

## DEEP SAND

**General Description:** *Thick red sand becoming slightly more clayey with depth, and with variable deep subsoil carbonate*

**Landform:** Dunefields

**Substrate:** Molineaux Sand

**Vegetation:** Mallee



**Type Site:** Site No.: MM004

1:50,000 sheet: 6928-3 (Halidon)

Hundred: McPherson

Annual rainfall: 310 mm

Sampling date: 05/09/91

Landform: Crest of low to moderate sandhill

Surface: Loose with no stone

### Soil Description:

<i>Depth (cm)</i>	<i>Description</i>
0-5	Loose orange sand (recent drift). Sharp to:
5-22	Loose brown sand. Sharp to:
22-40	Loose brown sand. Sharp to:
40-70	Loose orange loamy sand. Diffuse to:
70-100	Loose orange loamy sand. Diffuse to:
100-130	Soft orange loamy sand. Abrupt to:
130-155	Yellowish red soft sand with clayey sand lamellae and minor fine calcareous segregations. Abrupt to:
155-190	Yellowish red soft loamy sand with minor fine calcareous segregations.



**Classification:** Calcareous, Argic, Brown-Orthic Tenosol; medium, non-gravelly, sandy / sandy, very deep

## Summary of Properties

<b>Drainage</b>	Rapidly drained. Soil never remains wet for more than a few hours.
<b>Fertility</b>	Inherent fertility is low, as indicated by the exchangeable cation data. Low clay and organic matter contents limit nutrient retention capacity. Phosphorus, copper and zinc are deficient at sampling site.
<b>pH</b>	Neutral at the surface, alkaline with depth.
<b>Rooting depth</b>	70 cm in pit.
<b>Barriers to root growth</b>	
<b>Physical:</b>	None.
<b>Chemical:</b>	Low fertility and low nutrient retention capacity.
<b>Water holding capacity</b>	Approximately 40 mm.
<b>Seedling emergence:</b>	Good, except where water repellence prevents even wetting.
<b>Workability:</b>	Easily worked, although the risk of erosion is high.
<b>Erosion Potential</b>	
<b>Water:</b>	Low
<b>Wind:</b>	Moderately high.

## Laboratory Data

Depth cm	pH H <sub>2</sub> O	pH CaCl <sub>2</sub>	CO <sub>3</sub> %	EC1:5 dS/m	ECe dS/m	Org.C %	Avail. P mg/kg	Avail. K 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	7.1	6.1	<1	0.03	0.22	0.3	2	97	<0.5	<0.03	4.9	1.4	<0.05	2.5	2.55	0.53	0.14	0.16	na
0-5	7.6	6.4	1	0.02	0.19	0.2	3	80	<0.5	<0.05	3.6	0.84	0.13	1.5	1.37	0.36	0.15	0.10	na
5-22	6.8	5.7	<1	0.02	0.13	0.3	3	72	<0.5	<0.05	8.7	2.5	0.13	2.4	1.67	0.37	0.16	0.11	na
22-40	7.5	6.5	1	0.02	0.13	0.2	<2	75	<0.5	<0.05	4.6	0.51	0.14	2.9	2.23	0.49	0.15	0.10	na
40-70	7.8	7.0	<1	0.02	0.19	<0.1	<2	55	<0.5	<0.05	3.4	<0.06	0.38	2.7	2.11	0.61	0.16	0.08	na
70-100	8.0	7.2	5	0.02	0.11	<0.1	<2	42	<0.5	<0.05	2.8	0.08	0.27	2.9	2.05	0.92	0.17	0.08	na
100-130	7.8	7.0	<1	0.02	0.16	<0.1	<2	52	<0.5	<0.05	2.6	0.09	0.31	3.8	2.37	1.24	0.16	0.09	4.2
130-155	8.3	7.3	<1	0.03	0.24	<0.1	3	87	<0.5	<0.05	2.3	0.07	0.49	8.3	4.65	2.81	0.33	0.17	4.0
155-190	9.2	8.1	<1	0.07	0.36	<0.1	<2	77	<0.5	<0.05	1.6	0.14	0.13	4.6	3.14	1.79	0.27	0.15	5.9

**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.