

# **Aggregate Resource Inventory in the Local Government District of Piney**

by G.L.D. Matile

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**Manitoba**  
**Energy and Mines**  
Mines Branch



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Aggregate Report AR94-2

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Winnipeg, 1994

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Energy and Mines

Mines Branch

Hon. Donald W. Orchard  
Minister

Art Ball  
Director

G. Barnes  
A/Deputy Minister

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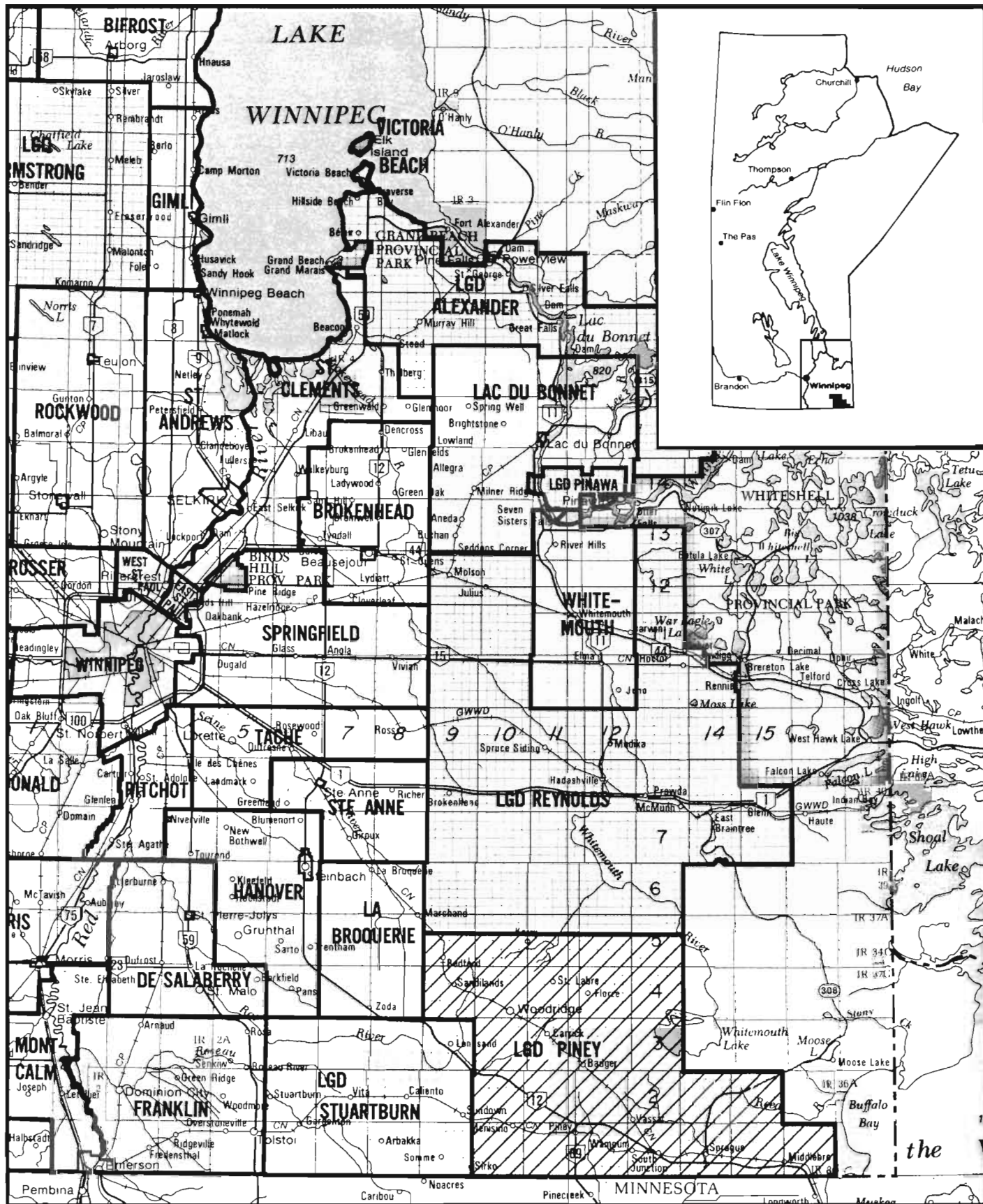


Figure 1: Location map.

## INTRODUCTION

### OBJECTIVES

An aggregate inventory was carried out in the Local Government District of Piney during the summers of 1988 to 1991. The objectives were to delineate sand and gravel deposits at a scale of 1:50 000 and to estimate the quantity and quality of material in each deposit. The aggregate inventory would then provide a database for land-use planning and potential resource users.

### LOCATION AND ACCESS

The Local Government District of Piney is located 88 km southeast of Winnipeg via P.T.H. 1 and 12 (Fig. 1). It comprises 25 townships (2330 km<sup>2</sup>), including: twp. 1, rges. 10-16E; twp. 2, rges. 10-15E; twp. 3, rges. 10-13E; twp. 4, rges. 9-13E; and the southern two-thirds of twp. 5, rges. 9-13E. The Buffalo Point Indian Reserve, which is in the southern portion of twp. 1, rge. 17E, is also included in this inventory. The map area is included in NTS areas 52E/3, 52E/4, 52E/5, 62H/1 and 62H/8. The area of the L.G.D. of Piney encompasses the Cat Hills and a part of the Sandilands and Northwest Angle Provincial Forests. The Watson P. Davidson Wildlife Management Area is located in the eastern portion of twps. 4-5, rge. 9E.

A network of provincial trunk highways, provincial roads and section roads provide access to much of the populated areas, while fire roads and trails provide additional access within the forest reserves. However, vast undeveloped areas, commonly swamp, are mostly inaccessible. P.T.H. 12 and P.R. 201, 203, 210, 308, 310, 402 and 404 provide good access between all major centres. Section roads and fire roads would require upgrading to accommodate truck traffic transporting aggregate.

### PHYSIOGRAPHY

The L.G.D. of Piney is located within the southeastern extreme of the Manitoba Lowlands. The area is dominated by the Bedford Hills, a sandy upland that rises to an elevation of 395 m, more than 80 m above the surrounding plain. A gently rolling till plain flanks the Bedford Hills. The low areas are generally occupied by large swamps, including the St. Labre, Sprague and Sundown Bogs.

The depth to bedrock decreases from in excess of 120 m in the western portion of the area in the Bedford Hills to less than 30 m in the east (Teller *et al.*, 1976).

The southwestern half of the area is within the Red River watershed; the northeastern half is within the Winnipeg River watershed. The area within the Red River watershed drains south via Sprague and Pine creeks, and west along the Rat River. Water within the Winnipeg River water-

shed flows north via the Whitemouth River and its tributaries.

### METHODOLOGY

Potential aggregate deposits were delineated on 1:50 000 scale airphotos, incorporating the following data: interpretation of black and white aerial photographs at scales of 1:50 000 and 1:15 840; pit inventory files from the Manitoba Department of Highways and Transportation; and soil maps (Smith and Ehrlich, 1964).

Field investigation was conducted over several summers, concluding in 1991. All existing exposures, including gravel pits and road cuts, were visited and samples were collected from deposits considered have economic value. Sites interpreted to have unproven aggregate potential were tested with a backhoe in the latter portion of the field season.

Gravel samples were processed in two stages<sup>1</sup>. In the first stage, which was conducted at the sampling sites, the material retained on 76 mm (3 inches), 38 mm (1 1/2 inches) and 19 mm (3/4 inches) screens was weighed and a representative sample ( $\approx 1$  kg) of the material that passed the 19 mm screen was collected. In the second stage, the minus 19 mm material was screened through 11 sieves, each separately weighed (Fig. 2), and a percentage retained was calculated for each size fraction.

This two-stage procedure was developed to overcome sampling deficiencies in sediments with an abundance of material coarser than 19 mm, ensuring that there was sufficient material in the coarser size fractions to maintain the samples' statistical validity (American Society for Testing and Materials, 1987, see specification **ASTM D75-82**). This procedure made it feasible to take samples in excess of 150 kg where necessary.

During the field processing of the gravel sample, a petrographic analysis of the 19-38 mm pebble fraction was carried out to determine the materials' suitability for aggregate. The pebbles were divided into 25 rock types and four quality classifications, from which percentages of good, fair, poor and deleterious pebbles were determined. Shale, which is a deleterious constituent of many sand and gravel deposits in agro-Manitoba, was calculated as a weight percentage. A summary of these results is presented in Appendix I.

Field data and aggregate deposit boundaries were plotted on 1:50 000 scale airphotos and these were used to produce the final maps (Maps AR94-2-1 to AR94-2-4, in pocket).

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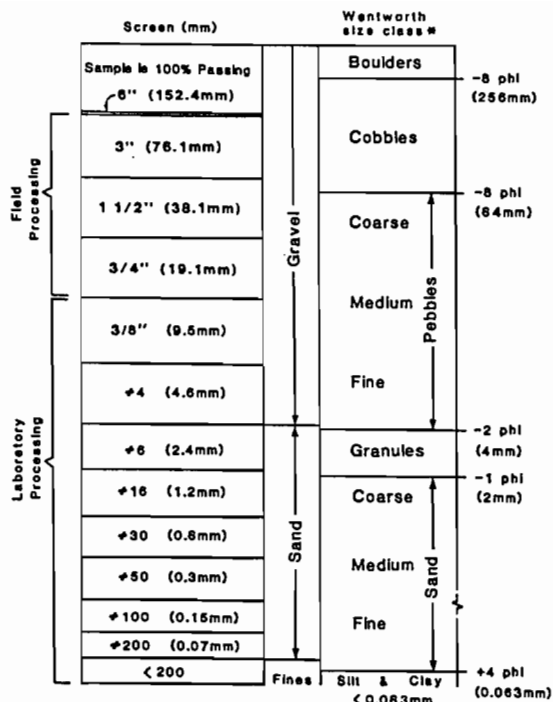
1 The maximum grain size sampled was 152 mm (6 inches).

## PREVIOUS WORK

Much of the L.G.D. of Piney had been mapped prior to this study and, where possible, this information has been integrated into this study. Smith and Ehrlich (1964) mapped the surface deposits as part of a regional soil survey covering the southeastern corner of Manitoba. Many deposits and pits have been tested by the Materials and Research Branch of the Manitoba Department of Highways and Transportation. Preliminary studies by Ringrose *et al.* (1977a, 1977b) and Large (1978a, 1978b, 1978c, 1978d) covered the entire area at a scale of 1:50 000. The Sandilands Provincial Forest was included in an aggregate industry study that examined supply and demand of various qualities of aggregate within the Winnipeg market area (Underwood McLellan and Associates, 1976).

## ACKNOWLEDGEMENTS

Ed Kostyniuk and Carole Tetreault provided able field assistance. Genevieve Corbil drafted the map under the supervision of Ed Truman.



\* modified from Folk, 1974

Figure 2: Grain size analysis and classification.

## BEDROCK GEOLOGY

Most of the L.G.D. of Piney is underlain by rocks of the Precambrian Shield. These are predominantly granitic and mafic metavolcanic rocks of the Wabigoon Domain, which is part of the Superior Structural Province (Manitoba Mines, Resources and Environmental Management, 1979).

The Ordovician Winnipeg and Red River formations and the Jurassic Amaranth Formation subcrop along the western part of the area. The Winnipeg Formation subcrop belt strikes north-south along rges. 9E and 10E. This belt is approximately 2 km wide and is composed predominantly of quartzose sandstone and shale. The overlying Red River

Formation subcrops to the west of the Winnipeg Formation and is predominantly composed of mottled dolomitic limestone, commonly known as *Tyndall stone*.

The Jurassic Amaranth Formation subcrops in twps. 2 and 3, rges. 10-12E. This sedimentary sequence comprises an east-west trending outlier of Jurassic rocks known as the *Dominion City Channel*, which infills a channel cut into Ordovician rocks of the Winnipeg and Red River formations. The Amaranth Formation is composed of red argillaceous siltstone and sandstone overlain by evaporites (gypsum and anhydrite) (Manitoba Energy and Mines, 1990).

## LATE WISCONSINAN HISTORY

Two major glacial ice lobes, the Rainy and Red River lobes, affected southeastern Manitoba during the Late Wisconsinan. These ice lobes deposited unsorted debris generally at the base of the ice (*till*) and sorted debris along meltwater channels within the ice or near the ice margin (*glaciofluvial sand and gravel*). The glaciofluvial sand and gravel is the major source of aggregate in southeastern Manitoba (see Map AR94-2-1 to AR94-2-4).

The Rainy lobe advanced from the northeast to an unknown point in southern Manitoba and deposited the Senkiw till, in which the pebble size fraction is predominantly com-

posed of Precambrian clasts, and its eastern equivalent, the Whiteshell till. The Rainy lobe advanced at least as far as the town of Senkiw, where the Senkiw till is exposed in sections along the Roseau River (Teller and Fenton, 1980).

During its retreat the Rainy lobe stabilized in the vicinity of the Bedford Hills, where it was met by the advancing Red River lobe, which had advanced from the northwest and deposited carbonate-rich till. Between these two ice sheets the Bedford Hills interlobate moraine was built by glacial meltwater that flowed southward into a predecessor of glacial Lake Agassiz (Teller and Fenton, 1980). Multiple



advances of the Red River lobe are recorded in the Roseau River sections as described by Fenton (1974).

About 13 000 years ago, during the retreat of these two ice lobes, numerous ice marginal lakes merged to form Lake Agassiz. In the deep water of the lake, clay was deposited, while along the shore, beach ridges composed of sand and gravel were being built. These beach ridges are also an important source of aggregate in southeastern Manitoba (see Map AR94-2-1 to AR94-2-4).

The history of Lake Agassiz is complex due to ice advances into the lake and numerous inlets and outlets that controlled the lake level. Each lake level is recorded by a

developed shoreline, commonly defined by beach ridges, although many have been destroyed by subsequent events in the lake. Drumlinoid ridges, straight glacial ridges commonly composed of sand and gravel, attest to a late glacial advance of the Red River lobe into Lake Agassiz. The Bedford Hills moraine was almost entirely surrounded by glacial ice at that time, but not overridden (Matile, 1991). Shortly after the retreat of this ice, the Bedford Hills would have become an island within Lake Agassiz. Drainage of Lake Agassiz from southeastern Manitoba occurred around 8500 years BP.

## AGGREGATE RESOURCES

Aggregate reserves have been calculated on a per-quarter-section basis, taking into account proven depths and the amount of depletion and sterilization. Sample and deposit quality were established using the guidelines shown in Figure 3.

Deposit reserves, exposure information, and gravel sample data including grain size distribution and petrographic analysis are found in Appendix I. This information correlates to the aggregate map by deposit number, exposure number, and legal description. The lithology of the gravel fraction of aggregate samples in the municipality is approximately 70% carbonate (Paleozoic) clasts and 30%

crystalline (Precambrian) clasts. However, several deposits in the area (deposits 1004, 1011, 1012, 1026 and 1077) are rich in Precambrian clasts. Shale and other deleterious lithologies are rare.

Pits within deposits 1026 and 1082 are perennially the most productive in the area. Highway upgrading and repair is the largest use of aggregate in the area. Mining activity within the L.G.D. of Piney is otherwise very limited due to the large distance to major aggregate markets. Several small pits produce aggregate on an intermittent basis for local consumption.

	Criteria	HIGH	MEDIUM	LOW
AGGREGATE QUALITY	Stone %	>30	15-30	0-15
	Sand %	0-35	35-70	>70
	Mud %	0-7	7-17	>17
	Shale %	0-5	5-12	>12
	Other Deleterious	low	medium	high
	Thickness	>5 m	2-5 m	0-2 m
	Uniformity	high	medium	low
DEPOSIT DEVELOPMENT POTENTIAL	Aggregate Quality	high	medium	low
	Crushable	abundant	moderate	minor
	Overburden	<2 m	2-4 m	>4 m
	Binder	yes	minor	none
	Water Table	>5 m	2-5 m	0-2 m
	Geological Potential	good	moderate	low
	Verification	proven	limited	untested
	Local Access	0-1 km	1-5 km	>5 km
	Quarrying Status	active	intermittent	inactive
	Transportation Diff.	high	medium	low
	Planning Constraints	none	conditional	sterilized
	Speciality Material	yes		no
	Aggregate Substitute	none	marginal	proximal

Figure 3: Aggregate quality and development potential guidelines. **Note:** These guidelines are an attempt to classify deposits in a broad spectrum of areas throughout Manitoba. Importance of individual criteria varies greatly depending on availability of aggregate within each region.

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**APPENDIX I**  
**DEPOSIT RESERVES AND EXPOSURE INFORMATION (INCLUDING GRAIN SIZE DISTRIBUTION AND**  
**PETROGRAPHIC ANALYSIS OF GRAVEL SAMPLES)**

**DEPOSIT # 001001** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001002** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001003** (McCAULEYVILLE SPIT)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001004A** (GLACIOFLUVIAL SAND AND GRAVEL)

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-06-001-17E	20	266400	CROWN(FEDERAL)/CROWN	
NW-06-001-17E	80	11400	CROWN(FEDERAL)/CROWN	
SE-07-001-17E	0	176000	CROWN(FEDERAL)/CROWN	
SW-07-001-17E	0	65000	CROWN(FEDERAL)/CROWN	
DEPOSIT RESERVES		518800		

**DEPOSIT # 001004B** (GRAVEL RIDGE)

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
SE-07-001-17E	80	54000	CROWN(FEDERAL)/CROWN	
DEPOSIT RESERVES		54000		

**EXPOSURE INFORMATION**

EXPOSURE #:	LM084 (SE-07-001-17E)	VISITED:	8905
EXPOSURE TYPE:	SAND AND GRAVEL PIT	LAND USE:	ACTIVE PIT
		SURROUNDING LAND USE:	FOREST NATURAL
ECONOMIC THICKNESS:	4.0 METRES	ESTIMATED STONE CONTENT:	MEDIUM
SECTION:	A	MATERIAL DESCRIPTION:	SANDY COBBLY COARSE PEBBLE GRAVEL
SECTION HEIGHT:	4.0 M.	DEPTH TO WATER TABLE:	
HEIGHT SAMPLED:	3.0 M.	OVERBURDEN THICKNESS:	0.2 M.
MATERIAL AT BASE:	SAND AND GRAVEL		

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM084 A (SE-07-001-17E)	94	83	71	64	57	49	37	22	9	4	2	MODERATE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM084 A	78	12	10	0	0	

**DEPOSIT # 001005A** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001005B** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001006** (PREDOMINANTLY DEPLETED)

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NW-07-001-16E	30	46200	PRIVATE/PRIVATE	
NW-18-001-16E	90	15400	PRIVATE/PRIVATE	
SW-18-001-16E	90	16000	PRIVATE/PRIVATE	
NW-19-001-16E	70	34200	CROWN(PROVINCIAL)/CROWN	
SW-19-001-16E	60	205600	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		317400		

**EXPOSURE INFORMATION**

EXPOSURE #: LM086 (SW-18-001-16E)	VISITED: 8905
EXPOSURE TYPE: SAND AND GRAVEL PIT	LAND USE: GARBAGE DUMP-AUTHORIZED,ACTIVE
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 2.5 METRES	ESTIMATED STONE CONTENT: MEDIUM
SECTION: A	MATERIAL DESCRIPTION: SANDY FINE PEBBLY GRAVEL
SECTION HEIGHT: 6.0 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 0.0 M.	OVERBURDEN THICKNESS: 0.2 M.
MATERIAL AT BASE: SAND	
NO CHANNEL SAMPLE TAKEN	

EXPOSURE #: LM087 (SW-18-001-16E) VISITED: 8905  
 EXPOSURE TYPE: BULLDOZER TEST PIT LAND USE: FOREST NATURAL  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 2.5 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: SANDY FINE PEBBLY GRAVEL  
 SECTION HEIGHT: 1.5 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 1.5 M. OVERBURDEN THICKNESS: 0.2 M.  
 MATERIAL AT BASE: SAND AND GRAVEL  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

#### SIEVE ANALYSIS

	PERCENT PASSING											
	OVERSIZED											
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	(PLUS 6")
LM087 A (SW-18-001-16E)	100	100	100	95	89	82	66	38	19	3	2	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

#### PETROGRAPHIC ANALYSIS

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM087 A	50	50	0	0	0	

**DEPOSIT # 001007** (NO ACCESS)  
 (NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001008A** (GLACIOFLUVIAL SAND)  
 (NO ECONOMIC AGGREGATE RESERVES PROVEN)

#### EXPOSURE INFORMATION

EXPOSURE #: LM198 (NW-17-001-15E) VISITED: 8907  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: AGRICULTURE,HAYING  
 ECONOMIC THICKNESS: 0.5 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL  
 SECTION HEIGHT: 3.0 M. DEPTH TO WATER TABLE: 3.0 M.  
 HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 0.2 M.  
 MATERIAL AT BASE: TILL  
 NO CHANNEL SAMPLE TAKEN

**DEPOSIT # 001008B** (GLACIOFLUVIAL SAND)  
 (NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001008C (GLACIOFLUVIAL SAND AND GRAVEL)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
SE-13-001-14E	40	33600	PRIVATE/PRIVATE	
	DEPOSIT RESERVES	33600		

**EXPOSURE INFORMATION**

EXPOSURE #: LM090 (SE-13-001-14E)	VISITED: 8905
EXPOSURE TYPE: SAND AND GRAVEL PIT	LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)
	SURROUNDING LAND USE: AGRICULTURE,HAYING
ECONOMIC THICKNESS: 2.0 METRES	ESTIMATED STONE CONTENT: MEDIUM
SECTION: A	MATERIAL DESCRIPTION: SANDY COBBLY PEBBLY GRAVEL
SECTION HEIGHT: 2.0 M.	DEPTH TO WATER TABLE: 2.5 M.
HEIGHT SAMPLED: 1.3 M.	OVERBURDEN THICKNESS: 0.4 M.
MATERIAL AT BASE: SAND	
SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS	

**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM090 A (SE-13-001-14E)	100	99	95	90	85	78	67	42	11	4	2	MODERATE
(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)												

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM090 A	53	45	3	0	0	

**DEPOSIT # 001009A (LESS SANDY EASTWARD)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-13-001-14E	50	53500	PRIVATE/PRIVATE	
SE-24-001-14E	0	6000	PRIVATE/PRIVATE	
NE-17-001-15E	0	20000	CROWN(PROVINCIAL)/CROWN	
NW-17-001-15E	0	210000	PRIVATE/PRIVATE	
NE-18-001-15E	0	246000	PRIVATE/PRIVATE	
NW-18-001-15E	20	108800	PRIVATE/PRIVATE	
SE-19-001-15E	0	130000	PRIVATE/PRIVATE	
SW-19-001-15E	0	149000	PRIVATE/PRIVATE	
	DEPOSIT RESERVES	923300		

**EXPOSURE INFORMATION**

EXPOSURE #: LM045 (NE-17-001-15E) VISITED: 8808  
 EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: SURFACE EASEMENT (OTHER THAN ROADWAY)  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 2.7 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
 SECTION HEIGHT: 2.7 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 2.7 M. OVERBURDEN THICKNESS: 0.2 M.  
 MATERIAL AT BASE: SAND AND GRAVEL  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM089 (NW-18-001-15E) VISITED: 8905  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: ACTIVE PIT  
 SURROUNDING LAND USE: AGRICULTURE, HAYING  
 ECONOMIC THICKNESS: 3.0 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
 SECTION HEIGHT: 4.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 2.0 M. OVERBURDEN THICKNESS: 0.3 M.  
 MATERIAL AT BASE: SAND  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM219 (NW-18-001-15E) VISITED: 8908  
 EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: HIGHWAY, ROADWAY, RAILWAY  
 SURROUNDING LAND USE: AGRICULTURE, HAYING  
 ECONOMIC THICKNESS: 1.5 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
 SECTION HEIGHT: 2.7 M. DEPTH TO WATER TABLE: 2.0 M.  
 HEIGHT SAMPLED: 1.5 M. OVERBURDEN THICKNESS: 0.0 M.  
 MATERIAL AT BASE: SAND  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM045 A (NE-17-001-15E)	100	100	97	86	80	71	25	7	2	2	1	SPARSE
LM089 A (NW-18-001-15E)	100	99	91	76	64	50	36	20	5	1	0	SPARSE
LM219 A (NW-18-001-15E)	100	99	91	82	65	42	20	12	10	6	3	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	%	%	%	%	% SHALE	COMMENTS
	GOOD	FAIR	POOR	DELETERIOUS	(BY WEIGHT)	
LM089 A	83	15	2	0	0	
LM219 A	68	30	2	0	0	

**DEPOSIT # 001009B (MOSTLY DEPLETED)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-20-001-15E	90	4650	CROWN(PROVINCIAL)/CROWN	
NW-21-001-15E	30	11550	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		16200		

**EXPOSURE INFORMATION**

EXPOSURE #: LM046 (NE-20-001-15E) VISITED: 8808  
EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: PIT-TEMPORARY USE  
SURROUNDING LAND USE: FOREST NATURAL  
ECONOMIC THICKNESS: 1.8 METRES ESTIMATED STONE CONTENT: MEDIUM  
SECTION: A MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
SECTION HEIGHT: 4.5 M. DEPTH TO WATER TABLE:  
HEIGHT SAMPLED: 2.7 M. OVERBURDEN THICKNESS: 0.2 M.  
MATERIAL AT BASE: CLAY  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

**SIEVE ANALYSIS**

	PERCENT PASSING											
	OVERSIZED											
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	(PLUS 6")
LM046 A (NE-20-001-15E)	100	92	82	74	67	59	49	30	14	3	2	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**DEPOSIT # 001010**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
SW-05-001-15E	0	19500	CROWN(PROVINCIAL)/CROWN	
SE-06-001-15E	60	46200	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		65700		

**EXPOSURE INFORMATION**

EXPOSURE #: LM088 (SE-06-001-15E) VISITED: 8905  
EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: ACTIVE PIT  
SURROUNDING LAND USE: AGRICULTURE,HAYING  
ECONOMIC THICKNESS: 1.5 METRES ESTIMATED STONE CONTENT: MEDIUM  
SECTION: A MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
SECTION HEIGHT: 2.0 M. DEPTH TO WATER TABLE:  
HEIGHT SAMPLED: 1.5 M. OVERBURDEN THICKNESS: 0.2 M.  
MATERIAL AT BASE: TILL  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**



**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM088 A (SE-06-001-15E)	100	99	95	76	58	46	29	16	7	3	2	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM088 A	77	18	5	0	0	

**DEPOSIT # 001011 (DRUMLINOID RIDGE)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NW-01-001-14E	60	15400	PRIVATE/PRIVATE	
NE-02-001-14E	80	32100	PRIVATE/PRIVATE	
SE-02-001-14E	20	82800	PRIVATE/PRIVATE	
DEPOSIT RESERVES		130300		

**EXPOSURE INFORMATION**

EXPOSURE #: LM091 (NE-02-001-14E) VISITED: 8905  
EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
SURROUNDING LAND USE: FOREST NATURAL  
ECONOMIC THICKNESS: 3.5 METRES ESTIMATED STONE CONTENT: MEDIUM  
SECTION: A MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL  
SECTION HEIGHT: 4.0 M. DEPTH TO WATER TABLE: 4.0 M.  
HEIGHT SAMPLED: 2.0 M. OVERBURDEN THICKNESS: 0.4 M.  
MATERIAL AT BASE: SAND AND GRAVEL  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM220 (NE-02-001-14E) VISITED: 8908  
EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: HIGHWAY,ROADWAY,RAILWAY  
SURROUNDING LAND USE: AGRICULTURE,HAYING  
ECONOMIC THICKNESS: 2.0 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
SECTION: A MATERIAL DESCRIPTION: PEBBLY COBBLY SAND  
SECTION HEIGHT: 5.0 M. DEPTH TO WATER TABLE: 5.0 M.  
HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 3.0 M.  
MATERIAL AT BASE: SAME AS IN PIT WALL  
NO CHANNEL SAMPLE TAKEN

EXPOSURE #: LM221 (NE-02-001-14E) VISITED: 8908  
 EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: HIGHWAY,ROADWAY,RAILWAY  
 SURROUNDING LAND USE: AGRICULTURE,HAYING  
 ECONOMIC THICKNESS: 0.0 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
 SECTION HEIGHT: 4.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 1.0 M. OVERBURDEN THICKNESS: 3.0 M.  
 MATERIAL AT BASE: SAME AS IN PIT WALL  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM222 (NE-02-001-14E) VISITED: 8908  
 EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: AGRICULTURE,HAYING  
 SURROUNDING LAND USE: AGRICULTURE,HAYING  
 ECONOMIC THICKNESS: 2.0 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: FINE SAND WITH SPG LAYERS  
 SECTION HEIGHT: 4.5 M. DEPTH TO WATER TABLE: M.  
 HEIGHT SAMPLED: 2.0 M. OVERBURDEN THICKNESS: 0.5 M.  
 MATERIAL AT BASE: SAND  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

#### SIEVE ANALYSIS

		PERCENT PASSING											OVERSIZED (PLUS 6")
		3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM091	A (NE-02-001-14E)	100	96	91	81	70	57	42	25	8	3	2	MODERATE
LM221	A (NE-02-001-14E)	100	97	92	87	80	71	60	42	24	10	5	SPARSE
LM222	A (NE-02-001-14E)	100	98	93	86	80	74	65	55	35	13	5	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

#### PETROGRAPHIC ANALYSIS

SAMPLE		% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM091	A	66	32	2	0	0	
LM221	A	78	17	5	0	0	
LM222	A	74	21	5	0	0	

**DEPOSIT # 001012** (REQUIRES MORE TESTING)  
 (NO ECONOMIC AGGREGATE RESERVES PROVEN)

**EXPOSURE INFORMATION**

EXPOSURE #: G 683 (SE-11-001-14E)  
EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 0.0 METRES  
SECTION: A  
SECTION HEIGHT: 4.0 M.  
HEIGHT SAMPLED: 1.8 M.  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

VISITED: 8908  
LAND USE:  
SURROUNDING LAND USE:  
ESTIMATED STONE CONTENT: LOW  
MATERIAL DESCRIPTION: DIAMICT OVER COBBLY SAND  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 1.8 M.

EXPOSURE #: LM093 (SE-03-001-14E)  
EXPOSURE TYPE: BULLDOZER TEST PIT

ECONOMIC THICKNESS: 0.0 METRES  
SECTION: A  
SECTION HEIGHT: 2.5 M.  
HEIGHT SAMPLED: 0.0 M.  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

VISITED: 8906  
LAND USE: AGRICULTURE,HAYING  
SURROUNDING LAND USE: BUILDING SITE(PERMANENT)  
ESTIMATED STONE CONTENT: LOW  
MATERIAL DESCRIPTION: PEBBLY SAND  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 0.3 M.

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
G 683 A	80	13	7	0	0	

**DEPOSIT # 001013A (UPPER CAMPBELL)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NW-28-001-14E	0	13000	PRIVATE/PRIVATE	
NE-29-001-14E	0	2000	CROWN(PROVINCIAL)/CROWN	
SE-29-001-14E	0	4000	CROWN(MUNICIPAL)/CROWN	
DEPOSIT RESERVES		19000		

**EXPOSURE INFORMATION**

EXPOSURE #: LM223 (NE-29-001-14E)  
EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 2.1 METRES  
SECTION: A  
SECTION HEIGHT: 2.5 M.  
HEIGHT SAMPLED: 2.1 M.  
MATERIAL AT BASE: SAME AS IN PIT WALL

VISITED: 8908  
LAND USE: HIGHWAY,ROADWAY,RAILWAY  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: MEDIUM LOW  
MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
DEPTH TO WATER TABLE: 2.1 M.  
OVERBURDEN THICKNESS: 0.2 M.

SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS

**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM223 A (NE-29-001-14E)	100	100	95	91	85	78	67	49	10	2	1	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM223 A	74	26	0	0	0	

**DEPOSIT # 001013B (UPPER CAMPBELL)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NW-28-001-14E	30	108150	PRIVATE/PRIVATE	
NE-29-001-14E	0	16500	CROWN(PROVINCIAL)/CROWN	
NE-33-001-14E	50	42750	PRIVATE/PRIVATE	
SE-33-001-14E	0	81000	PRIVATE/PRIVATE	
SW-33-001-14E	30	52500	PRIVATE/PRIVATE	
NW-34-001-14E	20	80400	PRIVATE/PRIVATE	
SW-03-002-14E	0	31500	PRIVATE/PRIVATE	
DEPOSIT RESERVES		412800		

**EXPOSURE INFORMATION**

EXPOSURE #: LM081 (NE-33-001-14E) VISITED: 8905  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-TEMPORARY USE  
 SURROUNDING LAND USE: AGRICULTURE,HAYING  
 ECONOMIC THICKNESS: 1.5 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
 SECTION HEIGHT: 2.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 1.5 M. OVERBURDEN THICKNESS: 0.3 M.  
 MATERIAL AT BASE: SILT  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM105 (NW-28-001-14E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 2.0 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
 SECTION HEIGHT: 2.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 1.3 M. OVERBURDEN THICKNESS: 0.5 M.  
 MATERIAL AT BASE: SAND  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM081 A (NE-33-001-14E)	100	100	100	98	93	85	70	47	15	6	4	SPARSE
LM105 A (NW-28-001-14E)	100	99	95	90	83	74	62	42	16	1	1	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM081 A	50	50	0	0	0	
LM105 A	62	38	0	0	0	

**DEPOSIT # 001013C (VERY SANDY)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-03-002-14E	0	1000	PRIVATE/PRIVATE	
NW-03-002-14E	0	2000	PRIVATE/PRIVATE	
NE-10-002-14E	50	13000	PRIVATE/PRIVATE	
NW-10-002-14E	20	65200	PRIVATE/PRIVATE	
SE-10-002-14E	20	13200	PRIVATE/PRIVATE	
SW-10-002-14E	0	65000	PRIVATE/PRIVATE	
NE-15-002-14E	60	7600	PRIVATE/PRIVATE	
SE-15-002-14E	70	28200	PRIVATE/PRIVATE	
SW-15-002-14E	0	8500	PRIVATE/PRIVATE	
DEPOSIT RESERVES		203700		

**EXPOSURE INFORMATION**

EXPOSURE #: LM080 (NW-10-002-14E) VISITED: 8905  
 EXPOSURE TYPE: DITCH OR ROAD CUT LAND USE: HIGHWAY,ROADWAY,RAILWAY  
 SURROUNDING LAND USE: AGRICULTURE,HAYING  
 ECONOMIC THICKNESS: 2.5 METRES ESTIMATED STONE CONTENT: LOW  
 SECTION: A MATERIAL DESCRIPTION: PEBBLY SAND  
 SECTION HEIGHT: 2.5 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 1.0 M. OVERBURDEN THICKNESS: 0.2 M.  
 MATERIAL AT BASE: SAND AND GRAVEL  
 SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS

**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM080 A (NW-10-002-14E)	100	100	99	99	96	91	85	69	45	7	1	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM080 A	81	19	0	0	0	

**DEPOSIT # 001013D (VERY SANDY)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-24-002-14E	0	27000	PRIVATE/PRIVATE	
NW-24-002-14E	0	50000	PRIVATE/PRIVATE	
SE-24-002-14E	70	37200	PRIVATE/PRIVATE	
SW-24-002-14E	50	38500	PRIVATE/PRIVATE	
NE-19-002-15E	0	29000	PRIVATE/PRIVATE	
NW-19-002-15E	0	8000	PRIVATE/PRIVATE	
SE-19-002-15E	50	109000	CROWN(PROVINCIAL)/CROWN	
SW-19-002-15E	50	82500	PRIVATE/PRIVATE	
NW-20-002-15E	80	12200	PRIVATE/PRIVATE	
SW-20-002-15E	90	4000	PRIVATE/PRIVATE	
DEPOSIT RESERVES		397400		

**EXPOSURE INFORMATION**

EXPOSURE #: LM078 (SW-20-002-15E) VISITED: 8905  
EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-TEMPORARY USE  
SURROUNDING LAND USE: HIGHWAY,ROADWAY,RAILWAY  
ECONOMIC THICKNESS: 2.0 METRES ESTIMATED STONE CONTENT: MEDIUM  
SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
SECTION HEIGHT: 2.0 M. DEPTH TO WATER TABLE:  
HEIGHT SAMPLED: 1.5 M. OVERBURDEN THICKNESS: 0.3 M.  
MATERIAL AT BASE: SAND AND GRAVEL  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM199 (SW-19-002-15E) VISITED: 8906  
EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
SURROUNDING LAND USE: HIGHWAY,ROADWAY,RAILWAY  
ECONOMIC THICKNESS: 1.0 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
SECTION: A MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
SECTION HEIGHT: 1.0 M. DEPTH TO WATER TABLE:  
HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 0.2 M.  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	(PLUS 6")
LM078 A (SW-20-002-15E)	100	100	97	83	59	36	26	19	10	3	3	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM078 A	51	47	1	0	0	

**DEPOSIT # 001013E (VERY SANDY)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-20-002-15E	80	20000	PRIVATE/PRIVATE	
NW-20-002-15E	80	1200	PRIVATE/PRIVATE	
NW-21-002-15E	80	1600	PRIVATE/PRIVATE	
NE-27-002-15E	80	13400	PRIVATE/PRIVATE	
NW-27-002-15E	70	28800	PRIVATE/PRIVATE	
NE-28-002-15E	70	5700	PRIVATE/PRIVATE	
SE-28-002-15E	70	24600	PRIVATE/PRIVATE	
SW-28-002-15E	70	23100	PRIVATE/PRIVATE	
SE-34-002-15E	70	9300	PRIVATE/PRIVATE	
NE-35-002-15E	70	26400	PRIVATE/PRIVATE	
SE-35-002-15E	70	8100	PRIVATE/PRIVATE	
SW-35-002-15E	70	34500	PRIVATE/PRIVATE	
NW-36-002-15E	70	42000	PRIVATE/PRIVATE	
DEPOSIT RESERVES		238700		

**EXPOSURE INFORMATION**

EXPOSURE #: LM079 (SW-01-003-15E)	VISITED: 8905
EXPOSURE TYPE: DITCH OR ROAD CUT	LAND USE: FOREST NATURAL
	SURROUNDING LAND USE: HIGHWAY,ROADWAY,RAILWAY
ECONOMIC THICKNESS: 2.0 METRES	ESTIMATED STONE CONTENT: MEDIUM
SECTION: A	MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL
SECTION HEIGHT: 2.0 M.	DEPTH TO WATER TABLE: 2.5 M.
HEIGHT SAMPLED: 1.5 M.	OVERBURDEN THICKNESS: 0.3 M.
MATERIAL AT BASE: SAND AND GRAVEL	
SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS	

**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM079 A (SW-01-003-15E)	100	99	94	85	69	50	34	20	6	2	1	SPARSE

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM079 A	87	9	4	0	0	

**DEPOSIT # 001014**

(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**EXPOSURE INFORMATION**

EXPOSURE #: LM094 (NW-21-001-14E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 0.0 METRES ESTIMATED STONE CONTENT: LOW  
 SECTION: A MATERIAL DESCRIPTION: TILL OVER SAND (MINOR GRAVEL LAYERS)  
 SECTION HEIGHT: 4.5 M. DEPTH TO WATER TABLE: 4.5 M.  
 HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 2.5 M.  
 MATERIAL AT BASE: SAND  
 NO CHANNEL SAMPLE TAKEN

SECTION: B MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
 SECTION HEIGHT: 4.0 M. DEPTH TO WATER TABLE: 4.5 M.  
 HEIGHT SAMPLED: 1.5 M. OVERBURDEN THICKNESS: 0.3 M.  
 MATERIAL AT BASE: SAME AS IN PIT WALL

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS****SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM094 B (NW-21-001-14E)	100	100	96	87	72	56	37	19	10	5	3	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM094 B	64	35	1	0	0	

**DEPOSIT # 001015 (GLACIOFLUVIAL SAND)**

(NO ECONOMIC AGGREGATE RESERVES PROVEN)



**DEPOSIT # 001016**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NW-25-002-14E	70	20400	CROWN(PROVINCIAL)/CROWN	
NE-26-002-14E	50	73000	PRIVATE/PRIVATE	
SW-36-002-14E	20	83200	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		176600		

**EXPOSURE INFORMATION**

EXPOSURE #: LM076 (NW-25-002-14E) VISITED: 8905  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-TEMPORARY USE  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 1.5 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL  
 SECTION HEIGHT: 1.5 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 1.4 M. OVERBURDEN THICKNESS: 0.1 M.  
 MATERIAL AT BASE: GRAVEL  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM077 (NE-26-002-14E) VISITED: 8905  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-TEMPORARY USE  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 2.5 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL  
 SECTION HEIGHT: 2.5 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 1.5 M. OVERBURDEN THICKNESS: 0.3 M.  
 MATERIAL AT BASE: SAND  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

SECTION: B MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL  
 SECTION HEIGHT: 2.0 M. DEPTH TO WATER TABLE: 3.0 M.  
 HEIGHT SAMPLED: 1.5 M. OVERBURDEN THICKNESS: 0.3 M.  
 MATERIAL AT BASE:  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

**SIEVE ANALYSIS**

		PERCENT PASSING											OVERSIZED (PLUS 6")
		3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM076	A (NW-25-002-14E)	100	97	90	79	64	51	38	21	7	2	1	SPARSE
LM077	A (NE-26-002-14E)	99	97	88	79	68	55	41	26	10	3	2	SPARSE
LM077	B (NE-26-002-14E)	99	97	92	84	69	48	23	10	5	3	2	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM076 A	74	21	4	0	0	
LM077 A	63	34	3	0	0	
LM077 B	28	66	7	0	0	

**DEPOSIT # 001017A** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001017B** (GLACIOFLUVIAL SAND AND GRAVEL)

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NW-12-001-13E	20	160800	PRIVATE/PRIVATE	
SE-13-001-13E	80	12600	PRIVATE/PRIVATE	
SW-13-001-13E	50	7500	PRIVATE/PRIVATE	
DEPOSIT RESERVES		180900		

**EXPOSURE INFORMATION**

EXPOSURE #: LM107 (SW-13-001-13E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: HIGHWAY,ROADWAY,RAILWAY  
 ECONOMIC THICKNESS: 1.5 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL OCC. COBBLE  
 SECTION HEIGHT: 2.0 M. DEPTH TO WATER TABLE: 2.0 M.  
 HEIGHT SAMPLED: 1.3 M. OVERBURDEN THICKNESS: 0.5 M.  
 MATERIAL AT BASE: SAND AND GRAVEL  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM224 (NW-12-001-13E) VISITED: 8908  
 EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: HIGHWAY,ROADWAY,RAILWAY  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 2.0 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
 SECTION HEIGHT: 3.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 2.0 M. OVERBURDEN THICKNESS: 0.0 M.  
 MATERIAL AT BASE: SAND  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM107 A (SW-13-001-13E)	100	98	92	88	77	62	37	14	7	4	3	SPARSE
LM224 A (NW-12-001-13E)	100	99	96	95	93	90	84	66	24	13	12	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM107 A	49	50	1	0	0	
LM224 A	59	41	0	0	0	

**DEPOSIT # 001018A** (VERY SANDY)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001018B** (ACTIVE NORTH OF HWY.12)

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-12-001-13E	60	174000	CROWN(PROVINCIAL)/CROWN	
SE-12-001-13E	0	182500	PRIVATE/PRIVATE	
SW-12-001-13E	0	105000	PRIVATE/PRIVATE	
SW-18-001-14E	0	6000	PRIVATE/PRIVATE	
DEPOSIT RESERVES		467500		

**EXPOSURE INFORMATION**

EXPOSURE #: LM108 (NE-12-001-13E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-TEMPORARY USE  
 SURROUNDING LAND USE: HIGHWAY,ROADWAY,RAILWAY  
 ECONOMIC THICKNESS: 3.0 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
 SECTION HEIGHT: 3.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 2.0 M. OVERBURDEN THICKNESS: 0.3 M.  
 MATERIAL AT BASE: SAND  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM108 A (NE-12-001-13E)	100	100	96	90	78	68	58	42	8	1	1	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM108 A	77	21	2	0	0	

**DEPOSIT # 001018C (REQUIRES TESTING)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-02-001-13E	0	46000	PRIVATE/PRIVATE	
NW-02-001-13E	0	26000	PRIVATE/PRIVATE	
SW-02-001-13E	20	171200	PRIVATE/PRIVATE	
SE-03-001-13E	0	104000	PRIVATE/PRIVATE	
DEPOSIT RESERVES		347200		

**EXPOSURE INFORMATION**

EXPOSURE #: LM109 (SE-03-001-13E)

VISITED: 8906

EXPOSURE TYPE: DITCH OR ROAD CUT

LAND USE: HIGHWAY,ROADWAY,RAILWAY

SURROUNDING LAND USE: AGRICULTURE,HAYING

ECONOMIC THICKNESS: 2.5 METRES

ESTIMATED STONE CONTENT: MEDIUM LOW

SECTION: A

MATERIAL DESCRIPTION: PEBBLY SAND

SECTION HEIGHT: 3.0 M.

DEPTH TO WATER TABLE:

HEIGHT SAMPLED: 0.0 M.

OVERBURDEN THICKNESS: 0.3 M.

MATERIAL AT BASE: SAND

NO CHANNEL SAMPLE TAKEN

**DEPOSIT # 001019A (GLACIOFLUVIAL SAND)**  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)**EXPOSURE INFORMATION**

EXPOSURE #: LM123 (NW-10-001-13E)

VISITED: 8906

EXPOSURE TYPE: BORROW PIT

LAND USE: FOREST NATURAL

SURROUNDING LAND USE: FOREST NATURAL

ECONOMIC THICKNESS: 0.0 METRES

ESTIMATED STONE CONTENT: LOW

SECTION: A

MATERIAL DESCRIPTION: SAND

SECTION HEIGHT: 6.0 M.

DEPTH TO WATER TABLE:

HEIGHT SAMPLED: 0.0 M.

OVERBURDEN THICKNESS: 6.0 M.

MATERIAL AT BASE: SAND

NO CHANNEL SAMPLE TAKEN

EXPOSURE #: LM125 (NE-16-001-13E)  
EXPOSURE TYPE: BORROW PIT

ECONOMIC THICKNESS: 0.0 METRES  
SECTION: A  
SECTION HEIGHT: 4.0 M.  
HEIGHT SAMPLED: 0.0 M.  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

VISITED: 8906  
LAND USE: FOREST NATURAL  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: LOW  
MATERIAL DESCRIPTION: SAND  
DEPTH TO WATER TABLE: 4.0 M.  
OVERBURDEN THICKNESS: 4.0 M.

EXPOSURE #: LM127 (NE-16-001-13E)  
EXPOSURE TYPE: BULLDOZER TEST PIT

ECONOMIC THICKNESS: 0.0 METRES  
SECTION: A  
SECTION HEIGHT: 3.0 M.  
HEIGHT SAMPLED: 0.0 M.  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

VISITED: 8906  
LAND USE: GARBAGE DUMP-AUTHORIZED,ACTIVE  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: LOW  
MATERIAL DESCRIPTION: SAND  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 3.0 M.

EXPOSURE #: LM141 (SW-18-002-13E)  
EXPOSURE TYPE: SAND AND GRAVEL PIT

ECONOMIC THICKNESS: 1.0 METRES  
SECTION: A  
SECTION HEIGHT: 2.0 M.  
HEIGHT SAMPLED: 0.0 M.  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

VISITED: 8906  
LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
SURROUNDING LAND USE: HIGHWAY,ROADWAY,RAILWAY  
ESTIMATED STONE CONTENT: MEDIUM LOW  
MATERIAL DESCRIPTION: PEBBLY SAND OVER FINE SAND  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 0.3 M.

EXPOSURE #: LM142 (SW-20-002-13E)  
EXPOSURE TYPE: SAND AND GRAVEL PIT

ECONOMIC THICKNESS: 1.5 METRES  
SECTION: A  
SECTION HEIGHT: 1.5 M.  
HEIGHT SAMPLED: 0.0 M.  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

VISITED: 8906  
LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: MEDIUM LOW  
MATERIAL DESCRIPTION: PEBBLY COBBLY SAND OVER SAND  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 0.3 M.

EXPOSURE #: LM200 (SE-18-001-13E)  
EXPOSURE TYPE: SAND AND GRAVEL PIT

ECONOMIC THICKNESS: 1.0 METRES  
SECTION: A  
SECTION HEIGHT: 1.5 M.  
HEIGHT SAMPLED: 0.0 M.  
MATERIAL AT BASE: TILL  
NO CHANNEL SAMPLE TAKEN

VISITED: 8907  
LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: MEDIUM  
MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 0.3 M.

EXPOSURE #: LM234 (NW-01-001-12E)  
EXPOSURE TYPE: BACKHOE TEST PIT  
  
ECONOMIC THICKNESS: 0.0 METRES  
SECTION: A  
SECTION HEIGHT: 4.0 M.  
HEIGHT SAMPLED: 0.0 M.  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

VISITED: 8908  
LAND USE: HIGHWAY,ROADWAY,RAILWAY  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: LOW  
MATERIAL DESCRIPTION: MEDIUM SAND  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 4.0 M.

EXPOSURE #: LM236 (NE-10-001-12E)  
EXPOSURE TYPE: BACKHOE TEST PIT  
  
ECONOMIC THICKNESS: 0.6 METRES  
SECTION: A  
SECTION HEIGHT: 4.0 M.  
HEIGHT SAMPLED: 0.0 M.  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

VISITED: 8908  
LAND USE: HIGHWAY,ROADWAY,RAILWAY  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: MEDIUM LOW  
MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL OVER SAND  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 0.2 M.

EXPOSURE #: LM237 (SW-14-001-12E)  
EXPOSURE TYPE: BACKHOE TEST PIT  
  
ECONOMIC THICKNESS: 0.5 METRES  
SECTION: A  
SECTION HEIGHT: 3.0 M.  
HEIGHT SAMPLED: 0.0 M.  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

VISITED: 8908  
LAND USE: HIGHWAY,ROADWAY,RAILWAY  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: MEDIUM  
MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 0.4 M.

EXPOSURE #: LM240 (SE-20-002-13E)  
EXPOSURE TYPE: BACKHOE TEST PIT  
  
ECONOMIC THICKNESS: 0.5 METRES  
SECTION: A  
  
SECTION HEIGHT: 2.4 M.  
HEIGHT SAMPLED: 0.5 M.  
MATERIAL AT BASE: SAND  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

VISITED: 8908  
LAND USE: HIGHWAY,ROADWAY,RAILWAY  
SURROUNDING LAND USE: SURFACE EASEMENT (OTHER THAN ROADWAY)  
ESTIMATED STONE CONTENT: MEDIUM  
MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL OCC. BOULDER  
DEPTH TO WATER TABLE: 2.4 M.  
OVERBURDEN THICKNESS: 0.3 M.

EXPOSURE #: LM414 (NW-18-001-13E)  
EXPOSURE TYPE: SAND AND GRAVEL PIT  
  
ECONOMIC THICKNESS: 0.0 METRES  
SECTION: A  
SECTION HEIGHT: 1.0 M.  
HEIGHT SAMPLED: 0.0 M.  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

VISITED: 9008  
LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
SURROUNDING LAND USE: AGRICULTURE,HAYING  
ESTIMATED STONE CONTENT: LOW  
MATERIAL DESCRIPTION: MEDIUM SAND  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 1.0 M.

**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM240 A (SE-20-002-13E)	100	97	88	81	73	64	56	45	24	7	3	SPARSE
(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)												

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM240 A	46	53	2	0	0	

**DEPOSIT # 001019B (SANDY GRAVEL)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
SW-15-001-13E	30	8400	PRIVATE/PRIVATE	
NE-16-001-13E	30	24150	CROWN(MUNICIPAL)/CROWN	
NW-16-001-13E	30	10500	PRIVATE/PRIVATE	
DEPOSIT RESERVES		43050		

**EXPOSURE INFORMATION**

EXPOSURE #: LM124 (SE-16-001-13E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 1.5 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
 SECTION HEIGHT: 1.5 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 0.2 M.  
 MATERIAL AT BASE: SAND  
 NO CHANNEL SAMPLE TAKEN

EXPOSURE #: LM126 (SE-16-001-13E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-TEMPORARY USE  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 2.0 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
 SECTION HEIGHT: 2.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 1.5 M. OVERBURDEN THICKNESS: 0.3 M.  
 MATERIAL AT BASE: SAND

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

SECTION: B MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
 SECTION HEIGHT: 4.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 0.3 M.  
 MATERIAL AT BASE: SAND  
 NO CHANNEL SAMPLE TAKEN

**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM126 A (SE-16-001-13E)	100	100	98	86	62	50	39	26	14	4	1	MODERATE
(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)												

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM126 A	70	27	3	0	0	

**DEPOSIT # 001019C** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001019D** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001019E** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001019F** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001019G** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001019H** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001019I** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001020A**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
SW-10-001-13E	30	25200	PRIVATE/PRIVATE	
	DEPOSIT RESERVES	25200		



**EXPOSURE INFORMATION**

EXPOSURE #: LM121 (SW-10-001-13E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: AGRICULTURE,HAYING  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 1.5 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
 SECTION HEIGHT: 1.5 M. DEPTH TO WATER TABLE: M.  
 HEIGHT SAMPLED: 1.0 M. OVERBURDEN THICKNESS: 0.2 M.  
 MATERIAL AT BASE: SAND AND GRAVEL  
 SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS

**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM121 A (SW-10-001-13E)	100	99	93	86	75	61	47	29	7	3	2	MODERATE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM121 A	47	52	1	0	0	

**DEPOSIT # 001020B**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NW-10-001-13E	60	16000	PRIVATE/PRIVATE	
DEPOSIT RESERVES		16000		

**EXPOSURE INFORMATION**

EXPOSURE #: LM122 (NW-10-001-13E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 1.5 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
 SECTION HEIGHT: 0.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 0.0 M.  
 MATERIAL AT BASE:  
 NO CHANNEL SAMPLE TAKEN

**DEPOSIT # 001021** (FLUVIAL-VERY SANDY)  
 (NO ECONOMIC AGGREGATE RESERVES PROVEN)

**EXPOSURE INFORMATION**

<b>EXPOSURE #:</b> LM110 (NW-03-001-13E)	<b>VISITED:</b> 8906
<b>EXPOSURE TYPE:</b> SAND AND GRAVEL PIT	<b>LAND USE:</b> PIT-NOT IN USE(COMMONLY REVEGETATED)
<b>ECONOMIC THICKNESS:</b> 1.5 METRES	<b>SURROUNDING LAND USE:</b> FOREST NATURAL
<b>SECTION:</b> A	<b>ESTIMATED STONE CONTENT:</b> MEDIUM LOW
<b>SECTION HEIGHT:</b> 1.5 M.	<b>MATERIAL DESCRIPTION:</b> SANDY PEBBLE GRAVEL OCC. COBBLE
<b>HEIGHT SAMPLED:</b> 0.0 M.	<b>DEPTH TO WATER TABLE:</b>
<b>MATERIAL AT BASE:</b> SAND	<b>OVERBURDEN THICKNESS:</b> 0.5 M.
<b>NO CHANNEL SAMPLE TAKEN</b>	
<b>EXPOSURE #:</b> LM225 (NW-03-001-13E)	<b>VISITED:</b> 8908
<b>EXPOSURE TYPE:</b> BACKHOE TEST PIT	<b>LAND USE:</b> HIGHWAY,ROADWAY,RAILWAY
<b>ECONOMIC THICKNESS:</b> 0.0 METRES	<b>SURROUNDING LAND USE:</b> AGRICULTURE,HAYING
<b>SECTION:</b> A	<b>ESTIMATED STONE CONTENT:</b> MEDIUM
<b>SECTION HEIGHT:</b> 4.0 M.	<b>MATERIAL DESCRIPTION:</b> TILL OVER SANDY FINE PEBBLE GRAVEL
<b>HEIGHT SAMPLED:</b> 1.0 M.	<b>DEPTH TO WATER TABLE:</b>
<b>MATERIAL AT BASE:</b> SAND	<b>OVERBURDEN THICKNESS:</b> 2.2 M.
<b>SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS</b>	
<b>EXPOSURE #:</b> LM226 (NW-03-001-13E)	<b>VISITED:</b> 8908
<b>EXPOSURE TYPE:</b> BACKHOE TEST PIT	<b>LAND USE:</b> HIGHWAY,ROADWAY,RAILWAY
<b>ECONOMIC THICKNESS:</b> 2.5 METRES	<b>SURROUNDING LAND USE:</b> AGRICULTURE,HAYING
<b>SECTION:</b> A	<b>ESTIMATED STONE CONTENT:</b> MEDIUM LOW
<b>SECTION HEIGHT:</b> 3.5 M.	<b>MATERIAL DESCRIPTION:</b> SANDY FINE PEBBLE GRAVEL VERY SANDY
<b>HEIGHT SAMPLED:</b> 0.0 M.	<b>DEPTH TO WATER TABLE:</b>
<b>MATERIAL AT BASE:</b> SAND	<b>OVERBURDEN THICKNESS:</b> 0.2 M.
<b>NO CHANNEL SAMPLE TAKEN</b>	
<b>EXPOSURE #:</b> LM227 (NW-03-001-13E)	<b>VISITED:</b> 8908
<b>EXPOSURE TYPE:</b> BACKHOE TEST PIT	<b>LAND USE:</b> HIGHWAY,ROADWAY,RAILWAY
<b>ECONOMIC THICKNESS:</b> 0.3 METRES	<b>SURROUNDING LAND USE:</b> AGRICULTURE,HAYING
<b>SECTION:</b> A	<b>ESTIMATED STONE CONTENT:</b> LOW
<b>SECTION HEIGHT:</b> 3.5 M.	<b>MATERIAL DESCRIPTION:</b> SANDY FINE PEBBLE GRAVEL
<b>HEIGHT SAMPLED:</b> 0.0 M.	<b>DEPTH TO WATER TABLE:</b>
<b>MATERIAL AT BASE:</b> CLAY	<b>OVERBURDEN THICKNESS:</b> 0.2 M.
<b>NO CHANNEL SAMPLE TAKEN</b>	
<b>EXPOSURE #:</b> LM292 (NW-03-001-13E)	<b>VISITED:</b> 8910
<b>EXPOSURE TYPE:</b> SAND AND GRAVEL PIT	<b>LAND USE:</b> PIT-NOT IN USE(COMMONLY REVEGETATED)
<b>ECONOMIC THICKNESS:</b> 0.0 METRES	<b>SURROUNDING LAND USE:</b> AGRICULTURE,HAYING
<b>SECTION:</b> A	<b>ESTIMATED STONE CONTENT:</b> LOW
<b>SECTION HEIGHT:</b> 0.0 M.	<b>MATERIAL DESCRIPTION:</b> PEBBLY SAND
<b>HEIGHT SAMPLED:</b> 0.0 M.	<b>DEPTH TO WATER TABLE:</b>
<b>MATERIAL AT BASE:</b>	<b>OVERBURDEN THICKNESS:</b> 0.0 M.
<b>NO CHANNEL SAMPLE TAKEN</b>	

**SIEVE ANALYSIS**

		PERCENT PASSING											OVERSIZED (PLUS 6")
		3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM225 A (NW-03-001-13E)		100	99	95	89	82	66	48	35	24	14	9	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM225 A	79	14	6	0	0	

**DEPOSIT # 001022A** (VERY SANDY)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**EXPOSURE INFORMATION**

EXPOSURE #: LM231 (NW-01-001-12E)	VISITED: 8908
EXPOSURE TYPE: BACKHOE TEST PIT	LAND USE: HIGHWAY,ROADWAY,RAILWAY
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 2.5 METRES	ESTIMATED STONE CONTENT: LOW
SECTION: A	MATERIAL DESCRIPTION: PEBBLY SAND
SECTION HEIGHT: 2.5 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 0.0 M.	OVERBURDEN THICKNESS: 0.2 M.
MATERIAL AT BASE: SAME AS IN PIT WALL	
NO CHANNEL SAMPLE TAKEN	

**DEPOSIT # 001022B** (REQUIRES TESTING)

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-06-001-13E	0	80000	PRIVATE/PRIVATE	
NW-06-001-13E	0	4000	PRIVATE/PRIVATE	
DEPOSIT RESERVES		84000		

**DEPOSIT # 001023A** (DRUMLINOID RIDGE)

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
SE-01-001-12E	0	16000	CROWN(PROVINCIAL)/CROWN	
SW-01-001-12E	0	30000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		46000		

**DEPOSIT # 001023B (NO ACCESS-ACTIVE IN US)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-06-001-13E	0	19000	PRIVATE/PRIVATE	
NW-06-001-13E	0	226000	PRIVATE/PRIVATE	
SE-06-001-13E	0	50000	PRIVATE/PRIVATE	
SW-06-001-13E	0	356000	PRIVATE/PRIVATE	
SW-07-001-13E	0	48000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		699000		

**EXPOSURE INFORMATION**

EXPOSURE #: LM228 (NW-06-001-13E)  
EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 1.3 METRES

SECTION: A

SECTION HEIGHT: 3.0 M.

HEIGHT SAMPLED: 0.0 M.

MATERIAL AT BASE: SAND

NO CHANNEL SAMPLE TAKEN

VISITED: 8908

LAND USE: HIGHWAY,ROADWAY,RAILWAY

SURROUNDING LAND USE: AGRICULTURE,HAYING

ESTIMATED STONE CONTENT: LOW

MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL

DEPTH TO WATER TABLE: 2.5 M.

OVERBURDEN THICKNESS: 0.0 M.

EXPOSURE #: LM229 (NW-06-001-13E)  
EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 0.0 METRES

SECTION: A

SECTION HEIGHT: 5.2 M.

HEIGHT SAMPLED: 0.0 M.

MATERIAL AT BASE: SAME AS IN PIT WALL

NO CHANNEL SAMPLE TAKEN

VISITED: 8908

LAND USE: HIGHWAY,ROADWAY,RAILWAY

SURROUNDING LAND USE: AGRICULTURE,HAYING

ESTIMATED STONE CONTENT: LOW

MATERIAL DESCRIPTION: SAND OVER SANDY FINE PEBBLE GRAVEL

DEPTH TO WATER TABLE: 5.0 M.

OVERBURDEN THICKNESS: 2.0 M.

EXPOSURE #: LM230 (SW-07-001-13E)  
EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 2.1 METRES

SECTION: A

SECTION HEIGHT: 3.0 M.

HEIGHT SAMPLED: 2.0 M.

MATERIAL AT BASE: SAND

SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS

VISITED: 8908

LAND USE: HIGHWAY,ROADWAY,RAILWAY

SURROUNDING LAND USE: FOREST NATURAL

ESTIMATED STONE CONTENT: MEDIUM

MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL OCC. COBBLE

DEPTH TO WATER TABLE:

OVERBURDEN THICKNESS: 0.0 M.

**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM230 A (SW-07-001-13E)	100	98	94	88	79	68	51	31	12	3	0	SPARSE

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM230 A	67	31	2	0	0	

**DEPOSIT # 001024**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NW-01-001-12E	0	22500	CROWN(PROVINCIAL)/CROWN	
NE-02-001-12E	0	19500	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		42000		

**EXPOSURE INFORMATION**

EXPOSURE #: LM232 (NW-01-001-12E) VISITED: 8908  
 EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: HIGHWAY,ROADWAY,RAILWAY  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 3.0 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
 SECTION HEIGHT: 3.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 3.0 M. OVERBURDEN THICKNESS: 0.0 M.  
 MATERIAL AT BASE: SAME AS IN PIT WALL  
 SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS

**SIEVE ANALYSIS**

	PERCENT PASSING												OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200		
LM232 A (NW-01-001-12E)	100	100	98	94	87	75	60	35	9	3	2		SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM232 A	76	19	5	0	0	

**DEPOSIT # 001025**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NW-01-001-12E	0	20000	CROWN(PROVINCIAL)/CROWN	
NE-02-001-12E	0	82500	CROWN(PROVINCIAL)/CROWN	
SW-12-001-12E	0	20000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		122500		

**EXPOSURE INFORMATION**

EXPOSURE #: LM128 (NE-02-001-12E)

VISITED: 8906

EXPOSURE TYPE: SAND AND GRAVEL PIT

LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)

ECONOMIC THICKNESS: 1.0 METRES

SURROUNDING LAND USE: HIGHWAY,ROADWAY,RAILWAY

SECTION: A

ESTIMATED STONE CONTENT: MEDIUM

SECTION HEIGHT: 0.0 M.

MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL

HEIGHT SAMPLED: 0.0 M.

DEPTH TO WATER TABLE:

MATERIAL AT BASE:

OVERBURDEN THICKNESS: 0.0 M.

NO CHANNEL SAMPLE TAKEN

EXPOSURE #: LM233 (NW-01-001-12E)

VISITED: 8908

EXPOSURE TYPE: BACKHOE TEST PIT

LAND USE: HIGHWAY,ROADWAY,RAILWAY

ECONOMIC THICKNESS: 4.0 METRES

SURROUNDING LAND USE: FOREST NATURAL

SECTION: A

ESTIMATED STONE CONTENT: MEDIUM HIGH

SECTION HEIGHT: 4.0 M.

MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL

HEIGHT SAMPLED: 4.0 M.

DEPTH TO WATER TABLE:

MATERIAL AT BASE: SAME AS IN PIT WALL

OVERBURDEN THICKNESS: 0.0 M.

SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS

**SIEVE ANALYSIS****PERCENT PASSING**

	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	OVERSIZED (PLUS 6")
LM233 A (NW-01-001-12E)	98	94	87	79	68	57	42	23	8	2	1	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM233 A	72	23	5	0	0	

**DEPOSIT # 001026 (OUTWASH, PRECAMBRIAN-CLAST-RICH)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NW-13-001-12E	0	114000	CROWN(PROVINCIAL)/CROWN	
SW-13-001-12E	0	384000	CROWN(PROVINCIAL)/CROWN	
NE-14-001-12E	30	325500	CROWN(PROVINCIAL)/CROWN	
NW-14-001-12E	10	248400	CROWN(PROVINCIAL)/CROWN	
SE-14-001-12E	20	537600	CROWN(PROVINCIAL)/CROWN	
NE-22-001-12E	0	150000	CROWN(PROVINCIAL)/CROWN	
SE-22-001-12E	0	171000	CROWN(PROVINCIAL)/CROWN	
NW-23-001-12E	90	51600	CROWN(PROVINCIAL)/CROWN	
SW-23-001-12E	70	216900	CROWN(PROVINCIAL)/CROWN	
SW-26-001-12E	0	282000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		2481000		

**EXPOSURE INFORMATION**

EXPOSURE #: LM048 (NW-23-001-12E) VISITED: 8808  
EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: TIMBER AREA  
SURROUNDING LAND USE: HIGHWAY,ROADWAY,RAILWAY  
ECONOMIC THICKNESS: 2.4 METRES ESTIMATED STONE CONTENT: MEDIUM  
SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL (FINES  
DOWNWARD)  
SECTION HEIGHT: 4.0 M. DEPTH TO WATER TABLE:  
HEIGHT SAMPLED: 2.4 M. OVERBURDEN THICKNESS: 0.2 M.  
MATERIAL AT BASE: SAND  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM049 (NE-22-001-12E) VISITED: 8808  
EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: HIGHWAY,ROADWAY,RAILWAY  
SURROUNDING LAND USE: FOREST NATURAL  
ECONOMIC THICKNESS: 4.2 METRES ESTIMATED STONE CONTENT: MEDIUM HIGH  
SECTION: A MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL  
SECTION HEIGHT: 4.2 M. DEPTH TO WATER TABLE:  
HEIGHT SAMPLED: 4.2 M. OVERBURDEN THICKNESS: 0.2 M.  
MATERIAL AT BASE: SAND AND GRAVEL  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM050 (NW-14-001-12E) VISITED: 8808  
EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: FOREST NATURAL  
SURROUNDING LAND USE: FOREST NATURAL  
ECONOMIC THICKNESS: 1.5 METRES ESTIMATED STONE CONTENT: MEDIUM  
SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL OCC. COBBLE  
SECTION HEIGHT: 3.0 M. DEPTH TO WATER TABLE:  
HEIGHT SAMPLED: 1.5 M. OVERBURDEN THICKNESS: 0.2 M.  
MATERIAL AT BASE: TILL  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM051 (SW-13-001-12E) VISITED: 8808  
 EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: FOREST NATURAL  
 SURROUNDING LAND USE: HIGHWAY,ROADWAY,RAILWAY  
 ECONOMIC THICKNESS: 4.2 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL OCC. COBBLE  
 SECTION HEIGHT: 3.4 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 3.4 M. OVERBURDEN THICKNESS: 0.8 M.  
 MATERIAL AT BASE: SAND AND GRAVEL  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM130 (NE-14-001-12E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: ACTIVE PIT  
 SURROUNDING LAND USE: WILDLIFE HABITAT-NATURAL, UNATTENDED  
 ECONOMIC THICKNESS: 2.0 METRES ESTIMATED STONE CONTENT: MEDIUM HIGH  
 SECTION: A MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL  
 SECTION HEIGHT: 2.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 0.3 M.  
 MATERIAL AT BASE: SAME AS IN PIT WALL  
 NO CHANNEL SAMPLE TAKEN

EXPOSURE #: LM131 (SE-14-001-12E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: WILDLIFE HABITAT-NATURAL, UNATTENDED  
 ECONOMIC THICKNESS: 2.0 METRES ESTIMATED STONE CONTENT: MEDIUM HIGH  
 SECTION: A MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL  
 SECTION HEIGHT: 2.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 0.3 M.  
 MATERIAL AT BASE: SAME AS IN PIT WALL  
 NO CHANNEL SAMPLE TAKEN

EXPOSURE #: LM132 (SW-23-001-12E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: WILDLIFE HABITAT-NATURAL, UNATTENDED  
 ECONOMIC THICKNESS: 3.0 METRES ESTIMATED STONE CONTENT: MEDIUM HIGH  
 SECTION: A MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL  
 SECTION HEIGHT: 3.0 M. DEPTH TO WATER TABLE: 3.5 M.  
 HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 0.3 M.  
 MATERIAL AT BASE: SAND  
 NO CHANNEL SAMPLE TAKEN

EXPOSURE #: LM133 (NW-23-001-12E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: ACTIVE PIT  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 3.0 METRES ESTIMATED STONE CONTENT: MEDIUM HIGH  
 SECTION: A MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL  
 SECTION HEIGHT: 3.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 2.5 M. OVERBURDEN THICKNESS: 0.3 M.  
 MATERIAL AT BASE: SAND AND GRAVEL  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**



EXPOSURE #: LM235 (SW-13-001-12E) VISITED: 8908  
 EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: HIGHWAY,ROADWAY,RAILWAY  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 4.2 METRES ESTIMATED STONE CONTENT: MEDIUM HIGH  
 SECTION: A MATERIAL DESCRIPTION: SANDY COBBLY COARSE PEBBLE GRAVEL  
 SECTION HEIGHT: 4.2 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 4.0 M. OVERBURDEN THICKNESS: 0.0 M.  
 MATERIAL AT BASE: SAME AS IN PIT WALL  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM238 (SW-26-001-12E) VISITED: 8908  
 EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: FOREST NATURAL  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 0.8 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
 SECTION HEIGHT: 3.5 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 1.0 M. OVERBURDEN THICKNESS: 0.6 M.  
 MATERIAL AT BASE: SAND  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

#### SIEVE ANALYSIS

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM048 A (NW-23-001-12E)	100	98	85	71	62	53	44	26	19	3	2	SPARSE
LM049 A (NE-22-001-12E)	100	91	78	69	58	50	39	25	12	3	1	SPARSE
LM050 A (NW-14-001-12E)	100	96	92	82	70	55	45	37	12	4	1	SPARSE
LM051 A (SW-13-001-12E)	100	97	90	85	76	66	53	36	14	4	3	SPARSE
LM133 A (NW-23-001-12E)	99	91	80	69	57	45	32	19	11	2	1	SPARSE
LM235 A (SW-13-001-12E)	94	85	76	68	62	57	52	43	23	11	6	MODERATE
LM238 A (SW-26-001-12E)	100	98	94	91	87	81	74	59	21	3	1	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

#### PETROGRAPHIC ANALYSIS

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM133 A	67	27	5	0	0	
LM235 A	84	11	6	0	0	
LM238 A	76	22	2	0	0	

**DEPOSIT # 001027 (SANDY GRAVEL)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-35-001-12E	30	74900	CROWN(PROVINCIAL)/CROWN	
NW-35-001-12E	30	56000	CROWN(PROVINCIAL)/CROWN	
SE-35-001-12E	0	31000	CROWN(PROVINCIAL)/CROWN	
SW-35-001-12E	0	21000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		182900		

**EXPOSURE INFORMATION**

EXPOSURE #: LM134 (SE-35-001-12E)

EXPOSURE TYPE: BORROW PIT

ECONOMIC THICKNESS: 2.0 METRES

SECTION: A

SECTION HEIGHT: 3.0 M.

HEIGHT SAMPLED: 0.0 M.

MATERIAL AT BASE: SAND

NO CHANNEL SAMPLE TAKEN

VISITED: 8906

LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)

SURROUNDING LAND USE: TIMBER AREA

ESTIMATED STONE CONTENT: MEDIUM LOW

MATERIAL DESCRIPTION: COBBLY PEBBLY SAND

DEPTH TO WATER TABLE:

OVERBURDEN THICKNESS: 0.3 M.

EXPOSURE #: LM239 (NW-35-001-12E)

EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 1.0 METRES

SECTION: A

SECTION HEIGHT: 3.5 M.

HEIGHT SAMPLED: 1.0 M.

MATERIAL AT BASE: SAND

VISITED: 8908

LAND USE: HIGHWAY,ROADWAY,RAILWAY

SURROUNDING LAND USE: FOREST NATURAL

ESTIMATED STONE CONTENT: MEDIUM

MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL OCC. COBBLE

DEPTH TO WATER TABLE:

OVERBURDEN THICKNESS: 0.5 M.

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS****SIEVE ANALYSIS**

## PERCENT PASSING

	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	OVERSIZED (PLUS 6")
LM239 A (NW-35-001-12E)	100	97	92	87	81	72	59	35	11	2	2	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM239 A	69	29	2	0	0	

**DEPOSIT # 001028 (HIGH WATER TABLE)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-33-001-12E	60	6800	CROWN(PROVINCIAL)/CROWN	
NW-33-001-12E	60	22800	CROWN(PROVINCIAL)/CROWN	
SW-33-001-12E	0	8000	CROWN(PROVINCIAL)/CROWN	
SE-04-002-12E	0	19000	CROWN(PROVINCIAL)/CROWN	
SW-04-002-12E	0	6000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		62600		

**EXPOSURE INFORMATION**

EXPOSURE #: LM135 (NE-33-001-12E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 2.0 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
 SECTION HEIGHT: 2.0 M. DEPTH TO WATER TABLE: 2.0 M.  
 HEIGHT SAMPLED: 1.5 M. OVERBURDEN THICKNESS: 0.2 M.  
 MATERIAL AT BASE: SAND AND GRAVEL  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM135 A (NE-33-001-12E)	100	100	97	92	85	78	67	50	27	4	3	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM135 A	61	37	1	0	0	

**DEPOSIT # 001029 (VERY SANDY)**  
 (NO ECONOMIC AGGREGATE RESERVES PROVEN)
**DEPOSIT # 001030 (REQUIRES TESTING)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
SE-01-001-11E	40	15300	PRIVATE/PRIVATE	
SW-01-001-11E	40	11700	PRIVATE/PRIVATE	
DEPOSIT RESERVES		27000		

**DEPOSIT # 001031 (ACTIVE DEPOSIT)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-01-001-11E	50	107000	PRIVATE/PRIVATE	
NW-01-001-11E	90	5800	PRIVATE/PRIVATE	
SE-01-001-11E	80	56800	PRIVATE/PRIVATE	
SE-12-001-11E	80	1600	PRIVATE/PRIVATE	
SW-12-001-11E	80	12400	PRIVATE/PRIVATE	
DEPOSIT RESERVES		183600		

**EXPOSURE INFORMATION**

EXPOSURE #: LM136 (SE-01-001-11E) VISITED: 8906  
EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
SURROUNDING LAND USE: AGRICULTURE,HAYING  
ECONOMIC THICKNESS: 2.0 METRES ESTIMATED STONE CONTENT: MEDIUM  
SECTION: A MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
SECTION HEIGHT: 2.0 M. DEPTH TO WATER TABLE:  
HEIGHT SAMPLED: 1.5 M. OVERBURDEN THICKNESS: 0.3 M.  
MATERIAL AT BASE: SAND  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM137 (SE-01-001-11E) VISITED: 8906  
EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
SURROUNDING LAND USE: AGRICULTURE,HAYING  
ECONOMIC THICKNESS: 2.0 METRES ESTIMATED STONE CONTENT: MEDIUM  
SECTION: A MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
SECTION HEIGHT: 2.0 M. DEPTH TO WATER TABLE:  
HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 0.3 M.  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

EXPOSURE #: LM138 (NE-01-001-11E) VISITED: 8906  
EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
SURROUNDING LAND USE: AGRICULTURE,HAYING  
ECONOMIC THICKNESS: 2.5 METRES ESTIMATED STONE CONTENT: MEDIUM  
SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
SECTION HEIGHT: 3.0 M. DEPTH TO WATER TABLE: 3.0 M.  
HEIGHT SAMPLED: 2.0 M. OVERBURDEN THICKNESS: 0.3 M.  
MATERIAL AT BASE: SAND  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM139 (SW-12-001-11E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: AGRICULTURE,HAYING  
 ECONOMIC THICKNESS: 2.5 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
 SECTION HEIGHT: 2.5 M. DEPTH TO WATER TABLE: 2.0 M.  
 HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 0.3 M.  
 MATERIAL AT BASE: SAND  
 NO CHANNEL SAMPLE TAKEN

#### SIEVE ANALYSIS

		PERCENT PASSING											OVERSIZED (PLUS 6")
		3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM136	A (SE-01-001-11E)	100	98	89	78	65	53	41	27	10	2	1	SPARSE
LM138	A (NE-01-001-11E)	100	98	91	85	74	64	51	34	14	3	1	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

#### PETROGRAPHIC ANALYSIS

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM136 A	54	46	0	0	0	
LM138 A	42	58	1	0	0	

**DEPOSIT # 001032A** (VERY SANDY)  
 (NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001032B** (SANDIER EASTWARD)

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-27-001-11E	0	46500	PRIVATE/PRIVATE	
NW-27-001-11E	30	144200	CROWN(PROVINCIAL)/CROWN	
NE-28-001-11E	60	64000	CROWN(MUNICIPAL)/CROWN	
SE-34-001-11E	30	225400	PRIVATE/PRIVATE	
SW-34-001-11E	30	26600	PRIVATE/PRIVATE	
SE-35-001-11E	0	134000	PRIVATE/PRIVATE	
SW-35-001-11E	20	253200	PRIVATE/PRIVATE	
NE-36-001-11E	0	4000	PRIVATE/PRIVATE	
NW-36-001-11E	0	54000	PRIVATE/PRIVATE	
SE-36-001-11E	0	25000	PRIVATE/PRIVATE	
SW-36-001-11E	0	180000	PRIVATE/PRIVATE	
DEPOSIT RESERVES		1156900		

**EXPOSURE INFORMATION**

EXPOSURE #: LM156 (SE-34-001-11E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-TEMPORARY USE  
 SURROUNDING LAND USE: HIGHWAY,ROADWAY,RAILWAY  
 ECONOMIC THICKNESS: 2.0 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
 SECTION HEIGHT: 2.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 2.0 M. OVERBURDEN THICKNESS: 0.3 M.  
 MATERIAL AT BASE: SAND  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM157 (SW-35-001-11E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: GARBAGE DUMP-AUTHORIZED,ACTIVE  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 3.0 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: PEBBLY SAND  
 SECTION HEIGHT: 3.5 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 0.3 M.  
 MATERIAL AT BASE: SAND  
 NO CHANNEL SAMPLE TAKEN

EXPOSURE #: LM241 (SW-34-001-11E) VISITED: 8908  
 EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: FOREST NATURAL  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 1.0 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
 SECTION HEIGHT: 3.5 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 1.0 M. OVERBURDEN THICKNESS: 0.2 M.  
 MATERIAL AT BASE: SAND  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM242 (SW-34-001-11E) VISITED: 8908  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 1.0 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
 SECTION HEIGHT: 8.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 0.3 M.  
 MATERIAL AT BASE: SAND  
 NO CHANNEL SAMPLE TAKEN

**SIEVE ANALYSIS****PERCENT PASSING**

	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	OVERSIZED (PLUS 6")
LM156 A (SE-34-001-11E)	100	100	98	95	94	92	89	78	43	3	1	SPARSE
LM241 A (SW-34-001-11E)	100	100	98	95	90	85	79	63	22	4	3	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM156 A	73	27	0	0	0	
LM241 A	82	17	1	0	0	

**DEPOSIT # 001032C** (VERY SANDY)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001033** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001034** (VERY SANDY)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001035A** (REQUIRES TESTING)

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
SE-28-002-13E	0	77000	PRIVATE/PRIVATE	
SW-28-002-13E	0	71000	PRIVATE/PRIVATE	
DEPOSIT RESERVES		148000		

**DEPOSIT # 001035B** (NO ACCESS)

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
SE-04-003-13E	0	49500	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		49500		

**DEPOSIT # 001035C** (VERY COARSE GRAVEL)

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-04-003-13E	0	38000	PRIVATE/PRIVATE	
SE-04-003-13E	5	7600	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		45600		

**EXPOSURE INFORMATION**

EXPOSURE #: LM215 (NE-04-003-13E) VISITED: 8908  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 2.5 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
 SECTION HEIGHT: 3.0 M. DEPTH TO WATER TABLE: 3.0 M.  
 HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 0.2 M.  
 MATERIAL AT BASE: SAME AS IN PIT WALL  
 NO CHANNEL SAMPLE TAKEN

**DEPOSIT # 001035D (SANDY GRAVEL)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-08-003-13E	20	45600	CROWN(MUNICIPAL)/CROWN	
NW-08-003-13E	20	15600	PRIVATE/PRIVATE	
SW-17-003-13E	20	55200	PRIVATE/PRIVATE	
DEPOSIT RESERVES		116400		

**EXPOSURE INFORMATION**

EXPOSURE #: LM144 (SW-17-003-13E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: AGRICULTURE,HAYING  
 ECONOMIC THICKNESS: 1.5 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
 SECTION HEIGHT: 2.0 M. DEPTH TO WATER TABLE: 2.0 M.  
 HEIGHT SAMPLED: 1.5 M. OVERBURDEN THICKNESS: 0.3 M.  
 MATERIAL AT BASE: SAND

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM145 (NW-08-003-13E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 1.5 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
 SECTION HEIGHT: 2.0 M. DEPTH TO WATER TABLE: 2.0 M.  
 HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 0.3 M.  
 MATERIAL AT BASE: SAND  
 NO CHANNEL SAMPLE TAKEN

**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM144 A (SW-17-003-13E)	100	100	98	93	82	59	30	18	10	6	4	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)



**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM144 A	14	83	2	0	0	

**DEPOSIT # 001036A** (SMALL SAND AND GRAVEL AREAS)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**EXPOSURE INFORMATION**

EXPOSURE #: LM162 (NW-04-003-12E)	VISITED: 8906
EXPOSURE TYPE: SAND AND GRAVEL PIT	LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 1.0 METRES	ESTIMATED STONE CONTENT: MEDIUM LOW
SECTION: A	MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL
SECTION HEIGHT: 2.0 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 1.5 M.	OVERBURDEN THICKNESS: 0.2 M.
MATERIAL AT BASE: SAND	

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM171 (SE-13-003-11E)	VISITED: 8906
EXPOSURE TYPE: SAND AND GRAVEL PIT	LAND USE: GARBAGE DUMP-AUTHORIZED,ACTIVE
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 1.5 METRES	ESTIMATED STONE CONTENT: MEDIUM
SECTION: A	MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL OCC. COBBLE
SECTION HEIGHT: 2.0 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 1.5 M.	OVERBURDEN THICKNESS: 0.3 M.
MATERIAL AT BASE: SAND AND GRAVEL	

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM205 (NE-22-002-11E)	VISITED: 8907
EXPOSURE TYPE: SAND AND GRAVEL PIT	LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 1.0 METRES	ESTIMATED STONE CONTENT: MEDIUM
SECTION: A	MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL
SECTION HEIGHT: 1.0 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 0.0 M.	OVERBURDEN THICKNESS: 0.2 M.
MATERIAL AT BASE: SAND	
NO CHANNEL SAMPLE TAKEN	

EXPOSURE #: LM253 (SE-29-002-11E)	VISITED: 8908
EXPOSURE TYPE: BACKHOE TEST PIT	LAND USE: HIGHWAY,ROADWAY,RAILWAY
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 0.0 METRES	ESTIMATED STONE CONTENT: LOW
SECTION: A	MATERIAL DESCRIPTION: MEDIUM SAND
SECTION HEIGHT: 2.5 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 0.0 M.	OVERBURDEN THICKNESS: 2.5 M.
MATERIAL AT BASE: SAND	
NO CHANNEL SAMPLE TAKEN	

EXPOSURE #: LM254 (NW-21-002-11E)	VISITED: 8908
EXPOSURE TYPE: BACKHOE TEST PIT	LAND USE: HIGHWAY,ROADWAY,RAILWAY
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 1.5 METRES	ESTIMATED STONE CONTENT: MEDIUM LOW
SECTION: A	MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL
SECTION HEIGHT: 2.5 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 1.5 M.	OVERBURDEN THICKNESS: 0.0 M.
MATERIAL AT BASE: SAND	

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM255 (NW-22-002-11E)	VISITED: 8908
EXPOSURE TYPE: BACKHOE TEST PIT	LAND USE: HIGHWAY,ROADWAY,RAILWAY
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 0.0 METRES	ESTIMATED STONE CONTENT: LOW
SECTION: A	MATERIAL DESCRIPTION: PEBBLY MEDIUM SAND
SECTION HEIGHT: 2.5 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 2.5 M.	OVERBURDEN THICKNESS: 2.5 M.
MATERIAL AT BASE: SAND	

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM257 (NE-22-002-11E)	VISITED: 8908
EXPOSURE TYPE: BACKHOE TEST PIT	LAND USE: HIGHWAY,ROADWAY,RAILWAY
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 3.0 METRES	ESTIMATED STONE CONTENT: MEDIUM LOW
SECTION: A	MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL W/ SAND LAYERS
SECTION HEIGHT: 3.0 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 3.0 M.	OVERBURDEN THICKNESS: 0.0 M.
MATERIAL AT BASE: SAME AS IN PIT WALL	

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM258 (SW-04-003-12E)	VISITED: 8908
EXPOSURE TYPE: BACKHOE TEST PIT	LAND USE: HIGHWAY,ROADWAY,RAILWAY
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 1.8 METRES	ESTIMATED STONE CONTENT: LOW
SECTION: A	MATERIAL DESCRIPTION: PEBBLY SAND W/PEBBLE LAYERS
SECTION HEIGHT: 3.0 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 1.8 M.	OVERBURDEN THICKNESS: 0.0 M.
MATERIAL AT BASE: SAND	

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM259 (NE-29-003-12E)	VISITED: 8908
EXPOSURE TYPE: BACKHOE TEST PIT	LAND USE: HIGHWAY,ROADWAY,RAILWAY
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 2.2 METRES	ESTIMATED STONE CONTENT: MEDIUM
SECTION: A	MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL OCC. COBBLE
SECTION HEIGHT: 3.5 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 2.2 M.	OVERBURDEN THICKNESS: 0.2 M.
MATERIAL AT BASE: SAND	

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM260 (NW-30-003-12E)  
EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 0.0 METRES

SECTION: A

SECTION HEIGHT: 0.0 M.

HEIGHT SAMPLED: 0.0 M.

MATERIAL AT BASE:

SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS

VISITED: 8908

LAND USE: HIGHWAY,ROADWAY,RAILWAY

SURROUNDING LAND USE: FOREST NATURAL

ESTIMATED STONE CONTENT: LOW

MATERIAL DESCRIPTION: PEBBLY SAND

DEPTH TO WATER TABLE:

OVERBURDEN THICKNESS: 0.0 M.

EXPOSURE #: LM261 (SW-30-003-12E)  
EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 2.0 METRES

SECTION: A

SECTION HEIGHT: 3.0 M.

HEIGHT SAMPLED: 2.0 M.

MATERIAL AT BASE: SAND

SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS

VISITED: 8908

LAND USE: HIGHWAY,ROADWAY,RAILWAY

SURROUNDING LAND USE: FOREST NATURAL

ESTIMATED STONE CONTENT: MEDIUM LOW

MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL

DEPTH TO WATER TABLE:

OVERBURDEN THICKNESS: 0.2 M.

EXPOSURE #: LM262 (SE-13-003-11E)  
EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 1.0 METRES

SECTION: A

SECTION HEIGHT: 3.0 M.

HEIGHT SAMPLED: 0.0 M.

MATERIAL AT BASE: SAND

NO CHANNEL SAMPLE TAKEN

VISITED: 8908

LAND USE: HIGHWAY,ROADWAY,RAILWAY

SURROUNDING LAND USE: FOREST NATURAL

ESTIMATED STONE CONTENT: MEDIUM LOW

MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL  
VERY SANDY

DEPTH TO WATER TABLE:

OVERBURDEN THICKNESS: 0.5 M.

## SIEVE ANALYSIS

### PERCENT PASSING

	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	OVERSIZED (PLUS 6")
LM162 A (NW-04-003-12E)	100	96	88	82	72	64	56	36	6	2	1	SPARSE
LM171 A (SE-13-003-11E)	99	95	88	79	58	37	20	15	8	3	2	SPARSE
LM254 A (NW-21-002-11E)	100	95	85	76	65	59	52	43	10	2	1	SPARSE
LM255 A (NW-22-002-11E)	100	100	100	98	95	92	87	78	41	3	1	SPARSE
LM257 A (NE-22-002-11E)	100	100	95	88	79	71	63	50	17	2	1	SPARSE
LM258 A (SW-04-003-12E)	100	100	100	98	97	95	91	71	28	3	1	SPARSE
LM259 A (NE-29-003-12E)	100	98	92	84	72	63	55	41	20	3	1	SPARSE
LM260 A (NW-30-003-12E)	100	100	98	94	88	83	77	68	26	2	1	SPARSE
LM261 A (SW-30-003-12E)	100	98	93	86	80	73	66	56	29	4	2	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM162 A	42	54	3	0	0	
LM171 A	60	36	4	0	0	
LM254 A	84	16	1	0	0	
LM255 A	62	23	15	0	0	
LM257 A	76	24	1	0	0	
LM258 A	50	50	0	0	0	
LM259 A	76	24	0	0	0	
LM260 A	81	17	2	0	0	
LM261 A	72	24	4	0	0	

**DEPOSIT # 001036B** (PREDOMINANTLY SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001036C** (PREDOMINANTLY SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001036D** (PREDOMINANTLY SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001036E** (PREDOMINANTLY SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001036F** (PREDOMINANTLY SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001036G** (PREDOMINANTLY SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001036H** (PREDOMINANTLY SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001036I** (PREDOMINANTLY SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001036J** (PREDOMINANTLY SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001036K** (PREDOMINANTLY SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001036L** (PREDOMINANTLY SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001036M** (PREDOMINANTLY SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001036N** (REQUIRES TESTING)

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
SE-21-002-11E	0	25000	CROWN(PROVINCIAL)/CROWN	
NW-22-002-11E	0	6000	CROWN(PROVINCIAL)/CROWN	
SW-22-002-11E	5	97850	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		128850		

**EXPOSURE INFORMATION**

EXPOSURE #: LM184 (SW-22-002-11E)	VISITED: 8907
EXPOSURE TYPE: SAND AND GRAVEL PIT	LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 1.0 METRES	ESTIMATED STONE CONTENT: MEDIUM
SECTION: A	MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL
SECTION HEIGHT: 1.0 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 0.0 M.	OVERBURDEN THICKNESS: 0.2 M.
MATERIAL AT BASE: SAME AS IN PIT WALL	
NO CHANNEL SAMPLE TAKEN	

**DEPOSIT # 001037A** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001037B** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001037C** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001037D** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001037E** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001037F** (MINOR SAND AND GRAVEL POCKETS)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

#### EXPOSURE INFORMATION

EXPOSURE #: LM167 (SW-03-004-11E)	VISITED: 8906
EXPOSURE TYPE: SAND AND GRAVEL PIT	LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 0.7 METRES	ESTIMATED STONE CONTENT: MEDIUM LOW
SECTION: A	MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL OCC. COBBLE
SECTION HEIGHT: 1.5 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 1.0 M.	OVERBURDEN THICKNESS: 0.2 M.
MATERIAL AT BASE: SAND	

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM168 (NW-34-003-11E)	VISITED: 8906
EXPOSURE TYPE: SAND AND GRAVEL PIT	LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 0.3 METRES	ESTIMATED STONE CONTENT: MEDIUM
SECTION: A	MATERIAL DESCRIPTION: PREDOMINANTLY TILL
SECTION HEIGHT: 3.0 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 0.0 M.	OVERBURDEN THICKNESS: 0.4 M.
MATERIAL AT BASE: TILL	
NO CHANNEL SAMPLE TAKEN	

EXPOSURE #: LM170 (SW-33-003-11E)	VISITED: 8906
EXPOSURE TYPE: BORROW PIT	LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)
	SURROUNDING LAND USE: HIGHWAY,ROADWAY,RAILWAY
ECONOMIC THICKNESS: 0.0 METRES	ESTIMATED STONE CONTENT: LOW
SECTION: A	MATERIAL DESCRIPTION: MOSTLY SILT TILL
SECTION HEIGHT: 0.0 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 0.0 M.	OVERBURDEN THICKNESS: 0.0 M.
MATERIAL AT BASE: TILL	
NO CHANNEL SAMPLE TAKEN	

#### SIEVE ANALYSIS

	PERCENT PASSING											OVERSIZED
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	(PLUS 6")
LM167 A (SW-03-004-11E)	100	96	83	73	65	58	52	47	37	6	1	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

#### PETROGRAPHIC ANALYSIS

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM167 A	77	22	1	0	0	

**DEPOSIT # 001037G** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001037H** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001037I** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001038A**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-31-001-11E	0	85000	CROWN(PROVINCIAL)/CROWN	
NE-06-002-11E	0	880000	CROWN(PROVINCIAL)/CROWN	
SE-06-002-11E	70	89250	CROWN(PROVINCIAL)/CROWN	
NE-07-002-11E	0	1005000	CROWN(PROVINCIAL)/CROWN	
SE-07-002-11E	0	1225000	CROWN(PROVINCIAL)/CROWN	
NE-08-002-11E	0	20000	CROWN(PROVINCIAL)/CROWN	
NW-08-002-11E	10	1356750	CROWN(PROVINCIAL)/CROWN	
SE-08-002-11E	0	192500	CROWN(PROVINCIAL)/CROWN	
SW-08-002-11E	0	1417500	CROWN(PROVINCIAL)/CROWN	
NW-17-002-11E	0	27500	CROWN(PROVINCIAL)/CROWN	
SE-17-002-11E	0	57500	CROWN(PROVINCIAL)/CROWN	
SW-17-002-11E	0	937500	CROWN(PROVINCIAL)/CROWN	
NE-18-002-11E	0	57500	CROWN(PROVINCIAL)/CROWN	
SE-18-002-11E	0	527500	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		7878500		

**EXPOSURE INFORMATION**

EXPOSURE #: LM082 (SE-06-002-11E)	VISITED: 8905
EXPOSURE TYPE: SAND AND GRAVEL PIT	LAND USE: PIT-TEMPORARY USE
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 2.5 METRES	ESTIMATED STONE CONTENT: MEDIUM
SECTION: A	MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL
SECTION HEIGHT: 2.5 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 1.5 M.	OVERBURDEN THICKNESS: 0.3 M.
MATERIAL AT BASE: SILT	

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

SECTION: B	MATERIAL DESCRIPTION: COBBLY PEBBLY SAND
SECTION HEIGHT: 3.0 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 0.0 M.	OVERBURDEN THICKNESS: 0.3 M.
MATERIAL AT BASE: SAND	
NO CHANNEL SAMPLE TAKEN	

EXPOSURE #: LM197 (NW-08-002-11E) VISITED: 8907  
EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
SURROUNDING LAND USE: FOREST NATURAL  
ECONOMIC THICKNESS: 3.0 METRES ESTIMATED STONE CONTENT: MEDIUM HIGH  
SECTION: A MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL  
SECTION HEIGHT: 3.0 M. DEPTH TO WATER TABLE:  
HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 0.2 M.  
MATERIAL AT BASE: SAME AS IN PIT WALL  
NO CHANNEL SAMPLE TAKEN

EXPOSURE #: LM248 (NE-07-002-11E) VISITED: 8908  
EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: HIGHWAY,ROADWAY,RAILWAY  
SURROUNDING LAND USE: FOREST NATURAL  
ECONOMIC THICKNESS: 3.5 METRES ESTIMATED STONE CONTENT: MEDIUM  
SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL W/SAND  
LAYER  
SECTION HEIGHT: 3.5 M. DEPTH TO WATER TABLE:  
HEIGHT SAMPLED: 3.5 M. OVERBURDEN THICKNESS: 0.2 M.  
MATERIAL AT BASE: SAME AS IN PIT WALL  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM249 (NE-06-002-11E) VISITED: 8908  
EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: HIGHWAY,ROADWAY,RAILWAY  
SURROUNDING LAND USE: FOREST NATURAL  
ECONOMIC THICKNESS: 2.4 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
SECTION: A MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL W/SAND  
LAYER  
SECTION HEIGHT: 3.5 M. DEPTH TO WATER TABLE:  
HEIGHT SAMPLED: 2.4 M. OVERBURDEN THICKNESS: 0.2 M.  
MATERIAL AT BASE: SAND  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM250 (SW-17-002-11E) VISITED: 8908  
EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: HIGHWAY,ROADWAY,RAILWAY  
SURROUNDING LAND USE: FOREST NATURAL  
ECONOMIC THICKNESS: 2.5 METRES ESTIMATED STONE CONTENT: MEDIUM  
SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
SECTION HEIGHT: 2.8 M. DEPTH TO WATER TABLE:  
HEIGHT SAMPLED: 2.5 M. OVERBURDEN THICKNESS:  
MATERIAL AT BASE: SAND  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

#### SIEVE ANALYSIS

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM082 A (SE-06-002-11E)	100	96	85	67	56	45	36	21	8	2	1	SPARSE
LM248 A (NE-07-002-11E)	100	96	90	81	70	56	45	32	14	2	1	SPARSE
LM249 A (NE-06-002-11E)	100	100	97	90	84	72	62	54	44	7	1	SPARSE
LM250 A (SW-17-002-11E)	100	97	92	82	69	55	41	27	9	3	1	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)



**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM082 A	66	33	1	0	0	
LM248 A	85	13	2	0	0	
LM249 A	85	13	3	0	0	
LM250 A	84	14	2	0	0	

**DEPOSIT # 001038B (VERY COARSE)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-20-002-11E	50	52000	CROWN(PROVINCIAL)/CROWN	
SE-29-002-11E	30	128800	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		180800		

**EXPOSURE INFORMATION**

EXPOSURE #: LM160 (NE-20-002-11E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 2.0 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL (COBBLES)  
 SECTION HEIGHT: 2.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 0.2 M.  
 MATERIAL AT BASE: SAND AND GRAVEL  
 NO CHANNEL SAMPLE TAKEN

EXPOSURE #: LM161 (SE-29-002-11E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 2.0 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL (COBBLES)  
 SECTION HEIGHT: 2.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 0.3 M.  
 MATERIAL AT BASE: SAND AND GRAVEL  
 NO CHANNEL SAMPLE TAKEN

EXPOSURE #: LM252 (NE-20-002-11E) VISITED: 8908  
 EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: HIGHWAY,ROADWAY,RAILWAY  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 2.4 METRES ESTIMATED STONE CONTENT: HIGH  
 SECTION: A MATERIAL DESCRIPTION: SANDY COBBLY COARSE PEBBLE  
 GRAVEL  
 SECTION HEIGHT: 3.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 2.4 M. OVERBURDEN THICKNESS: 0.0 M.  
 MATERIAL AT BASE: SAND

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM252 A (NE-20-002-11E)	89	76	66	60	54	46	37	28	12	3	2	MODERATE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM252 A	69	28	3	0	0	

**DEPOSIT # 001039A** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001039B** (MINOR SAND AND GRAVEL POCKETS)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**EXPOSURE INFORMATION**

EXPOSURE #: LM244 (NE-02-002-10E)	VISITED: 8908
EXPOSURE TYPE: BACKHOE TEST PIT	LAND USE: HIGHWAY,ROADWAY,RAILWAY
	SURROUNDING LAND USE: AGRICULTURE,HAYING
ECONOMIC THICKNESS: 0.8 METRES	ESTIMATED STONE CONTENT: MEDIUM
SECTION: A	MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL
SECTION HEIGHT: 4.5 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 0.0 M.	OVERBURDEN THICKNESS: 0.2 M.
MATERIAL AT BASE: TILL	
NO CHANNEL SAMPLE TAKEN	

EXPOSURE #: LM153 (NE-02-002-10E)	VISITED: 8906
EXPOSURE TYPE: SAND AND GRAVEL PIT	LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)
	SURROUNDING LAND USE: AGRICULTURE,HAYING
ECONOMIC THICKNESS: 2.0 METRES	ESTIMATED STONE CONTENT: MEDIUM LOW
SECTION: A	MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL
SECTION HEIGHT: 3.0 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 0.0 M.	OVERBURDEN THICKNESS: 0.2 M.
MATERIAL AT BASE: TILL	
NO CHANNEL SAMPLE TAKEN	

EXPOSURE #: LM154 (NE-02-002-10E)	VISITED: 8906
EXPOSURE TYPE: SAND AND GRAVEL PIT	LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)
	SURROUNDING LAND USE: AGRICULTURE,HAYING
ECONOMIC THICKNESS: 2.0 METRES	ESTIMATED STONE CONTENT: MEDIUM HIGH
SECTION: A	MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL
SECTION HEIGHT: 3.0 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 0.0 M.	OVERBURDEN THICKNESS: 0.3 M.
MATERIAL AT BASE: SAND	
NO CHANNEL SAMPLE TAKEN	
SECTION: B	MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL
SECTION HEIGHT: 1.0 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 0.0 M.	OVERBURDEN THICKNESS: 0.3 M.
MATERIAL AT BASE: SAND	
NO CHANNEL SAMPLE TAKEN	
EXPOSURE #: LM159 (SE-19-002-11E)	VISITED: 8906
EXPOSURE TYPE: BORROW PIT	LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 0.0 METRES	ESTIMATED STONE CONTENT: MEDIUM
SECTION: A	MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL W/ COBBLES AND FINE SAND
SECTION HEIGHT: 6.0 M.	DEPTH TO WATER TABLE: 6.5 M.
HEIGHT SAMPLED: 0.0 M.	OVERBURDEN THICKNESS: 6.0 M.
MATERIAL AT BASE: SAND AND GRAVEL	
NO CHANNEL SAMPLE TAKEN	
EXPOSURE #: LM246 (NE-01-002-10E)	VISITED: 8908
EXPOSURE TYPE: BACKHOE TEST PIT	LAND USE: HIGHWAY,ROADWAY,RAILWAY
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 0.8 METRES	ESTIMATED STONE CONTENT: MEDIUM
SECTION: A	MATERIAL DESCRIPTION: SAND / SANDY PEBBLE GRAVEL
SECTION HEIGHT: 3.3 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 0.0 M.	OVERBURDEN THICKNESS: 0.6 M.
MATERIAL AT BASE: TILL	
NO CHANNEL SAMPLE TAKEN	
EXPOSURE #: LM247 (NW-07-002-11E)	VISITED: 8908
EXPOSURE TYPE: BACKHOE TEST PIT	LAND USE: HIGHWAY,ROADWAY,RAILWAY
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 0.7 METRES	ESTIMATED STONE CONTENT: MEDIUM
SECTION: A	MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL (SAND SEAMS)
SECTION HEIGHT: 3.5 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 0.0 M.	OVERBURDEN THICKNESS: 0.0 M.
MATERIAL AT BASE: SAND	
NO CHANNEL SAMPLE TAKEN	

EXPOSURE #: LM251 (SW-18-002-11E) VISITED: 8908  
 EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: HIGHWAY,ROADWAY,RAILWAY  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 3.6 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
 SECTION HEIGHT: 3.6 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 3.6 M. OVERBURDEN THICKNESS: 0.0 M.  
 MATERIAL AT BASE: SAME AS IN PIT WALL  
 SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS

#### SIEVE ANALYSIS

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM251 A (SW-18-002-11E)	100	100	98	96	91	83	67	39	13	4	2	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

#### PETROGRAPHIC ANALYSIS

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM251 A	74	20	6	0	0	

#### DEPOSIT # 001039C (VERY COARSE-VARIABLE QUALITY)

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NW-01-002-10E	0	13000	PRIVATE/PRIVATE	
NE-02-002-10E	0	54000	PRIVATE/PRIVATE	
SE-11-002-10E	30	364000	CROWN(PROVINCIAL)/CROWN	
SW-11-002-10E	0	84000	PRIVATE/PRIVATE	
DEPOSIT RESERVES		515000		

#### EXPOSURE INFORMATION

EXPOSURE #: LM083 (SE-11-002-10E) VISITED: 8905  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: ACTIVE PIT  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 4.0 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL  
 W/BOULDERS  
 SECTION HEIGHT: 4.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 2.0 M. OVERBURDEN THICKNESS: 0.3 M.  
 MATERIAL AT BASE: SAND AND GRAVEL  
 SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS

EXPOSURE #: LM245 (SE-11-002-10E) VISITED: 8908  
 EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: FOREST NATURAL  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 1.6 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
 SECTION HEIGHT: 3.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 1.6 M. OVERBURDEN THICKNESS: 0.2 M.  
 MATERIAL AT BASE: SAME AS IN PIT WALL  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

#### SIEVE ANALYSIS

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM083 A (SE-11-002-10E)	100	98	93	81	67	52	35	22	11	6	3	MODERATE
LM245 A (SE-11-002-10E)	100	98	95	89	85	77	66	44	16	4	2	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

#### PETROGRAPHIC ANALYSIS

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM083 A	54	42	4	0	0	
LM245 A	37	57	6	0	0	

**DEPOSIT # 001039D** (GLACIOFLUVIAL SAND)  
 (NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001040** (MINOR SAND AND GRAVEL POCKETS)  
 (NO ECONOMIC AGGREGATE RESERVES PROVEN)

#### EXPOSURE INFORMATION

EXPOSURE #: LM140 (NW-11-001-11E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: AGRICULTURE,HAYING  
 ECONOMIC THICKNESS: 1.5 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
 SECTION HEIGHT: 1.5 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 0.0 M.  
 MATERIAL AT BASE: SAND  
 NO CHANNEL SAMPLE TAKEN

EXPOSURE #: LM201 (NW-11-001-11E) VISITED: 8907  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: AGRICULTURE,HAYING  
 ECONOMIC THICKNESS: 1.0 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: PEBBLY SAND  
 SECTION HEIGHT: 1.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 0.2 M.  
 MATERIAL AT BASE: SAME AS IN PIT WALL  
 NO CHANNEL SAMPLE TAKEN

**DEPOSIT # 001041** (NO ACCESS)  
 (NO ECONOMIC AGGREGATE RESERVES PROVEN)

#### DEPOSIT # 001042A

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-05-001-10E	30	127750	PRIVATE/PRIVATE	
NW-05-001-10E	0	172500	PRIVATE/PRIVATE	
NE-06-001-10E	30	134750	PRIVATE/PRIVATE	
NW-06-001-10E	10	168750	PRIVATE/PRIVATE	
SE-08-001-10E	30	180250	PRIVATE/PRIVATE	CROWN(PROVINCIAL)/CROWN
SW-08-001-10E	0	85000	PRIVATE/PRIVATE	
NE-09-001-10E	80	5500	PRIVATE/PRIVATE	
SE-09-001-10E	30	120750	PRIVATE/PRIVATE	
SW-09-001-10E	30	134750	PRIVATE/PRIVATE	
NW-10-001-10E	0	90000	CROWN(MUNICIPAL)/CROWN	
DEPOSIT RESERVES		1220000		

#### EXPOSURE INFORMATION

EXPOSURE #: LM148 (NW-06-001-10E) VISITED: 8906  
 EXPOSURE TYPE: DITCH OR ROAD CUT LAND USE: HIGHWAY,ROADWAY,RAILWAY  
 SURROUNDING LAND USE: AGRICULTURE,HAYING  
 ECONOMIC THICKNESS: 3.0 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
 SECTION HEIGHT: 3.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 1.5 M. OVERBURDEN THICKNESS: 0.3 M.  
 MATERIAL AT BASE: SAND  
 SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS

EXPOSURE #: LM149 (SE-08-001-10E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: AGRICULTURE,HAYING  
 ECONOMIC THICKNESS: 3.5 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL OCC. COBBLE  
 SECTION HEIGHT: 4.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 2.0 M. OVERBURDEN THICKNESS: 0.3 M.  
 MATERIAL AT BASE: SAND AND GRAVEL  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM150 (SE-08-001-10E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: AGRICULTURE,HAYING  
 ECONOMIC THICKNESS: 2.5 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
 SECTION HEIGHT: 3.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 0.3 M.  
 MATERIAL AT BASE: SAND AND GRAVEL  
 NO CHANNEL SAMPLE TAKEN

EXPOSURE #: LM196 (SE-08-001-10E) VISITED: 8907  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: AGRICULTURE,HAYING  
 ECONOMIC THICKNESS: 2.0 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
 SECTION HEIGHT: 2.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 0.2 M.  
 MATERIAL AT BASE: SAME AS IN PIT WALL  
 NO CHANNEL SAMPLE TAKEN

#### SIEVE ANALYSIS

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM148 A (NW-06-001-10E)	100	100	100	93	78	66	53	39	24	5	2	SPARSE
LM149 A (SE-08-001-10E)	99	95	86	72	59	49	41	30	15	2	1	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

#### PETROGRAPHIC ANALYSIS

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM148 A	86	14	0	0	0	
LM149 A	81	18	1	0	0	

**DEPOSIT # 001042B**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER SURFACE/GRAVEL)	OWNER2( SURFACE/GRAVEL)
SW-07-001-10E	60	34200	PRIVATE/PRIVATE	
	DEPOSIT RESERVES	34200		

**EXPOSURE INFORMATION**

EXPOSURE #: LM147 (SW-07-001-10E) VISITED: 8906  
EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-TEMPORARY USE  
SURROUNDING LAND USE: AGRICULTURE,HAYING  
ECONOMIC THICKNESS: 1.5 METRES ESTIMATED STONE CONTENT: MEDIUM  
SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL OCC. COBBLE  
SECTION HEIGHT: 3.0 M. DEPTH TO WATER TABLE:  
HEIGHT SAMPLED: 1.5 M. OVERBURDEN THICKNESS: 0.3 M.  
MATERIAL AT BASE: TILL  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

**SIEVE ANALYSIS**

	PERCENT PASSING												OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200		
LM147 A (SW-07-001-10E)	100	100	92	84	73	62	49	32	12	2	1		SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM147 A	80	17	3	0	0	

**DEPOSIT # 001043 (GLACIOFLUVIAL SAND AND GRAVEL)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NW-07-001-10E	0	17000	PRIVATE/PRIVATE	
	DEPOSIT RESERVES	17000		



**EXPOSURE INFORMATION**

EXPOSURE #: LM548 (NW-07-001-10E)  
 EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 0.0 METRES  
 SECTION: A

SECTION HEIGHT: 3.5 M.  
 HEIGHT SAMPLED: 0.0 M.  
 MATERIAL AT BASE: SAND  
 NO CHANNEL SAMPLE TAKEN

VISITED: 9108  
 LAND USE: HIGHWAY,ROADWAY,RAILWAY  
 SURROUNDING LAND USE: FOREST NATURAL  
 ESTIMATED STONE CONTENT: LOW  
 MATERIAL DESCRIPTION: SAND W/MINOR GRAVEL LAYERS (BOULDERS)  
 DEPTH TO WATER TABLE: 3.0 M.  
 OVERBURDEN THICKNESS: 3.5 M.

**DEPOSIT # 001044 (REQUIRES TESTING)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-16-002-11E	20	62400	CROWN(PROVINCIAL)/CROWN	
NE-21-002-11E	0	72000	CROWN(PROVINCIAL)/CROWN	
SE-21-002-11E	0	396000	CROWN(PROVINCIAL)/CROWN	
NE-22-002-11E	0	34500	CROWN(PROVINCIAL)/CROWN	
NW-22-002-11E	0	637500	CROWN(PROVINCIAL)/CROWN	
SW-22-002-11E	0	118500	CROWN(PROVINCIAL)/CROWN	
NW-26-002-11E	0	60000	CROWN(PROVINCIAL)/CROWN	
NE-27-002-11E	0	382500	CROWN(PROVINCIAL)/CROWN	
SE-27-002-11E	0	558000	CROWN(PROVINCIAL)/CROWN	
SW-27-002-11E	0	157500	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		2478900		

**EXPOSURE INFORMATION**

EXPOSURE #: LM183 (NE-16-002-11E)  
 EXPOSURE TYPE: SAND AND GRAVEL PIT

ECONOMIC THICKNESS: 2.0 METRES  
 SECTION: A  
 SECTION HEIGHT: 2.0 M.  
 HEIGHT SAMPLED: 2.0 M.  
 MATERIAL AT BASE: SAND

VISITED: 8907  
 LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: FOREST NATURAL  
 ESTIMATED STONE CONTENT: MEDIUM  
 MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL  
 DEPTH TO WATER TABLE:  
 OVERBURDEN THICKNESS: 0.2 M.

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM256 (SW-27-002-11E)  
 EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 2.4 METRES  
 SECTION: A  
 SECTION HEIGHT: 3.0 M.  
 HEIGHT SAMPLED: 2.4 M.  
 MATERIAL AT BASE: SAND

VISITED: 8908  
 LAND USE: HIGHWAY,ROADWAY,RAILWAY  
 SURROUNDING LAND USE: FOREST NATURAL  
 ESTIMATED STONE CONTENT: MEDIUM  
 MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
 DEPTH TO WATER TABLE:  
 OVERBURDEN THICKNESS: 0.0 M.

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

**SIEVE ANALYSIS****PERCENT PASSING**

	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	OVERSIZED (PLUS 6")
LM183 A (NE-16-002-11E)	99	96	91	86	77	65	48	28	9	2	1	SPARSE
LM256 A (SW-27-002-11E)	100	100	97	92	77	62	46	37	27	5	2	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM183 A	50	48	2	0	0	
LM256 A	74	26	0	0	0	

**DEPOSIT # 001045A (UPPER CAMPBELL)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m3)	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-03-002-10E	70	49050	PRIVATE/PRIVATE	
NW-03-002-10E	60	52800	PRIVATE/PRIVATE	
SE-03-002-10E	80	1200	PRIVATE/PRIVATE	
NE-09-002-10E	0	226500	PRIVATE/PRIVATE	
NW-09-002-10E	0	282000	CROWN(PROVINCIAL)/CROWN	
SE-09-002-10E	0	345000	CROWN(MUNICIPAL)/CROWN	
SW-10-002-10E	60	39000	PRIVATE/PRIVATE	
NW-16-002-10E	0	178500	PRIVATE/PRIVATE	
SW-16-002-10E	0	606000	PRIVATE/PRIVATE	
NE-17-002-10E	0	22500	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		1802550		

**EXPOSURE INFORMATION**

EXPOSURE #: LM146 (SW-10-002-10E)	VISITED: 8906
EXPOSURE TYPE: SAND AND GRAVEL PIT	LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 1.0 METRES	ESTIMATED STONE CONTENT: MEDIUM
SECTION: A	MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL
SECTION HEIGHT: 1.5 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 0.0 M.	OVERBURDEN THICKNESS: 0.3 M.
MATERIAL AT BASE: SAND AND GRAVEL	
NO CHANNEL SAMPLE TAKEN	

EXPOSURE #: LM155 (NW-03-002-10E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 2.0 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
 SECTION HEIGHT: 2.0 M. DEPTH TO WATER TABLE: 2.0 M.  
 HEIGHT SAMPLED: 2.0 M. OVERBURDEN THICKNESS: 0.2 M.  
 MATERIAL AT BASE: SAND AND GRAVEL  
 NO CHANNEL SAMPLE TAKEN

EXPOSURE #: LM243 (NW-09-002-10E) VISITED: 8908  
 EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: FOREST NATURAL  
 SURROUNDING LAND USE: AGRICULTURE,HAYING  
 ECONOMIC THICKNESS: 3.0 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
 SECTION HEIGHT: 3.0 M. DEPTH TO WATER TABLE: M.  
 HEIGHT SAMPLED: 2.7 M. OVERBURDEN THICKNESS: 0.3 M.  
 MATERIAL AT BASE: SAME AS IN PIT WALL  
 SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS

#### SIEVE ANALYSIS

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM243 A (NW-09-002-10E)	100	100	96	88	83	75	63	39	18	2	1	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

#### PETROGRAPHIC ANALYSIS

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM243 A	93	7	0	0	0	

**DEPOSIT # 001045B**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-17-002-10E	0	238000	CROWN(PROVINCIAL)/CROWN	
SE-17-002-10E	0	8000	CROWN(PROVINCIAL)/CROWN	
NE-20-002-10E	0	422000	CROWN(PROVINCIAL)/CROWN	
SE-20-002-10E	0	364000	CROWN(PROVINCIAL)/CROWN	
NW-28-002-10E	0	146000	CROWN(PROVINCIAL)/CROWN	
SW-28-002-10E	0	8000	CROWN(MUNICIPAL)/CROWN	
NE-29-002-10E	0	150000	CROWN(PROVINCIAL)/CROWN	
SE-29-002-10E	0	360000	CROWN(PROVINCIAL)/CROWN	
NE-32-002-10E	0	214000	CROWN(PROVINCIAL)/CROWN	
SE-32-002-10E	0	192000	CROWN(PROVINCIAL)/CROWN	
NW-33-002-10E	0	302000	CROWN(PROVINCIAL)/CROWN	
SW-33-002-10E	0	180000	CROWN(PROVINCIAL)/CROWN	
NE-05-003-10E	0	16000	CROWN(PROVINCIAL)/CROWN	
NW-05-003-10E	0	150000	CROWN(PROVINCIAL)/CROWN	
SE-05-003-10E	0	114000	CROWN(PROVINCIAL)/CROWN	
SW-05-003-10E	60	110400	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		2974400		

**EXPOSURE INFORMATION**

EXPOSURE #: LM095 (SW-05-003-10E)	VISITED: 8906
EXPOSURE TYPE: SAND AND GRAVEL PIT	LAND USE: GARBAGE DUMP-UNAUTHORIZED,INACTIVE
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 4.5 METRES	ESTIMATED STONE CONTENT: MEDIUM LOW
SECTION: A	MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL OCC. COBBLE
SECTION HEIGHT: 4.5 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 2.5 M.	OVERBURDEN THICKNESS: 0.6 M.
MATERIAL AT BASE: GRAVEL	

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM096 (SW-05-003-10E)	VISITED: 8906
EXPOSURE TYPE: SAND AND GRAVEL PIT	LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 2.5 METRES	ESTIMATED STONE CONTENT: MEDIUM LOW
SECTION: A	MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL
SECTION HEIGHT: 2.5 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 0.0 M.	OVERBURDEN THICKNESS: 0.3 M.
MATERIAL AT BASE: SAND AND GRAVEL	
NO CHANNEL SAMPLE TAKEN	

EXPOSURE #: LM097 (SW-05-003-10E)  
 EXPOSURE TYPE: SAND AND GRAVEL PIT  
 ECONOMIC THICKNESS: 2.5 METRES  
 SECTION: A  
 SECTION HEIGHT: 2.5 M.  
 HEIGHT SAMPLED: 0.0 M.  
 MATERIAL AT BASE: SAND AND GRAVEL  
 NO CHANNEL SAMPLE TAKEN

VISITED: 8906  
 LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: HIGHWAY,ROADWAY,RAILWAY  
 ESTIMATED STONE CONTENT: MEDIUM LOW  
 MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
 DEPTH TO WATER TABLE:  
 OVERBURDEN THICKNESS: 0.3 M.

EXPOSURE #: LM272 (SW-33-002-10E)  
 EXPOSURE TYPE: BACKHOE TEST PIT  
 ECONOMIC THICKNESS: 0.6 METRES  
 SECTION: A  
 SECTION HEIGHT: 3.0 M.  
 HEIGHT SAMPLED: 0.0 M.  
 MATERIAL AT BASE: SAND  
 NO CHANNEL SAMPLE TAKEN

VISITED: 8908  
 LAND USE: TIMBER AREA  
 SURROUNDING LAND USE: FOREST NATURAL  
 ESTIMATED STONE CONTENT: MEDIUM  
 MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
 DEPTH TO WATER TABLE:  
 OVERBURDEN THICKNESS: 0.3 M.

#### SIEVE ANALYSIS

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM095 A (SW-05-003-10E)	100	98	93	83	75	64	49	33	14	3	2	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

#### PETROGRAPHIC ANALYSIS

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM095 A	72	27	1	0	0	

**DEPOSIT # 001045C**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-05-003-10E	0	22000	CROWN(PROVINCIAL)/CROWN	
NW-05-003-10E	5	524400	CROWN(PROVINCIAL)/CROWN	
SW-05-003-10E	0	114000	CROWN(PROVINCIAL)/CROWN	
NE-07-003-10E	0	448000	CROWN(PROVINCIAL)/CROWN	
SE-07-003-10E	0	340000	CROWN(PROVINCIAL)/CROWN	
NW-08-003-10E	0	16000	CROWN(PROVINCIAL)/CROWN	
SE-08-003-10E	0	22000	CROWN(PROVINCIAL)/CROWN	
SW-08-003-10E	0	292000	CROWN(PROVINCIAL)/CROWN	
NE-18-003-10E	0	154000	CROWN(PROVINCIAL)/CROWN	
SE-18-003-10E	0	154000	CROWN(PROVINCIAL)/CROWN	
NE-19-003-10E	0	482000	CROWN(PROVINCIAL)/CROWN	
SE-19-003-10E	0	168000	CROWN(PROVINCIAL)/CROWN	
SE-30-003-10E	0	54000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		2790400		

**EXPOSURE INFORMATION**

EXPOSURE #: LM290 (NW-05-003-10E) VISITED: 8908  
EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
SURROUNDING LAND USE: FOREST NATURAL  
ECONOMIC THICKNESS: 1.0 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
SECTION: A MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
SECTION HEIGHT: 1.0 M. DEPTH TO WATER TABLE:  
HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 0.2 M.  
MATERIAL AT BASE: SAME AS IN PIT WALL  
NO CHANNEL SAMPLE TAKEN

**DEPOSIT # 001045D (POOR ACCESS)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NW-30-003-10E	0	91500	CROWN(PROVINCIAL)/CROWN	
SE-30-003-10E	0	213000	CROWN(PROVINCIAL)/CROWN	
SW-30-003-10E	0	69000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		373500		

**DEPOSIT # 001045E (NO ACCESS)**  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001045F (NO ACCESS)**  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001045G (NO ACCESS)**  
 (NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001045H (VERY SANDY)**  
 (NO ECONOMIC AGGREGATE RESERVES PROVEN)

**EXPOSURE INFORMATION**

EXPOSURE #: LM118 (SW-12-004-09E)	VISITED: 8906
EXPOSURE TYPE: SAND AND GRAVEL PIT	LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 0.0 METRES	ESTIMATED STONE CONTENT: MEDIUM LOW
SECTION: A	MATERIAL DESCRIPTION: PEBBLY SAND
SECTION HEIGHT:	DEPTH TO WATER TABLE:
HEIGHT SAMPLED:	OVERBURDEN THICKNESS: .
MATERIAL AT BASE: SAND	
NO CHANNEL SAMPLE TAKEN	

**DEPOSIT # 001045I (VERY SANDY)**  
 (NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001046**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-05-002-10E	50	69000	PRIVATE/PRIVATE	
NW-05-002-10E	70	82800	PRIVATE/PRIVATE	
SW-05-002-10E	0	122000	PRIVATE/PRIVATE	
NE-06-002-10E	80	46000	PRIVATE/PRIVATE	
NW-06-002-10E	70	91800	PRIVATE/PRIVATE	
SE-06-002-10E	20	160000	CROWN(MUNICIPAL)/CROWN	PRIVATE/PRIVATE
SW-06-002-10E	50	19000	PRIVATE/PRIVATE	
DEPOSIT RESERVES		590600		

**EXPOSURE INFORMATION**

EXPOSURE #: LM151 (NW-05-002-10E)	VISITED: 8906
EXPOSURE TYPE: SAND AND GRAVEL PIT	LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)
	SURROUNDING LAND USE: PASTURE, GRAZING
ECONOMIC THICKNESS: 1.0 METRES	ESTIMATED STONE CONTENT: MEDIUM
SECTION: A	MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL
SECTION HEIGHT: 1.5 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED:	OVERBURDEN THICKNESS: 0.3 M.
MATERIAL AT BASE: SAND	
NO CHANNEL SAMPLE TAKEN	

EXPOSURE #: LM152 (NW-05-002-10E) VISITED: 8906  
 EXPOSURE TYPE: DITCH OR ROAD CUT LAND USE: HIGHWAY,ROADWAY,RAILWAY  
 SURROUNDING LAND USE: AGRICULTURE,HAYING  
 ECONOMIC THICKNESS: 3.0 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
 SECTION HEIGHT: 3.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 2.0 M. OVERBURDEN THICKNESS: 0.2 M.  
 MATERIAL AT BASE: SAND  
 SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS

#### SIEVE ANALYSIS

		PERCENT PASSING											OVERSIZED (PLUS 6")
		3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM152	A (NW-04-002-10E)	100	99	89	75	63	51	40	30	17	3	1	SPARSE
(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)													

#### PETROGRAPHIC ANALYSIS

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM152 A	68	31	1	0	0	

**DEPOSIT # 001047** (SAND AND GRAVEL BLANKET-VERY SANDY)  
 (NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001048A** (VERY SANDY)  
 (NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001048B** (VERY SANDY)  
 (NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001048C** (NO ACCESS)  
 (NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001048D** (NO ACCESS)  
 (NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001049A** (SAND AND GRAVEL POCKETS)  
 (NO ECONOMIC AGGREGATE RESERVES PROVEN)



**EXPOSURE INFORMATION**

EXPOSURE #: G 606 (SE-05-003-10E)

EXPOSURE TYPE: BORROW PIT

ECONOMIC THICKNESS: 0.0 METRES

SECTION: A

SECTION HEIGHT: 4.0 M.

HEIGHT SAMPLED: 0.0 M.

MATERIAL AT BASE:

NO CHANNEL SAMPLE TAKEN

VISITED: 8906

LAND USE: FOREST NATURAL

SURROUNDING LAND USE: HIGHWAY,ROADWAY,RAILWAY

ESTIMATED STONE CONTENT: LOW

MATERIAL DESCRIPTION: SAND AND TILL SPARSE BOULDERS

DEPTH TO WATER TABLE: 4.0 M.

OVERBURDEN THICKNESS: 4.0 M.

EXPOSURE #: G 607 (SW-04-003-10E)

EXPOSURE TYPE: BORROW PIT

ECONOMIC THICKNESS: 0.0 METRES

SECTION: A

SECTION HEIGHT: 4.5 M.

HEIGHT SAMPLED: 0.0 M.

MATERIAL AT BASE: SAND

NO CHANNEL SAMPLE TAKEN

VISITED: 8906

LAND USE: HIGHWAY,ROADWAY,RAILWAY

SURROUNDING LAND USE: FOREST NATURAL

ESTIMATED STONE CONTENT: LOW

MATERIAL DESCRIPTION: SILT TILL W/SAND AND GRAVEL  
LENSES

DEPTH TO WATER TABLE:

OVERBURDEN THICKNESS: 4.5 M.

EXPOSURE #: G 608 (SW-04-003-10E)

EXPOSURE TYPE: BORROW PIT

ECONOMIC THICKNESS: 0.0 METRES

SECTION: A

SECTION HEIGHT: 3.0 M.

HEIGHT SAMPLED: 0.0 M.

MATERIAL AT BASE: SAND

NO CHANNEL SAMPLE TAKEN

VISITED: 8906

LAND USE: HIGHWAY,ROADWAY,RAILWAY

SURROUNDING LAND USE: FOREST NATURAL

ESTIMATED STONE CONTENT: LOW

MATERIAL DESCRIPTION: SAND ,GRAVELLY AT SURFACE

DEPTH TO WATER TABLE:

OVERBURDEN THICKNESS: 3.0 M.

EXPOSURE #: G 609 (NW-34-002-10E)

EXPOSURE TYPE: BORROW PIT

ECONOMIC THICKNESS: 0.0 METRES

SECTION: A

SECTION HEIGHT: 3.0 M.

HEIGHT SAMPLED: 0.0 M.

MATERIAL AT BASE: SAND

NO CHANNEL SAMPLE TAKEN

VISITED: 8906

LAND USE: HIGHWAY,ROADWAY,RAILWAY

SURROUNDING LAND USE: FOREST NATURAL

ESTIMATED STONE CONTENT: LOW

MATERIAL DESCRIPTION: PEBBLY SAND

DEPTH TO WATER TABLE:

OVERBURDEN THICKNESS: 3.0 M.

EXPOSURE #: G 610 (NE-34-002-10E)

EXPOSURE TYPE: BORROW PIT

ECONOMIC THICKNESS: 0.0 METRES

SECTION: A

SECTION HEIGHT: 4.0 M.

HEIGHT SAMPLED: 0.0 M.

MATERIAL AT BASE: SAND

NO CHANNEL SAMPLE TAKEN

VISITED: 8906

LAND USE: HIGHWAY,ROADWAY,RAILWAY

SURROUNDING LAND USE: FOREST NATURAL

ESTIMATED STONE CONTENT: LOW

MATERIAL DESCRIPTION: FINE SAND WITH TILL LENSES

DEPTH TO WATER TABLE:

OVERBURDEN THICKNESS: 4.0 M.

EXPOSURE #: LM098 (NE-33-002-10E)

EXPOSURE TYPE: BORROW PIT

ECONOMIC THICKNESS: 1.0 METRES

SECTION: A

SECTION HEIGHT: 3.5 M.

HEIGHT SAMPLED: 0.0 M.

MATERIAL AT BASE: TILL

NO CHANNEL SAMPLE TAKEN

VISITED: 8906

LAND USE: HIGHWAY,ROADWAY,RAILWAY

SURROUNDING LAND USE: FOREST NATURAL

ESTIMATED STONE CONTENT: MEDIUM HIGH

MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL

DEPTH TO WATER TABLE:

OVERBURDEN THICKNESS: 0.3 M.

EXPOSURE #: LM099 (NW-34-002-10E)

EXPOSURE TYPE: SAND AND GRAVEL PIT

ECONOMIC THICKNESS: 1.5 METRES

SECTION: A

SECTION HEIGHT: 4.0 M.

HEIGHT SAMPLED: 1.5 M.

MATERIAL AT BASE: SAND

SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS

VISITED: 8906

LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)

SURROUNDING LAND USE: HIGHWAY,ROADWAY,RAILWAY

ESTIMATED STONE CONTENT: MEDIUM HIGH

MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL

DEPTH TO WATER TABLE:

OVERBURDEN THICKNESS: 0.3 M.

EXPOSURE #: LM269 (SW-03-003-10E)

EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 1.9 METRES

SECTION: A

SECTION HEIGHT: 3.5 M.

HEIGHT SAMPLED: 1.9 M.

MATERIAL AT BASE: SAND

SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS

VISITED: 8908

LAND USE: FOREST NATURAL

SURROUNDING LAND USE: FOREST NATURAL

ESTIMATED STONE CONTENT: MEDIUM

MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL OCC. COBBLY SAND LAYERS

DEPTH TO WATER TABLE:

OVERBURDEN THICKNESS: 0.2 M.

EXPOSURE #: LM270 (NW-34-002-10E)

EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 0.0 METRES

SECTION: A

SECTION HEIGHT: 3.0 M.

HEIGHT SAMPLED: 0.0 M.

MATERIAL AT BASE: SAND

NO CHANNEL SAMPLE TAKEN

VISITED: 8908

LAND USE: HIGHWAY,ROADWAY,RAILWAY

SURROUNDING LAND USE: FOREST NATURAL

ESTIMATED STONE CONTENT: LOW

MATERIAL DESCRIPTION: FINE SAND SANDY COBBLY PEBBLE GRAVEL LAYER

DEPTH TO WATER TABLE:

OVERBURDEN THICKNESS: 0.0 M.

EXPOSURE #: LM271 (NE-33-002-10E)

EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 0.0 METRES

SECTION: A

SECTION HEIGHT: 3.5 M.

HEIGHT SAMPLED: 0.0 M.

MATERIAL AT BASE: SAND

NO CHANNEL SAMPLE TAKEN

VISITED: 8908

LAND USE: FOREST NATURAL

SURROUNDING LAND USE: FOREST NATURAL

ESTIMATED STONE CONTENT: LOW

MATERIAL DESCRIPTION: MED.-COARSE SAND PEBBLY COBBLY

DEPTH TO WATER TABLE:

OVERBURDEN THICKNESS: 3.5 M.

**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM099 A (NW-34-002-10E)	98	87	75	63	54	47	40	33	24	9	3	SPARSE
LM269 A (SW-03-003-10E)	100	100	96	86	73	58	45	33	15	4	2	SPARSE
(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)												

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM099 A	51	47	3	0	0	
LM269 A	47	49	4	0	0	

**DEPOSIT # 001049B (VERY SANDY)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NW-02-003-10E	0	4000	CROWN(PROVINCIAL)/CROWN	
SW-02-003-10E	0	12000	CROWN(PROVINCIAL)/CROWN	
NE-03-003-10E	50	61000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		77000		

**EXPOSURE INFORMATION**

EXPOSURE #: LM158 (NE-03-003-10E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-TEMPORARY USE  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 3.0 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
 SECTION HEIGHT: 3.5 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 2.0 M. OVERBURDEN THICKNESS: 0.3 M.  
 MATERIAL AT BASE: SAND AND GRAVEL  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM158 A (NE-03-003-10E)	100	98	93	82	65	51	37	24	16	8	4	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM158 A	72	28	1	0	0	

**DEPOSIT # 001050** (VERY SANDY)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001051** (MINOR SAND AND GRAVEL POCKETS)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001052** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001053** (MINOR SAND AND GRAVEL POCKETS)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**EXPOSURE INFORMATION**

EXPOSURE #:	LM216 (NE-27-003-10E)	VISITED:	8908
EXPOSURE TYPE:	SAND AND GRAVEL PIT	LAND USE:	PIT-NOT IN USE(COMMONLY REVEGETATED)
		SURROUNDING LAND USE:	PIT-TEMPORARY USE
ECONOMIC THICKNESS:	1.5 METRES	ESTIMATED STONE CONTENT:	MEDIUM
SECTION:	A	MATERIAL DESCRIPTION:	SANDY PEBBLE GRAVEL
SECTION HEIGHT:	2.5 M.	DEPTH TO WATER TABLE:	
HEIGHT SAMPLED:	0.0 M.	OVERBURDEN THICKNESS:	0.2 M.
MATERIAL AT BASE:	TILL		
	NO CHANNEL SAMPLE TAKEN		

EXPOSURE #:	LM217 (NW-26-003-10E)	VISITED:	8908
EXPOSURE TYPE:	SAND AND GRAVEL PIT	LAND USE:	PIT-NOT IN USE(COMMONLY REVEGETATED)
		SURROUNDING LAND USE:	FOREST NATURAL
ECONOMIC THICKNESS:	1.5 METRES	ESTIMATED STONE CONTENT:	MEDIUM LOW
SECTION:	A	MATERIAL DESCRIPTION:	SANDY FINE PEBBLE GRAVEL
SECTION HEIGHT:	2.0 M.	DEPTH TO WATER TABLE:	
HEIGHT SAMPLED:	0.0 M.	OVERBURDEN THICKNESS:	0.2 M.
MATERIAL AT BASE:	SAND		
	NO CHANNEL SAMPLE TAKEN		

EXPOSURE #:	LM273 (SE-18-003-10E)	VISITED:	8908
EXPOSURE TYPE:	BACKHOE TEST PIT	LAND USE:	FOREST NATURAL
		SURROUNDING LAND USE:	FOREST NATURAL
ECONOMIC THICKNESS:	1.7 METRES	ESTIMATED STONE CONTENT:	MEDIUM
SECTION:	A	MATERIAL DESCRIPTION:	SANDY PEBBLE GRAVEL OCC. COBBLE
SECTION HEIGHT:	2.8 M.	DEPTH TO WATER TABLE:	
HEIGHT SAMPLED:	1.7 M.	OVERBURDEN THICKNESS:	0.7 M.
MATERIAL AT BASE:	SAND		
	SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS		

**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM273 A (SE-18-003-10E)	99	96	89	82	73	59	41	20	9	4	2	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM273 A	64	36	0	0	0	

**DEPOSIT # 001054A (REQUIRES TESTING)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-17-002-10E	0	50000	CROWN(PROVINCIAL)/CROWN	
NW-17-002-10E	0	54000	CROWN(PROVINCIAL)/CROWN	
SE-20-002-10E	0	134000	CROWN(PROVINCIAL)/CROWN	
NW-21-002-10E	0	38000	CROWN(PROVINCIAL)/CROWN	
SW-21-002-10E	0	34000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		310000		

**DEPOSIT # 001054B**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-21-003-10E	0	42000	CROWN(PROVINCIAL)/CROWN	
NW-21-003-10E	20	139200	CROWN(PROVINCIAL)/CROWN	
SE-28-003-10E	0	44000	PRIVATE/PRIVATE	
SW-28-003-10E	0	38000	CROWN(MUNICIPAL)/CROWN	
DEPOSIT RESERVES		263200		

**EXPOSURE INFORMATION**

EXPOSURE #: LM044 (NW-21-003-10E)

VISITED: 8808

EXPOSURE TYPE: SAND AND GRAVEL PIT

LAND USE: PIT-TEMPORARY USE

SURROUNDING LAND USE: FOREST NATURAL

ECONOMIC THICKNESS: 2.0 METRES

ESTIMATED STONE CONTENT: MEDIUM

SECTION: A

MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL

SECTION HEIGHT: 2.0 M.

DEPTH TO WATER TABLE:

HEIGHT SAMPLED:

OVERBURDEN THICKNESS: 0.2 M.

MATERIAL AT BASE: SAND

NO CHANNEL SAMPLE TAKEN

**DEPOSIT # 001055** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001056A** (VERY SANDY-REQUIRES TEST)

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-28-003-12E	0	15000	CROWN(PROVINCIAL)/CROWN	
NE-31-003-12E	0	84000	CROWN(PROVINCIAL)/CROWN	
NE-32-003-12E	0	138000	CROWN(PROVINCIAL)/CROWN	
NW-32-003-12E	0	241000	CROWN(PROVINCIAL)/CROWN	
SE-32-003-12E	0	63000	CROWN(PROVINCIAL)/CROWN	
SE-33-003-12E	5	152950	CROWN(PROVINCIAL)/CROWN	
SW-33-003-12E	0	153000	CROWN(PROVINCIAL)/CROWN	
SE-06-004-12E	0	101000	CROWN(PROVINCIAL)/CROWN	
SW-06-004-12E	0	149000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		1096950		

#### EXPOSURE INFORMATION

EXPOSURE #: LM206 (SE-33-003-12E)	VISITED: 8907
EXPOSURE TYPE: SAND AND GRAVEL PIT	LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 1.0 METRES	ESTIMATED STONE CONTENT: MEDIUM
SECTION: A	MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL
SECTION HEIGHT: 1.0 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 0.0 M.	OVERBURDEN THICKNESS: 0.2 M.
MATERIAL AT BASE: SAND	
NO CHANNEL SAMPLE TAKEN	

**DEPOSIT # 001056B** (NO ACCESS)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001056C** (NO ACCESS)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001056D** (NO ACCESS)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001056E** (NO ACCESS)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001056F** (VERY SANDY)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001056G** (VERY SANDY)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001056H** (VERY SANDY)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001057A** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001057B** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001057C** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001058A** (NO ACCESS (ISLAND))  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001058B** (NO ACCESS-ISLAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001058C** (HIGH WATER TABLE)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001059A (VARIABLE QUALITY)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-01-004-13E	70	94200	CROWN(PROVINCIAL)/CROWN	
NW-01-004-13E	70	9000	CROWN(PROVINCIAL)/CROWN	
NW-02-004-13E	0	26000	CROWN(PROVINCIAL)/CROWN	
NE-03-004-13E	20	321600	PRIVATE/PRIVATE	
NW-03-004-13E	50	167000	PRIVATE/PRIVATE	
NE-07-004-13E	0	20000	CROWN(PROVINCIAL)/CROWN	
NE-08-004-13E	50	590000	CROWN(PROVINCIAL)/CROWN	
NW-08-004-13E	50	243000	CROWN(PROVINCIAL)/CROWN	
SE-08-004-13E	0	46000	PRIVATE/PRIVATE	
NE-09-004-13E	50	223000	CROWN(PROVINCIAL)/CROWN	
NW-09-004-13E	50	414000	CROWN(PROVINCIAL)/CROWN	
SE-09-004-13E	20	900800	CROWN(PROVINCIAL)/CROWN	
SW-09-004-13E	20	523200	CROWN(PROVINCIAL)/CROWN	
NE-10-004-13E	50	46000	CROWN(PROVINCIAL)/CROWN	
NW-10-004-13E	50	169000	CROWN(PROVINCIAL)/CROWN	
SE-10-004-13E	20	428800	CROWN(MUNICIPAL)/CROWN	
SW-10-004-13E	20	140800	CROWN(PROVINCIAL)/CROWN	
SE-11-004-13E	60	252800	CROWN(PROVINCIAL)/CROWN	
SW-11-004-13E	60	266400	CROWN(PROVINCIAL)/CROWN	
SE-12-004-13E	0	192000	CROWN(PROVINCIAL)/CROWN	
SW-12-004-13E	40	283200	CROWN(PROVINCIAL)/CROWN	
SW-17-004-13E	50	84000	CROWN(PROVINCIAL)/CROWN	
SE-18-004-13E	50	222000	CROWN(PROVINCIAL)/CROWN	
SW-18-004-13E	50	80000	CROWN(MUNICIPAL)/CROWN	
DEPOSIT RESERVES		5742800		

**EXPOSURE INFORMATION**

EXPOSURE #:	LM172 (SE-10-004-13E)	VISITED:	8906
EXPOSURE TYPE:	SAND AND GRAVEL PIT	LAND USE:	ACTIVE PIT
		SURROUNDING LAND USE:	FOREST NATURAL
ECONOMIC THICKNESS:	2.5 METRES	ESTIMATED STONE CONTENT:	MEDIUM
SECTION:	A	MATERIAL DESCRIPTION:	SANDY PEBBLE GRAVEL
SECTION HEIGHT:	2.5 M.	DEPTH TO WATER TABLE:	
HEIGHT SAMPLED:	2.0 M.	OVERBURDEN THICKNESS:	0.2 M.
MATERIAL AT BASE:	SAME AS IN PIT WALL		
SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS			



EXPOSURE #: LM173 (SE-10-004-13E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 2.0 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
 SECTION HEIGHT: 2.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 0.2 M.  
 MATERIAL AT BASE: SAME AS IN PIT WALL  
 NO CHANNEL SAMPLE TAKEN

EXPOSURE #: LM174 (SE-12-004-13E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 2.0 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
 SECTION HEIGHT: 2.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 0.2 M.  
 MATERIAL AT BASE: SAME AS IN PIT WALL  
 NO CHANNEL SAMPLE TAKEN

EXPOSURE #: LM175 (SW-18-004-13E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: HIGHWAY,ROADWAY,RAILWAY  
 ECONOMIC THICKNESS: 3.0 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: PEBBLY COBBLY SAND  
 SECTION HEIGHT: 3.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 0.3 M.  
 MATERIAL AT BASE: SAND  
 NO CHANNEL SAMPLE TAKEN

EXPOSURE #: LM263 (NE-09-004-13E) VISITED: 8908  
 EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: FOREST NATURAL  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 1.0 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SAND OVER SANDY PEBBLE GRAVEL  
 SECTION HEIGHT: 3.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 2.0 M.  
 MATERIAL AT BASE: GRAVEL  
 NO CHANNEL SAMPLE TAKEN

#### SIEVE ANALYSIS

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM172 A (SE-10-004-13E)	100	97	90	85	67	47	32	22	9	2	2	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM172 A	51	46	3	0	0	

**DEPOSIT # 001059B (GENERALLY VERY SANDY)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-12-004-12E	0	46500	CROWN(PROVINCIAL)/CROWN	
NW-12-004-12E	0	750000	CROWN(PROVINCIAL)/CROWN	
NW-13-004-12E	0	28500	CROWN(PROVINCIAL)/CROWN	
SE-13-004-12E	40	525600	CROWN(PROVINCIAL)/CROWN	
SW-13-004-12E	20	321600	CROWN(PROVINCIAL)/CROWN	
NE-14-004-12E	30	128100	CROWN(PROVINCIAL)/CROWN	
NW-14-004-12E	30	358050	CROWN(PROVINCIAL)/CROWN	
SE-14-004-12E	30	177450	CROWN(PROVINCIAL)/CROWN	
NE-15-004-12E	50	120750	CROWN(PROVINCIAL)/CROWN	
NE-20-004-12E	0	445500	CROWN(PROVINCIAL)/CROWN	
NW-20-004-12E	0	100500	CROWN(PROVINCIAL)/CROWN	PRIVATE/PRIVATE
NE-21-004-12E	0	195000	CROWN(PROVINCIAL)/CROWN	
NW-21-004-12E	0	345000	CROWN(PROVINCIAL)/CROWN	
SE-21-004-12E	0	324000	CROWN(PROVINCIAL)/CROWN	
SE-22-004-12E	0	210000	CROWN(PROVINCIAL)/CROWN	
SW-22-004-12E	0	534000	CROWN(PROVINCIAL)/CROWN	
SW-18-004-13E	60	71400	CROWN(MUNICIPAL)/CROWN	
DEPOSIT RESERVES		4681950		

**EXPOSURE INFORMATION**

EXPOSURE #: LM214 (SW-13-004-12E)	VISITED: 8908
EXPOSURE TYPE: SAND AND GRAVEL PIT	LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 1.5 METRES	ESTIMATED STONE CONTENT: MEDIUM
SECTION: A	MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL
SECTION HEIGHT: 2.0 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 1.0 M.	OVERBURDEN THICKNESS: 0.2 M.
MATERIAL AT BASE: SAND	

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM264 (SW-18-004-13E)	VISITED: 8908
EXPOSURE TYPE: BACKHOE TEST PIT	LAND USE: FOREST NATURAL
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 2.1 METRES	ESTIMATED STONE CONTENT: MEDIUM
SECTION: A	MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL
SECTION HEIGHT: 2.5 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 2.1 M.	OVERBURDEN THICKNESS: 0.3 M.
MATERIAL AT BASE: SAND	

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM214 A (SW-13-004-12E)	100	95	85	74	60	44	30	18	10	7	4	MODERATE
LM264 A (SW-18-004-13E)	100	97	93	86	75	62	48	33	14	3	2	SPARSE
(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)												

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM214 A	21	78	2	0	0	
LM264 A	80	16	4	0	0	

**DEPOSIT # 001059C (VARIABLE QUALITY)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m3)	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-19-004-12E	0	27000	PRIVATE/PRIVATE	
NW-20-004-12E	0	161000	CROWN(PROVINCIAL)/CROWN	PRIVATE/PRIVATE
SW-29-004-12E	0	134000	CROWN(PROVINCIAL)/CROWN	
SE-30-004-12E	5	178600	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		500600		

**EXPOSURE INFORMATION**

EXPOSURE #: LM187 (SE-30-004-12E) VISITED: 8907  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 2.5 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
 SECTION HEIGHT: 2.5 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 2.0 M. OVERBURDEN THICKNESS: 0.2 M.  
 MATERIAL AT BASE: SAME AS IN PIT WALL  
 SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS

**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM187 A (SE-30-004-12E)	100	99	96	92	86	75	63	49	27	3	1	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM187 A	43	54	3	0	0	

**DEPOSIT # 001059D (REQUIRES TESTING)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
SW-29-004-12E	0	46000	CROWN(PROVINCIAL)/CROWN	
SE-30-004-12E	0	142000	CROWN(PROVINCIAL)/CROWN	
SW-30-004-12E	0	19000	PRIVATE/PRIVATE	
DEPOSIT RESERVES		207000		

**DEPOSIT # 001059E (REQUIRES TESTING)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
SE-30-004-12E	0	4000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		4000		

**DEPOSIT # 001059F (GENERALLY VERY SANDY)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-25-004-11E	0	153000	PRIVATE/PRIVATE	
SE-25-004-11E	0	38000	PRIVATE/PRIVATE	
NW-30-004-12E	0	69000	CROWN(PROVINCIAL)/CROWN	
SE-30-004-12E	0	15000	CROWN(PROVINCIAL)/CROWN	
SW-30-004-12E	10	179100	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		454100		

**EXPOSURE INFORMATION**

EXPOSURE #: LM188 (SW-30-004-12E)	VISITED: 8907
EXPOSURE TYPE: SAND AND GRAVEL PIT	LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 1.0 METRES	ESTIMATED STONE CONTENT: MEDIUM LOW
SECTION: A	MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL
SECTION HEIGHT: 1.0 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 0.0 M.	OVERBURDEN THICKNESS: 0.2 M.
MATERIAL AT BASE: SAME AS IN PIT WALL	
NO CHANNEL SAMPLE TAKEN	

EXPOSURE #: LM267 (NW-30-004-12E)  
 EXPOSURE TYPE: BACKHOE TEST PIT  
 ECONOMIC THICKNESS: 2.5 METRES  
 SECTION: A  
 SECTION HEIGHT: 2.7 M.  
 HEIGHT SAMPLED: 2.5 M.  
 MATERIAL AT BASE: GRAVEL

VISITED: 8908  
 LAND USE: FOREST NATURAL  
 SURROUNDING LAND USE: FOREST NATURAL  
 ESTIMATED STONE CONTENT: MEDIUM LOW  
 MATERIAL DESCRIPTION: PEBBLY MED.-COARSE SAND  
 DEPTH TO WATER TABLE: M.  
 OVERBURDEN THICKNESS: 0.2 M.

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM268 (NW-30-004-12E)  
 EXPOSURE TYPE: BACKHOE TEST PIT  
 ECONOMIC THICKNESS: 0.0 METRES  
 SECTION: A  
 SECTION HEIGHT: 2.1 M.  
 HEIGHT SAMPLED:  
 MATERIAL AT BASE: SAND  
 NO CHANNEL SAMPLE TAKEN

VISITED: 8908  
 LAND USE: FOREST NATURAL  
 SURROUNDING LAND USE: FOREST NATURAL  
 ESTIMATED STONE CONTENT: LOW  
 MATERIAL DESCRIPTION: MED. SAND OVER PEBBLY COARSE SAND  
 DEPTH TO WATER TABLE: 1.9 M.  
 OVERBURDEN THICKNESS: 1.8 M.

**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM267 A (NW-30-004-12E)	100	99	95	93	89	84	69	42	14	2	1	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM267 A	67	31	2	0	0	

**DEPOSIT # 001059G (REQUIRES TESTING)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-25-004-11E	0	57000	PRIVATE/PRIVATE	
NE-35-004-11E	0	84000	PRIVATE/PRIVATE	
NW-36-004-11E	0	195000	CROWN(PROVINCIAL)/CROWN	
SE-36-004-11E	0	126000	PRIVATE/PRIVATE	
SW-36-004-11E	0	247000	PRIVATE/PRIVATE	
DEPOSIT RESERVES		709000		

**DEPOSIT # 001059H (GENERALLY VERY SANDY)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-35-004-11E	0	314000	PRIVATE/PRIVATE	
NW-35-004-11E	0	17000	PRIVATE/PRIVATE	
SE-02-005-11E	0	94000	PRIVATE/PRIVATE	
SW-02-005-11E	0	92000	PRIVATE/PRIVATE	
DEPOSIT RESERVES		517000		

**EXPOSURE INFORMATION**

EXPOSURE #: LM191 (NW-35-004-11E) VISITED: 8907  
EXPOSURE TYPE: DITCH OR ROAD CUT LAND USE: HIGHWAY,ROADWAY,RAILWAY  
SURROUNDING LAND USE: FOREST NATURAL  
ECONOMIC THICKNESS: 2.0 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
SECTION: A MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
SECTION HEIGHT: 2.0 M. DEPTH TO WATER TABLE:  
HEIGHT SAMPLED: 1.5 M. OVERBURDEN THICKNESS: 0.2 M.  
MATERIAL AT BASE: SAME AS IN PIT WALL  
SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS

**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM191 A (NW-35-004-11E)	100	99	98	96	90	74	48	32	11	2	2	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM191 A	76	15	9	0	0	

**DEPOSIT # 001059I (REQUIRES TESTING)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NW-02-005-11E	0	63000	CROWN(PROVINCIAL)/CROWN	
SW-02-005-11E	0	103000	PRIVATE/PRIVATE	
NE-03-005-11E	0	172000	CROWN(PROVINCIAL)/CROWN	
NE-09-005-11E	30	100800	CROWN(PROVINCIAL)/CROWN	
NW-09-005-11E	50	35500	CROWN(MUNICIPAL)/CROWN	
SE-09-005-11E	30	39900	CROWN(MUNICIPAL)/CROWN	
NW-10-005-11E	0	6000	PRIVATE/PRIVATE	
SE-10-005-11E	0	17000	CROWN(PROVINCIAL)/CROWN	
SW-10-005-11E	0	283000	PRIVATE/PRIVATE	
DEPOSIT RESERVES		820200		

**EXPOSURE INFORMATION**

EXPOSURE #: LM193 (NW-09-005-11E)

VISITED: 8907

EXPOSURE TYPE: SAND AND GRAVEL PIT

LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)

ECONOMIC THICKNESS: 1.0 METRES

SURROUNDING LAND USE: FOREST NATURAL

SECTION: A

ESTIMATED STONE CONTENT: MEDIUM LOW

SECTION HEIGHT: 1.0 M.

MATERIAL DESCRIPTION: SAND OCC. PEBBLE

HEIGHT SAMPLED: 0.0 M.

DEPTH TO WATER TABLE:

MATERIAL AT BASE: SAND

OVERBURDEN THICKNESS: 0.2 M.

NO CHANNEL SAMPLE TAKEN

**DEPOSIT # 001059J (VERY SANDY)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NW-09-005-11E	50	11500	CROWN(MUNICIPAL)/CROWN	
SW-16-005-11E	50	36500	PRIVATE/PRIVATE	
NE-17-005-11E	50	5500	CROWN(PROVINCIAL)/CROWN	
SE-17-005-11E	70	21300	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		74800		

**EXPOSURE INFORMATION**

EXPOSURE #: LM194 (SW-16-005-11E)

VISITED: 8907

EXPOSURE TYPE: SAND AND GRAVEL PIT

LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)

ECONOMIC THICKNESS: 0.0 METRES

SURROUNDING LAND USE: FOREST NATURAL

SECTION: A

ESTIMATED STONE CONTENT: LOW

SECTION HEIGHT: 2.0 M.

MATERIAL DESCRIPTION: SAND OCC. PEBBLE

HEIGHT SAMPLED: 0.0 M.

DEPTH TO WATER TABLE:

MATERIAL AT BASE: SAND

OVERBURDEN THICKNESS: 0.2 M.

NO CHANNEL SAMPLE TAKEN

**DEPOSIT # 001060A (POTENTIAL SAND AND GRAVEL POCKETS)**  
**(NO ECONOMIC AGGREGATE RESERVES PROVEN)**

**DEPOSIT # 001060B (GLACIOFLUVIAL SAND AND GRAVEL)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NW-16-004-12E	10	144450	CROWN(PROVINCIAL)/CROWN	
	DEPOSIT RESERVES	144450		

**EXPOSURE INFORMATION**

EXPOSURE #:	LM176 (NW-16-004-12E)	VISITED:	8906
EXPOSURE TYPE:	SAND AND GRAVEL PIT	LAND USE:	PIT-TEMPORARY USE
		SURROUNDING LAND USE:	FOREST NATURAL
ECONOMIC THICKNESS:	1.5 METRES	ESTIMATED STONE CONTENT:	MEDIUM
SECTION:	A	MATERIAL DESCRIPTION:	SANDY PEBBLE GRAVEL
SECTION HEIGHT:	2.0 M.	DEPTH TO WATER TABLE:	
HEIGHT SAMPLED:	1.5 M.	OVERBURDEN THICKNESS:	0.2 M.
MATERIAL AT BASE:	TILL		

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #:	LM265 (NW-16-004-12E)	VISITED:	8908
EXPOSURE TYPE:	BACKHOE TEST PIT	LAND USE:	FOREST NATURAL
		SURROUNDING LAND USE:	FOREST NATURAL
ECONOMIC THICKNESS:	2.0 METRES	ESTIMATED STONE CONTENT:	MEDIUM HIGH
SECTION:	A	MATERIAL DESCRIPTION:	SANDY PEBBLE GRAVEL OCC. COBBLE
SECTION HEIGHT:	3.0 M.	DEPTH TO WATER TABLE:	
HEIGHT SAMPLED:	2.0 M.	OVERBURDEN THICKNESS:	0.2 M.
MATERIAL AT BASE:	SAND		

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #:	LM266 (NW-16-004-12E)	VISITED:	8908
EXPOSURE TYPE:	BACKHOE TEST PIT	LAND USE:	TIMBER AREA
		SURROUNDING LAND USE:	FOREST NATURAL
ECONOMIC THICKNESS:	0.4 METRES	ESTIMATED STONE CONTENT:	MEDIUM
SECTION:	A	MATERIAL DESCRIPTION:	SANDY FINE PEBBLE GRAVEL
SECTION HEIGHT:	2.5 M.	DEPTH TO WATER TABLE:	1.8 M.
HEIGHT SAMPLED:		OVERBURDEN THICKNESS:	1.0 M.
MATERIAL AT BASE:	SILT		
NO CHANNEL SAMPLE TAKEN			



**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM176 A (NW-16-004-12E)	100	97	89	81	73	64	52	32	11	3	2	SPARSE
LM265 A (NW-16-004-12E)	100	97	89	83	74	64	50	33	21	15	4	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	%	%	%	%	% SHALE	COMMENTS
	GOOD	FAIR	POOR	DELETERIOUS	(BY WEIGHT)	
LM176 A	58	40	2	0	0	
LM265 A	73	25	2	0	0	

**DEPOSIT # 001061** (VERY SANDY)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001062A** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001062B** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001062C** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001063** (POOR ACCESS)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001064 (NO ACCESS)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NW-25-004-12E	0	25000	CROWN(PROVINCIAL)/CROWN	
NE-36-004-12E	0	65000	CROWN(PROVINCIAL)/CROWN	
SE-36-004-12E	0	36000	CROWN(PROVINCIAL)/CROWN	
SW-36-004-12E	0	115000	CROWN(PROVINCIAL)/CROWN	
NE-31-004-13E	0	19000	CROWN(PROVINCIAL)/CROWN	
NW-31-004-13E	0	126000	CROWN(PROVINCIAL)/CROWN	
NE-33-004-13E	0	90000	CROWN(PROVINCIAL)/CROWN	
NW-33-004-13E	0	67000	CROWN(PROVINCIAL)/CROWN	
SW-04-005-13E	0	121000	CROWN(PROVINCIAL)/CROWN	
SE-05-005-13E	0	103000	CROWN(PROVINCIAL)/CROWN	
SW-05-005-13E	0	111000	CROWN(PROVINCIAL)/CROWN	
SE-06-005-13E	0	80000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		958000		

**DEPOSIT # 001065A (NO ACCESS)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NW-28-004-12E	0	4000	CROWN(PROVINCIAL)/CROWN	
SE-33-004-12E	0	63000	CROWN(PROVINCIAL)/CROWN	
SW-33-004-12E	0	42000	CROWN(PROVINCIAL)/CROWN	
SE-34-004-12E	0	69000	CROWN(PROVINCIAL)/CROWN	
SW-34-004-12E	0	61000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		239000		

**DEPOSIT # 001065B (NO ACCESS)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-29-004-12E	0	17000	CROWN(PROVINCIAL)/CROWN	
SE-31-004-12E	0	15000	CROWN(PROVINCIAL)/CROWN	
SE-32-004-12E	0	94000	PRIVATE/PRIVATE	
SW-32-004-12E	0	80000	PRIVATE/PRIVATE	
DEPOSIT RESERVES		206000		

**DEPOSIT # 001065C (NO ACCESS)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-36-004-11E	0	57000	CROWN(PROVINCIAL)/CROWN	
NE-31-004-12E	0	27000	CROWN(PROVINCIAL)/CROWN	
NW-31-004-12E	0	69000	CROWN(PROVINCIAL)/CROWN	
SE-31-004-12E	0	54000	CROWN(PROVINCIAL)/CROWN	
SE-01-005-11E	0	11000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		218000		

**DEPOSIT # 001065D (NO ACCESS)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
SW-01-005-11E	0	8000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		8000		

**DEPOSIT # 001065E (NO ACCESS)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
SW-01-005-11E	0	27000	CROWN(PROVINCIAL)/CROWN	
SE-02-005-11E	0	29000	PRIVATE/PRIVATE	
DEPOSIT RESERVES		56000		

**DEPOSIT # 001065F (NO ACCESS)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NW-01-005-11E	0	4000	PRIVATE/PRIVATE	
SW-01-005-11E	0	8000	CROWN(PROVINCIAL)/CROWN	
NE-02-005-11E	0	10000	PRIVATE/PRIVATE	
DEPOSIT RESERVES		22000		

**DEPOSIT # 001065G (NO ACCESS)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-02-005-11E	0	86000	PRIVATE/PRIVATE	
NW-02-005-11E	0	11000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		97000		

**DEPOSIT # 001065H (NO ACCESS)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NW-02-005-11E	0	33000	CROWN(PROVINCIAL)/CROWN	
SW-11-005-11E	0	34000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		67000		

**DEPOSIT # 001065I (NO ACCESS)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
SW-11-005-11E	0	27000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		27000		

**DEPOSIT # 001065J (NO ACCESS)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
SW-11-005-11E	0	11000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		11000		

**DEPOSIT # 001065K (NO ACCESS)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-10-005-11E	0	80000	CROWN(PROVINCIAL)/CROWN	
NW-10-005-11E	0	10000	PRIVATE/PRIVATE	
NW-11-005-11E	0	50000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		140000		

**DEPOSIT # 001066A** (NO ACCESS)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001066B** (NO ACCESS)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001067** (NO ACCESS)

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
SE-22-005-12E	0	23000		
SW-23-005-12E	0	88000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		111000		

**DEPOSIT # 001068A** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**EXPOSURE INFORMATION**

EXPOSURE #: LM166 (SE-01-004-10E)  
EXPOSURE TYPE: DUGOUT

ECONOMIC THICKNESS: 0.0 METRES  
SECTION: A  
SECTION HEIGHT: 3.0 M.  
HEIGHT SAMPLED: 0.0 M.  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

VISITED: 8906  
LAND USE: GARBAGE DUMP-AUTHORIZED,ACTIVE  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: LOW  
MATERIAL DESCRIPTION: BOULDERS OVER SAND  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 3.0 M.

**DEPOSIT # 001068B** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001068C** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001068D** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001068E** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001068F** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001069A** (SEVERAL SMALL SAND AND GRAVEL AREAS)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**EXPOSURE INFORMATION**

EXPOSURE #:	LM185 (NE-15-004-10E)	VISITED:	8907
EXPOSURE TYPE:	SAND AND GRAVEL PIT	LAND USE:	PIT-NOT IN USE(COMMONLY REVEGETATED)
		SURROUNDING LAND USE:	FOREST NATURAL
ECONOMIC THICKNESS:	1.5 METRES	ESTIMATED STONE CONTENT:	MEDIUM LOW
SECTION:	A	MATERIAL DESCRIPTION:	SANDY PEBBLE GRAVEL
SECTION HEIGHT:	3.0 M.	DEPTH TO WATER TABLE:	
HEIGHT SAMPLED:	1.5 M.	OVERBURDEN THICKNESS:	0.5 M.
MATERIAL AT BASE:	SAND		

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #:	LM274 (NE-11-004-10E)	VISITED:	8908
EXPOSURE TYPE:	BACKHOE TEST PIT	LAND USE:	HIGHWAY,ROADWAY,RAILWAY
		SURROUNDING LAND USE:	FOREST NATURAL
ECONOMIC THICKNESS:	2.4 METRES	ESTIMATED STONE CONTENT:	MEDIUM LOW
SECTION:	A	MATERIAL DESCRIPTION:	SANDY PEBBLE GRAVEL OCC. COBBLE
SECTION HEIGHT:	3.0 M.	DEPTH TO WATER TABLE:	
HEIGHT SAMPLED:	2.2 M.	OVERBURDEN THICKNESS:	0.2 M.
MATERIAL AT BASE:	SAND		

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #:	LM276 (NW-15-004-10E)	VISITED:	8908
EXPOSURE TYPE:	BACKHOE TEST PIT	LAND USE:	HIGHWAY,ROADWAY,RAILWAY
		SURROUNDING LAND USE:	FOREST NATURAL
ECONOMIC THICKNESS:	2.0 METRES	ESTIMATED STONE CONTENT:	MEDIUM LOW
SECTION:	A	MATERIAL DESCRIPTION:	SANDY PEBBLE GRAVEL OCC. COBBLE
SECTION HEIGHT:	3.0 M.	DEPTH TO WATER TABLE:	
HEIGHT SAMPLED:	2.0 M.	OVERBURDEN THICKNESS:	0.3 M.
MATERIAL AT BASE:	SAME AS IN PIT WALL		

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #:	LM291 (NE-11-004-10E)	VISITED:	8910
EXPOSURE TYPE:	SAND AND GRAVEL PIT	LAND USE:	PIT-NOT IN USE(COMMONLY REVEGETATED)
		SURROUNDING LAND USE:	FOREST NATURAL
ECONOMIC THICKNESS:	2.0 METRES	ESTIMATED STONE CONTENT:	MEDIUM
SECTION:	A	MATERIAL DESCRIPTION:	SANDY PEBBLE GRAVEL
SECTION HEIGHT:	2.0 M.	DEPTH TO WATER TABLE:	
HEIGHT SAMPLED:	0.0 M.	OVERBURDEN THICKNESS:	0.2 M.
MATERIAL AT BASE:	SAND		

NO CHANNEL SAMPLE TAKEN

**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	(PLUS 6")
LM185 A (NE-15-004-10E)	100	97	92	80	67	56	52	49	32	2	1	SPARSE
LM274 A (NE-11-004-10E)	100	99	89	74	50	37	31	24	12	2	1	SPARSE
LM276 A (NW-15-004-10E)	99	95	91	84	74	62	53	42	17	1	1	SPARSE
(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)												

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM185 A	72	24	4	0	0	
LM274 A	82	18	0	0	0	
LM276 A	80	20	0	0	0	

**DEPOSIT # 001069B**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-01-004-10E	15	66300	CROWN(PROVINCIAL)/CROWN	
SE-12-004-10E	0	132000	CROWN(PROVINCIAL)/CROWN	
SW-12-004-10E	0	22500	CROWN(PROVINCIAL)/CROWN	
NE-06-004-11E	0	22500	CROWN(PROVINCIAL)/CROWN	
NW-06-004-11E	5	223725	CROWN(PROVINCIAL)/CROWN	
SE-06-004-11E	0	15000	CROWN(PROVINCIAL)/CROWN	
SW-06-004-11E	0	9000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		491025		

**EXPOSURE INFORMATION**

EXPOSURE #: LM164 (NE-01-004-10E)	VISITED: 8906
EXPOSURE TYPE: SAND AND GRAVEL PIT	LAND USE: PIT-TEMPORARY USE
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 1.5 METRES	ESTIMATED STONE CONTENT: MEDIUM
SECTION: A	MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL
SECTION HEIGHT: 1.5 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 1.5 M.	OVERBURDEN THICKNESS: 0.2 M.
MATERIAL AT BASE: SAND	

SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS

EXPOSURE #: LM165 (NW-06-004-11E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-TEMPORARY USE  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 1.5 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
 SECTION HEIGHT: 1.5 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 1.5 M. OVERBURDEN THICKNESS: 0.2 M.  
 MATERIAL AT BASE: SAND  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

#### SIEVE ANALYSIS

	PERCENT PASSING											OVERSIZED
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	(PLUS 6")
LM164 A (NE-01-004-10E)	100	97	86	73	62	54	46	36	15	2	1	SPARSE
LM165 A (NW-06-004-11E)	100	99	94	84	70	57	43	27	12	5	4	SPARSE
(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)												

#### PETROGRAPHIC ANALYSIS

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM164 A	75	21	3	0	0	
LM165 A	71	27	3	0	0	

#### DEPOSIT # 001069C (REQUIRES TESTING)

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NW-32-003-11E	0	40000	CROWN(PROVINCIAL)/CROWN	
SW-05-004-11E	0	12000	CROWN(PROVINCIAL)/CROWN	
SE-06-004-11E	0	7000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		59000		

#### DEPOSIT # 001069D (VERY SANDY) (NO ECONOMIC AGGREGATE RESERVES PROVEN)

#### DEPOSIT # 001069E (VERY SANDY) (NO ECONOMIC AGGREGATE RESERVES PROVEN)

#### DEPOSIT # 001069F (VERY SANDY) (NO ECONOMIC AGGREGATE RESERVES PROVEN)



**DEPOSIT # 001069G (VERY SANDY)**  
**(NO ECONOMIC AGGREGATE RESERVES PROVEN)**

**DEPOSIT # 001069H**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-15-004-10E	0	105000	CROWN(PROVINCIAL)/CROWN	
NE-21-004-10E	0	241000	CROWN(PROVINCIAL)/CROWN	
NW-21-004-10E	0	10000	CROWN(PROVINCIAL)/CROWN	
NE-22-004-10E	0	38000	CROWN(PROVINCIAL)/CROWN	
NW-22-004-10E	0	398000	CROWN(PROVINCIAL)/CROWN	
SE-22-004-10E	0	280000	CROWN(PROVINCIAL)/CROWN	
SW-22-004-10E	0	245000	CROWN(PROVINCIAL)/CROWN	
SE-28-004-10E	0	10000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		1327000		

**EXPOSURE INFORMATION**

EXPOSURE #: LM275 (SE-22-004-10E)	VISITED: 8908
EXPOSURE TYPE: BACKHOE TEST PIT	LAND USE: HIGHWAY,ROADWAY,RAILWAY
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 2.0 METRES	ESTIMATED STONE CONTENT: MEDIUM
SECTION: A	MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL
SECTION HEIGHT: 3.0 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 2.0 M.	OVERBURDEN THICKNESS: 0.2 M.
MATERIAL AT BASE: SAND	
<b>SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS</b>	

EXPOSURE #: LM277 (NE-21-004-10E)	VISITED: 8908
EXPOSURE TYPE: BACKHOE TEST PIT	LAND USE: FOREST NATURAL
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 0.6 METRES	ESTIMATED STONE CONTENT: MEDIUM
SECTION: A	MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL
SECTION HEIGHT: 2.7 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED:	OVERBURDEN THICKNESS: 1.0 M.
MATERIAL AT BASE: SAND	
NO CHANNEL SAMPLE TAKEN	
EXPOSURE #: LM278 (NE-21-004-10E)	VISITED: 8908
EXPOSURE TYPE: BACKHOE TEST PIT	LAND USE: FOREST NATURAL
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 1.0 METRES	ESTIMATED STONE CONTENT: MEDIUM LOW
SECTION: A	MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL W/SAND LAYERS
SECTION HEIGHT: 3.0 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED:	OVERBURDEN THICKNESS: 0.3 M.
MATERIAL AT BASE: SAND	
NO CHANNEL SAMPLE TAKEN	

EXPOSURE #: LM279 (NE-21-004-10E)  
EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 0.0 METRES  
SECTION: A  
SECTION HEIGHT: 2.5 M.  
HEIGHT SAMPLED: .  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

VISITED: 8908  
LAND USE: FOREST NATURAL  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: LOW  
MATERIAL DESCRIPTION: MED. SAND W/PEBBLY SAND LAYERS  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 2.5 M.

EXPOSURE #: LM280 (NW-21-004-10E)  
EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 3.0 METRES  
SECTION: A  
SECTION HEIGHT: 3.0 M.  
HEIGHT SAMPLED:  
MATERIAL AT BASE: SAME AS IN PIT WALL  
NO CHANNEL SAMPLE TAKEN

VISITED: 8908  
LAND USE: FOREST NATURAL  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: LOW  
MATERIAL DESCRIPTION: MEDIUM SAND PEBBLY  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 0.3 M.

#### SIEVE ANALYSIS

	PERCENT PASSING												OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200		
LM275 A (SE-22-004-10E)	100	95	85	78	69	61	53	42	16	1	1		SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

#### PETROGRAPHIC ANALYSIS

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM275 A	71	27	2	0	0	

#### DEPOSIT # 001069I (REQUIRES TESTING)

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
SE-32-004-10E	0	31000	CROWN(PROVINCIAL)/CROWN	
SW-32-004-10E	0	25000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		56000		

#### DEPOSIT # 001069J (VERY SANDY) (NO ECONOMIC AGGREGATE RESERVES PROVEN)

#### DEPOSIT # 001069K (VERY SANDY) (NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001070A** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001070B** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001070C** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001070D** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001070E** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001071** (GLACIOFLUVIAL SAND AND GRAVEL)

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-01-004-09E	40	45600	CROWN(PROVINCIAL)/CROWN	
SE-12-004-09E	40	78000	CROWN(PROVINCIAL)/CROWN	
NW-06-004-10E	0	50000	PRIVATE/PRIVATE	
SW-07-004-10E	0	114000	PRIVATE/PRIVATE	
DEPOSIT RESERVES		287600		

#### EXPOSURE INFORMATION

EXPOSURE #:	LM119 (SE-12-004-09E)	VISITED:	8906
EXPOSURE TYPE:	SAND AND GRAVEL PIT	LAND USE:	PIT-NOT IN USE(COMMONLY REVEGETATED)
		SURROUNDING LAND USE:	FOREST NATURAL
ECONOMIC THICKNESS:	2.0 METRES	ESTIMATED STONE CONTENT:	MEDIUM
SECTION:	A	MATERIAL DESCRIPTION:	SANDY PEBBLE GRAVEL OCC. COBBLE
SECTION HEIGHT:	2.5 M.	DEPTH TO WATER TABLE:	
HEIGHT SAMPLED:	1.5 M.	OVERBURDEN THICKNESS:	0.5 M.
MATERIAL AT BASE:	TILL		

#### SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS

SECTION:	B	MATERIAL DESCRIPTION:	SILT TILL
SECTION HEIGHT:	2.5 M.	DEPTH TO WATER TABLE:	
HEIGHT SAMPLED:		OVERBURDEN THICKNESS:	2.5 M.
MATERIAL AT BASE:	TILL		
NO CHANNEL SAMPLE TAKEN			

EXPOSURE #: LM120 (NE-01-004-09E)	VISITED: 8906
EXPOSURE TYPE: SAND AND GRAVEL PIT	LAND USE: PIT-TEMPORARY USE
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 2.0 METRES	ESTIMATED STONE CONTENT: MEDIUM
SECTION: A	MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL
SECTION HEIGHT: 2.5 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 1.5 M.	OVERBURDEN THICKNESS: 0.5 M.
MATERIAL AT BASE: SAND	

SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS

#### SIEVE ANALYSIS

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM119 A (SE-12-004-09E)	100	97	90	80	67	54	45	36	13	4	2	SPARSE
LM120 A (NE-01-004-09E)	97	89	81	74	65	57	47	32	10	3	1	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

#### PETROGRAPHIC ANALYSIS

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM119 A	52	47	1	0	0	
LM120 A	30	70	0	0	0	

**DEPOSIT # 001072A** (SAND AND GRAVEL POCKETS)  
(MINOR ISOLATED POCKETS OF SAND AND GRAVEL ONLY)

#### EXPOSURE INFORMATION

EXPOSURE #: LM104 (NW-33-005-10E)	VISITED: 8906
EXPOSURE TYPE: SAND AND GRAVEL PIT	LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 1.5 METRES	ESTIMATED STONE CONTENT: MEDIUM
SECTION: A	MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL
SECTION HEIGHT: 2.0 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 1.5 M.	OVERBURDEN THICKNESS: 0.5 M.
MATERIAL AT BASE: SAND	

SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS

EXPOSURE #: LM163 (SE-11-004-10E)	VISITED: 8906
EXPOSURE TYPE: SAND AND GRAVEL PIT	LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 0.0 METRES	ESTIMATED STONE CONTENT: LOW
SECTION: A	MATERIAL DESCRIPTION: PEBBLY SAND
SECTION HEIGHT: 0.0 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 0.0 M.	OVERBURDEN THICKNESS: 0.0 M.
MATERIAL AT BASE: SAND	
NO CHANNEL SAMPLE TAKEN	

EXPOSURE #:	LM186 (SW-17-004-10E)	VISITED:	8907
EXPOSURE TYPE:	SAND AND GRAVEL PIT	LAND USE:	PIT-NOT IN USE(COMMONLY REVEGETATED)
		SURROUNDING LAND USE:	HIGHWAY,ROADWAY,RAILWAY
ECONOMIC THICKNESS:	1.5 METRES	ESTIMATED STONE CONTENT:	MEDIUM
SECTION:	A	MATERIAL DESCRIPTION:	SANDY FINE PEBBLE GRAVEL
SECTION HEIGHT:	2.0 M.	DEPTH TO WATER TABLE:	
HEIGHT SAMPLED:	1.5 M.	OVERBURDEN THICKNESS:	0.2 M.
MATERIAL AT BASE:	SAND		

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #:	LM195 (NW-13-005-10E)	VISITED:	8907
EXPOSURE TYPE:	SAND AND GRAVEL PIT	LAND USE:	PIT-NOT IN USE(COMMONLY REVEGETATED)
		SURROUNDING LAND USE:	FOREST NATURAL
ECONOMIC THICKNESS:	0.5 METRES	ESTIMATED STONE CONTENT:	MEDIUM LOW
SECTION:	A	MATERIAL DESCRIPTION:	SANDY FINE PEBBLE GRAVEL OVER SAND
SECTION HEIGHT:	1.5 M.	DEPTH TO WATER TABLE:	
HEIGHT SAMPLED:	0.0 M.	OVERBURDEN THICKNESS:	0.2 M.
MATERIAL AT BASE:	TILL		
NO CHANNEL SAMPLE TAKEN			

EXPOSURE #:	LM281 (SW-21-004-10E)	VISITED:	8908
EXPOSURE TYPE:	BACKHOE TEST PIT	LAND USE:	HIGHWAY,ROADWAY,RAILWAY
		SURROUNDING LAND USE:	FOREST NATURAL
ECONOMIC THICKNESS:	2.8 METRES	ESTIMATED STONE CONTENT:	MEDIUM LOW
SECTION:	A	MATERIAL DESCRIPTION:	SANDY FINE PEBBLE GRAVEL
SECTION HEIGHT:	3.2 M.	DEPTH TO WATER TABLE:	
HEIGHT SAMPLED:	2.8 M.	OVERBURDEN THICKNESS:	0.2 M.
MATERIAL AT BASE:	SAND		

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #:	LM282 (SE-28-004-10E)	VISITED:	8908
EXPOSURE TYPE:	BACKHOE TEST PIT	LAND USE:	HIGHWAY,ROADWAY,RAILWAY
		SURROUNDING LAND USE:	FOREST NATURAL
ECONOMIC THICKNESS:	0.0 METRES	ESTIMATED STONE CONTENT:	LOW
SECTION:	A	MATERIAL DESCRIPTION:	MEDIUM SAND
SECTION HEIGHT:	3.0 M.	DEPTH TO WATER TABLE:	
HEIGHT SAMPLED:	.	OVERBURDEN THICKNESS:	0.0 M.
MATERIAL AT BASE:	SAND		
NO CHANNEL SAMPLE TAKEN			

EXPOSURE #:	LM283 (SW-03-005-10E)	VISITED:	8908
EXPOSURE TYPE:	BACKHOE TEST PIT	LAND USE:	HIGHWAY,ROADWAY,RAILWAY
		SURROUNDING LAND USE:	FOREST NATURAL
ECONOMIC THICKNESS:	1.5 METRES	ESTIMATED STONE CONTENT:	LOW
SECTION:	A	MATERIAL DESCRIPTION:	MEDIUM SAND PEBBLY
SECTION HEIGHT:	3.0 M.	DEPTH TO WATER TABLE:	
HEIGHT SAMPLED:		OVERBURDEN THICKNESS:	0.4 M.
MATERIAL AT BASE:	SAND		
NO CHANNEL SAMPLE TAKEN			

EXPOSURE #: LM286 (SE-19-005-10E)  
EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 0.0 METRES  
SECTION: A

SECTION HEIGHT: 2.5 M.  
HEIGHT SAMPLED:  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

EXPOSURE #: LM287 (SE-13-005-09E)  
EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 3.0 METRES  
SECTION: A  
SECTION HEIGHT: 3.2 M.  
HEIGHT SAMPLED:  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

EXPOSURE #: LM288 (NW-06-005-10E)  
EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 0.0 METRES  
SECTION: A

SECTION HEIGHT: 3.0 M.  
HEIGHT SAMPLED:  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

EXPOSURE #: LM418 (SE-13-005-09E)  
EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 2.7 METRES  
SECTION: A  
SECTION HEIGHT: 3.5 M.  
HEIGHT SAMPLED: 2.7 M.  
MATERIAL AT BASE: SAND

SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS

EXPOSURE #: LM419 (SE-13-005-09E)  
EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 2.7 METRES  
SECTION: A

SECTION HEIGHT: 3.0 M.  
HEIGHT SAMPLED: 0.0 M.  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

VISITED: 8908

LAND USE: HIGHWAY,ROADWAY,RAILWAY  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: LOW  
MATERIAL DESCRIPTION: SANDY COBBLY COARSE PEBBLE  
GRAVEL OVER SAND

DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 2.5 M.

VISITED: 8908

LAND USE: HIGHWAY,ROADWAY,RAILWAY  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: MEDIUM LOW  
MATERIAL DESCRIPTION: SAND W/GRAVEL LENSES  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 0.2 M.

VISITED: 8908

LAND USE: HIGHWAY,ROADWAY,RAILWAY  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: LOW  
MATERIAL DESCRIPTION: MEDIUM SAND W/MINOR GRAVEL  
LAYERS

DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 1.8 M.

VISITED: 9008

LAND USE: FOREST NATURAL  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: MEDIUM  
MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL OCC. COBBLE  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 0.6 M.

VISITED: 9008

LAND USE: FOREST NATURAL  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: LOW  
MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL OCC.  
BOULDER

DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 0.3 M.

EXPOSURE #: LM420 (SE-10-005-09E)  
EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 1.2 METRES  
SECTION: A  
SECTION HEIGHT: 3.5 M.  
HEIGHT SAMPLED: 1.2 M.  
MATERIAL AT BASE: SAND

SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS

VISITED: 9008  
LAND USE: FOREST NATURAL  
SURROUNDING LAND USE: TIMBER AREA  
ESTIMATED STONE CONTENT: MEDIUM  
MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 0.3 M.

EXPOSURE #: LM432 (NW-27-004-09E)  
EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 0.0 METRES  
SECTION: A  
SECTION HEIGHT: 3.5 M.  
HEIGHT SAMPLED: 0.0 M.  
MATERIAL AT BASE: SAND AND GRAVEL  
NO CHANNEL SAMPLE TAKEN

VISITED: 9008  
LAND USE: FOREST NATURAL  
SURROUNDING LAND USE: HIGHWAY,ROADWAY,RAILWAY  
ESTIMATED STONE CONTENT: LOW  
MATERIAL DESCRIPTION: SAND OVER SANDY PEBBLE GRAVEL  
W/ BOULDERS AND COBBLES  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 2.3 M.

EXPOSURE #: LM434 (NE-21-004-09E)  
EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 0.0 METRES  
SECTION: A  
SECTION HEIGHT: 3.0 M.  
HEIGHT SAMPLED: 0.0 M.  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

VISITED: 9008  
LAND USE: FOREST NATURAL  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: MEDIUM  
MATERIAL DESCRIPTION: SAND OVER SANDY COARSE PEBBLE  
GRAVEL  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 1.1 M.

EXPOSURE #: LM437 (SE-33-004-09E)  
EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 0.8 METRES  
SECTION: A  
SECTION HEIGHT: 3.5 M.  
HEIGHT SAMPLED:  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

VISITED: 9008  
LAND USE: FOREST NATURAL  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: MEDIUM  
MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 0.3 M.

**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM104 A (NW-33-005-10E)	100	98	91	81	72	66	60	49	18	9	1	SPARSE
LM186 A (SW-17-004-10E)	100	100	99	96	86	74	60	39	13	8	2	SPARSE
LM281 A (SW-21-004-10E)	100	100	99	92	77	65	53	37	15	4	1	SPARSE
LM418 A (SE-13-005-09E)	100	98	93	86	79	70	58	39	17	6	3	SPARSE
LM420 A (SE-10-005-09E)	100	99	87	69	57	50	45	40	35	11	3	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM104 A	54	45	0	0	0	
LM186 A	59	41	0	0	0	
LM281 A	78	21	1	0	0	
LM418 A	93	5	2	0	0	
LM420 A	89	8	3	0	0	

**DEPOSIT # 001072B** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001072C** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001072D** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001072E** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001073** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001074** (VERY SANDY)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001075** (VERY SANDY)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001076** (VERY SANDY)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)



**DEPOSIT # 001077 (PRECAMBRIAN-CLAST RICH SAND AND GRAVEL)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
SE-11-005-10E	0	160000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		160000		

**EXPOSURE INFORMATION**

EXPOSURE #: LM284 (SE-11-005-10E)	VISITED: 8908
EXPOSURE TYPE: BACKHOE TEST PIT	LAND USE: FOREST NATURAL
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 2.8 METRES	ESTIMATED STONE CONTENT: MEDIUM
SECTION: A	MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL
SECTION HEIGHT: 3.0 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 2.8 M.	OVERBURDEN THICKNESS: 0.2 M.
MATERIAL AT BASE: SAME AS IN PIT WALL	
SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS	

EXPOSURE #: LM285 (SE-11-005-10E)	VISITED: 8908
EXPOSURE TYPE: BACKHOE TEST PIT	LAND USE: FOREST NATURAL
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 0.5 METRES	ESTIMATED STONE CONTENT: MEDIUM HIGH
SECTION: A	MATERIAL DESCRIPTION: SCPG OVER MED.-CRS. SAND PEBBLY
SECTION HEIGHT: 3.0 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED:	OVERBURDEN THICKNESS: 0.3 M.
MATERIAL AT BASE: SAND	
NO CHANNEL SAMPLE TAKEN	

**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM284 A (SE-11-005-10E)	100	95	88	79	69	57	39	19	8	4	2	MODERATE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

# **PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM284 A	81	17	2	0	0	

**DEPOSIT # 001078** (VERY SANDY)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001079** (FINES EASTWARD AND SOUTHWARD)

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-23-004-09E	0	394000	CROWN(PROVINCIAL)/CROWN	
NW-23-004-09E	0	149000	CROWN(PROVINCIAL)/CROWN	
NE-24-004-09E	0	278000	CROWN(PROVINCIAL)/CROWN	
NW-24-004-09E	0	490000	CROWN(PROVINCIAL)/CROWN	
NW-25-004-09E	0	243000	CROWN(PROVINCIAL)/CROWN	
SE-25-004-09E	0	370000	CROWN(PROVINCIAL)/CROWN	
SW-25-004-09E	0	642000	CROWN(PROVINCIAL)/CROWN	
NE-26-004-09E	0	647000	CROWN(PROVINCIAL)/CROWN	
NW-26-004-09E	0	647000	CROWN(PROVINCIAL)/CROWN	
SE-26-004-09E	0	647000	CROWN(PROVINCIAL)/CROWN	
SW-26-004-09E	10	582300	CROWN(PROVINCIAL)/CROWN	
NE-27-004-09E	0	630000	CROWN(PROVINCIAL)/CROWN	
SE-27-004-09E	0	293000	CROWN(PROVINCIAL)/CROWN	
NE-34-004-09E	0	647000	CROWN(PROVINCIAL)/CROWN	
NW-34-004-09E	0	90000	CROWN(PROVINCIAL)/CROWN	
SE-34-004-09E	0	647000	CROWN(PROVINCIAL)/CROWN	
SW-34-004-09E	0	15000	CROWN(PROVINCIAL)/CROWN	
NW-35-004-09E	0	575000	CROWN(PROVINCIAL)/CROWN	
SE-35-004-09E	0	278000	CROWN(PROVINCIAL)/CROWN	
SW-35-004-09E	0	647000	CROWN(PROVINCIAL)/CROWN	
NW-02-005-09E	0	54000	CROWN(PROVINCIAL)/CROWN	
SW-02-005-09E	0	416000	CROWN(PROVINCIAL)/CROWN	
NE-03-005-09E	10	873450	CROWN(PROVINCIAL)/CROWN	
NW-03-005-09E	0	226500	CROWN(PROVINCIAL)/CROWN	
SE-03-005-09E	0	970500	CROWN(PROVINCIAL)/CROWN	
SW-03-005-09E	0	361500	CROWN(PROVINCIAL)/CROWN	
NE-10-005-09E	5	250800	CROWN(PROVINCIAL)/CROWN	
SE-10-005-09E	15	571200	CROWN(PROVINCIAL)/CROWN	
SW-10-005-09E	0	69000	CROWN(PROVINCIAL)/CROWN	
SE-15-005-09E	0	75000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		12779250		

## EXPOSURE INFORMATION

EXPOSURE #: LM101 (SW-23-005-09E) VISITED: 8906  
EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-TEMPORARY USE  
SURROUNDING LAND USE: FOREST NATURAL  
ECONOMIC THICKNESS: 3.0 METRES ESTIMATED STONE CONTENT: MEDIUM  
SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL OCC. COBBLE  
SECTION HEIGHT: 3.0 M. DEPTH TO WATER TABLE:  
HEIGHT SAMPLED: 2.5 M. OVERBURDEN THICKNESS: 0.2 M.  
MATERIAL AT BASE: SAND AND GRAVEL  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM102 (SW-10-005-09E) VISITED: 8906  
EXPOSURE TYPE: DITCH OR ROAD CUT LAND USE: PIT-TEMPORARY USE  
SURROUNDING LAND USE: HIGHWAY,ROADWAY,RAILWAY  
ECONOMIC THICKNESS: 4.0 METRES ESTIMATED STONE CONTENT: MEDIUM  
SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
SECTION HEIGHT: 4.0 M. DEPTH TO WATER TABLE:  
HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 0.2 M.  
MATERIAL AT BASE: SAND AND GRAVEL  
NO CHANNEL SAMPLE TAKEN

EXPOSURE #: LM103 (SE-10-005-09E) VISITED: 8906  
EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-TEMPORARY USE  
SURROUNDING LAND USE: FOREST NATURAL  
ECONOMIC THICKNESS: 6.0 METRES ESTIMATED STONE CONTENT: MEDIUM  
SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
SECTION HEIGHT: 6.0 M. DEPTH TO WATER TABLE:  
HEIGHT SAMPLED: 2.5 M. OVERBURDEN THICKNESS: 0.2 M.  
MATERIAL AT BASE: SAND AND GRAVEL  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

SECTION: B MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL SOME  
BACKFILL  
SECTION HEIGHT: 3.5 M. DEPTH TO WATER TABLE:  
HEIGHT SAMPLED: OVERBURDEN THICKNESS: 0.0 M.  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

EXPOSURE #: LM207 (NE-03-005-09E) VISITED: 8907  
EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
SURROUNDING LAND USE: FOREST NATURAL  
ECONOMIC THICKNESS: 6.0 METRES ESTIMATED STONE CONTENT: MEDIUM  
SECTION: A MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL  
SECTION HEIGHT: 6.0 M. DEPTH TO WATER TABLE:  
HEIGHT SAMPLED: 4.0 M. OVERBURDEN THICKNESS: 0.2 M.  
MATERIAL AT BASE: SAME AS IN PIT WALL  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM289 (SE-03-005-09E) VISITED: 8908  
 EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: HIGHWAY,ROADWAY,RAILWAY  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 2.5 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL W/ SAND LAYERS  
 SECTION HEIGHT: 2.5 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 0.2 M.  
 MATERIAL AT BASE: SAME AS IN PIT WALL  
 NO CHANNEL SAMPLE TAKEN

EXPOSURE #: LM421 (NE-10-005-09E) VISITED: 9008  
 EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: TIMBER AREA  
 SURROUNDING LAND USE: TIMBER AREA  
 ECONOMIC THICKNESS: 3.5 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
 SECTION HEIGHT: 3.6 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 2.7 M. OVERBURDEN THICKNESS: 0.3 M.  
 MATERIAL AT BASE: SAND AND GRAVEL  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM422 (NE-10-005-09E) VISITED: 9008  
 EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: TIMBER AREA  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 1.5 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: PEA GRAVEL  
 SECTION HEIGHT: 3.3 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 0.0 M. OVERBURDEN THICKNESS: 0.7 M.  
 MATERIAL AT BASE: SAND  
 NO CHANNEL SAMPLE TAKEN

EXPOSURE #: LM423 (SW-10-005-09E) VISITED: 9008  
 EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: FOREST NATURAL  
 SURROUNDING LAND USE: HIGHWAY,ROADWAY,RAILWAY  
 ECONOMIC THICKNESS: 3.3 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
 SECTION HEIGHT: 3.5 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 3.3 M. OVERBURDEN THICKNESS: 0.2 M.  
 MATERIAL AT BASE: SAND AND GRAVEL  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM424 (SW-10-005-09E) VISITED: 9008  
 EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: FOREST NATURAL  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 3.3 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL, COBBLY AT BASE  
 SECTION HEIGHT: 3.5 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 2.0 M. OVERBURDEN THICKNESS: 0.2 M.  
 MATERIAL AT BASE: SAND AND GRAVEL  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM425 (SE-10-005-09E)	VISITED: 9008
EXPOSURE TYPE: BACKHOE TEST PIT	LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 2.8 METRES	SURROUNDING LAND USE: FOREST NATURAL
SECTION: A	ESTIMATED STONE CONTENT: LOW
SECTION HEIGHT: 3.0 M.	MATERIAL DESCRIPTION: MEDIUM-COARSE SAND OCC. PEBBLE
HEIGHT SAMPLED: 2.5 M.	DEPTH TO WATER TABLE:
MATERIAL AT BASE: SAND	OVERBURDEN THICKNESS: 0.3 M.
<b>SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS</b>	
EXPOSURE #: LM426 (NW-02-005-09E)	VISITED: 9008
EXPOSURE TYPE: BACKHOE TEST PIT	LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 1.2 METRES	SURROUNDING LAND USE: FOREST NATURAL
SECTION: A	ESTIMATED STONE CONTENT: MEDIUM LOW
SECTION HEIGHT: 3.0 M.	MATERIAL DESCRIPTION: SAND OVER SANDY FINE PEBBLE GRAVEL
HEIGHT SAMPLED:	DEPTH TO WATER TABLE:
MATERIAL AT BASE: SAND	OVERBURDEN THICKNESS: 1.1 M.
NO CHANNEL SAMPLE TAKEN	
EXPOSURE #: LM427 (NW-02-005-09E)	VISITED: 9008
EXPOSURE TYPE: BACKHOE TEST PIT	LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 0.0 METRES	SURROUNDING LAND USE: FOREST NATURAL
SECTION: A	ESTIMATED STONE CONTENT: LOW
SECTION HEIGHT: 3.0 M.	MATERIAL DESCRIPTION: SAND OVER SANDY COBBLY PEBBLE GRAVEL
HEIGHT SAMPLED:	DEPTH TO WATER TABLE:
MATERIAL AT BASE: SAND	OVERBURDEN THICKNESS: 1.0 M.
NO CHANNEL SAMPLE TAKEN	
EXPOSURE #: LM428 (NE-03-005-09E)	VISITED: 9008
EXPOSURE TYPE: BACKHOE TEST PIT	LAND USE: TIMBER AREA
ECONOMIC THICKNESS: 2.7 METRES	SURROUNDING LAND USE: FOREST NATURAL
SECTION: A	ESTIMATED STONE CONTENT: MEDIUM LOW
SECTION HEIGHT: 3.0 M.	MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL
HEIGHT SAMPLED: 2.7 M.	DEPTH TO WATER TABLE:
MATERIAL AT BASE: SAND AND GRAVEL	OVERBURDEN THICKNESS: 0.3 M.
<b>SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS</b>	
EXPOSURE #: LM429 (SW-03-005-09E)	VISITED: 9008
EXPOSURE TYPE: BACKHOE TEST PIT	LAND USE: HIGHWAY,ROADWAY,RAILWAY
ECONOMIC THICKNESS: 2.3 METRES	SURROUNDING LAND USE: FOREST NATURAL
SECTION: A	ESTIMATED STONE CONTENT: MEDIUM
SECTION HEIGHT: 2.7 M.	MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL
HEIGHT SAMPLED: 2.3 M.	DEPTH TO WATER TABLE:
MATERIAL AT BASE: SAND	OVERBURDEN THICKNESS: 0.2 M.
<b>SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS</b>	

EXPOSURE #: LM430 (NE-34-004-09E)  
EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 0.0 METRES  
SECTION: A

SECTION HEIGHT: 3.0 M.  
HEIGHT SAMPLED:  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

VISITED: 9008  
LAND USE: HIGHWAY,ROADWAY,RAILWAY  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: LOW  
MATERIAL DESCRIPTION: MEDIUM TO COARSE SAND OCC.  
PEBBLE

DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 1.0 M.

EXPOSURE #: LM431 (SW-34-004-09E)  
EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 0.0 METRES  
SECTION: A

SECTION HEIGHT: 3.0 M.  
HEIGHT SAMPLED:  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

VISITED: 9008  
LAND USE: HIGHWAY,ROADWAY,RAILWAY  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: LOW  
MATERIAL DESCRIPTION: SAND WITH GRAVEL LAYERS  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 0.5 M.

#### SIEVE ANALYSIS

#### PERCENT PASSING

		3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	OVERSIZED (PLUS 6")
LM101	A (SW-23-005-09E)	99	98	93	82	64	50	35	23	7	2	2	SPARSE
LM103	A (SE-10-006-09E)	99	97	92	89	78	61	37	17	4	2	1	SPARSE
LM207	A (NE-03-005-09E)	100	97	90	79	66	54	41	22	6	2	2	SPARSE
LM421	A (NE-10-005-09E)	100	100	99	90	78	64	51	38	18	4	2	SPARSE
LM423	A (SW-10-005-09E)	100	98	94	88	80	71	58	36	14	3	1	SPARSE
LM424	A (SW-10-005-09E)	100	99	93	77	59	40	29	23	16	4	3	SPARSE
LM425	A (SE-10-005-09E)	100	98	98	93	82	66	46	17	6	4	2	SPARSE
LM428	A (NE-03-005-09E)	100	98	95	88	80	73	64	53	35	6	2	SPARSE
LM429	A (SW-03-005-09E)	100	97	87	80	66	52	36	22	9	3	1	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

#### PETROGRAPHIC ANALYSIS

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM101 A	77	22	1	0	0	
LM103 A	58	39	3	0	0	
LM207 A	72	27	1	0	0	
LM421 A	60	40	0	0	0	
LM423 A	93	5	3	0	0	
LM424 A	85	15	0	0	0	
LM425 A	95	0	5	0	0	
LM428 A	92	6	2	0	0	
LM429 A	89	11	0	0	0	

**DEPOSIT # 001080A (NO ACCESS)**  
**(NO ECONOMIC AGGREGATE RESERVES PROVEN)**

**DEPOSIT # 001080B (NO ACCESS)**  
**(NO ECONOMIC AGGREGATE RESERVES PROVEN)**

**DEPOSIT # 001081A (VARIABLE QUALITY)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-04-004-09E	0	377000	CROWN(PROVINCIAL)/CROWN	
NW-04-004-09E	0	601000	CROWN(PROVINCIAL)/CROWN	
SE-04-004-09E	5	399950	CROWN(PROVINCIAL)/CROWN	
SW-04-004-09E	5	614650	CROWN(PROVINCIAL)/CROWN	
NE-05-004-09E	0	494000	CROWN(PROVINCIAL)/CROWN	
NW-05-004-09E	0	350000	CROWN(PROVINCIAL)/CROWN	
SE-05-004-09E	0	465000	CROWN(PROVINCIAL)/CROWN	
SW-05-004-09E	0	247000	CROWN(PROVINCIAL)/CROWN	
NE-06-004-09E	0	170000	CROWN(PROVINCIAL)/CROWN	
NW-06-004-09E	40	96600	CROWN(PROVINCIAL)/CROWN	
SE-06-004-09E	5	196650	CROWN(PROVINCIAL)/CROWN	
SW-06-004-09E	50	147500	CROWN(PROVINCIAL)/CROWN	
NE-07-004-09E	30	389200	CROWN(PROVINCIAL)/CROWN	
SE-07-004-09E	10	558000	CROWN(PROVINCIAL)/CROWN	
SW-07-004-09E	80	10800	CROWN(PROVINCIAL)/CROWN	
NE-08-004-09E	0	1188000	CROWN(PROVINCIAL)/CROWN	
NW-08-004-09E	0	506000	CROWN(PROVINCIAL)/CROWN	
SE-08-004-09E	0	1218000	CROWN(PROVINCIAL)/CROWN	
SW-08-004-09E	0	690000	CROWN(PROVINCIAL)/CROWN	
NE-09-004-09E	0	230000	CROWN(PROVINCIAL)/CROWN	
NW-09-004-09E	0	1042000	CROWN(PROVINCIAL)/CROWN	
SE-09-004-09E	0	628000	CROWN(PROVINCIAL)/CROWN	
SW-09-004-09E	0	1294000	CROWN(PROVINCIAL)/CROWN	
NW-16-004-09E	0	34000	CROWN(PROVINCIAL)/CROWN	
SW-16-004-09E	0	636000	CROWN(PROVINCIAL)/CROWN	
NE-17-004-09E	0	1202000	CROWN(PROVINCIAL)/CROWN	
NW-17-004-09E	30	155400	CROWN(PROVINCIAL)/CROWN	
SE-17-004-09E	0	1294000	CROWN(PROVINCIAL)/CROWN	
SW-17-004-09E	0	234000	CROWN(PROVINCIAL)/CROWN	
NE-18-004-09E	50	153000	CROWN(PROVINCIAL)/CROWN	
SE-18-004-09E	30	404600	CROWN(PROVINCIAL)/CROWN	
SE-19-004-09E	0	20000	CROWN(PROVINCIAL)/CROWN	
NE-20-004-09E	0	812000	CROWN(PROVINCIAL)/CROWN	
NW-20-004-09E	50	149000	CROWN(PROVINCIAL)/CROWN	
SE-20-004-09E	0	1294000	CROWN(PROVINCIAL)/CROWN	
SW-20-004-09E	50	192000	CROWN(PROVINCIAL)/CROWN	
NW-21-004-09E	0	66000	CROWN(PROVINCIAL)/CROWN	
SW-21-004-09E	0	352000	CROWN(PROVINCIAL)/CROWN	

NW-28-004-09E	0	108000	CROWN(PROVINCIAL)/CROWN
NE-29-004-09E	0	728000	CROWN(PROVINCIAL)/CROWN
SE-29-004-09E	40	469200	CROWN(PROVINCIAL)/CROWN
SW-29-004-09E	60	12000	CROWN(PROVINCIAL)/CROWN
NE-32-004-09E	0	54000	CROWN(PROVINCIAL)/CROWN
SE-32-004-09E	0	306000	CROWN(PROVINCIAL)/CROWN
NW-33-004-09E	0	728000	CROWN(PROVINCIAL)/CROWN
SW-33-004-09E	0	386000	CROWN(PROVINCIAL)/CROWN
NW-04-005-09E	30	273000	CROWN(PROVINCIAL)/CROWN
SW-04-005-09E	50	276000	CROWN(PROVINCIAL)/CROWN
NE-09-005-09E	0	26000	CROWN(PROVINCIAL)/CROWN
SE-09-005-09E	0	138000	CROWN(PROVINCIAL)/CROWN
SW-09-005-09E	0	168000	CROWN(PROVINCIAL)/CROWN
DEPOSIT RESERVES		22583550	

#### EXPOSURE INFORMATION

EXPOSURE #:	LM100 (SW-04-005-09E)	VISITED:	8906
EXPOSURE TYPE:	SAND AND GRAVEL PIT	LAND USE:	PIT-TEMPORARY USE
		SURROUNDING LAND USE:	HIGHWAY,ROADWAY,RAILWAY
ECONOMIC THICKNESS:	4.0 METRES	ESTIMATED STONE CONTENT:	MEDIUM
SECTION:	A	MATERIAL DESCRIPTION:	SANDY PEBBLE GRAVEL OCC. COBBLE
SECTION HEIGHT:	4.0 M.	DEPTH TO WATER TABLE:	
HEIGHT SAMPLED:	1.8 M.	OVERBURDEN THICKNESS:	0.2 M.
MATERIAL AT BASE:	SAND		
SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS			

EXPOSURE #:	LM111 (SW-06-004-09E)	VISITED:	8906
EXPOSURE TYPE:	SAND AND GRAVEL PIT	LAND USE:	PIT-NOT IN USE(COMMONLY REVEGETATED)
		SURROUNDING LAND USE:	FOREST NATURAL
ECONOMIC THICKNESS:	3.0 METRES	ESTIMATED STONE CONTENT:	MEDIUM
SECTION:	A	MATERIAL DESCRIPTION:	SANDY PEBBLE GRAVEL
SECTION HEIGHT:		DEPTH TO WATER TABLE:	
HEIGHT SAMPLED:		OVERBURDEN THICKNESS:	
MATERIAL AT BASE:	SAND		
NO CHANNEL SAMPLE TAKEN			

EXPOSURE #:	LM112 (NE-06-004-09E)	VISITED:	8906
EXPOSURE TYPE:	SAND AND GRAVEL PIT	LAND USE:	PIT-NOT IN USE(COMMONLY REVEGETATED)
		SURROUNDING LAND USE:	FOREST NATURAL
ECONOMIC THICKNESS:	2.0 METRES	ESTIMATED STONE CONTENT:	MEDIUM
SECTION:	A	MATERIAL DESCRIPTION:	SANDY FINE PEBBLE GRAVEL
SECTION HEIGHT:	1.0 M.	DEPTH TO WATER TABLE:	
HEIGHT SAMPLED:	1.0 M.	OVERBURDEN THICKNESS:	0.2 M.
MATERIAL AT BASE:	SAND		
SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS			



EXPOSURE #: LM113 (SE-06-004-09E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: HIGHWAY,ROADWAY,RAILWAY  
 ECONOMIC THICKNESS: 2.5 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL OCC. COBBLE  
 SECTION HEIGHT: 2.5 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 2.0 M. OVERBURDEN THICKNESS: 0.2 M.  
 MATERIAL AT BASE: SAND AND GRAVEL  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM114 (SW-05-004-09E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: HIGHWAY,ROADWAY,RAILWAY  
 ECONOMIC THICKNESS: 1.0 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
 SECTION HEIGHT: 1.5 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 1.0 M. OVERBURDEN THICKNESS: 0.5 M.  
 MATERIAL AT BASE: SAND  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM115 (SE-04-004-09E) VISITED: 8906  
 EXPOSURE TYPE: BORROW PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 1.0 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
 SECTION HEIGHT: 1.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: OVERBURDEN THICKNESS: 0.2 M.  
 MATERIAL AT BASE: SAND AND GRAVEL  
 NO CHANNEL SAMPLE TAKEN

EXPOSURE #: LM116 (SW-04-004-09E) VISITED: 8906  
 EXPOSURE TYPE: DITCH OR ROAD CUT LAND USE: HIGHWAY,ROADWAY,RAILWAY  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 2.0 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
 SECTION HEIGHT: 2.5 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 1.5 M. OVERBURDEN THICKNESS: 0.5 M.  
 MATERIAL AT BASE: SAND  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM117 (SE-04-004-09E) VISITED: 8906  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 4.0 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
 SECTION HEIGHT: 4.0 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 2.5 M. OVERBURDEN THICKNESS: 0.3 M.  
 MATERIAL AT BASE: SAND  
**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #:	LM202 (SW-04-004-09E)	VISITED:	8907
EXPOSURE TYPE:	SAND AND GRAVEL PIT	LAND USE:	PIT-NOT IN USE(COMMONLY REVEGETATED)
		SURROUNDING LAND USE:	FOREST NATURAL
ECONOMIC THICKNESS:	3.0 METRES	ESTIMATED STONE CONTENT:	MEDIUM
SECTION:	A	MATERIAL DESCRIPTION:	SANDY COBBLY PEBBLE GRAVEL
SECTION HEIGHT:	3.0 M.	DEPTH TO WATER TABLE:	
HEIGHT SAMPLED:		OVERBURDEN THICKNESS:	0.2 M.
MATERIAL AT BASE:	SAND		
NO CHANNEL SAMPLE TAKEN			

EXPOSURE #:	LM203 (SW-04-004-09E)	VISITED:	8907
EXPOSURE TYPE:	SAND AND GRAVEL PIT	LAND USE:	PIT-NOT IN USE(COMMONLY REVEGETATED)
		SURROUNDING LAND USE:	FOREST NATURAL
ECONOMIC THICKNESS:	3.0 METRES	ESTIMATED STONE CONTENT:	MEDIUM
SECTION:	A	MATERIAL DESCRIPTION:	SANDY FINE PEBBLE GRAVEL WITH COARSE SAND LAYERS
SECTION HEIGHT:	3.0 M.	DEPTH TO WATER TABLE:	
HEIGHT SAMPLED:	2.5 M.	OVERBURDEN THICKNESS:	0.2 M.
MATERIAL AT BASE:	SAND		
<b>SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS</b>			

EXPOSURE #:	LM438 (NW-33-004-09E)	VISITED:	9008
EXPOSURE TYPE:	BACKHOE TEST PIT	LAND USE:	TIMBER AREA
		SURROUNDING LAND USE:	FOREST NATURAL
ECONOMIC THICKNESS:	2.8 METRES	ESTIMATED STONE CONTENT:	MEDIUM LOW
SECTION:	A	MATERIAL DESCRIPTION:	SANDY PEBBLE GRAVEL
SECTION HEIGHT:	3.0 M.	DEPTH TO WATER TABLE:	
HEIGHT SAMPLED:		OVERBURDEN THICKNESS:	0.3 M.
MATERIAL AT BASE:	SAND		
NO CHANNEL SAMPLE TAKEN			

EXPOSURE #:	LM439 (NE-32-004-09E)	VISITED:	9008
EXPOSURE TYPE:	BACKHOE TEST PIT	LAND USE:	TIMBER AREA
		SURROUNDING LAND USE:	FOREST NATURAL
ECONOMIC THICKNESS:	0.0 METRES	ESTIMATED STONE CONTENT:	LOW
SECTION:	A	MATERIAL DESCRIPTION:	MEDIUM TO COARSE SAND
SECTION HEIGHT:	3.0 M.	DEPTH TO WATER TABLE:	
HEIGHT SAMPLED:		OVERBURDEN THICKNESS:	1.8 M.
MATERIAL AT BASE:	SAND		
NO CHANNEL SAMPLE TAKEN			

EXPOSURE #:	LM440 (NE-32-004-09E)	VISITED:	9008
EXPOSURE TYPE:	BACKHOE TEST PIT	LAND USE:	TIMBER AREA
		SURROUNDING LAND USE:	FOREST NATURAL
ECONOMIC THICKNESS:	2.8 METRES	ESTIMATED STONE CONTENT:	MEDIUM
SECTION:	A	MATERIAL DESCRIPTION:	SANDY PEBBLE GRAVEL OCC. COBBLE
SECTION HEIGHT:	3.0 M.	DEPTH TO WATER TABLE:	
HEIGHT SAMPLED:	2.8 M.	OVERBURDEN THICKNESS:	0.2 M.
MATERIAL AT BASE:	SAND AND GRAVEL		
<b>SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS</b>			

EXPOSURE #: LM441 (NE-29-004-09E)  
EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 2.5 METRES  
SECTION: A

SECTION HEIGHT: 3.0 M.  
HEIGHT SAMPLED: 2.7 M.  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

VISITED: 9008  
LAND USE: TIMBER AREA  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: MEDIUM LOW  
MATERIAL DESCRIPTION: PEBBLY SAND OVER SANDY PEBBLE GRAVEL  
DEPTH TO WATER TABLE: 2.7 M.  
OVERBURDEN THICKNESS: 0.2 M.

EXPOSURE #: LM442 (NE-29-004-09E)  
EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 0.0 METRES  
SECTION: A  
SECTION HEIGHT: 3.0 M.  
HEIGHT SAMPLED:  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

VISITED: 9008  
LAND USE: TIMBER AREA  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: LOW  
MATERIAL DESCRIPTION: SAND OVER SAND AND COBBLES  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 3.0 M.

#### SIEVE ANALYSIS

#### PERCENT PASSING

	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	OVERSIZED (PLUS 6")
LM100 A (SW-04-005-09E)	100	97	93	87	70	54	42	23	7	2	1	MODERATE
LM112 A (NE-06-004-09E)	100	100	97	88	79	66	46	26	9	3	2	SPARSE
LM113 A (SE-06-004-09E)	99	98	96	91	85	79	64	43	9	1	1	SPARSE
LM114 A (SW-05-004-09E)	100	100	100	100	99	86	59	47	39	9	1	SPARSE
LM116 A (SW-04-004-09E)	100	100	100	99	92	79	59	36	14	3	2	SPARSE
LM117 A (SE-04-004-09E)	100	99	99	99	98	98	98	96	53	3	1	SPARSE
LM203 A (SW-04-004-09E)	100	98	94	92	90	86	60	13	5	1	1	SPARSE
LM440 A (NE-32-004-09E)	100	94	87	79	70	55	36	20	8	3	3	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

#### PETROGRAPHIC ANALYSIS

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM100 A	78	18	4	0	0	
LM112 A	61	38	1	0	0	
LM113 A	59	39	1	0	0	
LM114 A	100	0	0	0	0	
LM116 A	83	17	0	0	0	
LM117 A	73	27	0	0	0	
LM203 A	31	67	1	0	0	
LM440 A	80	20	0	0	0	

**DEPOSIT # 001081B (NO ACCESS)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-07-004-09E	0	23000	CROWN(PROVINCIAL)/CROWN	
SE-07-004-09E	0	84000	CROWN(PROVINCIAL)/CROWN	
NW-08-004-09E	0	79000	CROWN(PROVINCIAL)/CROWN	
SW-17-004-09E	0	33000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		219000		

**DEPOSIT # 001081C (REQUIRES TESTING)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-06-004-09E	0	1000	CROWN(PROVINCIAL)/CROWN	
SE-06-004-09E	0	13500	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		14500		

**DEPOSIT # 001082A**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-21-004-09E	40	55200	CROWN(PROVINCIAL)/CROWN	
NW-21-004-09E	40	13800	CROWN(PROVINCIAL)/CROWN	
SE-28-004-09E	40	7800	CROWN(PROVINCIAL)/CROWN	
SW-28-004-09E	40	25200	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		102000		

**EXPOSURE INFORMATION**

EXPOSURE #: LM182 (SW-28-004-09E)

VISITED: 8906

EXPOSURE TYPE: SAND AND GRAVEL PIT

LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)

SURROUNDING LAND USE: FOREST NATURAL

ECONOMIC THICKNESS: 2.0 METRES

ESTIMATED STONE CONTENT: MEDIUM

SECTION: A

MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL

SECTION HEIGHT: 2.0 M.

DEPTH TO WATER TABLE:

HEIGHT SAMPLED:

OVERBURDEN THICKNESS: 0.2 M.

MATERIAL AT BASE: SAND

NO CHANNEL SAMPLE TAKEN

EXPOSURE #: LM433 (NE-21-004-09E) VISITED: 9008  
 EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: FOREST NATURAL  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 2.1 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL  
 SECTION HEIGHT: 3.9 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 2.1 M. OVERBURDEN THICKNESS: 0.3 M.  
 MATERIAL AT BASE: SAND  
 SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS

#### SIEVE ANALYSIS

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM433 A (NE-21-004-09E)	100	94	89	83	75	65	54	44	29	10	4	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

#### PETROGRAPHIC ANALYSIS

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM433 A	91	9	0	0	0	

#### DEPOSIT # 001082B (PREDOMINANTLY DEPLETED)

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-28-004-09E	60	17400	CROWN(PROVINCIAL)/CROWN	
NW-28-004-09E	60	75600	CROWN(PROVINCIAL)/CROWN	
SW-28-004-09E	0	6000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		99000		

#### EXPOSURE INFORMATION

EXPOSURE #: LM435 (NW-28-004-09E) VISITED: 9008  
 EXPOSURE TYPE: BACKHOE TEST PIT LAND USE: FOREST NATURAL  
 SURROUNDING LAND USE: FOREST NATURAL  
 ECONOMIC THICKNESS: 1.3 METRES ESTIMATED STONE CONTENT: MEDIUM HIGH  
 SECTION: A MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL  
 SECTION HEIGHT: 3.2 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 1.3 M. OVERBURDEN THICKNESS: 0.2 M.  
 MATERIAL AT BASE: SAND  
 SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS

EXPOSURE #: LM436 (NW-28-004-09E)  
EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 0.6 METRES  
SECTION: A  
SECTION HEIGHT: 3.3 M.  
HEIGHT SAMPLED:  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

VISITED: 9008  
LAND USE: TIMBER AREA  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: MEDIUM  
MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 0.2 M.

EXPOSURE #: LM583 (NW-28-004-09E)  
EXPOSURE TYPE: SAND AND GRAVEL PIT

ECONOMIC THICKNESS: 2.5 METRES  
SECTION: A  
SECTION HEIGHT: 3.0 M.  
HEIGHT SAMPLED:  
MATERIAL AT BASE: TILL  
NO CHANNEL SAMPLE TAKEN

VISITED: 8807  
LAND USE: PIT-TEMPORARY USE  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: MEDIUM  
MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 0.3 M.

#### SIEVE ANALYSIS

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM435 A (NW-28-004-09E)	93	87	78	65	57	50	41	27	9	4	3	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

#### PETROGRAPHIC ANALYSIS

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM435 A	70	29	1	0	0	

**DEPOSIT # 001083A** (HIGH WATER TABLE)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001083B** (NO ACCESS)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001083C (NO ACCESS)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NW-16-005-09E	0	2000	CROWN(PROVINCIAL)/CROWN	
NW-21-005-09E	0	4000	CROWN(PROVINCIAL)/CROWN	
SW-21-005-09E	20	52000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		58000		

**DEPOSIT # 001083D (NO ACCESS)**  
 (NO ECONOMIC AGGREGATE RESERVES PROVEN)
**DEPOSIT # 001084A**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-22-004-11E	0	2000	PRIVATE/PRIVATE	
SE-27-004-11E	60	1600	PRIVATE/PRIVATE	
SW-27-004-11E	60	21600	PRIVATE/PRIVATE	
DEPOSIT RESERVES		25200		

**EXPOSURE INFORMATION**

EXPOSURE #: LM189 (SW-27-004-11E) VISITED: 8907  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: AGRICULTURE,HAYING  
 ECONOMIC THICKNESS: 1.5 METRES ESTIMATED STONE CONTENT: MEDIUM LOW  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
 SECTION HEIGHT: 1.5 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 1.0 M. OVERBURDEN THICKNESS: 0.2 M.  
 MATERIAL AT BASE: SAND  
 SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS

**SIEVE ANALYSIS**

	PERCENT PASSING												OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200		
LM189 A (SW-27-004-11E)	100	100	97	88	72	52	32	18	7	3	2		SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM189 A	18	81	1	0	0	

**DEPOSIT # 001084B (REQUIRES TESTING)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER	OWNER2(SURFACE/GRAVEL)
NE-28-004-11E	0	209000	PRIVATE/PRIVATE	
SE-33-004-11E	20	13600	PRIVATE/PRIVATE	
DEPOSIT RESERVES		222600		

**EXPOSURE INFORMATION**

EXPOSURE #: LM190 (SE-33-004-11E) VISITED: 8907  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-TEMPORARY USE  
 SURROUNDING LAND USE: AGRICULTURE,HAYING  
 ECONOMIC THICKNESS: 1.5 METRES ESTIMATED STONE CONTENT: MEDIUM  
 SECTION: A MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL OCC. COBBLE  
 SECTION HEIGHT: 1.5 M. DEPTH TO WATER TABLE:  
 HEIGHT SAMPLED: 1.0 M. OVERBURDEN THICKNESS: 0.2 M.  
 MATERIAL AT BASE: SAND  
 SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS

**SIEVE ANALYSIS**

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM190 A (SE-33-004-11E)	98	94	89	80	75	69	62	51	23	4	1	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% SHALE DELETERIOUS	COMMENTS (BY WEIGHT)
LM190 A	30	67	3	0	0 ,

**DEPOSIT # 001084C (REQUIRES TESTING)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
SE-33-004-11E	0	31000	PRIVATE/PRIVATE	
SW-33-004-11E	0	52000	PRIVATE/PRIVATE	
DEPOSIT RESERVES		83000		

**DEPOSIT # 001085A (GLACIOFLUVIAL SAND)**  
 (NO ECONOMIC AGGREGATE RESERVES PROVEN)



**DEPOSIT # 001085B** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001085C** (GLACIOFLUVIAL SAND)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001086A** (REQUIRES TESTING)

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2. (SURFACE/GRAVEL)
NW-32-004-11E	0	350000	CROWN(PROVINCIAL)/CROWN	
SW-32-004-11E	0	61000	CROWN(PROVINCIAL)/CROWN	
SW-05-005-11E	0	140000	CROWN(PROVINCIAL)/CROWN	
SE-06-005-11E	0	56000	PRIVATE/PRIVATE	
DEPOSIT RESERVES		607000		

**DEPOSIT # 001086B** (REQUIRES TESTING)

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
SE-06-005-11E	0	59000	PRIVATE/PRIVATE	
DEPOSIT RESERVES		59000		

**DEPOSIT # 001087A** (VERY SANDY AND SHALLOW)

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-07-005-11E	40	70800	PRIVATE/PRIVATE	
NW-08-005-11E	60	13600	PRIVATE/PRIVATE	
DEPOSIT RESERVES		84400		

#### EXPOSURE INFORMATION

EXPOSURE #: LM209 (NW-08-005-11E)	VISITED: 8908
EXPOSURE TYPE: SAND AND GRAVEL PIT	LAND USE: PIT-TEMPORARY USE
	SURROUNDING LAND USE: FOREST NATURAL
ECONOMIC THICKNESS: 3.0 METRES	ESTIMATED STONE CONTENT: MEDIUM
SECTION: A	MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL
SECTION HEIGHT: 3.0 M.	DEPTH TO WATER TABLE:
HEIGHT SAMPLED: 2.5 M.	OVERBURDEN THICKNESS: 0.2 M.
MATERIAL AT BASE: TILL	

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

EXPOSURE #: LM210 (NE-07-005-11E) VISITED: 8908  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
 SURROUNDING LAND USE: AGRICULTURE,HAYING  
 ECONOMIC THICKNESS: 2.0 METRES  
 SECTION: A ESTIMATED STONE CONTENT: MEDIUM  
 SECTION HEIGHT: 2.0 M. MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
 HEIGHT SAMPLED: DEPTH TO WATER TABLE:  
 MATERIAL AT BASE: TILL OVERBURDEN THICKNESS: 0.2 M.  
 NO CHANNEL SAMPLE TAKEN

EXPOSURE #: LM211 (NE-07-005-11E) VISITED: 8908  
 EXPOSURE TYPE: SAND AND GRAVEL PIT LAND USE: PIT-TEMPORARY USE  
 SURROUNDING LAND USE: AGRICULTURE,HAYING  
 ECONOMIC THICKNESS: 2.0 METRES  
 SECTION: A ESTIMATED STONE CONTENT: MEDIUM  
 SECTION HEIGHT: 2.0 M. MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
 HEIGHT SAMPLED: 2.0 M. DEPTH TO WATER TABLE:  
 MATERIAL AT BASE: TILL OVERBURDEN THICKNESS: 0.2 M.  
 SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS

#### SIEVE ANALYSIS

	PERCENT PASSING											OVERSIZED (PLUS 6")
	3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	
LM209 A (NW-08-005-11E)	100	96	86	72	54	37	21	11	8	6	4	SPARSE
LM211 A (NE-07-005-11E)	100	95	85	76	65	51	35	16	5	3	2	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

#### PETROGRAPHIC ANALYSIS

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM209 A	49	50	1	0	0	
LM211 A	41	55	4	0	0	

**DEPOSIT # 001087B** (VERY SANDY)  
 (NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001088** (NO ACCESS)  
 (NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001089** (NO ACCESS)  
 (NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001090A (NO ACCESS)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NW-15-005-11E	0	23000	CROWN(PROVINCIAL)/CROWN	
NE-16-005-11E	0	96000	CROWN(PROVINCIAL)/CROWN	
DEPOSIT RESERVES		119000		

**DEPOSIT # 001090B (NO ACCESS)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-16-005-11E	0	4000	CROWN(PROVINCIAL)/CROWN	
NW-16-005-11E	0	7500	CROWN(MUNICIPAL)/CROWN	
SW-21-005-11E	0	4000	PRIVATE/PRIVATE	
DEPOSIT RESERVES		15500		

**DEPOSIT # 001090C (NO ACCESS)**

LOCATION	PERCENT DEPLETED OR STERILIZED	REMAINING RESERVES (m <sup>3</sup> )	OWNER (SURFACE/GRAVEL)	OWNER2 (SURFACE/GRAVEL)
NE-19-005-11E	0	42000	CROWN(PROVINCIAL)/CROWN	
NW-20-005-11E	0	42000	CROWN(PROVINCIAL)/CROWN	
SE-20-005-11E	0	42000	CROWN(PROVINCIAL)/CROWN	
SW-20-005-11E	0	15000	CROWN(PROVINCIAL)/CROWN	
SW-21-005-11E	0	13000	PRIVATE/PRIVATE	
DEPOSIT RESERVES		154000		

**DEPOSIT # 001091 (VERY SANDY)**  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001092 (VERY SANDY)**  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001093 (VERY SANDY)**  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**EXPOSURE INFORMATION**

EXPOSURE #: LM415 (NE-19-005-10E)  
EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 2.1 METRES  
SECTION: A  
SECTION HEIGHT: 3.3 M.  
HEIGHT SAMPLED:  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

VISITED: 9008  
LAND USE: TIMBER AREA  
SURROUNDING LAND USE: TIMBER AREA  
ESTIMATED STONE CONTENT: LOW  
MATERIAL DESCRIPTION: SAND, PEBBLY OCC. COBBLE  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 0.3 M.

EXPOSURE #: LM416 (NE-19-005-10E)  
EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 0.0 METRES  
SECTION: A  
SECTION HEIGHT: 3.5 M.  
HEIGHT SAMPLED:  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

VISITED: 9008  
LAND USE: TIMBER AREA  
SURROUNDING LAND USE: TIMBER AREA  
ESTIMATED STONE CONTENT: LOW  
MATERIAL DESCRIPTION: SAND, PEBBLY  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 3.5 M.

EXPOSURE #: LM417 (NW-19-005-10E)  
EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 0.0 METRES  
SECTION: A  
SECTION HEIGHT: 3.3 M.  
HEIGHT SAMPLED:  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

VISITED: 9008  
LAND USE: TIMBER AREA  
SURROUNDING LAND USE: TIMBER AREA  
ESTIMATED STONE CONTENT: LOW  
MATERIAL DESCRIPTION: SAND, PEBBLY  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 3.3 M.

**DEPOSIT # 001094** (VERY SANDY)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**DEPOSIT # 001095** (NO ACCESS)  
(NO ECONOMIC AGGREGATE RESERVES PROVEN)

**EXPOSURE INFORMATION (FOR EXPOSURES NOT LOCATED IN A DEPOSIT)**

EXPOSURE #: G 604 (NE-31-002-10E)

EXPOSURE TYPE: BORROW PIT

ECONOMIC THICKNESS: 0.0 METRES

SECTION: A

SECTION HEIGHT: 2.5 M.

HEIGHT SAMPLED:

MATERIAL AT BASE: SAND

NO CHANNEL SAMPLE TAKEN

VISITED: 8906

LAND USE: FOREST NATURAL

SURROUNDING LAND USE: HIGHWAY,ROADWAY,RAILWAY

ESTIMATED STONE CONTENT: LOW

MATERIAL DESCRIPTION: SAND, SURFACE COBBLES

DEPTH TO WATER TABLE: 2.0 M.

OVERBURDEN THICKNESS: 2.5 M.

EXPOSURE #: G 605 (SE-06-003-10E)

EXPOSURE TYPE: BORROW PIT

ECONOMIC THICKNESS: 0.0 METRES

SECTION: A

SECTION HEIGHT: 1.5 M.

HEIGHT SAMPLED:

MATERIAL AT BASE: SAND

NO CHANNEL SAMPLE TAKEN

VISITED: 8906

LAND USE: FOREST NATURAL

SURROUNDING LAND USE: HIGHWAY,ROADWAY,RAILWAY

ESTIMATED STONE CONTENT: LOW

MATERIAL DESCRIPTION: SAND, NO BOULDERS

DEPTH TO WATER TABLE: 1.5 M.

OVERBURDEN THICKNESS: 1.5 M.

EXPOSURE #: LM047 (SE-11-001-14E)

EXPOSURE TYPE: BACKHOE TEST PIT

ECONOMIC THICKNESS: 2.1 METRES

SECTION: A

SECTION HEIGHT: 3.9 M.

HEIGHT SAMPLED: 2.0 M.

MATERIAL AT BASE: SAND

SEE SIEVE ANALYSIS

VISITED: 8808

LAND USE: PIT-TEMPORARY USE

SURROUNDING LAND USE: FOREST NATURAL

ESTIMATED STONE CONTENT: MEDIUM

MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL

DEPTH TO WATER TABLE:

OVERBURDEN THICKNESS: 0.2 M.

EXPOSURE #: LM075 (NW-26-002-14E)

EXPOSURE TYPE: DITCH OR ROAD CUT

ECONOMIC THICKNESS: 1.5 METRES

SECTION: A

SECTION HEIGHT: 2.0 M.

HEIGHT SAMPLED: 1.0 M.

MATERIAL AT BASE: CLAY

SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS

VISITED: 8905

LAND USE: AGRICULTURE,HAYING

SURROUNDING LAND USE: FOREST NATURAL

ESTIMATED STONE CONTENT: MEDIUM

MATERIAL DESCRIPTION: SANDY COBBLY FINE PEBBLE GRAVEL

DEPTH TO WATER TABLE:

OVERBURDEN THICKNESS: 0.2 M.

EXPOSURE #: LM085 (SE-18-001-16E)

EXPOSURE TYPE: BORROW PIT

ECONOMIC THICKNESS: 0.0 METRES

SECTION: A

SECTION HEIGHT: 3.0 M.

HEIGHT SAMPLED:

MATERIAL AT BASE: SAND

NO CHANNEL SAMPLE TAKEN

VISITED: 8905

LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)

SURROUNDING LAND USE: FOREST NATURAL

ESTIMATED STONE CONTENT: LOW

MATERIAL DESCRIPTION: SILT TILL-SAND IN NW CORNER

DEPTH TO WATER TABLE: 3.0 M.

OVERBURDEN THICKNESS: 3.0 M.

EXPOSURE #: LM092 (SE-11-001-14E)  
EXPOSURE TYPE: SAND AND GRAVEL PIT  
  
ECONOMIC THICKNESS: 0.0 METRES  
SECTION: A  
SECTION HEIGHT: 2.0 M.  
HEIGHT SAMPLED:  
MATERIAL AT BASE: TILL  
NO CHANNEL SAMPLE TAKEN

VISITED: 8906  
LAND USE: GARBAGE DUMP-AUTHORIZED,ACTIVE  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: LOW  
MATERIAL DESCRIPTION: SANDY FINE PEBBLY GRAVEL  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS:

EXPOSURE #: LM106 (SE-15-001-13E)  
EXPOSURE TYPE: SAND AND GRAVEL PIT  
  
ECONOMIC THICKNESS: 1.0 METRES  
SECTION: A  
SECTION HEIGHT: 1.5 M.  
HEIGHT SAMPLED:  
MATERIAL AT BASE: TILL  
NO CHANNEL SAMPLE TAKEN

VISITED: 8906  
LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
SURROUNDING LAND USE: AGRICULTURE,HAYING  
ESTIMATED STONE CONTENT: MEDIUM LOW  
MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 0.5 M.

EXPOSURE #: LM129 (SE-15-001-12E)  
EXPOSURE TYPE: DUGOUT  
  
ECONOMIC THICKNESS: 0.0 METRES  
SECTION: A  
SECTION HEIGHT: 3.0 M.  
HEIGHT SAMPLED:  
MATERIAL AT BASE: TILL  
NO CHANNEL SAMPLE TAKEN

VISITED: 8906  
LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: LOW  
MATERIAL DESCRIPTION: SILT TILL  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 3.0 M.

EXPOSURE #: LM143 (SE-08-003-13E)  
EXPOSURE TYPE: SAND AND GRAVEL PIT  
  
ECONOMIC THICKNESS: 1.0 METRES  
SECTION: A  
SECTION HEIGHT: 1.0 M.  
HEIGHT SAMPLED:  
MATERIAL AT BASE: SAND AND GRAVEL  
NO CHANNEL SAMPLE TAKEN

VISITED: 8906  
LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: MEDIUM  
MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
DEPTH TO WATER TABLE: 1.5 M.  
OVERBURDEN THICKNESS: 0.2 M.

EXPOSURE #: LM169 (SE-32-003-11E)  
EXPOSURE TYPE: SAND AND GRAVEL PIT  
  
ECONOMIC THICKNESS: 0.0 METRES  
SECTION: A  
  
SECTION HEIGHT: 3.0 M.  
HEIGHT SAMPLED:  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

VISITED: 8906  
LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: MEDIUM LOW  
MATERIAL DESCRIPTION: SILT TILL WITH SANDY FINE PEBBLE GRAVEL LAYERS  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 1.0 M.

EXPOSURE #: LM192 (SE-03-005-11E)  
EXPOSURE TYPE: BULLDOZER TEST PIT  
  
ECONOMIC THICKNESS: 1.0 METRES  
SECTION: A  
SECTION HEIGHT: 1.0 M.  
HEIGHT SAMPLED:  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

VISITED: 8907  
LAND USE: FOREST NATURAL  
SURROUNDING LAND USE: AGRICULTURE,HAYING  
ESTIMATED STONE CONTENT: MEDIUM LOW  
MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 0.2 M.

EXPOSURE #: LM204 (SW-01-003-10E)  
EXPOSURE TYPE: BORROW PIT  
  
ECONOMIC THICKNESS: 0.5 METRES  
SECTION: A  
SECTION HEIGHT: 1.5 M.  
HEIGHT SAMPLED:  
MATERIAL AT BASE: TILL  
NO CHANNEL SAMPLE TAKEN

VISITED: 8907  
LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
SURROUNDING LAND USE: HIGHWAY,ROADWAY,RAILWAY  
ESTIMATED STONE CONTENT: MEDIUM HIGH  
MATERIAL DESCRIPTION: SANDY COBBLY PEBBLE GRAVEL  
DEPTH TO WATER TABLE: 1.0 M.  
OVERBURDEN THICKNESS: 0.3 M.

EXPOSURE #: LM208 (NW-17-005-11E)  
EXPOSURE TYPE: SAND AND GRAVEL PIT  
  
ECONOMIC THICKNESS: 2.0 METRES  
SECTION: A  
  
SECTION HEIGHT: 2.5 M.  
HEIGHT SAMPLED:  
MATERIAL AT BASE: TILL  
NO CHANNEL SAMPLE TAKEN

VISITED: 8908  
LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
SURROUNDING LAND USE: AGRICULTURE, HAYING  
ESTIMATED STONE CONTENT: LOW  
MATERIAL DESCRIPTION: PEBBLY SAND(GRAVEL LAYERS AT BASE)  
DEPTH TO WATER TABLE: 2.0 M.  
OVERBURDEN THICKNESS: 0.2 M.

EXPOSURE #: LM212 (SE-09-005-11E)  
EXPOSURE TYPE: SAND AND GRAVEL PIT  
  
ECONOMIC THICKNESS: 1.0 METRES  
SECTION: A  
SECTION HEIGHT: 1.5 M.  
HEIGHT SAMPLED:  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

VISITED: 8908  
LAND USE: PIT-NOT IN USE(COMMONLY REVEGETATED)  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: MEDIUM LOW  
MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 0.2 M.

EXPOSURE #: LM213 (SE-09-005-11E)  
EXPOSURE TYPE: SAND AND GRAVEL PIT  
  
ECONOMIC THICKNESS: 0.5 METRES  
SECTION: A  
SECTION HEIGHT: 2.0 M.  
HEIGHT SAMPLED:  
MATERIAL AT BASE: SAND  
NO CHANNEL SAMPLE TAKEN

VISITED: 8908  
LAND USE: PIT-TEMPORARY USE  
SURROUNDING LAND USE: FOREST NATURAL  
ESTIMATED STONE CONTENT: MEDIUM  
MATERIAL DESCRIPTION: SANDY FINE PEBBLE GRAVEL  
DEPTH TO WATER TABLE:  
OVERBURDEN THICKNESS: 0.2 M.

EXPOSURE #: LM218 (NE-18-001-16E)  
 EXPOSURE TYPE: BACKHOE TEST PIT

VISITED: 8908  
 LAND USE: HIGHWAY,ROADWAY,RAILWAY  
 SURROUNDING LAND USE: FOREST NATURAL  
 ESTIMATED STONE CONTENT: MEDIUM LOW  
 MATERIAL DESCRIPTION: SANDY PEBBLE GRAVEL  
 DEPTH TO WATER TABLE:  
 OVERBURDEN THICKNESS: 0.0 M.

ECONOMIC THICKNESS: 1.5 METRES  
 SECTION: A  
 SECTION HEIGHT: 3.0 M.  
 HEIGHT SAMPLED: 1.5 M.  
 MATERIAL AT BASE: CLAY

**SEE SIEVE ANALYSIS AND PETROGRAPHIC ANALYSIS**

**SIEVE ANALYSIS**

**PERCENT PASSING**

		3.0	1.5	3/4	3/8	#4	#8	#16	#30	#50	#100	#200	OVERSIZED (PLUS 6")
LM047	A (SE-11-001-14E)	100	100	98	84	74	61	46	23	10	9	7	SPARSE
LM075	A (NW-26-002-14E)	100	95	87	78	69	56	43	28	12	3	1	SPARSE
LM218	A (NE-18-001-16E)	100	97	91	86	81	75	68	52	10	2	1	SPARSE

(NOTE: ALL SAMPLES ARE 100% PASSING 6 INCHES)

**PETROGRAPHIC ANALYSIS**

SAMPLE	% GOOD	% FAIR	% POOR	% DELETERIOUS	% SHALE (BY WEIGHT)	COMMENTS
LM075 A	92	5	3	0	0	
LM218 A	78	20	2	0	0	



