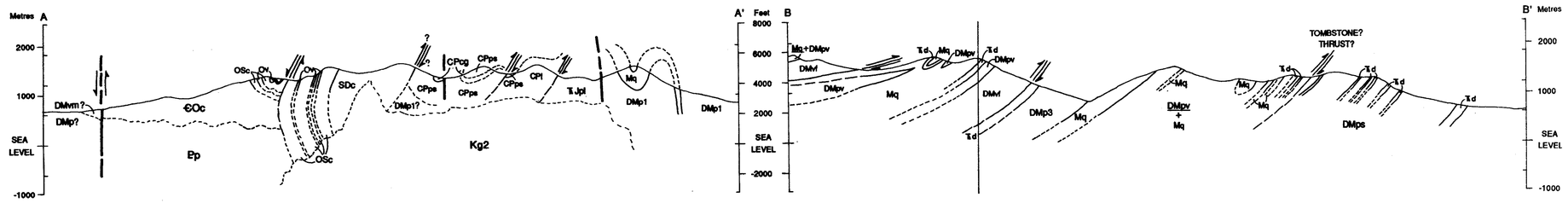

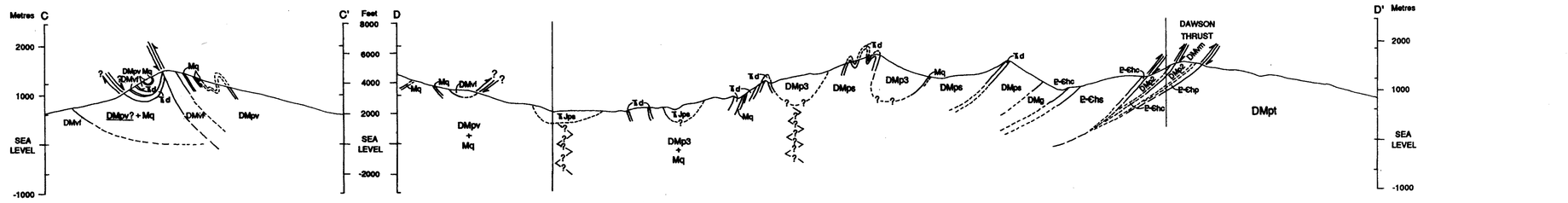

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LEGEND

QUATERNARY

Qs Unconsolidated glacial and fluvial deposits; thick vegetation cover

(north of Dawson Thrust)

CRETACEOUS

Kg2 Medium grained, pegmatitic, miarolitic, leucocratic fluorite-rich, muscovite, biotite granite

TRIASSIC AND JURASSIC

TJpl Recessive, buff to grey weathering black, sooty limestone; calcareous and noncalcareous, micaceous black shale; dark grey noncalcareous, silty shale at base of sequence

TRIASSIC

Td Massive, dark grey weathering, medium-grained hornblende diorite sill

CARBONIFEROUS AND/OR PERMIAN

CPps Dark grey slate interbedded with laminated quartz sandstone and thick bedded massive, fine grained quartzite; buff and green phyllite. May, in part, be equivalent to unit Mq

CPcg Chert pebble conglomerate; silica cemented in some places and carbonate cemented in others.

CPl Thick bedded, buff and grey weathering, dark grey limestone. North of the Rackla River, contains shale interbeds up to 3 meters thick, abundant crinioid columnals and fragments of other megafossils, and grit and chert pebbles in basal third of section.

MISSISSIPPIAN
Equivalent wholly, or in part, to the Keno Hill Quartzite of Green (1972)

Mq Dark grey, thick bedded to massive, vitreous quartzite.

DEVONIAN, MISSISSIPPIAN AND (?)YOUNGER
Units DMpt, DMps, DMv in part equivalent to the Earn Group

DMpt Brown, dark grey to blue weathering siliceous shale, argillaceous chert, silty shale, minor chert pebble conglomerate, chert grit, bedded barium carbonate and (?)barite. Resistant, dark grey to green weathering, ribbon banded grey to greenish grey chert in beds 2 to 30 cm thick, interbedded with grey to green shale. (Green chert and shale possibly younger than Mississippian)

DMp1 Dark grey and rusty weathering, black shale, silver-blue weathering siliceous shale, small amounts of finely laminated siliceous siltstone, and sandstone

DMvm Dark green weathering vesicular basalt, locally pillowed; lapilli tuff. Could belong, wholly or in part to unit Ov

(?)SILURIAN AND DEVONIAN

SDc Thick bedded to massive light grey dolostone and limestone. Dark grey, fetid limestone containing "two hole and "star" crinoids at top of unit

(?)ORDOVICIAN AND SILURIAN

OSc Thin to medium bedded grey and buff weathering silty limestone; massive white limestone; well bedded pale yellow and grey limestone in upper part of unit

ORDOVICIAN AND/OR (?)SILURIAN

Ov Dark green to brown weathering mafic, vesicular volcanic flows carbonate-cemented hyaloclastic breccias, and volcanic-derived sandstone, grit, and pebble and cobble conglomerate. Intercalated with unit OSc

(?)CAMBRIAN AND ORDOVICIAN

-€Oc Massive pale grey dolostone, oncolitic dolostone, minor quartzite, sandy dolostone

CAMBRIAN OR OLDER

-€t Finely laminated to thinly bedded grey and black dolostone; massive to well bedded, medium grey, pinkish grey dolostone. Possibly equivalent to the Taiga Formation of Norris(1982).

P€c Massive pale grey limestone

MIDDLE PROTEROZOIC

Ep Chocolate to orange brown weathering cryptalgal laminated, medium to thick bedded dolostone; overlain by rusty brown weathering, olive green siltstone and shale with lesser maroon, buff and black shale. Stratigraphically equivalent (but no lithologic similarities) to the PINGUICULA GROUP (Eisbacher, 1981)

WERNECKE SUPERGROUP

Eg GILLESPIE LAKE GROUP: Thinly laminated to thinly bedded orange weathering, greenish grey silty limestone, dolostone and calcareous, silty shale

(south of the Dawson Thrust)

CRETACEOUS

Kg1 Dark grey weathering, fine grained biotite, hornblende granodiorite

TRIASSIC AND JURASSIC

TJp Recessive noncalcareous grey slate and shale

TJps Recessive, buff to grey weathering calcareous black shale, micaceous, calcareous siltstone and sandstone, grey, noncalcareous shale

TRIASSIC

Td Massive and columnar jointed, dark grey weathering, medium-grained hornblende diorite sills; massive chlorite greenstone, equivalent to hornblende diorite, and possibly, older volcanic flows

MISSISSIPPIAN
Equivalent, wholly, or partially, to the Keno Hill Quartzite of Green (1972)

Mq Dark grey, thick bedded to massive, vitreous quartzite.

(?)DEVONIAN, MISSISSIPPIAN AND (?)YOUNGER
(Units DMp2, Dmp3, DMps, DMpv, DMvm, Dmg in part equivalent to the Earn Group)

DMp3 Dark grey and rusty weathering black phyllite, siliceous phyllite, with small amounts of finely laminated siliceous siltstone

DMps Dark grey and rusty weathering black phyllite, interbedded with varying amounts of thinly laminated to thick bedded micaceous quartz sandstone and siltstone. Minor blue weathering siliceous shale containing chert grit near Mt. Westman

DMpv Black siliceous phyllite interbedded with thin siltstone and quartzite laminations, and small amounts of rusty, buff and pale green weathering pyritic quartz muscovite and quartz chlorite phyllite which are probable equivalents of unit DMvf of Gordey (1990). Between Beaver River and Keno-Ladue River, includes abundant silver-blue weathering graphitic, siliceous phyllite, and lesser amounts of siltstone and quartzite

DMvf Dark grey to buff weathering, dark grey foliated aphanitic felsic volcanic rocks and foliated quartz porphyry. Intermittent buff weathering grey limestone near top of unit near Marg Deposit(83).

DMp2 Rusty brown weathering finely laminated dark grey phyllite with minor chert grit and conglomerate; silver-blue weathering, siliceous black phyllite containing bedded barium carbonate and (?) barite.

DMvm Dark green weathering lapilli tuff, greenstone. Could belong, totally or in part to unit Ov

UPPER PROTEROZOIC AND LOWER CAMBRIAN
HYLAND GROUP(P€hp,P€hc, P€hs)

P€hp Maroon and green slate interbedded with lesser amounts of buff shale and thick bedded quartz sandstone and grit

P€hc Buff to grey weathering limestone, silty and sandy limestone; in places gradational with calcareous grit of unit PChs

P€hs Buff to grey weathering calcareous to noncalcareous, thick bedded to massive quartz sandstone, quartzite, and quartz feldspar grit; buff weathering grey phyllite

SYMBOLS

- Limit of outcrop, single outcrop
- Geological boundary (defined, approximate, assumed, covered)
- Bedding (tops unknown, known, inclined, horizontal, overturned)
- Foliation (S1,S2)
- Lineation (L1 mineral, L1 intersection, L2 intersection)
- Fold axis (symmetry of fold as viewed downplunge, F1; F2)
- Anticline (traceof axial plane; D1, upright, overturned; D2)
- Syncline (trace of axial plane; D1 upright, overturned; D2)
- Fault (normal, strike-slip, sense of movement unknown)
- Thrust fault (D1defined, approximate, assumed, covered; D2)
- Tremolite/actinolite isograd in carbonate rocks and limit of hornfels in pelitic rocks
- Fossil locality
- Gossan
- Landslide
- Mineral occurences, with Yukon Exploration reference no. (see INAC references)
  - BLUE LITE tungsten skarn 70
  - ROD lead, zinc, silver bearing vein 69
  - MARG stratabound/concordant copper, zinc, lead, silver deposit 3
  - Bedded barite, witherite, baritocalcite
  - Exploration target 98

NOTES

The geology of Mt. Westman map area is discussed in Abbott(in press). Most map units in that publication are generalized, and differ from those used here. Most of the differences are self explanatory, but some, which reflect revisions to stratigraphic correlations and age assignments, are briefly explained here.

Dolomite and limestone north of the Kathleen Lakes fault (unit Pc1) are now tentatively assigned to units €t and P€c on the basis of lithologic similarity of the younger unit to the Taiga Formation of Norris (1982).

Between the Robert Service Thrust and the Beaver River, quartz grit and phyllite (unit PChi) is now considered to be largely volcanic and is now assigned to unit DMvf. Some of these rocks may be sedimentary, but derived from a volcanic protolith.

Chert conglomerate (in unitEupcg), thought to be Mississippian, yielded brachiopods that were tentatively identified by W. Bamber, Geological Survey of Canada (Pers. Com.) as Permian in age, and is now assigned to unit CPcg. On that evidence, limestone, and shale and sandstone, that were considered Mississippian, are also assigned to Carboniferous and Permian units(CPl and CPps). Contradictory stratigraphic relationships are indicated by the Permian fossil age, and remain unexplained. Immediately southeast of Kathleen Lakes, Triassic limestone and shale appear to overlie shale and quartzite mapped as Mississippian, with no intervening Carboniferous and/or Permian limestone and conglomerate. Note that most Devonian, Mississippian and (?)Younger units are primarily lithologic, and that the stratigraphic relations between many of them remain unclear.

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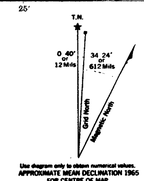

Use diagram only to obtain numerical values.
APPROXIMATE MEAN DECLINATION 1995
FOR CENTRE OF MAP
Annual change decreasing 4.7'

MOUNT WESTMAN
YUKON TERRITORY

Scale 1:50,000 Échelle

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

CONVERSION SCALE FOR ELEVATIONS
30 20 10 0 50 100 150 200 250 300 Metres
100 50 0 100 200 300 400 500 600 700 800 900 1000 Feet

This Provisional Map is equivalent to a standard map in accuracy of contour.

Some names on this map are not yet official. Corrections or additions are invited by the Surveys and Mapping Branch.

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

106D/7	106D/8 Roots	106C/5
106D/2	106D/1 Abbott	106C/4
105M/15	105M/16 Gordey	105N/13

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

Open File 1990-1

GEOLOGICAL MAP OF MT. WESTMAN MAP AREA(106D/1)

by
Grant Abbott
Exploration and Geological Services Division