

Project Name: Regional
Project Code: REG **Site ID:** T399 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	M.D. Laffan	Locality:	Rifle range track Atherton:
Date Desc.:	11/10/84	Elevation:	No Data
Map Ref.:	Sheet No. : 7963 1:100000	Rainfall:	1600
Northing/Long.:	145.429444444444	Runoff:	No Data
Easting/Lat.:	-17.275	Drainage:	Moderately well drained

Geology

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

Land Form

Rel/Slope Class:	Undulating hills 90-300m 3-	Pattern Type:	No Data
Morph. Type:	No Data	Relief:	No Data
Elem. Type:	Scarp-foot slope	Slope Category:	No Data
Slope:	10 %	Aspect:	No Data

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:		Mapping Unit:	N/A
Magnesian Dermosolic Redoxic Hydrosol		Principal Profile Form:	Gn3.74
ASC Confidence:		Great Soil Group:	Xanthozem

Analytical data are incomplete but reasonable confidence.

Site Disturbance: Limited clearing, for example selective logging

Vegetation:

Tall Strata - Tree, 12.01-20m, Closed or dense. *Species includes - None Recorded

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A1	0 - 0.1 m	Dark brown (10YR3/3-Moist); ; Silty clay loam (Heavy); Moderate grade of structure, 10-20 mm, Polyhedral; Strong grade of structure, 2-5 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Weak consistence; Field pH 5 (pH meter); Common, fine (1-2mm) roots; Gradual, Wavy change to -
AB	0.1 - 0.2 m	Brown (10YR4/3-Moist); ; Silty clay loam (Heavy); Moderate grade of structure, 10-20 mm, Polyhedral; Strong grade of structure, 2-5 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Weak consistence; Field pH 5 (pH meter); Common, fine (1-2mm) roots; Gradual, Wavy change to -
B1/A2	0.2 - 0.3 m	Light olive brown (2.5Y5/4-Moist); ; Silty light clay; Moderate grade of structure, 20-50 mm, Polyhedral; Strong grade of structure, 2-5 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Firm consistence; Field pH 5.5 (pH meter); Common, fine (1-2mm) roots; Gradual, Wavy change to -
B21	0.3 - 0.4 m	Yellowish brown (10YR5/6-Moist); ; Silty light clay; Moderate grade of structure, 20-50 mm, Angular blocky; Strong grade of structure, 2-5 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Very firm consistence; Few cutans, <10% of ped faces or walls coated, distinct; Field pH 5.8 (pH meter); Few, fine (1-2mm) roots; Gradual, Wavy change to -
B22	0.4 - 0.6 m	Yellowish brown (10YR5/8-Moist); ; 7.5YR5/6, 10-20% , 0-5mm, Distinct; ; 10-20% , 0-5mm, Distinct; Silty medium clay; Strong grade of structure, 50-100 mm, Prismatic; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Very firm consistence; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 5.8 (pH meter); Few, fine (1-2mm) roots;
B22	0.6 - 0.9 m	Yellowish brown (10YR5/8-Moist); ; 7.5YR5/6, 10-20% , 0-5mm, Distinct; ; 10-20% , 0-5mm, Distinct; Silty medium clay; Strong grade of structure, 50-100 mm, Prismatic; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Very firm consistence; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 5.8 (pH meter); Few, fine (1-2mm) roots; Gradual, Wavy change to -

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B23	0.9 - 1.2 m	Strong brown (7.5YR5/8-Moist); , 5YR58, 20-50% , 5-15mm, Distinct; , 20-50% , 5-15mm, Distinct; Silty medium clay; Strong grade of structure, 50-100 mm, Prismatic; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Very firm consistence; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 5.8 (pH meter); Few, fine (1-2mm) roots; Diffuse change to -
B31	1.2 - 1.5 m	Strong brown (7.5YR5/8-Moist); , 2.5YR58, 20-50% , 15-30mm, Distinct; , 20-50% , 15-30mm, Distinct; Silty light clay; Strong grade of structure, 50-100 mm, Prismatic; Strong grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Strong consistence; Few cutans, <10% of ped faces or walls coated, distinct; Field pH 5.8 (pH meter); Few, fine (1-2mm) roots; Diffuse change to -
B32	1.5 - 1.8 m	Light red (2.5YR6/8-Moist); , 10YR81, 10-20% , 15-30mm, Distinct; , 10YR68, 10-20% , 15-30mm, Distinct; Strong grade of structure, 50-100 mm, Prismatic; Strong grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Strong consistence; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5.8 (pH meter); Few, fine (1-2mm) roots;
B32	1.8 - 2.1 m	Light red (2.5YR6/8-Moist); , 10YR81, 10-20% , 15-30mm, Distinct; , 10YR68, 10-20% , 15-30mm, Distinct; Strong grade of structure, 50-100 mm, Prismatic; Strong grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Strong consistence; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5.8 (pH meter); Few, fine (1-2mm) roots;

Morphological Notes

Observation Notes

YELLOW VARIANT:PARENT MATERIAL VERY STRONGLY WEATHERED RHYOLITE:

Site Notes

ATHERTON

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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 Cmol (+)/kg	Acidity		%
0 - 0.1	3.8D 4.4A	0.138A	1.6H	0.55	0.35	0.03	6.68F	4.9A 11C	0.61 0.27
0.1 - 0.2	4.4A	0.087A							
0.2 - 0.3	4.1D 4.6A	0.056A	0.23H	0.15	0.11	0.03	4.13F	2.5A 5C	1.20 0.60
0.3 - 0.4	4.7A	0.039A							
0.4 - 0.6	4.1D 5A	0.02A	0.13H	0.49	0.08	0.03	4.38F	4.4A 6C	0.68 0.50
0.6 - 0.9	5.4A	0.013A							
0.9 - 1.2	4.1D 5.4A	0.013A	<0.02H	1.58	0.04	0.03	4.5F	4.9A 7C	0.61 0.43
1.2 - 1.5	5.3A	0.013A							
1.5 - 1.8	4.1D 5.3A	0.013A	<0.02H	1.14	0.04	0.03	4.18F	4.9A 5C	0.61 0.60
1.8 - 2.1	5.2A	0.014A							

[illegible][illegible]

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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
5A2	Chloride - 1:5 soil/water extract, automated colour
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 (%)