

the track to NP 167 crosses it.

Two small areas of flat-lying tillite have been mapped within the Natone area; they are at the southern end of the Colebrook Grid and to the immediate NE of Mt. Dundas. These outcrops are thought to be part of the Permian Zeehan Glacial Fm. (Blissett, 1962).

## 7. PHOTO GEOLOGY

The Natone Area is included in the 1:50,000 geological photo-interpretation done by Loxton-Hunting for E.Z. in 1978 using 1:40,000 air-photos. Because of the large scale used and consequent lack of detail, this study is of very limited use. Lithologies are sub-divided into Primrose Pyroclastics, Rosebery Group, Crimson Creek Fm., Dundas Group Unassigned and Donah Quartzite. The Primrose Pyroclastics near Moores Pimple and further south are shown extending considerably further westwards than the currently accepted position and can be safely discounted. The Rosebery Group is not shown near Moores Pimple. It is worth noting that a possible N-plunging anticline is shown near Colebrook Hill.

The accompanying report (Loxton, Hunting & Assoc. CA 25/78) suggests that the Primrose Pyroclastics may be partially conformable with the Dundas Group and Rosebery Group, and that the Rosebery Group is partially conformable with both the Dundas Group and the Crimson Creek Fm.

A geological photo-interpretation of the area from Hercules to the south was undertaken on behalf of Texins Devel. in 1970. The resulting 1:12,500 geological plan is presented in Discala (1974), but the scale of the air photos used is not indicated in this report. A large number of faults are shown and virtually all lithological contacts are faults - very convenient and therefore rather suspect. Lithologies are sub-divided into Mt. Read Volcanics (i.e. Primrose Pyroclastics), Dundas Group Undivided, Crimson Creek Fm., and Donah Quartzite; the Rosebery Group is not shown and has been included within the Crimson Creek Fm.. This study is useful for the faults shown.

A tectonic analysis using air photos was made for Texins Devel. over the southern part of the area extending to just north of Moores Pimple (Kopp 1970). The 1:12,500 plan shows numerous faults and indicates their respective dip and sense of movement; a few fold axes are also shown.

## 8. GEOCHEMISTRY (Fig. 4)

### 8.1. STREAM SEDIMENTS

Much of the Natone Area has been covered by two geographically distinct stream sediment surveys by E.Z. and Texins Development respectively. A moderately detailed stream sediment sampling programme was conducted by E.Z. in the Natone Creek and Ring River drainage basins in 1970-71. Samples were assayed for Cu, Pb, Zn, Mn but there is no record of sampling technique or size fraction sampled. Results have since been plotted on 1:15,480 (4" to 1 mile) plans; one plan for each element. Some Mn values south of Ring River are missing.

The validity of this programme in certain areas at least, is highly dubious - many assays in the Conliffe Creek and Bakers Creek drainage basins are exceptionally anomalous in Zn and Pb and to a lesser extent Cu. Although contamination from Hercules Mine and the haulage line is