IDF **Project Name:** 

**Project Code:** Site ID: T468 Observation ID: 1 **IDF** 

**CSIRO Division of Soils (QLD) Agency Name:** 

**Site Information** 

Desc. By: M.G. Cannon Locality: TRIAL AREA 2 'SHELL PROJECT' INGHAM: SITE

No Data Date Desc.: 22/09/86 Elevation: Sheet No.: 8060 1:100000 Map Ref.: Rainfall: n Northing/Long.: 145.90555555556 Runoff: Slow Easting/Lat.: -18.6261111111111 Drainage: Well drained

Geology

ExposureType: Conf. Sub. is Parent. Mat.: No Data Undisturbed soil core Geol. Ref.: Qa **Substrate Material:** No Data

**Land Form** 

Pattern Type: Rel/Slope Class: Level plain <9m <1% Sheet-flood fan No Data Morph. Type: Flat Relief: Slope Category: Elem. Type: Fan Level Aspect: 90 degrees Slope: <1 %

Surface Soil Condition (dry): Hardsetting, Soft

**Erosion:** 

**Soil Classification** 

**Australian Soil Classification: Mapping Unit:** N/A Gn2.21 Haplic Mesotrophic Red Kandosol **Principal Profile Form: ASC Confidence: Great Soil Group:** Red earth

Analytical data are incomplete but reasonable confidence.

Site Disturbance: Complete clearing. Pasture, native or improved, but never cultivated

Vegetation:

### **Surface Coarse Fragments:**

Profile Morphology

Frome Morphology			
	Α	0 - 0.11 m	Dark brown (7.5YR3/2-Moist); ; Coarse sandy clay loam (Light); Weak grade of structure, 2-5 mm, Subangular blocky; Moist; Very weak consistence; Common, fine (1-2mm) roots; Clear, Wavy change to -
	AB	0.11 - 0.3 m	Reddish brown (5YR4/4-Moist); ; Clay loam, coarse sandy; Massive grade of structure; Moist; Very weak consistence; Few, fine (1-2mm) roots; Gradual change to -
	B21	0.3 - 0.56 m	Yellowish red (5YR5/6-Moist); ; Sandy medium clay; Massive grade of structure; Moist; Weak consistence; Few, fine (1-2mm) roots; Gradual change to -
	BC	0.56 - 0.9 m	Reddish brown (5YR5/4-Moist); ; Coarse sandy clay loam; Massive grade of structure; Moist; Weak consistence; 50-90%, coarse gravelly, 20-60mm, subangular, dispersed, Granite, coarse fragments; Clear change to -
	D	0.9 - 1.4 m	Yellowish red (5YR5/8-Moist); ; Clayey coarse sand; Single grain grade of structure; Moist; Loose consistence; 50-90%, medium gravelly, 6-20mm, subangular, dispersed, Granite, coarse fragments; Few, coarse (>5mm) roots;
	D	1.4 - 1.5 m	Pink (5YR7/4-Moist); ; Coarse sand; Single grain grade of structure; Moist; Loose consistence; 90-100%, medium gravelly, 6-20mm, subangular, dispersed, Granite, coarse fragments; Common (10 - 20 %), Manganiferous, Medium (2 -6 mm), Concretions; Abrupt, Smooth change

to -1.5 - 1.8 m Very pale brown (10YR7/3-Moist); , 7.5YR58, 10-20% , 5-15mm, Distinct; , 10-20% , 5-15mm, Distinct; Sandy medium clay; Moderate grade of structure, 5-10 mm, Subangular blocky;

Massive grade of structure; Very firm consistence; 10-20%, medium gravelly, 6-20mm, subangular, dispersed, Granite, coarse fragments; Many (20 - 50 %), Manganiferous, Medium (2 -

6 mm), Concretions; Diffuse change to -

1.8 - 2.15 m Pale brown (10YR6/3-Moist); , 7.5YR58, 2-10% , 5-15mm, Distinct; , 2-10% , 5-15mm, Distinct; Sandy medium clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Massive grade of structure; Very firm consistence; 10-20%, medium gravelly, 6-20mm, subangular, dispersed, Granite, coarse fragments; Gradual change to -

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2.15 - 2.5 m

Pale brown (10YR6/3-Moist); , 5YR58, 2-10% , 5-15mm, Distinct; , 2.5Y61, 2-10% , 5-15mm, Distinct; Sandy medium clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Massive grade of structure; Very firm consistence; 2-10%, medium gravelly, 6-20mm,

subangular, dispersed, Granite, coarse fragments; Few, coarse (>5mm) roots; Diffuse change to

Grey (2.5Y6/1-Moist); , 2.5YR48, 20-50% , 5-15mm, Prominent; , 20-50% , 5-15mm, Prominent; 2.5 - 2.76 m

Sandy medium clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Massive grade of structure; Very firm consistence; 2-10%, medium gravelly, 6-20mm, subangular, dispersed,

Granite, coarse fragments; Few, coarse (>5mm) roots;

# **Morphological Notes**

## **Observation Notes**

STRONGLY WEATHERED GRANITE GRAVELS BELOW 56CM:

### **Site Notes**

LANERCOST

Observation ID: 1

Project Name: IDF
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Depth	рН	1:5 EC	Exc	hangeable Mg	Cations K	Na	Exchangeable Acidity	e CEC	ı	ECEC	E	SP
m		dS/m	Ou .	my		Cmol					9,	6
0 - 0.11	6A 5.8A	0.06A	3.76H	1.62	0.41	0.05		5.6A 6C		5.8F		.89 .83
0.11 - 0.3	5.7A	0.02A	0.52H	0.76	0.16	0.02		2.6A 4C		1.5F	0	.77 .50
0.3 - 0.56	5.5A	0.01A	0.11H	0.59	0.14	0.03		2.5A 3C		0.9F	1	.20
0.56 - 0.9	5.8A	0.01A	0.26H	1.31	0.34	0.05		3A 3C		2F	1	.67
0.9 - 1.4	5.9A	0.01A										
1.4 - 1.5	6.1A	0.01A	0.26H	1.1	0.16	0.06		2.6A 2C		1.6F		.31 .00
1.5 - 1.8	6.1A	0.01A	0.62H	2.48	0.22	0.13		3.9A 4C		3.5F	3	.33
1.8 - 2.15	6A	0.01A										
2.15 - 2.5	5.9A	0.01A		2.94	0.19	0.13		3.9A 4C		3.8F		.33 .25
2.5 - 2.76	6A	0.01A										
Depth	CaCO3	Organic	Avail. P	Total P	Total	Tot					Analysis	N
m	%	C %	mg/kg		N %	K %			CS	FS %	Silt (	Jay
0 - 0.11		1.99C 2.19C	10A 10B		0.0	5A		4	56A	20	14	10
0.11 - 0.3		1.03C	7A 5B		0.0	4A		5	44A	26	16	14
0.3 - 0.56		0.25C	7A 4B		0.0	1A		17	54A	19	11	15
0.56 - 0.9		0.06C	11A 10B		<0.0	1A		18	55A	17	12	16
0.9 - 1.4			.02					15	70A	13	7	10
1.4 - 1.5		0.04C	9A 5B					13	61A	20	10	9
1.5 - 1.8			OB					10	37A	21	17	25
1.8 - 2.15		0.04C						12	40A	20	14	26
		0.040	7.0									
2.15 - 2.5			7A 2B					13	40A	19	14	27
2.5 - 2.76			8A 8B					13	38A	18	13	30
Depth	•								K sa	t	K unsat	
m		Sat.	0.05 Bar		0.5 Bar g - m3/m3	1 Bar 3	5 Bar	15 Bar	mm/	h	mm/h	
0 - 0.11												

0 - 0.11 0.11 - 0.3 0.3 - 0.56 0.56 - 0.9 0.9 - 1.4 1.4 - 1.5 1.5 - 1.8

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1.8 - 2.15 2.15 - 2.5 2.5 - 2.76

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

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 (Ca2+,Mg2+,Na+,K+) 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

15J1 Effective CEC

3A1 EC of 1:5 soil/water extract 4A1 pH of 1:5 soil/water suspension

5\_C\_B Water soluble Chloride - Method recorded as B

6B3 Total organic carbon - high frequency induction furnace, infrared

Total nitrogen - semimicro Kjeldahl , automated colour 7A2

9B\_9C Available P (mg/kg) - Bicarbonate P - 0.5M NaHCO3 extractable

Available P (mg/kg) - Acid P - 0.005M H2SO4 (BSES) 9G\_BSES Clay (%) - Coventry and Fett pipette method

P10\_CF\_C P10\_CF\_CS P10\_CF\_FS P10\_CF\_Z Coarse sand (%) - Coventry and Fett pipette method Fine sand (%) - Coventry and Fett pipette method Silt (%) - Coventry and Fett pipette method

P10\_GRAV Gravel (%)