Project Name: **Regional**
Project Code: **REG** **Site ID:** **T383** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

Site Information

Desc. By: M.D. Laffan
Date Desc.: 23/02/84
Map Ref.: Sheet No. : 7963 1:100000
Northing/Long.: 145.429166666667
Easting/Lat.: -17.2744444444444
Locality:
Elevation: 1040 metres
Rainfall: 1600
Runoff: No Data
Drainage: Well drained

Geology

ExposureType: Existing vertical exposure
Geol. Ref.: PH
Conf. Sub. is Parent. Mat.: No Data
Substrate Material: Rhyolite

Land Form

Rel/Slope Class: Rolling hills 90-300m 10-32%
Morph. Type: Upper-slope
Elem. Type: Hillslope
Slope: 20 %
Pattern Type: No Data
Relief: No Data
Slope Category: No Data
Aspect: 90 degrees

Surface Soil Condition (dry):

Erosion:

Soil Classification

Australian Soil Classification:
Humose Dystrophic Red Dermosol
ASC Confidence:
All necessary analytical data are available.
Mapping Unit: N/A
Principal Profile Form: Gn3.14
Great Soil Group: Red podzolic soil

Site Disturbance: Limited clearing, for example selective logging

Vegetation:

Tall Strata - Tree, , . *Species includes - None Recorded

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.1 m	Black (10YR2/1-Moist); Mottles; Mottles; Clay loam; Moderate grade of structure, 2-5 mm, Polyhedral; Smooth-ped fabric; Moderately moist; Weak consistence; Field pH 6 (pH meter); Many, fine (1-2mm) roots;
A1	0.1 - 0.2 m	Black (10YR2/1-Moist); Mottles; Mottles; Clay loam; Moderate grade of structure, 2-5 mm, Polyhedral; Smooth-ped fabric; Moderately moist; Weak consistence; Field pH 6 (pH meter); Many, fine (1-2mm) roots; Gradual change to -
AB	0.2 - 0.3 m	Dark yellowish brown (10YR3/4-Moist); Mottles; Mottles; Light clay; Moderate grade of structure, 2-5 mm, Polyhedral; Smooth-ped fabric; Moderately moist; Weak consistence; Few cutans, <10% of ped faces or walls coated, faint; Field pH 6 (pH meter); Many, fine (1-2mm) roots; Gradual change to -
B21	0.3 - 0.4 m	Yellowish red (5YR4/6-Moist); Mottles; Mottles; Light medium clay; Moderate grade of structure, 5-10 mm, Polyhedral; Smooth-ped fabric; Moist; Weak consistence; Few cutans, <10% of ped faces or walls coated, distinct; Few (2 - 10 %), Manganiferous, Fine (0 - 2 mm), Concretions; Field pH 5.5 (pH meter); Common, fine (1-2mm) roots;
B21	0.4 - 0.5 m	Yellowish red (5YR4/6-Moist); Mottles; Mottles; Light medium clay; Moderate grade of structure, 5-10 mm, Polyhedral; Smooth-ped fabric; Moist; Weak consistence; Few cutans, <10% of ped faces or walls coated, distinct; Few (2 - 10 %), Manganiferous, Fine (0 - 2 mm), Concretions; Field pH 5.5 (pH meter); Common, fine (1-2mm) roots; Gradual change to -
B22	0.5 - 0.6 m	Red (2.5YR4/8-Moist); Mottles; Mottles; Medium clay; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Moist; Firm consistence; Few cutans, <10% of ped faces or walls coated, distinct; Field pH 5.5 (pH meter); Common, fine (1-2mm) roots;
B22	0.6 - 9 m	Red (2.5YR4/8-Moist); Mottles; Mottles; Medium clay; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Moist; Firm consistence; Few cutans, <10% of ped faces or walls coated, distinct; Field pH 5.5 (pH meter); Common, fine (1-2mm) roots; Diffuse change to -
B3	0.9 - 1.2 m	Red (2.5YR4/8-Moist); Mottles; Mottles; Light medium clay; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Very firm consistence; Few cutans, <10% of ped faces or walls coated, faint; Few, fine (1-2mm) roots;

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B3	1.2 - 1.5 m	Red (2.5YR4/8-Moist); Mottles; Mottles; Light medium clay; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Very firm consistence; Few cutans, <10% of ped faces or walls coated, faint; Few, fine (1-2mm) roots;

Morphological Notes

Observation Notes

RAINFOREST 16C:PARENT MATERIAL VERY STRONGLY W'D RHYOLITE BEDROCK:

Site Notes

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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	5.5A	0.035A	2.89H	1.6	0.33	0.11	2.29F	5.6A	7.2F	1.96
								28C		0.39
0.1 - 0.2	5.4A	0.026A								
0.2 - 0.3	4.2D	0.016A	0.26H	0.41	0.16	0.07	3.18F	4A	4.1F	1.75
	5.4A									
0.3 - 0.4	5.5A	0.01A								
0.4 - 0.5	4.2D	0.008A	0.03H	0.51	0.05	0.05	1.91F	2.4A	2.6F	2.08
	5.5A									
0.5 - 0.6	5.6A	0.008A								
0.6 - 0.9	4.1D	0.015A	0.11H	1	0.05	0.06	2.38F	3.3A	3.6F	1.82
	5.4A							6C		1.00
0.9 - 1.2	4.2D	0.014A	0.36H	1.22	0.07	0.06	1.94F	3.4A	3.7F	1.76
	5.4A							5C		1.20
1.2 - 1.5	5.6A	0.008A								

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		7.08C	13B	0.05A	0.27A	0.31A		0	8A	16	36	40
0.1 - 0.2		6.72C										
0.2 - 0.3		4.57C	5B					0	10A	13	40	37
0.3 - 0.4		1.83C										
0.4 - 0.5												
0.5 - 0.6		0.9C		0.015A		0.29A		0	7A	19	33	42
0.6 - 0.9		0.36C						0	2A	29	23	47
0.9 - 1.2				0.015A		0.27A		0	2A	33	26	39
1.2 - 1.5								0	2A	38	25	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 - 0.2									
0.2 - 0.3									
0.3 - 0.4									
0.4 - 0.5									
0.5 - 0.6									
0.6 - 0.9									
0.9 - 1.2									
1.2 - 1.5									

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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_FE	Total element - Fe(%) - 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_FE	Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon
15A2_CEC	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15D1_CEC	CEC - 1M ammonium acetate at pH 7.0, pretreatment for soluble salts; manual leach
15E1_CA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) 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
4C1	pH of 1:5 soil/1M potassium chloride extract - direct
6B3	Total organic carbon - high frequency induction furnace, infrared
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)
9H1	Phosphate retention
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 (%)