IDF **Project Name:**

T469 Observation ID: 1 **Project Code: IDF** Site ID:

CSIRO Division of Soils (QLD) Agency Name:

Site Information

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

SITE 211 No Data

Date Desc.: 22/09/86 Elevation: Map Ref.: Sheet No.: 8060 1:100000 Rainfall: n Northing/Long.: 145.90694444444 Runoff: Slow

Easting/Lat.: -18.624444444444 Drainage: Imperfectly drained

Geology

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

Land Form

Rel/Slope Class: Level plain <9m <1% Pattern Type: Sheet-flood fan No Data Morph. Type: Flat Relief: Elem. Type: Fan Slope Category: Level Aspect: 70 degrees Slope: <1 %

Surface Soil Condition (dry): Hardsetting, Soft

Erosion:

Soil Classification

Australian Soil Classification: Mapping Unit: N/A Gn2.31 Mottled Eutrophic Yellow Kandosol **Principal Profile Form:** Yellow earth ASC Confidence: **Great Soil Group:**

All necessary analytical data are available.

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

Vegetation:

Surface Coarse Fragments:

Profile Morphology Very dark grey (10YR3/1-Moist); Light brownish grey (10YR6/2-Dry); ; Sandy clay loam; Weak 0 - 0.1 m grade of structure, 5-10 mm, Subangular blocky; Earthy fabric; Moist; Very weak consistence; Few, fine (1-2mm) roots; Gradual, Wavy change to -Brown (10YR5/3-Moist); , 10YR73, 20-50% , 5-15mm, Distinct; , 20-50% , 5-15mm, Distinct; Clay A2sb 0.1 - 0.15 m loam, coarse sandy; Massive grade of structure; Earthy fabric; Moist; Weak consistence; 2-10%, medium gravelly, 6-20mm, angular, dispersed, Chert, coarse fragments, Few, fine (1-2mm) roots; Gradual, Irregular change to -R1 Yellowish brown (10YR5/4-Moist); , 10YR58, 2-10% , 0-5mm, Faint; , 10YR73, 2-10% , 0-5mm, 0.15 - 0.45 m Faint; Sandy medium clay; Massive grade of structure; Earthy fabric; Moist; Weak consistence; Very few (0 - 2%), Manganiferous, Fine (0 - 2 mm), Soft segregations; Few, fine (1-2mm) roots; Diffuse change to -B21 Brownish yellow (10YR6/5-Moist); , 10YR68, 2-10% , 0-5mm, Faint; , 2-10% , 0-5mm, Faint; 0.45 - 0.69 m Sandy medium clay; Massive grade of structure; Earthy fabric; Moist; Weak consistence; Few, medium (2-5mm) roots; Gradual change to -Light yellowish brown (10YR6/4-Moist); , 10YR68, 2-10% , 0-5mm, Distinct; , 2-10% , 0-5mm, B22 0.69 - 1 m Distinct; Coarse sandy clay loam; Massive grade of structure; Earthy fabric; Moist; Weak consistence; 50-90%, medium gravelly, 6-20mm, subangular, dispersed, Granite, coarse fragments; Few, medium (2-5mm) roots; Clear change to -2B Light yellowish brown (10YR6/4-Moist); , 10YR68, 10-20% , 5-15mm, Distinct; , 10-20% , 5-1 - 1.28 m 15mm, Distinct; Sandy medium clay; Massive grade of structure; Earthy fabric; Moist; Firm consistence; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Soft segregations; Few, medium (2-5mm) roots: Gradual change to -

2B 1.28 - 1.73 m Light yellowish brown (10YR6/4-Moist); , 10YR68, 2-10% , 0-5mm, Distinct; , 10YR34, 2-10% , 0-

5mm, Distinct; Medium clay; Weak grade of structure, 5-10 mm, Subangular blocky; Massive

grade of structure; Earthy fabric; Moist; Very firm consistence; Common (10 - 20 %),

Manganiferous, Medium (2 -6 mm), Nodules; Gradual change to -

3B 1.73 - 1.92 m Very pale brown (10YR7/4-Moist); , 10YR78, 20-50% , 5-15mm, Distinct; , 20-50% , 5-15mm,

Distinct; Coarse sandy clay loam (Light); Massive grade of structure; Earthy fabric; Moderately moist; Weak consistence; Very few (0 - 2 %), Manganiferous, Medium (2 -6 mm), Nodules;

Common, fine (1-2mm) roots;

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1.92 - 2.02 m ;

Morphological Notes

Observation Notes

B22 IS A 50% MIX OF GRAVELLY AND FINE MATERIAL:

Site Notes

LANERCOST

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Depth	рН	1:5 EC		nangeable //g	Cations K	Na	Exchangeable Acidity	CEC	E	CEC	E	SP
m		dS/m	Ja n	"Y	K	Cmol (-					%	6
0 - 0.1	6A 6.1A	0.08A 0.05A	7.06H	2.07	0.52	0.08		7.8A 8C	ę	9.7F		.03 .00
0.1 - 0.15 0.15 - 0.45	6.1A 6.2A	0.03A 0.02A	2.01H	1.86	0.28	0.03		4.2A 4C	4	1.2F		.71 .75
0.45 - 0.69	6.2A	0.01A	1.58H	1.9	0.3	0.03		3.9A 4C	3	3.8F	0.	.77 .75
0.69 - 1	6.2A	0.01A	0.87H	1.62	0.24	0.03		3.3A 3C	2	2.8F		.91 .00
1 - 1.28 1.28 - 1.73	6.2A 6.2A	0.01A 0.01A	2.52H	3.91	0.26	0.13		7.3A	6	6.8F		.78
1.73 - 1.92 1.92 - 2.02	6.1A	0.01A						8C 3C			1.	.63
Depth m	CaCO3	Organic C %	Avail. P mg/kg	Total P %	Total N %	Tota K %	l Bulk Density Mg/m3			ize A FS %	nalysis Silt C	Clay
0 - 0.1		2.11C	12A		0.0	6A		5	45A	23	21	12
0.1 - 0.15		1.94C	13B 9A 5B					6	32A	31	24	13
0.15 - 0.45		0.25C	4A 3B		0.0	1A		5	32A	22	23	23
0.45 - 0.69 0.69 - 1		0.18C 0.08C	7A 3B		0.0	1A		4 15	31A 41A	30 29	21 18	19 11
1 - 1.28 1.28 - 1.73 1.73 - 1.92			7A 7A 7A					9 2 5	28A 12A 36A	38 41 28	21 29 27	14 18 8
1.92 - 2.02			8A 8B		0.0	5A		J	50 A	20	۷.	J

Depth	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			
m				g	/g - m3/m3	3			mm/h	mm/h	

0 - 0.1 0.1 - 0.15 0.15 - 0.45 0.15 - 0.45 0.45 - 0.69 0.69 - 1 1 - 1.28 1.28 - 1.73 1.73 - 1.92 1.92 - 2.02

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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 (%)