



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		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		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 Clunch	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 Clunch	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
Clunch	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 10	361		3
Soft Clunch			1 6	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
Clunch	1	1	9	377	1	11
<u>Coal</u>			3	377	1	2
Clunch	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 + Bad)			5	389		8
<u>Coal</u> + <u>Clunch</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	✓	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			4	418	2	8
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 &amp; 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 \_\_\_\_\_

			Thickness.			Depth from Surface.		
			Yards.	feet.	ins.	Yards.	feet.	ins.
Westphalian								
3	<u>Coal</u>	(good)			6.	4524	1	.
		Clunch			7	4524	1	7
	<u>Coal</u>	(good)			4	4524	1	11
		Clunch		2	3	4525	1	2
	<u>Coal</u>	(good)		1	3	4525	2	5
		Clunch		1	2	4526	.	7
		Rock	4	2	11	4561	.	6
		Dark bind	3	.	11	4560	1	5
		Stone "	4	2	8	4569	1	1
	<u>Coal</u>	(good)			1	6	4569	2 27
		Ball			4	4569	2	11
	<u>Coal</u>	(good)			1	5	4570	1 4
	<u>Rock</u>		5	1	3	4575	2	7
		Blue bind Strong	2	.	7	4578	.	2
		Stone " & Rock band	4	1	11	4582	2	1
		" "	3	2	7	4586	1	8
		Dark "	9	2	.	4596	.	8
		Stone clunch	1	.	2	4597	.	10
		Coal & Stone bind	1	2	1.	4598	2	11
		Dark blue "	5	.	.	503	2	11
		Rock			6	504	.	5
		Dark bind	3	1	5	507	1	10
		Rock & Stone bind	2	.	10	509	2	8
		Blue bind	1	1	6	511	1	2
		Black " with shells	2	2	5	512	0	7
		Dark bind Stone clunch	2	1	5	515	2	0
		Black " with shells	2	2	5	519	2	5
		Dark Grey "	1	0	5	520	2	10
		Black "	2	2	10	523	2	8
		Grey bind with laminae	4	0	5	528	.	4
		Black bind	3	.	2	531	.	6
	<u>Coal</u>	good - Bright			1	7.	531	2 1
		Clod			"		532	.
		Ball			1 1/2	532	.	1 1/2
	<u>Coal</u>	with hard bands		2	0 1/2	532	2	2
		Clod with Strata of Coal			11	533	.	1
	<u>Coal</u>	Soft	1	1	2	534	1	2
		Clunch		1	5	534	2	8

WB & L (x)-14326-3000-12-3

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

(243 changes)



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 Fe<sub>2</sub>O<sub>3</sub>):

Iron (as Fe): 4

Calcium Carbonate: 745

Sodium (as Na):

Calcium Sulphate: 835

Silica (as SiO<sub>2</sub>): 10

Calcium Chloride: 2759

Chlorides (as Cl): 21,948

Magnesium Carbonate:

Sulphates (as SO<sub>4</sub>): 596

Magnesium Sulphate:

Nitrates (as N):

Magnesium Chloride: 2995

Free Carbon Dioxide (as CO<sub>2</sub>): 1.2

Magnesium Nitrate:

Total Alkalinity (as CaCO<sub>3</sub>): 745

Sodium Carbonate:

Total Acidity (as CaCO<sub>3</sub>):

Sodium Sulphate:

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

Sodium Chloride: 29606

Total Dissolved Solids after ignition:

Sodium Nitrate:

Total Hardness (as CaCO<sub>3</sub>): 7000

p.p.m. - No use

Temporary Hardness (as CaCO<sub>3</sub>): 745

p.p.m.

Permanent Hardness (as CaCO<sub>3</sub>): 6255

p.p.m.

Hardness due to Calcium (as CaCO<sub>3</sub>): 3850

p.p.m.

Hardness due to magnesium (as CaCO<sub>3</sub>): 3150

p.p.m.

R.D.

/over



NATIONAL COAL BOARD				EAST MIDLANDS DIVISION				NO. 1 AREA				SCHEDULE 3			
				MARKHAM				COLLIERY				R. 82(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  
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SK47/56



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

R. 80.

11 2/2/56

SK 47/56

The total solid content of the water is much the same as Sea Water, but I see no reason why it should not be used for Hydraulic conveyance of the coal if the coal is sprayed on elevators and pipe line flushed out after use with cleaner water.