Project Name: DD

Project Code: DD Site ID: B173 Observation ID: 1

Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: G.G. Beckmann Locality:

Date Desc.: Elevation: 06/08/52 30 metres Map Ref.: Sheet No.: 9142 1:100000 Rainfall: 690 Northing/Long.: 151.419166666667 Runoff: Verv slow Easting/Lat.: -27.580555555556 Drainage: Poorly drained

**Geology** 

ExposureType: Soil pit Conf. Sub. is Parent. Mat.: No Data

Geol. Ref.: No Data Substrate Material: Auger boring, 2 m deep, Porous,

Unconsolidated material (unidentified)

**Land Form** 

Rel/Slope Class:No DataPattern Type:Alluvial plainMorph. Type:No DataRelief:No DataElem. Type:PlainSlope Category:No DataSlope:0 %Aspect:No Data

Surface Soil Condition (dry): Self-mulching

**Erosion:** 

**Soil Classification** 

Australian Soil Classification:Mapping Unit:N/AEpicalcareous-Endohypersodic Self-Mulching Black VertosolPrincipal Profile Form:Ug5.16

ASC Confidence: Great Soil Group: Black earth

All necessary analytical data are available. **Site Disturbance:** Cultivation. Rainfed

Vegetation:

Surface Coarse Fragments: No surface coarse fragments

**Profile Morphology** 

0 - 0.04 m Very dark grey (10YR3/1-Dry); ; Heavy clay; Strong grade of structure, 5-10 mm, Granular; Dry; Weak consistence: Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.3 (pH meter); Clear change to -B2 Very dark grey (10YR3/1-Moist); ; Heavy clay; Moderate grade of structure, 20-50 mm, Angular 0.04 - 0.25 m blocky; Moist; Moderately plastic; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.7 (pH meter); Abundant, fine (1-2mm) roots; Gradual change to -Very dark grey (10YR3/1-Moist); ; Heavy clay; Moderate grade of structure, 20-50 mm, Angular B2 0.25 - 0.48 m blocky; Moist; Moderately plastic; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.9 (pH meter); Abundant, fine (1-2mm) roots; Gradual change to -Very dark grey (10YR3/1-Moist); ; Heavy clay; Moderate grade of structure, Lenticular; Moist; B2 0.51 - 0.86 m Firm consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 9 (pH meter); Common, fine (1-2mm) roots; Diffuse change to B3 0.91 - 1.32 m Greyish brown (10YR5/2-Moist); , 2.5Y64; Heavy clay; Moderate grade of structure, Lenticular; Moist; Firm consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Very few (0 - 2 %), Gypseous, , Crystals; Field pH 8.8 (pH meter); Few, fine (1-2mm) roots; Diffuse change to -ВЗ Greyish brown (10YR5/2-Moist); , 2.5Y64; Heavy clay; Weak grade of structure, Lenticular; 1.32 - 1.83 m Moist; Weak consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Few (2

- 10 %), Gypseous, , Crystals; Field pH 8.3 (pH meter);

**Morphological Notes** 

**Observation Notes** 

WATER LOGGED FOR UP TO ONE WEEK DURING HEAVY WET SEASONS

Site Notes

DARLING DOWNS

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## **Laboratory Test Results:**

| Depth   | рН           | 1:5 EC           |          | hangeable<br>Mg | Cations<br>K | E<br>Na     | xchangeable<br>Acidity | CEC                     |         | ECEC  | I        | ESP |
|---|--------------|------------------|----------|-----------------|--------------|-------------|------------------------|-------------------------|---------|-------|----------|-----|
| m   |              | dS/m             | Ca       | IVIG            | ĸ            | Cmol (+)/kg |                        |                         |         |       |          | %   |
| 0 - 0.04  | 8.3H         | 0.037B           |          | 00.0            | 4.5          | 0.5         |                        |                         |         | 74 45 |          |     |
| 0.04 - 0.25<br>0.25 - 0.48  | 8.7H<br>8.9H | 0.075B<br>0.118B | 38.1K    | 28.3            | 1.5          | 3.5         |                        |                         |         | 71.4E |          |     |
| 0.51 - 0.86   | 9H           |                  | 25.6K    | 34.6            | 1.4          | 9.6         |                        |                         |         | 71.6E |          |     |
| 0.91 - 1.32   | 8.8H         | 0.386B           |          |                 |              |             |                        |                         |         |       |          |     |
| 1.32 - 1.83   | 8.3H         | 0.854B           |          |                 |              |             |                        |                         |         |       |          |     |
| Depth   | CaCO3        | Organic          | Avail.   | Total           | Total        | Total       | Bulk                   | Pa                      | article | Size  | Analysis | 5   |
|   |              | C                | Р        | Р               | N            | K           | Density                | G۷                      | cs      | FS    | Silt     |     |
| m   | %            | %                | mg/kg    | %               | %            | %           | Mg/m3                  |                         |         | %     |          |     |
| 0 - 0.04  | 0.1360       | 1.37E            |          | 0.027F          | 0.09         | 99B         | 1.00                   |                         | 2C      | 10    | 11       | 75  |
| 0.04 - 0.25   | 0.7520       | -                | 29C      | 0.023F          |              |             | 1.00                   |                         | <1C     | -     |          | 71  |
| 0.25 - 0.48   |              |                  |          |                 |              |             | 1.10                   |                         |         |       |          |     |
| 0.51 - 0.86   | 2C           |                  |          | 0.022F          | 0.05         | 51B         |                        | 6                       | 2C      | 9     | 10       | 76  |
| 0.91 - 1.32   |              |                  |          |                 |              |             |                        |                         |         | _     |          |     |
| 1.32 - 1.83   | 1.72C        |                  |          |                 |              |             |                        |                         | <1C     | 7     | 11       | 77  |
| Depth   | COLE         |                  | Grav     | /imetric/Vo     | lumetric V   | later Cont  | ents                   |                         | Кs      | at    | K unsa   | t   |
|   |              | Sat.             | 0.05 Bar | 0.1 Bar         | 0.5 Bar      | 1 Bar       |                        | 5 Bar                   |         |       |          | -   |
| m   |              |                  |          | g/g             | j - m3/m3    | 3           |                        |                         | mm      | /h    | mm/h     |     |
| 0 - 0.04<br>0.04 - 0.25<br>0.25 - 0.48<br>0.51 - 0.86<br>0.91 - 1.32<br>1.32 - 1.83 |              |                  |          |                 |              |             | C                      | ).43C<br>).45C<br>).45C |         |       |          |     |

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## **Laboratory Analyses Completed for this profile**

15\_NR Sum of Ex. cations + Ex. acidity - Not recorded

15\_NR\_CAExch. basic cations (Ca++) - meq per 100g of soil - Not recorded15\_NR\_KExch. basic cations (K++) - meq per 100g of soil - Not recorded15\_NR\_MGExch. basic cations (Mg++) - meq per 100g of soil - Not recorded15\_NR\_NAExch. basic cations (Na++) - meq per 100g of soil - Not recorded

19B\_NR Calcium Carbonate (CaCO3) - 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 recordede

6Z Organic carbon (%) - Not recorded
7\_NR Total nitrogen (%) - Not recorded
9\_NR Available P (mg/kg) - Not recorded
9A\_NR Total element - P(%) - Not recorded

P10\_GRAV Gravel (%)

P10\_NR\_C Clay (%) - Not recorded

P10\_NR\_CS
P10\_NR\_FS
P10\_NR\_FS
P10\_NR\_Z
P3A\_NR
Coarse sand (%) - Not recorded
Fine sand (%) - Not recorded
Silt (%) - Not recorded
Bulk density - Not recorded

P3B\_VL\_15 15 BAR Moisture m3/m3 - Volumetric using pressure plate