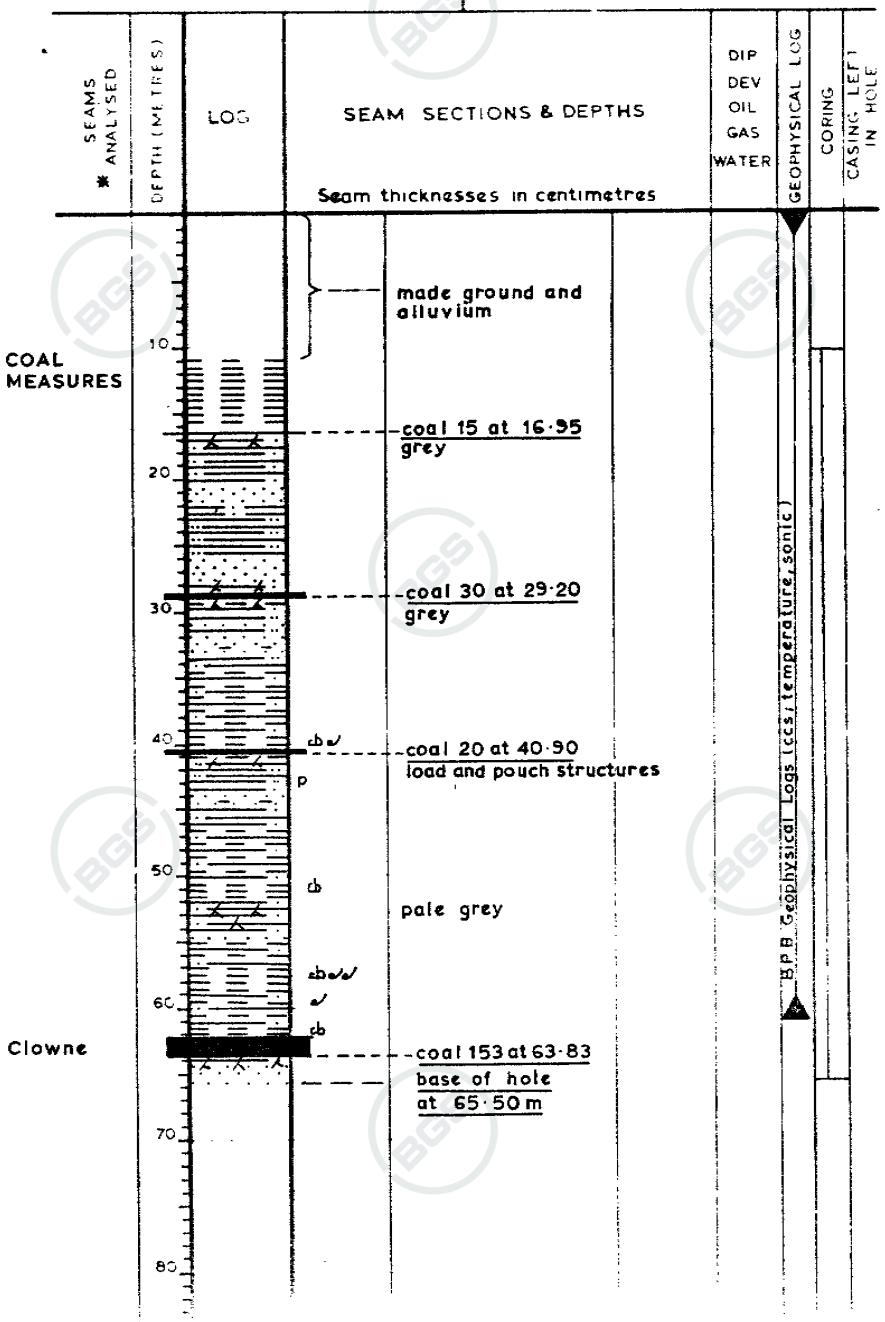
54D SK 47 SE/67 54D

MARKHAM COLLIERY

Borehole 4 for proposed surface drift (1985)

E 445211·9 m
N 372146·5 m

DATE 1985
STARTING LEVEL • 67·17 m O.D.



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Section of: MARKHAM COLLIERY No. 4 Borehole for proposed surface drift

Purpose: Site investigation

(Nat. Grid, Sheet & Qtr.)	B/H REG. NO.
SK47SE	54D

Exact Site: E.445211.9
N.372146.5

Level at which bore commenced relative to O.D. +67.17m.

Date of drilling: 14.3.85 to 21.3.85

Driller: Soil Mechanics Ltd.

Cores examined by D.J. Green, N.C.B. Geologist

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m	THICKNESS cm	DEPTH m	DEPTH cm
	See also geotechnical log by Soil Mechanics Ltd.				
	This hole was logged geophysically byB.P.B. Instruments Ltd.				
	Open hole to 6.00 m.				
MADE GROUND	Colliery fill	6	00		
	Cores from 6.00 m:-				
	Colliery fill (cores lost)	4	00	10	00
(approx. boundary)					
ALLUVIUM	clay, stiff, laminated, greenish-grey	0	45	10	45
	clay, stiff, mottled yellow-brown, sub-rounded inclusions of siltstone and sandstone	0	60	11	05
(approx. boundary)					

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COAL MEASURES					
Clay,	black, laminated, stiff	0	45		
				11	50
Mudstone	locally silty; dark; locally slightly carbonaceous; laminated; weathered (1.40 recovered)	2	30		
				13	80
Mudstone	laminated; soft, affected by water in top 0.25 (0.67 recovered)	1	60		
				15	40
Mudstone	laminated; core fragmented and affected by water (0.48 recovered)	1	40		
				16	80
	detached				
COAL	fragments (approx.)	0	15		
				16	95
	detached				
Seatearth:					
Siltstone	fine; pale grey; core dry and powdery (0.53 recovered)	0	55		
				17	50
Siltstone	fine to medium; occasional zones of shattered core up to 0.50 thick (2.15 recovered)	2	55		
				20	05
Siltstone	fine to medium, laminated (0.28 recovered)	)			
Sandstone	fine (0.90 recovered)	)3.00			
Sandstone	medium, massive (0.32 recovered)	)			
Siltstone	fine, locally muddy; laminated (0.64 recovered)	)			
				23	05
Siltstone	fine with occasional sandstone fine laminae and thin layers (80:20); common disconnected sandstone fine micro-lenses in basal 0.20	0	65		
				23	70
Core lost		0	34		
				24	04

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Siltstone	fine with occasional sandstone fine laminae and thin layers (80:20)	1	64		
				25	68
Sandstone	fine to medium; common micaceous carbonaceous planes; core fragmented towards base	1	82		
				27	50
Core lost		0	58		
Seatearth:					
				28	08
Siltstone	fine, muddy; grey, unlaminated; common roots	0	25		
				28	33
Mudstone	laminated	0	57		
				28	90
	attached				
COAL	Coal bright 0.16 (cylinders) Coal bright 0.14 (fragments) (Geophysical depth, 29.20 m.)				
		0	30		
	detached			29	20
Seatearth:					
Mudstone	dark; core fragmented (0.14 recovered)	0	14		
				29	34
Mudstone	locally silty; grey	0	64		
				29	98
Core lost		0	18		
				30	16
Siltstone	fine with common irregular sandstone fine laminae (80:20); occasional ironstone nodules; occasional minor load-and-pouch structures;	0	39		
				30	55
Sandstone	fine with common siltstone fine laminae (80:20); common micaceous carbonaceous planes, common large load-and-pouch structures; occasional ripples towards the base	0	92		
				31	47

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Siltstone	fine to medium with occasional sandstone fine laminae and thin layers (80:20); locally vaguely ripple bedded	0	46	31	93
Sandstone	fine with common siltstone fine laminae (80:20); common micaceous carbonaceous planes; locally ripple bedded	1	42	33	35
Siltstone	fine to medium with occasional sandstone fine laminae (80:20)	0	30	33	65
Siltstone	fine, laminated	0	68	34	33
Mudstone	silty, laminated	0	40	34	73
Siltstone	fine with occasional thin ironstone bands	0	32	35	05
Mudstone	silty, laminated	0	16	35	21
Siltstone	fine, occasionally muddy; laminated; occasional thin ironstone bands passage	2	20	37	41
Mudstone	silty, laminated; occasional thin ironstone bands	2	29	39	70
Mudstone	carbonaceous; shaly; occasional non-marine lamellibranchs in the basal 0.25 detached	1	00	40	70
COAL	bright; 0.08 fragments recovered; geophysical logs suggest dirty coal approx. 0.20 detached	0	20	40	90
Seatearth:					
Mudstone	dark grey, core completely fragmented	0	18	41	08

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Core lost		0	16	
				41 24
Siltstone	fine to medium, with occasional irregular sandstone fine laminae (80:20)	0	39	
				41 63
Sandstone	fine	0	27	
				41 90
Siltstone	fine with occasional sandstone fine laminae (80:20)	0	40	
				42 30
Siltstone	fine to medium with occasional sandstone fine laminae; occasional small load-and-pouch structures; common comminuted plant debris	1	03	
				43 33
Siltstone	fine to medium; laminated; occasional plant debris	0	57	
				43 90
Sandstone	fine with common siltstone fine laminae (80:20); common micaceous carbonaceous planes, ripple bedded throughout	0	70	
				44 60
Siltstone	fine with rare wispy sandstone fine laminae	0	60	
	passage			45 20
Siltstone	fine, laminated	0	90	
				46 10
Mudstone	silty, laminated; occasional thin ironstone bands	4	45	
				50 55
Mudstone	carbonaceous; shaly	0	73	
				51 28
Mudstone	laminated	0	18	
				51 46
Mudstone	silty, laminated	0	04	
				51 50

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Mudstone	silty, poorly laminated	0 95		
			52	45
Seatearth:				
Siltstone	fine to medium; pale grey; unlaminated, common roots	1 55		
			54	00
Sandstone	fine with common micaceous carbonaceous planes	0 60		
			54	60
Mudstone	silty; laminated; common thin ironstone bands	2 40		
			57	00
Mudstone	highly carbonaceous; shaly; common non-marine lamellibranchs	1 93		
			58	93
Mudstone	silty; occasional irregular ironstone bands near the top; becoming dark towards the base; occasional non-marine lamellibranchs	1 12		
			60	05
Mudstone	silty, dark; laminated; becoming slightly carbonaceous towards the base	1 80		
			61	85
Mudstone	carbonaceous	0 45		
	detached, fitting		62	30
CLOWNE SEAM	Coal, mainly bright; occasional pyrite lenses near the top 75 (cylinders) Coal, mainly bright 78 (cylinders) 153 (pull-out at 63.05 m.)			
	attached	1 53	63	83
Seatearth:				
Mudstone	pale grey	0 08		
			63	91
Siltstone	fine; pale grey	0 29		
			64	20

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Siltstone	medium; pale grey	0	13		
				64	33
Sandstone	fine with occasional siltstone fine laminae (90:10) common micaceous carbonaceous planes; occasional small ironstone lenses	1	17		
				65	50

Base of the hole at 65.50 m

Photographs of the cores are available in the report by Soil Mechanics Ltd. on the proposed Markham Colliery surface drift (1985).

JR/0114r/PH

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