Project Name: **Regional**
Project Code: **REG** **Site ID:** **T176** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

Site Information

Desc. By: G. Smith
Date Desc.: 03/11/70
Map Ref.: Sheet No. : 7767 1:100000
Northing/Long.: 144.233333333333
Easting/Lat.: -15.4638888888889
Locality: 25.9KM north of Laura Post Office on Kennedy Highway:
Elevation: No Data
Rainfall: 940
Runoff: Very slow
Drainage: Well drained

Geology

ExposureType: Undisturbed soil core
Geol. Ref.: Tf
Conf. Sub. is Parent. Mat.: No Data
Substrate Material: No Data

Land Form

Rel/Slope Class: Gently undulating rises 9-30m 1-3%
Morph. Type: Simple-slope
Elem. Type: Hillslope
Slope: 0 %
Pattern Type: Rises
Relief: 30 metres
Slope Category: Gently inclined
Aspect: No Data

Surface Soil Condition (dry): Hardsetting

Erosion:

Soil Classification

Australian Soil Classification:
Basic Regolithic Orthic Tenosol
ASC Confidence:
All necessary analytical data are available.
Mapping Unit: N/A
Principal Profile Form: Gn2.64
Great Soil Group: Yellow earth

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

Vegetation:

Tall Strata - Tree, 12.01-20m, Sparse. *Species includes - Eucalyptus species, Eucalyptus polycarpa, Grevillea species

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A11	0 - 0.1 m	Very dark greyish brown (10YR3/2-Moist); Grey (10YR5/1-Dry); ; Sand (Heavy); Massive grade of structure; Dry; Strong consistence; Clear change to -
A21	0.05 - 0.1 m	Dark greyish brown (10YR4/2-Moist); Greyish brown (10YR5/2-Dry); ; Sand; Massive grade of structure; Dry; Firm consistence; Gradual change to -
A22	0.1 - 0.2 m	Brown (10YR4/3-Moist); Pale brown (10YR6/3-Dry); ; Sand; Massive grade of structure; Dry; Strong consistence; Gradual change to -
B1	0.2 - 0.3 m	Yellowish brown (10YR5/4-Moist); Pale brown (10YR6/3-Dry); ; Sand; Massive grade of structure; Earthy fabric; Dry; Very strong consistence; Gradual change to -
B1	0.3 - 0.4 m	Yellowish brown (10YR5/4-Moist); Light yellowish brown (10YR6/4-Dry); ; Sand; Massive grade of structure; Earthy fabric; Dry; Very strong consistence; Gradual change to -
B1	0.4 - 0.5 m	Yellowish brown (10YR5/5-Moist); ; Sand; Massive grade of structure; Earthy fabric; Dry; Very strong consistence; Gradual change to -
B1	0.5 - 0.6 m	Yellowish brown (10YR5/6-Moist); ; Sand (Heavy); Massive grade of structure; Earthy fabric; Dry; Very strong consistence; Gradual change to -
B1	0.6 - 0.75 m	Yellowish brown (10YR5/6-Moist); ; Sandy loam; Massive grade of structure; Earthy fabric; Dry; Strong consistence; Gradual change to -
B2	0.75 - 0.9 m	Yellowish brown (10YR5/6-Moist); , 10YR68; Sandy clay loam; Massive grade of structure; Earthy fabric; Dry; Strong consistence; Gradual change to -
B2	0.9 - 1.2 m	Strong brown (7.5YR5/6-Moist); , 2.5YR58, 2-10% , 15-30mm, Distinct; , 2-10% , 15-30mm, Distinct; Sandy clay loam (Heavy); Massive grade of structure; Earthy fabric; Dry; Very strong consistence; Gradual change to -
B2	1.2 - 1.5 m	Red (2.5YR5/8-Moist); , 10YR56, 20-50% , 5-15mm, Distinct; , 20-50% , 5-15mm, Distinct; Sandy medium clay (Light); Massive grade of structure; Dry; Strong consistence; Gradual change to -

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B2	1.5 - 1.8 m	Red (2.5YR5/8-Moist); , 10YR66, 20-50% , 5-15mm, Distinct; , 20-50% , 5-15mm, Distinct; Sandy medium clay (Light); Massive grade of structure; Dry; Strong consistence; Gradual change to -
	1.8 - 2.1 m	Yellowish brown (10YR5/6-Moist); , 10YR66, 20-50% , 5-15mm, Distinct; , 10YR82, 20-50% , 5-15mm, Distinct; Sandy medium clay (Light); Massive grade of structure; Strong consistence; Gradual change to -
B3	2.1 - 2.4 m	Yellow (10YR7/5-Moist); , 7.5YR56, 20-50% , 5-15mm, Distinct; , 20-50% , 5-15mm, Distinct; Sandy medium clay (Light); Massive grade of structure; Dry; Strong consistence; Gradual change to -
	2.4 - 2.7 m	Light grey (10YR7/2-Moist); , 10YR56, 20-50% , 30-mm, Distinct; , 20-50% , 30-mm, Distinct; Sandy medium clay (Light); Massive grade of structure; Strong consistence; Gradual change to -
	2.7 - 2.85 m	Light grey (10YR7/2-Moist); , 10YR56, 20-50% , 30-mm, Distinct; , 20-50% , 30-mm, Distinct; Sandy medium clay (Light); Massive grade of structure; Strong consistence; 0-2%, coarse gravelly, 20-60mm, subrounded, Quartz, coarse fragments;

Morphological Notes

Observation Notes

Site Notes

LAURA

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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 - 0.05	5.9A	0.029A	1.1B	0.56	0.08	0.17	2.1F		4F	
0.05 - 0.1	5.9A	0.017A	0.36B	0.22	0.03	0.12	1.3F		2F	
0.1 - 0.2	5.9A	0.014A	0.22B	0.15	0.01	0.1	1F		1.5F	
0.2 - 0.3	5.9A	0.011A	0.12B	0.17	0.02	0.12	1.3F		1.7F	
0.3 - 0.4	6A	0.008A								
0.4 - 0.5	6.1A	0.008A	0.18B	0.14	0.01	0.12	0.6F		1.1F	
0.5 - 0.6	6.1A	0.008A								
0.6 - 0.75	5.9A	0.011A								
0.75 - 0.9	5.9A	0.011A	0.18B	0.36	0.01	0.12	0.8F		1.5F	
0.9 - 1.2	6A	0.014A								
1.2 - 1.5	6.2A	0.008A	0.18B	0.61	0.02	0.12	0.6F	1.32A	1.5F	9.09
1.5 - 1.8	6.3A	0.008A								
1.8 - 2.1	6.3A	0.008A	0.12B	0.71	0.01	0.14	0.4F		1.4F	
2.1 - 2.4	5.8A	0.026A								
2.4 - 2.7	6.2A	0.011A	0.12B	0.19	0.02	0.07				
2.7 - 2.85	6.4A	0.011A								

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 - 0.05		0.8D	5.6B	0.011A	0.07A	0.03A		0	93A	3	4	4
0.05 - 0.1		0.36D	4.5B	0.008A	0.03A	0.03A		<2	92A	3	5	5
0.1 - 0.2		0.25D	14.8B	0.008A		0.03A		<2	92A	3	6	6
0.2 - 0.3		0.17D						<2	91A	2	7	6
0.3 - 0.4												
0.4 - 0.5				0.009A		0.03A		<2	90A	2	8	7
0.5 - 0.6												
0.6 - 0.75												
0.75 - 0.9			6.6B	0.013A		0.04A		<2	84A	2	14	13
0.9 - 1.2												
1.2 - 1.5								2	83A	2	15	1
1.5 - 1.8												
1.8 - 2.1								2	83A	2	14	1
2.1 - 2.4												
2.4 - 2.7												
2.7 - 2.85												

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 - 0.05									
0.05 - 0.1									
0.1 - 0.2									
0.2 - 0.3									
0.3 - 0.4									
0.4 - 0.5									
0.5 - 0.6									
0.6 - 0.75									
0.75 - 0.9									

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0.9 - 1.2
1.2 - 1.5
1.5 - 1.8
1.8 - 2.1
2.1 - 2.4
2.4 - 2.7
2.7 - 2.85

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Laboratory Analyses Completed for this profile

10A1	Total sulfur - X-ray fluorescence
12_HF_CU	Total element - Cu(mg/kg) - HF/HClO4 Digest
12_HF_MN	Total element - Mn(mg/kg) - HF/HClO4 Digest
12_HF_ZN	Total element - Zn(mg/kg) - HF/HClO4 Digest
13C1_AL	Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon
15A2_CA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_CEC	Exchangeable bases- 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
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
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 H2SO4 (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_Il	Illite - X-Ray Diffraction
XRD_C_K2O	K2O - X-Ray Diffraction or Clay Fraction (air dry)
XRD_C_Ka	Kaolin - X-Ray Diffraction
XRD_C_Qz	Quartz - X-Ray Diffraction