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The presence of granitic and andesitic rock units within the southern portion of E.L. 27/76 provides a minor variation to the dominantly acid volcanic environment.

5. Geological mapping has indicated a major trend in lithology from east to west, from a coarse grained rhyolitic feldspar-quartz-biotite porphyry in the east, interpreted as an extrusive or high level intrusive, to a rhyolitic quartz-feldspar lava containing both minor intercalated tuffaceous horizons and more extensive units of tuffaceous, volcanoclastic and sedimentary lithologies to the west. This broad major trend is also present north of the Moores Valley (Macquarie Harbour) graben within E.L. 9/74 (Geopeko-Union Oil Joint Venture).
6. Geochemical drainage sampling, i.e. stream sediment analysis, appears to be a successful regional reconnaissance technique for delineating zones anomalous in Cu, Pb or Zn. Within this environment of shallow weathering and high run off subtle anomalous responses are the norm.

Aided by eyeball techniques, a detailed statistical appraisal derived anomalous threshold values for the Cu, Pb and Zn results. Against a regional background of (2ppm Cu, 20ppm Pb and 15ppm Zn results have been interpreted as anomalous when they have equalled or exceeded 5ppm, 65ppm and 55ppm Cu, Pb and Zn respectively.

7. Although the original rationale of selecting elements for analysis is considered sound, it is evident that certain elements have either no response in the area tested using stream sediment techniques or are not useful given the expense of analysis. These include Mn, Fe, Ag and Ba.