

NATIONAL COAL BOARD

WEST MIDLANDS DIVISION

NO.1 (NORTH STAFFS.) AREA

CHATTERLEY WHITEFIELD COLLIERY

750,000 TONS

PER ANNUM SCHEME

C O N T E N T S

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Estimated Reserves Available to the Scheme 9260'-8300'.

AREA PLANNING BRANCH
17TH MARCH, 1960.

NATIONAL COAL BOARD

West-Midlands Division

No.1 (North Staffs.) Area

CHATTERLEY-WHITFIELD COLLIERY

SCHEME FOR PLANNED OUTPUT OF 750,000 TONS PER ANNUM

Consideration has already been given to various alternative reconstruction schemes for Chatterley-Whitfield Colliery as follows :-

- 1): The concentration of the outputs of Norton, Victoria and Chatterley-Whitfield Collieries to Chatterley-Whitfield with an increase of output from the new combined Chatterley-Whitfield 'Take', giving a total of 2,000,000 tons per annum. This scheme included a new 24 ft. diameter shaft, the inter colliery drivages and the necessary surface plant to deal with the planned output.
- 2): The concentration of the outputs of Victoria and Chatterley-Whitfield Collieries to Chatterley-Whitfield with an increase of output from the Chatterley-Whitfield 'Take', giving a total of 1,500,000 tons per annum. This scheme included a new 24ft. diameter shaft, the inter colliery drirage and the necessary surface plant to deal with the planned output.
- 3): The reconstruction of Chatterley-Whitfield Colliery with an increase of output to give a total of 1,000,000 tons per annum. This scheme included a new 24ft. diameter shaft, underground drivages and surface plant to deal with the planned output.
- 4): The reconstruction of Chatterley-Whitfield Colliery with an increase of output to give a total of 890,000 tons per annum. This scheme did not include a new shaft, but modifications and deepening of existing shafts would be undertaken together with underground drivages and surface plant to deal with the planned output were included.
- 5): The reconstruction of Chatterley-Whitfield Colliery with a new shaft for a planned output of 750,000 tons per annum, with other items scaled down but in line with scheme 3 (the 1,000,000 tons per annum scheme).

The reconstruction scheme which is the subject of this report is based on a planned output of 750,000 tons per annum without the provision of a new shaft. (The saleable output in 1959 was 686,528 tons.)

The proposals cater for the deepening of the Hesketh Shaft at its existing diameter of 20ft: from its present winding depth of 638 yards to 761 yards (8300' Horizon) the repairing of the Institute Shaft (16' diameter) and its deepening at 20ft diameter from its present winding depth of 417 yards to 761 yards (8300' Horizon). New electric winders would be required at both these shafts and an inspection winder at the Platt Shaft.

The essential features of the scheme consist of establishing the 8300' Horizon in order to increase the output of the Moss and the seams immediately below it, to replace the output in the Bullhurst and Brights Seams. The access to the present workings in these two seams is by long dip haulages which are approaching their maximum economic length. The proposals also include a new coal preparation plant, together with new sidings layout and landsale facilities and the elimination of steam raising plant except for space heating. The concentration of the whole of the output would be to the Hesketh and Institute Shafts as well as the ventilation of the workings, and the Middle and Winstanley Shafts, which are at the present time on a separate transport and ventilation system, would be closed.

Estimated expenditure, itemised in Appendix IV, caters for all the work mentioned and includes the revenue drivage at the 8300ft. Horizon already authorised and the recent application for the necessary expenditure to establish a dirt preparation plant at the Hesketh level (8690' Horizon) to give facilities for solid stowing under the heavily built up area of the Town of Tunstall. The cost of two Area Standard Winders, together with new towers at the Hesketh and Institute Shafts, has also been included. At this stage, a full investation has not been made of the winders required for the work, and it is possible that appreciable economies may be affected on the estimated expenditure shown in Appendix IV.

Attached hereto are Appendices :-

- IV Expenditure
- VII Phasing of Expenditure
- IX Total Investment
- XI Estimated Wages Cost and Productivity
- XII Estimated Wages Cost and Profitability Completed Development,

together with an Annual Seam Output Chart (1960 - 1966) and an Estimate of Reserves showing seam reserves, coal rank and analysis.

AREA PLANNING BRANCH:
21st March, 1960:

National Coal BoardWest Midlands DivisionNo.1 (North Staffs) AreaChatterley Whitfield Colliery ProjectEffective date of Estimate January, 1960750,000 Tons Per Annum

Sect.	Description	Total Estimated Expenditure	Allocation of Total Expenditure		Depreciation	
			Rev.	Cap.	%	Estimated Annual Charge
01	General Expenses	30,000	-	30,000	2½	750
02	Site & Sinking Prep.	104,000	-	104,000	2.7	2,508
03	Shaft Deepening	500,000	-	500,000	2½	12,500
04	Shaft Furnishing	104,000	-	104,000	2½	2,600
05	Headframes & Winder Houses	262,000	-	262,000	2½	6,550
06	Winding Engines	510,000	-	510,000	5	25,500
07	Pithead Structures	75,000	-	75,000	2½	1,875
08	Winding Equipment	110,000	-	110,000	6⅔	7,337
09	Power, Heat & Light	298,000	-	298,000	5	14,900
10	Ventilation	100,000	-	100,000	4.1	4,100
11	Industrial Buildings	5,000	-	5,000	10	500
12	Welfare Buildings	-	-	-	-	-
13	Surface Layout	59,000	44,000	15,000	2½	375
14	Mats. Yard & Sidings	322,000	-	322,000	3.6	11,592
15	Preparation Plant	750,000	-	750,000	4.2	31,500
TOTAL SECT: 01-15		3,229,000	44,000	3,185,000	3.9	122,887
16	Pit Bottoms	340,000	-	340,000	3.6	12,240
17	Mine Drivage	741,000	634,000	107,000	12½	13,375
18	U/G. Main Transport	75,000	-	75,000	11.2	8,400
19	U/G Subsidiary Trans.	4,000	-	4,000	12½	500
20	Face Equipment	9,000	2,000	7,000	12½	875
TOTAL SECT: 16-20		1,169,000	636,000	533,000	6.6	35,390
GRAND TOTAL: 01-20		4,398,000	680,000	3,718,000	4.3	158,277
Cost per Annual Ton		£ 5.86				

NATIONAL COAL BOARDWEST MIDLANDS DIVISIONNO.1 (NORTH STAFFS.) AREAChatterley Whitfield Colliery ProjectPhasing of Expenditure Including Estimate of Interest
on Capital Expenditure Payable during ReconstructionHorizon Mining Scheme750,000 Tons per Annum

Financial Year	Estimated Expenditure During the Year		Cumulative Expenditure on Capital A/C up to and of previous Year	Interest on (c) at 3%	Interest on (d) at 6% per annum	Total Interest for Year
	On Revenue Account	On Capital Account				
(a)	(b)	(c)	(d)	(e)	(f)	(g)
1960	134,000	44,000	-	1,320	-	1,320
1961	196,000	857,000	44,000	25,710	2,640	28,350
1962	167,000	1,308,000	901,000	39,240	54,060	93,300
1963	129,000	1,006,000	2,209,000	30,180	132,540	162,720
1964	45,000	239,000	3,215,000	7,170	192,900	200,070
1965	9,000	264,000	3,454,000	7,920	207,240	215,160
Total new Expenditure per Appendix IV	680,000	3,718,000	Total Interest on Capital during Reconstruction			700,920

NATIONAL COAL BOARDTHE SUBMISSION OF CAPITAL PROJECTS FOR APPROVALTOTAL INVESTMENTWEST MIDLANDS DIVISIONNO.1 (NORTH STAFFS) AREA
CHATTERLEY WHITFIELD COLLIERY750,000 TONS PER ANNUM

1. New Capital Expenditure (as per Appendix IV)		£ 3,718,000
2. Interest on Capital during Reconstruction (as per Appendix VII)		700,920
3. Net loss on Interim Production (as per Appendix VIII)		-
4. Working Capital Required		
(a) Before Reconstruction	372,246	
(b) Additional Working Capital required as a result of reconstruction	<u>54,579</u>	426,825
5. Value of Existing Undertaking		1,160,149
6. Written down value of assets to be transferred from another colliery etc. and used for the purpose of this project.		-
		<hr/> 6,005,894
<u>LESS</u>		
7. Residual Value of Plant, Buildings, Equipment etc. becoming redundant as a result of the project.		-
8. Net Capital Investment		<hr/> <u>6,005,894</u>
9. Major Revenue Expenditure		680,000

NATIONAL COAL BOARD

THE SUBMISSION OF CAPITAL PROJECTS FOR APPROVAL

ESTIMATES OF WAGES COSTS AND PRODUCTIVITY

750,000 Tons Per Annum

1959

COMPLETED DEVELOPMENT

BASIS OF COMPUTATION

	(a)	(b)	(c)	(d)	(e)		(f)	
	Average Daily Manshifts	Average Daily Saleable Output	O.M.S.	Shifts per 1000 Tons	Calculated E.M.S.		Wages Cost Per Ton	
		Tons	Cwts.		s.	d.	s.	d.
<u>FACE</u>								
Moss Seam (Conventional)	316	1,555	98.4	203	69.	2	14/0.6	
Yard Seam Mechanised	62	270	87.1	230	81.	5	18/8.3	
Bellringer Seam (Conventional)	106	440	83.0	241	77.	0	18/6.6	
Ten Feet (Conventional)	61	300	98.0	203	77.	7	15/9.3	
Bullhurst (Conventional)	65	340	104.6	191	73.	2	13/1.8	
Silver (Conventional)	50	220	88.0	227	73.	1	16/7.3	
<u>TOTAL FACE</u>	660	3,125	94.7	211	73.	0	15/5.0	
<u>TRANSPORT</u>	320	3,125	195.3	102	46.	3	4/8.9	
<u>DEV/SPECIAL WORK</u>	120	3,125	520.8	38	73.	0	2/9.6	
<u>OTHERS</u>	180	3,125	347.2	58	61.	1	3/6.2	
<u>TOTAL OTHERS UNDERGROUND</u>	620	3,125	100.8	198	55.	9	11/0.7	
<u>TOTAL UNDERGROUND</u>	1,280	3,125	48.8	409	64.	8	26/5.7	
<u>SURFACE</u>	486	3,125	128.6	156	43.	6	6/9.2	
<u>TOTAL UNDERGROUND AND SURFACE</u>	1,766	3,125	35.4	565	58.	10	33/2.9	
<u>LESS TRANSFERS</u>	26	3,125	2403.8	8	43.	6	4.3	
	1,740	3,125	35.9	557	59.	1	32/10.6	

(g)	(h)	(i)	(j)	(k)		(l)	(m)	(n)	(o)	
				At Current E.M.S.	Rates Wages Cost per ton					
Average Daily Manshifts	Average Daily Saleable Output	O.M.S.	Shifts per 1000 Tons	s.	d.	s.	d.	Source of Data	Period Chosen	Ref. to Notes or Text
196	964	98.4				69/2		Moss North, Chatterley	Mar.'60	
340	1,471	86.5				81/5		Little Row No.2 North Chatterley.	Mar.'60	
236	1,020	86.4				77/0		Bellringer No.1 South Chatterley.	" "	
299	1,465	98.0				77/7		Ten Feet Hesketh Dip Chatterley	" "	
249	1,299	104.3				73/2		Bullhurst No.12 South Chatterley.	" "	
						43/9		Chatterley	Feb.'60	
						61/6		"	"	
						61/1		"	"	
						41/6		Chatterley	"	

THE SUBMISSION OF CAPITAL PROJECTS FOR APPROVAL

ESTIMATE OF WAGES COST AND PROFITABILITY - COMPLETED DEVELOPMENT

750,000 TONS PER ANNUM SCHEME

COMPARATIVE FIGURES

Proceeds: Sales of Coal (At Inland Prices)
Service Charges and Wholesale Margin.
Surplus Export Proceeds.

TOTAL REVENUE

OPERATING COSTS

Wages
Holiday Pay
Sick Pay
Workmans Coal
Supplementary Injuries
National Insurance
Roof Supports (Road and Face)
General Stores
Repairs and Renewals
Mining Contracts
Power, Heat and Light
Surface Damage
Wagon Charges
Salaries
Rent, Wayleaves
Rates
Pensions
General Expenses
Overhead Expenses
Travelling Allowance
Depreciation:-
New Expenditure
Minerals
Other Assets
Obsolescence

TOTAL OPERATING COSTS

OTHER COSTS

Amort of Capitalised Interest at 3%
Interest on Capital at 6%

TOTAL COSTS

NET PROFIT

YIELD ON CAPITAL INVESTED

MARGINAL RETURN ON INCREASED INVESTMENT

Completed Development.

Per Ton of Output		Annual Total
s.	d.	£.
94	0.4	3,526,250
	9.8	30,625
94	10.2	3,556,875
32	10.6	1,233,125
2	4.3	88,292
	3.5	10,938
1	5.1	53,489
	4.7	14,546
1	2.0	43,672
6	6.0	243,750
5	6.0	206,250
3	0.0	112,500
	-	-
3	9.0	140,625
	2.0	6,250
	5.0	15,625
1	10.0	68,750
	-	141
	6.0	18,750
1	0.5	39,071
5	2.4	195,000
3	0.0	112,500
	-	-
4	2.6	158,277
	1.3	4,063
2	10.9	108,930
	1.0	3,125
76	8.9	2,877,669
	6.7	21,028
9	7.3	360,354
86	10.9	3,259,051
7	11.3	297,824

4.96%

5.01%

1959 Results to Current Prices.

Per Ton of Output		Annual Total
s.	d.	£.
89	3.1	3,063,999
1	1.4	38,415
-	0.1	362
90	4.4	3,102,052
39	2.0	1,344,451
2	10.7	99,382
	3.5	10,165
1	8.0	57,168
	5.4	15,390
1	5.2	49,158
6	5.3	221,338
5	5.9	188,511
3	8.6	127,670
1	5.5	50,038
6	10.6	236,338
	4.5	4,241
	5.0	14,318
1	10.8	65,196
	0.1	141
	6.2	17,855
1	2.9	42,551
5	6.6	190,356
2	11.7	101,899
	-	-
	1.3	3,719
3	2.1	108,930
	1.0	2,861
85	11.9	2,951,676
	-	-
2	2.8	76,620
88	2.7	3,028,296
2	1.7	73,756

4.81%

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Actual Results for 1959 (year ending) 27/1/60

Per Ton of Output		Annual Total
s.	d.	£.
89	3.1	3,063,999
1	1.4	38,415
-	0.1	362
90	4.4	3,102,052
38	6.8	1,323,906
2	10.7	99,382
	3.5	10,165
1	8.0	57,168
	5.4	15,390
1	4.5	47,182
6	5.3	221,338
5	5.9	188,511
3	8.6	127,670
1	5.5	50,038
6	10.6	236,338
	1.5	4,241
	5.0	14,318
1	10.8	65,196
	0.1	141
	6.2	17,855
1	2.9	42,551
5	6.6	190,356
2	11.7	101,899
	-	-
	1.3	3,719
3	2.1	108,930
	1.0	2,861
85	4.0	2,929,155
	-	-
2	2.8	76,620
87	6.8	3,005,775
2	9.6	96,277

6.28%

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NATIONAL COAL BOARD

WEST MIDLANDS DIVISION

NO.1 (NORTH STAFFS.) AREA

CHATTERLEY WHITEFIELD COLLIERY

750,000 TONS PER ANNUM SCHEME

PROJECTED ANNUAL SEAM OUTPUTS 1960 - 1970

ESTIMATED WORKABLE RESERVES AS AT 1ST JANUARY 1958
AVAILABLE TO THE SCHEME (9260' to 8300' ABOVE A.D.)

	Moss	Yard	Bell-ringer	Ten Feet	Bullhurst	Silver	Brights	Total
1960	240,000	110,400	52,800	72,000	159,600	-	115,200	750,000
1961	240,000	110,400	52,800	72,000	159,600	-	115,200	750,000
1962	240,000	110,400	52,800	72,000	159,600	-	115,200	750,000
1963	295,200	64,800	105,600	72,000	159,600	52,800	-	750,000
1964	373,200	64,800	105,600	72,000	81,600	52,800	-	750,000
1965	373,000	64,800	105,600	72,000	81,600	52,800	-	750,000
1966	373,000	64,800	105,600	72,000	81,600	52,800	-	750,000
1967	373,000	64,800	105,600	72,000	81,600	52,800	-	750,000
1968	373,000	64,800	105,600	72,000	81,600	52,800	-	750,000
1969	373,000	64,800	105,600	72,000	81,600	52,800	-	750,000
1970	373,000	64,800	105,600	72,000	81,600	52,800	-	750,000
SEAM DATA								
Thickness	54"	30"	39"	60"	46"	27"	33"	Average
Ash	5.0	3.5	4.0	4.5	6.5	5.0	6.5	- do -
Sulphur	0.8	1.0	0.7	1.7	3.1	1.0	4.5	- do -
V.M. (d.m.m.f)	37.1	37.9	36.3	36.0	35.6	36.6	37.5	- do -
Coal Survey Rank	7/600	8/700	8/700	600	5/4/300	600	6/500	

Name of Seam	Av. Thickness	Workable Reserves	Ash (Air Dried)	Sulphur (Air Dried)	Volatile Matter (d.m.m.f.)	Coal Survey Code No.
	Ins	000 Tons	%	%	%	
Moss	54	3,205	5.0	0.8	37.1	700
Moss	54	2,754	5.0	0.8	36.2	600
Yard	30	2,093	3.5	1.0	37.4-36.9	700
Ragman	30/27	2,476	4.5	1.0	37.7-37.2	700
Hams	30/48	149	2.5	0.9	37.2	800
Hams	48	3,782	2.5	0.9	37.0-36.7	700
Bellringer	39/36	3,032	4.0	0.7	36.1	700
Ten Feet	60	219	4.5	1.7	36.3	700
Ten Feet	60	2,207	4.5	1.7	36.0	600
Bowling Alley	36	309	3.5	1.2	36.7	700
Bowling Alley	36	543	3.5	1.2	36.3	600
Hardmine	51	138	4.5	1.5	35.8	600
Flatts	24/30	820	3.5	1.0	36.6	600
Bullhurst	46	34	6.5	3.1	37.3	700
Bullhurst	46	73	6.5	3.1	37.1	600
Winpenny	27	104	6.0	2.1	37.6	700
Winpenny	27	680	6.0	2.1	37.4-37.1	600
Brickiln	24	799	8.0	3.0	36.2-35.9	700
Brickiln	24	319	8.0	3.0	35.8	600
Diamond	24	654	4.8	1.3	37.1-36.9	700
Diamond	24	377	4.8	1.3	36.7	600
Silver	27	510	5.0	1.0	36.8	700
Silver	27	625	5.0	1.0	36.6-36.4	600
Brights	33	743	6.5	4.5	38.4-38.0	600
Total Code No. 800		149				800
700		17,217				700
600		9,279				600
TOTAL WORKABLE RESERVES		26,645				

ESTIMATED LIFE AFTER DEVELOPMENT AT 750,000 TONS PER ANNUM

= 30 YEARS APPROX.