

**Project Name:** Balonne-Maranoa Soil Survey and Soil Moisture Profiles  
**Project Code:** B-M **Site ID:** SM31 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (ACT)

**Site Information**

<b>Desc. By:</b>	Gunn, RH	<b>Locality:</b>	East-West road near woodlands.
<b>Date Desc.:</b>	18/08/71	<b>Elevation:</b>	No Data
<b>Map Ref.:</b>	1:100000	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	149.7475247	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	-27.01548476	<b>Drainage:</b>	Imperfectly drained

**Geology**

<b>ExposureType:</b>	Auger boring	<b>Conf. Sub. is Parent. Mat.:</b>	No Data
<b>Geol. Ref.:</b>	No Data	<b>Substrate Material:</b>	No Data

**Land Form**

<b>Rel/Slope Class:</b>	No Data	<b>Pattern Type:</b>	No Data
<b>Morph. Type:</b>	No Data	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Plain	<b>Slope Category:</b>	Very gently sloped
<b>Slope:</b>	%	<b>Aspect:</b>	No Data

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

**Erosion:**

**Soil Classification**

<b>Australian Soil Classification:</b>	N/A	<b>Mapping Unit:</b>	N/A
<b>ASC Confidence:</b>	Confidence level not specified	<b>Principal Profile Form:</b>	Ug5.24
		<b>Great Soil Group:</b>	N/A

**Site Disturbance:**

**Vegetation:**

**Surface Coarse Fragments:**

**Profile Morphology**

0 - 0.25 m	Dark brown (10YR3/3-Moist); , 0-0% ; Medium clay; <2 mm, Subangular blocky; 2-5 mm, Subangular blocky; Smooth-ped fabric; Firm consistence; Field pH 6 (pH meter); Field pH 7.5 (pH meter);
0.25 - 0.65 m	Dark grey (10YR4/1-Moist); , 0-0% ; Heavy clay; , Subangular blocky; Massive grade of structure; Smooth-ped fabric; Firm consistence; Very few (0 - 2 %), Calcareous, , Concretions; Field pH 8.7 (pH meter); Field pH 8.5 (pH meter);
0.65 - 1 m	Dark greyish brown (10YR4/2-Moist); , 2-10% ; Heavy clay; Massive grade of structure; Firm consistence; Field pH 6.3 (pH meter); Field pH 5.5 (pH meter);

**Morphological Notes**

Consistence: friable when moist. Roots present.  
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**Observation Notes**

Parent material: weathered C sediments. Microrelief: gilgaied, approx. 90 cm. Crusty surface 0-.05 cm, fine cracks (about 3 days after approx. 2.5 cm rain). Top 1 cm above soil is almost complete cover of leaf litter & partly decomposed OM

**Site Notes**

Soil family: Ca. Mapping symbol: Cg. Land system: C. Land unit: 44 (2835 km2). Drainage site: mounds moderate - depression, seasonal waterlogging. Land use: grazing at site, also used for cultivation in this area. Veg: belah-brigalow forest

**Laboratory Test Results:**

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 - 0.25							1.66	0	16.1F	28.4	17.1	38.4

Depth	COLE	Gravimetric/Volumetric Water Contents							K sat	K unsat
		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar	15 Bar	mm/h	mm/h
m		g/g - m3/m3								
0 - 0.25								24.49E		

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**Laboratory Analyses Completed for this profile**

P10_GRAV	Gravel (%)
P10_HYD_C	Clay (%) - Hydrometer Method
P10_HYD_CS	Coarse Sand (%) - Hydrometer Method
P10_HYD_FS	Fine Sand (%) - Hydrometer Method
P10_HYD_Z	Silt (%) - Hydrometer Method
P3A1_CLOD	Bulk density g/cm3 - Clods at 0.1 Bar moisture content (McIntyre & Stirk, 1954, Aust. J. Agric. Res. 5:291-6)
P3B1VL_15	15 BAR Moisture m3/m3 - Volumetric using <2mm sample on pressure plate
P3B2VL_03	0.3 BAR Moisture m3/m3 - Volumetric using disturbed sample on pressure plate
XRD_C_Is	Interstratified clay minerals - X-Ray Diffraction
XRD_C_Ka	Kaolin - X-Ray Diffraction
XRD_C_Mm	Montmorillonite - X-Ray Diffraction
XRD_C_Qz	Quartz - X-Ray Diffraction