

Success Creek Group

The Success Creek Group consists of quartz sandstones, micaceous quartzites, siltstones and shales with carbonates at the top of the succession. The rocks, regarded as Upper Proterozoic in age (3), are exposed in the northerly trending Renison anticline. The carbonates host the major stratabound massive sulphide lenses at Renison. Rock units of this Group are not represented in outcrop on GAP.

Lower Crimson Creek Formation

The basal units of the Crimson Creek Formation, namely the Red Rock Member and the mineralised Number 1 Carbonate, do not outcrop on GAP. However, the overlying Dreadnought Hill Member passes up into the volcanoclastic greywacke sequence, units of which are exposed along the Murchison Highway, in Colebrook Creek and on the P.M.G. road (west).

The Volcanoclastic Greywacke Sequence

The greywacke beds are fine to coarse grained, poorly bedded and poorly sorted. They exhibit graded bedding, scour and fill structures, roll casts and flame structures. Mudstone and siltstone flake breccias occur towards the base of the coarser grained greywacke beds. The rocks are comprised of mafic to intermediate volcanic lithics, plagioclase and pyroxene crystals in an argillaceous matrix. They are generally grey, green or purple in colour.

The tuffaceous units closely resemble the greywackes, particularly when weathered or where outcrop is sparse. They are, however, thinly bedded, generally harder and more iron stained. They are comprised of intermediate and basic volcanic lithics, plagioclase and quartz crystals, devitrified shards and fragments of volcanic glass. The matrix is comprised of chlorite, ash, carbonate and opaques. For mapping purposes the greywackes and tuffs have been given the same notation. It proved almost impossible to differentiate between them, particularly when the argillaceous matrix of the greywackes has been altered by metamorphism to a similar mineral composition as that of the tuffs. Both rock