

**Project Name:** Regional  
**Project Code:** REG **Site ID:** T492 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

#### Site Information

<b>Desc. By:</b>		<b>Locality:</b>	Janis Boettinger Phd. site; approx 30m north of
<b>Date Desc.:</b>	01/05/88	<b>Elevation:</b>	No Data
<b>Map Ref.:</b>	Sheet No. : 8358 1:100000	<b>Rainfall:</b>	1091
<b>Northing/Long.:</b>	147.25	<b>Runoff:</b>	Slow
<b>Easting/Lat.:</b>	-19.8666666666667	<b>Drainage:</b>	Moderately well drained

#### Geology

<b>ExposureType:</b>	Soil pit	<b>Conf. Sub. is Parent. Mat.:</b>	No Data
<b>Geol. Ref.:</b>	Czs	<b>Substrate Material:</b>	Soil pit, 82 m deep, Andesite

#### Land Form

<b>Rel/Slope Class:</b>	Level plain <9m <1%	<b>Pattern Type:</b>	Peneplain
<b>Morph. Type:</b>	Crest	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Plain	<b>Slope Category:</b>	Level
<b>Slope:</b>	<1 %	<b>Aspect:</b>	No Data

**Surface Soil Condition (dry):** Surface crust, Hardsetting

#### Erosion:

#### Soil Classification

<b>Australian Soil Classification:</b>		<b>Mapping Unit:</b>	N/A
Vertic Eutrophic Red Dermosol		<b>Principal Profile Form:</b>	Dr2.12
<b>ASC Confidence:</b>		<b>Great Soil Group:</b>	Non-calcic brown soil

Analytical data are incomplete but reasonable confidence.

**Site Disturbance:** No effective disturbance other than grazing by hoofed animals

**Vegetation:** Low Strata - , , . \*Species includes - Heteropogon triticeus

Tall Strata - Tree, 12.01-20m, Sparse. \*Species includes - Eucalyptus drepanophylla, Eucalyptus papuana

**Surface Coarse Fragments:** 10-20%, coarse gravelly, 20-60mm, subangular, Metamorphic rock (unidentified)

#### Profile Morphology

A	0 - 0.1 m	Dark brown (7.5YR3/2-Moist); Brown (7.5YR4/4-Dry); ; Clay loam; Moderate grade of structure, 5-10 mm, Angular blocky; Moderate grade of structure, 10-20 mm, Subangular blocky; Common (1-5 per 0.01m2) Medium (2-5mm) macropores, Dry; Very firm consistence; Few, very fine (0-1mm) roots; Clear, Wavy change to -
AB	0.1 - 0.28 m	Dark reddish brown (2.5YR3/3-Moist); Reddish brown (2.5YR4/4-Dry); , 7.5YR42; , 2.5YR36; Light clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Moderate grade of structure, 10-20 mm, Subangular blocky; Few (<1 per 0.01m2) Medium (2-5mm) macropores, Moist; Firm consistence; Many cutans, >50% of ped faces or walls coated, distinct; Few, very fine (0-1mm) roots; Clear, Wavy change to -
B11t	0.28 - 0.43 m	Red (2.5YR4/6-Moist); Red (2.5YR4/8-Dry); ; Medium clay; Strong grade of structure, 5-10 mm, Angular blocky; Strong grade of structure, 10-20 mm, Angular blocky; Few (<1 per 0.01m2) Medium (2-5mm) macropores, Moist; Firm consistence; Slightly plastic; Normal plasticity; Moderately sticky; Common cutans, 10-50% of ped faces or walls coated, distinct; Few (2 - 10 %), Manganiferous, Fine (0 - 2 mm), Concretions; Few, fine (1-2mm) roots; Gradual, Wavy change to -
B22t	0.43 - 0.6 m	Red (2.5YR4/6-Moist); Red (2.5YR4/8-Dry); ; Medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Moderate grade of structure, 50-100 mm, Lenticular; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moist; Very firm consistence; Slightly plastic; Normal plasticity; Moderately sticky; Few cutans, <10% of ped faces or walls coated, distinct; Few (2 - 10 %), Manganiferous, Fine (0 - 2 mm), Concretions; Few, medium (2-5mm) roots; Clear, Wavy change to -
BC	0.6 - 0.82 m	Red (2.5YR4/6-Moist); Red (2.5YR5/6-Dry); , 7.5YR46, 2-10% , 0-5mm, Faint; , 2-10% , 0-5mm, Faint; Light clay; Moderate grade of structure, 10-20 mm, Angular blocky; Moderate grade of structure, 50-100 mm, Prismatic; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moist; Firm consistence; Slightly plastic; Normal plasticity; Moderately sticky; Few cutans, <10% of ped faces or walls coated, distinct; Few (2 - 10 %), Manganiferous, Fine (0 - 2 mm), Concretions; Clear, Wavy change to -

**Project Name:** Regional  
**Project Code:** REG                      **Site ID:** T492                      **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

CB            0.82 - 0.95 m      Brown (7.5YR4/4-Moist); Brown (7.5YR5/4-Dry); , 10YR43, 20-50% , 0-5mm, Distinct; , 20-50% , 0-5mm, Distinct; Loam; Massive grade of structure; Moist; Firm consistence; Slightly plastic; Normal plasticity; Slightly sticky; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, Substrate material, coarse fragments; Few cutans, <10% of ped faces or walls coated, distinct; Few (2 - 10 %), Manganiferous, Fine (0 - 2 mm), Concretions;

**Morphological Notes**

**Observation Notes**

MOUND OF 5Dra 5Uga COMPLEX; WORM CASTS OF A HORIZON MATERIAL IN AB HORIZON; STRONG SLICKENSIDE DEVELOPMENT IN LOWER B; PRIMARY MOTTLE IN BA<sub>t</sub> WORM CAST AND 2ND, MOTTLE CLAY SKINS;

**Site Notes**

HOME HILL

Project Name: Regional  
Project Code: REG Site ID: T492 Observation ID: 1  
Agency Name: CSIRO Division of Soils (QLD)

**Laboratory Test Results:**

Depth m	pH	1:5 EC dS/m	Ca	Exchangeable Mg	Cations K	Na Cmol (+)/kg	Exchangeable Acidity	CEC	ECEC	ESP %
0 - 0.1	6.05A	0.08A	8.14H	5.74	0.29	0.03	0.03F	13J 10.6C	14.2E	0.23 0.28
0.1 - 0.28	5.6A	0.089A	8.37H	5.84	0.1	0.06	0.04F	14.8J 13.2C	14.4E	0.41 0.45
0.28 - 0.43	5.68A	0.046A	9.88H	7.16	0.07	0.1	0.02F	12.6J 18.6C	17.2E	0.79 0.54
0.43 - 0.6	6.36A	0.036A	14.7H	8.49	0.07	0.15	0.02F	15.6J 20.4C	23.4E	0.96 0.74
0.6 - 0.82	6.72A	0.04A	17.9H	8.46	0.03	0.17	0.06F	13.8J 17.8C	26.6E	1.23 0.96
0.82 - 0.95	6.79A	0.036A	17.1H	6.48	0.02	0.13	0.04F	11.8J 13.6C	23.8E	1.10 0.96

Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk	Particle		Size	Analysis	
m	%	C	P	P	N	K	Density	GV	CS	FS	Silt	Clay
		%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.1		1.55C	12A 8B	0.03A		0.07A	0.26A					
0.1 - 0.28		0.65C				0.04A						
0.28 - 0.43			2A <2B	0.02A			0.25A					
0.43 - 0.6		0.33C				0.02A						
0.6 - 0.82												
0.82 - 0.95		0.07C	11A 583B	0.08A		0.01A	1.59A					

[illegible]

**Project Name:** Regional  
**Project Code:** REG **Site ID:** T492 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

**Laboratory Analyses Completed for this profile**

10A1	Total sulfur - X-ray fluorescence
12_HF_FE	Total element - Fe(%) - HF/HClO <sub>4</sub> Digest
12_XRF_CU	Total element - Cu(mg/kg) - X-Ray Fluorescence
12_XRF_MN	Total element - Mn(mg/kg) - X-Ray Fluorescence
12_XRF_ZN	Total element - Zn(mg/kg) - X-Ray Fluorescence
13C1_FE	Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon
15_NR	Sum of Ex. cations + Ex. acidity - Not recorded
15_NR_CEC	CEC - meq per 100g of soil - Not recorded
15D1_CEC	CEC - 1M ammonium acetate at pH 7.0, pretreatment for soluble salts; manual leach
15E1_CA	Exchangeable bases (Ca <sup>2+</sup> , Mg <sup>2+</sup> , Na <sup>+</sup> , K <sup>+</sup> ) 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
17A1	Total potassium - X-ray fluorescence
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
6B3	Total organic carbon - high frequency induction furnace, infrared
7A2	Total nitrogen - semimicro Kjeldahl , automated colour
9A1	Total phosphorus - X-ray fluorescence
9B_9C	Available P (mg/kg) - Bicarbonate P - 0.5M NaHCO <sub>3</sub> extractable
9G_BSES	Available P (mg/kg) - Acid P - 0.005M H <sub>2</sub> SO <sub>4</sub> (BSES)