



OPEN FILE 5487
ROSS RIVER
 YUKON

Scale 1:500 000 / Échelle 1/500 000

Universal Transverse Mercator Projection / Projection transverse universelle de Mercator
 North American Datum 1983 / Système de référence géodésique nord-américain, 1983
 © Her Majesty the Queen in Right of Canada 2012 / © Sa Majesté la Reine du chef du Canada 2012

105 K4	105 K3	105 K2	105 K1	105 J4
105 F13	105 F14	105 F15	105 F16	105 G13
OF5487 Sheet 6	OF5487 Sheet 7	OF5487 Sheet 8		
105 F12	105 F11	105 F10	105 F9	105 G12
	OF5487 Sheet 5	OF5487 Sheet 4		
105 F6	105 F5	105 F4	105 F3	105 G5

LEGEND

QUATERNARY Q Unconsolidated sediments: alluvium, glacioluvial deposits, moraine, fill, landslide debris and fans, talus.	UPPER SILURIAN TO DEVONIAN PORCUPINE FORMATION SDP Resistant, medium grey to light buff weathering, medium to thick bedded dolomite, sandy dolomite and dolomitic sandstone, gradational to SDh on the northeast and to SDh on the southwest; undifferentiated Porcupine Formation in Porcupine syncline.	NEAR EAST OF TINTINA FAULT SEDIMENTARY AND EXTRUSIVE ROCKS LATE TERTIARY OR QUATERNARY QTvb Recessive, brown weathering, brown fresh basalt and basalt breccia; lower Starr Creek.
MID-CRETACEOUS Kqfp Light grey and green quartz-feldspar porphyry dykes; aphanitic to very fine-grained quartz-feldspathic gneiss; omphacite studded with small subhedral, clear quartz and white feldspar phenocrysts; north of Mt. St. Cyr and near Fox Mountain.	INTRUSIVE ROCKS uKi Dark brown weathering; dark green, biotite lamprophyre dykes; locally between Porcupine and Groundhog Creeks.	TERTIARY Ts ROSS RIVER CONGLOMERATE: White weathering, poorly indurated sandstone, conglomerate and shale; shale is brown and thin bedded with abundant coaly partings and plant debris; sandstone is coarse grained, poorly sorted (blocks with beds to a metre thick, conglomerate, in beds to 20 metres thick, includes pebbles and cobbles of quartz, quartz schist, green basalt, and red cherty tuff in a sandy matrix of quartz, feldspar and muscovite; in Tintina Trench southwest of Ross River.
CARBONIFEROUS AND PERMIAN ST CYR ALLOCTHONOUS ASSEMBLAGE CPSCv Resistant, dark grey weathering, dark green, fine-grained amphibole and amphibolitic gneiss, less metamorphosed greenstone and altered basalt; includes minor altered pebbles, largely massive and structurally, but a penetrative fabric is developed above the basal thrust and in places within the mass (e.g. north side of Mt. St. Cyr).	INTRUSIVE ROCKS Kqm Moderately resistant, light grey and blocky weathering, biotite-quartz monzonite; medium to coarse-grained and equigranular; porphyritic with tabular, light pink potassic feldspar phenocrysts; generally lacks fabric; boundaries with PFC-L are arbitrary; lacks small xenoliths but includes large screens of metamorphic rocks.	INTRUSIVE ROCKS Tqfp LAPE RIVER PORPHYRY: Buff weathering, white rhyolite with small quartz and feldspar phenocrysts in an extremely fine-grained, acidized groundmass; in Tintina Trench southwest of Ross River.
MISSISSIPPIAN SEAGULL GROUP MFV Heterogeneous, lapilli and sand sized tuff, volcanic breccia and flow rocks ranging from trachyte to andesite; weathers rusty, black, white and orange; black argillaceous shale and calcareous grey and pale green cherty tuff locally abundant; minor finely crystalline buff limestone; locally includes abundant trachyte dykes; locally highly pyritic; weathers yellowish and commonly foliated so that primary textures are masked; includes maroon and green interbedded tuffs and flows (MFv); may include MFv-T undifferentiated between Seagull Creek and upper Hoole River.	ALLOCTHONOUS ROCKS CPSCub Resistant, dun-brown weathering, dunite, peridotite, pyroxenite and serpentized equivalents; northwest of Big Salmon Lake.	CRETACEOUS Kqcm Resistant, light grey, massive dolomite; undifferentiated dolomite of Porcupine Formation.
UPPER CAMBRIAN AND ORDOVICIAN LOVER HAVEN GROUP LCOV Resistant, brown weathering, thin bedded shale, calcareous siltstone and argillaceous limestone; metamorphosed to biotite phyllite, tremolite-calcite and impure marble; southwest of Tintina Trench.	AUTOCHTHONOUS ROCKS uTh Resistant, light grey, buff and light orange weathering, medium bedded dolomitized laminated muscovite to sucrose dolomite and dolomitic calcarenite, with minor silty and sandy dolomite; vugs, birds-eye texture, horizontal cavities, nodular burrows, mottling and mudcracks common; undifferentiated dolomite of Barite Mountain Formation.	PALEOZOIC OR MESOZOIC RESULT ALLOCTHONOUS ASSEMBLAGE PMnw Black, siliceous phyllite and medium green amphibole-chlorite phyllite; locally includes much interbedded grey and pebbly gneiss containing clasts of basal quartz, white potassic feldspar and granite; locally includes thin, black marble lenses; most rocks are strongly sheared.
UPPER CAMBRIAN AND ORDOVICIAN CLOUTIER FORMATION UCOC Medium grey, recessive weathering, lustrous, dark grey chlorite-muscovite-quartz phyllite with a good cleavage or foliation across bedding; includes abundant lenses of greenish-grey UCOc undifferentiated, which represents metamorphosed lenses of UCOc; UCOc grades laterally to UCOd and UCOe; near Keta River and Cloutier Creek.	PERMIAN Ps Starr Formation: recessive, dark grey weathering, thin bedded, interlamined buff yellowish siltstone and brown argillite with minor interbedded argillaceous limestone; strongly foliated; locally between Tintina Trench and Porcupine syncline close to UTh.	HECHKA GROUP OSM Resistant, dark grey and locally rusty weathering, massive to weakly foliated, green and maroon, cherty to sandy tuff and volcanic breccia; minor flow rocks of intermediate composition; includes MFv and MC undifferentiated; Seagull Creek to Hoole River.
UPPER CAMBRIAN AND ORDOVICIAN GROUNDHOG FORMATION UCOG Olive-green, massive, sandy and fine-grained tuff and siliceous slate, commonly strongly foliated and metamorphosed to greenschist facies; includes chlorite phyllite and chlorite amphibolite; abundant in UCOc.	MISSISSIPPIAN DMAS Resistant, brown weathering, thick bedded, fine- to coarse-grained, chert- and quartz-grain gneiss; may include MFv undifferentiated; occurs as lenses in uDMBS.	UPPER CAMBRIAN AND ORDOVICIAN MCCONNELL RIVER FORMATION ICM Recessive weathering, grey, thin bedded, calcareous argillite, limestone and calcareous siltstone; locally includes calcareous biotite schist and thin bedded quartz-tremolite-dioptase skarn near Keta River; ICMh, homfelsed equivalent.
UPPER CAMBRIAN AND ORDOVICIAN SILLY LIME MUDSTONE MEMBER ICM-S Resistant, black to dark grey, thin bedded and laminated, silty limestone; lowest member of ICM; near Keta River.	DEVONIAN AND MISSISSIPPIAN BLACK SLATE FORMATION uDMBS Recessive, thin bedded, black, siliceous slate with minor interbedded chert-grain gneiss and chert-grain gneiss; weathers black and blue-black with rusty streaks; includes lenses of MFv undifferentiated; may include MC undifferentiated; includes interbedded, dark grey bands; includes Fv undifferentiated.	DEVONIAN (UPPER?) ICM-P PYRITIC SLATE MEMBER: Recessive weathering, thin bedded, argillitic, black pyritic slate; upper member of McConnell River Formation; near Keta River.
UPPER CAMBRIAN AND ORDOVICIAN SCURRY LIMESTONE MEMBER ICM-SC White weathering, resistant marble, recrystallized lime mud and biotitic limestone; gradational with, and the metamorphic equivalent of, ICMh, near Scurry Creek.	DEVONIAN AND MISSISSIPPIAN ANKERITIC SLATE FORMATION DMAS Olive-green to dark grey, calcareous and ankeritic shale, siltstone and argillaceous limestone; includes slate and phyllite; occurs as lenses in uDMBS; southwest side of Tintina Trench.	DEVONIAN AND MISSISSIPPIAN SILLY LIME MUDSTONE MEMBER ICM-W White weathering, thick bedded to massive, medium grey to blue-grey limestone and argillaceous limestone; includes archeostylid outcrops; undifferentiated; generally occurs in the upper half of ICM, Keta River and White Creek.
UPPER CAMBRIAN AND ORDOVICIAN PASS PEAK FORMATION ICP Dark weathering, dull black-green, thin bedded, silty slate and shaly quartzite; locally includes medium- to coarse-grained, poorly sorted feldspathic sandstone to orthoquartzite; laterally gradational to PFC-L, a metamorphic equivalent; ICMh, homfelsed equivalent.	UPPER CAMBRIAN AND MISSISSIPPIAN MOUNT ROSS MEMBER ODD-R Orange-buff weathering, resistant, medium grey, thin- to medium-bedded, finely laminated and cross-laminated, calcareous, quartz siltstone and calcareous, very fine-grained orthoquartzite with brown silty phyllite partings; minor interbedded massive, light grey orthoquartzite (ODD-Rq); resembles SP and uTh; southwest side of Tintina Trench.	DEVONIAN AND MISSISSIPPIAN SOOTY SLATE MEMBER ODD-S Black and recessive weathering, calcareous, graphitic, sooty slate and silty slate; includes thin beds of dark grey, graphitic, very fine-grained quartzite and black limestone with tiny concretions; gradational to DMAS; southwest side of Tintina Trench.
UPPER CAMBRIAN AND ORDOVICIAN LAPE MEMBER PICP-L Resistant, light grey weathering, light grey, massive limestone and marble; near Lape Lakes.	ORDOVICIAN TO DEVONIAN DANGER FORMATION ODD-D Orange-buff weathering, resistant, medium grey, thin- to medium-bedded, finely laminated and cross-laminated, calcareous, quartz siltstone and calcareous, very fine-grained orthoquartzite with brown silty phyllite partings; minor interbedded massive, light grey orthoquartzite (ODD-Dq); resembles SP and uTh; southwest side of Tintina Trench.	UPPER SILURIAN TO DEVONIAN HOGG FORMATION SDH Resistant, medium grey to buff weathering, medium- to thick bedded orthoquartzite, dolomitic sandstone and sandy dolomite; gradational to SDh; includes SDHq and SDh undifferentiated.
UPPER CAMBRIAN AND ORDOVICIAN MCCONNELL RIVER FORMATION ICM-W White weathering, thick bedded to massive, medium grey to blue-grey limestone and argillaceous limestone; includes archeostylid outcrops; undifferentiated; generally occurs in the upper half of ICM, Keta River and White Creek.	ORDOVICIAN TO DEVONIAN ASKIN GROUP mDd Grey limestone formation: Resistant, blue-grey weathering, medium grey, medium to thin bedded, felt, biotitic limestone.	UPPER SILURIAN TO DEVONIAN HOGG FORMATION SDHq Silty white and light grey weathering, medium to thick bedded, light buff, medium grained, mature orthoquartzite commonly with dolomite cement, minor interbedded sandy dolomite; laterally gradational to ODn and SDh; upper part of SDh.
UPPER CAMBRIAN AND ORDOVICIAN SCURRY LIMESTONE MEMBER ICM-SC White weathering, resistant marble, recrystallized lime mud and biotitic limestone; gradational with, and the metamorphic equivalent of, ICMh, near Scurry Creek.	UPPER SILURIAN TO DEVONIAN HOGG FORMATION SDHr Resistant, thick bedded to massive, brilliant red to orange weathering, coarsely sucrose red dolomite; minor sandy dolomite; dolomitized equivalent of SDh.	UPPER CAMBRIAN AND ORDOVICIAN SCURRY LIMESTONE MEMBER ICM-SC White weathering, resistant marble, recrystallized lime mud and biotitic limestone; gradational with, and the metamorphic equivalent of, ICMh, near Scurry Creek.

SYMBOLS

Limit of outcrop
 Geological boundary (defined, approximate, assumed)
 Bedding orientation (inclined, vertical, horizontal)
 Foliation (inclined, vertical, horizontal)
 Rodding (inclined, vertical, horizontal)
 Joints (inclined, vertical)
 Anticline or synform (upright, overturned)
 Splay or system (upright)
 Fault, unknown sense of displacement (defined, approximate, assumed)
 Contraction fault, teeth on upfold side (defined, approximate, assumed)
 Extension fault (solid circle on downthrown side) (defined, approximate, assumed)
 Strike-slip fault (arrows indicate direction of relative movement) (assumed)
 Lineament
 Gossan, rusty zone
 Mineral locality, numbers refer to Yukon Milefile and Appendix 4
 Fossil locality, numbers refer to appended fossil list; time periods are abbreviated (e.g. early, m - middle, l - late; Cm - Cambrian; Oo - Ordovician; S - Silurian; Dv - Devonian; Ms - Mississippian; Cq - Carboniferous; Tr - Triassic)
 Radiometric age determination sample locality
 KAr date on biotite, hornblende and rock in Ma

Author: D.J. Timpelman-Kuit
 Geology by D.J. Timpelman-Kuit, Geological Survey of Canada (1974-1977) with contributions from previous work by J.A. Roddick, L.H. Green, and J.O. Wheeler
 Digital cartography by R.B. Cocking, Data Dissemination Division (DDD)
 Any revisions or additional geological information known to the user would be welcomed by the Geological Survey of Canada
 Digital base map from data compiled by Geomatics Canada, modified by DDD
 Some geographical names subject to revision
 Mean Magnetic declination 2012, 2° 14' E, decreasing 23.7 annually
 Elevations in feet above mean sea level

OPEN FILE
 DOSSIER PUBLIC
5487
 GEOLOGICAL SURVEY OF CANADA
 COMMISSION GÉOLOGIQUE DU CANADA
 2012
 SHEET 8 OF 13
 FEUILLE 8 DE 13

Publications in this series have not been edited by the author.
 Les publications de cette série n'ont pas été révisées par l'auteur.
 2012
 FEUILLE 8 DE 13