

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI **Site ID:** ed040 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

#### Site Information

<b>Desc. By:</b>	W.T. Ward	<b>Locality:</b>	Frank O'Neill, Llano
<b>Date Desc.:</b>	07/02/86	<b>Elevation:</b>	198 metres
<b>Map Ref.:</b>	Sheet No. : 8837_N 1:50000	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6672900 AMG zone: 55	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	752750 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>	Terrace plain	<b>Slope Category:</b>	Level
<b>Slope:</b>	0 %	<b>Aspect:</b>	No Data

**Surface Soil Condition (dry):** Surface crust, Poached

#### 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>	Ug6.1
		<b>Great Soil Group:</b>	Grey clay

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

#### Vegetation:

#### Surface Coarse Fragments:

#### Profile Morphology

A11	0 - 0.1 m	Very dark grey (10YR3/1-Moist); Dark grey (10YR4/1-Dry); , 10YR61, 0-2% , 0-5mm, Faint; Medium clay; Strong grade of structure, 10-20 mm, Angular blocky; Strong grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Moderately moist; Strong consistence; 0-2%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Field pH 7 (pH meter); Few, very fine (0-1mm) roots;
A12	0.1 - 0.25 m	Very dark grey (10YR3/1-Moist); , 7.5YR52, 0-2% , 0-5mm, Faint; Medium clay; Strong grade of structure, 10-20 mm, Angular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Moderately moist; Strong consistence; 0-2%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 7.5 (pH meter); Few, very fine (0-1mm) roots;
A13	0.25 - 0.55 m	Very dark greyish brown (10YR3/2-Moist); , 7.5YR52, 0-2% , 0-5mm, Faint; Light medium clay; Moderate grade of structure, 50-100 mm, Subangular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Moderately moist; Strong consistence; 0-2%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Soft segregations; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;
A14	0.55 - 0.85 m	Dark brown (7.5YR3/2-Moist); ; Medium clay; Weak grade of structure, 50-100 mm, Subangular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Moderately moist; Strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Soft segregations; Very few (0 - 2 %), Gypseous, Fine (0 - 2 mm), Crystals; Field pH 8.5 (pH meter); Diffuse, Smooth change to -
B21	0.85 - 1.9 m	Dark brown (10YR3/3-Moist); , 10YR31, 0-2% , 0-5mm, Faint; Medium heavy clay; Strong grade of structure, 50-100 mm, Lenticular; Strong grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Very firm consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.5 (pH meter);
B22	1.9 - 2.68 m	Dark brown (10YR3/3-Moist); , 10YR32, 2-10% , 30-mm, Distinct; Medium heavy clay; Strong grade of structure, 50-100 mm, Lenticular; Weak grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Few (2 - 10 %), Calcareous, Coarse (6 - 20 mm), Nodules; Field pH 8 (pH meter);

#### Morphological Notes

A11 30-40 level in core represents a zone 30-60 that is evidently darker than soil above and below, is this significant in degraded soils? Large pore at 135cm. This is the start of the

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Llano transect, samples saved for Ian.

**Observation Notes**

Parent Rock: alluvial sediment, clay, parna on fourth fan

**Site Notes**

Photosite looking towards Bald Hill and Bald Knob homestead. Hand pen broad tip. Many cracks hidden by weak surface crust making it difficult to see crack space and length. 50m north from gate in fence line to the west.

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[illegible]

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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