dean and Sons	Topsoil	2000	2000	M	1800	1800	0
87014	N87Q660	02/23/87	Tatra Leasing Limited	Gravel	1046	785	Y	1046	785	0

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -		Vol Units	- Used -		Data Quality
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87015	N86E509	02/24/87	Government of North West Territories	Gravel	40000	40000	M	30000	30000	0
87016	N87Q685	02/26/87	Aljon Holdings	Gravel	10000	7650	Y	0	0	0
87017	N87Q686	02/26/87	Aljon Holdings	Gravel	1000	750	Y	500	375	0
87018	N87Q687	02/26/87	Aljon Holdings	Gravel	2000	1500	Y	0	0	0
87019	N86F627	03/02/87	Echo Bay Mines Limited	Gravel	10000	7650	Y	10000	7650	0
87020	N87Q663	03/03/87	Tatra Leasing Limited	Rip Rap	500	375	Y	590	443	0
87021	N87Q689	03/05/87	Stan Dean and Sons	Gravel	2000	1500	Y	1200	900	0
87022	N86E539	03/05/87	Government of North West Territories	Gravel	3000	2250	Y	3000	2250	1
87023	N86E539	03/05/87	Government of North West Territories	Gravel	3000	2250	Y	2000	1500	0
87024	N86E539	03/05/87	Government of North West Territories	Shale	3000	2250	Y	2000	1500	0
87025	N86E539	03/05/87	Government of North West Territories	Shale	5000	3750	Y	4000	3000	1
87026	N86E539	03/05/87	Government of North West Territories	Shale	5000	3750	Y	4000	3000	1
87027	N86E539	03/05/87	Government of North West Territories	Shale	2000	1500	Y	2000	1500	1
87028	N86E539	03/05/87	Government of North West Territories	Shale	2000	1500	Y	2000	1500	1
87029	N86Q649	03/06/87	Government of North West Territories	Granular Material	10600	10600	M	12000	12000	0
87030	N87Q697	03/17/87	Kenaston Contracting Limited	Rock	3924	2943	Y	5880	4410	0
87031	N86Q510	03/17/87	Transport Canada	Gravel	40000	40000	M	65000	65000	0
87032	N86E539	03/18/87	Government of North West Territories	Gravel	4000	4000	M	4000	4000	0
87033	N87Q675	03/19/87	D Storr and Sons	Gravel	1000	750	Y	0	0	0
87034	N87Q675	03/19/87	D Storr and Sons	Rip Rap	3924	2943	Y	0	0	0
87035	N87Q707	03/20/87	Liard valley Dene Development Corporation	Sand and Clay	1960	1470	Y	0	0	0

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -			- Used -			Data Quality
					Amount	Volume	Units	Amount	Volume		
87036	N85Q336	03/20/87	Stan Dean and Sons	Sand & Gravel	1000	750	Y	800	600	0	
87037	N87F704	04/01/87	Panarctic Oil Limited	Gravel	2000	1500	Y	2000	1500	2	
87038	N87C682	04/06/87	Terra Mines Limited	Gravel	3000	2250	Y	0	0	0	
87039	N84Q136	04/06/87	NTCL	Gravel	5000	3750	Y	500	375	0	
87040	N87Q722	04/16/87	Robinson's Trucking	Rock	20000	15300	Y	0	0	2	
87041	N87Q726	04/15/87	Two-Way Enterprises	Clay and Topsoil	5000	3750	Y	0	0	0	
87042	N87Q660	04/22/87	Tatra Leasing Limited	Gravel	800	600	Y	800	600	0	
87043	N84Q264	04/23/87	Echo Bay Mines Limited	Gravel & Sand	10000	7650	Y	0	0	0	
87044	N85Q472	04/28/87	Government of North West Territories	Gravel	55000	55000	M	57000	57000	0	
87045	N87Q709	04/29/87	Northern Backhoe Services Limited	Pit Run Gravel	12000	9180	Y	0	0	0	
87046	N87Q734	05/01/87	Carter Industries	Gravel	2000	1500	Y	0	0	0	
87047	N87Q721	05/20/87	Government of North West Territories	Rock	34900	34900	M	0	0	0	
87048	N84Q075	05/21/87	Public Works Canada	Sand, Gravel, Clay	62800	62800	M	110820	110820	0	
87049	N85Q357	05/25/87	Aljon Holdings	Gravel	8000	6000	Y	0	0	0	
87050	N87Q725	05/26/87	Government of North West Territories	Gravel	7000	7000	M	7040	7040	0	
87051	N87Q753	05/27/87	Mike Kimble	Gravel	2000	1500	Y	1000	750	0	
87052	N87Q758	06/04/87	Government of North West Territories	Gravel	2000	2000	M	2000	2000	0	
87053	N86Q592	06/10/87	Kirk Motors Ltd.	Gravel	2000	1500	Y	2000	1500	1	
87054	N87Q769	06/12/87	Kostiuk, John	Gravel & Sand	300	225	Y	140	105	0	
87055	N86E539	06/15/87	Government of North West Territories	Shale	3000	3000	M	2000	2000	1	
87056	N86E539	06/15/87	Government of North West Territories	Shale	2000	2000	M	2000	2000	1	
87057	N85Q418	06/16/87	Government of North West Territories	Granular Material	20000	20000	M	1000	1000	0	

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -		Vol Units	- Used -		Data Quality
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87058	N86Q576	06/16/87	Lirettes Trucking	Common Fill	2200	1650	Y	2200	1650	0
87059	N87F56X	06/22/87	Noranda Exploration	Granular Material	27253	20849	Y	0	0	2
87060	N87Q743	06/19/87	Government of North West Territories	Gravel	40000	40000	M	51000	51000	0
87061	N87Q765	06/23/87	Don Moir	Rock and Clay	1500	1125	Y	270	203	0
87062	N86E509	06/24/87	Government of North West Territories	Gravel	20000	20000	M	0	0	0
87063	N85P405	06/25/87	Interprovincial Pipe Line (NW) Limited	Gravel	3000	2250	Y	400	300	0
87064	N85Q355	06/30/87	Government of North West Territories	Gravel and Shale	8000	8000	M	500	500	0
87065	N87Q752	07/02/87	Government of North West Territories	Granular Material	5000	5000	M	1215	1215	0
87066	N85Q389	07/02/87	W Burrill and Sons	Gravel	2000	1500	Y	2930	2198	0
87067	N87Q756	07/07/87	Nanisivik Mines Limited	Shale	2400	1800	Y	2400	1800	0
87067	N87Q756	07/07/87	Nanisivik Mines Limited	Sand	150	113	Y	0	0	0
87068	N87Q781	07/31/87	Robinson's Trucking	Rock	5000	3750	Y	0	0	0
87069	N87H771	07/10/87	Chevron Canada Resources Limited	Gravel and Silt	1000	750	Y	932	699	0
87070	N86E509	07/13/87	Government of North West Territories	Gravel	15000	15000	M	0	0	0
87071	N77E512	07/13/87	Government of North West Territories	Gravel	20000	20000	M	20000	20000	1
87072	N85Q369	07/15/87	Brian Heron	Gravel	3000	2250	Y	1600	1200	0
87073	N87Q782	07/16/87	Rowe's Construction	Gravel	3000	2250	Y	650	488	0
87074	N84E175	07/22/87	Public works Canada	Gravel	4000	4000	M	4000	4000	0
87075	N87Q772	07/24/87	Government of North West Territories	Gravel	35000	26775	Y	35000	26775	0
87076	N87Q776	07/23/87	Stan Dean and Sons	Gravel	3000	2250	Y	2970	2228	0
87076	N87Q776	07/23/87	Stan Dean and Sons	Rock	90	68	Y	0	0	0
87077	N77E512	07/23/87	Government of North West Territories	Gravel	23000	17595	Y	23000	17595	1

Quarry Land Use Permit	Permit Date	Permittee	Material Type	- Applied For -			- Used --		Data	
				Amount	Volume	Units	Amount	Volume	Quality	
87078	N85Q470	07/27/87	Giant Yukon Mines	Gravel	10000	7650	Y	5450	4088	0
87079	N87H771	07/27/87	Canns Construction Limited	Gravel and Silt	2000	1500	Y	452	339	0
87080	N84Q182	07/28/87	Rowe's Construction	Gravel	2000	1500	Y	500	375	0
87081	N87Q780	07/29/87	Chet Construction	Gravel	1780	1335	Y	0	0	0
87082	N87F761	07/29/87	Noranda Exploration	Gravel	2000	1500	Y	0	0	2
87083	N86E509	07/30/87	Government of North West Territories	Gravel	70000	70000	M	39000	39000	0
87084	N87E516	08/04/87	Government of North West Territories	Gravel	25000	19125	Y	25000	19125	2
87085	N87Q785	08/05/87	Mackenzie Mountain Service and Rentals	Aggregate	2616	1962	Y	0	0	2
87086	N87Q788	08/05/87	John Plowman	Sand & Gravel	200	150	Y	0	0	2
87087	N87Q722	08/07/87	Robinson's Trucking	Rock	30000	22950	Y	0	0	2
87088	N77E515	08/12/87	Government of North West Territories	Gravel	10000	10000	M	10000	10000	2
87089	N77E512	08/12/87	Government of North West Territories	Gravel	16000	16000	M	0	0	2
87090	N77E513	08/12/87	Government of North West Territories	Gravel	32000	32000	M	39900	39900	0
87091	N77E513	08/12/87	Government of North West Territories	Gravel	36000	36000	M	10300	10300	0
87092	N87Q79X	08/13/87	Northern Industries Limited	Gravel	5000	3750	Y	100	75	0
87093	N87Q799	08/17/87	Pluim Contractors Limited	Gravel	3000	2250	Y	3000	2250	0
87094	N87Q800	08/17/87	Fred H Ross and Associates	Gravel	3000	2250	Y	2850	2138	0
87095	N87Q792	08/21/87	Government of North West Territories	Sand	18000	13770	Y	18000	13770	0
87096	N87Q807	08/21/87	Aljon Holdings	Gravel	1000	750	Y	250	188	0
87097	N87Q704	08/21/87	Panarctic Oil Limited	Gravel	9000	6750	Y	9000	6750	1
87098	N77E512	08/26/87	Government of North West Territories	Gravel	10000	10000	M	10000	10000	1

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -			- Used -			Data Quality
					Amount	Volume	Units	Amount	Volume		
87099	N84E175	08/26/87	Public Works Canada	Common Fill	59000	59000	M	55372	55372	0	
87099	N87E175	08/26/87	Public Works Canada	Gravel	150	150	M	0	0	2	
87100	N87E815	08/27/87	Government of North West Territories	Pit Run	1000	1000	M	2154	2154	0	
87101	N87Q817	09/04/87	Aljon Holdings	Gravel	2000	1500	Y	2000	1500	2	
87102	N84Q182	09/04/87	Rowe's Construction	Gravel	2000	1500	Y	1000	750	0	
87103	N86Q611	09/03/87	W Burrill and Sons	Gravel	1500	1125	Y	1500	1125	0	
87104	N85Q470	09/09/87	Giant Yukon Mines	Sand & Gravel	2000	1500	Y	2000	1500	1	
87105	N87Q809	09/15/87	Arctic Coast Enterprises	Gravel	15000	11475	Y	15000	11475	0	
87106	N83Q992	09/14/87	Northstar Service and Construction	Dolomite	5000	3750	Y	5000	3750	1	
87107	N87Q822	09/30/87	Northland Construction	Gravel	1000	1000	M	250	250	0	
87108	N87Q826	10/07/87	Northland Construction	Sand and Topsoil	600	450	Y	0	0	0	
87109	N87C779	09/29/87	Westfort Petroleum	Gravel	10000	7650	Y	0	0	0	
87110	N87Q704	10/01/87	Panarctic Oil Limited	Gravel	2000	1500	Y	2000	1500	1	
87111	N86Q565	10/05/87	Mackenzie Mountain Service and Rentals	Aggregate	1500	1125	Y	0	0	2	
87112	N87Q785	10/05/87	Mackenzie Mountain Service and Rentals	Aggregate	5000	3750	Y	5000	3750	2	
87113	N87E803	08/18/87	Government of North West Territories	Sand and Clay	20000	15300	Y	0	0	1	
87114	N87Q722	10/22/87	Robinson's Trucking	Clay	4600	3450	Y	0	0	2	
87115	N85Q454	10/23/87	Carter Industries	Gravel	1000	750	Y	200	150	0	
87116	N85Q453	10/23/87	Carter Industries	Gravel	4000	3000	Y	8000	6000	0	
87117	N86Q622	10/27/87	Chet Construction	Gravel	1980	1485	Y	2000	1500	0	
87118	N87Q844	10/28/87	Chet Construction	Gravel	2000	1500	Y	2000	1500	2	
87119	N87Q845	10/30/87	Northernn Industries Limited	Gravel	500	375	Y	0	0	0	
87120	N87Q843	10/30/87	Transport Canada	Gravel	900	675	Y	90	68	0	

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -		Vol Units	- Used -		Data Quality
					Amount	Volume		Amount	Volume	
87121	N86F627	10/30/87	Echo Bay Mines Limited	Granular Material	90500	69233	Y	74750	57184	0
87122	N85Q387	11/03/87	Stan Dean and Sons	Gravel	2000	1500	Y	1500	1125	0
87123	N87Q722	11/04/87	Robinson's Trucking	Rock	30000	22950	Y	0	0	2
87124	N87Q833	11/13/87	Government of North West Territories	Granular Material	55000	55000	M	55000	55000	0
87125	N86G625	11/23/87	C and R Construction	Gravel	4000	3000	Y	0	0	2
87126	N86Q678	12/01/87	Government of North West Territories	Gravel	75000	75000	M	75000	75000	1
87127	N87E851	12/10/87	Government of North West Territories	Gravel	16000	16000	M	16000	16000	0
87128	N87E851	12/10/87	Government of North West Territories	Gravel	20000	20000	M	20500	20500	0
87129	N87E851	12/10/87	Government of North West Territories	Gravel	15000	15000	M	500	500	0
87130	N87E851	12/10/87	Government of North West Territories	Gravel	18000	18000	M	1000	1000	0
87131	N87E851	12/10/87	Government of North West Territories	Gravel	20000	20000	M	20000	20000	0
87132	N86E509	12/10/87	Government of North West Territories	Gravel	30000	30000	M	27000	27000	0
87133	N87Q857	12/21/87	D Storr and Sons	Gravel	1308	981	Y	0	0	0
87134	N87Q858	12/21/87	D Storr and Sons	Rip Rap	3924	2943	Y	0	0	2
87135	N87Q722	12/21/87	Robinson's Trucking	Clay	20000	15300	Y	0	0	2
87136	N87G862	12/31/87	Chevron Canada Resources Limited	Gravel and Silt	200000	153000	Y	33133	25347	0
88001	N87Q861	01/06/88	Government of North West Territories	Gravel	5000	3750	Y	1200	900	0
88002	N85P406	01/04/88	Interprovincial Pipe Line (NW) Limited	Gravel	3000	2250	Y	3000	2250	0
88003	N87Q864	01/05/88	Hamlet of Fort McPherson	Gravel	2000	1500	Y	1000	750	0
88004	N85P405	01/07/88	Interprovincial Pipe Line (NW) Limited	Gravel	5000	3750	Y	5000	3750	0
88005	N86Q647	01/11/88	Pope's Company Limited	Gravel	2000	1500	Y	2000	1500	0

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -			- Used -			Data Quality
					Amount	Volume	Units	Amount	Volume		
88006	N87Q685	02/16/88	Aljon Holdings	Gravel	1000	750	Y	0	0	0	
88007	N87Q686	02/16/88	Aljon Holdings	Gravel	2000	1500	Y	500	375	0	
88008	N87Q687	02/16/88	Aljon Holdings	Gravel	2000	1500	Y	500	375	0	
88009	N88Q898	02/22/88	Hamlet of Aklavik	Gravel	7000	7000	M	0	0	0	
88010	N87Q785	03/01/88	Mackenzie Mountain Service and Rentals	Gravel	6500	4875	Y	0	0	2	
88011	N88Q909	03/04/88	Fort Franklin Dene Development Corp	Gravel	2500	1875	Y	0	0	2	
88012	N88Q904	03/07/88	Northern Industries Limited	Gravel	200	150	Y	0	0	0	
88013	N88Q892	03/07/88	Government of North West Territories	Gravel	40000	30600	Y	40000	30600	2	
88014	N87F836	03/08/88	Robinson's Trucking	Gravel	3000	2250	Y	0	0	2	
88015	N85P406	03/15/88	Interprovincial Pipe Line (NW) Limited	Gravel	3000	2250	Y	1350	1013	0	
88016	N86E539	03/16/88	Government of North West Territories	Granular Material	500	375	Y	500	375	1	
88017	N86E539	03/16/88	Government of North West Territories	Shale	750	750	M	750	750	1	
88018	N87Q689	03/17/88	Stan Dean and Sons	Gravel	1200	900	Y	975	731	0	
88019	N88Q922	04/13/88	Stan Dean and Sons	Topsoil	1800	1350	Y	1875	1406	0	
88020	N88Q913	04/14/88	Government of North West Territories	Gravel	30000	30000	M	0	0	2	
88021	N86Q592	04/15/88	Kirk Motors Limited	Gravel	5848	4386	Y	5848	4386	1	
88022	N85P405	04/18/88	Interprovincial Pipe Line (NW) Limited	Gravel	5000	3750	Y	5000	3750	2	
88023	N87Q734	04/26/88	Carter Industries	Gravel	2000	1500	Y	500	375	0	
88024	N88Q936	04/28/88	Pineview Poultry Products Limited	Gravel	1000	750	Y	0	0	2	
88025	N87Q704	05/03/88	Panarctic Oil Limited	Gravel	8000	6000	Y	8000	6000	1	
88026	N87E851	05/16/88	Government of North West Territories	Gravel	20000	20000	M	500	500	0	
88027	N87E851	05/16/88	Government of North West Territories	Gravel	20000	20000	M	100	100	0	

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -		Vol Units	- Used -		Data Quality
					Amount	Volume		Amount	Volume	
88028	N88Q941	05/17/88	NTCL	Gravel	2500	1875	Y	2500	1875	0
88029	N87Q726	05/17/88	Two-Way Enterprises	Clay	1000	750	Y	0	0	2
88030	N87F761	05/17/88	Noranda Exploration	Gravel	4000	3000	Y	0	0	2
88031	N88Q959	06/10/88	Government of North West Territories	Rock	50000	38250	Y	50000	38250	0
88032	N87Q721	05/24/88	Government of North West Territories	Gravel	34900	34900	M	0	0	0
88033	N88E94X	05/24/88	Government of North West Territories	Gravel	6400	6400	M	6900	6900	0
88034	N88E957	06/02/88	Government of North West Territories	Gravel	1000	1000	M	50	50	0
88035	N88E957	06/02/88	Government of North West Territories	Gravel	0	0	U	0	0	0
88036	N87Q769	06/02/88	Kostiuk, John	Gravel	400	300	Y	0	0	0
88037	N87Q70X	06/08/88	Northern backhoe Services Limited	Gravel	500	375	Y	500	375	0
88038	N88J962	06/10/88	Government of North West Territories	Gravel	500	375	Y	0	0	0
88039	N85Q355	06/14/88	Government of North West Territories	Shale	8000	6000	Y	6000	4500	0
88040	N87E863	06/17/88	Government of North West Territories	Gravel	10000	10000	M	500	500	0
88041	N87Q781	06/24/88	Robinson's Trucking	Rock	10000	10000	M	0	0	0
88042	N87E863	06/29/88	Government of North West Territories	Gravel	5000	5000	M	1500	1500	0
88043	N88Q966	07/04/88	Government of North West Territories	Gravel	2300	2300	M	2300	2300	2
88044	N88Q966	07/04/88	Government of North West Territories	Rock	300	300	M	300	300	2
88045	N88E960	06/30/88	Government of North West Territories	Rock	64000	64000	M	64000	64000	2
88046	N85Q389	06/30/88	W Burrill and Sons	Gravel	3000	2250	Y	3000	2250	0
88047	N87Q78X	07/07/88	Rowe's Construction	Gravel	150	150	M	150	150	2
88048	N88E960	07/08/88	Government of North West Territories	Gravel	50000	50000	M	0	0	2

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -			- Used -			Data Quality
					Amount	Volume	Units	Amount	Volume		
88049	N88E960	07/08/88	Government of North West Territories	Shale	5000	5000	M	0	0	2	
88050	N88Q976	07/14/88	Aljon Holdings	Gravel	5000	3750	Y	0	0	2	
88051	N88Q965	07/15/88	Fred H Ross and Associates	Gravel Fill	7000	5250	Y	5250	3938	2	
88052	N88Q968	07/15/88	Aljon Holdings	Gravel	8000	6000	Y	0	0	2	
88053	N87F761	07/19/88	Noranda Exploration	Gravel	6000	4500	Y	0	0	2	
88054	N86Q592	07/21/88	Kirk Contracting Limited	Gravel	1000	750	Y	1000	750	1	
88055	N86E509	07/25/88	Government of North West Territories	Pit Run	50000	50000	M	2000	2000	0	
88056	N88E957	07/25/88	Government of North West Territories	Gravel	42000	42000	M	43000	43000	0	
88057	N87Q820	07/26/88	Kugluktuk Sales and Service	Sand	1000	750	Y	1000	750	0	
88058	N87Q820	07/26/88	Kugluktuk Sales and Service	Gravel	1000	750	Y	1000	750	0	
88059	N88Q979	07/29/88	Arctic Tech	Gravel	2200	1650	Y	0	0	0	
88060	N86E509	07/28/88	Government of North West Territories	Gravel	5000	5000	M	3000	3000	0	
88061	N88Q981	07/28/88	Stan Dean and Sons	Gravel	5000	3750	Y	5000	3750	2	
88062	N88E957	07/28/88	Government of North West Territories	Gravel	1000	1000	M	0	0	0	
88063	N88E856	07/28/88	Government of North West Territories	Gravel	20000	20000	M	0	0	2	
88064	N86Q606	07/28/88	Northstar Service and Construction	Gravel	1000	750	Y	1000	750	2	
88065	N88E957	07/29/88	Government of North West Territories	Gravel	1000	1000	M	950	950	0	
88066	N88Q990	07/29/88	Everall Construction Ltd.	Gravel	15000	11475	Y	0	0	2	
88067	N88Q996	08/02/88	Clark Bowler - Volker Stein	Sand	100	75	Y	0	0	0	
88068	N88Q999	08/12/88	Government of North West Territories	Gravel	4000	4000	M	4000	4000	2	
88069	N87Q790	08/15/88	Chet Construction	Gravel	1980	1485	Y	2000	1500	0	

Quarry Land Use Permit	Permit	Date	Permittee	Material Type	- Applied For -			- Used -			Data Quality
					Amount	Volume	Units	Amount	Volume		
88070	N87E861	08/18/88	Government of North West Territories	Gravel	10000	10000	M	500	500	0	
88071	N87E803	08/18/88	Government of North West Territories	Sand and Clay	15000	11475	Y	15000	11475	2	
88072	N86Q611	08/23/88	W Burrill and Sons	Gravel	1500	1125	Y	1500	1125	0	
88073	N86Q606	08/26/88	Northstar Service and Construction	Gravel	1000	750	Y	1000	750	2	
88074	N87Q795	08/31/88	Northern Industries Limited	Gravel	500	375	Y	100	75	0	
88075	N85Q470	09/02/88	Giant Yukon Mines	Gravel and Clay	500	375	Y	500	375	0	
88076	N87Q807	09/07/88	Aljon Holdings	Gravel	1000	750	Y	700	525	0	
88077	N88Q008	09/09/88	Rowe's Construction	Gravel	980	735	Y	980	735	2	
88078	N88Q008	09/09/88	Rowe's Construction	Gravel	1500	1125	Y	0	0	2	
88079	N88E991	09/19/88	Government of North West Territories	Shale	4000	4000	M	0	0	2	
88080	N87Q756	09/19/88	Nanisivik Mines Limited	Shale	2400	1800	Y	2400	1800	0	
88081	N88J962	09/20/88	Government of North West Territories	Pit Run Sand	300	300	M	0	0	0	
88082	N87Q817	10/04/88	Aljon Holdings	Aggregate	1000	750	Y	1000	750	2	
88083	N87C865	10/05/88	Noranda Minerals	Gravel	6000	4500	Y	0	0	2	
88084	N87Q822	10/06/88	Northland Construction	Gravel	1000	750	Y	0	0	0	
88085	N87Q816	10/06/88	Northland Construction	Topsoil	300	225	Y	0	0	0	
88085	N87Q816	10/06/88	Northland Construction	Sand	300	225	Y	0	0	0	
88086	N88Q009	10/11/88	Aljon Holdings	Aggregate	2000	1500	Y	0	0	0	
88087	N88P011	10/14/88	Interprovincial Pipe Line (NW) Limited	Gravel	22500	17213	Y	22500	17213	2	
88088	N88P010	10/14/88	Interprovincial Pipe Line (NW) Limited	Gravel	80000	61200	Y	80000	61200	2	
88089	N88Q966	10/17/88	Government of North West Territories	Pit Run Gravel	1500	1125	Y	1500	1125	2	
88090	N88Q017	10/27/88	Town of Hay River	Gravel	10000	10000	M	0	0	0	

APPENDIX C

LAND USE / QUARRY PERMIT DATABASE MANAGEMENT PROGRAM

PRELIMINARY USER MANUAL

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1. INTRODUCTION

The Land Use Database Management System is a custom developed, menu-driven software application designed to allow simple, fast and efficient computerized storage and access of information directly associated with Land Use Permits, Quarrying Permits, and Quarry Return Forms.

The system is divided into two distinct but fully integrated database management systems. These are the Land Use Permit Database Management System and the Quarry Permit / Return Database Management System.

The system offers four main features or modules. These are Update Databases, Data Search, Print Options (for reports and forms), and Database Utilities. The Database Utility module is accessed directly from the main menu, while the Update, Search, and Print modules are accessed from within either the Land Use Permit System menu, or the Quarry Permit System menu.

2. STARTING THE LAND USE DATABASE MANAGEMENT SYSTEM

The system has been installed on the menu screen of the Wang PC-260 system. To start, press <F6> for Databases, followed by <F4> for the database system.

To start the system from the DOS prompt C:\>, type D:<Enter> to change to the D drive, CD\GRANPERM<Enter> to change to the granperm subdirectory, followed by DBASE MAIN<Enter>, to start the system.

If control is ever returned to the dBase "Dot Prompt" (a solitary period mark at the lower left of the screen), simply type DO MAIN<Enter> to return to the system.

3. NAVIGATING THE MENU SYSTEM

The system is operated by selecting options from a series of menus. Each selection requires only a single keystroke, which means an entire operating session may consist of only several dozen keystrokes.

Menu options are accessed by entering a single letter, usually <A>, , <C>, etc. Help screens are accessed by pressing <Ctrl> and a letter. Entering <X> from any screen will move control back one screen.

4. GETTING HELP

At this stage of development, the help screens are not fully functional.

Help screens are accessed by pressing the Control <Ctrl> key in conjunction with a valid selection key. A more general help and information screen is accessed by pressing <Ctrl><Z> at any time.

The help screens are "application aware". This means that

the program will pick the help screen most closely associated with the application being used at the time. For example, when <Ctrl1><C> is pressed while in the main Land Use Permit database system menu, a help screen detailing information on Land Use Permit data searches will be displayed.

5. LAND USE PERMIT DATABASE MANAGEMENT SYSTEM

This system allows the entry, modification, and search of all data related to Land Use Permits.

From the main menu screen, enter the Land Use Permit Database Management System by pressing <A>. A new menu will be displayed, listing the following options:

- A Data Update
- B Data Search
- C Print Options

The Data Update module allows the user to add new Land Use Permits to the database, update the Inspection Report database, and add new permittees to the permittee database.

The Data Search module allows the user to search for individual or groups of records in any of the databases, based on information supplied by the user. The Data Search module is very useful for editing data in individual Land Use Permit records.

The Print Options module allows the user to quickly prepare reports and form letters. Expiry letters, mailing labels, and lists of Land Use Permits meeting specific criteria may be printed using the print options module.

5.1 Data Update module

Enter the Data Update module by pressing <A> from the Land Use Permit system menu screen.

A list of databases available to update is then displayed. Enter the letter code of the database to update.

After selecting the database to update, a list of methods for updating the database is displayed on screen. The database can be appended, which means that new data records are added at the end of the database. The database can be edited, which means that the existing records are displayed for editing, or the database can be browsed, which means that the records are displayed line by line for full screen editing.

5.2 Data Search module

Enter the Data Search module by pressing from the Land Use Permit system menu screen.

A list of databases available to search is then displayed. Enter the letter code of the database to search.

After selecting the database to search, a list of fields on which the search is based appears. This list is different depending on which database is being searched. The user may base the search on a single field, a group of fields, or all the fields. The data search routine bases the search on only those search

fields for which data was entered, and will find only those records where the data field(s) and the search field(s) are identical. For example, entering YAOW661 beside Land Use Permit will return only the data record for Land Use Permit Number YAOW661. Entering YTGH, WL, and Alaska Highway beside Permittee Code, RMO Area, and Highway respectively will return all Permits for YTG Highways in Watson Lake RMO area with Alaska Highway in the Highway data field.

After exiting this menu by using <Enter> to leave the list at the bottom, a new screen will appear indicating display to screen, print, or exit. Enter the appropriate letter, <A>, , or <X>.

5.3 Print Options module

Enter the Print Options module by pressing <C> from the Land Use Permit system menu screen.

A list of available options is displayed, and the appropriate option can be selected by keying in the corresponding letter code. A new window will appear, prompting the user to identify appropriate limits for printing, in order that only the necessary information is sent to the printer.

6. QUARRY PERMIT / RETURN DATABASE MANAGEMENT SYSTEM

This system allows the entry, modification, and search of all data related to quarry permits and returns.

From the main screen, enter the Quarry Permit / Return Database Management System by pressing C. A new menu will be displayed, listing the following options

- A Data Update
- B Data Search
- C Print Options

The Data Update module allows the user to add new Quarry Permits to the database and add new Quarry Returns to the database.

The Data Search module allows the user to search for individual or groups of records in any of the Quarry Permit databases, based on information supplied by the user. The Data Search module is useful for editing data in selected Quarry Permit records.

The Print Options module allows the user to quickly prepare reports and summaries. Quarry permit ledger sheets and bring-forward information sheets may be printed using the print options module.

6.1 Data Update module

Enter the Data Update module by pressing <A> from the Quarry Permit system menu screen.

6.2 Data Search module

Enter the Data Search module by pressing from the Land Use Permit system menu screen.

6.3 Print Options module

Enter the Print Options module by pressing <C> from the Quarry Permit system menu screen.

7 DATABASE UTILITIES

7.1 Reindex Databases

The Reindex Databases option restores all necessary index files for all of the database files in the system. If, for some reason, one or more of the index files becomes corrupted, simply use this option to rebuild all the index files.

7.2 Backup Database Files

This option allows the user to backup all of the system database files to either the A or B floppy drives, or to another directory on the hard disk. It uses the dos copy command.

7.3 Restore Database Files

This is the reverse procedure to Backup Database Files (above).

7.5 Reset Convert Flags

Once coded entry fields are replaced by the correct data, the record is marked with a flag to indicate that the correct field has already been replaced. This is a programming feature designed to save time when leaving a database. If a code needs to be changed in one or more records, the old information will not be replaced, because the flag is indicating that replacement is not required. If a situation occurs requiring the change of a code field to a flagged record, simply use this option, and then update or edit the database. Upon exiting, all records in the database will have appropriate fields replaced based on information contained within the coded entry fields.

8 DATA ENTRY FIELDS

There are three different types of data entry fields. These are free-form entry fields, formatted entry fields, and coded entry fields.

8.1 Free Form Entry Fields

Free form entry fields allow the user to enter data without restrictions of any kind. These are used mainly for fields where descriptive text and/or characters will be entered.

An example of a free form entry field is the land use operation type (OPER_TYPE) field in the Land Use Permit Database.

This field is used to store a description of the operation for which the Land Use Permit was issued. An example is "Development of a new quarry 17 kilometres west of Destruction Bay, Alaska Highway".

8.2 Formatted Entry Fields

Formatted entry fields restrict the user to enter data in a specified format. These fields are used in order to maintain consistency with respect to data input. Formatted entry fields usually restrict the user to entering a specific sequence of Numeric and/or Alpha characters.

An example of a formatted entry field is the Land Use Permit Number (L_USE_PERM) field in the Land Use Permit Database. This field restricts the user to entering a value corresponding to the following sequence of alpha (A) and numeric (9) characters: "AA9A999". In addition, any lowercase alpha characters are converted automatically to uppercase.

NOTE: The formatting process is performed through the use of special program codes in the screen format programs. This means that the formatting will only work when inputting data using data entry screens (in APPEND and EDIT modules). When data is being added or changed using the BROWSE modules, the format codes will NOT be in operation. Therefore, special care must be taken to ensure that all data entered is in the required format.

8.3 Coded Entry Fields

Coded entry fields are used to speed the data entry process, and to ensure consistency in data. Data for commonly used fields (such as permittee names) is entered by using a short, unique code. Upon completion of a data entry session, the data is automatically converted from the entry code to the full data field.

An example of this is the Permittee (PERMITTEE) field in the Land Use Permit Database. In order to input the field "Government of Yukon, Community and Transportation Services, Transportation Engineering Branch", the code "YTGH" is entered in the Permittee code (PERM_CODE) field. When data entry is finished, the program automatically accesses the Permittee database, links the code, and enters the proper permittee name.

DATABASES

LUSEPERM.DBF	Land use Permit database
LUSETEMP.DBF	Land Use Permit temporary database
QUARPERM.DBF	Quarry Permit database
QUARTEMP.DBF	Quarry permit temporary database
QUARRTN .DBF	Quarry Return database
RECEIPT .DBF	Receipt and Fee database
PERMITTEE.DBF	Permittee Database
LANDINFO.DBF	Land Use Section information database

Land Use Permit Database

This database is used to store information from Land Use Permits. It contains information including the permit number, class, permittee, type of land use operation, descriptive location of operation, RMO area responsible, dates of issue, commencement and expiry, and geographical coordinate location of operation.

Quarry Permit Database

This database contains information from quarry permits. This includes associated Land Use Permit number, Quarry permit number, material type, volume applied for, and dates of issue, commencement and expiry.

Quarry Return Database

This database contains information from Quarry Return sheets. It includes the Quarry Permit number, amount of material actually removed, number of hectares used in operation, and whether access was constructed.

Receipt Database

This database is used to both calculate and store Land Use and Quarry fees. It contains land use permit fees, land use fees, quarry permit fees, quarry royalty fees. Total fees are calculated automatically, and balance due or owing is calculated based on information entered into the quarry return database.

Permittee Database

The permittee database is used to store the name of permittees, associated permittee codes, and the street address, town, Province / Territory / State, postal code, phone number, and other similar information.

Land Use Section Information Database

Contains information on the Land Use department, which is used mainly for selecting correct RMO office telephone numbers, for printing expiry letters.

APPENDIX D

SAMPLE QUARRY AND LAND USE PERMIT LEDGERS

PERMIT NO.	PERMITTEE	ISSUE DATE	QUANTITY CU. YDS.	TYPE OF MATERIAL	LOCATION	LAND USE PERMIT
85/60	G.N.W.T. - D.P.W.	31.7.85	5,000 yd ³	Gravel	Muskrat River	N85Q31
85/61	Ricky Excavation	01-08-85	1,000 yds	Top soil	Mugnitoor Creek	N85Q328
85/62	G.N.W.T. - D.P.W.H.	01-08-85	5,000 yd ³	Gravel	Km 521 Wrigley Highway	N85Q39
85/63	TOWN OF INUVIK	02-08-85	2,400 yd ³	Sand	Km 234.3 Dempster	N85Q39
85/64	Territories (Const)	2-8-85	1550 yd ³	Gravel	Salt mtn	N84Q20
85/65	Aero Asphalt Paving	7-8-85	125 yd ³	Gravel	East Hwy	N85Q40
85/66	D. Storr & Sons	9-8-85	2600 yd ³	Shale Fill	Ar Rd. Rur	N85Q40
85/67	Kerr Mines	1-9-85	10,000 yd ³	General Fill	Bull Moose	N83G98
85/68	W. Burrill & Sons Ltd.	22-8-85	3,000 yd ³	Pit run Gravel	Km 438.2 Hwy #1	N84Q220
85/69	Rowe's Construction Ltd.	21-8-85	3,000 yd ³	Gravel	Km 521 Mackenzie Hwy.	N84Q182
85/70	Wellex LTD	26-8-85	150 yd ³	Pit Run Gravel	Norman Wells	N85Q41
85/71	Pararctic Oils	28-8-85	2500 yd ³	Gravel	Cameron Isl	N84Q09
85/72	John Plawman	30-8-85	500 yd ³	Gravel	Norman Wells	N85Q412
85/73	GNWT - DPW	3-9-85	15,000 m ³	Gravel	Coppermine	N85Q4C
85/74	Territories (Const.)	4-9-85	5000 yd ³	Gravel	Salt mtn	N84Q20
85/75	Alvin Broadhead	12-9-85	1000 yd ³	Gravel	Mile 21, Hwy 5	N85Q41
85/76	D. STORE & Sons	16-9-85	30,800 yd ³	Shale Fill	Arctic Red R.	N85Q40
85/77	Interprovincial Pipeline	18-9-85	5,000 yd ³	granular material	Various knposts between Black R. & N. Wells	N85P406
85/78	GNWT / DPW	20-9-85	2000 yd ³	Gravel	Russell Hs	N85Q41
85/79	STANLEY STEVENS	25-9-85	300 yd ³	Sand	N. Wells	N85Q426
85/80	Vanarctic Oils	25-9-85	8000 yd	Gravel	Cameron Isl	N84Q090
85/81	Lloyd Hansen	2-10-85	1500 yd	Gravel	Mile 21 Hwy 5	N85Q436
85/82	Lloyd Hansen	2-10-85	1000 yd	Gravel	Mile 19.7 Hwy 5	N85Q437
85/83	Nahanni Air Serv. Ltd	4-10-85	1,000 yd ³	Sand Gravel clay mix	N. Wells	N85Q435
85/84	Echo Bay	15-10-85	22,500 yd	Gravel	Kingsbury RD Various loc.	N83F941
85/85	GNWT - DPW - HIGHWAYS	21-10-85	50,000 m ³	Gravel	Km 521 Hwy #1	N85Q418
85/86	Aljon Holdings	12-10-85	2000 cuyd	Gravel	Mile 11.5 Hwy 5	N83Q984
85/87	Chet Const.	22-10-85	2000 cuyd	Gravel	Mile 12. Hwy 5	N85Q445

APPENDIX E

**Granular Resource Usage Database files, NWT and Yukon,
Land Use / Quarry Permit Database Management Program files
(On 3.5" flexible diskette)**