

5.2. Geological Interpretation

A brief geochronological interpretation is presented with the major geological events listed in order of increasing age:

Post-Devonian

Recent: Incision and establishment of present day drainage pattern. Development of narrow alluvial flats along the Ring River, and broad flats along Colebrook Creek.

Quaternary: Deposition of glacial and fluvio-glacial deposits in pre-existing river valleys.

Jurassic: Intrusion of sills and dykes of dolerite. No Jurassic dolerites have been recognised at GAP, but a dyke has been mapped at the Renison Mine.

Late Devonian

Emplacement of high level granitised plutons, particularly of the Pine Hill adamellite. The nature and extent of the emplacement was probably controlled by Tabberabberan fold and fault structures. Emanations of late stage hydrothermal fluids, together with thermal metamorphism, caused the development of a contact metamorphic aureole. Hydrothermal mineralising fluids were introduced into the country rocks, with fault and fissure structures acting as conduits.

Early Middle Devonian

The Tabberabberan Orogeny, a major period of deformation, involved early arcuate folds (F₁) which followed the Pre-Cambrian nuclei and later small scale compression folds (F₂). Both major and minor fault zones developed, particularly on north-east to south-west and north-west to south-east trends.

Late Cambrian?

Injection and emplacement of serpentinitised ultramafic bodies and gabbros. Emplacement was probably controlled by the pre-existing fundamental fault structures. The ultramafic and mafic rocks were probably deeply emplaced at the same time as