



NGRC
BOREHOLE RECORDS
ADJUSTMENT FORM



British
Geological
Survey

QUARTER SHEET SK47SW

BH REGISTRATION NUMBER 260-274

~~NUMBER NOT USED~~ / ~~! BGS MISSING !~~

(Delete as appropriate)

RECORDS ENTERED & HELD BY WALLINGFORD



SECTION OF Strata at Marpleham No 2 Colliery
COUNTY Derbyshire
Communicated by _____ Date of sinking _____
One-inch Map (N.S.) _____ Six-inch Map _____
HEIGHT ABOVE O.D. _____ DIP OF STRATA _____

		Thickness.			Depth from Surface.		
		Yards.	feet.	ins.	Yards.	feet.	ins.
Westphalian B.							
	Blue Band	3		6	80		11
	Dark	2	1	6	82	✓	5
	White Chunch	1	2	7	84	2	0
	Blue band	8	2	6	93	1	6
Coal	(Bright)		1	3	95	2	9
	Soft Chunch.		1	3	94	1	
	Stone "	1	2	4	96		4
Coal	+ Salt			4	96		8
	Chunch.	1	2		97	2	8
	Canth.		1	8	98	1	4
	Stone Band			11	98	2	3
	Canth.	1		9	100		
	Black Band			3	100		3
	Blue Band with Ironstone Balls	6		9	106	1	
	Chunch with Coal pipes		2	4	107		4
	Stone Band + Canth balls	9		8	116	1	0
	Dark " Strong			9	116	1	9
	Canth.			11	116	2	8
	Black band	10	1	2	127		10
Coal	Good + Bright		2	4	128		2
	Chunch		2	11	129		1
Coal	Good - Bright		1	4	129	1	5
	Chunch Soft			9	129	2	2
	" Strong	1		2	130	2	4
	Rock + Stone Band	6		2	136	2	6
	Blue Band	4	2	3	141	1	9
Coal	Inferior	1			142	1	9
	Chunch with Coal pipes				143		8
	" Strong	5		11	148	1	8
Coal	+ Salt			6	148		8
	Chunch Soft	1	2	3	150	1	5
	Stone Band - Rock	3	2		154		1
	Canth.			9	154		2
	Blue Band	2	1	4	156	2	6
Coal	(Bright)			6	157	1	
	Chunch			1	157		
	Stone Band	10	1	3	168		3
	Dark "	1	1	1	169	1	4
	Chunch			2	171	1	2
	Stone Band + Rock			10	172	2	5
	"			4	172	2	9
	" Chunch	1	1	0	174	0	

(3)

SECTION OF Strata at Markham No 2 Colliery SK47/56C
COUNTY Derbyshire 142
Communicated by _____ Date of sinking _____
One-inch Map (N.S.) _____ Six-inch Map _____
HEIGHT ABOVE O.D. _____ DIP OF STRATA _____

Westphalian B.

Thickness.			Depth from Surface.		
Yards.	feet.	ins.	Yards.	feet.	ins.
			179		9
			182	2	9
			185		11
			187		11
			187	2	11
			189		2
			198	1	9
			222	1	4
			222	1	10
			225		1
			225	2	5
			229	2	10
			230	1	1
			230	1	8
			230	2	1
			236	1	8
			238	2	11
			239	2	5
			240		9
			246		7
			251	1	7
			252	1	3
			252	2	11
			256	2	5
			259		7
			260		10
			265	0	10
			267		10
			268	1	7
			282		7
			286		1
			287		1
			289		8
			290		6
			291	1	16
			291	2	10
			292		6
			300	2	4
			308	1	10
			308	1	2
			308	2	8
			314	1	



SECTION OF Strata at Martham No 2 Colliery
COUNTY Westphalia
Communicated by _____ Date of sinking _____
One-inch Map (N.S.) _____ Six-inch Map SK 47/56
HEIGHT ABOVE O.D. _____ DIP OF STRATA _____

	Thickness.			Depth from Surface.		
	Yards.	feet.	ins.	Yards.	feet.	ins.
<u>Westphalia</u> <u>B</u> <u>Coal + Ball</u>			6	324	1	6
Stone Band with rock bands	8	2	2	323		8
Blue "		2	6	324		2
<u>Coal</u> <u>Top Hard</u>	2		6	326		8
Stone Chunch	2	2	6	329	978	8
" Band	2	1	3	331	1	5
Blue "	2	2		334		5
Black "		1	8	334	2	1
" Stone			5	334	2	6
<u>Coal</u> <u>Cannel</u>			2	334	2	8
Dark Bat			2	334	2	10
Stone Chunch	1	1	10	336	1	8
" Band - Cank	7	2		344	0	8
Dark Grey "	2	1	9	346	2	5
Black Ball			7	347		
<u>Coal</u> <u>Fairly good</u>			5	347		5
<u>Chunch</u>	3	1	6	350	1	11
Stone band	1	2		352		11
Strong "	2	2	4	355		3
" " + rock bands	1		6	356		9
" "	4		8	360	1	5
<u>Coal</u> <u>fairly good</u>			1	361		3
<u>Soft Chunch</u>			1	361	1	9
Strong Band	2		3	363	2	
" Band	2		3	365	2	3
Rock			10	366		1
Strong Band	2		6	368		7
Rock			8	368	1	3
Dark Band	5		"	373	2	2
<u>Coal</u> + <u>Dirt</u>	2			375	2	2
<u>Chunch</u>	1	1	9	377	1	11
<u>Coal</u>			3	377	1	2
Chunch	1		10	378	2	
Strong band with ironstone	5	2		384	1	
Dark Blue Band	4	1	3	388	2	8
<u>Coal</u> (Good + Bore)			5	389		8
<u>Coal</u> + <u>Chunch</u>			9	389	1	5
Rock with Cank Balls	2		7	399	2	2
Stone Band	3			394	2	0
Dark Grey Band with rock bands	4	1	8	399	1	1

SECTION OF Strata at Markham W.D. Colliery SK47/56C
COUNTY Derbyshire
Communicated by _____ Date of sinking _____
One-inch Map (N.S.) _____ Six-inch Map _____
HEIGHT ABOVE O.D. _____ DIP OF STRATA _____

	Thickness.			Depth from Surface.		
	Yards.	feet.	ins.	Yards.	feet.	ins.
<u>Westphalian</u> B.						
Dark bind	2	.	.	401	1	.
<u>Coal</u> & <u>Bit.</u> mixed			7	401	1	7
<u>Coal</u> (Good - Bright)		2	2	402	.	9
Black bind	1	2	10	404	.	7
<u>Cannel Coal</u>		2	2	404	2	9
Dark bind	1	1	3	406	1	.
<u>Cannel</u> (Impure)			7	406	1	7
Grey bind	1	2	9	408	1	24
Black "		1	6	408	2	10
Stone	1	1	1	410	.	11
Rock			11	410	1	10
Stone Bind	1	2	1	412	.	11
Dark "	1	1	11	413	2	10
<u>Coal</u> (Good - Bright)			6	414	.	4
Clunch Dark	2	.	9	416	1	1
Blue Bind	1	2	5	418	.	6
Blackshale & Cannel			5	418	.	11
Dark bind			9	418	1	8
<u>Coal</u> (dandy)			8	418	2	4
Dark bit			11	418	2	9
Clunch (light)	1	.	4	420	.	.
Clunch (dark)		2	6	420	2	6
Rock laddy	4	2	9	425	2	3
Strong bind		1	1	426	.	4
<u>Coal</u> (Good - Bright)			9	426	1	1
Clunch	1	1	.	427	2	1
Rock	1	1	3	429	.	4
Blue bind Strong	2	.	6	431	.	10
Black shale & Coal pebbles			6	431	1	4
Clunch			10	431	2	2
Rock with bands	2	.	5	433	2	7
Blue bind	2	.	1	435	2	8
<u>Coal & Rock</u>			5	436	.	1
Bit			6	436	.	7
Clunch	1	1	6	437	2	1
Blue bind	4	1	6	442	.	7
Rock	1	.	9	443	1	4
Stone bind	5	2	5	449	.	9
Blue " with Chalk	3	0	5	452	1	2
Blackshale	1	2	4	454	.	6



SECTION OF

Strata

at

Martham No 2 Colliery

COUNTY

Derbyshire

Communicated by

Date of sinking

One-inch Map (N.S.)

Six-inch Map

SK47/56C

HEIGHT ABOVE O.D.

DIP OF STRATA

20

Westphalian

3

Coal

(good)

Clunch

Coal

(good)

Clunch

Coal

(good)

Clunch

Rock

Dark bind

Stone "

Coal

(good)

Ball

Bottom Ell Coal

Coal

(good)

Rock

Blue bind Strong

Stone " r Rock band

" "

Dark "

Stone clunch

Coal r Stone bind

Dark blue "

Rock

Dark bind

Rock r Stone bind

Blue bind

Black " with shells

Dark bind r Stone clunch

Black " with shells

Dark Grey "

Black "

Grey bind with laminae

Black bind

Coal

good - Bright

Clod

Ball

Coal

with hard bands

Clod with Strata of Coal

Coal

Lopo

Clunch

Thickness.

Depth from Surface.

Yards.

feet.

ins.

Yards.

feet.

ins.

6.

4524

1

7

4524

1

7

4

4524

1

11

2

3

4555

1

2

1

3

4555

2

5

1

2

4556

.

7

4

2

11

4561

.

6

3

.

11

4562

1

5

4

2

8

4569

1

1

1

6

4569

2

2

4

4569

2

11

1

5

4570

1

4

5

1

3

4575

2

7

2

7

4578

.

2

4

1

11

4582

2

1

3

2

7

4586

1

8

9

2

4596

.

8

1

.

2

4597

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10

1

2

1

4598

2

11

5

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503

2

11

6

504

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5

3

1

5

507

1

10

2

10

509

2

8

1

1

6

511

1

2

2

7

512

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515

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518

2

0

1

5

520

2

10

2

10

523

2

8

4

0

5

528

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4

3

2

531

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6

1

7

531

2

1

1

1

532

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532

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1 1/2

2

0 1/2

532

2

2

11

533

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1

1

1

2

534

1

2

1

5

534

2

8

(243 changes)

T1603

WB & L (2)-14536-2000-12-3

WB & L (2)-14526-3000-12-3

P.P.
S/61



NATIONAL COAL BOARD

EAST MIDLANDS DIVISION

NO. 1 AREA

SCHEDULE: 2

MARKHAM

COLLIERY.

R. 092(a)

WATER ENCOUNTERED

DURING

SHAFT SINKINGS

DRIVING OF WORKINGS

SHAFT

HORIZON

QUANTITY

HORIZON

QUANTITY

A
No. 1 Shaft
Tubbing from - 6yds. to
78 yds.

B
No. 2 Shaft
Tubbing from 3 yds. to
77 yds.

C
No. 3 Shaft
Tubbing from 4 yds to
75 yds.

All above
80 yds.

No record

No water difficulties

-

11/2/20
SK47/56
A-C



10

NATIONAL COAL BOARD EAST MIDLAND DIVISION NO. 1 AREA SCIENTIFIC

MINERAL ANALYSIS OF WATER SAMPLE
(Required for General Assessment)

SK47/56C

Name of Colliery: Markham No. 2

Source: - Top Hard Seam

Date of Sampling: 31/10/51 Date submitted for Analysis: 31/10/51

Sample No.: 25

Possible Sources of Pollution:

Intended Use: For Hydraulic conveyance of coal (Markham B11)

CONDITIONS AT TIME OF ANALYSIS

Appearance: Turbid

Suspended Matter: 25

Appearance after Filtration: Very slightly

Iron in Suspended Matter (as Fe) 3

Colour: -

turbid
Hazen Units

Oil: Nil

pH Value: 7.2

Langelier Saturation Index: minus 0.2

ANALYSIS OF FILTERED WATER

PROBABLE COMBINATIONS

Calcium (as Ca): 1540

Silica: 10

Magnesium (as Mg): 764

Ferrous Sulphate 11
Iron Oxide (as Fe₂O₃):

Iron (as Fe): 4

Calcium Carbonate: 745

Sodium (as Na):

Calcium Sulphate: 835

Silica (as SiO₂): 10

Calcium Chloride: 2759

Chlorides (as Cl): 21,948

Magnesium Carbonate:

Sulphates (as SO₄): 596

Magnesium Sulphate:

Nitrates (as N):

Magnesium Chloride: 2995

Free Carbon Dioxide (as CO₂): 1.2

Magnesium Nitrate:

Total Alkalinity (as CaCO₃): 745

Sodium Carbonate:

Total Acidity (as CaCO₃):

Sodium Sulphate:

Total Dissolved Solids (dried at 180°C): 37359

Sodium Chloride: 29606

Total Dissolved Solids after ignition:

Sodium Nitrate:

Total Hardness (as CaCO₃): 7000

p.p.m. - No use

Temporary Hardness (as CaCO₃): 745

p.p.m.

Permanent Hardness (as CaCO₃): 6255

p.p.m.

Hardness due to Calcium (as CaCO₃): 3850

p.p.m.

Hardness due to magnesium (as CaCO₃): 3150

p.p.m.

R.D.

/over



NATIONAL COAL BOARD				EAST MIDLANDS DIVISION				NO. 1 AREA				SCHEDULE 3			
				MARKHAM				COLLIERY				R. 892(b)			
ADDRESS OF PREMISES	NAME OF WELL OR OTHER WORK	QUANTITY	SOURCE	USE OF WATER				DOMESTIC	COAL WASHING	BOILER FEED	SURPLUS				
Markham Colliery Duckmanton, Nr. Chesterfield.	Duckmanton Iron- works, No. 1 Old Shaft Sulzer Sub- mersible Shaft Pump	112/2 180,000 g.p. day	Top Hard Ancient Workings	-	-	-	-	-	Nil (Coal Washing and other surface use	273,800 gals. per day	Nil				
Bolsover Pumping Station	Bolsover Pumping Station Doe Lea Brook.	237,800 g.p. day	River Doe Lea and its tributaries	-	-	-	-	-	144,000 gals. per day	-	Nil				

112/20
SK47/56
112/20



NATIONAL COAL BOARD

EAST MIDLANDS DIVISION

NO. 1 AREA

SCHEDULE; 1

O.D. TOP OF SHAFT,

2371 237.1

SITE COORDS.

COLLIERY: MARKHAM

R.992

No.	PUMP	CAPACITY	Quantity Pumped	Workings Drained	Horizon Drained	Shaft from Which pumped	USE OF WATER				Method of Disposal of Unused water
							DOMESTIC	COAL WASHING	BOTTLER FEED	SURPLUS	
1.	Sulzer Centrifugal	250 g.p.m.	31,000 g.p.Day	Ell Coal Seam	- 480 40 yds.	No. 3	-	-	-	-	Waste Water to River Doe Lea direct - do -
2.	Sulzer Centrifugal	250 g.p.m.	60,000 g.p.day	Top Hard Seam Gob.	- 326 yds.	No. 3	-	-	-	-	- do -
3.	Sulzer Centrifugal	250 g.p.m.	60,000 g.p.day	- do -	- 326 yds.	No. 3	-	-	-	-	- do -
	Duckmanton Pump	250 g.p.m.	See Schedule 3								
	Sulzer Shaft Driven Submersible										
	Bolsquer Pumping Station	Lee Howel Centrifugal & Worthington Simpson	See Schedule 3.								

112/20
SK47/1/56



NATIONAL COAL BOARD

EAST MIDLANDS DIVISION

NO. 1 AREA

SCHEDULE: 4

MARKHAM COLLIERY

COMMENTS ON WATER PROBLEMS IN WORKINGS.

R.892 (c)

The four Markham Shafts were sunk due South of Seymour old Colliery, Blackshale, Deep Hard, Ell Coal, and Top Hard Seam have been extensively worked. On the Seymour Carrier Water pressure up to 400lbs. per sq. inch. is adequately held by stout barriers in the Top Hard Seam. This necessitated great care in the formation of barriers and later in the projection of workings of lower seams. The major portion of Top Hard development was due south to the Palterton Area and now that all Top Hard is exhausted Palterton Water make has built up until at some 50ft. deep in the shaft the water reached Markham No. 2 Pumps. Little trouble is experienced in lower seams, indeed the Blackshale is very dry.

Due to feed water shortage for internal use Markham Unit installed a Sulzer Submersible Pump in Duckmanton Iron Works, old Top Hard Shaft and this water pumped and delivered to Markham Reservoir under Automatic Control is of excellent quality. The installation of this Pumping Station relieved the adjacent Arkwright Colliery of much of this surplus water. Such has been the water shortage at Markham that Pumps have had to be installed near Bolsover to pump from the River Doe Lea before this was further polluted by industrial effluent downstream.

11/2
11/2
20
11/20
SK47/56



13
112
20
11/2/20
SK47/56

NATIONAL COAL BOARD EAST MIDLANDS DIVISION NO. 1 AREA SCIENTIFIC
GENERAL ANALYSIS OF WATER SAMPLE
(Required for General Assessment)

Name of Colliery: **Martham** Source: **Blackshale Seam.**
Date of Sampling: **27/12/51** Date submitted for Analysis: **1/1/52.** 2's R.H.A. Head. Sample No.:
Possible Sources of Pollution: **Required in connection with pumping.**
Intended Use:

CONDITIONS AT TIME OF ANALYSIS

Appearance: **Turbid** Suspended Matter: **7** p.p.m.
Appearance after Filtration: **Clear** Iron in Suspended Matter (as Fe): **-** p.p.m.
Colour: Hazen Units Oil: **-** p.p.m.
pH Value: **7.2** Langelier Saturation Index: **Minus 0.2**

ANALYSIS OF FILTERED WATER

Parts per million	PROBABLE COMBINATIONS
Calcium (as Ca): 5280	Silica: 10
Magnesium (as mg): 1091	Iron Oxide (as Fe ₂ O ₃): 0.4
Iron (as Fe): 0.3	Calcium Carbonate: 105
Sodium (as Na): 24.176	Calcium Sulphate: 286
Sulphate (as SO ₄): 10	Calcium Chloride: 14.277
Chlorides (as Cl): 49,560	Magnesium Carbonate:
Sulphates (as SO ₄): 202	Magnesium Sulphate: 4.277
Nitrates (as N): -	Magnesium Chloride:
Free Carbon Dioxide (as CO ₂): -	Magnesium Nitrate:
Total Alkalinity (as CaCO ₃): 105	Sodium Carbonate:
Total Acidity (as CaCO ₃): -	Sodium Sulphate:
Total Dissolved Solids (dried at 180°C): 81,000	Sodium Chloride: 61.427
Total Dissolved Solids after ignition:	Sodium Nitrate:
Total Hardness (as CaCO ₃): 17,700	
Temporary Hardness (as CaCO ₃): 105	
Permanent Hardness (as CaCO ₃): 17,595	
Hardness due to Calcium (as CaCO ₃): 13,200	
Hardness due to magnesium (as CaCO ₃): 4,500	

R. 80.

