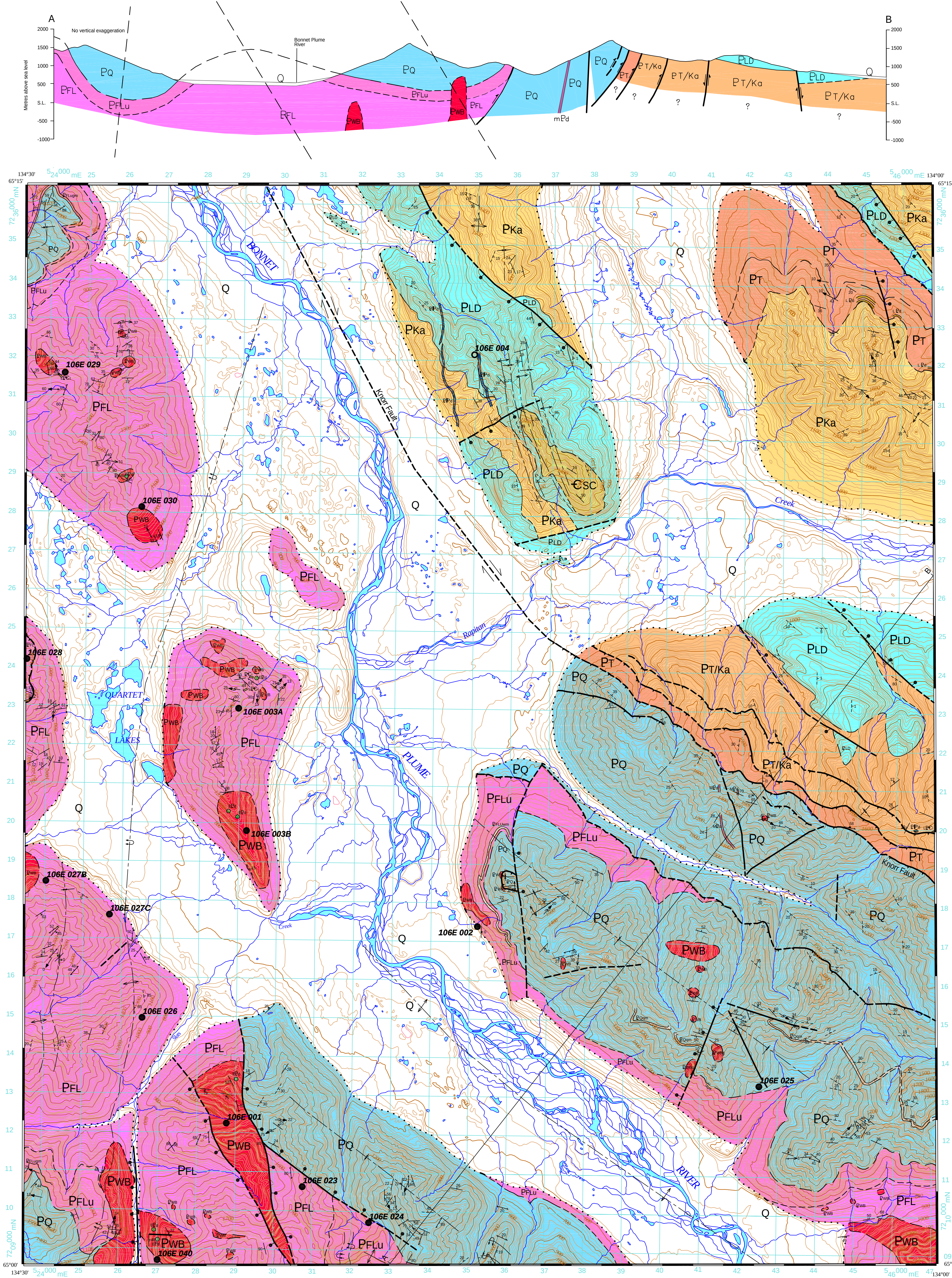


QUARTET LAKES
106 E/1
YUKON TERRITORY
SCALE 1:50 000

Topographic base produced by
SURVEY AND MAPPING BRANCH
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AND RESOURCES
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ONE THOUSAND METRE
Universal Transverse Mercator Grid
ZONE 8

Scale bar: 0 to 4000 Metres
CONTOUR INTERVAL 20 METRES
Elevations in feet above Mean Sea Level
North American Datum 1983
Transverse Mercator Projection

True North
0°42'
27°47'
Grid North
Magnetic North
Use diagram to obtain numerical values
APPROXIMATE MEAN DECLINATION 2002
FOR CENTRE OF MAP
Annual change decreasing 8.3

106E/7	106E/8	106F/5	106F/6
106E/2	106E/1 This Map	106F/4	106F/3
106D/15	106D/16 Thorkelson and Wallace, Geoscience Map 1598-D	106C/13 Thorkelson and Wallace, Geoscience Map 1598-D	106C/14 Thorkelson and Wallace, Geoscience Map 1598-L

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

Geoscience Map 2002-02

Geological map of Quartet Lakes
map area (106E/1),
Wernecke Mountains, Yukon
(1:50 000 scale)

by
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LEGEND

STRATIFIED ROCKS

QUATERNARY

Q Alluvium, colluvium, and glacial deposits

MIDDLE CAMBRIAN (?)

SLATS CREEK FORMATION (?)

CSC grey-weathering dolostone and purple-weathering mudstone interlayered with carbonate-rich conglomerate and dolostone brown-weathering, thin- to medium-bedded, plane- to cross-bedded, coarse sandstone and chert-rich granule conglomerate with carbonate matrix.

MIDDLE TO UPPER PROTEROZOIC

MACKENZIE MOUNTAINS SUPERGROUP

PLD LITTLE DAL FORMATION: grey- to yellow-weathering, medium- to thick-bedded micritic dolostone; minor black mudrock.

PKa KATHERINE GROUP: grey- to white- and pinkish-white-weathering, fine- to medium-grained quartz arenite; black-, brown- and purple-weathering siltstone and wacke, locally micaceous, mudcracked and ripple-marked, minor dolostone. TSEZOTENE FORMATION: black- to brown-weathering siltstone and wacke, commonly micaceous, mudcracked and ripple-marked, brown- to orange- and grey-weathering, medium- to very thick-bedded dolostone; black-, grey- and maroon-weathering mudrock; minor grey- to white- and pinkish-white-weathering, plane-bedded quartz arenite.

PT/Ka TSEZOTENE FORMATION and/or KATHERINE GROUP

LOWER PROTEROZOIC

WERNECKE SUPERGROUP

PQ QUARTET GROUP: black-weathering shale; grey-weathering, thin- to medium-bedded, finely laminated to cross-laminated siltstone; light-grey-weathering, thick-bedded, fine- to medium grained quartz arenite. local marker unit of light-grey-weathering quartz arenite.

FAIRCHILD LAKE GROUP

PFL UPPER FAIRCHILD LAKE GROUP: black-weathering shale, siltstone and dolomitic siltstone, locally crenulated and kink-banded; orange-, brown-, grey-, and white-weathering dolostone. local marker unit of grey-weathering dolostone. local marker unit of white-weathering dolostone.

PFL LOWER FAIRCHILD LAKE GROUP: black- to grey-weathering, thin- to medium-bedded, siltstone, shale, and slate, commonly laminated; brown-weathering, thin-bedded silty dolostone; bluish- to greenish-grey-weathering phyllite and fine-grained muscovite-chlorite-quartz schist, commonly hosting chloritoid porphyroblasts, crenulations and kink bands.

INTRUSIVE ROCKS

LATE PROTEROZOIC TO EARLY PALEOZOIC

PPu dark-green-weathering, fine- to medium-grained diorite dykes crosscutting Little Dal Formation and Katherine Group. Dykes locally host veins of epidote, calcite, hematite and malachite.

LATE PROTEROZOIC TO CAMBRIAN

LEC QUARTET LAKES LAMPROPHYRE: brown-weathering, aphyric to phlogopite-phyric dykes crosscutting Wernecke and Mackenzie Mountains supergroups, and locally hosting abundant xenoliths.

LATE PROTEROZOIC

LLe TSEZOTENE SILLS: dark-green-weathering, fine- to medium-grained diorite within Tsezotene Formation. Locally, diorite is plagioclase-phyric and hosts veins of calcite, quartz and pyrite.

MIDDLE PROTEROZOIC

MEu BEAR RIVER DYKES: dark-green-weathering, fine- to medium-grained diorite crosscutting Quartet Group. Locally, diorite hosts veins of epidote, quartz, calcite, pyrite, chalcopyrite and hematite.

WERNECKE BRECCIA

PWB grey-weathering, or mottled red-, pink-, brown- and grey-weathering hematitic breccia containing clasts of Wernecke Supergroup and, locally, megacrysts of the Bonnet Plume River intrusions. Includes metasomatized country rock of the Wernecke Supergroup. Breccia crosscuts foliations, crenulations and kink bands in the Fairchild Lake Group and locally hosts enrichments of Cu (as chalcopyrite), Au, U, Co and Mo (as molybdenite).

PWBa rusty-weathering pyritic breccia containing clasts of Wernecke Supergroup. Matrix consists primarily of vein quartz and lacks abundant hematite. Tentatively regarded as a variation of Wernecke Breccia but may be unrelated and of different age.

EARLY PROTEROZOIC

EBU BONNET PLUME RIVER INTRUSIONS: greenish-grey-weathering, fine- to medium-grained diorite preserved as megacrysts within Wernecke Breccia. Diorite locally hosts disseminations and veinlets of hematite or magnetite, and chalcopyrite.

SYMBOLS

Stratigraphic or intrusive contact known, approximate, assumed.....
Normal fault (pegs on downthrown side) known, approximate, assumed.....
Strike-slip fault assumed beneath cover.....
Thrust or reverse fault (teeth on hanging wall) known, approximate, assumed.....
Bedding inclined, overturned, vertical, top unknown, top observed... estimate from distant sighting.....
Slaty cleavage, schistosity inclined.....
Fold syncline: upright, inclined, overturned anticline: inclined, overturned (inclined folds have shorter arrow on steeper limb)
Minor Fold minor fold, showing vergence, upright
Line of cross section.....
Limit of outcrop.....

MINERAL OCCURRENCES

Yukon MINFILE 2001

Wernecke Breccia			
Cu and/or U (+/- Co, Au, Mo, Ba, Ag)			
106E 001	Oris	drilled prospect	
106E 002	Irene	drilled prospect	
106E 003	Quartet	showing	
106E 023	Radio	prospect	
106E 024	Break	prospect	
106E 025	Mountaineer	showing	
106E 026	Helikian	prospect	
106E 027	Five	prospect	
106E 028	Rapitan	showing	
106E 029	Ikona	showing	
106E 030	Beil	showing	
106E 040	Eaton	showing	
Unknown affinity Zn, Pb			
106E 004	Fairton	showing	

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Digital cartography by Amy Stuart, Yukon Geology Program, Whitehorse, Yukon.

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. Phone 867-667-3266. Fax 867-667-3267. E-mail geosales@inac.gc.ca

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