



Natural Resources

Mines

**GRANULAR-AGGREGATE RESOURCES OF THE
CENTREVILLE–WAREHAM–TRINITY AREA
(PARTS OF NTS MAP SHEETS 2C/13, 2D/16, 2E/01 AND 2F/04)**

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Open File NFLD/3157

**St. John's, Newfoundland
October, 2011**

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MAP

Map 2011-31 Granular-aggregate resources of the Centreville Wareham Trinity area (parts of NTS map sheets 2C/13, 2D/16, 2E/01 and 2F/04	
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INTRODUCTION

The Centreville–Wareham–Trinity area aggregate project (Figure 1) was conducted between June 8-13, 2011, at the request of the Mineral Lands Division, to find an alternate source of gravel to replace quarries (Figure 2) currently used within the community. A new gravel source will help reduce trucking of material through the community.

The study area includes parts of four NTS map areas; northeast corner of NTS area 2D/16, southeast corner of NTS area 2E/01, southwest corner of NTS area 2F/04, and the northwest corner of NTS area 2C/13 (Figure 2).

The project consisted of airphoto interpretation to outline potential quarry materials, and field sampling for grain-size, and petrographic analyses. From these data, and the compilation of pre-existing data (Kirby *et al.*, 1983; Ricketts, 2006; 2007), a 1:50 000-scale map was produced for the area (Map 2011-31).

In parts of the study area, potential deposits were not sampled because they are too small, are a long distance from roads (>3 km), or located in areas of private land, cabins, etc. Also, there are numerous, unsampled till ridges in the area where potential materials suitable for fill can be quarried. These till ridges range in length from approximately 40 to 750 m, and are 1 m to more than 10 m high.

DEPOSIT DESCRIPTION

Deposits sampled for potential long-term quarry activity were located in four areas. These deposits are near Northwest Brook, Indian Bay Brook, Southwest Pond and Fox Pond. Grain-size and petrographic analyses were determined from one or two samples collected from 1-m-deep hand-dug pits in each deposit (Table 1).

NORTH WEST BROOK

The North West Brook deposit (Figure 3; Deposit 1a) is located approximately 250 m north of North West Brook, 4 km northeast of the community of Parsons Point and 1.4 km southeast of Route 320, in NTS map area 2F/4. There is no road access to this deposit.

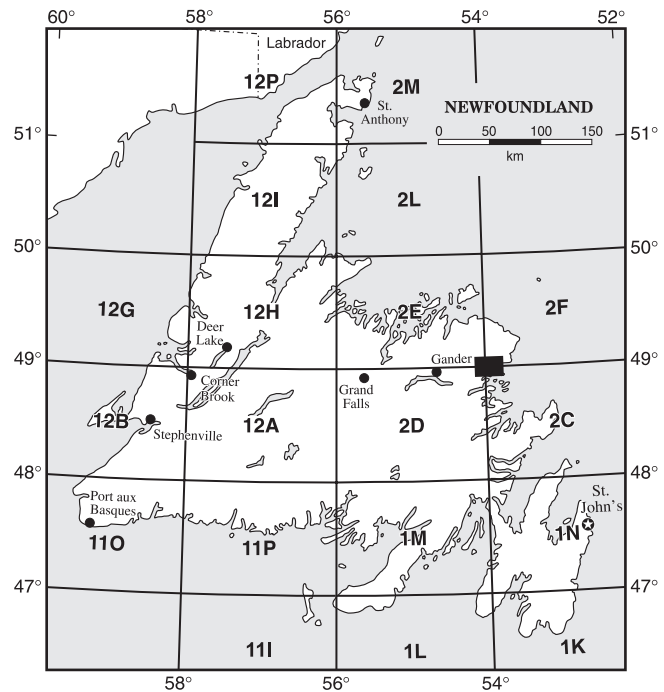


Figure 1. Location of study area.

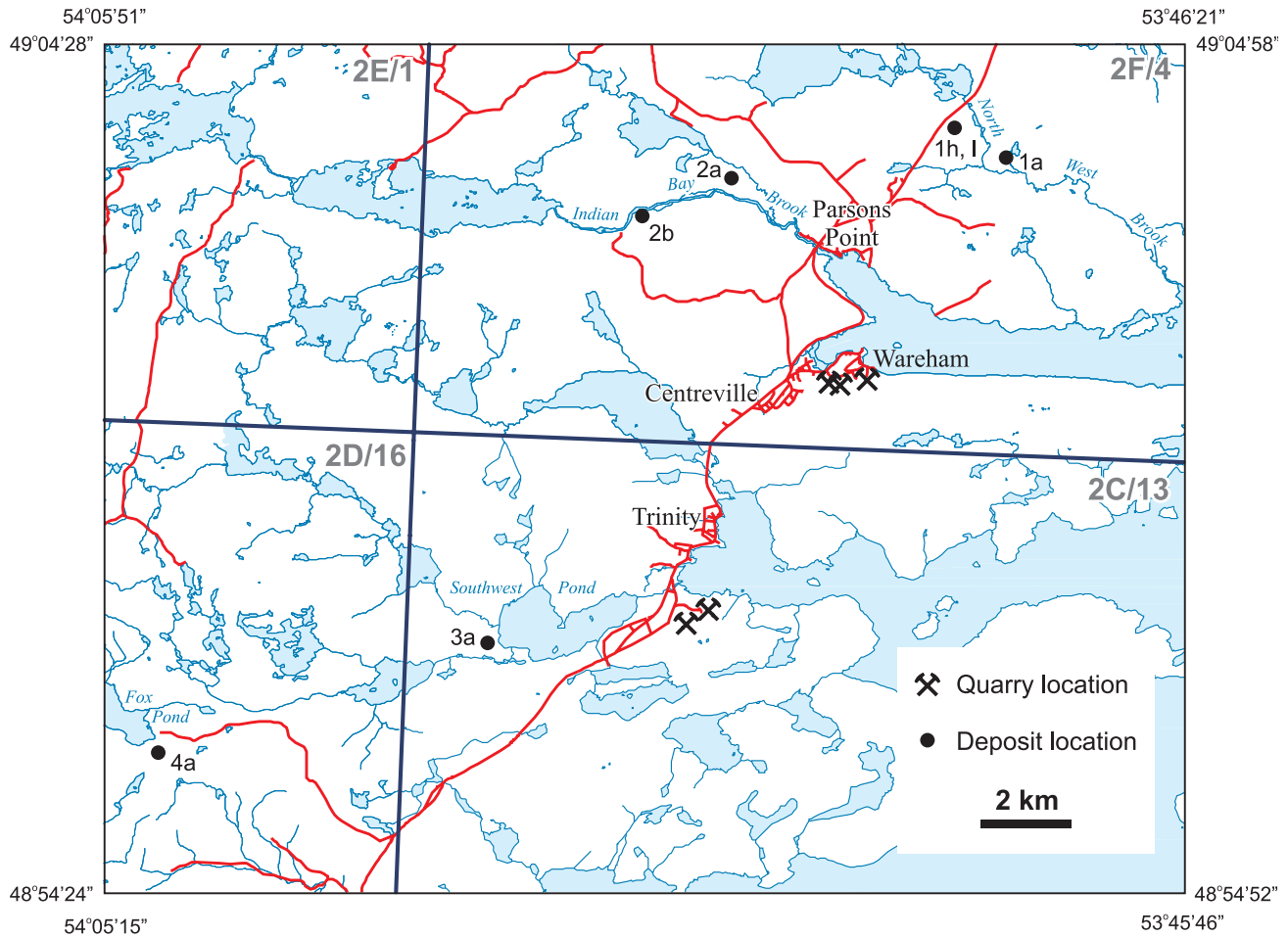


Figure 2. Study area showing deposit and quarry locations.

Table 1. Summary of aggregate deposits sampled in the Centreville–Wareham–Trinity area, in 2011 (see Figures 3-6 for locations sites)

Deposit	Estimated m ³	# of samples	% Grv (+5 mm)	% Sand (.078 mm to 5 mm)	%SL-CL (-.078 mm)	PN	Notes
1a	100 000	1	63.0	35.4	1.6	128	Very sandy gravel terrace
2a	100 000	2	72.7	26.7	0.6	131, 148	Very sandy gravel esker
2b	200 000	1	66.1	32.9	1.0	141	Very sandy gravel terrace
3a	500 000	1	50.5	47.5	2.0	143	Gravel-sand esker
4a	200 000	2	67.0	32.7	0.3	141, 144	Very sandy gravel esker

Note: Estimated quantities in table are based on airphoto interpretation and observations at field sample locations. Grain-sized percentages are based on samples collected from approximately 1-m-deep hand-dug pits.

This 7-m high deposit maybe the remnants of a glaciofluvial terrace. It contains approximately 100 000 m³ of aggregate. Grain-size analysis of one sample indicate that it contains 63% gravel, 35.4% sand, and 1.6% silt-clay. The sample has a petrographic number of 128 (Table 1). Potential smaller deposits (Figure 3; deposits 1b-1h), outlined on aerial photographs, were also located in this area. These smaller deposits are estimated to contain 8 000 to 60 000 m³ of sand and gravel. These deposits were not sampled. Two large till deposits (deposits 1i and 1j) containing an estimated 800 000 m³ of material (suitable for fill material) are located between Route 320 and gravel deposit 1a.

INDIAN BAY BROOK

Two deposits were sampled near Indian Bay Brook in NTS area 2F/4. First, a 500-m long esker (Figure 4; Deposit 2a) was located north of the brook, 1.2 km south of Route 320. There is no road access to this deposit. The esker contains approximately 100 000 m³ of aggregate. Grain-size analysis of two samples indicates it contains 72.7% gravel, 26.7% sand, and 0.6% silt-clay. The sample has a petrographic number of 140 (Table 1). Second, a terrace deposit (Figure 4; Deposit 2b) was located along the south river bank, approximately 3.5 km west of Route 320. The deposit is accessible by ATV along an abandoned access road but not by larger vehicles. The terrace contains approximately 200 000 m³ of aggregate. Grain-size analysis of one sample indicate it contains 66.1% gravel, 32.9% sand, and 1% silt-clay. Petrographic numbers of 131 and 148 were determined from analyses of two samples (Table 1). There are several smaller ridges (~100 m long) and the remnants of an eroded terrace on the south side of the brook. These were not sampled to determine aggregate quality.

SOUTHWEST POND

The Southwest Pond deposit (Figure 5; Deposit 3a) is located near the southwest end of Southwest Pond, 3.5 km southwest of Trinity and 1.3 km northwest of Route 320, in NTS area 2C/13. There is no road access to this deposit.

It consists of a system of ridges (possibly a dissected esker) about 1400 m long, and is estimated to contain up to 500 000 m³ of aggregate. Grain-size analyses of one sample indicate it contains of 50.5% gravel, 47.5% sand, and 2% silt-clay. The sample has a petrographic number of 143 (Table 1). Cabins located near the shoreline of Southwest Pond will affect quarrying in parts of this deposit.

FOX POND

The Fox Pond deposit consists of a 1.7 km-long dissected esker, and associated outwash material (Figure 6; Deposit 4a) found near the central part of the esker. It is located 4.5 km from Route 320, near the southeast side of Fox Pond, in NTS area 2D/16. The deposit is about 300 m south of a poorly maintained gravel road leading from Route 320 to Fox Pond. There are several cabins along the road, but none within 300 m of the esker.

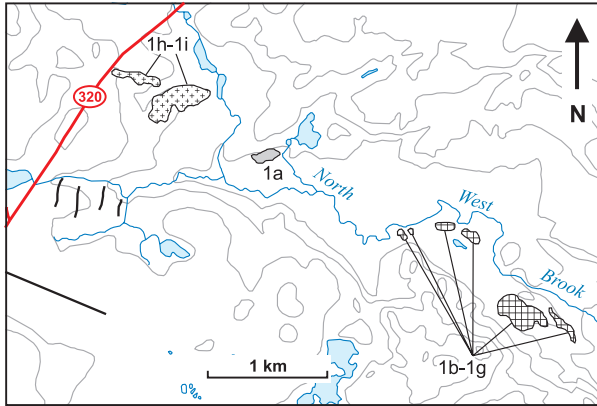


Figure 3. Deposit locations near Northwest Brook.

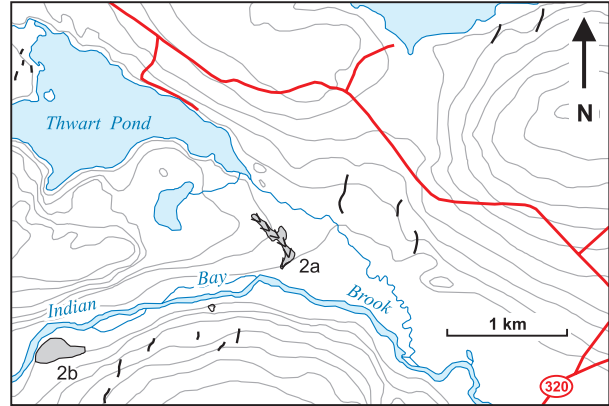


Figure 4. Deposit locations near Indian Bay Brook.

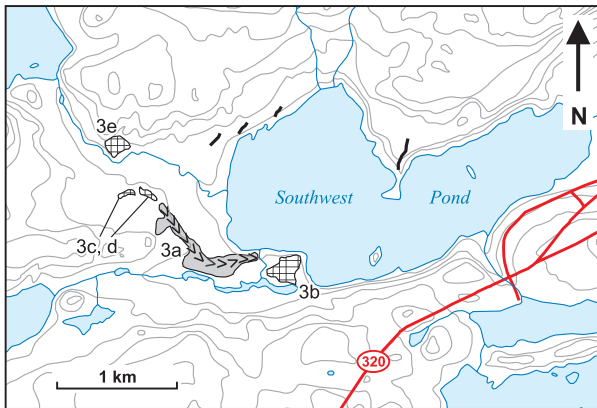


Figure 5. Deposit locations near Southwest Pond.

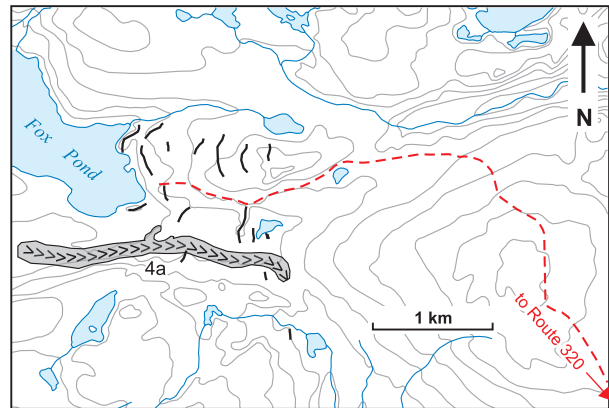

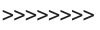



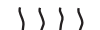


Figure 6. Deposit locations near Fox Pond.

LEGEND (for figures 3 through 6)

- | | |
|--|---|
|  Gravel and sand |  Esker |
|  Potential gravel and sand (no samples collected) |  Till ridge: parallel to ice flow (may contain areas of bedrock) |
|  Glacial till |  Till ridge: perpendicular to ice flow |

The deposit is estimated to contain over 200 000 m³ of aggregate. Grain-size analysis of two samples show an average of 67% gravel, 32.7% sand, and 0.3% silt-clay. Petrographic numbers of 141 and 144 were determined from analyses of two samples (Table 1).

SUMMARY

Deposits sampled in the study area range in size from 100 000 to 500 000 m³. These deposits are located between 1.3 and 4.5 km from Route 320, the major highway going through the community of Centreville–Wareham–Trinity. Based on analyses of the one or two samples collected from each deposit, grain-size and petrographic quality are suitable for most construction purposes.

REFERENCES

Kirby, F.T., Ricketts, R.J. and Vanderveer, D.G.

1983: Inventory of aggregate resources in Newfoundland and Labrador; information report and index maps. Newfoundland Department of Mines and Energy, Mineral Development Division, Report 83-2, 36 pages.

Ricketts, M.J.

2006: Granular-aggregate resources of the St. Brendans map sheet (NTS 2C/13). Government of Newfoundland and Labrador, Department of Natural Resources, Geological Survey, Map 2006-21, Open File 002C/13/0165.

2007: Granular-aggregate resources of the Wesleyville map sheet (NTS 2F/4). Government of Newfoundland and Labrador, Department of Natural Resources, Geological Survey, Map 2007-06, Open File 002F/04/0034.