



LEGEND

- NEOGENE**  
 Unconsolidated colluvial, fluvial, and glacial deposits
- LOWER CAMBRIAN TO LOWER ORDOVICIAN**  
 CD<sub>6</sub> Massive, light grey, medium grained crystalline dolomitic packstone, locally oolitic; sandy dolostone, medium bedded; silty, dolomitic wackestone and packstone
- ..... sharp, parallel contact; probable disconformity
- UPPER PROTEROZOIC - LOWER CAMBRIAN**  
 PC<sub>5</sub> Grey-brown weathering, dark brown-grey quartz wacke, intercalated with dark brown-orange dolomitic wackestone and rare coarse grained to granule quartz wacke-grit; discontinuous lens of chert, pebble conglomerate and crossbedded quartz arenite at base or interbedded with top of unit below; rare lower Cambrian trace fossils in upper 50 m
- PC<sub>4</sub> Grey-orange weathering, pale yellow wackestone; dolomitic, fine- to medium-grained, thin bedded; rare hummocky cross-stratification and ripples; rare flat pebble dolostone breccia and capping of laminated black fetid limestone mudstone
- PC<sub>3</sub> Black laminated mudstone, rarely shale; interbedded with dark brown laminated siltstone
- ..... sharp, straight, parallel contact; probable disconformity over Mount Harper Group
- UPPER PROTEROZOIC**  
**MOUNT HARPER GROUP**  
**UPPER MOUNT HARPER GROUP**  
 PH<sub>2</sub> Yellow-orange weathering, light- to medium-grey, coarsening upward cycles of intercalated dolomitic mudstone and wackestone to dolostone conglomerate; cycles 20-100 m thick
- PH<sub>1</sub> Dark green-grey conglomerate, pebble- to small boulder-sized clasts, mixed volcanic and carbonate clasts; rare tuff, pyroclastic bombs and thin basaltic flows
- ..... contact gradational (10s to 100s of metres) where it overlies volcanic rocks; sharp angular unconformity (10-20°) where it overlies the Fifteenmile group
- MOUNT HARPER VOLCANIC COMPLEX**  
 F Member F: orange-weathering tabular basaltic flows and dioritic sills
- E Member E: andesitic basalt flows, breccia, and tuff; minor sills; E<sub>1</sub>: hydroclastic breccia
- D Member D: rhyolitic flows, breccia, and gneiss; locally quartz- and plagioclase-phyric; D<sub>1</sub>: crystal tuff and volcanic ashose
- C Member C: basaltic breccia; including block and ash flows, tuff-breccia, and volcanic conglomerate
- B Member B: brown-weathering basaltic flows, breccia, dykes, and sills; B<sub>1</sub>: massive and pillowed flows with pipe amygdulites and breccia
- A Member A: dark green weathering basaltic breccia and flows, including tubular pillows, aquagene tuff, dykes, and sills
- ..... sharp and conformable contact on lower Mount Harper Group; angular unconformity where overlies Fifteenmile group
- LOWER MOUNT HARPER GROUP**  
 PH<sub>3</sub> Pale yellow-orange weathering, grey to orange wackestone, dolomitic, fine- to very coarse-grained, thin- to medium-bedded; fining upward from, or interbedded with, pebble to small cobble dolostone conglomerate
- PH<sub>2</sub> Moderate to dusky red wackestone/mudstone (redbeds); generally dolomitic, but high chert content; coarsens up from mudstone to coarse grained wackestone; abundant desiccation cracks, common ripples, rare planar- and trough-crossbeds. (unit occurs east of map area only)
- PH<sub>1</sub> Yellow-brown- to orange-weathering, orange to grey dolostone conglomerate; pebble to boulder sizes, medium- to thick-bedded, complex grading or massive, very rare dolomitic mudstone and medium- to coarse-grained dolomitic wackestone in discontinuous interbeds
- PH<sub>a</sub> Light to medium grey breccia, generally rubble pack breccia; with complex chalcidony and carbonate cements, rare silcrete and calcareous horizons
- ..... disconformity: sharp contact except gradational where PH<sub>1</sub> is preserved up to 50 m preserved paleorelief; some preserved pre-Mount Harper Group high-angle normal faults
- MIDDLE TO UPPER PROTEROZOIC**  
**FIFTEENMILE GROUP**  
 PFU<sub>1</sub> Upper Fifteenmile group: cream- to white-weathering, light grey dolostone; massive to laminated; uppermost unit abundantly stromatolitic; units below include chert dolostone breccia; thin bedded black mudstone; lower Fifteenmile group not exposed in map area.
- ..... angular unconformity
- MIDDLE PROTEROZOIC**  
**WERNECKE SUPERGROUP**  
**GILLESPIE LAKE GROUP**  
 PWG Orange-weathering interbedded (medium to thick) dolostone and argillaceous or silty dolostone; maroon-weathering argillite; common domal and columnar stromatolites, crystalgal laminae
- ..... gradational contact
- QUARTET GROUP**  
 PWQ Interbedded (thin to thick) grey to brown sandstone, siltstone, and shale; beds continuous; rare slump structures, ripples and trough crossbeds

SYMBOLS

- Geological boundary (defined, approximate, assumed) .....
- Depositional bedding (inclined, vertical) .....
- Volcanic layering (depositional slope unknown) .....
- Volcanic pillowed flow orientation (bulb shows present dip direction; arrow indicates local flow direction; not corrected for bed tilt) .....
- Cleavage .....
- Dykes and sills (commonly clustered and not to scale strike and dip where noted) .....
- Thrust fault (defined, approximate) (teeth in direction of dip) .....
- High angle fault (defined, approximate) (solid circle indicates downthrown side) .....

**Figure 3.**  
**Geology of the Mount Harper Group,**  
**Ogilvie Mountains**  
**YUKON TERRITORY**

Scale 1:25 000 - Échelle 1/25 000

Metres 500 1000 1500 2000 Metres

Universal Transverse Mercator Projection / Projection transversale universelle de Mercator

Geology by C.F. Roots, 1981, 1982, 1986, P.S. Mustard, 1986, 1987  
 To accompany Geological Survey of Canada Bulletin 492

Base map from provisional topographic maps 116 B/12 and 116 C/8, published at 1:50 000 scale by the Surveys and Mapping Branch, 1968

Magnetic declination 1985, 31° 18' E, decreasing 1.4' annually

Elevation in feet above mean sea level. Contour interval 100 feet (30.5m)

