, goin	ct Name: ct Code: cy Name:	Regional REG Site ID: CSIRO Division of Soils		Observation ID:	1
-	nformation				
Desc. I	By:	G.G. Murtha	Locality:		ay 5.3KM south of rail overpass on d between fence and road:
Date D Map Re Northin Easting	ef.: ng/Long.:	30/11/73 Sheet No. : 8259 1:100000 146.908333333333 19.38	Elevation: Rainfall: Runoff: Drainage:	30 metres 1140 Moderately rapid Poorly drained	
<u>Geolo</u> Expos Geol. F	ureType:	Undisturbed soil core C-Pv	Conf. Sub. is Pare Substrate Materia		
<u>Land</u> Rel/Sic	ope Class:	Gently undulating plains <9m 1-3%	Pattern Type:	Alluvial fan	
Morph Elem. Slope:	. Туре: Туре:	Simple-slope Fan 0 %	Relief: Slope Category: Aspect:	6 metres Gently inclined No Data	
•		dition (dry): Hardsetting			
Erosic	on:				
<u>Soil C</u>	lassificatio	<u>on</u>			
Haplic	lian Soil Cla Calcic Browr Confidence:		Princi	ing Unit: ipal Profile Form: Soil Group:	N/A Db1.13 No suitable group
		tical data are available.			
Site D Veget		No effective disturbance othe Low Strata - Tussock grass,			None recorded
veget	<u>ation.</u>	0		•	ba, Eucalyptus grandifolia, Eucalyptus
polycarp	a				
		Fragments: No surface coar	se fragments		
_	e Morpholo 0 - 0.08 m				
A1	0 - 0.08 m		(40)/D0/0 Mainth, Cla		of structure E 40 mm
			t; Weak consistence; 0		e of structure, 5-10 mm, Ily, 6-20mm, Gravel, coarse
B1	0.08 - 0.2	Subangular blocky; Mois fragments; Clear change m Dark brown (10YR3/3-M	t; Weak consistence; 0 to - oist); ; Medium heavy c Dry; Very strong consis	-2%, medium grave day; , Angular block: tence; 0-2%, fine gi	lly, 6-20mm, Gravel, coarse y; Strong grade of structure, 5- ravelly, 2-6mm, Gravel, coarse
B1 B2	0.08 - 0.2 0.2 - 0.3 m	Subangular blocky; Mois fragments; Clear change Dark brown (10YR3/3-M 10 mm, Angular blocky; fragments; Few (2 - 10 Dark brown (10YR3/3-M	t; Weak consistence; 0 • to - Dry; Very strong consis %), Ferromanganiferou oist); ; Heavy clay; Stro ence; 0-2%, fine gravell	-2%, medium grave clay; , Angular block tence; 0-2%, fine g ls, Fine (0 - 2 mm), ong grade of structur ly, 2-6mm, Gravel, c	lly, 6-20mm, Gravel, coarse y; Strong grade of structure, 5- ravelly, 2-6mm, Gravel, coarse
		Subangular blocky; Mois fragments; Clear change Dark brown (10YR3/3-M 10 mm, Angular blocky; fragments; Few (2 - 10 Dark brown (10YR3/3-M Dry; Very strong consiste %), Ferromanganiferous m Brown (7.5YR4/2-Moist);	t; Weak consistence; 0 to - oist); ; Medium heavy c Dry; Very strong consis %), Ferromanganiferou oist); ; Heavy clay; Stro ence; 0-2%, fine gravell , Fine (0 - 2 mm), Conc ; Heavy clay; Strong g 0-2%, fine gravelly, 2-	-2%, medium grave lay; , Angular block tence; 0-2%, fine gi s, Fine (0 - 2 mm), ong grade of structur ly, 2-6mm, Gravel, corretions; rrade of structure, 20 6mm, Gravel, coars	lly, 6-20mm, Gravel, coarse y; Strong grade of structure, 5- ravelly, 2-6mm, Gravel, coarse Concretions; re, 20-50 mm, Angular blocky;
B2	0.2 - 0.3 m	Subangular blocky; Mois fragments; Clear change Dark brown (10YR3/3-M 10 mm, Angular blocky; fragments; Few (2 - 10 Dark brown (10YR3/3-M Dry; Very strong consiste %), Ferromanganiferous m Brown (7.5YR4/2-Moist); Very strong consistence; Ferromanganiferous, Fin m Brown (7.5YR4/2-Moist);	t; Weak consistence; 0 to - oist); ; Medium heavy c Dry; Very strong consis %), Ferromanganiferou oist); ; Heavy clay; Stro ence; 0-2%, fine gravell , Fine (0 - 2 mm), Concretic ; Heavy clay; Strong g 0-2%, fine gravelly, 2- ie (0 - 2 mm), Concretic ; Heavy clay; Strong g 0-2%, fine gravelly, 2-	-2%, medium grave clay; , Angular block tence; 0-2%, fine g ls, Fine (0 - 2 mm), ong grade of structur ly, 2-6mm, Gravel, c cretions; rrade of structure, 21 6mm, Gravel, coars ons; rrade of structure, 21 6mm, Gravel, coars	lly, 6-20mm, Gravel, coarse y; Strong grade of structure, 5- ravelly, 2-6mm, Gravel, coarse Concretions; re, 20-50 mm, Angular blocky; coarse fragments; Few (2 - 10 D-50 mm, Angular blocky; Dry; e fragments; Few (2 - 10 %), D-50 mm, Angular blocky; Dry; e fragments; Few (2 - 10 %),
B2 B2	0.2 - 0.3 m 0.3 - 0.45	 Subangular blocky; Mois fragments; Clear change Dark brown (10YR3/3-M 10 mm, Angular blocky; fragments; Few (2 - 10 Dark brown (10YR3/3-M Dry; Very strong consiste %), Ferromanganiferous Brown (7.5YR4/2-Moist); Very strong consistence; Ferromanganiferous, Fin Brown (7.5YR4/2-Moist); Very strong consistence; Ferromanganiferous, Fin 	t; Weak consistence; 0 to - bist); ; Medium heavy c Dry; Very strong consis %), Ferromanganiferou bist); ; Heavy clay; Stro ence; 0-2%, fine gravell , Fine (0 - 2 mm), Concretic ; Heavy clay; Strong g 0-2%, fine gravelly, 2 te (0 - 2 mm), Concretic ; Heavy clay; Strong g 0-2%, fine gravelly, 2 te (0 - 2 mm), Concretic (3/2-Moist); ; Heavy clay	-2%, medium grave slay; , Angular block tence; 0-2%, fine g s, Fine (0 - 2 mm), ong grade of structur y, 2-6mm, Gravel, cor tretions; rade of structure, 20 6mm, Gravel, coars ons; rrade of structure, 20 6mm, Gravel, coars ons; Clear change to ay; Strong grade of st	Ily, 6-20mm, Gravel, coarse y; Strong grade of structure, 5- avelly, 2-6mm, Gravel, coarse Concretions; re, 20-50 mm, Angular blocky; coarse fragments; Few (2 - 10 0-50 mm, Angular blocky; Dry; e fragments; Few (2 - 10 %), 0-50 mm, Angular blocky; Dry; e fragments; Few (2 - 10 %), 0-50 mm, Angular blocky; Dry; e fragments; Few (2 - 10 %), 0-50 mm, Angular blocky; Dry; e fragments; Few (2 - 10 %), 0-50 mm, Angular blocky; Dry; e fragments; Few (2 - 10 %), 0-50 mm, Angular blocky; Dry;
B2 B2 B2	0.2 - 0.3 m 0.3 - 0.45 0.45 - 0.6	 Subangular blocky; Mois fragments; Clear change Dark brown (10YR3/3-M 10 mm, Angular blocky; I fragments; Few (2 - 10 Dark brown (10YR3/3-M Dry; Very strong consister %), Ferromanganiferous Brown (7.5YR4/2-Moist); Very strong consistence; Ferromanganiferous, Fin Brown (7.5YR4/2-Moist); Very strong consistence; Ferromanganiferous, Fin Dark reddish brown (5YF blocky; Dry; Rigid consist 	t; Weak consistence; 0 to - oist); ; Medium heavy c Dry; Very strong consis %), Ferromanganiferou oist); ; Heavy clay; Stro ence; 0-2%, fine gravell , Fine (0 - 2 mm), Conce ; Heavy clay; Strong g 0-2%, fine gravelly, 2- e (0 - 2 mm), Concretic ; Heavy clay; Strong g 0-2%, fine gravelly, 2- e (0 - 2 mm), Concretic ; Heavy clay; Strong g 0-2%, fine gravelly, 2- e (0 - 2 mm), Concretic (3/2-Moist); ; Heavy cla tence; Few (2 - 10 %), (3/2-Moist); ; Heavy cla	-2%, medium grave slay; , Angular block stence; 0-2%, fine gi s, Fine (0 - 2 mm), ong grade of structur y, 2-6mm, Gravel, corretions; rade of structure, 20 6mm, Gravel, coars ons; rade of structure, 20 6mm, Gravel, coars ons; clear change to ay; Strong grade of st Calcareous, Mediur ay; Strong grade of st	 Ily, 6-20mm, Gravel, coarse y; Strong grade of structure, 5- ravelly, 2-6mm, Gravel, coarse Concretions; re, 20-50 mm, Angular blocky; coarse fragments; Few (2 - 10 D-50 mm, Angular blocky; Dry; e fragments; Few (2 - 10 %), D-50 mm, Angular blocky; Dry; e fragments; Few (2 - 10 %), D-50 mm, Angular blocky; Dry; e fragments; Few (2 - 10 %), D-50 mm, Angular blocky; Dry; e fragments; Few (2 - 10 %), D-50 mm, Angular blocky; Dry; e fragments; Few (2 - 10 %), D-50 mm, Angular blocky; Dry; e fragments; Few (2 - 10 %), D-50 mm, Angular blocky; Dry; e fragments; Few (2 - 10 %), D-50 mm, Angular blocky; Dry; e fragments; Few (2 - 10 %), D-50 mm, Angular blocky; Dry; e fragments; Few (2 - 10 %), D-50 mm, Angular blocky; Dry; e fragments; Few (2 - 10 %), D-50 mm, Angular blocky;
B2 B2 B2 B2	0.2 - 0.3 m 0.3 - 0.45 0.45 - 0.6 0.6 - 0.9 m	Subangular blocky; Mois fragments; Clear change Dark brown (10YR3/3-M 10 mm, Angular blocky; fragments; Few (2 - 10 Dark brown (10YR3/3-M Dry; Very strong consiste %), Ferromanganiferous m Brown (7.5YR4/2-Moist); Very strong consistence; Ferromanganiferous, Fin Brown (7.5YR4/2-Moist); Very strong consistence; Ferromanganiferous, Fin Dark reddish brown (5YF blocky; Dry; Rigid consis Dark reddish brown (5YF blocky; Dry; Rigid consis	t; Weak consistence; 0 to - bist); ; Medium heavy c Dry; Very strong consis %), Ferromanganiferou bist); ; Heavy clay; Stro- ence; 0-2%, fine gravell , Fine (0 - 2 mm), Concre- ; Heavy clay; Strong g 0-2%, fine gravelly, 2- te (0 - 2 mm), Concretic ; Heavy clay; Strong g 0-2%, fine gravelly, 2- te (0 - 2 mm), Concretic (3/2-Moist); ; Heavy clay tence; Few (2 - 10 %), (3/2-Moist); ; Heavy clay; S	-2%, medium grave slay; , Angular block tence; 0-2%, fine gi is, Fine (0 - 2 mm), ing grade of structur ly, 2-6mm, Gravel, corretions; irade of structure, 20 6mm, Gravel, coars ons; Clear change to ay; Strong grade of s Calcareous, Mediur ay; Strong grade of s Calcareous, Mediur trong grade of structure	 Ily, 6-20mm, Gravel, coarse y; Strong grade of structure, 5- ravelly, 2-6mm, Gravel, coarse Concretions; re, 20-50 mm, Angular blocky; coarse fragments; Few (2 - 10 D-50 mm, Angular blocky; Dry; e fragments; Few (2 - 10 %), D-50 mm, Angular blocky; Dry; e fragments; Few (2 - 10 %), D-50 mm, Angular blocky; Dry; e fragments; Few (2 - 10 %), D-50 mm, Angular blocky; Dry; e fragments; Few (2 - 10 %), D-50 mm, Angular blocky; Dry; e fragments; Few (2 - 10 %), D-50 mm, Angular blocky; Dry; e fragments; Few (2 - 10 %), D-50 mm, Angular blocky; Dry; e fragments; Few (2 - 10 %), D-50 mm, Angular blocky; Dry; e fragments; Few (2 - 10 %), D-50 mm, Angular blocky; Dry; e fragments; Few (2 - 10 %), D-50 mm, Angular blocky; Dry; e fragments; Few (2 - 10 %), D-50 mm, Angular blocky;

Project Name:	Regional			
Project Code:	REG	Site ID:	T215	Observation ID: 1
Agency Name:	CSIRO Division	of Soils (Q	LD)	

- 1.8 2.1 mBrown (7.5YR4/2-Moist); ; Heavy clay; Strong grade of structure, 20-50 mm, Angular blocky;
Rigid consistence; Very few (0 2 %), Ferromanganiferous, Medium (2 -6 mm), Nodules; Very
few (0 2 %), Calcareous, Very coarse (20 60 mm), Nodules;
- 2.1 2.4 m Brown (7.5YR4/2-Moist); ; Heavy clay; Strong grade of structure, 20-50 mm, Angular blocky; Rigid consistence; Very few (0 - 2 %), Ferromanganiferous, Medium (2 -6 mm), Nodules; Very few (0 - 2 %), Calcareous, Very coarse (20 - 60 mm), Nodules;

Morphological Notes

Observation Notes

150-180CM SOME COARSE SAND THROUGHOUT:120-180CM SOFT CA LINING VERITCALTRACKS:

Site Notes

TOWNSVILLE

Project Name:	Regional			
Project Code:	REG	Site ID:	T215	
Agency Name:	CSIRO Divisi	on of Soils (C	(LD)	

Laboratory Test Results:

Depth	рН	1:5 EC	Ex	changeab	le Cations		Exchangeable	CEC	ECEC	ESP
			a	Mg	ĸ	Na	Acidity			
m		dS/m				Cmol	(+)/kg			%
0 - 0.08	6.5A	<0.05A	9.5B	8	0.4	0.17				
0.08 - 0.2	6.4A	<0.05A	9.6B	8.4	0.1	0.35				
0.2 - 0.3	6.9A	<0.05A								
0.3 - 0.45	7.3A	<0.05A	10.8B	9.4	0.09	0.69				
0.45 - 0.6	8A	0.139A								
0.6 - 0.9	9.1A	0.25A	23.1B	9.7	<0.01	1.73				
0.9 - 1.2	9.3A	0.571A								
1.2 - 1.5	9.1A	0.77A								
1.5 - 1.8	9.1A	0.839A								
1.8 - 2.1	9A	0.919A								
2.1 - 2.4	9A	0.919A								

Observation ID: 1

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Pa GV	article CS	Size FS	Analysi: Silt	s Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.08 0.08 - 0.2		2.13D	14B 4.3B	0.049A	0.15A	0.4A		0	6A	29	31	32
0.2 - 0.3				0.024A		0.47A						
0.3 - 0.45			30.5B					0	6A	18	19	52
0.45 - 0.6												
0.6 - 0.9								6	17A	30	19	34
0.9 - 1.2												
1.2 - 1.5				0.049A		0.64A		<2	9A	29	25	44
1.5 - 1.8												
1.8 - 2.1												
2.1 - 2.4												

Depth	COLE		Grav	vimetric/V	olumetric W	ater Conte	ents		K sat	K unsat
m		Sat.	0.05 Bar	0.1 Bar g/	0.5 Bar /g - m3/m3	1 Bar	5 Bar	15 Bar	mm/h	mm/h
0 - 0.08										
0.08 - 0.2										
0.2 - 0.3										
0.3 - 0.45										
0.45 - 0.6										
0.6 - 0.9										
0.9 - 1.2										
1.2 - 1.5										
1.5 - 1.8										
1.8 - 2.1										
2.1 - 2.4										

Project Name:	Regional		
Project Code:	REG	Site ID:	T215
Agency Name:	CSIRO Divisio	on of Soils (C	QLD)

Observation ID: 1

Laboratory Analyses Completed for this profile

10A1	Total sulfur - X-ray fluorescence
12_HF_CU	Total element - Cu(mg/kg) - HF/HClO4 Digest
12_HF_ZN	Total element - Zn(mg/kg) - HF/HClO4 Digest
15A2_CA	Exchangeable bases (Ca2+,Mg2+,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
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_UC	Organic carbon (%) - Uncorrected Walkley and Black method
7A2	Total nitrogen - semimicro Kjeldahl, automated colour
9A1	Total phosphorus - X-ray fluorescence
9G_BSES	Available P (mg/kg) - Acid P - 0.005M H2SO4 (BSES)
P10_CF_C	Clay (%) - Coventry and Fett pipette method
P10_CF_CS	Coarse sand (%) - Coventry and Fett pipette method
P10_CF_FS	Fine sand (%) - Coventry and Fett pipette method
P10_CF_Z	Silt (%) - Coventry and Fett pipette method
P10_GRAV	Gravel (%)