

Figure 1. The Tehery Lake–Wager Bay area is divided into six domains (Ukkusikslik, Douglas Harbour, Lunan, Gordon, and Kummel Lake domains, and Daly Bay Complex) defined by large-scale structures (including the Wager and Chesterfield shear zones) and characterized by differing metamorphic assemblages, Sm–Nd isotopic data, and/or the presence/absence of specific lithologies.

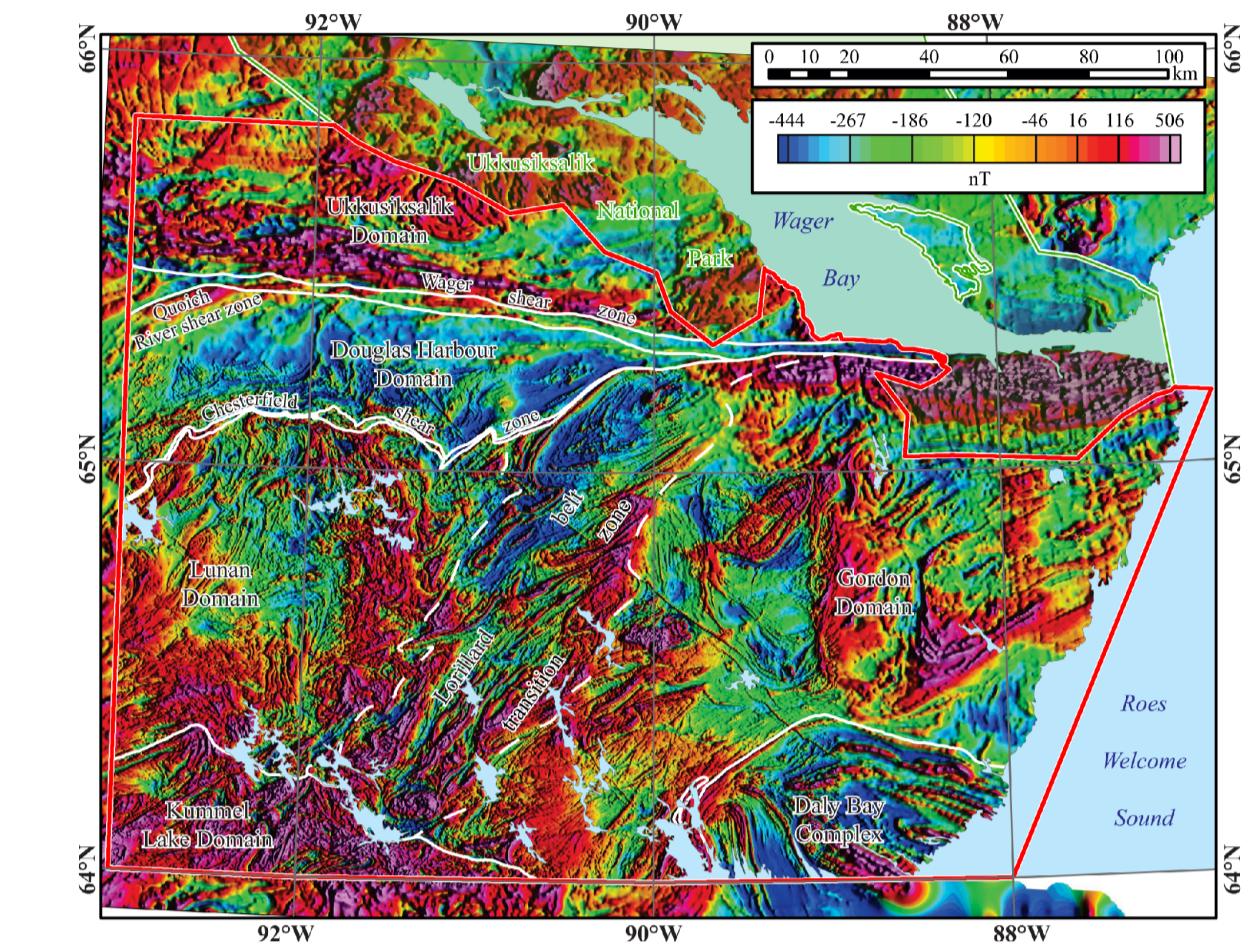
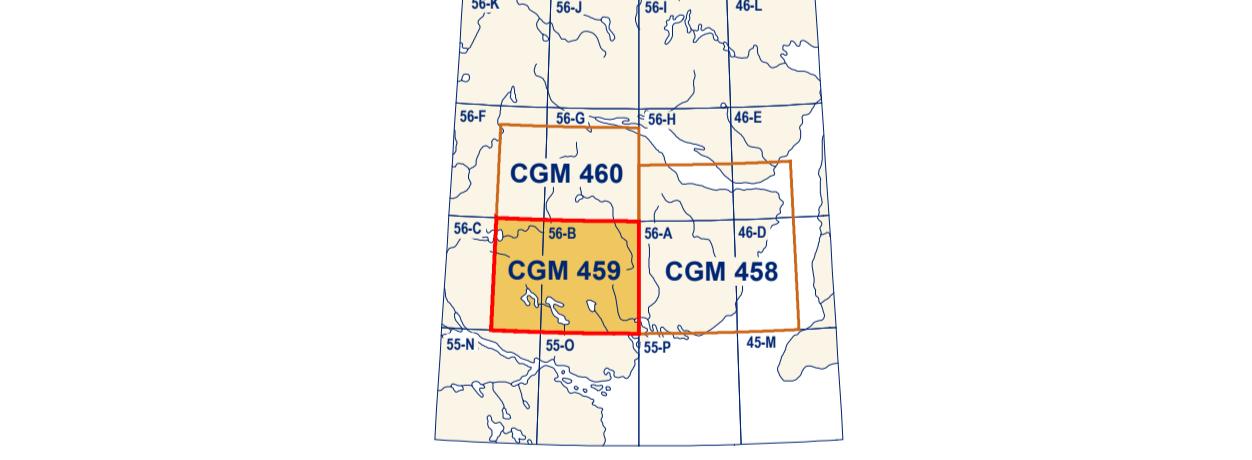


Figure 2. Total-field magnetic data underlying the Tehery Lake–Wager Bay area (Geological Survey of Canada, 1978, 1998; Keating et al., 2003; Coyle and Kiss, 2012a, b), illustrating the dominant deformational fabric, major lineaments including large-scale structures and dykes, and weakly or undeformed plutonic intrusions.

New geological mapping in the Tehery Lake–Wager Bay area of northwestern Hudson Bay, Nunavut, frames the emplacement, depositional, and metamorphic histories of the region.

emplacement, depositional, and metamorphic histories of the dominant rock types, major structures, and links to neighbouring areas of the central Rae Craton and Chesterfield Block. The area is divided into six domains (Gordon, Lunan, and Kummel Lake domains presented here, and Ukkusiksik and Douglas Harbour domains and Daly Bay Complex on adjoining maps) defined by large-scale structures and characterized by differing metamorphic assemblages, Sm-Nd and U-Pb isotopic data, and/or specific lithologies. Meso- to Neoarchean granitoid rocks underlie most of the area and are tectonically intercalated with Archean (volcano)-sedimentary packages (Kummel Lake, Lorillard, and Paliak belts). These rocks are locally intruded by ca. 2.62 to 2.58 Ga Snow Island suite granite and cut by younger, thin, east-trending diabase dykes. Paleoproterozoic (volcano)sedimentary rocks are preserved in the Kingmirit belt (Daly Bay Complex) and in basement-cover infolds of Ketyet River group-equivalent strata (Douglas Harbour and Ukkusiksik domains). In the south, the Daly Bay Complex (comprising mostly mafic granulite-facies rocks) and Kummel Lake Domain (a granulite-grade core complex) share some characteristics with rocks of the Kramanituar and Uvauk complexes, which may delineate the northeastern segment of the ca. 1.90 Ga Snowbird tectonic zone. The Paleoproterozoic Trans-Hudson Orogeny had widespread, penetrative structural and metamorphic effects on the area, and led to the intrusion of the ca. 1.85 to 1.81 Ga Hudson suite monzogranite and mafic ultrapotassic rocks, and ca. 1.83 Ga monzodiorite in the Ukkusiksik and Douglas Harbour domains. The area is cut by large, southeast-trending gabbro dykes of the 1.267 Ga Mackenzie igneous event.

d'Hudson, au Nunavut, encadre l'histoire de la mise en place, du dépôt et du métamorphisme des types de roches dominants, les principales structures et les liens avec les régions avoisinantes de la partie centrale du craton de Rae et du bloc de Chesterfield. La région est divisée en six domaines (domaines de Gordon, de Lunan et de Kummel Lake présentés ici, ainsi que domaines d'Ukkusiksik et de Douglas Harbour et complexe de Daly Bay sur les cartes adjacentes) définis par des structures à grande échelle et caractérisés par des assemblages métamorphiques, des données isotopiques Sm-Nd et U-Pb et/ou des lithologies spécifiques différents. Des roches granitoïdes du Mésoarchéen au Néoarchéen couvrent la majeure partie de la région et sont tectoniquement intercalées avec des assemblages (volcano)sédimentaires de l'Archéen (ceintures de Kummel Lake, de Lorillard et de Paliak). Ces roches sont localement injectées par des intrusions de granite de la suite de Snow Island datant d'environ 2,62 à 2,58 Ga et recoupées par des dykes de diabase plus jeunes, minces et de direction est. Des roches (volcano)sédimentaires du Paléoprotérozoïque sont conservées dans la ceinture de Kingmirit (complexe de Daly Bay) et dans des replis de socle-couverture de strates équivalentes au groupe de Ketyet River (domaines de Douglas Harbour et d'Ukkusiksik). Au sud, le complexe de Daly Bay (composé principalement de roches mafiques du faciès des granulites) et le domaine de Kummel Lake (un complexe à noyau métamorphique du faciès des granulites) partagent certaines caractéristiques avec les roches des complexes de Kramanituar et d'Uvauk, qui pourraient délimiter le segment nord-est de la zone tectonique de Snowbird d'environ 1,90 Ga. L'orogenèse trans-hudsonienne du Paléoprotérozoïque a eu des effets structuraux et métamorphiques étendus et pénétrants sur la région et a conduit à l'intrusion de monzogranite de la suite d'Hudson d'environ 1,85 à 1,81 Ga et de roches ultrapotassiques mafiques, ainsi que de monzodiorite d'environ 1,83 Ga dans les domaines d'Ukkusiksik et de Douglas Harbour. La région est recoupée par de grands dykes de gabbro de direction sud-est, issus de l'événement igné de Mackenzie (1,267 Ga).



**National Topographic System reference and index to adjoining
published Geological Survey of Canada maps**

NATIONAL RESOURCES CANADA
GEOLOGICAL SURVEY OF CANADA

CANADIAN GEOSCIENCE MAP 459

CANADA-NUNAVUT GEOSCIENCE OFFICE

OPEN FILE MAP 2023-05

BEDROCK GEOLOGY

ARMIT LAKE AREA

Kivalliq, Nunavut

NTS 56-B and 56-C east



Geological Survey of Canada Canadian Geoscience Maps

This figure is a geological map of the Gordon-Lunan Belt, spanning from approximately 65°N to 15°S latitude and 90°W to 60°E longitude. The map displays a complex network of geological domains, shear zones, and structural features. Key regions include the Lunan Domain (northern part), Gordon Domain (southern part), and Kummel Lake Domain (western part). Major shear zones shown are the Chesterfield Shear Zone (northernmost) and the Lunan-Gordon Transition Zone (central). The map uses a color-coded system to represent different geological units, with labels such as Agd, Amg, Als, Alsp, Ass, and Aklggd. Numerous small red dots and numbers are scattered across the map, likely representing specific geological or structural observations. The map also includes a grid of latitude and longitude lines.

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Geology by H.M. Steenkamp (2015 to 2017)
and I. Therriault (2017), Canada-Nunavut
(2012, 2015 to 2016), D.A. Kellett (2012), J.
(2015), T. Peterson (2015), J. Beales (2015),
J. Kendrick (2016), O.M. Weller (2016), V. T.
of Canada; K. Hatogina (2015) and R. Bayne
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University of British Columbia

Geological compilation by H.

a, C.J.M. Lawley, T. Peterson, and V. Tschirhart	Geomatics Cartography Scientific editing
'), L. Lebeau (2016), A. Lion (2016) Geoscience Office; N. Wodicka J.B. Whalen (2012), C.J.M. Lawley (2015), W. Garrison (2015 to 2016), Tschirhart (2016), Geological Survey one (2016), Government of Nunavut; Université Laval; K.P. Larson (2017), University of British Columbia Okanagan	Joint initiative of the Geological Survey Geoscience Office, conducted under the Tehery-Wager Bay activity as part of the mapping for Energy and Minerals Investments in Economic Development
M. Steenkamp, 2022	Logistical support provided by the Polar part of its mandate to promote scientific research and exploration.

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raphy by N. Côté
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cientific research in the Canadian north,

BEDROCK GEOLOGY

AMMIT LAKE AREA

Kivalliq, Nunavut
NTS 56-B and 56-C east

1:150 000



0 2 4 6 8 10 12 km

Map projection Universal Transverse Mercator, zone 15
North American Datum 1983

Base map at the scale of 1:250 000 from Natural Resources Canada, with modifications
Elevations in metres above mean sea level

Shaded-relief image derived from the digital elevation model supplied by
Natural Resources Canada
Illumination: azimuth 315°, altitude 45°, vertical factor 5x

Mean magnetic declination 2023, 7°21'W, decreasing 15.4' annually
Readings vary from 9°38'W in the NE corner to 5°07'W in the SW corner of the map.

Title photograph: Aerial view of a mafic granulite body (unit Agab) near Lunan Lake, Nunavut (photo location 7). Photograph by O.M. Weller.
NRCAN photo 2022-259

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