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Follow-up till geochemical data (2023): Pokiok Batholith and environs.

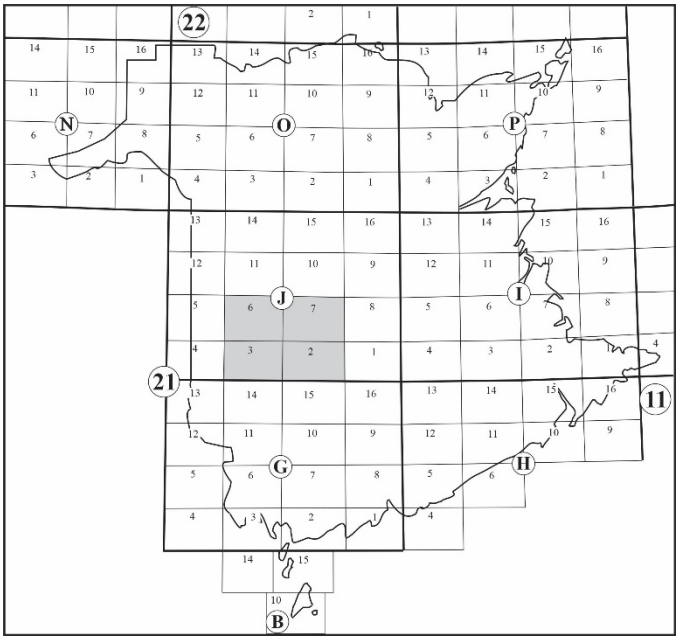
Gilmore, W.F. - 9 p. (pdf and xlsx formats).

Between 2021 and 2023, the New Brunswick Geological Survey (NBGS) conducted a focused, follow-up till survey program of the areas overlying the Pokiok Batholith (NTS map sheets 21 G/14, 21 G/15, 21 J/02, 21 J/03, 21 J/06 and 21 J/07), and the areas near it's contact boundaries with adjacent mapped rock units/formations, north of the Saint John River. This three-year follow-up survey, which increased the sample density of the area to approximately one site per 2 km2, will help to better define the anomalous areas identified in past surveys (Seaman 1999; Seaman 2002; Allard et al. 2005; Seaman 2012) and increase the possibility of delineating previously unknown areas of prospective mineralization.

Samples were collected from sites in between the sample sites of previous regional till surveyss to further understand the distribution of mineral concentrations in the glacial till blanketing the area, with a focus on critical minerals. The survey area is mainly underlain by granitic rocks of the Devonian Pokiok Plutonic Suite, volcanic rocks of the Devonian Tobique Group, Early Devonian mafic intrusive rocks, Cambrian to Early Ordovician sedimentary rocks, Silurian sedimentary rocks, and Late Carboniferous sedimentary rocks.

Over the summer of 2023, 134 till samples were collected for geochemical analysis, from 128 hand-dug pits. Samples were collected in areas located above the underlying Pokiok Batholith or near mapped contact boundaries. Geochemical, site card (field observation data) and grain size data from the first two years of the study were released as an open file report in 2023 (Gilmore 2023). Geochemical, site card and grain size data for samples collected over the summer of 2023 are presented in this open file report.

Samples were prepared (dried and sieved) in NBGS laboratory facilities (Fredericton, New Brunswick). AGAT Laboratories (Mississauga, Ontario) was contracted to conduct geochemical analysis for 48 elements by ICP-OES/ICP-MS following a 4-acid digestion, as well as Au, Pd, and Pt analysis by Fire Assay (ICP-OES Finish).



grey shading on map denotes study area

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