Project Name: **Regional**
Project Code: **REG** **Site ID:** **T403** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

Site Information

Desc. By: M.D. Laffan
Locality: Adjacent to road crest on northen side of Kennedy Highway:between Hypipamee crater National Park & Herberton Rd.t'off:
Date Desc.: 15/10/84
Elevation: No Data
Map Ref.: Sheet No. : 7963 1:100000
Rainfall: 1600
Northing/Long.: 145.475
Runoff: No Data
Easting/Lat.: -17.4472222222222
Drainage: Moderately well drained

Geology

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

Land Form

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

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:
Magnesic Dermosolic Redoxic Hydrosol
ASC Confidence:
All necessary analytical data are available.
Mapping Unit: N/A
Principal Profile Form: Gn3.71
Great Soil Group: Xanthozem

Site Disturbance: No effective disturbance. Natural

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 greyish brown (10YR4/2-Moist); ; Clay loam; Moderate grade of structure, 2-5 mm, Granular; Moderate grade of structure, <2 mm, Granular; Smooth-ped fabric; Moderately moist; Weak consistence; Field pH 5.5 (pH meter); Many, very fine (0-1mm) roots; Gradual, Smooth change to -
A3	0.1 - 0.2 m	Yellowish brown (10YR5/8-Moist); ; Silty light clay (Light); Moderate grade of structure, 5-10 mm, Polyhedral; Strong grade of structure, <2 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Weak consistence; Field pH 5.5 (pH meter); Common, very fine (0-1mm) roots; Gradual, Smooth change to -
B21	0.2 - 0.3 m	Yellowish brown (10YR5/8-Moist); ; Silty light clay; Moderate grade of structure, 20-50 mm, Angular blocky; Moderate grade of structure, <2 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Firm consistence; 0-2%, medium gravelly, 6-20mm, subrounded, Sand, coarse fragments; Few cutans, <10% of ped faces or walls coated, distinct; Field pH 5.8 (pH meter); Common, very fine (0-1mm) roots;
B21	0.3 - 0.5 m	Yellowish brown (10YR5/8-Moist); ; Silty light clay; Moderate grade of structure, 20-50 mm, Angular blocky; Moderate grade of structure, <2 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Firm consistence; 0-2%, medium gravelly, 6-20mm, subrounded, Sand, coarse fragments; Few cutans, <10% of ped faces or walls coated, distinct; Field pH 5.8 (pH meter); Common, very fine (0-1mm) roots; Gradual, Smooth change to -
B22	0.5 - 0.6 m	Yellowish red (5YR5/6-Moist); ; Medium clay; Strong grade of structure, 20-50 mm, Angular blocky; Moderate grade of structure, <2 mm, Subangular blocky; Smooth-ped fabric; Moist; Firm consistence; 2-10%, medium gravelly, 6-20mm, subrounded, Sand, coarse fragments; Few cutans, <10% of ped faces or walls coated, distinct; Field pH 6 (pH meter); Few, very fine (0-1mm) roots;
B22	0.6 - 0.75 m	Yellowish red (5YR5/6-Moist); ; Medium clay; Strong grade of structure, 20-50 mm, Angular blocky; Moderate grade of structure, <2 mm, Subangular blocky; Smooth-ped fabric; Moist; Firm consistence; 2-10%, medium gravelly, 6-20mm, subrounded, Sand, coarse fragments; Few cutans, <10% of ped faces or walls coated, distinct; Field pH 6 (pH meter); Few, very fine (0-1mm) roots; Diffuse change to -

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B23	0.75 - 0.9 m	Yellowish brown (10YR5/6-Moist); , 2.5YR46, 20-50% , 5-15mm, Distinct; , 20-50% , 5-15mm, Distinct; Silty medium clay; Strong grade of structure, 20-50 mm, Angular blocky; Strong grade of structure, 2-5 mm, Subangular blocky; Smooth-ped fabric; Moist; Very firm consistence; 2-10%, medium gravelly, 6-20mm, subrounded, Sand, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 5.5 (pH meter); Few, very fine (0-1mm) roots;
B23	0.9 - 1.2 m	Yellowish brown (10YR5/6-Moist); , 2.5YR46, 20-50% , 5-15mm, Distinct; , 20-50% , 5-15mm, Distinct; Silty medium clay; Strong grade of structure, 20-50 mm, Angular blocky; Strong grade of structure, 2-5 mm, Subangular blocky; Smooth-ped fabric; Moist; Very firm consistence; 2-10%, medium gravelly, 6-20mm, subrounded, Sand, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 5.5 (pH meter); Few, very fine (0-1mm) roots; Diffuse change to -
Bg	1.2 - 1.5 m	Light yellowish brown (10YR6/4-Moist); , 2.5YR46, 20-50% , 5-15mm, Prominent; , 10YR72, 20-50% , 5-15mm, Prominent; Silty medium clay; Strong grade of structure, 20-50 mm, Angular blocky; Strong grade of structure, 2-5 mm, Angular blocky; Smooth-ped fabric; Moist; Very firm consistence; 0-2%, medium gravelly, 6-20mm, subrounded, Sand, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 5.8 (pH meter); Few, very fine (0-1mm) roots; Diffuse change to -
BC	1.5 - 1.8 m	White (10YR8/1-Moist); , 2.5YR46, 10-20% , 5-15mm, Prominent; , 10-20% , 5-15mm, Prominent; Silty medium clay; Strong grade of structure, 20-50 mm, Angular blocky; Strong grade of structure, 2-5 mm, Angular blocky; Smooth-ped fabric; Moist; Very firm consistence; 0-2%, medium gravelly, 6-20mm, subrounded, Sand, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 5.5 (pH meter); Few, very fine (0-1mm) roots; Diffuse change to -
C1	1.8 - 1.95 m	White (10YR8/1-Moist); , 10R46, 10-20% , 5-15mm, Prominent; , 5YR58, 10-20% , 5-15mm, Prominent; Moderate grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Moist; Very firm consistence; 0-2%, medium gravelly, 6-20mm, subrounded, Sand, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 5.5 (pH meter);

Morphological Notes

Observation Notes

YELLOW VARIANT:PARENT MATERIAL IS VERY STRONGLY WEATHERED RHYOLITE:

Site Notes

HYPIPAMEE CRAT

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable	CEC	ECEC	ESP
			Ca	Mg	K	Na	Acidity			
m		dS/m	Cmol (+)/kg							%
0 - 0.1	4.2D	0.068A	1.5H	1.2	0.18	0.04	2.06F	2.4A	5F	1.67
	5.1A							10C		0.40
0.1 - 0.2	5.1A	0.037A								
0.2 - 0.3	5.2A	0.024A	<0.02H	0.23	0.05	0.04	1.05F	1.3A	1.4F	3.08
0.3 - 0.5	4.5D	0.019A	<0.02H	0.35	0.03	0.04	0.83F	1.2A	1.3F	3.33
	5.3A							3C		1.33
0.5 - 0.6	5.2A	0.016A								
0.6 - 0.75	4.3D	0.016A	<0.02H	0.52	0.24	0.03	1.12F	1.5A	1.9F	2.00
	5.1A							3C		1.00
0.75 - 0.9	5.1A	0.017A								
0.9 - 1.2	4.3D	0.014A	<0.02H	0.52	0.04	0.03	1.12F	0.8A	1.7F	3.75
	5A							2C		1.50
1.2 - 1.5	5A	0.012A								
1.5 - 1.8	4.9A	0.013A								
1.8 - 1.95	4.8A	0.013A								

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		4.54C	8B	0.031A	0.24A	0.11A		1	30A	26	18	26
0.1 - 0.2		2.68C						2	28A	27	18	28
0.2 - 0.3		1.55C	3B					1	25A	29	18	29
0.3 - 0.5		1.01C		0.015A		0.08A		1	23A	29	17	31
0.5 - 0.6												
0.6 - 0.75		0.46C						2	21A	21	15	44
0.75 - 0.9								3	19A	16	13	52
0.9 - 1.2				0.006A		0.04A		2	19A	15	15	52
1.2 - 1.5								0	12A	14	22	52
1.5 - 1.8				0.001A		0.02A		2	10A	16	23	51
1.8 - 1.95												

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 - 0.5										
0.5 - 0.6										
0.6 - 0.75										
0.75 - 0.9										
0.9 - 1.2										
1.2 - 1.5										
1.5 - 1.8										
1.8 - 1.95										

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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 (%)