



DEPARTMENT OF MINES - TASMANIA

THE MOUNT READ VOLCANICS AND ASSOCIATED ROCKS IN THE QUEENSTOWN-WHIP SPUR AREA

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CAINOZOIC

- Quaternary alluvium.
- Boulder fan deposits.
- Pleistocene ? gravel deposits fringing Queen River valley and Conglomerate Creek valley - roundstone gravels to boulder grade, with bedded sand - clay lenses.

SILURO-DEVONIAN

- Undifferentiated - mainly quartzose sandstone.

ORDOVICIAN

- Limestone and calcareous shale - Gordon Limestone Subgroup correlate.

LATE CAMBRIAN - EARLY ORDOVICIAN

- Quartzose sandstone, fine conglomerate and minor shale, with chromite rich bands - correlate of Pioneer Beds.
- Owen Conglomerate - siliceous conglomerate and sandstone of Mt. Owen. Selected sandstone beds shown.
- Volcaniclastic conglomerate - correlate of Jukes Conglomerate.

CAMBRIAN - ? LATE PRECAMBRIAN MOUNT READ VOLCANICS

- Extrusive Rocks - not necessarily in stratigraphic order**
- Massive to banded brown - weathering intermediate agglomerate and crystal tuff in Lynchford area, with feldspar, quartz, pyroxene, epidote, minor hornblende. Secondary albite halos around rock fragments common. Lithological correlate of Comstock Tuff.
 - Graded - bedded to massive brown - weathering agglomerate and crystal tuff of Whip Spur area, intermediate to acid, interbedded with tuffaceous sandstone, vitric shale and minor basic lavas and basic dykes.
 - Acid to intermediate agglomerate and tuff with minor sediments and acid to basic lavas and intrusives. Includes autaxitic ash - flow and bedded ash - fall rocks, with phenocrystic feldspar but rarely quartz. Coarse agglomerate with fragments of feldspar porphyry common. Rocks usually strongly cleaved with variable sericite - chlorite alteration.
 - Feldspar porphyry, usually massive but with flow - banding and autobreccia texture in places, and rare columnar jointing. Pale grey to green, pink or red. Rhyolite to rhyodacite composition, with mainly albite phenocrysts. Partly intrusive.
 - Green chlorite - rich agglomerate and tuff, with rock fragments of pilotaxitic or vesicular basic to intermediate lava.
 - Interbedded agglomerate, shale, sandstone and tuff in upper Conglomerate Creek. Graded bedding common.
 - Interbedded shale, tuffaceous greywacke, slate, vitric tuff and agglomerate. Rare trace fossils.
 - Fine - grained vitric tuff and shale with interbedded tuffaceous greywacke, crystal tuff and agglomerate.
 - Quartz - rich tuff, medium to coarse - grained, shale clasts in places.
 - Miners Ridge Sandstone - quartzose sandstone and minor shale, well - bedded.
 - Basic to intermediate lava, breccia and tuff, with possible intrusives, in Lynch Creek area. Includes pyroxene - feldspar porphyries, aphytic - textured rocks, and feldspar - chlorite - quartz porphyry.

Intrusive Rocks

- Feldspar porphyry, usually massive but with flow - banding and autobreccia texture in places, and rare columnar jointing. Pale grey to green, pink or red. Rhyolite to rhyodacite composition, with mainly albite phenocrysts. Partly extrusive.
- Basic to intermediate intrusives, ranging from large bodies of feldspar - pyroxene porphyry to small chloritic dykes.
- Quartz - feldspar porphyry, usually massive, with xenoliths of slate and sandstone in places.

Alteration

- Overprint indicates area of strong sericite - chlorite - quartz alteration and pronounced schistosity in volcanic rocks ('Lynch schists').

- Geological boundary - observed or accurate.
- Geological boundary - approximate.
- Geological boundary - inferred.
- Gradational boundary.
- Fault - observed or accurate.
- Fault - position approximate.
- Fault - inferred.
- Strike and dip of bedding, facing unknown.
- Strike and dip of bedding, facing known.
- Overturned bedding vertical bedding.
- Bedding of primary foliation in volcanic rocks.
- Plunge of columnar jointing in volcanic rocks.
- Strike and dip of cleavage, vertical cleavage.
- Prospect or abandoned mine.
- Four - wheel drive track.

CARTOGRAPHY BY P.B. NANKIVELL