DEEP SILICEOUS SAND
(Lowan / Moornaba soil)

General Description: *Deep siliceous sand with a pale subsurface layer, continuing below 100 cm*

Landform: Gently undulating rises with sandhills.

Substrate: Windblown Molineaux Sand.

Vegetation: Mallee.

Type Site: Site No.: EE069

1:50,000 sheet:	6230-1 (Cowell)	Hundred:	Minbrie
Annual rainfall:	340 mm	Sampling date:	22/01/93
Landform:	Midslope of gently undulating rise		
Surface:	Loose with no stones		

Soil Description:

Depth (cm)	*Description*
0-7	Very pale brown loose sand (remnants of original A2 horizon - original A1 and upper A2 presumably eroded). Gradual to:
7-40	Yellow loose sand. Abrupt to:
40-130	Yellow, grey and red mottled loose sand with several lamellae of reddish yellow sandy loam. Water table at 140 cm.

Classification: Basic, Argic, Bleached-Orthic Tenosol; thin, non-gravelly, sandy / sandy, deep

Summary of Properties

Drainage Soil is rapidly drained, but water table at 140 cm indicates that seepage water from upslope will impede deep drainage to some extent.

Fertility Inherent fertility is very low, as indicated by the exchangeable cation data, low clay content and negligible organic carbon. Deficiencies of nitrogen, phosphorus, potassium, copper, zinc and manganese can be expected.

pH Neutral at the surface, slightly alkaline with depth.

Rooting depth 90 cm in pit.

Barriers to root growth

Physical: None.

Chemical: None, but low nutrient retention capacity and status prevent deeper root growth.

Water holding capacity Approximately 70 mm in root zone.

Seedling emergence: Reduced by water repellence.

Workability: Loose surface is easily worked.

Erosion Potential

Water: Low.

Wind: Moderately high.

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	
0-7	6.8	6.6	<1	0.01	0.10	<0.1	19	<40	-	0.50	0.05	8.1	0.14	0.14	2.0	0.76	0.19	0.06	0.11	3.0
7-40	7.4	7.3	0	0.02	0.16	<0.1	3	48	-	0.09	0.19	4.4	0.06	0.15	2.2	0.73	0.41	0.05	0.15	2.3
40-130	7.4	7.5	0	0.02	0.16	<0.1	<2	100	-	0.54	0.33	3.1	0.11	0.17	3.5	1.14	1.15	0.16	0.25	4.6

Note: 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.