

DESCRIPTIVE NOTES

This map shows the western half of the belt in the Abloviak shear zone of the Paleoproterozoic Torngat Orogen, in Quebec and Newfoundland (Labrador). In the southern part of the map area, folded with Paleoproterozoic metasediments (igneous-sedimentary metapelites) are quartzites and marbles (P.Lm) of the Lake Harbour Group, and interlayered with intrusive Paleoproterozoic metaplutonic rocks (P.Lg) of the Hibernia charnockite suite.

The Province gneisses are in sharp contact to the north with the Tasuyak gneiss, a 10-15 km wide unit of layered paragneiss and diabase that is interpreted to represent the metaprotomylonite, deformed or accretionary wedge succession on the eastern margin of the Rae Province. The Tasuyak gneiss grades northward into quartzite-felsic gneisses with thin calc-silicates and mafic lenses (P.Tg). Both the paragneiss and Tasuyak gneiss were intruded by Paleoproterozoic mafic quartz diorite (P.Qd) and felsic granodiorite (P.Gd), the former of which was dated by U-Pb on zircon to ca. 1895 ± 2 Ma (D. Scott, pers. comm., 1993). Together these rocks comprise the Tasuyak gneiss complex (cf. Van Kramendonk and Ermannovics, 1990).

In the northeastern part of the map area, strongly reworked Archean orogenic orthogneisses of the Nain Province (Arn) are tectonically intermingled with mafic gneisses of intraplated Paleoproterozoic rocks (P.Pg), and a suite of intrusive Paleoproterozoic rocks (P.PtG). These rocks are considered to represent a distinct tectonostratigraphic assemblage from the Tasuyak gneiss complex and the Rae Province.

Deformation in the Torngat Orogen is interpreted to have resulted through continent-continent collision between the Nain and Rae provinces, that evolved in three principal phases after late Archean deformation in both the Nain and Rae provinces (D.C. cf. Van Kramendonk, 1992). In the first phase (D=1), Nain-Rae collision at ca. 1800 Ma (Bertrand et al., 1992) produced thrusting on either side of the collisional boundary and high-grade metamorphism (cf. Van Kramendonk, 1992). The subsequent deformation (D=2) under continued high-grade metamorphic conditions resulted in mylonite and ultramylonite. U-Pb dating within the map area (D. Scott, pers. comm., 1993) to the north occurred at between ca. 1845-1804 Ma.

In the third phase of deformation (D=3) folding of the Abloviak shear zone and formation of the Komatovik shear zone immediately to the east of the map area occurred. Folding of the Abloviak 0.5-2 km wide zone of amphibolite-facies ductile mylonite, referred to as the Katherine River shear zone (Van Kramendonk et al., 1993). Folding of mylonite units and the Abloviak shear zone (D=3) Komatovik shear zones has been dated by U-Pb on zircon from synkinematic pegmatite veins at between ca. 1768-1780 Ma (Scott et al., 1993). D. Scott, pers. comm., 1993). Faulting at granulite-facies metamorphic grade (D=4) was the final deformation in the map area.

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Any mention or additional information known to the user which is not shown on the map should be indicated by the Geological Survey of Canada

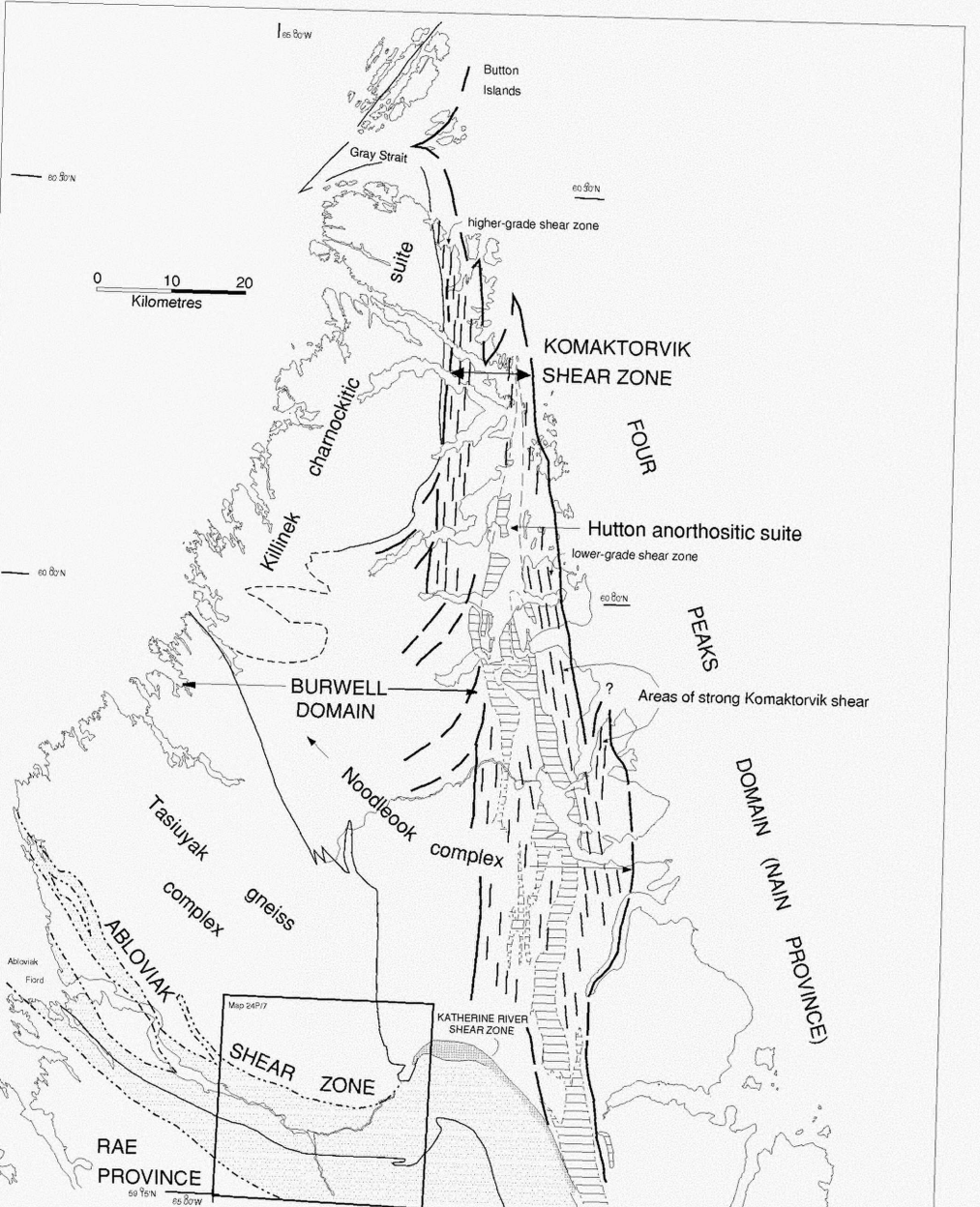
Mean magnetic declination 1983, 37°00' W, increasing 12.6' annually. Reading may vary from 37°00' W at the SW corner to 37°00' W in the NE corner of the map.

Digital base map from Survey Mapping and Remote Sensing published at the same scale. Geographical and technical details are available from the Geological Survey of Canada.

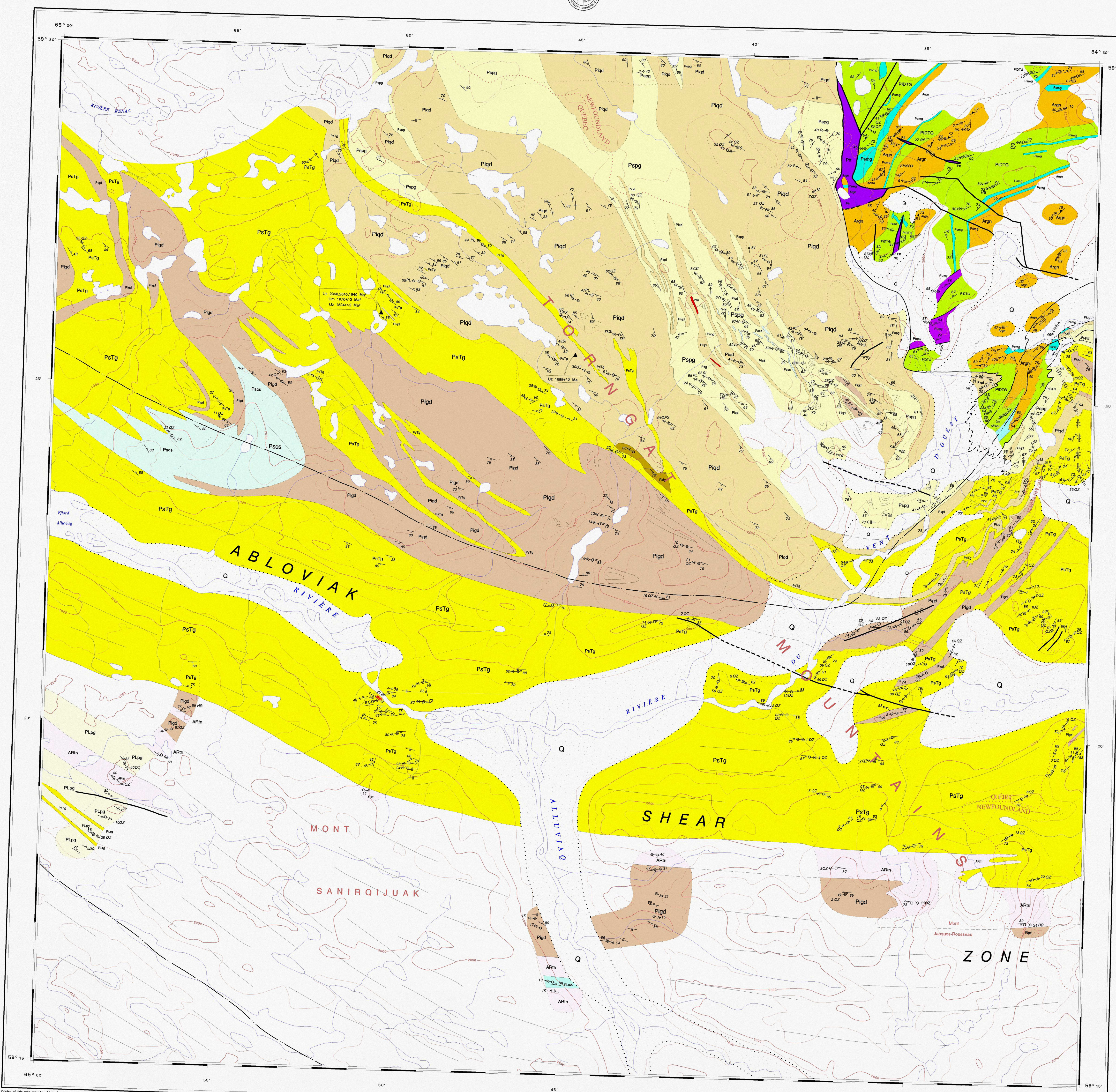
Copies of the topographical edition of this map may be obtained from the Canada Map Office, Department of Energy, Mines and Resources, Ottawa, Ontario, K1A 0S8.

The Québec-Newfoundland boundary line has not been surveyed and monumented on the ground at date of publication.

Elevations in feet above mean sea level.



Structural (UPPER CASE) and lithological (lower case) subdivisions of the northern part of the Paleoproterozoic Torngat Orogen, Quebec and Newfoundland. Location of map area outlined by square box.



Open File 2738
GEOLOGY
MONT JACQUES-ROUSSEAU
QUÉBEC - NEWFOUNDLAND (LABRADOR)

Scale 1:50 000 - Echelle 1:50 000

Transverse Mercator Projection
CGM 84142, South Factor 1
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LEGEND

- Unconsolidated Quaternary deposits and alluvium
- Paleoproterozoic Rocks
 - Ps: Fault breccia and calcareous sandstone with pseudotachylite veins
 - Pmy: Amphibolite to gneiss-felsic mylonite and ultramylonite
 - Meta-plutonic Rocks
 - Pq: Slightly altered, fine to medium-grained, pink and grey granite
 - PQTG: Polyphase intrusive suite, varying from mafic diorite through basalt and gabbro, to granite and quartz monzonite at amphibolite facies. Dominantly (70-80%) homogeneous, anastomosing mafic to quartz diorite (orthoclase + quartz) dykes, with inclusions of plagioclase-quartz diorite and mafic gabbro, and layered mafic gneiss (P.Lg), cut by orthopyroxene gabbro dykes and numerous phases of leucocratic veins and pegmatite veins. Features vary from semi-lobate metaplutonic rocks to migmatitic orthogneiss that locally show complex folded bedding.
 - Pqgd: Grey to black weathering mafic quartz diorite (porphyro texture = 30-50%) at granulite facies orthopyroxene-bearing mafic gneiss. Dominantly (70-80%) homogeneous, anastomosing mafic to quartz diorite (orthoclase + quartz) dykes, with inclusions of plagioclase-quartz diorite and mafic gabbro, and layered mafic gneiss (P.Lg), cut by orthopyroxene gabbro dykes and numerous phases of leucocratic veins and pegmatite veins. Features vary from semi-lobate metaplutonic rocks to migmatitic orthogneiss that locally show complex folded bedding.
 - Pqgd: Massive to foliated, leucocratic, orthopyroxene-bearing mafic gneiss of the 'Kibik' charnockite suite. Dominantly (70-80%) homogeneous, anastomosing mafic to quartz diorite (orthoclase + quartz) dykes, with inclusions of plagioclase-quartz diorite and mafic gabbro, and layered mafic gneiss (P.Lg), cut by orthopyroxene gabbro dykes and numerous phases of leucocratic veins and pegmatite veins. Features vary from semi-lobate metaplutonic rocks to migmatitic orthogneiss that locally show complex folded bedding.
 - Pstg: Granulite-facies mafic diorite, coarse to sheeted within the Tasuyak gneiss (P.Tg) and Paleoproterozoic paragneiss (P.Pg). Interpreted to represent an early phase of the Kibik charnockite suite (Pqgd).
 - Supracrustal Rocks
 - Ppgg: Grey to buff weathering paragneiss with red garnet and biotite, abundant leucosomes, and complex migmatitic character.
 - PtG: Tasuyak gneiss (red garnet and white weathering paragneiss and ultramylonite), characterized by foliated mafic gneiss and ultramylonite. Interpreted to represent an early phase of the Kibik charnockite suite (Pqgd).
 - Pqcs: Calc-silicate and mafic horizons in Ppgg consists of 1-5 m wide layers of mafic gneiss and calc-silicate. Ultramylonite and light green mafic ultramylonite (ultramylonite), 1-10 m thick, locally with numerous ultramylonite and ultramylonite.
 - Psmg: Carbonate-bearing mafic gneiss at amphibolite facies, interlayered with mafic gneiss and mafic ultramylonite. Intruded by Paleoproterozoic mafic and mafic ultramylonite.
 - Lake Harbour Group
 - P.Lg: Amphibolite-facies mafic gneiss and ultramylonite, interlayered with mafic gneiss and ultramylonite. Interpreted to represent an early phase of the Kibik charnockite suite (Pqgd).
 - PLg: Rusty-brown weathering metagabbro gneiss, commonly with gabbro.
 - PLmb: Pure, white, coarse-grained calcite marble.
 - Archean and/or Proterozoic Rocks
 - APat: Granulite-facies, reworked mafic orthogneiss at amphibolite facies with variable amounts of anastomosing ultramylonite, characterized by disrupted mafic layers and on-axis scale layering.
 - Archean Rocks
 - Arn: Unfolded leucocratic orthogneiss and migmatite, with highly variable composition and texture. Typically coarse, very well-sorted and heterogeneous and reworked orthogneiss. Metamorphosed to late Archean granulite facies, cut by Paleoproterozoic amphibolite facies.



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