

# Bedrock Geology of the South-Central Tantato Domain (Parts of NTS 740/07, /08 and 74P/05)

at 1:50 000 scale

Preliminary Geological Map (2015)

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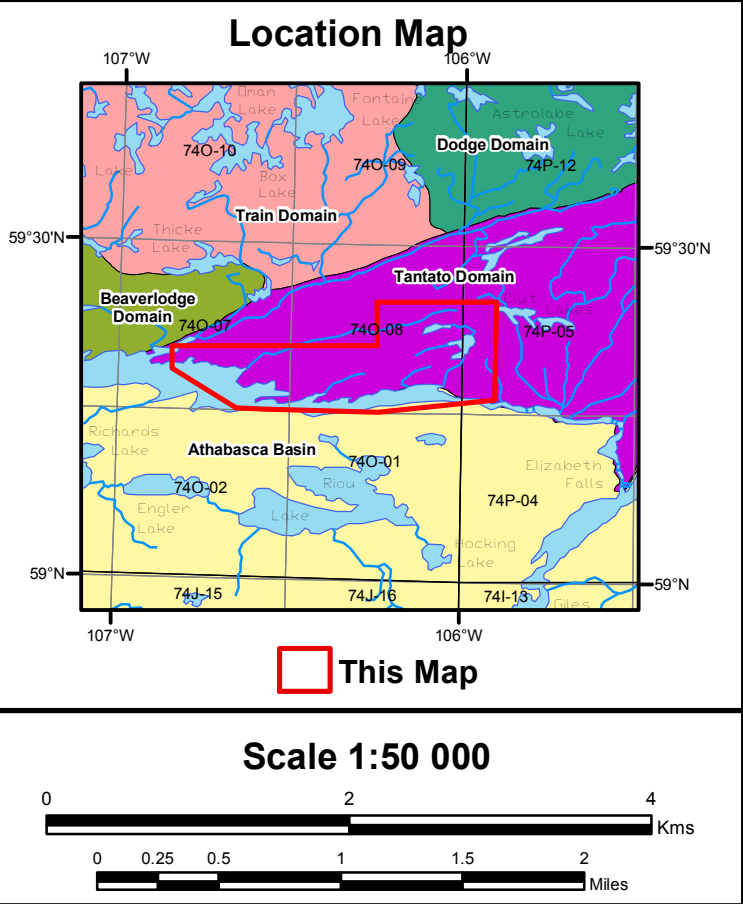
The area was mapped by Bernadette Knox and Jaida Lamming with the assistance of Thomas Ogilvie, Jacklynn Kennicott, Brendon Samson, Clarke Pauli, during the summers of 2014 and 2015.

This map was printed from the geologist's digital file. Geological data were collected and processed with Microsoft Access and ArcView 10.3 software. Base maps were compiled from CanVec 1:50 000 scale digital cartographic maps produced by Natural Resources Canada. Grid coordinates are NAD83 CSRS98 UTM zone 13. The map was processed overall using ArcView 10.3 software.

The map is issued in a package with the Summary of Investigations 2015, Volume 2, Saskatchewan Geological Survey, and is available separately as a PDF file from <http://www.publications.gov.sk.ca/depist.cfm?c=310&c=466>.

**This map accompanies the following publication:**  
Knox, B. and Lamming, J. (2015). Details from the 1:20 000 scale mapping of the south-central Tantato Domain, Rae Province along the northern margin of the Athabasca Basin, in Summary of Investigations 2015, Volume 2, Saskatchewan Geological Survey, Sask. Ministry of the Economy, Misc. Rep. 2015-4-2, Paper A-1, 15p.

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Knox, B. and Lamming, J. (2015). Bedrock geology of the south-central Tantato Domain (Parts of NTS 740/07, /08 and 74P/05); 1:50 000 scale prelim. map with Summary of Investigations 2015, Volume 2, Saskatchewan Geological Survey, Sask. Ministry of the Economy, Misc. Rep. 2015-4-2-(2).



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## Legend

### Upper Deck

- Leucogranite dyke:** pink to dark red; medium to coarse grained; locally fine grained; massive to moderately mylonitized; biotite; C<sub>I</sub> = 1-5; non-magnetic.
- Mg**
- Mafic granulite:** light grey to black or dark green, locally red, fine to coarse grained; foliated to massive and variably mylonitized; clinopyroxene-orthopyroxene-garnet-magnetite-hornblende-biotite-plagioclase; C<sub>I</sub>=30-80; variably magnetic; locally very high.
- Mafic granulite dyke:** same as unit Mg with width <20m.
- Ec**
- Eclogite:** red and green; fine to coarse grained; foliated to massive and variably mylonitized; garnet-clinopyroxene-feldspar; C<sub>I</sub>= 95; weakly to non-magnetic.
- Eclogite dyke:** same as unit Ec with width <20m
- GAn**
- Garnet-bearing anatectic granite:** white to pale orange; medium to coarse grained; foliated and layered (particularly where remnants of Ps<sub>g</sub> remain); locally mylonitized; garnet-biotite-sillimanite; grades into Ps<sub>g</sub>; C<sub>I</sub>=5-10; non-magnetic.
- Ps<sub>g</sub>**
- Psammopelitic gneiss:** white to pale orange; fine to coarse grained; well layered to gneissic and variably mylonitized, typically migmatitic due to presence of melt ± injected leucosome; garnet-biotite-quartz-K-feldspar-sillimanite-zircon-orthopyroxene-graphite; grades into unit GAn; C<sub>I</sub>=10-30; non-magnetic; locally weakly magnetic.
- RG**
- Rea Granite:** cream to light grey and locally rust color; fine to medium grained; moderately to strongly lineated, poorly foliated, and variably mylonitized; orthopyroxene-garnet; C<sub>I</sub>=20; non-magnetic.
- Gr<sub>d</sub>**
- Granodiorite:** light to dark pink and cream; medium to coarse grained; moderately to strongly foliated and lineated; variably mylonitized; clinopyroxene-orthopyroxene-garnet-hornblende-biotite; moderately to non-magnetic
- Gr<sub>o</sub>**
- Garnetiferous granitic orthogneiss:** light to dark grey; fine to coarse grained; foliated to gneissic and variably mylonitized; orthopyroxene-hornblende-biotite; C<sub>I</sub>=10-30; weakly magnetic.
- Lower Deck**
- U**
- Ultramylonite:** light to medium grained; fine to locally medium grained; strongly mylonitized, poorly to moderately lineated; hornblende porphyroblasts; C<sub>I</sub>=5-30; variably magnetic. Possibly derived from megacrystic granite or granodiorite.
- MTGr**
- Melby-Turnbull granite:** light pink to grey; medium to coarse grained; moderately to strongly foliated and variably mylonitized; hornblende-biotite-K-spar; C<sub>I</sub>=15-20; non-magnetic.
- GrMc**
- Megacrystic granite:** light pink to cream; fine to coarse grained with megacrystic grains; moderately foliated and lineated; variably mylonitized; hornblende-biotite-garnet; C<sub>I</sub>=25-35; moderately magnetic.
- MGr**
- Mary Granite:** light to dark grey; fine to coarse grained; strongly lineated and weakly foliated, variably mylonitized; pyroxene-hornblende-biotite-garnet; C<sub>I</sub>=10-35; moderately magnetic.

<sup>1</sup>Color Index

## Symbols

- Foliation (inclined; first generation, third generation, fourth generation)
- Axial plane (inclined; second generation, third generation, fourth generation, fifth generation)
- S fold (second generation, third generation, fourth generation, unknown generation)
- U fold (second generation, third generation, fourth generation, fifth generation, unknown generation)
- Z fold (second generation, third generation, fourth generation)
- Lineation (elongation and intersecting; second generation)
- Outcrop examined
- Geological Contact
- Contour interval (10 metre)
- River
- Lake
- Swamp

