

**Project Name:** Regional  
**Project Code:** REG      **Site ID:** T431      **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

**Site Information**

<b>Desc. By:</b>	M.G. Cannon	<b>Locality:</b>	100M south east of T430 Fan Palm Forest:
<b>Date Desc.:</b>	23/09/85	<b>Elevation:</b>	No Data
<b>Map Ref.:</b>	Sheet No. : 8062    1:100000	<b>Rainfall:</b>	3000
<b>Northing/Long.:</b>	145.780555555556	<b>Runoff:</b>	No runoff
<b>Easting/Lat.:</b>	-17.963888888889	<b>Drainage:</b>	Very poorly drained

**Geology**

<b>ExposureType:</b>	Undisturbed soil core	<b>Conf. Sub. is Parent. Mat.:</b>	No Data
<b>Geol. Ref.:</b>	Qa	<b>Substrate Material:</b>	Unconsolidated material (unidentified)

**Land Form**

<b>Rel/Slope Class:</b>	Level plain <9m <1%	<b>Pattern Type:</b>	Alluvial plain
<b>Morph. Type:</b>	Closed Depression	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Swamp	<b>Slope Category:</b>	Level
<b>Slope:</b>	<1 %	<b>Aspect:</b>	No Data

**Surface Soil Condition (dry):** Self-mulching, Soft

**Erosion:**

**Soil Classification**

<b>Australian Soil Classification:</b>		<b>Mapping Unit:</b>	N/A
Mesotrophic Dermosolic Redoxic Hydrosol		<b>Principal Profile Form:</b>	Gn3.90
<b>ASC Confidence:</b>		<b>Great Soil Group:</b>	No suitable group
All necessary analytical data are available.			

**Site Disturbance:** Limited clearing, for example selective logging

**Vegetation:**

Tall Strata - Tree, 6.01-12m, Mid-dense. \*Species includes - None Recorded

**Surface Coarse Fragments:**

**Profile Morphology**

A1f	0 - 0.1 m	Brown (10YR4/3-Moist); Pale brown (10YR6/3-Dry); , 10YR32, 2-10% , 0-5mm, Faint; , 2-10% , 0-5mm, Faint; Silty clay loam; Strong grade of structure, 2-5 mm, Cast; Strong grade of structure, <2 mm, Granular; Smooth-ped fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; Common, fine (1-2mm) roots; Diffuse, Wavy change to -
A12	0.1 - 0.2 m	Dark greyish brown (10YR4/2-Moist); , 10YR32, 2-10% , 0-5mm, Faint; , 2-10% , 0-5mm, Faint; Silty clay loam; Strong grade of structure, 2-5 mm, Cast; Strong grade of structure, <2 mm, Granular; Smooth-ped fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; Common, fine (1-2mm) roots; Diffuse, Wavy change to -
A3	0.2 - 0.3 m	Dark greyish brown (10YR4/2-Moist); , 10YR32, 2-10% , 0-5mm, Faint; , 2-10% , 0-5mm, Faint; Sandy light clay; Strong grade of structure, 2-5 mm, Cast; Strong grade of structure, <2 mm, Granular; Smooth-ped fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; Few, very fine (0-1mm) roots; Diffuse, Wavy change to -
B1	0.3 - 0.55 m	Dark greyish brown (10YR4/2-Moist); , 10YR56, 2-10% , 5-15mm, Distinct; , 2-10% , 5-15mm, Distinct; Sandy medium clay; Strong grade of structure, 20-50 mm, Prismatic; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Moist; Firm consistence; Few, very fine (0-1mm) roots; Gradual, Irregular change to -
B2	0.55 - 0.85 m	Light grey (10YR7/2-Moist); , 10YR68, 2-10% , 5-15mm, Distinct; , 2-10% , 5-15mm, Distinct; Sandy medium clay; Strong grade of structure, 20-50 mm, Prismatic; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Moist; Firm consistence; Few, very fine (0-1mm) roots;
	0.85 - 1.15 m	Light grey (10YR7/2-Moist); , 10YR68, 2-10% , 5-15mm, Distinct; , 2-10% , 5-15mm, Distinct; Sandy medium clay; Strong grade of structure, 20-50 mm, Prismatic; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Firm consistence; Few, very fine (0-1mm) roots;
	1.15 - 1.45 m	Light grey (10YR7/2-Moist); , 10YR68, 2-10% , 5-15mm, Distinct; , 2-10% , 5-15mm, Distinct; Sandy medium clay; Strong grade of structure, 20-50 mm, Prismatic; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Firm consistence; Few, very fine (0-1mm) roots;

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1.45 - 1.75 m	Light grey (10YR7/2-Moist); , 10YR68, 10-20% , 5-15mm, Prominent; , 10-20% , 5-15mm, Prominent; Sandy medium clay; Strong grade of structure, 20-50 mm, Prismatic; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Firm consistence; Few, very fine (0-1mm) roots; Gradual, Wavy change to -
B2      1.75 - 1.9 m	Light grey (10YR7/2-Moist); , 10YR58, 10-20% , 5-15mm, Prominent; , 10-20% , 5-15mm, Prominent; Sandy medium clay; Strong grade of structure, 20-50 mm, Prismatic; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Moist; Firm consistence; Common (10 - 20 %), Manganiferous, Coarse (6 - 20 mm), Soft segregations; Few, very fine (0-1mm) roots;

**Morphological Notes**

**Observation Notes**

**Site Notes**

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**Laboratory Test Results:**

Depth m	pH	1:5 EC dS/m	Ca	Exchangeable Mg	Cations K	Na Cmol (+)/kg	Exchangeable Acidity	CEC	ECEC	ESP %
0 - 0.1	5.08A	0.128A	3.24H	1.98	0.84	0.22	1.44F	5A 19C	7.7F	4.40 1.16
0.1 - 0.2	4.9A	0.06A								
0.2 - 0.3	5.24A	0.023A	<0.02H	0.61	0.06	0.19	4.78F	4.2A 13C	5.7F	4.52 1.46
0.3 - 0.55	5.24A	0.028A								
0.55 - 0.85	5.29A	0.035A	0.28H	1.39	0.05	0.32	1.8F	2.5A 9C	3.8F	12.80 3.56
0.85 - 1.15	5.45A	0.029A								
1.15 - 1.45	5.65A	0.039A								
1.45 - 1.75	5.7A	0.03A	0.81H	2.33	0.07	0.6	1.43F	2.2A 8C	5.2F	27.27 7.50
1.75 - 1.9	5.95A	0.028A								

Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk	Particle		Size	Analysis	
m	%	C %	P mg/kg	P %	N %	K %	Density Mg/m3	GV	CS	FS %	Silt	Clay
0 - 0.1		5.14C	70A 80B	0.087A	0.3A	2.3A		0	8D	15	48	30
0.1 - 0.2								0	5D	13	41	41
0.2 - 0.3		1.45C	7A 15B	0.044A	0.08A	1.88A		0	2D	14	39	45
0.3 - 0.55								0	1D	12	39	48
0.55 - 0.85		0.47C	2A 6B	0.013A		1.4A		0	1D	10	43	47
0.85 - 1.15								0	0D	9	43	48
1.15 - 1.45								0	0D	11	47	42
1.45 - 1.75		0.27C	6A 7B	0.018A		1.86A		0	0D	14	48	38
1.75 - 1.9								0	1D	16	48	35

[illegible]

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**Laboratory Analyses Completed for this profile**

10A1	Total sulfur - X-ray fluorescence
12_HF_CU	Total element - Cu(mg/kg) - HF/HClO <sub>4</sub> Digest
12_HF_FE	Total element - Fe(%) - HF/HClO <sub>4</sub> Digest
12_HF_MN	Total element - Mn(mg/kg) - HF/HClO <sub>4</sub> Digest
12_HF_ZN	Total element - Zn(mg/kg) - HF/HClO <sub>4</sub> Digest
13C1_AL	Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon
13C1_FE	Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon
15A2_CEC	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15D1_CEC	CEC - 1M ammonium acetate at pH 7.0, pretreatment for soluble salts; manual leach
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	Exchange acidity (hydrogen and aluminium) - meq per 100g of soil - By 1M KCl exch. acidity by titration to pH 8.4
15J1	Effective CEC
17A1	Total potassium - X-ray fluorescence
2A1	Air-dry moisture content
3A1	EC of 1:5 soil/water extract
4A1	pH of 1:5 soil/water suspension
6B3	Total organic carbon - high frequency induction furnace, infrared
7A2	Total nitrogen - semimicro Kjeldahl , automated colour
9A1	Total phosphorus - X-ray fluorescence
9B_9C	Available P (mg/kg) - Bicarbonate P - 0.5M NaHCO <sub>3</sub> extractable
9G_BSES	Available P (mg/kg) - Acid P - 0.005M H <sub>2</sub> SO <sub>4</sub> (BSES)
9H1	Phosphate retention
P10_GRAV	Gravel (%)
P10_PB_C	Clay (%) - Plummet balance
P10_PB_CS	Coarse sand (%) - Plummet balance
P10_PB_FS	Fine sand (%) - Plummet balance
P10_PB_Z	Silt (%) - Plummet balance