

**Project Name:** Regional  
**Project Code:** REG **Site ID:** T339 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

**Site Information**

<b>Desc. By:</b>	R.J. Coventry	<b>Locality:</b>	
<b>Date Desc.:</b>	05/09/73	<b>Elevation:</b>	No Data
<b>Map Ref.:</b>	Sheet No. : 7956 1:100000	<b>Rainfall:</b>	600
<b>Northing/Long.:</b>	145.187777777778	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	-20.7208333333333	<b>Drainage:</b>	No Data

**Geology**

<b>ExposureType:</b>	Undisturbed soil core	<b>Conf. Sub. is Parent. Mat.:</b>	No Data
<b>Geol. Ref.:</b>	No Data	<b>Substrate Material:</b>	No Data

**Land Form**

<b>Rel/Slope Class:</b>	No Data	<b>Pattern Type:</b>	No Data
<b>Morph. Type:</b>	No Data	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	No Data	<b>Slope Category:</b>	No Data
<b>Slope:</b>	0 %	<b>Aspect:</b>	No Data

**Surface Soil Condition (dry):** N/A

**Erosion:**

**Soil Classification**

<b>Australian Soil Classification:</b>		<b>Mapping Unit:</b>	N/A
Mottled Mesotrophic Brown Kandosol		<b>Principal Profile Form:</b>	Gn2.62
<b>ASC Confidence:</b>		<b>Great Soil Group:</b>	Yellow earth

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, Sparse. \*Species includes - Heteropogon contortus, Bothriochloa bladhii  
Mid Strata - Tree, 3.01-6m, Very sparse. \*Species includes - None recorded  
Tall Strata - Tree, 6.01-12m, Very sparse. \*Species includes - Eucalyptus shirleyi

**Surface Coarse Fragments:** No surface coarse fragments

**Profile Morphology**

A1	0 - 0.1 m	Very dark greyish brown (10YR3/2-Moist); Dark greyish brown (10YR4/2-Dry); ; Sandy loam; Massive grade of structure; Dry; Weak consistence; Gradual change to -
A1/A3	0.1 - 0.2 m	Dark yellowish brown (10YR4/4-Moist); Yellowish brown (10YR5/7-Dry); ; Sandy loam (Heavy); Massive grade of structure; Dry; Weak consistence; Gradual change to -
A3	0.2 - 0.3 m	Brown (10YR4/3-Moist); Dark yellowish brown (10YR4/4-Dry); ; Sandy loam; Massive grade of structure; Dry; Weak consistence; Gradual change to -
B1	0.3 - 0.4 m	Yellowish brown (10YR5/7-Moist); Brownish yellow (10YR6/8-Dry); ; Sandy clay loam; Massive grade of structure; Moist; Weak consistence;
B1	0.4 - 0.6 m	Yellowish brown (10YR5/7-Moist); Brownish yellow (10YR6/8-Dry); ; Sandy clay loam; Massive grade of structure; Moist; Weak consistence;
B2	0.6 - 0.9 m	Yellowish brown (10YR5/7-Moist); , 7.5YR57, 20-50% , 5-15mm, Distinct; , 20-50% , 5-15mm, Distinct; Sandy medium clay; Massive grade of structure; Moist; Very firm consistence; Very few (0 - 2 %), Ferruginous, , Nodules; Abrupt change to -
B2	0.9 - 1.2 m	Yellowish brown (10YR5/7-Moist); , 7.5YR57, 20-50% , 5-15mm, Distinct; , 20-50% , 5-15mm, Distinct; Sandy medium clay; Massive grade of structure; Moist; Very firm consistence; Very few (0 - 2 %), Ferruginous, , Nodules;
B2	1.2 - 1.5 m	Yellowish brown (10YR5/7-Moist); , 7.5YR57, 20-50% , 5-15mm, Distinct; , 20-50% , 5-15mm, Distinct; Sandy medium clay; Massive grade of structure; Moist; Very firm consistence; Very few (0 - 2 %), Ferruginous, , Nodules;
B2	1.5 - 1.8 m	Yellowish brown (10YR5/4-Moist); , 2.5YR36, 20-50% , 5-15mm, Distinct; , 10YR57, 20-50% , 5-15mm, Distinct; Sandy medium clay; Massive grade of structure; Moist; Very firm consistence; Very few (0 - 2 %), Ferruginous, , Nodules;
B2	1.8 - 2.1 m	Yellowish brown (10YR5/4-Moist); , 2.5YR36, 20-50% , 5-15mm, Distinct; , 10YR57, 20-50% , 5-15mm, Distinct; Sandy medium clay; Massive grade of structure; Moist; Very firm consistence; Very few (0 - 2 %), Ferruginous, , Nodules; Gradual change to -

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B3	2.1 - 2.4 m	Greyish brown (10YR5/2-Moist); , 10YR54, 20-50% , 15-30mm, Prominent; , 2.5YR47, 20-50% , 15-30mm, Prominent; Sandy medium clay; Massive grade of structure; Moist; Very firm consistence; Many, fine (1-2mm) roots;
B3	2.4 - 2.7 m	Greyish brown (10YR5/2-Moist); , 10YR54, 20-50% , 15-30mm, Prominent; , 2.5YR46, 20-50% , 15-30mm, Prominent; Sandy medium clay; Massive grade of structure; Moist; Very firm consistence; Very few (0 - 2 %), Ferruginous, , Nodules; Many, fine (1-2mm) roots; Gradual change to -
C1	2.7 - 3 m	Greyish brown (10YR5/2-Moist); , 10YR58, 20-50% , 15-30mm, Prominent; , 2.5YR46, 20-50% , 15-30mm, Prominent; Sandy medium clay; Massive grade of structure; Moist; Very firm consistence; Few, fine (1-2mm) roots;
C1	3 - 3.5 m	Greyish brown (10YR5/2-Moist); , 10YR58, 20-50% , 15-30mm, Prominent; , 2.5YR48, 20-50% , 15-30mm, Prominent; Sandy medium clay; Massive grade of structure; Moist; Very firm consistence; Gradual change to -
C2	3.5 - 4 m	Light reddish brown (2.5YR6/3-Moist); , 7.5YR58, 20-50% , 15-30mm, Prominent; , 2.5YR48, 20-50% , 15-30mm, Prominent; Sandy clay loam; Massive grade of structure; Moist; Strong consistence; 10-20%, coarse gravelly, 20-60mm, Substrate material, coarse fragments; Very few (0 - 2 %), Ferruginous, Medium (2 -6 mm), Nodules;
C2	4 - 4.5 m	Light reddish brown (2.5YR6/3-Moist); , 7.5YR58, 20-50% , 15-30mm, Prominent; , 2.5YR48, 20-50% , 15-30mm, Prominent; Sandy medium clay; Massive grade of structure; Moist; Strong consistence; 10-20%, coarse gravelly, 20-60mm, Substrate material, coarse fragments; Very few (0 - 2 %), Ferruginous, Medium (2 -6 mm), Nodules; Gradual change to -
C3	4.5 - 4.65 m	Dark red (2.5YR3/5-Moist); , 10YR61, 20-50% , 15-30mm, Prominent; , 7.5YR58, 20-50% , 15-30mm, Prominent; Clayey sand; Massive grade of structure; Moist; Very strong consistence; 10-20%, coarse gravelly, 20-60mm, Substrate material, coarse fragments;

#### **Morphological Notes**

#### **Observation Notes**

SOME PEDOTUBATION THROUGHOUT A1/A3 HORIZONS.

#### **Site Notes**

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**Laboratory Test Results:**

Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable		CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na	Acidity			
						Cmol	(+)/kg			%
0 - 0.1	6A	0.047A	2.24H	1.4	0.26	0.03	0.34F	6.7A	4.3F	0.45
0.1 - 0.2	5.4A	0.024A								
0.2 - 0.3	5.2A	0.26A	0.8H	1.05	0.09	0.03	0.37F	4.41A	2.3F	0.68
0.3 - 0.4	5.4A	0.024A								
0.4 - 0.6	5.4A	0.018A	0.61H	1.4	0.07	0.05	0.36F	3.39A	2.5F	1.47
0.6 - 0.9	5.5A	0.025A								
0.9 - 1.2	6.2A	0.026A	0.33H	1.64	0.07	0.23	0.3F	3.89A	2.6F	5.91
1.2 - 1.5	6.6A	0.023A								
1.5 - 1.8	7A	0.023A						4.45A		
1.8 - 2.1	6.9A	0.023A	<0.02H	2.74	0.06	0.24	0.22F		3.3F	
2.1 - 2.4	6.9A	0.025A								
2.4 - 2.7	7A	0.026A								
2.7 - 3	7.1A	0.024A								
3 - 3.5	6.9A	0.023A								
3.5 - 4	7.1A	0.038A								
4 - 4.5	7.3A	0.09A								
4.5 - 4.65	7.4A	0.094A								

Depth  m	CaCO3	Organic	Avail.	Total	Total	Total	Bulk Density Mg/m3	Particle		Size	Analysis	
	%	C %	P mg/kg	P %	N %	K %		GV	CS	FS %	Silt	Clay
0 - 0.1		1.08D	11B	0.009A	0.148A	0.07A		1	35A	38	11	16
0.1 - 0.2		0.56D	7B		0.056A			0	34A	40	10	16
0.2 - 0.3		0.36D	7B	0.007A	0.086A	0.07A		0	38A	34	10	18
0.3 - 0.4								0	33A	36	10	22
0.4 - 0.6			5B	0.005A		0.08A		0	32A	34	10	25
0.6 - 0.9								1	30A	28	9	33
0.9 - 1.2				0.007A		0.09A		3	30A	26	9	34
1.2 - 1.5								2	29A	25	9	37
1.5 - 1.8								1	25A	25	10	39
1.8 - 2.1								3	25A	25	11	39
2.1 - 2.4								3	29A	26	10	36
2.4 - 2.7								12	30A	28	11	32
2.7 - 3								5	37A	30	9	25
3 - 3.5								5	39A	33	10	19
3.5 - 4								13	39A	30	10	21
4 - 4.5								18	36A	20	8	35
4.5 - 4.65								20	59A	21	5	15

[illegible]

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1.2 - 1.5  
1.5 - 1.8  
1.8 - 2.1  
2.1 - 2.4  
2.4 - 2.7  
2.7 - 3  
3 - 3.5  
3.5 - 4  
4 - 4.5  
4.5 - 4.65

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**Laboratory Analyses Completed for this profile**

10A1	Total sulfur - X-ray fluorescence
13C1_FE	Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon
15A2_CEC	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15E1_CA	Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) by compulsive exchange, no pretreatment for soluble
15E1_K	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts
15E1_MG	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts
15E1_NA	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts
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
17A1	Total potassium - X-ray fluorescence
2A1	Air-dry moisture content
3A1	EC of 1:5 soil/water extract
4A1	pH of 1:5 soil/water suspension
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 H <sub>2</sub> SO <sub>4</sub> (BSES)
MIN_EC	Exchange Capacity - Minerology
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 (%)
XRD_C_II	Illite - X-Ray Diffraction
XRD_C_K2O	K <sub>2</sub> O - X-Ray Diffraction or Clay Fraction (air dry)
XRD_C_Ka	Kaolin - X-Ray Diffraction
XRD_C_Qz	Quartz - X-Ray Diffraction