

SILVER MOUNTAIN AREA, LONG RANGE INLIER, NEWFOUNDLAND

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The 2009 field season, saw the commencement of a 1:50,000-scale, bedrock mapping project of the Silver Mountain map area (NTS map area 12H/11), with mapping concentrating on the northern part of the map sheet.

This area is underlain by granulite- to amphibolite-facies basement rocks which are predominantly strongly foliated to gneissic metagranodiorite, strongly foliated to locally gneissic biotite metamonzogranite, foliated metagabbro to metamonzodiorite and locally preserved narrow screens of paragneiss, typically less than 1 km wide. These basement units have been intruded by variably foliated Neoproterozoic–Mesoproterozoic (Grenvillian) augen-textured biotite monzogranite, biotite-hornblende quartz monzonite, charnockite, orthopyroxene tonalite and minor gabbro. The area is intruded by the aerially extensive Silurian Taylor's Brook gabbro, which has been intruded by a younger granitic intrusion of unknown age. Felsic and mafic, foliated or massive, metamorphosed and unmetamorphosed dykes of various ages have intruded most units. A marble–pelite sequence is preserved partially flanking the Taylor's Brook gabbro and is thought to represent an outlier of Paleozoic cover rocks.

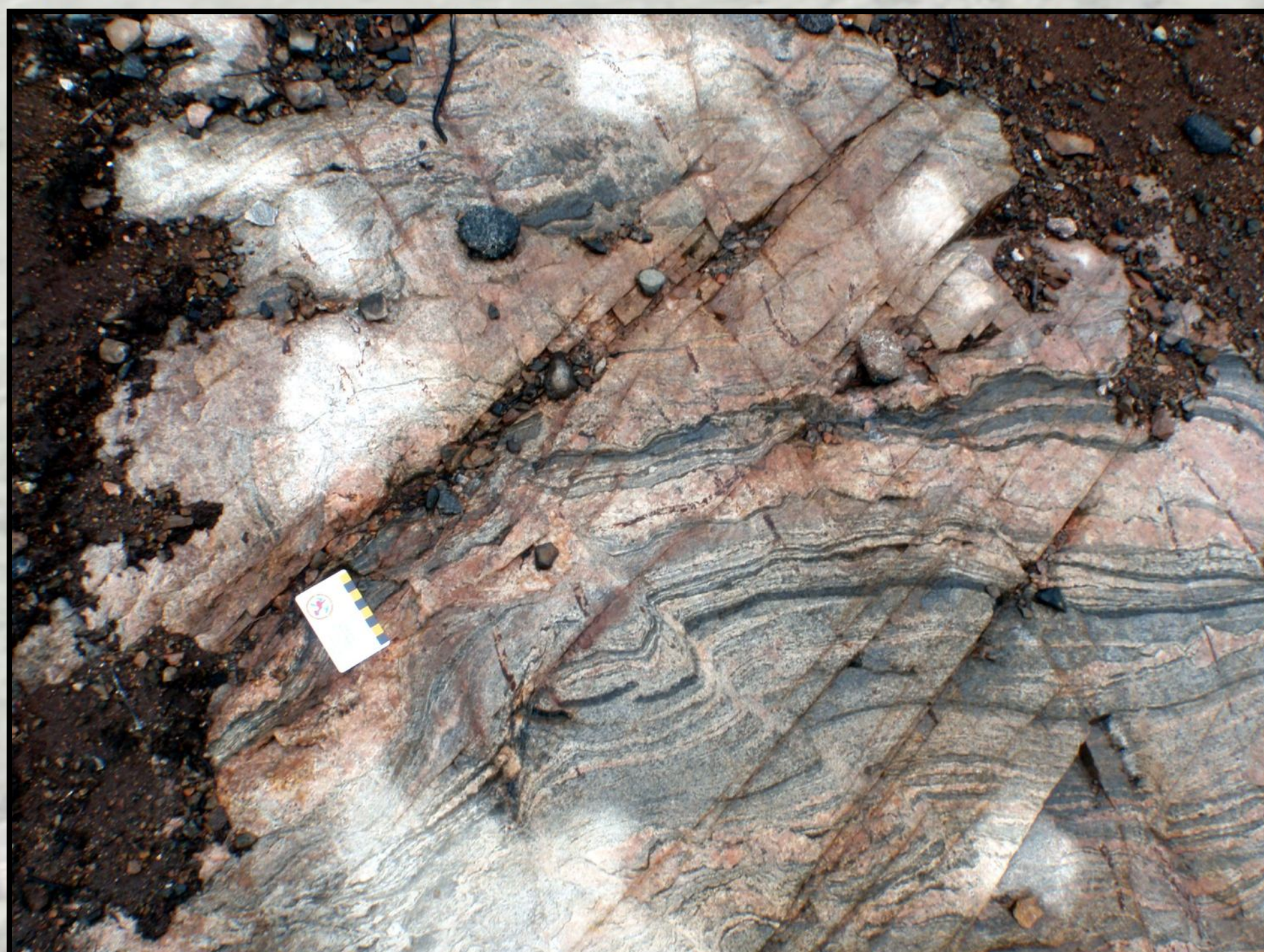
The Long Range Inlier forms a structural culmination and preserves several generations of deformation in the Silver Mountain area. Regional-scale F_1 folds are thought to control the distribution of basement gneiss units, and were subsequently overprinted by minor F_2 folds. Late shear zones (D_3) cut most of the lithologies in the map area. As one nears the southeastern thrust contact with the Lower Paleozoic platformal sequences, the degree to which this younger thrust overprints earlier fabrics in the underlying units increases significantly. The area is known to host to several base-metal showings and abundant gold-bearing quartz veins (most noteworthy the Viking Project of Northern Abitibi Mining Corp.).



View of the Silver Mountain map area, in the vicinity of the Taylor's Brook gabbro.



A K-feldspar-augen meta-quartz monzonite to monzonite (Mesoproterozoic – Neoproterozoic) that which preserves a c-s fabric. Shear bands indicate a sinistral sense of motion.



Compositionally heterogeneous, disharmonically folded basement gneiss comprises a host biotite metamonzogranite to granodiorite lithology with less abundant 1- to 2-cm wide amphibolite layers. This unit is variably intruded by: a) foliation parallel, folded fine-grained biotite granite (20% of exposure); b) 1- to 2-cm wide, folded K-feldspar-augen granite veins (Grenvillian?) and c) late, crosscutting granite veins (5% of exposure, not shown in image). The outcrop is cut by a late, mm-scale, shear zone with sinistral displacement.



Biotite-hornblende K-feldspar-augen syenogranite of the Main River Pluton, megacrystic, S>L fabric, K-feldspar augen are typically 1 to 3 cm long.



Taylor Brook gabbro: Composed of gabbro to melanogabbro with a prominent igneous layering marked by coarse-grained plagioclase-porphyrific layers and less abundant mafic layers, locally contains abundant coarse-grained magnetite crystals. Igneous layering is cut by a fine-grained gabbro dyke with preserved chilled margins.



Relatively pure, banded grey-white marble, layers are 1 to 10 cm thick; locally contains rare 1- to 5-cm wide pods and thin beds rich in garnet, phlogopite, diopside and spinel. The unit also contains disseminated pyrite.