LOAM OVER PEDARIC RED CLAY
(Red loamy flat soil)

General Description: *Thin loamy surface soil over a red crumbly clayey subsoil, calcareous at depth, with gypsum accumulations in deep subsoil*

Landform: Flats and depressions

Substrate: Coarsely structured mottled red clay (Blanchetown Clay equivalent)

Vegetation: Atriplex spp., Casuarina spp. (belah), Marieana spp. (blackbush)

Type Site: Site No.: CM077

1:50,000 sheet:	6830-3 (Lindley)	Hundred:	Bunyung
Annual rainfall:	220 mm	Sampling date:	18/11/96
Landform:	Depression on a gently undulating plain		
Surface:	Surface flake, with no stones		

Soil Description:

Depth (cm)	*Description*
0-8	Red firm massive fine sandy loam, with a thin bleached layer at base. Sharp to:
8-25	Dark reddish brown friable medium clay with strong polyhedral structure. Clear to:
25-45	Red very highly calcareous hard medium clay with moderate polyhedral structure. Clear to:
45-80	Yellowish red very highly calcareous medium clay with moderate coarse prismatic structure. Clear to:
80-110	Yellowish red and olive mottled firm very highly calcareous medium clay with strong coarse blocky structure and 20-50% gypsum crystals.

Classification: Gypsic, Pedaric, Red Sodosol; thin, non-gravelly, loamy / clayey, moderate.

Summary of Properties

Drainage Moderately well drained. Water will perch on top of the clayey subsoil for a week or so following prolonged rain.

Fertility Inherent fertility is high.

pH Alkaline at the surface, strongly alkaline at moderate depth.

Rooting depth 110 cm in pit but few roots below 45 cm.

Barriers to root growth

Physical: None.

Chemical: High pH from 25 cm, high salinity from 45 cm, sodicity from 8 cm, (and boron?).

Water holding capacity Approximately 70 mm in root zone.

Seedling emergence: Fair - surface may seal over.

Erosion Potential

Water: Low.

Wind: Moderately low - pulverizing by stock will create a wind erosion hazard.

Laboratory Data

Depth cm	pH H_2O	pH $CaC1_2$	CO_3 %	EC1:5 dS/m	ECe dS/m	Org.C %	Avail. P mg/kg	Avail. K mg/kg	SO_4-S mg/kg	Boron mg/kg	Trace Elements mg/kg (DTPA)				CEC cmol (+)/kg	Exchangeable Cations cmol(+)/kg				ESP
											Cu	Fe	Mn	Zn		Ca	Mg	Na	K	
Paddock	8.2	7.8	0	0.95	5.60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0-8	8.9	7.8	0	0.17	1.73	-	-	-	-	-	-	-	-	-	11.6	5.2	2.5	1.54	1.92	13.3
8-25	9.1	7.8	0	0.16	0.64	-	-	-	-	-	-	-	-	-	29.8	11.4	7.4	4.84	2.58	16.2
25-45	9.3	8.4	16	0.98	4.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45-80	8.9	8.5	11	2.54	10.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80-110	8.3	8.2	10	4.71	12.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Paddock sample bulked from cores (0-10 cm) taken around the pit.
CEC (cation exchange capacity) is a measure of the soil's capacity to store and release major nutrient elements.
ESP (exchangeable sodium percentage) is derived by dividing the exchangeable sodium value by the CEC.