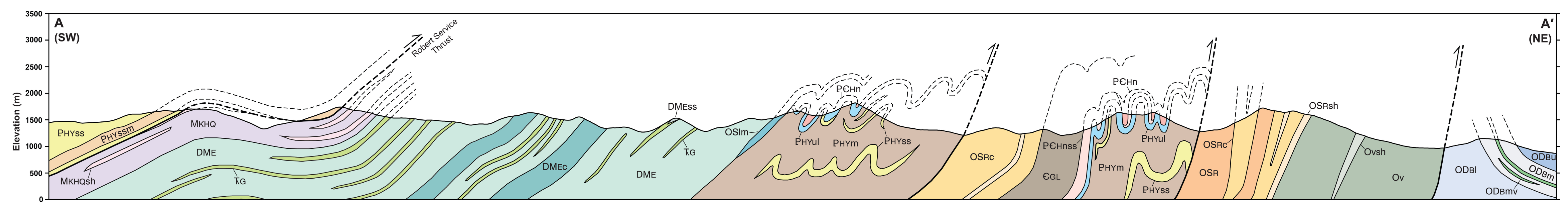
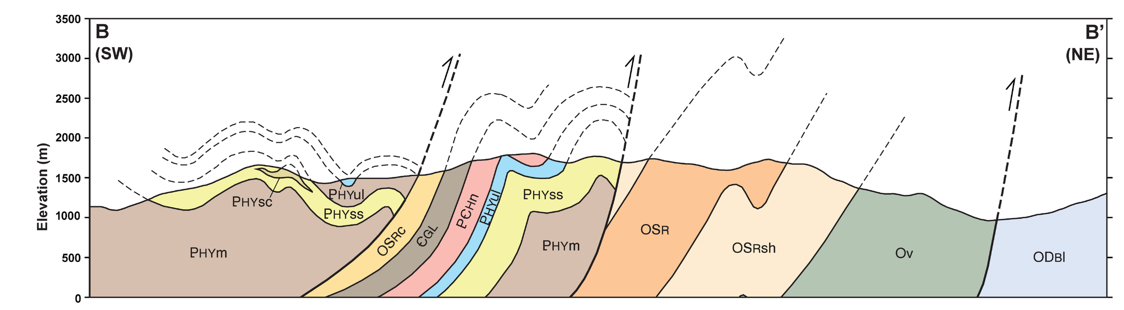


# LEGEND

## QUATERNARY

| | |
|---|---|
| Q | *Unconsolidated alluvial, colluvial, fluvial and glacial deposits* |

## TRIASSIC

| | |
|---|---|
| TG | *GALENA SUITE: Dark grey to dark green-weathered, dark green gabbro sills; medium-grained; locally fine-grained with plagioclase phenocrysts* |

## MISSISSIPPIAN

### TSICHU GROUP

| | |
|---|---|
| MKHQ | *KENO HILL QUARTZITE: Medium to thick-bedded grey quartz arenite; medium-grained, crystalline texture; local interbeds of buff to orange-weathered, medium-grained quartz-rich sandstone with dolomite cement; rare interbeds of dark grey shale* |
| MKHQsh | *KENO HILL QUARTZITE, shale member: Dark grey shale; thinly interbedded to laminated; locally light to dark green weathered; locally rich in chlorite ± white mica (schistose); interstratified with Keno Hill quartzite* |

## DEVONIAN TO MISSISSIPPIAN

### EARN GROUP

| | |
|---|---|
| DME | *UNDIVIDED: Dark grey shale; thinly bedded to laminated; local thin interbeds of grey-brown siltstone ranging to very fine grained sandstone* |
| DMEc | *CARBONATE UNIT: Rhythmically interbedded orange-weathered dolostone, white-weathered fine-grained sandstone and dark grey to dark green shale, with local chert interbeds; thinly bedded, locally medium bedded* |
| DMEss | *SANDSTONE UNIT: Brown-weathered, fine-to-medium-grained, grey-brown quartz arenite; medium-bedded; shiny, sugary-textured fresh surface* |

## DEVONIAN(?)

| | |
|---|---|
| Dqm | *Medium-grained, foliated quartz monzonite with carbonate-quartz alteration* |

## ORDOVICIAN TO DEVONIAN(?)

### BOUVETTE FORMATION

| | |
|---|---|
| ODBu | *UPPER UNIT: Pale grey to white-weathered, thick-bedded to massive dolostone; fine-to-medium-grained dolomitic sandstone and mudstone; lesser pebble conglomerate with dolostone, mudstone and rare limestone clasts; two-hole and star crinoids are common* |
| ODBmv | *MIDDLE UNIT, volcanic member: Dark green to brown-weathered vesicular basalt; volcanic sandstone and grit* |
| ODBm | *MIDDLE UNIT, undivided: Thin to medium-bedded, grey and buff-weathered silty limestone; massive, white limestone; grey to light grey bioclastic limestone; local interbedded pale yellow and grey limestone and dolostone* |
| ODBl | *LOWER UNIT: Light grey weathered, massive to medium-bedded, variably dolomitized pale grey limestone, dolostone, oncolitic dolostone; light grey quartzite and sandy dolostone* |

## ORDOVICIAN TO SILURIAN(?)

| | |
|---|---|
| OSlm | *Fine-grained, medium-bedded, light grey weathered, fetid grey limestone; commonly contains silica nodules; local fossiliferous beds; basal pebble conglomerate ( ) with a grey limestone matrix* |

## ORDOVICIAN TO SILURIAN

### ROAD RIVER GROUP

| | |
|---|---|
| OSR | *UNDIVIDED: Thinly, rhythmically interbedded, grey-weathered, dark grey to black mudstone, grey siliceous siltstone and chert* |
| OSRsh | *SHALE UNIT: Grey-green shale to phyllite; dark grey and black shale; minor maroon shale; local interbeds of black mudstone, siliceous siltstone ± chert* |
| OSRc | *CHERT UNIT: Thin to medium-bedded, dark grey-weathered chert with rhythmic dark grey and light grey interbeds; locally white-weathered; locally massive* |

## ORDOVICIAN(?)

| | |
|---|---|
| Og | *Medium-grained, dark green to grey-weathered gabbro* |
| Ov | *Dark grey, dark brown and dark green mafic volcaniclastic rocks; lesser dark green amygdaloidal basalt and mafic tuff; minor reddish-brown-weathered intermediate volcaniclastic rocks* |
| Ovsh | *Blue-grey to silver-weathered, dark grey to black shale; interstratified with volcaniclastic rocks (Ov)* |

## CAMBRIAN

| | |
|---|---|
| CGL | *GULL LAKE FORMATION: Thinly, rhythmically interbedded grey-brown to chocolate-brown weathered siltstone and shale (~50/50%) with grey fresh surfaces; locally siltstone-rich (~70%) and medium bedded* |

## CAMBRIAN(?)

| | |
|---|---|
| Cg | *Medium to coarse-grained, brownish-green, clinopyroxene gabbro sills and plugs; local melanocratic hornblende diorite* |

## NEOPROTEROZOIC (EDIACARAN) TO LOWER CAMBRIAN

### HYLAND GROUP, NARCHILLA FORMATION

| | |
|---|---|
| PCHn | *UNDIVIDED: Dark grey, green and maroon shale; grey and green siltstone to phyllite; minor fine-grained, white, thinly bedded sandstone; rare medium-bedded, brown to grey quartz grit to quartz arenite* |
| PCHnss | *SANDSTONE UNIT: Medium-bedded, brown to grey quartz quartz grit sandstone and lesser quartz arenite; local interbeds of dark grey, green and maroon shale and grey-green siltstone to phyllite* |

## NEOPROTEROZOIC (EDIACARAN)

### HYLAND GROUP, YUSEZYU FORMATION

| | |
|---|---|
| PHYul | *LIMESTONE UNIT: Grey, fine-grained, massive to medium-bedded limestone with local laminations; minor orange-weathered, medium-bedded dolostone* |
| PHYm | *"MIXED" UNIT: Green and grey siltstone to phyllite; dark grey, green and maroon shale; minor medium-bedded, brown to grey quartz arenite and quartz grit with local quartz-pebble conglomerate* |
| PHYss | *SANDSTONE-DOMINATED UNIT, undivided: Medium to thickly bedded, brown to grey quartz arenite and quartz grit sandstone with local quartz-pebble conglomerate; rare dark grey and green shale and siltstone to phyllite* |
| PHYsc | *SANDSTONE-DOMINATED UNIT, calcareous member: Medium to thick-bedded, orange-weathered quartz-rich sandstone with dolomitic cement; local interbeds of grey limestone, orange-weathered dolostone and green-grey shale* |
| PHYssm | *SANDSTONE-DOMINATED UNIT, "mixed" member: Thinly interbedded siliciclastic and calcareous rocks, including: grey-to-tan quartz grit sandstone; dark grey-green shale to phyllite; orange-weathered quartz grit sandstone with dolomite cement; grey limestone; orange-weathered dolostone* |

### RACKLA GROUP

| | |
|---|---|
| PRB | *BLUEFLOWER FORMATION?: Thinly interbedded to laminated black mudstone and grey siltstone; grey calcareous shale and dark to light grey siliceous siltstone, locally laminated; dark brown-weathered, dark greenish-brown feldspathic wacke; light grey massive to medium-bedded quartz arenite* |
| PRG | *GAMETRAIL FORMATION: Orange, yellow and grey-weathered dolostone, dolomitic siltstone/sandstone and limestone, commonly planar and or cross-laminated; carbonate-clast breccia and conglomerate; minor maroon shale* |

**LEGEND EXPLANATION**

PLUTONIC SUITES: grouping of plutonic rock units based on age, regional distribution and/or composition

LAYERED ROCK ASSEMBLAGES: regionally mappable units generally of Group or Formation rank

# SYMBOLS

- bedding
- foliation
- bedding-parallel foliation
- crenulation cleavage
- bedrock mapping station
- axial plane
- joint
- quartz vein
- fold axis
- crenulation lineation
- intersection lineation
- stretching or mineral lineation
- pencil structure
- geological contact (defined, approximate, inferred)
- anticline (defined, approximate, inferred)
- syncline (defined, approximate, inferred)
- thrust fault (defined, approximate, inferred)

# MINERAL OCCURRENCES

| Map symbol & Name | Minfile # | Commodities | Status |
|---|---|---|---|
| Dutch | 106D 031 | (?) | Anomaly |
| Pointer | 106D 032 | Zn-Ag | Anomaly |
| Contact | 106D 033 | Zn-Ag-Mo | Anomaly |
| Barry | 106D 073 | Ag-Pb | Unknown |
| Caracal | 106D 110 | Au | Anomaly |
| Growler | 106D 128 | Au-Cu-Ag-Pb-Zn | Showing |

*(From Yukon Geological Survey, 2020a).*

# GEOCHRONOLOGY

| Map symbol | Sample | Rock type | Method | Mineral | Technique | Age (Ma) | Age interpretation |
|---|---|---|---|---|---|---|---|
| 1 | 1-48-4/PB | schist | K/Ar | muscovite | total fusion | 95 ± 12 | cooling age? |
| 2 | 19DS-002 | sandstone | U/Pb | zircon | CA-TIMS | 664.66 ± 0.36 | maximum depositional age |
| 3 | 19DS-051 | sandstone | U/Pb | zircon | CA-TIMS | 724.65 ± 0.3 | maximum depositional age |

*(From Yukon Geological Survey, 2020b).*

## NOTES

Geology by Diane Skipton (2019, 2021), Yukon Geological Survey. Field assistance provided by Amaya Cherian-Hall and Liam Maw. The geology of this area is described in more detail in Skipton and Maw (2021) and Skipton (2022).

Digital cartography and drafting by Diane Skipton, Yukon Geological Survey.

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

A paper copy 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.

## RECOMMENDED CITATION

SKIPTON, D.R., 2022. Preliminary geological map of the southern Nash Creek area, central Yukon (parts of NTS 106D/2, 3, 6, 7). Yukon Geological Survey, Open File 2022-6, scale 1:50000.

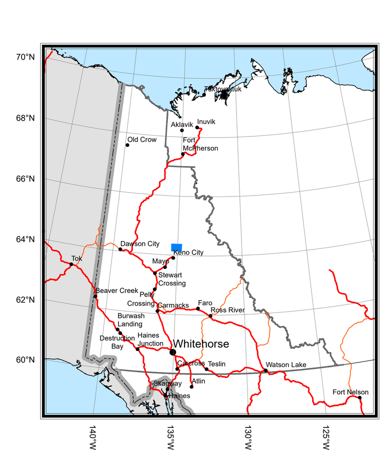
## REFERENCES


SKIPTON, D.R and MAW, L., 2021. Updated geology of the Clark Lakes area in central Yukon (parts of 106D/2, 3, 6 and 7). In: Yukon Exploration and Geology 2020, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 73-94.

SKIPTON, D.R., 2022. Updated bedrock geology of the southern Nash Creek area in central Yukon (parts of NTS 106D2, 3, 6 and 7). In: Yukon Exploration and Geology 2021, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 161-183.

YUKON GEOLOGICAL SURVEY, 2020a. Yukon MINFILE - A database of mineral occurrences, Yukon Geological Survey, http://data.geology.gov.yk.ca/Compilation/24#InfoTab, [accessed February 17, 2022].

YUKON GEOLOGICAL SURVEY, 2020b. Yukon Digital Geochronology, Yukon Geological Survey, http://data.geology.gov.yk.ca/Compilation/22#InfoTab, [accessed February 17, 2022].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30 metre shaded relief from GEOMATICS YUKON www.geomaticsyukon.ca

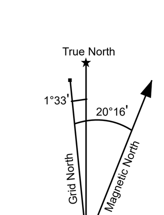
ONE THOUSAND METRE GRID
Universal Transverse Mercator Projection
North American Datum 1983
Zone 8

BEDROCK GEOLOGY
**NASH CREEK**
YUKON

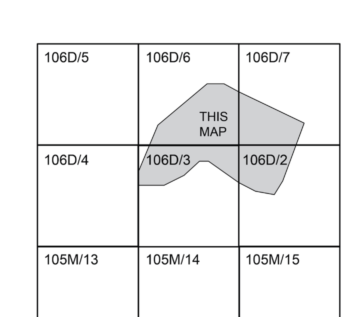
SCALE 1:50 000

0 1 2 3 4 5
Kilometres

CONTOUR INTERVAL 100 FEET
Elevations in feet above Mean Sea Level




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




Yukon

Yukon Geological Survey
Energy, Mines and Resources
Government of Yukon

Open File 2022-6

**Preliminary geological map of the southern Nash Creek area, central Yukon (parts of NTS 106D/2, 3, 6, 7) (scale 1:50000)**

by

Diane Skipton