

**Project Name:** NAR  
**Project Code:** NAR      **Site ID:** B887      **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> 24/08/76	<b>Elevation:</b> 290 metres
<b>Map Ref.:</b> Sheet No. : 9046 1:100000	<b>Rainfall:</b> 716
<b>Northing/Long.:</b> 150.863888888889	<b>Runoff:</b> Moderately rapid
<b>Easting/Lat.:</b> -25.682777777778	<b>Drainage:</b> Imperfectly drained

#### Geology

<b>ExposureType:</b> Undisturbed soil core	<b>Conf. Sub. is Parent. Mat.:</b> No Data
<b>Geol. Ref.:</b> CZs	<b>Substrate Material:</b> Undisturbed soil core, 2 m deep, Sandstone

#### Land Form

<b>Rel/Slope Class:</b> Undulating rises 9-30m 3-10%	<b>Pattern Type:</b> Rises
<b>Morph. Type:</b> Crest	<b>Relief:</b> 30 metres
<b>Elem. Type:</b> Hillslope	<b>Slope Category:</b> No Data
<b>Slope:</b> 0 %	<b>Aspect:</b> No Data

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

#### Erosion:

#### Soil Classification

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b> N/A
Bleached-Ferric Magnesic Yellow Dermosol	<b>Principal Profile Form:</b> Dy5.81
<b>ASC Confidence:</b>	<b>Great Soil Group:</b> Lateritic podzolic soil

Analytical data are incomplete but reasonable confidence.

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

#### Vegetation:

Low Strata - Tussock grass, . . \*Species includes - Aristida species  
 Mid Strata - , , . \*Species includes - Alphitonia excelsa, Petalostigma pubescens  
 Tall Strata - Tree, 6.01-12m, Mid-dense. \*Species includes - Eucalyptus crebra, Angophora costata

#### Surface Coarse Fragments:

#### Profile Morphology

A1	0 - 0.1 m	Brown (10YR5/3-Dry); ; Loamy sand; Weak grade of structure, 10-20 mm, Subangular blocky; 2-5 mm, Subangular blocky; Dry; Loose consistence; 2-10%, fine gravelly, 2-6mm, angular, Quartz, coarse fragments; Very few (0 - 2 %), Ferromanganiferous, Medium (2 -6 mm), Nodules; Few, very fine (0-1mm) roots; Gradual change to -
A2	0.1 - 0.2 m	Pale brown (10YR6/3-Dry); ; Loamy coarse sand; Massive grade of structure; Dry; Very weak consistence; 2-10%, fine gravelly, 2-6mm, angular, Quartz, coarse fragments; Very few (0 - 2 %), Ferromanganiferous, Medium (2 -6 mm), Nodules; Few, very fine (0-1mm) roots;
A2	0.2 - 0.3 m	Light yellowish brown (10YR6/4-Dry); ; Loamy coarse sand; Massive grade of structure; Dry; Very weak consistence; 2-10%, fine gravelly, 2-6mm, angular, Quartz, coarse fragments; Few (2 - 10 %), Ferromanganiferous, Medium (2 -6 mm), Nodules; Few, very fine (0-1mm) roots;
A2	0.3 - 0.4 m	Very pale brown (10YR7/4-Dry); ; Clayey sand; Massive grade of structure; Dry; Weak consistence; 20-50%, fine gravelly, 2-6mm, angular, Quartz, coarse fragments; Few (2 - 10 %), Ferromanganiferous, Medium (2 -6 mm), Nodules; Few, fine (1-2mm) roots; Diffuse change to -
A3	0.4 - 0.5 m	Yellow (10YR7/5-Dry); ; Clayey sand; Massive grade of structure; Dry; Weak consistence; 20-50%, fine gravelly, 2-6mm, angular, Quartz, coarse fragments; Many (20 - 50 %), Ferromanganiferous, Coarse (6 - 20 mm), Nodules;
B1	0.5 - 0.6 m	Brownish yellow (10YR6/7-Dry); ; 2.5YR46, 0-2% , 0-5mm, Distinct; , 0-2% , 0-5mm, Distinct; Sandy medium clay; Massive grade of structure; Dry; Firm consistence; 20-50%, fine gravelly, 2-6mm, angular, Quartz, coarse fragments; Common (10 - 20 %), Ferromanganiferous, Coarse (6 - 20 mm), Nodules; Few, fine (1-2mm) roots; Gradual change to -
B21	0.6 - 0.75 m	Brownish yellow (10YR6/6-Dry); ; 2.5YR46, 20-50% , 5-15mm, Prominent; , 10YR63, 20-50% , 5-15mm, Prominent; Light medium clay; Massive grade of structure; Dry; Firm consistence; 2-10%, fine gravelly, 2-6mm, angular, Quartz, coarse fragments; Very many (50 - 100 %), Ferruginous, Coarse (6 - 20 mm), Nodules; Few, very fine (0-1mm) roots; Gradual change to -
B22	0.75 - 0.9 m	Brownish yellow (10YR6/6-Dry); ; 10YR61, 20-50% , 5-15mm, Prominent; , 10R46, 20-50% , 5-15mm, Prominent; Light medium clay; Massive grade of structure; Dry; Firm consistence; 10-20%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Many (20 - 50 %), Ferruginous, Coarse (6 - 20 mm), Nodules;

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B23	0.9 - 1.2 m	Red (2.5YR4/6-Dry); , 10YR66, 20-50% , 15-30mm, Prominent; , 10YR61, 20-50% , 15-30mm, Prominent; Coarse sandy clay loam; Weak grade of structure, 50-100 mm, Angular blocky; Dry; Strong consistence; 10-20%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments;
B31	1.2 - 1.5 m	Dark red (2.5YR3/6-Dry); , 10YR61, 20-50% , 15-30mm, Prominent; , 5YR76, 20-50% , 15-30mm, Prominent; Coarse sandy clay loam; Weak grade of structure, 50-100 mm, Angular blocky; Dry; Strong consistence; 10-20%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Gradual change to -
B32	1.5 - 1.65 m	Grey (10YR6/1-Dry); , 2.5YR36, 20-50% , 15-30mm, Prominent; , 10R66, 20-50% , 15-30mm, Prominent; Coarse sandy medium clay; Weak grade of structure, 20-50 mm, Angular blocky; 5-10 mm, Angular blocky; Dry; Strong consistence; 10-20%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Clear change to -
B33	1.65 - 1.8 m	Red (2.5YR5/6-Dry); , 10YR61, 20-50% , 30-mm, Prominent; , 5YR76, 20-50% , 30-mm, Prominent; Clayey coarse sand; Massive grade of structure; Dry; Strong consistence; 20-50%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Abrupt change to -
BC	1.8 - 2 m	Red (2.5YR5/7-Dry); , 10YR62, 20-50% , 30-mm, Prominent; , 5YR78, 20-50% , 30-mm, Prominent; Clayey coarse sand; Massive grade of structure; Dry; Firm consistence; 2-10%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Abrupt change to -
BC	2 - 2.07 m	Grey (10YR5/1-Dry); , 10YR71, 20-50% , 15-30mm, Prominent; , 10YR58, 20-50% , 15-30mm, Prominent; Coarse sandy clay loam; Massive grade of structure; Dry; Strong consistence; 0-2%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments;

#### **Morphological Notes**

#### **Observation Notes**

NODULES INCLUDE FROM 13-30% MAGNETIC.LAYERS RENUMBERED 12/10/92

#### **Site Notes**

NARAYEN

**Observation ID: 1**

**Laboratory Test Results:**

Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na Cmol (+)/kg	Acidity		%
0 - 0.1	5.9H	0.1B							
0.1 - 0.2	5.5H	0.05B							
0.2 - 0.3	5.4H	0.04B							
0.3 - 0.4	5.4H	0.04B	0.3K	0.35	0.07	0.12	0.85D		
0.4 - 0.5	5.3H	0.06B							
0.5 - 0.6	5.4H	0.07B	0.15K	1.93	0.27	0.16	3.52D		
0.6 - 0.75	5.4H	0.09B							
0.75 - 0.9	5.1H	0.13B	0.08K	2.23	0.05	0.21	4.57D		
0.9 - 1.2	5H	0.11B							
1.2 - 1.5	4.7H	0.11B	0.06K	0.6	0.13	0.18	1.66D		
1.5 - 1.65	4.7H	0.17B							
1.65 - 1.8	4.8H	0.09B	0.34K	0.24	0.04	0.14	0.73D		
1.8 - 2	4.6H	0.1B							

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		0.93A	4B		0.045B							
0.1 - 0.2		0.46A			0.026B							
0.2 - 0.3		0.28A			0.018B							
0.3 - 0.4		0.24A	2B		0.011B							
0.4 - 0.5		0.3A			0.015B							
0.5 - 0.6		0.29A			0.023B							
0.6 - 0.75		0.27A	3B		0.021B							
0.75 - 0.9		0.15A			0.014B							
0.9 - 1.2		0.09A			0.008B							
1.2 - 1.5		0.1A			0.005B							
1.5 - 1.65		0.18A			0.013B							
1.65 - 1.8					0.001B							
1.8 - 2					0.005B							

[illegible]

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**Laboratory Analyses Completed for this profile**

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
2_LOI	Loss on Ignition (%)
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
6A1	Organic carbon - Walkley and Black
7_NR	Total nitrogen (%) - Not recorded
9G_BSES	Available P (mg/kg) - Acid P - 0.005M H2SO4 (BSES)