

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
423.23	423.29	0.06	100	FMLSS, grey-white; minor festoon cross-bedded carbonaceous laminae. BC dips at 2°.		
423.29	423.35	0.06		<u>COAL SECTION:</u> Dark-grey mudstone/carbonaceous mudstone (50:50), laminite; abundant slickensides. GBC.	}	
423.35	423.47	0.12		Dark-grey mudstone; abundant carbonaceous mudstone lenticles; minor disturbed bedding (dipping at 5°). GBC.		
423.47	423.80	0.33		Dull coal; well-developed sub-vertically-dipping joints; minor bright coal bands; brown mudstone bands, shaly in part, at 423.49 m, 423.55 m, 423.58 m and 423.63 m. GBC.		
423.80	423.84	0.04		Shale, brown; abundant carbonaceous debris and lenticles.		
423.84	423.97	0.13		Dull coal; abundant sub-vertically-dipping joints and cleat; minor bright bands; grades with depth to carbonaceous mudstone; brown-pink claystone band from 423.95 - .95 m. GBC.		
423.97	424.01	0.04		Mudstone, grey; abundant plant-fossil debris. GBC.		
424.01	424.03	0.02		Dull coal; bright bands common; disturbed top and bottom contacts. GBC.		
				(BASE OF COAL SECTION)		
424.03	424.97	0.94		Mudstone, grey; shaly in part; poorly carbonaceous from 424.03 m to 424.08 m; abundant slickensides from 424.48 m to 424.93 m. GBC.		
424.97	425.31	0.34	100	FLSS, light-grey/siltstone, grey (50:50); interbanded; minor lenticular		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS												
			metres	%													

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				and flaser bedding. GBC.		
425.31	426.58	1.27	100	Mudstone, grey; minor slickensides; shaly in part; abundant FMLSS and siltstone bands from 426.18 - .28 m; brown-grey from 425.57 m to 426.08 m and poorly shaly; shaly intervals in basal 30 cm with minor laminite. BC dips at 5°.		
426.58	426.99	0.41		FLSS, grey-white/siltstone, grey (75:25), interbedded; minor contorted bedding and laminite. GBC.		
426.99	427.47	0.48		Laminite, grey siltstone/light-grey FLSS (75:25); minor flaser bedding dipping at up to 5°; minor slickensides. Slickensided BC.		
427.47	427.63	0.16		Carbonaceous mudstone/grey mudstone (50:50), interbedded; abundant coaly bands and laminae (contorted, irregular); abundant slickensides and plant-fossil debris. GBC.		
427.63	427.82	0.19		Mudstone, grey; grades to shaly with depth. BC dips at 5°.		
427.82	427.89	0.07		Carbonaceous mudstone; shaly; minor dull coal; core parts readily. BC dips at 2°.		
427.89	428.02	0.13		Shale, brown-grey; poorly carbonaceous; light-brown towards base. GBC.		
428.02	429.39	1.37		Mudstone, grey; minor slickensides; minor acicular brown and black plant-fossil debris; silty; dark-grey with minor laminite from 428.81 m to 429.11 m; poorly shaly at base. BC dips at 2°.		
429.39	429.45	0.06		<u>COAL SECTION:</u> Dull coal, minor brown-black shaly laminae. Rippled BC dips at 5°.		
429.45	429.47	0.02		Mudstone, grey-white; bedding dips at 5°; lenticular; sparse carbonaceous lentils and debris. Undulose (rippy) BC dips at 5°.		
429.47	429.63	0.16	100	Carbonaceous mudstone; minor heavy dull coal; abundant 1 to 3 mm Continued over		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
429.63	430.14	0.51	100	diameter brown clay clasts and pellets; abundant coaly debris. Irregular BC. <u>COAL SECTION:</u> Dull coal; heavy dull coal at top 3 cm; broken core due to abundant cleat and joints; minor bright bands and laminae. BC dips at 2°. (Contd.))	(Contd.)
				(BASE OF COAL SECTION)		
430.14	431.24	1.10		FLSS, brown-grey; grades with depth to FMLSS; minor coaly debris and 45° - dip slickensides.		
431.24	437.50	6.26		FMLSS; minor MLSS intervals; massive with minor 0° to 5° - dip bands; abundant coaly debris, CLSS and mudstone intervals from 436.45 m to 437.15 m. GBC.		
437.50	451.11	13.61		MLSS; mud-pellets and cobbles and coaly debris from 437.53 m to 438 m; minor coaly debris from 439.28 m to 451.11 m with occasional mud-pellets and FLSS intervals; minor carbonate matrix from 445.60 m to 446.5 m; coaly debris, CLSS, minor disturbed bedding and conglomerate cobbles from 450.1 m to 450.35 m.		
451.11	451.33	0.22		Mudstone, light-grey; abundant wispy contorted carbonaceous laminae. Irregular BC.		
451.33	451.39	0.06		<u>COAL SECTION:</u> Dull coal, minor bright bands; minor carbonaceous and grey mudstone lenticles. (not sampled))	
451.39	451.40	0.01		Shale, grey-brown.		
451.40	451.62	0.22		Dull coal, shaly from 451.40 - .42 m; broken core due to well-developed sub-vertical cleat; minor bright bands.		
451.62	451.66	0.04	100	Laminite, bright coal/dull coal/grey mudstone/carbonaceous mudstone (approx. equal proportions). <small>Continued over</small>)	

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
451.66	451.71	0.05	100	<u>COAL SECTION:</u> Mudstone, grey; minor wispy, (not sampled) ripply carbonaceous lamin- (Contd.) ae.	}	(Contd.)
451.71	451.73	0.02		Dull coal; abundant pyrite mineralisation. GBC.		
				(BASE OF COAL SECTION)		
451.73	452.57	0.84		Mudstone, grey; abundant slickensides and carbonaceous laminae; coaly bands and laminae from 452.09 m to 452.19 m.		
452.57	452.58	0.01		Shale, grey-brown; carbonaceous at top and bottom.		
452.58	455.38	2.80		Interbedded grey siltstone/light-grey FLSS/ grey mudstone (25:50:25); minor carbon- aceous laminae, joints, slickensides and festoon cross-bedding. GBC.		
455.38	456.75	1.37		FMLSS, grey-white; disturbed bedding and minor carbonaceous laminae dips at up to 10°.		
456.75	463.02	6.27		Interbedded grey siltstone/dark-grey mud- stone/light-grey FLSS (25:25:50) with minor carbonaceous intervals, bioturbation and slickensides. Slickensided BC dips at 30°.		
463.02	471.07	8.05		FMLSS with abundant silty festoon cross- bedding; grey-white; massively-bedded. BC dips at 5°.		
471.07	471.28	0.21		Mudstone, grey; abundant green-grey distor- ted mudstone laminae and bands. BC dips at 10°.		
471.28	471.31	0.03		<u>COAL SECTION:</u> Laminite, dull coal/grey mudstone (50:50); minor brown and white mudstone. BC dips at 5°.	}	A (top of main working section)
471.31	471.53	0.22	100	Dull coal; well-developed cleat and joints; 45° to sub-vertically-dipping slickensides with minor fault movement from 471.30 m to 471.35 m.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
471.53	471.55	0.02	100	<u>COAL SECTION:</u> (Contd.) Bright coal; kaolinite (?) on cleat. BC dips at 2°.	A (top of main working section) (Contd.)	
471.55	471.63	0.08		Dull coal; grades with depth to carbonaceous mudstone.		
471.63	471.77	0.14		Carbonaceous mudstone with heavy dull coal (50:50); abundant white clay clasts and pellets. GBC.		
471.77	472.00	0.23		Dull coal; 45° dip cleat (not pronounced); minor carbonaceous mudstone bands from 471.92 - .97 m.		
472.00	472.02	0.02		Claystone; indurated; white-pink-brown; abundant vermiform carbonate needles at base. BC dips at 2°.		
472.02	472.06	0.04		Dull coal. GBC.		
472.06	472.07	0.01		Carbonaceous mudstone; minor brown colour. GBC.		
472.07	472.31	0.24		Dull coal; minor bright bands; abundant kaolinite on cleat and sub-vertical carbonate veins.		
472.31	472.33	0.02		Mudstone; light-grey grading to brown at base; clayey.		
472.33	472.35	0.02		Dull coal. BC dips at 2°.		
472.35	472.36	0.01		Carbonaceous mudstone; lenticular brown and grey mudstone bands. GBC.	B (Base of main Working Section)	
472.36	472.66	0.30		Dull coal; well-developed (but not pronounced) sub-vertical cleat. GBC.		
472.66	473.00	0.34		Dull coal; broken core due to abundant cleat and jointing; minor bright bands.		
473.00	473.07	0.07	100	Interbanded dull and bright coal; abundant pyrite in bright coal; minor kaolinite. GBC.		
				Continued over		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
473.07	473.33	0.26	100	<u>COAL SECTION:</u> Dull coal; minor bright bands; well-developed sub-vertical cleat. GBC. (Contd.)	}	B (Base of main Working Section)
473.33	473.40	0.07		Bright coal; minor dull coal bands; abundant kaolinite on cleat.		
				(BASE OF COAL SECTION)		
473.40	474.29	0.89		Brown-grey clayey siltstone; minor sandy and shaly intervals from 473.53 m to 474.29 m. GBC.		
474.29	481.91	7.62		Brown-grey FMLSS grading with depth to grey white FMLSS; abundant banding and FLSS and MLSS intervals; minor carbonate matrix and bedding dipping at up to 5°. BC dips at 2°.		
481.91	481.93	0.02		Dull coal. BC dips at 2°.		
481.93	481.99	0.06		Brown shale; bedding dips at up to 5°. Slickensided BC dips at 45°. Minor slickensides.		
481.99	482.09	0.10		Dull coal. Slickensided BC dips at 45°. Abundant slickensides.		
482.09	483.05	0.96		Interbanded light-grey FLSS/grey siltstone (50:50), minor FMLSS and mudstone intervals, minor slickensides; minor coaly debris and microfaults. Irregular BC dips at 2°.		
483.05	483.11	0.06		<u>COAL SECTION:</u> Laminite, carbonaceous mudstone /dark-grey mudstone (75:25). Irregular BC.	}	
483.11	483.52	0.41		Dull coal; well-developed sub-vertically-dipping cleat; abundant 45° to sub-vertical joints; minor sub-horizontal partings; broken core in part; minor carbonaceous mudstone from 483.21 m to 483.26 m. GBC.		
483.52	483.67	0.15	100	Interbanded bright and dull coal; abundant kaolinite on cleat; broken core; slickensided. BC forms		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION		
		metres	%		Core	Sample	
				a point, dipping away at 45° on either side of the joint.)		
				(BASE OF COAL SECTION)			
483.67	489.60	5.93	100	Interbedded dark-grey mudstone/grey siltstone/light grey F and FMLSS (approximately equal proportions); minor slickensides; shaly, carbonaceous interval with minor bright and dull coal bands from 485.02 m to 485.30 m (abundant slickensides); abundant disturbed and irregular bedding (flame-structures, lenses, rollovers, bioturbation (minor)); minor festoon cross-bedding.			
489.60	491.36	1.76		FMLSS, light-grey; minor carbonaceous laminae (commonly festoon-cross-bedded). GBC.			
491.36	492.42	1.06		Siltstone, grey; minor sandy and mudstone intervals; banded in part. BC dips at 2°.			
492.42	492.45	0.03		<u>COAL SECTION:</u> Heavy dull coal; minor sub-horizontal slickensides. BC dips at 2°.	}		
492.45	492.49	0.04		Laminite, dull coal/bright coal (50:50), minor kaolinite (?) and sub-vertically-dipping carbonate veins. GBC.			
492.49	492.53	0.04		Dull coal. GBC.			
492.53	492.61	0.08		Heavy dull coal. GBC.			
492.61	492.86	0.25		Carbonaceous mudstone; grades with depth to carbonaceous siltstone, sandy; minor joints. GBC.			
492.86	493.37	0.51	100	Interbanded FMLSS, grey-white /carbonaceous siltstone (50:50), minor irregular and lenticular bedding; minor ripple and flaser bedding and cross-bedding. GBC.			
				Continued over			

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				(BASE OF COAL SECTION)		
493.37	494.79	1.42	100	FMLSS, grey-white; minor carbonaceous bands and laminae (dipping at up to 5°); minor clay pellets in basal 5 cm. BC dips at 2°.		
494.79	497.73	2.94		MLSS, grey-white, massively bedded; carbonate (massive) from 495.9 m to 496.2 m; minor FLSS (festoon-cross-bedded) from 496.2 m to 496.6 m. BC dips at 5°.		
497.73	497.83	0.10		<u>COAL SECTION:</u> Dull coal; minor bright laminae; abundant calcite veins and calcite-coated slickenside near base. GBC.		
497.83	497.98	0.15		Mudstone, dark-grey; carbonaceous at top; minor carbonaceous debris.		
497.98	498.39	0.41		FLSS, grey-brown; clayey; abundant muscovite flakes, silty; minor banding and festoon cross-bedding.		
498.39	498.60	0.21		Heavy dull coal; minor dull coal; minor grey mudstone lenticles; minor sub-vertically-dipping joint; core parts readily along bedding plane. GBC.		
498.60	498.68	0.08		Carbonaceous mudstone; abundant grey mudstone laminae dipping at up to 2°; minor slickensides. Undulose BC.		
498.68	498.69	0.01		Shale, brown-grey-white; clayey.		
498.69	498.74	0.05		Carbonaceous mudstone; minor grey mudstone laminae and lenticles; minor dull coal intervals; silty. GBC.		
498.74	498.77	0.03	100	Heavy dull coal; minor claystone pellets and lenticles; minor carbonaceous mudstone.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS														
			metres	%															

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
498.77	498.79	0.02	100	<u>COAL SECTION:</u> (Contd.) Carbonaceous mudstone with abundant brown-grey-pink clay pellets; lenticular bedding. Irregular BC.	}	
498.79	498.84	0.05		Interlaminated dull coal/grey sandy siltstone (75:25); minor carbonaceous mudstone; irregular and lenticular bedding dips at 5°. BC dips at 5°.		
498.84	499.00	0.16		Dull coal; minor bright laminae; abundant joints dipping at from 45° to 90° (relative to core axis). Cuspate, irregular BC.		
				<u>(BASE OF COAL SECTION)</u>		
499.00	499.11	0.11		Mudstone, light-grey; abundant coaly shards; disturbed bedding; contorted wispy coaly stringers (sub-vertical to sub-horizontal). GBC.		
499.11	501.86	2.75		Mudstone, grey; silty; abundant FLSS and siltstone bands and laminae; minor jointing and slickensides; shaly; minor carbonate on joints and slickensides; sandy and clayey; minor festoon cross-bedding; minor bioturbation; 45°-dip sigmoidal open-framework calcite vein from 501.23 m to 501.28 m; grey-brown shale band with minor carbonaceous mudstone dipping at 5° from 501.67 - .69 m. Undulose BC dips at 5°.		
501.86	501.90	0.04		<u>COAL SECTION:</u> Laminite, grey mudstone/ carbonaceous mudstone (50:50), abundant grey-brown clay clasts; bedding dips at up to 5°. BC dips at 2°.	}	
501.90	502.02	0.12	100	Dull coal; abundant sub-horizontal 0.5 cm - spaced cleat. GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
502.02	502.10	0.08	100	<u>COAL SECTION:</u> (Contd.) Dull coal; abundant slicken-sides (calcite-coated) dipping at up to 45°. BC dips at 2°.	}	
502.10	502.13	0.03		Interlaminated grey-brown-pink claystone/carbonaceous (50:50) mudstone; abundant pellets and lenticles; bedding dips at 5°. BC dips at 2°.		
502.13	502.15	0.02		Dull coal. GBC.		
502.15	502.16	0.01		Mudstone, dark-grey-brown; minor carbonaceous mudstone; bedding dips at 2°. BC dips at 2°.		
502.16	502.19	0.03		Dull coal; sub-vertically-dipping joints (extend from 502.10 m to 502.19 m). GBC dips at 2°.		
502.19	502.21	0.02		Claystone, grey-brown/dull coal (50:50). BC dips at 2°.		
502.21	502.27	0.06		Dull coal; abundant sub-vertically-dipping joints; broken core. Diffuse, irregular BC.		(Contd.)
502.27	502.47	0.20		Carbonaceous mudstone; minor heavy dull coal.		
502.47	502.50	0.03		Mudstone, grey-brown/carbonaceous (75:25); abundant clay clasts.		
502.50	502.54	0.04		Carbonaceous mudstone; minor heavy dull coal. Undulose BC dips at 2°.		
502.54	502.87	0.33	100	Dull coal; broken core (due to sub-vertically-dipping joints); minor bright laminae and sandy lenticles. Undulose BC dips at 10°.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS												
			metres	%													

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
502.87	502.94	0.07	100	<u>COAL SECTION:</u> Secondary (?) carbonate veins; closely-parked in carbonaceous mudstone (dull coal (?)) matrix.	}	(Contd.)
502.94	503.22	0.28		Dull coal; abundant calcite veins and coating on slickenside surfaces; abundant joints (very broken core). Irregular, slickensided BC.		
				(BASE OF COAL SECTION)		
503.22	503.82	0.60		Mudstone, light-grey; abundant slickensides and carbonaceous debris, broken core and minor coaly lenticles from 503.22 m to 503.42 m; contorted coaly stringers and minor sandy bands from 503.42 m to 503.66 m; bedding dips at up to 5° from 503.66 m to 503.82 m. GBC.		
503.82	504.55	0.73		Mudstone, grey/FLSS, light-grey (50:50), interbanded; minor disturbed bedding and coaly debris; shaly and clayey in part. GBC.		
504.55	505.05	0.50		FLSS, light-grey; abundant bands and laminae (minor festoon cross-bedding dipping at up to 5°) of mudstone and carbonaceous mudstone. GBC.		
505.05	505.29	0.24		FMLSS, grey-white; minor sub-vertical carbonate-coated joints. Irregular BC dips at 2°.		
505.29	505.97	0.68		Siltstone, grey/FLSS, light-grey (75:25), interbanded; minor lenticular and festoon cross-bedding and carbonaceous laminae. GBC.		
505.97	506.87	0.90		FLSS, light-grey; shaly; minor carbonaceous and grey mudstone bands and laminae. GBC.		
506.87	507.26	0.39		Mudstone, grey; abundant light-grey mudstone /siltstone bands and laminae; minor sub-vertical joints. Irregular BC.		
507.26	507.28	0.02	100	Shale, olive-green-grey; carbonaceous at top and bottom; abundant black and brown fossil-plant debris.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS														
			metres	%															

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
507.28	507.35	0.07	100	Dark-grey mudstone; minor slickensides; carbonaceous in part; disturbed bedding. BC dips at 10°.		
507.35	507.76	0.41		Mudstone, grey; grades to siltstone with depth; minor coaly stringers and sub-vertical joint. GBC.		
507.76	508.08	0.32		Siltstone, light-grey; sandy; minor jointing and mudstone lenticles. GBC dips at 2°.		
508.08	508.56	0.48		FLSS, light-grey/siltstone, grey (75:25); interbedded; abundant sub-vertical burrows and contorted bedding. Stepped BC dips at 2°.		
508.56	509.11	0.55		FLSS (grading to FMLSS with depth), light-grey /siltstone, grey (75:25), interbanded; minor carbonaceous and mudstone laminae; minor disturbed bedding. GBC.		
509.11	509.33	0.22		MLSS, grey-white; speckly; banding and laminae dipping at 5°. GBC.		
509.33	509.67	0.34		MLSS, white; abundant carbonate matrix. Irregular, stepped BC dips at 10°.		
509.67	511.44	1.77		FMLSS, grey-white; minor sub-vertical joints; faint banding in part; minor MLSS and FLSS intervals. BC dips at 2°.		
511.44	511.81	0.37		<u>COAL SECTION:</u> (not sampled) Mudstone, grey and dark-grey; laminated bedding dips at 2°; sub-vertically-dipping joint through centre of the core; grades to carbonaceous with depth. GBC.		
511.81	511.93	0.12		Carbonaceous mudstone; minor heavy dull coal; abundant joints and slickensides (broken core). GBC.		
511.93	512.32	0.39		Dull coal; minor bright laminae; heavy dull coal in part; minor sub-vertical joints. GBC.		
512.32	512.42	0.10	100	Carbonaceous mudstone/heavy dull coal (50:50). GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
512.42	512.60	0.18	100	<u>COAL SECTION:</u> (not sampled) (Contd.) Mudstone, dark-grey; abundant carbonaceous and coaly debris; silty. GBC.	}	
512.60	513.18	0.58		Siltstone, brown-grey-black/FLSS, brown-grey (50:50), interbanded; minor laminae dipping at up to 2°. GBC.		
513.18	513.88	0.70		Carbonaceous mudstone/FLSS, grey (75:25); interbanded; minor irregular bedding and coaly laminae dipping at 5°. BC dips at 5°. Silty.		
513.88	515.47	1.59		FMLSS, light-grey; abundant carbonaceous mudstone and siltstone bands and laminae; minor coaly debris; minor disturbed and contorted irregular bedding (dips at 5°); minor clay-pellet bands; abundant sub-vertically-dipping jointing. BC dips at 5°.		
515.47	530.94	15.47		(BASE OF COAL SECTION) FMLSS, green-grey; minor MLSS, FLSS and CLSS intervals; abundant (less than 1 mm-diameter) brown nodules scattered throughout from 515.47 m to 518.62 m; abundant sub-vertically-dipping joints from 518.62 m to 527.90 m; minor nodules from 520.2 m to 525.6 m (not present in some parts); rippled core surface; siltstone pellets and FLSS from 524.2 m to 524.4 m; abundant brown nodules from 525.60 m to 526.06 m (Specimen 8059-1 from 525.78 m to 525.88 m); broken core from 527.64 m to 527.90 m; light-grey from 527.90 m to 530.94 m. GBC.	}	
530.94	533.40	2.46	100	FLSS, light-grey to grey; minor banding and 45°-dip joints; interbedded FLSS/grey siltstone with disturbed bedding from 533 m to 533.40 m. GBC.		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
538.94	539.20	0.26	100	mudstone bands and laminae; thin sub-vertical calcite veins. BC dips at 2°.		
539.20	539.78	0.58		Interbanded light-grey FLSS/grey mudstone (50:50); grades to mudstone with depth; minor burrows. GBC.		
539.78	539.99	0.21		Mudstone, dark-grey; carbonaceous in part; minor slickensides; shaly from 539.58 m to 539.78 m. GBC.		
539.99	540.04	0.05		Shale, olive-green-grey.		
540.04	540.06	0.02		Dull coal; slickensides at base; grades to carbonaceous brown-black shale with depth.		
540.06	540.13	0.07		Shale, olive-green-grey.		
540.13	540.14	0.01		Heavy dull coal. GBC.		
540.14	540.19	0.05		Shale, grey-brown; bedding dips at 2°.		
540.19	540.52	0.33		Carbonaceous mudstone; silty; minor light-grey bands and lenticles. GBC.		
540.52	540.58	0.06		Siltstone, grey; abundant sandy and mudstone bands and laminae.		
540.58	540.85	0.27		Carbonaceous mudstone; abundant slickensides; shaly in part. GBC.		
540.85	542.38	1.53		Mudstone, silty. GBC.		
542.38	547.18	4.80	100	FLSS; grey; silty at top with mudstone intervals; minor festoon cross-bedding; disturbed bedding (dipping at 30°) with brown nodules from 542.28 m to 542.38 m. GBC.		
				FMLSS, grey-white; predominantly massive; minor carbonaceous lenticles dipping at up to 5° from 542.62 m to 543.63 m; abundant siltstone and dark-grey mudstone bands and laminae with minor festoon cross-bedding dipping at up to 5° from 543.63 m to 544.64 m; minor mudstone shards from 544.64 m to 545.61 m; abundant intraformational conglomerate intervals of dark-grey siltstone pebbles and cobbles from 545.61 m to 546.92 m. Undulose BC dips at 2°.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
547.18	548.04	0.86	100	Carbonaceous mudstone; silty; abundant plant-fossil debris; sandy in part.		
548.04	548.46	0.42		Interbanded carbonaceous siltstone/dark-grey FLSS (50:50), bedding dips at 5°. BC dips at 5°.		
548.46	549.57	1.11		MQSS, white; sparkly; abundant carbonaceous laminae dipping at up to 20°; minor festoon cross-bedding; large-scale planar cross-bedding predominant from 548.63 m to 549.57 m. Slickensided BC dips at 30°. <u>(Top of this unit constitutes the upper surface of the quartzose sandstone found at the base of the Upper Parmeener Super-Group in N.E. Tasmania).</u>		
549.57	549.87	0.30		Siltstone, dark-grey; muddy; minor slickensides; faint laminae and bands. Cross-bedded BC.		
549.87	550.83	0.96		FMLSS, grey-white; minor siltstone bands and laminae dipping at up to 30°. BC dips at 2°.		
550.83	551.74	0.91		Mudstone, dark-grey; minor slickensides; abundant silty and sandy bands and laminae; minor lenticles. Slickensided BC dips at 30°.		
551.74	552.04	0.30		Dark-grey to carbonaceous mudstone; silty. GBC.		
552.04	552.48	0.44		FLSS, grey; silty. GBC.		
552.48	553.63	1.15		Interbanded and laminated; FLSS, light-grey/mudstone, dark-grey (50:50); minor contorted bedding and sub-vertical joints; minor bioturbation and flaser bedding; grades to mudstone with depth. GBC.		
553.63	554.09	0.46		Dark-grey mudstone grading with depth to carbonaceous mudstone.		
554.09	554.48	0.39		MQSS, white; sparkly; abundant carbonaceous laminae dipping at up to 20°. GBC.		
554.48	554.59	0.11		Laminite, FMQSS/carbonaceous mudstone.		
554.59	554.61	0.02	100	MQSS (medium-grainsize quartzose sandstone), white; sparkly; abundant carbonaceous laminae dipping at up to 20°. Continued over		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

DRILLING TARGET:- Glacio Marine Sequence of the Lower Parmeener Super Group													
REMARKS:- Duncan Seam 2.49 m at 228.67 - 231.16m;					East Fingal Upper								
SURVEY DATA Split 2.08 m from 273.90m; Lower Split 1.13, from 285.10m.													
DEPTH metres	Bearing mag.	Inclin. degs	SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS					
						metres	%						

GEOLOGICAL LOG

Logged by:- **C.A. Bacon**

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
0.00	60.00	0	0	Precollared. Talus of dolerite boulders and clay from 0 to 15.00m; solid dolerite 15 to 60.00m.		
60.00	150.10	90.10	100	Dolerite, grey; fracture zones filled with chlorite, calcite and zeolite from 66.50 to 67.00m; abundant small fractures at varying angles (45° to 60°) to core axis over this interval. From 67.50 to 68.00m; one large fracture dips at 80°. From 81.70m to 82.60m, a large fracture dips at 80° and is filled with white calcite (?) or zeolite (?) which is tinged pink; together with a green greasy mineral, (talc?). From 83.00 to 83.40m; a large fracture; from 86.75 to 87.00m; a fracture zone dipping at 70°, filled with pale green, friable mineral. From 87.00 to 88.00m; core broken, amny fractures. From 98.70m to 89.90m; a joint dips at 80°. From 92.40 to 92.60m; a joint filled or covered with dendrites. From 98.50 to 98.90m; a joint filled with a white mineral, calcite (?) or zeolite (?). From 110.50 to 111.00m; a joint with a thin covering of a white mineral with dendrites.		

Continued over:-

DEPARTMENT OF MINES—TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No.:- DOM	MAP SHEET No. 49	DISTRICT FINGAL	LOCATION OF SITE:-
Fingal DDH No. 61		On Fingal Tier in the Headwaters of Fingal Rivulet	
E.L. OF SITE:- 639.30m		SITE SURVEY ON MAP No.:-	CORE SIZE:- NQ
BEARING OF HOLE:-		AIR PHOTO No.:-	COMMENCED:- 23.9.80
INCLINATION OF HOLE:-		DRILL:- Warman 1000	COMPLETED:- 23.11.80
CO-ORDS OF SITE:- 586 760mE 5 385 011mN		DRILLER:- R. Stevens M. Whitmore	FINAL DEPTH (m):- 402.00m

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				<p>From 111.20 to 111.40m: a fracture, filled with calcite or zeolite, sparkling. From 117.00 to 119.50m: an extensive fracture zone; core badly broken. From 125.50 to 126.00m: jointed dolerite broken. From 126.00 to 133.00m: very extensive jointing, fracturing and brecciation of dolerite; re-cementing with calcite and/or zeolite. Tinged pink and green. From 137.00 to 138.00m: core jointed. From 138.00 to base of unit: multiple sub-vertical joints, increasing in frequency towards base of unit.</p> <p>Dolerite grainsize: medium 60 to 81m fine 81 to 125m very fine 125 to 150m</p> <p>Dolerite-sediment contact melanged mixed; zone of mixing extends 10cm from 150.00 to 150.10. Dolerite at base is glassy with abundant microphenocrysts.</p> <p>Dolerite intervals of 10cm every 3m have been marked and stored for future reference.</p>		
150.10	151.99	1.89	100	Fine-medium grained lithic sandstone, (FMLSS), light grey in colour irregular top contact; grey mudstone pellets 1cm x 2cm from 150.22 to 150.27m; sub-vertical joint from 150.55 to 150.62m; sharp bottom contact; (SBC).		
151.99	152.01	0.02	100	Dull coal, irregular intruded bottom contact.		
152.01	152.68	0.07	100	Dolerite, light green-grey, fine-grained irregular top contact, brecciated and re-cemented over basal 2cm. sharp bottom contact (SBC).		
				<u>COAL SECTION</u>		
152.08	152.18	0.10	100	Mudstone, dark grey, massive, SBC.		1
152.18	152.53	0.35	100	Dull coal, rare cleats. SBC.		
152.53	152.65	0.12	100	Heavy dull coal, with many calcite filled and cemented		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

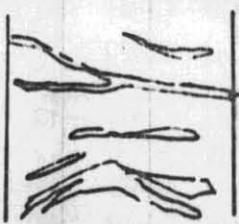
GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
152.65	152.72	0.07	100	cleats, few bright bands; SBC.		
152.72	152.85	0.13	100	Dull coal, core broken, SBC.		
152.85	152.86	0.01	100	Paleosol (?) shaley, grey, friable clay-like substance; SBC.		1
152.86	152.96	0.10	100	Dull coal, sandy; SBC.		
152.96	153.03	0.07	100	Heavy dull coal with many calcite veins, gradational bottom contact, (GBC).		
153.03	156.00	0	0	Dull coal with many calcite veins. (BASE OF COAL SECTION) CORE LOSS of 2.97m; loss most probably comprises: 0.10m coal 2.87m grey mudstone (based on discussions with drillers on colour changes in returning water).		
156.00	156.04	0.04	100	Shale, grey, SBC.		
156.04	158.64	2.60	100	Mudstone, grey, laminated; shale bands from 157.64 to 157.68m; and from 157.74m to 157.77m. Shaley over basal 20cm; Core broken over basal 20cm; Sandy towards base.		
158.64	159.00	0	0	CORE LOSS of 0.36m.		
159.00	161.35	2.35	100	Mudstone, sandy grey in colour, occasional wispy carbonaceous laminae.		
161.35	163.15	1.80	100	FLSS, grey-white, hard; (baked by overlying dolerite); massive siltstone laminae common, GBC.		
163.15	165.00	1.65	90	FMLSS, grey, massive, abundant wispy carbonaceous laminae, rare coaly debris, core broken, CORE LOSS of 20cm in this unit; rare.		
165.00	168.35	3.35	100	FMLSS, grey, massive, SBC.		
168.35	169.65	1.30	100	FLSS, grey, rare wispy carbonaceous laminae, SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
169.65	176.18	6.53	100	FMLS, grey, coaly debris over the interval from 170.70 to 171.00m.  coaly debris Coaly debris over the interval from 171.00 to 172.00m; and from 172.30 to 172.60m. Clast of grey laminated mudstone from 172.50 to 172.54m. Band of dull coal from 172.07 to 172.13m; sharp top and bottom contacts on coal bands. Interbedded mudstone and dull coal from 173.07m to 173.28m. SBC. Band of coal from 173.28 to 173.31m. STG, SBC, on coal band. Mud pellets and coaly debris sparsely scattered over the interval from 175.48 to 176.18m; SBC.		
176.18	176.27	0.09	100	Mudstone, shaley, grey, slickensided. Core broken over top 3cm. SBC.		
				<u>COAL SECTION</u>		
176.27	176.275	0.005	100	Calcite band, sharp bottom contact, (SBC).		
176.275	176.39	0.115	100	Dull coal, gradational bottom contact, (SBC).		
176.39	176.79	0.40	100	Mudstone, grey sands with abundant plant fragments; wispy coaly laminae and rootlet-like structures; slickensides common; core broken; SBC.		
176.79	176.92	0.13	100	Dull coal, very irregular bottom contact, dipping at 30°; core broken over top 3cm.		
				(BASE OF COAL SECTION)		
					Continued over	

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
176.92	178.02	1.10	100	Mudstone, grey, sandy with rare plant fragments; sand content increases towards base.		
178.02	178.66	0.63	98	Laminite of FLSS and mudstone <1mm wide; rare coaly debris; slickensided from 178.12 to 178.25m; coaly debris from 178.32 to 178.37m. SBC.		
<u>COAL SECTION</u>						
178.66	178.725	0.065	100	Dull coal, SBC.		
	178.728	0.003		Shale band, grey, SBC.		
	178.768	0.040		Dull coal, SBC.		
	178.77	0.002		Bright coal, SBC.		72
	178.82	0.05		Shale, beige, friable, SBC.		
	179.03	0.21		Dull coal, SBC.		
	179.04	0.01		Bright coal, SBC.		
	179.19	0.15		Dull coal, SBC.		
	179.205	0.015		Shale, brown, SBC.		
	179.22	0.015		Dull coal, SBC.		
	179.25	0.03		Shale beige, SBC.		
	179.26	0.01		Dull coal, GBC.		
	179.28	0.02		Shale, sandy with dull coal (50/50), GBC.		
179.28	179.68	0.40	100	Dull coal, calcite 'spider web' network, from 179.52 to 179.68m. Calcite filling in cleats. GBC.		
179.68	179.91	0.23	100	Mudstone, shaley, brown-grey, GBC.		
179.91	179.98	0.07	100	FLSS, grey.		
179.98	180.00	0.02	100	Mudstone, grey, core broken; slickensided.		
180.00	180.02	0.02	100	Dull coal, core broken, GBC.		
<u>(BASE OF COAL SECTION)</u>						
180.02	180.66	0.64	100	Mudstone, grey, sandy, band of dull coal 180.20 to .22m; SBC.		
180.66	180.72	0.06	100	Shale, beige, friable, SBC.		

Continued over

ASSAY DATA

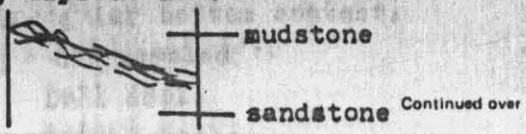
SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
180.72	181.81	1.09	100	Mudstone, grey, laminated with FLSS, (60:40); irregular bottom contact. <u>COAL SECTION - not sampled</u>		
181.81	181.82	0.01	100	Dull coal.		
	181.85	0.002	100	Bright coal.		
	181.86	0.035	100	Dull coal.		
	181.89	0.030	100	Shale beige.		
	181.907	0.017	100	Dull coal.		
	181.91	0.003	100	Shale band.		
	181.98	0.07	100	Dull coal, GBC.		
	182.06	0.08	100	Mudstone, grey sandy, SBC.		
	182.08	0.02	100	Shale, beige with carbonaceous flecks, SBC. (BASE OF COAL SECTION)		
182.08	188.56	6.48	100	Mudstone and FLSS, interbedded and inter-laminated, (50/50); abundant shale laminae and flecks; laminae 1mm wide; minor x bedding; wispy carbonaceous laminae common, SBC. <u>COAL SECTION</u>		
188.56	188.58	0.025	100	Bright coal.		
188.58	188.60	0.020	100	Shale, black, carbonaceous.		
188.60	188.61	0.005	100	Shale, beige.		
188.61	188.67	0.060	100	Heavy dull coal, SBC.		
188.67	188.99	0.320	100	Mudstone, sandy.		
188.99	189.00	0.010	100	Shale, brown, core broken into tiny crumbs.		
189.00	189.59	0.59	100	Dull coal, slickenside dipping at 50° over top 10cm; sub-vertical cleats filled with calcite, rare bright bands 1mm wide, and brown shale bands common over basal 20cm; GBC.		3
189.59	189.67	0.08	100	Interbedded dull coal and grey sandy mudstone, GBC. (BASE OF COAL SECTION)		

ASSAY DATA

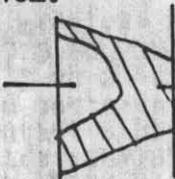
SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
189.67	190.71	1.04	100	Mudstone, grey, sandy finely laminated; occasional wispy carbonaceous laminae. SBC.		
190.71	194.14	3.43	100	FMLSS, grey, massive coaly band dipping 30° at 190.970-to 190.975m; mudstone (grey) interval from 191.16 to 191.29m; coaly debris and mudstone pellets from 192.82 to 192.92m.		
194.14	200.85	6.71	100	MLSS, grey, massive; coaly debris and wispy carbonaceous laminae from 196.04 to 196.24m; from 196.44 to 196.64m; and from 200.75 to 200.85m. GBC.		
200.85	202.52	1.67	100	FMLSS, grey, massive; wispy carbonaceous laminae common. GBC.		
202.52	203.75	1.23	100	MLSS, grey, massive, irregular bottom contact dipping at 15°.		
203.75	203.85	0.10	100	Shale, brown, carbonaceous friable; (possibly a large clast).		
203.85	207.01	3.16	100	MLSS, grey, massive; grey mudstone pellet from 203.975 to 204.02m. Band of coal from 204.35 to 204.39m. Irregular top and bottom contacts - top contact dips 10°; bottom contact dips 30°. Clay and mudstone pellet conglomerate from 206.46 to 206.62m; pellets 0.5cm to 3.0cm long by 0.5 to 1.0cm wide. Band of grey laminated mudstone from 206.62 to 206.70m. SBC.		
207.01	207.20	0.19	100	Mudstone, grey, laminated with carbonaceous siltstone; GBC.		
207.20	207.40	0.20	100	Siltstone, black, carbonaceous; with minor plant fragments.		
207.40	207.60	0.20	100	Mudstone, grey, with minor plant fragments. GBC.		
207.60	207.86	0.26	100	Siltstone, black, carbonaceous, GBC.		
207.86	208.00	0.14	100	Mudstone, grey, silty, very irregular bottom contact, dips at 20°.		



ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS														
			metres	%															

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
208.00	208.10	0.10	100	Siltstone, black, carbonaceous, GBC.		
208.10	208.37	0.27	100	Mudstone, dark grey. core broken, abundant slickensides, sandy over basal 10cm, GBC.		
208.37	208.97	0.60	100	Mudstone, grey, laminated with FLSS (50:50) minor cross-bedding, and occasional rootlet (?) or worm burrow (?) structures; GBC.		
						
208.97	218.33	9.36	100	MLSS, massive, light grey in colour, rare wispy carbonaceous laminae, GBC.		
218.33	221.20	2.87	100	MLSS, grey, massive; rare coaly debris; rare mudstone pellets <1cm in diameter; SBC, dips at 10°.		
221.20	221.27	0.07	100	Dull coal with MLSS incursion: core broken over top 1cm.		
						
<p>SBC, dips at 15°.</p>						
221.27	228.47	7.20	100	MLSS, grey coaly debris and mudstone pellets common. Carbonaceous siltstone clast from 226.25 to 226.29m. Irregularly shaped coaly debris from 227.80m to 228.00m.		
						
<p>Wispy carbonaceous laminae dipping ⁱⁿat ^{up} to 20° SBC.</p>						

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
<u>COAL SECTION</u>						
228.47	228.52	0.05	100	Dull coal, with minor bright bands, 1mm wide; GBC.	4A	
228.52	228.585	0.065	100	Dull coal, interbedded with grey-brown mudstone (50:50), GBC.		
228.585	228.67	0.085	100	Mudstone, grey-brown; with abundant 'algal mats'(?), SBC. Few slickensides in mudstone unit.		
						
228.67	228.70	0.03	100	Dull coal. SBC.	4B	
	228.705	0.005		Shale brown. SBC.		
	228.75	0.045		Dull coal.		
	228.755	0.005		FLSS, lens of sand.		
	228.772	0.017		Dull coal.		
	228.775	0.003		Bright coal.		
	228.850	0.075		Dull coal.		
228.850	228.86	0.01	100	Brown shaley coal.		
	228.90	0.04		Dull coal.		
	228.905	0.005		Bright coal.		
	229.048	0.143		Dull coal.		
	229.05	0.002		MLSS - sand lens.		
	229.07	0.020		Dull coal, GBC.		
	229.095	0.025		Mudstone, white, SBC.		
	229.36	0.265		Dull coal.		
	229.39	0.03	100	Calcite, feathery.		
						

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS														
			metres	%															

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
229.39	229.49	0.10	100	Dull coal, GBC.		
229.49	229.54	0.05	100	Carbonaceous, shaley, brown mudstone, and dull coal (50:50).		4B
229.54	229.62	0.08	100	Heavy dull coal.		
229.62	231.16	1.54	100	Dull coal, core broken; abundant cleats, calcite on cleats; GBC.		4C
(BASE OF COAL SECTION)						
231.16	231.31	0.15	100	Siltstone, brown, massive. GBC.		
231.31	232.48	1.17	100	FLSS grey with occasional siltstone and mudstone laminae; and rare wispy carbonaceous laminae. GBC.		
232.48	250.67	18.09	99	<p>FMLSS, massive, grey; very rare wispy carbonaceous laminae. (CORE LOSS of 10cm in the interval from 234.00 to 237.00m. Coaly debris and mudstone pellets from 240.20 to 240.30m; from 241.37 to 241.84m; and from 241.95 to 242.00m. Band of coal from 242.19 to 242.20m. Occasional distorted wispy coaly laminae, and mudstone pellets riddled with wispy carbonaceous laminae;</p> <div style="text-align: center;">  <p>mudstone pellet</p> </div> <p>Coaly debris from 234.50 to 245.00m; and from 246.60 to 247.20m; mudstone pellets from 246.60 to 247.20m;</p>		
250.67	267.22	16.55	100	MLSS, light grey, massive rare coaly debris and wispy carbonaceous laminae. Mudstone and siltstone pellets, 5cm in diameter from 252.42 to 252.58m. Irregularly shaped coaly debris from 261.57 to 261.77m; small (2 to 8mm diameter) mudstone pellets from 262.00 to 262.10m. SBG		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
257.22	267.82	0.60	100	Mudstone, black, carbonaceous, finely laminated; GBC.		
257.82	270.00	2.18	100	Mudstone, black, carbonaceous, interbedded with grey FMLSS, (50:50); abundant wispy carbonaceous laminae; swirling disturbed bedding common - (bioturbation ?)		
						
				Beds commonly 1 to 3cm wide, GBC.		
270.00	270.77	0.77	100	FMLSS, grey, abundant wispy carbonaceous laminae; rare bands of black silty mudstone; GBC.		
270.77	270.92	0.15	100	Mudstone, black; interbedded with FMLSS; (60:40); GBC.		
270.92	271.67	0.75	100	FMLSS, grey, abundant wispy carbonaceous laminae, and occasional bands of silty carbonaceous mudstone. SBC.		
271.67	271.80	0.13	100	Mudstone, silty, carbonaceous; black in colour. SBC.		
271.80	272.08	0.28	100	FMLSS, grey, massive; abundant wispy carbonaceous laminae, GBC.		
272.08	273.90	1.82	100	FLSS, grey-green, massive; no coaly debris; interlaminated with mud over basal 50cm, SBC.		
<u>COAL SECTION</u>						
273.90	274.065	0.165	100	Dull coal, core broken. SBC.		5A
	274.07	0.005		Mudstone, white, hard, SBC.		
	274.30	0.23		Dull coal, GBC.		
	274.32	0.02		Shale, brown, with dull coal (50:50), SBC.		
	274.35	0.03		Dull coal, SBC.		
	274.335	0.005		Mudstone, pale brown, shaley SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	274.362	0.007		Dull coal, SBC.		
	274.37	0.003		Mudstone, white, hard, flecked with wispy carbonaceous laminae; SBC.		
	274.65	0.23		Dull coal, SBC.		
	274.66	0.01		Mudstone, white, hard, flecked with wispy carbonaceous laminae; SBC.		
	274.67	0.01		Shaley coal; friable.		
	274.69	0.02		Dull coal, SBC.		
	274.695	0.005		Shale, brown, with dull coal (50:50); SBC.		
	274.97	0.275		Dull coal.		5A ¹
274.97	274.995	0.025		Mudstone, white, hard, with wispy carbonaceous flecks; SBC.		5B
	275.013	0.018		Dull coal.		
	275.018	0.005		Mudstone, white, shaley.		
	275.019	0.001		Bright coal.		
	275.02	0.001	100	Mudstone, white, shaley.		
	275.98	0.94	98	Dull coal, core broken; rare calcite-coated sub-vertical cleats.		
(BASE OF COAL SECTION)						
275.98	275.03	0.05	100	Carbonaceous mudstone with pink-brown elongate mudstone pellets, 0.5cm long. GBC.		
275.03	278.06	2.01	99	Mudstone, brown, friable; with abundant wispy coaly laminae.		
278.06	285.10	1.04	100	FMLSS, grey, massive; minor cross-bedding; minor wispy carbonaceous laminae; SBC.		
GOAL SECTION						
285.10	285.36	0.26	100	Dull, shaley coal, GBC.		
285.36	285.61	0.25		Mudstone, grey, wispy carbonaceous laminae from 285.44 to 285.46m; SBC.		6A

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	285.735	0.125		Dull coal, core broken.		
	285.74	0.005		Bright coal.		
	286.17	0.43		Dull coal, SBC.		
	286.19	0.02		Dull, sandy coal, SBC.		6B
	286.33	0.14	100	Dull coal with calcite on cleats, SBC.		
				(BASE OF COAL SECTION)		
286.33	287.64	1.31	100	FLSS, with abundant mudstone laminae, and wispy carbonaceous laminae; minor cross bedding; grey in colour; GBC.		
287.64	287.65	0.01	100	Clay, beige, friable, SBC.		
287.65	287.79	0.11	100	Mudstone, grey, abundant wispy carbonaceous laminae, SBC.		
287.79	287.82	0.03	100	Clay, beige, friable, core broken; SBC.		
287.82	287.85	0.03	100	Mudstone, dark grey, carbonaceous; GBC.		
287.85	288.83	0.98	100	FMLSS, grey, massive; SBC, dips at 10°.		
288.83	291.47	2.64	100	Mudstone, grey, slickensided, core broken. Sandy over basal 40cm.		
291.47	294.75	3.28	100	Laminite of grey mudstone and grey-white FLSS; minor x bedding; wispy carbonaceous laminae common; occasional brown shale band; disturbed bedding; commonly bioturbated (?). Slickenside from 291.81 to 291.86m. GBC.		
294.75	295.14	0.39	100	Siltstone, black, carbonaceous; GBC.		
295.14	300.07	4.93	100	MLSS, grey, massive, interbedded with black siltstone over top 10cm; occasional mudstone pellets, and abundant wispy carbonaceous laminae. Mudstone pellets 0.5 to 1.0cm diameter scattered over basal 25cm. Large mudstone pellet from 299.97 to 300.02m. SBC.		
300.07	300.31	0.24	100	Mudstone, grey, laminated. GBC.		
300.31	300.42	0.11	100	Mudstone, dark grey; extensively slickensided, carbonaceous, shaley.		
300.42	301.26	0.84	100	Siltstone, shaley, brown, friable, GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
301.26	302.33	1.07	100	FMLSS, grey; interbedded with black carbonaceous mudstone; SBC.		
302.33	302.41	0.08	100	Dull coal, SBC.		
302.41	302.60	0.19	100	Siltstone, shaley; abundant plant fragments; friable, GBC.		
302.60	304.43	1.83	100	FMLSS, silty, abundant wispy carbonaceous flecks and minor plant debris, GBC.		
304.43	305.50	1.07	100	Mudstone, grey, slickenside at top of unit; massive; finely banded; GBC.		
305.50	307.40	1.90	100	MLSS, grey, massive; rare wispy carbonaceous laminae and coaly debris, FLSS interval from 306.20 to 306.28m.		
307.40	313.23	5.83	100	MLSS, grey-white, massive; calcite replacement from 308.04 to 308.20m; 309.40 to 309.54m; rare grey mudstone pebbles up to 3cm in diameter; rare coaly debris. SBC.		
313.23	314.65	1.42	100	Mudstone, grey, massive, core broken.		
314.65	315.44	0.79	100	FLSS, interlaminated with grey mudstone, (60:40).		
315.44	316.15	0.71		Mudstone, grey, interbedded with FLSS, (50:50), GBC.		
316.15	316.45	0.30	100	Mudstone, grey, GBC.		
316.45	317.11	0.48	73	Mudstone, slightly carbonaceous, concoidal fracturing common; minor shale laminae; core broken, ground over basal 15cm.		
317.11	320.60	3.49	100	Mudstone, sandy, carbonaceous laminated with brown shale (80:20); sandy from 317.50 to 318.00m. SBC.		
320.60	321.15	0.55	100	Mudstone, black, carbonaceous. Interbedded with MLSS, and minor brown shale; (40:50:10). SBC.		
321.15	332.01	10.86	100	FLSS, grey, minor cross-bedding, dipping 10 to 30°; occasional claystone and mudstone pellets; finely laminated; GBC.		
332.01	332.88	0.87	100	FMLSS, grey, massive; occasional coaly debris, SBC.		
332.88	333.15	0.27	100	Mudstone, grey, finely laminated, core broken over basal 15cm. SBC. Continued over		

ASSAY DATA

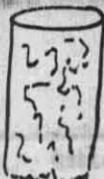
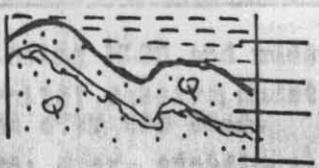
SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
333.15	333.24	0.09	100	Calcite replacing MLSS and mudstone, S3C.		
333.24	340.02	6.78	100	MLSS, grey-white; massive; mudstone pellets and laminae over top 20cm.		
340.02	343.87	3.85	100	MLSS, massive; grey, occasional mudstone pellets, SBC.		
343.87	344.94	1.07	100	Laminite of mudstone and siltstone, dark grey; laminae 1mm wide. SBC.		
344.95	345.07	0.12	100	Siltstone, carbonaceous, SBC.		
345.07	345.39	0.32	100	Mudstone, grey, laminated with 10% FLSS.		
345.39	346.92	0.44	83	MLSS, grey, massive, core broken over top 10cm.		
345.92	346.09	0.17	100	Laminite of carbonaceous and non-carbonaceous (clayey) mudstone; abundant plant fragments and sandy laminae. (SBC).		
346.09	346.14	0.03	60	Dull coal, core broken, SBC.		
346.14	346.16	0.02	100	Mudstone laminite, SBC.		
346.16	346.17	0.01	100	Dull coal, SBC.		
346.17	348.36	2.29	100	FLSS, with 30% silty laminae; minor cross-bedding grey in colour, GBC.		
348.36	355.00	6.64	100	FMLs, grey, massive, rare wispy carbonaceous laminae dipping up to 10; rare irregularly shaped clasts of siltstone; SBC.		
355.00	355.13	0.13	100	Mudstone, grey, laminated, GBC.		
355.13	355.25	0.12	100	Mudstone, brown, interlaminated with black carbonaceous mudstone, GBC.		
355.25	355.97	0.72	100	FLSS, grey, interlaminated with grey-green mudstone (70:30), over top 30cm. SBC.		
355.97	356.13	0.16	100	Mudstone, green-grey; laminated, SBC.		
356.13	356.36	0.23	100	Mudstone, brown, silty, with abundant carbonaceous mudstone laminae, SBC.		
356.36	360.30	3.94	100	FMLSS, grey, massive; rare mudstone and siltstone pellets; rare plant fragments; SBC.		
360.30	360.55	0.25	100	Mudstone, grey, with minor shale flecks. GBC.		
360.55	360.58	0.03	100	Mudstone, shaley, brown-grey, SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
360.58	361.10	0.52	100	Mudstone, dark grey, carbonaceous, core broken and ground over basal 10cm, GBC.		
361.10	362.98	1.88	100	FLSS, grey, with 30% mudstone laminae, minor cross bedding, GBC.		
362.98	363.00	0.02	100	Mudstone, green-grey.		
363.00	363.19	0.19	100	Mudstone, black, silty, carbonaceous, core broken over top 10cm. GBC.		
363.19	363.79	0.60	100	FLSS interbedded with green-grey mudstone (50:50), SBC.		
363.79	363.81	0.02	100	MLSS, grey, SBC.		
363.81	363.84	0.03	100	Mudstone, black, SBC.		
363.84	363.86	0.02	100	MLSS, grey, SBC.		
363.86	363.93	0.07	100	Mudstone, grey-brown, shaly, SBC.		
363.93	364.34	0.41	100	Fine quartz rich lithic sandstone, white in colour, abundant disturbed laminae, possibly bioturbated (?), SBC.		
364.34	364.37	0.03	100	Mudstone, black, carbonaceous, GBC.		
364.37	364.42	0.05	100	Shale, black, carbonaceous, friable, GBC.		
364.42	364.50	0.08	100	Mudstone, black, carbonaceous, SBC.		
364.50	364.75	0.25	100	Quartz-rich lithic sandstone; with wispy carbonaceous laminae as shown:		
						
364.75	365.11	0.36	100	Mudstone, black, shaley, very irregular bottom contact as shown:		
						
				Continued over		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
365.11	365.62	0.51	100	Medium grained quartzose sandstone, with abundant wispy carbonaceous laminae, sandstone is white in colour with an irregular bottom contact.		
365.62	366.08	0.46	100	Siltstone, brown with biotite grains and occasional plant fragments, GBC.		
366.08	366.81	0.73	100	FMQSS (Fine-medium grained quartzose sandstone,) silty over top 10cm core badly broken.		
366.81	366.91	0.10	100	Siltstone, black, carbonaceous, core broken.		
366.91	367.01	0.10	100	FMQSS, white core broken.		
367.01	369.00	0	0	CORE LOSS 1.99m.		
369.00	372.00	0	0	CORE LOSS 3.00m.		
372.00	372.10	0.10	100	Siltstone, black, carbonaceous, GBC.		
372.10	373.83	1.73	100	FMQSS with abundant disturbed bedding; core broken; wispy carbonaceous laminae very abundant; sandstone white in colour.		
373.83	373.98	0.15	100	Siltstone, black, carbonaceous.		
373.98	374.14	0.16	100	FMQSS.		
374.14	378.00	0	0	CORE LOSS.		
378.00	380.18	2.18	100	FMQSS, white, abundant wispy carbonaceous laminae, core broken.		
380.18	383.17	2.99	100	MQSS, massive, interbedded with siltstone over the basal 30cm.		
383.17	383.73	0.56	100	Mudstone, grey, interbedded with beige shale, SBC.		
383.73	394.81	11.08	100	Mudstone, dark grey, interbedded with dark brown shale; (50:50) rare calcite flecks and quartz grits, reworked from the underlying glaciomarine sediments. Shale bands expanding and very friable. Rare bands (1cm wide) of QSS. Sand band 2cm wide from 390.65 to 390.67m; SBC.		
394.81	394.96	0.15		Siltstone, dark brown, carbonaceous flecks and biotite grains common, SBC. BASE OF UPPER PARMEENER SUPERGROUP.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
394.96	402.00	7.04	100	<p>TOP OF GLACIO MARINE SEQUENCE OF LOWER PARMEENER SUPERGROUP.</p> <p>Mudstone dark green-grey in colour abundant flecks of calcite and quartz grits 1-3mm in diameter. Rare dropstones up to 5cm in diameter.</p> <p>END OF HOLE AT 402.00m.</p>		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

DRILLING TARGET:- Upper glacio-marine sequence of the Lower Division of the 1/5														
REMARKS:- Dolerite has truncated the major coal Parmaener Super-Group														
SURVEY DATA seams in this area.					ASSAY DATA									
DEPTH metres	Bearing mag.	Inclin. degs	SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS						
						metres	%							

GEOLOGICAL LOG

Logged by:- **R. Castleden**

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
0	338.15	338.15	100	Dolerite, grey; very hard; core breaks into 0.5m to 2m lengths; minor weathered joints and calcite/chlorite-filled shear (?) zones (1cm-5cm wide); massive; gradational grainsize variation throughout (average grainsize is 1mm to 2mm); abundant quartz and calcite(?) veins; minor zeolite (red and white) veins (specimen 8062-1 from 62.5m to 62.6m); minor coarse intervals with plagioclase laths up to 1cm in length; minor grey-green zones and granophyric intervals (specimen 8062-2 from 197.1m to 197.23m shows steeply-dipping (60°) contact between coarse and fine dolerite); grey-black in colour with green and honey-coloured pyroxene phenocrysts abundant; fine grainsize from 300m to base (glassy in basal 50cm). Undulose bottom contact (BC) (from 338.12m-.15m) dips at 45°. (10cm of dolerite has been sampled at 3m intervals and stored for future analysis).		
338.15	338.35		0.20	Fine-medium grainsize lithic sandstone (FMLSS), grey-white; hornfelsed. Stepped BC dips at 20°.		

Continued over:-

DEPARTMENT OF MINES—TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No.:-	MAP SHEET No. 49	DISTRICT FINGAL	LOCATION OF SITE:-
Department of Mines Fingal DDH Number 62		Headwaters of Fingal Rivulet	
R.L. OF SITE:- 704.5m	SITE SURVEY ON MAP No.:- N/A	CORE SIZE:- NW: 0 to 3.00m NQ: 3.00 to 452.83m	
BEARING OF HOLE:- -	AIR PHOTO No.:- N/A	COMMENCED:- 7th Oct, 80	
INCLINATION OF HOLE:- vertical	DRILL:- Longyear 38	COMPLETED:- 10th Nov, 80	
CO-ORDS OF SITE:- 584 367mE 5 383 489mN	DRILLER:- D. Summers, A Dawson	FINAL DEPTH (m):- 452.83	

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
338.35	341.35	2.98		Siltstone, grey-white; hornfelsed; mud-pellet band from 338.68m to 338.75m; festoon cross-bedded fine-grainsize lithic sandstone (FLSS) from 338.75m to 339.00m; minor FMLSS intervals; bedding dips at up to 45° to 60° - dip joints spaced at 30cm intervals; minor calcite-filled joints. BC dips at 5°.		
341.33	343.00	1.67		Medium-grainsize lithic sandstone (MLSS); white-grey; minor clay lenticles and carbonaceous shards dipping at up to 20°; FLSS interval from 10cm to 20cm. BC dips at 10°. Hornfelsed.		
343.00	343.06	0.06		<u>COAL SECTION:</u> Mudstone, grey; hornfelsed; (Attenuated) abundant carbonaceous partings. BC dips at 5°.		
343.06	343.28	0.22	100	Dull coal; abundant carbonaceous mudstone bands and lenticles dipping at up to 10°. Hornfelsed. <u>(BASE OF COAL SECTION)</u>		
343.28	346.62	3.34	100	Siltstone; grey; interbedded with FLSS (festoon cross-bedded); minor carbonaceous laminae; grades to mudstone with depth; minor slickensided carbonaceous mudstone from 346.2m to 346.3m. GBC.		
346.62	350.48	3.86		FLSS, grey; silty at top grading with depth to FMLSS; abundant dark-grey silty mudstone bands and carbonaceous laminae (commonly festoon cross-bedded) dipping at up to 10°. GBC.		
350.48	354.35	3.87		MLSS, grey-white; sub-vertically dipping joints (with calcite infilling) spaced at 1m intervals; sparse carbonaceous laminae dip at up to 5°. BC dips at 2° relative to core axis.		
354.35	354.50	0.15		<u>COAL SECTION:</u> Dull coal; abundant bright (Attenuated) bands. BC dips at 5°. <u>(BASE OF COAL SECTION)</u>		
354.50	360.52	6.02		Interbedded FLSS, grey-white siltstone, light-grey/mudstone, dark-grey (50:25:25);		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				minor carbonaceous mudstone and dull coal bands (shaly in part); minor bioturbated festoon and flaser bedding dipping at up to 10°; minor slickensides; laminite towards base. GBC.		
360.52	362.75	2.23		FMLSS, grey-white; minor festoon cross-bedded carbonaceous laminae towards the base. GBC.		
362.75	364.06	1.31		Mudstone, grey; silty at top. GBC dips at 5°. Contorted bedding.		
364.06	364.30	0.24		<u>COAL SECTION:</u> Carbonaceous mudstone with abundant brown-grey laminae. (Low Quality) FLSS, brown-black; silty; minor carbonaceous laminae. GBC.		
364.39	364.98	0.59	100	Dull coal grading to carbonaceous mudstone with depth; abundant 45° to sub-vertical jointing. Irregular BC dips at 20°. (BASE OF COAL SECTION)		
364.98	369.02	4.04	100	MLSS, grey-white; silty and carbonaceous in top 40cm; abundant carbonaceous laminae, bands and debris in top 2m; massive.		
369.02	369.41	0.39		Laminite, grey mudstone/light-grey mudstone (50:50); silty; minor carbonaceous laminae. GBC.		
369.41	369.59	0.18		<u>COAL SECTION:</u> Carbonaceous mudstone; minor (Low Quality) bright coal laminae.		
369.59	369.63	0.04		Dull coal; minor bright laminae; shaly at base.		
369.63	370.38	0.75		FLSS, grey-brown; silty and shaly; conjugate joints and slickensides from 40cm to 60cm. GBC dips at 2°.		
370.38	370.64	0.26		Carbonaceous mudstone; abundant grey mudstone laminae. BC dips at 5°.		
370.64	370.87	0.23		FLSS, grey-white; silty; dirty poorly carbonaceous. BC dips at 5°. <small>Continued over</small>		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
370.87	370.91	0.04		Dull coal. GBC. Minor LSS dyke.		
370.91	371.85	0.94		Siltstone, carbonaceous; sandy; minor mudstone lenticles; abundant brown clay lenticles and pellets in basal 15cm. (BASE OF COAL SECTION)		
371.85	384.09	12.24		MLSS, grey-white; FMLSS in top 4m and basal 2m; massive; minor carbonaceous laminae; occasional 20cm to 30cm limestone (massive secondary carbonate) intervals. BC dips at 2°. Minor coaly debris.		
384.09	386.20	2.11		Mudstone, silty; minor sandy bands and carbonaceous laminae and partings; minor flaser bedding and 45° to 60°-dip jointing.		
386.20	386.56	0.36		Carbonaceous siltstone; coaly in part.		
386.56	388.90	2.34		FLSS, grey-brown; abundant carbonaceous laminae and bands; minor small-scale cross bedding and clay-pellets; silty with coaly debris.		
388.90	401.80	12.90		MLSS, white-grey; massive; FMLSS from 399.7m to 401.5m; abundant coaly debris from 401m to 401.8m.		
401.80	402.06	0.14	54	Dull coal with minor bright bands; mudstone laminae towards base. Slickensided BC dips at 45°.		
402.06	404.30	2.24	100	Interbedded mudstone, grey/sandy siltstone, light-grey (50:50); minor coal bands, shaly intervals and slickensides; flaser and festoon cross-bedding in basal 1m. BC dips at 2°.		
404.30	404.43	0.13		Fine-medium-grainsize quartzose sandstone (FMQSS); minor carbonaceous laminae and festoon cross-bedding.		
404.43	404.49	0.06		Dull coal; carbonaceous mudstone towards base.		
404.49	407.78	3.29		Interbedded siltstone/FLSS (50:50); abundant dark-grey mudstone bands and laminae; minor flaser bedding, bioturbation and small-scale cross-bedding. GBC. <small>Continued over</small>		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS														
			metres	%															

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
407.78	408.55	0.77		Carbonaceous siltstone; carbonaceous mudstone in part; sandy towards base. Slickensided BC. Mudstone, grey; silty; abundant sandy intervals and disturbed bedding. BC dips at 5°.		
408.55	422.72	14.17		FLSS, grey-white; abundant siltstone and dark-grey mudstone intervals; minor intraformional conglomerate; minor small-scale cross-bedding and 45°-dip joints and slickensides; massive from 415.4m to base; grades to FMLSS with depth; occasional 45° to sub-vertical joints. BC dips at 10°. Carbonate matrix from 418m to 419m.		
422.72	425.63	2.91		Medium-grainsize quartzose sandstone (MQSS); white; sparkly; massive; minor small-scale cross-bedding; abundant carbonaceous flecks and laminae dipping at up to 10°; minor 45°-dip joints and a large sub-vertical joint from 422.9m to 42.63m.		
425.63	428.95	3.32	100	Mudstone, grey; silty; minor slickensides, sandy bands and laminae; carbonaceous from 426.4m to 426.8m; minor bioturbation and small-scale cross-bedding; massive carbonate veins and matrix in basal 15cm. GBC.		
428.95	450.76	21.81	100	MQSS, white; sparkly; large-scale planar cross-bedding and abundant festoon cross-bedding; bioturbation abundant in top 2m, sparse elsewhere; abundant carbonaceous laminae and bands; minor bright and dull coal debris and mudstone intervals; contorted bedding (very sparse); sparse sub-vertically-dipping joints. Slickensided, sub-horizontally-dipping BC. (Base of Upper Division of Parmeener Super Group).		
450.76	452.83	2.07	100	Siltstone, dark-grey; abundant quartz grits (angular, up to 2mm in diameter); shaly in top 50cm; plant-fossils sparse; muscovitic; minor gritty lenticles. (Top of Lower Division of Parmeener Super Group). (End of Department of Mines Fingal Diamond Drill Hole Number 62 at a depth of 452.83m) Continued over		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS														
			metres	%															

DRILLING TARGET:- Pre-collar BH63B using a Failing percussion-drilling rig.											
REMARKS:- Percussion drilling abandoned as the ground is too unstable to run casing.											
SURVEY DATA			ASSAY DATA								
DEPTH metres	Bearing mag.	Inclin. degs	SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS			
						metres	%				

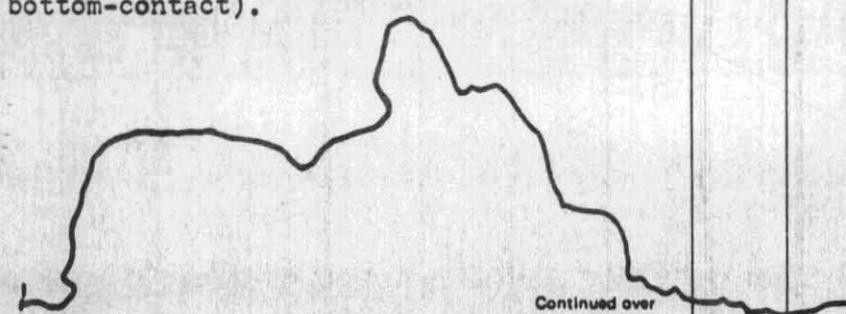
GEOLOGICAL LOG Logged by:- R. Castleden

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
0.00	4.57	chips		16.5 cm hammer-bit drilling through broken dolerite and red clay.		
4.57	16.76	chips		14.0cm hammer-bit drilling through broken dolerite and red clay. (4 m of casing remains in this hole).		

Continued over:-

DEPARTMENT OF MINES—TASMANIA
DRILL RECORD

HOLE No.:- 63B	MAP SHEET No. 49	DISTRICT Fingal	LOCATION OF SITE:-
Valley Road on the Fingal Tier			
R.L. OF SITE:- 746.4 m	SITE SURVEY ON MAP No.:	CORE SIZE:- No core; dolerite chips.	
BEARING OF HOLE:-	AIR PHOTO No.:-	COMMENCED:- 2nd July, 1979	
INCLINATION OF HOLE:- Vertical	DRILL:- Failing	COMPLETED:- 3rd July, 1979	
CO-ORDS OF SITE:- 539 792.0mE 5385 902.2mN	DRILLER:- K. Richardson, R. Stevens	FINAL DEPTH (m):- 16.76	

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
0	77.00	49.00	64	Dolerite talus, weathered dolerite blocks, lateritised speckled yellow-brown sections; broken core (no samples taken of HQ core); abundant iron-stained joints in the dolerite blocks.		
77.00	124.20	47.20	100	Dolerite; grey (minor dark-grey to black intervals); average grainsize is 1 mm ± 0.5 mm; larger pyroxene phenocrysts are up to 2 mm in length; abundant jointing (iron-stained; lateritised in part; minor chlorite, quartz and calcite (?) veins) from 77 m to 100 m; steeply-dipping (50° to 60°) contact with fine-grained microphorphyritic dolerite with abundant grassy matrix and 1 mm to 2 mm cuboidal black-green pyroxene (?) phenocrysts from 84.5 m to 84.65 m; apparent flow banding (may be due to drilling action) from 84.5 m to 89 m with abundant calcite (?) veins and bands in fine-grained to glassy green-grey dolerite; broken core to 100 m, then becoming more massive with minor thin quartz veins and joints; 1 mm to 2 mm spaced sub-vertically - dipping joints from 116 m to basal contact; dark-green-grey and with very low specific gravity from 123.5 m to 124.2 m (flakey, paper-like minerals on joints); bottom-contact (BC) is very irregular and dips (on average) at 30° (but up to 45° in part); minor slickensiding (dipping at 45° to 60°) in basal 1 m. (cross-section of unfolded bottom-contact). 		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
124.20	125.82	1.62	100	Mudstone, green-white; hornfelsed; brittle; abundant sub-vertically-dipping joints; minor calcite veins; minor sandy laminations in top 10 cm with minor banding elsewhere. Bottom-contact (BC) dips at 5°.		
125.82	137.74	11.92		Medium-grainsize lithic sandstone (MLSS); white-grey-pink; large-scale planar cross-bedding from 125.82 m to 127.2 m; disturbed siltstone bands from 127.2 m to 127.8 m; green hornfelsed mudstone from 127.95 m to 128 m; intraformational (siltstone cobble) conglomerate from 128 m to 128.4 m; green-white quartzose sandstone and pink-grey claystone cobbles from 128.65 m to 128.7 m (see photo); minor 45° dip slickenside from 129.78 m to 129.85 m; massively-bedded from 128.7 m to 137.74 m. Hornfelsed. BC dips at 10° from 137.72 m to 137.74 m.		
137.74	137.92	0.18		Mudstone, green-grey; hornfelsed; minor carbonaceous bands dipping at up to 10°; broken core (shaly in part with minor slickensides. Gradational bottom-contact (GBC).		
137.92	138.02	0.10		Mudstone, pink-grey; abundant slickensides dipping at 45°; hornfelsed.		
138.02	138.05	0.03		Mudstone, green-grey; hornfelsed; broken core.		
138.05	138.16	0.11		Mudstone, grey-green; broken core; hornfelsed minor joints and slickensides. GBC.		
138.16	138.42	0.26		Fine-grainsize lithic sandstone (FLSS); light-grey-brown; minor disturbed bedding dipping at up to 10°; abundant siltstone intervals; sub-vertically-dipping joint from 138 m to 138.26 m; 45° - dip slickensides from 138.25 m to 138.29 m and from 138.36 m to 138.42 m. BC dips at 10°. Hornfelsed.		
138.42	138.46	0.04	100	Fine-medium-grainsize lithic sandstone (FMLSS); grey-white; hornfelsed. BC dips at 10°.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
138.46	138.55	0.09	100	Interbanded grey-green mudstone/carbonaceous mudstone (50:50); minor disturbed bedding and coaly laminae; shaly in part. BC dips at 5°. Hornfelsed.		
138.55	140.45	1.90		Interbanded FLSS, grey-brown-white/siltstone, creamy grey (75:25); bedding dips at up to 10°; minor sub-vertical joint from 139.7 m to 139.84 m; laminated towards the base; hornfelsed. GBC.		
140.45	140.94	0.49		Laminite, white-grey mudstone/dark-grey mudstone (75:25); hornfelsed; minor sandy and silty bands microfaults, flame-structures and 45° to 60° dip joints. BC dips at 5°.		
140.94	141.72	0.78		<u>COAL SECTION:</u> Interbanded carbonaceous mudstone/dark-grey mudstone (75:25); hornfelsed; minor coaly intervals; abundant sub-vertical joints and minor slickensides; shear zone from 141.59 m to 141.70 m; bedding dips at up to 5°; core breaks readily. crushed-zone at basal contact dips at 30°. Minor kaolinite on cleat. <u>BASE of COAL SECTION).</u>		
141.72	142.25	0.53		Mudstone, grey; abundant dark-grey to carbonaceous mudstone tentacles, bands and wispy, contorted laminae; minor bioturbation and flaser bedding; minor coaly debris and slickensides; shaly towards base; hornfelsed. GBC dips at 10°.		
142.25	142.85	0.60		FMLSS, grey-white; massive; hornfelsed; minor joints dipping at 45°.		
142.85	143.47	0.62	100	FLSS, grey-white/siltstone, dark-grey (75:25) inter-banded; minor bioturbation and festoon cross-bedding; bedding dips at up to 10°; minor laminite and mudstone bands. BC dips at 2°.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS												
			metres	%													

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
143.47	166.32	22.85	100	MLSS, dark-grey with abundant carbonaceous material in the matrix; minor 45° dip joint at 145.5 m; bedding dips at up to 10; minor carbonaceous laminae and coaly debris; up to 20% quartzose component (sparkly); grades with depth from 163 m to grey-white MLSS with minor coaly lenticles. GBC.		
166.32	166.46	0.14		Conglomerate; MLSS grey-white matrix; elongate cobbles and pebbles up to 3 cm in length with long axes dipping at 45° relative to bedding GBC.		
166.46	169.03	2.57		MLSS, white; massive; minor quartzose component (10%); 45° dip joint at 168.9 m. BC dips at 2°.		
169.03	171.52	2.49		FMLSS, white; minor carbonaceous laminae and lenticles dipping at up to 5°; minor quartzose component (20%); minor 60° dip joints.		
171.52	173.00	1.48		MLSS, white; massive; minor carbonate in sub-vertically-dipping joint from 172.45 m to 173 m. GBC.		
173.00	174.35	1.35		Coarse grainsize lithic sandstone (LSS)/MLSS (50:50), interbedded; occasional 30° to 60° dip joints (spacing is 25 cm to 50 cm). BC dips at 5°.		
174.35	174.75	0.40		FLSS, white; 20% quartzose component; massive; minor 45° dip joint from 10 cm to 20 cm.		
174.75	175.87	1.12		MLSS, white-grey; massive; minor carbonaceous streaks. GBC.		
175.87	176.78	0.91		FMLSS, light-grey; minor 60°-dip joints; rippled core surface. GBC.		
176.78	176.93	0.15		MLSS, grey; abundant siltstone and mudstone clasts, pellets and shards; calcite vein (3 mm wide) and 45° - dip slickenside from 3 cm to 10 cm. BC dips at 2°.		
176.93	176.99	0.06	100	FMLSS, grey; abundant carbonaceous material in matrix. BC dips at 5°. <small>Continued over</small>		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
176.99	177.04	0.05	100	Dull coal, abundant wispy calcite veins; broken-core. BC dips at 5°.		
177.04	178.20	1.16		FMLSS, grey; abundant carbonaceous material in matrix; becomes brown-grey with minor carbonaceous laminae with depth; dark-grey siltstone cobble (slickensided) from 177.20 m; hard, apparently, hornfelsed, stony coal (fossilised tree trunk (?)) with abundant wispy calcite veins and one major 3 mm wide sub-vertically-dipping vein from 177.27 m to 177.46 m; bedding dips at up to 10°. GBC.		
178.20	179.95	1.75		FMLSS, brown-grey; abundant carbonaceous laminae and lenticles dipping at up to 10° slickensided BC.		
179.95	180.09	0.14		Carbonaceous mudstone, minor sandy band; shaly. Slickenside BC dips at 45°.		
180.09	180.23	0.14		Mudstone, brown-grey; mottled in appearance; very shaly with minor slickensides; abundant carbonaceous material. Slickensided BC dips at 20°.		
180.23	182.69	2.46		Intraformational conglomerate; MLSS matrix; poorly carbonaceous (grey-black); irregular, disturbed bedding dips at up to 45°; minor slickensides dipping at up to 60°, and intervals running for 40 cm; dirty, poorly-sorted debris; minor slump-structures and overturned bedding; shaly in part. Stepped BC dips at 10°.		
182.69	183.78	1.09		MLSS, grey-brown; dirty; massive. BC dips at 10°. Minor thin 60° dip calcite veins in top 40 cm.		
183.78	184.46	0.68		Mudstone, dark-grey to carbonaceous; minor coaly laminae dipping at up to 20°; shaly in part; occasional slickensides. Irregular GBC.		
184.46	185.02	0.56	100	Mudstone, grey-brown; dirty; minor coaly debris (roctlets (?)). GBC. Shaly in part. Continued over		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
185.02	185.92	0.90	100	FLSS, grey-black with minor light-grey bands; silty; minor festoon cross-bedding and carbonaceous laminae. GBC.		
185.92	187.14	1.22		Mudstone, grey-brown; grades to dark-grey (poorly carbonaceous) with depth; abundant slickensides; shales in basal 30 cm; minor laminite.		
187.14	187.20	0.06		FMLSS, grey-brown. Irregular BC dips at 10°.		
187.20	187.30	0.10		Mudstone, dark-grey; abundant slickensides (broken core). GBC.		
187.30	188.67	1.37		Interbanded grey-white FLSS/carbonaceous silty mudstone (75:25); abundant festoon cross-bedding, slumping, flaser-bedding and minor carbonaceous lenticles dipping at up to 20°. BC dips at 2°.		
188.67	189.58	0.91		MLSS, grey; peppery texture; bedding dips at up to 10°. BC dips at 2°.		
189.58	189.62	0.04		<u>COAL SECTION:</u> Dull coal.		
189.62	189.64	0.02		Bright coal.		
189.64	189.73	0.09		Dull coal; minor bright laminae; broken core (well-developed cleat).		
189.73	189.87	0.14		Dull coal; minor bright laminae; bedding dips at up to 2°.		
189.87	189.93	0.06		Bright coal		
189.93	190.03	0.10		Dull coal; abundant bright bands.		
190.03	190.10	0.07		Bright coal.		
190.10	190.12	0.02		Dull coal; minor bright laminae.		
190.12	190.14	0.02		Bright coal.		
190.14	190.20	0.06	100	Dull coal; abundant bright laminae dipping at 2°. Continued over		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
190.20	190.22	0.02	100	Carbonaceous mudstone; minor coaly laminae.		
190.22	190.24	0.02		Bright coal. GBC.		
190.24	190.46	0.22		Carbonaceous mudstone/dark-grey, mudstone, interbanded (50:50); abundant coaly lenticles and debris; minor slickensides. GBC.		
(BASE of COAL SECTION)						
190.46	192.84	2.38		Mudstone, grey; minor slickensides; abundant wispy carbonaceous laminae and coaly stringers; bedding dips at up to 45°; minor bioturbation and silty and sandy intervals.		
192.84	193.09	0.25		FMLSS, grey-white; abundant wispy carbonaceous laminae and lenticles (minor cross-bedding); bioturbated. BC dips at 2°.		
193.09	193.50	0.41		Laminite, grey mudstone/light-grey mudstone (50:50); minor poorly-developed flaser bedding dipping at up to 2°. BC dips at 2°.		
193.50	193.52	0.02		<u>COAL SECTION:</u> Carbonaceous mudstone; abundant dark-grey mudstone clasts and lenticles.		
193.52	193.59	0.07		Dull coal; minor bright laminae; bedding dips at up to 5°. BC dips at 5°.		
193.59	193.65	0.06		Shale, grey-brown; minor light-grey 1 mm - diameter intra-clasts.		
193.65	193.72	0.07		Dull coal, minor bright laminae BC dips at 2°.		
193.72	193.74	0.02		Bright coal.		
193.74	193.81	0.07	100	Dull coal; abundant bright laminae GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
193.81	193.83	0.02	100	<u>COAL SECTION:</u> (continued) Shale, brown; minor green clay pellets and intraclasts.		
193.83	193.97	0.14		Dull coal; abundant bright laminae and bands; broken core from 193.92 m to 193.97 m (minor slickensides).		
193.97	194.01	0.04		Mudstone, grey; minor coaly laminae and debris; poorly slickensided.		
194.01	194.04	0.03		Dull coal; abundant bright laminae.		
				(<u>BASE of COAL SECTION</u>)		
194.04	194.36	0.32		Mudstone, grey; minor wispy carbonaceous debris and laminae (rootlets (?)); sandy in basal 1 cm.		
194.36	194.42	0.06		<u>COAL SECTION:</u> Dull coal; abundant bright laminae dipping at up to 5° (lenticular in part).		
194.42	194.52	0.10		Mudstone, grey; minor carbonaceous laminae and 30° - dip slickenside. GBC.		
194.52	194.55	0.03		Carbonaceous mudstone/lenticular grey mudstone band (50:50).GBC.		
194.55	194.78	0.23		Dull coal; well-developed cleat; minor bright laminae; broken core (along cleat);		
194.78	194.83	0.05	100	Mudstone, dark-grey; slickensided; minor coaly laminae and debris; abundant plant-fossil fragments; shaly in part.		
				(<u>BASE of COAL SECTION</u>)		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
194.83	195.10	0.27	100	Shale, grey; abundant slickensides.		
195.10	195.53	0.43		Siltstone/FLSS (50:50); interbedded; bioturbated; minor carbonaceous laminae (contorted bedding). Worm-burrows (?) at base.		
195.53	195.84	0.31		Mudstone, grey; abundant slickensides and wispy carbonaceous laminae and debris; minor sandy lenticles; grades to dark-grey (poorly-carbonaceous) with depth; minor coaly laminae. Broken core at base.		
195.84	196.07	0.23		Shale, carbonaceous; abundant slickensides. BC dips at 2°.		
196.07	196.94	0.87		<u>COAL SECTION:</u> Dull coal; abundant bright laminae; calcite veins from 196.30 m to 196.43 m and 196.58 m to 196.65 m; abundant clay pellets from 196.27 m to 196.39 m; bedding dips at 2°; well-developed sub-vertical joints (resulting in broken core) from 196.52 m to 196.94 m;		
196.94	196.98	0.04		Dull coal with abundant grey-mudstone lenticles. (<u>BASE of COAL SECTION</u>)		
196.98	197.22	0.24		Grey mudstone, abundant slickensides and carbonaceous laminae dipping at up to 10°.		
197.22	199.54	2.32	100	Mudstone, grey/FLSS, grey-white (50:50); interbedded; abundant wispy carbonaceous laminae; minor slickensides and festoon cross-bedding; minor green intraclasts and green mudstone intervals;		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
199.54	199.55	0.01	100	<u>COAL SECTION:</u> Carbonaceous mudstone laminae, overlying grey mudstone. BC dips at 2°.		
199.55	199.93	0.38		Dull coal; abundant kaolinite on well-developed cleat; minor slickensides; broken core in basal 10 cm.		
199.93	199.99	0.06		Heavy dull coal; shaly. GBC. Mudstone, light-grey; abundant 60°-dip joints (broken core); shaly at base; minor carbonaceous laminae.		
199.99	200.13	0.14				
200.13	200.22	0.09		Dull coal, minor bright bands; well-developed cleat (broken core).		
200.22	200.23	0.01		Mudstone, grey.		
200.23	200.30	0.07		Dull coal, minor bright laminae; 60°-dip joints through core.		
200.30	200.33	0.03		Mudstone, grey; shaly; poorly carbonaceous and minor coaly debris. GBC.		
200.33	200.43	0.10		Interbanded dull coal/carbonaceous mudstone (50:50); minor bright coal lenticles; irregular, disturbed bedding and minor slickensides, core parts readily. GBC.		
				(BASE of COAL SECTION)		
200.43	201.17	0.74		Grey mudstone; minor coaly laminae, green mudstone intervals and intraclasts; minor slickensides; silty; bedding dips at up to 5°. Sandy bands at base.		
201.17	220.01	18.84	100	MLSS, grey-white; massively-bedded; minor coaly debris and carbonaceous laminae; carbonate in matrix from 212 m to 213.1 m (massive limestone veins in carbonaceous matrix from 212.8 m to 213 m); FMLSS in part.		

ASSAY DATA

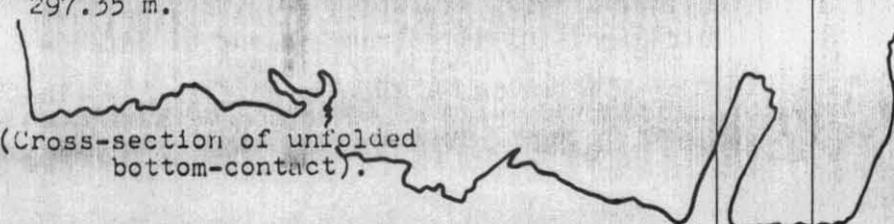
SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
220.01	221.84	1.83	85	Mudstone, grey-blue; abundant slickensides; carbonaceous mudstone at base. GBC.		
221.84	222.95	1.11	100	FLSS, grey-white; abundant siltstone and mudstone bands and laminae (festoon cross-bedded); minor carbonaceous debris and bioturbation; minor flaser bedding and calcite veins.		
222.95	260.66	37.71		MLSS, grey-white; massively bedded (occasionally dips at up to 10°); minor carbonaceous laminae and debris; minor FMLSS intervals; abundant 30 cm calcite-veined dull coal intervals in coaly debris and MLSS matrix from 241.88 m to 243 m; intraformational conglomerate from 243 m to 244.4 m; minor rippled core surface; calcite veins (dipping at 60°) become common from 245 m (occasional mid-pellets appear hornfelsed from this depth). BC dips at 70° from 260.45 m to 260.66 m (steeply dipping, slightly irregular). ...		
260.66	261.88	1.22		Dolerite, green-grey; fine-grained (micro-porphyrific with green phenocrysts abundant in glassy ground mass); abundant calcite veins. Irregular, brecciated BC dips at 45° from 261.81 m to 261.88m.		
261.88	262.33	0.45		Mudstone, hornfelsed; carbonaceous to 261.9 m; silicified brown-grey; abundant calcite veins. Steeply-dipping BC from 262.18 m to 262.33 m.		
262.33	272.95	10.62	100	Dolerite (as above); very green near contacts hornfelsed mudstone (top and bottom contacts dipping at 60°) from 262.88 m to 263.16 m; abundant 45° to 60°-dip joints (5 cm to 10 cm spacing); basal 3 m contain green dolerite similar in appearance to hornfelsed lithic sandstone; brecciated and abundant 5 mm, to 2 cm - thick calcite veins (minor slickensiding) in basal 1 m. BC dips at 45° from 272.87 m to 272.95 m and is lined with calcite veins.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
272.95	273.32	0.37	100	FLSS, grey; massive; hornfelsed; abundant cream-pink, white calcite veins (crystalline) dipping at from 45° to sub-vertically.		
273.32	276.82	3.50		MLSS, grey; massive; hornfelsed; minor FMLSS intervals and sparse carbonaceous laminae; bedding dips at up to 5°; abundant calcite veins and 60° dip joints infilled with calcite (up to 1 cm wide); FMLSS at base. BC dips at 50° from 276.64 m to 276.82 m.		
276.82	297.34	20.52		Dolerite, fine-grained to glassy groundmass; micro-porphyrific in part; light green-grey in top 1.5 m, then grades to green-grey-black with abundant 1 mm to 2 mm (in diameter) green-black phenocrysts (pyrexene (?)); abundant sub-horizontal to sub-vertical jointing; breccia-zone in top 50 cm; abundant calcite veins up to 3 cm in width (and extending orthogonally from the top contact) in the top 1.5 m, minor elsewhere (dipping sub-vertically); crystalline honey-coloured mineral in breccia zone at base. Irregular BC dips at 30° from 297.31 m to 297.34 m. Slickenside from 297.31 m to 297.35 m.		
 <p>(Cross-section of unfolded bottom-contact).</p>						
297.34	300.56	3.22	100	Mudstone, dark-grey; carbonaceous part; hornfelsed; abundant jointing and 30° to 45°- dip slickensides with calcite veins up to 1 cm in width (most are contorted thin, wispy veins); carbonaceous mudstone and dull coal from 297.31 m to 297.38 m (very hard); minor shaly parts; dirty FLSS to FMLSS intervals with minor steeply-dipping carbonaceous laminae from 298.65 m to 298.83 m and from 299.61 m to 299.91 m (irregular, slickensided, jagged BC's). Slickensided BC dips at 45° (calcite coated) from 300.49 m to 300.56 m.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
300.56	301.98	1.42	100	FLSS, grey-brown; abundant carbonaceous laminae (laminite in part with minor festoon cross-bedding); abundant brecciated-core (cracked core infilled with calcite); abundant microfaults; sub-horizontal bedding from 300.49 m to 301.05 m, then bedding becomes steeply-dipping (up to 45°); abundant dark-grey mudstone bands from 300.9 m; minor FMLSS intervals. BC dips at 45° from 301.94 m to 301.98 m.		
301.98	302.91	0.93		Laminite, dark-grey mudstone/light-grey siltstone and mudstone (50:50); bedding dips 45°; abundant microfaulting, brecciation and calcite veins (contorted); abundant slickensides and sub-vertically-dipping joints. GBC dips at 20° from 302.88 m to 302.91 m.		
302.91	303.03	0.12		Dull coal, minor carbonaceous mudstone (shaly) at top and bottom; abundant 1mm to 3 mm wide 45° to sub-vertically-dipping calcite veins (running in the opposite sense to the bedding which dips at 10°); minor slickensides. slickensided BC dips at 20°.		
303.03	303.70	0.67		Interbedded carbonaceous mudstone/FLSS, grey-brown (50:50); interbanded and laminated in part; bedding dips at 30°; abundant 1 mm to 4 mm wide calcite veins (wispy in part) dipping sub-horizontally to 45°; minor brecciation. BC dips at 10°. Slickensided fault (dipping at 10° but running in the opposite sense to the BC) appears to be a reverse fault at the base.		
303.70	307.33	3.63		FMLSS, grey-brown grading with depth to grey-white; abundant carbonaceous laminae and costly debris dipping at up to 30°; minor slickensides and calcite veins; abundant clay clasts in the lithic fragments; abundant coaly debris and clay-pellets in basal 10 cm. Irregular BC.		
307.33	309.11	1.78	100	FMLSS; massive; grey-white; very minor carbonaceous laminae dipping at up to 5°; FLSS in part.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
309.11	301.08	0.97	100	Laminite, dark-grey mudstone/light-grey mudstone (50:50); minor festoon cross-bedding, swirl marks and overturned bedding; grades to carbonaceous mudstone in basal 10 cm; FLSS from 309.58 m to 309.7 m.		
310.08	310.33	0.25		Shale, grey-brown; silty; clayey; minor muscovite fragments. GBC.		
310.33	310.94	0.61		Shale, dark-grey/grey-brown/black; interbanded; minor 30°-dip slickensides; grades to carbonaceous with depth.		
310.94	311.30	0.36		Carbonaceous shale; minor wispy calcite veins towards base; 45°-dip slickenside from 311.18 m to 311.26m. GBC.		
311.30	311.67	0.37		Shale, grey-brown; abundant muscovite flakes; silty; calcite bands (up to 1 cm in width from 311.30 m to 311.38 m). GBC.		
311.67	312.12	0.45		Carbonaceous shale; abundant grey-brown laminations and 30°-dip slickensides; minor wispy calcite veins. BC dips at 10°.		
312.12	312.23	0.11		Shale; silty; clayey; grey-cream-brown; abundant 1 mm to 2 mm coaly flecks; 20°-dip slickenside from 312.18 m to 312.2 m. BC dips at 5°.		
312.23	312.54	0.31		Carbonaceous shale; appears poorly-hornfelsed; minor 30°-dip calcite veins associated with slickensides from 312.28 m to 312.42 m. GBC.		
312.54	312.81	0.27		Interbanded carbonaceous shale/grey-brown MLSS (50:50); sandstone predominates towards base; minor laminite and lenticular, disturbed bedding.		
312.81	312.86	0.05		Dull coal, minor bright lenticles dipping at 5°; minor kaolinite or poorly-developed, cleat. BC dips at 10°.		
312.86	310.08	1.22	100	Mudstone, grey-brown; clayey; abundant slickensides with calcite-coating dipping at from 0° to 90° (relative to core axis); ^{Continued over} shear -zone dipping at 45° with FLSS, carbona-		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				aceous laminae, grey-brown mudstone and abundant calcite veins from 313.34 m to 313.65 m; minor light-grey brown mudstone bands and laminae towards base. GBC.		
314.08	315.92	1.84	100	<u>COAL SECTION:</u> Interbedded hornfelsed dull coal/ carbonaceous mudstone (50:50); minor grey mudstone and silty, sandy intervals; abundant joints, slickensides, calcite veins; minor brecciation; bedding dips at up to 5°; minor bright coal bands and laminae. (<u>BASE of COAL SECTION</u>)		
315.92	316.55	0.63		Siltstone, grey-brown; abundant mudstone bands; sandy in part; minor slickensides and coaly debris; calcite-coated slickensides; minor disturbed bedding towards base.		
316.55	318.54	1.99		FMLSS, grey-white; fault with unknown throw from 317.5 m to 317.55 m (dips at 45°); grey-brown with siltstone and mudstone banding in top 40 cm; sparse coaly debris, laminae and mudstone bands.		
318.54	318.66	0.12		Mudstone, grey; minor flame-structures, lenticular bedding and dark-grey bands and laminae; shaly, slickensided in part; brown clay-pellets towards base. GBC.		
318.66	320.05	1.39		Mudstone, brown; abundant green clasts and fragments throughout; (similar to interval seen in Diamond Drill Holes 44 and 46B); minor clay-pellets (bioturbation) and calcite veins; minor slickensides.		
320.05	320.12	0.07		<u>COAL SECTION:</u> Carbonaceous mudstone; lenticular laminae dip at up to 5°; minor disturbed bedding.		
320.12	320.27	0.15		Dull coal; hornfelsed (?).		
320.27	320.49	0.22	100	Mudstone, brown-black; silty; minor carbonaceous debris; carbonaceous at top. GBC. <small>Continued over</small>		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
(BASE of COAL SECTION)						
320.49	322.45	1.96	100	Siltstone, grey-brown; minor slickensides; sparse carbonaceous flecks and dark bands; muddy in part; grades to grey at base with minor carbonaceous bands and brown clay shards and pellets; bedding dips at up to 5°.		
322.45	337.67	15.22		FMLSS, grey-white; grey-brown for top 5.5 m; minor mudstone bands, siltstone cobbles, coaly debris and slickensides; coaly debris and calcite vein from 328.7 m to 328.9 m; minor FLSS; 1 cm - diameter clay pellets from 331 m to 331.4 m; siltstone band from 332.2 m to 332.3 m; carbonate matrix from 333.2 m to 335.2 m; occasional coaly debris bands from 335.6 m to 337.1 m; minor MLSS intervals; bedding dips at up to 10°. BC dips at 5°.		
337.67	344.00	6.33		Interbanded FLSS, grey/siltstone, grey-brown (50:50); abundant darker bands and carbonaceous laminae; FLSS grades to FMLSS to MLSS with depth; banding disappears with depth; bedding dips at up to 5°; massive MLSS with minor laminae and bands in basal 2.5 m; carbonaceous mudstone and clay-pellets from 341.9 m to 342 m; BC dips at 5°; the above sequence is repeated from 342.3 m to 344.0 m; 60° - dip calcite-coated slickenside from 342.85 m to 343.05 m. BC dips at 5°.		
344.00	352.12	8.12	100	Interbedded mudstone, grey and grey-brown/FLSS, grey-white (50:50); abundant siltstone intervals and minor FMLSS; bedding dips at up to 10°; minor slickensides; shaly in part; quartzose sandstone (QSS) from 345.9 m to 346.2 m; minor cross-bedding and lenticular bedding; minor shale and dull coal intervals in basal 2.5 m; hornfelsed in basal 1.5 m; occasional worm-burrows (?) and calcite veins; minor carbonaceous and dark-grey mudstone bands and lenticles. Irregular BC (breccia-zone along the contact) dips sub-vertically from 351.88 m to 352.12 m and is contorted and undulose. <small>Continued over</small>		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
352.12	354.15	2.03	100	Dolerite, green-grey grading to grey with depth; abundant calcite veins up to 1 cm wide dipping at from 0° to 90° relative to the core axis; abundant irregular joints (some en-echelon sub-vertical joints filled with calcite indicate dilation in a vertical sense). BC dips at 60° from 353.96 to 354.14 m. 2 cm-wide calcite vein between dolerite and underlying sediment; minor pyrite lamina at 353.96 m.		
354.15	355.65	1.50		Siltstone, grey-brown; hornfelsed; abundant thin calcite veins and carbonaceous laminae (swirl marks, irregular disposition); bedding dips at up to 5°; some sigmoidal joints filled with black material; breccia zone in part. Steeply-dipping BC (irregular and paralleled by a 1 cm - wide calcite vein) from 355.10 m to 355.65 m; green dolerite blebs on the side of the core from 354.9 m to 354.96 m. The 1 cm-wide calcite vein at the basal contact is wedge-shaped, fanning upwards, and contains pyrite cubes.		
355.65	356.51	0.86		Dolerite, green-grey; very green at top and bottom contacts; minor calcite veins; speckled with 1 mm to 2 mm long dark-green blebs in a white matrix. BC dips at 30° from 356.45 m to 356.51 m.		
356.51	358.04	1.53		Dark-grey FLSS; hornfelsed; minor thin calcite veins; bedding dips at up to 5°; minor siltstone and FMLSS bands and laminae; clay-pellets in basal 5 cm. Undulose BC.		
358.04	358.24	0.20		FLSS, grey-white; abundant carbonate in matrix. BC dips at 30°. (Massive limestone).		
358.24	359.60	1.36	100	Interbanded FLSS, grey/silty mudstone, dark-grey-brown; bedding dips up to 30°; bioturbation at top; fault (throw unknown) from 359.18 m to 359.44 m (beds dip at 5° on top side, 30° on bottom side). Hornfelsed. GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
359.60	360.45	0.85	100	Carbonaceous mudstone/dull coal (75:25), interbedded; brecciated; abundant calcite veins up to 4 cm in width; faulted (?); hornfelsed; abundant sandy and silty intervals. GBC.		
360.45	361.50	1.05		FLSS, grey; abundant carbonaceous laminae; grades to siltstone, with depth; bedding dips at up to 5°. Steeply-dipping BC from 360.94 m to 361.50 m. 1cm - wide calcite wedge (1mm in from the dolerite contact) extends for the length of this contact. Hornfelsed.		
361.50	365.22	3.72		Dolerite; green-grey; grey-white matrix with abundant 1mm phenocrysts (microporphyry (?)) throughout; minor irregular jointing and 30° dip calcite veins (1 mm to 2 mm wide). BC dips at 30° from 365.17 m to 365.22 m (irregular and with minor calcite veins).		
365.22	365.28	0.06		Carbonaceous mudstone; hornfelsed; irregular bedding and calcite veins; minor breccia development; some sandy lenticles. Undulose BC dips at 2°.		
365.28	365.81	0.53		FLSS, grey (washed-out appearance); hornfelsed; minor festoon cross-bedding dipping at up to 5°; minor carbonaceous laminae.		
365.81	366.15	0.34		FMLSS, gree-grey; hornfelsed; pyritic; dolerite sliver from 365.95 m to 366.15 m on the side of the core and associated with calcite veins and minor brecciation of the enclosing sediments; siltstone and mudstone cobbles and carbonaceous laminae from 365.95 m to 366.12 m; pyrite growth from 365.90 m to 365.94 m (lenticular, irregular). BC dips at 30° from 366.11 m to 366.15 m (very irregular). Hornfelsed.		
366.15	366.36	0.21		Secondary carbonate vein system ("Christmas tree" structure) in grey-black siltstone matrix. Irregular vein network. Undulose BC. Hornfelsed.		
366.36	368.40	2.04	100	Carbonaceous siltstone; hornfelsed; minor siltstone and FLSS intervals; abundant black-coated joints (2-5 mm spacing, dipping from		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				20° to 80°); minor calcite veins and slickensides; minor sub-vertical 1 cm - wide breccia development from 366.74 m to 367.8 m with green dolerite wedge from 366.74 m to 366.96 m; carbonaceous mudstone and heavy dull coal in part. Steeply-dipping BC (70°) from 367.86 m to 368.40 m with shearing, calcite veins and breccia development zone (1-2 cm wide) paralleling the contact.		
368.40	369.00	0.60	100	Dolerite; cream-white with minor green (as for above dolerite); irregular jointing; black-green at base. BC dips at 20° from 368.97 m to 369.00 m and has an associated alteration halo from 368.84 m to 369.00 m.		
369.00	392.81	23.81		Medium-grainsize quartzose sandstone (MQSS), green-white; hornfelsed for top 2.5 m; minor 45° to 60° - dip jointing; abundant carbonaceous laminae and festoon cross-bedding; bioturbation; minor rollover structures and microfaults; massive from 374.7 m to 378 m; planar cross-bedded in part, silty carbonaceous mudstone from 380.51 m to 380.51 m to 380.8 m; massive in basal 5 m. Sub-horizontal BC. (Base of the Upper Division of the Parmeener Super-group).		
392.81	397.02	4.21	100	(Top of this unit forms the top surface of the Lower Division of the Parmeener Super-Group). Siltstone, dark-grey; abundant sandy bands and small-scale cross-bedding in top 40 cm; muscovitic; bedding dips at up to 5°; minor sub-horizontal slickensides; abundant quartz-grits (2 mm to 3mm in diameter); minor gritty lenticles and brown-green bands (irregular, undulose bedding dipping at up to 5°); minor calcite-coated slickensides dipping at 45° in basal 2m; minor plant-fossil debris. End of Department of Mines Fingal Diamond Drill Hole Number 64 at a depth of 397.02 m .		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

DDH 66

DRILLING TARGET:- Base of the Upper Parmeener Supergroup											
REMARKS:- Dolerite intersected to a depth of 426.17 m											
SURVEY DATA						ASSAY DATA					
DEPTH metres	Bearing mag.	Inclin. days	SAMPLE No.	FROM metres	TO metres	RECOVERY metres %		ASSAY RESULTS			

GEOLOGICAL LOG

Logged by:- R. Castleden

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
0.00	426.17	420	99	Dolerite; grey; massive; predominantly solid and hard; grainsize is (average) 2-3 mm (with minor pyroxene (?) phenocrysts up to 5 mm in length) and there is weathering on sub-vertically-dipping joints (2 cm wide zone) from 0-30 m; purplish-grey zone from 12-18 m; grain-size is 1-2 mm from 30 m to 230 m (light-grey dolerite grading to dark-grey by 230 m); minor sub-horizontally-dipping to sub-vertically-dipping joints; 5 cm mafic (black-green) mineral zone from 139.80 m to 139.85 m; slickensided sub-horizontally-dipping calcite vein at 148 m; minor sub-vertically-dipping calcite (?) (zeolite (?)) veins; green chlorite (?) and calcite (?) veins dipping at 60° from 193.80 m - 194 m, from 198.80 m - 199.10 m, from 203.10 m to 203.4 m, from 213 m to 218 m, from 226 m to 227 m, from 228 m to 230 m and from 232 m to 233 m; highly-jointed (broken-up) dolerite with chlorite (?) veins from 234 m to 236 m; abundant 0.5 cm to 2 cm spacing, 45°-dip to sub-vertically-dipping jointing from 236 m to 255 m; coarse-grainsize grey-green		

Continued over:-

DEPARTMENT OF MINES—TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No.:- DOM FINGAL DDH Number 66	MAP SHEET No. 49	DISTRICT FINGAL	LOCATION OF SITE:- Fingal Tier near the headwaters of Mick's Creek and approximately 2 km west of Thebes Throne.
R.L. OF SITE:- 778.2 m	SITE SURVEY ON MAP No.:- N/A	CORE SIZE:- NW: 0 - 3.00 m NQ: 3.00 - 303.00 m BQ: 303.00 - 446.91 m AQ: 446.91 - 585.61 m	COMMENCED:- 13th June, 1980
BEARING OF HOLE:- -	AIR PHOTO No.:- N/A	COMPLETED:- 27th Oct., 1980	
INCLINATION OF HOLE:- Vertical	DRILL:- Edeco Stratadrill		
CO-ORDS OF SITE: 591 979 mE 5 389 037 mN	DRILLER:- R. McDonald R. Lohrey, A. Dawson	FINAL DEPTH (m):- 585.61	

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				zone (broken core) from 230 m to 255 m with abundant 1-2 m long zones of 60°-dip to sub-vertically-dipping chlorite and calcite (green-white) veins, together with pink-brown and brown-white veins; zone from 239 m to 241 m contains pink and green soapy, flakey minerals and a brown-white silicified rock (hornfelsed sandstone (?)); zone from 246 m to 250 m contains abundant 60°-dip to sub-vertically-dipping veins of chlorite (?), calcite (?) and zeolite (?); minor white-green veins from 250 m to 255 m with granophyric intervals from 252 m to 253 m; predominantly light-grey and massive from 255 m to 415 m (minor dark-grey intervals); abundant sub-vertically-dipping calcite (?) and minor chlorite (?) veins spaced at 5-10 m intervals from 268 m to 360 m; 1 mm grainsize from 255 m to 425.8 m (becomes finer with depth); thick sub-vertically-dipping white (calcite (?)) veins from 308-314 m; light-green and dark-green (broken zone) from 326 m to 330 m; white and green veins (small, conspicuous but not abundant) from 330 m to 366 m; 45°-dip to 60°-dip calcite (?)/chlorite (?) veins at 368 m, from 376 m to 377 m and from 402 m to 403 m; thin white veins dipping at 60° common from 410 m to 426.17 m; dark-grey from 415 m to 421 m; abundant 45° dip joints (spaced at from 5 to 50 cm) from 415 m to 426.17 m; very dark-green-grey from 421 m to 425.8 m; glassy matrix with minor less-than 1 mm-diameter white clasts and thin, wispy white veins from 425.8 m to 426.17 m. Irregular bottom-contact dips at 5°.		
426.17	427.08	0.91	100	Fine-medium-grainsize lithic sandstone (FMLSS), white-grey; chalky; thermally metamorphosed (hornfelsed); minor banding; abundant festoon cross-bedding. Bottom-contact (BC) dips at 5°.		
427.08	428.15	1.07	100	Fine-grainsize lithic sandstone (FLSS), white-grey; silty; minor banding;		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS							
			metres	%								

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
428.15	432.71	4.56	100	hornfelsed. Gradational bottom-contact (GBC).		
432.71	442.97	10.26		FMLSS, white-grey; chalky; hornfelsed; minor banding; grades to massively-bedded at base. BC dips at 2°.		
442.97	443.85	0.88		Medium-grainsize lithic sandstone (MLSS), grey; speckled; minor coarse-grainsize lithic sandstone (CLSS) and FLSS bands; predominantly massively-bedded; abundant carbonaceous bands and laminae from 438.04 m to 440.04 m; mudstone bands, mud-pellets, mudstone shards from 439.44 m to 440.04 m; bedding dips at up to 20° from 437.9 m to 440.9 m; grades with depth to FMLSS from 441.3 m to 442.97 m; shaly (swollen core) in part from 442.04 m to 442.97 m. BC dips at 2°.		
				<u>COAL SECTION:</u> Dull coal; minor broken core, particularly where there are 45°-dip to 60° dip joints from 443.06 m to 443.15 m, from 443.21 m to 443.33 m, from 443.35 m to 443.40 m, from 443.57 m to 443.67 m and from 443.78 m to 443.83 m; sandy, brown shaly band (carbonaceous at its base) from 443.44 m to 443.47 m; minor (less than 10%) bright bands dipping at up to 10°; carbonaceous mudstone from 443.83 m to 443.85 m. GBC.		
				<u>(BASE OF COAL SECTION)</u>		
443.85	445.14	1.29		Shale, dark-brown; muddy; silty; carbonaceous from 443.85 m to 443.95 m; minor slickensides; (swollen) clay-matrix in part; carbonaceous mudstone from 444.05 m to 444.25 m and from 444.42 m to 444.47 m. Irregular, rippled BC.		
445.14	447.07	1.93	100	FMLSS/MLSS (75:25) interbedded (75:25) with mudstone/siltstone (50:50); minor carbonaceous bands and laminae; Continued over		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
447.07	449.04	1.97	100	(swollen) clay-matrix in part. BC dips at 10°. MLSS/FMLSS (50:50), interbedded; bedding dips at up to 5°; minor coaly lenticles from 447.07 m to 447.12 m. GBC dips at 5°.		
449.04	451.38	2.34	100	MLSS, grey-white; massively-bedded; minor coaly debris; carbonate veins dipping at 10° from 449.54 m to 449.64 m; CLSS interval from 450.14 m to 450.44 m.		
451.38	454.69	3.31	0	Core loss.		
454.69	459.94	5.25	100	MLSS, grey-white; massively-bedded; minor coaly debris; FMLSS from 455.69 m to 456.99 m and from 457.49 m to 459.94 m.		
459.94	462.99	3.05		FLSS, light-grey; massively-bedded; grades to grey-white FMLSS with depth; minor coaly laminae and lenticles from 461.69 m to 462.99 m.		
462.99	464.89	1.90		FMLSS, light-grey and speckly; bedding dips at 10° from 462.99 m to 463.29 m and at 5° from 463.29 m to 464.89 m; CLSS matrix with quartzitic cobbles (conglomerate band) from 463.41 m to 463.55 m. BC dips at 2°.		
464.89	465.89	1.00		FLSS, grey; massive. BC dips at 2°.		
465.89	473.54	7.65		MLSS; minor coaly debris; massive bedding dips at up to 5°; speckled in appearance; minor sub-vertically-dipping carbonate veins from 466 m to 469 m; minor FMLSS intervals from 469 m to 473.54 m. GBC.		
473.54	477.76	4.22		FMLSS, minor FLSS intervals; massive bedding; secondary carbonate veins and bands with coaly debris dipping at up to 20° from 474.19 m to 474.50 m; bedding dips at up to 5° from 474.92 m to 476.92 m with minor brown laminae; MLSS from 477.46 m to 477.76 m; bedding dips at up to 10° from 476.92 m to 477.76 m with minor brown carbonate laminae. BC dips at 45°.		
477.76	477.86	0.10	100	Laminite, grey mudstone/carbonaceous mudstone (60:40); bedding dips at up to 10°. BC dips at 20°. <small>Continued over</small>		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
477.86	477.93	0.07	100	COAL SECTION: (not sampled) Carbonaceous mudstone; irregular, confused abundant carbonaceous- and grey-mudstone clasts and pellets (1 mm to 1 cm in diameter) from 477.86 m to 477.91 m. GBC.		
477.93	478.13	0.20		Carbonaceous mudstone/dull coal (50:50); abundant sub-vertically-dipping joints (broken core); shaly and slickensided towards base. Irregular, involute BC.		
				(BASE OF ATTENUATED COAL SECTION)		
478.13	478.49	0.36		Conglomerate, mud-pellet (elongate); bedding dips at up to 5° (very disturbed in part); sandy and silty bands. BC dips at 10°.		
478.49	479.63	1.14		FLSS; abundant 60°-dip to sub-vertically- dipping wispy undulose carbonaceous laminae and bands; very disturbed (contorted) bedding; mudstone with mud- pellets and silty matrix from 479.53 m to 479.63 m. Pebbly BC dips at 10°.		
479.63	484.74	5.11		MLSS; massive; minor coaly flecks; minor FMLSS intervals from 480.93 m to 484.74 m. GBC.		
484.74	486.55	1.81		FMLSS, light-grey; massive; minor coaly lenticles, FLSS and carbonate intervals dipping at up to 5° from 484.97 m to 486.55 m. GBC dips at 5°.		
486.55	489.23	2.68		MLSS, massive; bedding dips at up to 5°; grey-white; minor carbonaceous laminae; grades with depth to FMLSS.		
489.23	489.27	0.04		COAL SECTION: Dull coal. GBC.		
489.27	489.28	0.01		(attenuated) Shale, brown-black.		
489.28	489.38	0.10	100	Dull coal; minor bright bands; minor slickensides. GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
489.38	489.40	0.02	100	<u>COAL SECTION:</u> Mudstone, dark-grey. BC dips at 2°. (attenuated)		
489.40	489.51	0.11		(Contd.) Dull coal; minor sub-vertically-dipping joints towards base.		
<u>(BASE OF COAL SECTION)</u>						
489.51	489.59	0.08		Mudstone, dark-grey; abundant clay clasts and lenticles; minor coaly laminae; bedding dips at up to 2°; carbonaceous in part. GBC dips at 2°.		
489.59	489.67	0.08		Interbanded dark-grey mudstone/grey mudstone (75:25); minor clay clasts; carbonaceous in part. Undulose BC dips at 2°.		
489.67	491.47	1.80		Mudstone, dark-grey; minor sandy bands and carbonaceous laminae; minor joint (dipping at 60°) from 489.81 m to 489.91 m; abundant 45°-dip joints and slickensides (resulting in broken core) from 489.93 m to 490.11 m; minor wispy carbonaceous stringers; abundant carbonaceous laminae from 490.11 m to 490.49 m with abundant bands of carbonaceous mudstone and dull coal; sub-vertically-dipping joints from 490.73 m to 491.01 m; joints dipping at 45° from 490.96 m to 491.04 m; 60°-dip joint from 491.26 m to 491.34 m; abundant sandy and silty festoon cross-bedding from 491.05 m to 491.43 m. GBC.		
491.47	491.59	0.12		Mudstone, grey; abundant coaly bands and laminae dipping at up to 2°. Slickensided BC dips at 30°.		
491.59	491.82	0.23		<u>COAL SECTION:</u> Interbanded dull coal/dark-grey mudstone (50:50); bedding dips at up to 5°; abundant low-angle slickensides. Undulose BC dips at 2°.		
491.82	491.84	0.02	100	Shale, olive-green-brown; slickensided; minor carbonaceous bands dipping at up to 5°. Stepped BC dips at up to 2°. Continued over		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
491.84	491.99	0.15	100	<u>COAL SECTION:</u> Dull coal; minor bright laminae; sparse slickensides; minor mudstone laminae. (attenuated) (Contd.) <u>(BASE OF COAL SECTION)</u>		
491.99	494.01	2.02		Mudstone, dark-grey; bedding dips at up to 5°; slickensided carbonaceous mudstone from 492.11 m to 492.19 m; carbonaceous mudstone from 492.35 m to 492.43 m; laminite of dull coal/bright coal/dark-grey mudstone (25:25:50) from 492.43 m to 492.54 m; disturbed bedding with minor carbonaceous laminae dipping at up to 10° from 492.54 m to 492.82 m; minor sandy bands from 492.54 m to 493.01 m (BC dips at 30°); occasional carbonaceous mudstone bands, laminae, slickensides and sandy intervals from 492.93 m to 494.01 m; 1 cm -throw micro-fault from 493.94 m to 493.98 m. GBC.		
494.01	494.83	0.82		FLSS, grey; abundant mudstone bands and laminae dipping at up to 5°. Stepped BC.		
494.83	495.16	0.33		Mudstone, dark-grey; minor slickensides and light-grey laminite; dull coal from 495.09 m to 495.11 m. Irregular BC.		
495.16	496.04	0.88		FMLSS, grey-white; minor carbonaceous laminae dipping at up to 10° and shaly, silty intervals, MLSS from 495.99 m to 496.04 m; sub-vertical worm-burrow (?) from 495.98 m to 496.05 m. BC dips at 2°.		
496.04	496.67	0.63		Mudstone, grey and dark-grey; conjugate slickenside zone from 496.54 m to 496.74 m.		
496.67	497.55	0.88		Interbanded grey mudstone/light-grey FLSS (75:25); shaly in part; minor carbonaceous laminae and slickensides. Irregular BC dips at 10°.		
497.55	498.75	1.20	100	FMLSS, grey-white; minor carbonaceous laminae and festoon cross-bedding; minor silty and mudstone bands dipping at up to 5°. GBC. Continued over		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
498.75	499.24	0.49	100	Mudstone, dark-grey; minor light-grey laminae; abundant slickensides and silty from 498.88 m to 499.24 m; minor carbonaceous laminae and coaly stringers from 498.99 m to 499.11 m. GBC.		
499.24	499.36	0.12		FMLSS, grey. Irregular BC dips at 5°.		
499.36	499.57	0.21		MLSS, grey-white. BC dips at 10°.		
499.57	500.33	0.76		FLSS, grey; minor silty and mudstone bands dipping at up to 2°; shaly towards the base. GBC.		
500.33	500.78	0.45		Interbanded grey FLSS/dark-grey mudstone; bedding dips at 5°. GBC.		
500.78	501.24	0.46		Mudstone, grey; abundant coaly stringers; minor contorted bedding and carbonaceous debris; silty and shaly from 501.03 m to 501.24 m. GBC.		
501.24	502.10	0.86		FLSS, light-grey; abundant grey mudstone and siltstone bands and laminae; minor cross-bedding; mud-pellets from 502.04 m to 502.10 m. BC dips at 2°.		
502.10	504.57	2.47		FMLSS, grey-white; abundant carbonate in matrix; bedding dips at up to 5°; grades to FLSS with depth; minor mudstone bands and festoon cross-bedded carbonaceous laminae from 503.06 m to 503.41 m; minor bioturbation with worm-burrow (?) extending to 504.67 m. Undulose BC dips at 2°.		
504.57	504.76	0.19		FLSS, light-grey; minor carbonaceous laminae; silty.		
504.76	504.92	0.16		Mudstone, grey; grades to siltstone with depth.		
504.92	506.19	1.27		MLSS, grey-white; minor carbonate matrix and coaly laminae; bedding dips at up to 5°. Sigmoidal BC dips at 5°.		
506.19	506.92	0.73		Siltstone, grey; grades to dark-grey mudstone with depth.		
506.92	507.57	0.65	100	FMLSS, grey-white/carbonaceous mudstone (75:25), interbanded; abundant carbonaceous laminae and minor coaly laminae. Contorted, ragged BC. Continued over		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
507.57	508.22	0.65	100	Interbanded grey mudstone/dark-grey mudstone (50:50); minor laminae, lenticular bedding and festoon cross-bedding; minor sandy, silty and carbonaceous intervals towards the base.		
508.22	508.32	0.10		<u>COAL SECTION:</u> Heavy dull coal/carbonaceous mudstone (50:50). GBC.		
508.32	508.35	0.03		Shale, brown; minor carbonaceous laminae. Rippled BC.		
508.35	509.06	0.71		Dull coal; minor bright laminae; abundant joints dipping at 45° from 508.35 m to 508.5 m; sub-vertically-dipping joints from 508.5 m to 508.75 m; abundant bright laminae from 508.91 m to 509.06 m; shaly intervals from 508.96 m to 509.01 m.		
				(BASE OF COAL SECTION)		
509.06	509.89	0.83		Mudstone, grey; abundant slickensides and coaly debris; minor siltstone and carbonaceous mudstone. GBC.		
509.89	512.59	2.70		FLSS, grey-white; minor silty intervals; abundant carbonaceous laminae dipping at up to 10° with minor cross-bedding from 508.89 m to 512.59 m. BC dips at 2°.		
512.59	515.05	2.46		FMLSS, grey-white; grades to MLSS; minor carbonaceous laminae and coaly debris; massively-bedded. Undulose BC.		
515.05	516.03	0.98		Mudstone, grey; silty; twin joints (5 mm separation) dipping at 45° from 515.32 m to 515.41 m; interbanded with dark-grey mudstone from 515.62 m to 515.83 m. GBC.		
516.03	516.06	0.03		<u>COAL SECTION:</u> Carbonaceous mudstone; minor grey mudstone laminae; grades to dull coal. BC dips at 2°.		
516.06	516.24	0.18	100	Dull coal; abundant low-angle joints (5 mm		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				spacing); abundant slickensides (resulting in broken core from 516.19 m to 516.24 m. Slickensided BC (sub-horizontal).		
				(BASE OF COAL SECTION)		
516.24	516.31	0.07	100	Shale, grey. GBC.		
516.31	517.31	1.00		Mudstone, silty.		
517.31	517.33	0.02		Mudstone, carbonate-rich; minor slickensides and coaly laminae. BC dips at 10°.		
517.33	517.36	0.03		Dull coal; shaly at base. BC dips at 2°.		
517.36	517.38	0.02		Mudstone, grey; carbonate bands. Cuspate BC dips at 2°.		
517.38	517.71	0.33		Mudstone, grey; minor slickensides; shaly; carbonaceous mudstone from 517.51 m to 517.55 m and from 517.67 m to 517.71 m. BC dips at 2°.		
517.71	517.72	0.01		<u>COAL SECTION:</u> Dull coal.		
517.72	517.75	0.03		Carbonaceous mudstone; minor slickensides. GBC.		
517.75	517.78	0.03		Heavy dull coal; minor carbonaceous mudstone. GBC.		
517.78	517.88	0.10		Dull coal.		
517.88	517.91	0.03		Claystone, cream-brown. Rippled BC.		
517.91	518.06	0.15		Heavy dull coal with brown mudstone laminae. GBC.		
518.06	518.14	0.08		Mudstone, brown; poorly carbonaceous.		
518.14	518.63	0.49	100	Dull coal; minor bright laminae; minor mudstone lenticles from 518.14 m to 518.18 m; secondary disseminated pyrite from 518.18 m to 518.21 m; mudstone laminae and lenticles from 518.36 m to 518.42 m. Ragged, irregular BC. Continued over		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
518.63	518.66	0.03	100	<u>COAL SECTION:</u> (Contd.) Mudstone, grey; minor carbonaceous laminae. BC dips at 2°.		
518.66	518.70	0.04		Dull coal. BC dips at 2°.		
518.70	518.74	0.04		Mudstone, grey-brown. Irregular BC.		
518.74	519.02	0.28		Dull coal; minor bright laminae. GBC.		
519.02	519.04	0.02		Carbonaceous mudstone.		
519.04	519.07	0.03		Carbonaceous mudstone saturated with secondary (?) carbonate.		
519.07	519.08	0.01		Carbonaceous mudstone, sandy; bedding dips at up to 5°.		
519.08	519.78	0.70	100	Dull coal; sub-vertically-dipping joints throughout; minor sub-vertical carbonate veins; bright coal with abundant carbonate on cleat from 519.23 m to 519.26 m; mudstone bands (?) from 519.43 m to 519.45 m and from 519.66 m to 519.78 m (carbonaceous); interbanded dull and bright coal from 519.45 m to 519.57 m.		
				(<u>BASE OF COAL SECTION</u>)		
519.78	528.55	8.51	97	Interbedded and interbanded grey-white FMLSS/grey silty mudstone (50:50); occasional carbonaceous laminae, disturbed bedding and bioturbation; minor festoon cross-bedding and slickensides; bedding dips at up to 5°.		
528.55	528.81	0.26	100	<u>COAL SECTION:</u> (attenuated) Dull coal; 25% bright laminae and bands. GBC.		
528.81	528.91	0.10		Carbonaceous mudstone. GBC.		
				(<u>BASE OF COAL SECTION</u>)		
528.91	529.17	0.26	100	Carbonaceous siltstone. GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS																
			metres	%																	

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
529.17	534.06	4.89	100	Interbanded carbonaceous siltstone/dark-grey FLSS (50:50); minor cross-bedding and slickensides; FLSS grades to FMLSS with depth; FMLSS with minor carbonaceous bands and laminae from 531.43 m to 532.71 m.		
534.06	540.37	6.31		Mudstone, grey; minor silty and sandy bands and laminae dipping at up to 10°; minor slickensides and cross-bedding; carbonate-rich MLSS interval from 539.15 m to 539.45 m. Ripply BC.		
540.37	549.85	9.48		MLSS, grey-white; massively-bedded; minor carbonaceous laminae from 540.37 m to 540.88 m; shaly from 541.83 m to 542.08 m; mud-pellets from 542.63 m to 542.83 m; minor shaly and carbonaceous laminae from 543.8 m to 546.8 m; secondary (?) carbonate from 546.59 m to 546.64 m; shaly with minor mudstone from 548.65 m to 549.63 m; carbonaceous laminae and bands from 549.63 m to 549.85 m.		
549.85	550.30	0.45		<u>COAL SECTION:</u> Dull coal/carbonaceous mudstone (50:50), interbedded; shaly in part; minor slickensides. GBC.		
550.30	551.08	0.78		Dull coal; grades to carbonaceous mudstone with depth; broken core; calcite on sub-vertical slickensides. GBC.		
				<u>(BASE OF COAL SECTION)</u>		
551.08	555.72	4.64		FMLSS, grey; shaly in part; minor mudstone and siltstone intervals; minor faulted carbonaceous laminae; bedding dips at up to 10°. Interdigitating BC.		
555.72	570.69	14.79		MLSS, grey-white; minor coaly debris and carbonaceous laminae; predominantly massive; abundant jointing and broken core; FLSS and FMLSS in part; minor festoon cross-bedding and bedding dipping at up to 10°; sparse mud-pellet bands. BC dips at 2°.		
570.69	571.70	1.01	100	Shale; grey-black. Slickensided BC dips at 20°. Silty; minor plant-fossil debris.		

ASSAY DAT/

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS																	
			metres	%																		

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
571.70	572.08	0.38	100	Interbedded FMLSS, grey/carbonaceous mudstone (50:50); abundant contorted and irregular bedding; flame-structures, rollovers present; minor slickensides. GBC.		
572.08	572.55	0.47		FMLSS, grey-white; abundant coal debris and minor mud-pellet bands; minor carbonaceous laminae and partings; sub-vertical joint through centre of core; minor normal faulting (throw 1 cm, dip of fault plane is 50°.)		
572.55	572.60	0.05		<u>COAL SECTION:</u> Carbonaceous mudstone, silty; (attenuated) minor contorted mudstone lenticles. GBC.		
572.60	572.71	0.11		Dull coal; minor bright bands and laminae. GBC.		
572.71	572.80	0.09		Carbonaceous mudstone with abundant grey-brown mudstone lenticles. GBC.		
				(BASE OF COAL SECTION)		
572.80	573.87	1.07		FLSS, grey; silty; muddy at top; minor contorted carbonaceous laminae; shaly in part. GBC.		
573.87	582.90	9.03		FMLSS, light-grey; massive; minor slickensides and 45° to 60° dip joints; carbonate matrix from 578.3m to 579.1m and in basal 50 cm (minor). BC dips at 2°.		
582.90	585.61	2.71	100	Interbedded FLSS, light-grey/mudstone, dark-grey (25.75); minor banding and laminate; bedding dips at up to 5° (contorted in part); minor flaser bedding and slump structures; dull coal intervals from 582.90m to 582.95m and from 583.5m to 583.6m.		
				[End of Department of Mines Fingal Diamond drill hole Number 66 at a depth of 585.61m]		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

DRILLING TARGET:- Precollaring BH 68														
REMARKS:-														
SURVEY DATA					ASSAY DATA									
DEPTH metres	Bearing mag.	Inclin. degs	SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS						
						metres	%							

GEOLOGICAL LOG

Logged by:- **C.A. Bacon**

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
0	50.66	chips		Precollared with 16.5cm hammer bit; no core recovered, only chips and dust.		

Continued over:-

DEPARTMENT OF MINES—TASMANIA
DIAMOND DRILL CORE RECORD

HOLE No.:- 68	MAP SHEET No. 49	DISTRICT FINGAL	LOCATION OF SITE:-
FINGAL TIER			
R.L. OF SITE:- 779.10 m	SITE SURVEY ON MAP No.:	CORE SIZE:- chips	
BEARING OF HOLE:-	AIR PHOTO No.:-	COMMENCED:- 9/4/80	
INCLINATION OF HOLE:- 90°	DRILL:- WARMAN 1000	COMPLETED:- 10/4/80	
CO-ORDS OF SITE: 592 215. 2mE 385 721. 6mN	DRILLER:- K. Richardson	FINAL DEPTH (m):- 50.66m	

DRILLING TARGET:- Top of glacio-marine sequence of Lower Parmeener Super Group										
REMARKS.-										
SURVEY DATA			ASSAY DATA							
DEPTH metres	Bearing mag.	Inclin. degs	SAMPLE No.	FROM metres	TO metres	RECOVERY metres %		ASSAY RESULTS		
		77.9								
		90°								
		592 215.2								
		5 385 724.6								
										620.69 m

GEOLOGICAL LOG

Logged by:- C.A. Bacon

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
0.00	50.66	0	0	Pre-collared to 50.66 m.		
50.66	349.00	298.34	100	Very coarse dolerite; calcite filled fractures at 67.00 m, and from 306.00 - 349.00 m, dipping at 70 - 80°. Dolerite grain size decreases gradually with depth, until dolerite fine to fine-medium grained at 349.00 m.		
349.00	434.00	85.00	100	Fine-medium grained dolerite grading to very fine dolerite at 434.00 m.		
434.00	437.00	3.00	100	Fine grained dolerite with sparse vertical cracks and sub-vertical joints filled with calcite.		
437.00	449.00	12.00	100	Dolerite becoming finer grained, almost glassy, rare sub-vertical joints.		
449.00	452.60	3.60	100	Dolerite glassy; chilled margin. End of dolerite at 452.60 m. Samples (10 cm long) of core taken every 3 m and stored for future use. Dolerite - sediment contact diffuse, indistinct, no severe change; dolerite melds into severely baked mudstone.		
452.60	452.71	0.11	100	Baked green mudstone.		

Continued over:-

DEPARTMENT OF MINES—TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No.:- 68	MAP SHEET No. 49	DISTRICT FINGAL	LOCATION OF SITE:-
FINGAL TIER			
R.L. OF SITE:- 779.10 m	SITE SURVEY ON MAP No.:	CORE SIZE:- NQ	
BEARING OF HOLE:-	AIR PHOTO No.:-	COMMENCED:- 9/5/80	
INCLINATION OF HOLE:- 90°	DRILL:- Longyear 44	COMPLETED:- 2/7/80	
CO-ORDS OF SITE:- 592 215.2 mE 5 385 724.6 mN	DRILLER:- C. Mitchell S. Mitchell	FINAL DEPTH (m):- 620.69 m	

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
452.71	453.51	0.80	100	<u>COAL SECTION:</u> Coal with abundant calcite veins, no bright bands; heavy dull coal with abundant silty laminae, gradational bottom contact, GBC.		1
453.51	454.29	0.78	100	Shaley siltstone, grey, with calcite in veins.		
454.29	454.98	0.69	100	Fine-grained lithic sandstone (FLSS), with clay pellets from 454.29:39 m. Remainder of unit barren.		
454.98	473.09	18.11	100	Medium-grained lithic sandstone (MLSS), largely barren, coal debris, bands and laminae from 470.82 m. Very occasional silty laminae throughout unit.		
473.09	476.06	2.97	100	Medium to coarse-medium grained lithic sandstone, (MCLSS), barren.		
476.06	481.74	5.68	100	Medium lithic sandstone with abundant clay pellets, coaly debris, coaly bands from 476.08 - .26 m; remainder of unit barren; bedding horizontal. Calcite replacement of sandstone from 481.14 - .28 m, and from 481.35 - .39 m; SBC.		
481.74	482.06	0.30	94	<u>COAL SECTION:</u> Dull coal with abundant calcite on cleats; core broken.	481.74	
482.06	483.72	1.66	100	Dull coal with 1% bright bands, mudstone bands from 481.26 - .37 m, 482.43 - .47 m, and from 482.56 - .69 m. Laminite of mudstone and heavy dull coal from 482.84 - 483.07 m; green mudstone bands from 483.41 - .53 m and from 483.60 - .66 m. This unit of interbedded dull coal and green mudstone displays abundant slickensides dipping at up to 45° in the mudstone sections; calcite on slickensides.	482.56	2A
						2B
						483.72

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		Moist Ash V.C.M. F.C. ASSAY RESULTS on a dry basis										
			metres	%	%	%	%								
1	452.71	453.51	0.80	100	3.8	67.8	10.4	21.8							
2A	481.74	482.56	0.80	97	4.9	51.4	23.0	25.6							
2B	482.56	483.72	1.16	100	4.6	69.3	19.2	11.5							

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
483.72	485.06	1.34	100	Green mudstone with abundant coaly laminae and bands, core brown from 484.56 - 485.06 m. Contains swelling clays (montmorillonite) as core has expanded.		
485.06	485.57	0.51	100	Shaley carbonaceous mudstone with abundant slickensides; core expanded.		
485.57	487.84	2.27	100	Sandy green mudstone with abundant sandy and coaly laminations.		
487.84	487.86	0.02	100	Dirt band or paleosol.		
487.86	488.66	0.80	100	FLSS interlaminated with mudstone, 60/40. Gradational bottom contact, GBC.		
488.66	488.82	0.16	100	MLSS, barren, sharp bottom contact, SBC.		
488.82	491.23	2.41	100	FLSS, interlaminated with 25% mud from 488.82 - .92 m; abundant coaly laminations, laminated with 10% mud from 490.99 - 491.09 m, GBC.		
491.23	500.92	9.69	100	MLSS, barren; very occasional calcite veins from 494.07 - 500.08 m.		
500.92	502.20	1.28	100	Green mudstone, with abundant coaly laminae; a micaceous shale band with abundant carbonaceous material from 501.82 - .86 m.		
502.20	503.00	0.80	100	Sandy mudstone, with 20% sand, SBC.		
503.00	503.08	0.08	100	FLSS, banded.		
503.08	503.40	0.32	100	FLSS interbedded with siltstone, 50/50.		
503.40	504.65	1.25	100	Sandy mudstone with occasional slickensides.		
504.65	505.91	1.26	100	FLSS with occasional coaly bands and wispy carbonaceous laminae, SBC.		
505.91	510.29	4.38	100	Interbedded green mudstone and FLSS, 60/40, with occasional plant fragments, possibly <i>Rienetia</i> sp; unit is finely laminated with sandy intervals 1-2 to 5 cm wide.		
510.29	511.03	0.74	100	Carbonaceous mudstone, core broken in parts.		
511.03	511.44	0.41	100	Coherent claystone, carbonaceous.		
511.44	511.66	0.22	100	Carbonaceous sandy mudstone, friable, breaks easily, contains 10% clay.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
511.66	513.53	1.87	100	Sandy mudstone with calcitic flecks, finely banded, abundant coaly laminae; sand content 50% in unit; carbonaceous mudstone band from 513.19 - .23 m, SBC.		
513.53	516.29	2.76	100	FLSS, banded, abundant wispy carbonaceous laminae; abundant cross bedding dipping at up to 15°.		
516.29	516.31	0.02	100	COAL SECTION: Clay pellet conglomerate with pellets 1-2 mm wide.		
516.31	516.86	0.55	100	Dull coal with 1-2% bright bands, calcite on cleats and brown shale bands from 516.33 - .34 m and from 516.395 - 516.400 m, GBC.		3
516.86	519.30	2.44	100	FLSS, grey, bedding dips up to 10°; barren, GBC.		
519.30	521.34	2.04	100	MLSS, barren.		
521.34	523.29	1.95	100	MFLSS, largely barren but with clay pellets and coaly debris from 523.14 - .19 m. SBC.		
523.29	524.31	1.02	100	Heavy dull coal with sandy bands from 523.50 - .51 m, 523.59 - .60 m, 524.02 - .03 m, 524.09 - .10 m and a mudstone band from 524.135 - 524.140 m; and a sandy band from 524.22 - .23 m.		4A
524.31	525.38	1.07	100	Heavy dull coal with 5% bright bands; FLSS pebble at 525.16 - .21 m; sparse calcite bands and sub-vertical veins from 524.75 - .95 m; calcite vein 0.5 cm wide at 524.920 - .925 m; veins feathery; very fine.		4B
				Continued over		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		Moist Ash V.C.N. F.C. ASSAY RESULTS on a dry basis							
			metres	%	%	%	%					
3	516.29	516.86	0.57	100	10.2	56.7	21.8	21.5				
4A	523.29	524.31	1.02	100	4.7	63.1	19.4	17.5				
4B	524.31	525.38	1.07	100	3.3	46.9	22.2	30.9				
4C												

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
525.38	526.48	1.10	100	<u>COAL SECTION:</u> Heavy dull coal with .2% bright bands; sandy coal interval from 525.41 - .47 m; occasional cleats and sub-vertical joints; sandy mudstone bands from 525.795 - 525.800 m. SBC.		4C
526.48	533.34	6.86	100	Laminated FLSS and mudstone, 80/20; with very occasional wispy carbonaceous laminae and mudstone bands; shaley from 527.82 - .83 m, and from 528.90 - .95 m, mudstone band from 528.66 - .72 m. Above unit displays occasional slickensides, and occasional sandy laminae. GBC.		
533.34	536.36	3.02	100	Laminated FLSS and mudstone, 50/50, barren. Interval of FLSS from 535.52 - 536.00 m, GBC.		
536.36	536.63	0.27	100	Carbonaceous mudstone, finely laminated, GBC.		
536.63	539.33	2.70	100	MLSS, carbonaceous flecks and wispy carbonaceous laminae abundant, bedding dips up to 15°.		
539.33	541.38	2.05	100	MLSS, barren, with an interval from 540.63 - .65 m containing abundant clay pellets and coaly debris.		
541.38	542.36	0.98	100	MLSS, barren, SBC.		
542.36	542.43	0.07	100	Green mudstone.		
542.43	545.65	3.22	100	Carbonaceous sandy mudstone, with sand content of increasing downwards, from 40% at the top of the unit to 80% over the basal 1 m.		
545.65	545.66	0.01	100	Calcite band; dip 10°; calcite in 'flakes'.		
545.66	545.67	0.01	100	Carbonaceous sandy mudstone.		
545.67	545.73	0.06	100	FLSS interlaminated with mudstone, 50/50.		
545.73	555.54	9.81	100	MLSS, barren; with calcite replacement from 550.16 - .41 m, SBC.		
555.54	556.13	0.59	100	Grey mudstone with abundant slickensides.		
556.13	557.43	1.30	100	<u>COAL SECTION:</u> Dull coal, with sandy coal intervals from 556.83 - 557.07 m. Continued over		5

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		Moist Ash V.C.M. F.C. ASSAY RESULTS on a dry basis									
			metres	%	%	%	%							
5	556.13	557.43	1.30	100	3.9	53.4	21.1	25.5						

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
557.43	557.63	0.20	100	COAL SECTION: Heavy dull coal, no bright bands, finely laminated. (Contd.)		
557.63	557.89	0.26	100	Carbonaceous mudstone.		
557.89	558.40	0.51	100	Laminite of brown siltstone, mudstone, and FLSS; 40/40/20. GBC.		
558.40	560.06	1.66	100	MLSS, quartz rich; laminated with silt, MLSS; silt (80/20).		
560.06	560.43	0.37	100	Siltstone.		
560.43	563.44	3.01	100	Grey, quartz rich-FMLSS, laminated with silt (80/20); laminations 1 mm wide and are horizontal. GBC.		
563.44	564.73	1.29	100	Grey quartz rich MFLSS, with abundant wispy carbonaceous laminae and abundant silt laminae. The silt content of this unit decreases with depth. GBC.		
564.73	566.47	1.74	100	Grey MLSS with very occasional mud pellets 3-8 mm long by 2 mm wide, and occasional mudstone laminae.		
566.47	573.61	7.14	100	Grey-white MLSS, barren, with a large fracture from 566.69 - .92 m, dipping at 70° to the core axis; coal fragments with irregular shapes occur at 569.74 - .75 m, and at 569.69 - .70 m. A carbonaceous mudstone pellet is found from 569.75 - .78 m; and a coal pellet at 570.150 - .155 m; coaly debris occurs over the intervals of 570.54 - .99 m, 571.21 - .56 m. A coal band of bright, crumbly coal is found at 571.59 - .63 m, and a coal pellet occurs over the interval 571.71 - .73 m. Calcite occurs in the matrix as small white flecks from 572.19 - .31 m.		
573.61	577.63	4.02	100	White MLSS with calcite in matrix; coaly bands and debris from 574.95 - .96 m; a calcite nodule with wispy coal laminae throughout at 575.00 m. Coal debris and mudstone pellets occur from 575.91 - .93 m, and from 576.28 - .38 m; mud pellets 10 mm diameter occur from 576.48 - .53 m, coal pellets occur		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				from 576.72 - .73 m and from 576.80 - .86 m. Wispy carbonaceous laminae occur from 576.58 - .63 m and from 577.38 - .58 m; mudstone laminae occur from 577.58 - .60 m. One coal band 5 mm wide is at 576.42 m. SBC.		
577.63	578.03	0.40	100	Black carbonaceous mudstone with plant fragments and abundant sand and silt laminae. GBC.		
578.03	578.50	0.47	100	Grey sandy siltstone, finely laminated with laminations horizontal. GBC.		
578.50	579.02	0.52		FLSS interbedded with grey siltstone and carbonaceous siltstone, (80/10/10). Wispy carbonaceous laminae abundant in this unit.		
579.02	579.38	0.36		FLSS, barren, GBC.		
579.38	580.05	0.67	100	FLSS, interbedded with grey silt, 80/20. GBC.		
580.05	580.40	0.35		FLSS, with occasional horizontal wispy carbonaceous laminae. SBC.		
580.40	580.47	0.07		Black carbonaceous mudstone with plant fragments, GBC.		
580.47	580.49	0.02	100	Bright coal, SBC.		
580.49	580.53	0.04		Sandy black carbonaceous mudstone, bottom contact slickensided, dipping 30°.		
580.53	580.54	0.01	100	Beige mudstone with plant fragments. GBC.		
580.54	580.57	0.03		Shaley dull coal, GBC.		
580.57	580.89	0.32		Grey mudstone, massive, with a slickenside at 580.63 m, dipping 70°. GBC.		
580.89	581.23	0.34	100	Grey shaley mudstone, GBC.		
581.23	581.65	0.42		Grey sandy mudstone.		
581.65	581.66	0.01		Coal pellet conglomerate with pellets 1 mm in diameter, SBC.		
581.66	581.78	0.12		Grey mudstone with abundant plant fragments and a conchoidal fracture. GBC.		
581.78	584.48	2.70	100	Interlaminated grey mudstone, brown siltstone and grey FLSS, (30/30/40). Individual beds are 1 mm -		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS																
			metres	%																	

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
584.48	586.89	2.41	100	10 mm wide; with occasional wispy carbonaceous laminae. The sand content increases with depth. FLSS with sparse, low angled current bedding, silty laminae and abundant wispy carbonaceous laminae. GBC.		
586.89	590.29	3.40		MLSS, with no silt laminae and only a few wispy carbonaceous laminae. One mudstone pellet 20 mm x 30 mm at 587.44 m. SBC.		
590.29	590.44	0.15		FLSS, grey and barren, GBC.		
590.44	595.26	4.82		MLSS, white; barren; bedding dips up to 10°, calcite in matrix, SBC.		
595.26	596.45	1.19		FMLSS, grey, with abundant coaly debris and mud and coal pellets from 594.32 - .34 m, 594.47 - .68 m. SBC.		
596.45	598.05	1.60		Grey siltstone; finely banded with occasional slickensides dipping at 45° and occasional sandy laminae.		
598.05	599.48	1.43	100	Grey sandy siltstone with abundant sandy laminae. FLSS interval from 598.31 - .46 m. GBC.		
599.48	600.79	1.31		FLSS interbedded with siltstone plant fragments in siltstone beds. Coarse quartz-lithic sandstone bands from 600.46 - .49 m, 600.51 - .54 m, 600.60 - .71 m. GBC.		
600.79	602.75	1.96	100	Siltstone, grey, containing 20% FLSS, GBC.		
602.75	603.05	0.30		MQSS (medium-grained quartzose sandstone) interbedded with grey siltstone. SBC.		
603.05	603.19	0.14		Black siltstone, SBC.		
603.19	603.20	0.01		Brown siltstone, SBC.		
603.20	605.58	2.33	98	MQSS with abundant silty laminae; silt content is 40% over the top 0.50 m, decreasing to 20% at 603.80 m.		
605.58	608.56	2.98	100	MQSS, sparkling white, clean, with wispy carbonaceous and silty laminae and bands from 608.38 - .49 m.		

Continued over

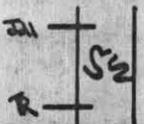
ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																
598.05	598.05	598.05	0.00	100																
598.31	598.31	598.31	0.00																	
598.31	598.31	598.31	0.00																	
598.31	598.31	598.31	0.00	100																
598.31	598.31	598.31	0.00																	

DRILLING TARGET:- Top of Lower Parmeener Super Group Glacio-Marine Sequence											
REMARKS:-											
SURVEY DATA						ASSAY DATA					
DEPTH metres	Bearing mag.	Inclin. degs	SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS			
						metres	%				

GEOLOGICAL LOG

Logged by:- C.A. Bacon

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
0.00	63.00	chips		Pre-collared dolerite.		
63.00	300.00	237.00	100	Coarse grained dolerite, fining downwards.		
300.00	438.00	138.00	100	Medium grained dolerite; minor secondary intrusion of glassy dolerite from 351.00 - 351.50 m. Main dolerite body does not show sub-vertical cracking, but has a well defined chilled margin at the base.		
438.00	441.82	3.82	100	Very glassy dolerite; dolerite grades from fine to very fine to glassy; actual dolerite sediment contact at 441.82 m. Contact melanged, disturbed.		
						
441.82	441.92	0.10	100	Baked mudstone.		
441.92	442.75	0.83	100	Carbonaceous mudstone with a mudstone pebble at 442.57 - .58 m and sparse calcite veins.		
442.75	444.00	1.25	100	Shaley mudstone with abundant slickensides.		
444.00	444.05	0.05		Mudstone; bioturbated, with rheomorphic slumping, and abundant siltstone laminae.		

Continued over:-

DEPARTMENT OF MINES—TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No.:- 69	MAP SHEET No. 49	DISTRICT FINGAL	LOCATION OF SITE:-
FINGAL TIER			
R.L. OF SITE:- 715.10 m	SITE SURVEY ON MAP No.1	CORE SIZE:- NQ	
BEARING OF HOLE:-	AIR PHOTO No.1:-	COMMENCED:- 29/4/80	
INCLINATION OF HOLE:- 90°	DRILL:- Warran 1000	COMPLETED:- 11/6/80	
CO-ORDS OF SITE: 5 393 017 mE 5 387 754 mN	DRILLER:- K. Richardson R. Stevens	FINAL DEPTH (m):- 545.41 m	

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
444.05	444.12	0.07	100	<u>COAL SECTION:</u> Dull coal with 5% bright bands.		
444.12	444.21	0.09		Green mudstone.		
444.21	444.46	0.25		Dull coal, sharp bottom contact, SBC.		
444.46	444.47	0.01		Beige claystone.		
444.47	444.72	0.25		Dull coal.		1
444.72	444.87	0.15		Shale interbedded with coal, (50:50), bioturbated.		
444.87	445.17	0.30	100	Dull coal with shale bands 0.5 cm thick comprising 20% of the unit.		
445.17	445.53	0.36	100	Dull coal, core badly broken, gradational bottom contact, GBC.		
445.53	445.56	0.03		Carbonaceous mudstone, core badly broken, grades from above unit. SBC.		
445.56	445.63	0.07	100	Beige coloured laminate of mudstone, and claystone (50:50) with 10% bright coal bands.		
445.63	445.66	0.03	100	Grey mudstone, core badly broken.		
445.66	446.33	0.67		Coherent grey mudstone with abundant wispy carbonaceous laminae.		
446.33	446.34	0.01	100	Beige clay.		
446.34	446.51	0.17		Carbonaceous mudstone with shale and silt bands and a few bright coal bands.		
446.51	447.00	0.49	100	Green mudstone.		
447.00	448.27	1.27		Green mudstone with abundant wispy carbonaceous laminae and shale bands 0.5 cm wide; slickensides common.		
448.27	448.96	0.69	100	Green mudstone as above core broken.		
448.96	449.10	0.14		Carbonaceous mudstone and non-carbonaceous mudstone laminated with clay (40:40:20).		
449.10	449.22	0.12	100	Dull coal, core broken.		
449.22	449.93	0.71	100	Green mudstone with abundant plant fossils, and numerous slickensides.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		Moist Ash V.C.M. F.C. ASSAY RESULT on a dry basis							
			metres	%	%	%	%					
1	444.05	445.56	1.51	100	3.5	49.1	25.3	25.6				

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
449.93	452.65	2.72	100	Green mudstone as above, with microfault with throw of 5 cm from 450.10 - .15 m; sandy laminae abundant; FLSS interval from 451.11 - .23 m.		
452.65	452.66	0.01	100	Dirt band.		
452.66	452.72	0.06	100	Dull coal.		
452.72	455.50	2.78	100	Green mudstone, as above. GBC.		
455.50	456.75	0.55	100	FLSS, barren.		
456.05	465.76	9.71	100	MFLSS, largely barren, with occasional coal bands and rare wispy carbonaceous laminae; calcite replacement from 460.10 - .20 m; coal bands abundant from 460.10 - .20 m. GBC.		
465.76	468.66	2.90	100	Grey mudstone with carbonaceous debris, and wispy carbonaceous laminae; dirt bands at 466.92 m and 467.06 m. Zone of slickensides 468.22 - .36 m. GBC.		
468.66	469.61	0.95	100	Laminite of FLSS and mudstone, (50:50).		
469.61	471.09	1.48	100	Laminite of FLSS and mudstone (80:20). GBC.		
471.09	472.69	1.60	100	FLSS and mudstone laminite (80:20), bedding horizontal, unit finely banded.		
472.69	473.49	0.80	100	Carbonaceous mudstone, slickensided at top; unit becomes less carbonaceous towards base.		
473.49	474.12	0.63	100	Grey-green sandy mudstone, GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				COAL SECTION		
474.12	476.69	2.57	100	Poorly carbonaceous mudstone, abundant slickensides, broken over 476.49 - .69 m.		
476.69	477.13	0.44		Dull coal with calcite on abundant cleats, core broken.		2
477.13	480.92	3.79		FLSS, bedding horizontal.		
480.92	481.62	0.70		Laminite, FLSS and green-grey mudstone, (10:90); extensive slickensides from 481.52 - 481.62 m. GBC.		
481.62	482.42	0.80		Laminite of FLSS and green-grey mudstone (80:20), with abundant wispy carbonaceous laminae.		
482.42	486.22	3.80		Laminite of mudstone and siltstone, (50:50) green-grey in colour; laminae less than 1 mm wide; sandy (with 10% FLSS) from 484.42 - 486.22 m. SBC, dips at 40°; slickenside on bottom contact.		
486.22	486.44	0.22		FLSS with abundant calcite replacing FLSS in parts. GBC.		
486.44	487.00	0.56		Laminite of FLSS and siltstone (80:20), GBC.		
487.00	487.40	0.40		Laminite of FLSS and siltstone (20:80), GBC.		
487.40	488.00	0.60		Carbonaceous siltstone, black in colour, with occasional plant fragments, GBC.		
488.00	488.01	0.01		Siltstone, brown in colour, GBC.		
488.01	490.87	2.86		Fine-medium grained lithic sandstone (FMLSS), with abundant wispy carbonaceous laminae; sandstone is massive, white in colour; and is quartz-rich. SBC.		
490.87	491.44	0.57		Laminite of FLSS and siltstone, (70:30), grey in colour. GBC.		
491.44	492.07	0.63		Laminite of FLSS and siltstone, (50:50), grey in colour. GBC.		
492.07	492.43	0.36		Carbonaceous siltstone, black in colour, GBC.		
492.43	493.85	1.42	100	Laminite of FLSS and carbonaceous siltstone, (50:50), dark grey in colour; laminae less than 1 mm wide; abundant wispy		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		Moist Ash V.C.M. F.C. ASSAY RESULTS on a dry basis										
			metres	%	%	%	%								
2	476.69	477.13	0.44	100	2.9	24.8	31.9	43.5							

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
492.43	493.85	1.42	100	carbonaceous laminac and abundant cross bedding; slickensides common. SBC.		
493.85	504.38	10.53	100	MFLSS, massive, with rare wispy carbonaceous laminae. Calcite replacement from 495.82 - .83 m; core broken from 495.83 - 496.33 m and from 503.55 - 504.00 m; a joint dips at 70° from 503.85 - 504.00 m. SBC.		
504.38	504.88	0.50	100	Carbonaceous shale, core broken, dark grey in colour, extensive re-cemented slickensides and abundant clay laminae, SBC.		
504.88	505.83	0.95	100	Mudstone, brown, friable, finely laminated. GBC.		
COAL SECTION						
505.83	506.33	0.50	100	Carbonaceous mudstone and heavy dull coal (50:50). GBC.		
506.33	506.68	0.35	100	Dull coal, with 1% bright bands; core broken. GBC.		
506.68	506.86	0.18	100	Carbonaceous mudstone, black in colour, GBC.		
506.86	507.73	0.87	100	Siltstone, black in colour, finely laminated. GBC.		
507.73	508.37	0.64	100	Laminite of FLSS and siltstone, (60:40), GBC.		
508.37	511.51	2.29	73	MFLSS, with abundant wispy carbonaceous laminae from 508.37 - .43 m; core broken from 510.00 - 511.35 m, SBC.		
511.51	511.84	0.33	100	Mud pellet conglomerate, grey in colour, with angular mud pellets up to 5 cm x 5 cm; most pellets however are approximately 3 cm x 1 cm, aligned with their long axis at 90° to the core axis. Mudstone bands 1 cm wide are also common; slickenside on basal contact, dips at 70°.		
511.84	512.25	0.41	100	MFLSS, massive.		
512.25	512.43	0.18	100	Mud pellet conglomerate, as above. GBC.		
512.43	518.59	5.91	95	MFLSS, massive, core broken; occasional mudstone pellets and rare wispy carbonaceous laminae dipping at 10°; calcite replacement from 514.05 - 514.12 m. SBC.		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS												
			metres	%													

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
518.59	522.00	3.41	100	Laminite of MFLSS and mudstone (80:20); finely laminated with laminae less than 1 mm wide, and abundant wispy carbonaceous laminae. Core broken from 518.59 - 519.00 m; 'worm burrow' structures and disturbed bedding from 520.60 - .80 m, abundant coaly debris from 521.10 - .30 m; sub-vertical joints from 519.56 - .70 m.		
522.00	522.33	0.33	100	FMLSS with abundant sub-vertical joints, SBC.		
522.33	522.40	0.07	100	Dull coal, SBC.		
522.40	523.30	0.90	100	Mudstone and siltstone laminite, (50:50), with abundant disturbed laminae, possibly bioturbation. GBC.		
523.30	531.28	7.98	100	FMLSS, grey, core broken; abundant sub-vertical joints. Core crushed from 525.95 - 526.30 m; occasional wispy carbonaceous laminae, GBC.		
531.28	531.38	0.10	100	FMLSS and mudstone laminite, grey in colour; bedding disturbed; microfaults with throw of up to 1 cm common.		
531.38	531.43	0.05	100	Mudstone, grey, massive; core broken.		
531.43	534.46	2.46	81	FMLSS, massive, with mudstone cobbles from 531.68 - .88 m; vertical joints from 531.68 - 533.08 m, core broken from 532.08 - 532.33 m, SBC.		
534.46	535.03	0.57	100	Mud pellet conglomerate; mud pellets 1 x 3 cm; mud pellets angular.		
535.03	535.58	0.55	100	FMLSS with abundant claystone and mudstone pellets, and reworked clasts of lithic sandstone. SBC.		
535.58	536.31	0.73	100	Mudstone, grey, laminated, SBC.		
536.31	536.49	0.18	100	Siltstone, brown, SBC.		
536.49	537.42	0.93	100	FMLSS, massive, GBC. FMLSS, quartz rich (10% quartz) with abundant silt laminae. SBC.		
537.42	537.73	0.31	100	MQSS with abundant coaly debris and wispy carbonaceous laminae; small mudstone pellets (2 x 3 mm) at base.SBC. Continued over		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
537.73	537.87	0.14	100	MQSS with abundant green mudstone pellets and laminae; matrix tinted green. SBC.		
537.87	538.15	0.28	100	Mudstone, green in colour, interbedded with FMLSS, (50:50). Abundant slickensides, core broken. GBC.		
538.15	539.35	1.20	100	FLSS with 10% mud, massive. GBC.		
539.35	539.40	0.05	100	Mudstone, grey. GBC.		
539.40	540.90	1.50	100	Laminite of siltstone and FLSS, (50:50).		
540.90	541.45	0.55	100	Carbonaceous siltstone, SBC.		
541.45	542.05	0.60	100	FQSS, occasional coaly debris, SBC.		
542.05	542.97	0.92	100	FLSS, quartz rich, SBC.		
542.97	543.30	0.33	100	FQSS with abundant coaly debris, GBC.		
543.30	544.08	0.78	100	FQSS laminated with FLSS, (50:50).		
544.08	544.43	0.35	100	Laminite of siltstone and mudstone, (50:50); grey in colour. GBC.		
544.43	545.41	0.98	100	FLSS, quartz rich laminated with mudstone, (80:20).		
END OF DOM FINGAL DDH 69 at 545.41 m.						

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

DRILLING TARGET:- Glacio-marine sequence of Lower Parmeener Super Group											
REMARKS:- East Fingal seam intruded by dolerite											
SURVEY DATA						ASSAY DATA					
DEPTH metres	Bearing mag.	Inclin. ugs	SAMPLE No.	FROM metres	TO metres	RECOVERY metres %		ASSAY RESULTS			

GEOLOGICAL LOG				Logged by:- C.A. Bacon			
FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION		
		metres	%		Core	Sample	
0	342.00	342.00	100	Medium-grained dolerite.			
342.00	347.65	5.65	100	Fine-grained dolerite.			
347.65	349.18	1.53	100	Very fine-grained glassy dolerite with abundant pyroxene microphenocrysts 1 mm ² . Contact of dolerite and sediments dips 60° from 349.18 to 349.30 m. Basal 1 cm shows dolerite-sediment mixing; green (chloritized) and hornfelsed.			
349.18	349.61	0.43	100	Hornfelsed heavy dull coal and carbonaceous mudstone (50:50); abundant calcite veins 1 mm wide; occasional veins up to 9 mm wide; veins dip sub-vertically.			
349.61	349.68	0.07	100	Carbonaceous mudstone very hard, with abundant calcite veins. Bottom contact dips at 60°. Top of bottom contact at 349.68m; base of bottom contact at 349.78 m.			
349.68	349.97	0.27	98	Sandy carbonaceous mudstone interbedded with grey mudstone, 50/50; bottom contact dips 60° - see diagram			

Continued over:-

DEPARTMENT OF MINES—TASMANIA
DIAMOND DRILL CORE RECORD

HOLE No.:- 70	MAP SHEET No. 49	DISTRICT FINGAL	LOCATION OF SITE:-
Fingal Tier, in the headwaters of St. Paul's River			
R.L. OF SITE:- 603.60 m	SITE SURVEY ON MAP No.:	CORE SIZE:- NQ	
BEARING OF HOLE:-	AIR PHOTO No.:-	COMMENCED:- 16/1/80	
INCLINATION OF HOLE:- 90°	DRILL:- Longyear 38	COMPLETED:- 21/3/80	
CO-ORDS OF SITE: 391 176.5 ME 5 385 873.5 MN	DRILLER:- D.Summers, A.Dawson	FINAL DEPTH (m):- 416.27 m	

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
349.97	350.13	0.14	98	Siltstone, abundantly carbonaceous, broken core, bedding dipping at 60°.		
350.13	350.18	0.05	100	Brecciated zone; top contact dips at 60° from 350.13 to 350.18 m.		
350.18	350.23	0.05	100	Carbonaceous siltstone, broken core; unit friable, incompetent, bedding dips at 60°; basal contact dips at 60° from 350.23 m to 350.27 m.		
350.23	350.35	0.12	100	Friable, green, brecciated clay; top of top contact: 350.23 m; base of top contact: 350.27 m; top of basal contact: 350.35 m. Basal contact dips 60°.		
350.35	350.67	0.32	100	Carbonaceous siltstone; less carbonaceous towards the base.		
350.67	351.48	0.46	58	Fine, lithic sandstone (FLSS); abundant carbonaceous laminae dipping at 45°, core broken, few slickensides; abundant mudstone laminae. Core Loss 0.35 m in this unit.		
351.48	351.59	0.11	100	Paleosol (?) quartz grits in matrix of sand and clay; botryoidal texture, unit sheared and incompetent.		
351.59	351.98	0.39	100	Carbonaceous mudstone, bedding dipping at 45°; core brecciated.		
351.98	353.33	1.35	100	FLSS; core brecciated, wispy carbonaceous laminae dipping at 45°; yellow in colour.		
353.33	353.64	0.31	100	FLSS; white; abundant coaly debris, bedding dips at 45°, large coal lenses.		
353.64	354.28	0.64	100	<u>COAL SECTION</u> : Dull coal, sandy over top 0.01 m, core broken.		
354.28	354.42	0.14	100	Carbonaceous mudstone.		
354.42	354.55	0.13	100	Dull coal.		
354.55	354.91	0.36	100	Grey mudstone.		
354.91	355.85	0.60	64	Grey mudstone with abundant sandy and carbonaceous laminae; dipping at 60° to core axis; core brecciated.		

(Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
355.85	356.07	0.22	100	COAL SECTION: Dull coal, brecciated, 2 mm wide calcite vein at top of unit; abundant calcite fragments and rare silt laminae.		
356.07	356.17	0.10	100	Sandy coal, very hard (baked?) bedding dips at 60°, silt laminae common.		
356.17	356.27	0.10	100	Sand-free dull coal; very friable; jointed; bedding dips at 60°. Kaolinite vein at top of unit, GBC.		
356.27	356.38	0.10	90	Poorly carbonaceous grey, friable mudstone. Gradational bottom contact (GBC).		
356.38	356.61	0.22	95	Richly carbonaceous grey mudstone; joints at 60° to core axis, sharp, horizontal bottom contact (SBC).		
356.61	357.09	0.46	95	Friable grey carbonaceous mudstone contains montmorillonite, core expanded.		
357.09	357.15	0.06	100	Dirt band or possible paleosol with secondary calcite; quartz grits in a matrix of silt and clay.		
357.15	357.23	0.07	90	Breccia zone in FLSS with abundant mudstone bands; slickenside at top; bedding at 45°.		
357.23	357.42	0.18	95	Brecciated coal, GTC, GBC dipping at 60° with slickenside on contact. Top of bottom contact at 357.38 m. Base of bottom contact at 357.42 m. Minor FLSS bands towards the top; claystone band 2 mm wide at base; kaolinite on basal slickenside.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				silty laminae; core broken 359.78 - .92 m; and from 360.94 - 361.44 m; coaly debris from 361.45 - 361.55 m.		
352.12	363.67	1.55	100	Green mudstone; core broken; unit massive; top 10 cm severely jointed; slickenside at 45° at 362.31 m; bedding 45° to core; slickensides at 362.53 - .59 m; joints at 362.63 m, 362.75 m, 362.77 m, 362.91 m and 363.10 m. Slickensides from 363.22 - .28 m; joint at 363.38 m; slickenside at 363.61 - .67 m.		
353.67	363.71	0.04	100	Paleosol (?); quartz grits and sand grains in matrix of sand and clay.		
353.71	363.96	0.25	100	Carbonaceous mudstone; jointed; kaolinite bands at 363.75 m, 363.83 m, 363.85 m.		
353.96	365.31	1.35	100	Brown mudstone; sandstone interval from 364.18 - 364.29 m.		
355.31	366.94	1.63	100	Brown mudstone interlaminated with FLSS (50/50); sandy intervals (sand/silt 70/30) from 365.92 - 366.00 m; bedding 20° to core axis.		
356.94	368.20	1.26	100	MLSS with slickenside dipping 30° at 367.25 m; kaolinite on slickensides; MCLSS with carbonaceous debris from 367.25 - 367.61 m; GTC and GBC for this interval. Whole unit has GBC, dipping at 20°. Joint at 367.74 m; dip 70°.		
				 joint, dip 70°		
368.20	374.23	6.03	100	MLSS, barren, with frequent FLSS intervals; joint 80° to core axis at 368.80 m; joints dipping 70° at 372.00 m, 372.43 m, 372.47 m, 372.56 m, 372.66 m, 372.70 m and 372.72 m. Bedding dips at up to 30° from 372.70 - 373.91 m and from 373.96 - 374.05 m. Clay pellets and coaly debris from 373.34 m and 373.44 m.		
374.23	374.62	0.39	100	CLSS, barren; core broken.		
374.62	375.05	0.43		Sandy mudstone, core broken.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				387.03 - 387.08 m. Interlaminated with sand over basal 30 cm. GBC.		
387.26	387.56	0.30	100	Greasy green mudstone, extensively slickensided, montmorillonite rich. GBC.		
387.56	387.76	0.20	100	Greasy green mudstone with no slickensides.		
387.76	388.15	0.39	100	Brown mudstone with abundant coaly bands 2 mm wide; disturbed bedding and bioturbation at base of unit; wispy carbonaceous laminae towards base. GBC.		
388.15	389.26	1.11	100	Massive green mudstone with slickenside 388.78 - 388.89 m; clay rich patches 388.74 - 388.76 m, sandy over basal 0.25 m, with bedding dipping at 30°.		
389.26	389.51	0.25	100	FLSS interlaminated with mudstone; fine laminae, disturbed bedding. GBC.		
389.51	389.63	0.12	100	FLSS interlaminated with carbonaceous mudstone. GBC.		
389.63	389.83	0.20	100	Sandy mudstone.		
389.83	389.89	0.06	100	FLSS, carbonaceous towards base.		
389.89	389.91	0.03	100	Dirt band.		
389.91	389.94	0.03	100	Carbonaceous siltstone.		
389.94	389.99	0.05	100	FLSS with wispy carbonaceous laminae. GBC.		
389.99	390.27	0.28	100	FLSS interlaminated with sandy mudstone.		
390.27	390.43	0.16	100	CLSS.		
390.43	391.49	1.06	100	FLSS interlaminated with sandy mudstone; fine laminations; sub-vertical burrows.		
391.49	391.59	0.10	100	FLSS interlaminated with carbonaceous mudstone.		
391.59	392.45	0.73	85	FLSS interlaminated with green mudstone, fine laminations, bedding horizontal. CORE LOSS in this unit: 0.13 m. Slickensides dipping 70° at 289.66 m; 390.49 m, 392.00 m, 392.08 m and 391.70 m. Slickensides dipping 45° at 390.00 m, 390.01 m. (in above units).		
392.45	393.05	0.60	100	Pale green mudstone; massive, sandy over basal 0.30 m; bedding horizontal. <small>Continued over</small>		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

				clay pellets 1 mm diameter and mud laminae common over basal 0.30 m. Abundant slickensides at base. GBC.	
393.05	393.31	0.26	100	Brown mudstone, massive, abundant slickensides; greasy to touch.	
393.31	393.48	0.17	100	Sandy mudstone, few wispy carbonaceous laminae, rheomorphic slumping, and abundant bioturbation.	
393.48	393.61	0.13	100	Calcareous mudstone; i.e. calcareous matrix. GBC.	
393.61	394.22	0.61	100	FLSS interlaminated with mudstone (70/30); slickensides at 393.74 m, 394.00 - 394.20 m. GBC.	Index Page
394.22	394.50	0.28	100	Carbonaceous mudstone.	
394.50	395.18	0.67	99	Carbonaceous mudstone interbedded with FLSS; beds 1 mm - 10 mm wide.	
395.18	396.37	1.19	100	MLSS interbedded with carbonaceous mudstone over top 30 cm, wispy carbonaceous laminae, small CLSS bands over basal 0.5 m. GBC.	
396.37	396.66	0.29	100	Sandy carbonaceous mudstone, massive. GBC.	
396.66	396.83	0.17	100	MLSS (white) interlaminated with carbonaceous mudstone 50/50; GBC.	
396.83	397.32	0.49	100	FLSS, white, barren.	
397.32	397.79	0.47	100	Core loss 0.47 m.	
397.79	397.80	0.01	100	Brown mudstone. GBC.	
397.80	399.00	1.20	100	Green mudstone with slickensides dipping at 60° at 398.30 m; 398.51 m, 398.58 m. Sandy over basal 0.30 m; abundant bioturbation and rheomorphic slumping; siltstone band from 398.39 - 398.44 m.	
399.00	405.13	6.13	100	Green mudstone, slightly carbonaceous 399.11 - 399.30 m; interbedded with MLSS over 399.30 - 401.11 m; bedding horizontal, slickenside at 401.11 m dipping 45°; interbedded with MLSS from 401.14 - 401.59 m; beds 1 mm - 10 mm wide; fine laminations in mudstone units. Faulted at base; faults dip 70°; SBC, slickenside at base.	Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				 Faults Slickenside		
405.13	405.16	0.03	100	Green mudstone, finely laminated GBC.		
405.16	405.49	0.33	100	MLSS interbedded with CLSS; beds 1 cm wide; coaly debris at .03 m, .07 m % from top coaly wisps in basal 10 cm, GBC.		
405.49	406.15	0.66	100	FLSS interbedded with carbonaceous siltstone; undulose bottom contact (70/30); bedding dips 60°; microfault 0.09 m for top. GBC.		
406.15	407.49	1.34	100	MQSS with wispy carbonaceous laminae, interbedded with carbonaceous mudstone over basal 10 cm.		
407.49	408.25	0.76	100	CQSS interbedded with carbonaceous siltstone, QSS coarser over basal 5 cm.		
408.25	409.85	1.60	100	FQSS with sparse wispy carbonaceous laminae.		
409.85	410.07	0.22	100	Core loss 0.22 m.		
410.07	411.37	1.30	100	MQSS with coaly laminae over top 10 cm and over basal 0.50 m.		
411.37	413.07	1.49		MQSS with abundant coaly and mudstone laminae dipping at 35°; occasional mudstone pellets. Core Loss 0.21 m between 411.85 - 411.97 m. 0.5 cm coal at 411.45 m; sandy mudstone interval over top 30 cm; clay pellets 412.17 - .26 m and 412.82 - .88 m. Coaly debris 411.98 - 412.15 m, wispy carbonaceous laminae 412.50 - 413.50 m; 1 cm dirt band at 411.98 m pellets and coaly debris over basal 10 cm.		
413.07	413.82	0.72	96	FQSS, muddy over top 0.47 m; wispy carbonaceous laminae over basal 0.26 m. Loss in unit of 0.03 m.		
413.82	416.27	2.17	100	MFQSS, wispy carbonaceous laminae in top 1.5 m; core broken 415.34 - 415.38 m, Core Loss of 0.28 m at 415.38 - 415.66 m.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS																
			metres	%																	

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				<p>Faults at 70° to core at 414.84 m and 414.21 m, and 413.32 m. Basal 0.27 m is markedly carbonaceous with abundant bioturbation, rheomorphic slumping, disturbed laminae and coaly debris.</p> <p>END OF HOLE AT 416.27 m.</p>		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS														
			metres	%															

DRILLING TARGET:- Pre-collaring DDH 71										
REMARKS:-										
SURVEY DATA					ASSAY DATA					
DEPTH metres	Bearing mag.	Inclin. degs	SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS		
						metres	%			
										chips only
										26.3.80
										27.3.80
										48.00

GEOLOGICAL LOG

Logged by:-

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
0.00	48.00	0	0	Dolerite; pre-collared by Warman 1000 using 16.5 cm hammer bit. No core recovered, only chips and dust.		

Continued over:-

DEPARTMENT OF MINES—TASMANIA

DRILL RECORD

HOLE No.:- 71	MAP SHEET No. 49	DISTRICT FINGAL	LOCATION OF SITE:-
On Fingal Tier, East of the Mitchell Fault			
R.L. OF SITE:- 653.90 m	SITE SURVEY ON MAP No.:	CORE SIZE:- chips only	
BEARING OF HOLE:-	AIR PHOTO No.:-	COMMENCED:- 26.3.80	
INCLINATION OF HOLE:-	DRILL:- Warman 1000	COMPLETED:- 27.3.80	
CO-ORDS OF SITE: 5 592 905.2 mE 3 386 048.1 mN	DRILLER:- K. Richardson R. Stevens	FINAL DEPTH (m):- 48.00	

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				coincident with some calcite veins. Baked lithic arenite with mudstone clasts xenoliths from 232.10 - 232.70 m; The xenoliths are also cut by pyrite-hematite veins. Dolerite is 'bleached' from 234.10 - 234.30 m. Top dolerite-sediment contact dips at 50°; bottom contact dips at 55°.		
234.30	241.44	7.14	100	Medium grained lithic arenite (= MLSS), with minor mudstone clasts and coaly stringers.		
241.44	241.57	0.13		<u>COAL SECTION:</u> Dull coal with 20% bright (minor) bands.		
241.57	246.30	4.73		Medium grained lithic arenite with coaly debris from 242.90 - 243.70 m, mudstone clasts from 245.5 - 246.30 m; several crush zones occur as follows:- CZ: 243.35 - 243.66 top: 25° base: 70° CZ: 244.20 - 244.37 top: 55° base: 65° CZ: 245.30 - 245.40 top: ? base: 75°		
246.30	247.30	1.00		Laminite of siltstone and mudstone, core badly broken.		
247.30	247.60	0.30	100	Claystone, kaolinite, pale brown in colour, core broken.		
247.60	248.40	0.70	87	Mudstone, brown, core broken.		
248.40	250.00	1.40	87	Laminite of mudstone and siltstone.		
250.00	250.70	0.70	100	Mudstone, brown.		
250.70	251.05	0.35		Crush Zone, consisting of kaolinite claystone, carbonaceous mudstone, and non-carbonaceous mudstone. Top of zone dips at 70°; bottom of zone dips at 80°.		
251.05	252.20	1.15		Laminite of mudstone and siltstone, core badly broken.		
252.20	253.90	1.70	100	Crush zone, composed of coarse clasts, probably 20 cm in diameter. Predominant lithology is a kaolinite claystone with minor carbonaceous mudstone and grey-brown mudstone. Carbonaceous mudstone from 252.80 - 255.88 m; dull coal with 10% bright bands from 252.88 -		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS														
			metres	%															

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
253.96	261.40	7.50	100	253.00 m; top of crush zone dips at 30°; base of crush zone dips at 80°. This zone is possibly an outer sheath to the underlying well-developed crush zone. Crush zone, well developed, average size of porphyroclasts is 20-30 mm, but ranging down to pug. Lithologies consist of mudstone to 256.50 m with siltstone and lithic arenite clasts; siltstone from 256.50 - 258.00 m; with mudstone and siltstone erratics and predominantly lithic arenite from 258.00 - 261.40 m. (This sequence may reflect the original sequence of sandstone - siltstone - mudstone.) At 254.80 m, calcite 'shear boundaries' occur, and elsewhere calcite veins are clearly pre-shearing. Top of shear zone dips at 80°; dip of base ranges from 35 - 50°. Δ 255.40 = 25/30°; Δ 255.80 = 15°.		
261.40	263.00	0.30	19	Medium grained lithic arenite, with veins randomly distributed; core loss of 1.30 m from 261.70 - 263.00 m. (The core loss may represent another well developed crush zone.)		
263.00	266.00	2.70	90	Medium-fine grained lithic sandstone (a lithic arenite) - (FMLSS); with well developed calcite crystals on a joint dipping 70° at 263.10 m. Core broken; core loss of 30 cm in this unit. Calcite veinlets from 264.00 - 264.10 m. End of NQ Core. Start of BQ Core.		
266.00	267.67	1.67	100	Medium-grained lithic sandstone (MLSS); massive, with very occasional mud pellets. Band of mud pellets from 267.40 - 267.55 m.		
267.67	267.87	0.20		<u>COAL SECTION:</u> Heavy dull coal with 5% bright bands.		
267.87	267.98	0.11		Beige clay, friable.		1A
267.98	268.88	0.90	100	Dull coal with 5% bright bands and Continued over		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				occasional cleats.		
268.88	268.97	0.09	100	<u>COAL SECTION:</u> (Contd.)		
268.97	269.14	0.17		Mudstone, green-brown; shaly. Heavy dull coal with abundant sand grains.		
269.14	269.17	0.03		Mudstone, pale brown.		
269.17	269.30	0.13		Dull coal.		
269.30	269.42	0.12		Heavy dull coal.		1A
269.42	269.48	0.06	100	Claystone, beige.		
269.48	270.00	0.51	98	Heavy dull coal with abundant sandy lenses.		
270.00	270.34	0.33	97	Mudstone, green-white with calcite flecks.		1B
270.34	270.35	0.01	100	Clay, brown, sticky.		
270.35	270.36	0.01	100	Mudstone, laminated.		
270.36	270.57	0.20	95	Heavy dull coal.		
270.57	270.77	0.20	100	Heavy dull coal with abundant silty and sandy laminae.		
270.77	270.93	0.15	94	Claystone, beige.		
270.93	271.10	0.16	94	Dull coal, interbedded with sandy mudstone (60:40).		
271.10	271.47	0.36	98	Dull coal.		1C
271.47	271.50	0.03	100	Mudstone, sandy.		
271.50	271.88	0.37	98	Dull coal.		
271.88	271.92	0.04	100	Claystone, beige, sandy.		
271.92	272.26	0.33	98	Dull coal.		
272.26	272.35	0.09	100	Dull coal with interbedded sandy laminae.		
272.35	272.42	0.07		Claystone interbedded with mudstone (50:50).		
272.42	272.60	0.18		Heavy dull coal.		
272.60	272.68	0.08		Carbonaceous shaley mudstone.		
272.68	273.00	0.32		Mudstone, brown; banded and shaley.		
273.00	273.05	0.05	100	Mudstone, green.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
273.05	273.21	0.16	100	Mudstone, brown.		
273.21	273.27	0.06		Mudstone, clayey.		
273.27	276.65	2.38		Mudstone, brown-green; laminated, sandy over basal 0.5 m.		
275.65	281.35	5.70		FMLSS, banded with silt laminae; laminae 1 mm wide; abundant cross bedding dipping at up to 10°.		
281.35	292.10	10.75		FMLSS, massive.		
292.10	293.80	1.70	100	FMLSS, with abundant coaly debris from 292.10 - 293.50 m; a coal band from 293.70 - 293.72 m; and a clay pellet conglomerate from 293.75 - .80 m.		
293.80	297.04	3.21	99	Mudstone and beige clay, interbedded, with beige clay intervals from 293.82 - 293.88 m; 294.01 - 294.05 m; 294.50 - 294.52 m; 294.70 - 294.77 m; 295.06 - 295.10 m; 295.20 - 295.45 m; 295.95 - 296.01 m.		
297.04	299.50	2.46	100	Fine grained lithic sandstone, (FLSS).		
299.50	300.30	0.80		Mudstone, shaley, clayey; abundant clay laminae.		
300.30	300.35	0.05		Mudstone, clayey.		
300.35	300.45	0.10		Claystone, beige claystone.		
300.45	300.65	0.20		Heavy dull coal.		
300.65	300.81	0.16		Claystone, beige, sandy.		
300.81	300.94	0.13		Carbonaceous mudstone with abundant clay pellets.		
300.94	301.33	0.39		Mudstone with abundant slickensides.		
301.33	302.65	1.32		FLSS, massive.		
302.65	314.65	12.00		Medium grained lithic sandstone (MLSS); grey; with occasional coaly debris; mudstone interval from 309.00 - 309.10 m.		
314.65	327.55	12.90		Medium grained lithic arenite (MLSS), minor coaly debris.		
327.55	328.70	1.15		Mudstone, green-grey.		
328.70	328.90	0.20	100	<u>COAL SECTION</u> : Dull coal, 10% bright bands.		2

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
328.90	329.01	0.11	100	<u>COAL SECTION:</u> Claystone, pale brown.		
329.01	329.15	0.14		(Contd.) Dull coal, 10% bright bands.		
329.15	329.23	0.08		Claystone, pale brown.		
329.23	331.60	2.37		Dull coal; 10-20% bright bands (0.5 m core loss from 330.70 - 331.20 m where coal core is broken and crushed).		2
				(<u>BASE OF COAL SECTION</u>)		
331.60	332.20	0.60		Mudstone, pale brown.		
332.20	345.83	13.63		MLSS, minor coaly debris.		
345.83	345.89	0.06		<u>COAL SECTION:</u> Dull coal.		
345.89	346.04	0.15		Carbonaceous mudstone and pale brown claystone.		
346.04	346.17	0.13		MLSS with mudstone clasts less than 5 cm in diameter.		
346.17	346.85	0.68		Mudstone, grey-green.		
346.85	346.92	0.07		Carbonaceous mudstone.		
346.92	347.06	0.14		Dull coal with 3% bright bands.		
347.06	347.09	0.03		Claystone, grey-green.		
347.09	347.58	0.49		Heavy dull coal, 10% bright bands.		3
347.58	349.50	1.92		Carbonaceous mudstone and grey-green mudstone, interbedded.		
349.50	351.00	1.50		Siltstone with coal laminae. GBC.		
				(<u>BASE OF COAL SECTION</u>)		
351.00	378.12	27.12		MLSS with mudstone clasts from 355.10 - 355.30 m; grey slickensided mudstone from 368.20 - 368.55 m. Minor coaly debris throughout.		
378.12	378.41	0.29		<u>COAL SECTION:</u> Dull coal with claystone splits, 5% bright bands.		
378.41	378.64	0.23	100	Brown claystone with coal laminae. Continued over		4

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
378.64	378.80	0.16	100	<u>COAL SECTION:</u> (Contd.) Dull coal with 5% bright bands.		4
378.80	379.00	0.20		Carbonaceous, broken mudstone.		
379.00	379.37	0.37		Dull coal, 15% bright bands.		
379.37	379.84	0.47		Mudstone, grey.		
379.84	380.00	0.16		Carbonaceous mudstone.		
380.00	382.20	2.20		Interlaminated grey mudstone and siltstone, minor coal flaser bedding.		
382.20	382.30	0.10		Carbonaceous mudstone.		
				(<u>BASE OF COAL SECTION</u>)		
382.30	383.15	0.85		Mudstone, green, grey, silty.		
383.15	383.85	0.70		<u>COAL SECTION:</u> Dull coal, 5% bright bands.		5
383.85	384.50	0.65		Mudstone, grey, brown, abundant carbonaceous laminae.		
384.50	384.63	0.13		Heavy dull coal with numerous clay splits 2-4 mm wide 10% bright bands.		
384.63	384.73	0.07		Mudstone, grey with minor white kaolinite claystone.		
384.70	384.90	0.20		Heavy dull coal, 5% bright bands.		
384.90	387.15	2.25		Mudstone, grey with carbonaceous laminae grading into silty mudstone and into siltstone towards the base.		
				(<u>BASE OF COAL SECTION</u>)		
387.15	393.73	6.58		MLSS, with minor coaly debris, and band of bright coal from 389.55 - 389.60 m.		
393.73	394.35	0.62		Mudstone, grey-green, abundant carbonaceous laminae.		
394.35	396.15	1.80		Interbedded siltstone and FLSS.		
396.15	403.60	7.45		MLSS, with minor coaly debris.		
403.60	403.88	0.28	100	Mudstone, grey, with carbonaceous laminae.		

Continued over

ASSAY DATA

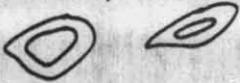
SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
403.88	404.50	0.62	100	<u>COAL SECTION:</u> Heavy dull coal interbedded with carbonaceous mudstone; numerous mudstone splits 2-3 mm wide. (<u>BASE OF COAL SECTION</u>)		6
404.50	407.20	2.70		Interlaminated siltstone and mudstone.		
407.20	408.40	1.20		Interbedded siltstone and FLSS.		
408.40	409.28	0.88		Interlaminated siltstone and mudstone.		
409.28	409.32	0.04		Carbonaceous mudstone.		
409.32	409.86	0.54		<u>COAL SECTION:</u> Dull coal, 5% bright bands. (<u>BASE OF COAL SECTION</u>)		7
409.86	410.10	0.24		FLSS interbedded with siltstone; up to 30% coaly debris.		
410.10	410.90	0.80		Mudstone, grey, grading downwards into silty mudstone.		
410.90	414.10	3.20		MLSS.		
414.10	415.15	0.95		<u>COAL SECTION:</u> Dull coal.		8
415.15	417.00	1.85		Siltstone, grading to mudstone at base.		
417.00	418.55	1.55		Dull coal with 5-10% bright bands and claystone splits at 417.95 m; 418.10 m; and 418.35 m. (<u>BASE OF COAL SECTION</u>)		9
418.55	427.05	8.50		Interbedded and interlaminated mudstone and siltstone.		
427.05	427.25	0.20		<u>COAL SECTION:</u> Heavy dull coal.		
427.25	430.70	3.45		FMLSS, with 20% coaly laminae.		
430.70	431.70	1.00		Siltstone and mudstone laminite.		
431.70	432.05	0.35		Carbonaceous mudstone, and heavy dull coal (50:50). (<u>BASE OF COAL SECTION</u>)		
432.05	432.55	0.50		FLSS with 30% coaly debris.		
432.55	432.70	0.15	100	Carbonaceous mudstone and white claystone.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
477.15	478.10	0.95	100	Interlaminated siltstone and mudstone.		
478.10	478.22	0.12		Carbonaceous mudstone.		
478.22	481.10	2.88		Interlaminated FLSS, siltstone and mudstone.		
481.10	482.20	1.10		FLSS.		
482.20	482.78	0.58		Mudstone.		
482.78	483.35	0.57		FLSS.		
483.35	484.00	0.65		Mudstone.		
484.00	484.20	0.20		MLSS.		
484.20	485.70	1.50		FLSS interlaminated with siltstone with wispy carbonaceous laminae.		
485.70	486.45	0.75		Clay pellet conglomerate, mudstone clasts appear zoned, 		
486.45	487.10	0.65		MLSS, finely laminated.		
487.10	487.60	0.50		CLSS with clay-pellet granular conglomerate.		
487.60	488.65	1.05	100	Medium grained quartz rich lithic arenite with fine carbonaceous laminae.		
				END OF HOLE AT 488.65 m.		
				GLACIO - MARINE SEQUENCE OF THE UPPER PARMEENER SUPER-GROUP NOT REACHED.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

DRILLING TARGET:- Glacio Marine Sequence of the Upper Parmeener Super Group											
REMARKS:- Duncan and East Fingal seams intruded by dolerite											
SURVEY DATA						ASSAY DATA					
DEPTH metres	Bearing mag.	Inclin. degs	SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS			
						metres	%				

GEOLOGICAL LOG

Logged by:- T.G. Summons

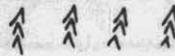
FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
0.00	342.65	342.65	100	Dolerite; chilled margin from 341.90 - 342.65 m, crush zone centred on chilled margin; crush zone dips at 65°. Dolerite sediment contact dips at 65°. Samples of dolerite, 10 cm every 3 m have been stored for future use.		
342.65	347.80	5.15		Lithic arenite, bedding dips at 45°, minor carbonaceous laminae.		
347.80	348.80	1.00		Mudstone, grey, bedding dips at 50°.		
348.80	349.50	0.70		Lithic arenite, fine grained (= fine grained lithic sandstone); rare wispy carbonaceous laminae.		
349.50	351.30	0.80		Mudstone, grey brown; contains minor crush zone dipping at 55°.		
351.30	353.85	2.55		Interbedded fine grained lithic arenite and grey mudstone; bedding dips at up to 5°.		
353.85	354.50	0.65		Quartz arenite, medium grainsize (= medium grained quartzose sandstone).		
354.50	355.10	0.60		Carbonaceous and grey mudstone, interbedded.		
355.10	355.95	0.85		Fine grained lithic arenite.		
355.95	357.40	1.45	100	Carbonaceous and grey mudstone with bands of dull coal from 356.83 - 356.89 m and from 356.95 - 357.05 m.		

Continued over:-

DEPARTMENT OF MINES—TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No.:- DOM	MAP SHEET No. 49	DISTRICT FINGAL	LOCATION OF SITE:-
FINGAL DDH 72			
On Fingal Tier, west of the Mitchell Fault			
R.L. OF SITE:- 580.80 m	SITE SURVEY ON MAP No.:	CORE SIZE:- NQ	
BEARING OF HOLE:- 90°	AIR PHOTO No.:-	COMMENCED:- 5/3/80	
INCLINATION OF HOLE:-	DRILL:- Joy Sullivan 30 HD	COMPLETED:- 31/3/80	
CO-ORDS OF SITE: 591 054.1 mE 5 385 192.3 mN	DRILLER:- D. Whammond	FINAL DEPTH (m):- 391.00 m	

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
357.40	358.80	1.40	100	Lithic arenite with minor quartz arenite. Beds dipping at up to 5°.		
358.80	362.20	3.40		Interbedded fine grained lithic arenite and grey carbonaceous mudstone.		
362.20	363.80	1.60		Quartz arenite with up to 50% carbonaceous mudstone laminae.		
363.80	373.45	9.65	100	Interbedded lithic arenite and laminated grey to carbonaceous mudstone. Cone in cone structures at top of unit: 		
				Sheared zone at base; top contact of shear zone dips at 80°.		
373.45	375.90	2.21	90	Quartz arenite, fine grained.		
375.90	377.20	0	0	Core Loss of 1.30 m; probably part of crush zone.		
377.20	377.90	0.63	90	Mudstone, grey, part of a crush zone.		
377.90	378.20	0	0	Core Loss of 0.30 m; probably basal part of a crush zone.		
378.20	382.60	3.96	90	Quartz arenite, fine grained; minor mudstone bands and pellets. Bedding dips at up to 60°.		
382.60	384.20	1.60	100	Lithic arenite with mudstone interbedded. Sharp bottom contact; dips at 60°. BASE OF FRESHWATER SEQUENCE OF UPPER PARMEENER SUPER GROUP. TOP OF GLACIO-MARINE SEQUENCE OF UPPER PARMEENER SUPER GROUP.		
384.20	385.50	1.30		Clayey mudstone) Crush zone.		
385.50	387.53	2.03		Lithic greywacke) Porphyroclasts in crush zone are 7 cm long.		
387.53	387.85	0.32		Dolerite dyke, top and bottom contacts dip at 60°.		
387.85	391.00	3.15	100	Lithic greywacke with acid volcanic and pyrite bearing fragments. END OF HOLE AT 391.00 m.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

DRILLING TARGET:- Precollaring DDH 73											
REMARKS											
SURVEY DATA						ASSAY DATA					
DEPTH metres	Bearing mag.	Inclin. degs	SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS			
						metres	%				

GEOLOGICAL LOG Logged by:- T.G. Summons

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
0	45.00	0	0	Dolerite; precollared using a 16.5cm hammer bit; no core recovered, only chips and dust.		

Continued over:-

DEPARTMENT OF MINES—TASMANIA
DIAMOND DRILL CORE RECORD

HOLE No.:- DOM	MAP SHEET No. 49	DISTRICT FINGAL	LOCATION OF SITE:-
FINGAL DDH 73	On Fingal Tier, east of the Mitchell Fault		
R.L. OF SITE:- 706.80m	SITE SURVEY ON MAP No.:	CORE SIZE:- chips only	
BEARING OF HOLE:-	AIR PHOTO No.:-	COMMENCED:- 24.3.80	
INCLINATION OF HOLE:-	DRILL:- Warman 1000	COMPLETED:- 25.3.80	
CO-ORDS OF SITE:- 591 885.5mE 5 386 843.3mN	DRILLER:- K. Richardson R. Stevens	FINAL DEPTH (m):- 45.00m	

DRILLING TARGET:- Lower Glacio Marine Sequence of Parmeener Super Group.

REMARKS:- Duncan Seam is 0.98m thick from 397.02-398.00m. East Fingal Upper Split: 441.00m - 441.95 m, Lower Split 443.67-445.40 m.

DEPTH metres	Bearing mag.	Inclin. degs	SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS				
						metres	%					

GEOLOGICAL LOG

Logged by:- T.G. Summons, C. Bacon

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
45.00	196.85	151.85	100	Fine grained dolerite; chilled margin from 196.56-196.85m. Samples of dolerite have been taken every 3m and stored for future reference.		
196.85	201.93	5.08	100	Medium to coarse grained lithic sandstone (M-CLSS), with minor conglomerate bands composed of mudstone, sandstone and volcanic material (?).		
201.93	202.90	0.97	100	Heterogeneous mudstone, sandstone; volcanic material?		
202.90	223.85	0.95	100	Medium grained lithic sandstone; (MLSS), brown coloured with chevron structures, gradational cross bedding. Bedding dipping at up to 5°.		
223.85	235.08	11.23	100	FLSS, green and brown coloured with carbonaceous laminae and coaly fragments; some kaolin infilling joints.		
235.08	241.20	6.12	100	Interbedded mudstone and quartz arenite, increasingly sandy towards base.		
241.20	241.26	0.06	100	Mafic - Intermediate tuff with pyrite crystal < 3cm in diameter.		
241.26	247.40	6.14	100	Quartz-rich lithic arenite, medium grained, brown coloured, with coaly stringers and mudstone pellets.		

Continued over:-

DEPARTMENT OF MINES—TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No.:- DOM	MAP SHEET No. 49	DISTRICT FINGAL	LOCATION OF SITE:-
FINGAL DDH 73	On Fingal Tier, east of the Mitchell Fault		
R.L. OF SITE:- 706.80m	SITE SURVEY ON MAP No.:	CORE SIZE:- NQ	
BEARING OF HOLE:-	AIR PHOTO No.:-	COMMENCED:- 1.4.80	
INCLINATION OF HOLE:-	DRILL:- Longyear 38	COMPLETED:- 14.5.80	
CO.ORDS OF SITE:- 591 885.5mE 5 386 843.3mN	DRILLER:- D. Summers	FINAL DEPTH (m):- 496.96m	

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
247.40	248.53	1.13	100	Mudstone, brown with minor carbonaceous mudstone pellets.		
248.53	258.93	10.40	100	Medium grained lithic arenite with coaly debris and carbonaceous mudstone pellets and carbonaceous laminae.		
258.93	260.00	1.07	100	Interlaminated brown claystone and carbonaceous mudstone.		
260.00	261.38	1.38	100	Interbedded siltstone and fine grained lithic arenite.		
261.38	261.82	0.44	100	<u>COAL SECTION - SEAM A</u> Dull coal, <10% bright bands. (BASE OF COAL SECTION)		
261.82	266.81	4.99	100	Mudstone, grey to brown, minor carbonaceous mudstone. <u>COAL SECTION (MINOR) SEAM A</u>		
266.81	267.12	0.31	100	Heavy dull coal, <15% bright bands (BASE OF COAL SECTION)		
267.12	285.40	18.28	100	MLSS; green grey, clasts of mudstone, some are kaolinized; numerous coaly debris patches and minor 'clay pellet' conglomerate bands. <u>COAL SECTION - SEAM B</u>		
285.40	286.10	0.70	<100	Semi bright coal, with vertical fractures and clay bands ranging in thickness from 15-20mm. Location of core losses inferred to be in the clay bands. Mudstone intervals from 285.65-285.75m; and from 285.78-285.85m.		1A
286.10	286.35	0.25	100	Dull coal.		
286.35	286.52	0.17	100	Clay.		
286.52	286.61	0.09	100	Dull coal.		
286.61	286.66	0.05	100	Clay.		1B
286.66	286.80	0.14	100	Dull coal.		
286.80	286.91	0.11	100	Clay.		
286.91	286.97	0.06	100	Interbedded clay and dull coal.		
286.97	287.14	0.17	100	Dull coal.		
287.14	287.16	0.02	100	Clay.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%	Moist %	Ash %	Vol %	F.C. %						
1A	285.40	286.35	0.95	<100	4.6	29.7	29.6	40.7						
1B	286.35	287.32	0.97	100	5.7	64.4	23.4	12.2						

Note: Seam A not sampled

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
287.16	287.32	0.16	100	Dull coal.		
287.32	287.40	0.08	100	Mudstone.		
287.40	287.76	0.36	100	Claystone.		
287.76	288.32	0.56	100	Dull coal with minor carbonaceous mudstone at top of interval.		1C
288.32	288.48	0.16	100	Interbedded carbonaceous mudstone and clay.		
288.48	289.00	0.52	100	Interbedded claystone and dull coal.		1D
289.00	289.04	0.04	100	Claystone.		
289.04	289.24	0.20	100	Interbedded claystone and dull coal.		
289.24	289.28	0.04	100	Claystone.		
289.28	289.62	0.34	100	Dull coal.		
289.62	289.65	0.03	100	Claystone.		
289.65	289.95	0.30	100	Interbedded claystone and dull coal.		1E
289.95	290.00	0.05	100	Claystone.		
290.00	290.18	0.18	100	Dull coal.		
290.18	290.28	0.10	100	Interbedded claystone and carbonaceous mudstone.		
290.28	290.36	0.08	100	Dull coal.		
				(BASE OF COAL SECTION)		
290.36	311.61	21.25	100	MLSS, brown-grey, dense calcite veining from 299.77-299.79m; coaly bands and debris; minor mudstone pellets.		
311.61	312.01	0.40	100	Mudstone, carbonaceous and non-carbonaceous with plant fossils; including <u>Rienetsia lobata</u> .		
312.01	316.52	4.51	100	Interlaminated siltstone and dull coal with minor brown claystone.		
				<u>COAL SECTION (MINOR) SEAM C</u>		
316.52	317.35	0.83	100	Dull coal, 10% bright bands.		2
				(BASE OF COAL SECTION)		
317.35	320.19	2.84	100	Siltstone, grey, broken.		
320.19	322.70	2.51	100	Laminite of carbonaceous and non-carbonaceous mudstone.		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		Moist Ash Vol. F.C.				ASSAY RESULTS			
			metres	%	%	%	%					
1C	287.32	288.48	1.16	100	6.0	74.2	19.6	6.2				
1D	288.48	289.04	0.56	100	3.7	52.3	26.7	21.0				
1E	289.04	290.18	1.14	100	4.5	49.5	26.9	23.6				
2	316.52	317.35	0.83	100	5.4	40.4	31.0	28.6				

		73					
FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION		
		metres	%		Corr	Sample	
322.70	323.47	0.77	100	Mudstone, green, abundant plant fragments.			
323.47	331.92	8.45	795	Fine to medium grained lithic sandstone, (F-MLSS), with carbonaceous laminae.			
331.92	332.23	0.31	100	Mudstone, green.			
332.23	343.31	11.08	100	MLSS, with minor mudstone intervals, coaly laminations, claystone pellets, Abundant coaly debris from 342.59-343.31m.			
<u>COAL SECTION - SEAM D</u>							
343.31	343.45	0.14	100	Dull coal.			
343.45	344.27	0.82	100	Lithic arenite.			
344.27	344.44	0.17	100	Shaley mudstone.			
344.44	344.56	0.12	100	Dull coal.			
344.56	344.62	0.06	100	Shale.		3	
344.62	345.00	0.38	100	Dull coal.			
345.00	345.06	0.06	100	Shale.			
345.06	345.44	0.38	100	Dull coal.			
(BASE OF COAL SECTION)							
345.44	347.20	1.76	100	Interbedded lithic arenite and finely bedded mudstone, with festoon cross bedding, and rheomorphic slumping.			
347.20	350.24	3.04	100	Mudstone, grey with plant fragments; bioturbated			
<u>COAL SECTION - SEAM E</u>							
350.24	352.00	1.76	100	Dull coal, 10% bright bands. Gradational basal contact.		4	
(BASE OF COAL SECTION)							
352.00	365.80	13.80	100	F-MLSS, coaly laminae, minor mudstone pellets; bedding dipping at up to 10°.			
<u>COAL SECTION - SEAM E</u>							
365.80	367.07	1.27	100	Dull coal; minor cleats; calcite coating cleats from 366.67-366.99m. Dirt bands 5mm wide at 366.52m; 366.54m; and at 366.58m.		5	
(BASE OF COAL SECTION)							

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		Moist Ash Vol. F.C.				ASSAY RESULTS			
			metres	%	%	%	%					
3	344.44	345.44	1.00	100	10.2	50.3	30.6	19.1				
4	350.24	352.00	1.76	100	6.2	31.7	33.2	35.1				
5	365.80	367.07	1.27	100	6.0	48.2	24.7	27.1				

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
367.07	367.67	0.60	100	Shaley lithic arenite; fine grained; (=FLSS). Gradational bottom contact; (GBC).		
367.67	380.00	12.33	100	Medium grained lithic arenite, (=MLSS). Bedding dipping at up to 10°; minor slickensiding. GBC.		
380.00	380.51	0.51	100	Mudstone; green, with claystone pellets.		
380.51	397.02	16.51	100	MLSS, with minor grey mudstone and clay pellet conglomerate; beds dip up to 30°; rare coaly debris.		
<u>COAL SECTION - SEAM F (DUNCAN)</u>						
397.02	397.17	0.15	100	Dull coal.		
397.17	397.23	0.06	100	Mudstone.		
397.23	397.59	0.36	100	Dull coal.		6
397.59	397.61	0.02	100	Clay brown.		
397.61	397.77	0.16	100	Dull coal.		
397.77	398.00	0.23	100	Dull coal 10% bright bands.		
398.00	398.08	0.08	100	Carbonaceous mudstone.		
398.08	398.20	0.12	100	Green mudstone.		
398.20	398.24	0.04	100	Carbonaceous mudstone.		
398.24	298.26	0.02	100	Claystone.		
398.26	398.38	0.12	100	Dull coal.		
(BASE OF COAL SECTION)						
398.38	400.22	1.84	100	Blue-green shaley mudstone.		
400.22	422.70	22.48	100	MLSS, minor mudstone pellets, flattened.		
422.70	431.20	8.50	100	Interbedded FLSS, mudstone and siltstone. Minor cross bedding.		
431.20	434.00	2.80	100	MLSS.		
434.00	435.00	1.00	100	Laminated mudstone-siltstone.		
435.00	436.50	1.50	100	Interbedded siltstone and fine grained lithic arenite.		
436.50	437.60	1.10	100	Carbonaceous mudstone, green-grey.		
437.60	441.00	3.40	100	Mudstone, laminated.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS				DUNCAN SEAM
			metres	%	Moist %	Ash %	%	%	
6	397.02	398.00	0.98	100	4.7	53.3	25.0	21.7	

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
COAL SECTION - SEAM G (EAST FINGAL SPLITS)						
441.00	441.15	0.15	100	Dull coal.		
441.15	441.30	0.15	100	Dull coal with kaolinite clay pellets.		
441.30	441.33	0.03	100	Dull coal with 2% bright bands.		7
441.33	441.39	0.06	100	Pale brown kaolinitic claystone; minor coaly debris.		
441.39	441.95	0.56	100	Dull coal, 5-10% bright bands.		
441.95	442.60	0.65	100	Grey-green siltstone.		
442.60	443.57	0.97	100	Lithic arenite, minor coaly laminae; fine grained; bedding dips at up to 5°.		
443.57	443.67	0.10	100	Mudstone, grey.		
443.67	444.15	0.48	100	Dull coal ≤10% bright bands.		
444.15	444.21	0.06	100	Kaolinitic claystone, brown.		8A
444.21	444.29	0.08	100	Dull coal, ≤10% bright bands.		
444.29	444.31	0.02	100	Claystone.		
444.31	444.49	0.18	100	Dull coal, ≤10% bright bands.		
444.49	444.52	0.03	100	Claystone.		
444.52	445.40	0.88	100	Dull coal ≤10% bright bands.		8B
(BASE OF COAL SECTION)						
445.40	447.30	1.90	100	Mudstone, with minor siltstone.		
447.30	449.46	0	0	CORE LOSS of 2.16m.		
449.46	452.06	2.60	100	Mudstone, grey-green, silty, with burrow structures.		
452.06	538.80	1.74	100	Siltstone with minor carbonaceous laminae.		
453.80	454.97	1.17	100	Mudstone, silty.		
454.97	455.30	0.33	100	Mudstone; silty and carbonaceous.		
455.30	460.00	4.70	100	Interbedded siltstone and fine grained lithic arenite; the latter with 40% carbonaceous laminae.		
460.00	461.70	1.70	100	Laminated grey-white mudstone with carbonaceous mudstone.		
461.70	461.84	0.14	100	Heavy dull coal.		
461.84	463.25	1.41	100	Pale brown claystone.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		Moist Ash				ASSAY RESULTS				
			metres	%	%	%	%						
7	441.00	441.95	0.95	100	4.3	53.3	21.9	19.8	EAST FINGAL UPPER SPLIT				
8A	443.67	444.52	0.85	100	4.2	53.5	22.4	24.1	EAST FINGAL LOWER SPLIT				
8B	444.52	445.40	0.88	100	1.5	24.0	28.5	47.5					

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
463.25	473.75	10.50	100	Pale brown claystone.		
473.75	477.20	3.45	100	Interbedded and interlaminated carbonaceous grey-green and brown mudstone; minor kaolinitic claystone.		
477.20	478.00	0.80	100	Lithic arenite, fine grained. (-FLSS)		
478.00	478.45	0.45	100	Grey and carbonaceous mudstone.		
478.45	493.45	15.00	100	M-CLSS with coaly laminae and debris.		
493.45	493.72	0.27	100	Dull coal, mudstone pellets at base.		
493.72	496.96	3.24	100	MLSS with coaly debris and mudstone pellets.		
				END OF HOLE AT 496.96m.		
				QUARTZOSE SANDSTONE AND GLACIOMARINE MUDSTONE NOT REACHED.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

DRILLING TARGET:- Pre-collaring BH 74 using a Warman 1000 percussion drilling rig

REMARKS:-

SURVEY DATA			ASSAY DATA																	
DEPTH metres	Bearing mag.	Inclin. degs	SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS												
						metres	%													

GEOLOGICAL LOG Logged by:- C.A. Bacon

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
0.00	46.00	chips	-	Pre-collared using 16.5 cm hammer-bit; core recovered as chips and dust, no core kept for storage. Solid dolerite to 46.00 m.		

Continued over:-

DEPARTMENT OF MINES—TASMANIA
DIAMOND DRILL CORE RECORD

HOLE No.:- 74	MAP SHEET No. 49	DISTRICT FINGAL	LOCATION OF SITE:-
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FINGAL TIER

R.L. OF SITE:- 643.00 m	SITE SURVEY ON MAP No.:	CORE SIZE:- No core, Dolerite chips
BEARING OF HOLE:-	AIR PHOTO No.:-	COMMENCED:- 17/3/80
INCLINATION OF HOLE:- 90°	DRILL:- Warman 1000 R. Stevens	COMPLETED:- 18/3/80
CO-ORDS OF SITE:- 5 392 215 mE 5 385 721 mN	DRILLER:- K. Richardson	FINAL DEPTH (m):- 46.00 m

DRILLING TARGET:- Top of the Glaciomarine sequence of the Lower Parmeener Super Group												
REMARKS:-												
SURVEY DATA			DIAMOND DRILL CORE RECORD									
DEPTH metres	Bearing mag.	Inclin. degs	SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS				
						metres	%					

GEOLOGICAL LOG Logged by:- C.A. Bacon

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
0.00	46.00	chips	0	Percussion drilled using a hammer bit with the Warman 1000 rig.		
46.00	166.84	120.84	100	Dolerite, grey, medium grained.		
166.84	176.93	10.09	100	Fine-grained dolerite with sub-vertical cracks at 45° to core axis from 168.84 m to 176.93 m. Fine glossy matrix with pyroxene phenocrysts 1 mm? Contact at 176.93 m; contact irregular, undulosed, dips 5°. Dolerite coloured green from 176.88 - 93 m. 10 cm dolerite sampled every 3 m run; stored for future reference.		
176.93	178.58	1.65	100	Medium-grained lithic sandstone (MLSS) with abundant coaly bands and laminae and clay pellets. GBC.		
178.58	178.85	0.23	85	<u>COAL SECTION:</u> Dull coal with 10% bright bands, loss of 4 cm from 178.58 - .85 m, minor calcite.		
178.85	179.51	0.63	97	Richly carbonaceous siltstone, finely laminated, core broken. GBC.		
179.51	182.63	3.12	100	Interlaminated carbonaceous siltstone and MLSS; some festoon cross-bedding, abundant silty lenticules; a large sub-vertical crack runs from 180.86 m -		

DEPARTMENT OF MINES—TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No.:- 74	MAP SHEET No. 49	DISTRICT FINGAL	LOCATION OF SITE:-
FINGAL TIER			
R.L. OF SITE:- 643.00 m	SITE SURVEY ON MAP No.:	CORE SIZE:- NQ	
BEARING OF HOLE:- 90°	AIR PHOTO No.:-	COMMENCED:- 25/3/80	
INCLINATION OF HOLE:-	DRILL:- Longyear 44	COMPLETED:- 29/4/80	
CO-ORDS OF SITE: 592 215.2 mE 5 385 721.6 mN	DRILLER:- C. Mitchell S. Mitchell	FINAL DEPTH (m):- 481.23 m	

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
182.63	183.40	0.77	100	181.86 m, crack is filled with a red mineral (zeolite?); coal interval from 182.46 - .56 m; STC and SBC.		
183.40	189.24	5.84	100	FLSS with abundant mud in matrix; rheomorphic slumping and clasts of reworked sediment common; clay bands at 183.30 m, 183.35 m. SBC. 		
189.24	190.85	1.61	100	MLSS with abundant cross-bedding and occasional clay pellets; alternation of coal pellet rich and barren cross-bedded intervals from 184.88 m - 187.85 m, mud pellets not uncommon, irregular shapes. SBC.  mud pellet		
190.85	192.15	1.30	100	Mudstone, finely laminated, sandy laminae horizontal.		
192.15	194.89	2.74	100	Laminite of carbonaceous and non-carbonaceous mudstone, bands 1-2 mm wide, irregular BC dips 10°.		
194.89	194.92	0.03	100	MLSS; abundant coaly debris from 195.15 m - .65 m; mud pellet conglomerate from 194.65 m - .89 m. Mud pellets are irregularly shaped and are up to 5 cm in diameter; BC is irregular and undolosed.		
194.92	214.33	19.41		Slightly carbonaceous mudstone, probably a large pellet.		
214.33	214.96	0.56	88	MLSS, abundant mud pellets from 194.62 m - 195.16 m, pellets angular, 1-10 mm in diameter. Coaly debris patches common occasional clay pellets, mostly massive and barren. Clay pellet band from 202.43 - .50 m, wispy coaly laminae common.		
				Clay pellet conglomerate, with MLSS, 40%; pellets irregularly shaped, coaly laminae and lenses common.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
214.96	217.91	2.95	100	Laminite of mudstone and FLSS, 50/50, laminations 1 mm wide, mudstone carbonaceous; gradational top and bottom contacts; unit grades into a dirty MLSS with abundant coaly laminae towards the base; i.e. from 217.18 m - .91 m.		
217.91	220.81	2.90	100	MLSS, massive and barren apart from sparse coaly debris, occasional wispy coaly laminae; laminite interval from 220.35 m - .48 m; GBC.		
220.81	221.57	0.76	100	Laminated sandy mudstone, grey abundant sub-vertical cracks and joints. SBC.		
221.57	221.74	0.17	100	White coloured shale, SBC, friable.		
221.74	223.95	2.21	100	Interbedded carbonaceous and non-carbonaceous mudstone; laminated with FLSS in the proportions 30/30/40 from 222.95 m - 223.95 m. Abundant coal and mud pellets in MLSS interval from 223.05 m - .38 m.		
223.95	224.68	0.73	100	Interbedded FLSS, siltstone and mudstone, 50/25/25; non-carbonaceous.		
224.68	229.70	5.01	99	Sandy laminated mudstone 30/70 with burrow-like structures, alternation of grey-dark-grey laminae. 		
229.70	229.75	0.05	100	Beige claystone, STC, SBC, dips 10°.		
229.75	230.07	0.32		Green greasy mudstone with occasional biotite flakes.		
230.07	230.78	0.71	100	<u>COAL SECTION:</u> Dull coal, 10% bright bands, SBC.		
230.78	230.90	0.12		Green mudstone, SBC, dips 10°.		1
230.90	231.00	0.10		Dull coal.		
231.00	231.05	0.05		Heavy dull coal.		
231.05	231.80	0.75	100	Carbonaceous mudstone with siltstone laminae.		
231.80	232.72	0.92	100	FLSS with occasional plant debris and abundant interlaminated siltstone. GBC. Continued over		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		%ash	ASSAY RESULTS								
			metres	%										
1	230.07	231.05	0.98	100	77.0									
2A	244.33	244.88	0.55	100	78.8									
2B	244.88	246.71	1.83	100	51.2									
2C	246.71	249.00	2.29	100	69.9									
2D	249.00	249.68	0.68	100	84.0									

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
232.72	232.94	0.22	100	Green mudstone with abundant jointing.		
232.94	233.67	0.73		Green mudstone with slickensides; calcite on cleared faces of slickensides. Total calcite replacement from 233.04 m - .09 m.		
233.67	233.68	0.01		Brown, finely laminated mudstone, STC, SBC.		
233.68	233.98	0.30		Grey laminated siltstone, sandy towards base.		
233.98	234.26	0.28		FLSS with abundant cross bedding.		
234.26	244.33	10.07	100	MLSS, massive, mostly barren with sparse patches of coaly debris; coal band 3 cm wide from 241.45 m - .48 m. FLSS interval from 242.50 m - 242.75 m; bedding dips 10°, core cracked 243.20 m - .29 m with cracks 45° to core axis.		
244.33	244.55	0.22	100	<u>COAL SECTION:</u> Heavy dull coal with abundant silt and sand laminae; SBC dips 10°.		2A
244.55	244.88	0.33	100	Pale green mudstone, SBC.		
244.88	246.71	1.83	100	Dull coal with silty laminae and abundant cleats.		2B
246.71	247.02	0.31	100	Green greasy mudstone.		
247.02	247.19	0.17	100	Dull coal.		
247.19	247.41	0.22	100	Heavy dull coal.		
247.41	247.53	0.11	99	Amber coloured claystone.		2C
247.53	247.98	0.45	100	Heavy dull coal.		
247.98	249.00	1.02	100	Dull coal with abundant sandy laminae.		
249.00	249.68	0.66	97	Dull coal and carbonaceous mudstone 50/50.		2D
249.68	249.90	0.22	100	Green mudstone, crumbly, sandy towards base.		
249.90	251.10	1.20	100	FLSS, finely banded, cross bedded.		
251.10	257.02	5.92	100	FLSS, abundant biotite grains, bedding dips 5%, mudstone laminae common.		
257.02	266.00	8.98	100	MLSS with abundant coaly debris, interval 257.04 m - .31 m; largely massive and barren; clay and coal pellet conglomerate interval from 358.34 m - .64 m; fine-grained flecks of calcite in matrix, calcite replacement of MLSS from 255.63 m - .77 m.		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
266.00	267.02	1.02	100	MFLSS, barren.		
267.02	273.01	5.99	100	MLSS, barren, coaly debris from 268.00 m - 268.20 m, sparse mud and clay pellets, calcite nodules at 272.52 m.		
273.01	273.08	0.07	100	<u>COAL SECTION:</u> Heavy dull coal.		
273.08	273.20	0.12	100	Dull coal.		
273.20	273.40	0.20	100	Green claystone, non friable.		
273.40	274.04	0.64	100	Dull coal with 1 cm mudstone at 273.40 m - .41 m, 273.48 m - .50 m, 273.52 m - .55 m. Calcite veins abundant. GBC.		3A
274.04	274.30	0.26	100	Friable beige claystone, shaly and greasy. GBC.		
274.30	275.08	0.78	100	Dull coal, sandy from 274.58 m - .62 m, green mudstone band from 274.81 m - .87 m.		3B
275.08	275.87	0.79	100	Dull coal with 5% bright bands, core broken.		
275.87	277.11	1.24	100	Sandy mudstone with rheomorphic slumping; sandy from 275.87 m - .97 m; sand and mud in proportions of 50/50.		
277.11	278.08	0.97	100	Laminite of mudstone and sandstone, with rheomorphic slumping, microfaulting common, laminae 1 mm wide.		
278.08	278.55	0.46	99	Black carbonaceous mudstone.		
278.55	278.63	0.08)	Dull coal.		
278.63	278.68	0.05)	Sandy claystone.		
278.68	278.84	0.15)	Dull coal.		
278.84	279.02	0.17)	Sandy claystone coloured beige, abundant biotite flakes.		
279.02	279.10	0.07	99	Brown mudstone.		
279.10	279.22	0.12	100	Brown mudstone with carbonaceous flecks; band of pink clay from 279.18 m - .20 m.		
279.22	279.28	0.06	100	Dull coal, calcite on cleat, GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS											
			metres	%	%ash											
3A	273.01	274.30	1.29	100	73.9											
3B	274.30	275.87	1.57	100	56.1											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
279.28	279.33	0.05	100	FLSS, GBC.		
279.33	281.34	1.31	65	Shaley, mudstone, coloured grey, black, beige; a speckled appearance, slickenside at 45° to core axis from 279.49 m - .55 m; .61 m - .66 m, kaolinite on slickensides. GBC.		
281.34	281.80	0.46	100	Sandy mudstone; FLSS and mud 50/50, inter-laminated with silt lenses, core broken.		
281.80	284.80	3.00	100	FLSS with mudstone laminae, finely laminated, rare coaly debris, rheomorphic slumping and microfaults common.		
284.80	301.63	16.83	100	MLSS, massive, barren; bedding dips at 30°; coal pellet 10 cm diameter at 295.70 m; carbonaceous mudstone pellet at 296.10 m; shaley mudstone pellet at 296.15 m - .25 m; abundant smaller mudstone pellets from 295.80 m - 296.15 m. Dull coal intervals at 298.87 m - .96 m, 300.63 m - .73 m. Irregular bottom contact.		
301.63	302.09	0.46	100	FLSS with wispy coaly laminae dipping at 10°. Irregular bottom contact.		
302.09	302.92	0.83		Mudstone, grey, abundant coaly laminae distorted bedding, bedding, SBC.		
302.92	303.11	0.19	100	<u>COAL SECTION:</u> Dull coal.		
303.11	303.21	0.10	100	Clay band, shaley, brown.		
303.21	303.44	0.23		Heavy dull coal, 3% bright bands.		
303.44	303.56	0.12		Beige shaley clay; sticky. SBC, STC.		
303.56	303.96	0.40		Heavy dull coal, calcite on cleats.		
303.96	304.54	0.58		Grey fine-grained mudstone, slickensides.		
304.54	304.64	0.10		Beige clay, shaley, SBC dips 10°.		
304.64	306.81	2.17		Dull coal, abundant cleats with calcite, abundant silty laminae. GBC.		4

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		Ash Moist V.C.M. F.C. ASSAY RESULTS								
			metres	%	%	%	%						
4	304.64	306.81	2.17	100	31.9	3.6	27.6	40.5					

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
306.81	307.48	0.67		Grey mudstone with rare plant fossils.		
307.48	309.17	1.69		MFLSS, some cross bedding. GBC.		
309.17	323.18	14.01		MLSS, barren; minor FLSS intervals, occasional -al coaly debris and rare mud pellets.		
323.18	323.61	0.43		Sandy mudstone (FMLSS with mudstone 75:25); abundant silty laminae. GBC.		
323.61	324.58	0.97		Carbonaceous mudstone, GBC.		
324.58	325.26	0.68		Mud pellet conglomerate (MLSS: mud pellets: coal pellets, 30:60:10).		
325.26	341.19	15.93		MLSS with occasional clasts of reworked sediments, irregular shapes.		
341.19	341.39	0.20		FLSS.		
341.39	342.05	0.66		Mud pellet conglomerate with pellets: MLSS 25:75; abundant coaly debris.		
342.05	342.75	0.70	100	FLSS with rheomorphic slumping and mud pellets.		
342.75	344.21	1.46	100	FMLSS, barren.		
344.21	346.10	1.89		FMLSS, interlaminated with mudstone 80/20; rheomorphic slumping. SBC.		
346.10	347.18	1.08	100	MLSS, barren.		
347.18	349.24	2.04	99	MLSS, with minor FMLSS intervals and coaly debris.		
349.24	354.64	5.40	100	MLSS, barren.		
354.64	355.90	1.26	100	<u>COAL SECTION:</u> Dull coal with 5% bright bands, mudstone bands from <u>Duncan Seam</u> 354.99 m - 355.02 m, 355.09 m - .095 m, 355.61 m - 355.63 m. GBC.		5
355.90	357.22	1.32		Green mudstone with white spots, probably calcite contains <u>Dicroidium sp.</u> leaves and stems.		
357.22	357.82	0.60		Green mudstone, sandy, GBC.		
357.82	359.26	1.44		FLSS, barren.		
359.26	379.52	20.26		MLSS, barren, mud pellets and coaly debris from 373.78 m - 374.28 m, dirt band at 373.08 m.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%	% ash									
5	354.64	355.90	1.26	100	56.0									

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
379.52	380.23	0.71		Green mudstone with rare coaly laminae.		
380.23	382.29	2.06		FLSS with 20% mud laminae, fine-grained, rare 'worm burrow' structures. GBC.		
382.29	382.68	0.39		Carbonaceous mudstone, GBC.		
382.68	385.54	2.86		FLSS with 40% mud laminae, unusual rheomorphic slumping.		
385.54	389.31	3.77	100	MFLSS, barren massive, very occasional coaly debris and mud pellets.		
389.31	390.24	0.91	98	MLSS, quartz rich. SBC.		
390.24	390.57	0.32	98	Pale green interbedded silt and mudstone, 50/50. GBC.		
390.57	391.87	1.30	100	FLSS with abundant coaly laminations and beds dipping 10°; abundant mudstone laminae (40%).		
391.87	393.14	1.26	99	Green mudstone.		
393.14	393.66	0.54	100	<u>COAL SECTION:</u> Dull coal and mudstone; laminated, 50/50, GBC.		6A
393.66	394.19	0.53		East Fingal Upper Split Heavy dull coal, sandy.		6B
394.19	394.52	0.33		MLSS with abundant coal debris.		
394.52	395.17	0.65		FLSS with festoon cross-bedding, mud and silt laminae, slickenside at base, dips 100°.		
395.17	396.61	1.43	99	<u>COAL SECTION:</u> Dull coal with calcite at 395.90 m - .92 m, beige clay bands from 396.08 m - .10 m, and from 396.56 m - .57 m, GBC.		6C
396.61	399.95	3.34		FLSS interlaminated with siltstone 70/30, slickensides near top of unit.		
399.95	401.25	1.30		<u>COAL SECTION:</u> Dull coal, dirt band 0.5 cm. Wide at 400.12 m, sandy dirt band 2 cm wide from 400.52 m - .54 m. Sandy bands from 400.84 m - .87 m, and from 400.79 m - .81 m.		7A
401.25	401.75	0.50		Dull coal.		7B

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		Ash Moist V.C.M. F.C. ASSAY RESULTS									
			metres	%	%	%	%	%						
6A	393.14	393.66	0.52	100	85.2									
6B	393.66	394.19	0.53		81.2									
6C	395.18	396.61	1.43		51.0									
7A	399.95	401.25	1.30		39.4	5.0	18.3	42.2						
7B	401.25	401.75	0.50		30.6	4.3	24.0	45.4						

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
401.75	402.25	0.50		Mudstone interlaminated with FLSS, 50/50, 50/50.		
402.25	403.51	1.26		FLSS with abundant slickensides, and wispy coaly laminae dipping 30°, dirt band 1 cm wide at 404.34 m.		
403.51	404.21	0.70		FLSS, laminated with mud.		
404.21	405.06	0.85		FLSS, barren.		
405.06	410.35	5.29	100	FLSS, laminated with mud (70/30), festoon cross-bedding, beds 1 mm wide.		
410.35	411.25	0.90		MFLSS, barren.		
411.25	411.87	0.60	98	Carbonaceous mudstone.		
411.87	412.02	0.15		Carbonaceous mudstone. Interbedded with quartz-rich MFLSS.		
412.02	413.38	1.32		MLSS with abundant coaly debris and bands.		
413.38	415.18	1.80	100	MLSS, largely barren.		
415.18	416.05	0.87		FLSS interlaminated with mud 70/30; banded.		
416.05	416.24	0.19		Carbonaceous mudstone.		
416.24	416.28	0.04		Shale.		
416.28	416.36	0.08		Sandy, carbonaceous mudstone.		
416.36	417.05	0.69		FLSS interbedded with carbonaceous mudstone 50/50.		
417.05	417.57	0.52		<u>COAL SECTION:</u> Dull coal with siltstone bands.		
417.57	417.77	0.20		FLSS, shaley.		
417.77	419.40	1.61	99	FLSS, barren.		
419.40	430.19	10.79	100	FMLSS, largely barren; rare coaly debris, laminae and mud pellets.		
430.19	430.35	0.16	100	Heavy dull coal, calcite on cleats.		
430.35	430.43	0.08		Sandy carbonaceous mudstone.		
430.43	430.96	0.52	99	MQSS with abundant wispy coaly laminae.		
430.96	432.80	1.84	100	MQSS, as above.		
432.80	433.48	0.68		CQSS.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
433.48	434.00	0.52		<u>COAL SECTION:</u> MQSS.		
434.00	434.41	0.41	100	(Contd.) MFQSS.		
434.41	448.09	13.68		MFLSS, barren; with large mudstone pellet at 440.86 m - 441.02 m; 1 cm coal from 447.37 m - .38 m.		
448.09	448.89	0.80	100	<u>COAL SECTION:</u> Heavy dull coal, no bright bands.		
448.89	449.39	0.50		Sandy carbonaceous mudstone.		
449.39	449.76	0.37		Sandy carbonaceous mudstone.		
449.76	451.36	1.60		MQSS with abundant coaly debris.		
451.36	451.39	0.03		Carbonaceous mudstone.		
451.39	451.41	0.02		Brown shale.		
451.41	451.92	0.48	94	Green mudstone, in parts shaley.		
451.92	452.38	0.46	100	FLSS with occasional worm burrows.		
452.38	458.42	6.04	100	FLSS with calcite replacement from 452.72 m - .83 m; abundant cross-bedding dips up to 10°, abundant mud laminae.		
458.42	459.98	1.56	100	MFLSS, largely barren.		
459.98	460.00	0.02		Dull coal.		
460.00	463.52	3.41	97	MQSS with coaly laminations.		
463.52	463.54	0.02	100	Dull coal.		
463.54	470.58	7.04		Green FQSS/mudstone 50/50.		
470.58	477.21	6.63		MQSS with abundant coaly debris.		
				BASE OF FRESHWATER SEQUENCE OF UPPER PARMEENER SUPER GROUP. CONTACT EROSIONAL START OF GLACIO-MARINE SEQUENCE OF PARMEENER SUPER GROUP		
477.21	481.23	4.02		Green mudstone with abundant quartz grits. Top of unit consists of a mudstone pellet		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				conglomerate with a MQSS matrix (477.21 m - .31 m). END OF HOLE AT 481.23 m.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

DRILLING TARGET:- GLACIO-MARINE SEQUENCE OF THE LOWER PARMEENER SUPER GROUP												
REMARKS:-												
SURVEY DATA				ASSAY DATA								
DEPTH metres	Bearing mag.	Inclin. degs	SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS				
						metres	%					

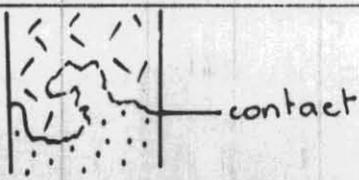
GEOLOGICAL LOG Logged by:- C Bacon

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
0.00	29.00	0	0	Dolerite talus, composed of dolerite boulders and clay.		
29.00	137.34	108.34	100	<p>Dolerite, grey massive fracture zone 20 cm long from 48.50 - 48.70; A fracture zone filled with white zeolite (?) or calcite (?) and a green chalky, greasy mineral; chlorite (?) from 94.50 - 95.00 m. Two small zones 20 cm wide between 96.00 and (core badly broken, and has been moved.) Severe fracture zone between approx. 117.50 - 119.00 m; Fracture zone is filled with a micaceous, flakey, pale green mineral. Core badly broken. Sub-vertical joints and fractures exist over the basal 15 m.</p> <p>Dolerite grainsize:</p> <p>Medium 29.00 - 122.00 m Fine 122.00 - 137.34 m</p> <p>Dolerite - sediment contact at 137.34 m; contact intrusive.</p>		

Continued over:-

DEPARTMENT OF MINES—TASMANIA
DIAMOND DRILL CORE RECORD

HOLE No.:- 60	MAP SHEET No. 49	DISTRICT FINGAL	LOCATION OF SITE:-
On Fingal Tier, near the Headwaters of Fingal Rivulet.			
R.L. OF SITE:- 725.20 M	SITE SURVEY ON MAP No.:	CORE SIZE:- BQ 395.00-474.00 m	NQ 0 - 395.00 m
BEARING OF HOLE:-	AIR PHOTO No.:-	COMMENCED:- 2.9.80	
INCLINATION OF HOLE:-	DRILL:- Joy Sullivan 30HD	COMPLETED:- 14.11.80	
CO-ORDS OF SITE:- 5 381 636 MN	DRILLER:- D. WHAMMOND	FINAL DEPTH (m):- 474.00 m	

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
137.34	138.74	1.40	100	 <p>Medium to coarse-grained lithic sandstone, white in colour. Contains clasts 1 cm in diameter of ignimbrite (?). Bedding dips at up to 30°. Sediment has been baked. Sharp bottom contact, SBC.</p>		
138.74	139.30	0.56		Mudstone, pale green in colour, baked; core badly broken; rock is hard and marble-like. Irregular bottom contact.		
139.30	140.07	0.77		White, baked, sandy mudstone containing flakes of biotite; sharp bottom contact, SBG.		
140.07	140.12	0.05		Fine grained sandstone or possibly ash; sharp top and bottom contacts.		
140.12	140.42	0.30	94	Welded tuff (?) core badly broken, core hard glassy; has been baked. Sandy over basal 15 cm; Gradational bottom contact, GBC.		
140.42	141.10	0.06	97	 <p>Mudstone, green, hard, baked; flecked red and white; "algal mat" structures common; possible melding feature at top: Flecks of red zeolite common.</p>		
141.10	144.10	3.00		Mudstone, beige, hard, core badly broken; lenses of green mudstone and carbonaceous flecks common.		
144.10	151.90	7.80	100	Fine, grained lithic sandstone, (FLSS); occasional coaly laminae, rare worm burrow type structures; occasional cross bedding dipping up to 30°; rare mud pellets; 0.5 cm x 0.2 cm with their long axes oriented perpendicular to the core axes;		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				Abundant wispy carbonaceous laminae dipping at up to 30° from 149.00 - 149.50. Large irregularly shaped clasts of sediment from 151.35 - 151.40 m. Bioturbation (?) from 151.00 - 151.35 m SBC.		
151.90	152.08	0.18	100	FLSS, massive, no carbonaceous laminae.		
152.08	173.23	21.15		Medium to fine-medium grained lithic sandstone, FMLSS: grey with occasional wispy carbonaceous laminae; core broken from 152.60 - 152.75 m; 2 mm coal at 154.720 - 154.722 mm. Abundant siltstone laminae from 157.20 - 157.40 m. Mudstone pellets 0.5 cm x 0.2 cm to 0.1 cm x 0.1 cm in size from 157.40 - 158.00 m. Large mudstone clast 2 cm x 3 cm from 157.79 - 157.82 m. Coal bands: 2 mm wide from 160.770 - 160.772 m and one 5 mm wide from 161.085 - 161.09 m. Rare coaly debris from 161.00 - 164.00 m. Core broken over the interval 169.70 - 170.00 m. Rare wispy carbonaceous laminae. Coaly debris and coal pellets from 173.00 - 173.10 m.		
173.23	173.30	0.07		Carbonaceous mudstone, SBC, dipping at 10°.		
173.30	173.91	0.61		Mudstone, grey, shaley over top 10 cm; abundant worm burrow structures; SBC.		
173.91	174.00	0.09		Carbonaceous mudstone.		
174.00	174.23	0.23		Mudstone, green-grey, friable; core broken, shaley.		
174.23	175.08	0.85		Mudstone, beige, tinged pink, silty; rare plant fossil debris; SBC.		
175.08	176.08	1.00		FLSS, grey; (yellowed due to exposure to are on top of core surface); massive.		
176.08	176.52	0.44		FLSS, dark grey, shaley, core friable, broken.		
176.52	182.39	5.87	100	FMLSS, grey to light grey; rare wispy carbonaceous laminae, rare coaly debris. Core broken from 181.00 - 183.00 m; rare brown shale laminae;		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS												
			metres	%													

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
<u>COAL SECTION</u>						
182.39	182.54	0.15	100	Dull coal with well developed cleat, SBC.		
182.54	182.62	0.08		Mudstone, grey, SBC.		
182.62	182.84	0.12		Micro-conglomerate of clay and mud pellets; elongate, irregularly shaped pellets from 2 - 5 mm long, Pellets tinged pink, SBC.		
182.84	182.91	0.07		Carbonaceous mudstone dark brown, silty, SBC.		
182.91	183.05	0.14		Mudstone, beige, SBC.		
183.05	183.09	0.04		Dull coal, core broken into pieces 1 cm in diameter. SBC.		
183.09	183.16	0.07		Mudstone, beige.		
183.16	183.66	0.50		Dull coal with well developed cleat. Kaolinite or calcite on cleats.		
183.66	183.80	0.14		Paleosol? Tiny angular pieces 0.5 cm in diameter of mudstone and coal in a matrix of carbonaceous shale, SBC.		
183.80	184.06	0.26		Mudstone, green, shaley, chloritic (?).		
184.06	184.12	0.06		Shale, beige, SBC.		
184.12	184.31	0.19		Heavy dull coal, SBC.		
184.31	184.46	0.15		Shale, beige, SBC.		
184.46	184.47	0.01		Grey mudstone, GBC. Core badly broken.		
184.47	184.54	0.07		Dull coal, core broken.		
184.54	184.59	0.05		Mudstone, beige, shaley.		
184.59	184.79	0.20	100	Dull coal.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

SAMPLE FROM		TO		RECOVERY		GEOLOGICAL LOG		ASSAY RESULTS		Page:- 5/26	
FROM metres	TO metres	metres	%	DESCRIPTION				SECTION		Core	Sample
<u>COAL SECTION cont.....</u>											
184.79	184.89	0.10	100	Shale, slightly carbonaceous light brown.							
184.89	185.00	0.11		Dull coal with mudstone pellet 1 cm x 0.5 cm at top of unit. Core broken into small chips							
185.00	185.12	0.12		Dull coal, 1% bright bands, SBC.							
185.12	185.17	0.05		Mudstone, beige, SBC.							
185.17	185.22	0.05		Carbonaceous mudstone.							
185.22	185.25	0.03		Mudstone, beige, shaley.							
185.25	185.52	0.27		Dull coal, 10% bright bands, SBC.							
<u>BASE OF COAL SECTION</u>											
185.52	188.29	2.77		Mudstone, pale green, worm burrow structures common; sandy, rare wispy carbonaceous laminae; laminated in parts; core broken 185.63 - 185.70 m. SBC, dips at 10°.							
188.29	188.56	0.27		Mudstone, beige, abundant flakes 1 mm in diameter of brown biotite; rock greasy to touch; shaley over top 10 cm.							
188.56	188.66	0.08	80	Carbonaceous mudstone.							
188.66	188.84	0.18	100	Mudstone, grey, fractured and re-cemented; shaley, friable.							
188.84	189.39	0.55		Mudstone, grey, coherent, massive; GBC.							
189.39	191.00	0.61		Sandy mudstone, with abundant wispy carbonaceous laminae; bedding dips at up to 20°; unit dark grey in colour.							
191.00	194.00	3.00		Interbedded sandy mudstone and FLSS (50:50). Abundant cross bedding.							
Continued over											

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
194.00	196.81	2.87	100	Medium grained lithic sandstone (MLSS), with abundant wispy carbonaceous laminae and mudstone pellets. Coal band from 194.95 to 194.97 m; Irregular clasts of mudstone from 195.50 to 195.70 m; Large clasts of laminated mudstone from 195.77 to 198.20 m; SBC, dips at 10°.		
196.87	197.00	0.13		Green mudstone, SBC.		
197.00	204.62	7.62		MCLSS with occasional wispy carbonaceous laminae; Mudstone pellets common, rare coaly debris; occasional coal bands; rare calcite chips; coal band from 200.96 - 200.98 m; clasts of mudstone irregularly shaped, from 201.00 to 201.40 m; coaly debris from 202.50 to 203.00 m; mudstone pellets from 203.70 to 203.87 m; mudstone interval from 203.87 to 204.00 m; mudstone pellets from 204.30 to 204.62 m; SBC.		
204.62	205.10	0.48		FMLSS, grey, massive, SBC.		
205.10	206.80	1.70		Mudstone, grey, abundant wispy coaly laminae; severe bioturbation; rare coal bands 1 mm wide, GBC.		
206.80	206.95	0.15		Dull coal, 20% bright bands, occasional shale laminae; GBC.		
206.95	208.25	1.05	80	Siltstone, dark grey, shaley, occasional plant fossils; Core loss of 25 cm in this unit.		
208.25	208.36	0.11	100	Mudstone, beige, with abundant biotite grains and plant fossil debris. SBC.		
208.36	208.44	0.08		Shale, carbonaceous.		
208.44	209.00	0.56		Carbonaceous mudstone, and carbonaceous shale; (50:50).		
209.00	209.24	0.24	100	FLSS, carbonaceous; abundant mudstone laminae; GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

MILE FROM		60		GEOLOGICAL LOG		ASSAY RESULTS		Page: - 7/26	
FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION		Core	Sample	
		metres	%						
209.24	209.86	0.41	66	Carbonaceous mudstone, with abundant FLSS laminae. Shaley over basal 15 cm; Core loss of 21 cm in this unit; core broken over basal 15 cm, SBC.					
209.86	210.08	0.22	100	Mudstone, beige, speckled with biotite grains 1 mm ² ; shaley, SBC.					
210.08	210.58	0.45	90	Carbonaceous mudstone, dark brown, core broken and ground over top 5 cm, Core loss of 5 cm in this unit. GBC.					
210.58	210.65	0.08	100	Mudstone, pale brown, abundant carbonaceous debris; feathery calcite over top 1 cm; irregular mudstone clasts; SBC.					
210.65	210.66	0.01		Carbonaceous mudstone, SBC.					
210.66	210.83	0.17		Mudstone, pale brown, speckled occasional coaly debris, SBC.					
210.83	210.96	0.13		Carbonaceous mudstone, laminated; abundant sand grains; shale laminae common, GBC.					
210.96	211.04	0.08		Interbedded carbonaceous and pale brown mudstone. SBC.					
211.04	211.45	0.41		Brown mudstone, speckled; shaley, occasional dark brown mudstone clasts. SBC.					
				<u>COAL SECTION</u>					
211.45	211.63	0.18		Heavy dull coal, SBC.					
211.23	211.71	0.08		Mudstone, pale grey, shaley, friable, abundant wispy coaly laminae; SBC, dips at 10°.					
211.71	212.00	0.29		Dull coal, abundant mudstone flecks.					
212.00	212.30	0.30		Dull coal, 10% bright bands, well developed cleat.					
212.30	212.36	0.03	50	Coal pebbles, core broken and ground; Core loss of 3 cm in this unit.					
				Continued over					

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
<u>COAL SECTION cont....</u>						
212.36	212.49	0.13	100	Interbedded dull coal mudstone, (50:50) with 20% bright bands. Disturbed bedding common, SBC.		
212.49	212.66	0.17		Mudstone, shaley, pale green, abundant carbonaceous debris, SBC.		
212.66	212.67	0.01		Shale, carbonaceous, black, SBC.		
212.67	212.71	0.04		Mudstone, carbonaceous, dotted with brown mudstone pellets 3mm in diameter.		
212.71	212.75	0.04		Mudstone, pale brown, abundant plant fossil material: SBC.		
212.75	212.85	0.10		Carbonaceous mudstone, black, shaley, SBC.		
212.85	212.90	0.05		Mudstone, pale brown, SBC.		
212.90	212.94	0.04		Mudstone, carbonaceous, shaley, SBC.		
212.94	212.97	0.03		Mudstone, pale brown, SBC.		
212.97	213.58	0.61		Dull coal, 15% bright bands, calcite on rare cleats, shale band from 213.31 - 213.32 m; SBC.		
213.58	214.11	0.53		Pale brown mudstone speckled with calcite, shaley, worm burrow structures common; Band of coal from 213.740 - 213.745 m; SBC.		
214.11	214.48	0.37		Heavy dull coal and carbonaceous mudstone (50:50); plant fossils common.		
214.48	214.55	0.07		Shale, brown, SBC.		
214.55	214.57	0.02	100	Mudstone, carbonaceous, with pink mudstone pellets, SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
<u>COAL SECTION cont...</u>						
214.57	214.77	0.17	100	Carbonaceous siltstone, calcite nodule at top of unit; abundant sand grains. SBC.		
214.77	214.86	0.03		Dull coal with 10% bright bands, rare cleats ; SBC.		
214.86	214.84	0.04		Dull coal, interbedded with grey mudstone; GBC.		
214.84	215.18	0.34		Dull coal, 10% bright bands, SBC.		
215.18	215.23	0.05		Dull coal and grey mudstone (50:50); 10% bright bands, SBC.		
215.23	215.25	0.02		Shaley mudstone, beige, SBC.		
215.25	215.60	0.35		Dull coal, 10% bright bands, band of shale and calcite 215.56 - 215.57 m; band of bright coal from 215.59 - 215.60 m;		
215.60	215.76	0.16		Slickensided grey mudstone, 5% bright bands; abundant plant fragments, SBC.		
<u>(BASE OF COAL SECTION)</u>						
215.76	215.84	0.08		Mudstone, white, hard, coal debris common, SBC.		
215.84	215.94	0.10		Shaley grey mudstone, SBC.		
215.94	216.24	0.30		Slickensided grey mudstone, abundant coal debris and bioturbation, SBC.		
216.24	216.35	0.11		Carbonaceous shaley mudstone, SBC.		
216.35	216.96	0.66		Pale grey mudstone, core broken. Sandy towards the base.		
216.96	220.90	3.94		FLSS, grey, massive, occasional cross bedding; rare wispy carbonaceous laminae; SBC.		
220.90	238.76	18.06	100	FMLSS, grey, massive, core broken; coaly debris from 224.00 - 225.00m. Rare wispy carbonaceous laminae, SBC.		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS												
			metres	%													

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
COAL SECTION						
238.76	238.96	0.20	100	Dull coal with well developed cleat, calcite or kaolinite on cleats; core broken, SBC.		
238.96	239.00	0.04		Mudstone, brown, shaley, SBC.		
239.00	239.10	0.03	30	Carbonaceous mudstone, core broken and ground.		
239.10	239.17	0.05	71	Paleosol (?): grits of sandstone mudstone and quartz in a shaley matrix, SBC.		
239.17	239.25	0.08	100	Dull coal, SBC.		
239.25	239.26	0.01		Mudstone, grey.		
239.26	239.29	0.03		Dull coal.		
239.29	239.33	0.04		Mudstone, pale brown, hard, speckled with biotite. SBC.		
239.33	239.68	0.30	86	Dull coal well developed cleat kaolinite or calcite on cleat; 10% bright bands SBC, core broken.		
239.68	239.69	0.01	100	Sandy coal, SBC.		
239.69	239.93	0.24		Dull coal, 10% bright bands, with 1 mm shale from 239.835 - 239.836 m; 2 mm mudstone from 239.900-239.902 m; 5 mm mudstone from 239.920-239.925m; SBC.		
239.93	239.96	0.03		Mudstone, beige, interleaved with wispy carbonaceous laminae over basal 1 cm.		
	239.995	0.035		Dull coal.		
	239.997	0.002		Grey mudstone.		
	240.000	0.003		Beige mudstone.		
	240.030	0.030	100	Dull coal.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	240.035	0.005	100	Grey mudstone.		
	240.043	0.008		Dull coal.		
	240.045	0.002		Grey mudstone.		
	240.064	0.079		Dull coal.		
	240.07	0.006		Grey mudstone.		
	240.09	0.020		Dull coal shaley irregular bottom contact, dips at 10°.		
240.09	240.25	0.14	87	Mudstone, grey, core broken, abundant slickensides, GBC, dips 15°.		
240.25	240.26	0.01		Bright coal, core broken.		
240.26	240.42	0.16		Dull coal, 10% bright bands, core sub-vertical cleats.		
240.42	240.52	0.10		Grey mudstone, interlaminated with dull coal (50:50).		
240.52	243.85	3.22	96	<u>(BASE OF COAL SECTION)</u> Grey mudstone, finely laminated, core broken and ground away from 241.09-241.12 m.		
243.85	247.60	3.75		Mudstone, grey, laminated with FLSS (50:50) laminae 1 mm wide, horizontal; rare cross bedding dipping at up to 10°; GBC dips at 10°.		
247.60	247.68	0.08		Carbonaceous shale; GBC dips at 20° (possibly a large friable shale clast); core broken and crumbly.		
247.68	260.05	10.27	83	FMLSS, grey, massive core broken from 248.00- 248.75 m; coaly debris and mudstone pellets from 249.40-249.60 m. Core losses of 0.50 m from 249.60-250.10 m; and 0.50 m from 250.50-251.00 m. Core loss of 0.10 m from 251.00-251.10 m. Coaly debris and wispy carbonaceous laminae from 252.60-253.50 m. Core loss of 0.50 m from 255.10-255.70 m. Mudstone interval from 256.70-257.20 m; mudstone dark grey laminated.		

Continued over

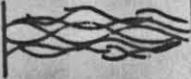
ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				Core loss of 0.50 m over the interval 237.20-259.70, where core is crushed and broken.		
				Total core losses in this unit: 2.10 m. GBC.		
260.05	261.68	1.63	100	FLSS, finely laminated, dark grey, massive; bedding dips at up to 20°; GBC.		
261.68	264.70	2.93	97	FMLSS, core broken; unit grey; massive; Core Loss of 9 cm from 261.68-263.00 m. Occasional wispy carbonaceous laminae; coaly debris over basal 30 cm. GBC.		
264.70	264.94	0.24	100	Mudstone, dark green-grey; massive; abundant slickensides.		
264.94	265.17	0.23		MLSS, grey, massive; GBC dips at 20°.		
265.17	265.51	0.34	100	Mudstone, dark green-grey; abundant slickensides at base.		
265.51	266.68	1.10	94	MLSS, green-grey; mudstone pellets over top 2 cm; core broken over top 30 cm, with core loss of 7 cm; Coaly debris over the interval 266.20-.50 m. Mudstone and claystone pellets over the interval 266.20-.50 m. GBC.		
266.68	267.10	0.42	100	Mudstone, dark green-grey; shaley; GBC.		
267.10	267.47	0.37		FMLSS, grey, massive, GBC.		
267.47	277.88	10.41		MLSS, grey, with abundant coaly debris, mudstone pellets and clasts from 267.40-268.10; remainder of unit massive; very rare coaly debris and clay and mud pellets from 268.10-277.88 m.		
277.88	278.76	0.88	100	FLSS, laminated with siltstone (50:50); grey; finely laminated; laminae 1 mm wide. GBC.		
278.76	280.87	2.09	99	Mudstone interlaminated with siltstone (50:50); abundant bioturbation features; dark grey in colour; finely laminated; worm burrow type features common; rare coaly bands slickenside from 280.72-.77 m. GBC.		
280.87	280.88	0.01	100	Shaley mudstone, green-grey; with abundant <small>Continued over</small>		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				plant fossil fragments; GBC.		
				<u>COAL SECTION</u>		
280.88	281.00	0.12	100	Dull coal, slickenside at 45° at base.		
281.00	281.04	0.04		Shale brown, core broken, friable.		
281.04	281.12	0.08		Dull coal, 5% bright bands; brown shale laminae common. GBC.		
281.12	281.15	0.03		Mudstone, dark brown, carbonaceous.		
281.15	281.31	0.16		Dull coal, 5% bright bands, GBC.		
281.31	281.35	0.04		Shale, beige, friable, GBC.		
281.35	281.38	0.03		Heavy dull coal, GBC.		
281.38	281.39	0.01		Shale, beige, GBC.		
281.39	281.43	0.04		Heavy dull coal.		
281.43	281.44	0.01		Mudstone, brown, carbonaceous, GBC.		
281.44	281.59	0.15		Mudstone, green, friable, GBC.		
281.59	281.91	0.32		Dull coal, 10% bright bands, few cleats, calcite, filling cleats GBC.		
281.91	282.33	0.42		Mudstone, green, abundant wispy carbonaceous laminae dipping at up to 30°; slickensides over basal 0.08 m. GBC.		
282.33	282.37	0.04		Dull coal, GBC.		
				<u>(BASE OF COAL SECTION)</u>		
282.37	282.47	0.10		Mudstone, green-grey, GBC.		
282.47	283.195	0.725		Mudstone, green-grey, sandy over top 30 cm; massive; GBC.		
283.195	283.20	0.005		Calcite and mudstone, (50:50) with abundant		
						
				wispy carbonaceous laminae GBC.		
				<u>COAL SECTION</u>		
283.20	283.22	0.02		Dull coal.		
283.22	283.24	0.02	100	Shale, brown.		

Continued over

ASSAY DATA

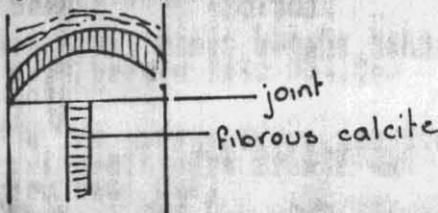
SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

60				GEOLOGICAL LOG	Page:- 14/26	
FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
283.24	283.36	0.12	100	Calcite, flakey, broken.		
283.36	283.37	0.01		Shale, beige.		
283.37	283.40	0.03		Dull coal.		
283.40	283.44	0.04		Mudstone, dark green; abundant wispy carbonaceous laminae, slickenside at top. GBC.		
283.44	283.50	0.06		Dull coal, core broken.		
	283.503	0.003		Shale, brown, friable.		
	283.507	0.004		Bright coal.		
	283.51	0.003		Shale, brown, friable.		
283.51	283.60	0.09		Dull coal, 10% bright bands; core broken; GBC.		
283.60	283.62	0.02		Sandy shale, GBC.		
283.62	283.67	0.05		Dull coal, 10% bright bands.		
283.67	283.68	0.01		Shale, sandy, pale brown.		
283.68	284.30	0.72		Dull coal, 5% bright bands; core broken.		
284.30	284.405	0.105		Dull coal, with 5% bright bands. GBC.		
284.405	284.41	0.005		Sandy coal, GBC.		
284.41	284.90	0.49		Dull coal, well developed cleat; calcite on cleats; 15% bands; GBC.		
284.90	284.91	0.01		Mudstone, hard, white, flecked with wispy carbonaceous laminae; irregular bottom contact.		
284.91	284.92	0.01		Dull coal.		
284.92	284.94	0.02		Bright coal, with sub-vertical cleat, well developed; calcite on cleats.		
284.94	285.075	0.135		Dull coal; few bright bands, GBC.		
285.075	285.10	0.025		Sandy mudstone, white; contains plant fossil debris. GBC.		
285.10	285.32	0.22	100	Dull coal, 10% bright bands, GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
285.32	285.33	0.01	100	Mudstone, light brown, shaley, flecked with wispy carbonaceous laminae, GBC.		
285.33	285.425	0.095		Dull coal with 25% bright bands, and abundant brown mudstone laminae; GBC.		
285.425	285.43	0.005		Mudstone, white.		
285.43	285.48	0.05		Dull coal, 10% bright bands; GBC.		
285.48	285.50	0.02		Dull coal and white mudstone interlaminated; GBC.		
285.50	285.52	0.02		Dull coal, 10% bright bands, GBC.		
285.52	285.53	0.01		Bright coal, GBC.		
<u>(BASE OF COAL SECTION)</u>						
285.53	287.38	1.85		Mudstone, light grey, with abundant wispy carbonaceous laminae and flecked with plant fossil debris. Shaley from 286.33-287.10 m; calcite veins from 287.00-287.10 m; GBC.		
						
287.38	287.41	0.03		Shale light brown, GBC.		
287.41	287.48	0.07		Mudstone, grey, interbedded with brown shale (50:50); bedding irregular; GBC.		
287.48	288.26	0.78		FLSS, grey, massive.		
288.26	288.38	0.12		Mudstone, grey, core broken; slickensided; GBC.		
288.38	288.60	0.22		Dull coal, 5% bright bands; GBC dips at 20°.		
288.60	290.80	2.20		Mudstone, grey, abundant wispy carbonaceous laminae; sandy from 289.13-290.54; slickenside dips at 45° from 290.54-290.60 m. Abundant wispy carbonaceous laminae and carbonaceous flecks from 290.54-290.73.		
290.80	290.87	0.07	100	Micro-conglomerate of grey mudstone pellets		

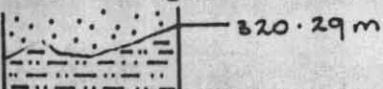
ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				2 mm-5 mm in diameter; GBC dips at 10°. Abundant wispy carbonaceous laminae. <u>COAL SECTION</u>		
290.87	291.60	0.73		Dull coal 2% bright bands slickenside coated with calcite from 290.40-.47 m, GBC. <u>(BASE OF COAL SECTION)</u>		
291.60	291.67	0.07		Carbonaceous shale, brown with common dull coal laminae. GBC, dips at 10°.		
291.67	291.685	0.015		Mudstone, greeney-grey, irregular bottom contact.		
291.685	291.70	0.015		Carbonaceous shaley mudstone, irregular bottom contact.		
291.70	292.87	1.17		Mudstone, sandy with 25% FLSS; rare worm burrow structures; possible bioturbation; sand lenses; and rare slickensides. GBC.		
292.87	293.44	0.57		FMLSS, grey, massive, GBC.		
293.44	293.77	0.33		Mudstone, sandy cross bedding over top 5 cm; disturbed bedding; bioturbated(?) abundant wispy carbonaceous laminae; slickenside from 293.74-.77 m; irregular bottom contact. <u>COAL SECTION</u>		
293.77	293.88	0.11		Dull coal.		
	293.881	0.001		Brown shale.		
	293.884	0.003		Dull sandy coal.		
	293.89	0.006		Brown shale, interlaminated with bright coal (50:50).		
293.89	294.28	0.39		Dull coal, minor bright bands, core broken from 293.92-294.00 m.		
294.28	294.36	0.08		Mudstone grey shaley, few plant fragments core broken and crushed, GBC.		
294.36	294.78	0.42	100	Dull coal 10% bright bands calcite on sub-vertical cleats, GBC. Continued over		

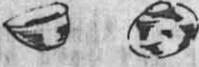
ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS												
			metres	%													

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
294.78	294.89	0.11		Interbedded dull coal and brown shaley mudstone with 20% bright bands, GBC. <u>(BASE OF COAL SECTION)</u>		
294.89	295.19	0.30		Mudstone, grey-green with 25% FLSS i.e. sandy mudstone flecked with wispy carbonaceous debris. Fine scale cross bedding over basal 10 cm, GBC.		
295.19	320.29	23.51	94	<p>MFLSS, grey, massive; core broken from 295.95-296.00 m; occasional wispy carbonaceous laminae; CORE LOSS of 0.78 m from 301.22-302.00 m. Interval of sandy mudstone from 301.12-302.46 m; with mudstone sand (30:70). Occasional mudstone pellets; Grey mudstone interval from 307.50-.60 m; core broken from 308.00-309.00 m with CORE LOSS of 5 cm over this interval.</p> <p>Clast of coal from 309.31-.32 m; core broken from 309.32-.44; CORE LOSS of 30 cm between 309.00-311.00; core broken and ground from 311.80-312.70; from 313.50-314.00; 314.80-315.10; 317.00-317.40;</p> <p><u>CORE LOSSES:</u></p> <p>20 cm between 311.00-314.00 m 4 cm between 314.00-317.00 m</p> <p>Abundant plant debris from 315.00-315.20 m, from 318.20-.30;</p> <p>Mudstone pellets 3 cm in diameter from 318.40-.45 m;</p> <p>Core broken from 317.60-318.45; coaly debris from 318.45-.90 m;</p> <p>CORE LOSS of 22 cm between 317.60-320.00.</p> <p>Abundant wispy carbonaceous laminae from 320.00-320.20 m. Irregular eroded bottom contact.</p>  <p>Total core losses in this unit: 1.59 m. Continued over</p>		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
320.29	321.19	0.90	100	Mudstone, grey, severe bioturbation and distorted wispy carbonaceous laminae:  slickenside dips 60° at 320.53-.57 m. Irregular bottom contact - not erosional:  brown shale clast brown shale		
321.19	321.31	0.12		Shale, brown, interbedded with carbonaceous mudstone; few coaly laminae, GBC dips at 10°.		
321.31	322.35	1.04		FMLSS, clast of grey mudstone from 321.31-.37 m. GBC dips at 10°.		
322.35	322.67	0.32		Interlaminated carbonaceous and non carbonaceous mudstone, (50:50); rheomorphic slumping; disturbed bedding; GBC dips at 5°.		
322.67	322.84	0.17		Dull coal interlaminated with tiny 1 mm ² mudstone pellets; GBC. 		
322.84	322.89	0.05		Steady mudstone, GBC.		
322.89	322.892	0.002		Brown shale, GBC.		
322.892	322.90	0.008		Micro-conglomerate of tiny mudstone pellets, GBC.		
322.90	323.07	0.41	65	Dull coal; CORE LOSS of 6 cm in this unit as core is ground away. 		
323.07	323.48	0.41		Mudstone, grey, abundant wispy carbonaceous laminae, GBC.		
323.48	324.58	1.10	100	FLSS; dark grey, rare wispy carbonaceous laminae; GBC. Continued over		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
324.58	324.79	0.21	100	Mudstone, green-grey; abundant wispy carbonaceous laminae; GBC.		
				<u>COAL SECTION</u>		
324.79	325.52	0.73		Dull coal 2% bright bands feathery calcite stringers over top 1 cm occasional sand laminae, GBC.		
				<u>(BASE OF COAL SECTION)</u>		
325.52	328.30	2.78		FMLSS, carbonaceous over top 10 cm; massive, grey in colour.		
328.30	334.75	6.45		MLSS, light grey, rare mudstone pellets and wispy coaly laminae, massive.		
334.75	343.88	9.13		FMLSS, grey, massive; rare mudstone pellets and wispy coaly laminae; large clasts of carbonaceous mudstone from 340-340.10 m; clasts 5 cm x 3 cm; dipping at 40°.		
						
				Mudstone interval from 339.12-.44 m; base of mudstone interval dips from 339.44-.54 m; the mudstone interval is probably a clast of mudstone; GBC.		
						
343.88	344.10	0.22		Coarse grained lithic sandstone, (CLSS); with abundant mud and coal pellets 1 cm x 0.2 cm; GBC.		
344.10	345.83	1.73		M-CLSS; occasional elongate mudstone and coal pellets. GBC.		
345.83	345.855	0.025		Carbonaceous shale, brown, GBC, dips at 10°.		
345.855	346.94	0.085		Mudstone, light grey, abundant wispy carbonaceous laminae; GBC.		
346.94	346.99	0.05		Dull coal with abundant shale laminae; core broken; GBC.		
346.99	348.53	2.54		Mudstone, pale green-grey; wispy carbonaceous laminae common; interbedded with FLSS (50:50) over the interval from 347.47-348.00 m.		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
348.53	349.10	0.57	100	Carbonaceous clayey mudstone; black; friable, core has cracked and expanded; band of white clay from 348.98-.99 m.		
349.10	349.54	0.44		Mudstone, green; abundant wispy carbonaceous laminae; bioturbated; disturbed bedding; carbonaceous over top 10 cm. GBC.		
349.54	349.57	0.03		Dull coal, shaley, GBC dips at 10°.		
349.57	354.46	4.89		FLSS interlaminated with mudstone; grey in colour; calcite nodule from 350.21-.26 m; abundant wispy carbonaceous laminae; slickensides from 353.61-.71 m; carbonaceous shale interval from 353.61-.64 m; GBC.		
354.46	354.89	0.43		FLSS, massive, grey, occasional cross bedding; occasional wispy carbonaceous laminae, GBC.		
354.89	355.73	0.84		Mudstone, grey, finely laminated; rare wispy carbonaceous laminae; GBC.		
355.73	355.92	0.19		Mudstone, grey, and carbonaceous mudstone laminate; (70:30); GBC.		
355.92	355.99	0.07		Dull coal.		
355.99	356.10	0.11		Dull coal interbedded with brown shale, and carbonaceous mudstone; (30:20:50); GBC.		
356.10	356.67	0.57		Mudstone, green-grey; lens of bright coal from 356.66-.665 m; GBC.		
356.67	356.68	0.01		Shaley, coal.		
356.68	356.685	0.005		Dull coal.		
356.685	356.70	0.015		Sandy siltstone, white, GBC.		
356.70	356.86	0.16		Carbonaceous siltstone, speckled with tiny pellets of FLSS, GBC.		
356.86	357.45	0.59		FLSS, abundant carbonaceous laminae, GBC.		
357.45	360.57	3.12		Laminate of FLSS white and carbonaceous siltstone, (50:50); plant fossil fragments common; cross bedding common; minor bioturbation?		
360.57	360.92	0.35	100	FMLSS, grey, interbedded with carbonaceous siltstone, micro-conglomerates; beds 2 cm-3 cm wide; pellets in siltstone micro-conglomerates 1-2 mm in diameter.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION		
		metres	%		Core	Sample	
360.92	369.36	8.44		FMLS, grey, massive, elongate flattened mudstone pebbles 1 cm x 0.2 cm from 361.36-.74 m; occasional wispy carbonaceous laminae; occasional clasts of FLS reworked and deposited in soft sediment. e.g. 361.84-.88 m;  Mudstone pebbles: 364.00-.20 m; GBC.			vague outlines deformed sediment
<u>COAL SECTION</u>							
369.36	369.390	0.03		Dull coal, 10% bright bands.			
	369.391	0.01		Shale, brown, GBC.			
	369.392	0.001		Bright coal band, GBC.			
	369.40	0.008		Shale, brown, GBC.			
	369.44	0.040		Dull coal, 2% bright bands, GBC.			
	369.445	0.005		Mudstone, creamy white, shaley, GBC.			
	369.615	0.170		Dull coal, GBC.			
	369.620	0.005		Shaley mudstone, pale brown, GBC.			
	369.722	0.102		Dull coal.			
	369.730	0.008		Mudstone, white, hard.			
	369.734	0.004		Dull coal.			
	369.760	0.026		Mudstone, hard, white.			
	369.765	0.005		Shaley, coal.			
	369.81	0.045		Dull coal, minor shale laminae.			
	369.82	0.010		Mudstone, light brown.			
	370.06	0.240		Dull coal, few cleats, calcite on cleats; GBC, 2% bright bands.			
	370.095	0.035		Mudstone, hard, white, abundant wispy carbonaceous laminae, GBC.			
	370.180	0.085		Dull coal, 2% bright bands.			
	370.185	0.005		Mudstone, beige, sandy.			
	370.30	0.115		Dull coal, shaley, 2% bright bands, GBC.			

Continued over

ASSAY DATA

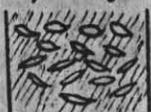
SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	370.43	0.130		Dull coal.		
	370.435	0.005		Mudstone, light brown, sandy.		
	371.09	0.655		Dull coal, core broken; well developed cleat 5% bright bands; GBC.		
	<u>(BASE OF COAL SECTION)</u>					
371.09	371.47	0.38		Laminate of FLSS and mudstone (50:50); core broken, GBC.		
371.47	371.67	0.20		Mudstone, grey, clayey; abundant wispy carbonaceous debris; GBC.		
371.67	371.75	0.08		Carbonaceous mudstone, GBC.		
371.75	377.37	5.62		FMLSS, interbedded and interlaminated with grey mudstone; abundant cross bedding; finely laminated; rare slickensides; GBC.		
377.37	377.378	0.008		Shale, pale brown.		
377.378	377.38	0.002		Bright coal.		
377.38	377.47	0.090		Carbonaceous mudstone.		
377.47	378.28	0.810		Interlaminated FLSS and grey mudstone (50:50); GBC.		
378.28	378.95	0.67		Carbonaceous siltstone, black.		
378.95	379.25	0.30		Interlaminated carbonaceous siltstone and FMLSS, with rare mudstone pellets. GBC.		
379.25	379.49	0.24		Interlaminated carbonaceous and non-carbonaceous mudstone; GBC.		
379.49	379.51	0.02		Carbonaceous mudstone, GBC.		
	379.56	0.05		Shale, sandy, brown, GBC.		
	379.58	0.02		Heavy dull coal, GBC.		
	379.59	0.01		Shale, sandy brown, GBC.		
	379.71	0.12		Dull coal, core brokwn and ground; few cleats; GBC.		
379.71	379.94	0.23		Siltstone, carbonaceous.		
379.94	380.43	0.49		Mudstone, sandy core has crumbled into tiny chips, clayey.		
380.43	380.78	0.35	100	FLSS wispy carbonaceous laminae common; abundant mudstone laminae, GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
380.78	381.63	0.85	100	Mudstone, grey, core broken and crumbly slickensided, over top 5 cm; abundant slickensides; abundant wispy carbonaceous laminae. Interbedded with carbonaceous mudstone over the basal 25 cm; GBC.		
381.63	383.46	1.83		FMLSS, grey, massive, occasional wispy carbonaceous laminae dipping at up to 20°; occasional slickensides; GBC.		
383.46	385.53	2.07		Siltstone, interlaminated with FLSS, (50:50) occasional slickensides and rare wispy coaly laminae; GBC.		
385.53	388.46	2.93		FMLSS, grey, massive, rare wispy coaly laminae, siltstone interval from 387.10-.25 m; GBC.		
388.46	388.95	0.49		Siltstone, dark grey abundant FLSS laminae; abundant plant fossil fragments; finely laminated, GBC.		
388.95	389.33	0.38		Mudstone, light grey, finely laminated, occasional plant fossil fragments, GBC.		
389.33	391.86	2.53		Laminate of carbonaceous siltstone, and FLSS, finely laminated, minor cross bedding, GBC.		
391.86	395.00	3.14		FMLSS, grey, massive, very rare wispy coaly laminae.		
				END OF NQ CORE		
				START OF BQ CORE		
395.00	395.54	0.54		FMLSS, grey, massive, GBC.		
395.54	395.95	0.41		Mudstone, grey finely laminated, GBC.		
395.95	296.44	0.49		Carbonaceous mudstone; core broken; abundant slickensides; contains clay as core has expanded and crumbled.		
296.44	296.64	0.20		Mudstone, poorly carbonaceous.		
296.64	296.80	0.16		Siltstone, grey abundant plant fossil fragments; sandy.		
296.80	399.18	0.76	27	Siltstone, very carbonaceous with numerous small sandy lenses; core ground and broken; CORE LOSS of 2.00 m.		
						
					Continued over	

ASSAY DATA

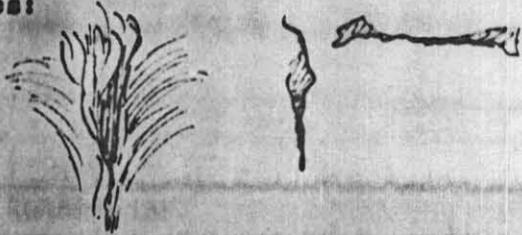
SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
399.18	399.44	0.26	100	MLSS, interlaminated with carbonaceous siltstone; (40:60); occasional mudstone pellets; 10% bright coal bands.		
399.44	399.58	0.14		Mudstone, grey, abundant wispy carbonaceous laminae, GBC.		
399.58	399.66	0.08		Mudstone, grey, core ground and broken; rare.		
399.66	399.67	0.01		Calcite nodules.		
399.67	399.71	0.04		Mudstone, grey.		
399.71	401.85	0		Core loss of 2.14 m.		
401.85	401.93	0.08		Dull coal, 10% bright bands, GBC.		
401.93	404.00	2.07		Mudstone, sandy, with biotite grains, disturbed bedding, and abundant wispy carbonaceous laminae.		
404.00	405.78	1.78		FMLSS, yellow; wispy carbonaceous laminae common, rare calcite feathery veins, GBC.		
405.78	407.25	1.47		FLSS, interlaminated with grey mudstone.		
407.25	407.40	0.15		Mudstone, dark grey.		
407.40	407.85	0		CORE LOSS of 0.45 m.		
407.85	408.05	0.20		Mudstone, dark grey abundant wispy carbonaceous laminae, finely laminated. GBC.		
408.05	408.55	0.50		MLSS, quartz rich dark grey, highly carbonaceous; GBC.		
408.55	410.85	1.13	50	FMLSS, yellow quartz rich; non-carbonaceous; CORE LOSS of 1.17 m in this unit.		
410.85	429.44	18.59		FMLSS, grey, massive, very sparse coaly debris; large FLSS pellets 0.5 cm long from 410.85-411.45 m. GBC.		
429.44	430.05	0.61		FLSS, greenery-grey, massive. GBC.		
430.05	430.20	0.15		? A hard, orange coloured rock, has a speckled appearance and flow - structures? Composed of opaque white weathered "blobs" 1-2 mm in diameter extremely hard, has a worn a smooth end; flecked with a powdery (sample taken) grey mineral.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS												
			metres	%													

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
430.20	430.31	0.71	100	FLSS, with abundant irregularly shaped clasts of FLSS; GBC.		
430.91	434.90	3.99		FLSS, green-grey; abundant silt laminae; core contains clay from 431.30-431.85; core cracked and expanded; minor cross bedding; GBC.		
434.90	435.99	1.09		MLSS, grey, interbedded and interlaminated with carbonaceous siltstone; abundant coaly debris.		
435.99	437.85	0		CORE LOSS of 1.86 m.		
437.85	447.32	9.47		FLSS, massive, grey; minor wispy carbonaceous laminae minor mudstone pellets.		
447.32	449.16	1.84		Mudstone, green-grey, worm burrows, abundant wispy carbonaceous laminae, becomes sandy towards the base; GBC.		
449.16	449.80	0.64		FLSS, grey, massive, GBC.		
449.80	451.40	1.60		Mudstone, green-grey; occasional slickensides; becomes sandy towards the base.		
451.40	452.85	1.45		Interlaminated green grey mudstone and FLSS, (50:50); rare wispy coaly laminae.		
452.85	453.34	0.49		Mudstone, green-grey; finely laminated; contains clay; core cracked; GBC.		
453.34	453.79	0.45		Carbonaceous sandy mudstone; GBC.		
453.79	454.44	0.65		Fine grained quartz arenite, (quartz sandstone); (FQSS); abundant worm burrow type structures:		
						
				Abundant wispy carbonaceous laminae, and possibly burrows, now sand filled; and roots filled with carbonaceous material.		
454.44	454.49	0.05	100	Siltstone, black, GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
454.49	457.92	3.43	100	FQSS; abundant wispy coaly laminae; carbonaceous intervals common.		
457.92	459.60	1.68		Mudstone, green, shaley, finely laminated, carbonaceous over basal 30 cm; GBC.		
459.60	465.86	6.26		FQSS, abundant wispy carbonaceous laminae, dipping at up to 30°; coaly debris common, GBC.		
455.86	466.14	0.28		Carbonaceous siltstone with 1 cm of bright coal at 465.94-.95 m. Finely laminated, GBC.		
456.14	470.05	3.91		FQSS, white, massive; GBC.		
470.05	470.66	0.61		Siltstone, dark grey in colour, finely laminated, GBC.		
470.66	471.66	1.00		FQSS, white; core broken; GBC.		
471.66	473.38	0.08	.05	Mudstone, beige, core broken into small chips; core loss of 1.64 m.		
473.38	474.00	0.62	100	FQSS.		
				END OF HOLE AT 474.00 m.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
197.03	200.27	3.24	100	Sharp bottom contact, (SBC). Interbedded carbonaceous siltstone and fine grained lithic sandstone, (FLSS); abundant mud pellets; abundant wispy carbonaceous laminae; white in colour; sharp irregular bottom contact. Siltstone contains fragments of <u>Dicroidium sp.</u>		
200.27	200.51	0.24	100	Dull coal, < 5% bright bands, sharp, irregular top and bottom contacts with small 1cm x 5cm pellet of coal 1cm above top contact. 		
				Top contact erosional - coal seam possibly eroded away. Small green mud pellet at 200.39 - 200.41m; pellet 2cm wide.		
200.51	200.63	0.12	100	Mudstone, grey, rare wispy carbonaceous laminae, SBC.		
200.63	200.65	0.02	100	Dull coal, SBC.		
200.65	200.95	0.30	100	Mudstone, grey, wispy carbonaceous laminae common; laminae often disturbed with wavy patterns; GBC.		
200.95	201.50	0.55	100	Mudstone, clayey, dark grey in colour, occasional siltstone pellets, GBC.		
201.50	202.70	1.20	100	Mudstone, silty, with mudstone: siltstone being in the proportions (50:50); cross bedding common, dipping at up to 10°; unit coloured brown-grey; sandy over basal 20cm; SBC.		
202.70	203.25	0.55	100	Mudstone, grey, clayey; core broken from 202.95-203.25m. GBC.		
203.25	203.44	0.19	100	Mudstone, carbonaceous, black in colour; GBC.		
				COAL SECTION		
203.44	203.535	0.095		Heavy dull coal, SBC.		
	203.540	0.005		Mudstone, hard, white, SBC.		
	203.545	0.005		Dull coal, SBC; < 2% bright bands.		

Continued over

ASSAY DATA

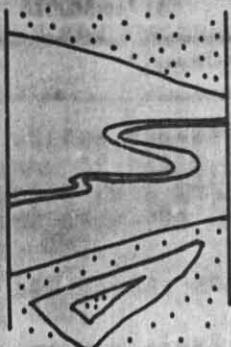
SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS												
			metres	%													

FROM				TO				RECOVERY				DESCRIPTION		SECTION	
metres	metres	metres	%	metres	metres	metres	%					Core	Sample		
	203.565		0.020					Mudstone, hard, white, SBC.							
	203.750		0.185					Dull coal; <2% bright bands.							
	203.790		0.040					Mudstone, brown with mud pellets 5cm x 1cm.							
	203.835		0.045					Dull coal; <2% bright bands.							
	203.840		0.005					Mudstone; brown, SBC.							
	203.910		0.070					Dull coal with irregularly shaped clast of sandy mudstone; <2% bright bands.							
	203.920		0.010					Dull coal with 20% bright bands.							
	203.00		0.080					Dull coal, <2% bright bands.							
	204.14		0.140					Dull coal with 15% bright bands and traces of kaolinite or calcite on minor cleats.							
	203.34		0.200					Dull coal, <1% bright bands.							
	204.345		0.005					Mudstone, brown.							
	204.62		0.275					Dull coal, cleat at 45° 204.44-204.47m, GBC.							
BASE OF COAL SECTION															
204.62	205.59		0.77					Mudstone grey, clayey, GBC.							
205.39	206.63		1.24	100				Mudstone and FLSS laminite; (50:50) minor wispy carbonaceous laminae.							
206.63	213.87		7.24	100				FMLSS, massive, grey; very rare wispy carbonaceous laminae, SBC.							
213.87	213.940		0.070					Mudstone, dark grey, SBC.							
	213.945		0.005					Calcite.							
	214.01		0.055					Dull coal, shaley, sheared; core broken; recemented with calcite.							
214.01	214.65		0.64					Carbonaceous mudstone, sandy, GBC.							
214.65	214.70		0.05					Dull coal, 5% bright bands, SBC.							
214.70	217.87		3.17					Mudstone, laminated with FLSS (80:20); abundant wispy carbonaceous laminae; occasional mud pellets, 1-2mm x 5mm in diameter, unit pale grey in colour.							
217.87	218.75		0.88					Mudstone, shaley, grey-brown in colour, core broken, SBC.							

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS																
			metres	%																	

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
218.75	219.30	0.55		Mudstone, dark grey, abundant plant fossils, GBC.		
219.30	224.56	5.26	100	FMLSS, occasional wispy carbonaceous laminae; massive, grey in colour.		
224.56	226.27	1.71	100	Carbonaceous mudstone, sandy; interbedded with FLSS over the basal 20cm.		
226.27	230.95	4.68		FLSS, light grey in colour, wispy carbonaceous laminae common from 227.40 - 227.50m, small mudstone pellets common; SBC.		
230.95	231.00	0.05		Mudstone, dark grey.		
231.00	231.20	0.20		Carbonaceous mudstone, shaley over basal 5cm.		
231.20	231.58	0.38		Carbonaceous siltstone.		
231.58	246.80	15.22	100	FMLSS, grey, massive, abundant wispy carbonaceous laminae over top 1.5m; calcite replacement in sediment from 42.80-43.50m.		
						
				<p>Clast of carbonaceous mudstone from 243.75 - 243.88m; Band of sand in 'boudinage' pattern in centre of clast;</p>		
						

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS												
			metres	%													

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				Top and bottom contacts of clast dip at 20°. Chunk of coaly debris below clast. Coaly debris from 245.88-246.05m. Calcareous over the interval 246.05-246.80m. SBC.		
246.80	248.13	1.33	100	Mudstone, laminated, grey, occasional plant fossils, GBC.		
248.13	250.80	2.67		Siltstone, carbonaceous, banded, bands 1-2mm wide; sandy towards base.		
250.80	251.30	0.50		MLSS, yellow, abundant coaly debris, wispy coaly laminae and mudstone pellets.		
251.30	251.85	0.55		Mudstone, grey, sandy.		
251.85	266.90	15.05		FMLSS, grey, massive, core broken into small chips from 257.30-258.00m; rare wispy coaly laminae; occasional mudstone pellets coaly debris from 266.00-266.70m; occasional mudstone intervals; rare slickensides in mudstone.		
266.90	267.62	0.72	100	FLSS, dark grey, silty, GBC.		
267.62	268.54	0.92		Mudstone, dark grey, banded, laminae <1mm wide.		
268.54	268.60	0.06		Mudstone, grey, shaley, SBC.		
268.60	268.79	0.19		Dull coal, SBC.		
268.79	268.91	0.12		Mudstone, carbonaceous.		
268.91	269.05	0.14		FLSS, abundant wispy coaly laminae.		
269.05	270.00	0.95		Mudstone, slightly carbonaceous; dark grey.		
270.00	280.17	10.17	100	Mudstone, pale grey-green; laminated; abundant shale laminae sandy from 273.68-274.10; core broken; slickensides dipping at up to 45° common; abundant wispy coaly laminae.		
280.17	283.58	4.41	100	FMLSS, grey, massive, SBC.		
283.58	283.90	0.32		Mudstone, dark grey, GBC.		
283.90	284.63	0.73		FMLSS, grey, massive. SBC.		
284.63	285.70	1.07		Mudstone, dark grey, laminated. GBC.		
285.70	287.45	1.75		FMLSS, massive. SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
287.45	287.90	0.45		Mudstone, shaley. GBC.		
287.90	289.15	1.25		FMLSS, quartz rich, SBC.		
289.15	289.80	0.65		Siltstone; black, core broken.		
289.80	293.20	3.20		Mudstone, sandy, interbedded with FLSS, (50:50).		
293.20	300.50	7.30		Quartzose sandstone, medium grained, MQSS, with abundant wispy carbonaceous laminae and coaly debris, interbedded with black carbonaceous siltstone (80:20). Beds 2-3cm wide.		
300.50	301.00	0.50	100	Siltstone, black. END OF HOLE AT 301.00m.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

DRILLING TARGET:- Glacio-marine sequence of the Lower Parmeener Super Group.										
REMARKS:- Duncan seam not present - dolerite has intruded to below the level of the Duncan Seam.										
SURVEY DATA					ASSAY DATA					
DEPTH metres	Bearing mag.	Inclin. degs	SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS		
						metres	%			

GEOLOGICAL LOG

Logged by:- **C. Bacon**

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
0	20.00	0	0	Dolerite Talus, composed of weathered dolerite boulders and clay.		
20.00	209.15	189.15	100	Dolerite, medium to fine-medium grained; grey in colour; fracture zones filled with zeolite or calcite from 177-178m, 183-184m, 185-188m. Dolerite finer grained from 194.00m. Subvertical joints over the basal 20m. Dolerite-sediment contact at 209.15m; contact not severe, barely detectable, with grey dolerite melding into grey laminite. An irregularly shaped zeolite runs from 208.95-209.05m.		
						

Continued over:-

DEPARTMENT OF MINES—TASMANIA
DIAMOND DRILL CORE RECORD

HOLE No.:- 75	MAP SHEET No. 49	DISTRICT FINGAL	LOCATION OF SITE:-
On Fingal Tier near the Headwaters of Fingal Rivulet			
R.L. OF SITE:- 585.2m	SITE SURVEY ON MAP No.:-	CORE SIZE:- NQ	
BEARING OF HOLE:-	AIR PHOTO No.:-	COMMENCED:- 1.12.80	
INCLINATION OF HOLE:-	DRILL:- Joy Sullivan 30HD	COMPLETED:- 13.12.80	
CO-ORDS OF SITE:- 584 421mE 5 384 507mN	DRILLER:- D. Whammond	FINAL DEPTH (m):- 374.15m	

GEOLOGICAL LOG

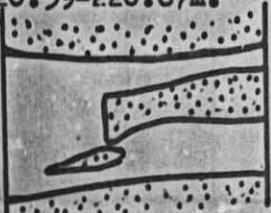
Page:- 2

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
209.15	211.55	2.40	100	Laminite of carbonaceous and non-carbonaceous siltstone, grey in colour; (50:50); some rheomorphic slumping and minor microfaulting with throws of 1cm-1mm. Sand content increases towards the base. Gradational bottom contact, GBC.		
211.55	211.64	0.09	100	Sandy dull coal with abundant sub-vertical calcite veins, sharp bottom contact, SBC.		
211.64	211.87	0.23	100	Fine grained lithic sandstone, (FLSS); GBC.		
211.87	212.22	0.35	100	FLSS, grey, interbedded with grey laminated mudstone, (50:50); beds irregularly shaped, 71cm wide. Worm burrows over top 20cm, GBC.		
212.22	213.50	1.28	100	Sandy mudstone, grey, with occasional wispy carbonaceous laminae. GBC.		
213.50	214.63	1.10	98	Dull coal with less than 2% bright bands, rare sub-vertical cleats covered with calcite; core crushed over basal 50cm.		
214.63	215.15	0.52	100	Sandy mudstone with 20% FLSS; grey in colour, massive.		
215.15	216.59	1.44	100	FLSS, grey, massive; abundant wispy coaly laminae; some rheomorphic slumping; irregularly shaped clasts of mudstone common; clasts 1cm x 2cm; minor cross bedding dipping at up to 10°. SBC.		
216.59	217.05	0.46	100	Mudstone, grey, slickensides common. GBC.		
217.05	217.42	0.32	85	Mudstone, grey, carbonaceous, disturbed bedding common; core broken; SBC.		
217.42	218.15	0.73	100	Mudstone, grey, shaley and sandy towards the base. GBC.		
218.15	226.23	8.08	100	Fine-medium grained lithic sandstone, FMLSS; abundant cross bedding dipping at up to 10°; occasional mudstone pellets, rare coaly debris, occasional wispy carbonaceous laminae; und massive		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS														
			metres	%															

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				grey in colour. Interval of laminated grey mudstone and FLSS (50:50) from 219.65-219.90m. Interval of mudstone from 220.59-220.67m.  Coaly debris abundant from 223.50-223.80m. Sandstone shaley from 224.15-224.83m. SBC.		
226.23	226.31	0.08	100	Dull coal, GBC.		
226.31	227.27	0.96	100	Mudstone, grey, slickensided, sandy, GBC.		
227.27	227.47	0.20	100	Carbonaceous mudstone, GBC.		
227.47	227.62	0.15	100	Mudstone, grey, GBC.		
227.62	228.10	0.48	100	Shale, beige, friable, SBC.		
228.10	230.20	2.10	100	Mudstone, interbedded with FLSS, (50:50); occasional cross-bedding; some worm burrows; unit grey in colour; massive; rare wispy carbonaceous laminae. GBC.		
230.20	235.45	5.25	100	FMLSS, rare wispy carbonaceous laminae. Core broken from 232.60-233.15m. Core broken and shaley from 233.15-235.45m. SBC.		
235.45	235.56	0.11	100	Mudstone, grey, SBC.		
235.56	236.42	0.86	100	Siltstone, carbonaceous; laminated with FMLSS (80:20); GBC.		
236.42	239.32	2.90	100	FMLSS; abundant carbonaceous laminae, silt laminae and chunks of coaly debris 2mm x 4mm. SBC.		
239.32	241.16	1.84	100	FMLSS, massive, grey.		
241.16	241.30	0.14	100	Mudstone, laminated, beige in colour, SBC.		
241.30	241.68	0.38	100	Siltstone, carbonaceous, black in colour, shaley, GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
241.68	242.26	0.58	100	FLSS, yellow-beige in colour, slightly carbonaceous, core friable and crumbly. GBC.		
242.26	242.66	0.40	100	Siltstone, black, carbonaceous, sandy, band of coarse lithic sandstone CLSS, 1cm wide at base with carbonaceous siltstone mixed in; SBC.		
242.66	242.92	0.26	100	Dull coal, 5% bright bands; core broken over basal 5cm.		
242.92	245.19	2.29	100	Mudstone, beige, shaley; rare badly broken; abundant slickensides, rare wispy carbonaceous laminae.		
245.19	248.26	3.07	100	Laminite of beige mudstone and MLSS, (50:50), occasional cross bedding dipping at up to 20°; occasional carbonaceous mudstone bands 1mm wide; occasional disturbed bedding; core broken over the basal 10cm.		
248.26	248.71	0.45	100	MLSS, laminated; abundant biotite flakes in sandstone.		
248.71	248.78	0.07	100	Reworked MLSS clasts, laminated, in a matrix of grey MLSS; clasts angular.		
248.78	249.03	0.25	100	Shaley FMLSS, core crushed and broken. SBC.		
249.03	249.31	0.28	100	Calcite replacement. Abundant wispy carbonaceous laminae throughout. SBC.		
249.31	249.32	0.01	100	Shale, black, carbonaceous, SBC.		
249.32	253.90	4.58	100	MFLSS, coaly debris and mudstone pellets common over top 30cm; abundant wispy carbonaceous laminae; unit massive, grey in colour. SBC.		
253.90	256.26	2.36	100	Mudstone, grey, interbedded with FMLSS, (50:50); occasional slickensides, rare wispy carbonaceous debris.		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
256.26	257.16	0.90	100	Mudstone, grey, laminated, rare plant fossils, core broken over basal 40cm; unit carbonaceous towards the base.		
257.16	258.20	1.04	100	Carbonaceous mudstone, finely banded; sandy towards the base; occasional clasts or nodules of calcite over the interval GBC.		
258.20	260.11	1.19	100	Carbonaceous mudstone and quartz-rich lithic sandstone, interbedded; (60:40); sandstone fine at top of unit grading to coarse at base of unit. SBC.		
260.11	261.95	1.84	100	FLSS, grey, massive, abundant mudstone bands and laminae; core broken over the top 30cm.		
261.95	263.15	0	0	CORE LOSS of 1.20m.		
263.15	264.84	1.69	100	FMLSS, grey, abundant wispy coaly laminae; unit grey in colour; SBC dipping at 10°.		
264.84	265.51	0.67	100	Mudstone, greasy, grey; slickensided, core crumbled and badly broken over top 30cm; banding visible over basal 40cm; bands 1mm wide; SBC.		
265.51	266.15	2.65	100	FMLSS, rare wispy carbonaceous laminae, SBC, dips at 30°.		
266.16	266.32	0.16	100	Mudstone, grey, with spiderweb of calcite replacement and an irregular bottom contact.		
						
266.32	274.55	8.23	100	FMLSS, grey, massive; coaly debris over the intervals from 269.15-269.45m; 273.05-273.30m. SBC.		
274.55	281.37	6.82	100	Laminite of FMLSS; (quartz rich); and grey mudstone; bands of laminite 1mm wide; mudstone:sandstone (60:40); sandstone white in colour. SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

GEOLOGICAL LOG

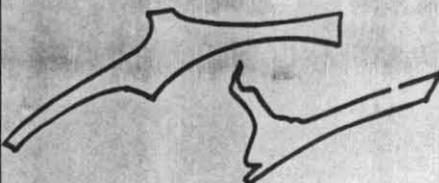
FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
281.37	285.61	4.24	100	Interbedded quartz rich lithic sandstone medium-fine grained and grey mudstone; (80:20). Mudstone laminae abundant, irregularly shaped clasts of mudstone common; size of clasts 5 cm in diameter. Clast of brown shale from 284.95-285.19 m. Flecks of carbonaceous mudstone in the shale.		
285.61	285.99	0.38	100	Mudstone, dark grey, GBC.		
285.99	286.24	0.25	100	Mudstone, grey, laminated with carbonaceous mudstone (50:50); bands 2-4 mm wide. GBC.		
286.24	286.40	0.16	100	Dull coal with 5% bright bands, GBC.		
286.40	286.55	0.15	100	Carbonaceous mudstone, GBC.		
286.55	287.20	0.65	100	Mudstone, grey, finely laminated, occasional wispy carbonaceous laminae.		
287.20	287.50	0.30	100	Mudstone, grey, shaley, GBC.		
287.50	288.33	0.83	100	Mudstone and quartz-rich FMLSS, interbedded; (20:80). Carbonate replacement; with a 'fish scale' pattern from 288.03-.10 m.		
288.33	288.53	0.20	100	Mudstone, dark grey, shaley.		
288.53	290.20	1.67	100	Mudstone, dark grey, with occasional carbonaceous mudstone intervals, occasional slickensides and sandy intervals. Sandy FMLSS interval from 289.93-290.13 m.		
290.20	290.77	0.57	100	Mudstone, grey, with 20% FMLSS; carbonaceous mudstone intervals common; unit coloured dark grey.		
290.77	291.53	0.76	100	Carbonaceous mudstone interbedded with quartzose sandstone (60:40).		
291.53	297.40	5.83	100	Quartzose sandstone, medium grained (MQSS) with occasional wispy carbonaceous laminae dipping at 20°: core broken; unit has a 'sparkling' appearance in parts. GBC.		
297.40	297.70	0.25	83	Carbonaceous mudstone, black, shaley, abundant slickensides, core broken, GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS												
			metres	%													

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
297.70	298.67	0.97	100	FMLSS, yellow, massive. GBC.		
298.67	298.68	0.01	100	Calcite replacement, GBC.		
298.68	299.15	0.47	100	Mudstone, grey, slickensided; carbonaceous towards the base.		
299.15	299.71	0.56	100	Carbonaceous siltstone with occasional plant fossils, GBC.		
299.71	300.64	0.93	100	FMLSS, shaley, GBC.		
300.64	301.58	0.94	100	Mudstone, grey, carbonaceous, calcite replacement from 301.14-.24 m. Abundant sandy laminae; minor cross bedding.		
301.58	305.17	3.59	100	MQSS; sparkling white with minor carbonaceous intervals. Core broken.		
305.17	310.01	4.84	100	MQSS with very minor carbonaceous intervals. GBC.		
310.01	311.11	1.10	100	Carbonaceous siltstone, GBC.		
311.11	324.47	13.36	100	MQSS with abundant wispy carbonaceous laminae; some bioturbation. Sulphide nodules among abundant wispy carbonaceous laminae at 314.76 m. Coaly debris abundant. GBC.		
						
324.47	325.68	1.21	100	Laminite of QSS and black siltstone (70:20), GBC.		
325.68	327.75	2.07	100	Siltstone, black, shaley.		
327.75	337.28	9.53	100	Black carbonaceous sandy siltstone with quartz grits reworked from underlying marine sediments. GBC.		
337.28	337.41	0.13	100	Dull coal, 2% bright bands, GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS														
			metres	%															

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
337.41	338.17	0.76	100	FQSS, massive, GBC.		
338.17	338.51	0.34	100	MQSS, massive, GBC.		
338.51	339.75	1.21	100	CQSS, massive, GBC.		
TOP OF GLACIO-MARINE SEDIMENTS OF THE LOWER PARMEENER SUPERGROUP UPPER MARINE SEQUENCE.						
339.75	358.05	18.30	100	Green-grey mudstone with abundant angular quartz grits. GBC.		
358.05	359.31	1.26	100	Quartz-rich sandstone, coarse drained; granite derived?? Abundant biotite; dropstones 2 cm x 2 cm common. GBC.		
359.31	374.15	14.84	100	Mudstone, green-grey with abundant quartz grits; tinged purple with abundant small dropstones over top 20 cm. Carbonate replacement from 367.65-.79 m.		
END OF HOLE AT 374.15 m						
Continued over						

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

DRILLING TARGET:- Base of the Upper Parmeener Super Group.										
REMARKS:- Roof of the Duncan seam is at an R.L. of 395.33m. Working section thickness is 1.87m.										
SURVEY DATA					ASSAY DATA					
DEPTH metres	Bearing mag.	Inclin. degs	SAMPLE No.	FROM metres	TO metres	RECOVERY metres %		ASSAY RESULTS		

GEOLOGICAL LOG

Logged by:- **R. Castleden**

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
0	301.28	301.28	100	Dolerite, grey massive; fine-medium to medium-coarse grainsize; minor chlorite-calcite zones (sub-vertically to sub-horizontally-dipping 1cm to 30cm wide veins and (?) shear zones); pronounced textural variation from the collar level to the base of the dolerite sill; massive, unbroken core-sticks; minor granophyric intervals (in particular 94 to 95m); minor banded appearance (in particular 57m to 58m); abundant, closely-spaced, sub-vertically-dipping joints from 280m to 300m, becoming more randomly orientated, pervasive from 300.4m to 301.28m, texture is micro-porphyrific in basal 1m; green-grey in colour in basal 0.5m; barium-bearing heulandite occurs in sub-vertically-dipping calcite veins in basal 0.2m; stepped bottom-contact (BC) dips at from 25° to 35° with minor shard-like inclusions of coal in the dolerite adjacent to the contact; flow-banding in carbonaceous sediments immediately underlying the dolerite parallels the dip of the contact; joints terminating at the contact dip at 75°.		

Continued over:-

DEPARTMENT OF MINES—TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No.:- DOM Fingal DDH No. 76	MAP SHEET No. 49	DISTRICT Fingal	LOCATION OF SITE:- Dolerite Plateau Between Lucks and Pretty End Creeks
R.L. OF SITE:- 745.8m	SITE SURVEY ON MAP No.:- N/A	CORE SIZE HQ: 0.00m to 17.98m NQ: 17.98m to 306.61m BQ: 306.61m to 549.83m	COMMENCED:- 21st November, '80
BEARING OF HOLE:- -	AIR PHOTO No.:- N/A	COMPLETED:- 23rd March, '81	
INCLINATION OF HOLE:- Vertical	DRILL:- Longyear 44	DRILLER:- O. Mitchell R. McDonald L. Lavelle	FINAL DEPTH (m):- 549.83
CO-ORDS OF SITE:- 586 327mE 5 379 532mN			

SAMPLE		76		GEOLOGICAL LOG		Page: - 2	
FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION		
		metres	%		Core	Sample	
COAL SECTION:							
301.28	301.36	0.08	100	Carbonaceous mudstone; brittle; thermally metamorphosed; abundant conchoidal fracturing and glassy slickensided surfaces; minor flakey calcite (?) veins. Irregular bottom contact (BC).			1
301.36	301.44	0.08		Interbanded cindered dull coal/thermally metamorphosed carbonaceous mudstone (50:50); brittle; abundant slickensides; minor faulting and disruption of bedding; abundant translucent papery calcite veins; bedding dips at up to 30°. Faulted BC.			
301.44	301.51	0.07		Carbonaceous mudstone; thermally metamorphosed; bedding dips at 20°; abundant 45° to 60° dip slickensides. BC dips at 20°.			
301.51	301.66	0.15		Shear-zone. Platelets of hornfelsed carbonaceous mudstone; abundant low-angle to 45°-dip slickensides. Slickensided BC dips at 30°.			
301.66	302.02	0.36	100	Carbonaceous mudstone, thermally metamorphosed; minor cindered dull coal bands; abundant sub-vertically			

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
302.02	302.04	0.02	100	dipping calcite veins; minor slickensides, disturbed bedding and small-scale faulting. BC dips at 5°.		
				Bright cindered coal; well developed cleat coated with papery calcite. BC dips at 5°.		
302.04	302.06	0.02		Carbonaceous mudstone; hornfelsed; minor cindered coal laminae.		
302.06	302.11	0.05		Bright cindered coal; well developed cleat; 50% is hornfelsed banded carbonaceous mudstone.		
302.11	302.17	0.06		Carbonaceous mudstone, thermally metamorphosed; abundant coaly and clay lenticles. BC dips at 2°.		1 (Cont.)
302.17	302.26	0.09		Bright cindered coal; well-developed cleat; minor calcite veins coating sub-vertically-dipping cleat. Sharp BC.		
302.26	302.28	0.02		Carbonaceous mudstone; thermally-metamorphosed. Sub-horizontal BC.		
302.28	302.30	0.02		Bright cindered coal; abundant well-developed cleat with minor sub-vertically-dipping calcite veins (less than 0.5 mm in width).		
302.30	302.38	0.08		Carbonaceous mudstone; thermally-metamorphosed; abundant coaly laminae and lenticles dipping at up to 5°.		
302.38	302.42	0.04	100	Grey-black mudstone; bedding dips at 5°; abundant carbonaceous component, but not strictly a carbonaceous mudstone; thermally-metamorphosed.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

SAMPLE 76				GEOLOGICAL LOG		Page:- 4	
FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION		
		metres	%		Core	Sample	
302.42	302.53	0.11	100	Carbonaceous mudstone/ bright cindered coal (75:25) laminite; bedding dips at up to 5°; minor sub-horizontally-dipping slickensides. Slickensided BC.			
302.53	302.64	0.11		Carbonaceous mudstone; thermally metamorphosed; abundant slickensides dipping at from 0°-45° (shear zone). Gradational BC.		1	
<u>(BASE OF COAL SECTION)</u>							
302.64	302.78	0.14		Mudstone, dark-grey; shaly in part; abundant low angle slickensides; minor brecciation and small scale-faulting; minor thermal metamorphism (?); minor cindered coal laminae at base. Gradational BC.			
302.78	303.53	0.75		Mudstone, grey; silty; abundant high-angle slickensides; shaly in part; bedding dips at 20° at base; minor slickenside-and breccia- (shear) zones. Hornfelsing not obvious.			
303.53	305.00	1.47		Shale; grey, grading to grey-brown at base; hackly fracture throughout; (almost a mud- stone, but this material completely dis- integrates after a period in the core-trays).			
305.00	307.91	2.91		Interbanded light-grey fine-medium-grainsize lithic sandstone (FMLSS)/dark-grey silty mudstone (25:75); minor soft-sediment slumping, bioturbation (vertical worm-burrows(?)), scour and fill structures, cross-bedding, laminated bedding and flaser-bedding; shaly in part; minor jointing. BC dips at 10°.			
307.91	340.64	32.73	100	FMLSS, light-grey; massively bedded; minor carbonaceous laminae and coaly partings dipping at up to 20°; mudstone interval (mud- pellet conglomerate (?)) from 311.60 m to 312.0 m; massive carbonate recrystallization from 315.2 m to 315.3 m; abundant mudstone and carbonaceous mudstone flaser-bedded laminae dipping at up to 20° from 320.7 m to 321.05 m; Continued over			

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS														
			metres	%															

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
			100	minor fine-grainsize lithic sandstone (FLSS) intervals; abundant coaly debris, mud-pellets, disturbed bedding, quartzite cobbles; dull and bright coal intervals from 327.7 m to 331.5 m together with carbonaceous laminae, FLSS and medium-grainsize lithic sandstone (MLSS) matrix and carbonate overgrowths; minor coaly debris from 337 m to 337.15 m. BC dips at 5°.		
340.64	346.76	6.12		Mudstone, grey to dark-grey; silty; minor slickensides dipping at from 20° to 45°; carbonaceous mudstone from 341.1 m to 341.3 m and from 341.38 m to 341.53 m together with grey-brown mudstone and bright coal bands; abundant plant-fossil debris; shaly in part; abundant silty and sandy bands towards the base of this unit; bedding occasionally dips at up to 30°. Partly gradational BC dips at 5°.		
346.76	347.07	0.31		FLSS, grey; massively bedded; minor dark-grey laminae; bedding dips at up to 10°. BC dips at 20°.		
347.07	350.41	3.34		Interbedded MLSS, light-grey/FLSS, grey (75:25); abundant coaly debris, mudstone bands and laminae, irregular bedding (dipping at up to 30°); minor carbonate in matrix. BC dips at 10°.		
350.41	350.43	0.02		Dull coal with minor bright laminae; minor claystone lenticles and brown plant-fossil fragments. BC dips at 10°.		
350.43	350.47	0.04		FLSS, light-grey; minor mud-pellets and coaly shards. BC dips at 20°.		
350.47	350.52	0.05		COAL SECTION: Dull coal, minor bright laminae; bedding dips at up to 20°. Irregular BC.		2A
350.52	350.54	0.02		Shale, brown; abundant vermiculite(?) flakes. BC dips at 10°.		
350.54	350.70	0.16	100	Dull coal, minor bright laminae dipping at up to 20°; minor clay-pellets; minor		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
350.70	351.19	0.49	100	sub-vertical joint and sub-horizontal parting. BC dips at 10°. Dull coal with abundant bright coal bands and laminae; bedding dips at from 5° to 20°; abundant calcite-coated cleat developed on bright coal, sub-vertical jointing elsewhere; minor clay-pellets. BC dips at 5°.		
351.19	351.20	0.01		Grey mudstone, lenticular bedding dips at 5°.		
351.20	351.29	0.09		Dull coal with abundant bright coal laminae; broken core due to well-developed cleat; minor white clay lenticles. Sub-horizontal BC.		2A
351.29	351.30	0.01		Carbonaceous mudstone; minor cream-brown claystone lenticles.		
351.30	351.47	0.17		Dull coal, minor bright coal laminae dipping at up to 30° with well-developed cleat coated with kaolinite; grades to dull coal at base.		
351.47	351.65	0.18		Dull coal with abundant bright laminae; minor brown clay lenticles. Gradational BC.		
351.65	351.67	0.02		Carbonaceous mudstone, grey in part. Gradational BC.		
351.67	351.75	0.08		Dull coal with abundant bright bands and laminae; kaolinite and/or calcite forms sub-vertical veins.		
351.75	351.77	0.02	100	Pink-brown mudstone; minor dull coal laminae; clay pellets at base.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
351.77	351.81	0.04	100	Dull coal with abundant bright coal laminae. BC dips at 2°.	2A (cont.)	
351.81	351.93	0.12		Heavy dull coal; papery calcite on sub-vertically-dipping joint. BC dips at 2°.		
351.93	351.95	0.02		Claystone, cream-brown. Undulose BC.		
351.95	352.03	0.08		Dull coal; sub-vertically-dipping joints; claystone band (3 mm in thickness) at base.		
352.03	352.13	0.10		Dull coal; minor bright coal laminae and claystone lenticles.		
352.13	352.15	0.02		Carbonaceous mudstone/white-brown claystone (50:50). BC dips at 5°.		
352.15	352.34	0.19		Carbonaceous mudstone/bright coal (50:50) laminite; abundant claystone laminae and lenticles. Bedding and BC dip at 10° to 20°.		
352.34	352.46	0.12		Carbonaceous mudstone with abundant grey mudstone laminae. Bedding dips at up to 20°.		2B
352.46	352.48	0.02		Bright coal; well-developed calcite-coated cleat. Undulose BC.		
352.48	352.86	0.38		Mudstone, grey; minor bright coal laminae from 352.86 m to 352.88 m accompanied by white-grey claystone shards; minor slickensides and carbonaceous laminae; abundant claystone shards and coaly laminae in basal 4 cm.		
352.86	352.90	0.04	100	Dull coal with minor bright laminae. BC dips at 10°.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION		
		metres	%		Core	Sample	
352.90	353.02	0.12	100	Carbonaceous mudstone; abundant grey mudstone and claystone shards and lenticles.			
353.02	353.03	0.01		Bright coal.			
353.03	353.05	0.02		Claystone, grey; irregular bedding and abundant coaly laminae.			
353.05	353.13	0.08		Dull coal with abundant bright laminae.			
353.13	353.24	0.11		Dull coal with minor bright laminae.			
353.24	353.25	0.01		Claystone, grey-white.			
353.25	353.28	0.03		Heavy dull coal.			
353.28	353.45	0.17		Mudstone, grey; shaly in part; claystone shard at 353.37 m.			
353.45	353.47	0.02		Carbonaceous mudstone.			
353.47	353.55	0.08		Mudstone, grey; silty at base; abundant plant-fossil debris.		2B	
353.55	353.62	0.07		Heavy dull coal.			
353.62	354.02	0.40		Dull coal with minor bright laminae.		2C	
354.02	354.04	0.02		Mudstone, pink-brown; minor carbonaceous laminae.			
354.04	354.56	0.52		Dull coal with minor bright laminae, well-developed coarsely-spaced cleat results in broken core, bedding dips at up to 10° at base.			
354.56	354.71	0.15		Grey mudstone/carbonaceous mudstone(75:25) laminite; lenticular, irregular bedding; minor coaly laminae, shaly at base. Gradational BC.		2D	
				<u>(BASE OF COAL SECTION)</u>			
354.71	355.36	0.65	100	Mudstone, grey; minor coaly and carbonaceous laminae from 354.78 m to 354.83 m and from 354.87 m to 354.90 m. Gradational BC (GBC).			

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS												
			metres	%													

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
355.36	356.24	0.88	100	Interbanded FLSS, light-grey/siltstone, grey (75:25); minor mudstone bands and laminae; minor contorted carbonaceous lenticles dipping at up to 30°. GBC.		
356.24	356.44	0.20		Mudstone, grey; abundant silty laminae and lenticles; minor cross-bedding; shaly in part. BC dips at 5°.		
356.44	356.49	0.05		FLSS, grey-brown; minor carbonaceous laminae dipping at 5°. Irregular, involute BC (flaser-bedded).		
356.49	356.83	0.34		Mudstone, grey; abundant contorted carbonaceous plant-fossil fragments; parts readily along bedding. BC dips at 5°.		
356.83	357.30	0.47		<u>COAL SECTION:</u> Dull coal with abundant bright coal laminae; well-developed sub-vertical cleat. GBC.		2E
357.30	357.40	0.10		Mudstone, grey and grey-brown; minor carbonaceous intervals.		
357.40	357.63	0.23		Dull coal, abundant bright coal laminae; minor kaolinite on well-developed cleat; broken core due to sub-vertical cleat development. BC dips at 5°.		
357.63	357.74	0.11		Mudstone, grey; abundant bright coal and carbonaceous mudstone laminae; shaly. Undulose BC dips at 2°.		2F
				<u>(BASE OF COAL SECTION)</u>		
357.74	358.20	0.46		Mudstone, grey; shaly; minor wispy carbonaceous laminae and plant fragments; silty towards base. GBC.		
358.20	360.66	2.46		FLSS, light-grey; abundant siltstone, mudstone and carbonaceous mudstone laminae dipping at up to 20°. GBC.		
360.66	372.96	12.30	100	FMLSS, light-grey; minor carbonaceous laminae and coaly debris; minor carbonate matrix; bedding dips at up to 30°; Continued over		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				predominantly FLSS in basal 5 m; abundant coaly debris, mud-pellets and irregular bedding from 369.9 m to 371.4 m. Irregular, slickensided BC.		
372.96	373.04	0.08	100	Laminite, green mudstone/brown mudstone (50:50); contorted bedding; (brown colour may be a fossil bark (?); green colour maybe worm-burrows (?)). Irregular BC dips at 5°.		
373.04	373.13	0.14		FMLSS, grey and light-grey, abundant coaly debris; bedding and BC dips at 30°.		
373.18	373.31	0.13		Carbonaceous mudstone; fissile; 60° dip joint. BC dips at 20°.		
373.31	373.50	0.19		Mudstone, carbonaceous/grey/brown (50:25:25); abundant bands and laminae dipping at 20°. Minor coaly debris; minor siltstone bands at base. BC dips at 10°.		
373.50	373.84	0.34		Siltstone, grey; minor FLSS and mudstone intervals and flaser bedding; mud-pellets from 372.82 m to 372.84 m. Irregular BC.		
373.84	373.99	0.15		FLSS, light grey; minor coaly partings. Irregular, pebbly BC dips at 20°.		
373.99	374.43	0.44		Mudstone, grey/FLSS, light-grey (50:50), interbanded; minor bioturbation; abundant plant-fossil debris. Undulose BC dips at 10°.		
374.43	375.08	0.65		Shale, dark-grey; carbonaceous from 374.43 m to 374.45 m; 45°-dip calcite vein from 374.49 m to 374.59 m; minor slickensides; green-grey with secondary (?) calcite in basal 15 cm. BC dips at 5°.		
375.08	375.21	0.13		Mudstone, blue-grey; minor carbonaceous intervals. GBC.		
375.21	375.26	0.05		Shale, brown; minor dull coal bands.		
375.26	375.31	0.05		Heavy dull coal; minor bright laminae. BC dips at 5°.		
375.31	377.16	1.85	100	Mudstone, grey; abundant slickensides in top 20 cm together with dull coal and carbonaceous mudstone intervals; siltstone		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
377.16	378.39	1.23	100	and FLSS bands and laminae with cross-bedding from 377.16 m to 377.35 m. Slickensided, faulted BC.		
377.16	378.39	1.23	100	FLSS, light-grey; minor intervals of banded siltstone/ mudstone commonly cross-bedded.		
378.39	404.64	26.25		MLSS, light-grey; abundant intervals of FMLSS and FLSS; minor coaly partings; dull coal from 396.43 m to 396.51 m and from 396.82 m to 396.92 m; abundant coaly debris and contorted bedding from 396.51 m to 396.82 m; bedding dips at 20° (carbonaceous laminae) from 398.7 m to 399 m; green-grey colour with calcite veins and minor green and carbonaceous mudstone pellets and shards from 401.33 to 402.2 m. Undulose BC dips at 10°.		
404.64	420.20	15.56		Mudstone, grey to grey-green; abundant slickensides, plant-fossil debris, bioturbation (where sandy), FMLSS intervals; minor dull coal and carbonaceous mudstone intervals; bedding dips at up to 20°; minor cross-bedding; shale from 415.66 m to 416.2 m; laminite from 417.3 m to 420 m of FLSS/ siltstone and grey to dark-grey mudstone (flaser-bedded); grades to FLSS at the base of this unit.		
420.20	423.12	2.92		FMLSS, light-grey; abundant cross-bedded and bioturbated siltstone and mudstone intervals from 420.2 m to 421.6 m. Sub-horizontal BC.		
423.12	425.30	2.18		Mudstone, grey and dark-grey/FLSS light-grey (75:25); interbedded; carbonaceous mudstone grading to dull coal with depth from 423.55 m to 423.95 m; minor cross-bedding, bioturbation and irregular (disturbed) bedding. GBC.		
425.30	426.05	0.75		Mudstone, grey; minor laminae and wispy carbonaceous partings. GBC.		
426.05	426.19	0.14	100	<u>COAL SECTION:</u> Dull coal; minor bright laminae, calcite veins and cleat. GBC.		3

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS														
			metres	%															

SAMPLE		76		GEOLOGICAL LOG				Page:- 12	
FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION				
		metres	%		Core	Sample			
426.19	426.20	0.01	100	Carbonaceous mudstone; minor brown-pink clay pellets.					
426.20	426.24	0.04		Dull coal. Involute BC.					
426.24	426.47	0.23		Carbonaceous mudstone with abundant cream-grey flaser-bedded mudstone/claystone bands and lenticles. GBC.					
426.47	426.57	0.10		Dull coal; minor bright laminae (less than 1%). BC dips at 5°.					
426.57	426.58	0.01		Claystone, pink-brown; wispy BC.					
426.58	426.64	0.06		Dull coal; minor bright laminae (less than 1%). GBC.					
426.64	426.90	0.26		Interbanded dull coal with minor bright laminae/mudstone, cream-white, pink-brown (75:25); minor carbonate veins in coal.					
426.90	427.78	0.88		Dull coal with abundant bright laminae and bands (25%); broken core due to well-developed cleat; minor clay shards at 427.00 m to 427.01 m and from 427.73 m to 427.74 m; brown-grey claystone bands from 427.13 m to 427.16 m and from 427.21 m to 427.22 m. BC dips at 2°.		3			
				(BASE OF COAL SECTION)					
427.78	431.77	3.99		Mudstone, grey; minor carbonaceous mudstone intervals from 429.2 m to 429.6 m; abundant FLSS bands and intervals from 430.4 m to 431.77 m with flaser and minor cross-bedded silty mudstone. BC dips at 5°.					
431.77	435.20	3.43	100	FMLSS, light-grey; minor carbonaceous laminae dipping at up to 10°. Slickensided BC dips at 30°.					

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
435.20	439.40	4.20	100	Mudstone, dark-grey; carbonaceous from 435.2 m to 435.5 m; FMLSS from 436.7 m to 436.95 m; abundant FLSS bands and laminae from 435.7 m to 436.7 m; interbedded brown shale/dull coal from 437 m to 437.45 m; minor slickensides; shaly in part. GBC.		
439.40	445.27	5.87		Interbanded FLSS, light-grey/siltstone, grey/mudstone, dark-grey (50:25:25); abundant cross-bedding flaser-bedding; minor laminite development. BC dips at 5°.		
445.27	445.33	0.06		<u>COAL SECTION:</u> Dull coal; abundant bright coal laminae.		4
445.33	446.62	1.29		Carbonaceous mudstone; minor sandy laminae (20%).		
				<u>(BASE OF COAL SECTION)</u>		
446.62	451.54	4.92		FMLSS, light-grey; minor FLSS and MLSS intervals; minor carbonate in matrix and carbonaceous laminae dipping at up to 30°. BC dips at 2°.		
451.54	451.78	0.24		Laminite; mudstone, dark-grey/siltstone, light-grey (50:50). GBC.		
451.78	452.07	0.29		<u>COAL SECTION:</u> Dull coal, minor bright bands and laminae; brown shale from 451.93 m to 451.96 m; cream-brown shaly claystone from 452.04 m to 452.06 m. BC dips at 2°.		5A
452.07	452.55	0.48		FLSS, grey; minor carbonaceous matrix and laminae; abundant bioturbation (worm-burrows(?)); flaser-bedding near base. BC dips at 10°.		
452.55	452.79	0.24		Carbonaceous mudstone; minor FLSS laminae. GBC.		
452.79	453.03	0.24	100	Laminite; FLSS, white-grey/carbonaceous mudstone (50:50); minor flaser and cross-bedding.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS												
			metres	%													

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
453.03	455.33	2.30	100	Carbonaceous mudstone; abundant slickensides; minor coaly laminae and sandy lenticles.		5B
455.33	456.14	0.81		Mudstone, grey; shaly in part; minor carbonaceous bands and laminae; abundant slickensides from 455.8 m to 456.14 m.		5C
456.14	456.89	0.75		Dull coal grading to heavy dull coal with depth; abundant carbonaceous mudstone pellets and shards from 456.7 m to 456.84 m.		5D
(BASE OF COAL SECTION)						
456.89	459.45	2.56		Mudstone, grey; abundant FLSS, FMLSS and siltstone bands (laminite in part). GBC.		
459.45	461.40	1.95		Mudstone, brown; grades to grey with depth; abundant green and black wispy clasts and shards. GBC.		
461.40	484.74	23.34		MLSS, brown-grey; abundant clay rock fragments; iron-stained fossilised wood(?) in a green mudstone matrix from 462.6 m to 463.1 m; grey mudstone from 472.7 m to 473 m; grades to green-grey then light-grey with depth; very-hard, brown, rock pebbles from 473.2 m to 473.4 m; FMLSS and FLSS more predominant with depth; minor carbonate matrix from 479.8 m to 480.3 m; broken core due to abundantly-slickensided mudstone from 479.65 m to 479.8 m; minor coaly debris and carbonaceous laminae from 480.6 m to 484.74 m. BC dips at 5°.		
484.74	490.16	5.42	100	Mudstone, dark-grey; abundant FMLSS bands; minor bioturbation, siltstone flaser bedded laminae and bands; white FMLSS from 485.44 m to 485.48 m; bedding dips at up to 10°; shaly in part; dull coal and carbonaceous mudstone from 485.48 m to 485.6 m, from 488 m to 488.2 m and from 489.8 m to 490.1 m. GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
490.16	497.60	7.44	100	FMSS, light-grey; minor coaly laminae dipping at up to 20°, grades to FLSS with depth; abundant coaly debris and brown (pyroclastic(?)) cobbles from 497.31 m to 497.6 m. BC dips at 2°.		
497.60	498.44	0.84		Interbanded FLSS, grey/carbonaceous mudstone (25:75); contorted flaser bedding; slickensides at depth.		
498.44	499.74	1.30		FLSS, grey; minor carbonaceous laminae. Undulose BC dips at 2°.		
499.74	500.49	0.75		Mudstone, grey; minor FLSS bands and laminae. BC dips at 2°.		
500.49	501.27	0.78		FLSS, light-grey; minor brown shreds at base. BC dips at 5°.		
501.27	502.98	1.71		Interbanded carbonaceous mudstone/grey FLSS/dark-grey mudstone (50:25:25); minor bioturbation, carbonaceous laminae, flaser bedding and coaly debris.		
502.98	508.71	5.73		FMSS, light-grey; minor carbonate matrix and carbonaceous laminae; bedding dips at up to 10° towards the base; coaly debris from 508.6 m to 508.71 m. BC dips at 15° to 20°.		
508.71	526.80	18.09		Medium-grainsize quartzose sandstone (MQSS); white; massively-bedded; minor wispy carbonaceous laminae and coaly debris; large-scale cross-bedding dipping at from 5° to 20°; minor carbonaceous mudstone intervals from 511.5 m to 512.4 m, from 512.64 m to 513.8 m (interbedded with MQSS), from 514.2 m to 514.45 m (contorted, interbedded MQSS), from 518.2 m to 518.25 m and from 521.2 m to 521.3 m; minor bioturbation throughout. GBC from 525.67 m to 526.8 m (interbedded fine-grainsize quartzose sandstone (FQSS)/dark-grey mudstone (25:75)).		
526.80	533.86	7.06	100	Mudstone; dark-grey; minor slickensides; abundant 0.5 mm to 2 mm-diameter quartz grits scattered throughout; abundant muscovite flakes. BC dips at 20°.		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
533.86	539.70	5.84	100	MQSS, white; abundant cross-bedded carbonaceous laminae dipping at up to 10°; minor bioturbation and mudstone bands; carbonaceous mudstone from 537 m to 537.4 m. GBC.		
539.70	541.42	1.72		Coarse-grainsize quartzose sandstone (CQSS); large-scale cross-bedding. BC dips at 5°.		
541.42	543.42	2.00		Fine-grainsize quartzose sandstone (FQSS), green-white; abundant wispy, cross-bedded carbonaceous laminae; grades to brown-grey shale in basal 20 cm. GBC.		
543.42	549.83	6.41	100	Siltstone, dark-grey; abundant quartz-grits, quartzite pebbles and reef-quartz(?) cobbles ranging from angular to sub-rounded and orientated at varying angles relative to bedding; at 548.6 m, there is a 2 cm-long quartzite pebble with its long axis oriented vertically; minor calcite veins from 549.3 m to 549.45 m.		
(END OF DOM FINGAL DDH NUMBER 76 AT A DEPTH OF 549.83 m)						
Continued over						

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

DRILLING TARGET:- Pre-collaring DDH 50											
REMARKS:-											
SURVEY DATA						ASSAY DATA					
DEPTH metres	Bearing mag.	Inclin. degs	SAMPLE No.	FROM metres	TO metres	RECOVERY metres %		ASSAY RESULTS			

GEOLOGICAL LOG

Logged by:- *C. A. Bacon*

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
0	17.00	0	0	Precollared dolerite scree of dolerite boulders and clay. No core recovered; only chips and clay.		

Continued over:-

DEPARTMENT OF MINES—TASMANIA
DIAMOND DRILL CORE RECORD

HOLE No.:- 50	MAP SHEET No. 49	DISTRICT St Marys	LOCATION OF SITE:-
On the Northern Slopes of Fingal Tier, East of the Mitchell Fault			
R.L. OF SITE:- 536.20	SITE SURVEY ON MAP No.:	CORE SIZE:- -	
BEARING OF HOLE:-	AIR PHOTO No.:-	COMMENCED:- 5.2.1981	
INCLINATION OF HOLE:-	DRILL:- Warman 1000	COMPLETED:- 13.2.81	
CO-ORDS OF SITE:- 591 939 ME 5 389 903 MN	DRILLER:- R. Stevens	FINAL DEPTH (m):- 17.00	

DRILLING TARGET:- Glacio-marine sequence of the Lower Parmeener Super-Group										
REMARKS:-										
SURVEY DATA					ASSAY DATA					
DEPTH metres	Bearing mag.	Inclin. degs	SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS		
						metres	%			

GEOLOGICAL LOG

Logged by:- *C. A. Bacon*

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
17.00	26.00	0	0	Dolerite boulders and clay, (scree).		
26.00	79.00	53.00	100	Dolerite, core broken and jointed, grey in colour, medium grained, occasional joint planes filled with white zeolite; core badly broken from 64.00-79.00m. Samples of dolerite, 10cm from every 3m run have been reserved for future use.		
79.00	84.00	0	0	CORE LOSS of 5.00m.		
84.00	84.90	0.90	100	Medium grained lithic sandstone (MLSS); yellow; friable; core broken; clayey and weathered.		
84.90	90.00	0	0	CORE LOSS of 5.10m.		
90.00	103.63	13.63	100	Fine-medium grained lithic sandstone (FMLSS), grey, massive, core not broken, abundant wispy carbonaceous laminae, minor bioturbation, minor clayey patches, some cross bedding dipping at up to 10°; gradational bottom contact (GBC).		
103.63	104.01	0.38	100	Mudstone, grey, laminated; core broken over basal 15cm. Unit grades into carbonaceous mudstone.		
104.01	104.65	0.64	100	Carbonaceous mudstone laminated with grey mudstone; finely banded; hard; coherent, minor disturbed bedding, GBC.		

Continued over:-

DEPARTMENT OF MINES—TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No.:- 50	MAP SHEET No. 49	DISTRICT ST MARYS	LOCATION OF SITE:-
On the Northern Slopes of Fingal Tier, East of the Mitchell Fault			
R.L. OF SITE:- 563.20 m	SITE SURVEY ON MAP No.:	CORE SIZE:- NQ 17 - BQ	
BEARING OF HOLE:-	AIR PHOTO No.:-	COMMENCED:- 15.2.81	
INCLINATION OF HOLE:-	DRILL:- Warman 100 (NQ) Longyear 38 (BQ)	COMPLETED:- 21.5.81	
CO-ORDS OF SITE:- 591.939 ME 5389 903 MN	DRILLER:- R. Stevens D. Summers	FINAL DEPTH (m):- 368.30 m	

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
104.65	106.70	2.05	100	FMLSS, dark grey, abundant wispy coaly debris, clasts of irregularly shaped mudstone from 105.00-105.30m; sharp bottom contact, (SBC).		
106.70	106.78	0.08	100	Carbonaceous siltstone, SBC.		
106.78	106.81	0.03	100	Shale, white, SBC.		
106.81	107.35	0.54	100	Mudstone, green-grey; silty; finely banded, shaley towards the top; jointed; SBC.		
107.35	107.43	0.08	100	Shale, white, SBC.		
107.43	107.65	0.22	100	Shale, brown-grey; clayey, friable. GBC.		
107.65	107.93	0.28		Shale, white; abundant pyrite grains, friable, clayey, SBC.		
107.93	108.02	0.09		Carbonaceous mudstone, dark brown, shaley. GBC.		
108.02	108.29	0.27		Carbonaceous mudstone (black), interbedded with grey mudstone, (80:20); unit clayey and greasy to touch; occasional sand lenses, SBC.		
108.29	108.32	0.03		Sandy claystone. SBC.		
108.32	108.35	0.03		Carbonaceous mudstone. SBC.		
108.35	108.38	0.03		Claystone, beige; wispy coaly debris common. SBC.		
108.38	108.42	0.04		Mudstone, carbonaceous, brown, GBC.		
108.42	108.53	0.11		Heavy dull coal.		
108.53	108.57	0.04		Mudstone, carbonaceous.		
108.57	108.62	0.05		Mudstone, light brown with carbonaceous mudstone laminae.		
108.62	108.63	0.01		Carbonaceous mudstone.		
108.63	108.81	0.18		Shale, beige, SBC.		
108.81	108.93	0.12		Heavy dull coal.		
108.93	109.05	0.12		Mudstone (grey) interlaminated with claystone; beige and shaly; (50:50); SBC.		
	109.14	0.09		Carbonaceous mudstone, SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
109.14	109.34	0.20		Shale, white; interbedded with carbonaceous mudstone over the top 10cm.		
109.34	109.54	0.20		Carbonaceous mudstone, sandy and shaley; GBC.		
109.54	109.68	0.14		Shale, white, SBC.		
109.68	109.72	0.04		Mudstone, dark grey, carbonaceous and sandy. GBC.		
				<u>COAL SECTION</u>		
	109.83	0.11		Heavy dull coal, SBC.		
	109.87	0.04		Calcite, SBC.		
	110.09	0.22		Heavy dull coal, SBC.		
	110.40	0.31		Mudstone, pale grey; abundant wispy coaly debris; SBC.		
	110.63	0.23		Dull coal, no bright bands, core broken, SBC.		
				(BASE OF COAL SECTION)		
110.63	110.66	0.03		Sandy mudstone, GBC.		
110.66	110.72	0.06		Mudstone, dark grey, SBC.		
110.72	110.75	0.04		Muddy fine lithic sandstone (FLSS), SBC.		
110.76	110.92	0.16		Mudstone, dark grey, GBC.		
110.92	110.93	0.01		FLSS, muddy. GBC.		
110.93	111.00	0.07		Mudstone, sandy, core broken.		
111.00	111.20	0.20		Heavy dull coal.		
111.20	111.47	0.27		Shaley mudstone.		
111.47	111.85	0.38		Carbonaceous mudstone and heavy dull coal (50:40) with abundant shale laminae.		
111.85	112.04	0.19		Heavy dull coal.		
112.04	112.07	0.03		Mudstone, brown.		
112.07	112.27	0.20		Mudstone, grey, shaley.		
112.27	112.40	0.13		Mudstone, brown.		
112.40	113.02	0.62		Siltstone, brown, GBC.		
113.02	113.47	0.45		FLSS, clayey; bedding dips at up to 20°; minor cross bedding. SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
113.47	113.61	0.14		Siltstone, grey; banded; core cracked, SBC.		
113.61	114.00	0.39		FLSS, white clayey; core cracked and expanded.		
114.00	114.33	0.33		FLSS; less clayey; core coherent.		
114.33	114.43	0.10		Heavy dull coal, GBC.		
114.43	114.54	0.11		Sandy Claystone, coherent, GBC.		
114.54	114.82	0.28		Carbonaceous mudstone; abundant slickensides GBC.		
114.82	118.00	3.18		Mudstone massive, occasional shaley patches; pale grey in colour, laminated; sand content increases with depth. GBC.		
118.90	122.22	4.22		Interlaminated FLSS and mudstone (30:70); grey; massive; finely laminated, minor cross bed- ding.		
122.22	133.00	10.78		FMLSS; light grey, massive; coal band 131.50- .65 m mudstone clasts 131.65 - .90 m; coaly debris 131.90 - 132.00 SBC.		
133.00	133.05	0.05		Dull coal.		
133.05	133.12	0.07		Carbonaceous mudstone, brown, with heavy dull coal (60:40)		
133.12	135.00	1.88		Interlaminated FLSS and siltstone (50:50) GBC. END OF NQ CORE START OF BQ CORE - DRILLER D. Summers. NOTE: Core Markers from here on are wrong.		
135.00	135.50	0.50		Interlaminated FLSS and siltstone (50:50) GBC.		
135.50	137.28	1.30		FMLSS with abundant coaly debris, CORE LOSS OF 0.38 m.		
137.28	140.25	2.97		FMLSS, light grey, massive.		
140.25	140.66	0.41		FMLSS; as above; core broken. SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
<u>COAL SECTION</u>						
140.68		0.02		Heavy dull coal, GBC.		
140.71		0.03		Mudstone, grey; coaly debris common.		
140.91		0.20		Heavy dull coal.		
140.95		0.04		Mudstone, sandy		
141.03		0.08		Mudstone, brown.		
141.25		0.22		Heavy dull coal		
141.29		0.04		Mudstone, brown		
141.48		0.19		Heavy dull coal		
141.69		0.21		Mudstone, brown, clayey with pyrite grains and coaly debris; shaley towards the base.		1A.
141.975		0.285		Heavy dull coal		
141.98		0.005		FLSS		
142.01		0.03		Heavy dull coal		
142.16		0.15		Mudstone, brown		
142.17		0.01		Mudstone, carbonaceous		
142.19		0.02		Mudstone, brown, clayey.		
142.37		0.18		Laminated brown and carbonaceous black mudstone.		
142.62		0.25		Heavy dull coal		
142.67		0.05		Mudstone, sandy, clayey.		
143.09		0.42		Dull coal; 10% bright bands; broken over basal 10 cm.		1B

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		Moist Ash VCM F.C. Seam				Appt S.G.	
			metres	%	%	%	%	%		
1A	140.66	142.67	2.01	100	6.2	75.7	-	-	C	2.08
1B		144.12	1.45		5.2	54.6	-	-		1.71
1C		147.38	3.25		6.5	77.2	-	-		2.03
1D		148.75	1.37		5.0	53.9	-	-		1.66
1E		150.56	1.81		7.9	65.3	-	-		1.68
2A	133.93	155.36	1.43	100	6.9	78.6	-	-	C	2.10
2B		157.95	2.59		5.6	53.8	-	-		1.70
2C		158.74	0.79		4.5	54.6	-	-		1.64

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
143.16		0.07		Dull coal, sandy.		
143.18		0.12		Dull coal.		
143.4		0.2		Dull coal, core broken, 10% bright bands.		
143.49		0.03		Mudstone, beige, sandy.		
143.69		0.20		Dull coal, 5% bright bands. mudstone bands and sand laminae common.		
143.70		0.01		Mudstone, sandy		
143.71		0.01		Dull coal.		
143.74		0.03		FMLSS, grey massive.		18
143.74		0.008		Dull coal.		
143.75		0.002		FLSS		
143.77		0.025		Dull coal.		
143.80		0.025		Mudstone, sandy		
143.815		0.015		Dull coal.		
143.82		0.005		Shale, beige.		
143.93		0.11		Dull coal, 5% bright bands.		
143.98		0.05		Mudstone, beige, sandy.		
144.12		0.14		Dull coal laminated with brown mudstone (50:50).		
144.17		0.05		Mudstone, beige, sandy.		
144.95		0.025		Dull coal.		
144.20		0.005		Mudstone, beige.		1C
144.23		0.03		Dull coal.		
144.25		0.02		Dull coal laminated with mudstone (50:50). <small>Continued over</small>		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	144.28	0.03		Mudstone, beige.		
	144.46	0.18		Dull coal.		
	144.52	0.06		Mudstone, beige; sandy; wispy carbonaceous laminae common.		
	144.56	0.04		Dull coal.		
	144.57	0.01		Claystone, sandy.		
	144.67	0.10		Dull coal		
	144.675	0.005		Mudstone, sandy.		
	144.70	0.025		Dull coal.		
	144.83	0.13		Mudstone, clayey "greenish" tint.		
	144.88	0.05		Carbonaceous mudstone with brown mudstone laminae.		
	144.97	0.09		Mudstone, slickensided; "greenish" tint.		1C
	145.02	0.05		Carbonaceous mudstone.		
	145.07	0.05		Mudstone, green, cleyey; "greenish" tint.		
	145.19	0.12		Dull coal.		
	145.23	0.04		Mudstone, beige.		
	145.44	0.21		Dull coal.		
	145.65	0.21		Mudstone, clayey, brown; speckled with calcite chips.		
	145.86	0.21		Dull coal.		
	145.04	0.18		Mudstone, beige, clayey, speckled with calcite.		
	146.07	0.03		Carbonaceous mudstone.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	146.32	0.25		Mudstone, beige, clayey, sandy; speckled with calcite.		
	146.41	0.09		Dull coal.		
	146.48	0.07		Mudstone, beige, speckled.		
	146.50	0.02		Dull coal		
	146.525	0.025		Mudstone, beige, speckled.		
	146.57	0.045		Dull coal.		
	146.585	0.015		Mudstone, shaley.		
	146.64	0.055		Dull coal.		
	146.70	0.06		Mudstone, beige, speckled.		1C
	146.82	0.12		Dull coal.		
	146.85	0.03		FLSS (sand lens)		
	147.11	0.26		Dull coal.		
	147.12	0.01		Mudstone, beige.		
	147.24	0.12		Dull coal.		
	147.28	0.04		Mudstone, white, with coaly laminae.		
	147.31	0.03		Dull coal.		
	147.32	0.01		Mudstone, white.		
	147.34	0.02		Dull coal.		
	147.38	0.04		Mudstone, white, sandy, clayey		
	147.94	0.56		Dull coal 10% bright bands.		
	147.99	0.05		Mudstone, beige with wispy coaly laminae.		1D
	148.24	0.25		Dull coal.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
152.44	0.19			Mudstone, grey, laminated with carbonaceous mudstone.		
153.93	1.49			Mudstone, grey, laminated with FLSS. GBC.		
154.06	0.13			Mudstone, clayey, speckled.		
				<u>COAL SECTION</u>		
154.07	0.01			Heavy dull coal.		
154.08	0.01			Mudstone, speckled.		
154.10	0.02			Heavy dull coal.		
154.12	0.02			Mudstone, sandy, brown in colour.		
154.15	0.03			Heavy dull coal.		
154.20	0.05			Mudstone, brown, sandy.		
154.26	0.06			Heavy dull coal.		2A.
154.27	0.01			Mudstone, sandy.		
154.36	0.09			Heavy dull coal.		
154.60	0.24			Mudstone, speckled.		
154.62	0.02			Heavy dull coal.		
154.64	0.02			Mudstone, shaley, speckled.		
154.94	0.30			Heavy dull coal with sand and mudstone laminae.		
155.01	0.07			Heavy dull coal.		
155.04	0.03			Mudstone, sandy.		
155.16	0.12			Heavy dull coal.		
155.36	0.20			Mudstone, speckled, shaley; tinted green.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS														
			metres	%															

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	155.78	0.42		Heavy dull coal with minor sandy lenses.		
	155.79	0.01		Mudstone, white, sandy.		
	155.94	0.15		Dull coal, sandy.		
	156.16	0.22		Dull coal.		
	156.25	0.09		Mudstone, beige, speckled.		2B
	156.78	0.53		Heavy dull coal.		
	156.80	0.02		Mudstone, beige, clayey.		
	157.54	0.74		Heavy dull coal.		
	157.69	0.15		Sandy coal.		
	157.95	0.26		Dull coal.		
	158.00	0.05		Mudstone, white, hard (volcanic ash ?) SBC.		
	158.08	0.08		Carbonaceous mudstone with minor heavy dull coal.		
	158.32	0.24		Dull coal. SBC.		2C
	158.50	0.18		Mudstone, beige, with wispy carbonaceous laminae, SBC.		
	158.74	0.24		Dull coal, GBC.		
	159.06	0.32		Shale, black, carbonaceous GBC.		
				(BASE OF COAL SECTION)		
159.06	162.92	3.86	100	Mudstone, grey, laminated; few slickensides.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
152.92	179.19	16.27		FMLSS, grey massive, rare coaly spars and coaly debris; rare wispy carbonaceous laminae; occasional mudstone pellets, occasional intervals of FLSS. SBC.		
179.19	179.44	0.25		<u>COAL SECTION</u> Mudstone, pale grey, laminated, carbonaceous towards the base. GBC.		
	179.54	0.10		Heavy dull coal; few (1%) bright bands; GBC.		
	179.63	0.09		Shale; grey-brown; crumbly. SBC.		
	179.85	0.22		Dull coal, 5% bright bands, GBC.		3.
	179.95	0.10		Shaley grey-green mudstone; core broken.		
	180.17	0.22		Very dull coal; no bright bands, except over basal 5 cm - 5% bright bands GBC. (BASE OF COAL SECTION)		
180.17	182.74	2.57		Pale grey mudstone with minor occasional coaly spars. SBC; shaley and broken over basal 15 cm.		
182.74	185.11	2.37		FLSS, grey, clayey. Interbedded mudstone over basal 1 m.		
185.11	186.01	0.90		Mudstone, green-grey; worm burrow or rootlet structures common; wispy carbonaceous flecks common. SBC.		
186.01	186.05	0.04		Shale, brown. SBC.		
186.05	186.84	0.79		Mudstone, green-grey interlaminated with carbonaceous mudstone, (50:50);		
186.84	186.92	0.08		Carbonaceous mudstone, GBC.		
186.92	187.25	0.33		Dull coal; 1-2% bright bands; GBC.		
187.25	187.42	0.17		Carbonaceous mudstone, GBC.		
187.42	188.53	0.11		Sandy grey mudstone with abundant wispy carbonaceous debris. Core broken - contains swelling clay. SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		Moist Ash		VCM	F.C.	SEAM					
			metres	%	%	%	%							
3	179.44	180.17	0.73	100	8.7	49.4	18.1	32.5	D					
4	206.79	207.80	1.01	100	7.1	33.0	21.6	45.4	E					
5	283.28	284.74	1.46	100	4.8	57.8	-	-	H					
6	308.47	309.71	1.24	100	4.1	57.9	-	-	H					

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
188.53	188.72	0.19		FMLSS, grey, massive. SBC.		
188.72	188.96	0.24		Sandy grey mudstone, core broken. SBC.		
188.96	191.87	2.91		FMLSS, grey, massive; minor FLSS intervals; SBC.		
191.87	206.79	14.92		MLSS, grey, massive; occasional patches of coaly debris and rare mudstone pellets. SBC.		
206.79	207.80	1.01		<u>COAL SECTION</u> Dull coal; no bright bands. GBC.		
				(BASE OF COAL SECTION)		4
207.80	208.03	0.23		Mudstone, green, shaley; contains swelling clay. SBC.		
208.03	208.10	0.07		Dull coal, SBC.		
208.10	209.20	1.10		Clayey mudstone; core shattered; grey; contains abundant wispy coaly laminae GBC.		
209.20	221.00	11.80		FMLSS, grey, massive, SBC.		
221.00	221.20	0.20		Mudstone; dark grey; abundant disturbed bedding and wispy carbonaceous laminae. GBC.		
221.20	221.41	0.21		Mudstone, grey-green; sharp irregular bottom contact.		
221.41	221.46	0.05		FMLSS, grey, massive, SBC.		
221.46	221.64	0.18		Siltstone, black, SBC; Possibly a clast.		
221.64	239.78	18.14		FMLSS, grey; occasional wispy carbonaceous laminae and coaly spars mudstone pellets from 223.90 - 224.30 m. SBC.		
239.78	241.13	1.35		Mudstone, grey, shaley. Core expanded and cracked - contains swelling clays. GBC.		
241.13	241.31	0.18		Dull coal, no bright bands, GBC.		
241.31	241.73	0.42		Interbedded carbonaceous and grey mudstone, (40:60); laminae dipping at up to 20°, Minor micro-faulting, with drag dips showing: Continued over		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

GEOLOGICAL LOG

50		RECOVERY		DESCRIPTION	SECTION	
FROM metres	TO metres	metres	%		Core	Sample
						
				and minor rheomorphic slumping GBS.		
241.73	252.83	11.10		FMLSS; mudstone clasts over top 30 cm. Calcite replacement from 247.54 - .66 m. Clasts of mudstone from 248.20 - 248.40 m. SBC.		
				<u>COAL SECTION</u>		
252.83	253.03	0.20		Dull coal; 1% bright bands. GBC.		
	253.65	0.62		Mudstone; green-grey; occasional wispy carbonaceous laminae SBC.		
	253.68	0.03		Dull coal - clast, probably.		
	254.73	0.05		Mudstone, grey-green. SBC.		
	253.78	0.05		Dull coal, 5% bright bands - possibly another coal clast. SBC.		
				(<u>BASE OF COAL SECTION</u>)		
253.78	254.31	0.53		Mudstone, green-grey, interbedded with sand towards the base. GBC.		
254.31	256.87	2.56		FMLSS; grey, massive. SBC.		
256.87	257.32	0.45		Laminite of FLSS and mudstone, (50:50); occasional shale laminae GBC.		
257.32	257.55	0.23		Mudstone grey with abundant carbonaceous mudstone laminae. Slickensided. SBC.		
257.55	257.63	0.08		Dull coal, SBC.		
257.63	257.65	0.02		Shale, beige, SBC.		
257.65	257.75	0.10		Dull coal. SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS												
			metres	%													

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
257.75	258.16	0.41		Mudstone, green-grey; carbonaceous over basal 5 cm. SBC.		
258.16	258.82	0.66		FLSS, grey GBC.		
258.82	264.00	5.18		Mudstone, sandy, green-grey; occasional plant fossils; occasional coaly spars; SBC.		
254.00	264.56	0.56		FLSS, reinforced with calcite - not entirely replaced, GBC.		
254.56	265.70	0.14		Mudstone, very sandy at the top GBC.		
255.70	278.16	12.46		FMLSS, grey, massive. SBC?		
				<u>COAL SECTION</u>		
278.16	278.74	0.58		Dull coal, core broken. GBC.		
				<u>BASE OF COAL SECTION</u>		
278.74	281.09	2.35		Mudstone, green-grey, shaley occasional slickensides; core broken SBC.		
281.09	282.61	1.27		FMLSS, grey, massive; rare wispy carbonaceous laminae; SBC.		
282.61	283.28	0.66		Mudstone, green-grey; sandy.		
				<u>COAL SECTION</u>		
283.28	283.51	0.23		Heavy dull coal, sandy		
	284.10	0.59		Dull coal; well developed cleates; calcite on cleat; 5% bright bands; core broken.		
	284.22	0.12		Dull coal.		5.
	284.39	0.17		Dull coal interlaminated with grey mudstone, (50:50).		
	284.74	0.35		Dull coal, core broken. Well developed cleat. GBC.		
				<u>(BASE OF COAL SECTION)</u>		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
284.74	287.28	2.54		Grey mudstone, core slickensided and broken SBC.		
287.28	287.34	0.06		Dull coal. SBC.		
287.34	287.43	0.09		Sand, mudstone. SBC.		
287.43	287.66	0.23		Dull coal, core broken. SBC.		
287.66	287.80	0.14		Mudstone with some calcite replacement. GBC.		
287.80	287.83	0.03		Dull coal.		
287.83	287.84	0.01		Mudstone, grey.		
287.84	288.00	0.16	100	Dull coal GBC.		
288.00	290.24	0.42	25	Mudstone, grey. Core broken; ground up pieces of core. CORE LOSS of 1.82 m in this unit.		
290.24	297.03	7.21	100	Mudstone, green-grey; sandy and shaley over top 1 m. Core broken and slickensided. Occasional plant fossils and wispy carbonaceous laminae. Finely laminated, laminae 1 mm wide. SBC.		
<u>COAL SECTION</u>						
297.03	297.67	0.64		Dull coal; 1-2% bright bands, core broken; GBC.		
<u>(BASE OF COAL SECTION)</u>						
297.67	298.60	0.93		Carbonaceous siltstone, black; GBC.		
298.60	303.93	5.33		FMLSS; grey; occasional coaly debris SBC.		
303.93	304.38	0.55		FLSS, carbonaceous GBC.		
304.38	308.47	4.09		Mudstone, green-grey; occasional slickensides; shaley towards the base. GBC.		
<u>COAL SECTION</u>						
308.47	308.58	0.11		Dull coal. GBC.		6
	308.60	0.12		Carbonaceous mudstone, shaley, GBC. <small>Continued over</small>		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	309.25	0.65		Dull coal, 1-2% bright bands, occasional sand lenses, SBC.		
	309.32	0.07		Sandy mudstone, SBC.		
	309.44	0.12		Dull coal, core broken.		
	309.45	0.01		Sandy mudstone, SBC.		
	309.56	0.11		Dull coal, SBC.		6.
	309.57	0.01		Sandy mudstone, SBC.		
	309.71	0.14		Dull coal. GBC.		
				(BASE OF COAL SECTION)		
309.71	311.15	1.44		Siltstone, brown-grey, GBC.		
311.15	315.09	3.94		FMLSS, grey, rare coaly debris and rare coaly bands. SBC.		
315.09	320.45	5.36		Mudstone, green-grey; carbonaceous laminae common; carbonaceous, sandy and shaley in parts; minor coaly debris; sandy towards the base. GBC.		
320.45	321.58	1.13		FMLSS, grey, GBC.		
321.58	342.65	21.07		FMLSS, grey, rare coaly spars; minor bioturbation; minor coal bands. Quartz rich over basal 2 m. SBC.		
342.65	342.69	0.04		Dull coal, 1% bright bands, SBC.		
342.69	343.15	0.46		Mudstone; green-grey; bioturbated and laminated SBC.		
343.15	343.23	0.08		Dull coal, core broken. GBC.		
343.23	343.50	0.27		Mudstone, grey. SBC.		
343.50	343.52	0.02		Dull coal, SBC.		
343.52	344.19	0.67		Quartz rich lithic sandstone, white, bioturbated with abundant worm burrows. GBC		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS																
			metres	%																	

		50		GEOLOGICAL LOG		Page:- 19/19	
FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION		
		metres	%		Core	Sample	
344.19	353.63	8.44		Siltstone with abundant biotite, rare plant fossil pieces, brown-grey in colour, laminated. Sandy in parts. GBC.			
353.63	354.45	0.82		Quartz-rich lithic sandstone, grey, SBC.			
354.45	354.48	0.03		Dull coal, SBC.			
354.48	361.07	6.59		Siltstone, brown-grey, laminated; contains biotite grains; sandy and muddy in parts. Contains rare plant fossils. GBC.			
361.07	364.60	3.53		Interbedded siltstone and quartz-rich lithic arenite (50:50).			
364.60	366.60	2.00		Mudstone, green-grey. GBC.			
366.60	368.30	1.70		Mudstone, containing quartz clasts; dark grey in colour, (REWORKED PERMIAN);			
				EOH at 368.30 m.			
				Glacio-marine sequence of the Lower Parmeener Super Group not reached.			

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
65.87	66.20	0.33	100	Dull coal 5% bright bands; well developed cleat, GBC. Shaley towards the base.		
66.20	67.10	0.90		Grey mudstone, laminated.		
67.10	67.58	0.48		Clayey lithic sandstone, now crumbs only - core badly shattered.		
67.58	67.74	0.16		Heavy dull coal, GBC.		
67.74	70.41	2.67		Mudstone, dark grey, shaley, SBC.		
70.41	71.11	0.70		Mudstone, white, very shaley with abundant pyrophyllite grains 1 mm ² . SBC.		
71.11	71.20	0.09		Heavy dull coal and carbonaceous mudstone, (50:50); GBC.		
71.20	71.74	0.54		Mudstone, grey, sandy with interval of hard pale green mudstone from 24 - 33 cm from top of unit. Unusual pattern of green 'blebs' in unit: sample 51A		51A
						
				taken from this unit. GBC.		
71.74	76.00	4.26		Fine grained lithic sandstone, FLSS, grey, massive; core split in parts.		
76.00	79.74	3.74		Fine-medium grained lithic sandstone, FMLSS, grey, massive. SBC.		
79.74	80.07	0.33		Mudstone, grey, hard, with wispy carbonaceous laminae. SBC.		
80.07	80.36	0.29		FMLSS, grey, massive, SBC.		
80.36	80.96	0.60		FMLSS, very shaley; core broken, SBC.		
80.96	90.96	10.00	100	FMLSS, grey, massive, minor wispy carbonaceous laminae; core broken and shaley in parts. Minor coaly debris, SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
90.96	91.62	0.66	100	Mudstone, grey, hard, sandy, SBC.		
91.62	91.68	0.06		Shale, white, SBC.		
91.68	91.78	0.10		Mudstone, carbonaceous, SBC.		
91.78	91.81	0.03		Shaley grey mudstone, SBC.		
91.81	91.87	0.06		Carbonaceous mudstone, black. SBC.		
91.87	92.15	0.28		Shaley grey-white mudstone, SBC.		
92.15	92.90	0.75		Grey mudstone, hard sandy minor coaly debris; unit banded SBC.		
92.90	92.98	0.08		Shaley white mudstone, SBC.		
92.98	93.17	0.19		Mudstone, black, carbonaceous, with pyrophyllite grains, hard and cherty. SBC.		
93.17	93.21	0.04	100	Shale, white, crumbly. SBC.		
93.21	93.29	0.08	90	Mudstone, brown, minor plant fragments, SBC core broken, SBC.		
93.29	93.59	0.30	100	Shale, white, crumbly, sandy, SBC.		
93.59	93.83	0.24		Carbonaceous mudstone, black, sandy, with plant fragments.		
93.83	94.17	0.34		Carbonaceous mudstone, as above. SBC.		
94.17	94.20	0.03		Mudstone, sandy, white, SBC.		
				<u>COAL SECTION</u>		
94.20	94.21	0.01		Dull coal, SBC.		
	94.22	0.01		Mudstone, grey, sandy; carbonaceous. SBC.		IA
	94.39	0.17		Dull coal, core broken.		
	94.45	0.06		Mudstone, brown, sandy, SBC.		
	94.59	0.14	100	Dull coal, 10% bright bands. GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		Moist	Ash	VCM	FC	ASSAY RESULTS (dry basis) Appt S.G.						
			metres	%					%	%	%	%	%	%	%
1A	93.59	95.70	1.91	100		80.5	-	-							2.14
1B	95.70	97.02	1.39	100		68.8	-	-							1.99

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	94.67	0.08	100	Mudstone, brown, minor plant fragments, SBC.		
	94.77	0.10		Dull coal, no bright bands. GBC.		
	95.10	0.33		Mudstone, brown-grey, shaley, with carbonaceous laminae. SBC.		
	95.19	0.09		Dull coal, SBC.		1A.
	95.20	0.01		Mudstone, brown-grey, SBC.		
	95.44	0.24		Dull coal, 5% bright bands, GBC.		
	95.70	0.26		Shale, white. SBC.		
	95.93	0.23		Heavy dull coal, GBC.		
	95.95	0.02		Mudstone, grey, SBC.		
	96.39	0.44		Mudstone, carbonaceous, core broken; GBC.		
	96.71	0.32		Interbedded grey and carbonaceous mudstone, SBC.		1B.
	96.94	0.23		Dull coal, core broken; 2% bright bands.		
	97.09	0.15		Dull coal, as above; 10% bright bands, SBC.		
				<u>END OF COAL SECTION</u>		
97.09	100.00	2.91		Fine grained lithic sandstone, (FLSS); minor wispy carbonaceous laminae, core broken in parts.		
100.00	100.10	0.10		FLSS, as above, SBC.		
100.10	100.16	0.06		Shale, white, with pyrophyllite grains, SBC.		
100.16	100.78	0.62	100	Interbedded dull coal (10%); grey mudstone (60%) and carbonaceous mudstone (30%); minor mudstone pellets and 'worm burrow' type structures, SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
100.78	101.01	0.23	100	FLSS, grey.		
101.01	102.16	1.15		FLSS laminated with grey mudstone, SBC.		
102.16	102.21	0.05		Shale, white, SBC.		
102.21	105.56	3.35		Mudstone, grey, laminated, with calcite replacement from 104.03-.17 m; 104.84-.88m; GBC.		
105.56	121.56	16.00		FMLSS, grey, massive, core broken at top of unit. Coaly debris and bands abundant from 111.00 to base of unit; SBC.		
121.56	123.06	1.50		Mudstone, grey, abundant plant fossils; sandy; sand content increases with depth, SBC.		
123.06	123.38	0.32		Shale, green-grey, SBC.		
123.38	123.65	0.27		Carbonaceous mudstone, GBC.		
123.65	123.83	0.18		Shale, green-brown-grey; SBC.		2A
123.83	123.89	0.06		Carbonaceous mudstone, SBC.		
123.89	123.99	0.10		Shale, white, with pyrophyllite grains.		
				<u>COAL SECTION</u>		
123.99	124.44	0.45		Heavy dull coal, GBC.		
	124.67	0.23		Carbonaceous shaley mudstone, GBC.		
	124.78	0.11		Carbonaceous mudstone, massive, GBC.		
	124.88	0.10		Heavy dull coal, GBC.		2B
	125.10	0.22		Carbonaceous mudstone, with clasts of brown mudstone, GBC.		
	125.40	0.30		Dull coal, 10% bright bands, SBC.		
	125.42	0.02	100	Mudstone, beige, SBC.		2C

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS (dry basis)				Appt	S.G.
			metres	%	Moist %	Ash %	VCM %	FC %		
2A	123.06	123.99	0.93	100	9.8	89.4	-	-		
2B		125.40	1.41	95	6.7	69.6	-	-		
2C		126.99	1.59	100	6.7	74.3	-	-		
2D		128.32	1.33		7.4	81.4	-	-		
2E		129.37	1.05		5.5	73.4	-	-		1.99
2F		130.04	0.67		6.9	34.7	24.5	-		1.48
2G		130.72	0.68		5.2	62.3	-	-		1.84
2H		131.94	1.22		5.3	87.4	-	-		2.22
2J		132.91	0.97		5.7	66.9	-	-		1.90

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	125.66	0.15	60	Dull coal, core broken; core loss of 9 cm in this unit.		2C
	125.81	0.15	100	Interbedded dull coal and beige mudstone (40:60), SBC.		
	125.86	0.05		Dull coal, SBC.		
	125.94	0.05		Beige mudstone, SBC.		
	126.06	0.15		Heavy dull coal, SBC.		
	126.12	0.06		Beige mudstone		
	126.15	0.03		Dull coal		
	126.155	0.005		Beige mudstone		
	126.18	0.025		Dull coal		
	126.19	0.01		Beige mudstone		
	126.20	0.01		Heavy dull coal		
	126.23	0.03		Beige mudstone		
	126.43	0.17		Dull coal		
	126.44	0.04		Dull coal/carbonaceous mudstone, SBC.		
	126.47	0.03		Shaley green-grey mudstone, SBC.		
	126.66	0.19		Carbonaceous mudstone, SBC.		
	126.73	0.07		Shale, white.		
	126.76	0.03		Carbonaceous mudstone.		
	126.85	0.09		Shale, white.		
	126.90	0.05		Carbonaceous mudstone		
	126.99	0.09	100	Shale, white, SBC.		2C

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	127.00	0.01	100	Dull Coal		
	127.13	0.13		Dull coal, SBC.		
	127.15	0.02		Shale, white		
	127.35	0.20		Dull coal, 1% bright bands		
	127.57	0.22		Mudstone, green-grey with calcite replacement over basalt 5 cm.		
	127.65	0.18		Dull coal, GBC.		2D.
	127.71	0.06		Carbonaceous mudstone, SBC.		
	127.74	0.03		Shale, carbonaceous, SBC.		
	127.83	0.09		Carbonaceous mudstone, SBC.		
	127.99	0.16		Shale, White, SBC.		
	128.03	0.04		Carbonaceous mudstone, SBC.		
	128.32	0.29		Shale white, SBC.		
	128.45	0.15		Heavy dull coal with minor shale laminae.		
	128.54	0.09		Shale, white, SBC.		
	128.56	0.02		Dull coal, SBC.		
	128.59	0.03		Shale, beige, SBC.		
	128.64	0.05		Dull coal, SBC.		
	128.65	0.01		Shale, white, SBC.		
	128.70	0.05		Dull coal, SBC.		2E.
	128.76	0.06		Mudstone, white, SBC.		
	128.89	0.13		Dull coal, SBC.		
	128.94	0.05	100	Mudstone, white, SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
129.12	0.18	100		Dull coal, SBC.		
129.14	0.02			Mudstone, beige		
129.145	0.005			Carbonaceous mudstone		
129.15	0.005			Mudstone beige		2E.
129.20	0.05			Dull coal		
129.37	0.17			Mudstone beige with carbonaceous mudstone bands		
129.66	0.29			Dull coal, calcite on cleat, 5% bright bands. SBC.		
129.665	0.005			Sand lens.		2F.
130.04	0.375			Dull coal, 5% bright bands.		
130.11	0.07			Mudstone, grey. SBC.		
130.52	0.41			Dull coal, GBC .		
130.53	0.01			Mudstone band.		2G.
130.72	0.19			Dull coal, core broken. GBC.		
131.12	0.40			Mudstone, grey, with wispy carbonaceous laminae.		
131.13	0.01			Calcite band.		
131.32	0.19			Dull coal interbedded with shaley mudstone, (70:40).		
131.46	0.14			Shale, white, with carbonaceous mudstone bands.		2H
131.59	0.13			Mudstone carbonaceous.		
131.64	0.05			Shale green-grey.		
131.75	0.11	100		Carbonaceous mudstone		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	131.94	0.19	100	Shale white		ZH
	131.97	0.03		Carbonaceous mudstone		
	132.00	0.03		Shale white		
	132.41	0.41		Sandy speckled carbonaceous mudstone		
	132.44	0.03		Shale white		
	132.67	0.23		Dull coal		ZI
	132.70	0.03		Mudstone grey		
	132.73	0.03		Mudstone carbonaceous		
	132.84	0.11		Carbonaceous mudstone, core broken		
	132.91	0.07		Dull coal, with cleat and calcite in-filling; 1% bright bands; core broken.		
				<u>BASE OF COAL SECTION</u>		
132.91	133.00	0.09		Mudstone, grey, sandy, core broken.		
133.00	136.83	3.83		Laminite of grey mudstone and FLSS, (50:50) laminated; minor low angle cross bedding; interval of white shale from 135.24 - .33 m. SBC.		
				<u>COAL SECTION</u>		
136.83	136.88	0.05		Shale, white, GBC.		
	136.89	0.01		Mudstone, carbonaceous, sandy, GBC.		
	136.93	0.04		Shale, white, GBC.		SA
	136.94	0.01		Mudstone, carbonaceous, sandy, GBC.		
	136.96	0.02	100	Shale, white, GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		Moist Ash VCM F.C. ASSAY RESULTS(dry basis) Appt S.G.								
			metres	%	%	%	%						
3A	136.83	138.24	1.41	100	7.2	76.0	-	-					
3B		138.51	0.27		7.4	88.7	-	-					
3C		139.09	0.58		3.9	65.1	-	-					
3D		140.68	0.99		5.7	50.3	-	-					1.69

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
137.00	0.04	100		Mudstone, carbonaceous, sandy.		
137.04	0.04			Shale, white, GBC.		
137.07	0.03			Mudstone, carbonaceous, sandy. GBC.		
137.08	0.01			Shale, white, GBC.		
137.15	0.07			Mudstone, carbonaceous, sandy. GBC.		
137.38	0.23			Shale, white, crumbly. SBC.		
137.415	0.035			Mudstone, carbonaceous, SBC.		
137.42	0.005			Shale, white, SBC.		
137.45	0.03			Mudstone, carbonaceous, SBC.		
137.46	0.01			Shale, white.		3A
137.55	0.09			Mudstone, carbonaceous, GBC.		
137.57	0.02			Sand lens (FLSS, carbonaceous).		
137.62	0.05			Carbonaceous mudstone, sandy, SBC.		
137.64	0.02			Claystone, beige, SBC.		
137.77	0.13			Heavy dull coal carbonaceous mudstone (50:50) SBC.		
137.80	0.03			Sand lens.		
137.82	0.02			Claystone, beige SBC.		
138.24	0.42			Carbonaceous mudstone with grey mudstone laminae, SBC.		
138.51	0.27			Shale, white, crumbly, SBC.		3B
138.56	0.05			Carbonaceous mudstone, GBC.		
138.77	0.21	100		Dull coal GBC		3C

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	138.92	0.15	100	Claystone, beige, hard. SBC.		
	139.04	0.12		Dull coal, 1% bright bands. GBC.		3C
	139.07	0.03		Mudstone, carbonaceous, sandy. GBC.		
	139.09	0.02		Shale, brown, SBC.		
	139.10	0.01		Sand lens, SBC.		
	139.23	0.13		Dull coal and mudstone laminite (50:30) GBC.		
	139.49	0.26		Dull coal, 2% bright bands. SBC.		
	139.52	0.03		Claystone, band, white - ash band probably, SBC.		3D
	139.57	0.05		Dull coal, SBC.		
	139.58	0.01		Claystone, probably an ash band.		
	139.89	0.31		Dull coal, minor mudstone. SBC.		
	139.92	0.03		Claystone, yellow-beige.		
	140.08	0.16		Dull coal, well developed clast, GBC.		
	140.25	0.17		Mudstone, carbonaceous, sandy, GEC.		
				<u>BASE OF COAL SECTION</u>		
140.25	140.70	0.45		FLSS and mudstone laminite, grey, core shattered; (50:50).		
140.70	143.27	2.57		Laminite, as above, core shattered over top 60 cm; minor cross bedding and disturbed patches. SBC.		
				<u>COAL SECTION</u>		
143.27	143.38	0.11	100	Carbonaceous mudstone, minor slickensides GBC.		4
	143.39	0.01		Claystone band, SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	143.43	0.04	100	Mudstone, black, banded, carbonaceous; Almost a "bluey" tinge apparwnt, GBC.		
	143.51	0.08		Dull coal, GBC.		
	143.61	0.10		Interbedded grey claystone and dull coal (60:40), GBC.		
	143.69	0.08		Dull coal, SBC.		
	143.87	0.18		Claystone, beige, sandy, SBC. With abundant wispy carbonaceous laminae.		
	144.01	0.14		Dull coal, 2% bright bands, GBC.		
	144.06	0.05		White, hard claystone - an ash band. SBC		
	144.28	0.22		Mudstone, carbonaceous.		4
				<u>BASE OF COAL SECTION</u>		
144.28	145.01	0.73		Mudstone, green-grey, core broken. GBC.		
145.01	148.46	3.45		Laminite of grey mudstone and FLSS.		
148.46	163.84	15.38		FMLSS, grey, massive, minor coaly debris, core broken from 154.00-156.00; coal intersection from 155.05- .22 m.		
163.84	164.09	0.25		Mudstone, grey, slickensided, core broken. GBC.		
164.09	164.14	0.05		Carbonaceous mudstone, GBC.		5
164.14	164.19	0.05		Dull coal, SBC.		
164.19	164.34	0.25		Shale, dark brown, GBC		
				<u>COAL SECTION</u>		
164.34	164.63	0.29		Dull coal, core broken, shaley over basal 10 cm. SBC.		
	164.71	0.08		Shale, white, SBC.		
	164.84	0.13		Dull coal, no bright bands, GBC, shaley.		
	165.04	0.20		Carbonaceous mudstone, minor coal bands shaley, GBC.		6
Continued over						

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		Moist	Ash	VCM	F.C.	ASSAY RESULTS (dry basis)							
			metres	%					%	%	%	%	%	%	%	%
4	143.27	144.28	1.01	100	4.7	68.6	-	-								
5	164.09	165.14	1.05	100	8.9	68.2	-	-								
6	168.43	169.45	1.02	100	6.7	37.3	25.5	37.2								
7	251.35	252.25	0.90	100	4.4	53.0	-	-								

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	165.33	0.29		Mudstone, grey, minor wispy carbonaceous laminae.		
	<u>BASE OF COAL SECTION</u>					
165.33	168.32	4.99		Laminite of FLSS and grey mudstone. (50:50); bands; FLSS intervals common; shaley; core broken. SBC.		
	<u>COAL SECTION</u>					
168.32	168.15	0.02		Shale, brown, SBC.		
	168.43	0.08		Shale, white, SBC.		
	169.07	0.64		Dull coal, 2% bright bands, calcite on cleat.		
	169.40	0.33		Dull coal, as above.		6
	169.45	0.05		Carbonaceous mudstone		
	<u>BASE OF COAL SECTION</u>					
169.45	172.00	2.55		Sandy mudstone, clayey.		
172.00	188.83	16.83		FMLSS, grey, massive; rare wispy carbonaceous laminae; minor coaly debris; minor mudstone laminae; mudstone pellets SBC from 186.00-186.50 m.		
188.83	189.58	0.75		Mudstone, grey, laminated, slickensided; core broken; wispy carbonaceous laminae.		
189.58	189.80	0.22		Dull coal.		
189.80	190.00	0.20		Mudstone, grey, slickensided.		
190.00	191.68	1.68		Mudstone, grey, core hardly broken; sandy towards the base; SBC.		
191.68	201.54	9.86		FMLSS, grey, massive, no coaly debris.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS												
			metres	%													

GEOLOGICAL LOG

Page:- 14/15

DDH 51				DESCRIPTION	SECTION	
FROM metres	TO metres	RECOVERY			Core	Sample
		metres	%			
201.54	229.88	28.34	100	FMLSS, grey, massive; minor coaly debris; sparse mudstone pellets; core broken in parts; SBC.		
229.88	230.01	0.13		Dull coal, few bright bands, GBC.		
230.01	230.77	0.76		Mudstone, grey, core broken, shaley, minor wispy carbonaceous laminae, SBC.		
230.77	231.07	0.30		Dull coal, no bright bands. SBC.		
231.07	232.00	0.93		Mudstone, grey, shaley, as above coal unit.		
232.00	232.81	0.81		Mudstone, grey, carbonaceous flecks throughout, shaley, core broken, core sandy in parts, GBC.		
232.81	232.95	0.14		Dull coal.		
232.95	239.22	6.27		Mudstone, grey, flecked with wispy carbonaceous laminae; core broken and shaley. GBC. Coal from 238.95 - 238.90 m.		
239.92	249.3	10.31		FMLSS, massive, pale grey.		
249.53	249.63	0.10		Carbonaceous mudstone shaley SBC.		
249.63	250.18	0.55		FMLSS, shaley GBC.		
250.18	251.35	1.17		Mudstone, grey, laminated, GBC.		
251.35	251.65	0.30		Grey and carbonaceous mudstone laminite.		
				<u>COAL SECTION</u>		
251.65	252.25	0.60		Dull coal, core broken; few bright bands.		7
				<u>BASE OF COAL SECTION</u>		
252.25	255.20	2.95		Laminite of FLSS and grey mudstone (50:50); GBC.		
255.20	257.60	2.40	100	FMLSS, grey, massive.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
257.60	258.00	0.40		Shaley green-grey mudstone, SBC.		
258.00	258.26	0.26		Dull shaley coal		
258.26	261.00	2.74	100	Mudstone green grey shaley slickensided with minor carbonaceous intervals.		
				END OF HOLE AT 261.00 m		

Continued over

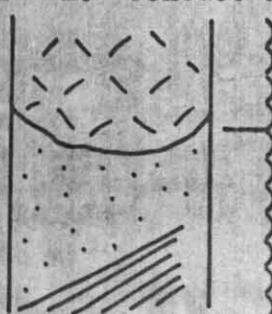
ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

DRILLING TARGET:- Upper Marine Sequence of the Lower Parmeener Super Group											
REMARKS:-											
SURVEY DATA						ASSAY DATA					
DEPTH metres	Bearing mag.	Inclin. degs	SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS			
						metres	%				

GEOLOGICAL LOG

Logged by:- G.A. RACON

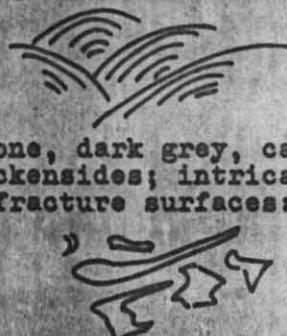
FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
0	152.89	152.89	100	<p>Dolerite, pale grey, medium grained, fining towards base. Very fine grained over basal 1 m. Contact at 152.89 m.</p>  <p>Contact sharp, undulose, dolerite at contact chilled, with angular microphenocrysts 1 mm².</p>		
152.89	152.94	0.05	100	<p>Fine grained lithic sandstone (FLSS), baked, bottom contact dips at 20°.</p>		

Continued over:-

DEPARTMENT OF MINES—TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No.:- 79	MAP SHEET No. 49	DISTRICT ST MARYS	LOCATION OF SITE:-
ON FINGAL TIER, WEST OF THE MITCHELL FAULT			
R.L. OF SITE:- 675.70 m	SITE SURVEY ON MAP No.:-	CORE SIZE:- NQ	
BEARING OF HOLE:-	AIR PHOTO No.:-	COMMENCED:- 3 - 3 - 1981	
INCLINATION OF HOLE:-	DRILL:- Longyear 44 No. 2	COMPLETED:- 16 - 4 - 1981	
CO-ORDS OF SITE: 594 214 m E 5 384 795 m N	DRILLER:- D. Wharmond	FINAL DEPTH (m):- 502.00 m	

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
152.94	154.29	1.35	100	White fine grained lithic sandstone, (FLSS), bedding dipping at 10-20°; sediments baked.		
154.29	158.70	4.41	100	Mudstones, baked, very hard and chert-like; pale green to dark green in colour, beige coloured over basal 1.5 m. Core broken.		
158.70	159.38	0.68	100	Mudstone, pale green; crumbly core; scored with lighter marks; clayey; studded with mica(?) and/or pyrite(?) crystals over basal 20 cm; core badly broken.		
159.38	160.00	0.55	89	Mudstone, pale green, core shattered; core-pieces hard, cherty, still showing effects of baking by the dolerite..		
150.00	163.00	0	0	Core Loss 3.00 m.		
153.00	167.95	4.95	100	Mudstone, dark green-grey occasional slickensides; core broken; vague pink bands through rock; (still slightly metamorphosed) bedding horizontal; finely laminated; occasional slickensides filled with calcite; colour becomes paler towards the base of the unit. Shaley mudstone from 167.91 - .95 m. Gradational bottom contact, (GBC).		
157.95	169.50	1.55	100	Siltstone, carbonaceous, black in colour, core slightly broken; abundant plant fragments; conchoidal fracture patterns ("algal mats" of RHC). GEC.		
159.50	174.88	5.38	100	Mudstone, dark grey, carbonaceous; rare slickensides; intricate designs in carbon on fracture surfaces:  Colour of mudstone becomes lighter with depth; pale grey-green after top 1 m. Sharp bottom contact, (GBC).		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS												
			metres	%													

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
174.88	177.09	2.24	100	Fine-medium grained lithic sandstone, (FMLSS); massive; pale grey in colour; rare bedding traces dip at up to 10°, GBC.		
177.09	177.31	0.22	100	CLSS (coarse grained lithic sandstone) abundant clay pellets and mudstone pellets; dark grey in colour; irregular eroded bottom contact.		
177.31	177.50	0.19	100	Siltstone; grey; rare wispy carbonaceous laminae, GBC.		
177.50	178.99	1.49	100	Laminite of FLSS and siltstone; dark grey in colour. GBC.		
178.99	182.98	3.99	100	FMLSS, light grey; occasional coal and mudstone pellets; bedding horizontal; rare wispy carbonaceous laminae. Sharp bottom contact, GBC.		
182.98	183.72	0.74	100	CLSS, with abundant siltstone, claystone and mudstone clasts; mostly 1-2 cm ² ; 1 cm of bright coal at 183.25-183.26 m; rare mudstone clasts 2-3 cm x 2 cm from 183.39-183.49 m. Large clasts of silty carbonaceous mudstone from 183.52-183.65 m, and from 183.69-183.73 m. GBC.		
183.72	184.00	0.28	100	Silty carbonaceous mudstone, with rare slickensides. Clasts of this unit in base of overlying unit.		
184.00	184.42	0.42	100	Carbonaceous siltstone, core crushed over top 10 cm; mixed with some mud; rock is 1/2 way between siltstone and mudstone. Chunks of coaly debris rare. GBC.		
184.42	187.03	2.61	100	FMLSS, grey, massive, rare wispy carbonaceous laminae dipping at up to 15°; occasional mudstone and claystone pellets. GBC.		
187.03	188.76	1.73	100	Laminite of carbonaceous siltstone and FLSS, (50:50); black in colour with some minor cross bedding which dips at up to 20°. Re-worked clasts of carbonaceous siltstone from 187.65-.73 m.		



ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
188.76	193.90	5.14	100	FLSS, green-grey in colour, massive, very minor cross bedding dipping at up to 20°; very occasional wispy carbonaceous laminae, GBC.		
193.90	200.05	6.15	100	FMLSS, pale grey in colour, massive; no wispy carbonaceous laminae and no mudstone pellets. One chunk of coaly debris from 199.63-.64 m. GBC.		
200.05	201.70	0.95	58	Quartz pebble conglomerate, with clasts 1-3 cm x 1-3 cm; mostly well rounded pebbles. One long white clast; conglomerate in a matrix of CLSS. Band of bright coal from 200.34-200.36; core loss of 0.70 m in this unit.		
201.70	202.11	0.41	100	CLSS, coloured pale green; (glauconite), with small (1 mm ²) mudstone and claystone pellets; GBC.		
202.11	202.18	0.07	100	Heavy dull coal, GBC.		
202.18	202.33	0.15	100	Clay pellet conglomerate, pellets 2-3 cm x 1-2 cm, coloured pale green and beige. GBC.		
202.33	202.74	0.41	100	CLSS, with abundant wispy carbonaceous laminae and minor coaly debris. GBC.		
202.74	204.22	1.48	100	Interbedded and interlaminated FMLSS and carbonaceous mudstone; 'worm burrow' type structures common; unit carbonaceous; abundant small (1-2 mm in diameter) clay pellets.		
204.22	210.60	6.38	100	FMLSS, grey, massive, interbedded with mudstone, (80:20) over top 50 cm. GBC.		
210.60	212.96	2.36	100	FMLSS, grey, massive, abundant coaly debris; bedding dipping at up to 30°; CLSS interval over the top 30 cm; 1 cm coal from 211.77-211.78, and 0.5 cm coal from 211.890-.895 m. GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

GEOLOGICAL LOG

Page:- 5/23

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
212.96	214.19	1.23	100	Mudstone, grey-brown; rare wispy carbonaceous laminae, sandy over top 20 cm. GBC.		
214.19	217.95	3.76	100	FLSS, brown-grey, vertical joints common with calcite on joints; minor bioturbation, GBC.		
217.95	218.01	0.06	100	Dull coal with 5% bright bands; calcite on numerous vertical cleats. GBC.		
218.01	218.74	0.73	100	FLSS, bedding dipping at 5°; well defined fine laminations; coaly debris over basal 20 cm; GBC dipping at 20°.		
<u>COAL SECTION</u>						
218.74	218.74	50.005	100	Bright coal band dipping at 20°; GBC.		
	218.91	100.155	100	Carbonaceous mudstone and dull coal laminite; (60:40); 10% bright bands to undulose bottom contact.		1.
	219.375	0.465	100	Heavy dull coal; 10% bright bands; well developed cleat; calcite on cleats; core broken. GBC.		
	219.41	0.025	100	Clay, beige, abundant wispy carbonaceous laminae; unit hard and coherent; GBC.		
	219.74	0.33	100	Laminite of heavy dull coal and carbonaceous mudstone (80:20); with 1% bright bands. GBC.		
<u>(BASE OF COAL SECTION)</u>						
219.74	220.20	0.46	100	Mudstone, grey, laminated, sandy in parts; GBC.		
220.20	220.48	0.28	100	Shale, green-brown, pale, with calcite patterns over basal 10 cm.		



ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		Moist. Ash		ASSAY RESULTS								
			metres	%	%	%									
1	218.74	219.375	0.635	100	5.4	58.6									
2	226.46	227.71	1.25	100	5.9	69.0									

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
220.48	225.22	4.74	100	Laminite of siltstone and mudstone, (50:50), carbonaceous, finely laminated, streaked with green and white rare worm burrows, GBC.		
225.22	225.34	0.12	100	FMLSS, grey-brown, massive, GBC.		
225.34	225.55	0.21	100	CLSS, with abundant mudstone and claystone pellets; abundant coaly debris. GBC.		
225.55	225.62	0.07	100	Carbonaceous mudstone, GBC. Grey sandy mudstone, GBC.		
225.62	226.08	0.46	100	Shale, beige, core broken, veined with calcite; core friable; GBC.		
226.08	226.10	0.02	100	MLSS, brown, GBC.		
226.10	226.46	0.36	100	Mudstone, grey, with abundant brown clay pellets; carbonaceous; core jointed vertically, with calcite on joints. GBC.		
				<u>COAL SECTION</u>		
226.46	226.86	0.40	100	Carbonaceous mudstone interbedded with brown mudstone (80:20), GBC.		
	227.09	0.23	100	Heavy dull coal, 1% bright bands, GBC.		
	227.095	0.005	100	Bright coal, GBC, dipping at 20°.		2
	227.12	0.025	100	Claystone, beige, abundant wispy carbonaceous laminae, GBC. dipping at 10°.		
	227.40	0.28	100	Mudstone, dark grey, finely laminated, GBC.		
	227.71	0.31	100	Dull coal with 10% bright bands, GBC.		
	228.03	0.32	100	Mudstone, green-grey; slickensided; core broken.		
				<u>(BASE OF COAL SECTION)</u>		
228.03	241.05	12.02	100	FMLSS, grey, massive; occasional patches of elongated mudstone pellets, coaly debris from 238.50-241.00 m; GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
241.05	251.14	0.09	100	Dull coal with 15% bright bands, core broken G.B.C.		
241.14	247.94	6.80		Mudstone, grey, abundant wispy carbonaceous laminae, minor cross bedding, abundant horizontal laminae, horizontal from 247.30-247.80 m. Minor bioturbation (?) or disturbed bedding. Calcite (scribble) from 247.84-247.86 m. GBC.		
247.94	248.05	0.11		Shale, brown. GBC.		
	248.65	0.60		Grey mudstone interbedded with carbonaceous muds one, (50:50); individual beds 5 cm thick.		
	248.69	0.04		Shale, beige, GBC.		
	248.79	0.10		Mudstone, carbonaceous, GBC.		
	248.91	0.12		Claystone, carbonaceous, abundant wispy carbonaceous laminae and sand grains common, GBC.		
	249.03	0.12		Heavy dull coal, 1% bright bands, GBC.		
	249.09	0.06		Claystone, sandy, pale brown in colour. Carbonaceous. GBC.		
	249.23	0.14		Claystone, beige, shaley, core broken; plant fragments common.		
	249.56	0.23		Dull coal, 1% bright bands, GBC.		
	249.74	0.18		Dull coal interbedded and interlaminated with carbonaceous mudstone, (50:50); GBC.		
	253.85	4.11		FLSS, massive, minor cross bedding; minor rootlet structures; laminae 1 mm wide. GBC.		
				<u>COAL SECTION</u> (not sampled)		
	254.08	0.23	100	Shale, pale brown, sandy; flecks of biotite (?) common; GBC.		
	254.22	0.11	100	Mudstone, black, carbonaceous; finely laminated; shale laminae abundant; GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	254.27	0.05	100	Heavy dull coal, 1% bright bands; GBC.		
	254.30	0.03		"Dirt band" or "Palaeosol?"; grits of quartz in a clayey matrix; core broken.		
	254.45	0.15		Heavy dull coal and carbonaceous mudstone, (50:50); with abundant mud pellets 2-3 mm x 2-3 mm over basal 8 cm. GBC.		
	254.51	0.06		Carbonaceous mudstone, GBC.		
	254.52	0.01		Carbonaceous mudstone with mudstone pellets, GBC.		
	254.59	0.01		Carbonaceous mudstone, GBC.		
	254.60	0.01	100	Carbonaceous mudstone with mudstone pellets, GBC.		
	254.66	0.05	80	Carbonaceous mudstone, GBC.		
	254.715	0.055	100	Shale, beige, GBC.		
	254.82	0.105		Heavy dull coal, size.		
	254.83	0.01		Carbonaceous shale, GBC.		
	254.91	0.08		Heavy dull coal, GBC.		
	254.95	0.04		Carbonaceous claystone, GBC.		
	255.06	0.11		Shaley and sandy claystone, GBC.		
	255.055	0.025		Calcite, "feather pattern" replacement; GBC.		
	255.18	0.095		Dull coal, GBC.		
	255.29	0.11		Sandy claystone, with some carbonaceous debris.		
	255.47	0.18		Carbonaceous mudstone with minor mudstone laminae and coaly debris, GBC.		
	255.86	0.39		Shaley claystone, beige, sandy; core broken over basal 10 cm; minor carbonaceous flicks and streaks.		
	256.00	0.14		Carbonaceous mudstone, massive, GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	256.01	0.01	100	Mudstone, white, GBC.		
	256.09	0.08		Heavy dull coal, GBC.		
	256.10	0.01		Sandy claystone, GBC.		
	256.25	0.15		Dull coal, 10% bright bands, calcite on sub-vertical cleats; GBC.		
				<u>(BASE OF COAL SECTION)</u>		
256.25	256.50	0.25		FLSS, interlaminated with mudstone over the top 10 cm, GBC.		
256.50	258.45	1.95		Laminite of FLSS and mudstone (50:50); pale green-grey in colour, minor cross bedding, GBC.		
				<u>COAL SECTION</u> (not sampled)		
258.45	258.52	0.07		Heavy dull coal and carbonaceous mudstone (50:50). GBC.		
	258.58	0.06		Claystone, beige, sandy. GBC.		
	259.33	0.75		Heavy dull coal interbedded with sandy claystone, beds 2-3 cm wide. GBC.		
	259.43	0.10		Dull coal, 10% bright bands. GBC.		
	259.58	0.15		Interbedded shaley claystone and carbonaceous mudstone, (50:50). GBC.		
	259.90	0.32		Dull coal, 10% bright bands, core broken, abundant cleats, GBC.		
	260.05	0.15		White claystone, abundant wispy carbonaceous laminae, GBC.		
	260.27	0.22		Interlaminated, shaley claystone and carbonaceous mudstone (50:50), GBC.		
	260.74	0.47		Shaley MFLSS, GBC, dips at 5°.		
	261.23	0.49		Dull coal, 10% bright bands; core broken, well developed cleat wit. calcite. GBC.		
	263.56	0.33		Mudstone, grey, laminated.		
263.56	274.00	10.46		<u>(BASE OF COAL SECTION)</u> MFLSS, grey, massive, GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS														
			metres	%															

GEOLOGICAL LOG

Page :- 10/23

FROM metres	TO metres	RECOVERY		COAL SECTION	DESCRIPTION	SECTION	
		metres	%			Core	Sample
	274.14	0.14	100		Dull coal, 10% bright bands, GBC.		
	274.37	0.23			Shale, beige, core broken and crumbly.		3A
	274.95	0.58			Dull coal 5% bright bands; minor mudstone laminae; GBC.		
	275.29	0.34			Shale, beige, core broken.		
	275.59	0.30			Carbonaceous, mudstone and heavy dull coal (50:50); sandy; abundant brown mudstone laminae and minor mudstone pellets.		3B
	275.98	0.39			Shale, beige, crumbly.		
	276.15	0.17			Dull coal, 5% bright bands, GBC.		
	276.17	0.02			Mudstone, dark brown, GBC.		
	276.33	0.16			Dull coal, 5% bright bands, minor mudstone laminae.		3C
	276.45	0.12			Shale, beige, crumbly.		
	277.00	0.55			Dull coal, 10% bright bands; calcite on abundant cleats, core broken over the basal 20 cm.		
	277.14	0.14			Heavy dull coal, 1% bright bands. GBC.		
	277.30	0.16			Shale, beige, GBC.		
	277.42	0.12			Heavy dull coal, 1% bright bands, GBC.		
	277.45	0.03			Shaley claystone, abundant wispy carbonaceous laminae. GBC.		
	277.57	0.12			Heavy dull coal, 1% bright bands, GBC.		3D
	277.62	0.05			Shaley claystone, sandy; abundant wispy carbonaceous laminae. GBC.		
	277.66	0.04			Heavy dull coal, 1% bright bands. GBC.		
	277.67	0.01			Shaley claystone, GBC.		
	278.03	0.36			Dull coal, 1% bright bands. GBC.		
	278.35	0.32			Shale, white, GBC.		3E

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		S.G.				
			metres	%	Moist %	Ash %	V.F.M. %	F.C. %	MJ/kg
3A	274.00	274.95	0.95	100	2.6	63.6			1.78
3B		275.98	1.03		2.8	84.0			2.12
3C		277.00	1.02		2.4	49.5			1.62
3D		278.03	1.03		2.7	70.4			1.94
3E		278.35	0.32		4.1	90.7			2.17
3F		279.36	1.01		2.2	69.1			2.00
3G		280.52	1.16		2.1	58.1			1.79

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
278.69	0.34	100		Dull coal, 1% bright bands. GBC.	3F	
278.70	0.01			Claystone, white, GBC.		
278.75	0.05			Dull coal, 1% bright bands, GBC.		
278.85	0.10			Claystone, beige, abundant wispy carbonaceous laminae, GBC.		
279.36	0.57			Dull coal, 10% bright bands; core broken. Occasional mudstone and claystone laminae 1 mm wide; rare cleats.		
279.39	0.03			Claystone, pale brown; coaly debris common. GBC.		
279.70	0.31			Dull coal, core broken, occasional cleat. GBC.		
279.73	0.03			Claystone, pale brown, GBC.	3G	
280.00	0.27			Dull coal, 15% bright bands; core broken. GBC.		
280.01	0.01			FLSS, GBC.		
280.03	0.02			Dull coal, GBC.		
280.08	0.05			Heavy dull coal, GBC.		
280.11	0.03			Carbonaceous mudstone, black, GBC.		
280.12	0.01			Heavy dull coal, GBC.		
280.13	0.01			Mudstone, brown, shaley; GBC.		
280.17	0.04			Heavy dull coal, GBC.		
280.22	0.05			Mudstone, white, shaley, GBC.		
280.52	0.30			Heavy dull coal, 1% bright bands, GBC.		
				(BASE OF COAL SECTION)		
280.52	283.00	2.48		Mudstone; occasional slickensides; unit massive; grey in colour; sandy. GBC.		
283.00	285.70	2.70		Mudstone, finely laminated; laminae 1 mm wide; grey-green in colour; some disturbed bedding - bioturbation(?) or rheomorphic slumping(?). GBC.		
285.70	292.63	6.93		FMLSS, grey-white, massive. GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
292.63	294.30	1.67	100	Mudstone, finely banded, laminae 1 mm wide, green-grey in colour, sandy towards the base of unit. GBC.		
294.30	295.64	1.34		FLSS, occasional coaly debris close to the top of the unit.		
295.64	299.13	3.49		FLSS, grey, massive; rare vertical cracks filled with calcite, rare wispy carbonaceous laminae; band of bright coal from 298.57-.61 m. Occasional mudstone clasts with wispy coaly laminae; occasional coaly debris.		
299.13	299.26	0.13	9	Heavy dull coal and carbonaceous mudstone, (50:50); 1% bright bands, GBC.		
299.26	299.52	0.26		Carbonaceous mudstone, black; core broken at base, rare slickensides; GBC.		
299.52	299.68	0.08		Shale, beige. GBC.		
299.60	301.00	1.40		Carbonaceous mudstone, black; slightly micaceous; rare plant fossils; core broken over top 10 cm; unit becomes sandy towards the base.		
301.00	302.58	1.38		Carbonaceous mudstone interlaminated with FLSS; bedding dipping at up to 10°; minor shale bands; GBC, dips at 10°.		
				<u>COAL SECTION</u> - not sampled		
302.38	302.51	0.13		Heavy dull coal, 1% bright bands, GBC.		
	302.75	0.24	100	Heavy dull coal and carbonaceous mudstone laminite (50:50); mudstone pellets 1-3 mm x 1-3 mm common; core broken, GBC.		
	302.76	0.01	90	Shale, beige, sandy; core crumbly, GBC.		
	302.78	0.02	100	Heavy dull coal, GBC.		
	302.82	0.04		Shale, beige, sandy, GBC.		
	302.85	0.03	100	Carbonaceous mudstone, black, GBC.		
	302.92	0.05	70	Shale, beige, sandy, core crumbly. GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	303.03	0.11	100	Heavy dull shaley coal and carbonaceous mudstone, (50:50); no bright bands, GBC.		
	303.11	0.04	50	Shale, beige, sandy, core crumbly, GBC.		
	303.16	0.05	100	Heavy dull coal and carbonaceous mudstone, 1% bright bands, GBC.		
	303.54	0.16	44	Shaley, pale green, crumbly mudstone. GBC.		
	303.55	0.01	100	Carbonaceous mudstone, GBC.		
	303.56	0.01		Shale, pale green, GBC.		
	303.58	0.02		Carbonaceous mudstone, GBC.		
	303.60	0.02		Shale, pale green, GBC.		
	303.68	0.08		Heavy dull coal, GBC.		
	303.73	0.05	100	Shale, sandy, beige, core crushed.		
	304.00	0.26	96	Dull coal, 1% bright bands; shale laminae common.		
	304.06	0.06	100	Shale, black, core crushed.		
	304.22	0.16		Shale, beige, core crushed.		
	304.24	0.02		Shale, black, core crushed.		
	304.30	0.06		Shale, beige, sandy; abundant biotile flakes, GBC.		
	304.32	0.02		Shale, black, carbonaceous. GBC.		
	304.38	0.06		Shale, beige, sandy; GBC.		
	304.55	0.17	100	Heavy dull coal, 1% bright bands; brown mudstone laminae common. GBC.		
	304.81	0.17	65	Shale, beige, sandy, with biotite (or pyrophyllite ??) grains; core crumbly. GBC.		
	305.44	0.63	100	Laminite of dull coal and brown mudstone, (80:20); (would have a high ash content); sandy; very rare bands 1 mm wide of mudstone and small mudstone pellets; GBC sandy towards the base. Continued over		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

GEOLOGICAL LOG

Page:- 14/23

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	306.18	0.74		Sandy carbonaceous mudstone with occasional wispy carbonaceous laminae and coaly pellets; contains up to 50% sand in a carbonaceous mudstone/FLSS laminites over basal 50 cm.		
	306.26	0.08		Shale, beige, abundant pyrophyllite grains, GBC.		
	306.34	0.08		Heavy dull coal; abundant brown mudstone laminae with 5% bright bands, GBC.		
				<u>(BASE OF COAL SECTION)</u>		
	307.00	0.66		Mudstone, green-grey; abundant disturbed bedding, coaly bands and laminae, minor bright coal bands; rare slickensides; core broken.		
	307.28	0.28		Sandy mudstone, green-grey; rare cross bedding, GBC.		
				<u>COAL SECTION</u>		
	307.50	0.22		Dull coal with vertical cleat and 10% bright bands; core broken over top 15 cm. GBC.		
	307.56	0.06		Sandy claystone, abundant wispy carbonaceous laminae, GBC.		4
	307.73	0.17		Dull coal with vertical cleat; core broken; 10% bright bands, GBC.		
	307.76	0.03		Sandy hard mudstone (possibly volcanic ash?) with sharp top and bottom contacts.		
	307.89	0.13		Dull coal, 10% bright bands, GBC.		
	308.12	0.23		Beige shaley claystone, coaly debris abundant.		
	308.18	0.06		Dull coal with 10% bright bands; vertical cleat; core broken.		
	308.30	0.12		Laminated heavy dull coal and brown claystone.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		Moist Ash V.C.M. F.C. SE				
			metres	%	%	%	%	%	% MJ/kg
4	307.22	307.89	0.61	100	6.7	42.0	21.6	36.4	-
5A	333.90	334.80	0.90		8.2	59.0	-	-	1.64
5B	334.80	336.88	2.08		6.6	31.9	26.6	41.5	1.47
5C	336.88	336.98	0.10		4.7	79.8	-	-	2.38
5D	336.98	338.07	1.09		5.2	50.3	23.7	26.0	1.67
Comb. 5B-5D	F 1.7				4.6	19.6	31.9	48.5	-

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	308.33	0.04	100	Brown mudstone, core broken.		
	308.41	0.08		Dull coal, 10% bright bands, GBC.		
	308.415	0.005		Mudstone, white, GBC.		
	308.42	0.005		Dull coal, GBC.		
	308.43	0.01		Mudstone, white, GBC.		
	308.64	0.21		Heavy dull coal and carbonaceous mudstone (50:50); white mudstone laminae common.		
	308.65	0.01		FMLSS.		
	308.70	0.05		Heavy dull coal and carbonaceous mudstone, (50:50).		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	308.83	0.13	100	Sandy Mudstone, green-grey, core broken, G.B.C.		
308.83	333.90	25.07		(BASE OF COAL SECTION) FMLSS, muddy towards the top of the unit, grey in colour; massive, rare wispy carbonaceous laminae, rare mudstone pellets, rare coaly debris, abundant carbonaceous mudstone laminae from 319.00-320.00 m; clay pellets conglomerate from 321.50-322.00 m. Clay debris from 322.00-323.00 m. Clay pellets from 323.00-324.00 m; Large pellet or clast of grey mudstone from, 323.20-.56 m. Coaly debris from 326.50-326.90 m; clay pellets from 326.90-328.00 m. Sand of brown shale from 322.41-.48 m. SBC.		
333.90	334.16	0.26		Mudstone, grey-green; occasional slickensides, sandy. GBC.		
	334.22	0.06		Dull coal, 1% bright bands.		
	334.23	0.01	100	Shale, brown.		
	334.38	0.14	93	Shale, beige.		5A
	334.56	0.18	100	Dull coal, 1% bright bands.		
	334.59	0.02	66	Shale, beige.		
	334.80	0.19	90	Dull coal 1% bright bands, core broken.		
	335.43	0.63	100	Dull coal, 10% bright bands, vertical cleat, core broken.		
	335.49	0.06		Sandy beige shale, sharp top and bottom contacts.		
	335.82	0.33		Dull coal, 10% bright bands.		5B
	335.83	0.01		Sandy beige shale, sharp top and bottom contacts.		
	336.88	1.05		Dull coal, 10% bright bands; core broken over basal 20 cm.		
	336.98	0.10		Mudstone, green abundant coaly debris, slickensides; core broken.		5C

Continued over

ASSAY DATA
Washability Results: Sample 5B-5D

SAMPLE No.	FROM metres	TO metres	RECOVERY		Density Fraction	Weight %	Ash %	Cumulative Floats	
			metres	%				Weight%	Ash%
					F1.4	34.2	10.9	34.2	10.9
					F1.6	29.9	24.0	64.1	17.0
					F1.7	4.6	41.2	68.7	18.6
					B1.7	31.3	75.8	100.0	36.5

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	337.30	0.32	100	Dull coal, 10% bright bands, core broken.		
	337.31	0.01		Mudstone, white, SBC.		
	337.61	0.30		Dull coal, SBC.		5D
	337.65	0.04		Brown sandy mudstone, SBC.		
	337.91	0.26		Dull coal, 10% bright bands, GBC.		
	338.07	0.16		Carbonaceous mudstone with a few bright bands GBC.		
				(BASE OF COAL SECTION)		
338.07	339.45	1.38		Sandy grey mudstone, finely laminated; laminae 1 mm wide; mudstone: sand in proportions (80:20). GBC.		
339.45	340.25	0.80		FLSS interlaminated with mudstone, (50:50). SBC.		
340.25	350.35	10.10		MFLSS, coaly debris from 344.00-344.50 m; coaly debris and mudstone clasts from 347.80-350.35 m. Occasional wispy carbonaceous laminae. Unit grey in colour, massive. Occasional sub-vertical joints SBC.		
				COAL SECTION		
350.35	351.46	1.11		Dull coal, 10% bright bands, poorly developed cleat, occasional slickensides, GBC.		6
351.46	351.74	0.28		Mudstone, dark grey, core broken, slightly carbonaceous, GBC.		
351.74	352.28	0.54		Mudstone, sandy; towards the base, core broken, unit light grey in colour, GBC.		
352.28	352.31	0.03		Dull coal, 5% bright bands, GBC.		
				(BASE OF COAL SECTION)		
352.31	353.20	0.89		FLSS, grey in colour, muddy, bedding horizontal SBC.		
353.20	353.85	0.65		Mudstone, dark grey, carbonaceous badly slickensided, GBC.		
353.85	354.47	0.62		Dull coal, well developed cleat, 10% bright bands. Occasional brown mudstone laminae in coal, core broken, GBC.		

Continued over

ASSAY DATA

Washability Data - sample 4.

SAMPLE No.	FROM metres	TO metres	RECOVERY		Moist Ash V.C.M. F.C.				SINKS	FLOATS	Wght	Ash	CUMULATIVE FLOATS	
			metres	%	%	%	%	WEIGHT %					ASH %	
6	350.35	351.46	1.11	100	5.1	39.3	22.3	26.4	51.40	F1.40	30.9	8.4	30.9	8.4
7	384.56	385.30	0.64	100	2.6	24.6	30.7	44.7	51.60	F1.70	25.7	21.7	56.6	14.4
8	410.45	411.30	0.85		5.4	44.2	19.3	26.5	51.70		13.6	35.8	69.6	18.4
9	420.69	422.53	1.84		4.8	33.0	22.8	44.2			30.4	61.2	100.0	31.4
9 F	at 1.7				3.3	15.1	-	-						
10	442.46	443.47	1.01		5.4	57.2	-	-						

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
353.47	364.40	10.93	100	FMLSS, light grey in colour, abundant cross bedding over top 50 cm; bedding dips at up to 30°. Minor wispy carbonaceous laminae. Mudstone pellets over basal 20 cm.		
364.40	366.10	1.70		Mudstone, sandy, pale green in colour. Shaley from Paleosol ? from (grits in a clayey matrix) GBC.		
366.10	367.38	1.28		FLSS, grey, massive, GBC.		
367.38	382.09	5.71		FMLSS, grey, massive.		
				<u>COAL SECTION</u>		
382.09	382.12	0.03		Dull coal, 10% bright bands. GBC.		
	383.24	0.90	80	Mudstone, grey-brown, abundant carbonaceous and shaley laminae, occasional slickensides,		
	383.36	0.12	100	Heavy dull coal interlaminated with grey mudstone (40:60) SBC.		
	383.48	0.12		Dull coal 10% bright bands abundant mudstone laminae GBC.		
	383.67	0.19		Dull coal interbedded with grey mudstone (40:60), shale laminae common GBC.		
	384.43	0.56	74	Mudstone, pale grey-green slickensides common core broken.		
	381.46	0.03	100	Carbonaceous claystone, black. core crumbly.		
	384.51	0.05		Dull coal, core shattered.		
	384.56	0.05		Shale, black, carbonaceous, core shattered, only crumbs.		
	385.30	0.64	73	Dull coal, 10% bright bands, some cleat; core broken GBC.		7
385.30	385.82	0.52	100	Mudstone, green-grey; abundant white shale laminae occasional slickensides occasional wispy carbonaceous laminae. GBC.		
385.82	385.87	0.05		Mudstone, black, carbonaceous, GBC		
385.87	386.07	0.20		Mudstone, green-grey, abundant wispy carbonaceous laminae GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
386.07	386.15	0.08	100	Dull coal, minor calcite on cleats, 10-15% bright bands. G.B.C. (BASE OF COAL SECTION)		
386.15	386.76	0.61	100	Mudstone, green-grey; abundant shaley laminae, core broken GBC.		
386.76	386.84	0.08	100	Dull coal 15% bright bands GBC.		
386.84	386.85	0.01	100	Shale, dark grey, core crushed and crumbly.		
386.85	386.92	0.07		Mudstone, green-grey; abundant wispy coaly laminae; coal bands common.		
386.92	387.12	0.20		Dull coal, 5% bright bands, GBC.		
387.12	388.00	0.85	98	Mudstone, green-grey, minor wispy carbona- ceous laminae, rare worm burrows. Core broken, slickensides common over the interval from 387.90-388.80 m; sandy towards the base, bioturbation abundant, GBC.		
390.25	392.73	2.48	100	FMLSS, grey, massive, rare wispy carbonaceous laminae, SBC.		
392.73	394.27	1.54		Mudstone, sandy, rare wispy carbonaceous laminae; occasional slickensides; SBC.		
394.27	394.28	0.01		Shale, brown, SBC.		
394.28	394.36	0.08		Dull coal, core broken, SBC.		
394.36	395.26	0.90		FLSS, grey, massive, SBC.		
395.26	407.88	12.62		FMLSS, grey, massive, occasional wispy carbonaceous laminae; occasional bands of carbonaceous mudstone pellets 1-2 mm and 1-2 mm GBC.		
407.88	408.12	1.24		Carbonaceous siltstone, core broken.		
408.12	409.29	1.17		FMLSS white-grey in colour, abundant wispy carbonaceous laminae over basal 50 cm; abundant carbonaceous mudstones pellets 1mm in diameter over basal 10 cm; SBC.		
409.29	409.77	0.48		Laminite of dull coal and carbonaceous mudstone, (50:50) with abundant white mudstone laminae over top 10 cm. Sand lenses over basal 10 cm. Minor shale laminae. SBC.		
409.77	410.45	0.68	100	FLSS grey-white, massive, minor wispy carbonaceous laminae, SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

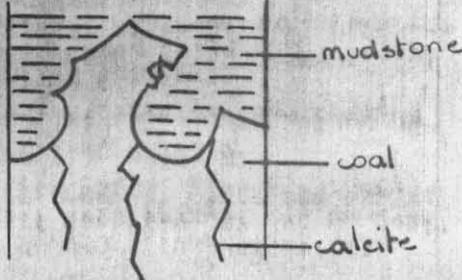
GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
<u>COAL SECTION</u>						
410.45	411.30	0.85	100	Dull coal, 10% bright bands core badly broken, G.B.C.		8
411.30	411.34	0.04		Shaley coal, G.B.C.		
<u>(BASE OF COAL SECTION)</u>						
411.34	412.00	0.66		Mudstone, green-grey; slickensides common; bioturbation(?) present. SBC.		
412.00	418.87	6.87		FMLSS grey massive.		
418.87	419.27	0.40		Laminite of siltstone and mudstone (50:50) grey in colour, laminae 1 mm wide; plant fossils common. GBC.		
<u>COAL SECTION</u>						
419.27	419.64	0.37		Dull coal, 1% bright bands, G.B.C.		
	420.69	1.05	96	Laminite of grey mudstone and siltstone (50:50); rare plant fossils, core broken; occasional slickensides GBC.		
420.69	420.98	0.29	100	Dull coal, 5%, bright bands, GBC.		
420.98	421.01	0.03		Mudstone, white-grey; laminated; GBC.		9
421.01	421.45	0.44		Dull coal, 5% bright bands, core badly broken; poorly developed cleat; no calcite GBC. Core expanded due to breakage.		
	421.49	0.04		Sandy carbonaceous mudstone, SBC.		
	422.53	1.04		Dull coal, core broken; 10% bright bands. GBC. Core expanded due to breakage.		
<u>(BASE OF COAL SECTION)</u>						
422.53	424.71	2.14		Mudstone, grey, rare wispy carbonaceous laminae, sandy towards the base. Slickensides slipping 5-30° over basal 20 cm. GBC.		
424.71	426.69	1.98		FMLSS, grey, occasional coaly debris and coaly bands 1-2 mm wide. Minor cross bedding, SBC.		
426.69	431.47	4.78		Laminite of mudstone and siltstone, minor plant fossils, grey in colour. As above, sandy over the interval 431.07-.37m; slickensides over basal 10 cm. GBC.		

ASSAY DATA

SAMPLE No	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
431.47	431.68	0.21	100	Dull coal, 5% bright bands, poorly developed "welded cleat"; - sealed with calcit; SBC.		
431.68	432.96	1.28		Interbedded and interlaminated carbonaceous siltstone and FMLSS; (30:70); Bedding dipping at up to 30°; GBC.		
432.96	435.39	2.43		FMLSS with abundant wispy carbonaceous laminae; bands of mudstone pellets 1-5 mm x 1-5 mm from 432.48-.54m; 434.01-.03m; 434.82-.90m; 434.94-435.00m; 435.05-.16 m.SBC.		
435.39	435.82	0.43		Mudstone, grey, finely laminated; GBC.		
435.82	436.00	0.18		Carbonaceous mudstone, black, SBC.		
436.00	436.01	0.01		Shale, beige, SBC.		
436.01	437.04	1.03		Carbonaceous shaley mudstone; dark grey-black in colour; core broken, SBC.		
437.04	437.83	0.79		Sandy grey mudstone, GBC.		
437.83	438.20	0.37		Dull shaley coal, core broken, 5% bright bands, GBC.		
438.20	442.00	3.47	91	Sandy grey mudstone; core broken; calcite(?) nodules 2 mm x 2 mm in disturbed bedding (bioturbation?) from 439.34 - .47 m. Core shaley and badly broken over basal 1 m (Core Loss of 0.33 m.		
442.00	442.46	0.46		Sandy grey mudstone core not broken; sand content 40-50%; Interesting irregular bottom contact with underlying coal:		
						
442.46	442.63	0.17		Dull coal, 5% bright bands, GBC.		
	443.09	0.46	100	Carbonaceous mudstone, and heavy dull coal, (50:50). GBC. <small>Continued over</small>		10

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS																
			metres	%																	

GEOLOGICAL LOG

Page:- 22/23

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	443.25	0.16	100	Shaley dull coal, 5% bright bands, SBC.		
	443.26	0.01		FLSS, SBC.		
	443.47	0.21		Heavy dull coal 10% bright bands, over basal 10 cm; SBC, slickensided,		10
				(BASE OF COAL SECTION)		
443.47	445.06	1.59		Shaley grey mudstone, slickensided, becoming sandy and more coherent after 0.80 m; very sandy over basal 30 cm; GBC.		
445.06	445.81	0.75		FMLSS, grey, massive, calcite impregnating		
446.81	447.65	1.04		Sandstone from 446.19 - .24 m.		
446.85	447.65	0.80		Mudstone, grey, laminated, "grinding marks" on coal from bit; deep grooves 1-5 mm deep. Mudstone quite hard. Slickensides over basal 15 m.		
447.65	447.86	0.21		Shale, core crumbly, grey in colour;		
447.86	448.00	0.14		Mudstone, grey.		
448.00	449.31	1.31		Carbonaceous mudstone, black, occasional shale laminae, some "algal mat" structures GBC.		
449.31	450.08	.77		Sandy carbonaceous mudstone with 20% quartzose sandstone, unit is black in colour, becoming sandier towards the base; GBC. Shaley over basal 20 cm.		
450.08	452.91	2.83		Interbedded quartz-rich sandstone and carbonaceous mudstone; Occasional mudstone pellets and minor bands 1 mm wide of bright coal; Interval of coarse quartzose sandstone and mudstone pellets 2 mm x 2-3 mm from 450.41-.69 m. SBC, dips at 100.		
452.91	467.61	14.70		FMLSS, grey, massive, green pellets from 457.39 -.71 m; SBC.		
457.61	467.64	0.03		Dull coal.		
457.64	471.38	3.74		FMLSS, abundant coaly debris over the top 40 cm.		
471.38	474.07	2.69		Mudstone shaley dark green abundant shale laminae core jointed, broken; abundant sandy laminae a few 'worm burrow structures, SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

GEOLOGICAL LOG

Page:- 23/23

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
474.07	474.14	0.07	100	Carbonaceous shale, SBC.		
474.14	474.32	0.18		Shale, beige, core broken; SBC.		
474.32	474.35	0.03		Carbonaceous mudstone SBC.		
474.35	474.44	0.09		Shale beige, SBC.		
474.44	474.48	0.04		Dull coal GBC.		
474.48	474.51	0.03		Shale beige SBC.		
474.51	474.62	0.11		Dull coal, 5% bright bands. Slickensided bottom contact dipping at 20°.		
474.62	475.00	0.38		Green mudstone, core broken, GBC.		
475.00	477.30	2.30		Green mudstone, interlaminated with FLSS (60:40); core broken from 474.22-.36 m, GBC		
477.30	478.11	0.81		FMLSS, with occasional wispy carbonaceous laminae.		
478.11	481.20	3.09		Interlaminated carbonaceous mudstone and quartz rich lithic sandstone 50:50 sand content increases towards the base GBC.		
481.20	484.71	3.51		FMLSS, grey, massive.		
484.71	490.95	6.24		Mudstone, grey, laminated, abundant shale laminae; occasional interbedded bands of quartz rich sandstone. GBC.		
490.95	493.97	3.02		Quartzose sandstone, (Q55) fine-medium grained; abundant mudstone laminae; minor mudstone pellets; SBC.		
493.97	494.30	0.33		Shale, brown, GBC.		
494.30	496.93	2.63		Mudstone brown-grey; GBC; sandy towards the base. QSS; abundant mudstone pellets, coaly laminae and coaly debris. SBC.		
				BASE OF FRESHWATER SEQUENCE OF THE UPPER PARMEENER SUPER-GROUP. TOP OF UPPER GLACIO-MARINE SEQUENCE OF THE LOWER PARMEENER SUPER-GROUP.		
496.93	502.00	5.07		Mudstone, dark green-grey; abundant angular quartz grits 1-2 mm in diameter.		
				EOH at 502.00 m.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

DRILLING TARGET:- Upper Marine Sequence of the Lower Permian Super Group, Duncan Seam												
REMARKS:-												
SURVEY DATA			not present; EFL = 1.09 m ASSAY DATA									
DEPTH metres	Bearing mag.	Inclin. degs	SAMPLE No.	FROM metres	TO metres	RECOVERY metres %		ASSAY RESULTS				

GEOLOGICAL LOG

Logged by:-

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
0	236.52	236.52	100	Dolerite, grey, hard; few fracture zones; joints filled with green chlorite (?) from 51.60 - 52.00; finer-grained over basal 15 m; sub-vertical cracks filled with white zeolite over basal 20 m; glassy over basal microphenocrysts abundant over basal 15 cm. Bottom contact melds into sediment; no abrupt sharp change; dolerite green-tinted over basal 40 cm; sediment severely baked over top 20 cm; baking less severe after top 20 cm. Sections of dolerite 10 cm long have been kept from each 3 m run for future reference.		
236.52	236.72	0.20	100	Mudstone, green-grey, hornfelsed. Sharp bottom contact, (SBC).		

Continued over:-

DEPARTMENT OF MINES—TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No.:- 80	MAP SHEET No. 49	DISTRICT FINGAL	LOCATION OF SITE:-
ON FINGAL TIER EAST OF THE MITCHELL FAULT			
R.L. OF SITE:- 592.20 m	SITE SURVEY ON MAP No.:	CORE SIZE:- NQ	
BEARING OF HOLE:-	AIR PHOTO No.:-	COMMENCED:- 1.6.1981	
INCLINATION OF HOLE:-	DRILL:- LONGYEAR 38 No. 2	COMPLETED:- 21.7.1981	
CO-ORDS OF SITE:- 595 300 m E. 5 381 907 m N.	DRILLER:- S. Mitchell	FINAL DEPTH (m):- 438.70 m	

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
236.72	237.45	0.73	100	Fine-medium grained lithic sandstone (FMLSS) with numerous wispy carbonaceous laminae Gradational bottom contact (GBC).		
237.45	237.65	0.20		Mudstone, green grey, baked hard, hornfelsed. GBC.		
237.65	238.59	0.94		FMLSS with coaly laminae common. SBC.		
238.59	239.44	0.85		Fine grained, very hard, black rock; possibly volcanic. Sample taken, (80A). Contains wisps of carbonaceous material and "bedding" where visible is "swirly" and disturbed. SBC.		
239.44	242.20	2.76		FMLSS, grey, massive, coaly wisps and debris common, SBC.		
242.20	242.30	0.10		Mudstone black silicified (probably as a result of dolerite intrusion). Core badly broken. SBC.		
242.30	242.52	0.22		Calcite replacement of sandstone, abundant wisps of carbon caught up in calcite.		
242.52	244.35	1.83		Laminite of FMLSS and black carbonaceous mudstone (50:50); occasional points; rare cross bedding dipping at up to 20°; some rheomorphic slumping;		
COAL SECTION						
244.35	244.94	0.59		Dull coal, core crushed; <10% bright bands; calcite on cleat.		
	245.38	0.44		Shaley carbonaceous mudstone core broken.		1.
	245.41	0.03		Shale, dark grey.		
	245.77	0.36		Dull coal, core crushed.		
	245.92	0.15		Heavy dull coal.		
	246.22	0.30		Carbonaceous mudstone core crushed; clayey.		
(BASE OF COAL SECTION)						

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		Moist Ash VCM F.C. ASSAY RESULTS (dry basis)			
			metres	%	%	%	%	%
1	244.35	246.22	1.87	100	4.0	75.1	-	-
2	333.09	339.18	1.09	100	6.9	59.9	-	-
3	347.65	347.92	0.27	100	3.2	33.6	24.9	41.5

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
246.22	246.96	0.74		Sandy grey mudstone core crushed.		
246.96	247.25	0	0	Core Loss 0.29 m.		
247.25	248.52	1.27		Fine grained lithic sandstone (FLSS), with mudstone (80:20). GBC.		
248.52	261.55	13.03		FMLSS; grey, massive, no wispy carbonaceous laminae, SBC.		
261.55	262.10	0.55		Mudstone, grey, core broken		
262.10	262.94	0.84		Mudstone, sandy; slightly carbonaceous; greasy to touch, slickensides common; GBC.		
262.94	263.16	0.22		Dull coal; core broken; calcite on cleats.		
263.16	263.58	0.42		Mudstone, dark grey, carbonaceous with minor plant fossils. SBC.		
263.58	267.44	3.86		Mudstone, grey, sandy towards the base; GBC.		
267.44	268.08	0.64		Laminite of grey mudstone, and FMLSS; (50:50) abundant wispy carbonaceous laminae dipping at up to 30° GBC.		
268.08	270.11	2.03		FMLSS grey massive wispy carbonaceous laminae common SBC.		
270.11	270.29	0.18		Mudstone grey very gradual interbedded bottom contact.		
270.29	271.13	0.74		FMLSS, grey, massive, wispy carbonaceous laminae common.		
271.13	283.18	12.05		FMLSS, grey massive, core broken, carbonaceous laminae abundant over basal 1.0 m.		
283.18	285.74	1.56		FMLSS, grey, massive, occasional clay and mudstone pellets; 1 cm x 2 mm; occasional coaly debris clasts; occasional sub-vertical joints; GBC.		
285.74	289.14	3.40		Coarse grained lithic sandstone, (CLSS); grey; massive. Calcite replacement with chunks of coaly debris and siltstone clasts from 281.40 - .51 m GBC. <small>continued over</small>		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

GEOLOGICAL LOG

Page:- 4/ 11

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
289.14	293.36	4.22		FMLSS; grey; massive; calcite replacement from 289.30 - .38 m. SBC.		
293.36	298.16	4.80		Mudstone, dark grey occasional slickensides; shaley over top 15 cm; wispy carbonaceous laminae common; minor "bioturbation" or disturbed bedding An ash band ("tonstein") from 294.18 - .22 m. Core broken over top 10 cm; shaley patches common and core broken from 295.20 - 298.16 m.		
298.16	298.66	0.50		Mudstone; grey, interbedded with FMLSS over basal 25 cm. GBC.		
298.66	301.16	2.50		FMLSS, light grey; massive; sub-vertical jointing over top 1 m. Core broken; occasional wispy carbonaceous laminae.		
301.16	301.36	0		CORE LOSS 0.30 m.		
301.36	326.36	24.60		FMLSS, grey, massive; rare mudstone and siltstone pellets; rare wispy coaly laminae; core broken from 309.96 - 310.36 m; core broken from 313.16 - 316.16 m; core loss of 0.40 m over this interval; sub-vertical joints from 313.16 - .16 m; SBC.		
326.36	326.59	0.23		Mudstone, grey; shaley; core broken; slickensides dipping at up to 45°, GBC.		
326.59	326.84	0.25		Mudstone, shaly, clayey; core crumbly. GBC.		
326.84	327.04	0.20		Mudstone, dark grey core cracked.		
<u>COAL SECTION</u>						
327.04	327.105	0.065		Dull coal, SBC.		
	327.11	0.005		Mudstone, white, SBC.		
	327.22	0.11		Dull coal laminated with carbonaceous mudstone (50:50) GBC.		
<u>(BASE OF COAL SECTION)</u>						
327.22	327.24	0.02		Shale, brown.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS												
			metres	%													

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
327.24	327.60	0.36		Carbonaceous mudstone, black.		
327.60	328.00	0.40		Mudstone, dark grey, slickensides dipping at 30-40°; core broken over the basal 20 cm.		
328.00	328.08	0.08		Mudstone, sandy, beige; abundant wispy carbonaceous laminae dipping at up to 40°. SBC.		
328.08	328.20	0.12		Clay pellet conglomerate with small pink pellets 1-2 mm x 2 - 4 mm; bedding dips at 40 - 50°; SBC dipping at 45°.		
328.20	329.61	1.41	100	Mudstone, grey; abundant wispy carbonaceous laminae dipping 20 - 40° over the top 10 cm; occasional sand lenses; occasional joints and slickensides zeolite pattern (zeolite in mudstone) over the interval.  GBC.		
329.61	332.29	2.56	95	FML33, occasional wispy carbonaceous laminae; sub-vertical joints; core broken. SBC. probable core loss of 0.12 cm. in this unit.		
332.29	332.74	0.45	100	Dull coal, core broken.		
332.74	332.75	0.01		Clay, beige, slump feature outlined in wispy coaly laminae. 		
332.75	332.79	0.04		Dull coal, interlaminated with mudstone over the basal 1 cm. GBC.		
332.79	332.97	0.18		Mudstone, grey, abundant wispy carbonaceous laminae and flecks. GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
332.97	334.00	1.03		FMLSS interlaminated with mudstone (80:20), GBC.		
334.00	336.98	2.98		Mudstone, sandy; sand content decreases with depth; shaley in parts; calcite nodule from 334.78 - .84 m (embedded in green shale); occasional slickensides and joints; bedding horizontal.		
336.98	337.35	0.37		Interbedded carbonaceous mudstone and grey mudstone (20:80) Carbonaceous mudstone content increases slightly with depth. Mudstone clayey and greasy. GBC.		
337.35	337.40	0.05		Carbonaceous mudstone, black.		
337.40	338.05	0.66		Carbonaceous mudstone, black interbedded with grey mudstone (50:50); beds up to 5 cm wide; dipping at 20°. Slickensided towards the base.		
				<u>COAL SECTION</u>		
338.06	338.09	0.03		Shale, white, crumbly SBC.		
338.09	338.50	0.41		Heavy dull coal and carbonaceous mudstone (50:50).		
338.50	338.53	0.03		Shale, brown. SBC.		
338.53	338.59	0.04		Heavy dull coal. SBC.		
338.59	338.61	0.04		Shale, brown. SBC.		
338.61	338.70	0.09		Dull coal. SBC.		2
338.70	338.77	0.07		Shale, brown. SBC.		
338.77	338.96	0.19		Dull coal. SBC.		
338.96	338.99	0.03		Clay, brown. SBC.		
338.99	339.18	0.19		Dull coal, SBC.		
339.18	339.98	0.80		Mudstone, grey; sandy.		
				<u>BASE OF COAL SECTION</u>		
339.98	341.75	1.77		Mudstone, grey, sandy with abundant wispy carbonaceous laminae dipping at up to 10°. core broken. GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
341.75	341.80	0.05		Carbonaceous mudstone, core broken and crushed. SBC.		
341.80	341.86	0.06		Calcite replacement of mudstone SBC.		
341.86	345.98	4.12		Sandy grey mudstone (with 20% sand); sand content decreases with depth. GBC.		
345.98	347.48	1.50		Mudstone interlaminated with FMLSS (50:50) Abundant wispy carbonaceous laminae dipping at up to 10°. SBC.		
347.48	347.65	0.17		Sandy carbonaceous mudstone with minor pink clay pellets 1 - 3 mm in diameter; GBC.		
347.65	347.92	0.27		Dull coal, core crushed; minor calcite veins, GBC.		3.
347.92	348.07	0.15		Sandy mudstone; bioturbated.		
348.07	348.33	0.26		Carbonaceous siltstone with plant fossils, GBC.		
348.33	348.93	0.60		FMLSS, SBC.		
348.93	349.83	0.90		Carbonaceous siltstone interlaminated with FMLSS; laminae 1 - 3 mm wide; abundant biotite grains; cross bedding dipping at up to 10°; GBC.		
349.83	352.59	2.76		FMLSS, massive; occasional clasts of mudstone and siltstone; occasional patches of CLSS; core broken. SBC.		
352.59	353.28	0.69		Mudstone; grey; laminated; minor wispy carbonaceous laminae; GBC.		
353.28	353.37	0.09		Dull coal, core broken .		
353.37	353.45	0.08		Calcite.		
353.45	354.16	0.71		Mudstone; beige; sandy; slickensides dipping at up to 45°.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
354.16	354.85	0.69		Carbonaceous mudstone laminated with grey mudstone (80:20). Laminae 1 mm wide; sandy; abundant biotite grains.		
354.85	355.25	0.40		Heavy dull coal, GBC.		
355.25	356.05	0.80		Mudstone, grey; abundant wispy carbonaceous laminae.		
356.05	357.29	1.24		Mudstone, grey; interbedded with FLSS; beds 1-2 cm wide GBC.		
357.29	357.49	0.20		Mudstone, grey, crumbly; core broken, SBC.		
357.49	357.51	0.02		Shale, beige, SBC.		
357.51	351.98	0.47		Mudstone, grey.		
357.98	358.05	0.07		Mudstone, black, carbonaceous with brown mudstone pellets.		
358.05	358.13	0.08		Mudstone, brown SBC.		
358.13	358.58	0.45		Carbonaceous mudstone black; core broken over basal 10 cm.		
358.58	359.30	0.72		Mudstone, beige; few wispy carbonaceous laminae; sandy towards the base.		
359.30	360.43	1.13		Mudstone interbedded with FLSS: beds 2-3 cm wide; bedding horizontal, GBC.		
360.43	261.73	1.30		Mudstone, grey, laminated; abundant wispy carbonaceous laminae dipping at up to 45°. Interbedded with FMLSS over the basal 25 cm. GBC.		
361.73	363.44	1.71		FMLSS with wispy carbonaceous laminae; muddy over top 30 cm. SBC.		
363.44	364.05	0.61		Mudstone; laminated; clasts ripped up" and redeposited at top of unit.		
364.05	364.06	0.01		Shale.		
364.06	364.73	0.67		Mudstone, green-grey; core broken; some wispy carbonaceous laminae SBC. <small>Continued over</small>		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS														
			metres	%															

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
364.73	366.65	1.92		FMLSS, massive. SBC.		
366.65	366.85	0.20		Mudstone, grey, SBC.		
366.85	367.49	0.64		FMLSS, massive, SBC.		
367.49	369.39	1.90		Mudstone, dark grey; laminated; abundant wispy carbonaceous laminae.		
369.39	369.49	0.10		Siltstone; sandy; beige; GBC.		
369.49	373.03	3.54		FMLSS; core jointed and broken, over top 0.50m; abundant biotite grains; unit quartz rich; interbedded with siltstone over basal 50 cm. Core loss of 0.30 m in this unit.		
373.03	373.68	0.65		CLSS; quartz-rich; abundant pink claystone pellets; mudstone pellets and coaly debris; coaly stringers or "spars" common; core broken SBC.		
373.68	390.37	16.69		FMLSS; occasional wispy carbonaceous laminae dipping at up to 20°; clast of siltstone from 382.47 - .54 m; coaly debris from 382.41 - .81 m; and from 385.83 - 389.13 m; 1 cm calcite from 388.54 - .55 m; coaly debris from 388.55 - .76 m.		
390.37	390.61	0.24		FMLSS, interlaminated with carbonaceous siltstone; (90:10) Minor rheomorphic slumping and disturbed bedding. SBC.		
390.61	390.69	0.08		Carbonaceous siltstone, GBC.		
390.69	391.03	0.34		Mudstone, grey, sandy		
391.03	392.21	1.18		FMLSS interbedded with grey mudstone, 80:20; beds 2-3 cm wide; minor coaly wisps.		
392.21	392.57	0.36		Carbonaceous mudstone of mudstone laminite.		
392.57	392.88	0.31		FLSS, massive GBC.		
392.88	393.93	1.05		FMLSS, SBC.		
393.93	394.08	0.15		Mudstone, brown.		
394.08	394.10	0.02		Shale, beige.		
394.10	394.15	0.06		Carbonaceous mudstone; brown-black core broken.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
394.16	394.19	0.03		Claystone, beige.		
394.19	394.26	0.07		Carbonaceous mudstone.		
394.26	394.28	0.02		Volcanic ash (?) or very hard claystone, with wisps of coal. SBC.		
394.28	394.33	0.05		Sandy carbonaceous mudstone.		
394.33	395.33	1.00		Mudstone with minor sand.		
395.33	395.37	0.04		Volcanic ash (?) black in colour.		
395.37	393.23	2.86		Mudstone, grey; minor sand.		
398.23	399.53	1.30		FMLSS interlaminated with mudstone (80:20). GBC		
399.53	407.72	8.19		Quartzose sandstone (QSS); white; abundant biotite grains and wispy carbonaceous laminae. Interbedded with black siltstone over the interval 401.61 - 402.11 m. SBC.		
407.72	409.50	1.78		Mudstone, grey. GBC.		
409.50	410.06	0.56		FMLSS, massive; grey.		
410.06	410.63	0.57		Mudstone, grey, laminated, GBC.		
410.63	410.77	0.14		Mudstone; carbonaceous GBC.		
410.77	410.97	0.20		Mudstone; grey; abundant wispy carbonaceous laminae.		
410.97	411.71	0.74		Mudstone interbedded with FLSS; beds 5 - 10 cm GBC.		
411.71	411.86	0.15		Mudstone, grey. GBC.		
411.86	411.94	0.08		FMLSS, grey, massive.		
411.94	412.02	0.08		Mudstone; grey, GBC.		
412.02	414.88	2.86		Mudstone, interbedded with FMLSS; quartz rich.		
414.88	415.08	0.20		Mudstone, grey. GBC.		
415.08	415.41	0.33		FQSS; white, GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
415.41	415.63	0.22		FLSS interlaminated with grey mudstone, GBC.		
415.63	416.43	0.80		Mudstone, shaley; sandy over basal 30 cm.		
416.43	416.67	0.24		FLSS; quartz rich; interlaminated with mudstone (50:50) GBC.		
416.67	416.89	0.22		Siltstone, black.		
416.89	416.93	0.04		Clay; beige.		
416.93	417.04	0.11		Siltstone, black.		
417.04	417.94	0.90		Mudstone; sandy; beige. SBC.		
417.94	418.98	1.04		QSS abundant wispy carbonaceous laminae; occasional mudstone pellets. SBC.		
418.98	419.91	0.91		Siltstone; brown; laminated GBC.		
419.91	420.49	0.58		Siltstone; interbedded with QSS; (50:50) GBC.		
420.49	424.18	3.69		QSS with wispy coaly laminae.		
424.18	425.95	1.77		Mudstone, green grey; reworked Lower Parmeener Super group, sediments.		
425.95	426.81	0.86		QSS, white. SBC.		
				BASE OF UPPER PARMEENER SUPERGROUP SILICLASTIC SEQUENCE. TOP OF LOWER PARMEENER SUPERGROUP MARINE SEQUENCE.		
426.81	438.70	11.74	98	Mudstone, green-grey with abundant quartz grits. E.O.H. at 438.70 m.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

DRILLING TARGET:- Glacio-Marine sequence of the Lower Parmeener Super-Group.																			
REMARKS:- Duncan Seam split (1.05 and 0.73m); East Fingal Splits 1.14 and 1.48m thick.																			
SURVEY DATA					ASSAY DATA														
DEPTH metres	Bearing mag.	Inclin. degs	SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS											
						metres	%												

GEOLOGICAL LOG Logged by:- C.A. Bacon

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
0	4.63	0	0	Overburden of clay and weathered dolerite.		
4.63	34.63	30.00	100	Extremely weathered, friable dolerite, yellow in colour; clayey.		
34.63	105.97	71.34	100	Medium grained, hard, dark grey dolerite; occasional veins of calcite and/or white zeolite; sub-vertical fractures over basal 15m. Glassy and very dark grey over basal 2m. Small angular phenocrysts 1mm in diameter visible in glassy dolerite. Overall, the dolerite fines towards the base. Chilled contact:		

— dolerite
 — halo with clinophlerite
 — baked siltstone
 — veins of white zeolite

Continued over:-

DEPARTMENT OF MINES—TASMANIA
DIAMOND DRILL CORE RECORD

HOLE No.:- 81	MAP SHEET No. 49	DISTRICT St Marys	LOCATION OF SITE:-
On the Eastern End of Fingal Tier			
R.L. OF SITE:- 647.50m	SITE SURVEY ON MAP No.:	CORE SIZE:- NQ	
BEARING OF HOLE:-	AIR PHOTO No.:-	COMMENCED:- 26.6.1981	
INCLINATION OF HOLE:-	DRILL:- Longyear 44 No. 1	COMPLETED:- 28.8.1981	
CO-ORDS OF SITE:- 593 053m E. 5 385 006m N.	DRILLER:- C. Mitchell	FINAL DEPTH (m):- 438.62m	

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				dipping at 30°. Basal 30cm of dolerite severely chilled; abundant veins of red zeolite (heulandite and/or clinoptilerlite) and white zeolite. Halo of pink tinge around contact. A sample of dolerite (10cm) has been retained from each 3m run for future study purposes.		
105.97	106.77	0.80	100	Baked siltstone; dark grey abundant veins of white zeolite; grades into mudstone.		
106.77	114.15	7.38		Mudstone; baked; hornfelsed; very hard, core fractured and shattered along joints 60-70° to core axis; abundant calcite and/or zeolite on the joint faces. Core dominantly green-grey; some patches of pale grey and mottled black-green mudstone. Minor carbonaceous mudstone (baked, hard) intervals. Carbonaceous from 112.87-114.02m. Grades into sandstone from 114.00-114.15m		
114.15	124.21	10.06		Fine grained lithic sandstone, (FLSS); very muddy over top 50cm; bedding dipping at 10°; green-grey in colour core broken; core loss of 37cm in the run from 115.79-118.79m. Abundant mudstone laminae and small mudstone pellets at the top of the unit. Mudstone pellet conglomerate from 118.79-119.40m; pellets 1-3mm x 2-3mm; core tinged pink and green in parts; core still baked. Core loss of 7cm from 223.60-223.67m. Gradational bottom contact. GBC.		
124.21	125.50	1.29		Mudstone, white, chalcedony-like; baked very hard. Core broken and fractured; vague bedding planes visible. GBC.		
125.50	127.84	2.34		Mudstone, dark grey; abundance of small mudstone pellets and biotite grains. Tinged pink and green towards the base - effect of heating by the dolerite. GBC.		
127.84	129.70	1.86		FLSS, grey, GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

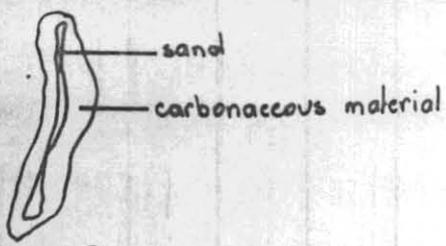
FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
129.70	134.27	4.57		Fine-medium grained lithic sandstone (FMLSS); minor cross bedding; minor wispy carbonaceous laminae some bioturbation. Abundant mudstone laminae and minor mudstone intervals from 130.32-130.50m; sharp bottom contact, SBC.		
134.27	137.99	3.72		Carbonaceous mudstone, black; core broken; sandy; GBC.		
137.99	138.47	0.48		FLSS; silty; core laminated; laminae 1mm wide. GBC.		
138.47	138.51	0.04		Shale, white, SBC.		
138.51	138.60	0.09		Siltstone, black, carbonaceous. GBC.		
138.60	138.87	0.27		Mudstone, grey, shaley. GBC.		
138.87	139.21	0.34		Mudstone, carbonaceous, sandy, GBC.		
139.21	139.85	0.64		Mudstone, grey, GBC. Tinges of green, and shaley in parts.		
139.85	143.17	3.32		Carbonaceous mudstone, black, slickensides at 45° to core axis; sandy, shaley in parts, mudstone pellets common, GBC.		
143.17	145.21	2.04		Mudstone; green; tinged with red mottled patterns; unit hard; rootlet or worm burrow structures common; looks horn-felsed. GBC.		
145.21	146.91	1.70		Carbonaceous mudstone, black, very sandy. Shaley from 146.00-146.50m; GBC.		
146.91	149.18	2.27		Mudstone, dark grey; sandy; interbedded with carbonaceous mudstone (60:40); core cracked along joint planes running 20-30° to core axis; minor shaley intervals; GBC.		
149.18	149.87	0.69		Carbonaceous mudstone pellet conglomerate; pellets 0.5-1cm in diameter; matrix of FMLSS. SBC.		
149.87	150.33	0.46		FLSS, carbonaceous; worm burrow structures common; filled in with sand.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				 <p>SBC, dips at 5°.</p>		
150.33	154.64	4.31		FMLSS; grey, massive; minor mudstone pellets minor wispy carbonaceous laminae SBC.		
154.64	154.90	0.26		Carbonaceous siltstone, GBC.		
154.90	154.95	0.05		Siltstone and mudstone pellet conglomerate in matrix of coarse grained lithic sandstone. SBC.		
154.95	155.50	0.55		FMLSS, grey, vague cross bedding dipping up to 10°. SBC.		
155.50	155.97	0.47		FMLSS, grey; mud pellets over basal 3cm. SBC.		
155.97	159.82	3.85		FLSS with abundant mudstone laminae; cross bedding 10-20° common.		
159.82	161.17	1.35		Mudstone, sandy; core cracked (contains swelling clays), abundant veins of calcite, shaley and sandy in parts. GBC.		
161.17	172.65	11.48	100	FMLSS, abundant mudstone laminae; mudstone pellets from 163.80-164.20m; shaley and muddy over the interval 165.60-166.10m wispy carbonaceous laminae dipping at up to 10° common GBC.		
172.65	175.15	1.50	60	Conglomerate - DALMAYNE (?) CONGLOMERATE. Matrix of FMLSS; grey; containing well rounded pebbles up to 4cm in diameter of quartzite, coal, mudstone, sandstone and acid volcanic rocks. CORE LOSS of 1m in this unit.		
175.15	180.86	5.71	100	FMLSS, grey; coaly spars common occasional wispy carbonaceous laminae, SBC.		
180.86	180.99	0.13	100	Dull coal; 1-2% bright bands.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
180.99	184.86	3.09	78	Mudstone, sandy; brown over top 0.50m grading into grey mudstone then white mudstone over basal 1m. Wispy carbonaceous laminae; shale laminae common; few very small mudstone pellets unit very hard (silicified?) over basal 30 cm; minor rheomorphic slumping. GBC CORE LOSS of 76cm from 182.05-182.81m.		
184.86	197.62	12.65	99	FLSS; grey, massive. CORE LOSS of 6cm from 86.70-86.76m; CORE LOSS of 5cm from 187.86-187.91m. Minor wispy carbonaceous laminae; rare coaly debris and mudstone pellets; coal band from 196.02-106.06m, coaly debris abundant over basal 0.50m. SBC, dips at 5°.		
197.62	198.21	0.59	100	Mudstone, grey; abundant bioturbation - shown by broken wispy carbonaceous laminae; sand lenses common, mudstone pellets 0.5cm in diameter at base of unit. SBC.		
198.21	198.23	0.02		Carbonaceous mudstone, sandy. SBC.		
198.23	198.42	0.19		Carbonaceous mudstone with pink mudstone pellets over top 5cm; brown shale laminae over basal 5cm. SBC.		
				COAL SECTION		
198.42	198.48	0.06		Dull coal, no bright bands. SBC.		
	198.56	0.08		Shale, brown, sandy with mudstone pellets. SBC.		
	198.66	0.10		Dull coal, poor cleat, 1-2% bright bands. GBC.		
	198.68	0.02		Ash band (?) - tonstein. Pink in colour with coaly debris common. SBC. Sample taken - 81A		1
	198.78	0.10		Dull coal; poor cleat; no bright bands, GBC.		
	198.80	0.02		Sand lens, SBC.		
	199.00	0.20		Dull coal, 10% bright bands; calcite on cleat. SBC.		
	199.01	0.01		Sand lens. SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		Moist %	Ash %	VCM %	F.C. %	ASSAY RESULTS Seam	Appt S.G.
			metres	%						
1	198.56	199.69	1.13	100	4.3	52.6	-	-	A	
2	226.90	227.92	1.02	100	6.8	77.6	-	-	A	
3A	249.15	251.09	1.94	100	5.0	64.1	-	-	B	1.87
3B		252.88	1.79		8.8	90.5	-	-	B	2.21
3C		253.98	1.10		4.7	58.6	-	-	B	1.75
4	278.05	280.90	2.85	100	7.1	67.3	-	-	C	

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	199.09	0.09		Dull coal, 1-2% bright bands, GBC.		
	199.12	0.03		Mudstone, tinged pink; abundant coaly debris, mud pellets at top of band. SBC.		
	199.26	0.04		Dull coal, GBC.		
	199.34	0.18		Mudstone, grey, slickensided, shaley, GBC.		
	199.69	0.35		Dull coal 10% bright bands, well developed cleat GBC.		1
<u>BASE OF COAL SECTION</u>						
199.69	199.85	0.16		Mudstone, light grey, abundant coaly spars, GBC.		
199.85	200.08	0.23		Mudstone, pink, with clay blebs and wispy carbonaceous laminae. Sample taken - 81B.		81B
200.08	200.29	0.21		Interbedded dull coal and grey mudstone (50:50); bright coal bands common. GBC.		
200.29	205.73	5.44		FLSS laminated and grey cross bedding dipping at up to 10°. Mudstone laminae common SBC.		
205.73	221.16	15.43		FMLSS grey massive occasional patches of coaly debris and coaly spars; as from 213.00-214.00, 216.00-216.50m, SBC.		
221.16	222.47	1.31		Mudstone pale grey bioturbation quite severely sand and wispy carbonaceous laminae common, GBC.		
222.47	224.73	1.26		FMLSS grey laminated. SBC. Core broken in parts; mudstone laminae common.		
224.73	224.76	0.03		Shale, white SBC.		
224.76	224.79	0.03		Carbonaceous mudstone, black, SBC.		
224.79	224.82	0.03		Shale brown SBC.		
224.82	224.88	0.06		Sandy carbonaceous mudstone, GBC.		
224.88	226.13	1.25		FLSS laminated grey core broken over top 20cm mudstone laminae common.		
226.13	226.20	0.07		Shale beige with wispy carbonaceous laminae SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS												
			metres	%													

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
<u>COAL SECTION - POOR QUALITY</u>						
	226.215	0.015		Dull coal SBC.		
	226.23	0.015		Shale brown SBC.		
	226.40	0.17		Sandy carbonaceous mudstone black; abundant sand grains. SBC.		
	226.72	0.32		Mudstone green SBC.		
	226.90	0.18		Shale beige SBC.		
	227.04	0.14		Dull coal.		
	227.57	0.53		Carbonaceous mudstone with sand grains small mudstone pellets and brown shale laminae GBC.		
	227.65	0.09		Shale brown GBC.		2
	227.79	0.13		Carbonaceous mudstone with sand lenses over basal 5cm. GBC.		
	227.92	0.13		Dull coal, GBC; 10% bright bands.		
	227.99	0.07		Mudstone dark grey few coaly bands GBC.		
<u>BASE OF COAL SECTION</u>						
227.99	229.51	1.52		Laminite of FLSS and grey mudstone (50:50); finely banded minor disturbed bedding. Core cracked vertically. SBC.		
229.51	229.68	0.17		Shale, beige, speckled with pyrophyllite grains; SBC.		
229.68	229.87	0.19		Sandy carbonaceous mudstone with abundant pink mudstone pellets up to 0.5cm in diameter SBC.		
229.87	229.90	0.03		FLSS - sand lens. SBC.		
229.90	230.07	0.17		Carbonaceous mudstone, clayey and shaley; pink mudstone pellets common.		
230.07	230.82	0.75		Interbedded sandy shale (brown) and carbonaceous mudstone (black) (50:50); GBC.		
<u>COAL SECTION - POOR QUALITY, NOT SAMPLED</u>						
230.82	231.00	0.18		Heavy dull coal, GBC.		
	231.13	0.13		Shale, beige, SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	231.21	0	0.08	Heavy dull coal, SBC.		
	231.39	0	0.18	Mudstone, grey-green with abundant wispy carbonaceous laminae; core broken, unit hard; silicified; SBC dips at 10°.		
	231.73	0	0.35	Shale beige, speckled with pyrophyllite grains, friable, SBC.		
	231.81	0	0.07	Heavy dull coal, GBC.		
	231.87	0	0.06	Sandy shale, GBC.		
	232.04	0	0.17	Heavy dull coal with pink mudstone pellets 2-4mm in diameter.		
	232.07	0	0.03	Brown shale, SBC.		
	232.38	0	0.31	Interbedded heavy dull coal and brown mudstone, 1% bright bands; (50:50); abundant shale laminae sand grains common.		
				<u>BASE OF COAL SECTION</u>		
232.38	233.58	1	1.20	FLSS, grey, shaley, few silicified mudstone bands 0.5cm wide; GBC.		
233.58	234.40	0	0.82	Shale, pale brown-white; few pink mudstone bands.		
234.40	235.36	0	0.96	FLSS, grey, laminated, SBC.		
235.36	249.15	5	5.79	FMLSS grey massive, Wispy carbonaceous laminae over the basal 1m; coaly debris abundant over the basal 50cm. Band of dull coal from 248.85-248.92m. Bottom contact sharp eroded, coal seam has been partly eroded away.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS														
			metres	%															

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
254.50	254.95	0.45		Laminite of carbonaceous and grey mudstone (50:50); highly carbonaceous over top 30cm; sandy towards the base. SBC.		
254.95	254.98	0.03		Mudstone, beige; SBC.		
254.98	257.50	2.52		FLSS; highly carbonaceous at the top; abundant bioturbation over the top 1,20m; minor coaly debris and rare mudstone pellets. SBC.		
257.50	274.61	17.11		FMLSS, grey, rare wispy carbonaceous laminae; mudstone pellets and coaly debris common from 264.00-264.30m; band of coal from 264.65-264.69m; calcite nodule from 267.24-267.29m; coaly spars common over basal 2m. Band of carbonaceous mudstone from 274.33-274.40m. SBC.		
274.01	276.06	2.05		Carbonaceous siltstone, black laminated with occasional plant fossils; (e.g. <i>Rienetsia</i> -like leaves) finely banded; sand laminae common. Becomes more carbonaceous towards the base GBC.		
276.06	276.55	0.49		Carbonaceous mudstone, black abundant plant fossils; sandy, shaley. SBC.		
276.55	276.59	0.04		Shale, beige, friable SBC.		
276.59	277.27	0.68		Carbonaceous mudstone, shaley, black abundant shale laminae muddy towards the base SBC.		
277.27	277.29	0.02		Shale beige, SBC.		
277.29	278.03	0.74		Carbonaceous mudstone black silty and sandy, interbedded with sandy shale 50:50 over basal 50cm, SBC.		
278.03	278.05	0.02		Mudstone, green, shaley.		
				<u>COAL SECTION</u>		
278.05	278.19	0.14		Heavy dull coal.		4
	278.22	0.03		Sandy brown-beige shale.		
	278.32	0.10		Dull coal, no bright bands, SBC.		
	278.33	0.06		Sandy carbonaceous mudstone, SBC.		
	278.41	0.03		Shale, white with calcite; SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	278.42	0.01		Carbonaceous mudstone, SBC.		
	278.48	0.06		Shale, brown, friable, SBC.		
	278.63	0.15		Dull coal, no bright bands.		
	279.76	1.13		Shale, white friable SBC.		
	279.85	0.09		Dull coal no bright bands, SBC.		
	279.86	0.01		Shale brown.		
	279.91	0.05		Sandy dull coal.		
	279.95	0.04		Dull coal.		
	279.955	0.005		Sand lens.		
	280.12	0.01		Shale white.		
	280.17	0.05		Dull coal.		
	280.18	0.01		Shale white.		
	280.68	0.50		Carbonaceous mudstone, in parts sandy. SBC.		
	280.71	0.03		Shale white friable SBC.		
	280.77	0.06		Dull coal no bright bands.		
	280.79	0.02		Shale brown friable. SBC.		
	290.90	0.11		Sandy carbonaceous mudstone becoming less carbonaceous towards the base.		4
BASE OF COAL SECTION						
280.90	280.93	0.03		Mudstone, grey, with carbonaceous flecks, GBC.		
280.93	280.95	0.02		Mudstone, black, carbonaceous.		
280.95	280.97	0.02		Mudstone, grey with squashed mudstone lenses; sandy GBC.		
280.97	280.98	0.01		Sandy coherent, shale, brown.		
280.98	281.00	0.02		Dull coal, 2% bright bands.		
281.00	281.06	0.06		FLSS with wispy carbonaceous laminae.		
281.06	281.09	0.03		Dull coal, 2% bright bands.		
281.09	282.82	1.73		FLSS, carbonaceous laminae and bands of coal common over top 50cm. Laminated; interbedded with heavy dull coal for next over basal 10cm.		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

GEOLOGICAL LOG

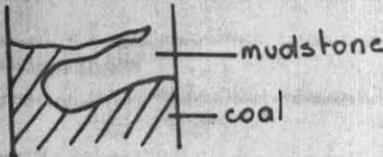
FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
COAL SECTION - NOT SAMPLED						
282.82	282.92	0.10		Dull coal, 10% bright bands, cleat with calcite GBC.		
	283.03	0.11		Interbedded pink shaley mudstone and dull coal (50:50); abundant pink mudstone pellets.		
	283.15	0.12		Dull coal, 5% bright bands.		
	283.16	0.01		Sand lens.		
	283.31	0.15		Dull coal, 10% bright bands, SBC.		
	283.53	0.22		Shale beige, SBC.		
	283.62	0.09		Dull coal, 10% bright bands, SBC.		
	283.67	0.05		Mudstone, grey, core broken.		
	283.72	0.05		Dull coal, 10% bright bands.		
	283.77	0.05		Mudstone, grey with carbonaceous laminae; SBC.		
	283.80	0.03		Shale, brown.		
	284.06	0.26		Dull coal interbedded with grey mudstone, (40:60).		
BASE OF COAL SECTION						
284.06	285.01	0.95		Mudstone, grey, abundant wispy carbonaceous laminae, SBC.		
285.01	310.76	26.75		FMLSS, occasional coaly debris; grey, massive; occasional mudstone pellets and rare wispy coaly laminae. SBC.		
COAL SECTION						
310.76	310.82	0.06		Mudstone, grey, with wispy carbonaceous laminae. SBC.		5A
	311.00	0.18		Dull coal, 1-2% bright bands, SBC.		
	311.21	0.21		Shale, dark brown, crumbly, SBC.		
	311.41	0.20		Dull coal, 5% bright bands, SBC.		
	311.51	0.10		Shale, white, crumbly, SBC.		
	311.82	0.31		Dull coal, poor cleat, 5-10% bright bands, SBC.		5B

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		Moist %	Ash %	VCM %	F.C. %	ASSAY RESULTS	
			metres	%					Seam	S.G.
5A	310.76	311.51	0.75	100	5.5	79.0	-	-	D	1.81
5B		311.96	0.45		6.7	37.0				1.55
5C		312.41	0.45		6.2	72.0				1.89
5D		313.96	1.22		6.8	27.3				1.42
5E		364.13	0.33		3.5	62.9				2.21
Composite	5B-5D	Inclusive			6.4	40.9	23.1	36.0		
"	"	" F1.7			5.8	20.0	29.8	50.2		
Density Fraction 5B-5D					Weight Ash		Cumulative Floats			
					%	%	Weight %	Ash %		
	Floats	1-4			39.4	10.9	39.4	10.9		
	S1.4	F1.6			22.5	26.5	61.9	16.6		
	S1.6	F1.7			6.0	39.4	67.9	18.6		
	Sinks	1.7			32.1	74.9	100.0	36.7		

GEOLOGICAL LOG

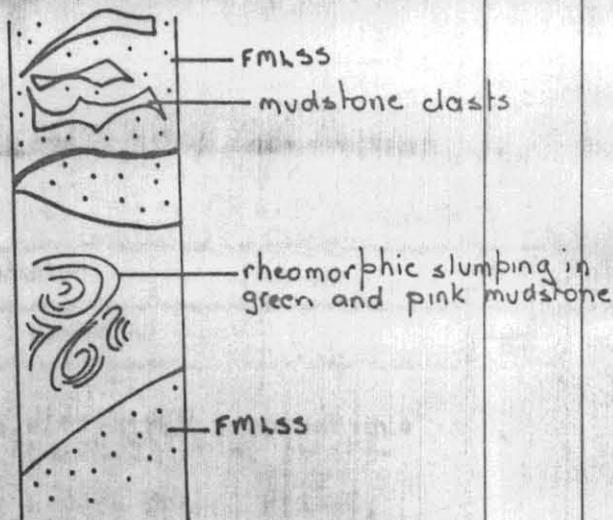
FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	311.83	0.01		Mudstone, green-grey.		
	311.96	0.13		Dull coal with brown shale laminae common. GBC.		
	312.10	0.14		Sandy grey mudstone, GBC.		5C
	312.12	0.02		Carbonaceous black mudstone, GBC.		
	312.15	0.03		Dull coal, SBC.		
	312.25	0.10		Shale, white, crumbly. SBC.		
	312.38	0.13		Dull coal, SBC.		
	312.41	0.03		Shale, brown, crumbly. SBC.		
	313.63	1.22		Dull coal, 10% bright bands; sub-vertical cleat with calcite.		5D
	313.96	0.33		Dull coal interbedded with grey mudstone (50:50); abundant bright bands.		5E
BASE OF COAL SECTION						
313.96	314.78	0.82		Mudstone, grey, laminated.		
314.78	329.70	14.92		FMLSS, grey, massive, SBC.		
329.70	329.79	0.09		Mudstone, occasional coaly flecks, irregular bottom contact.		
						
COAL SECTION - NOT SAMPLED SEAM E						
329.79	329.98	0.19		Dull coal, 5% bright bands, SBC.		
329.98	330.10	0.12		Mudstone, light grey laminated, GBC.		
330.10	330.14	0.04		Dull coal and grey mudstone laminite, (50:50), SBC.		
330.14	330.15	0.01		Shale, white, SBC.		
	330.24	0.09		Carbonaceous mudstone black GBC; slickensides common.		
	330.35	0.11		Dull coal, GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	330.39	0.04		Laminite of dull coal and grey mudstone; SBC.		
	330.55	0.16		Dull coal, 10% bright bands, SBC.		
	330.75	0.20		Laminite of dull coal and grey mudstone (60:40); abundant brown shale laminae, SBC. Slickensides towards the base.		
BASE OF COAL SECTION						
330.75	331.54	0.89		Mudstone, grey, clayey; core cracked and broken; carbonaceous mudstone intervals; GBC.		
331.54	334.04	2.50		FLSS, grey, minor rootlet type structures; cross bedding dipping at up to 10° common; laminated in parts. SBC.		
334.04	363.08	29.04		FMLSS, grey massive; minor wispy carbonaceous laminae; bands of coal from 344.28-344.35m; 344.55-344.61m; coaly debris and mudstone pellets from 344.24-344.80m. Coal pellets over the interval 348.06-348.26. Mudstone swirls in sandstone from 351.90-351.98m.		



Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

GEOLOGICAL LOG

Page:- 15/20

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				Grey mudstone with wispy carbonaceous laminae from 354.40-354.50m, 354.85-355.03m. Paleosoll (?) - dark brown, clayey, gritty with coaly fragments from 354.50-354.59m. SBC to FMLSS unit. <u>COAL SECTION - DUNCAN SEAM</u>		
363.08	363.41	0.33		Laminite of dull coal and grey mudstone, (50:50); SBC.		
	363.42	0.01		Mudstone, light brown; with wispy carbonaceous flecks; SBC.		
	363.51	0.09		Dull coal, 5% bright bands.		6A
	363.52	0.01		Sand lens.		
	363.56	0.04		Dull coal.		
	363.57	0.01		Mudstone, grey.		
	363.75	0.18		Laminite of dull coal and mudstone.		
	363.75	0.01		Bright coal, SBC.		
	363.79	0.03		Mudstone, beige-grey; SBC.		
	364.13	0.34		Dull coal, 10% bright bands.		
				<u>BASE OF COAL SECTION</u>		
	364.135	0.005		Mudstone, grey-brown.		
	364.14	0.005		Bright coal.		
	365.47	7.33		Mudstone, grey, abundant plant fossils shaley; slickensides dipping 20-40° to core axis common, core broken; carbonaceous towards the base, GBC.		
	366.00	0.53		Laminite of FLSS and mudstone, (50:50), GBC.		
	366.51	0.51		Mudstone, grey, GBC.		
				<u>COAL SECTION</u>		
366.51	366.95	0.44		Dull coal, minor sand lenses; 5% bright bands; GBC.		6B
	367.24	0.29		Interlaminated dull coal and grey mudstone, (50:50); GBC.		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		Moist %	Ash %	VCM %	F.C. %	ASSAY RESULTS		Appt S.G.
			metres	%					Seam		
6A	363.42	364.13	0.17	100	4.2	56.9	-	-	F		
6B	366.51	366.95	0.44		5.3	31.0	25.3	43.7	F		
7	403.52	404.46	1.14		5.5	49.5	16.4	34.1	GU		
8A	409.51	409.82	0.31		5.0	49.6	15.8	34.6	GL		1.76
8B		409.95	0.13		3.2	72.2	-	-			2.55
8C		410.99	1.04		4.8	46.4	17.9	35.7			1.68

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
367.24	367.28	0.04		Dull coal, 5% bright bands; SBC. <u>BASE OF COAL SECTION</u>		
367.28	268.61	0.33		FLSS, grey, worm burrows or rootlet structures common; SBC; becomes coarse to MFLSS at base. SBC.		
368.61	368.88	0.27		FLSS, laminated with mudstone (50:50) GBC.		
368.88	369.52	0.64		Mudstone, grey, slickensides; core broken; minor coaly bands and wispy carbonaceous laminae; SBC.		
369.52	369.54	0.02		Mudstone, light brown, SBC.		
369.54	369.55	0.01		Dull coal.		
369.55	369.56	0.01		Mudstone, grey.		
369.56	369.57	0.01		Shale, brown.		
369.57	369.67	0.10		Dull coal, 10% bright bands, SBC.		
369.67	372.79	0.12		Mudstone, grey, sandy; some bioturbation; some slickensiding; minor disturbed bedding.		
372.79	397.30	24.51		FMLSS, grey, massive, no coaly debris, laminae etc - quite barren. Mudstone pellets from 295.80-295.20m. Pellets up to 5cm in diameter well rounded. Clast of coal at top of pellet interval. Coal pellet 8cm long; some swirly structures in mudstone around coal clast. (Coal clast has algal mat structures of RHC - probably fracture patterns).		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
397.30	397.49	0.19		Grey mudstone, GBC.		
397.49	397.59	0.10		Grey mudstone interbedded with carbonaceous mudstone, (50:50). GBC.		
397.59	397.87	0.28		Very dull coal, no bright bands, GBC.		
397.87	397.97	0.20		Sandy carbonaceous mudstone, shaley and clayey, GBC.		
397.97	400.32	0.35		FLSS, grey, banded, bioturbated in parts with abundant wispy carbonaceous laminae, GBC.		
400.32	403.52	0.20		FMLSS, grey massive, barren, SBC.		
				<u>COAL SECTION</u>		
403.52	403.64	0.12		Dull coal, GBC.		7
	403.72	0.08		Dull coal, interbedded with sandy shale (90:10); GBC.		
	403.82	0.10		Dull coal, no bright bands, GBC.		
	403.84	0.02		Sandy mudstone white with carbonaceous debris, GBC.		
	403.88	0.04		Dull coal.		
	403.885	0.005		Sand lens.		
	403.99	0.105		Dull coal.		
	404.02	0.03		Shaley beige mudstone with wispy carbonaceous laminae, SBC.		
	404.05	0.03		Dull coal, SBC.		
	404.06	0.01		Shaley beige mudstone, SBC.		
	404.32	0.26		Dull coal, no bright bands.		
	404.385	0.065		Dull coal, shaley.		
	404.39	0.005		Sand lens.		
	404.42	0.03		Dull coal.		
	404.41	0.01		Sand lens.		
	404.61	0.20		Dull coal; broken on cleat, SBC.		
	404.62	0.01		Shale, brown.		
	404.63	0.01		Dull coal.		
	404.64	0.01		Shale, brown.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	404.66	0.02		Carbonaceous mudstone.		7
<u>BASE OF COAL SECTION</u>						
404.66	407.70	3.04		Laminite of FLSS and mudstone, grey minor rootlet-type structures, SBC.		
407.70	409.25	1.55		FLSS, grey massive, SBC.		
409.25	409.33	0.08		Mudstone, grey laminated, GBC.		
409.33	409.48	0.15		Carbonaceous mudstone, black, sandy, GBC.		
409.48	409.51	0.03		Grey mudstone, laminated, GBC.		
<u>COAL SECTION</u>						
409.51	409.82	0.31		Heavy dull coal and carbonaceous mudstone, (50:50), SBC.		8A
	409.85	0.03		Shale brown.		8B
	409.95	0.10		Calcite replacement - in situ growth of calcite.		
	410.20	0.25		Heavy dull coal, GBC.		8C
	410.32	0.12		Heavy dull coal and grey mudstone - speckled appearance (50:50). SBC.		
	410.33	0.01		Heavy dull coal, SBC.		
	410.37	0.04		Sandy white mudstone, SBC.		
	410.55	0.18		Dull coal, sandy.		
	410.58	0.03		Carbonaceous mudstone, sandy.		
	410.60	0.02		Shale, dark brown.		
	410.79	0.39		Dull coal, GBC.		
<u>BASE OF COAL SECTION</u>						
410.99	411.55	0.56		Mudstone, grey, laminated becomes sandy towards the base.		
411.55	412.38	0.38		FLSS, banded; abundant wispy carbonaceous laminae, minor disturbed bedding.		
412.38	412.73	0.35		Mudstone, grey, banded, slickensided; SBC; dips at 20°.		
412.73	412.78	0.05		Dull coal, SBC dips at 10°.		
412.78	412.79	0.01		Claystone, beige, sharp irregular bottom contact.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
412.79	412.86	0.07		Calcite replacement, irregular bottom contact.		
412.86	413.43	0.57		Mudstone, grey, slickensided core broken.		
413.43	420.16	6.73		Laminite of FLSS and grey mudstone (50:50). Carbonaceous towards the base, rheomorphic slumping common; laminae 1mm wide, minor cross bedding. GBC.		
420.16	420.21	0.05		Carbonaceous mudstone, black, GBC.		
420.21	420.215	0.005		Shale, brown.		
	420.36	0.145		Dull coal, no bright bands.		
420.36	423.20	2.84		FMLSS, grey, abundant wispy carbonaceous laminae; dipping at 10-40°; minor coaly bands and pellets, SBC.		
423.20	424.04	0.84		Laminite of FLSS and grey mudstone, (50:50), minor cross bedding, GBC.		
424.04	424.32	0.28		Carbonaceous siltstone with minor plant fragments, SBC.		
424.32	424.34	0.02		Shale, beige.		
424.34	424.96	0.62		FLSS, carbonaceous at the top; grades into siltstone.		
424.96	425.34	0.38		Siltstone, black, carbonaceous; with plant fragments, SBC.		
425.34	425.44	0.10		FLSS, grey, SBC.		
425.44	425.55	0.11		Mudstone, dark grey, GBC.		
425.55	426.11	0.56		Shaley coal, core expanded and cracked; joints filled with calcite; mudstone laminae common GBC.		
426.11	428.60	2.49		FLSS, clayey over top 50cm; grey; band of coal from 428.15-428.16m. SBC.		
428.60	429.46	0.86		FMLSS, grey, massive.		
429.46	432.35	2.89		FLSS, green-grey, banded.		
432.35	435.95	3.60		FMLSS, grey, massive, SBC.		
435.95	436.50	0.55		Mudstone, shaley, clayey, core friable, GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				<u>COAL SECTION</u>		
436.50	436.94	0.44		Heavy dull coal, no bright bands.		
				<u>BASE OF COAL SECTION</u>		
436.94	437.15	0.21		Carbonaceous and grey mudstone; - speckled appearance, shaley GBC.		
437.15	438.62	1.47		Clayey brown mudstone, shaley towards the base. Very shaley over basal 80cm.		
				<u>END OF HOLE 438.62m</u>		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

DRILLING TARGET:- Upper Marine sequence of the Lower Parmeener Super Group

REMARKS:-

SURVEY DATA			ASSAY DATA												
DEPTH metres	Bearing mag.	Inclin. degs	SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS							
						metres	%								

GEOLOGICAL LOG

Logged by:- C.A. Bacon

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
0	17.00	0	0	Overburden of dolerite clay and boulders. No core recovery.		
17.00	59.40	42.40	100	Dolerite, weathered and crumbly at the top, abundant joints and fractures filled in with calcite and/or zeolite; some fracture faces coated with slippery greasy pink or green minerals - possibly chlorite? Occasional sub-vertical fractures over the basal 15m; dolerite medium grained and grey in colour. Some calcite "veining".		
59.40	60.04	0.44	50	Contact zone ground-up mass of clay (sticky - now dried hard) and ground-up pieces of dolerite core and sandstone core; probable core loss of 20cm in this area.		
60.04	62.00	1.49	75	Fine-medium grained lithic sandstone (FMLS), massive; core badly broken. Core loss of 47cm in this interval.		

Continued over:-

DEPARTMENT OF MINES—TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No.:- 82	MAP SHEET No.	DISTRICT	LOCATION OF SITE:-
On Fingal Tier East of the Mitchell Fault			
R.L. OF SITE:- 588.60m	SITE SURVEY ON MAP No.:	CORE SIZE:- NQ	
BEARING OF HOLE:-	AIR PHOTO No.:-	COMMENCED:- 3/8/81	
INCLINATION OF HOLE:-	DRILL:- Longyear 38 No. 2	COMPLETED:- 1/10/81	
CO-ORDS OF SITE:- 591 208m E 5 390 466m N	DRILLER:- S. Mitchell	FINAL DEPTH (m):- 428.13m	

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
62.00	6	1.30	50	FMLSS, as above; core broken and crumbly over the basal 20cm. Core loss of 1.55m at the base of this unit; core loss shared with underlying unit.		
65.00		0.15		Dull coal, core shattered. Core loss of 1.55 shared with above unit. Exact proportions of each lost not known.		
65.00	65.10	0.10	100	Mudstone, grey, gradational bottom contact, GBC.		
65.10	68.00	2.90	100	Carbonaceous siltstone, sandy; core broken muddy in parts; minor slickensides. Core loss of 10cm in this unit.		
68.00	68.10	0.10	100	Carbonaceous siltstone as above, core ground and broken.		
68.10	69.92			CORE LOSS of 1.82m.		
69.92	70.49	0.57	100	FMLSS, with carbonaceous siltstone laminae, grey sharp bottom contact. Core ground and broken over top 10cm.		
70.49	70.69	0.20		Clayey mudstone, very sandy, core cracked and broken. SBC.		
70.69	71.00	0.31		Fine grained lithic sandstone, (FLSS), grey.		
71.00	71.71	0.71		FLSS, as above, grey.		
71.71	77.80	6.09		FMLSS, grey, massive, mudstone pellets and coaly debris from 75.00-.20m; 76.40-.66m; 77.36-.72m; SBC.		
77.80	79.16	1.36		FLSS, grey, massive; minor cross bedding. GBC.		
79.16	84.12	4.96		Coarse grained lithic sandstone, (CLSS); grey, abundant mudstone, siltstone and coaly pellets; rare clasts of tuff. SBC.		
84.12	85.98	1.86		Carbonaceous siltstone, black; jointed; red heulandite or clinoptilerlite on joints; two pale grey intervals of very hard rock from 83.68-.75m and from 83.87-.94m. Possibly reworked ash? Pale grey, intervals. Low gradational top and bottom contacts and abundant wispy carbonaceous laminae. GBC.		
83.98	86.51	0.53		Mudstone, grey, sandy, GBC. Continued over		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
86.51	88.00	1.49		Carbonaceous siltstone interbedded and interlaminated with medium-grained lithic sandstone, (MLSS).		
88.00	89.13	1.13		MLSS, white, coaly debris abundant; mudstone pellets common, GBC.		
89.13	89.53	0.40		CLSS, white, abundant mudstone pellets, clasts and coaly debris, SBC.		
89.53	89.94	0.41		FLSS, banded with mudstone laminae, (80:20), GBC.		
89.94	90.04	0.10		Shale, GBC.		
90.04	90.10	0.06		Carbonaceous siltstone, GBC.		
90.10	90.20	0.10		Dull coal, 10% bright bands, well developed cleat, GBC.		
90.20	90.48	0.28		Carbonaceous siltstone with 5% bright coaly laminated, GBC.		
90.48	90.78	0.30		FMLSS, interbedded with carbonaceous siltstone. (60:40); SBC.		
90.78	101.05	10.27		FMLSS, massive, white, hard. Rare coaly debris and minor cross bedding. Clasts of quartzite and tuff from the underlying unit is over the basal 30cm.		
101.05	102.80	1.75		Conglomerate (the DALMAYNE CONGLOMERATE) composed of rounded clasts of white tuff, quartzite, mudstone and rhyolite in a matrix of CLSS. Core broken in parts. SBC.		
102.80	103.08	0.28		FMLSS, white with abundant coaly spars. SBC.		
103.08	105.04	1.96		FMLSS, white - possibly contains calcite cement. rare wispy carbonaceous laminae. SBC.		
105.04	105.12	0.08	100	Carbonaceous mudstone, GBC.		
105.12	106.12	0.85	85	Mudstone, beige, shaley, core broken over top 30cm. GBC. CORE LOSS of 15cm in this unit.		
106.12	115.83	9.71	100	FMLSS, grey, massive, very rare wispy carbonaceous laminae. SBC.		
115.83	117.33	1.55		MLSS, white, coaly debris and mudstone pellets common, SBC. Continued over		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
117.38	118.39	1.01		FLSS interbedded with carbonaceous siltstone over the top 30cm. Very carbonaceous over top 10cm; minor cross bedding, grainsize increases with depth, SBC; rheomorphic slumping common.		
118.39	118.43	0.04	100	MLSS, grey, SBC.		
118.43	119.13	0.62	70	IGNIMBRITE OR TUFF LAYER. White in colour, hard in parts but clayey and where core has been wet the core has crumbled. Finely banded - some cross bedding visible indicating reworking of ash. Very muddy - this part is a mud-ash band, ash is reworked and deposited with mudstone. Probable core loss of 8cm at the end of this section.		
119.13	120.50	1.37	100	Continuation of IGNIMBRITE horizon. Now the unit is a proper welded tuff with no mudstone contamination; distorted bedding and contorted flow patterns. Shaley over basal 10cm - looking a bit weathered. SBC.		
120.50	121.10	0.60		Siltstone, black, carbonaceous interlaminated with FLSS (80:20). Unit hard-baked. GBC.		
121.10	122.13	1.03		FLSS, abundant cross-bedding and wispy carbonaceous laminae.		
122.13	123.05	0.92		FLSS, as above, white, hard, SBC.		
123.05	123.15	0.10		Dull coal, 10% bright bands.		
123.15	123.30	0.15		Carbonaceous mudstone with bright coaly bands, GBC.		
123.30	123.34	0.04		Grey mudstone with worm burrow structures, SBC.		
123.34	123.36	0.02		Pink sandy claystone with wispy carbonaceous laminae, SBC.		
123.36	123.51	0.15		Carbonaceous siltstone, SBC.		
123.51	123.13	1.62		Mudstone, grey, bioturbated, extremely hard.		
125.13	125.73	0.60		Mudstone, as above. SBC.		
125.73	125.76	0.03		Sandy beige claystone SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
125.76	125.97	0.21		Carbonaceous siltstone laminated with grey mudstone after the top 10cm; GBC, bedding greatly disturbed.		
125.97	128.13	2.07	100	Mudstone, grey, bioturbated; CORE LOSS of 9cm in this unit.		
128.13	134.58	6.02	93	Mudstone, grey, bioturbated, laminated with FLSS over minor intervals; occasional wispy coaly debris and rare coaly clasts; SBC. CORE LOSS of 43cm in this unit.		
134.58	134.90	0.32	100	Shale, beige, abundant pyrophyllite grains; calcite as a cement and in veins throughout unit; SBC.		
134.90	134.95	0.05		Heavy dull coal, SBC.		
134.95	134.96	0.01		Shale, beige.		
134.96	135.20	0.24		Carbonaceous mudstone.		
135.20	135.22	0.02		Mudstone, grey, sandy.		
135.22	135.23	0.01		Mudstone, black, carbonaceous.		
135.23	135.24	0.01		Mudstone, grey, sandy, GBC.		
135.24	135.85	0.61		FLSS, dark grey, carbonaceous with coal bands and spans, GBC.		
135.85	136.31	0.46		Mudstone, grey, bioturbated, GBC.		
136.31	136.46	0.15	100	Dull coal, (possibly a large clast). SBC.		
136.46	136.95	0.45	90	FMLSS, grey with coaly bands 1.2cm wide, and abundant coaly debris; core broken over basal 30cm. CORE LOSS of 4cm in this unit.		
136.95	145.88	8.93	100	FMLSS, grey massive; clasts of quartzite (rounded) and ripped up irregularly shaped mudstone clasts over the basal 40cm, SBC.		
				<u>COAL SECTION</u>		
145.88	149.13	0.25		Dull coal, 10% bright bands, well developed cleat, core broken.		
	149.27	0.14		Dull coal, as above, core not broken. GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	149.30	0.03		Mudstone, beige, with wispy carbonaceous laminae, GBC.		
	149.49	0.19		Dull coal, 10% bright bands.		
				<u>BASE OF COAL SECTION</u>		
149.49	153.13	3.64		Mudstone, grey, sandy occasional wispy carbonaceous laminae; TUFF BAND from 149.77-.82m; tuff band white, hard.		
153.13	158.72	5.59		FLSS, grey, bioturbated, laminated in parts; cross beds common; rare coaly debris. SBC.		
158.72	160.10	1.38		Shale, dominantly brown, minor carbonaceous intervals, SBC.		
160.10	161.17	1.07		Mudstone, green-grey, sandy; bedding disturbed; wispy carbonaceous laminae common; worm burrows common. GBC.		
161.17	153.51	2.34		FLSS, grey, minor cross bedding, SBC.		
				<u>COAL SECTION</u>		
153.51	153.56	0.05		Dull coal, GBC.		
	163.66	0.10		Shaley mudstone, beige, SBC.		
	163.70	0.04		Carbonaceous shaley mudstone, GBC.		
	163.73	0.03		Dull coal, GBC.		
	163.78	0.05		Shaley mudstone, beige, SBC.		
	163.88	0.10		Dull coal, 2% bright bands, SBC.		
	163.93	0.05		Shaley mudstone, beige, SBC.		
	164.01	0.08		Dull coal, GBC.		
	164.12	0.11		Carbonaceous mudstone with coaly laminae, GBC.		
	164.13	0.01		Dull coal.		
	164.15	0.02		Dull coal, SBC.		
				<u>BASE OF COAL SECTION</u>		
164.15	165.05	0.90		Mudstone, light grey. bioturbated, SBC.		
165.05	165.24	0.19		Speckled claystone, abundant pyrophyllite grains, SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS														
			metres	%															

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
165.24	165.76	0.52		Carbonaceous, shaley, speckled, claystone with brown shale laminae and clasts, and minor coal bands, SBC.		
165.76	165.84	0.08		Shaley beige claystone.		
				<u>MINOR COAL SECTION</u>		
165.84	166.14	0.30		Dull coal, 5% bright bands, SBC.		
	166.15	0.01		Mudstone band, SBC.		
	166.23	0.08		Dull coal, 5-10% bright bands, GBC.		
	166.25	0.02		Mudstone pellets, grey, 1-2mm in diameter. GBC.		
	166.30	0.05		Dull coal, GBC.		
	166.32	0.02		Mudstone, grey, SBC.		
	166.38	0.05		Carbonaceous mudstone, GBC.		
				<u>BASE OF COAL SECTION</u>		
166.38	167.13	0.75		Mudstone, grey, sandy, abundant worm burrows.		
167.13	168.83	1.70		Mudstone, grey, sandy, as above; core fractured; lenses of FLSS common, SBC.		
168.83	169.01	0.18		Claystone, beige, speckled; SBC.		
169.01	169.05	0.04		Carbonaceous mudstone, black, SBC.		
169.05	169.26	0.01		Claystone, brown, with plant debris flecks, SBC.		
169.06	169.29	0.83		Carbonaceous mudstone, black, core broken; shaley, GBC.		
169.29	169.33	0.04		Claystone, beige, shaley, SBC.		
169.33	169.77	0.44		Mudstone, carbonaceous, black, shaley towards the base; SBC.		
169.77	169.95	0.18		Mudstone, grey-green, SBC.		
169.95	170.05	0.10		Carbonaceous shaley mudstone, hard.		
170.05	170.13	0.08		Claystone, beige speckled - quite hard. Possibly volcanic ash. Mixed with carbonaceous debris.		
170.13	170.15	0.02		Carbonaceous mudstone, SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
170.15	170.19	0.04		Claystone, beige, SBC. <u>COAL SECTION</u>		
170.19	170.35	0.16		Heavy dull coal, GBC.		
	170.43	0.08		Claystone, grey, with wispy coaly debris, SBC.		
	170.52	0.09		Heavy dull coal and grey mud- stone, (50:50); GBC.		
	170.66	0.14		Dark grey mudstone, very hard; silicified; SBC.		
	170.99	0.33		Claystone, speckled, beige, SBC.		
	171.45	0.46		Heavy dull coal, sandy at the base, GBC.		
	171.56	0.11		Claystone, beige, sandy, SBC.		
	171.61	0.65		Dull coal, GBC.		
	171.69	0.08		Shaley carbonaceous mudstone, SBC.		
	171.87	0.18		Dull coal, 5% bright bands, GBC.		
				<u>BASE OF COAL SECTION</u>		
171.87	173.06	1.19		Mudstone, light grey, bioturbated, SBC.		
173.06	173.15	0.87		Carbonaceous mudstone, dark grey, GBC.		
173.15	173.99	0.84		Mudstone, light grey, bioturbated, GBC.		
173.99	176.10	2.11		Laminite of FLSS and grey mudstone (50:50); cross bedding common; SBC.		
176.10	184.65	8.55		FMLSS, grey, massive, rare coaly debris; SBC.		
				<u>COAL SECTION</u>		
184.65	180.88	0.23		Dull coal, 1% bright bands, GBC.		
	185.02	0.14		Shaley carbonaceous mudstone, GBC.		
	185.13	0.11		Dull coal, no bright bands.		
	185.14	0.61		Dull coal, as above.		
	185.28	0.14		Shaley, speckled, carbonaceous mudstone, black, SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
185.50		0.22		Carbonaceous mudstone, interbedded with sand and shale laminae; not speckled. GBC.		
185.70		0.20		Heavy dull coal, SBC.		
186.00		0.30		Grey-green mudstone with wispy carbonaceous flecks, SBC.		
186.54		0.54		Dull coal, with 1% bright bands, GBC.		
186.92		0.38		Grey-green shaley mudstone, with abundant coaly wisps and coal bands from 186.35-.40m; GBC.		
186.98		0.06		Dull coal, SBC.		
186.99		0.01		Sandy shale band.		
187.02		0.03		Dull coal.		
187.04		0.02		Sandy shale band.		
187.17		0.13		Dull coal.		
187.65		0.38		Claystone, beige, shaley, speckled; GBC.		
187.76		0.21		Dull coal with brown shale laminae; GBC.		
187.80		0.04		Mudstone, green, spotted with white - calcite?		
188.15		0.35		Dull coal, 1-2% bright bands, abundant shale laminae.		
188.35		0.20		Dull coal, core broken, SBC.		
188.36		0.01		Sand band, SBC.		
188.42		0.06		Dull coal.		
188.46		0.04		Sand band.		
188.80		0.34		Dull coal, SBC.		
189.03		0.23		Claystone, beige, speckled, SBC.		
189.61		0.58		Dull coal, core broken near base of unit.		
189.65		0.04		Claystone, beige, interbedded with dull coal; very disturbed unit.		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
189.73		0.03		Claystone, beige, SBC.		
190.20		0.47		Dull coal, core broken.		
190.22		0.02		Sand band, SBC.		
190.26		0.04		Dull coal, SBC.		
190.29		0.03		Mudstone band, SBC.		
190.56		0.27		Dull coal, core broken.		
190.61		0.05		Mudstone band, grey with wispy coaly flecks, SBC.		
190.83		0.22		Dull coal, 5% bright bands, well developed cleat, GBC.		
190.87		0.04		Sandy mudstone band.		
191.00		0.13		Dull coal, core broken.		
191.01		0.01		Sandy mudstone band, SBC.		
191.02		0.01		Dull coal, SBC.		
191.05		0.03		Mudstone, white, SBC.		
191.12		0.07		Dull coal.		
191.28		0.16		Dull coal, 2% bright bands, SBC.		
191.31		0.03		Mudstone band, white, SBC.		
191.43		0.12		Dull coal, GBC.		
191.83		0.40		Carbonaceous mudstone, with coaly bands, GBC.		
				<u>BASE OF COAL SECTION</u>		
191.83	192.20	0.37		Mudstone, grey, bioturbated, GBC,		
192.20	192.30	0.10		FLSS, grey.		
192.30	193.07	0.77		FLSS, grey, massive, finely banded.		
193.07	194.13	1.06		FMLSS, grey, massive.		
194.13	216.20	22.07		FMLSS, as above; rare coaly debris and minor wispy carbonaceous laminae; SBC.		
216.20	216.82	0.62		Mudstone dark grey laminated shaley - core broken and expanded in parts. GBC.		
				<u>COAL SECTION</u>		
216.82	216.89	0.07		Dull coal, brown shale laminae common.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	216.95	0.07		Claystone, beige, with wispy coaly flecks, SBC.		
	217.06	0.11		Dull coal, GBC.		
	217.16	0.10		Speckled shaley carbonaceous mudstone, SBC.		
	217.20	0.04		Speckled beige claystone, SBC.		
	217.22	0.02		Dull coal, SBC.		
	217.29	0.07		Speckled beige claystone with abundant coaly debris, SBC.		
	217.38	0.09		Carbonaceous mudstone, black, shaley, SBC.		
	217.41	0.03		Speckled beige claystone, SBC.		
	217.46	0.05		Heavy dull coal, speckled with shale laminae. SBC. Contains irregularly shaped coaly clasts.		
	217.59	0.13		Claystone, grey-green, shaley, SBC.		
	217.60	0.01		Dull coal, SBC.		
	217.61	0.01		Shale, brown, SBC.		
	217.71	0.10		Dull coal, SBC.		
	217.77	0.06		Claystone, beige, shaley, SBC.		
	217.96	0.19		Dull coal, SBC.		
	217.99	0.03		Mudstone, grey-brown, SBC.		
	218.01	0.02		Dull coal.		
	218.11	0.10		Dull coal, SBC.		
	218.28	0.17		Mudstone, grey brown, shaley, SBC.		
	218.31	0.03		Mudstone, shaley, carbonaceous.		
	218.52	0.21		Heavy dull coal with brown shale laminae.		
	218.57	0.05		Claystone, beige, shaley, <small>Continued over</small>		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS														
			metres	%															

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	218.70	0.13		Dull coal, 1% brightbands.		
	218.96	0.26		Shaley, speckled, carbonaceous mudstone.		
	219.02	0.06		Shaley, beige claystone.		
	219.25	0.23		Heavy dull coal.		
	219.42	0.17		Shaley beige claystone.		
	219.69	0.27		Dull coal with many mudstone and shale laminae, GBC.		
	219.84	0.13		Heavy dull coal and brown shale, speckled.		
	220.46	0.64		Dull coal, 1-2% bright bands, cleat well developed. SBC.		
	220.48	0.02		White mudstone, SBC.		
	220.61	0.13		Dull coal.		
	220.64	0.03		Speckled carbonaceous shaley mudstone.		
	220.97	0.33		Dull coal.		
	221.00	0.03		White mudstone.		
	221.01	0.01		Dull coal.		
	221.10	0.10		Dull coal.		
	221.20	0.10		Carbonaceous and grey mudstone.		
	221.63	0.43		Grey mudstone, core broken.		
	222.06	0.43		Dull coal interlaminated with grey mudstone (50:50).		
	222.20	0.14		Grey mudstone.		
	222.26	0.06		Claystone, white, hard, SBC.		
	222.40	0.14		Dull coal with many sand laminae.		
	222.42	0.02		Claystone, white, hard, SBC.		
	222.73	0.31		Dull coal. SBC.		
				<u>BASE OF COAL SECTION</u>		
	223.03	1.30		Mudstone, grey, bioturbated.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
223.03	228.54	5.51		Laminated grey mudstone clayey core has expanded; grey in colour; some rheomorphic slumping; some microfaulting; SBC.		
228.54	246.22	17.68		FMLSS, grey, massive, occasional coaly debris, large mudstone and sandstone clasts 10cm in diameter from 336-229m; minor wispy coaly laminae, abundant coaly spars from 241-244m. SBC.		
				<u>COAL SECTION</u>		
246.22	246.29	0.07		Dull coal no bright bands.		
	246.41	0.12		Mudstone shaley crumbly with minor plant fossils.		
	247.22	0.81	100	Dull coal 3% bright bands core broken near base.		
	247.43	0		CORE LOSS of 21cm.		
	247.48	0.05	100	Mudstone, beige, SBC.		
	247.32	0.14		Dull coal, SBC.		
	247.68	0.04		Shale, sandy, SBC.		
	247.83	0.13		Dull coal, SBC.		
	247.85	0.02		Mudstone, sandy, SBC.		
	248.17	0.32		Dull coal, 5-10% bright bands.		
	248.63	0.46		Dull coal, core broken, GBC.		
	248.75	0.12		Mudstone, green-grey.		
	249.47	0.72		Dull coal, core broken, minor sandy laminae, GBC.		
	249.63	0.16		Mudstone, grey, slickensided; core broken into small chips; carbonaceous.		
				<u>BASE OF COAL SECTION</u>		
249.63	250.00	0.37		Mudstone, as above, rare coaly bands. GBC.		
250.00	252.40	2.40		Mudstone, green-grey, SBC.		
252.40	263.88	11.48		FMLSS, grey, massive, with coaly spars and bands common; clay pellets common over basal 2m. SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
<u>COAL SECTION</u>						
263.88	265.14	1.26		Dull coal; minor brown shale laminae over top 10cm; 5% bright bands, GBC. Core not broken. Band of grey mudstone from 264.37-.46m.		
<u>BASE OF COAL SECTION</u>						
265.14	265.24	0.10		Carbonaceous mudstone, sandy with minor dull coal laminae, GBC.		
265.24	265.39	0.15		Mudstone pellet conglomerate; carbonaceous over top 7cm; pellets rounded; ripped up from underlying unit. Coal band at 3.50-4.00cm from top of unit. SBC.		
265.39	265.63	0.24		Mudstone, grey, core cracked due to swelling clays, SBC.		
265.63	265.91	0.28		FLSS, grey, cross bedded.		
265.91	266.04	0.13		FLSS, as above.		
266.04	267.90	1.86		FLSS, bioturbated; bedding disturbed, grey; cross beds dipping at up to 10°, SBC.		
267.90	268.01	0.11		Mudstone, grey, slickensided, GBC.		
<u>COAL SECTION</u>						
268.01	268.08	0.07		Mudstone, grey, laminated with dull coal, 80:20, SBC.		
	268.11	0.03		Dull coal, GBC.		
	268.13	0.02		Mudstone, green-grey, GBC.		
	268.61	0.48		Dull coal, 10% bright bands, core slightly broken, GBC.		
	268.66	0.05		Mudstone, brown, GBC.		
	268.705	0.045		Bright coal, SBC.		
	268.71	0.005		Shale band, SBC.		
	268.77	0.05		Dull coal, GBC.		
<u>BASE OF COAL SECTION</u>						
268.77	269.13	0.36		Mudstone, grey, shaley, core broken and crumbly - core expanded slightly due to breakage.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	297.45	0.06		Dull coal interbedded with grey mudstone, (50:50); minor bright bands. GBC.		
	297.59	0.14		Grey mudstone, GBC.		
	297.74	0.15		Dull coal, GBC.		
	297.76	0.02		Sandy mudstone lens.		
	297.84	0.08		Dull coal.		
	297.85	0.01		Sandy claystone lens.		
	297.95	0.10		Dull coal, GBC.		
	298.69	0.74		Mudstone, grey with abundant carbonaceous laminae.		
	298.97	0.28		Green-grey mudstone, as above. SBC,		
	298.98	0.01		Calcite, "fish bone" pattern. SBC.		
	299.01	0.03		Dull coal, SBC.		
				<u>BASE OF COAL SECTION</u>		
299.01	299.13	0.12	100	Mudstone, green-grey with worm burrow type structures.		
299.13	300.75	1.59	99	Grey sandy mudstone, as above. Some slickensides; core broken in part. Shaley over basal 5cm. SBC.		
				<u>COAL SECTION</u>		
	300.85	0.10		Dull coal. 15% bright bands, SBC.		
	300.96	0.11		Mudstone, grey, with wispy carbonaceous laminae, SBC.		
	300.98	0.02		Claystone, beige, SBC.		
	301.01	0.03		Dull coal, GBC.		
	301.02	0.01		Claystone, with coal laminae, SBC.		
	301.10	0.08		Dull coal, SBC.		
	301.21	0.11		Grey mudstone with carbonaceous flecks, GBC.		
				<u>BASE OF COAL SECTION</u>		
				Continued over		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS												
			metres	%													

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
301.21	301.97	0.76		FLSS with abundant muddy intervals, GbC.		
301.97	303.29	1.32		Sandy mudstone, GBC. Grey in colour.		
303.29	303.99	0.70		Mudstone, grey, with carbonaceous laminae. GBC.		
303.99	304.92	0.93		FMLSS, pale grey, massive; core broken towards the base - minor core loss of probably 5cm. Unit banded.		
304.92	311.26	6.34		FMLSS, massive, grey, minor cross bedding minor carbonaceous flecks. SBC.		
311.26	312.75	1.49		Mudstone, grey, slickensided, core broken; sand patches and worm burrow structures common. SBC.		
312.75	321.16	8.41		FMLSS, white, massive; rare coaly flecks, SBC.		
321.16	321.30	0.14		Mudstone, grey, laminated. SBC.		
321.30	321.51	0.21		Sandy carbonaceous mudstone, GBC.		
321.51	322.79	1.28		FMLSS, with abundant carbonaceous mudstone laminae and minor carbonaceous intervals. SBC.		
322.79	323.13	0.34				
323.13	325.28	2.15				
				<u>COAL SECTION</u>		
325.28	325.92	0.64		Dull coal, no bright bands, core broken. GBC.		
	326.07	0.15		Carbonaceous mudstone with coaly flecks. GBC.		
				<u>BASE OF COAL SECTION</u>		
326.07	326.14	0.07		Mudstone, grey, shaley; core broken.		
326.14	328.78	2.64		Mudstone, interbedded with FLSS; grey; (50:50), SBC. Beds 5cm wide. GBC.		
328.78	334.13	5.45		FMLSS, grey, massive, SBC.		
334.13	334.94	0.81		Mudstone, grey, laminated. SBC.		
334.94	335.03	0.09		Mudstone, black, carbonaceous. SBC.		
335.03	335.75	0.72		Mudstone, grey, with wispy carbonaceous laminae; clast of dull shaley coal above the base of the unit. SBC.		

Continued over

ASSAY DATA

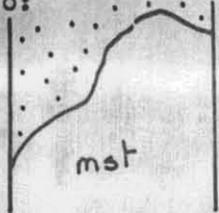
SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
<u>COAL SECTION</u>						
335.75	336.70	0.95		Dull coal with brown shale laminae over top 5cm. 10% bright bands, well developed cleat. SEC.		
	336.73	0.03		Claystone, beige, SBC.		
	336.76	0.03		Dull coal, SBC.		
	336.81	0.05		Calcite, SBC.		
	336.84	0.03		Claystone, whitey-beige, SBC.		
	337.56	0.72		Dull coal with calcite or zeolite on sub-vertical cleat. SBC. 10% bright bands.		
	337.57	0.01		Claystone, beige.		
	337.74	0.17		Dull coal, 10% bright bands, SBC.		
<u>BASE OF COAL SECTION</u>						
337.74	339.76	2.02		FLSS; muddy in parts; laminated; wispy carbonaceous laminae common. GBC.		
339.76	339.85	0.09		Mudstone, grey, slickensided, GBC, core broken.		
339.85	339.88	0.03		Dull coal, GBC.		
339.88	340.07	0.19		Mudstone, grey, core broken.		
340.07	341.29	0.22		FLSS, grey, with wispy carbonaceous laminae, cross bedding common. SBC.		
341.29	342.33	1.04		FMLSS, grey, massive, SBC.		
342.33	344.13	1.80		Mudstone, grey, interbedded with FMLSS, grey; (50:50). GBC.		
344.13	345.11	0.98		FMLSS, grey, massive with minor interbedded mudstone. SBC.		
345.11	347.04	1.93		Mudstone, grey, laminated; core cracked and broken.		
347.04	347.48	0.44	100	Mudstone, as above, sandy; slickensided from 347.14-.16m.		
347.48	348.08	0.54	90	Carbonaceous sandy mudstone, core broken over top 25cm. CORE LOSS of 6cm.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
359.61	359.96	0.35		Interlaminated FMLSS and black carbonaceous mudstone, (50:50). SBC.		
359.96	360.18	0.22		Mudstone, grey, GBC.		
360.18	362.79	2.61		FMLSS, grey, massive.		
362.79	364.38	1.59		Mudstone, dark grey, laminated; with minor claystone laminae; GBC.		
364.38	365.70	1.32		Siltstone, brown with flecks of plant fragments and biotite (?) grains. GBC.		
365.70	371.13	5.43		Quartz-rich FMLSS, grey, massive, with a calcite nodule 2cm in diameter.		
371.13	388.86	17.73		FMLSS, grey, massive, mudstone interval from 376.20-376.90m; possibly a huge clast and not a bed; top contact of mudstone so: 		
388.86	388.95	0.09		rare clasts of siltstone and mudstone irregularly shaped clasts from 386.50-387.50m. Clasts up to 5cm in diameter.		
388.95	388.98	0.03		Dull coal, GBC.		
388.98	389.01	0.03		Claystone, beige, SBC.		
389.01	389.01	0.63		Dull coal, core broken, SBC.		
389.01	391.92	2.91		FLSS laminated with mudstone, 80:20, green grey in colour; worm burrow structures and carbonaceous laminae common. GBC.		
391.92	392.06	0.14		Shale, white, with calcite bands. SBC.		
392.06	392.13	0.07		Dull coal, core broken.		
392.13	395.13	3.00		Interbedded and interlaminated FLSS and green-grey mudstone with minor wispy carbonaceous laminae.		
395.13	402.73	7.60		As above; minor carbonaceous intervals, SBC.		
402.73	403.60	0.87		FMLSS, white; with calcite throughout, over SBC.		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS															
			metres	%																

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
403.60	408.40	4.80		Interbedded and interlaminated FLSS and green-grey mudstone; (50:50); minor carbonaceous intervals. GBC.		
408.40	408.68	0.28		Coarse grained lithic sandstone, CLSS: SBC.		
408.68	408.70	0.02		Dull coal, GBC.		
408.70	408.70	0.08		Sandy mudstone, GBC.		
408.78	409.58	0.80		Quartzose sandstone, medium-fine frained; (FMQSS); white in colour with abundant coaly debris.		
409.58	410.47	0.89		FMQSS interbedded with green-grey mudstone, disturbed bedding and wispy coaly laminae common.		
410.47	411.56	1.09		FMQSS, white with abundant wispy coaly laminae. Abundant coaly bands, coarse grained towards the base.		
411.56	412.45	0.89		MQSS with abundant wispy carbonaceous laminae and coaly debris. SBC.		
412.45	415.68	3.23		Siltstone, brown-grey with coaly flecks. Abundant sandy laminae, GBC.		
415.68	423.00	7.32		FMQSS, white, sparkling, with disturbed bedding and many wispy carbonaceous laminae. Bioturbated? Bedding dips at up to 30°. GBC.		
423.00	426.27	3.27		Reworked "Permian" sediments. Green-grey mudstone containing angular quartz grits and occasional dropstones, erosional bottom contact. BASE OF FRESHWATER SEQUENCE OF THE UPPER PARMEENER SUPERGROUP.		
426.27	428.13	1.86		Mudstone with dropstones and quartz grits; core broken. Unit belongs to the UPPER MARINE SEQUENCE OF THE LOWER PARMEENER SUPERGROUP. E.O.H. 82 at 428.13m.		

Continued over

ASSAY DATA

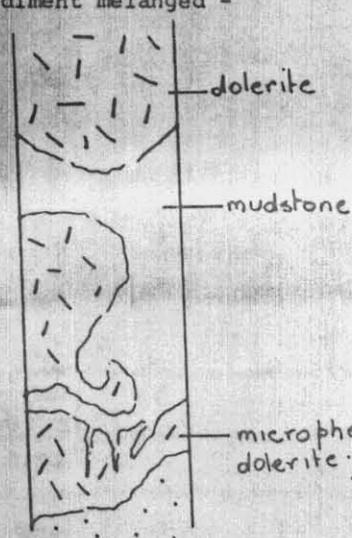
SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS												
			metres	%													

DRILLING TARGET:- Upper Marine Sequence of Lower Parmeener Super Group											
REMARKS - Hole abandoned at 296.03 m; East Fingal Seam not reached.											
SURVEY DATA						ASSAY DATA					
DEPTH metres	Bearing mag.	Inclin. degs	SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS			
						metres	%				

GEOLOGICAL LOG

Logged by:-

C.A. Bacon

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
0	5.00	5.00		Overburden of dolerite boulders and clay.		
5.00	93.35	88.35		<p>Dolerite, grey; medium-grained; abundant fracture zones filled with zeolite and/or calcite - white in colour. Sub-vertical fractures and joints over the basal 20 m. Severe fracture zone with core weathered, broken and full of zeolite from 32 - 43 m. Dolerite chilled at the base; contact between dolerite and sediment melanged -</p>  <p style="text-align: right;">Continued over:-</p>		

DEPARTMENT OF MINES—TASMANIA

DIAMOND DRILL CORE RECORD

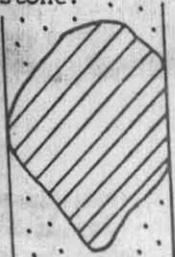
HOLE No.:- 83	MAP SHEET No. 49	DISTRICT St Marys	LOCATION OF SITE:-
R.L. OF SITE:- 675.7 m	SITE SURVEY ON MAP No.:	HQ: 0 - 137.89	CORE SIZE:- NQ: 137.89 - 296.03
BEARING OF HOLE:-	AIR PHOTO No.:-	COMMENCED:- 24.9.81	
INCLINATION OF HOLE:-	DRILL:- Longyear 44 No. 1	COMPLETED:- Not completed	
CO-ORDS OF SITE: 594 484 m E 5 385 832 m N	DRILLER:- C. Mitchell	FINAL DEPTH (m):- 296.03 m	

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
93.35	93.51	0.16		Mudstone and dolerite; as shown above. Gradational bottom contact. GBC.		
93.51	94.13	0.62		Fine grained lithic sandstone, (FLSS); grey, massive finely banded; hard. Gradational bottom contact, GBC.		
94.13	94.87	0.74		Mudstone, baked, tinged pink and green very hard; hornfelsed; minor banding visible. GBC.		
94.87	102.97	8.10	100	Mudstone, grey, minor banding and minor small mud pellet lenses; core shaley and broken effects of heating less severe although still apparent. Core shaley; broken; minor slickensiding with calcite on slip faces.		
102.97	112.87	9.80	99	Mudstone, as above; grey; with darker patches. Has a 'bleached' appearance. Minor 'blebs' of carbonaceous material. CORE LOSS of 10 cm 104.85 - 95 m. Core broken and shaley. Sharp bottom contact, (SBC)		
112.67	115.67	2.80	100	Coarse grained lithic sandstone (CLSS) interbedded with patches of medium grained lithic sandstones. Conglomerate of rounded acid volcanic pebbles 2 - 3 cm in diameter over the basal 10 cm. Wispy carbonaceous laminae common. Sharp bottom contact, (SBC).		
115.67	115.87	0.20		Shale, beige.		
	116.54	0.67		Mudstone, black, sandy, carbonaceous. Gradational bottom contact, (GBC).		
	118.77	2.23	100	Mudstone, grey and beige; banded; sandy in parts; bracciaded and re-cemented with calcite from 116.89 - 117.04 m.		
118.77	123.32	4.10	90	Mudstone, grey and beige, as above; shaley; core broken; minor sandy MLSS intervals. END OF NQ CORE; END OF HOLE; REDRILL 1 m FROM ORIGINAL SITE. REDRILL - START OF BOXED CORE, HQ SIZE.		
118.90	131.48	12.58	100	Mudstone, pale green; laminae visible; core badly broken and shattered. Minor carbonaceous 'blebs' 0.5 cm in diameter. Shattered and re-cemented with calcite from 132.20 - 132.30 m. GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS												
			metres	%													

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
131.48	132.11	0.63		FMLSS, grey, with many small biotite flakes. SBC.		
132.11	134.62	2.51		Mudstone, hard, very pale green; minor shaley intervals. GBC.		
134.62	137.89	3.27		FMLSS, grey, interbedded with mudstone over the top 1.0 m; massive; no coaly wisps or debris.		
				END OF HQ CORE. CONTINUATION OF REDRILLED HOLE IN NQ CORE.		
137.89	138.59	0.70		FMLSS, grey, massive, GBC.		
138.59	139.80	1.21		Coarse grained lithic sandstone, CLSS, grey, with clasts of FLSS, SBC.		
139.80	143.87	4.07		Fine grained lithic sandstone, FLSS, with occasional coaly wisps and worm burrow type structures - largely featureless. GBC.		
143.87	145.80	1.93		FMLSS, grey, massive.		
145.80	147.13	1.38		FMLSS, as above, GBC.		
147.13	147.72	0.59		MLSS with grey mudstone clasts common.		
147.72	148.68	0.96		CLSS, many clasts of mudstone; LSS lithic fragments of granite and volcanics, SBC. One extremely hard clast 15 cm long - very irregular shape. Possibly silicified mudstone.		
						
148.68	148.77	0.09		Mudstone, tinged with pink and green; shaley laminae common.		
148.77	149.24	0.47		Mudstone, shaley, as above. Sandy towards the base. GBC.		
149.24	149.53	0.29		Carbonaceous siltstone with mica flecks and rare plant fossils. GBC.		
149.53	151.81	2.28		FLSS, massive, grey; grades into MFLSS over basal 1 m. Wispy carbonaceous laminae common, minor cross bedding.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS												
			metres	%													

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
151.81	152.32	0.51		FMSS; wispy coaly laminae and mudstone pellets abundant, SBC.		
152.32	153.00	0.68		Carbonaceous mudstone with 'algal mat' (of RHC) structures. Minor shale laminae, SBC.		
153.00	153.08	0.08		FMSS, a sand lens with traces of worm burrows. SBC.		
153.08	153.20	0.12		Silty carbonaceous mudstone with more 'algal mats'; core broken at base.		
153.20	153.83	0.63		Brown-beige shaley mudstone core ground in parts, GBC.		
153.83	154.64	0.81		Carbonaceous, sandy, shaley mudstone. Core broken and crumbly; slickensides over basal 5 cm. SBC.		
154.64	155.55	0.91		FLSS, grey, massive; minor worm burrow structures and mudstone laminae, GBC.		
155.55	168.29	12.74		FMSS, grey, massive; - scattered mudstone pellets; - rare wispy carbonaceous laminae; - core broken from 157.78 - 159.78 m; - mudstone pellets; coaly debris and quartz pebbles scattered over the interval: 163.90 - 163.78 m; - CLSS interval with quartz and volcanic pebble conglomerate from 164.37 - 164.58 m; 165.55 - 165.64 m; 168.04 - 168.29 m; SBC. (Last conglomerate interval is over basal 25 cm). Clasts well rounded, 1 - 4 cm in diameter, mudstone clasts 0.2 - 1 cm in diameter.		
168.29	169.80	1.51	100	Quartz rich lithic arenite with abundant irregularly shaped clasts of mudstone < 1 cm in diameter, and wispy carbonaceous laminae. Coaly bands rare. GBC.		
169.80	170.89	1.01	93	Shaley mudstone with many 'algal mat' structures; carbonaceous; core ground and broken; core loss of 15 cm in this unit GBC.		
170.89	171.11	0.22	100	Claystone beige; again with abundant 'algal mats; and brown biotite flakes. Core friable. SBC.		
171.11	171.33	0.22	100	Mudstone brown-grey, quite hard, sandy in parts. GBC.		
171.33	171.69	0.32	88	Claystone white mixed with mud probably of volcanic origin very shaley; possibly reworked ash. Contains the brown biotite flakes; 'algal mats' also common. GBC.		
171.69	172.15	0.42	91	Claystone, white, hard; very fine, possibly volcanic ash. Contains brown biotite flakes; SBC.		

Continued over

ASSAY DATA

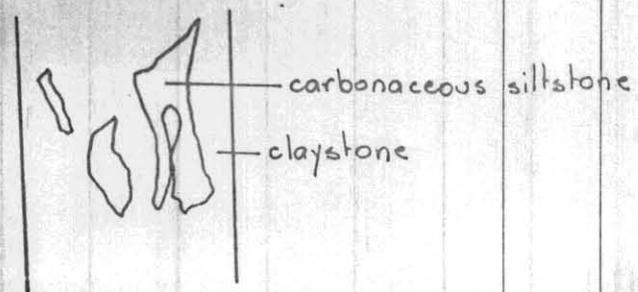
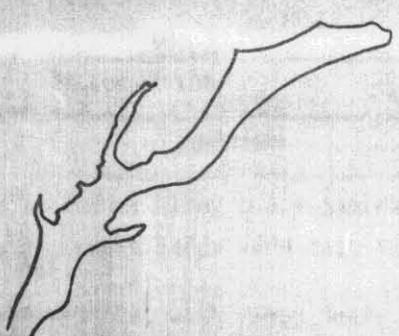
SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
172.15	172.17	0.02	100	Claystone and carbonaceous mudstone intermixed, sandy, SBC.		
172.17	172.19	0.02		Mudstone; carbonaceous, with a small 3 mm wide vitrainite. SBC.		
172.19	175.73	3.54		Mudstone, brown-grey with evidence of bioturbation.		
175.73	178.45	2.72		Mudstone brown-grey laminated with FLSS; (80:20). SBC.		
178.45	185.16	6.71		FMLSS, grey, massive; core broken in parts; very rare wispy carbonaceous laminae, coaly debris (coaly spars) over basal 20 cm. SBC.		
COAL SECTION						
185.16	185.29	0.13		Carbonaceous siltstone, SBC.		
	185.34	0.05		Sandy beige claystone, SBC.		
	185.38	0.04		Carbonaceous siltstone with coal bands (80:20); SBC.		
	185.42	0.04		Sandy beige claystone, SBC.		
	185.44	0.02		Sandy carbonaceous siltstone, SBC.		
	185.49	0.05		Sandy beige claystone.		
	185.58	0.09		Sandy carbonaceous siltstone, SBC.		
	185.62	0.04		Brown mudstone, slickensides dipping 60° at base, SBC.		
	185.90	0.28		Dull coal, 10% bright bands. CBC.		
BASE OF COAL SECTION						
185.90	186.93	1.03		Mudstone grey; bioturbation apparent, GBC.		
186.93	187.75	0.92		Claystone white, fine, with brown biotite flakes, SBC.		
187.85	187.91	0.06		Dull coal, GBC.		
187.91	188.80	0.89		Mudstone, many FLSS laminae and abundant bioturbation, SBC.		
188.80	188.89	0.09		Dull coal, bright band at base, SBC.		
188.89	189.52	0.63		Mudstone, grey, sandy, laminated; disturbed bedding at base.		



ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
189.52	190.12	0.60		Claystone, beige; as above; some 'worm burrow' type structures. 		
190.12	190.15	0.03		Dull coal, with clay laminae.		
190.15	190.87	0.72		Mudstone, interbedded with FLSS; (60:40). GBC.		
190.87	191.47	0.60		Sandy grey mudstone with worm burrows, 10 cm long; bioturbated; SBC. 		
191.47	191.51	0.04		Claystone, beige, SBC.		
191.51	192.64	1.13		Sandy grey mudstone with worm burrows, as above.		
192.64	192.65	0.01		Sand lens, SBC.		
192.65	192.74	0.09		Carbonaceous, sandy siltstone with small pink mudstone pellets, SBC.		
192.74	192.79	0.05		Beige, sandy, claystone, SBC.		
192.79	192.84	0.05		Dull coal, SBC.		
192.84	193.00	0.16		Brown mudstone; core broken (has been wet); white mudstone laminae over basal 3 cm; SBC.		
193.00	193.04	0.04		Dull coal, 10% bright bands; SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
193.04	193.13	0.09		Sandy brown mudstone, wispy coaly laminae; SBC.		
193.13	193.37	0.24		Dull coal, 10% bright bands, and calcite or kaolinite on cleat; SBC.		
193.37	193.42	0.05		Sandy beige claystone, with wispy coaly laminae, SBC.		
193.42	193.49	0.07		Heavy dull coal and carbonaceous mudstone inter-laminated; sandy; SBC.		
193.49	193.88	0.39		FLSS, with wispy coaly laminae;		
193.88	197.15	3.27		FLSS, with minor bioturbation and abundant mudstone laminae, interlaminated with mud (50:50) over basal 50 cm.		
COAL SECTION						
197.15	197.33	0.18		Carbonaceous sandy mudstone with coal bands over top 5 cm; SBC.		
	197.54	0.21		Dull coal; 10% bright bands; well developed cleat; GBC.		
	198.25	0.71		Sandy grey mudstone, GBC.		
	198.40	0.15		Interbedded dull coal and pink claystone; GBC.		
	198.51	0.11		Beige claystone, SBC.		
	198.79	0.28		MLSS, grey, massive, SBC; many biotite flakes.		
	199.00	0.21		Dull coal, GBC.		
	199.08	0.08		Carbonaceous sandy claystone, SBC.		
	199.14	0.06		Dull coal, SBC.		
	199.18	0.04		Shaley, sandy, claystone.		
	199.32	0.14		Dull coal, 10% bright bands, SBC.		
	199.33	0.01		Beige, claystone, SBC.		
	199.72	0.39		Dull coal, 10% bright bands, SBC.		
	199.79	0.07		Interbedded dull coal and beige claystone, (50:50); bedding disturbed.		
	199.89	0.10		Mudstone, grey, shaley.		
	199.93	0.04		Grey mudstone, GBC.		
	200.28	0.35		Dull coal, 10% bright bands; SBC.		
	200.55	0.27		Grey mudstone, wispy carbonaceous laminae, GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	200.61	0.06		Claystone, beige; SBC. (very hard - possibly an ash band).		
	200.77	0.16		Mudstone grey; minor coaly flecks, GBC.		
	200.90	0.13		Mudstone, black, shaley, carbonaceous. GBC.		
BASE OF COAL SECTION						
200.90	201.68	0.78		Mudstone, grey, shaley; sandy towards the base. SBC.		
201.68	202.42	0.74		FLSS, minor cross bedding, GBC.		
202.42	211.49	9.07		FMLSS, grey, massive; core broken in parts; no coaly laminae; SBC.		
211.49	213.50	2.01		FLSS; brown; banded with mudstone laminae; GBC.		
213.50	221.26	7.18		FMLSS, grey, minor wispy carbonaceous laminae. Coaly debris over basal 2 m; SBC.		
COAL SECTION						
	221.29	0.01		Dull coal, GBC.		
	221.35	0.06		Carbonaceous mudstone, GBC.		
	221.58	0.23		Claystone, white.		
	222.47	0.89		White claystone interbedded with grey mudstone (50:50), bioturbated; worm burrows common; carbonaceous over basal 30 cm, GBC.		
	222.69	0.22		Carbonaceous mudstone with some heavy dull coal laminae, SBC.		
	222.70	0.01		Sand lens, FLSS; SBC.		
	222.79	0.09		Dull coal, core broken.		
	222.90	0.11		Grey mudstone, GBC.		
	222.91	0.01		Dull coal, SBC.		
	222.93	0.02		Beige claystone, SBC.		
	223.09	0.16		Dull coal, sandy towards the base, SBC.		
	223.14	0.05		Brown claystone with coaly debris. SBC.		
	223.18	0.04		Dull coal, SBC.		
	223.39	0.21		Brown speckled claystone, SBC.		
	223.49	0.10		Dull coal, GBC.		
	223.68	0.19		Brown claystone, SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	223.83	0.15		Dull coal, sandy towards the base. GBC.		
	223.86	0.03		Sandy carbonaceous mudstone, SBC.		
	223.98	0.04		Mudstone, brown, with common plant fragments, SBC.		
	224.39	0.41		Dull coal, 10% bright bands, GBC.		
				BASE OF COAL SECTION		
224.39	228.67	4.28		Sandy grey mudstone, with minor coaly debris; banded; sand:mud in proportion (50:50). GBC.		
228.67	228.77	0.10		Shaley white claystone, SBC.		
228.77	228.89	0.12		Muddy carbonaceous FLSS, SBC.		
228.89	228.95	0.06		Beige claystone.		
228.95	230.13	1.18		FLSS, carbonaceous over top 20 cm; minor coaly flecks and wispy coaly laminae; SBC.		
				COAL SECTION - poor quality		
230.13	230.56	0.43		Carbonaceous mudstone, black with intervals of pink mudstone pellets; minor shale bands; core broken in parts.		
	230.60	0.04		Sandy beige claystone, SBC.		
	230.72	0.12		Heavy dull coal, no bright bands.		
	230.92	0.20		Beige sandy claystone, with minor calcite replacement from 230.87 - 230.88 m), SBC.		
	231.05	0.13		Heavy dull coal, no bright bands.		
	231.13	0.08		Beige claystone, SBC.		
	231.16	0.13		Carbonaceous black mudstone, GBC.		
	231.26	0.10		Beige claystone, SBC.		
	231.37	0.11		Heavy dull coal with minor sand lenses, SBC.		
	231.41	0.04		Dull coal, 5% bright bands, GBC.		
	232.28	0.87		Claystone, white, wispy carbonaceous flecks; grey over top 10 cm. SBC.		
				BASE OF COAL SECTION		
232.28	233.05	0.77		Sandy mudstone, laminated. SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
233.05	233.36	0.31		Bioturbated grey mudstone, with coaly debris, SBC.		
233.36	233.95	0.59		Sandy dark grey carbonaceous mudstone.		
233.95	234.17	0.22		Beige claystone, with minor carbonaceous mudstone intervals.		
234.17	234.32	0.15		Carbonaceous mudstone, black.		
234.32	234.51	0.19		Interbedded beige claystone and black carbonaceous mudstone (50:50).		
234.51	234.66	0.15		Dull coal, GBC.		
234.66	234.93	0.27		Sandy carbonaceous mudstone.		
234.93	235.04	0.11		Grey mudstone, SBC, laminated.		
235.04	235.48	0.44		White crumbly shale, SBC.		
235.48	235.95	0.47		Dull coal, SBC. 10% bright bands, abundant shale laminae.		
235.95	236.51	0.56		Mudstone, pale grey, very sandy.		
236.51	254.51	18.00		FMLSS, fines upwards over top 2 m to FLSS over top 0.5 m; occasional wispy carbonaceous laminae, coaly debris and mudstone pellets. SBC.		
				COAL SECTION		
254.51	254.73	0.22		Dull coal		
	254.82	0.09		Claystone		
	255.24	0.42		Dull coal, 1 - 2% bright bands, SBC.		
	255.245	0.005		Shale, brown, SBC.		
	255.40	0.155		Dull coal, 1 - 2% bright bands.		
	255.59	0.19		Claystone, brown-beige, with wispy carbonaceous flecks; SBC.		
	255.65	0.06		Dull coal, 1 - 2% bright bands; SBC.		
	255.655	0.005		Shale brown, SBC.		
	255.70	0.035		Dull coal, 5% bright bands, SBC.		
	255.73	0.03		Claystone, beige, SBC.		
	255.85	0.12		Dull coal, 1 - 2% bright bands; SBC.		
	255.96	0.11		Claystone, beige, SBC.		
	256.28	0.32		Dull coal, < 1% bright bands; rare mudstone laminae, SBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	256.53	0.25		Claystone, beige, SBC.		
	257.22	0.69		Dull coal, with occasional mudstone pellets and rare bright bands; SBC.		
	257.33	0.11		Beige mudstone, with calcite replacement from carbonaceous over basal 5 cm.		
	257.34	0.01		Bright coal.		
	257.41	0.07		Dull coal intermixed with clay; swirly patterns disturbed bedding.		
	257.84	0.43		Dull coal 10% bright bands well developed cleat; calcite on cleat.		
	257.87	0.03		Dull coal, SBC.		
	257.90	0.03		Beige mudstone, SBC.		
	257.94	0.04		Dull coal.		
	257.945	0.005		Sand lens.		
	257.995	0.05		Dull coal.		
	258.00	0.005		Sand lens.		
	258.175	0.175		Dull coal.		
	258.18	0.005		Sand lens.		
	258.24	0.06		Dull coal.		
	258.28	0.04		Beige mudstone with coaly fragments.		
	258.695	0.415		Dull coal.		
	258.71	0.015		Beige sandy claystone.		
	258.88	0.17		Dull coal with many mudstone and sand lenses.		
	258.94	0.06		Beige claystone.		
	258.96	0.02		Sandy dull coal.		
	258.98	0.02		Beige claystone.		
	259.19	0.21		Interbedded beige claystone and dull coal (50:50).		
	259.225	0.035		Dull coal.		
	259.25	0.025		Beige claystone.		
	259.27	0.02		Dull coal.		
	259.31	0.04		Beige claystone.		
	259.37	0.06		Interbedded beige claystone and dull coal (50:50); bedding disturbed.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
262.00	262.91	0.91		FLSS; muddy over top 20 cm; with coaly flecks; minor cross bedding; laminated with 10% mudstone.		
262.91	271.60	8.69		FLSS; occasional mudstone clasts; minor cross bedding banded; laminated with 10% mudstone; GBC.		
271.60	281.34	9.74		FMLSS; grey, massive, minor wispy carbonaceous laminae; coaly debris from 275.50 - 276.80 m, cluster of mudstone pellets at base of coaly debris interval; clast of dull coal 275.92 - 275.99 m, STC, SBC, on clast; SBC for whole unit.		
COAL SECTION						
281.34	281.43	0.09		Shale, brown, friable; SBC.		
	281.55	0.12		Interbedded shale brown/dull coal/sandy claystone (50/20/30). SBC.		
	281.665	0.115		Dull coal, < 1% bright bands, SBC.		
	281.835	0.17		Claystone, beige, with minor wispy coaly flecks; SBC.		
	281.89	0.055		Dull coal.		
	281.90	0.01		Dull coal, < 1% bright bands.		
	281.92	0.02		Shale, brown.		
	282.03	0.11		Dull coal, < 1% bright bands.		
	282.06	0.03		Beige claystone.		
	282.17	0.11		Dull coal, < 1% bright bands.		
	282.32	0.15		Interbedded beige claystone and dull coal; (50:50); with some clay pellets; SBC.		
	282.35	0.03		Dull coal, < 1% bright bands.		
	282.365	0.015		Beige claystone with pellets.		
	282.405	0.04		Dull coal, < 1% bright bands.		
	282.44	0.035		Sandy beige claystone, SBC.		
	282.55	0.10		Dull coal, < 1% bright bands.		
	282.80	0.25		Speckled beige claystone.		
	282.90	0.10		Dull coal.		
	282.94	0.04		Sandy carbonaceous mudstone with clay pellets.		
	283.07	0.13		Dull coal.		
	283.10	0.03		Beige claystone.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
283.135	0.035			Heavy dull coal.		
283.22	0.085			Beige claystone.		
283.335	0.115			Dull coal.		
283.405	0.07			Beige claystone.		
283.42	0.015			Dull coal.		
283.425	0.005			Sandy beige claystone.		
283.75	0.325			Dull coal, < 1% bright bands.		
BASE OF COAL SECTION						
283.825	0.075			Black carbonaceous mudstone.		
283.835	0.01			White mudstone.		
284.25	0.42			Carbonaceous mudstone.		
284.275	0.02			White mudstone, sandy.		
284.40	0.125			Carbonaceous mudstone.		
284.43	0.03			White mudstone.		
285.91	1.48			Silty carbonaceous mudstone, with brown shale laminae and dull coal laminae common; plant fossils abundant.		
286.735	0.825			FLSS, grey, minor wispy coaly laminae laminated with mud over basal 5 cm. SBC.		
287.485	0.105					
COAL SECTION						
287.485	0.105			Claystone, pink with very abundant wispy carbonaceous laminae and clay pellets. SBC.		
287.605	0.12			Dull coal, 1% bright bands.		
287.65	0.045			Beige speckled claystone.		
287.665	0.015			Dull coal, SBC.		
287.675	0.01			Beige, pink speckled claystone.		
287.80	0.125			Dull coal.		
287.81	0.01			Sandy claystone.		
287.875	0.065			Dull coal with brown shale laminae.		
288.07	0.195			Beige speckled claystone.		
288.075	0.005			White kaolinite claystone.		
288.15	0.075			Dull coal, 2% bright bands.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	288.195	0.045		Claystone, carbonaceous with coaly flecks.		
	288.23	0.035		Claystone, beige, sandy.		
	288.28	0.05		Dull coal.		
	288.295	0.015		Sandy claystone.		
	288.35	0.055		Beige claystone.		
	288.335	0.005		Dull coal.		
	288.375	0.02		Sandy carbonaceous claystone.		
	288.39	0.015		Dull coal, 10% bright bands.		
	288.68	0.29		Dull coal, 10% bright bands, broken over basal 5 cm.		
				BASE OF COAL SECTION		
288.68	289.32	0.64		Grey mudstone, abundant plant fragments, SBC.		
289.32	296.03	6.71		FMLSS, grey, massive, minor coaly debris; core broken in parts wispy carbonaceous and mudstone laminae common.		
				END OF HOLE AT 296.03 m.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS														
			metres	%															

GEOLOGICAL LOG

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
137.85	139.89	2.04		FMLSS, grey, massive. GBC.		
139.89	140.91	1.02		Coarse grained lithic sandstone, with beds dipping at up to 40°. GBC. Small clasts and pebbles common.		
140.91	141.31	0.40		FMLSS, grey, massive, GBC.		
141.31	144.63	3.32		Mudstone, grey, with wispy carbonaceous laminae and many sub-vertical veins of zeolite and/or calcite; white in colour. Core broken in parts; sandy towards the base.		
144.63	148.79	4.16		FLM grained lithic sandstone, FLSS, with carbonaceous laminae dipping at up to 30°. GBC.		
				<u>COAL SECTION</u>		
148.79	148.89	0.10		Dull coal, core broken.		
	149.25	0.36		Dull coal; 1% bright bands. GBC.		
				<u>BASE OF COAL SECTION</u>		
149.25	161.07	11.82	100	FMLSS, carbonaceous over top 20 cm; grey, massive; very few pebbles; no coaly debris; very rare coaly wisps.		
151.07	163.89	2.57	90	FMLSS, as above, core broken and ground away. Core loss of 25 cm in this interval.		
153.89		0.26	16	Quartz pebble conglomerate, core badly ground away; only rounded fragments retrieved. Core loss severe.		
	166.89	0.20		Mudstone, greyey-blue; core shattered and broken and ground away. Core Loss of 2.50 m in above two units; not possible to accurately portion loss between the units.		
156.89	169.22	2.33		FLSS, dark grey, muddy; massive although core cracked in parts; carbonaceous laminae common. Black, glittery substance in broken core at 168.90-.95 m		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				possibly wood? Black, powdery, with many flecks of silver (mica?) not seen this substance before in core. Core shattered over basal 40 cm.		
169.22	169.62	0.40		Mudstone, greyey-blue; core shattered and expanded considerably.		
169.62	170.09	0.47		FLSS, browney grey, massive.		
170.09	172.89	2.64	94	FLSS, core broken and cracked; core loss of 16 cm in this unit.		
	175.89	1.56	52	FLSS, clayey, dark grey with occasional carbonaceous laminae; core broken and cracked. Core loss of 1.46 m in this run.		
175.89		1.98	66	FMLSS; grey; massive; occasional mudstone pellets; core badly broken into small blocks (5 cm long); tiny chips and crumbly sand. Clast of carbonaceous mudstone 42-50 cm from top of unit.		
	178.89	0.10		Clayey mudstone, black. Core loss of 0.92 m in this run, from 175.89-178.89 m.		
178.89	179.49	0.60	100	Siltstone, grey, sandy; core broken.		
179.49	180.77	1.28	100	FLSS, carbonaceous; minor plant fossils; clayey in parts.		
180.77	181.89	1.02	90	FMLSS, white-grey; carbonaceous flecks. Core Loss of 10 cm in this unit - at the base where core crumbly.		
181.89	184.89	2.58	86	FMLSS, dark grey, minor mudstone laminae, core broken. Core Loss of 0.42 m in this run.		
184.89	186.53	0.94	58	MLSS, grey, core ground into tiny chips over top 20 cm; core broken. GBC dipping at 10°. Core Loss of 0.70 m in this unit.		
186.53	186.58	0.05	100	Dull coal, GBC dips at 10°.		
186.58	186.86	0.28	100	Mudstone, grey, laminated, sandy towards the base.		
186.86	187.79	0.63	68	FLSS, muddy, grey, core broken. Core Loss of 0.30 m in this unit.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
187.79	187.89	1.10	100	Mudstone sandy, with coaly bands. Dark grey in colour.		
187.89	187.99	0.10		Mudstone, grey as above.		
				<u>COAL SECTION</u>		
187.99	188.11	0.12		Dull coal, no bright bands. GBC, dips at 10°.		
	188.12	0.01		Shale, laminae; brown, GBC, dips at 10°.		
	188.17	0.05		Dull coal, GBC, dips at 10°.		
				<u>BASE OF COAL SECTION</u>		
188.17	189.72	1.55		White mudstone, shaley over interval 20-40 cm from top; hard; silicified; speckled with pink spots - heulandite? Large crack 70-90 cm from top filled with white and pink zeolites - like the pink spots. Unit very hard; leached(?); GBC.		
189.72	189.82	0.10	100	Carbonaceous mudstone, slickensided with white zeolite(?) on slickenside.		
189.82	190.89	0.50	48	Mudstone pale brown-white; core shattered into tiny crumbs and chips, core loss of 0.57 m in this unit.		
190.89	191.70	0.76	93	Mudstone, white (leached?), laminated; core broken into blocks; interbedded with chunks of coal from 191.50-.70 m. GBC.		
191.70	192.44	0.74	100	Claystone, very white, core easily broken; abundant brown biotite grains; unit resembles a tuff but no primary layering structures etc. can be seen - possibly tuffaceous material diluted with mud; sample taken for thin sectioning. GBC.		
192.44	192.47	0.03	100	Dull coal, no bright bands, many calcite stringers throughout		
192.47	193.69	1.13	93	Mudstone grey clayey with joints filled with white calcite(?) or zeolite core broken. GBC.		
193.69	193.78	0.09	100	Carbonaceous mudstone. GBC.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
193.78	193.89	0.11	100	Shale, brown, GBC.		
193.89	194.33	0.44	100	Interbedded shale, brown; mudstone, grey; and dull coal; (40:40:20). Many swirly disturbed bedding patterns; some bioturbation(?); many small 1-2 mm diameter mudstone pellets. GBC.		
				<u>COAL SECTION</u>		
194.33	194.49	0.16		Dull coal, GBC. 5% bright bands; minor brown shale laminae.		
	194.51	0.02		Mudstone, brown, GBC.		
	194.54	0.03		Dull coal. GBC.		
	194.62	0.08		Interbedded dull coal and grey mudstone, 70:30.		
	194.77	0.15		Dull coal, sandy.		
	194.83	0.05		Dull coal interbedded with white shale bands.		
	195.06	0.23		Dull coal; minor calcite on cleat 10% bright bands.		
	195.09	0.03		Dull coal with grey mudstone laminae. GBC.		
	195.17	0.08		Dull coal, GBC.		
				<u>BASE OF COAL SECTION</u>		
195.17	195.93	0.76		Mudstone, light grey, sandy, GBC.		
195.93	196.11	0.18		Claystone, beige, with many pyrophyllite grains GBC, dips at 20°.		
196.11	196.89	0.78		Mudstone, dark grey, with wispy carbonaceous laminae core broken; calcite on cracks.		
196.89	199.89	3.00		Mudstone, dark grey, as above, core broken.		
199.89	205.89	6.00		Mudstone, grey shaley in parts laminae dipping at up to 45°; sandy in parts; many FLSS laminae and wispy coaly laminae.		
205.89	208.89	3.00		Mudstone, as above; core broken over basal 0.50 m.		
208.89	212.35	3.46		Mudstone grey and FLSS; grey; interbedded; massive; fine bands; laminae dips at 20°.		
Continued over						

ASSAY DATA

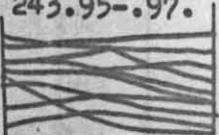
SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
212.35	229.78	17.43		FLSS, grey, massive occasional wispy carbonaceous laminae.		
229.78	232.69	2.91		Mudstone carbonaceous; grey in colour, core broken; sandy towards the base. GBC.		
232.69	233.07	0.38		MLSS carbonaceous streaks and laminae common.		
				<u>COAL SECTION</u>		
233.07	233.14	0.07		Mudstone, carbonaceous; black.		
	233.23	0.09		Shale, brown.		
	233.35	0.12		Mudstone carbonaceous.		
	233.36	0.01		Sand lens.		
	233.44	0.08		Dull coal.		
	233.46	0.02		Shale, reddy-brown, GBC.		
	233.68	0.22		Dull coal.		
	233.73	0.05		Shale brown with dull coal 50:50.		
	233.82	0.05		Dull coal, GBC.		
				<u>BASE OF COAL SECTION</u>		
233.82	235.74	1.92		Laminated grey mudstone and FLSS 50:50.		
235.74	235.89	0.15		FLSS, grey, massive.		
235.89	236.93	1.04		FLSS, minor coaly debris over basal 15 cm.		
236.93	239.27	2.34		Mudstone, grey, bioturbated; wispy carbonaceous laminae common.		
239.27	241.89	2.62		Interbedded quartz-rich lithic arenite and carbonaceous siltstone, (50:50). Core not broken - but quite hard. Some grinding of core on faces of core blocks.		
						
241.89	242.14	0.25		CLSS with mud pellets 0.5 cm in diameter abundant, GBC.		
242.14	244.02	1.88		Siltstone, grey, with common <u>Esquisitales</u>		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
				family plant fossils; calcite feather replacement from 202.95-.96 243.64-.56 243.95-.97.		
						
244.02	244.59	0.57		Tuff! A welded tuff on ignimbrite horizon; fine grained; many brown biotite flakes; coarser grained over basal 15 cm; unit very fine grained otherwise white in colour, probably mostly kaolinite now. Sample taken GBC. 84A.		
244.59	244.79	0.20		CLSS; carbonaceous; black; with mudstone pellets and coaly fragments. GBC.		
244.79	244.89	0.10		Interbedded carbonaceous and grey mudstone (50:50); bedding disturbed; minor chunks of dull coal.		
244.89	245.33	0.44		Interbedded grey mudstone and clasts of dull coal, (80:20); irregularly shaped clasts of dull coal, grading into grey mudstone. Abundant slickensides with calcite on slip faces. GBC.		
245.33	246.09	0.76		Grey mudstone, minor mudstone pellets minor wispy coaly laminae sandy towards the base; GBC.		
246.09	253.89	7.80		FMLSS, with minor intervals of laminated mudstone, as from 247.85-248.20.		
				END OF HOLE AT 253.89 m.		

Continued over

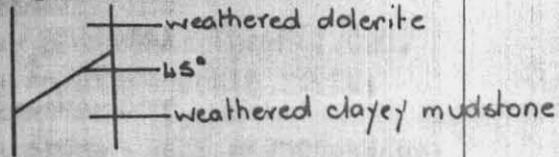
ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

DRILLING TARGET:--		Upper Marine Sequence of the Lower Parmeener Super Group											
REMARKS:--		Hole abandoned at 271.05 m; No economic seams intersected											
SURVEY DATA					ASSAY DATA								
DEPTH metres	Bearing mag.	Inclin. degs	SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS					
						metres	%						

GEOLOGICAL LOG

Logged by:--

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
0	84.77	0	0	<p>Dolerite scree; core broken; longest piece core 2 m long; most core lengths 30-60 cm long; weathered brown in parts; very weathered over basal 10 m; clayey, soft, fractured. Sharp bottom contact with underlying mudstone.</p>  <p>No scree boxed and kept for further examination, apart from basal 0.50 m.</p>		
84.77	85.11	0.34		Shaley weathered carbonaceous mudstone, sticky, clayey; sharp bottom contact (GBC).		
COAL SECTION						
85.11	85.20	0.09		Dull coal, no bright bands, GBC.		
	85.76	0.56		Mudstone, grey with minor wispy carbonaceous laminae, GBC.		
	86.51	0.75		White mudstone, clayey with minor plant fragments, GBC.		
	86.67	0.16		Dull coal, no bright bands, GBC.		

Continued over:--

DEPARTMENT OF MINES—TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No.:-- 85	MAP SHEET No. 49	DISTRICT St. Marys	LOCATION OF SITE:--
R.L. OF SITE:-- 533.8	SITE SURVEY ON MAP No.:	CORE SIZE:-- NQ	
BEARING OF HOLE:--	AIR PHOTO No.:	COMMENCED:-- 6.10.1981	
INCLINATION OF HOLE:--	DRILL:-- S. Mitchell	COMPLETED:-- not completed	
CO-ORDS OF SITE:-- 591 218 ME 390 466 MN	DRILLER:-- Longyear 38 No. 2	FINAL DEPTH (m):-- 283.05	

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	86.70	0.03		Sandy white-grey mudstone, GBC.		
	86.81	0.11		Dull coal, no bright bands; GBC.		
	86.89	0.01		Grey shale, GBC.		
	87.27	0.38		Dull coal, 1% bright bands, GBC.		
	<u>BASE OF COAL SECTION</u>					
87.27	87.61	0.34		Grey mudstone, core broken, with wispy carbonaceous laminae, GBC.		
87.61	87.71	0.10		Greeny-white greasy mudstone, shaley, GBC.		
87.71	87.84	0.13		Grey mudstone with abundant coaly bands; gradational bottom contact, GBC.		
87.84	88.97	1.13		Grey mudstone with minor wispy carbonaceous laminae, with shale laminae common; GBC. Sandy towards the base.		
88.97	91.27	2.30		FLSS, grey core cracked; broken from 90.47-91.27 m; GBC.		
91.27	100.83	9.56		FMLSS with minor calcite and core broken in parts; minor wispy carbonaceous laminae; core broken from 100.05 to base of unit, GBC.		
100.83	101.31	0.48		Carbonaceous mudstone with minor grey mudstone laminae, GBC.		
101.31	101.47	0.16		FLSS carbonaceous; core crumbles, GBC.		
101.47	106.27	4.80		FMLSS, slightly carbonaceous over top 30 cm; wispy carbonaceous laminae abundant core broken; mudstone pellets common, rare mudstone clasts; GBC.		
106.27	107.40	1.13		Grey slickensided mudstone, GBC.		
107.40	109.38	1.98		FMLSS; muddy becoming interbedded with carbonaceous mudstone (80:20); over the basal 1 m, GBC.		
	<u>COAL SECTION</u>					
109.38	109.53	0.15		Beige claystone, GBC.		
	109.54	0.01		Brown shale.		
	109.90	0.36		Dull coal, no bright bands, GBC.		
	110.04	0.14		Beige clay, carbonaceous at top.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
	110.13	0.09		Dull coal, no bright bands, GBC.		
	110.27	0.14		Grey mudstone, GBC.		
	110.49	0.22		Dull coal.		
	110.54	0.05		Claystone, brown, mottled with plant fragments.		
	110.75	0.08		"Paleosol" - clasts of carbonaceous mudstone and dull coal with grit and silt loosely held together.		
	110.895	0.055		Beige claystone.		
	110.945	0.05		Dull coal.		
	111.005	0.05		Brown mudstone with plant fragments.		
	111.035	0.03		Dull coal.		
	111.085	0.05		Brown mudstone- irregular top and bottom contacts.		
	111.115	0.03		Dull coal.		
	111.165	0.05		Claystone, beige, speckled.		
	111.305	0.14		Dull coal, GBC.		
	111.33	0.025		Brown greasy claystone.		
	111.545	0.215		Dull coal.		
	111.585	0.04		Mudstone, brown.		
	111.65	0.095		Mudstone, impregnated with calcite.		
	111.715	0.035		Mudstone, brown.		
	111.81	0.095		Dull coal.		
	111.825	0.015		Brown shale.		
	111.835	0.01		Dull coal.		
	111.86	0.025		Pale grey mudstone, clayey.		
	111.92	0.05		Dull coal with shale laminae.		
2.91	111.96	0.04		Carbonaceous brown-black mudstone.		
	112.00	0.04		Greasy beige claystone with carbonaceous flecks.		
	112.045	0.045		Dull coal.		
	112.31	0.265		Sandy grey mudstone.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
12.34	0.03			Carbonaceous sandy mudstone.		
12.435	0.095			Dull coal with shale bands.		
12.495	0.06			Greasy beige claystone.		
12.525	0.03			Carbonaceous mudstone.		
12.555	0.03			Claystone, beige.		
12.66	0.105			Carbonaceous mudstone.		
12.73	0.07			Claystone, beige; sandy.		
12.77	0.04			Dull coal.		
12.785	0.015			White claystone with wispy carbonaceous flecks.		
12.82	0.035			Dull coal.		
12.87	0.05			Sandy grey mudstone.		
13.31	0.33	66		Dull coal with cleat, core broken.		
13.38	0.07			Sandy beige claystone.		
13.385	0.005			Dull coal.		
13.405	0.02			Grey mudstone with wispy carbonaceous flecks.		
13.425	0.02			Dull coal.		
13.45	0.025			Sandy beige claystone with wispy carbonaceous flecks.		
13.48	0.03			Dull coal.		
13.51	0.03			Pale grey mudstone.		
13.89	0.28	66		Dull coal, with cleat core broken.		
13.92	0.03			White mudstone (ash band?) with carbonaceous flecks.		
14.45	0.38	60		Dull coal, core badly broken.		
14.465	0.015			White mudstone.		
14.695	0.23			Heavy dull coal, GBC.		
14.81	0.115			FLSS, with coaly bands and flecks.		
14.83	0.02			Carbonaceous shale.		
14.87	0.04			FLSS, as above.		
14.93	0.06			White shale.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS												
			metres	%													

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
114.95	0.02			Dull coal.		
114.955	0.005			Brown shale.		
115.00	0.045			Dull coal.		
115.005	0.005			Brown shale with dull coal.		
115.05	0.045			Dull coal.		
115.085	0.035			Dull coal.		
115.195	0.11			Brown mudstone, with plant fragments.		
115.325	0.13			Carbonaceous dark brown mudstone.		
115.505	0.18			Dull sandy coal.		
115.52	0.015			Mud pellets in dull coal.		
115.80	0.28			Heavy dull coal.		
116.00	0.10	50		Core chips; mostly dull coal, few white hard claystone (ash band?) chips.		
116.06	0.06			Dull coal 5% bright bands, GBC.		
116.09	0.03			Mudstone white hard with "blebs".		
116.73	0.40	65		Dull coal 5% bright bands core very broken.		
116.73	17.01	0.18	64	Mudstone, grey core broken, GBC.		
				<u>BASE OF COAL SECTION</u>		
117.01	118.20	1.19	100	FLSS grey, muddy; wispy carbonaceous laminae common, GBC.		
118.20	119.09	0.79	89	Mudstone, grey, core crushed over top 10 cm; wispy coaly laminae common, GBC.		
119.09	120.23	1.14	100	Carbonaceous mudstone, sandy; abundant brown mudstone pellets; and brown shale laminae.		
				<u>COAL SECTION - Poor Quality</u>		
120.23	120.26	0.03		Claystone, beige.		
	120.30	0.04		Carbonaceous mudstone.		
	120.305	0.005		Sand lens.		
	120.415	0.11		Dull coal, no bright bands.		
	120.585	0.07	40	Dull coal, core broken.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
120.675		0.09		Sandy mudstone, GBC.		
120.77		0.095		Carbonaceous mudstone.		
121.04		0.27		Dull coal. coal		
121.60		0.26	45	Broken dull coal.		
121.605		0.005		Mudstone band, grey.		
122.045		0.44		Dull coal 10% bright bands.		
122.10		0.055		Mudstone band white grey ash?		
122.33		0.23		Dull coal 5% bright bands.		
122.45		0.12		Interbedded grey mudstone and dull coal (50:50)..		
123.20		0.35	45	Dull coal, core badly broken.		
123.23		0.03		Chips of grey mudstone; ash band?		
123.76		0.25	45	Dull coal, core broken.		
123.87		0.09		Ash band; pale beige with wispy carbonaceous flecks; Sample 85A.		
124.02		0.15		Carbonaceous mudstone.		
				<u>BASE OF COAL SECTION</u>		
	124.31	0.29		Mudstone green-brown with minor shale laminae.		
124.31	128.45	4.14		FLSS brown-grey minor cross bedding rare wispy carbonaceous flecks.		
128.45	138.23	8.07		FMLSS pale grey core shattered and broken; core loss of 1.71 m over this interval; rare wispy carbonaceous laminae; coaly spars common; frequent mud pellets. GBC.		
138.23	139.25	1.02		Sandy brown siltstone with sand:silt (50:50); minor cross bedding, few minor faults.		
139.25	139.26	0.01		Coal band.		
139.26	139.78	0.52		Shaley grey mudstone, many shale laminae core friable; impregnated with calcite over the top 7 cm. GBC.		
139.78	139.87	0.09		FMLSS with coaly spar.		
139.87	139.92	0.05		Dark grey mudstone with plant fossil flecks.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS													
			metres	%														

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
<u>MINOR COAL SECTION</u>						
139.92	140.03	0.11		Shaley dull coal.		
	140.06	0.03		Carbonaceous shale black.		
	140.30	0.24		Dull coal, core broken.		
	140.37	0.07		Carbonaceous shale black.		
	140.67	0.30		Dull coal core broken.		
	140.83	0.16		Brown siltstone. GBC.		
<u>BASE OF COAL SECTION</u>						
140.83	147.83	6.98	99	FMLSS with mudstone laminae common over top 1 m; clast of dull coal from 119.05-.08 m, GBC.		
147.83	148.05	0.22		Dull coal; 10% bright bands, core broken.		
148.05	148.32	0.27		Heavy dull coal, 1% bright bands, muddy; rare plant fragments. GBC.		
148.32	150.10	1.78		Sandy grey mudstone with wispy coaly flecks.		
150.10	154.05	3.95		FLSS, grey; muddy over top 50 cm; rare coaly flecks. GBC.		
154.05	155.04	0.99		MLSS, massive, grey, GBC.		
155.04	182.13	27.09		FMLSS massive grey rare coaly flecks, mudstone pellets common; mudstone pellet conglomerate from 172.05-.37 m; pellets 2-3 cm in diameter; joint from 180.95-181.60 full of calcite and zeolite; well formed amber coloured crystals; GBC.		
<u>COAL SECTION - MINOR</u>						
182.13	182.43	0.14	50	Dull coal, core broken.		
	182.56	0.06	75	Sandy black carbonaceous mudstone.		
	182.59	0.02	66	Clast of MLSS in carbonaceous mudstone, core broken.		
	182.68	0.02	25	Dull coal, core broken.		
	182.70	0.02		FLSS, irregular eroded contact with underlying coal.		
	182.90	0.20		Dull coal no bright bands.		
<u>BASE OF COAL SECTION</u>						
182.90	184.05	1.15		FMLSS, with many coaly bands spars and clasts over the top 20 cm.		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS										
			metres	%											

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
184.05	189.61	5.56		FMLSS, Massive, coaly spars common; core broken; wispy carbonaceous laminae common. GBC.		
189.61	191.04	1.43		MLSS massive core broken coaly clasts common coaly band 190.05-.06 m. GBC.		
191.04	218.54	27.50		MFLSS, grey, massive; with mudstone clast from 203.18-203.72 m, GBC.		
218.54	223.05	4.51		Mudstone, carbonaceous over top 30 cm; green-grey; with minor shale bands.		
223.05	233.80	10.75		FMLSS, grey massive; muddy over 225.05-227.50 m; minor wispy carbonaceous laminae; minor mudstone pellets, GBC.		
233.80	235.78	1.98		Laminated green-grey mudstone, interbedded with FLSS, (50:50); GBC.		
				<u>COAL SECTION</u>		
235.78	236.36	0.58		Dull coal, no bright bands; GBC.		
				<u>BASE OF COAL SECTION</u>		
236.36	240.30	3.94		Interbedded green grey mudstone and FLSS (40:60); carbonaceous over basal 30 cm. GBC.		
				<u>COAL SECTION</u>		
240.30	241.60	1.30		Dull coal, 1-2% bright bands, core broken in parts.		
				<u>BASE OF COAL SECTION</u>		
241.60	242.35	0.75		Siltstone, brown; minor plant fossil flecks.		
242.35	256.30	13.95		FMLSS grey massive minor mudstone laminae; minor wispy coaly laminae, shaley over basal 1 m.		
256.30	260.85	4.55		FLSS, grey, massive, with many mudstone bands and laminae; GBC.		
260.85	261.33	0.48		Shaley dull coal, GBC.		
261.33	261.43	0.10		Mudstone, brown-beige; GBC.		
261.43	262.07	0.64		Carbonaceous mudstone, black, GBC. Sandy towards the base.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS												
			metres	%													

FROM metres	TO metres	RECOVERY		DESCRIPTION	SECTION	
		metres	%		Core	Sample
262.07	262.72	0.65		FMLSS interbedded with carbonaceous mudstone (50:50). GBC.		
262.72	266.01	3.29		FMLSS, grey, massive with abundant wispy coaly laminae; shaley towards the base. GBC.		
266.01	271.05	5.04		Sandy, shaley grey-green mudstone.		
				END OF HOLE AT 271.05 m.		
Continued over						

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY		ASSAY RESULTS									
			metres	%										