Project Name: Soil Studies in the Lower Namoi Valley

Project Code: EDGEROI Site ID: Observation ID: 1 na001

Agency Name: **CSIRO Division of Soils (QLD)**

Site Information

W.T. Ward Locality: stock route, at Bohena

Desc. By: Date Desc.: Elevation: 06/01/86 231 metres Map Ref.: Sheet No.: 8837_S 1:50000 Rainfall: No Data Northing/Long.: 6630400 AMG zone: 55 Runoff: No Data Easting/Lat.: 753200 Datum: AGD66 Drainage: No Data

Geology

ExposureType: Undisturbed soil core Conf. Sub. is Parent. Mat.: No Data No Data **Substrate Material:** No Data Geol. Ref.:

Land Form

Rel/Slope Class: No Data Pattern Type: No Data Morph. Type: Elem. Type: No Data Relief: No Data

Slope Category: Moderately inclined Hillcrest

Aspect: No Data Slope: 2 %

Surface Soil Condition (dry): Self-mulching

Erosion:

Soil Classification

Australian Soil Classification: Mapping Unit: N/A Principal Profile Form: Ua5.16 ASC Confidence: **Great Soil Group:** Grey clay

Confidence level not specified

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

Vegetation:

Surface Coarse Fragments:

Profile	Morphology	
A11	0 - 0.04 m	Dark greyish brown (10YR4/2-Moist); Dark greyish brown (10YR4/2-Dry); ; Light medium clay; Strong grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Moderately moist; Very firm consistence; Sharp, Smooth change to -
A12	0.1 - 0.2 m	Dark greyish brown (10YR4/2-Moist); ; Medium clay; Moderate grade of structure, 10-20 mm, Angular blocky; Earthy fabric; Moderately moist; Strong consistence; Abrupt, Smooth change to
B21y	0.2 - 0.6 m	Dark greyish brown (10YR4/2-Moist); ; Medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Earthy fabric; Moderately moist; Strong consistence; Few (2 - 10 %), Gypseous, Fine (0 - 2 mm), Crystals; Gradual, Smooth change to -
B22	0.6 - 1.6 m	Dark greyish brown (10YR4/2-Moist); ; Medium heavy clay; Moderate grade of structure, 50-100 mm, Lenticular; Moderate grade of structure, 50-100 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Strong consistence; Diffuse, Smooth change to -
B23	1.6 - 4 m	Dark greyish brown (10YR4/2-Moist); , 10YR72, 0-2% , 0-5mm, Distinct; Medium heavy clay; Weak grade of structure, 100-200 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Strong consistence; Diffuse, Smooth change to -
2B2	4 - 5.6 m	Pale brown (10YR6/3-Moist); , 10R34, 10-20% , 30-mm, Prominent; , 7.5YR58, 2-10% , 0-5mm, Distinct; Light clay; Weak grade of structure, 20-50 mm, Angular blocky; Moderate grade of structure, 2-5 mm, Cast; Smooth-ped fabric; Earthy fabric; Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, rounded, Ironstone, coarse fragments; Diffuse, Smooth change to -
2C	5.6 - 6 m	Yellowish brown (10YR5/6-Moist); , 2.5Y62, 2-10% , 5-15mm, Distinct; Loamy sand; Massive grade of structure: Moderate grade of structure, 2-5 mm, Cast: Smooth-ped fabric: Moderately

Morphological Notes

Organic stain around a root in second and third horizons, 2.5YR3/2. Traces of soft lime A11

above gypsum in horizon 2. Colour of horizon 4 is paler than those above but is still

moist; Strong consistence; Few cutans, <10% of ped faces or walls coated, distinct;

10YR4/2. Horizon 5 is also paler than the material above. Its segr

egations are minute, = fine sand layers. Few slickensides below 160cm. The 10YR7/2 A12

segregations below 160cm are not gypsum but sand (X-ray ID) and are seen also in the

upper part of the subjacent horizon. Manganese flecks seem to stop at 40

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B21y

0cm. Flecks of red material start at 390cm in grey clay. We seem to be passing here into sandy material with much organic worm traces, possibly a burial. One ironstone coarse

fragment found. Horizon 6 ped colour is red, with reduced colours

surrounding. A broken ironstone fragment, angular, 6-20mm, was found at 465cm. B22

Horizon 7 has nodular fracture. Horizon 6 grades down to coarse sandy clay. Horizon

designations are tentative.

Observation Notes

Parent Rock: aeolian sediment, clay, over weathered sands and clayey sands parna on fifth fan, Bohena

Site Notes

A very low interfluve. Very few cracks, long, 15cm wide, run from puff to shelf. Site drilled is on crest of puff.

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Laboratory Test Results:

Depth	рН	1:5 EC		angeable C	Cations K	Exc Na	changeable Acidity	CEC	ECEC	ESP
m		dS/m	Ca IV	y	N.	Cmol (+)/kg				%
0 - 0.04 0.1 - 0.2 0.3 - 0.4 0.7 - 0.8 2.4 - 2.5 4.5 - 4.6 5.9 - 6										
Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk			Analysis
m	%	C %	P mg/kg	P %	N %	К %	Density Mg/m3	GV (S FS %	Silt Clay
0 - 0.04 0.1 - 0.2 0.3 - 0.4 0.7 - 0.8 2.4 - 2.5 4.5 - 4.6 5.9 - 6										
Depth	pth COLE Gravimetric/Volumetric Water Contents						K sat	K unsat		
m		Sat.	0.05 Bar		0.5 Bar - m3/m3	1 Bar	5 Bar 15 l	Bar	mm/h	mm/h
0 - 0.04 0.1 - 0.2 0.3 - 0.4 0.7 - 0.8 2.4 - 2.5 4.5 - 4.6 5.9 - 6										

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Laboratory Analyses Completed for this profile