

sample 29654 described in C.M.S. report 80/2/22 in Appendix 1. The granites are associated with porphyritic intrusive rhyolites which are most abundant around the contact of the granite south of 5,368,000N. Petrographic description of a very similar rock from outside the area under discussion showed it to be an altered and stressed granite of medium to deep seated intrusion. The porphyritic appearance and finer grained groundmass were the result of irregular zones of granulation followed by recrystallisation of a fine grained albite cement and a strong sericite and chlorite alteration. It is very possible then that the intrusive rhyolites of the Mt. Murchison area merely represent tectonised zones within the granite. As most of these rocks occur on the margins of the granite they may reflect a forceful mode of emplacement of the granite.

The country rocks intruded by the granite are restricted to a fringe around its eastern and southern contacts. The western contact, north of 5,369,000N is formed by the unconformable overlap of the Owen Conglomerate. The country rocks comprise a sequence of steep to west dipping sediments and acid volcanics. They are generally cleaved which may reflect shearing movements along the Tynnan Fault, which bounds the Pre-Cambrian massif to the east. Although not mapped in this programme, the fault contact trends parallel to the E.L. boundary some 600m to the east. The most easterly unit mapped comprises siltstones and shales which outcrop at 387,900E between 5,368,400N and 5,368,800N. These strike slightly east of north and dip west at 60°-70°. A petrographic description of a typical example is given by sample 29652 in C.M.S. report 80/2/22 in Appendix 1. These sediments are overlain by predominantly acid pyroclastics. A small zone of intermediate tuff was mapped at 5,368,400N 387,700E. In the north of the area around 5,369,500N