

Project Name: Regional
Project Code: REG **Site ID:** T79 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	R.F. Isbell	Locality:	Torn off to Paluma Dam from Mt. Spec - Running River Road:
Date Desc.:	11/11/68	Elevation:	914 metres
Map Ref.:	Sheet No. : 8159 1:100000	Rainfall:	2032
Northing/Long.:	146.170833333333	Runoff:	Moderately rapid
Easting/Lat.:	-19.0125	Drainage:	No Data

Geology

Exposure Type:	Undisturbed soil core	Conf. Sub. is Parent. Mat.:	No Data
Geol. Ref.:	Cuy	Substrate Material:	Undisturbed soil core, Igneous rock (unidentified)

Land Form

Rel/Slope Class:	Undulating rises 9-30m 3-10%	Pattern Type:	Plateau
Morph. Type:	No Data	Relief:	15 metres
Elem. Type:	Hillslope	Slope Category:	No Data
Slope:	0 %	Aspect:	No Data

Surface Soil Condition (dry): Soft, Self-mulching

Erosion:

Soil Classification

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

Site Disturbance: Complete clearing. Pasture, native or improved, but never cultivated

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.1 m	Dark brown (10YR3/3-Moist); ; Loam (Heavy); Moderate grade of structure, 2-5 mm, Granular; Moderately moist; Weak consistence; Abundant, fine (1-2mm) roots; Gradual change to -
A12	0.1 - 0.2 m	Dark brown (7.5YR3/4-Moist); Brown (7.5YR5/4-Dry); ; Clay loam; Moderate grade of structure, 5-10 mm, Angular blocky; Moderately moist; Weak consistence; ManyGradual change to -
A21	0.2 - 0.3 m	Brown (7.5YR4/4-Moist); Brown (7.5YR5/4-Dry); ; Clay loam; Weak grade of structure, 10-20 mm, Angular blocky; Moderately moist; Weak consistence; ManyGradual change to -
A3	0.3 - 0.4 m	Brown (7.5YR4/4-Moist); Brown (7.5YR5/4-Dry); , 2.5YR47, 20-50% , 15-30mm, Distinct; , 20-50% , 15-30mm, Distinct; Light clay; Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Firm consistence; CommonClear change to -
B21	0.4 - 0.6 m	Red (2.5YR4/7-Moist); Light red (2.5YR6/8-Dry); ; Light medium clay; Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Firm consistence; FewGradual change to -
B22	0.6 - 0.9 m	Red (2.5YR4/8-Moist); ; Medium clay; Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Firm consistence; Few, fine (1-2mm) roots; Gradual change to -
B23	0.9 - 1.2 m	Red (2.5YR5/8-Moist); , 10YR76, 2-10% ; , 2-10% ; Medium clay; Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Firm consistence; Few, fine (1-2mm) roots; Gradual change to -
B24	1.2 - 1.5 m	Red (2.5YR5/8-Moist); , 10YR76, 10-20% ; , 10-20% ; Medium clay; Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Firm consistence;
B24	1.5 - 1.8 m	Red (2.5YR5/8-Moist); , 10YR76, 10-20% ; , 10-20% ; Medium clay; Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Firm consistence;

Project Name: Regional
Project Code: REG **Site ID:** T79 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

B24	1.8 - 2.1 m	Red (2.5YR5/8-Moist); , 10YR76, 20-50% ; , 20-50% ; Medium clay; Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Firm consistence;
B24	2.1 - 2.4 m	Red (2.5YR5/8-Moist); , 10YR76, 20-50% ; , 20-50% ; Medium clay; Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Firm consistence;
B24	2.4 - 2.7 m	Red (2.5YR5/8-Moist); , 10YR76, 20-50% ; , 20-50% ; Medium clay; Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Firm consistence;
B24	2.7 - 3 m	Red (2.5YR5/8-Moist); , 10YR76, 20-50% ; , 20-50% ; Medium clay; Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Firm consistence;
B24	3 - 3.3 m	Red (2.5YR5/8-Moist); , 10YR76, 10-20% ; , 10-20% ; Medium clay; Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Firm consistence; Gradual change to -
B25	3.3 - 3.6 m	Red (2.5YR5/8-Moist); , 10YR76, 2-10% , 0-5mm; , 2-10% , 0-5mm; Medium clay; Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Firm consistence;
B25	3.6 - 3.9 m	Red (2.5YR5/8-Moist); , 10YR76, 2-10% , 0-5mm; , 2-10% , 0-5mm; Medium clay; Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Firm consistence;
B25	3.9 - 4.2 m	Red (2.5YR5/8-Moist); , 10YR76, 2-10% , 0-5mm; , 2-10% , 0-5mm; Medium clay; Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Firm consistence;
B25	4.2 - 4.4 m	Red (2.5YR5/8-Moist); , 10YR76, 2-10% , 0-5mm; , 2-10% , 0-5mm; Medium clay; Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Firm consistence; Clear change to -
BC	4.4 - 4.55 m	Red (2.5YR5/8-Moist); , 10YR76, 20-50% ; , 20-50% ; Clay loam; Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Firm consistence; Clear change to -
C	4.55 - 4.7 m	;

Morphological Notes

C Fine:w`d dacite:R Y mottled:patches LMC:rock fabric evident

Observation Notes

90-270CM MOTTLES VERTICALLY ORIENTATED:270-440CM OCCASIONAL VERMIFORM STRUCTURES:

Site Notes

PALUMA

Project Name: Regional
 Project Code: REG Site ID: T79 Observation ID: 1
 Agency Name: CSIRO Division of Soils (QLD)

Laboratory Test Results:

Depth	pH	1:5 EC	Ca	Exchangeable Mg	Cations K	Na	Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m				Cmol (+)/kg				%
0 - 0.1	5.2A	0.148A	1.4B	1.6	0.36	0.43				
0.1 - 0.2	5.4A	0.071A	0.1B	0.9	0.17	0.28				
0.2 - 0.3	5.4A	0.059A	0.1B	0.8	0.19	0.29				
0.3 - 0.4	5.4A	0.038A								
0.4 - 0.6	5.4A	0.029A	0.1B	0.6	0.16	0.24				
0.6 - 0.9	5.4A	0.032A	0.1B	0.5	0.02	0.12				
0.9 - 1.2	5.2A	0.041A								
1.2 - 1.5	5A	0.035A	0.1B	0.4	0.04	0.11				
1.5 - 1.8	5A	0.035A								
1.8 - 2.1	5A	0.038A	0.1B	0.3	0.04	0.16				
2.1 - 2.4	4.9A	0.041A								
2.4 - 2.7	4.9A	0.038A								
2.7 - 3	4.8A	0.035A								
3 - 3.3	4.8A	0.035A								
3.3 - 3.6	4.8A	0.032A								
3.6 - 3.9	4.7A	0.032A								
3.9 - 4.2	4.7A	0.035A								
4.2 - 4.4	4.7A	0.032A								
4.4 - 4.45	4.9A	0.029A								
4.55 - 4.7	5A	0.038A								

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle GV	Size CS	Analysis FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.1		4.5D	6A	0.034A	0.375A	0.076A		11	31D	9	15	34
0.1 - 0.2		2.8D	12.2B	0.028A	0.325A	0.153A		10	34D	7	15	38
0.2 - 0.3		2.2D	7.5B	0.024A	0.2A	0.051A		12	34D	7	15	38
0.3 - 0.4			4A									
0.4 - 0.6			5.6B									
0.6 - 0.9				0.018A		0.054A		9	23D	4	22	50
0.9 - 1.2				0.017A	0.018A	0.072A		<2	18D	5	32	42
1.2 - 1.5				0.023A		0.089A						
1.5 - 1.8												
1.8 - 2.1				0.018A	0.005A	0.085A		<2	17D	7	37	37
2.1 - 2.4												
2.4 - 2.7												
2.7 - 3												
3 - 3.3				0.015A		0.066A						
3.3 - 3.6												
3.6 - 3.9												
3.9 - 4.2				0.019A		0.06A						
4.2 - 4.4												
4.4 - 4.45												
4.55 - 4.7				0.016A		0.176A						

Depth	COLE	Gravimetric/Volumetric Water Contents						K sat	K unsat
m		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar	15 Bar	
					g/g -	m3/m3			mm/h

Project Name:	Regional		
Project Code:	REG	Site ID:	T79
Agency Name:	CSIRO Division of Soils (QLD)	Observation ID:	1

0 - 0.1
0.1 - 0.2
0.2 - 0.3
0.3 - 0.4
0.4 - 0.6
0.6 - 0.9
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 - 3
3 - 3.3
3.3 - 3.6
3.6 - 3.9
3.9 - 4.2
4.2 - 4.4
4.4 - 4.45
4.55 - 4.7

Project Name: Regional
Project Code: REG **Site ID:** T79 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Laboratory Analyses Completed for this profile

10A1	Total sulfur - X-ray fluorescence
15A2_CA	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,Na ⁺ ,K ⁺) - 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
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
5A2	Chloride - 1:5 soil/water extract, automated colour
6A1_UC	Organic carbon (%) - Uncorrected Walkley and Black method
7A2	Total nitrogen - semimicro Kjeldahl , automated colour
9A1	Total phosphorus - X-ray fluorescence
9B_9C	Available P (mg/kg) - Bicarbonate P - 0.5M NaHCO ₃ extractable
9G_BSES	Available P (mg/kg) - Acid P - 0.005M H ₂ SO ₄ (BSES)
P10_GRAV	Gravel (%)
P10_PB_C	Clay (%) - Plummet balance
P10_PB_CS	Coarse sand (%) - Plummet balance
P10_PB_FS	Fine sand (%) - Plummet balance
P10_PB_Z	Silt (%) - Plummet balance
XRD_C_Gb	Gibbsite - X-Ray Diffraction
XRD_C_Hm	Hematite - X-Ray Diffraction
XRD_C_Ka	Kaolin - X-Ray Diffraction
XRD_C_Qz	Quartz - X-Ray Diffraction