

**Project Name:** Regional  
**Project Code:** REG **Site ID:** T249 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

#### Site Information

<b>Desc. By:</b>	R.F. Isbell	<b>Locality:</b>	3KM north along Forestry Road B (north of Lake Tinaroo):
<b>Date Desc.:</b>	02/07/76	<b>Elevation:</b>	800 metres
<b>Map Ref.:</b>	Sheet No. : 78063 1:25000	<b>Rainfall:</b>	1520
<b>Northing/Long.:</b>	145.6	<b>Runoff:</b>	Moderately rapid
<b>Easting/Lat.:</b>	-17.1166666666667	<b>Drainage:</b>	Moderately well drained

#### Geology

<b>Exposure Type:</b>	Existing vertical exposure	<b>Conf. Sub. is Parent. Mat.:</b>	No Data
<b>Geol. Ref.:</b>	Pgm	<b>Substrate Material:</b>	Granite

#### Land Form

<b>Rel/Slope Class:</b>	No Data	<b>Pattern Type:</b>	Hills
<b>Morph. Type:</b>	Crest	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Hillslope	<b>Slope Category:</b>	Gently inclined
<b>Slope:</b>	8.8 %	<b>Aspect:</b>	No Data

**Surface Soil Condition (dry):** Firm

#### Erosion:

#### Soil Classification

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b>	N/A
Acidic Magnesic Red Dermosol	<b>Principal Profile Form:</b>	Gn3.4
<b>ASC Confidence:</b>	<b>Great Soil Group:</b>	Red podzolic soil
All necessary analytical data are available.		

**Site Disturbance:** No effective disturbance. Natural

#### Vegetation:

**Surface Coarse Fragments:** No surface coarse fragments

#### Profile Morphology

A1	0 - 0.1 m	Very dark greyish brown (10YR3/2-Moist); ; Clay loam; Strong grade of structure, 2-5 mm, Cast; Firm consistence; 0-2%, fine gravelly, 2-6mm, Quartz, coarse fragments; AbundantGradual change to -
A12	0.1 - 0.2 m	Dark brown (7.5YR3/4-Moist); ; Light clay; Strong grade of structure, 5-10 mm, Cast; Weak consistence; CommonGradual change to -
A2	0.2 - 0.3 m	Strong brown (7.5YR4/6-Moist); ; Heavy clay; Strong grade of structure, 5-10 mm, Angular blocky; Weak consistence; 20-50%, fine gravelly, 2-6mm, Quartz, coarse fragments; FewGradual change to -
B1	0.3 - 0.45 m	Yellowish red (5YR4/8-Moist); ; Medium clay; Moderate grade of structure, 10-20 mm, Angular blocky; Firm consistence; 20-50%, fine gravelly, 2-6mm, Quartz, coarse fragments; FewGradual change to -
B21	0.45 - 0.6 m	Red (2.5YR4/7-Moist); ; Medium clay; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Very firm consistence; 20-50%, fine gravelly, 2-6mm, Quartz, coarse fragments; FewGradual change to -
B22	0.6 - 0.9 m	Red (10R4/6-Moist); ; Medium clay; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Very firm consistence; 20-50%, fine gravelly, 2-6mm, Quartz, coarse fragments; FewGradual change to -
B23	0.9 - 1.2 m	Red (10R4/6-Moist); ; Medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Very firm consistence; 20-50%, Quartz, coarse fragments; Gradual change to -
B3	1.2 - 1.5 m	Red (2.5YR4/8-Moist); , 7.5YR68, 2-10% , 15-30mm; , 2-10% , 15-30mm; Medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Very firm consistence; 2-10%, Quartz, coarse fragments; Gradual change to -
B3	1.5 - 1.8 m	Red (2.5YR4/8-Moist); , 7.5YR68, 2-10% , 15-30mm; , 2-10% , 15-30mm; Medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Very firm consistence; 2-10%, Quartz, coarse fragments; Gradual change to -
B3	1.8 - 2.1 m	Red (2.5YR4/7-Moist); , 0-2% ; , 0-2% ; Medium clay; Very firm consistence; 2-10%, Quartz, coarse fragments; Gradual change to -

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BC	2.1 - 2.4 m	Red (2.5YR4/7-Moist); , 0-2% ; , 0-2% ; Medium clay; Very firm consistence; 2-10%, Quartz, coarse fragments; Gradual change to -
BC	2.4 - 2.7 m	Red (2.5YR4/7-Moist); , 0-2% ; , 0-2% ; Medium clay; Very firm consistence; 2-10%, Quartz, coarse fragments; Gradual change to -
BC	2.7 - 3 m	Yellowish red (5YR5/8-Moist); ; Light clay; Very firm consistence;

**Morphological Notes**

**Observation Notes**

210-300CM MICA FLAKES:60-300CM W'D FELSPAR GRADING TO MUCH:270-300CM AREAS OF ROCK FABRIC:

**Site Notes**

LAMB RANGE

**Observation ID: 1**

**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	4.6A		0.22B	1.33	0.4	0.21	3.65F	19.4C	1.08
0.1 - 0.2	4.9A								
0.2 - 0.3	5.1A		<0.02B	0.53	0.52	0.07	2.25F		
0.3 - 0.45	5.3A							3.4F	
0.45 - 0.6	5.5A		0.08B	1.52	0.32	0.12	1.36F	8.2C	1.46
0.6 - 0.9	5.4A		0.08B	1.37	0.27	0.06	1.93F		
0.9 - 1.2	5.2A		0.08B	0.75	0.19	0.06	3.36F		
1.2 - 1.5	5A								
1.5 - 1.8	4.9A		0.08B	0.3	0.14	0.02	4.12F		
1.8 - 2.1	4.9A							4.7F	
2.1 - 2.4	4.9A								
2.4 - 2.7	4.8A								
2.7 - 3	4.9A								

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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/HClO <sub>4</sub> Digest
12_HF_FE	Total element - Fe(%) - HF/HClO <sub>4</sub> Digest
12_HF_MN	Total element - Mn(mg/kg) - HF/HClO <sub>4</sub> Digest
12_HF_ZN	Total element - Zn(mg/kg) - HF/HClO <sub>4</sub> Digest
13C1_FE	Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon
15A2_CA	Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) - 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
15D1_CEC	CEC - 1M ammonium acetate at pH 7.0, pretreatment for soluble salts; manual leach
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
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 H <sub>2</sub> SO <sub>4</sub> (BSES)
9H1	Phosphate retention
MIN_EC	Exchange Capacity - Mineralogy
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_Hm	Hematite - X-Ray Diffraction
XRD_C_Ht0	Halloysite (10 Å) - X-Ray Diffraction
XRD_C_K2O	K <sub>2</sub> O - X-Ray Diffraction or Clay Fraction (air dry)
XRD_C_Ka	Kaolin - X-Ray Diffraction