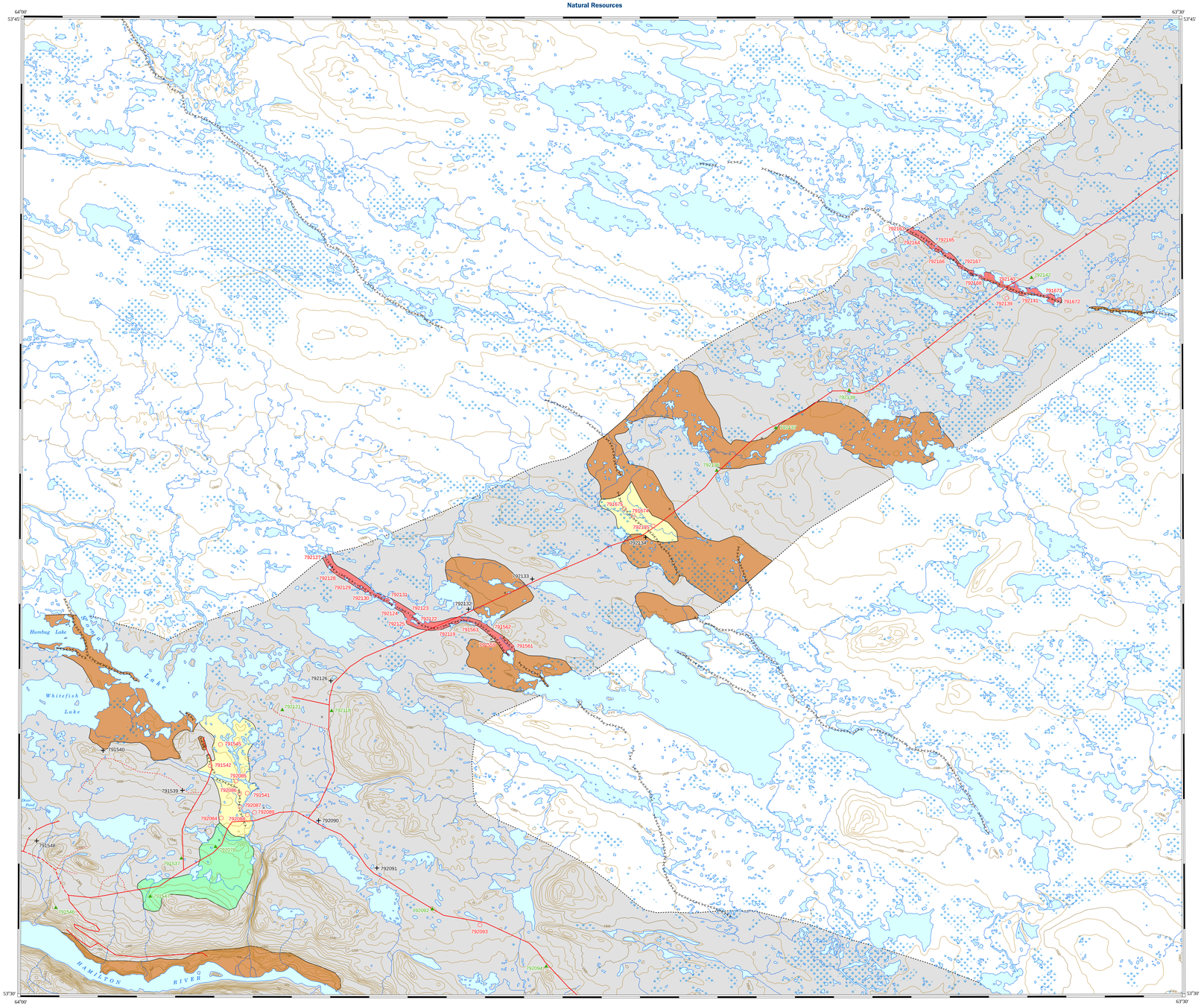
Newfoundland Labrador

Natural Resources



MAP 2014-06

SONA LAKE

NEWFOUNDLAND AND LABRADOR

kilometres

GRANULAR-AGGREGATE RESOURCES OF THE SONA LAKE MAP SHEET (NTS 13E/12)

MAP 2014-06

LEGEND

Sample types (based on laboratory sieve analysis - see Table 1)

Sample Symbol	Definition
○	Commonly gravel or sand, having silt-clay content < 5 percent. Deposits are commonly graded and stratified
▲	Commonly till, poorly graded and of variable grain size, having a silt-clay content (≥ 5 and ≤ 15 percent) and stone size exceeding allowable limits for most geotechnical purposes (except subgrade uses) without processing (i.e., washing, screening or crushing)
+	Commonly silty till, silt or clay samples, having silt-clay content > 15 percent
×	Site observation – no sample collected

Multiple samples taken from the same site in different years are listed in order from oldest to youngest. Multiple samples taken at the same site in the same year are listed in order, from the top of the exposure to bottom.

Note

This is a composite legend for all granular-aggregate resource maps. All aggregate zones, study areas, and sample types shown in the legend may not appear on this map. Aggregate zone classification is based on airphoto interpretation, field investigation and sieve analyses. Areas outside the coloured zones have no known potential for granular materials; however silty tills, rock rubble suitable for fill, and bedrock suitable for aggregate may be present. Classification criteria used on this map do not consider current or conflicting land uses, nor do they guarantee either access to, or the quality of, the material located within these zones.

ZONES OF AGGREGATE POTENTIAL

- Contains granular materials; probability of locating economic deposits is moderate to high
- Contains thin (less than 2 m) or discontinuous granular materials; also includes areas where extent of thicker deposits could not be determined by field investigation; probability of locating economic deposits is moderate to low
- May contain granular materials but deposits are not substantiated by field investigation; probability of locating economic deposits is moderate to low
- Material of granular composition (e.g., sandy tills and colluvium) that generally contains up to 8 percent silt-clay, but could be improved for higher grade uses by washing or screening
- Contains sand-size granular materials; high potential for economic exploitation of sand; low to moderate potential for coarser granular materials
- Eskers: sinuous ridges of granular materials; moderate to high potential for economic exploitation
- Study area within the dashed outline

In addition to this map data, a granular-aggregate database is accessible in the Geoscience Atlas of Newfoundland and Labrador (http://gpa.gov.nl.ca) for all granular-aggregate maps and sample data. The database provides information on more than 13 000 samples collected from 230, 1:50 000-scale map areas in Newfoundland and Labrador.

This map was originally produced in a series of blueline maps from airphoto interpretation and field work (Fulton et al., 1975; Environmental Geological Section, 1983).

GIS / digital cartography by T. Paltanavage.

The location of roads added to topographic map base are approximate.

Elevation in feet above mean sea level. Contour interval 50 feet.

Copies of this map may be obtained from the Geoscience Publications and Information Section, Geological Survey, Department of Natural Resources, Government of Newfoundland and Labrador, P.O. Box 8700, St. John's, NL, Canada, A1B 4J6.

This map is subject to review and revision. Comments to the author concerning errors or omissions are invited.

Base from maps published by Surveys and Mapping Branch, Department of Natural Resources, Ottawa, Canada.

OPEN FILE 013E/12/0095
This map supercedes Map 82-214, Open File LAB/0607

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Department: http://www.nr.gov.nl.ca/nr/
Geological Survey: http://www.nr.gov.nl.ca/nr/mines/geoscience/
E-mail: pub@gov.nl.ca

References

Fulton, R.J, Hodgson, D.A. and Minning, G.V.
1975: Inventory of Quaternary Geology, Southern Labrador - Terrain Studies in Undeveloped areas. Geology Survey of Canada, Department of Energy, Mines and Resources, Ottawa, Paper 74-46, 14 pages.

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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.

Recommended citation

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2014: Granular-aggregate resources of the Sona Lake map sheet (NTS 13E/12). Government of Newfoundland and Labrador, Department of Natural Resources, Geological Survey, Map 2014-06, Open File 013E/12/0095.

Note

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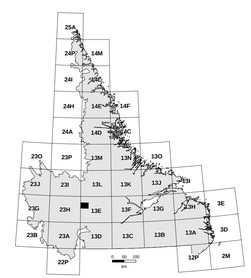
GRAIN-SIZE ANALYSES

Grain-size results from the 63, 32, 16 and 8 mm mesh sieves were obtained at the sample site location by sieving approximately 15 kg of material. A 500 to 1000 gm split of the <8 mm material (sand-silt-clay) was retained for laboratory sieve analysis. Laboratory sieve analyses included the use of seven sieves with mesh openings of 4, 2, 1, 0.5, 0.25, 0.125, 0.062 and the -0.062 mm pan fraction. Samples were wet and/or dry sieved (Kirby et al., 1983) depending on silt-clay content and consolidation of particles.

Table 1: Exposure thickness (Exp), estimated deposit thickness (Dep), petrographic number (PN), grain-size percentages (based on percent retained on the 63 mm down to the -0.062 mm mesh sieves) and gravel (Grv), sand and silt-clay (SL-CL) content of sample material collected in NTS map area 13E/12.

	⊢Metres→			⊢Percent retained through sieve opening (millimetres)→												⊢Percent→		
Sample	Exp	Dep	PN	63	32	16	8	4	2	1	0.5	0.25	0.125	0.062	<0.062	Grv	Sand	SL-CL
791537	4.5	8.0	271	4.8	3.6	6.6	9.0	7.8	11.0	11.3	10.0	9.2	8.1	5.2	13.5	29.8	55.4	14.8
791539	3.8	8.0	230	5.0	7.5	6.8	8.7	5.1	6.1	6.7	8.1	10.9	11.0	7.8	16.4	31.8	49.9	18.3
791540	4.3	8.0	266	0.0	2.4	2.4	3.0	3.3	6.0	9.0	11.1	12.3	13.2	11.9	25.3	10.3	61.4	28.3
791541	1.2	2.5	233	22.3	15.2	5.4	14.3	9.6	11.6	10.1	5.5	3.1	1.9	0.8	0.4	64.3	35.1	0.6
791542	3.5	5.5	233	12.8	17.6	12.8	12.8	10.9	12.5	7.8	6.7	3.5	1.5	0.7	0.5	64.1	35.3	0.7
791545	1.2	2.5	190	0.0	1.3	10.5	13.8	11.8	14.1	13.6	12.3	15.1	6.6	0.6	0.2	34.5	65.2	0.3
791546	1.5	8.0	206	0.0	10.9	8.0	8.8	7.0	9.1	8.6	9.0	9.3	9.4	6.6	13.4	33.0	52.0	15.0
791547	3.0	8.0	289	0.0	3.6	10.1	11.5	5.7	5.5	7.1	12.1	14.4	11.2	6.3	12.4	29.5	56.5	14.0
791548	5.8	7.0	200	0.0	5.8	5.8	8.7	1.6	4.4	7.1	8.5	10.7	11.9	9.4	26.1	21.5	50.1	28.4
791559	0.8	8.0	281	15.0	21.4	16.8	13.3	11.1	4.8	3.1	6.4	5.0	2.0	0.6	0.4	74.8	24.6	0.6
791561	0.8	6.0	276	2.6	23.9	21.3	13.5	4.8	4.2	5.3	7.3	6.5	5.4	3.5	1.8	64.9	32.5	2.6
791562	1.1	8.0	300	0.0	28.6	24.0	10.4	13.9	10.5	6.7	3.6	1.1	0.5	0.4	0.4	73.4	26.1	0.5
791563	4.3	8.0	281	2.9	9.3	22.1	15.1	24.5	17.5	6.4	0.6	0.3	0.1	0.7	0.1	67.8	31.9	0.3
791672	1.8	8.0	262	5.9	18.3	15.7	15.0	6.7	11.4	11.6	8.9	4.3	1.0	0.4	0.5	59.9	39.5	0.6
791673	1.7	10.0	261	3.0	12.1	15.9	12.1	8.1	11.4	13.5	14.5	6.4	1.4	0.8	0.7	49.3	49.8	0.9
791674	1.8	7.0					0.0	1.3	4.3	5.6	10.4	54.7	22.3	1.2	0.2	1.0	98.6	0.5
791675	2.1	9.0					0.0	25.8	13.3	11.1	10.9	29.2	8.9	0.6	0.1	19.3	80.4	0.3
792078	1.0	20.0	294	5.5	11.0	8.6	7.4	8.8	7.0	8.5	12.4	10.2	7.9	5.1	7.6	39.1	52.0	8.8
792084	1.3	1.0	203	2.5	22.8	24.7	11.7	9.3	11.1	8.4	5.8	2.8	0.6	0.1	0.1	68.7	31.2	0.1
792085	3.0	5.0	232	6.3	4.7	47.2	5.9	10.6	11.7	8.2	2.8	1.1	0.6	0.4	0.4	72.1	27.4	0.5
792086	0.3	4.0	240	6.6	30.3	21.7	11.2	5.0	3.7	2.6	3.8	6.1	4.4	2.3	2.5	73.5	23.5	3.0
792087	1.8	3.0	225	6.5	14.3	14.9	14.3	11.7	14.3	14.4	6.5	1.7	0.7	0.4	0.3	58.8	40.8	0.4
792088	1.7	1.5	232	0.0	10.6	11.9	13.9	22.1	17.5	9.5	6.0	5.2	2.2	0.7	0.4	53.0	46.5	0.5
792089	4.0	20.0	270	13.1	14.4	14.4	11.1	9.0	7.7	5.0	5.6	6.8	6.8	3.6	4.0	59.7	35.4	4.9
792090	3.0	8.0	242	0.0	6.8	8.9	6.2	6.2	4.9	5.5	9.5	14.7	14.3	10.4	12.5	26.6	58.3	15.1
792091	3.0	7.0	221	12.6	8.4	9.0	12.6	5.7	6.0	6.0	6.3	7.4	6.8	4.9	14.4	46.8	37.6	15.7
792092	2.0	8.0	270	8.8	12.2	8.8	6.8	7.5	5.6	5.5	8.8	11.2	10.1	5.8	8.7	42.4	47.5	10.1
792093	3.0	9.0	226	11.6	12.2	10.9	10.2	13.5	8.9	7.3	8.1	8.4	4.6	2.1	2.1	55.0	42.3	2.7
792094	4.8	28.0	239	4.6	5.9	3.9	5.2	4.3	4.4	5.7	11.1	17.2	17.7	10.9	9.2	22.8	66.3	11.9
792118	1.9	2.0	300	2.9	10.4	19.1	11.0	6.8	4.0	2.8	5.5	11.2	12.3	6.5	7.4	48.5	42.5	9.1
792119	9.0	16.0	274	0.0	14.8	11.6	10.3	15.7	15.9	22.4	15.3	6.4	1.5	0.7	0.7	48.7	50.8	0.5
792121	1.0	9.0	241	6.1	12.9	9.2	6.7	5.0	5.0	5.9	9.5	12.1	10.8	7.4	9.4	38.7	50.0	11.2
792122	2.0	2.0	257	8.0	10.9	16.1	14.9	14.1	14.1	10.4	4.7	2.0	1.0	1.3	2.4	60.6	36.7	2.7
792123	3.0	8.0	278	11.9	10.1	10.7	14.5	18.8	14.3	7.6	4.6	3.1	1.9	1.6	0.9	61.3	37.4	1.3
792124	3.0	4.0	265	3.7	14.2	14.2	16.4	12.1	14.4	11.7	9.5	2.6	0.7	0.3	0.3	57.6	42.1	0.3
792125	3.3	7.0	269	0.0	5.8	11.0	9.0	6.3	9.3	16.4	25.2	11.5	4.0	1.1	0.4	30.6	68.8	0.7
792126	3.0	20.0	272	0.0	2.0	4.6	6.0	5.5	4.8	5.1	6.9	10.2	15.5	15.2	24.3	16.7	55.2	28.1
792127	0.7	4.7	280	15.1	14.0	11.6	7.0	5.6	11.9	17.3	13.3	3.4	0.5	0.1	0.2	51.8	47.9	0.2
792128	0.8	4.0	258	20.2	28.9	11.4	7.0	6.6	7.2	7.1	5.0	2.9	1.7	1.0	0.8	72.5	26.4	1.1
792129	1.0	5.0	243	13.6	5.8	14.6	16.5	16.2	9.8	3.7	2.9	5.2	5.4	3.4	2.9	62.6	33.6	3.8
792130	1.0	5.0	267	12.8	4.3	13.8	18.1	9.3	6.8	4.4	5.7	13.2	7.4	2.9	1.4	55.9	42.0	2.1
792131	0.8	9.0	255	0.0	11.6	14.0	8.5	11.8	14.7	21.0	15.5	2.2	0.3	0.1	0.1	43.0	56.8	0.2
792132	1.0	2.0					0.0	0.0	0.0	0.1	0.4	2.2	35.3	47.3	14.8	0.0	73.4	26.6
792133	2.0	20.0	269	6.0	7.4	6.0	8.1	3.9	11.0	12.2	9.4	7.4	7.4	5.8	15.5	30.4	52.6	16.9
792134	1.4	3.0					0.0	0.0	0.0	0.1	0.3	1.4	8.2	42.2	47.9	0.0	41.6	58.4
792135	5.0	5.0	238	9.3	22.1	17.4	13.4	11.2	9.9	8.4	5.2	1.3	0.4	0.1	0.2	70.6	29.1	0.2
792136	2.0	6.0	275	0.0	15.9	9.3	10.6	10.5	9.7	8.7	8.1	8.0	6.2	3.0	10.1	43.6	45.6	10.8
792137	2.0	20.0	254	0.0	6.6	7.4	8.1	9.7	9.2	9.2	10.1	11.7	10.9	6.1	11.2	29.3	57.9	12.7
792138	0.6	4.0	222	9.3	7.6	6.4	9.9	8.9	11.4	9.5	7.7	7.3	8.6	6.4	6.9	39.8	51.7	8.5
792139	3.0	4.0	239	12.9	10.3	20.1	18.6	15.6	11.9	7.7	2.3	0.4	0.1	0.0	0.2	73.5	26.3	0.2
792140	6.0	8.0	238	3.9	29.6	12.5	7.9	15.6	13.1	8.9	4.6	2.0	0.8	0.4	0.6	65.7	33.6	0.7
792141	6.0	8.0	179	2.4	15.0	21.6	22.2	18.5	12.1	3.4	2.2	1.6	0.7	0.2	0.3	75.0	24.7	0.3
792142	1.0	6.0	185	3.2	11.0	9.0	7.1	9.0	10.8	9.0	8.5	8.4	9.3	6.6	8.1	37.0	53.2	9.8
792163	0.8	7.0	205	11.7	8.0	22.2	19.1	13.9	9.3	8.2	4.3	1.2	0.6	0.5	0.9	71.5	27.5	1.0
792164	0.8	8.0	212	19.0	11.7	12.4	11.7	7.8	9.5	11.7	10.3	3.3	1.2	0.6	0.8	60.6	38.5	0.9
792165	1.0	8.0	195	13.5	16.2	12.8	16.2	18.5	10.9	5.0	3.8	1.9	0.6	0.3	0.3	72.7	27.0	0.3
792166	1.0	6.0	203	19.9	9.0	14.5	13.9	10.7	12.7	11.0	5.3	1.6	0.7	0.4	0.4	65.2	34.3	0.5
792167	0.9	12.0	220	0.0	29.9	46.9	12.9	4.7	2.2	1.2	0.8	0.4	0.4	0.2	0.3	93.3	6.3	0.4
792168	1.2	12.0	190	9.4	8.7	15.0	15.7	25.4	16.4	6.8	2.0	0.2	0.1	0.1	0.1	67.9	32.0	0.1



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