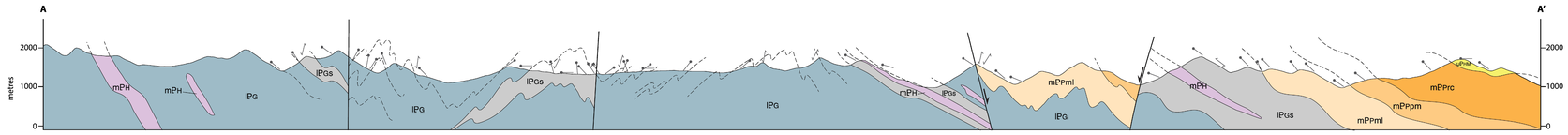
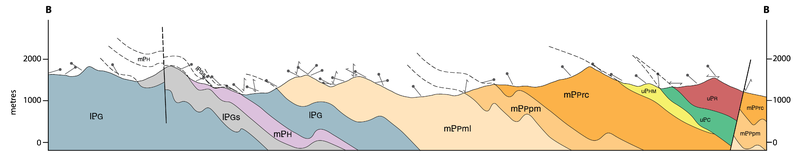
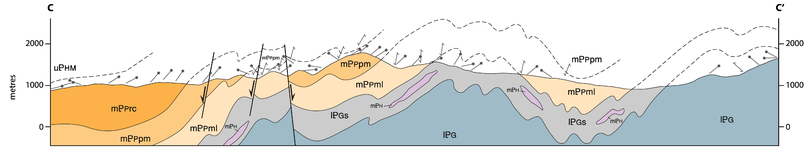
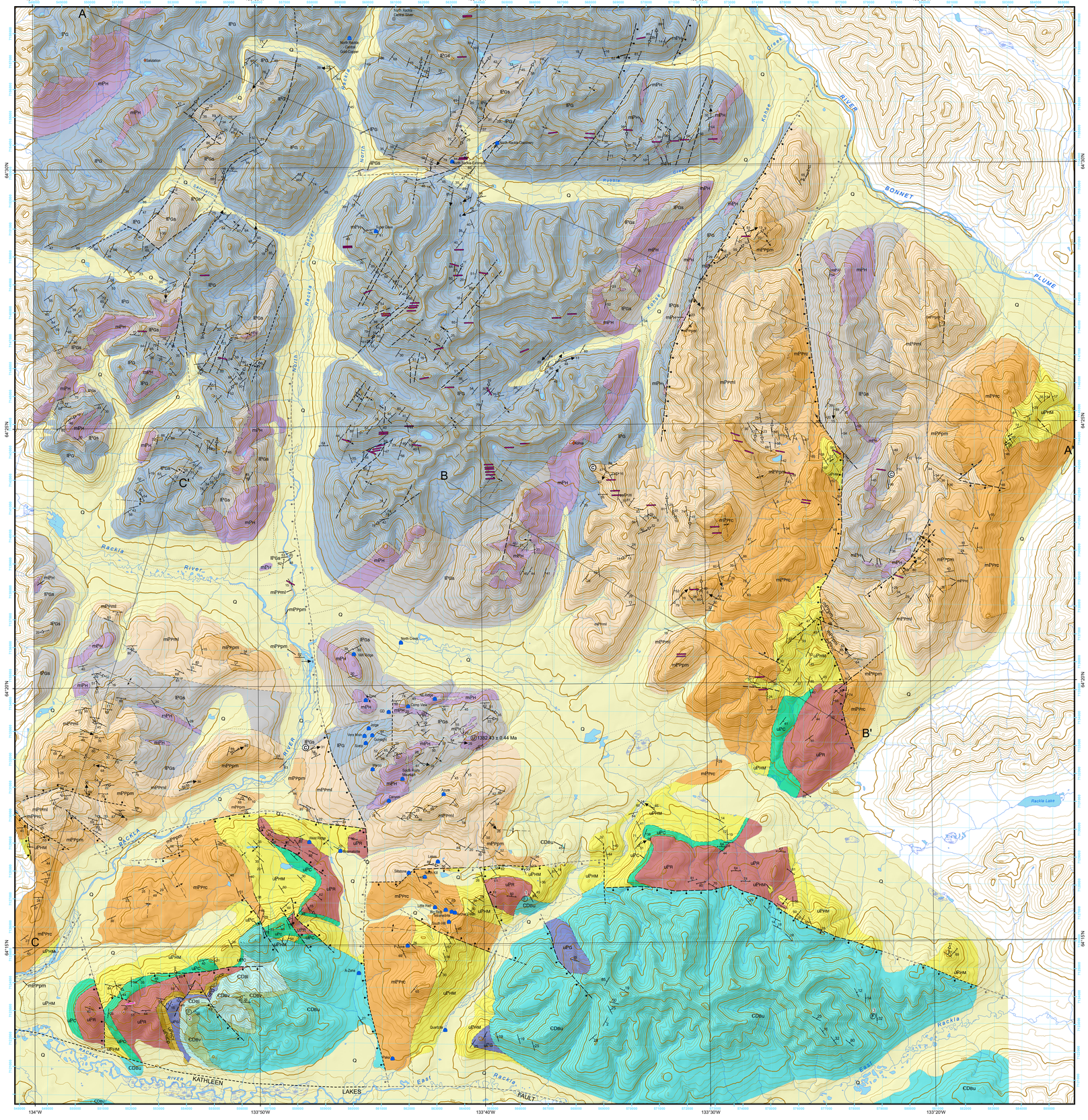








1:50 000-scale topographic base data produced by CENTRE FOR TOPOGRAPHIC INFORMATION, NATURAL RESOURCES CANADA

30 metre shaded relief from GEOMATICS YUKON www.geomaticsyukon.ca

ONE THOUSAND METRE GRID
Universal Transverse Mercator Projection
North American Datum 1983
Zone 8

BEDROCK GEOLOGY

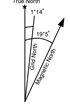
RUSTY MOUNTAIN AND BONNET PLUME PASS (WESTERN HALF)

YUKON

SCALE 1:50 000

0 1 2 3 4 5
Kilometres

CONTOUR INTERVAL 20 METRES
Elevations in metres above Mean Sea Level



Use diagram only to obtain numerical values
APPROXIMATE MEAN DECLINATION 2016
FOR CENTRE OF MAP

106D/9 MCCLUSKY LAKE	106C/12 GILLESPIE CREEK	106C/11 CORN CREEK
106D/8 MOUNT GOOD	106C/5 RUSTY MOUNTAIN	106C/6 BONNET PLUME PASS
106D/1 MOUNT WESTMAN	106C/4 MOUNT MERYYN	106C/3 MOUNT FERRELL

QUATERNARY

Q — *unconsolidated alluvial, colluvial, fluvial, and glacial deposits*

IGNEOUS ROCKS

MESOPROTEROZOIC

HART RIVER INTRUSIONS

mPH — *resistant, medium grey weathering, fine to medium-grained greenish-grey mafic sills and dikes; weathered surfaces commonly weather orange-pink; quartz phenocrysts are common (ca. 1.38 Ga)*

LAYERED ROCKS

CAMBRIAN–DEVONIAN

BOUVETTE FORMATION

CDBu — *UPPER MEMBER: light to medium grey weathering dolostone; commonly thickly bedded; locally fossiliferous*

CDBv — *VOLCANICLASTIC MEMBER: grey, green and orange weathering volcaniclastic sandstone and conglomerate; locally fossiliferous*

CDBl — *LOWER MEMBER: light to medium grey weathering dolostone*

EDIACARAN

RACKLA GROUP

uPB — *BLUEFLOWER FORMATION: brown weathering shale and siltstone*

uPG — *GAMETRAIL FORMATION: Well bedded and laminated grey, buff, maroon, yellow-orange, and green weathering silty lime and dolomudstone*

CRYOGENIAN–EDIACARAN

HAY CREEK GROUP

uPHCr — *RAVENSTHROAT FORMATION: grey and cream weathering dolostone; local chaotic bedding and tepee structures*

uPHCp — *MOUNT PROFEIT DOLOSTONE/ICE BROOK FORMATION: grey and cream weathering dolostone; locally light grey weathered carbonate-clast diamictite*

CRYOGENIAN

RAPITAN GROUP

uPR — *orange, maroon and brown weathering clast to matrix-supported conglomerate and diamictite; maroon, orange, grey and green shale, siltstone and sandstone intervals*

TONIAN

CALLISON LAKE FORMATION

uPC — *light to medium grey weathering dolostone with irregular chert layers; commonly laminated; intervals of silica replaced oolitic grainstone; local hematite-cemented conglomerate*

HEMATITE CREEK GROUP

uPHM — *laminated, medium to very thickly bedded grey, purple, and orange weathering sandstone; shale, siltstone, limestone, red-weathering stromatolitic dolostone, and orange-weathering dolostone and dolomitic siltstone*

MESOPROTEROZOIC

PINGUICULA GROUP

mPPrc — *RUBBLE CREEK FORMATION: dark and light grey laminated dolostone with local zebra textures and intraformational breccia; discontinuous intervals of recessive, brown and grey weathering limestone with minor interbedded siltstone, shale, and dolostone; top ~50 metres includes tan, orange, and pink weathering laminated dolostone with sparse dark chert nodules*

mPPpm — *PASS MOUNTAIN FORMATION: thin to medium-bedded, orange and grey weathering weathering dolomitic limestone and calcareous dolostone; commonly cross-laminated; brown weathering dolomitic and calcareous shale and siltstone at base*

mPPml — *MOUNT LANDREVILLE FORMATION: grey, green, blue and brown weathering shale, mudstone, siltstone and fine-grained sandstone; locally interbedded matrix supported polymictic conglomerate and medium to coarse-grained sandstone at base*

PALEOPROTEROZOIC

GILLESPIE LAKE GROUP

lPGs — *thin to medium-bedded, variably calcareous-dolomitic, tan, green, blue, brown, red-orange, grey and black weathering shale, siltstone and fine-grained sandstone; commonly planar parallel and less commonly wavy laminted; minor interbedded silty limestone and dolostone*

lPG — *resistant, thin to thick-bedded, orange, red, and grey weathering silty dolostone grainstone, mudstone and boundstone; locally interbeddded with light grey limestone; commonly microbically laminated; locally stromatolitic; contains intervals of recessive laminated to thinly bedded, carbonate mudstone and grainstone with minor interbedded shale and siltstone*

SYMBOLS

geologic contacts (defined, approximate, inferred, covered)
fault; movement not known (defined, approximate, inferred, covered)
normal fault (defined, approximate, inferred, covered)
sinistral strike-slip fault (defined, approximate, inferred, covered)
anticline
syncline
bedding (upright, overturned) 34 74
penetrative cleavage (inclined) 83
fold axial plane (inclined) 68
intersection lineation 64
fold axis (dominant phase) 12
field station
fossil collection P 2
zircon U-Pb CA-TIMS date U 1382.43 ± 0.44 Ma
basal Pinguicula conglomerate C
mafic dike
apparent dip of bedding in cross section
apparent dip of cleavage in cross section

MINERAL OCCURRENCES

MINFILE #	Name	Symbol	Status	Commodity	Deposit Type
106C 001	Kohse	♦	Prospect	Cu	Vein Cu+/-Ag Quartz
106C 002	Salutation	♦	Showing	Cu-Ag-Au	Vein Cu+/-Ag Quartz
106C 083	Vera Main	■	Deposit	Pb-Zn-Ag	MVT/Manto
106C 085	Little Red	■	Drilled Prospect	Pb-Zn-Ag-Cu	MVT/Manto
106C 088	Super Dave	■	Showing	Cu-Ag-Pb	MVT/Manto
106C 108	North Rackla-Extension	■	Drilled Prospect	Pb-Zn-Ag-Cu-Mn-Au	MVT/Manto
106C 110	North Rackla-Discovery	■	Drilled Prospect	Pb-Zn-Ag-Cu	MVT/Manto
106C 112	North Rackla - Central Gold-Copper	■	Showing	Au-Ag-Pb-Zn	MVT/Manto
106C 113	North Rackla - Central Silver	●	Showing	Pb-Zn-Ag-Cu	Unknown
106C 114	Gunsight	■	Drilled Prospect	Pb-Zn-Ag	MVT/Manto
106C 115	Big Red	■	Drilled Prospect	Zn-Pb-Ag	MVT/Manto
106C 116	Tetrahedrite	■	Drilled Prospect	Pb-Zn-Ag	MVT/Manto
106C 117	South Hill	■	Drilled Prospect	Zn-Pb-Ag	MVT/Manto
106C 118	Lakes	■	Prospect	Zn-Pb-Ag	MVT/Manto
106C 119	Stromatolite	■	Prospect	Pb-Ag-Zn	MVT/Manto
106C 131	A-Zone	■	Showing	Pb-Zn-Ag	MVT/Manto
106C 132	Paka	■	Drilled Prospect	Pb-Zn-Ag	MVT/Manto
106C 133	Quartzite	■	Prospect	Pb-Zn-Ag	MVT/Manto
106C 134	P-Zone	■	Prospect	Pb-Zn-Ag-Cu	MVT/Manto
106C 135	Siltstone	■	Deposit	Pb-Zn-Ag	MVT/Manto
106C 136	West Ridge	■	Showing	Pb-Zn-Ag	MVT/Manto
106C 137	South Rusty Mountain	■	Drilled Prospect	Pb-Zn-Ag	MVT/Manto
106C 138	Marco	■	Showing	Pb-Zn-Ag	MVT/Manto
106C 139	Scarp	■	Drilled Prospect	Pb-Zn-Ag	MVT/Manto
106C 140	Jorge	■	Drilled Prospect	Pb-Zn-Ag	MVT/Manto
106C 141	GD	■	Showing	Pb-Zn-Ag	MVT/Manto
106C 142	Camp View	■	Drilled Prospect	Pb-Zn-Ag	MVT/Manto
106C 143	NE Ridge	■	Drilled Prospect	Pb-Zn-Ag	MVT/Manto
106C 144	NW Ridge	■	Showing	Pb-Zn-Ag	MVT/Manto
106C 145	North Creek	■	Showing	Pb-Zn-Ag	MVT/Manto
106C 146	V-Zone	■	Prospect	Pb-Zn-Ag	MVT/Manto
106C 147	Canyon	■	Showing	Pb-Zn-Ag-Cu	MVT/Manto
106C 148	Azure	■	Showing	Pb-Zn-Ag	MVT/Manto
106C 149	Archie's Vein	■	Drilled Prospect	Pb-Zn-Ag	MVT/Manto
106C 150	North Kill	■	Drilled Prospect	Pb-Zn-Ag	MVT/Manto

FOSSIL COLLECTIONS

Map #	Age	Map Unit	Station	Fossil Type	Author	Date
1	Silurian	CDBu	19TA006	indeterminate solitary coral, tabulate coral, gastropod	R.B. BLODGETT	2020
2	Middle Ordovician–Early Silurian	CDBv	19TA091	brachiopods, indeterminate solitary rugose corals	R.B. BLODGETT	2020
3	Ordovician, likely Early Ordovician	CDBu	12-JQ-023	gastropods	R.B. BLODGETT	2013

NOTES

Geology by T. Ambrose 2019-2021 with additional information from Eaton (1999) and Colpron et al. (2013). The geology of this area is described in more detail in Ambrose (2022). Thanks to Cantex Mine Development Corporation for logistical support in the field.

Digital cartography and drafting by Tyler Ambrose, Yukon Geological Survey.

Any revisions or additional geological information known to the user would be welcomed by the Yukon Geological Survey.

Paper copies of this map may be obtained from the Yukon Geological Survey, Energy, Mines and Resources, Government of Yukon, P.O. Box 2703 (K-102), Whitehorse, Yukon, Y1A 2C6. Email: geology@yukon.ca.

A digital PDF of this map may be accessed free of charge from the Yukon Geological Survey website: https://data.geology.gov.yk.ca

RECCOMENDED CITATION

Ambrose, T., 2022. Preliminary bedrock geology map of the Rusty Mountain and Bonnet Plume Pass areas, southern Wernecke Mountains, Yukon (NTS 106C/3, 4, 5, 6, 11, 12 and 106D/1, 8). Yukon Geological Survey, Open File 2022-5, scale 1:50 000.

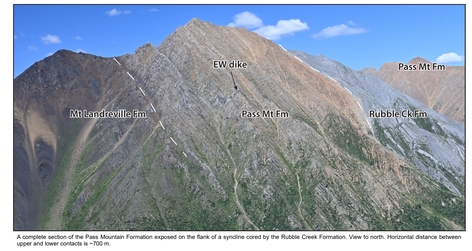
REFERENCES

Ambrose, T., 2022. Update on the bedrock geology of the Rusty Mountain and Bonnet Plume Pass (west half) areas. In: Yukon Exploration and Geology 2021, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 13–36.

Colpron, M., Moynihan, D., Israel, S. and Abbott, G., 2013. Geological map of the Rackla belt, east-central Yukon (NTS 106C/1-4, 106D/1). Yukon Geological Survey, Open File 2013-13, 1:50 000 scale, 5 maps and legend.

Eaton, J., 1999. Geochemical, Geological and Geophysical Assessment Report for the Val, Vera, Rusty, KLA, Nad and Craig Claims, Manson Creek Resources Ltd. Yukon Energy, Mines and Resources Assessment Report 093568.

Yukon Geological Survey, 2021. Yukon MINFILE – A database of mineral occurrences. Yukon Geological Survey, https://data.geology.gov.yk.ca/, [accessed: March, 3, 2022].



A complete section of the Pass Mountain Formation exposed on the flank of a syncline cored by the Rubble Creek Formation. View to north. Horizontal distance between upper and lower contacts is ~700 m.

Yukon Geological Survey
Energy, Mines and Resources
Government of Yukon

Open File 2022-5

Preliminary bedrock geology map of the Rusty Mountain and Bonnet Plume Pass areas, southern Wernecke Mountains, Yukon (NTS 106C/3, 4, 5, 6, 11, 12 and 106D/1, 8) (1: 50 000 scale)

by

Tyler Ambrose