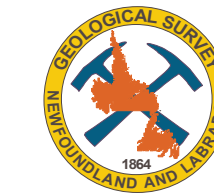


MAP 2015-03
CHURCHILL FALLS
(NTS 23H/09)



**GRANULAR-AGGREGATE RESOURCES
OF THE CHURCHILL FALLS MAP SHEET
(NTS 23H/09)**

MAP 2015-03

LEGEND

- Sample types based on laboratory sieve analysis - see Table 1
- Symbol**
- Commonly gravel or sand, having silt-clay content < 5 percent. Deposits are commonly graded and stratified
 - △ Commonly silt, poorly graded and of variable grain size, having a silt content (≥ 5 and < 15 percent) and stone size exceeding allowable limits for most geotechnical purposes (except aggregate uses) without processing (i.e., washing, screening or crushing)
 - + Commonly silty silt, 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 airborne interpretation, field investigation and sieve analyses. Areas outside the colored zones have no known potential for granular materials, however silty fills, 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://gis.gov.nl.ca>) for all granular aggregate maps and sample data. The database provides information on more than 13,000 samples collected from 200, 1:50,000 scale map areas in Newfoundland and Labrador.

This map was originally produced in a series of baseline maps from airphoto interpretation and field work (Fulton et al., 1975; Environmental Geology Section, 1982).

GIS / digital cartography by K. Morgan.

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 6700, St. John's, NL, Canada, A1B 4X6.

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

Based on maps published by Surveys and Mapping Branch, Department of Natural Resources, Ottawa, Canada.

OPEN FILE 023H09/03

This map supersedes Map 82-264 and Map 82-265, Open File LAB/0607

PUBLISHED 2014

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

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Recommended citation

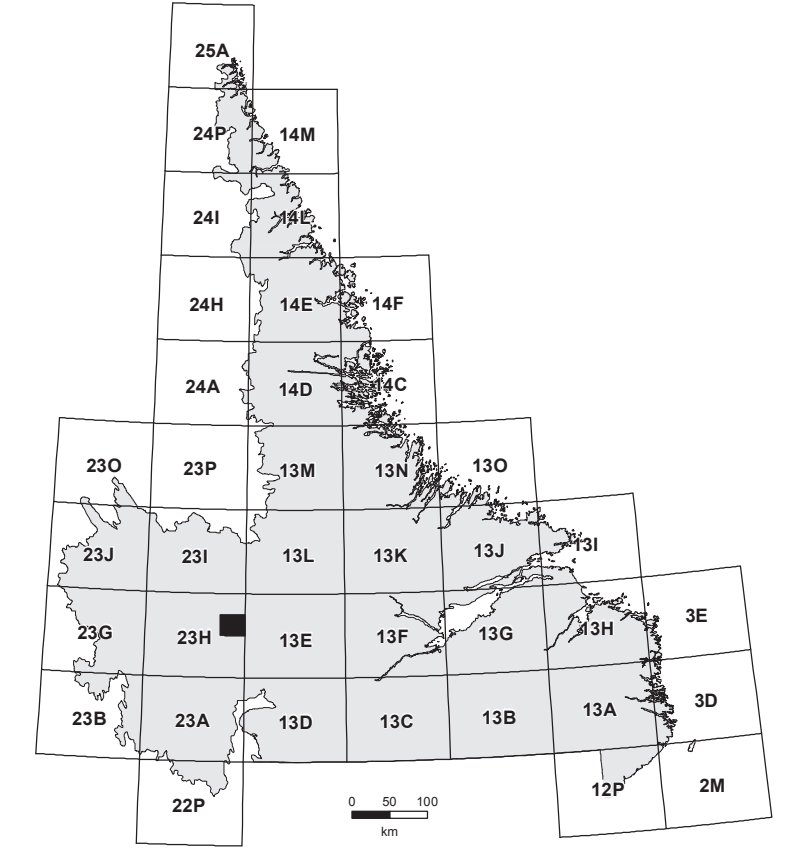
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Note

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INDEX MAP

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 (Kitty 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 23H/09.

Sample	Exp	Dep	PN	Percent retained through sieve opening (millimetres)							Grv	Sand	SL-CL					
				63	32	16	8	4	2	1				0.5	0.25	0.062		
791549	12	14	208	0	7.8	7.3	16.8	7.1	12.6	10	8.2	8.1	7.6	5	9.6	37.2	51.9	10.9
791550	14	18	243	4.8	2.4	6.5	9.7	5	7.2	7	6.9	10.4	15.8	11.6	12.7	27.1	57.3	15.6
791551	2.1	4	305	5.8	10.1	5.8	9.4	5	5.9	6.6	7.5	9.7	10.3	7.4	16.7	34.7	48.7	18.5
791552	4.5	0.6	226	13.4	6.3	5.2	11.9	3.7	3.8	4.5	4.7	5.6	7.3	6.3	25.2	41.6	31.8	26.8
791553	3	6	220	2.9	7.5	4.6	84.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	99.4	0.4	0.2
791555	3.5	8	215	0	3.1	2.5	6	0.7	3.2	5.1	8.9	10.3	10	8.9	39.3	14.1	44.4	41.5
791557	4.1	7	144	5.6	4.5	9.5	79.8	0.1	0.1	0.1	0.1	0.1	0.1	0	0.1	99.4	0.4	0.2
791564	3.3	8	263	0	23.6	10.1	8.8	8.2	8	6.6	6.5	6.5	7.6	5.9	8.3	48.6	41.7	9.7
791565	6.7	10	230	3.5	1.7	3.5	6.1	5.8	8.6	10.1	10.1	8.8	10.1	8.9	22.7	19.1	55.9	25
791566	0.8	4	263	0	3.1	5.5	11.7	16.8	22.6	22.2	15.9	3.6	0.4	0.1	0.1	32.9	66.9	0.1
791567	8.3	12	252	3.1	2.3	4.6	7.7	5.9	6.6	8.4	10.6	11.7	13.7	10.3	15.1	22.1	60.2	17.7
791568	4.7	10	198	1.7	8.4	12.3	13.4	7.9	8.2	8.3	7.9	7.2	5.9	4.6	14.2	41.6	43	15.4
791569	2.6	6	240	0	0	0	0	11.8	12.9	11.9	11.7	11.8	9.7	8	22.3	6.8	69.9	24.3
791570	2.4	6	181	0	10.3	23	18.3	8	10.4	7.3	4.3	4	4.3	2.8	7.3	57.7	34.3	8
791572	3.8	8	193	8.5	1.7	6	8.5	6.8	11.4	12.4	11.7	8.4	6.6	5.4	12.6	29.7	56.3	14
791573	2.8	6	232	6.2	6.2	3.9	6.2	4.1	8.8	7.1	7.3	8.6	10.2	6.3	26.2	25.7	47	27.3
791574	3.8	7	128	0	17.5	10.7	13	7	9.8	7.7	5.9	6.6	4.6	10.4	46.4	42	11.8	
791575	3.3	7	222	0	23.9	5.8	7.2	5	6.5	8.2	9.8	10.8	13.2	11.3	19.3	19.6	58.3	22.1
791576	2.9	7	146	20.7	11	7.6	8.6	7.6	7.4	5.1	4.6	5	6.6	5	9.8	54.6	34.4	11
791577	3.4	7	234	4.6	16.4	16.4	14.4	9.6	9.1	7.2	5.4	4.4	4	3.3	5.3	58.9	35	6.1
791578	3.7	6	208	4.4	10.2	10.3	15.3	16.3	15.9	7.5	5	4	4.1	2.7	3.4	55.3	40.7	4
791579	4.2	8	248	10.3	10.3	7.4	8.1	5.3	8.4	8.4	7.8	9.5	10.5	6	9	40	50.4	9.5
791580	2.1	8	226	2.2	5.6	5.6	6.1	4.1	7.8	9.8	10.6	10.4	11.4	7.9	18.6	22.5	56.9	20.5
791581	3.8	8	231	8.2	15.1	11.7	15.1	11.4	6.2	7.3	5.2	3.1	3	3.4	7.2	38.7	33.2	8.1
791582	2.2	8	230	2.6	11.9	21.7	5.4	5.9	5.2	5	5.7	7.5	6.3	20.2	42.9	35.3	21.8	
791583	1.8	7	0	0	0	0	0	0.3	0.4	0.7	1.6	7.5	38.8	28.7	23.9	0.3	68.7	31.1
791584	5.3	9	256	0	20.7	27.4	14.7	9	8.9	6.2	5.2	2.8	1.3	0.8	3.1	69.5	27.3	3.3
791585	1.6	6	273	0	7.5	15.6	14.3	9.4	12.8	13.7	18.1	6.2	1.5	0.5	0.3	44.5	55.1	0.4
791586	1.2	3	194	10.1	10.1	20.2	14.5	9.2	12.5	10.8	6.8	3.1	1.4	0.6	0.6	61.8	37.4	0.8
791587	2.6	5	246	11.4	14.5	15.2	13.9	10.4	15.9	10.8	5.2	1.9	0.5	0.2	0.2	62.8	36.9	0.3
791588	0.4	4	0	0	0	0	0	16.4	17.4	16.4	12	3.4	2.3	0.3	0.1	1.2	98.6	0.2
791589	0.4	4	0	0	0	0	0	13.7	14.6	14.6	2.4	0.1	0.1	0.1	0.1	1	98.9	0.1
791590	3.5	6	238	0	17.7	12.8	15.6	7.4	9.2	8.6	7.4	5.8	5.3	4.8	5.3	51.7	41.8	6.5
791591	5.8	10	200	0	28.2	16	12.8	7.5	14.6	14.8	5.8	1.6	0.6	0.3	0.2	60.5	39.3	0.3
791592	2.7	9	228	10.5	7	9.1	5.6	8.1	7.9	8.1	8.1	8.8	8	18.8	30.8	48.4	20.8	
791593	1.4	12	322	8.9	7.6	8.3	8.9	4	6.5	6.6	6.2	6.4	7.2	6.1	23.2	36.7	38.5	24.8
791594	2.2	8	211	15.7	8.2	8.8	66.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	99.3	0.6	0.2
792235	1	6	252	0	0.8	3.9	11	21.7	30.2	23	8	0.9	0.2	0.1	0.3	31.9	67.7	0.4
792236	1.3	7	0	0	0	0	0	0.3	2.2	26.5	44	21.4	4.5	1.1	0	97.7	2.3	0
793664	4	6	0	0	0	0	48.4	6.2	7.2	9.8	16.2	9.8	1.6	0.4	0.3	53.1	46.5	0.4
793665	15	15	0	0	0	0	70	9.9	2.9	3.6	4.9	5.3	2.4	0.7	0.4	77.4	22	0.6