

**Project Name:** Regional  
**Project Code:** REG **Site ID:** T220 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

**Site Information**

<b>Desc. By:</b>	G.G. Murtha	<b>Locality:</b>	2.3KM along power line track from national park road Alligator Creek 4.8KM from highway:
<b>Date Desc.:</b>	05/12/73	<b>Elevation:</b>	61 metres
<b>Map Ref.:</b>	Sheet No. : 8259 1:100000	<b>Rainfall:</b>	1140
<b>Northing/Long.:</b>	146.9375	<b>Runoff:</b>	Rapid
<b>Easting/Lat.:</b>	-19.4083333333333	<b>Drainage:</b>	Well drained

**Geology**

<b>Exposure Type:</b>	Undisturbed soil core	<b>Conf. Sub. is Parent. Mat.:</b>	No Data
<b>Geol. Ref.:</b>	P-Cv	<b>Substrate Material:</b>	Undisturbed soil core, 1.2 m deep, Andesite

**Land Form**

<b>Rel/Slope Class:</b>	Rolling rises 9-30m 10-32%	<b>Pattern Type:</b>	Rises
<b>Morph. Type:</b>	No Data	<b>Relief:</b>	24 metres
<b>Elem. Type:</b>	Hillslope	<b>Slope Category:</b>	Moderately inclined
<b>Slope:</b>	15.8 %	<b>Aspect:</b>	No Data

**Surface Soil Condition (dry):** Hardsetting

**Erosion:**

**Soil Classification**

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b>	N/A
Haplic Eutrophic Red Chromosol	<b>Principal Profile Form:</b>	Dr2.2
<b>ASC Confidence:</b>	<b>Great Soil Group:</b>	N/A
All necessary analytical data are available.		

**Site Disturbance:** No effective disturbance other than grazing by hoofed animals

**Vegetation:** Low Strata - Tussock grass, 0.51-1m, Mid-dense. \*Species includes - None recorded  
Tall Strata - Tree, 6.01-12m, Very sparse. \*Species includes - Eucalyptus drepanophylla, Eucalyptus alba

**Surface Coarse Fragments:** 20-50%, cobbly, 60-200mm, , Gravel

**Profile Morphology**

A1	0 - 0.1 m	Very dark greyish brown (10YR3/2-Moist); ; Loam (Heavy); Weak grade of structure, 10-20 mm, Angular blocky; Dry; Firm consistence; 20-50%, cobbly, 60-200mm, Gravel, coarse fragments; Gradual change to -
A2	0.1 - 0.2 m	Brown (7.5YR4/2-Moist); Brown (7.5YR5/4-Dry); ; Clay loam; Weak grade of structure, 10-20 mm, Angular blocky; Dry; Firm consistence; 20-50%, cobbly, 60-200mm, Gravel, coarse fragments;
A2	0.2 - 0.3 m	Brown (7.5YR4/2-Moist); Brown (7.5YR5/4-Dry); ; Clay loam; Weak grade of structure, 10-20 mm, Angular blocky; Dry; Firm consistence; 20-50%, cobbly, 60-200mm, Gravel, coarse fragments; Clear change to -
B2	0.3 - 0.45 m	Yellowish red (5YR4/6-Moist); ; Heavy clay; Strong grade of structure, 10-20 mm, Angular blocky; Dry; Very strong consistence; 2-10%, medium gravelly, 6-20mm, Gravel, coarse fragments;
B2	0.45 - 0.6 m	Yellowish red (5YR4/6-Moist); ; Heavy clay; Strong grade of structure, 10-20 mm, Angular blocky; Dry; Very strong consistence; 2-10%, medium gravelly, 6-20mm, Gravel, coarse fragments;
B	0.6 - 0.9 m	Reddish brown (5YR4/4-Moist); ; Heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Moderately moist; Very firm consistence;
C	0.9 - 1.2 m	;

**Morphological Notes**

C Soft friable weathered brownish Y parent material:

**Observation Notes**

60-90CM INCREASING AMOUNTS OF SOFT BROWNISH YELLOW PARENT MATERIAL:

**Site Notes**

THE SISTERS

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**Laboratory Test Results:**

Depth m	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP %
		dS/m	Ca	Mg	K	Na Cmol (+)/kg			
0 - 0.1	6.8A	<0.05A	13.5B	5.3	1	0.13			
0.1 - 0.2	6.4A	<0.05A							
0.2 - 0.3	6.5A	<0.05A							
0.3 - 0.45	6.5A	<0.05A	9.5B	6.5	0.28	0.1			
0.45 - 0.6	6.5A	<0.05A	10.8B	6.1	0.04	0.22			
0.6 - 0.9	6.5A	<0.05A							
0.9 - 1.2	6.7A	<0.05A							

Depth  m	CaCO3	Organic	Avail.	Total	Total	Total	Bulk Density Mg/m3	Particle		Size FS %	Analysis	
	%	C %	P mg/kg	P %	N %	K %		GV	CS		Silt	Clay
0 - 0.1		2.97D	245B		0.21A			12	17A	32	25	26
0.1 - 0.2								20	34A	26	20	20
0.2 - 0.3								26	33A	25	18	24
0.3 - 0.45			141B					16	6A	14	18	61
0.45 - 0.6								<2	3A	12	20	65
0.6 - 0.9												
0.9 - 1.2			553B									

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 - 0.2										
0.2 - 0.3										
0.3 - 0.45										
0.45 - 0.6										
0.6 - 0.9										
0.9 - 1.2										

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**Laboratory Analyses Completed for this profile**

12_HF_CU	Total element - Cu(mg/kg) - HF/HClO <sub>4</sub> Digest
12_HF_ZN	Total element - Zn(mg/kg) - HF/HClO <sub>4</sub> Digest
15A2_CA	Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) - 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_K	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_MG	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_NA	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
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
6A1_UC	Organic carbon (%) - Uncorrected Walkley and Black method
7A2	Total nitrogen - semimicro Kjeldahl , automated colour
9G_BSES	Available P (mg/kg) - Acid P - 0.005M H <sub>2</sub> SO <sub>4</sub> (BSES)
P10_CF_C	Clay (%) - Coventry and Fett pipette method
P10_CF_CS	Coarse sand (%) - Coventry and Fett pipette method
P10_CF_FS	Fine sand (%) - Coventry and Fett pipette method
P10_CF_Z	Silt (%) - Coventry and Fett pipette method
P10_GRAV	Gravel (%)