

REGIONAL COMPILATION OF THE NORTHERN ARCHEAN ASHUANIPI COMPLEX, SUPERIOR PROVINCE, WESTERN LABRADOR (NTS MAP AREAS 23J/02, 03, 04, 05, 06, 07, 10, 11, 14 and 23O/03)

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The ca. 3.0-2.65 Ga Ashuanipi Complex in western Labrador is an Archean granulite facies migmatite terrane consisting of older pre-D₁ migmatitic paragneiss, tonalitic to dioritic rocks and mafic to ultramafic intrusions that predate syn- to late D₂ diatexite migmatite, syenite to granite plutons, mafic dykes and pegmatite. The region is known to host local gold and base metal mineralization (Thomas and Butler, 1987; McConnell et al., 1989). New mineral indications and MODS occurrences sampled during regional bedrock mapping in 2013, 2015 and 2016 indicate elevated Au (gold), silver (Ag), arsenic (As), Ni (nickel), Pb (lead), Zn (zinc) and Mo (molybdenum) in sulphide-bearing zones (primarily pyrrhotite ± bornite ± chalcopyrite) hosted in paragneiss, tonalite gneiss, mafic and ultramafic intrusions, diatexite, granitoid plutons and pegmatite. Syn- to late D₂ quartz syenite to alkali feldspar granite pegmatite, garnet-rich diatexite and granite plutons record local anomalous radioactivity and indicate elevated thorium (Th), uranium (U), REE (rare-earth elements) and zirconium (Zr) contents associated with these rocks and are a new potential exploration target in the region. Most of the Ashuanipi Complex in Labrador is underexplored and large areas remain untested for the potential to host economic deposits in several different rock types, particularly areas adjacent to the Quebec border in the western part of the complex.

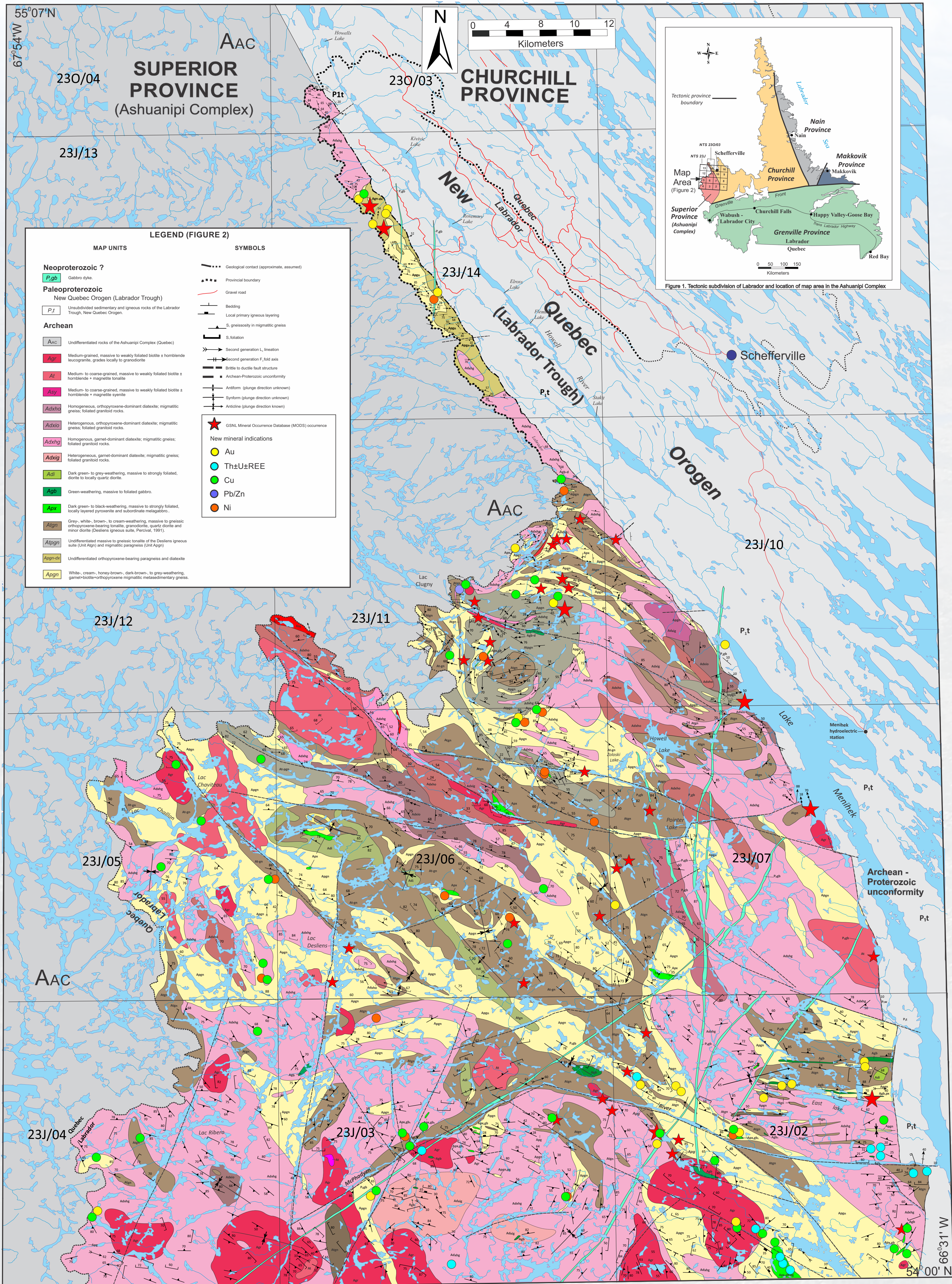


Figure 2. Regional geological compilation of the northern Ashuanipi Complex in western Labrador and location of new mineral indications (geology after van Nostrand and Bradford, 2014; van Nostrand et al., 2016; van Nostrand and Broughm, 2017)

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