



OPEN FILE 5487
BEDROCK GEOLOGY
RAM CREEK
YUKON

Scale 1:50 000 / Échelle 1:50 000

UNIVERSAL TRANSVERSE MERCATOR PROJECTION
North American Datum 1983
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PROJECTION TRANSVERSE UNIVERSALE DE MERCAUTOR
Système de référence géodésique nord-américain, 1983
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NATIONAL TERRITORIAL SYSTEM REFERENCE AND DATA
Système de référence géodésique du Canada 1983

- QUATERNARY**
Q Unconsolidated sediments: alluvium, glacioluvial deposits, moraine, fill, landslide debris and fans, talus.
- MID-CRETACEOUS**
Kqtp Light grey and green quartz-feldspar porphyry dykes; aphanitic to very fine-grained quartz-feldspathic groundmass stained with small subhedral, clear quartz and white feldspar phenocrysts north of Mt. St. Cyr and near Fox Mountain.
- uKi Dark brown weathering, dark green, biotite lamprophyre dykes; locally between Porcupine and Groundhog Creeks.
- 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 FPCs; are arbitrary; lacks small xenoliths but includes large screens of metamorphic rocks.
- Kqpm BIG SALMON BATHOLITH: moderately resistant, blocky, light grey weathering, homogeneous, porphyritic (pinkish potassic feldspar), medium-grained biotite-quartz monzonite; locally exhibits a strong inherited fabric; boundaries with FPCs are arbitrary; lacks small xenoliths but includes large screens of metamorphic rocks.
- ALLOCHTHONOUS ROCKS**
CPSCV Resistant, dark grey weathering, dark green, fine-grained amphibolite and amphibolite gneiss, less metamorphosed gneiss and altered basalt; includes minor altered gabbro; largely massive and structureless, but a penetrative faser fabric is developed above the basal thrust and in places within the mass (e.g. north side of Mt. St. Cyr).
- CPSCuB Resistant, dun-brown weathering, dunite, peridotite, pyroxenite and serpentinitized equivalents; northwest of Big Salmon Lake.
- UPPER TRIASSIC**
uTh Dark grey and buff weathering, massive, thin bedded, biotitic limestone with buff weathering; minor and brown argillite with minor interbedded argillaceous limestone; strongly dolomitized locally between Tintina Trench and Porcupine syncline close to uTh.
- uThc Resistant, medium to light grey, massive to thick-bedded limestone including lime and quartz sandstone; occurs as lenses within uTh.
- PERMIAN**
PS STARR FORMATION: recessive, dark grey weathering, thin bedded, interbedded buff weathering siltstone and brown argillite with minor interbedded argillaceous limestone; strongly dolomitized locally between Tintina Trench and Porcupine syncline close to uTh.
- MISSISSIPPIAN**
SEAGULL GROUP
FELSIC VOLCANIC FORMATION
MFV Heterogeneous, lapilli and sand sized tuff, volcanic breccia and flow rocks ranging from trachyte to andesite; weathering rusty, black, white and orange black; argillaceous silt and siliceous pale grey and pale green cherty tuff locally abundant; minor finely crystalline light limestone; locally includes abundant trachyte dykes; locally highly gneissic; weakly sericitized and commonly foliated to that primary features are masked; includes maroon and green intermediate tuffs and flows (MFVb); may include MFV-T undifferentiated between Seagull Creek and upper Hooke River.
- MFVb Resistant, dark grey and locally rusty weathering, massive to weakly foliated; green and maroon, cherty to sandy buff and volcanic breccia; minor flow rocks of intermediate composition; includes MFV and MC undifferentiated; Seagull Creek to Hooke River.
- MFV-T TRACHYTE MEMBER: resistant, massive, medium- to fine-grained equigranular quartz monzonite; locally includes abundant trachyte dykes; locally includes potassic feldspar in fairly fresh perthite; includes minor MFV undifferentiated between McConnell River and Seagull Creek.
- MC Cherty tuff formation: rusty orange weathering, cherty, apple green and dark grey, thin bedded chert and cherty tuff; may include minor MFV undifferentiated between Porcupine Syncline and Tintina Trench.
- MCs Recessive, black, siliceous slate; common weathering with rusty streaks; includes MC, MCV, MFVb, and MFV undifferentiated; gradational contact with MFVb and MFV locally within MC.
- MCv Resistant, rusty orange weathering, thin bedded tuff, siliceous tuff and tuffaceous chert; gradational between MFVb and MC.
- UPPER DEVONIAN AND MISSISSIPPIAN**
BLACK SLATE FORMATION
uDMBS Recessive, thin bedded, black, siliceous slate with minor interbedded chert-grain greywacke and chert-granule grit weathering, black and blue-black with rusty streaks; weathers black and blue-black with rusty streaks; includes lenses of MFV undifferentiated; may include MC undifferentiated; includes interbedded, dark grey bantz; includes PS undifferentiated.
- uDMBSb Light grey weathering, platy, medium to dark grey, thin bedded, field, coarsely crinoidal limestone; buff weathering, thick bedded, medium grey, coarsely crystalline, field limestone; includes minor calcareous slate; occurs as lenses in uDMBS.
- uDMBSw Resistant, brown weathering, thick bedded, fine- to coarse-grained, chert- and quartz-grain greywacke; may include MFV undifferentiated; occurs as lenses in uDMBS.
- DEVONIAN AND MISSISSIPPIAN**
UPPER HARVEY GROUP
DMSS SILICEOUS SLATE FORMATION: moderately resistant, black, graphitic, siliceous and gneissic slate; weathers black with rusty streaks; includes COC undifferentiated; gradational to DMAS; southwest side of Tintina Trench.
- DMAS ANKERITE SLATE FORMATION: orange-brown weathering, recessive, thin bedded, medium to dark grey, calcareous and ankeritic shale, siltstone and argillaceous limestone; includes slate and phyllitic slate; includes uDMAS; southwest side of Tintina Trench.
- DMAS1 Bright orange weathering, medium grey, ankeritic shale, slate and phyllitic slate; southwest side of Tintina Trench.
- DEVONIAN (UPPER?)**
Dvc Orange weathering, pale green, resistant calcic-amygdaloidal basalt, basaltic tuff and breccia; intercalated crinoidal calcarenite; includes DO undifferentiated; includes calcareous brown-weathering slate within DMAS.
- DC Light grey weathering, platy, medium to dark grey, thin bedded, field, crinoidal limestone and buff weathering, thick bedded, medium grey, coarsely crystalline, field limestone; includes minor calcareous slate.
- ORDOVICIAN TO DEVONIAN**
DANGER FORMATION
ODD-R MOUNT ROSS MEMBER: orange buff weathering, resistant, medium grey, thin to medium-grained, 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.
- ODD-S SOOTY SLATE MEMBER: 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 crinoids; gradational to DMAS; southwest side of Tintina Trench.
- ORDOVICIAN TO DEVONIAN**
ASHKIN GROUP
muDg GREY LIMESTONE FORMATION: resistant, blue-grey weathering, medium grey, medium to thin bedded, field, biotitic limestone.
- UPPER SILURIAN TO DEVONIAN**
HOGG FORMATION
Resistant, medium grey to buff weathering, medium to thick bedded orthoquartzite, dolomitic sandstone and sandy dolomite; gradational to SDh; includes SDh and SDhD undifferentiated.
- SDH Silvery white and light grey weathering, medium to thick bedded, light buff, medium grained, massive orthoquartzite commonly with dolomitic cement; minor interbedded sandy dolomite; laterally gradational to OOD and SDv; upper part of SDh.
- SDHd Resistant, buff weathering, medium bedded to massive, medium grey, laminated to siltstone, dolomite; minor sandy dolomite; generally low in SDh.
- SDHr Resistant, thick bedded to massive, brilliant red to orange weathering, coarsely siltstone; red dolomite; minor sandy dolomite; dolomitized equivalent of SDh.
- 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.
- SDPy Resistant, yellow weathering, light grey, thick bedded dolomite; includes muDg undifferentiated; highest member of Porcupine Formation.
- SDPq White and grey weathering, blocky, medium to thick bedded, light buff, medium grained, mature orthoquartzite, commonly with dolomite cement, minor interbedded sandy dolomite; laterally gradational to SDh and to SDhS.
- SDP4 Resistant, buff to orange-brown weathering, thin bedded, silty to finely sandy dolomite, fourth member of the Porcupine Formation in Porcupine syncline.
- SDP2 Resistant, orange brown weathering, medium bedded silty to finely sandy dolomite; second member of Porcupine Formation in Porcupine syncline.
- SDPd Resistant, light grey, massive dolomite; undifferentiated dolomite of Porcupine Formation.
- UPPER SILURIAN TO DEVONIAN**
BANTE MOUNTAIN FORMATION
SDB Resistant, medium grey to buff and light orange weathering, medium- to thick bedded dolomite, sandy dolomite and dolomitic sandstone; gradational to SDh and SDP; includes quartzite and dolomitic mudstone undifferentiated southwest and northeast of Porcupine Syncline.
- SDBc Recessive, medium grey weathering, thin bedded to platy, silty limestone; near Katza River.
- SDbd Resistant, light grey, buff and light orange weathering, medium bedded dolomitic mudstone to siltstone dolomite and dolomitized calcarenite, with minor silty and sandy dolomite; vugs, birds-eye texture, fenestral cavities, distribution burrows, nodules and mudcracks common; undifferentiated dolomite of Bante Mountain Formation.
- SDBq Recessive, thick bedded, orange weathering, dolomite-cemented quartz sandstone and sandy dolomite; occurs only near Katza River; equivalent to SDh.
- SDbr Resistant, thick bedded to massive, brilliant red to orange weathering, coarsely siltstone; minor sandy dolomite; gradational with SDh; altered equivalent of Bante Mountain Formation.
- ORDOVICIAN AND SILURIAN**
PLATY SILTSTONE FORMATION
SP Tan, medium grey, and locally deep maroon weathering; light grey to buff, thin bedded to platy, dolomitic siltstone, very fine-grained dolomitic sandstone and minor silty dolomite.
- SPd Resistant, buff to brown weathering, thin bedded to platy, silty and sandy dolomite; laterally gradational to, and occurs within, SP.
- SPv ORANGE VOLCANIC MEMBER: orange weathering, recessive, maroon and green, lapilli tuff and volcanic breccia with lime cement; minor interbedded biotitic dolomite.
- UPPER CAMBRIAN AND ORDOVICIAN**
LOWER HARVEY GROUP
COC CANVON FORMATION: resistant, brown weathering, thinly interbedded shale, calcareous siltstone and argillaceous limestone; metamorphosed to biotite phyllite, tremolite-calcite quartzite and impure marble; southwest of Tintina Trench.
- CAMBRIAN, ORDOVICIAN AND SILURIAN**
KECHIKA GROUP
ORDOVICIAN AND SILURIAN
MAGINDY FORMATION: recessive, black locally calcareous, fissile graphitic slate; includes thin silt, flows and dikes of dark green basalt; includes SHv rarely includes lenses or large blocks of argill laminated dolomite; includes white orthoquartzite beds high in the unit near Hooke River; grades upward into SP and laterally into uCOG and uCOR; southwest of Tintina Trench.
- OSM Resistant, buff to brown weathering, massive, medium grey, medium to fine-grained calcareous shale and silty limestone or calcareous siltstone; proportion of carbonate to clastic material varies; includes silty and phyllitic equivalents; distinctive red weathering quartzite lenses; are common; locally includes olive green tuff in layers a few metres thick; laterally gradational to uCOG.
- uCOR Olive-green tuff with individual beds a few metres thick; laterally gradational to uCOG.
- uCORv Olive-green tuff with individual beds a few metres thick; laterally gradational to uCOG.
- UPPER CAMBRIAN AND ORDOVICIAN**
CLOUTIER FORMATION
uCOc Medium grey, recessive weathering, lustrous, dark grey chlorite-muscovite-quartz phyllite with good cleavage; foliation across bedding; includes abundant lenses of 'greenstone' (uCOG) undifferentiated, which represents metamorphosed lenses of uCOG; COCvb grades laterally to uCOG and uCOR; near Katza River and Cloutier Creek.
- uCOcv Olive-green, massive, sandy and fine-grained tuff and tuffaceous slate, commonly strongly foliated and metamorphosed to greenschist facies; includes chlorite phyllite and chert; abundant in uCOc.
- COCvb Resistant, dark weathering, massive, dark green and dark maroon basalt with calcite amygdales; locally strongly foliated chlorite schist with argillaceous replacement; chert patches; includes uCOcv undifferentiated.
- UPPER CAMBRIAN AND ORDOVICIAN**
GROUNDHOG FORMATION
uCOg Medium grey and recessive weathering, lustrous, medium grey chlorite-muscovite-quartz phyllite and silty phyllite, locally calcareous; locally includes lenses, silt and flows of olive-green to dark green basalt and basaltic tuff; uCOGv may include OSM undifferentiated; grades laterally to uCOG and uCOR; differs from uCOG in having less volcanic component; near Groundhog and Seagull Creeks.
- uCOGv Olive-green, sandy and fine-grained tuff and tuffaceous slate, commonly strongly foliated and metamorphosed to greenschist facies; equivalents include chlorite phyllite and chert; abundant but only locally differentiated in uCOG.
- uCOGb Resistant, dark grey weathering, massive, siltstone, dark green, medium- to fine-grained calcareous or diorite silt with argillaceous margins; between Groundhog Creek and Lapie River.
- LOWER CAMBRIAN**
KATZA GROUP
MCCONNELL RIVER FORMATION
ICM Recessive weathering, grey, thin bedded, calcareous argillite, limestone and calcareous siltstone; locally includes calcareous diorite schist and thinly bedded quartz-tremolite-diopside assemblage near Katza River; ICMT; hornblende equivalent.
- ICM-P PYRITIC SLATE MEMBER: recessive weathering, thinly laminated, graphitic, black pyritic slate; upper member of McConnell River Formation, near Katza River.
- ICM-W WHITE CREEK MEMBER: resistant, thick bedded to massive, medium grey to blue-grey limestone and argillaceous limestone; includes ankeritic white bulk, undifferentiated; generally occurs in the upper half of ICM; Katza River and Lapie Creek.
- ICMd Orange red weathering, resistant, massive, coarsely crystalline red siltstone dolomite; large, irregular shaped lenses within ICM and ICMw.
- ICM-S SILTY LIME MUDSTONE MEMBER: resistant, black to dark grey, thin bedded and laminated, silty limestone; lowest member of ICM; near Katza River.
- ICM-SC SURVIV LIMESTONE MEMBER: white weathering, resistant marble; recrystallized lime mud and biotitic limestone; gradational with, and fine metamorphic equivalent of, ICM-W; near Scurry Creek.
- PASS PEAK FORMATION
ICP Dark weathering, buff khaki-green, thin bedded, silty slate and shaly quartzite; locally includes medium- to coarse-grained, poorly sorted felspathic sandstone to orthoquartzite; laterally gradational to PICP-L; a metamorphosed equivalent; ICPH; hornblende equivalent.
- PICP-L LAPIE MEMBER: Resistant, light grey weathering, light grey, massive limestone and marble; near Lapie Lakes.
- Pn+ Injection migmatite of muscovite-biotite gneiss, augen gneiss and schist with silty dikes and small plugs of fine-grained biotite granite, biotite-quartz monzonite, epite and pegmatite; proportions vary. Gradational with ICP and ICM; contacts with Kqm and Kqpm are based on the proportion of metamorphic to igneous rock.
- NORTHEAST OF TINTINA FAULT**
SEDIMENTARY AND EXTRUSIVE ROCKS
QTVb Recessive, brown weathering, brown fresh basalt and basalt breccia; lower Starr Creek.
- LATE TERTIARY OR QUATERNARY**
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 siltstone 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 south of Ross River.
- INTRUSIVE ROCKS**
Tqtp LAPIE RIVER PORPHYRY: Buff weathering, white rhyolite with small quartz and feldspar phenocrysts in an extremely fine grained, kaolinitized groundmass; in Tintina Trench southwest of Ross River.
- CRETACEOUS**
Kqm Resistant, blocky weathering, mainly equigranular and medium grained, but locally porphyritic (white potassic feldspar), homogeneous, grey, biotite-quartz monzonite and lesser granodiorite; contacts with FMs are arbitrary and based on the proportion of igneous rock to the schist.
- ALLOCHTHONOUS ROCKS**
CPAv Resistant, dark grey weathering, massive, dark green, basaltic gneiss and amphibolite; minor augite porphyry; includes CPAb undifferentiated.
- CPAub Resistant, dun-brown weathering, dunite, peridotite, pyroxenite and serpentinitized equivalents; includes CPAC undifferentiated; locally within CPAv.
- CPAC Resistant, orange-weathering, white, crystalline limestone and marble; at Hooke and Lapie Canyons.
- CPA1 Recessive, Jasper-red and apple-green chert and cherty tuff; includes CPAn.
- PALEOZOIC OR MESOZOIC**
NISUTLIN ALLOCHTHONOUS ASSEMBLAGE
PMW Black, siliceous phyllonite and medium green amphibolite-chlorite phyllite; locally includes much interbedded gneiss and pebbly greywacke containing clasts of blue quartz; white potassic feldspar and slate chips; locally includes thin, black marble lenses; most rocks are strongly sheared.
- PMNc White weathering, resistant, massive, light grey, recrystallized crinoidal limestone; commonly has well developed faser texture and grades into marble biotite monzonite.
- PMNog Resistant, medium grey, chert- and quartz-pebble conglomerate with minor interbedded black slate; mostly the rocks have a well developed faser fabric so that they grade into PMW.
- PROTEROZOIC OR CAMBRIAN**
ONICA CRYSTALLINE COMPLEX
MIMV Complex: Blocky, medium grey weathering, biotite-muscovite-quartz feldspar augen gneiss and quartz monzonite composition with minor interfoliated biotite-muscovite-quartz schist.
- SYMBOLS**
Limit of outcrop
Geological boundary (defined, approximate, assumed)
Bedding orientation (inclined, vertical, horizontal)
Foliation (inclined, vertical, horizontal)
Roofing, crinkles, mineral lineation, or minor fold axis
Joints (inclined, vertical)
Anticline or syncline (upright, overturned)
Syncline or synform (upright)
Fault, unknown sense of displacement (defined, approximate, assumed)
Contraction fault, teeth on upthrust side (defined, approximate, assumed)
Extension fault (solid circle on downthrust side (defined, approximate, assumed))
Strike-slip fault (arrows indicate direction of relative movement) (assumed)
Lineament
Gossan, rusty zone
Mineral locality; numbers refer to Yukon Minfile and Appendix 4
Fossil locality; numbers refer to appended fossil list; time periods are abbreviated (e - early, m - middle, l - late; Cm - Cambrian; Or - Ordovician; Sp - Silurian; Dv - Devonian; M - Mississippian; Co - Carboniferous; Tr - Triassic)
Radiometric age determination sample locality
K/Ar date on biotite-b, hornblende-h and rock-r in Ma



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