

Appendix 3 - DDH OJ 004

Drill hole details:

Collar Co ordinates	E 55 524 451
	N 5 305 593
RL	407m
Dip	-90 ⁰
Drill type	HQ Diamond
Depth	48.65m

Graphic log	2
Detailed seam log	5
Photographs of core	7
Drill log	11

Graphic logs

MIDLANDS ENERGY

DRILL HOLE No 0J004

SHEET 1 OF 3

Survey Depth	Azimuth	Dip	Hole Co-ordinates (GDA - GPS)	
0	-	-90°	Easting_	59 525 451
			Northing_	5 305 593
			Elevation (m)	407
			Azimuth_Mag	-
			Dip	-90°

PROJECT: SOUTHERN MIDLANDS COAL
PROSPECT: EL-26/2008 (MUDWALLS ROAD)
DATE: 16-4-12 → 17-4-12
LOGGED BY: KAREN ADAMS

HOLE DEPTH	CORE RECOVERY	ROD	SAMPLE NO	SULPHIDES					PICTORIAL LOG		GRAPHIC LOG					GEOLOGY NOTES	SUMMARY LOG
				PREFIX	%	STRUCT	ALT	mm	0.06	0.5	2	8	32	64			
1	-	-	-														
2	-	-	-														
3	-	-	-														
4	-	-	-														
5	-	-	-														CUTTING BIT - NO CORE - 0-9.9m
6	-	-	-														
7	-	-	-														
8	-	-	-														
9	-	-	-														
10	-	-	-														
11	100	62															HQ ↓
12	100	100															SS
13	100	83															
14	100	15															MS
15	38	0															CL
16	75	100															MS
17	100	100															SS
18	100	100															SS
19	100	81															MS/SS
20	100	83															SS
REMARKS																	

MIDLANDS ENERGY

DRILL HOLE No 0J004

SHEET 2 OF 3

Survey Depth	Azimuth	Dip	Hole Co-ordinates (GDA -GPs)	
			Easting_	55 525 451
			Northing_	5 305 593
			Elevation (m)	407
			Azimuth_Mag	-
			Dip	-90°

PROJECT: SOUTHERN MIDLANDS COAL
PROSPECT: EL 26/2008 (MUDWALLS ROAD)
DATE: 16-4-12 → 17-4-12
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HOLE DEPTH	CORE RECOVERY	ROD	SAMPLE NO PREFIX	SULPHIDES					PICTORIAL LOG		GRAPHIC LOG	GEOLOGY NOTES	SUMMARY LOGS
				%	1	3	1	3	5	STRUCT			
21	100	35							JT PT	44° 20°		19.97-22.81: GREY TO DARK GREY MUDSTONE WITH MINOR CARBONACEOUS MUDSTONE AND VERY MINOR SANDSTONE.	
22	100	100							JT	38°			MS
23	100	46										22.81-23.45: GREY MUDSTONE WITH MINOR SANDSTONE. CROSS BEDDING PRESENT	
24	100	100										23.45-26.35: GREY, MEDIUM TO COARSE-GRAINED LITHIC SANDSTONE WITH DICHRIDIUM FOSSILS AND ZONAL FLACER BANDING (ESPECIALLY 26.25-26.45m) AND PROMINENT CROSS-BEDDING (24.6-25.1m)	
25	100	95											
26	100	100											SS
27	100	100											
28	100	100											
29	100	55										28.35-29.12: DULL, MODERATELY HEAVY COAL MINOR VITRINITE	
30	100	24							JT JT	30° 30°		29.12-30.88: GREY MUDSTONE AND MINOR FINE-GRAINED SANDSTONE.	MS
31	100	100										30.88-31.10: PALE GREY, FINE TO MEDIUM-GRAINED LITHIC SANDSTONE WITH MINOR MUDSTONE UP HOLE AND FLACER BANDING DOWN HOLE	SS
32	100	100							SL	85°		31.10-32.20: STRONGLY FLACER BANDED, PALE GREY TO GREY FINE TO MEDIUM-GRAINED LITHIC SANDSTONE WITH MINOR MUDSTONE. 'MICRO' FAULTING AT 31.7m & 32.2m	SS
33	100	100										32.20-33.57: PALE GREY, FINE TO MEDIUM-GRAINED LITHIC SANDSTONE WITH FLACER BANDING COMMON AND GRADATIONAL DOWN-HOLE CONTACT	SS
34	100	100										33.57-37.23: GREEN, ALTERED, MEDIUM-GRAINED LITHIC SANDSTONE WITH VERY MINOR FLACER BANDING. 'CRET'ING DOWN HOLE	
35	100	66											
36	100	71											SS
37	100	100											
38	100	55							JT JT JT	80° 70° 45°		37.23-37.50: BLACK TO GREEN, HIGHLY ALTERED COAL (?) AND MEDIUM TO COARSE-GRAINED SANDSTONE	
39	100	85										37.50-37.85: GREEN-GREY, FINE TO VERY FINE-GRAINED DOLERITE CALLED MARSH. 2-5 JOINT SETS. PROXIMAL TO CONTACT	
40	100	79										37.85-48.65: GREEN-GREY, MEDIUM-GRAINED DOLERITE WITH FREQUENT JOINTING TO 41.7m AND CALCITE VENTILS.	DOL

REMARKS

MIDLANDS ENERGY

DRILL HOLE No 0J004
SHEET 3 OF 3

Survey Depth	Azimuth	Dip	Hole Co-ordinates (GDA - EPS)	
			Easting_	55 525 451
			Northing_	5 305 593
			Elevation (m)	407
			Azimuth_Mag	-
			Dip	-90°

PROJECT: SOUTHERN MIDLANDS COAL
PROSPECT: EL26/2008 (MUDWALLS ROAD)
DATE: 16-4-12 → 17-4-12
LOGGED BY: KAREN ADAMS

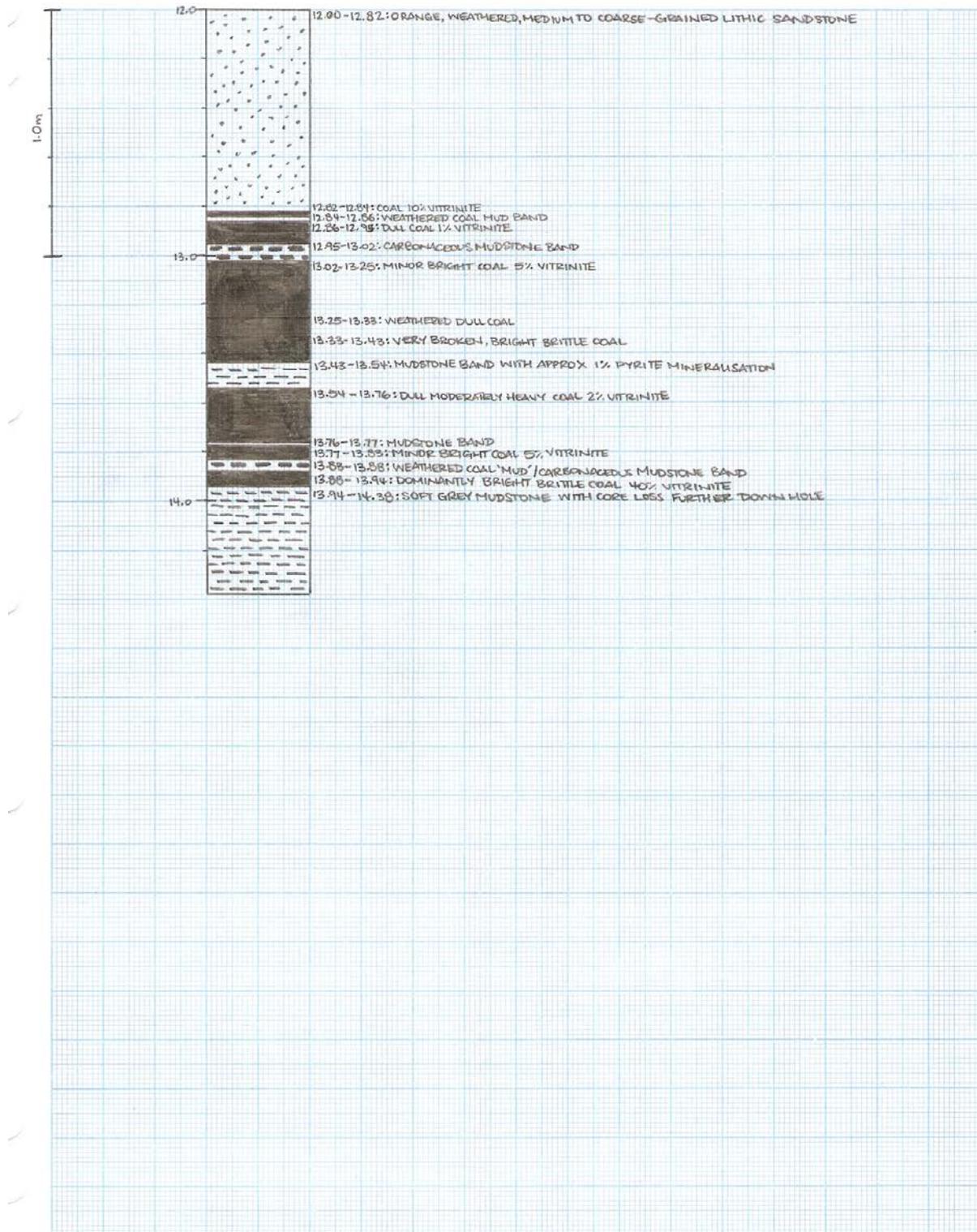
HOLE DEPTH	CORE RECOVERY	ROD	SAMPLE NO PREFIX	SULPHIDES					PICTORIAL LOG		GRAPHIC LOG				GEOLOGY NOTES	SUMMARY LOG
				%					STRUCT	ALT	mm					
				1	3	1	3	5			0.06	0.5	2	8		
41	100	40														
42	100	74						JT JT	20° 30°							
43	100	100														
44	100	80														Del
45	100	100														
46	100	100														
47	100	100														
48	100	90														
48.45	100	100														
REMARKS																

Detailed seam logs

OJ004 - DETAILED LOG : SEAM ONE

1mm Squares

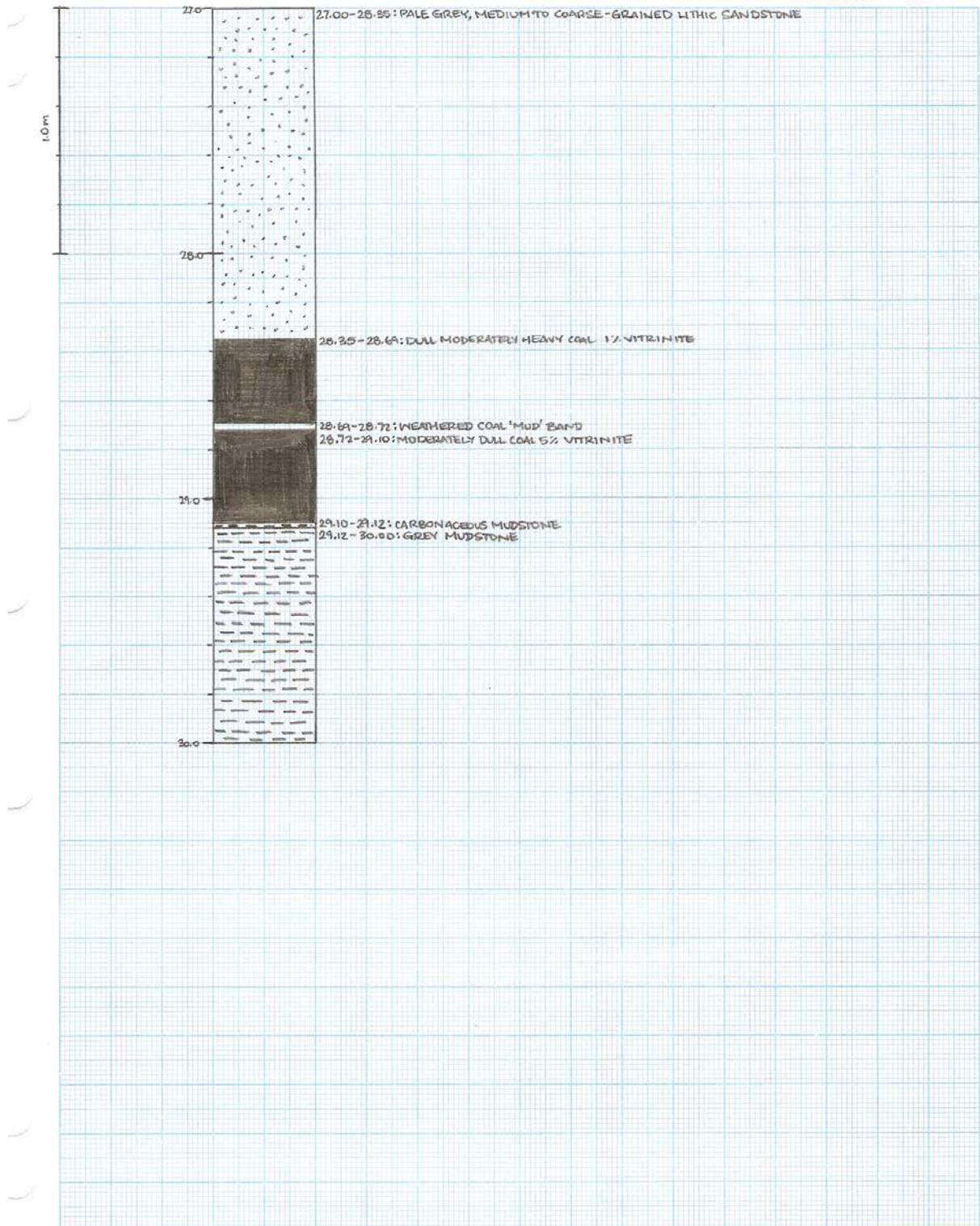
SEAM 1:20



OJ004 - DETAILED LOG: SEAM TWO

1mm Squares

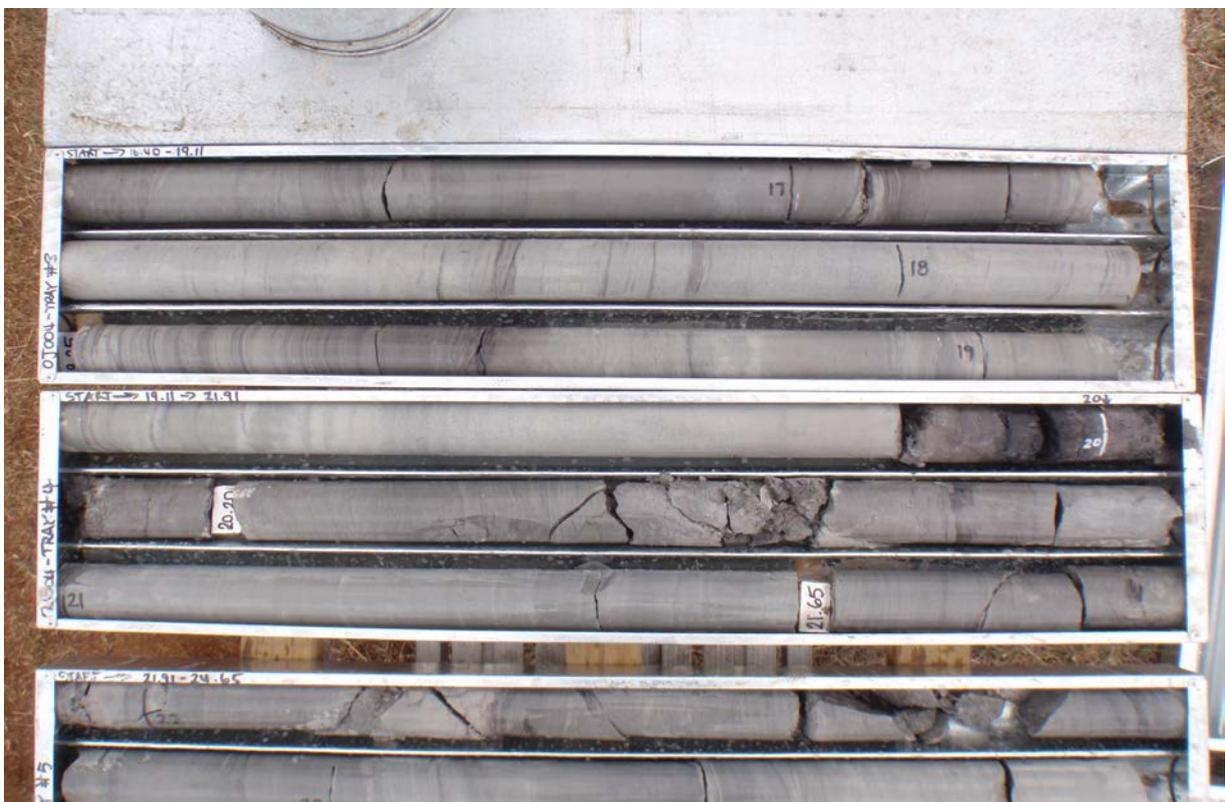
SCALE 1:20



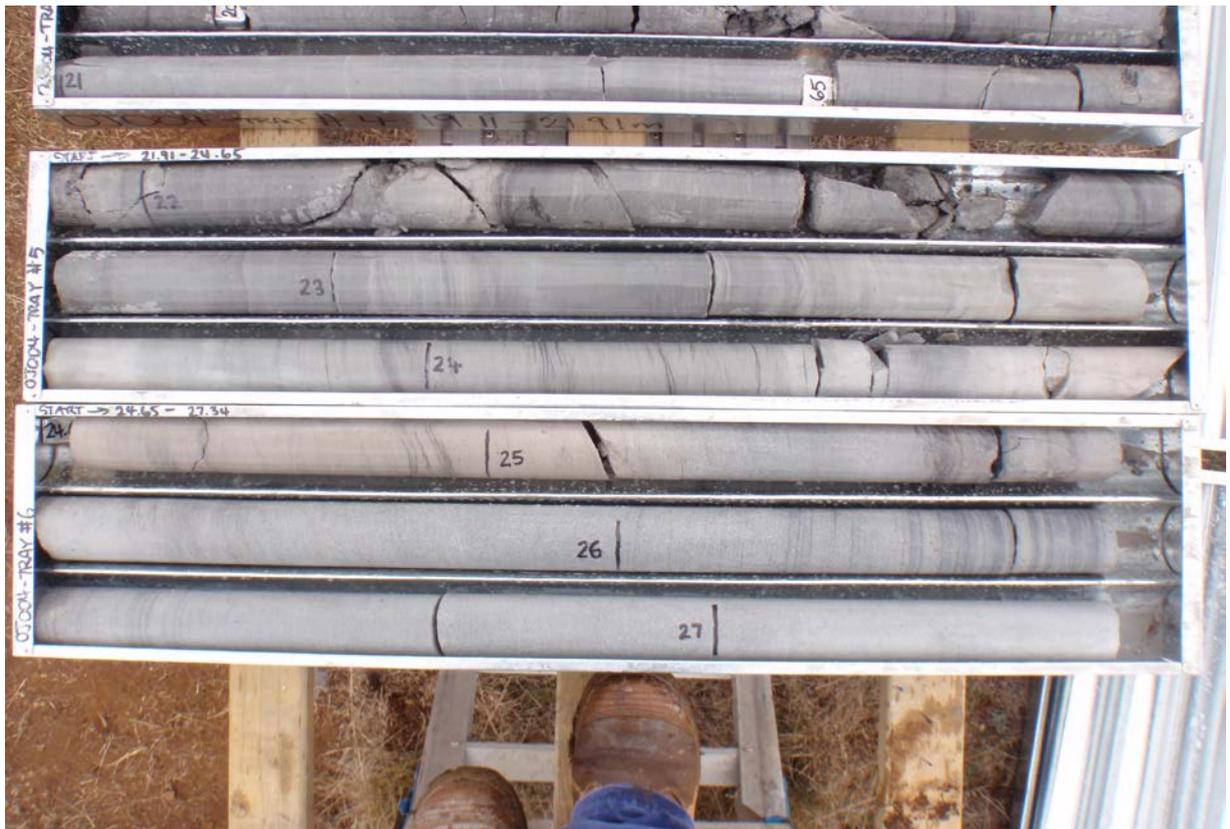
Photographs of core



Trays 1 & 2 – 9.90 to 16.40



Trays 3 & 4 – 16.40 to 21.91



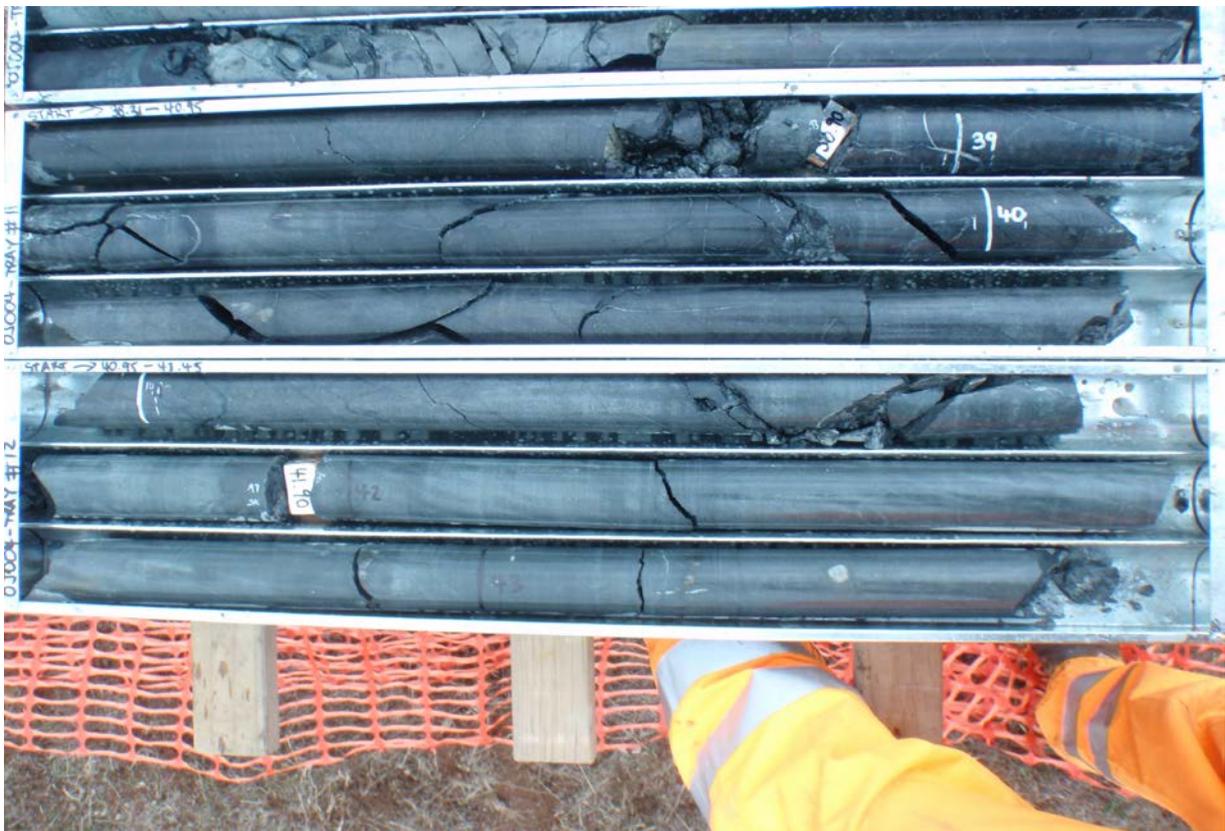
Trays 5 & 6 – 21.91 to 27.34



Trays 7 & 8 – 27.34 to 32.95



Trays 9 & 10 – 32.95 to 38.31



Trays 11 & 12 – 38.31 to 43.45



Trays 13 & 14 – 43.45 to 48.65 EOH

Drill Hole ID: OJ004

Project: Southern Midlands Coal

License: EL26/2008

Date Drilled: 16/4/12 - 17/4/12

Collar: Easting: 55 525 451
Northing: 5 305 593
Elevation: 407

(GDA - GPS)

Azimuth: n/a

Dip: -90 degrees

mFrom	mTo	Description
0	9.9	Cutting bit - No Core
9.9	12.82	Orange weathered, medium to coarse-grained lithic sandstone with 5cm mudstone rip-up clasts at 11.6m
12.82	13.94	Dull, heavy coal with minor bright brittle bands and some mudstone banding
13.94	14.38	Pale grey, broken mudstone
14.38	15.25	Core Loss - washed away (water return grey)
15.25	17.28	Grey mudstone with minor darker grey mudstone banding and small intervals of pale grey, fine-grained sandstone down hole. Minor flacer banding in sandstone
17.28	18.21	Pale grey, fine to medium-grained lithic sandstone with some flacer banding
18.21	18.58	Grey to dark grey interbedded mudstone and fine-grained lithic sandstone with minor carbonaceous mudstone. Bedding at 18.4m at 85 degrees to core axis
18.58	19.83	Pale grey, fine-grained lithic sandstone with minor mudstone and carbonaceous mudstone
19.83	19.9	Dark grey mudstone and carbonaceous mudstone
19.9	19.97	Minor bright coal with vitrinite banding
19.97	22.81	Grey to dark grey mudstone with minor carbonaceous mudstone and very minor sandstone
22.81	23.45	Grey sandstone with minor sandstone. Cross bedding present
23.45	28.35	Grey, medium to coarse-grained lithic sandstone with <i>dichroidium</i> fossils and zonal flacer banding (especially 26.25-26.45m) and prominent cross bedding (24.6-25.1m)
28.35	29.12	Dull, moderately heavy coal with minor vitrinite
29.12	30.88	Grey mudstone and minor fine-grained sandstone
30.88	31.1	Pale grey, fine to medium-grained lithic sandstone with minor mudstone up hole and minor flacer banding down hole
31.1	32.2	Strongly flacer banded, pale grey to grey, fine to medium-grained lithic sandstone with minor mudstone. 'Micro' faulting at 31.7 & 32.2m
32.2	33.57	Pale grey, fine to medium-grained lithic sandstone with flacer banding common and gradational down hole contact
33.57	37.23	Green, altered medium-grained lithic sandstone with very minor flacer banding. 'Grey'ing downhole
37.23	37.5	Black to green, highly altered coal(?) and medium to coarse-grained sandstone.
37.5	37.85	Green-grey, fine to very fine-grained dolerite chilled margin. 3.5 joint sets around contact
37.85	48.65	Green-grey, fine to medium-grained dolerite with frequent jointing to 41.7m and calcite veinlets
	EOH	