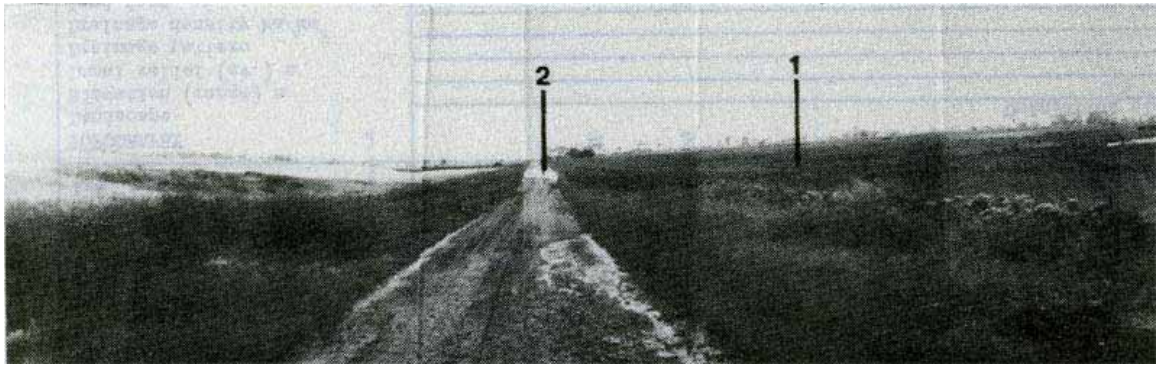
### *6.22 Rockbank Land System*



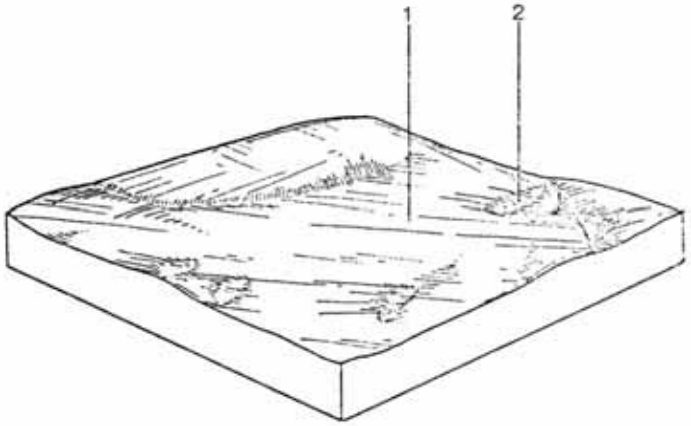

This is a small land system covering 28.7 km$^2$ or 1.1% of the survey area in its western half.

The characteristic feature is the depressions which, from air-photo interpretation, number about 40.

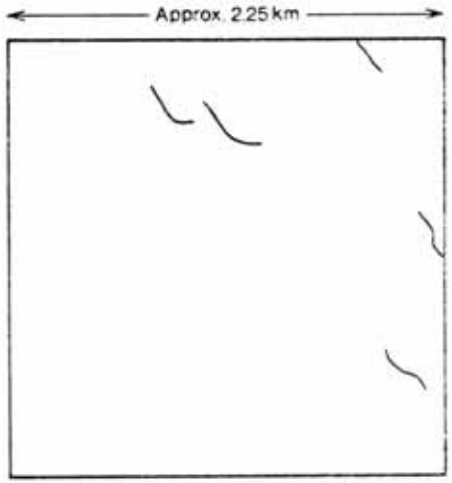
The Kororoit River changed its course slightly to the east with the extensive lava flows of Mt. Cottrell and Mt. Atkinson, the depressions could be old river channels, the result of lava flows or a combination of both.

The soils of the plains are typically red calcareous sodic duplex soils and those of the depressions grey calcareous sodic clays or black clays. Vegetation and iron oxidation at root depth indicate waterlogging.

The structure of the original vegetation, which has now been cleared, was probably Open Woodland consisting mostly of River Red Gum.




**Schematic Block Diagram**




**Drainage Pattern**

| **COMPONENT** | 1 | 2 |
|---|---|---|
| Proportion % | 70 | 30 |
| **CLIMATE** | | |
| Rainfall (av.) | Annual: 480-500 mm (monthly range: 43 mm – June 29 mm) | |
| Temperature (av.) | Annual: $14^0$C (monthly range: February $21^0$C – July $9^0$C) | |
| Seasonal growth limitations | Temperature: less than $10^0$C June - August<br>Precipitation less than potential evapotranspiration October – April | |
| **GEOLOGY** | | |
| Age, rock | Pleistocene basalt | |
| **TOPOGRAPHY** | | |
| Landscape | Undulating lain with depressions | |
| Elevation (range) m | 100-120 | |
| Local relief (av.) m | 6 | |
| Drainage pattern | Centripetal | |
| Drainage density km/km$^2$ | 0.4 | |
| Land form | Slope | Depression |
| Slope (av.) %, slope shape | 3; Straight | 2; Straight |
| **NATIVE VEGETATION** | | |
| Structure | Open woodland | |
| Dominant species | *E. camaldulensis* | |
| **SOIL** | | |
| Parent Material | In situ weathered rock | Alluvium |
| Description | Red calcareous sodic duplex soils, coarse structure | Grey calcareous sodic clay soils, uniform texture, coarse structure. Black clay soils, uniform texture, coarse structure |
| Factual Key | Dr 2.13 | Ug 5.24, Ug 5.17 |
| Surface Texture | Loam – Clay loam | Clay |
| Permeability | Moderate | Low |
| Depth (av.) m | 1.5 | 1.5 |
| **LAND USE** | Cereal cropping | Grazing |
| **SOIL DETERIORATION HAZARD** | | |
| Critical land features | Hard setting surfaces | High watertable, hard setting surfaces |
| Processes | Overland flow | Overland flow, periodic waterlogging |
| Forms | Sheet erosion | Surface compaction |