



Geological Survey Branch
GEOSCIENCE MAP 1993-10
GEOLOGY OF THE WARNER PASS MAP AREA
 NTS 920/3
 Geology compiled by P. Scharizza and R.G. Gaba

Based on geological mapping by P. Scharizza, J.K. Glover, P.J. Umhoefer, J.I. Garver,
 C. Hande, P. Rapp and J.M. Riddell (1986-1988)

Scale 1:50 000



LEGEND

QUATERNARY
 Qal Unconsolidated glacial, fluvial and alluvial deposits; locally may include small bedrock exposures not examined during the present study

TERTIARY
 Middle and(?) Pliocene
 CHILCOTIN GROUP
 MPC Olivine basalt flows

Paleocene and/or Eocene(?)
 MOUNT SHEBA VOLCANICS (PEab and PEv)
 PEab Basalt flows and flow breccia
 PEv Intermediate to felsic volcanic flows and breccias; minor amounts of conglomerate, sandstone and siltstone
 PEv CLUCKATA RIDGE SUCCESSION: Intermediate to felsic volcanic flows, tuffs and breccias; sandstone, conglomerate, luffaceous shale and mudstone

RELAY MOUNTAIN - BRIDGE RIVER OVERLAP (UPPER TYAUGHTON BASIN)

UPPER CRETACEOUS
 POWELL CREEK FORMATION (ukpcu to ukpca)
 ukpcu Well stratified lapilli tuff, volcanic breccia, lahars, volcanic conglomerate and sandstone
 ukpca Andesitic volcanic breccia, lapilli tuff and ash tuff; mafic to intermediate volcanic flows; volcanic sandstone and conglomerate; ulocm - mainly lapilli and ash tuffs, mafic and intermediate flows; ulocms - well bedded volcanic sandstone and conglomerate; ukpca - well bedded volcanic sandstone, conglomerate and shale, silicified lapilli tuff; rare andesitic flows; ukpca - massive volcanic breccia; lesser volcanic sandstone, conglomerate, lahar, andesitic flows
 ukpca Polymict and volcanic-clast conglomerates; sandstone, siltstone and shale; rare occurrences of welded tuff

LOWER AND/OR UPPER CRETACEOUS
 TAYLOR CREEK GROUP (uktkc to uktkc)
 Alban and/or Cenomanian
 uktkc BECE CREEK SUCCESSION: sandstone, siltstone and shale, pebble conglomerate containing clasts of chert, volcanic rock and clastic sedimentary rock; calcareous sandstone and shale; ash and crystal tuff

Alban
 IKtv Intermediate, felsic and mafic volcanic flows, tuffs and breccias; volcanic conglomerate; sandstone and shale
 IKtl LIZARD FORMATION: thin to medium-bedded, light brown to grey-weathering micaceous quartzite/saprophytic sandstone and dark grey laminated shale
 IKtd DASH FORMATION: orange-weathering, medium to thick-bedded, locally massive chert-pebble conglomerate; thin to medium-bedded chert-rich sandstone, and dark grey shale and siltstone

Alban and(?) older
 IKtp PARADISE FORMATION: thin-bedded medium to dark grey shale and green-grey sandstone; lesser amounts of thick-bedded pebbly to cobble conglomerate containing volcanic clasts and less abundant lacustrine and plutonic clasts
 IKts ELBOW PASS FORMATION: medium to thick-bedded green-grey sandstone, dark grey shale, and pebble conglomerate containing intermediate and mafic volcanic clasts

Alban and(?) older and(?) younger
 IKto Undivided IKts, IKtl, IKtv and uktkc

RELAY MOUNTAIN TERRANE (LOWER TYAUGHTON BASIN)

LOWER CRETACEOUS
 Hauterivian and/or younger
 IKva TOSH CREEK UNIT: volcanic conglomerate and breccia; dark grey shale with intercalations of siltstone and sandstone; mafic to intermediate volcanic rocks

MIDDLE JURASSIC TO LOWER CRETACEOUS
 RELAY MOUNTAIN GROUP (IKms to mujmw)
 Hauterivian and(?) Baramian
 IKms Dark grey shale and siltstone; lesser amounts of sandstone and calcareous sandstone

Upper Oxfordian to Valanginian
 IKms Grey, brown and green sandstone and siltstone, locally calcareous; commonly massive, locally medium to thick-bedded; Barrois phacopods and belemnites common; coquina beds locally abundant; lesser amounts of conglomerate and conglomeratic sandstone containing mainly volcanic and plutonic clasts

Callovian to lower Oxfordian
 IKms Dark grey siliceous shale intercalated with thin beds of green to brown siltstone and fine grained sandstone; commonly rusty-weathering; lesser amounts of thin to medium-bedded, medium to coarse grained sandstone, calcareous sandstone, and calcareous siltstone; locally includes pebble conglomerate containing mainly felsic to intermediate volcanic clasts

GADWALLADER TERRANE

LOWER TO MIDDLE JURASSIC
 Hettangian to Bajocian
 IKms LAST CREEK FORMATION: brown calcareous sandstone, siltstone and conglomerate; overlain by dark grey to black calcareous shale

UPPER TRIASSIC
 TYAUGHTON GROUP (utv and utn)
 Upper Norian
 utn Limestone conglomerate; overlain by thin to medium-bedded green sandstone intercalated with granule to pebble conglomerate containing mainly volcanic and limestone clasts; overlain by brown sandstone and siltstone intercalated with beds of fossiliferous calcareous sandstone; overlain by thin to medium-bedded green sandstone intercalated with thin beds of pebble conglomerate containing intermediate to felsic volcanic clasts

CADWALLADER TERRANE (continued)

TYAUGHTON GROUP (continued)
 Middle(?) and upper Norian
 utn Massive to thick-bedded conglomerate and conglomeratic sandstone intercalated with medium to thin-bedded red to brown sandstone; conglomerate contains clasts of limestone, intermediate to felsic volcanic rocks and locally plutonic rocks; overlain by thin to thin bedded grey limestone

PALEOZOIC OR MESOZOIC
 JACASS MOUNTAIN GROUP
 IKm Sandstone, conglomerate, siltstone and shale

INTRUSIVE ROCKS

TERTIARY
 Oligocene
 Co Hornblende porphyry
 Eocene
 Egp Quartz monzonite and gneodiorite

Paleocene and/or Eocene
 PEp Hornblende-biotite-quartz-feldspar porphyry

LATE CRETACEOUS AND/OR EARLY TERTIARY
 KTp Hornblende-feldspar porphyry, locally grading to diorite and quartz diorite
 KTs Diorite and gabbro

LATE CRETACEOUS
 Lkgd Gneodiorite

SYMBOLS

Geological contact (defined, approximate, assumed):
 Bedding, tops observed (horizontal, inclined, vertical, overturned):
 Bedding, tops not observed (inclined, vertical):
 Mesoscopic fold axis:
 Anticline (upright, overturned):
 Syncline (upright, overturned):
 Thrust or reverse fault; teeth on upthrust block (defined, approximate, assumed):
 Fault; solid dot indicates downthrown block, arrows indicate relative sense of strike-slip movement (defined, approximate, assumed):
 Dike (mainly hornblende-feldspar porphyry and quartz-feldspar porphyry):
 Alteration zone (A1 - quartz-carbonate-mariposite; A2 - carbonate AS - quartz-pyrite + sericite + clay + carbonate; A4 - chlorite-epidote + carbonate + clay + pyrite):
 Mineral occurrence (number refers to 920 MINFILE number):
 Macrofossil locality:
 Macrofossil from clast in conglomerate:
 Plant or palynomorph fossil locality:
 Limit of quaternary cover:
 Small bedrock exposure within quaternary cover:
 Limit of geological mapping:

ADDITIONAL SOURCES OF INFORMATION

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