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6 - INCH MAP

B/H REGD. NO.

Section of: Markham Colliery No.15  
Underground Borehole.

Purpose: To investigate the roof measures  
of the Second Waterloo

Exact Site: National Grid Co-ordinates  
E446585  
N370086

MAY 1982 SK 47 SE / 56

SK.47SE

52

(Nat.Grid, Sheet & Qtr.)

Level at which bore commenced relative to  
O.D. - 450.07 m  
(in the Clay Cross Soft workings)

Date of Boring: August to October 1980

Borer: N.C.B. North Derbys. Area  
Drilling Team

Cores examined by J.A. Smith, N.C.B. Geologist

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS		DEPTH	
		m	cm	m	cm
	Top of borehole			132	75
Siltstone	fine with common thin sandstone layers (75:25); sporadic minor erosion surfaces; common plant fragments and ironstone patches in top 0.15; rare burrows passage	1	22	131	53
Sandstone	fine and siltstone fine (55:45); common minor erosion surfaces	0	35	131	18
Siltstone	muddy, fine in parts, unlaminated; abundant plant fragments	0	95	130	23
Mudstone	silty, laminated; common plant fragments and ironstone bands	0	43	129	80
Seatearth					
Siltstone	muddy, unlaminated, cheesy texture in parts; ironstone nodules in basal 0.15; abundant rootlets, rare plant fragments in top 0.10	0	45	129	35
Sandstone	fine and siltstone fine (50:50); load casts in basal 0.05; slump structures in top 0.05	0	25	129	10
Sandstone	fine with rare thin siltstone fine laminae	0	20	128	90

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Section of: Markham No.15 Underground Borehole

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS		DEPTH	
		m	cm	m	cm
Siltstone	fine and sandstone fine (60:40), load cast at 128.57	0	37	128	53
Sandstone	fine with rare thin siltstone fine laminae; common minor erosion surfaces passage	1	84	126	69
Sandstone	fine and siltstone fine (55:45), papery lamination passage	0	24	126	45
Siltstone	fine with rare thin sandstone fine laminae	0	23	126	22
Siltstone	fine, muddy in parts, unlaminated; faultlets at 123.60; rare thin sandstone fine laminae 124.00 to 124.30 passage	3	48	122	74
Mudstone	silty, laminated, dark in basal 0.15; isolated non-marine lamellibranch fragment at 121.06	2	48	120	26
<u>CORE BOXED 120.26 TO 117.00</u>					
Mudstone	dark grey, shaly, with mussel fragments	0	47	119	79
<u>2ND WATERLOO</u>	Coal and dirty coal		17		
	Mudstone, grey; rootlets; ironstone streaks		31		
	Coal, bright, largely fragmented		40		
	Mudstone, grey; rootlets		13		
	Core lost: penetration recorder indicates dirt		22		
	Coal, clean, banded; fragmented		26		
	Mudstone, grey; rootlets		9		
	Coal, clean, bright; fragmented		42		
		200	2	00	
				117	79
Seatearth	Mudstone, grey; fragmented	0	19	117	60
<u>2ND WATERLOO FLOOR COAL</u>	Core lost; penetration recorder indicates coal		3		
	Core lost; penetration recorder indicates dirt		2		
	Mudstone seatearth, grey		2		
	Coal, bright; pyritic		7		
		14	0	14	
				117	46

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GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS		DEPTH	
		m	cm	m	cm
E - MAY 1982					
Combined 2nd Waterloo and Floor Coal:-					
Dip less than 20 Recovery 65%					
Seatearth Siltstone	fine to medium, light grey; muddy in top 0.08	0	46	117	00
Siltstone	fine to medium, unlaminated, common rootlets	0	28	116	72
Siltstone	muddy, common listric surfaces; common plant fragments and rootlets	0	08	116	64
Siltstone	fine, unlaminated; common plant fragments in basal 0.20; sporadic rootlets throughout	0	71	115	93
Siltstone	fine with thin sandstone fine laminae (80:20); load casts at 115.56; comminuted plant debris	1	52	114	41
Sandstone	fine with rare thin siltstone fine laminae	0	60	113	81
Siltstone	fine, unlaminated, rare thin sandstone laminae in top 0.10	1	31	112	50
Siltstone	muddy, poorly laminated	0	36	112	14
Mudstone	silty, laminated; shaly in basal 0.50	1	00	111	14
Mudstone	highly carbonaceous, shaly attached	0	05	111	09
COAL	with 1 cm dirt towards the base; completely fragmented detached	0	16	110	93
Seatearth					
Mudstone	silty, unlaminated cheesy texture, listric in parts; abundant rootlets	0	20	110	73
Siltstone	muddy, poorly laminated; common ironstone nodules in basal 0.10; abundant rootlets	0	35	110	38



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Section of: Markham No. 15 Underground Borehole

~~5 - MAY 1982~~

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS		DEPTH	
		m	cm	m	cm

Siltstone

muddy, laminated; common rootlets

0 38

110 00

Coring from 85.18; cores seen from 110.00

N.B. Zero for the borehole coincides with  
the base of the Clay Cross Soft seam

JR/8214/DC.XI



**NORTH DERBYSHIRE AREA**

NATIONAL COAL BOARD

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SK 47SE/56

SURVEY DEPARTMENT

BOREHOLE DATA AND HISTORY

1 MAY 1986

BOREHOLE NAME: MARKHAM NO 15 UNDERGROUND UP-BORE.  
Approximate Location: 1,060 METRES S 30°E BOLSOVER NO 2 SHAFT  
National Grid Reference: E 446585 N 370086  
6 inch sheet: SK 46 NE.  
Level of Origin: - 450.07m O.D.  
Date of Drilling: Commenced 7.8.80  
Finished 24.10.80  
Contractor's Name: N.C.B.  
Name of Boremaster: DRILLER IN CHARGE B. WARD.

Depth <sup>m</sup> (ft)	Diameter of Core <sup>mm</sup> (in)	Diameter of Hole <sup>mm</sup> (in)
00 to 85.18	OPEN HOLE	88.90 mm
85.18 to 132.75 m	NQU CORE	69.9
	(cores seen from 110.00 m) etc.	

Drilling Difficulties: NONE.

Method of Sealing Off Borehole: PUMPED 850 KILOGRAMS SHALLOW OIL WELL CEMENT, CLASS B MIXED WITH 454.6 LITRES OF FIRE MAIN WATER UP THE BOREHOLE UNTIL A PRESSURE OF 450 lbf/sq. IN. WAS RECORDED ON THE GAUGE. HOLE FULL OF CEMENT WHEN CHECKED NEXT DAY.

Purpose fulfilled by Borehole: WHEN CHECKED NEXT DAY. OBTAINED A CORE OF 2<sup>ND</sup> WATERLOO SEAM & PROVED POSITION & THICKNESS OF SANDSTONE CHANNEL ABOVE THE SEAM & INTERVAL BETWEEN TOP OF SEAM & BASE OF CHANNEL.

Official Responsible for above Report:

A.F. BOWMER.

WD

Chief Surveyor & Minerals Manager



