

BLEACHED SILICEOUS SAND

General Description: *Very thick bleached sand to loamy sand with an organically darkened surface over calcrete or a buried soil*

Landform: Gently undulating rises.

Substrate: Calcrete over a buried sand over clay soil.

Vegetation:



Type Site:	Site No.:	CK013	1:50,000 mapsheet:	6426-3 (Destrees)
	Hundred:	Haines	Easting:	743400
	Section:	42	Northing:	6028900
	Sampling date:	24/5/95	Annual rainfall:	520 mm average

Flat between gently undulating rises, 1% slope. Soft surface with no stones.

Soil Description:

Depth (cm)	Description
0-18	Very dark greyish brown loose loamy fine sand. Abrupt to:
18-45	White loose fine sand. Gradual to:
45-74	Pale yellow loose sand with clayey lamellae. Abrupt to:
74-76	Brown soft light sandy loam. Abrupt to:
76-125	Massive calcrete. Abrupt to:

	Buried soil:
125-150	Yellowish brown firm massive light sandy clay loam. Sharp to:
150-160	Pale yellow loose fine sand. Sharp to:
160-175	Light olive brown and red hard heavy clay with strong angular blocky structure.



Classification: Basic, Petrocalcic, Bleached-Orthic Tenosol; medium, non-gravelly, sandy / loamy, moderate over buried soil:
Mottled-Subnatric, Brown Sodosol; thick, non-gravelly, loamy / clayey



Summary of Properties

- Drainage:** Moderately well drained. Soil may remain wet for up to a week following heavy or prolonged rainfall.
- Fertility:** Natural fertility is very low due to the leached sandy nature of this soil. Most nutrient retention capacity is attributable to the organic matter fraction. Phosphorus and potassium are both deficient, and magnesium levels are low. A range of deficiencies can be expected.
- pH:** Neutral at the surface, alkaline at depth (calcrete).
- Rooting depth:** Approximately 80 cm in pit.
- Barriers to root growth:**
- Physical:** Broken calcrete layer at around 80 cm severely restricts deeper root growth.
 - Chemical:** Low nutrient retention capacity and status limit root growth.
- Waterholding capacity:** Effectively 30-40 mm in rootzone.
- Seedling emergence:** Satisfactory, but water repellence reduces establishment in some seasons.
- Workability:** Soft surface is easily worked.
- Erosion Potential:**
- Water:** Low.
 - Wind:** Moderate.

Laboratory Data

Depth cm	pH H ₂ O	pH CaCl ₂	CO ₃ %	EC1:5 dS/m	ECe dS/m	Org.C %	Avail. P mg/kg	Avail. K mg/kg	SO ₄ mg/kg	Boron mg/kg	Trace Elements mg/kg (DTPA)			CEC cmol (+)/kg	Exchangeable Cations cmol(+)/kg				ESP	Ext Al mg/kg	React Fe mg/kg
											Cu	Mn	Zn		Ca	Mg	Na	K			
Paddock	7.0	6.3	<1	0.04	0.4	1.2	15	59	6.0	1.5	0.97	2.58	9.9	6.1	7.08	0.54	0.10	0.13	na	1.6	200
											*2.2	-	*12								
0-18	6.9	6.0	<1	0.03	0.3	1.0	5	39	3.6	1.3	-	-	-	4.8	6.02	0.32	0.06	0.07	na	<1	152
18-45	6.9	6.2	<1	0.02	0.1	0.2	4	20	3.1	0.4	-	-	-	0.8	1.06	0.09	0.07	0.02	na	<1	165
45-74	7.1	6.5	<1	0.02	0.2	0.1	2	21	4.1	0.3	-	-	-	0.9	1.03	0.14	0.08	0.05	na	<1	232
74-76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
76-125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
125-150	8.8	8.1	6	0.14	0.6	0.1	2	75	13.3	1.0	-	-	-	4.4	3.66	1.45	0.22	0.20	5.0	<1	276
150-160	7.6	7.5	<1	0.01	0.1	0.1	3	18	3.1	0.3	-	-	-	0.7	0.51	0.12	0.06	0.03	na	<1	176
160-175	8.6	7.8	1	0.28	1.5	0.2	2	150	56	1.4	-	-	-	13.6	7.36	4.38	1.37	0.45	10.1	<1	387

Note: Paddock sample bulked from cores (0-10 cm) taken around the pit.

* EDTA trace element analyses for paddock sample.

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.

Further information: [DEWNR Soil and Land Program](#)

