

**Project Name:** PRO  
**Project Code:** PRO      **Site ID:** H206      **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (TAS)

#### Site Information

<b>Desc. By:</b>	G.M. Dimmock	<b>Locality:</b>	2.4KM NW of Penna:
<b>Date Desc.:</b>	16/12/60	<b>Elevation:</b>	15 metres
<b>Map Ref.:</b>		<b>Rainfall:</b>	560
<b>Northing/Long.:</b>	147.501944444444	<b>Runoff:</b>	Moderately rapid
<b>Easting/Lat.:</b>	-42.768888888889	<b>Drainage:</b>	Very poorly drained

#### Geology

<b>ExposureType:</b>	Soil pit	<b>Conf. Sub. is Parent. Mat.:</b>	No Data
<b>Geol. Ref.:</b>	No Data	<b>Substrate Material:</b>	Auger boring, 2.4 m deep, Unconsolidated material (unidentified)

#### Land Form

<b>Rel/Slope Class:</b>	Level plain <9m <1%	<b>Pattern Type:</b>	Flood plain
<b>Morph. Type:</b>	Flat	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	No Data	<b>Slope Category:</b>	Level
<b>Slope:</b>	0 %	<b>Aspect:</b>	No Data

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

#### Erosion:

#### Soil Classification

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b>	N/A
Mottled Epipedal Black Vertosol	<b>Principal Profile Form:</b>	Ug5.16
<b>ASC Confidence:</b>	<b>Great Soil Group:</b>	Black earth

All necessary analytical data are available.

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

#### Vegetation:

#### Surface Coarse Fragments:

#### Profile Morphology

A	0 - 0.1 m	Black (10YR2/1-Moist); ; Heavy clay; Moderate grade of structure, 20-50 mm, Angular blocky; Very coarse, (20 - 50) mm crack; Dry; Rigid consistence; Many, fine (1-2mm) roots;
A	0.1 - 0.2 m	Black (10YR2/1-Moist); ; Heavy clay; Moderate grade of structure, 20-50 mm, Angular blocky; Very coarse, (20 - 50) mm crack; Dry; Rigid consistence; Very few (0 - 2 %), Unidentified, Fine (0 - 2 mm), Soft segregations; Many, fine (1-2mm) roots; Diffuse change to -
A	0.2 - 0.3 m	Black (10YR2/1-Moist); , 5YR58; Heavy clay; Weak grade of structure, 20-50 mm, Angular blocky; Very coarse, (20 - 50) mm crack; Dry; Rigid consistence; Few (2 - 10 %), Unidentified, Fine (0 - 2 mm), Soft segregations; Many, fine (1-2mm) roots;
A	0.3 - 0.46 m	Black (10YR2/1-Moist); , 5YR58; Heavy clay; Weak grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Very coarse, (20 - 50) mm crack; Dry; Very strong consistence; Few (2 - 10 %), Unidentified, Fine (0 - 2 mm), Soft segregations; Common
A	0.46 - 0.61 m	Black (10YR2/1-Moist); , 5YR58; Heavy clay; Weak grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Very coarse, (20 - 50) mm crack; Dry; Very strong consistence; Few (2 - 10 %), Unidentified, Fine (0 - 2 mm), Soft segregations; Common
AB	0.61 - 0.76 m	Black (10YR2/1-Moist); , 5Y32; Heavy clay; Massive grade of structure; Smooth-ped fabric; Very coarse, (20 - 50) mm crack; Moderately moist; Strong consistence; Few, medium (2-5mm) roots; Diffuse change to -
B	0.76 - 0.89 m	Dark olive grey (5Y3/2-Moist); , 5Y31; Heavy clay; Massive grade of structure; Smooth-ped fabric; Moist; Very firm consistence; Few (2 - 10 %), Unidentified, Fine (0 - 2 mm), Soft segregations; Very few (0 - 2 %), Gypseous, Medium (2 -6 mm), Concretions; FewDiffuse change to -
	0.89 - 1.02 m	Olive grey (5Y4/2-Moist); , 5Y31; Heavy clay; Massive grade of structure; Smooth-ped fabric; Very firm consistence; Few (2 - 10 %), Gypseous, Medium (2 -6 mm), Concretions; FewDiffuse change to -
	1.09 - 1.27 m	Olive (5Y5/3-Moist); , 2.5Y56; Heavy clay; Massive grade of structure; Smooth-ped fabric; Very firm consistence; Very few (0 - 2 %), Unidentified, Fine (0 - 2 mm), Soft segregations; Few (2 - 10 %), Gypseous, Medium (2 -6 mm), Concretions;

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- 1.57 - 1.65 m    Olive (5Y5/3-Moist); , 2.5Y56; Heavy clay; Very firm consistence; Few (2 - 10 %), Unidentified, ,  
Concretions; Few (2 - 10 %), Gypseous, , Concretions;
- 2.34 - 2.41 m    Dark yellowish brown (10YR4/6-Moist); , 5Y52; Sandy medium clay; Very firm consistence; Few  
(2 - 10 %), Unidentified, , Concretions; Very few (0 - 2 %), Calcareous, , Concretions;

**Morphological Notes**

**Observation Notes**

>244CM AUGER STOPPED BY GRAVELS:241-244CM <50% R 50MM LATERITE AND 50MMDOLERITE:

**Site Notes**

SORELL

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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 Cmol (+)/kg	Acidity		%
0 - 0.1	6.7A	0.113A	14.1H	23.6	1.2	1.3	4.2H 8.6E	48.8B	
0.1 - 0.2	7.4A	0.113A	13.7H	13.7	1	2	5.8E	48.2B	
0.2 - 0.3	7.8A	0.158A	12.5H	12.5	1	3.4	4.1E	49B	
0.3 - 0.46	8A	0.33A	8.4H	22.6	0.61	4.2	2.7E	38.5B	
0.46 - 0.61	7.8A	0.631A							
0.61 - 0.76	8A	0.929A	9.8H	21.4	0.49	5	1.8E	38.5B	
0.76 - 0.89	8.1A	0.813A							
0.89 - 1.02	8.5A	0.786A	6.3H	16.6	0.52	4.1		27.5B	
1.09 - 1.27	8.8A	0.952A							
1.57 - 1.65	8.9A	1A							
2.34 - 2.41	8.6A	0.455A							

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**Laboratory Analyses Completed for this profile**

15E1_CA	Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) by compulsive exchange, no pretreatment for soluble
15E1_K	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts
15E1_MG	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts
15E1_NA	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts
15G_C_H1	Exchangeable hydrogen - meq per 100g of soil - Hydrogen By back titration of A or B
15G1_H	Hydrogen Cation - meq per 100g of soil - 1M KCl Exch. Acidity By titration to pH 8.0
15J_H	Sum of Ex. cations + Ex. acidity - Sum of basic exch. cations and exch. (Hydrogen)
2_LOI	Loss on Ignition (%)
2A1	Air-dry moisture content
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
6A1_UC	Organic carbon (%) - Uncorrected Walkley and Black method
7A2	Total nitrogen - semimicro Kjeldahl , automated colour
9A_HCL	Total element - P(%) - By boiling HCl
P10_GRAV	Gravel (%)
P10A1_C	Clay (%) - Pipette
P10A1_CS	Coarse sand (%) - Pipette
P10A1_FS	Fine sand (%) - Pipette
P10A1_Z	Silt (%) - Pipette