

LEGEND

CRETACEOUS

LOWER CRETACEOUS

FORT ST. JOHN GROUP

KSc SCATTER FORMATION: Resistant, greenish-grey, glauconitic, laminated sandstone; medium- to thick-bedded; silty, concretionary mudstone common in middle part of unit.

KGr GARIBUTT FORMATION: Grey shale and siltstone with siderite concretions; minor thin-bedded, finely laminated sandstone; may include the Chinkin Formation if present in the map area.

TRIASSIC

DIABER GROUP

KT TOAD FORMATION: Grey, red, and green shale interbedded with thin- to thick-bedded brown sandstone; locally calcareous or phosphatic; may include Grayling Formation if present in the map area.

PERMIAN

ISHBEL GROUP

PF FANTASQUE FORMATION: Rusty weathering dark grey to white, well bedded, spiculate chert; rhythmically interbedded with minor shale and siliceous siltstone.

PT Tika map unit: Buff weathering, light to medium brown, silty or sandy limestone grading into calcareous siltstone and sandstone; medium-bedded, massive to cross-laminated; sparsely fossiliferous; rectilinear fracture pattern characteristic.

LOWER CARBONIFEROUS

MATTSON FORMATION

CM-u MIDDLE AND UPPER MEMBERS UNDIVIDED: see Note 3

CM-m UPPER MEMBER: Light to medium grey, fine- to coarse-grained, locally calcareous quartz arenite and sub-arenitic, subarkosic fossiliferous limestone, and grey to green shale; sandstone commonly shows large-scale crossbedding; fossils in the limestone are commonly silicified; may include Tika map unit.

CM-l MIDDLE MEMBER: Grey to buff to brown, poorly- to well-indurated, fine-grained quartz arenite with subordinate siltstone and dark shale; minor coal and sandy dolomite; sandstone shows fine- to large-scale crossbedding; typically forms sharp-based, thick-bedded, fringing sequences.

CM LOWER MEMBER: Greyish orange weathering, light grey or buff, well-indurated, fine- to very fine-grained quartz arenite interbedded with siltstone and dark grey shale; minor coal, dolomite, and lithoclast breccia; cross-lamination and trace fossils common; typically thin- to medium-bedded.

DEVONIAN AND CARBONIFEROUS

DCBR BEA RIVER FORMATION: Dark grey to black shale, locally weathers buff; sparsely fossiliferous; minor interbedded greyish-orange weathering sandstone, siltstone, lithoclast breccia, scattered siderite nodules.

MAP SYMBOLS

Geological boundary (defined, approximate, assumed)

Nomenclature change

Outcrop stations

Outcrop; remote observation

Bedding (inclined, overturned);

Crossbedding (dip direction and dip, unconnected)

Joints

Anticline (defined, approximate, assumed)

Syncline (defined, approximate, assumed)

Anticlinal kink fold - (defined, approximate, assumed) (See diagram below)

Synclinal kink fold - (defined, approximate, assumed) (See diagram below)

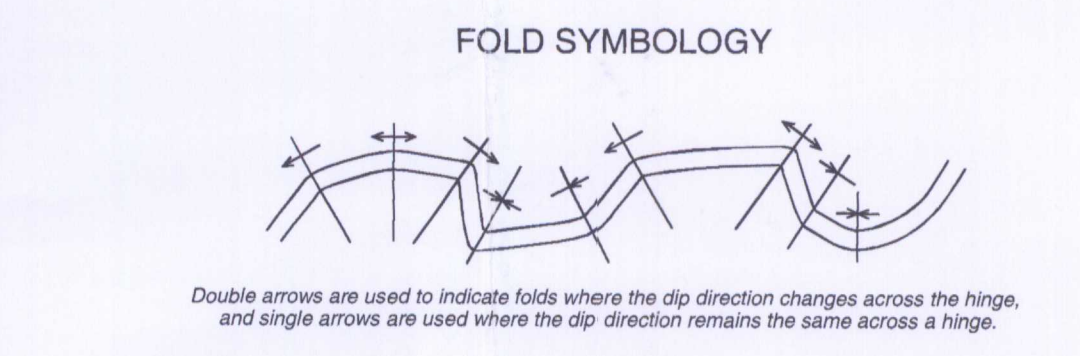
Fold axis (trend and plunge; calculated from bedding)

Fault, thrust (known, approximate)

Fault, unknown type (approximate) (U on upthrown side, D on downthrown side)

Section location (see reference 2)

Type locality (see reference 1)



- ### NOTES:
- Bedding orientations are shown at station locations; crossbedding and joint orientations are shown slightly offset from stations for clarity.
 - Slumping of large sections of bedrock, particularly along the Beaver River, may lead to locally inaccurate structure orientations and/or buried contacts.
 - Middle and Upper members of the Mattson Formation are not divided in parts of the western half of the map area due to difficulties in delineating the characteristic carbonate beds of the Upper Mattson under heavy bush cover.
 - The similarity of lithologies between the Tika map unit and the Upper member of the Mattson Formation, combined with the recessive character of the Tika map unit, have limited its mappability to shallowly dipping fold limbs with relatively good exposure.

References:

- Harker, P. 1963. Carboniferous and Permian rocks of SW District of Mackenzie; Geological Survey of Canada, Bulletin 95.
- MacNaughton, R.B. 2002. Sedimentology of Triassic siliciclastic strata, Mount Martin and Mount Merrill map areas, Yukon Territory; Geological Survey of Canada, Current Research 2002-A04, 10 p.

Compilation by K. M. Falles and C. A. Evencech based on fieldwork and studies of vertical air photographs 2001.

THIS MAP IS A PRODUCT OF THE CENTRAL FORELAND NATMAP PROJECT

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Geology from field work by K. M. Falles and C. Evencech 2001, with contributions from: A. Khudoley, R. Moore, P. Mortensen and A. Yanke.

Geological cartography by K. M. Falles and S. J. Hinds

Any revisions or additional geological information from the user would be welcomed by the Geological Survey of Canada.

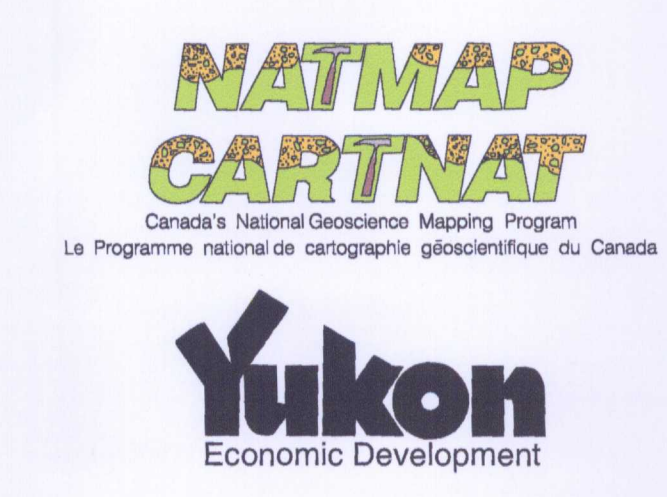
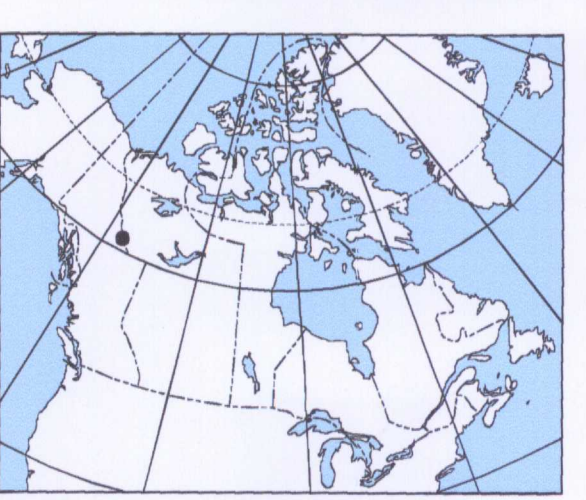
Base map at the same scale published Surveys and Mapping Branch in 1971

CONTOUR INTERVAL: 100 FEET

Elevations in Feet above Mean Sea Level

Recommended citation:

Falles K. M., and Evencech C. A. 2002. Preliminary Geology of Mount Merrill (95C02), Yukon Territory and British Columbia; Geological Survey of Canada, Open File map 4264, scale 1:50 000.



PRELIMINARY GEOLOGY
MOUNT MERRILL
YUKON TERRITORY - BRITISH COLUMBIA

Scale 1:50 000 Échelle 1/50 000

Kilometres 1 0 1 2 3 Kilometres

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95C06 Gold Pay Creek	95C07 Brown Lake	95C08 Babiche Mountain
95C03 Money Creek	95C02 Mount Merrill	95C01 Mount Martin
94N14 Beavercrow Mountain	94N15 Crow River	94N16 Beaver River

