

Project Name: GYC **Site ID:** B568 **Observation ID:** 1
Project Code: GYC **Agency Name:** CSIRO Division of Soils (QLD)

Site Information

Desc. By:	C.H. Thompson	Locality:	
Date Desc.:	26/10/66	Elevation:	61 metres
Map Ref.:	Sheet No. : 9445 1:100000	Rainfall:	1615
Northing/Long.:	152.85	Runoff:	Very rapid
Easting/Lat.:	-26.25	Drainage:	Well drained

Geology

Exposure Type:	Soil pit	Conf. Sub. is Parent. Mat.:	No Data
Geol. Ref.:	Qa	Substrate Material:	Auger boring, 3.6 m deep, Unconsolidated material (unidentified)

Land Form

Rel/Slope Class:	Undulating low hills 30-90m 3-10%	Pattern Type:	Hills
Morph. Type:	Lower-slope	Relief:	No Data
Elem. Type:	Hillslope	Slope Category:	No Data
Slope:	0 %	Aspect:	No Data

Surface Soil Condition (dry):

Erosion:

Soil Classification

Australian Soil Classification:		Mapping Unit:	N/A
Epiacidic Epipedal Red Vertisol		Principal Profile Form:	Gn3.54
ASC Confidence:	All necessary analytical data are available.	Great Soil Group:	Xanthozem

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

Vegetation:

Tall Strata - Sod grass, <0.25m, Closed or dense. *Species includes - *Pennisetum clandestinum*, *Imperata cylindrica*

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A1	0 - 0.05 m	Brown (10YR4/3-Moist); ; Clay loam (Light); Strong grade of structure, <2 mm, Granular; Many (>5 per 100mm ²) macropores, Moist; Very weak consistence; 0-2%, medium gravelly, 6-20mm, Quartz, coarse fragments; Field pH 6.1 (pH meter); Abundant, fine (1-2mm) roots;
A1	0.05 - 0.1 m	Brown (10YR4/3-Moist); ; Clay loam; Strong grade of structure, 5-10 mm, Subangular blocky; Many (>5 per 100mm ²) macropores, Moist; Very weak consistence; 0-2%, medium gravelly, 6-20mm, Phyllite, coarse fragments; Field pH 5.9 (pH meter); Abundant, fine (1-2mm) roots; Clear change to -
A2	0.1 - 0.2 m	Strong brown (7.5YR5/6-Moist); ; Clay loam; Moderate grade of structure, 20-50 mm, Angular blocky; Moist; Very weak consistence; 0-2%, medium gravelly, 6-20mm, Quartz, coarse fragments; Field pH 5.7 (pH meter); Many, fine (1-2mm) roots; Gradual change to -
B1	0.2 - 0.3 m	Yellowish red (5YR5/6-Moist); ; Light clay; 2-5 mm, Polyhedral; Strong grade of structure, 20-50 mm, Angular blocky; Moist; Weak consistence; 0-2%, medium gravelly, 6-20mm, Quartz, coarse fragments; Very few (0 - 2 %), Manganiferous, , Nodules; Field pH 5 (pH meter); Common, fine (1-2mm) roots;
B1	0.3 - 0.45 m	Yellowish red (5YR5/6-Moist); ; Light medium clay; Strong grade of structure, Polyhedral; Strong grade of structure, 20-50 mm, Angular blocky; Moist; Weak consistence; 0-2%, medium gravelly, 6-20mm, Phyllite, coarse fragments; Very few (0 - 2 %), Manganiferous, , Nodules; Field pH 4.9 (pH meter); Common, fine (1-2mm) roots; Diffuse change to -
B21	0.45 - 0.6 m	Yellowish red (5YR4/6-Moist); , 10YR68, 10-20% , 0-5mm, Faint; , 2.5YR46, 10-20% , 0-5mm, Faint; Medium clay; Strong grade of structure, 2-5 mm, Polyhedral; Moist; Weak consistence; 0-2%, medium gravelly, 6-20mm, Quartz, coarse fragments; Very few (0 - 2 %), Manganiferous, , Nodules; Field pH 4.8 (pH meter); Few, fine (1-2mm) roots;
B21	0.6 - 0.9 m	Yellowish red (5YR4/6-Moist); , 10YR68, 10-20% , 0-5mm, Faint; , 2.5YR46, 10-20% , 0-5mm, Faint; Medium clay; Strong grade of structure, 2-5 mm, Polyhedral; Moist; Weak consistence; 0-2%, medium gravelly, 6-20mm, Quartz, coarse fragments; Very few (0 - 2 %), Manganiferous, , Nodules; Field pH 4.8 (pH meter); Few, fine (1-2mm) roots; Diffuse change to -

Project Name: GYC **Site ID:** B568 **Observation ID:** 1
Project Code: GYC **Agency Name:** CSIRO Division of Soils (QLD)

B22	0.9 - 1.2 m	Red (2.5YR4/6-Moist); , 10YR78, 10-20% , 5-15mm, Distinct; , 5YR58, 10-20% , 5-15mm, Distinct; Medium heavy clay; Strong grade of structure, 2-5 mm, Polyhedral; Moist; Firm consistence; 0-2%, medium gravelly, 6-20mm, Quartz, coarse fragments; Field pH 4.7 (pH meter);
B22	1.2 - 1.5 m	Red (2.5YR4/6-Moist); , 10YR78, 10-20% , 5-15mm, Distinct; , 5YR58, 10-20% , 5-15mm, Distinct; Medium heavy clay; Strong grade of structure, 2-5 mm, Polyhedral; Moist; Firm consistence; 0-2%, medium gravelly, 6-20mm, Quartz, coarse fragments; Field pH 4.7 (pH meter);
B22	1.5 - 1.8 m	Red (2.5YR4/6-Moist); , 10YR78, 20-50% , 5-15mm, Distinct; , 5YR58, 20-50% , 5-15mm, Distinct; Medium heavy clay; Strong grade of structure, 2-5 mm, Polyhedral; Moist; Firm consistence; 0-2%, medium gravelly, 6-20mm, Quartz, coarse fragments; Field pH 4.7 (pH meter);
B22	1.8 - 2.1 m	Red (2.5YR4/6-Moist); , 10YR78, 20-50% , 5-15mm, Distinct; , 5YR58, 20-50% , 5-15mm, Distinct; Medium heavy clay; Strong grade of structure, 2-5 mm, Polyhedral; Moist; Firm consistence; 0-2%, Quartz, coarse fragments;
B22	2.1 - 2.4 m	Red (2.5YR4/6-Moist); , 10YR78, 20-50% , 5-15mm, Distinct; , 5YR58, 20-50% , 5-15mm, Distinct; Medium heavy clay; Strong grade of structure, 2-5 mm, Polyhedral; Moist; Firm consistence; 0-2%, Quartz, coarse fragments; Diffuse change to -
B3	2.4 - 2.7 m	Red (10R4/6-Moist); , 5YR58, 20-50% , 15-30mm, Prominent; , 10YR78, 20-50% , 15-30mm, Prominent; Medium clay; Moderate grade of structure, 5-10 mm, Polyhedral; Moist; Firm consistence; 0-2%, Quartz, coarse fragments;
B3	2.7 - 3 m	Red (10R4/6-Moist); , 5YR58, 20-50% , 15-30mm, Prominent; Medium clay; Moderate grade of structure, 5-10 mm, Polyhedral; Moist; Firm consistence; 0-2%, Quartz, coarse fragments;
B3	3 - 3.3 m	Red (10R4/6-Moist); , 5YR58, 20-50% , 15-30mm, Prominent; Medium clay; Moderate grade of structure, 5-10 mm, Polyhedral; Moist; Firm consistence; 0-2%, Quartz, coarse fragments;
B3	3.3 - 3.6 m	Red (10R4/6-Moist); , 5YR58, 20-50% , 15-30mm, Prominent; , 10YR78, 20-50% , 15-30mm, Prominent; Medium clay; Moderate grade of structure, 5-10 mm, Polyhedral; Moist; Firm consistence; 0-2%, Quartz, coarse fragments; Diffuse change to -
D	3.6 - 3.9 m	Red (10R4/8-Moist); , 2.5Y71, 20-50% , 15-30mm, Prominent; , 10YR78, 20-50% , 15-30mm, Prominent; Light medium clay; Weak grade of structure, 5-10 mm, Angular blocky; Moist; Firm consistence; 0-2%, Quartz, coarse fragments;
D	3.9 - 4.2 m	Red (10R4/8-Moist); , 2.5Y71, 20-50% , 15-30mm, Prominent; Light medium clay; Weak grade of structure, 5-10 mm, Angular blocky; Moist; Firm consistence; 10-20%, Phyllite, coarse fragments; Diffuse change to -
D	4.2 - 4.5 m	Red (10R4/8-Moist); , 10R36, 20-50% , 30-mm, Prominent; , 2.5Y71, 20-50% , 30-mm, Prominent; Light medium clay; Weak grade of structure, Angular blocky; Moist; Firm consistence; 10-20%, Phyllite, coarse fragments;
D	4.5 - 4.8 m	Red (10R4/8-Moist); , 10R36, 20-50% , 30-mm, Prominent; , 2.5Y71, 20-50% , 30-mm, Prominent; Light medium clay; Weak grade of structure, Angular blocky; Moist; Firm consistence; 2-10%, Phyllite, coarse fragments;

Morphological Notes

Observation Notes

0-5CM POROUS GRANULAR STRUCTURE:PARENT MATERIAL COLLUVIUM - ALLUVIUM FROM PHYLLITE:3.6-4.8M PHYLLITE WEATHERED IN SITU:

Site Notes

KIN KIN

Project Name: GYC
Project Code: GYC **Site ID:** B568 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Laboratory Test Results:

Depth m	pH	1:5 EC dS/m	Exchangeable Cations			Na Cmol (+)/kg	Exchangeable Acidity	CEC	ECEC	ESP %
			Ca	Mg	K					
0 - 0.05	6.1A	0.141A	5.1B	2.6	1.8	0.6	5.8D			
0.05 - 0.1	5.9A	0.068A	3.3B	1.5	1.3	0.52	3.2D			
0.1 - 0.2	5.7A	0.049A	2.2B	1.5	0.67	0.16	2.6D			
0.2 - 0.3	5A	0.043A	0.63B	0.5	0.3	0.13	3.6D			
0.3 - 0.45	4.9A	0.038A	0.52B	0.57	0.18	0.2	4.5D			
0.45 - 0.6	4.8A	0.038A	0.36B	0.49	0.1	0.15	4.9D			
0.6 - 0.9	4.8A	0.038A								
0.9 - 1.2	4.7A	0.035A	0.05B	0.8	0.05	0.09	15.2D			
1.2 - 1.5	4.7A	0.035A								
1.5 - 1.8	4.7A	0.035A	0.05B	0.6	0.05	0.13	3.9D			
1.8 - 2.1	4.5A	0.041A								
2.1 - 2.4	4.6A	0.035A								
2.4 - 2.7	4.6A	0.035A								
2.7 - 3	4.6A	0.035A								
3 - 3.3	4.6A	0.032A								
3.3 - 3.6	4.6A	0.032A	0.11B	0.38	0.08	0.14	4.5D			
3.6 - 3.9	4.5A	0.032A								
3.9 - 4.2	4.6A	0.035A								
4.2 - 4.5	4.5A	0.037A								
4.5 - 4.8	4.6A	0.032A	0.02B	0.18	0.07	0.1	4.1D			
Depth m	CaCO ₃ %	Organic C %	Avail. P mg/kg	Total P %	Total N %	Total K %	Bulk Density Mg/m ³	Particle GV	Size CS	Analysis FS % Silt Clay
0 - 0.05		5.81A	20A 12B	0.08A	0.52B	1.1A	1.01		2C	18 32 38
0.05 - 0.1		2.96A	19A 8.2B	0.077A	0.34B	1.1A		4	6C	14 31 40
0.1 - 0.2		2.33A	3.9A 4.9B	0.057A	0.22B	1.2A	1.29		6C	12 35 45
0.2 - 0.3		0.99A		0.046A	0.13B	1.3A	1.41	3	4C	13 35 49
0.3 - 0.45		0.76A		0.043A	0.096B	1.3A		4	4C	11 24 51
0.45 - 0.6		0.58A		0.035A	0.071B	1.5A	1.46	2	7C	12 28 54
0.6 - 0.9										
0.9 - 1.2				0.033A	0.066B	1.9A	1.55	1	2C	8 26 62
1.2 - 1.5										
1.5 - 1.8				0.031A	0.053B	2A		1	1C	9 30 59
1.8 - 2.1										
2.1 - 2.4								2	1C	8 35 57
2.4 - 2.7								3	1C	8 39 55
2.7 - 3										
3 - 3.3										
3.3 - 3.6								2	2C	7 39 53
3.6 - 3.9										
3.9 - 4.2										
4.2 - 4.5								9	2C	8 44 47
4.5 - 4.8										
Depth m	COLE	Gravimetric/Volumetric Water Contents						K sat	K unsat	
		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar	15 Bar	mm/h	mm/h
					g/g -	m ³ /m ³				

Project Name: GYC **Project Code:** GYC **Site ID:** B568 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

0 - 0.05	0.41F	0.26H
0.05 - 0.1		
0.1 - 0.2	0.41F	0.25H
0.2 - 0.3	0.37F	0.26H
0.3 - 0.45		
0.45 - 0.6	0.39F	0.3H
0.6 - 0.9		
0.9 - 1.2	0.42F	0.36H
1.2 - 1.5		
1.5 - 1.8		
1.8 - 2.1		
2.1 - 2.4		
2.4 - 2.7		
2.7 - 3		
3 - 3.3		
3.3 - 3.6		
3.6 - 3.9		
3.9 - 4.2		
4.2 - 4.5		
4.5 - 4.8		

Project Name: GYC **Site ID:** B568 **Observation ID:** 1
Project Code: GYC **Agency Name:** CSIRO Division of Soils (QLD)

Laboratory Analyses Completed for this profile

10A1	Total sulfur - X-ray fluorescence
15_NR_H	Hydrogen Cation - meq per 100g of soil - Not recorded
15A2_CA	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,Na ⁺ ,K ⁺) - 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_K	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_MG	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_NA	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
17A1	Total potassium - X-ray fluorescence
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	Organic carbon - Walkley and Black
7_NR	Total nitrogen (%) - Not recorded
9A1	Total phosphorus - X-ray fluorescence
9B_9C	Available P (mg/kg) - Bicarbonate P - 0.5M NaHCO ₃ extractable
9G_BSES	Available P (mg/kg) - Acid P - 0.005M H ₂ SO ₄ (BSES)
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
P3A1	Bulk density - g/cm ³
P3B3VLe004	0.04 BAR Moisture m ³ /m ³ - Volumetric using undisturbed 60mm diameter and 34mm height core on suction plate
P3B3VLe01	0.1 BAR Moisture m ³ /m ³ - Volumetric using undisturbed 60mm diameter and 34mm height core on suction plate
P3B3VLe03	0.3 BAR Moisture m ³ /m ³ - Volumetric using undisturbed 60mm diameter and 34mm height core on suction plate
P3B3VLe06	0.6 BAR Moisture m ³ /m ³ - Volumetric using undisturbed 60mm diameter and 34mm height core on pressure plate
P3B3VLe15	15 BAR Moisture m ³ /m ³ - Volumetric using undisturbed 60mm diameter and 34mm height core on pressure plate
P3B3VLe2	2 BAR Moisture m ³ /m ³ - Volumetric using undisturbed 60mm diameter and 34mm height core on pressure plate
P3B3VLe7	7 BAR Moisture m ³ /m ³ - Volumetric using undisturbed 60mm diameter and 34mm height core on pressure plate