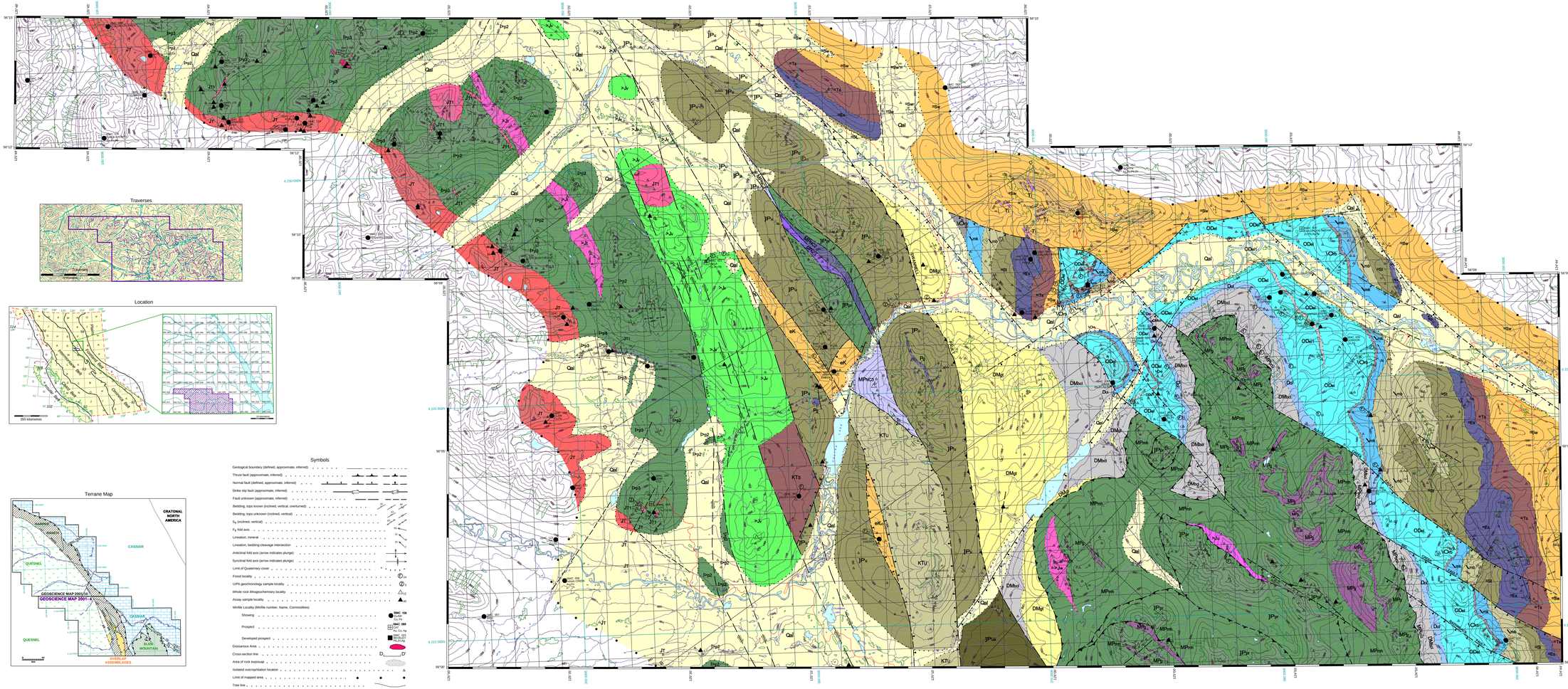


Geological Survey Branch

Geoscience Map 2001- 4

GEOLOGY OF THE USLIKA LAKE AREA, NORTH-CENTRAL BRITISH COLUMBIA

NTS 94C/2, 3 and 4

by FILIPPO FERRI, STEVE DUDKA, CHRIS REES, DAN MELDRUM AND MARCUS WILLSON

SCALE 1:50 000

0 1 2 3 4 5 Kilometres

Traverses

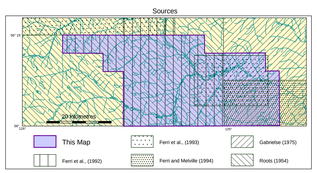
Location

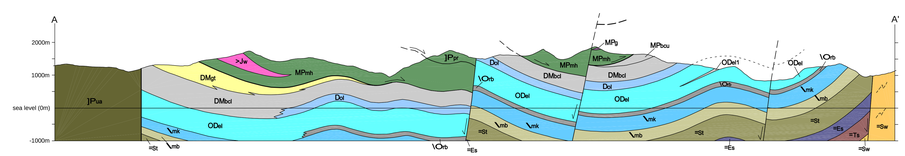
Terrane Map

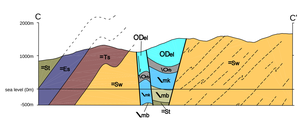
Symbols

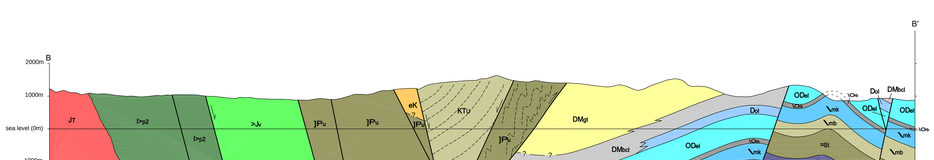
- Geological boundary (defined, approximate, inferred)
- Thrust fault (approximate, inferred)
- Normal fault (defined, approximate, inferred)
- Strike slip fault (approximate, inferred)
- Fault unknown (approximate, inferred)
- Bedding, tops known (inclined, vertical, overturned)
- Bedding, tops unknown (inclined, vertical)
- S_2 (inclined, vertical)
- F_2 fold axis
- Lineation, mineral
- Lineation, bedding-cleavage intersection
- Anticlinal fold axis (arrow indicates plunge)
- Synclinal fold axis (arrow indicates plunge)
- Limit of Quaternary cover
- Fossil locality
- UPB geochronology sample locality
- Whole rock lithogeochemistry locality
- Assay sample locality
- Minfile Locality (Minfile number, Name, Commodities)
  - Showing — MAC 108 Mt Hall Au-Fe
  - Prospect — MAC 089 Ash Au, Cu, Ag
  - Developed prospect — MAC 101 Mount Creek Pb,Zn,Ag
- Gossanous Area
- Cross-section line — D D'
- Area of rock exposure
- Isolated outcrop/station location
- Limit of mapped area
- Tree line
- Roads

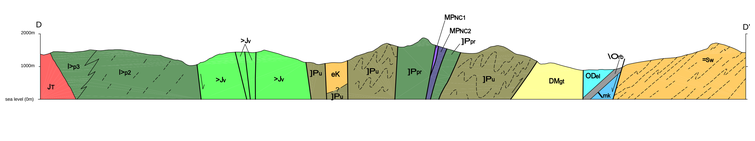
Sources

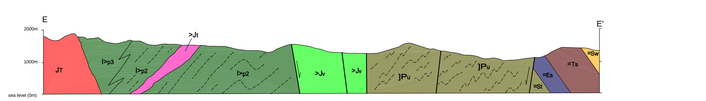












Quaternary

- Qal — *Area of thick glacial deposits.*

OVERLAP ASSEMBLAGES

Tertiary(?)

- Ti — *Dacite, small stocks, dikes or sills; tan, beige, pink or white, quartz and/or feldspar phyric; biotite and/or hornblende as accessories.*

Late Cretaceous to Early Tertiary

SUSTUT GROUP

- KTs — *Sandstone, conglomerate and siltstone, grey-green to brown or red-brown, thin to thickly bedded and friable, abundant thin coaly lenses.*

Late Cretaceous(?) and Early Tertiary(?)

USLIKA FORMATION

- KTu — *Conglomerate, coarse pebble to boulder; sandstone, green to grey-green, massive to thickly bedded.*

Early Cretaceous

- eK — *Conglomerate, pebbly; sandstone, grey-brown and maroon, nodular; argillite, dark grey, may contain thin coal lenses.*

QUESNEL TERRANE

Early to Middle Jurassic

HOGEM INTRUSIVE COMPLEX

THANE PLUTON

- J1 — *Monzonite, monzodiorite and quartz monzodiorite; tan, brown, pinkish, megacrystic; hornblende, biotite and magnetite as accessories; syenite, quartz-syenite and alkali-feldspar syenite, pink, fine to coarse grained, locally porphyritic and magnetic.*
- J1t — *Monzonite, monzodiorite, syenite; small stocks or dikes; grey, tan to greenish, megacrystic to crowded porphyries; hornblende as accessory; magnetite.*

Late Triassic to Early Jurassic(?)

TENAKIHI INTRUSIVE COMPLEX

- >Jt — *Diorite to monzodiorite, grey to dark green, fine to coarse grained, massive to layered with cumulate textures, pyroxene and hornblende bearing, magnetic.*
- >Ju — *Wehrlite, dark grey to black, massive; minor serpentine, gabbro.*

WASI ULTRAMAFIC COMPLEX

- >Jw — *Serpentine, dark green, massive; gabbro, coarse grained may be weakly foliated and altered to listwanite.*

TAKLA GROUP

Late Triassic? to Early Jurassic

VEGA CREEK SUCCESSION

- >Jv — *Basalt, grey-brown to maroon, massive to agglomeratic, aphanitic, amygdaloidal to plagioclase, pyroxene and olivine(?) phyric; lesser tuff and lapilli tuff containing monzonite clasts.*

Late Triassic

PLUGHAT MOUNTAIN SUCCESSION

- Ps3 — *Argillite and argillite-plagioclase phyric basaltic agglomerate, coarse lapilli tuff and lesser massive flows, tuff and tuffaceous siltstone, green, dark green, grey to greenish grey; argillite, dark grey to grey.*
- Ps2 — *Tuffs, grey to greenish, massive to thickly bedded; tuffaceous siltstone, grey-green to dark grey, thin to thickly bedded; argillite, dark green to grey, thin to moderately bedded; rare argillaceous limestone, dark grey; lesser coarse lapilli tuff and agglomerate as in Ps3.*

HARPER RANCH SUBTERRANE

Pennsylvanian? to Permian

LAY RANGE ASSEMBLAGE

UPPER MAFIC TUFF DIVISION

- JPzu — *Tuff and tuffaceous siltstone, green, thin to thickly bedded, fine to very fine grained; interlayered with grey to dark grey argillaceous siltstone, grey to cream chert and limestone; lapilli tuffs and agglomerate, clasts are pyroxene-plagioclase phyric basalts, maroon and green; basalt, dark green, massive and amygdaloidal.*
- JPzm — *Minor grey to dark grey argillite and argillaceous siltstone, greenish grey siltstone.*
- JPg — *Gabbro, dark green to green, fine to medium grained.*

SLIDE MOUNTAIN TERRANE

NINA CREEK GROUP

Pennsylvanian? to Permian

PILLOW RIDGE SUCCESSION

- JPzr — *Basalt, grey-green to dark green , massive and pillowed and may be olivine phyric; gabbro, dark green, fine to medium grained; argillite, dark grey to black, wavy, thin to moderate bedding, may be siliceous; chert, green, grey, cream, moderately to thickly bedded; rare serpentine.*
- JPzs — *Argillite and siliceous argillite, grey to dark grey, wavy; siltstone, grey chert, grey and cream, may be ribboned; minor basalt.*

Mississippian to Permian

MOUNT HOWELL SUCCESSION

- MPnh — *UPPER PART: argillite and siliceous argillite, grey to dark grey, wavy, thin to moderately thick bedding; siltstone, grey, chert, grey and cream, thin to thickly bedded, may be ribboned; minor basalt, green to grey-green, massive to pillowed and may be olivine phyric; gabbro, dark green, fine to medium grained; argillite, dark green. LOWER PART: argillite and lesser cherty argillite, dark grey to black, wavy, thin to moderately thick bedding, minor quartz-wacke, grey-brown, lenticular.*

NINA CREEK GROUP UNDIVIDED

- MPNc1 — *Gabbro, fine to very coarse grained, may be foliated to mylonitic.*
- MPNc2 — *Serpentine, dark green, massive.*
- MPNc3 — *Gabbro, dark green, fine to coarse grained; amphibolite, foliated basalts; serpentine.*
- MPg — *Gabbro, dark green to green, fine to medium grained.*

CASSIAR TERRANE

Mississippian to Permian

BIG CREEK GROUP

- MPbou — *UPPER PART: argillite and slate; grey to black, wavy to planar bedded; minor limestone; grey to brown, argillaceous to siliceous, thin to thickly bedded.*

Late Devonian to Early Mississippian

- DMbd — *LOWER PART: shale, argillite and siltstone, dark grey, blue-grey and black, thin to very thinly bedded and platy to wavy bedded quartz wacke to sandstone; black to dark grey. Minor light grey tuff as in DMgt.*

GILLILAND TUFF

- DMgt — *Tuff, light grey, grey to dark grey, sericitic, massive, quartz and feldspar bearing, rare mica clasts; minor quartz-feldspar wacke and arkosic sandstone, grey; rare chert-chip breccia.*

Early? to Middle Devonian

OTTER LAKES GROUP

- Dol — *Dolomite and limestone, dark grey to grey, feist, poorly bedded, locally fossiliferous; dolomite, grey, massive.*

Ordovician to Early Devonian

ECHO LAKE GROUP

- ODel — *Dolomite and limestone, pale to medium grey, thin to massively bedded, medium crystalline and sugary, may be bioclastic, oolitic and contains carbonate breccia horizons, locally silicified and may contain algal structures.*
- ODel1 — *Argillite, dark grey, graptolitic and argillaceous limestone, grey to dark grey, planar bedded.*

Cambrian and Ordovician?

RAZOR BACK GROUP

- \Orb — *UPPER PART: calcareous argillite, argillaceous and dolomitic limestone, both dark grey, thinly bedded. LOWER PART: argillite, shale, dark grey to grey or silvery, thinly bedded, may contain sections of sericite, phyllite or schist; white to greenish.*

Early Cambrian

ATAN GROUP

MOUNT KISON LIMESTONE

- \nrk — *Limestone, grey to white and mottled, recrystallized, thin, wavy indistinct and discontinuous bedding, slightly argillaceous and may be dolomitized.*

MOUNT BROWN QUARTZITE

- \mb — *Sandstone, impure quartzite, grey-brown to maroon, moderately to thickly bedded, interlayered with siltstone and phyllite, dark grey to gray-green, thin to thickly bedded; minor limestone nodules.*

Late Proterozoic

INGENIKA GROUP

STELKUZ FORMATION

- =St — *Phyllite and schist, may be quartzitic, green-grey, crenulated, impure quartzite; limestone, white to bluish grey, clean with thin micaceous partings; phyllite, slate and siltstone, dark blue-grey to black, graphytic; locally contains biotite and garnet.*

ESPEE FORMATION

- =Es — *Limestone, locally dolomitic, dark grey, grey to white, mottled, thin to moderately bedded, locally white marble.*

TSAYDIS FORMATION

- =Ts — *Slate, phyllite, greenish grey to grey, interlayered with limestone to calcareous phyllite, both thinly bedded; lesser sandstone, siltstone, green-grey, feldspathic wacke; limestone, blue-grey, impure and laminated; locally contains biotite.*

SWANNELL FORMATION

- =Sw — *Quartzite, impure quartzite, feldspathic quartzite and sandstone, grey to tan, thin to thickly bedded interlayered with garnet-biotite-muscovite bearing schist.*

Base Map Information

Base map has been reproduced from digital TRIM I (Terrain Resource Inventory Management) 1:20 000 topographic database produced by the British Columbia Ministry of Environment, Lands and Parks. North American Datum 1983. Universal Transverse Mercator Projection. Elevation in metres above sea level.

Magnetic declination for the southeast corner of the map sheet is 23° 20.2' (-16.6'/year); the centre of the map sheet 23° 29.3' (-16.8'/year) and for the northwest corner is 23° 36.8' (-16.8'/year). Grid north is 2.06°.

Copies of this map may be purchased from Crown Publications, Victoria, British Columbia or may be viewed at *http://www.em.gov.bc.ca/geology*.

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Map reviewed by D. Lefebure and K. A. Bellefontaine.
Geologic cartography by F. Ferri and V. Vilkos.

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