Metasedimentary gneiss and related rocks (P msd, P msm, P dxt)

The study area is situated in the northeastern Grenville Province and straddles the boundary between the Exterior and Interior terranes.

Corrigan (1997) indicating that some rocks in the southeastern part of the WLT have been overprinted by ca.1000 Ma metamorphism.

Mealy Mountains Intrusive Suite (MMIS)

One of these plutons, occurring in the southwestern part of the MMT, is dated by U–Pb techniques on zircon to be 964 ± 3 Ma. The pluton intrudes younger rocks and contains a high percentage of K-feldspar-bearing leucosome.

The Grenville Province of southern Labrador has some exploration potential (Swinden, 1991; Thomas, Nunn, and Krogh, 1986).

Metasedimentary gneisses in the northeastern part of NTS 13D/16 are intruded by granodiorite orthogneiss (P grn). These rocks are pink on the fresh and weathered surfaces, medium to coarse grained and contain less than 10% biotite. Generally they are massive, although weakly foliated rocks also occur. Of note, some plutons are marked by prominent circular or elliptical, magnetic highs, whereas others are marked by magnetic lows. M grn rocks are correlated, on the basis of mineral elongation lineation.

Late- to post-Grenvillian faulting is important in structuring the WLT. The faulting has produced a number of prominent, northeast-trending, northeast-striking faults that are associated with a number of large-scale, mesoscopic shear zones. The shear zones are characterized by a high-strain zone several kilometres wide, occurring along the boundary with the MMT.

In the southern part of the WLT, the Grenville Province is characterized by an approximately northwestern limit of highly strained rocks, in which mylonitic rocks dominate. The mylonitic rocks are often associated with a number of large-scale, mesoscopic shear zones, which are characterized by a high-strain zone several kilometres wide, occurring along the boundary with the MMT.

The MMT is intruded by plutons of granite, quartz monzonite, and locally, K-feldspar porphyritic granite defined as unit M grn. These rocks are pink on the fresh and weathered surfaces, medium to coarse grained and contain less than 10% biotite. They are commonly characterized by prominent circular or elliptical, magnetic highs, whereas others are marked by magnetic lows. M grn rocks are correlated, on the basis of mineral elongation lineation.

Gneissic and foliated, amphibolite-facies granitoid rocks, mainly including biotite ± hornblende ± clinopyroxene mineral elongation lineation type in the unit. Grey- to pink-weathering monzonitic rocks, locally porphyritic, and containing local clinopyroxene are also common in the MMT. These rocks are typically associated with a number of large-scale, mesoscopic shear zones, which are characterized by a high-strain zone several kilometres wide, occurring along the boundary with the MMT.

The MMT also contains a number of mineralized outcrops. An outcrop of gossanous P ggn orthogneiss (Sample: NK-00-8060, UTM 522150m E, 5826410m N) contains several percent sulphide mineralization and 2788 ppm copper. In addition, an outcrop of granite and associated ultramafic rocks (Sample: DJ-00-9026, UTM 546365m E, 5828086m N) contain several percent pyrite and 215 ppm copper.

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