

Geology by A.M. Hiney
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 Elevations contoured in metres above mean sea level. Contour interval 10 metres.
 Universal Transverse Mercator Projection (UTM) Zone 21.
 North American Datum (NAD) 1927.
 Map 2020-18
 OPEN FILE 012H/11/2331
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 This map is subject to revision and modification. Symbols for bedding and selected minor structures are not printed directly at the exposure location.
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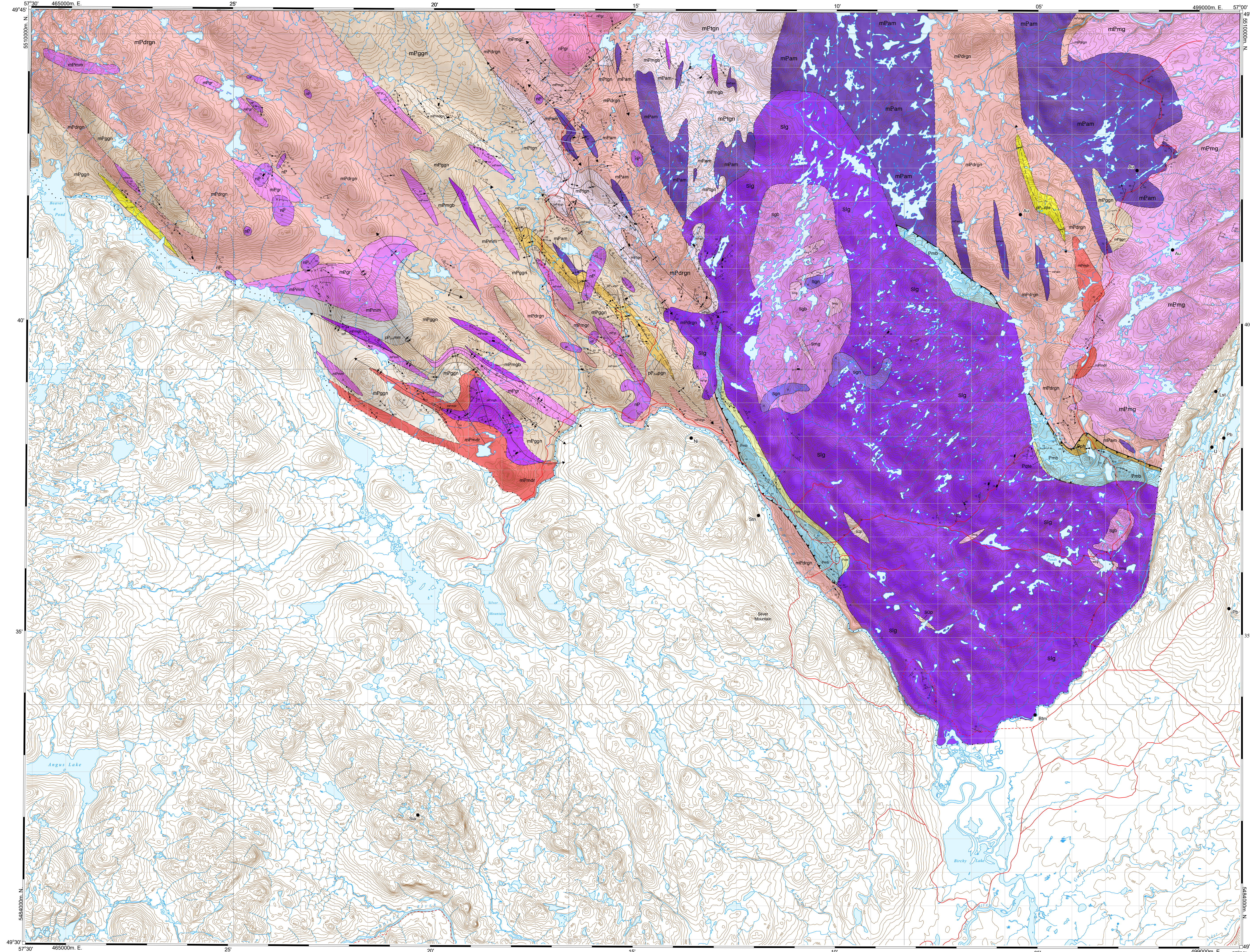
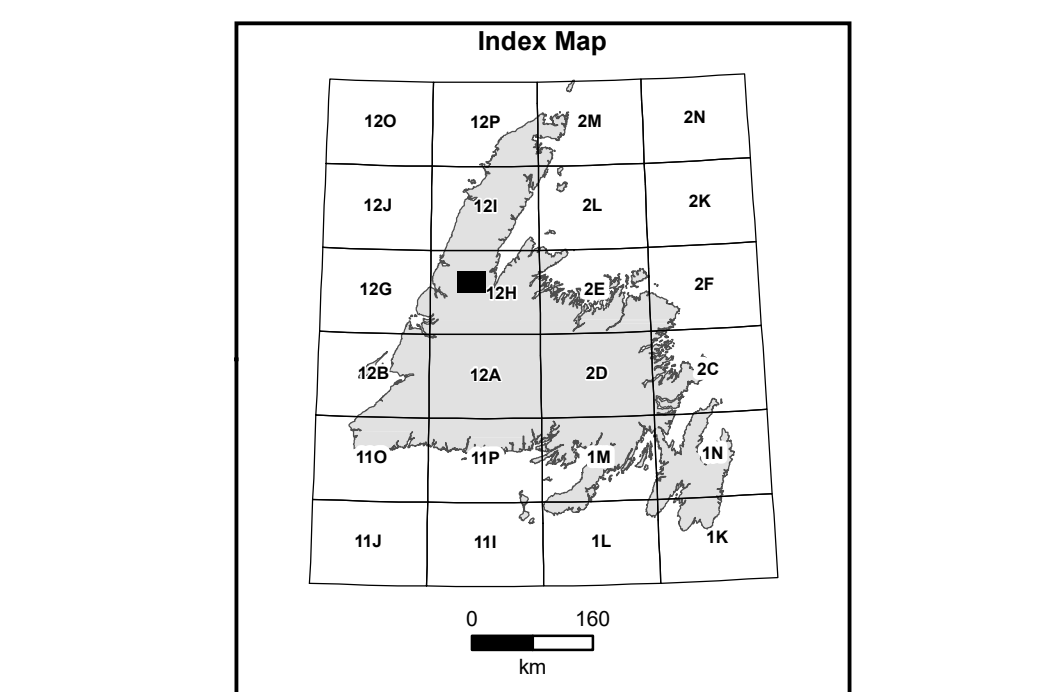
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References
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 2002. U-Pb geochronology constraints on the crustal evolution of the Long Range Inlier, Newfoundland. *Canadian Journal of Earth Sciences*, Volume 39, pages 445-450.
 Owen, J.V.
 1986. Geology of the Silver Mountain area. Geological Survey of Canada, Open File 1278.

Mineral Occurrences

Mineral Occurrence	UTM Zone 21, 48Q UTM Easting	UTM Zone 21, 48Q UTM Northing	Name	Alternate Name	Commodity	Status
Au	495611	550129	West Viking		Gold	Showing
Au	493463	550811	West Viking		Gold	Showing
Au	490000	552360	Viking Gold-Viking Thrust		Gold	Prospect
Bn	493900	548660	Taylor Brook		Limestone	Showing
Lt	492970	549240	Taylor Pond		Limestone	Showing
Ni	492900	549760	Lagan	Taylor Brook	Nickel	Showing
Pb	490690	548260	Turners Ridge		Lead	Development Proposed
Pb	490630	548760	Sike Pond		Lead	Prospect
Si	479500	548270	Whites River Sike Domes		Silica	Prospect
Sp	490600	548660	Silver Mountain-Dobson		Galena	Prospect
U	499772	548778	Determination Zone		Uranium	Showing



LEGEND

EARLY SILURIAN

- top Quartz-felsparic gneiss that are fine grained, pink, have an aphanitic groundmass and contain euhedral, 1- to 4-mm-long quartz and felspar phenocrysts
- Smg Leucocratic biotite monzogranite, medium grained, contains pegmatite patches and 2- to 3-cm-wide chilled margins

Taylor Brook Gabbro Complex 430.5 ± 2.6 Ma (Heaman et al., 2002)

- Sgt Pegmatitic gabbro to melanogabbro, intruded by fine-grained grey gabbro and oligoclase, possibly related to Unit Sg. It is coarse grained to porphyritic and contains pyroxene crystals up to 10 cm long. The gabbro and melanogabbro contain patches of hornblende in a plagioclase. As with other units in the complex, this phase locally contains minor gneiss and chlorite. It is cut by large dykes and a suite of leucocratic biotite monzogranite (Unit Sg) and dikes of fine-grained, quartz-felsparic gneiss (Unit Sg).
- Sgt Coarse-grained gabbro to mafic. Locally contains olivine, pyroxene and amphibole textures, and commonly contains plagioclase-rich patches. Disseminated magnetite and sulphides occur locally. The unit is cut by finer grained dikes of co-magmatic gabbro and melanogabbro.
- Sg Heterogeneous, mafic gabbro with minor leucogabbro; melanogabbro, and mafic, typically medium to coarse grained, preserving sparse zoning and isolated evidence for magnetite magne energy. Minor occurrences of disseminated sulphides, primarily pyrite and chalcopyrite, and magnetite are scattered throughout this unit.

LATE NEOPROTEROZOIC TO ORDOVICIAN

- Pg This layered sericitic gneiss and quartzite. The sericitic layers contain garnet, muscovite, biotite and locally sillimanite. Garnet is typically 1 to 3 mm in diameter and sillimanite needles are 1 to 3 mm long. In the quartz-rich layers, garnet is mantled by biotite.
- Pfb Brown weathered mafic, chlorite-greenish banding, and contains minor accessory minerals. Locally, some 2- to 10-cm-wide beds contain quartz, amphibole and biotite, other beds contain 0.5- to 2-cm-wide, brown, fine-grained, melanocratic, quartz-rich concretions related to mylonite mechanical cleavage of biotite and amphibole.
- Sg Dark-grey-brown, phyllic (pale) schist recrystallized, cleaved and locally preserves mylonitic fabric. It is intruded by possibly Late Silurian granite dykes.

LATE MESOPROTEROZOIC TO NEOPROTEROZOIC

- mp Hornblende melanogabbro, massive to weakly foliated, typically preserving a subvolcanic texture. Phylloclasts and locally biotite euhedral crystals.

GRENVILLIAN PLUTONIC ROCKS (~1056 - 970 Ma)

Potato Hill Pluton - 999 ± 4 Ma (Heaman et al., 2002)

- mpv Coarse orthopyroxene megacrystic gabbro showing granitic-felsic melanocratic mineral assemblages. The margins of the pluton are strongly foliated, decreasing in intensity toward the interior of the pluton. It is cut by undeformed, coarse-grained mafic dykes.

Main River Pluton

- mpv Biotite hornblende monzogranite to quartz monzonite, pink, felspar megacrystic, lineated and foliated. The foliation form argon within the fabric and are typically 1 to 3 cm long. The unit typically shows an S1, anastomosing fabric. There are locally fine grained dykes and dikes that are likely genetically related to the intrusion. The unit is cut by quartz veins, some have gold mineralization.

Unnamed intrusions

- mpv Biotite hornblende monzogranite to quartz monzonite and later neoproterozoic, weakly to strongly foliated, strongly lineated and typically preserving an L4 fabric. Potassium-felsparic argon are typically 0.5- to 1-cm-wide and 1- to 2.5-cm long. Quartz crystals are commonly blue-grey, indicative of post-crystallization ductile strain. The unit is correlated with Unit U4 of Owen (1988).
- mpv Biotite melanogabbro, fine to medium grained, moderately foliated, recrystallized displaying a granoblastic texture. Numerous, 1- to 2-cm-wide quartz veins present.
- mpv Biotite hornblende melanogabbro to melanogabbro, medium to coarse grained, moderately foliated, moderately lineated, recrystallized and locally contain 1 to 3-cm-wide veins of plagioclase and/or potassium feldspar. The unit is locally cut by 1- to 2-cm-wide quartz veins containing disseminated sulphides. The unit is correlated with Unit U4 of Owen (1988).
- mpv Biotite hornblende melanogabbro containing minor phases of hornblende-bearing, plagioclase-pyroxene melanogabbro, medium to locally coarse grained, moderately to strongly foliated and lineated, although most gneiss textures are locally preserved.

LATE PALEOPROTEROZOIC TO EARLY MESOPROTEROZOIC

LONG RANGE GNEISS COMPLEX

Orthogneiss

- mpv Biotite hornblende orthopyroxene melanogabbro to melanobiotite, strongly foliated to locally gneissic, typically medium grained preserving 1- to 2-cm-wide mafic cores (hornblende-biotite + magnetite) that give the unit an overall speckled appearance. Cut by felsparic granite gneiss veins, locally with euhedral biotite and containing 10 to 100 µm quartz. The unit is cut by dykes of quartz and late brittle faults. This unit corresponds to Unit U4 of Owen (1988).
- mpv Orthopyroxene-biotite melanobiotite to melanogabbro, typically moderately to strongly foliated, medium grained, foliated, recrystallized preserving granitic-felsic mineral assemblages. Locally heterogeneous containing layers and/or mafic mineral and/or amphibole lenses. This unit corresponds to Unit U4 of Owen (1988).
- mpv Biotite hornblende orthopyroxene melanogabbro to granuloblastic gneiss, medium grained, moderately foliated to locally gneissic. It is cut by 2- to 5-cm-wide, coarse-grained granite veins containing blue-grey quartz crystals forming approximately 10 percent of the rock. Lenses contain rare amphibole lenses. This unit corresponds to Unit U4 of Owen (1988).
- mpv Biotite hornblende orthopyroxene monzogranite to quartz monzonite gneiss, pink to grey containing compositional layers that range from 2 to 4 cm in thickness, and are locally enclosed in magnetite. Amphibole layers are locally preserved. The unit is cut by felsparic granite, as well as a crosscutting granite pegmatite veins. 2- to 5-cm-thick, containing blue-grey quartz crystals. Rare 1- to 2-cm-wide quartz veins were also found.
- mpv Moderately foliated to locally gneissic melanobiotite to melanogabbro, containing biotite, hornblende and pyroxene, leucocratic patches are enclosed in amphibole and quartz. The unit also contains minor mafic-wide amphibole layers and is locally cut by intermediate quartz veins.
- mpv Dark-green, foliated and lineated, medium-grained amphibole, locally containing plagioclase-rich layers parallel to the foliation. The unit also includes minor foliated melanogabbro.

Migmatite

- mpv Metavolcanic migmatite containing 15 to 20 percent leucosome, and an orthopyroxene-biotite psammite mesosome. The unit is cut by igneous to post-tectonic, 2- to 4-cm-wide, potassium-felsparic porphyritic granite pegmatite veins containing blue-grey quartz eyes.

Paragneiss

- mpv Garnet-biotite + sillimanite + muscovite sericitic to pelitic gneiss interlayered with psammite gneiss. The sericitic to pelitic phase locally contains cordierite. Compositional layers are 1 to 2 cm thick.
- mpv Fine to medium grained, recrystallized, interlayered quartzite and quartz-rich paragneiss. The disposition of this unit is from Owen (1988).

SYMBOLS

- Geological Contact (defined, approximate, assumed)
- Fault (defined, approximate, assumed)
- Thrust Fault (defined, approximate)
- Anticline (defined, approximate, assumed)
- Plunge direction indicated, when known
- Syncline (defined, approximate, assumed)
- Plunge direction indicated, when known
- Anticline, overturned (defined, approximate, assumed)
- Plunge direction indicated, when known
- Syncline, overturned (defined, approximate, assumed)
- Plunge direction indicated, when known
- Synclorium, assumed
- Line of mapping
- Road, paved
- Road, unpaved
- Bedding (top unknown)
- Fold Axial Plane (1st generation)
- S-Fold Axis (1st generation)
- U-Fold Axis (generation unknown, 1st generation)
- Z-Fold Axis (generation unknown, 1st)
- Foliation or Cleavage (generation unknown, 1st, 2nd)
- Gneiss Foliation or Banding (1st generation, 2nd)
- Igneous Layering (top unknown, known)
- Intersection Lineation (2nd generation)
- Linear Fabric (1st generation)
- Slicken Slips
- Shear Zone (shear unknown, dextral, sinistral, normal)
- Sample locations
- Mineral Occurrence