

**Project Name:** RR  
**Project Code:** RR      **Site ID:** B557      **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

**Site Information**

<b>Desc. By:</b>	G.D. Hubble	<b>Locality:</b>	
<b>Date Desc.:</b>	26/09/66	<b>Elevation:</b>	305 metres
<b>Map Ref.:</b>	Sheet No. : 9045 1:100000	<b>Rainfall:</b>	677
<b>Northing/Long.:</b>	150.516666666667	<b>Runoff:</b>	Moderately rapid
<b>Easting/Lat.:</b>	-26.433333333333	<b>Drainage:</b>	Imperfectly drained

**Geology**

<b>ExposureType:</b>	Soil pit	<b>Conf. Sub. is Parent. Mat.:</b>	No Data
<b>Geol. Ref.:</b>	T	<b>Substrate Material:</b>	Undisturbed soil core, 1 m deep, Sandstone

**Land Form**

<b>Rel/Slope Class:</b>	No Data	<b>Pattern Type:</b>	Pediment
<b>Morph. Type:</b>	Lower-slope	<b>Relief:</b>	14 metres
<b>Elem. Type:</b>	Pediment	<b>Slope Category:</b>	No Data
<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
Magnesian Mottled-Hypnatic Brown Sodosol		<b>Principal Profile Form:</b>	Dy3.43
<b>ASC Confidence:</b>		<b>Great Soil Group:</b>	Solodized solonetz
All necessary analytical data are available.			

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

**Vegetation:** Low Strata - Tussock grass, , . \*Species includes - None recorded  
Mid Strata - Tree, , . \*Species includes - None recorded  
Tall Strata - Tree, 12.01-20m, Closed or dense. \*Species includes - Eucalyptus populnea, Eucalyptus

drepanophylla

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

**Profile Morphology**

A1	0 - 0.1 m	Dark brown (10YR3/3-Moist); ; Fine sandy loam; Massive grade of structure; Coarse (>5mm) macropores, Dry; Weak consistence; 2-10%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Field pH 5.4 (pH meter); Clear change to -
A21	0.1 - 0.15 m	Dark greyish brown (10YR4/2-Moist); , 10YR53, 10-20% , 5-15mm, Faint; , 10YR52, 10-20% , 5-15mm, Faint; Fine sandy loam; Massive grade of structure; Very fine (0.075-1mm) macropores, Dry; Weak consistence; 2-10%, fine gravelly, 2-6mm, Substrate material, coarse fragments; Field pH 5.2 (pH meter); Clear change to -
A22	0.15 - 0.2 m	Yellowish brown (10YR5/4-Moist); Very pale brown (10YR8/4-Dry); ; Loamy fine sand; Massive grade of structure; Very fine (0.075-1mm) macropores, Dry; Weak consistence; 2-10%, fine gravelly, 2-6mm, Substrate material, coarse fragments; Field pH 5.7 (pH meter); Abrupt change to -
B21	0.2 - 0.3 m	Yellowish brown (10YR5/5-Moist); , 7.5YR44, 20-50% , 5-15mm, Distinct; , 5YR48, 20-50% , 5-15mm, Distinct; Medium clay; Strong grade of structure, 100-200 mm, Columnar; 10-20 mm, Angular blocky; Dry; Strong consistence; 2-10%, fine gravelly, 2-6mm, Substrate material, coarse fragments; Very few (0 - 2 %), Manganiferous, , Soft segregations; Field pH 6.5 (pH meter);
B21	0.3 - 0.53 m	Yellowish brown (10YR5/5-Moist); , 7.5YR44, 20-50% , 5-15mm, Faint; , 5YR48, 20-50% , 5-15mm, Faint; Medium clay; Strong grade of structure, 100-200 mm, Columnar; 10-20 mm, Angular blocky; Dry; Strong consistence; 0-2%, fine gravelly, 2-6mm, Substrate material, coarse fragments; Very few (0 - 2 %), Manganiferous, , Soft segregations; Field pH 8.1 (pH meter); Diffuse change to -
B22	0.53 - 0.6 m	Yellowish brown (10YR5/4-Moist); , 10YR42, 20-50% , 5-15mm, Faint; , 20-50% , 5-15mm, Faint; Light medium clay; Moderate grade of structure, 10-20 mm, Angular blocky; Moderately moist; Strong consistence; 0-2%, medium gravelly, 6-20mm, Substrate material, coarse fragments; Very few (0 - 2 %), Manganiferous, , Soft segregations; Few (2 - 10 %), Calcareous, Fine (0 - 2 mm), Soft segregations; Field pH 9.7 (pH meter);

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B22	0.6 - 0.68 m	Yellowish brown (10YR5/4-Moist); , 10YR42, 20-50% , 5-15mm, Faint; , 20-50% , 5-15mm, Faint; Light medium clay; Moderate grade of structure, 10-20 mm, Angular blocky; Moderately moist; Strong consistence; 2-10%, medium gravelly, 6-20mm, Substrate material, coarse fragments; Very few (0 - 2 %), Manganiferous, , Soft segregations; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Soft segregations; Field pH 9.7 (pH meter); Clear change to -
B3	0.68 - 0.76 m	Dark greyish brown (10YR4/2-Moist); , 10YR54, 20-50% , 5-15mm, Faint; , 10YR51, 20-50% , 5-15mm, Faint; Fine sandy medium clay; Weak grade of structure, 10-20 mm, Angular blocky; Moderately moist; Firm consistence; 0-2%, medium gravelly, 6-20mm, Substrate material, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Soft segregations; Field pH 9.7 (pH meter);
B3	0.76 - 0.9 m	Dark greyish brown (10YR4/2-Moist); , 10YR54, 20-50% , 5-15mm, Faint; , 10YR51, 20-50% , 5-15mm, Faint; Sandy medium clay; Weak grade of structure, 10-20 mm, Angular blocky; Moderately moist; Firm consistence; 0-2%, medium gravelly, 6-20mm, Substrate material, coarse fragments; Very few (0 - 2 %), Ferruginous, Coarse (6 - 20 mm), Nodules; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Soft segregations; Field pH 9.5 (pH meter);
B3	0.9 - 1 m	Dark greyish brown (10YR4/2-Moist); , 10YR54, 20-50% , 5-15mm, Faint; , 10YR51, 20-50% , 5-15mm, Faint; Sandy medium clay; Weak grade of structure, 10-20 mm, Angular blocky; Moderately moist; Firm consistence; 0-2%, medium gravelly, 6-20mm, Substrate material, coarse fragments; Field pH 9.1 (pH meter);

**Morphological Notes**

**Observation Notes**

CALCAREOUS SEGRATIONS INCLUDE SOME NODULES:

**Site Notes**

BARAKULA

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**Laboratory Test Results:**

Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na	Acidity		%
						Cmol	(+)/kg		
0 - 0.1	5.4H	0.015B	1.1K	1.7	0.15	0.42	4.7D		
0.1 - 0.15	5.2H	0.012B	0.1K	1.4	0.06	0.43	3.7D		
0.15 - 0.2	5.7H	0.01B	0.04K	0.94	0.08	0.42	1.3D		
0.2 - 0.3	6.5H	0.033B	0.16K	5.9	0.06	2.7	2.8D		
0.3 - 0.53	8.1H	0.067B							
0.53 - 0.6	9.7H	0.16B	0.77K	6.3	0.06	3.6	0D		
0.6 - 0.68	9.7H	0.19B							
0.68 - 0.76	9.7H	0.17B	0.93K	7.1	0.06	3.9	0.15D		
0.76 - 0.9	9.5H	0.15B							
0.9 - 1	9.1H	0.11B	0.39K	7.8	0.06	6.5	0D		

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		1.02E	4C	0.007F	0.074B			4	18C	58	9	14
0.1 - 0.15		0.55E	3B	0.004F	0.042B			6	24C	50	8	15
0.15 - 0.2		0.32E	2B	0.002F		0.05B		10	24C	62	7	8
0.2 - 0.3				0.004F		0.07B		6	14C	42	6	37
0.3 - 0.53												
0.53 - 0.6	6.8C							2	12C	47	7	27
0.6 - 0.68												
0.68 - 0.76	1C			0.002F		0.07B		1	11C	51	9	26
0.76 - 0.9												
0.9 - 1	0.1C			0.004F		0.09B		1	10C	44	11	33

[illegible]

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**Laboratory Analyses Completed for this profile**

10A_NR	Total element - S(%) - Not recorded
15_NR_CA	Exch. basic cations (Ca++) - meq per 100g of soil - Not recorded
15_NR_H	Hydrogen Cation - 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
17A_NR	Total element - K(%) - Not recorded
19B_NR	Calcium Carbonate (CaCO3) - Not recorded
2A1	Air-dry moisture content
3_NR	Electrical conductivity or soluble salts - Not recorded
4_NR	pH of soil - Not recorded
5_NR	Water soluble Chloride - Cl(%) - Not recorded
6Z	Organic carbon (%) - Not recorded
7_NR	Total nitrogen (%) - Not recorded
9_NR	Available P (mg/kg) - Not recorded
9A_NR	Total element - P(%) - Not recorded
9G_BSES	Available P (mg/kg) - Acid P - 0.005M H2SO4 (BSES)
P10_GRAV	Gravel (%)
P10_NR_C	Clay (%) - Not recorded
P10_NR_CS	Coarse sand (%) - Not recorded
P10_NR_FS	Fine sand (%) - Not recorded
P10_NR_Z	Silt (%) - Not recorded