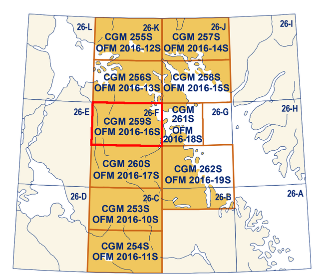
Abstract

This map summarizes the field observations for the McKeand River (north) map area following eight weeks of regional and targeted bedrock mapping on western Hall Peninsula. The 2015 field campaign completes a two-decade mission to update map coverage for the whole of Baffin Island south of latitude 70°N. The bedrock is dominated by a Paleoproterozoic metaplutonic suite, ranging in composition from gabbro to syenogranite, with crosscutting relations indicating a progression from mafic to silicic magmatism. Prevailing upper amphibolite to lower granulite facies metamorphic conditions overlap the stability limits of magnetite and orthopyroxene, which is consistent with equilibrium phase diagrams and regional aeromagnetic data. Metasedimentary rocks, including quartzite, pelite, marble, and metagreywacke, are present as screens and enclaves between and within plutonic bodies. An examination of the 'ghost' stratigraphy suggests that the metasedimentary rocks can be correlated with the middle Paleoproterozoic Lake Harbour Group in the south and Piling Group in the north. Two basaltic dyke swarms and shallowly dipping Ordovician limestone respectively crosscut and overly the Paleoproterozoic units.

ᐃᓱᒪᒋᔭᐅᔪᑦ

ᑖᓐᓇ ᓄᓇᙳᐊᖅ ᓇᓄᓇᐃᔭᐃᔪᖅ ᖃᐅᔨᓴᖅᑎᓪᓗᒋᑦ ᖃᐅᔨᓯᐅᔪᑦ McKeand River (north) ᓄᓇᙳᐊᖅ 8–ᓂᑦ ᐱᓇᓱᐊᕈᓯᕐᓂᑦ ᐊᕙᑦᑐᖅᓯᒪᔪᒥᑦ ᐊᒻᒪ ᖃᐅᔨᓴᕐᓂᖃᓗᐊᓚᐅᖅᑐᑦ ᖁᐊᙳᐃᓐᓇᖅᑐᒥᑦ ᓄᓇᙳᐊᓚᐅᓂᕐᒥᑦᐱᖓᓐᓇᖓᓂ ᓴᐅᒥᒥᑦ. 2015–ᒥ ᖃᐅᔨᓴᕐᓂᐅᔪᖅ ᐱᔭᕇᖅᓯᓚᐅᖅᑐᖅ ᐊᕐᕌᒍᓂᑦ ᐊᕙᑎᓂᑦ ᐱᓕᕆᐊᖑᔪᖅ ᐅᑦᑐᒥᒨᕐᒪᓕᖅᑎᑕᐅᓪᓗᑎ ᓄᓇᙳᐊᑦᕿᑭᖅᑖᓗᒥ ᓂᒋᓚᒫᖓᓂᑦ 70°N. ᖁᐊᙳᐃᓐᓇᖅᑐᖅ ᐃᓗᓕᖅᑭᓂᕆᔭᖓ Paleoproterozoic metaplutonic suite, ᐊᔾᔨᒌᙱᓂᖅᑲᖅᑐᑦ ᐃᓗᓕᖏᑦ ᐱᒋᐊᖅᑐᓂ gabbro ᑎᑭᑦᑐᒍ syenogranite, ᖁᓚᐂᕆᖅᑕᐅᑎᓪᓗᑎ ᖃᓄᐃᓘᖅᑕᐅᑎᓂᕐᒋᑦᓇᓗᓇᐃᖅᓯᔪᖅ ᐱᕙᓪᓕᐊᓂᖓ mafic ᑎᑭᑦᑐᒍ silicic magmatism. ᒫᓐᓇᐅᔪᒥᑦ ᑕᒃᓯᐅᔪᖅ ᖁᑦᑎᓂᖅᓴᙳ amphibolite ᐊᑎᓐᓂᖓᓄᑦ granulite facies metamorphic ᖃᓄᐃᓐᓂᕆᔾᔪᑎᑦ ᖁᓂᕆᖅᑕᐅᑎᔪᑦ ᒪᑭᑦᑎᐊᕈᓐᓇᕐᓂᖓ ᑮᓪᓕᖅᑎᑎᔪᖅ magnetite ᐊᒻᒪ orthopyroxene, ᒪᓕᓐᓂᖅᑐᖅ ᓇᓪᓗᑎᑎᓂᕐᒋᑦᑐᓂᑦ ᐊᔾᔨᙳᐊᑦ ᐊᒻᒪ ᐊᕙᑦᑐᖅᓯᒪᔪᒥᖅᖃᕐᓕᖅᐳᑦ ᓂᐱᒃᑲᓐᓇᖅᑲᕐᓂᖓᓄᑦ ᑐᑭᓯᒋᐊᕈᑎᑦ. Metasedimentary ᐅᔭᖅᑲᐃᑦ, ᐱᖃᓯᐅᑎᓪᓗᑎ quartzite, pelite, ᑐᓐᓄᔭᖅ, ᐊᒻᒪ ᐊᕙᑦᑐᖅ metagreywacke, ᑕᑯᔅᓴᐅᑎᑕᐅᔪᑦ ᐊᒻᒪ ᐊᕙᑦᑐᖅᓯᒪᔪᓂᑦ ᐊᑯᓐᓂᖓᓂ ᐃᓗᐊᓂᓗ plutonic ᐃᓗᓕᖏᑦ. ᖃᐅᔨᓴᖅᑕᐅᓂᖓᓂᒃᑯᑦ 'ᑕᕐᕆᐊᑦᑐᖅ' ᓄᓇᓕᖕᓂᕐᒧᑦ ᓇᓗᓇᐃᖅᓯᔪᖅ metasedimentary ᐅᔭᖅᑲᐃᑦ ᑲᑎᙵᓂᖅᑲᖅᑐᑦ ᖃᑎᙵᓂᑦᑐᓂ Paleoproterozoic ᑭᒥᖅᑯᒥ ᐱᓕᖕᒥᑦ ᓂᒋᖓᓂ ᐊᒻᒪ ᐳᑐᓂᖕᖓᐅᑦᑐᐊᖅᑲᖓᓂ. ᒪᕐᕉᒃ basaltic ᐅᔭᖅᑲᐃᑦ ᐊᒥᓱᔪᑦ ᐊᒻᒪᐃᑲᑦᑐᒨᖓᔪᑦ Ordovician limestone ᖁᓕᓐᓂᖅᑕᐅᑎᔪᑦ ᐊᒻᒪ ᖁᓛᓂᑦ Paleoproterozoic ᑲᑎᙵᔪᓂᑦ.



ᑲᓇᑕᒥ ᓄᓇᙳᐊᓕᕆᔨᒃᑯᑦ ᖃᐅᔨᓯᐊᕐᕕᖓᓐᓂᑦ ᐃᓚᒍᑕᖏᓐᓂ ᐊᑦᑐᐊᓂᖃᖅᑐᓄᑦ ᓴᖅᑭᖅᑎᑕᐅᔪᑦ ᓄᓇᒥ ᖃᐅᔨᓴᓂᕐᒧᑦ ᑲᓇᑕᒥ ᓄᓇᙳᐊᑦ

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ᓄᓇᙳᐊᓕᕆᔨᒃᑯᑦ ᖃᐅᔨᓴᖅᑏᑦ ᑲᓇᑕᒥ
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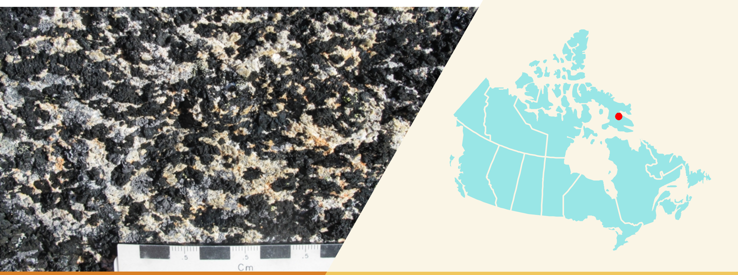
ᒪᑐᐃᖓᔪᖅ ᓄᓇᙳᐊᖅ 2016-16S
ᓄᓇᓂ ᖃᐅᔨᓴᕐᓂᖅ
McKEAND RIVER (NORTH)
ᕿᑭᖅᑖᓗᒃ, ᓄᓇᕗᑦ
1:100 000



ᖃᐅᔨᓴᖅᑕᐅᓚᐅᖅᑐᑦ ᖁᕝᕙᓯᒋᐊᖅᑕᐅᓯᒪᓂᖓ ᓇᓗᓇᐃᖅᑕᐅᑎᑦ

ᓇᓗᓇᐃᖅᑕᐅᑦ ᐊᑐᖅᑕᐅᓯᒪᔪᑦ CGM 253S, CGM 254S, CGM 255S, CGM 256S, CGM 257S, CGM 258S, CGM 259S, CGM 260S, CGM 261S, ᐊᒻᒪ CGM 262S. ᐊᒥᐊᓂᑦ ᓇᓗᓇᐃᖅᑕᐅᑦ ᓇᓗᓇᐃᖅᓯᔪᑦ ᓄᓇᙳᐊᒥ ᑕᓐᓇᐅᔪᑦ ᑕᕝᕙᓂ ᓄᓇᙳᐊᒥ. ᐊᕐᕌᒍᖏᑦ (Eon) ᓄᓇᙳᐊᒥ ᓇᓗᓇᐃᖅᑕᐅᔪᑦ ᓯᕗᓪᓕᖅᐹᖑᓂ ᑎᑎᕋᖅᓯᒪᔪᑦ, ᓱᕐᓗ P (Paleoproterozoic), ᓄᓇᐃᑦ ᐊᕝᕕᓯᒪᓂᖏᑦ ᓇᒦᓐᓂᖓ ᐊᑎᖓ, ᐊᑐᕆᐊᖅᑲᕐᓂ, ᑐᖏᓕᐊᓂ ᐱᖓᔪᖓᓂᒃᑯ ᑎᑎᕋᖅᓯᒪᔪᑦ ᓱᕐᓗ. LH (Lake Harbour Group), ᐊᒻᒪ ᐅᔭᖅᑲᓂᑦ ᖃᐅᔨᓴᕐᓂᖅ ᒥᑭᓂᖅᓴᐅᔪᓂᑦ ᑎᑎᕋᖅᓯᒪᔪᑦ, ᓱᕐᓗ. mo (orthorpyroxene-bearing monzogranite).

QUATERNARY

Symbol	Description
Q	Glacial till (bouldery diamicton); glaciofluvial sand and gravel; glaciolacustrine, glaciomarine and marine sand, silt, and gravel; alluvial sand and gravel; talus scree bouldery diamicton.

ORDOVICIAN

Symbol	Description
OA	**AMADJUAQ FORMATION:** limestone; tan to dark brown; nodular bedded, weathers massive; argillaceous to shaly in lower part.

NEOPROTEROZOIC

Symbol	Description
Nd	Diabase dyke (Franklin swarm).

MESOPROTEROZOIC–CENOZOIC

Symbol	Description
MCd	Diabase dyke (Kekertaluk swarm).

PALEOPROTEROZOIC

Symbol	Description
Psb	Biotite syenogranite; locally with K-feldspar megacrysts.
Pmg	Biotite-garnet±orthopyroxene monzogranite; locally contains abundant inclusions of metasedimentary rock.
Pmgk	Biotite-garnet±orthopyroxene monzogranite; with K-feldspar megacrysts; locally contains abundant inclusions of metasedimentary rock.
Pmb	Biotite-magnetite±orthopyroxene monzogranite; locally with K-feldspar megacrysts.
Pmh	Biotite-hornblende±magnetite±orthopyroxene monzogranite.
Pms	Orthopyroxene-biotite monzogranite; commonly contains abundant inclusions of metasedimentary rock.
Pmo	Orthopyroxene-biotite±magnetite monzogranite; locally with K-feldspar megacrysts.
Pgo	Orthopyroxene-hornblende-biotite±magnetite granodiorite.
Pd	Hornblende-orthopyroxene-clinopyroxene diorite, leucodiorite; locally layered with compositions ranging from diorite to anorthosite.
Pg	Hornblende-clinopyroxene-magnetite±biotite gabbro; locally layered with compositions ranging from gabbro to anorthosite.

PILING GROUP

Symbol	Description
PPL	**LONGSTAFF BLUFF FORMATION:** psammite, semipelite, arkosic and lithic metawacke; thin-to-thick layers, light to dark grey; minor hornblende-bearing calc-silicate layers and concretions.

LAKE HARBOUR GROUP

FROBISHER SUITE

Symbol	Description
PLHw	White garnet-biotite leucogranite; commonly interlayered with metasedimentary rock.
PLHd	Metaleucodiorite.
PLHm	Metagabbro, amphibolite.
PLHu	Metaperidotite, metapyroxenite, metadunite.

METASEDIMENTARY ROCKS

Symbol	Description
PLHc	Diopside-phlogopite-spinel-apatite marble, calc-silicate; minor siliciclastic layers; white garnet-biotite leucogranite pods and seams.
PLHa	Hornblende-garnet-biotite±clinopyroxene amphibolite; locally with carbonate seams.
PLHp	Garnet-sillimanite-biotite psammite; semipelite, pelite, quartzite; minor marble and calc-silicate; white garnet-biotite leucogranite pods and seams; metadiorite to metaleucodiorite and layered mafic-ultramafic sills.
PLHs	Garnet-biotite semipelite; pelite, quartzite; white garnet-biotite leucogranite pods and seams.
PLHq	Garnet-sillimanite quartzite, feldspathic quartzite; semipelite, orthoquartzite, pelite; minor marble and calc-silicate; white garnet-biotite leucogranite pods and seams.

ARCHEAN

Symbol	Description
Amm	Biotite-magnetite monzogranite, locally crosscut by coarse-grained to pegmatitc syenogranite veins.
Amk	K-feldspar megacrystic biotite monzogranite to quartz monzonite.
Ag	Biotite±hornblende granodiorite to monzogranite.
At	Biotite±hornblende tonalite to granodiorite; commonly contains layers of diorite to quartz diorite, and locally contains pods and enclaves of metagabbro.

Geological contact
- Defined
- Approximate

Normal fault; solid circle indicates downthrown side
- Approximate

Oblique-slip fault, normal, inferred
- Sinistral slip
- Dextral slip

Foliation form line

ᕿᕐᓂᖅᑕᑦ ᓇᓗᓇᐃᒃᑯᑎᒋᔭᐅᔪᑦ ᓄᓇᙳᐊᕐᒥ ᓴᕿᑎᑦᑎᓯᒪᕗᑦ ᐃᓂᒋᔭᐅᔪᒥᑦ. ᓯᐊᕐᓇᐃᑦ ᓇᓗᓇᐃᒃᑯᑏᑦ ᐅᑯᓂᖓ ᐅᒃᑐᕋᐅᑎᒍᑎᐅᓂᕐᒧᑦ ᓴᕿᔮᖅᑎᑕᐅᓂᖓᓐᓂᒃ ᑕᕝᕙᓂ ᓄᓇᙳᐊᕐᒥ; ᐃᓚᖅᑯᑦ ᑕᒪᐃᓐᓂᑦ ᓴᓇᐅᓯᒪᔪᓂᑦ ᐊᒻᒪ ᐃᓚᖏᓐᓂ 2015 ᓴᓇᙳᐊᕆᓂᑯᓂᑦ.

- 10 Contact, inclined
- 15 Foliation, inclined
- Foliation, vertical
- 10 Foliation, mylonitic, inclined
- 30 Gneissosity, inclined
- 20 Igneous layering, inclined
- Glacial striae
- Glacial striae, flow direction unknown
- 20 Mineral lineation
- 10 Stretching lineation
- 30 Fold hinge
- 20 Axial plane, inclined

Antiform, defined (f_2)

Antiform, overturned, defined (f_2)

Synform, defined (f_2, f_3)

Synform, overturned, defined (f_2)

Station
- Fieldwork 2015
- Legacy

Carving stone
- CS Occurrence in hydrated ultramafic rock

ᐊᑐᓕᖁᔭᐅᔪᑦ ᐅᖃᖅᑕᐅᓯᒪᔪᑦ ᖃᐅᔨᒋᐊᕐᕕᒡᔪᐊᓃᑦ
St-Onge, M.R., Weller, O.M., Dyck, B.J., Rayner, N.M., Chadwick T., ᐊᒻᒪ Liikane, D., 2016. ᓄᓇᓂ ᖃᐅᔨᓴᕐᓂᖅ, McKeand River (north), ᕿᑭᖅᑖᓗᒃ, ᓄᓇᕗᑦ; ᓄᓇᙳᐊᓕᕆᔨᒃᑯᑦ ᖃᐅᔨᓴᖅᑏᑦ ᑲᓇᑕᒥ, ᑲᓇᑕᒥ ᓄᓇᓂᑦ ᖃᐅᔨᓴᓂᕐᒧᑦ ᓄᓇᙳᐊᖅ 259S (ᐱᒋᐊᕐᓂᖓ); ᓄᓇᕗᒻᒥ ᐅᔭᖅᑲᓂᑦ ᖃᐅᔨᓴᖅᑏᑦ ᑎᑎᕋᕐᕕᖓ, ᒪᑐᐃᖓᔪᖅ ᓄᓇᙳᐊᖅ 2016-16S, ᐊᖏᓂᖓ 1:100 000. doi:10.4095/298762

ᑎᑎᕋᖅᑐᑦ: M.R. St-Onge, O.M. Weller, B.J. Dyck, N.M. Rayner, T. Chadwick, ᐊᒻᒪ D. Liikane

ᓄᓇᓂ ᖃᐅᔨᓴᖅᑎ M.R. St-Onge, O.M. Weller, B.J. Dyck, N.M. Rayner, T. Chadwick, ᐊᒻᒪ D. Liikane, ᓄᓇᙳᐊᓕᕆᔨᒃᑯᑦ ᖃᐅᔨᓴᖅᑏᑦ ᑲᓇᑕᒥ; S. Noble-Nowdluk, T. Milton, ᐊᒻᒪ T. Rowe, ᓄᓇᕗᑦ ᒐᕙᒪᒃᑯᑦ, 2015

ᓄᓇᒥ ᖃᐅᔨᓴᕐᓂᖅ ᓇᓗᓇᐃᔭᐃᔪᖅ M.R. St-Onge ᐊᒻᒪ ᑎᑎᕋᖅᑕᐅᑲᓐᓂᕐᓂᖓ ᐆᒻᒪ M.R. St-Onge ᐊᒻᒪ O.M. Weller, 2015

ᓄᓇᒥ ᖃᐅᔨᓴᓂᕐᒧᑦ ᒪᓕᒐᓐᓂᐊᖅᑐᖅ ᐱᓇᓱᒍᑦ ᖁᐊᙳᐃᓐᓇᖅᑐᑦ ᑐᐱᓕᐊᕈᑎᓂᑦ, ᕝᕆᓪᓚᒡ 2.6

ᓄᓇᙳᐊᓕᐊᖅᑎᑦ A. Morin, A. Ford, C. Gilbert, L. Robertson, G. Buller, ᐊᒻᒪ R. Buenviaje

ᓄᓇᙳᐊᓕᕆᔨ N. Côté

ᑐᓵᔨᑦ Wintranslation

ᐅᓇ ᓄᓇᙳᐊᖅ ᐃᓚᒋᔭᖓ ᓄᓇᐅᑉ ᖃᐅᔨᓴᕐᓂᖅ (GEM) ... ᓄᓇᙳᐊᓕᕆᔨᒃᑯᑦ ᖃᐅᔨᓴᖅᑏᑦ ᑲᓇᑕᒥ (GSC) ... ᓄᓇᕗᒻᒥ ᐅᔭᖅᑲᓂᑦ ᖃᐅᔨᓴᖅᑏᑦ ᑎᑎᕋᕐᕕᖓ (CNGO) ...

... PCSP 05615

ᓄᓇᙳᐊᖅ ... Universal Transverse Mercator, ... 19. North American Datum 1983

ᓄᓇᙳᐊᑦ ... 1:250 000 ...

... 2016, 30°25'W, ... 27.6' ... 29°52'W ... 30°55'W ...

... metagabbro, McKeand River, ᕿᑭᖅᑖᓗᒃ, ᓄᓇᕗᑦ. ... D. Liikane. 2015-125

GEOSCAN (http://geoscan.nrcan.gc.ca/)

(http://cngo.ca/).

ᓄᓇᓂ ᖃᐅᔨᓴᕐᓂᖅ
McKEAND RIVER (NORTH)
ᕿᑭᖅᑖᓗᒃ, ᓄᓇᕗᑦ
1:100 000

2 0 2 4 6 8 km

ᓴᖅᑭᑎᑕᐅᓚᐅᖅᑐᖅ ᑖᓐᓇᓕ ᖃᐅᔨᓴᖅᑕᐅᓂᖓ ᐊᕐᕕᒋᐊᖅᑕᐅᓯᒪᖕᒪᑦ.

ᓄᓇᙳᐊᓕᕆᔨᒃᑯᑦ ᖃᐅᔨᓴᖅᑏᑦ ᑲᓇᑕᒥ
ᑲᓇᑕᒥ ᓄᓇᓂᑦ ᖃᐅᔨᓴᓂᕐᒧᑦ ᓄᓇᙳᐊᖅ 259S
ᓄᓇᕗᒻᒥ ᐅᔭᖅᑲᓂᑦ ᖃᐅᔨᓴᖅᑏᑦ ᑎᑎᕋᕐᕕᖓ
ᒪᑐᐃᖓᔪᖅ ᓄᓇᙳᐊᖅ 2016-16S
ᓄᓇᓂ ᖃᐅᔨᓴᕐᓂᖅ
McKEAND RIVER (NORTH)
ᕿᑭᖅᑖᓗᒃ, ᓄᓇᕗᑦ

Canada