

**Project Name:** RR  
**Project Code:** RR      **Site ID:** B291      **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

**Site Information**

|                        |                           |                   |                         |
|------------------------|---------------------------|-------------------|-------------------------|
| <b>Desc. By:</b>       | G.D. Hubble               | <b>Locality:</b>  |                         |
| <b>Date Desc.:</b>     | 14/10/56                  | <b>Elevation:</b> | 366 metres              |
| <b>Map Ref.:</b>       | Sheet No. : 8159 1:100000 | <b>Rainfall:</b>  | 1092                    |
| <b>Northing/Long.:</b> | 146.458055555556          | <b>Runoff:</b>    | Moderately rapid        |
| <b>Easting/Lat.:</b>   | -19.35                    | <b>Drainage:</b>  | Moderately well drained |

**Geology**

|                      |          |                                    |  |
|----------------------|----------|------------------------------------|--|
| <b>ExposureType:</b> | Soil pit | <b>Conf. Sub. is Parent. Mat.:</b> | No Data                                |
| <b>Geol. Ref.:</b>   | Cpg      | <b>Substrate Material:</b>         | Auger boring, 1.3 m deep, Granodiorite |

**Land Form**

|                         |                              |                        |           |
|-------------------------|------------------------------|------------------------|-----------|
| <b>Rel/Slope Class:</b> | Undulating rises 9-30m 3-10% | <b>Pattern Type:</b>   | Rises     |
| <b>Morph. Type:</b>     | Crest                        | <b>Relief:</b>         | 30 metres |
| <b>Elem. Type:</b>      | Hillslope                    | <b>Slope Category:</b> | No Data   |
| <b>Slope:</b>           | 8 %                          | <b>Aspect:</b>         | No Data   |

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

**Erosion:**

**Soil Classification**

|   |  |                                |                   |
|---|--|--------------------------------|-------------------|
| <b>Australian Soil Classification:</b>      |  | <b>Mapping Unit:</b>           | N/A               |
| Bleached-Mottled Eutrophic Yellow Chromosol |  | <b>Principal Profile Form:</b> | Dy3.42            |
| <b>ASC Confidence:</b>                      |  | <b>Great Soil Group:</b>       | No suitable group |

All necessary analytical data are available.

**Site Disturbance:** No effective disturbance other than grazing by hoofed animals

**Vegetation:** Low Strata - Tussock grass, , . \*Species includes - Dichanthium sericeum

Tall Strata - Tree, 12.01-20m, Sparse. \*Species includes - Eucalyptus crebra, Eucalyptus polycarpa

**Surface Coarse Fragments:** 2-10%, bouldery, 600mm-2m, , Granodiorite

**Profile Morphology**

|     |               |  |
|-----|---------------|--|
| A1  | 0 - 0.14 m    | Very dark brown (10YR2/2-Moist); ; Loamy coarse sand; Massive grade of structure; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Moist; Very weak consistence; Field pH 6.3 (pH meter); Many, fine (1-2mm) roots; Gradual change to -  |
| A2  | 0.14 - 0.25 m | Light yellowish brown (10YR6/4-Moist); ; Loamy coarse sand; Massive grade of structure; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Moist; Very weak consistence; 2-10%, fine gravelly, 2-6mm, Quartz, coarse fragments; Field pH 6.2 (pH meter); Many, fine (1-2mm) roots; Clear change to -   |
| B2  | 0.27 - 0.39 m | Brownish yellow (10YR6/6-Moist); , 7.5YR56; Medium clay; Strong grade of structure, 50-100 mm, Prismatic; Moderate grade of structure, 20-50 mm, Angular blocky; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moist; Firm consistence; 2-10%, fine gravelly, 2-6mm, Quartz, coarse fragments; Field pH 6.2 (pH meter); Common, fine (1-2mm) roots; Gradual change to - |
| B2  | 0.39 - 0.53 m | Brownish yellow (10YR6/6-Moist); , 7.5YR56; Medium clay; Moderate grade of structure, 50-100 mm, Prismatic; Moderate grade of structure, 20-50 mm, Angular blocky; Moist; Firm consistence; 10-20%, fine gravelly, 2-6mm, Quartz, coarse fragments; Field pH 6.3 (pH meter); Few, fine (1-2mm) roots; Gradual change to -  |
| B3C | 0.61 - 0.91 m | Strong brown (7.5YR5/8-Moist); , 2.5Y58; Clay loam, coarse sandy; Massive grade of structure; Moist; Weak consistence; 2-10%, fine gravelly, 2-6mm, Quartz, coarse fragments; Field pH 6.6 (pH meter); Diffuse change to -   |
| B3C | 0.91 - 1.17 m | Strong brown (7.5YR5/8-Moist); , 2.5Y58; Clay loam, coarse sandy; Massive grade of structure; Moist; Weak consistence; 10-20%, fine gravelly, 2-6mm, Quartz, coarse fragments; Field pH 7.3 (pH meter); Diffuse change to -  |
| C   | 1.37 - 1.83 m | White (10YR8/1-Moist); , 2.5Y56; , 7.5YR54; Loamy coarse sand; Massive grade of structure; Moist; Weak consistence; 10-20%, fine gravelly, 2-6mm, Quartz, coarse fragments; Field pH 7.1 (pH meter); Diffuse change to -   |
| C   | 2.13 - 2.59 m | White (10YR8/1-Moist); , 2.5Y56; , 2.5Y52; Loamy coarse sand; Massive grade of structure; Moist; Weak consistence; 20-50%, fine gravelly, 2-6mm, Quartz, coarse fragments; Field pH 7.3 (pH meter);  |
| C   | 2.59 - 3.05 m | ;  |

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C      3.51 - 3.86 m      ;

R      - m      Rock

**Morphological Notes**

R      Rock sample taken adjacent to profile

**Observation Notes**

TENDING RED BROWN EARTH NORTHERN SUB GROUP, YELLOW BROWN SUBSOIL

**Site Notes**

HARVEY RANGE

**Observation ID: 1**

**Laboratory Test Results:**

| Depth       | pH   | 1:5 EC | Exchangeable Cations |      |      |             | CEC                  | ECEC | ESP |
|-------------|------|--------|----------------------|------|------|-------------|----------------------|------|-----|
| m           |      | dS/m   | Ca                   | Mg   | K    | Na          | Exchangeable Acidity |      | %   |
|             |      |        |                      |      |      | Cmol (+)/kg |                      |      |     |
| 0 - 0.14    | 6.3H | 0.01B  | 1.55K                | 0.64 | 0.15 | 0.05        | 1.7D                 |      |     |
| 0.14 - 0.25 | 6.2H | 0.01B  |                      |      |      |             |                      |      |     |
| 0.27 - 0.39 | 6.2H | 0.01B  | 4.38K                | 2.47 | 0.28 | 0.09        | 2.7D                 |      |     |
| 0.39 - 0.53 | 6.3H | 0.01B  |                      |      |      |             |                      |      |     |
| 0.61 - 0.91 | 6.6H | 0.01B  |                      |      |      |             |                      |      |     |
| 0.91 - 1.17 | 7.3H | 0.02B  |                      |      |      |             |                      |      |     |
| 1.37 - 1.83 | 7.1H | 0.01B  |                      |      |      |             |                      |      |     |
| 2.13 - 2.59 | 7.3H | 0.01B  |                      |      |      |             |                      |      |     |
| 2.59 - 3.05 | 7.3H | 0.01B  |                      |      |      |             |                      |      |     |
| 3.51 - 3.86 | 7.2H | 0.01B  |                      |      |      |             |                      |      |     |

| Depth       | CaCO3 | Organic | Avail. | Total  | Total | Total | Bulk  | Particle |     | Size | Analysis |      |
|-------------|-------|---------|--------|--------|-------|-------|-------|----------|-----|------|----------|------|
|             | %     | C       | P      | P      | N     | K     |       | Density  | GV  | CS   | FS       | Silt |
| m           |       | %       | mg/kg  | %      | %     | %     | Mg/m3 |          |     | %    |          |      |
| 0 - 0.14    |       | 0.69A   | 4C     | 0.016F | 0.04B |       |       | 0        | 50C | 35   | 8        | 3    |
| 0.14 - 0.25 |       | 0.25A   |        |        |       |       |       | 9        | 43C | 38   | 9        | 11   |
| 0.27 - 0.39 |       | 0.26A   |        | 0.025F | 0.03B |       |       | 9        | 32C | 24   | 10       | 36   |
| 0.39 - 0.53 |       |         |        |        |       |       |       | 11       | 32C | 21   | 12       | 34   |
| 0.61 - 0.91 |       |         |        |        |       |       |       |          |     |      |          |      |
| 0.91 - 1.17 |       |         |        |        |       |       |       | 11       | 40C | 26   | 8        | 25   |
| 1.37 - 1.83 |       |         |        |        |       |       |       |          |     |      |          |      |
| 2.13 - 2.59 |       |         |        |        |       |       |       | 27       | 63C | 27   | 5        | 6    |
| 2.59 - 3.05 |       |         |        |        |       |       |       | 32       |     |      |          |      |
| 3.51 - 3.86 |       |         |        |        |       |       |       | 37.5     |     |      |          |      |

[illegible]

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**Laboratory Analyses Completed for this profile**

|           |  |
|-----------|--|
| 15_NR_CA  | Exch. basic cations (Ca++) - meq per 100g of soil - Not recorded |
| 15_NR_H   | Hydrogen Cation - meq per 100g of soil - Not recorded            |
| 15_NR_K   | Exch. basic cations (K++) - meq per 100g of soil - Not recorded  |
| 15_NR_MG  | Exch. basic cations (Mg++) - meq per 100g of soil - Not recorded |
| 15_NR_NA  | Exch. basic cations (Na++) - meq per 100g of soil - Not recorded |
| 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 recorded                    |
| 6A1       | Organic carbon - Walkley and Black                               |
| 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 | Coarse sand (%) - Not recorded                                   |
| P10_NR_FS | Fine sand (%) - Not recorded                                     |
| P10_NR_Z  | Silt (%) - Not recorded  |