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The geology of the Voyager 9 grid has been detailed in preceding reports (Large, 1981 and Wilson et al 1981) It comprises a sequence of coarse lithic tuffs, volcanic breccias, rhyo-dacite lavas and a group of chlorite rich lithologies referred to as quartz chlorite porphyries and 'andesites'. Outcrop of the latter lithologies continues south of the V9 grid along Stoney Creek to 7200N where they are faulted against porphyritic lavas.

The two chloritic lithologies are closely associated and sharp contacts have been mapped between the quartz rich porphyry and fine-grained massive, blue-grey 'andesitic' units. The latter commonly contain 2-5% pyrite and occasional grains of chalcopyrite.

The drainage system which forms the western boundary of the V9 area marks the approximate limit of the Stoney Creek Granite. Sporadic outcrops can be observed in an area of positive relief and thin button grass cover, which delineates the main granite outcrop. Typically the granite is a fine-medium grained porphyritic microgranite. Plates of muscovite and biotite and the high feldspar content distinguish it from the crystal tuffs which occur as roof pendants within the granite body. The granite pluton is bulbous in shape and measures approximately 1.4km by 1km and intrudes the volcanic pile terminating against a \pm 70m thick unit of siliceous clastic sediments which form its western boundary.

The sediments form a series of NE trending ridges which are offset by NW-SE faults. They consist of a chaotic, poorly sorted quartzite breccia at the base and grade upwards into quartz pebble conglomerates, pebbly quartzites and massive saccharoidal quartzites and quartz sandstones. The basal breccias are composed almost entirely of massive angular quartz blocks upto 50cm in length, the angularity and closely packed nature of the rock suggests the breccia is intraformational.