HIGHLY CALCAREOUS SANDY CLAY LOAM
(Calca soil)

General Description: *Highly calcareous sandy loam to clay loam grading to a very highly calcareous sandy loam to light clay with variable carbonate rubble*

Landform: Undulating rises.

Substrate: Very highly calcareous medium to fine grained wind blown material (Woorinen Formation).

Vegetation: Mallee.

Type Site:

Site No.:	EW077		
1:50,000 sheet:	5831-4 (Venus)	Hundred:	Witera
Annual rainfall:	425 mm	Sampling date:	30/03/93
Landform:	Midslope of an undulating rise, 3% slope		
Surface:	Firm with no stones		

Soil Description:

Depth (cm)	*Description*
0-20	Dark brown very highly calcareous friable clay loam with moderate fine subangular blocky structure. Clear to:
20-100	Light brown very highly calcareous soft light sandy clay loam with 20-50% carbonate concretions (Class III B carbonate). Gradual to:
100-180	Pink very highly calcareous soft light clay with 20-50% carbonate concretions (Class III B carbonate).

Classification: Hypervescent, Regolithic, Supracalcic Calcarosol; medium, non-gravelly, clay loamy / clayey, deep

Summary of Properties

Drainage Moderately well drained. The soil never remains wet for more than a day or so following heavy or prolonged rainfall.

Fertility Inherent fertility is moderate. High carbonate levels to the surface reduce availability of phosphorus and trace elements. Regular phosphate applications are essential - levels are low at the sampling site. Nitrogen levels depend on legume content of pasture and cropping history.

pH Alkaline at the surface, strongly alkaline with depth.

Rooting depth 180 cm in pit, but few roots below 100 cm.

Barriers to root growth

Physical: There are no physical barriers.

Chemical: High pH and high sodicity from 100 cm restrict deeper root growth.

Water holding capacity Approximately 110 mm in the root zone.

Seedling emergence: Satisfactory.

Workability: Firm surface is easily worked.

Erosion Potential

Water: Moderately low.

Wind: 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 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	
0-20	8.4	7.9	17	0.18	0.71	1.9	10	660	-	2.0	0.32	7.80	6.70	6.30	21.3	17.33	2.34	0.16	2.16	0.7
20-100	8.9	8.1	63	0.25	1.52	-	2	230	-	1.8	0.52	1.90	0.53	0.31	10.2	6.69	2.96	0.65	0.69	6.3
100-180	9.3	8.4	68	0.96	8.07	-	<2	310	-	4.3	0.14	0.80	0.34	0.45	7.8	1.56	4.08	1.97	0.86	25.2

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