GRADATIONAL SANDY LOAM OVER ROCK

General Description: *Red sandy loam becoming more clayey with depth overlying a layer of soft carbonate grading to weathering bedrock*

Landform: Low rises

Substrate: Weathering basement rock (gneiss)

Vegetation: Bluebush shrubland
Dominant species:
Maireana astrotricha
Maireana pyrimadata

Type Site: Site No.: CU035

1:50,000 sheet:	7033-4	Hundred:	Out of Hundreds
Annual rainfall:	200 mm	Sampling date:	08/02/94
Landform:	Slope of low rise, 2% slope		
Surface:	Firm, lichen crust and minor quartz gravel		

Soil Description:

Depth (cm)	*Description*
0-8	Red massive sandy loam with minor quartz gravel. Abrupt to:
8-20	Red sandy clay loam with weak coarse polyhedral structure. Clear to:
20-45	Dark red sandy light clay with moderate coarse polyhedral structure. Gradual to:
45-80	Orange very highly calcareous sandy clay loam with moderate coarse polyhedral structure. Diffuse to:
80-130	Weathering gneiss with 10-20% soft carbonate segregations.

Classification: Sodic, Hypercalcic, Red Dermosol; thin, non-gravelly, loamy / clayey, moderate

Summary of Properties

Drainage The soil is well drained. The high calcium status indicates that the soil will absorb water readily.

Fertility The exchangeable cation data indicate that the soil has a moderate plant nutrient storage capacity.

pH Alkaline at the surface, strongly alkaline with depth.

Rooting depth 80 cm in pit with very few roots below this depth.

Barriers to root growth

Physical: There are no physical barriers until bedrock is encountered. If any shallower, basement rock will limit optimal root growth.

Chemical: There are no apparent chemical limitations. Salt and boron levels are very low.

Water holding capacity Approximately 100 mm in pit. The sandy surface (low wilting point) will make most of its water available to plants.

Seedling emergence Good.

Erosion Potential• Erosion potential is moderately low.

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	8.5	7.7	0	0.09	0.42	0.4	21	367	-	0.7	0.4	3	6.1	1.5	10.0	6.82	2.00	0.51	0.96	5.0
0-8	9.0	8.2	0.1	0.11	0.65	0.3	16	333	-	0.8	0.3	2	5.1	0.7	7.6	5.49	1.71	0.64	0.86	7.3
8-20	9.0	8.2	0.1	0.09	0.40	0.3	8	418	-	1.1	0.6	2	3.9	0.4	11.3	7.77	2.28	0.55	1.20	4.7
20-45	9.2	8.2	0.1	0.14	0.61	0.2	5	295	-	0.8	1.0	4	2.5	0.3	17.5	11.8	3.06	1.31	1.00	7.6
45-80	9.2	8.2	16.0	0.15	0.44	0.3	10	95	-	0.4	1.0	3	1.1	0.3	15.4	11.4	3.12	1.27	0.44	7.8
80-130	9.3	8.4	8.1	0.10	0.30	0.1	4	42	-	0.3	0.4	2	0.7	0.3	5.5	5.57	1.62	0.68	0.12	8.5

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.