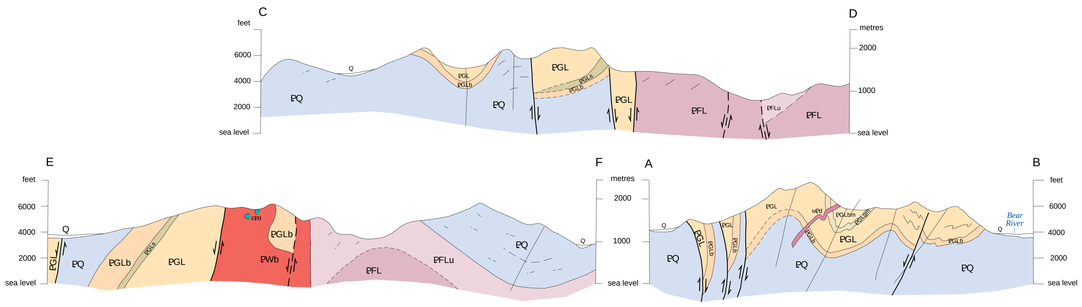
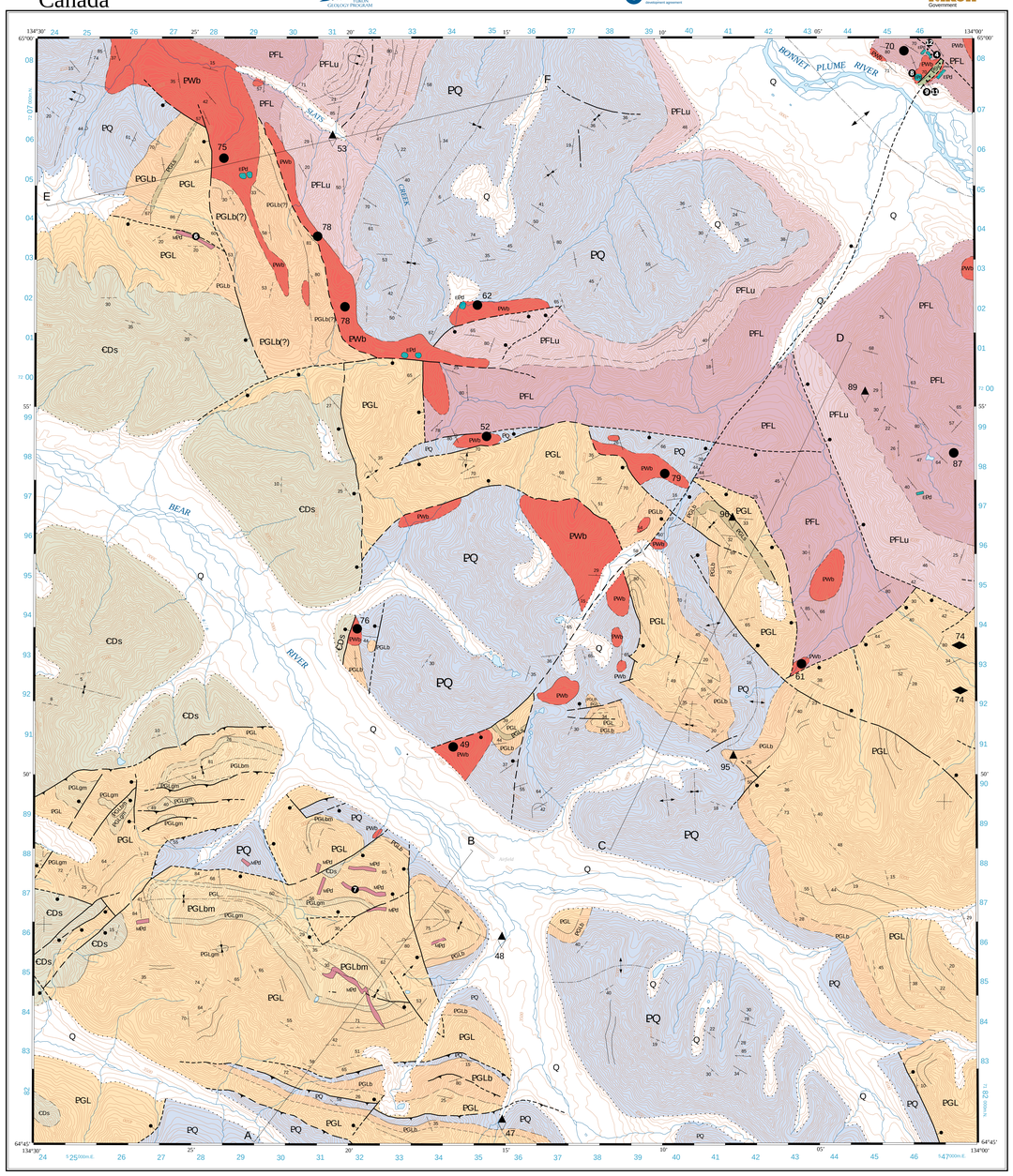


Canada



LEGEND

STRATIFIED ROCKS

QUATERNARY

Q — Alluvium, colluvium and glacial deposits

CAMBRIAN TO DEVONIAN

CDs — Resistant, crudely stratified, light grey weathering dolostone, locally underlain by reddish brown weathering sandstone and conglomerate (Slats Creek formation?)

LOWER PROTEROZOIC

SLAB VOLCANICS

PSv — Northeast of Bonnet Plume River, grey to maroon, dense to amygdaloidal lava flows; minor sandstone and conglomerate

GILLESPIE LAKE GROUP

PGL — Undivided Gillespie Lake Group: orange, brown and grey weathering dolostone and silty dolostone, locally stromatolitic, locally hosting chert nodules and sparry karst infillings, interbedded with subordinate black weathering siltstone and shale, geen, grey and brown weathering quartzose sandstone. Locally developed slaty cleavage in shaley beds

PGLbm — Southwest of Bear River, brown to black weathering laminated mudstone and shale

PGLgm — Southwest of Bear River, green, grey and brown weathering laminated mudstone

PGLs — Black weathering siltstone and shale

PGLb — Basal Gillespie Lake Group: cross laminated orange weathering silty to sandy dolostone interbedded with black weathering shale and grey to white weathering, quartzose, fine grained sandstone.

QUARTET GROUP

PQ — Black weathering shale, finely laminated dark grey weathering siltstone and planar to cross laminated light grey weathering siltstone to fine-grained sandstone. In upper part of succession, siltstone and fine-grained sandstone interbedded with subordinate orange weathering dolostone grades upward into basal Gillespie Lake Group. Slaty cleavage and microfolds locally present in shaly units

FAIRCHILD LAKE GROUP

PFL — Undivided Fairchild Lake Group: Greenish grey to pink and green weathering laminated siltstone, grey weathering fine-grained sandstone, and minor brown to white weathering carbonate. Siltstone and sandstone are commonly cross-laminated; siltstone is locally cleaved, crenulated and kinked, and locally metamorphosed into chlontoid/garnet-quartz-muscovite-chlorite schist. Base not exposed.

PFLu — Upper Fairchild Lake Group: black weathering siltstone, buff to light grey weathering dolomitic siltstone, orange to brown weathering dolostone, and white weathering dolostone; locally cleaved and crenulated; grades upward into black shale and siltsone of Quartet Group, and downward into lower Fairchild Lake Group

INTRUSIVE ROCKS

MIDDLE PROTEROZOIC

BEAR RIVER DYKES

mEPd — Greenish grey weathering, fine grained diorite to gabbro.

WERNECKE BRECCIA

PWb — Mottled red, green brown and grey weathering hematitic breccia and related metasomatized country rock. Breccia contains variably metasomatized clasts of Wernecke Supergroup and minor Early Proterozoic diorite (**EPd**). Breccia hosts localized enrichments of copper, gold, uranium, cobalt and silver. Brecciation occurred after formation of cleavage, schistosity, and kink bands in Wernecke Supergroup.

EARLY PROTEROZOIC

BONNET PLUME RIVER INTRUSIONS

EPd — Dykes, stocks, and megaclasts of greenish grey weathering, fine to medium grained diorite to gabbro, commonly containing stringers or disseminations of hematite or magnetite. Megaclasts common within Wernecke breccia.

PRELIMINARY ISOTOPIC AGES

Ref. No.	Sample No.	Geochronologist	Method and Material	Age (preliminary)
4	DT-94-20-1C	J. Mortensen	U-Pb zircon (igneous)	1705 +/-1
6	TOA-96-6-7-1C	J. Mortensen	U-Pb baddeleyite (igneous)	ca 1270
7	DT-95-1	J. Mortensen	U-Pb zircon (igneous)	1265 +20/-11
8	DT-93-7-1B	Robert Creaser	U-Pb titanite (hydrothermal)	1595 +8/-5
9	DT-94-21-1C	J. Mortensen	U-Pb rutile (hydrothermal)	1382 +/-8.4
11	DT-93-151-1C	M. Villeneuve	$^{40}Ar/^{39}Ar$ biotite (igneous?)	522 +/-5
12	DT-95-2-1B	P. Layer	$^{40}Ar/^{39}Ar$ muscovite (metamorphic)	995.7 +/-3.4

MINERAL OCCURENCES
Yukon Minfile

Wernecke breccia:

106 D/049	Pagisteel	Cu and/or U, +/- Co, Au, Ag
106 D/052	Ford	Cu and/or U, +/- Co, Au, Ag
106 D/061	Found	Cu and/or U, +/- Co, Au, Ag
106 D/062	Gruckle	Cu and/or U, +/- Co, Au, Ag
106 D/070	Slab	Cu and/or U, +/- Co, Au, Ag
106 D/075	Bland	Cu and/or U, +/- Co, Au, Ag
106 D/076	Face	Cu and/or U, +/- Co, Au, Ag
106 D/078	Pitch	Cu and/or U, +/- Co, Au, Ag
106 D/079	Chieftain	Cu and/or U, +/- Co, Au, Ag
106 D/087	Snowstar	Cu and/or U, +/- Co, Au, Ag

Vein:

106 D/047	Gray	Cu, Au Ag, Pb, Zn
106 D/048	New Jersey	Cu, Au Ag, Pb, Zn
106 D/053	Slats	Cu, Au Ag, Pb, Zn
106 D/089	Zelon	Cu, Au Ag, Pb, Zn
106 D/095	Wallace	Cu, Au Ag, Pb, Zn, Sb
106 D/096	Reid	Cu, Au Ag, Pb, Zn, Sb

Stratabound concordant:

106 C/074	Cord	Pb, Zn

RECOMMENDED CITATION

THORKELSON, D.J. and WALLACE, C.A. 1998. Geological map of Slats Creek map area, Wernecke Mountains, Yukon (106 D/16). Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada. Geoscience Map 1998-9, scale 1:50,000.

This map accompanies Thorkelson, D.J. 1998. Geology of the Slats Creek, Fairchild Lake and Dolores Creek map areas, Yukon (106 D/16, 106 C/13, 106 C/14). Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Bulletin.....TBA.

Digital mapping and cartography by Will vanRanden, Canada/Yukon Geoscience Office.

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

Copies of this map, the accompanying report and Yukon Minfile may be purchased from Geoscience Information and Sales, c/o Whitehorse Mining Recorder, Indian and Northern Affairs Canada, Room 102-300 Main St. Whitehorse, Yukon Y1A 2B5
Ph. 403-667-3266 Fax 403-667-3267

Store map in a dark area to prevent colours from fading.

SYMBOLS

Stratigraphic or intrusive contact (defined, approximate, assumed)

Normal fault-pegs on hanging wall (defined, approximate, assumed)

Reverse fault (teeth on hanging wall)

Bedding
inclined, overturned, vertical
horizontal, facing unknown
estimate from airphoto or
distant sighting

Slaty cleavage, schistosity (inclined, vertical)

Fold
syncline; inclined, overturned
anticline; inclined, overturned

Line of cross-section — A B

Preliminary age determination — 8

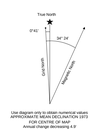
Topographic base produced by SURVEYS AND MAPPING BRANCH, DEPARTMENT OF ENERGY, MINES AND RESOURCES.

ONE THOUSAND METRE
Universal Transverse Mercator Grid
ZONE 8

SLATS CREEK
YUKON TERRITORY
SCALE 1:50 000

Miles 1 0 1 2 3 Miles
Metres 1000 0 1000 2000 3000 4000 Metres

CONTOUR INTERVAL 100 FEET
Elevations in Feet above Mean Sea Level
North American Datum 1927
Transverse Mercator Projection



Use diagram only to obtain numerical values
APPROXIMATE MEAN DECLINATION 1973
Annual Change Decreasing 4.9'

106 E/1	106 F/4	106 F/3
106 D/16 THIS MAP	106 C/13 Thorkelson and Wallace Geoscience Map 1998-10	106 C/14 Thorkelson and Wallace Geoscience Map 1998-11
106 D/9	106 C/12	106 C/11

Indian and Northern Affairs Canada
Exploration and Geological Services Division
Yukon Region

Geoscience Map 1998-9

Geological map of Slats Creek area Wernecke Mountains, Yukon NTS 106 D/16

by

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