

LAUNCESTON.

GEOLOGICAL LOG REPORT

ATP EL2080  
LAUNCESTON

TENEMENT 2080

103

\*\*\*\*\*  
EL2080 LAUNCESTON, 00019  
\*\*\*\*\*

Easting: 489140.000  
Northing: 5410940.000  
Grid Type: Australian Marring Grid  
Accuracy: Approximate  
Cell: 150.00  
Datum: Approximate Level - Not Surveyed  
Sheet Reference:  
Sheet Index:  
Total Depth: 34.78  
Drilling Commenced: 02/12/81  
Drilling Completed: 02/12/81  
Inclination:  
Azimuth:  
Standing Water Level: 3.8

Logging Organisation: CSR Exploration and Evaluation Group  
Logged By: HINRICHS  
Drilling Contractor: H.J. Stacpole  
Geophysical Logging: Murdoch Geophysics

Counts:  
Parish:  
Portion:

Plus Depths:  
Hole Diameter: 150  
Core Diameter: 100  
Cased Depths: 6.0  
Core Barrel: Triefus Triple Barrel

Available Data: Gamma Loss  
Density Loss  
Resistivity Loss  
Caliper Loss

Drill Bits: Blades  
Rollers

ALL ROCKS ARE FRESH UNLESS OTHERWISE INDICATED

EL2080 LAUNCESTON, 00019

771169

LAUNCESTON.

## GEOLOGICAL LOG REPORT

ATP EL2080 TENEMENT 2080  
LAUNCESTON

STRAT NAME	SEQ NO.	SEAM NAME	WORK SECT	SAMPLE NUMBER	DEPTH (m)	THICK (m)	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA
				R	3.55	3.55	NO RECORD	
				C2746	3.64	0.09	LIGNEOUS CLAY	Mottled brown; firm; low plasticity (argonic); good core - unbroken.
				C2746	3.86	0.22	CLAY	Medium to dark brown; firm; high plasticity (clay); good core - unbroken; occasional ligneous wisps.
				C2746	3.91	0.05	LIGNEOUS CLAY	Dark brown; firm; low plasticity (argonic); good core - unbroken.
				C2747	3.97	0.06	LIGNITE	Dark brown - black; firm; friable; good core - unbroken; common bioturbation.
				C2747	4.08	0.11	INFERIOR LIGNITE	Dark brown - black; firm; friable; good core - unbroken.
				C2748	4.09	0.01	CLAY	Ligneous; medium to dark brown; firm; low plasticity (clay); good core - unbroken.
				C2748	4.18	0.09	INFERIOR LIGNITE	Clayey; dark brown - black; firm; friable; good core - unbroken; occasional base?
							RARE CLAY BANDS	
				C2748	4.22	0.04	CLAY	Ligneous; dark brown; firm; high plasticity (clay); good core - unbroken.
				C2748	4.27	0.05	LIGNITE	Clayey; dark brown - black; firm; friable; good core - unbroken; fissile; occasional bioturbation.
				C2748	4.37	0.10	LIGNITE	Dark brown; firm; friable; good core - unbroken.
				C2748	4.44	0.07	LIGNEOUS CLAY	Dark brown; firm; low plasticity (argonic); good core - unbroken.
				C2748	4.49	0.05	INFERIOR LIGNITE	Clayey; dark brown; firm; friable; good core - unbroken; subfissile.
				C2748	4.53	0.04	LIGNITE	Woody textured; dark brown - black; firm; friable; good core - unbroken; fissile.
				C2748	4.55	0.02	LIGNITE	Clayey; dark brown; firm; friable; good core - unbroken; subfissile; occasional bioturbation.

EL2080 LAUNCESTON. C0019

104

771170

STRAT NAME	SEQ NO.	SEAM NAME	WORK SECT	SAMPLE NUMBER	DEPTH (m)	THICK (m)	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA
				C2748	4.80	0.25	LIGNITE	Dark brown - black; firm; friable; good core - unbroken; fissile; gradational base.
				C2749	4.83	0.03	INFERIOR LIGNITE	Clayey; dark brown; firm; friable; good core - unbroken; fissile.
				C2749	4.89	0.06	LIGNEOUS CLAY	Medium to dark brown; firm; low plasticity (orsonic); good core - unbroken.
				C2749	5.09	0.20	CLAY	Medium to dark brown - grey; firm; high plasticity (clay); good core - unbroken; sharp irregular base; beds dip at 05 degrees; occasional ligneous wisps; Additional features include: occasional woody fragments; Additional features include: occasional bioturbation.
				C2750	5.14	0.05	INFERIOR LIGNITE	Woody textured; clayey; dark brown - black; firm; friable; good core - unbroken; fissile; Bands include: INFERIOR LIGNITE; woody textured; clayey; dark brown - black; low strength; brittle; good core - unbroken; fissile.
				C2750	5.16	0.02	INFERIOR LIGNITE	Dark brown - black; firm; friable; good core - unbroken.
				C2750	5.37	0.21	LIGNITE	Woody textured; dark brown; firm; friable; good core - unbroken; fissile; occasional resin addresates.
				C2751	5.42	0.05	INFERIOR LIGNITE	Clayey; dark brown; firm; friable; good core - unbroken; common resin addresates.
				C2751	5.55	0.13	LIGNITE	Woody textured; clayey; dark brown - black; firm; friable; good core - unbroken; fissile; occasional resin addresates.
				C2751	5.64	0.09	LIGNITE	Woody textured; dark brown; firm; friable; good core - unbroken; fissile; occasional resin addresates.
				C2751	5.67	0.03	LIGNITE	Dark brown - black; low strength; friable; good core - unbroken; fissile.
					5.74	0.07	CORE LOSS	
				C2752	6.17	0.43	LIGNITE	Woody textured; clayey; dark brown; firm; friable; core crushed; fissile;
							COMMON CLAY WISPS; WOOD IS LOW STRENGTH AND BRITTLE	*

STRAT NAME	SEQ NO.	SEAM NAME	WORK SECT	SAMPLE NUMBER	DEPTH (m)	THICK (m)	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA
				C2752	6.35	0.18	LIGNITE	Humified; clayey; dark brown - black; soft; friable; core crushed; FISSILE WHEN FIRM FRIABLE
				C2752	6.58	0.23	INFERIOR LIGNITE	Clayey; humified; dark brown; soft; friable; core crushed; gradational base; occasional resin concretions; Additional features include: gelatinous; LOW PLASTICITY TO FRIABLE; COLLOIDAL; RELATIVELY * HIGH MOISTURE
				C2753	6.85	0.27	INFERIOR LIGNITE	Clayey; humified; dark brown - black; soft; friable; core crushed; gradational base; rare resin concretions; LOW PLASTICITY TO FRIABLE; GELATIONOUS * COLLOID; OCCASIONAL WOOD BANDS
				C2754	7.38	0.53	INFERIOR LIGNITE	Clayey; dark brown; soft; friable; core crushed; LOW PLASTICITY TO FRIABLE; GELATINOUS; LESS * CLAY THAN OVERLYING UNIT Bands include: LIGNITE; woody textured; dark brown - black; firm; friable; THICKNESS OF WOODY LIGNITE BANDS INCREASES * DOWN SEQUENCE
				C2755	7.41	0.03	LIGNEDUS CLAY	Dark brown; firm; low plasticity (arsenic); good core - unbroken; gradational base.
				C2755	7.44	0.03	CLAY	Ligneous; dark brown - black; firm; high plasticity (clay); good core - unbroken; gradational base.
				C2755	7.47	0.03	INFERIOR LIGNITE	Clayey; dark brown - black; firm; low plasticity (arsenic); good core - unbroken; LOW PLASTICITY TO FRIABLE; OCCASIONAL CLAY * WISPS

EL2080 LAUNCESTON. C0019

771172

LAUNCESTON.

## GEOLOGICAL LOG REPORT

ATP EL2080 TENEMENT 2080  
LAUNCESTON

STRAT NAME	SEQ NO.	SEAM NAME	WORK SECT	SAMPLE NUMBER	DEPTH (m)	THICK (m)	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA
				C2755	7.64	0.17	INFERIOR LIGNITE	Clayey; woody textured; dark brown - black; soft; friable; good core - unbroken; fissile; common woody fragments.
				C2755	7.70	0.06	INFERIOR LIGNITE	Clayey; woody textured; dark brown - black; firm; friable; good core - unbroken; fissile.
				C2755	7.74	0.04	INFERIOR LIGNITE	Clayey; dark brown; firm; friable; good core - unbroken; fissile; gradational base; abundant woody fragments.
				C2756	7.78	0.04	LIGNEOUS CLAY	Dark brown; firm; low plasticity (ordanic); good core - unbroken; occasional ligneous wisps.
				C2756	7.91	0.13	CLAY	Dark brown - black; firm; high plasticity (clay); good core - unbroken; occasional bioturbation; Additional features include: occasional ligneous wisps.
				C2756	8.15	0.24	CLAY	Light to medium brown - grey; firm; high plasticity (clay); good core - unbroken; shorr irregular base; occasional bioturbation.
				C2756	8.18	0.03	CLAY	Ligneous; dark brown; firm; high plasticity (clay); good core - unbroken; gradational base.
				C2756	8.24	0.06	CLAY	Ligneous; dark brown; firm; low plasticity (clay); good core - unbroken; gradational base; occasional bioturbation.
				C2756	8.44	0.20	CLAY	Ligneous; dark brown; firm; high plasticity (clay); good core - unbroken; occasional bioturbation.
				C2756	8.53	0.09	LIGNEOUS CLAY	Dark brown; firm; high plasticity (ordanic); good core - unbroken.
				C2757	8.57	0.04	INFERIOR LIGNITE	Clayey; dark brown; firm; friable; good core - unbroken.
				C2757	8.63	0.06	CLAY	Ligneous; medium to dark brown - grey; firm; low plasticity (clay); good core - unbroken; gradational base;  INCREASED CARBONACEOUS CONTENT TOWARDS BASE
				C2757	8.83	0.20	LIGNITE	Dark brown - black; firm; friable; good core - unbroken; common woody fragments;  RARE CLAY WISPS

EL2080 LAUNCESTON. C0019

107

771173

STRAT NAME	SEQ NO.	SEAM NAME	WORK SECT	SAMPLE NUMBER	DEPTH (m)	THICK (m)	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA
				C2758	9.12	0.29	LIGNITE	Dark brown - black; firm; friable; good core - unbroken; gradational base; common woody fragments;  RARE CLAY WISPS; WOOD FRAGMENTS MORE COMMON *  TOWARDS BASE OF UNIT
				C2758	9.44	0.32	INFERIOR LIGNITE	Clayey; dark brown; firm; friable; good core - unbroken; rare bioturbation.
				C2758	9.78	0.34	LIGNITE	Dark brown - black; firm; friable; good core - unbroken; fissile;  RARE CLAY BANDS; WOODY TEXTURE IN PART
				C2758	10.07	0.29	INFERIOR LIGNITE	Clayey; medium to dark brown - black; firm; friable; good core - unbroken; fissile; gradational base; occasional bioturbation; Additional features include: abundant woody fragments;  INCREASED BIOTURBATION AND INHERENT CLAY *  TOWARDS BASE OF UNIT
				C2758	10.08	0.01	LIGNEOUS CLAY	Light to medium brown - grey; firm; high plasticity (argonic); good core - unbroken.
				C2759	10.71	0.63	CLAY	Mottled brown - grey; firm; high plasticity (clay); good core - unbroken; occasional ligneous wisps;  CLAY IS LIGHT TO MID BROWN-GREY; WITH RARE *  CARBONACEOUS WISPS
				C2759	10.93	0.22	CLAY	Sandy; quartzose; light to medium grey - brown; firm; high plasticity (clay); good core - unbroken; very fine grained; gradational base.
				C2759	11.07	0.14	SAND	Clayey; quartzose; light to medium grey; firm; low plasticity (clay); good core - unbroken; very fine grained; occasional ligneous wisps.
				C2759	11.10	0.03	CLAY	Sandy; woody textured; medium to dark grey - brown; firm; low plasticity (clay); good core - unbroken.

EL2080 LAUNCESTON. C0019

LAUNCESTON.

## GEOLOGICAL LOG REPORT

ATP EL2080  
LAUNCESTON

TENEMENT 2080

STRAT NAME	SEQ NO.	SEAM NAME	WORK SECT	SAMPLE NUMBER	DEPTH (m)	THICK (m)	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA
				C2759	11.22	0.12	SAND	Clayey; light to medium grey; firm; low plasticity (clay); good core - unbroken; very fine grained.
				C2759	11.33	0.11	SAND	Clayey; light to medium grey - brown; firm; low plasticity (clay); good core - unbroken; very fine grained; rare ligneous wisps; Additional features include: good core - unbroken; abundant woody fragments.
				C2759	11.45	0.12	SAND	Clayey; light to medium grey; firm; low plasticity (clay); good core - unbroken; very fine grained; abundant bioturbation.
			C		11.56	0.11	CORE LOSS	
			R		14.80	3.24	CLAY	Sandy; light to medium grey; firm; low plasticity (clay); very fine grained; Bands include: LIGNEOUS CLAY; silty; medium to dark brown; firm; low plasticity (organic); common ligneous wisps.
				C2760	14.84	0.04	CLAY	Medium to dark brown; firm; low plasticity (clay); good core - unbroken.
				C2760	14.90	0.06	INFERIOR LIGNITE	Clayey; mottled brown; firm; friable; good core - unbroken; common bioturbation;  LIGNITE IS MOTTLED MID TO DARK BROWN
				C2760	15.06	0.16	LIGNITE	Dark brown; firm; friable; good core - unbroken; common bioturbation.
				C2761	15.40	0.34	INFERIOR LIGNITE	Clayey; dark brown - black; firm; friable; good core - unbroken; occasional resin concretions; Additional features include: common bioturbation.
				C2761	15.58	0.18	LIGNITE	Dark brown; firm; friable; good core - unbroken; subfissile; common bioturbation; Additional features include: good core - unbroken; common resin concretions.
				C2761	15.62	0.04	LIGNITE	Woody textured; dark brown; firm; friable; good core - unbroken; fissile; common bioturbation.

EL2080 LAUNCESTON. C0019

LAUNCESTON.

## GEOLOGICAL LOG REPORT

ATP EL2080

TENEMENT 2080

LAUNCESTON

STRAT NAME	SEQ NO.	SEAM NAME	WORK SECT	SAMPLE NUMBER	DEPTH (m)	THICK (m)	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA
				C2761	15.84	0.22	LIGNITE	Clayey; dark brown; firm; friable; good core - unbroken; rare resin assemblages; Additional features include: good core - unbroken; common bioturbation.
				C2761	15.92	0.08	LIGNITE	Woody textured; dark brown; firm; friable; good core - unbroken; fissile; gradational base; common bioturbation; Bands include: LIGNITE; woody textured; dark brown; low strength; brittle; good core - unbroken; fissile.
				C2762	16.11	0.19	INFERIOR LIGNITE	Clayey; dark brown; firm; friable; good core - unbroken; rare resin assemblages; Additional features include: good core - unbroken; common bioturbation.
				C2762	16.22	0.11	INFERIOR LIGNITE	Clayey; dark brown - grey; firm; friable; good core - unbroken; common bioturbation.
				C2762	16.55	0.33	INFERIOR LIGNITE	Clayey; dark brown; firm; friable; good core - unbroken; common bioturbation;
								DEGREE OF BIOTURBATION INCREASES DOWN *
								SEQUENCE
				C2763	16.85	0.30	CLAY	Silt; light to medium grey - brown; firm; low plasticity (clay); good core - unbroken; gradational base; rare resin assemblages; Additional features include: good core - unbroken; common bioturbation.
				C2763	17.08	0.23	INFERIOR LIGNITE and CLAY	Intermixed 70:30, INFERIOR LIGNITE; clayey; dark brown; firm; friable; good core - unbroken; common bioturbation; CLAY; medium to dark brown - grey; firm; low plasticity (clay); good core - unbroken.
				C2763	17.10	0.02	CLAY	Light to medium brown - grey; firm; low plasticity (clay); good core - unbroken.
				C	17.17	0.07	CORE LOSS	
				C2764	17.24	0.07	CLAY	Limaceous; light to medium brown - grey; firm; low plasticity (clay); good core - unbroken; subfissile; rare woody fragments.

EL2080 LAUNCESTON. C0019

110

771176

LAUNCESTON.

## GEOLOGICAL LOG REPORT

ATP EL2080 TENEMENT 2080  
LAUNCESTON

STRAT NAME	SEQ NO.	SEAM NAME	WORK SECT	SAMPLE NUMBER	DEPTH (m)	THICK (m)	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA
				C2764	17.36	0.12	CLAY	Light to medium brown - grey; firm; low plasticity (clay); good core - unbroken.
				C2764	17.55	0.19	CLAY	Light to medium grey - brown; firm; low plasticity (clay); good core - unbroken; gradational base; occasional bioturbation; Additional features include: good core - unbroken; rare ligneous wisps; Additional features include: good core - unbroken; rare resin aggregates.
				C2764	17.66	0.11	CLAY	Ligneous; light to medium brown; firm; low plasticity (clay); good core - unbroken; gradational base.
				C2764	17.68	0.02	LIGNEOUS CLAY	Dark brown; firm; low plasticity (organic); good core - unbroken; subfissile; common ligneous wisps.
				C2765	17.73	0.05	INFERIOR LIGNITE	Clayey; medium to dark brown - black; firm; friable; good core - unbroken; subfissile.
				C2765	17.83	0.10	INFERIOR LIGNITE	Clayey; dark brown; firm; friable; good core - unbroken; common bioturbation; Bands include: CLAY; dark brown - grey; firm; low plasticity (clay); good core - unbroken.
				C2765	18.00	0.17	LIGNITE	Dark brown - black; firm; friable; good core - unbroken; common bioturbation.
				C2765	18.14	0.14	LIGNITE	Woody textured; dark brown - black; firm; friable; good core - unbroken; fissile; common bioturbation.
				C2765	18.25	0.11	LIGNITE	Clayey; dark brown; firm; friable; good core - unbroken; common bioturbation.
				C2765	18.29	0.04	LIGNITE	Clayey; dark brown; firm; friable; good core - unbroken; fissile; common bioturbation.
				C2765	18.35	0.06	INFERIOR LIGNITE	Clayey; dark brown - black; firm; friable; good core - unbroken; common bioturbation.
				C2765	18.38	0.03	INFERIOR LIGNITE	Clayey; dark brown - black; firm; friable; good core - unbroken; fissile; common bioturbation.

EL2080 LAUNCESTON. C0019

LAUNCESTON.

## GEOLOGICAL LOG REPORT

ATP EL2080  
LAUNCESTON

TENEMENT 2080

112

STRAT NAME	SEQ NO.	SEAM NAME	WORK SECT	SAMPLE NUMBER	DEPTH (m)	THICK (m)	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA
				C2765	18.73	0.35	INFERIOR LIGNITE	Classey; dark brown; firm; friable; good core - unbroken; common bioturbation; Additional features include: good core - unbroken; common woody fragments.
				C2765	18.75	0.02	INFERIOR LIGNITE	Classey; dark brown; low strength; brittle; good core - unbroken; fissile.
				C2765	18.97	0.22	LIGNITE	Classey; dark brown - black; firm; friable; good core - unbroken; common bioturbation.
				C2765	19.21	0.24	INFERIOR LIGNITE	Classey; dark brown - black; firm; friable; good core - unbroken; common bioturbation.
				C2767	19.41	0.20	LIGNITE	Classey; woody textured; dark brown; firm; friable; good core - unbroken; common woody fragments.
				C2767	19.78	0.37	INFERIOR LIGNITE	Classey; dark brown; firm; friable; good core - unbroken; occasional woody fragments; Additional features include: good core - unbroken; occasional woody fragments.
				C2767	19.82	0.04	LIGNITE	Classey; dark brown; firm; friable; good core - unbroken; fissile.
				C2767	20.12	0.30	LIGNITE	Dark brown; firm; friable; good core - unbroken; common bioturbation.
				C2768	20.17	0.05	LIGNEOUS CLAY	Dark brown; firm; low plasticity (organic); good core - unbroken; gradational base; common bioturbation.
				C2768	20.19	0.02	CLAY	Ligneous; medium to dark brown - grey; firm; high plasticity (clay); good core - unbroken; gradational base.
				C2768	20.33	0.14	CLAY	Light to medium brown - grey; firm; high plasticity (clay); good core - unbroken; occasional bioturbation.
				C2768	20.38	0.05	CORE LOSS	
				C2768	20.60	0.22	CLAY	Light to medium brown - grey; firm; slickensides on fracture; high plasticity (clay); sparse, oblique joints, angle of joints 60 degrees; good core - unbroken; gradational base; occasional bioturbation.
				C2768	20.70	0.10	CLAY	Medium to dark brown - grey; firm; high plasticity (clay); good core - unbroken; occasional carbonaceous remains.

EL2080 LAUNCESTON. C0019

771178

LAUNCESTON.

## GEOLOGICAL LOG REPORT

ATP EL2080  
LAUNCESTON

TENEMENT 2080

STRAT NAME	SEQ NO.	SEAM NAME	WORK SECT	SAMPLE NUMBER	DEPTH (m)	THICK (m)	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA
				C2769	21.20	0.50	LIGNITE	Dark brown, firm, friable, good core - unbroken, occasional bioturbation.
				C2769	21.40	0.20	LIGNITE	Clayey, dark brown, firm, friable, good core - unbroken, occasional bioturbation.
				C2769	21.44	0.04	CLAY	Light to medium brown - grey, firm, high plasticity (clay), good core - unbroken, gradational base, common leaf fragments.
				C2769	21.84	0.40	LIGNITE	Dark brown - black, firm, friable, good core - unbroken, subfissile, rare resin agglomerates; Additional features include: good core - unbroken, occasional bioturbation.
				C2769	21.94	0.10	LIGNITE	Dark brown - black, firm, friable, good core - unbroken, fissile, occasional bioturbation.
				C2769	21.97	0.03	LIGNITE	Clayey, dark brown - black, low strength, brittle, good core - unbroken, fissile, occasional bioturbation.
				C2769	22.34	0.37	LIGNITE	Dark brown - black, firm, friable, good core - unbroken, occasional bioturbation.
				C2769	22.36	0.02	LIGNITE	Woody textured, dark brown - black, low strength, brittle, good core - unbroken, fissile.
				C2769	22.42	0.06	INFERIOR LIGNITE	Clayey, dark brown, firm, friable, good core - unbroken, occasional bioturbation.
				C2769	22.53	0.11	INFERIOR LIGNITE	Clayey, medium to dark brown - black, firm, friable, good core - unbroken, gradational base, common bioturbation.
				C2769	22.56	0.03	INFERIOR LIGNITE	Clayey, dark brown - black, firm, friable, good core - unbroken, common bioturbation.
				C2769	22.58	0.02	LIGNITE	Clayey, dark brown, firm, friable, good core - unbroken, gradational base, common bioturbation.
				C2771	22.71	0.13	LIGNEOUS CLAY	Medium to dark brown, firm, friable, good core - unbroken, common bioturbation.
				C2771	22.94	0.23	CLAY	Ligneous, silty, medium to dark brown - grey, firm, low plasticity (clay), good core - unbroken, common bioturbation.

EL2080 LAUNCESTON. 00019

113

771179

LAUNCESTON.

## GEOLOGICAL LOG REPORT

ATP EL2080  
LAUNCESTON

TENEMENT 2080

114

STRAT NAME	SEQ NO.	SEAM NAME	WORK SECT	SAMPLE NUMBER	DEPTH (m)	THICK (m)	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA
				C2771	23.19	0.25	CLAY	Light to medium brown - grey; firm; high plasticity (clay); good core - unbroken; gradational base; common bioturbation; Additional features include: good core - unbroken; abundant ligneous wisps.
				C2771	23.40	0.21	CLAY	Light to medium grey - brown; firm; high plasticity (clay); good core - unbroken; gradational base; rare ligneous wisps.
				C2771	23.54	0.14	CLAY	Light to medium brown; firm; high plasticity (clay); good core - unbroken.
				C	24.11	0.57	CORE LOSS	
				C2772	24.14	0.03	CLAY	Light to medium grey; firm; high plasticity (clay); good core - unbroken.
				C2772	24.17	0.03	CLAY	Light to medium grey - brown; firm; high plasticity (clay); good core - unbroken; gradational base; rare ligneous wisps.
				C2772	24.23	0.06	CLAY	Light to medium brown - grey; firm; high plasticity (clay); good core - unbroken.
				C2772	24.26	0.03	CLAY	Light to medium grey - brown; firm; high plasticity (clay); good core - unbroken; gradational base; occasional woody fragments; Additional features include: good core - unbroken; rare ligneous wisps.
				C2772	24.64	0.38	CLAY	Silty; light to medium grey - brown; firm; high plasticity (clay); good core - unbroken; rare ligneous wisps.
				C2772	24.75	0.11	CLAY	Silty; light to medium brown - grey; firm; high plasticity (clay); good core - unbroken.
				C2772	25.11	0.36	CLAY	Light to medium brown - grey; firm; high plasticity (clay); good core - unbroken; sharp irregular base.
				C2773	25.17	0.06	INFERIOR LIGNITE	Clayey; woody textured; dark brown; firm; friable; good core - unbroken; fissile.
				C2773	25.45	0.28	INFERIOR LIGNITE	Clayey; dark brown - black; firm; friable; good core - unbroken; fissile; rare bioturbation; Additional features include: good core - unbroken; common woody fragments.

EL2080 LAUNCESTON. C0019

771180

LAUNCESTON.

## GEOLOGICAL LOG REPORT

ATP EL2080  
LAUNCESTON TENEMENT 2080

STRAT NAME	SEQ NO.	SEAM NAME	WORK SECT	SAMPLE NUMBER	DEPTH (m)	THICK (m)	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA
				C2773	25.50	0.05	LIGNEOUS CLAY	Medium to dark brown; firm; low plasticity (organic); good core - unbroken; common woody fragments.
				C2773	25.60	0.10	INFERIOR LIGNITE	Clayey; dark brown; firm; friable; good core - unbroken; stratifoliate base; common woody fragments.
				C2773	25.69	0.09	CLAY	Light to medium brown - grey; firm; low plasticity (clay); good core - unbroken; stratifoliate base; rare resin aggregates.
				C2773	25.74	0.05	INFERIOR LIGNITE	Clayey; dark brown; firm; friable; good core - unbroken; occasional resin aggregates; Additional features include: good core - unbroken; rare bioturbation.
				C2773	26.15	0.41	LIGNITE	Medium to dark brown; firm; friable; good core - unbroken; stratifoliate base; occasional bioturbation.
				C2773	26.20	0.05	LIGNITE	Clayey; woody textured; medium to dark brown; firm; friable; good core - unbroken; subfissile.
				C2773	26.26	0.06	LIGNITE	Dark brown; firm; friable; good core - unbroken; sharp planar base; beds dip at 30 degrees; WHOLE UNIT DIPS AT 30 DEGREES
				C2773	26.39	0.13	INFERIOR LIGNITE	Clayey; dark brown; firm; friable; good core - unbroken.
				C2773	26.45	0.06	INFERIOR LIGNITE	Clayey; dark brown - black; firm; friable; good core - unbroken; fissile; common woody fragments; Additional features include: good core - unbroken; occasional bioturbation.
				C2775	26.55	0.10	LIGNITE	Dark brown; firm; friable; good core - unbroken; fissile.
				C2775	26.57	0.02	INFERIOR LIGNITE	Clayey; woody textured; medium to dark brown; low strength; friable; good core - unbroken; rare resin aggregates.
				C2775	26.78	0.21	LIGNITE	Clayey; dark brown; firm; friable; good core - unbroken; occasional resin aggregates.
				C2776	26.81	0.03	LIGNITE	Woody textured; dark brown; firm; friable; good core - unbroken; subfissile.

EL2080 LAUNCESTON. C0019

771181

LAUNCESTON.

## GEOLOGICAL LOG REPORT

ATP EL2080 TENEMENT 2080  
LAUNCESTON

116

STRAT NAME	SEQ NO.	SEAM NAME	WORK SECT	SAMPLE NUMBER	DEPTH (m)	THICK (m)	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA
				C2776	26.93	0.12	LIGNITE	Dark brown; firm; friable; good core - unbroken; rare bioturbation.
				C2776	27.21	0.28	LIGNITE	Dark brown; firm; friable; good core - unbroken; rare bioturbation.
				C2777	27.73	0.52	LIGNITE	Dark brown; firm; friable; good core - unbroken; occasional woody fragments.
				C2777	27.80	0.07	LIGNITE	Woody textured; dark brown - black; firm; friable; good core - unbroken; fissile.
				C2777	28.42	0.62	LIGNITE	Dark brown; firm; friable; good core - unbroken; rare bioturbation; Additional features include: good core - unbroken; occasional woody fragments.
				C2778	28.45	0.03	LIGNITE	Woody textured; dark brown - black; low strength; brittle; good core - unbroken; fissile.
				C2778	28.65	0.20	LIGNITE	Dark brown - black; firm; friable; good core - unbroken; common bioturbation.
				C2779	28.68	0.03	LIGNITE	Clayey; dark brown - black; firm; friable; good core - unbroken.
				C2779	28.72	0.04	INFERIOR LIGNITE	Clayey; dark brown; firm; friable; good core - unbroken.
				C2779	28.91	0.19	LIGNITE	Dark brown; firm; friable; good core - unbroken; occasional bioturbation.
				C2779	28.99	0.08	LIGNEOUS CLAY	Medium to dark brown - grey; firm; low plasticity (organic); good core - unbroken; gradational base.
				C2779	29.07	0.08	INFERIOR LIGNITE	Clayey; dark brown; firm; friable; good core - unbroken.
				C2779	29.12	0.05	CLAY	Ligneous; light to medium brown - grey; firm; high plasticity (clay); good core - unbroken; gradational base; occasional bioturbation.
				C2780	29.33	0.21	LIGNITE	Dark brown; firm; friable; good core - unbroken; occasional bioturbation.
				C2781	29.38	0.05	INFERIOR LIGNITE	Clayey; medium to dark brown - grey; firm; friable; good core - unbroken; occasional bioturbation.

EL2080 LAUNCESTON, C0019

771182

LAUNCESTON.

## GEOLOGICAL LOG REPORT

ATP EL2080 TENEHENT 2080  
LAUNCESTON

STRAT NAME	SEQ NO.	SEAM NAME	WORK SECT	SAMPLE NUMBER	DEPTH (m)	THICK (m)	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA
				C2781	29.94	0.56	LIGNITE	Dark brown; firm; friable; good core - unbroken; fissile; occasional bioturbation.
				C2781	30.27	0.33	LIGNITE	Dark brown; firm; friable; good core - unbroken; fissile; common bioturbation.
				C2781	30.46	0.19	LIGNITE	Clayey; dark brown - black; firm; friable; good core - unbroken; gradational base; common bioturbation.
				C2782	30.49	0.03	CLAY	Sandy; quartzose; medium to dark brown; firm; low plasticity (clay); good core - unbroken; very fine grained; common resin aggregates.
				C2782	30.54	0.05	CLAY	Medium to dark brown; firm; low plasticity (clay); good core - unbroken; rare woody fragments.
				C2782	30.59	0.05	CLAY	Sandy; medium to dark brown; firm; low plasticity (clay); good core - unbroken; very fine grained; common woody fragments.
				C2782	30.88	0.29	CLAY	Light to medium brown - grey; firm; high plasticity (clay); good core - unbroken; rare bioturbation; Additional features include: good core - unbroken; rare woody fragments.
				C2782	30.98	0.10	CLAY	Light to medium grey - brown; firm; high plasticity (clay); good core - unbroken; rare bioturbation.
				C2782	31.73	0.75	CLAY	Silty; light to medium grey - brown; firm; high plasticity (clay); good core - unbroken; gradational base; rare lenticular wisps; Additional features include: good core - unbroken; common bioturbation.
				C2782	32.24	0.51	CLAY	Silty; light to medium brown - grey; firm; high plasticity (clay); good core - unbroken; occasional woody fragments.
				C2783	32.26	0.02	LIGNEDUS CLAY	Medium to dark brown - black; firm; low plasticity (organic); good core - unbroken; occasional woody fragments.
				C2783	32.30	0.04	INFERIOR LIGNITE	Clayey; dark brown - black; firm; low plasticity (organic); good core - unbroken; rare resin aggregates; Additional features include: good core - unbroken; common bioturbation.

EL2080 LAUNCESTON. 00019

217

271183

LAUNCESTON.

## GEOLOGICAL LOG REPORT

ATP EL2080  
LAUNCESTON

TENEMENT 2080

118

STRAT NAME	SEQ NO.	SEAM NAME	WORK SECT	SAMPLE NUMBER	DEPTH (m)	THICK (m)	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA
				C2783	32.51	0.21	LIGNITE	Dark brown - grey; firm; friable; good core - unbroken; gradational base; common bioturbation.
				C2783	32.59	0.08	INFERIOR LIGNITE	Clayey; dark brown - black; firm; friable; good core - unbroken; gradational base; INCREASED CLAY CONTENT TOWARDS BASE
				C2783	32.63	0.04	CLAY	Light to medium grey - brown; firm; high plasticity (clay); good core - unbroken.
				C2783	32.66	0.03	CLAY	Lidaceous; medium to dark brown - grey; firm; high plasticity (clay); good core - unbroken; occasional bioturbation.
				C2783	33.04	0.38	CLAY	Light to medium brown; firm; high plasticity (clay); good core - unbroken; gradational base; common carbonaceous remains; Additional features include: good core - unbroken; common bioturbation.
				C2783	33.18	0.14	LIGNITE	Dark brown - black; firm; friable; good core - unbroken; common bioturbation.
				C	34.78	1.60	CORE LOSS	
-----					END OF BORE AT	34.78 m	-----	

EL2080 LAUNCESTON. C0019

771184

REPORT TC14-01  
LAUNCESTON.

THIESS COAL SYSTEM  
GEOLOGICAL LOG REPORT

PAGE 42 11/ 8/92 16:28:14  
ATP EL2080 TENEMENT 2080  
LAUNCESTON

STRAT NAME	SEQ NO.	SEAM NAME	WORK SECT	SAMPLE NUMBER	DEPTH (m)	THICK (m)	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA
					0.30	0.30	SILT	Sandy, medium to dark brown; medium dense; non-plastic; common woody fragments.
					1.80	1.50	CLAY	Sandy; mottled buff - orange; firm; low plasticity (clay); WITH A TRACE OF GRAVEL
					1.90	0.10	GRAVEL	Medium to dark red - purple; medium dense; non-plastic; BUCKSHOT/IRONSTONE
					3.50	1.60	CLAY	Silty; mottled yellow - grey; firm; low plasticity (clay); Additional features include: sink; WITH STIFF LOW PLASTICITY BANDS
					3.90	0.40	IRONSTONE - UN-DIFFERENTIATED	Medium to dark brown - yellow; low strength; brittle; CONCRETIONARY IRONSTONE; FERRICRETE
					5.00	1.10	CLAY	Kaolinitic; mottled grey - yellow; firm; high plasticity (clay); gradational base.
					7.00	2.00	CLAY	Silty; kaolinitic; mottled buff - grey; stiff; low plasticity (clay); Additional features include: yellow.
					9.35	2.35	CLAY	Light brown - grey; firm; high plasticity (clay).
					10.20	0.85	LIGNITE	Humified; woody textured; medium to dark black - brown; firm; friable.
					10.60	0.40	INFERIOR LIGNITE	Humified; woody textured; medium to dark brown; firm; friable.
					11.70	1.10	LIGNITE	Humified; woody textured; medium to dark black - brown; firm; friable; Bands include: LIGNEOUS CLAY; medium to dark brown; firm; low plasticity (argonic).

EL2080 LAUNCESTON. R0020

REPORT TC14-01

THIASS COAL SYSTEM

PAGE 12 11/ 6/82 16:28:14

LAUNCESTON.

GEOLOGICAL LOG REPORT

ATP EL2080  
LAUNCESTON

TENEMENT 2080

STRAT NAME	SEQ NO.	SEAM NAME	WORK SECT	SAMPLE NUMBER	DEPTH (m)	THICK (m)	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA
					0.30	0.30	SILT	Sandy; medium to dark brown; medium dense; non-plastic; common woody fragments.
					1.80	1.50	CLAY	Sandy; mottled buff - orange; firm; low plasticity (clay); WITH A TRACE OF GRAVEL
					1.90	0.10	GRAVEL	Medium to dark red - purple; medium dense; non-plastic; BUCKSHOT/IRONSTONE
					3.50	1.60	CLAY	Silty; mottled yellow - grey; firm; low plasticity (clay); Additional features include: pink; WITH STIFF LOW PLASTICITY BANDS
					3.90	0.40	IRONSTONE - UN-DIFFERENTIATED	Medium to dark brown - yellow; low strength; brittle; CONCRETIONARY IRONSTONE; FERRICRETE
					5.00	1.10	CLAY	Kaolinitic; mottled grey - yellow; firm; high plasticity (clay); nodular base.
					7.00	2.00	CLAY	Silty; kaolinitic; mottled buff - grey; stiff; low plasticity (clay); Additional features include: yellow.
					9.35	2.35	CLAY	Light brown - grey; firm; high plasticity (clay).
					10.20	0.85	LIGNITE	Humified; woody textured; medium to dark black - brown; firm; friable.
					10.60	0.40	INFERIOR LIGNITE	Humified; woody textured; medium to dark brown; firm; friable.
					11.70	1.10	LIGNITE	Humified; woody textured; medium to dark black - brown; firm; friable; Bands include: LIGNEDUS CLAY; medium to dark brown; firm; low plasticity (argonic).

EL2080 LAUNCESTON. R0020

STRAT NAME	SEQ NO.	SEAM NAME	WORK SECT	SAMPLE NUMBER	DEPTH (m)	THICK (m)	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA
					12.20	0.50	INFERIOR LIGNITE	Humified, medium to dark brown, firm, friable; Bands include: LIGNEOUS CLAY, medium to dark brown, firm, low plasticity (organic).
					12.95	0.75	LIGNEOUS CLAY	Medium to dark brown, firm, low plasticity (organic).
					14.00	1.05	INFERIOR LIGNITE	Humified, gelatinous, medium to dark brown, soft.
					14.20	0.20	INFERIOR LIGNITE	Humified, woody textured, medium to dark brown, firm, friable.
					14.40	0.20	LIGNITE	Humified, woody textured, medium to dark black - brown, firm, friable.
					14.70	0.30	INFERIOR LIGNITE	Humified, woody textured, medium to dark brown, firm, friable.
					15.50	0.80	LIGNEOUS CLAY	Medium to dark brown, firm, low plasticity (organic); Bands include: INFERIOR LIGNITE, humified, clayey, medium to dark brown, firm, friable; Bands include: CLAY, carbonaceous, medium to dark grey - brown, firm, high plasticity (clay), common ligneous wisps.
					16.05	0.55	INFERIOR LIGNITE	Humified, medium to dark brown - black, firm, friable.
					17.10	1.05	LIGNITE	Humified, dark black - brown, firm, friable; Bands include: INFERIOR LIGNITE, clayey, medium to dark brown - black, firm, friable; Bands include: LIGNEOUS CLAY, medium to dark brown, firm, low plasticity (organic).
					17.55	0.45	INFERIOR LIGNITE	Medium to dark brown - black, firm, friable.
					17.95	0.40	LIGNITE	Humified, dark black - brown, firm, friable.
					18.55	0.60	LIGNEOUS CLAY	Humified, medium to dark brown, firm, low plasticity (organic); Bands include: CLAY, carbonaceous, medium to dark grey - brown, firm, high plasticity (clay).
					19.00	0.45	INFERIOR LIGNITE	Medium to dark brown - black, firm, friable.
					19.30	0.30	LIGNEOUS CLAY	Medium to dark brown, firm, low plasticity (organic).

REPORT TC14-01

THIERS COAL SYSTEM

PAGE 41 11/ 6/82 16:28:16

LAUNCESTON.

GEOLOGICAL LOG REPORT

ATP EL2080 TENEMENT 2080  
LAUNCESTON

STRAT NAME	SEQ NO.	SEAM NAME	WORK SECT	SAMPLE NUMBER	DEPTH (m)	THICK (m)	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA
					21.10	1.80	INFERIOR LIGNITE and LIGNEOUS CLAY	Interbedded 80:20. INFERIOR LIGNITE: humified, dark black - brown, firm, friable; LIGNEOUS CLAY: medium to dark brown, firm, low plasticity (ordonic); Bands include: INFERIOR LIGNITE, humified, clayey, medium to dark brown, firm, friable.
					21.75	0.65	INFERIOR LIGNITE	Clayey, medium to dark brown, firm, friable.
					22.80	1.05	CLAY	Carbonaceous, medium to dark brown - grey, firm, high plasticity (clay); abundant ligneous wisps; Bands include: LIGNITE, medium to dark black - brown, firm, friable; Bands include: LIGNEOUS CLAY, medium to dark brown, firm, low plasticity (ordonic).
					24.10	1.30	LIGNITE	Humified, dark black - brown, firm, friable; Bands include: LIGNEOUS CLAY, medium to dark brown, firm, low plasticity (ordonic).
					25.00	0.90	LIGNITE and LIGNEOUS CLAY	Interbedded 80:20. LIGNITE: humified, dark black - brown, firm, friable; LIGNEOUS CLAY: medium to dark brown, firm, low plasticity (ordonic).
					25.70	0.70	INFERIOR LIGNITE	Dark brown, firm, friable.
					26.35	0.65	LIGNITE	Humified, dark black - brown, firm, friable.
					26.80	0.45	INFERIOR LIGNITE	Dark brown, firm, friable.
					29.85	3.05	SAND	Clayey, ligneous, medium to dark brown, medium dense, non-plastic, fining upwards; abundant woody fragments; Additional features include: quartzose, abundant ligneous wisps; Bands include: CLAY, carbonaceous, medium to dark brown - grey, firm, high plasticity (clay); common ligneous wisps; Bands include: CLAY, light to medium grey - brown, firm, high plasticity (clay).
					30.30	0.45	LIGNEOUS CLAY	Medium to dark brown, firm, low plasticity (ordonic).
					30.90	0.60	INFERIOR LIGNITE	Dark brown, firm, friable.
					31.40	0.50	LIGNITE	Humified, dark black - brown, firm, friable.

STRAT NAME	SEQ NO.	SEAM NAME	WORK SECT	SAMPLE NUMBER	DEPTH (m)	THICK (m)	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA
					33.80	2.40	INFERIOR LIGNITE	Dark brown; firm; friable; Bands include: LIGNEOUS CLAY; medium to dark brown; firm; low plasticity (argenic); Bands include: CLAY; carbonaceous; medium to dark brown - grey; firm; high plasticity (clay).
					36.85	3.05	CLAY	Carbonaceous; medium to dark brown - grey; firm; high plasticity (clay).
					37.30	0.45	SAND	Ligneous; quartzose; medium to dark brown; medium dense; non-plastic.
					38.20	0.90	INFERIOR LIGNITE	Sandy; quartzose; medium to dark brown; firm; friable; Additional features include: humified; clauveu.
					38.55	0.35	CLAY	Medium to dark brown - grey; firm; high plasticity (clay).
					40.20	1.65	INFERIOR LIGNITE	Humified; clauveu; medium to dark brown; firm; friable; Bands include: CLAY; carbonaceous; medium to dark brown - grey; firm; high plasticity (clay); common woody fragments; Bands include: LIGNEOUS CLAY; medium to dark brown; firm; low plasticity (argenic).
					47.20	7.00	CLAY	Carbonaceous; medium to dark brown; firm; high plasticity (clay); gradational base; common woody fragments; Additional features include: abundant ligneous wisps; Bands include: CLAY; ligneous; medium to dark brown; firm; low plasticity (clay); Bands include: INFERIOR LIGNITE; humified; clauveu; medium to dark brown; firm; friable.
					47.85	0.65	CLAY	Light to medium grey - brown; firm; high plasticity (clay).
					49.60	1.75	CLAY	Carbonaceous; medium to dark brown; firm; high plasticity (clay).
					60.30	10.70	SAND	Quartzose; light to medium grey; medium dense; non-plastic; fine and medium grained; poorly sorted; subrounded; equant; fining upwards; common woody fragments; Additional features include: rounded; common ligneous fragments.

STRAT NAME	SEQ NO.	SEAM NAME	WORK SECT	SAMPLE NUMBER	DEPTH (m)	THICK (m)	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA
					62.80	2.50	SAND	Quartzose; light to medium grey; medium dense; non-plastic; fine and medium grained; poorly sorted; subrounded; equant; coarsening upwards; common woody fragments; Additional features include: rounded; common lissaceous fragments.
					63.50	0.70	CLAY	Light to medium brown - grey; firm; high plasticity (clay); gradational base.
					67.50	1.00	SAND	Quartzose; woody textured; light to medium grey; medium dense; non-plastic; fine and medium grained; abundant lissaceous fragments; WOOD NOT HUMIFIED; FIBROUS TEXTURE
					69.80	2.30	SAND	Quartzose; clayey; light to medium grey; medium dense; non-plastic; fine grained.
					70.90	1.10	SAND	Quartzose; woody textured; light to medium grey; medium dense; non-plastic; fine and medium grained.
					71.14	0.24	LIGNITE	Woody textured; medium to dark brown; firm; friable; fibrous.
					72.15	1.01	SIDERITE	Light grey; high strength; tough.
					80.00	7.85	SAND	Quartzose; clayey; light to medium grey; medium dense; non-plastic; fine grained.

-----  
END OF BORE AT 80.00 m  
-----

EL2080 LAUNCESTON. R0020

124

771190