Project Name: CAN
Project Code: CAN **Site ID:** C147 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (NSW)

Site Information

Desc. By: H.M. Churchwood
Date Desc.: 12/12/56
Map Ref.: Sheet No. : 7726 1:100000
Northing/Long.: 143.416666666667
Easting/Lat.: -34.9666666666667
Locality: See C150 upslope of C148
Elevation: 90 metres
Rainfall: 325
Runoff: Moderately rapid
Drainage: Imperfectly drained

Geology

ExposureType: No Data
Geol. Ref.: No Data
Conf. Sub. is Parent. Mat.: No Data
Substrate Material: Slightly porous, Unconsolidated material (unidentified)

Land Form

Rel/Slope Class: Undulating plains <9m 3-10%
Morph. Type: Open depression (vale)
Elem. Type: Swale
Slope: 3 %
Pattern Type: Dunefield
Relief: No Data
Slope Category: Gently inclined
Aspect: 270 degrees

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:
Haplic Petroclcic Red Kandosol
ASC Confidence:
Analytical data are incomplete but reasonable confidence.
Mapping Unit: N/A
Principal Profile Form: N/A
Great Soil Group: N/A

Site Disturbance: Complete clearing. Pasture, native or improved, but never cultivated

Vegetation: Low Strata - Sod grass, , . *Species includes - None recorded
Mid Strata - Malle shrub, , . *Species includes - None recorded

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

0.05 - 0.13 m	Red (2.5YR5/8-Moist); ; Sand; Massive grade of structure; Weak consistence; Field pH 7.8 (pH meter);
0.18 - 0.23 m	Red (2.5YR5/6-Moist); ; Sand; Massive grade of structure; Firm consistence; Field pH 8 (pH meter);
0.25 - 0.3 m	Yellowish red (5YR5/8-Moist); ; Sandy light clay (Light); 20-50 mm, Angular blocky; Weak grade of structure, 50-100 mm, Prismatic; Firm consistence; Field pH 9 (pH meter);
0.3 - 0.36 m	Yellowish red (5YR5/8-Moist); ; Sandy light clay (Light); Firm consistence; Field pH 9.6 (pH meter);
0.48 - 0.58 m	Yellowish red (5YR5/8-Moist); ; Sandy light clay; Firm consistence; Few cutans, <10% of ped faces or walls coated, distinct; Few (2 - 10 %), Calcareous, , Concretions; Calcrete, Strongly cemented; Field pH 9.8 (pH meter);
0.66 - 0.71 m	Yellowish red (5YR5/8-Moist); ; Sandy light clay; Firm consistence; Few cutans, <10% of ped faces or walls coated, distinct; Many (20 - 50 %), Calcareous, , Soft segregations; Calcrete, Very strongly cemented; Field pH 9.7 (pH meter);
0.91 - 1.01 m	Yellowish red (5YR5/8-Moist); , 2.5YR48, 2-10% ; , 2-10% ; Sandy light clay; Firm consistence; Few cutans, <10% of ped faces or walls coated, distinct; Common (10 - 20 %), Calcareous, , Concretions; Calcrete, Strongly cemented; Field pH 9.8 (pH meter);
1.22 - 1.32 m	Red (2.5YR5/8-Moist); ; Sandy clay loam; Firm consistence; Very few (0 - 2 %), Manganiferous, , Soft segregations; Few (2 - 10 %), Calcareous, , Soft segregations; Calcrete, Moderately cemented; Field pH 9.9 (pH meter);
1.37 - 1.47 m	Red (2.5YR5/8-Moist); ; Sandy light clay (Light); Weak consistence; Very few (0 - 2 %), Manganiferous, , Soft segregations; Few (2 - 10 %), Calcareous, , Concretions; Calcrete, Moderately cemented; Field pH 9.8 (pH meter);
1.68 - 1.78 m	Red (2.5YR4/6-Moist); ; Sandy light clay (Heavy); Firm consistence; Few cutans, <10% of ped faces or walls coated, distinct; Very few (0 - 2 %), Manganiferous, , Soft segregations; Few (2 - 10 %), Calcareous, , Soft segregations; Field pH 9.8 (pH meter);

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1.98 - 2.08 m	Red (2.5YR4/6-Moist); ; Sandy light clay; Firm consistence; Few cutans, <10% of ped faces or walls coated, distinct; Common (10 - 20 %), Calcareous, , Concretions; Field pH 9.5 (pH meter);
2.59 - 2.74 m	Yellowish red (5YR5/8-Moist); ; Sandy clay loam; Firm consistence; Few cutans, <10% of ped faces or walls coated, distinct; Common (10 - 20 %), Calcareous, , Concretions; Field pH 9.6 (pH meter);
3.05 - 3.2 m	Yellowish red (5YR5/8-Moist); ; Sandy clay loam (Light); Firm consistence; Few cutans, <10% of ped faces or walls coated, distinct; Common (10 - 20 %), Calcareous, , Concretions; Field pH 9.6 (pH meter);
3.81 - 3.96 m	Red (2.5YR4/6-Moist); ; Sandy light clay (Light); Firm consistence; Few cutans, <10% of ped faces or walls coated, distinct; Common (10 - 20 %), Calcareous, , Soft segregations; Field pH 9.5 (pH meter);
4.27 - 4.42 m	Red (2.5YR4/6-Moist); ; Sandy clay loam (Heavy); Firm consistence; Field pH 9.3 (pH meter);
4.57 - 4.72 m	Yellowish red (5YR5/8-Moist); , 7.5YR66, 20-50% ; , 20-50% ; Sandy light clay; Very firm consistence; Few cutans, <10% of ped faces or walls coated, distinct; Field pH 8.4 (pH meter);
4.82 - 4.98 m	Yellowish red (5YR5/6-Moist); , 5YR46, 20-50% ; , 10YR72, 20-50% ; Sandy medium clay (Light); Very weak consistence; Few cutans, <10% of ped faces or walls coated, distinct; Field pH 7.8 (pH meter);
4.98 - 5.13 m	Yellowish red (5YR5/6-Moist); , 10YR72, 20-50% ; , 20-50% ; Sandy medium clay; Very weak consistence; Few cutans, <10% of ped faces or walls coated, distinct; Field pH 7.8 (pH meter);
5.28 - 5.43 m	Dark reddish brown (5YR3/4-Moist); , 7.5YR72, 20-50% ; , 20-50% ; Medium clay; Very firm consistence; Few cutans, <10% of ped faces or walls coated, distinct; Field pH 7.6 (pH meter);

Morphological Notes

Observation Notes

PLEISTOCENE AEOLIANITE:VESICULAR TO 60CM:FINE ROOT LINES TO 2M

Site Notes

MURRAKOOL

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable Acidity	CEC	ECEC	ESP
			Ca	Mg	K	Na				
m		dS/m	Cmol (+)/kg							%
0.05 - 0.13	7.8A	0.03A								
0.18 - 0.23	8A	0.03A								
0.25 - 0.3	9A	0.05A								
0.3 - 0.36	9.6A	0.15A								
0.48 - 0.58	9.8A	0.6A	4.3K	5.3	0.74	3.5			13.8B	
0.66 - 0.71	9.7A	0.714A								
0.91 - 1.01	9.8A	0.6A	3.3K	4.6	0.84	3.4			12.1B	
1.22 - 1.32	9.9A	0.565A								
1.37 - 1.47	9.8A	0.714A								
1.68 - 1.78	9.8A	0.685A								
1.98 - 2.08	9.5A	0.863A								
2.59 - 2.74	9.6A	0.863A								
3.05 - 3.2	9.6A	0.863A								
3.81 - 3.96	9.5A	1.01A								
4.27 - 4.42	9.3A	1.07A								
4.57 - 4.72	8.4A	1.07A								
4.82 - 4.98	7.8A	1.1A								
4.98 - 5.13	7.8A	1.19A								
5.28 - 5.43	7.6A	1.43A								

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis				
								GV	CS	FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0.05 - 0.13									42D	47	4	7
0.18 - 0.23									44D	46	2	7
0.25 - 0.3									41D	38	3	17
0.3 - 0.36	0.08A								39D	36	2	21
0.48 - 0.58	8.14A								31D	36	6	25
0.66 - 0.71	12.2A								31D	35	7	27
0.91 - 1.01	8.53A								36D	37	6	20
1.22 - 1.32									35D	40	4	19
1.37 - 1.47												
1.68 - 1.78	16.3A								32D	36	5	27
1.98 - 2.08	18.8A											
2.59 - 2.74									30D	45	2	21
3.05 - 3.2	10.1A								30D	44	4	21
3.81 - 3.96												
4.27 - 4.42	20.6A								29D	38	12	21
4.57 - 4.72												
4.82 - 4.98	0.91A								26D	43	3	25
4.98 - 5.13												
5.28 - 5.43	0.67A								17D	30	7	46

Depth	COLE	Gravimetric/Volumetric Water Contents						K sat	K unsat
		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar	15 Bar	
m		g/g - m3/m3						mm/h	mm/h
0.05 - 0.13									
0.18 - 0.23									
0.25 - 0.3									

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0.3 - 0.36
0.48 - 0.58
0.66 - 0.71
0.91 - 1.01
1.22 - 1.32
1.37 - 1.47
1.68 - 1.78
1.98 - 2.08
2.59 - 2.74
3.05 - 3.2
3.81 - 3.96
4.27 - 4.42
4.57 - 4.72
4.82 - 4.98
4.98 - 5.13
5.28 - 5.43

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Laboratory Analyses Completed for this profile

15_NR_CA	Exch. basic cations (Ca++) - meq per 100g of soil - Not recorded
15_NR_K	Exch. basic cations (K++) - meq per 100g of soil - Not recorded
15_NR_MG	Exch. basic cations (Mg++) - meq per 100g of soil - Not recorded
15_NR_NA	Exch. basic cations (Na++) - meq per 100g of soil - Not recorded
15J_H	Sum of Ex. cations + Ex. acidity - Sum of basic exch. cations and exch. (Hydrogen)
19A1	Carbonates - rapid titration
2A1	Air-dry moisture content
3A1	EC of 1:5 soil/water extract
4A1	pH of 1:5 soil/water suspension
5A2	Chloride - 1:5 soil/water extract, automated colour
P10_PB_C	Clay (%) - Plummet balance
P10_PB_CS	Coarse sand (%) - Plummet balance
P10_PB_FS	Fine sand (%) - Plummet balance
P10_PB_Z	Silt (%) - Plummet balance