Project Name: **Regional**
Project Code: **REG** **Site ID:** **T35** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

Site Information

Desc. By: R.F. Isbell
Date Desc.: 16/09/64
Map Ref.: Sheet No. : 8258 1:100000
Northing/Long.: 146.833333333333
Easting/Lat.: -19.65
Locality: Stock route 2 chains north of Cemetery Reserve:
Elevation: No Data
Rainfall: 870
Runoff: Very slow
Drainage: Poorly drained

Geology

ExposureType: Soil pit
Geol. Ref.: Qa
Conf. Sub. is Parent. Mat.: No Data
Substrate Material: Unconsolidated material (unidentified)

Land Form

Rel/Slope Class: Level plain <9m <1%
Morph. Type: Flat
Elem. Type: Plain
Slope: 0 %
Pattern Type: Alluvial plain
Relief: No Data
Slope Category: Very gently sloped
Aspect: No Data

Surface Soil Condition (dry): Self-mulching

Erosion:

Soil Classification

Australian Soil Classification:
Endohypersodic Self-Mulching Black Vertosol
ASC Confidence:
All necessary analytical data are available.
Mapping Unit: N/A
Principal Profile Form: Ug5.11
Great Soil Group: Black earth

Site Disturbance: Limited clearing, for example selective logging

Vegetation: Low Strata - Tussock grass, 0.51-1m, Mid-dense. *Species includes - Dichanthium species, Heteropogon contortus

Mid Strata - , , . *Species includes - None recorded

Tall Strata - Tree, , Sparse. *Species includes - Eucalyptus papuana, Eucalyptus tessellaris

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.1 m	Very dark grey (10YR3/1-Moist); Dark grey (10YR4/1-Dry); , 0-0% ; , 0-0% ; Light clay; Strong grade of structure, 10-20 mm, Angular blocky; Dry; Very strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Concretions; Gradual change to -
B21	0.1 - 0.3 m	Very dark grey (10YR3/1-Moist); , 0-0% ; , 0-0% ; Heavy clay; 5-10 mm, Lenticular; Moderate grade of structure, 20-50 mm, Angular blocky; Dry; Rigid consistence; 0-2%, fine gravelly, 2-6mm, Gravel, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Concretions;
B21	0.3 - 0.56 m	Very dark grey (10YR3/1-Moist); , 0-0% ; , 0-0% ; Heavy clay; 5-10 mm, Lenticular; Moderate grade of structure, 20-50 mm, Angular blocky; Dry; Rigid consistence; 0-2%, fine gravelly, 2-6mm, Gravel, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Concretions; Gradual change to -
B22	0.56 - 0.71 m	Greyish brown (10YR5/2-Moist); , 0-0% ; , 0-0% ; Heavy clay; Weak grade of structure, 20-50 mm, Angular blocky; Dry; Rigid consistence; 0-2%, fine gravelly, 2-6mm, Gravel, coarse fragments; Many (20 - 50 %), Calcareous, , Concretions; Gradual change to -
B23	0.71 - 0.94 m	Grey (2.5Y6/1-Moist); , 10YR58; Medium heavy clay; Weak grade of structure, 20-50 mm, Angular blocky; Dry; Rigid consistence; 0-2%, fine gravelly, 2-6mm, Gravel, coarse fragments; Very many (50 - 100 %), Calcareous, , Concretions;
B23	0.94 - 1.14 m	Grey (2.5Y6/1-Moist); , 10YR58; Medium heavy clay; Weak grade of structure, 20-50 mm, Angular blocky; Dry; Rigid consistence; 0-2%, fine gravelly, 2-6mm, Gravel, coarse fragments; Very many (50 - 100 %), Calcareous, , Concretions; Gradual change to -
	1.14 - 1.35 m	Grey (2.5Y6/1-Moist); , 10YR58; Light clay; Weak consistence; Very many (50 - 100 %), Calcareous, Coarse (6 - 20 mm), Concretions;
	1.35 - 1.45 m	;

Morphological Notes

Gravel or large carbonate nodule stopped augger:

Observation Notes

STRONG SHEAR PLANES IN 10-56CM HORIZON:CARBONATE NODULES ON SURFACE:COMPLEX OF UG5.1 AND UG5.4 SOILS:

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Site Notes
LANDSDOWN

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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 - 0.1	6.9A	0.089A	14.2E	4.6	0.27	0.9	2.1F	22C	22.1F	4.09
0.1 - 0.3	7.3A	0.089A	15.6E	5.2	0.12	1	1.1F	23C	23F	4.35
0.3 - 0.56	8.6A	0.297A								
0.56 - 0.71	9.4A	0.476A								
0.71 - 0.94	9.3A	0.744A	6.2E	7	0.12	5.8		19C		30.53
0.94 - 1.14	9.1A	1.16A								
1.14 - 1.35	9A	1.28A								

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 - 0.1		1.2D	7B	0.01A	0.09A				23D	33	14	31
0.1 - 0.3	0.2A		6B						20D	31	13	35
0.3 - 0.56				0.012A								
0.56 - 0.71												
0.71 - 0.94	14.4A											
0.94 - 1.14												
1.14 - 1.35												

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 - 0.1									
0.1 - 0.3									
0.3 - 0.56									
0.56 - 0.71									
0.71 - 0.94									
0.94 - 1.14									
1.14 - 1.35									

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Laboratory Analyses Completed for this profile

15C1_CA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_K	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_MG	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_NA	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15D1_CEC	CEC - 1M ammonium acetate at pH 7.0, pretreatment for soluble salts; manual leach
15G_C	Exchange acidity (hydrogen and aluminium) - meq per 100g of soil - By 1M KCl exch. acidity by titration to pH 8.4
15J1	Effective CEC
19A1	Carbonates - rapid titration
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
6A1_UC	Organic carbon (%) - Uncorrected Walkley and Black method
7A2	Total nitrogen - semimicro Kjeldahl , automated colour
9A1	Total phosphorus - X-ray fluorescence
9G_BSES	Available P (mg/kg) - Acid P - 0.005M H2SO4 (BSES)
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