

**Project Name:** Regional  
**Project Code:** REG **Site ID:** T144 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

#### Site Information

<b>Desc. By:</b>	G. Smith	<b>Locality:</b>	.5KM north of T143:1.8KM south of Dillion Creek at Tandanus on road south of Balfe's Creek:
<b>Date Desc.:</b>	25/08/70	<b>Elevation:</b>	No Data
<b>Map Ref.:</b>	Sheet No. : 8057 1:100000	<b>Rainfall:</b>	610
<b>Northing/Long.:</b>	145.816666666667	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	-20.1	<b>Drainage:</b>	Imperfectly drained

#### Geology

<b>Exposure Type:</b>	Undisturbed soil core	<b>Conf. Sub. is Parent. Mat.:</b>	No Data
<b>Geol. Ref.:</b>	Tf	<b>Substrate Material:</b>	Undisturbed soil core, 1 m deep, Sandstone

#### Land Form

<b>Rel/Slope Class:</b>	Undulating plains <9m 3-10%	<b>Pattern Type:</b>	Plain
<b>Morph. Type:</b>	Flat	<b>Relief:</b>	6 metres
<b>Elem. Type:</b>	Plain	<b>Slope Category:</b>	Gently inclined
<b>Slope:</b>	0 %	<b>Aspect:</b>	No Data

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

#### Erosion:

#### Soil Classification

<b>Australian Soil Classification:</b>		<b>Mapping Unit:</b>	N/A
Sodic Petroferric Yellow Kandosol		<b>Principal Profile Form:</b>	Gn2.21
<b>ASC Confidence:</b>		<b>Great Soil Group:</b>	Yellow earth
All necessary analytical data are available.			

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

#### Vegetation:

Mid Strata - Tree, 1.01-3m, Very sparse. \*Species includes - Acacia species  
 Tall Strata - Tree, 3.01-6m, Sparse. \*Species includes - Eucalyptus melanophloia

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

#### Profile Morphology

A11	0 - 0.05 m	Dark greyish brown (10YR4/2-Moist); Light brownish grey (10YR6/2-Dry); ; Sandy clay loam; 5-10 mm, Platy; Massive grade of structure; Dry; Very firm consistence; Few, fine (1-2mm) roots; Clear change to -
A12	0.05 - 0.1 m	Yellowish brown (10YR5/5-Moist); Pale brown (10YR6/3-Dry); ; 10YR76, 0-2% , 0-5mm; ; 0-2% , 0-5mm; Sandy clay loam (Heavy); 5-10 mm, Platy; Dry; Strong consistence; Few, fine (1-2mm) roots; Gradual change to -
B1	0.1 - 0.2 m	Yellowish brown (10YR5/4-Moist); Very pale brown (10YR7/4-Dry); ; Sandy clay loam (Heavy); Massive grade of structure; Dry; Very firm consistence; Gradual change to -
B2	0.2 - 0.3 m	Brownish yellow (10YR6/5-Moist); ; Sandy clay loam (Heavy); Massive grade of structure; Earthy fabric; Dry; Very firm consistence; Gradual change to -
B2	0.3 - 0.4 m	Brownish yellow (10YR6/5-Moist); ; 10YR76, 2-10% , 0-5mm, Faint; ; 2-10% , 0-5mm, Faint; Sandy clay loam (Heavy); Massive grade of structure; Earthy fabric; Dry; Very firm consistence; Gradual change to -
B2	0.4 - 0.5 m	Brownish yellow (10YR6/5-Moist); ; 10YR76, 2-10% , 0-5mm, Faint; ; 2-10% , 0-5mm, Faint; Sandy clay loam (Heavy); Massive grade of structure; Earthy fabric; Dry; Very firm consistence; Gradual change to -
B2	0.5 - 0.6 m	Brownish yellow (10YR6/5-Moist); ; 10YR76, 2-10% , 0-5mm, Faint; ; 2-10% , 0-5mm, Faint; Sandy clay loam (Heavy); Massive grade of structure; Earthy fabric; Dry; Very firm consistence; Gradual change to -
B2	0.6 - 0.7 m	Brownish yellow (10YR6/5-Moist); ; 10YR76, 2-10% , 0-5mm, Faint; ; 2-10% , 0-5mm, Faint; Sandy clay loam (Heavy); Massive grade of structure; Earthy fabric; Dry; Very firm consistence; Gradual change to -
C1	0.7 - 0.8 m	Brownish yellow (10YR6/5-Moist); ; 10YR76, 2-10% , 15-30mm; ; 2-10% , 15-30mm; Sandy medium clay; Massive grade of structure; Dry; Very firm consistence; Common (10 - 20 %), Ferruginous, Coarse (6 - 20 mm), Nodules; Gradual change to -

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0.8 - 0.9 m	Light brownish grey (2.5Y6/2-Moist); ; Sandy medium clay; Massive grade of structure; Very firm consistence; , Ferruginous, , Concretions; Thin ironpan, Concretionary; Gradual change to -
0.9 - 1 m	Light brownish grey (2.5Y6/2-Moist); , 10YR66; Sandy medium clay; Massive grade of structure; Very firm consistence; , Ferruginous, , Nodules;

**Morphological Notes**

**Observation Notes**

5-10CM MOTTILING ALONG ROOT CHANNELS:80-90CM MASS OF IRON (SUB ROUNDED) CONCERTIONS:

**Site Notes**

BALFE'S CK

**Laboratory Test Results:**

[illegible]

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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
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
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)
MIN_EC	Exchange Capacity - Minerology
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_II	Illite - 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
XRD_C_Qz	Quartz - X-Ray Diffraction