

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI **Site ID:** ed068 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

#### Site Information

<b>Desc. By:</b>	W.T. Ward	<b>Locality:</b>	B. & M.(Bevan) O'Regan, Moema
<b>Date Desc.:</b>	16/12/86	<b>Elevation:</b>	312 metres
<b>Map Ref.:</b>	Sheet No. : 8837_N 1:50000	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6669700 AMG zone: 55	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	781650 Datum: AGD66	<b>Drainage:</b>	No Data

#### Geology

<b>ExposureType:</b>	Undisturbed soil core	<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>	Pediment	<b>Slope Category:</b>	Very gently sloped
<b>Slope:</b>	1 %	<b>Aspect:</b>	310 degrees

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

#### 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>	Dy5.43
		<b>Great Soil Group:</b>	Solodic soil

**Site Disturbance:** Complete clearing. Pasture, native or improved, cultivated at some stage

#### Vegetation:

#### Surface Coarse Fragments:

#### Profile Morphology

A11	0 - 0.1 m	Brown (7.5YR4/2-Moist); Brown (7.5YR4/2-Dry); , 5YR21, 0-2% , 5-15mm, Distinct; Loamy sand; Weak grade of structure, 10-20 mm, Subangular blocky; Single grain grade of structure; Sandy (grains prominent) fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Loose consistence; Very few (0 - 2 %), Ferromanganiferous, Coarse (6 - 20 mm), Nodules; Field pH 6.5 (pH meter); Few, very fine (0-
A12	0.1 - 0.2 m	Brown (7.5YR5/2-Moist); ; Loamy sand; Weak grade of structure, 5-10 mm, Subangular blocky; Single grain grade of structure; Sandy (grains prominent) fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very weak consistence; Field pH 6 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth change to -
A21	0.2 - 0.45 m	Very pale brown (10YR7/3-Moist); ; Loamy sand; Weak grade of structure, 2-5 mm, Subangular blocky; Single grain grade of structure; Sandy (grains prominent) fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very weak consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Field pH 6.5 (pH meter); Few, fine (1-2mm) roots;
A22	0.45 - 0.6 m	Light grey (10YR7/2-Moist); , 7.5YR32, 10-20% , 15-30mm, Prominent; Loamy sand; Single grain grade of structure, <2 mm; Weak grade of structure, 5-10 mm, Subangular blocky; Sandy (grains prominent) fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very weak consistence; Common (10 - 20 %), Ferromanganiferous, Coarse (6 - 20 mm), Nodules; Field pH 6.5 (pH meter); Few, very fine (0-1mm) roots; Sharp, Smooth
B21g	0.6 - 1 m	Strong brown (7.5YR5/6-Moist); , 10YR72, 20-50% , 30-mm, Prominent; Loamy sand; Strong grade of structure, 10-20 mm, Prismatic; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; Field pH 7 (pH meter); Few, very fine (0-1mm) roots;
B22g	1 - 1.3 m	Dark red (2.5YR3/6-Moist); , 7.5YR56, 10-20% , 5-15mm, Prominent; , 10YR71, 20-50% , 15-30mm, Prominent; Sandy clay loam; Strong grade of structure, 20-50 mm, Prismatic; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 8 (pH meter); Few, fine (1-2mm) roots; Diffuse, Smooth change to -

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B23      1.3 - 2.73 m      Dark red (2.5YR3/6-Moist); , 7.5YR58, 20-50% , 30-mm, Prominent; , 10YR61, 10-20% , 15-30mm, Prominent; Sandy clay loam; Moderate grade of structure, 100-200 mm, Prismatic; Weak grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm<sup>2</sup>) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Veins; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;

#### **Morphological Notes**

A11      The concretions in the A22 are coloured 10YR7/3 on the top and 7.5YR3/2 on the bottom. Manganese stain starts at 240cm, and carbonate laminae also start at 240cm. The lime veins at 250cm are coloured 10YR8/2. Manganese stains also appear between 250-260cm. Pilliga Sandstone. Samples 01 and 02 were found to be oily in the laboratory. This oil might have affected chemical analyses.

A12

#### **Observation Notes**

Parent Rock: residual, sandstone, Pilliga Sandstone, weathered

#### **Site Notes**

Pediment, near foot, leading to valley plain. Trampling is by brush clearing tractors. Vegetation: cypress, mollee box, mulga, shrub (rounded leaf, sprawling habit, sample).



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**Laboratory Analyses Completed for this profile**

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
19B1	Carbonates - manometric
3A1	EC of 1:5 soil/water extract
4A1	pH of 1:5 soil/water suspension
5A2	Chloride - 1:5 soil/water extract, automated colour
6B3	Total organic carbon - high frequency induction furnace, infrared
7B1	Water soluble nitrate - automated colour
9B1	Bicarbonate-extractable phosphorus - manual colour
P10_CF_C	Clay (%) - Coventry and Fett pipette method
P10_CF_Z	Silt (%) - Coventry and Fett pipette method