

**Project Name:** Regional  
**Project Code:** REG **Site ID:** T168 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

#### Site Information

<b>Desc. By:</b>	G.G. Murtha	<b>Locality:</b>	10.7KM west of Nulla Nulla on Road to Cargoon:
<b>Date Desc.:</b>	11/05/71	<b>Elevation:</b>	61 metres
<b>Map Ref.:</b>	Sheet No. : 7958 1:100000	<b>Rainfall:</b>	690
<b>Northing/Long.:</b>	145.125	<b>Runoff:</b>	Rapid
<b>Easting/Lat.:</b>	-19.8583333333333	<b>Drainage:</b>	Well drained

#### Geology

<b>ExposureType:</b>	Undisturbed soil core	<b>Conf. Sub. is Parent. Mat.:</b>	No Data
<b>Geol. Ref.:</b>	Czn	<b>Substrate Material:</b>	Undisturbed soil core, 3 m deep,Basalt

#### Land Form

<b>Rel/Slope Class:</b>	Level plain <9m <1%	<b>Pattern Type:</b>	Plain
<b>Morph. Type:</b>	No Data	<b>Relief:</b>	0 metres
<b>Elem. Type:</b>	Plain	<b>Slope Category:</b>	Very gently sloped
<b>Slope:</b>	0 %	<b>Aspect:</b>	No Data

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

#### Erosion:

#### Soil Classification

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b>	N/A
Haplic Eutrophic Brown Ferrosol	<b>Principal Profile Form:</b>	Gn3.22
<b>ASC Confidence:</b>	<b>Great Soil Group:</b>	No suitable group

All necessary analytical data are available.

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

**Vegetation:** Low Strata - Tussock grass, 0.51-1m, Mid-dense. \*Species includes - None recorded  
 Tall Strata - Tree, 6.01-12m, Very sparse. \*Species includes - Eucalyptus drepanophylla

**Surface Coarse Fragments:** 2-10%, fine gravelly, 2-6mm, subrounded, Other

#### Profile Morphology

A1	0 - 0.1 m	Dark brown (7.5YR3/2-Moist); ; Loam (Heavy); Moderate grade of structure, 2-5 mm, Angular blocky; Moist; Weak consistence; 0-2%, fine gravelly, 2-6mm, Quartz, coarse fragments; Very few (0 - 2 %), Ferromanganiferous, Fine (0 - 2 mm), Nodules; Gradual change to -
A3	0.1 - 0.2 m	Dark brown (7.5YR3/4-Moist); ; Clay loam; Moderate grade of structure, 2-5 mm, Angular blocky; Moist; Weak consistence; Very few (0 - 2 %), Ferromanganiferous, Medium (2 - 6 mm), Nodules;
B1	0.2 - 0.3 m	Brown (7.5YR4/4-Moist); ; Clay loam (Heavy); Moderate grade of structure, 2-5 mm, Angular blocky; Moist; Weak consistence; Very few (0 - 2 %), Ferromanganiferous, Fine (0 - 2 mm), Nodules;
B1	0.3 - 0.45 m	Brown (7.5YR4/4-Moist); ; Light medium clay; Strong grade of structure, 2-5 mm, Angular blocky; Moist; Weak consistence; Few (2 - 10 %), Ferromanganiferous, Fine (0 - 2 mm), Nodules;
B21	0.45 - 0.6 m	Strong brown (7.5YR4/6-Moist); ; Medium clay; Strong grade of structure, 2-5 mm, Angular blocky; Moist; Weak consistence; Few (2 - 10 %), Ferromanganiferous, Fine (0 - 2 mm), Nodules;
B21	0.6 - 0.9 m	Strong brown (7.5YR4/6-Moist); ; Medium clay; Strong grade of structure, 2-5 mm, Angular blocky; Moist; Weak consistence; Few (2 - 10 %), Ferromanganiferous, Fine (0 - 2 mm), Nodules; Diffuse change to -
B22	0.9 - 1.2 m	Strong brown (7.5YR5/6-Moist); ; 2.5YR46, 10-20% , 5-15mm, Distinct; , 10-20% , 5-15mm, Distinct; Medium clay; Strong grade of structure, 5-10 mm, Angular blocky; Moist; Very firm consistence; Few (2 - 10 %), Ferromanganiferous, Coarse (6 - 20 mm), Nodules;
B22	1.2 - 1.5 m	Strong brown (7.5YR5/6-Moist); ; 2.5YR46, 10-20% , 5-15mm, Distinct; , 10-20% , 5-15mm, Distinct; Medium clay; Strong grade of structure, 5-10 mm, Angular blocky; Moist; Very firm consistence; Few (2 - 10 %), Manganiferous, Coarse (6 - 20 mm), Concretions;
	1.5 - 1.8 m	Red (2.5YR4/6-Moist); ; 7.5YR57, 10-20% , 15-30mm, Distinct; , 10-20% , 15-30mm, Distinct; Medium clay; Moderate grade of structure, 5-10 mm, Angular blocky; Very firm consistence; Few (2 - 10 %), Manganiferous, Coarse (6 - 20 mm), Concretions;

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1.8 - 2.1 m	Red (2.5YR4/6-Moist); , 7.5YR54, 2-10% , 15-30mm, Distinct; , 2-10% , 15-30mm, Distinct; Heavy clay; Weak grade of structure, 5-10 mm, Angular blocky; Very firm consistence; Few (2 - 10 %), Manganiferous, , Concretions;
2.1 - 2.4 m	Red (2.5YR4/6-Moist); , 7.5YR54, 2-10% , 15-30mm, Distinct; , 2-10% , 15-30mm, Distinct; Heavy clay; Weak grade of structure, 5-10 mm, Angular blocky; Very firm consistence; Few (2 - 10 %), Manganiferous, , Concretions;
2.4 - 2.7 m	Brown (7.5YR4/4-Moist); , 5YR48, 10-20% , 5-15mm, Distinct; , 10YR56, 10-20% , 5-15mm, Distinct; Heavy clay; Moderate grade of structure, Angular blocky; Very firm consistence; Few (2 - 10 %), Manganiferous, , Concretions;
2.7 - 3 m	Brown (7.5YR4/4-Moist); , 5YR48, 10-20% , 5-15mm, Distinct; , 10YR56, 10-20% , 5-15mm, Distinct; Heavy clay; Moderate grade of structure, Angular blocky; Very firm consistence; Few (2 - 10 %), Manganiferous, , Concretions;

C 3 - 3.3 m ;

**Morphological Notes**

C Multicoloured weathered basalt:

**Observation Notes**

2-10% <2MM FEMN NODULES ON SURFACE:270-300CM WEATHERED BASALT INCREASING:

**Site Notes**

NULLA NULLA

**Observation ID: 1**

[illegible]

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3 - 3.3

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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
15_NR_CA	Exch. basic cations (Ca++) - meq per 100g of soil - Not recorded
15_NR_K	Exch. basic cations (K++) - meq per 100g of soil - Not recorded
15_NR_MG	Exch. basic cations (Mg++) - meq per 100g of soil - Not recorded
15_NR_NA	Exch. basic cations (Na++) - meq per 100g of soil - Not recorded
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
17A1	Total potassium - X-ray fluorescence
3A1	EC of 1:5 soil/water extract
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)
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_Is	Interstratified clay minerals - X-Ray Diffraction
XRD_C_Ka	Kaolin - X-Ray Diffraction
XRD_C_Qz	Quartz - X-Ray Diffraction