

# THE COAL MINES OF NEW MILLS

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## INTRODUCTION

The rocks of the district in and around New Mills consist of alternations of sandstones and shales of the Lower Coal Measures, with several thin coal seams.<sup>1</sup> Shale is the dominant rock often forming the roof of coal seams and varying in thickness up to scores of feet. Such shale is often labelled as 'bind' on mine sections and is a common constituent of spoil heaps adjacent to pits or tunnels. Sandstones are not consistent and vary markedly in thickness over quite short distances geographically. On mine sections they are labelled as 'rock'. There are five named coal seams in the local succession, but the most commonly mined was the Yard Coal, so named from its average thickness. It is also known as the Bassy Mine in the north of England, on account of its inferior quality with shale or dirt partings. Less important was the Red Ash (Little Mine) (Fig. 1). A fossil soil — a seat earth — occurs beneath many coal seams and in some localities forms a soft grey or whitish clay deficient in lime, suitable for the manufacture of bricks and tiles. It was mined at Birch Vale and Furness Vale. Below the Yard Coal, the Woodhead Hill Rock, a thick sandstone, forms the sides of the Torrs, at New Mills, a spectacular gorge 30m deep cut by the rivers Goyt and Sett.

The most significant geological feature is one of a general nature. The rocks are disposed in a major geological structure known as the Goyt syncline, an elongate basin with a longitudinal axis trending south-north for several miles from the Roaches in north Staffordshire to Cown Edge near Glossop (Fig. 2). The axis of the syncline follows the centre of the Goyt valley northwards from Goyts Moss, but between Buxworth and New Mills, the river swings west and breaks out of the syncline, the axis of which continues towards Rowarth and Glossop. The syncline is a subsidiary fold within the broad dome of the Peak District and this accident of geology has been responsible for the preservation of the coal seams. Variations in the depth of the coal result from the inward dip of the strata in the syncline and from a number of faults which throw the strata up or down. For instance, on Ollersett Moor the Yard Coal was found at Burn'd Edge Colliery No 4 at a depth of 66 feet, whereas a few hundreds yards to the south, because of an intervening fault, the same coal was found in Burn'd Edge Colliery No 1 at a depth of 396 feet.

Licences to mine coal in the region, which was part of the royal forest of Peak, and which were issued by the duchy of Lancaster (which to this day still retains the mineral rights in the region), are first known from Elizabethan times. They covered a wide area, the rents were modest, and no royalties were required. These arrangements continued until the first half of the eighteenth century, when a surprising amount of mining took place on Ollersett and Beard moors. Here, on the eastern flank of the syncline, the coal seams approached the surface and thus could be reached by shallow pits. A unique account book of a three-man partnership lasting 46 years, has been preserved from this period and its contents and form are discussed in some detail for it provides a rare insight

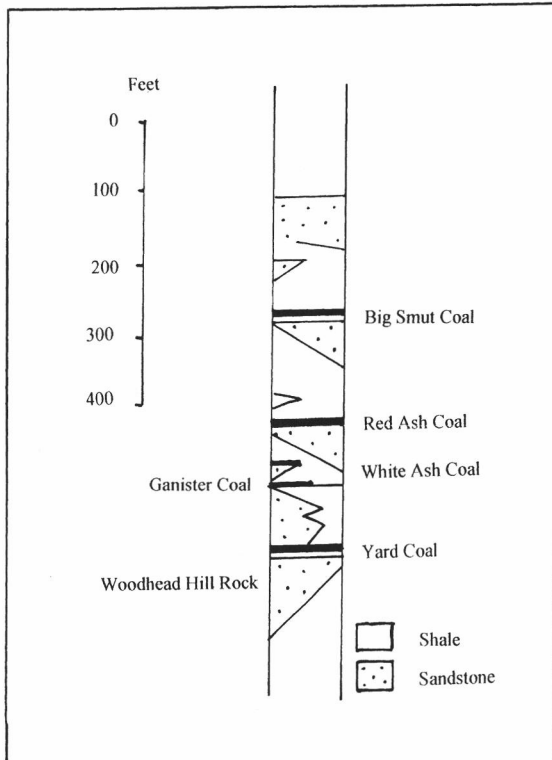


Fig. 1: Section of the Lower Coal Measures within the Goyt syncline. Source: British Geological Survey, one inch geological map, *Chapel en le Frith* (Sheet 99).

into the coal mining practices of this period. In the nineteenth century, with the onset of the industrial period, there was a major increase in mining by shafts on the lower slopes of the moors towards the centre of the syncline where the coal was deeper. This mining is recorded in a series of estate leases, mineral maps, and mine abandonment plans. With just a few exceptions, coal mining ceased in the New Mills region towards the end of the nineteenth century as difficult physical conditions caused the mines to become uneconomic to work and it became possible to receive cheaper, higher quality, coal by rail from Lancashire and Yorkshire.

### THE SIXTEENTH AND SEVENTEENTH CENTURIES

From medieval times, the area of north west Derbyshire, which included the present New Mills, was part of a wide administrative division called Bowden Middleleale (Fig. 3).<sup>2</sup> It formed part of the manor and royal forest of Peak which stretched from Glossop to Tideswell. In 1372 the forest came into the possession of John of Gaunt and in 1399 when John's son was crowned Henry IV, it became part of the huge crown estate known as the duchy of Lancaster.<sup>3</sup> Duchy of Lancaster documents therefore are important sources for coal mining and among them are the earliest known references to coal mining in the district. In the late sixteenth century exploitation took place through the medium of licences to dig for coal. 'What are described in the indexes, and also in the margins of the

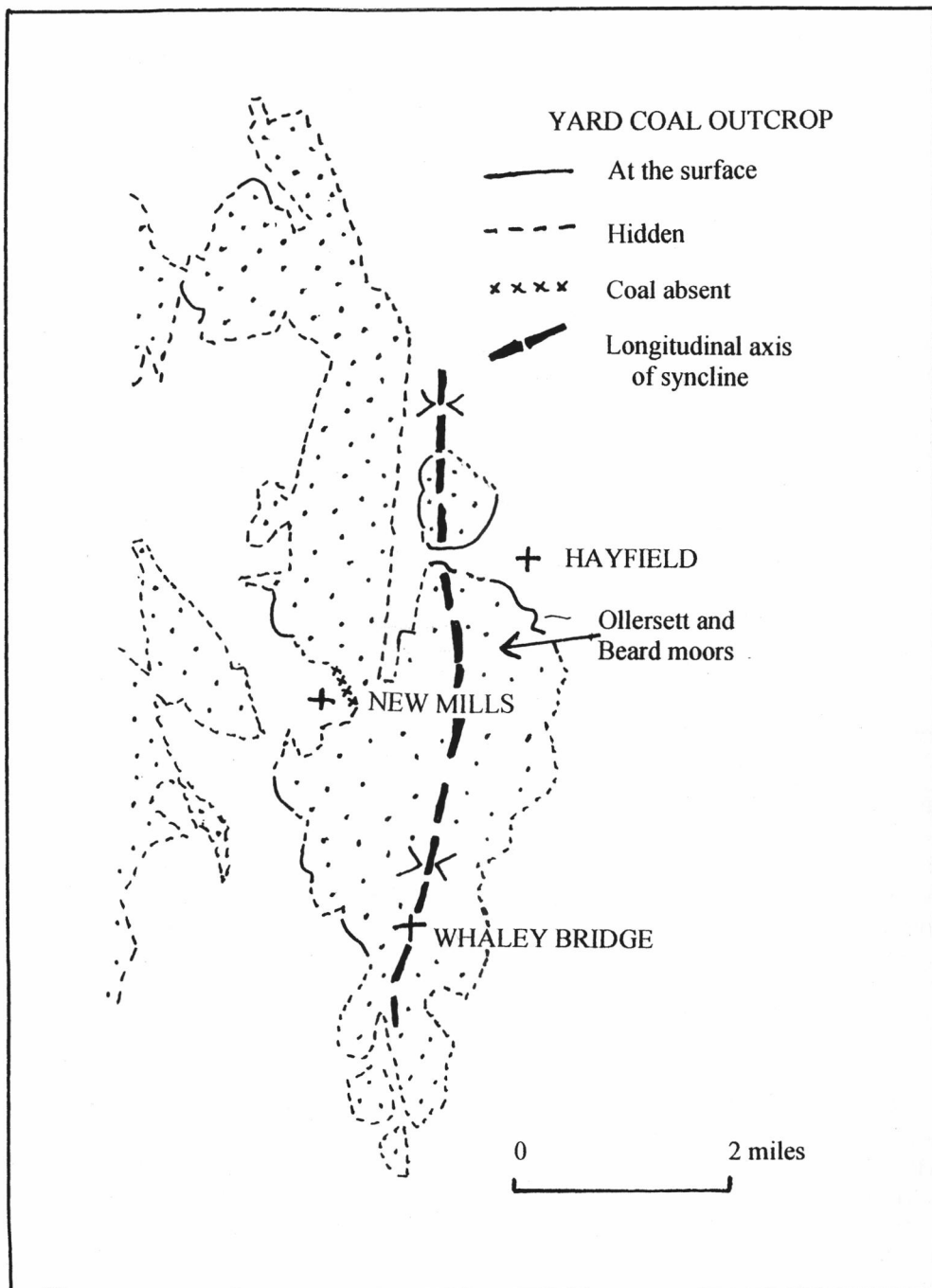


Fig. 2: The Yard Coal outcrop in the vicinity of New Mills. Source: I P Stevenson and G D Gaunt, *Geology of the country around Chapel en le Frith*, (1971), p 278.

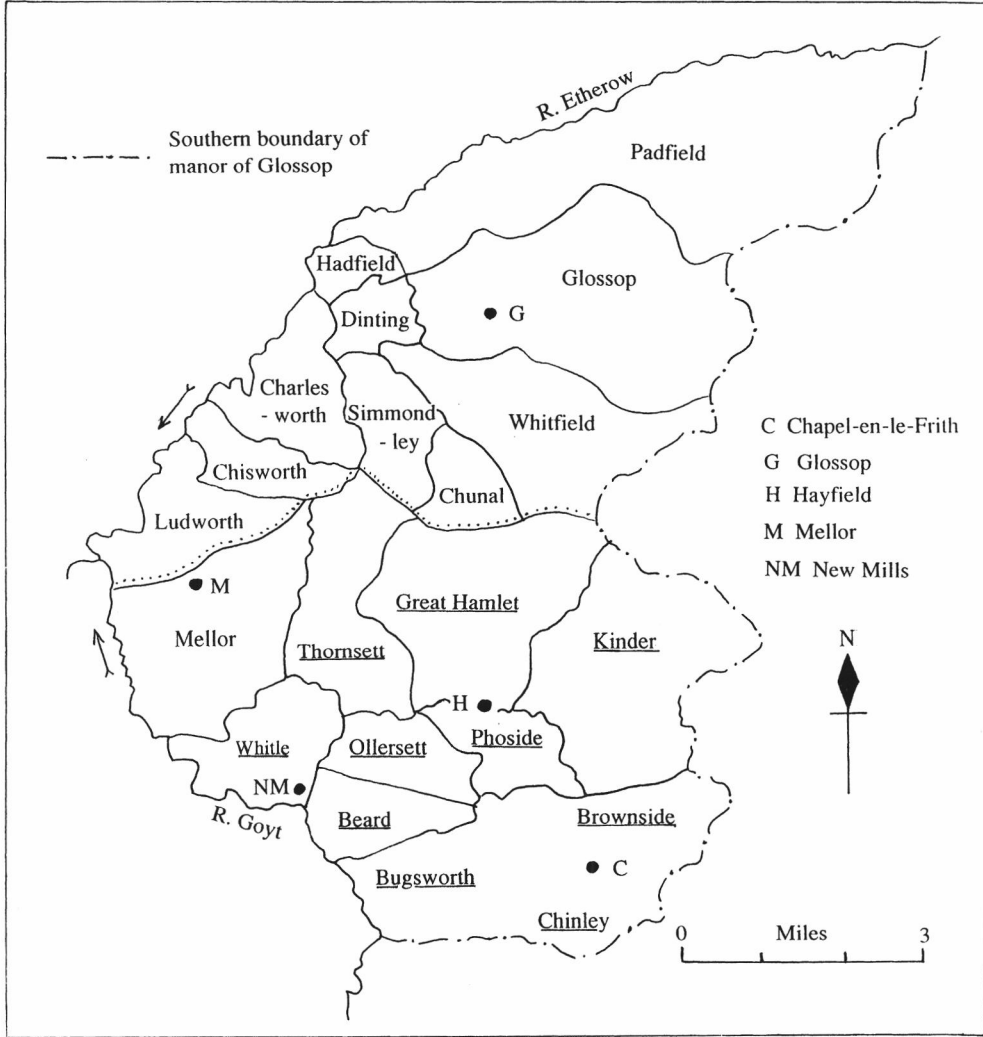


Fig. 3: The ancient parish of Glossop and its hamlets. The names of the ten hamlets of Bowden Middlecale are underlined.

enrolment books, as leases of coal mines are in reality licences to dig for coal . . . The term of these licences was normally twenty-one years, and the rent varied from 5s to 26s 8d under Henry VIII and Philip and Mary . . .<sup>74</sup> There were no royalties, and apart from covenants to fill up the pits and make good the ground and also to compensate tenants for any loss, the licences contained no special provisions. A licence given in 1599 to Henry Needham of Thornsett to work coal in Middlecale restricted him to six pits and contained a proviso for railing in the pits for the protection of cattle.

This Indenture made . . . Betweene the same sayd Sovereigne Ladye . . . And Henry Needham of Thornsett . . . for Coles within all and onye the wastes and comon ground situat and byinge within the libtye of the Lordshipp of highe peake . . . called Middlecale . . . this grant of lycence shall not



Table 1

Date of lease or renewal	Term	To commence from	To expire
19 May 1599	21 years	25th March	1620
22 Feb 1614	three lives	Still in being in 1650 according to the statement in the Parliamentary Survey by a jury upon oath	
26 Dec 1660	31 years	Michas 1660	1691
2 April 1685	24 years	Michas 1691	1715
6 June 1702	17 years	Michas 1715	1732
29 Jan 1716	14 years	Michas 1732	1746
9 Nov 1734	19 years	1746	1765
13 Jan 1753	18 years	1765	1783
9 Jan 1776	23 years	1783	1806
13 Jan 1788	31 year	From date	1819
13 Feb 1810	31 years	From date	1841
5 Feb 1823	31 years	From date	unexpired

Source: Copy of Abstract of title, Jackson lease, 1843. Author's collection.

extend to digge sinke or make more than sixe pytts att the most . . . yeildinge and payinge . . . the yearly rent of 12s . . . 5d<sup>5</sup>

This licence was surrendered six years before its term ran out and in 1614 a second licence granted to Henry Needham the coal in the wastes and common grounds in the liberty and lordship of the High Peak 'called Middle Tack alias Middle Cale'.<sup>6</sup>

At that time, coal mines which were in crown hands were commonly let on such easy terms, while if they were in the hands of private landowners, they tended to be sold or leased on more realistic terms.<sup>7</sup> These two Elizabethan licences have the usual arrangements for letting coal mines, which in other coal mining areas went back to the Middle Ages, ie, a flat licence fee, no royalties, a long term (21 years) and restrictions on output (maximum of six pits).<sup>8</sup> According to Hatcher,<sup>9</sup> the earliest known case of taking royalties based on output is from at least 1530 in South Wales, but in the crown (duchy of Lancaster) lands of the High Peak it was not until the onset of industrialisation two hundred years later that such a realistic approach came about. The two licences to Henry Needham were to play a fundamental part in the history of coal mining in the region for they formed the basis for licensing the mining of coal in the whole of Middlecale for almost two hundred and fifty years (Table 1).

In 1650, following the civil war, a Parliamentary survey was made of the lands of the manor of the High Peak and the rents received. It included a note on coal mining rights,

All those Coal delfes or pittes lyeing upon the Wast grounds neare Berd' in the Hamlett of Ollersett in the Township of Bowden Middle Cale The benefitt thereof tho' att present inconsiderable Yet that & the liberty of sinking and sougning in other parts there adjacent The Charge of workeing being considerable & the proffitts uncertaine we vullue the same to be worth de claro Communibis Annis. . . . .£2 10 00

Memorand that we are informed that Randolph Ashenhurst of Berd aforesd Esq. hath for many yeares past taken & enjoyed the benefitt of the coale mines upon the Wast ground neare Berd' claimeing by virtue of a Lease under the Rent of 21s per Annum for 3 lives yet in being as is

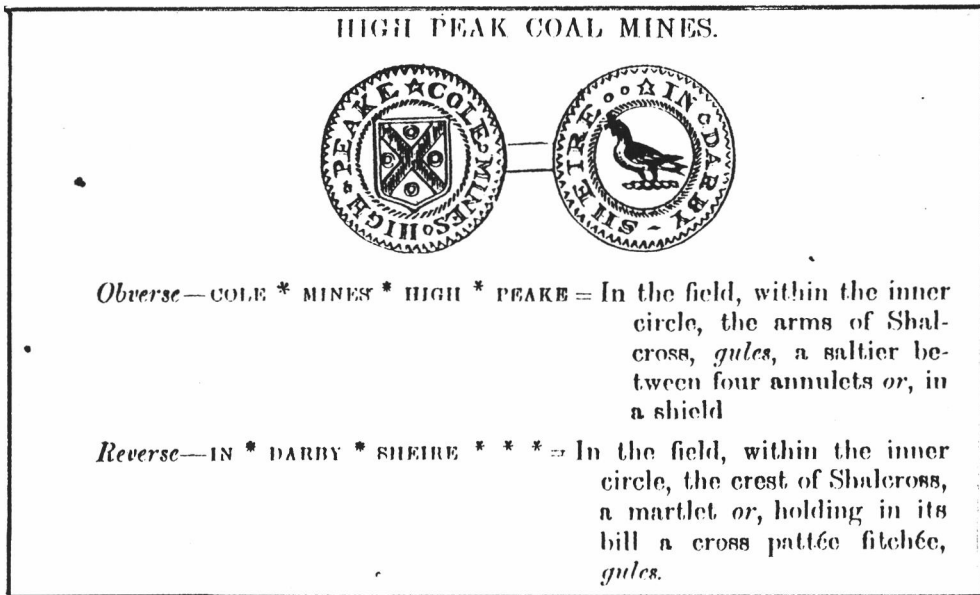


Fig. 4: High Peake Cole Mines token issued by John Shalcross, showing the Shalcross crest on the reverse. J Jewitt, 'Traders' tokens of Derbysbire', *The Reliquary*, 6 (1865–66, p 150). There are two of these tokens in Buxton Museum and Art Gallery.

pretended to us by a Jury upon oath But the names of the Lessees parties to the Lease nor their ages nor date of the Lease we cannot learne or know altho' we desired & required the same of the said Jurors.<sup>10</sup>

In the later part of the seventeenth century these coal mining rights in the High Peak were leased to John Shalcross a local landowner (who lived at Shalcross Hall near the present Whaley Bridge) and High Sheriff of Derbyshire in 1686 and 1710.<sup>11</sup> He issued a trade token, the 'High Peake Cole Mines', which bore his family's coat of arms (Fig. 4).<sup>12</sup> These coal mining rights acquired by the family and the collieries to which they applied, sub-let to others, were to remain a consistent thread in the history of mining in the area right through into the nineteenth century. The earliest known reference to the Shalcross connection is the deed of 1660 (Table 1). In 1680–81 the accounts of the half year rents in the High Peak which included Beard, Ollersett, Hague Bar, Thornsett, Whitle, showed Reginald Brekland Esq for Beard mill £0 8s 4d and John Shalcross Esq for Colemines £0 10s 0.<sup>13</sup>

Soon after this, a lease to John Shalcross (dated 2 April 1685) demised

All the Toll passage and Stallage of the Markett and Fayres at Chappell in the Frith . . . And also full power Liberty Licence and Authority to search dig find and gett Cole within all and Singular the wastes and comons situate lyeing and being within the Liberty of the Lordship of the high peake parcel of the possessions of the Duchy of Lancaster . . . for a term of 24 years from 29th, September 1691 with a yearly rent for the Tolls of £1.3.4 and for the licence to dig and sell coal 15s. And also yielding and paying all other usual Customs, Suits, rents and services. The like in the two former leases. Fine £50.<sup>14</sup>

Although the fines were moderate, the leases were still no more than licences to mine coal over a wide area, and no royalties were payable. It was not until the end of the century that economic circumstances and the demand for more coal brought about more realistic rents, the introduction of royalties, and the restriction of mining to a single area such as a farm estate.

### COAL MINING ACCOUNT BOOK FOR NEW MILLS, 1711–57

It was under the 1702 lease that John Shalcross sublet the coal under Ollersett and Beard moors to three partners — John Mottram (Peter Mottram from 1749/50), William Carrington and William Bennett. The work of this partnership is enshrined in the pages of an account book, covering the period 1711–57.<sup>15</sup> Consisting of 163 closely written pages, it records the first serious period of coal mining in the New Mills district. It was not uncommon in the Derbyshire region by the early eighteenth century for small coal mines to be leased by partners.<sup>16</sup>

... a certain piece or parcel of ground now commonly called or known by the name of Beard Common ... and being part or parcel of the said Moiety of the aforementioned wastes and commons which were as aforesaid allotted and set out to the tenants Freeholders and copyholders ... and ratified and confirmed by the aforesaid Decree of this court of the 25<sup>th</sup> June 1711 ... purchased from King Charles the first by Randle Ashenhurst late of Beard. . .<sup>17</sup>

For coal mines on large estates, accounts have been known to survive from as early as the late sixteenth century<sup>18</sup> but for accounts to survive from a small private enterprise in a minor coal mining area like New Mills nearly three hundred years later is a very rare occurrence. This is certainly the case with this book.<sup>19</sup> No other mining accounts for the local coalfield are known except for some kept for the duke of Devonshire. But these are for a much later period and for one year only, 1790.<sup>20</sup>

The heading on the first page of the New Mills book sets out clearly the purpose of the book — ‘An Account what William Carrington of Ashten Clough hath received from the Banksmen at any of the Coal pitts and Likewise what he hath and disbursed touching the same Since May 1st 1711 as followeth’. One wonders if these men at the time imagined that ‘followeth’ would mean 46 years of continuous partnership as enshrined in the pages of this book.

The detail throughout is exceptional (Fig. 5). For each pit — and there are over thirty named during the period — there is given on a weekly basis: (1) the name of the banksman (2) the name of the pit (3) the production in scores and baskets (4) the value of production (5) the cost in wages per score (Getting, Drawing, and Winding) (6) the profit per score and (7) the balance left owing by the banksmen to the partners after the deduction of wages and expenses. There are periodic or yearly summary totals, showing the residual balances and the disbursements to the partners. Interspersed are sections or pages with details of expenses such as dead work, tools, nails, tubs, timber, gunpowder and even the account book purchased specially in Stockport for keeping the accounts — ‘pd. By me att Stockport for this Blank book to Mr. Mott. . . 2s 4d’. The years are given in the old style (New Year’s day being 25 March) until 1752.

The production is given in scores and baskets, there being twenty baskets to the score. A certain number of scores would make a ton, so that if a basket weighed one

hundredweight then, conveniently, one score is one ton. The capacity of a basket at this time was generally just over one hundredweight,<sup>21</sup> so this might be an underestimate. According to Farey many years later 'a certain number of corves [baskets] are supposed to make a Ton and by that denomination they are sold'.<sup>22</sup> But as well as noting an uncertainty as to the exact number of corves to the ton, Farey also points out that in eastern Derbyshire where coals were brought down the canals 'previous to 1798, the quantity or weight allowed to a Ton, varied at almost every Coal-wharf or place of loading the Coals'.

The banksman was the team leader at a particular pit. He was the winder, he carried the coal to the bank where it was stored for sale, and kept a record of the number of baskets raised. He paid the team (in this case a total of 3 or 4 men) out of sales income, had to meet certain expenses and was held accountable by the partners for the balance. These balances were paid to the partners irregularly and rarely in full, for example: '29 March 1727, I acknowledge the Thirty One pounds Four Shillings Five pence on the left hand to be due from me to Wm. Carrington Wm. Bennet & John Mottram & which I promise to pay or satisfy on demand — as witness my hand Jarvis Collier'. Often, large amounts were owed for long periods, over a year in some cases, being carried over from one pit to another. Perhaps this represents the variation in the rate of income from sales. Presumably, if the sales were irregular, the banksman would have to retain some income for future wages.

All the mining recorded took place on the isolated upper slopes of Ollersett and Beard moors, which rise to over 1000 feet between New Mills and Chinley. Even today only rough tracks give access to these areas, which consist of peat-covered, ill-drained unimproved pastures, moss, cotton grass and heather. The moors are on the eastern flank of the Goyt syncline in which the dip of the strata rises towards the east at about 1 in 7. Thus, near the top of the moors the Yard coal seam, which was the concern of the partnership, approaches the surface and could be reached by shallow pits (Fig. 13). Some pits are recorded in the book as being dug straight away at the beginning of the partnership — on the 9th June 1711 'pd. Geo. Lomas p(er) 4 days (deleted ?) Sinking the new dirt hole 4 yds. . . 4s 0d'.

Although these are shallow pits and probably were operated by a hand or horse windlass — 'pd to Wm. Bennett more for a Barrel. . . 0s 9d' — the large quantities of coal produced suggests that they were not bell pits and that coal was extracted from extensive areas around each pit (Plate 1). This is supported by the frequent reference to payments for 'dead work', ie not winning any coal. Thus on August 2nd 1711 'pd for dead work at the dirt hole. . . 3s 0d', and on the same date 'Spent when bargained about the dead worke in Gaskell pitt. . . 1s 6d'.

It is estimated that an acre of coal contained 1510 tons for every foot thickness.<sup>23</sup> At its maximum thickness, therefore, the Yard seam should yield theoretically something like 4,500 tons per acre. In practice the figure would have been much less since mining was done on the pillar and stall method, although pillars were sometimes recovered later. The account book records that 123,258 scores of coal were mined in 46 years. If a score is one ton then this would represent over 27 acres where the seam was one yard thick and had been completely removed. This might explain why later mining — in the early and mid-nineteenth century, when techniques were much further advanced — took place on

The image shows two pages of a handwritten account book. The left page contains entries for the years 1711, 1712, 1713, 1714, 1715, 1716, 1717, 1718, 1719, 1720, 1721, and 1722. Each entry typically lists a date (e.g., 'July 14-17'), a quantity (e.g., '11 week'), and a value (e.g., 'value - 1 13 4'). The right page contains entries for the years 1723, 1724, 1725, 1726, 1727, 1728, 1729, 1730, 1731, 1732, 1733, 1734, 1735, 1736, 1737, 1738, 1739, 1740, 1741, and 1742. Similar to the left page, it lists dates, quantities, and values. The handwriting is in a cursive script typical of the 18th century. The paper is aged and shows some staining and wear.

Fig. 5: Pages from the New Mills coal mining account book for 1711 and 1741. The pages show two methods of recording the weekly production and the wages and profits. Source: DRO, D3226 Z/1/1. In 1711, the value of the coal was 1s 10d per score. In 1717-22, coal was being sold in Lancashire for 2s 2d to 2s 10d per ton (J U Nef, *The rise of the British coal industry*, Vol. 2, 1932, p 394).

Septemb <sup>r</sup> 17 <sup>th</sup> 1711. 20 week Bristle pit 16 score - value 1:15:0 Profit 10 <sup>th</sup> due 1:2:3	Aug <sup>st</sup> 11 <sup>th</sup> 1711. Bristle 15 score - value 1:15:0 Profit 10 <sup>th</sup> due 0:12:0
Septemb <sup>r</sup> 22 <sup>nd</sup> 1711. 21 week Bristle pit 16 score - value 1:6:0 Profit 10 <sup>th</sup> due 0:17:0	Aug <sup>st</sup> 11 <sup>th</sup> 1711. 19 week Gaskill pit 15 score - value 0:10:0 Profit 9 <sup>th</sup> due 0:4:3
Septemb <sup>r</sup> 29 <sup>th</sup> 1711. 22 week Bristle pit 16 score - value 1:6:0 Profit 10 <sup>th</sup> due 14:0	August 18 <sup>th</sup> 1711. 15 week Bristle pit 15 score - value 0:10:4 Profit 10 <sup>th</sup> due 0:9:2
Octob <sup>r</sup> 6 <sup>th</sup> 1711. 23 week Bristle pit 10 score - value 0:10:0 Profit 10 <sup>th</sup> due 0:10:2	August 25 <sup>th</sup> 1711. 17 week Bristle pit 15 score - value 0:11:0 Profit 10 <sup>th</sup> due 0:5:0
Octob <sup>r</sup> 13 <sup>th</sup> 1711. 24 week Bristle pit 10 score - value 0:10:0 Profit 10 <sup>th</sup> due 0:10:0	August 25 <sup>th</sup> 1711. 17 week Gaskill pit 15 score - value 1:10:4 Profit 10 <sup>th</sup> due 0:10:4
Octob <sup>r</sup> 20 <sup>th</sup> 1711. 25 week Gaskill pit 25 score - value 2:1:8 Profit 9 <sup>th</sup> due 1:0:4	August 25 <sup>th</sup> 1711. 17 week Gaskill pit 15 score - value 1:10:4 Profit 9 <sup>th</sup> due 0:4:1
Octob <sup>r</sup> 27 <sup>th</sup> 1711. 26 week Bristle pit 16 score - value 1:6:0 Profit 10 <sup>th</sup> due 0:13:4	Septemb <sup>r</sup> 1 <sup>st</sup> 1711. 10 week Bristle pit 22 score - value 1:16:0 Profit 10 <sup>th</sup> due 0:10:0
Octob <sup>r</sup> 27 <sup>th</sup> 1711. 26 week Gaskill pit 14 score - value 1:3:4 Profit 9 <sup>th</sup> due 0:11:1	Septemb <sup>r</sup> 8 <sup>th</sup> 1711. 10 week Bristle pit 22 score - value 1:16:0 Profit 9 <sup>th</sup> due 0:9:2
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Novemb <sup>r</sup> 3 <sup>rd</sup> 1711. 27 week Gaskill pit 24 score - value 2:8:0 Profit 9 <sup>th</sup> due 0:19:0	Septemb <sup>r</sup> 8 <sup>th</sup> 1711. 10 week Gaskill pit 21 score - value 1:15:0 Profit 9 <sup>th</sup> due 0:12:0
Novemb <sup>r</sup> 3 <sup>rd</sup> 1711. 27 week Bristle pit 19 score - value 1:11:0 Profit 10 <sup>th</sup> due 0:15:0	Sept 15 <sup>th</sup> 1711. 20 week Bristle pit 16 score - value 1:3:4 Profit 10 <sup>th</sup> due 0:11:0
Novemb <sup>r</sup> 10 <sup>th</sup> 1711. 28 week Gaskill pit 19 score - value 1:3:4 Profit 9 <sup>th</sup> due 0:11:1	Sept 15 <sup>th</sup> 1711. 20 week Gaskill pit 16 score - value 0:12:0 Profit 9 <sup>th</sup> due 0:5:4
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Novemb <sup>r</sup> 17 <sup>th</sup> 1711. 29 week Gaskill pit 26 score - value 2:3:4 Profit 9 <sup>th</sup> due 1:0:4	Sept 22 <sup>nd</sup> 1711. 21 week Gaskill pit 16 score - value 1:6:0 Profit 9 <sup>th</sup> due 0:10:3
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Novemb <sup>r</sup> 24 <sup>th</sup> 1711. 30 week Gaskill pit 20 score - value 1:13:4 Profit 9 <sup>th</sup> due 0:11:0	Sept 29 <sup>th</sup> 1711. 22 week Gaskill pit 16 score - value 0:10:0 Profit 10 <sup>th</sup> due 0:8:0
Novemb <sup>r</sup> 24 <sup>th</sup> 1711. 30 week Bristle pit 16 score - value 1:2:0 Profit 10 <sup>th</sup> due 12:6	Octob <sup>r</sup> 6 <sup>th</sup> 1711. 23 week Bristle pit 12 score - value 1:10:0 Profit 12 <sup>th</sup> due 0:10:0
Novemb <sup>r</sup> 31 <sup>st</sup> 1711. 31 week Gaskill pit 18 score - value 1:13:4 Profit 9 <sup>th</sup> due 11:3	Octob <sup>r</sup> 6 <sup>th</sup> 1711. 23 week Gaskill pit 12 score - value 0:11:0 Profit 9 <sup>th</sup> due 0:6:0
Decemb <sup>r</sup> 7 <sup>th</sup> 1711. 32 week Bristle pit 13 score - value 1:11:0 Profit 10 <sup>th</sup> due 10:10	Octob <sup>r</sup> 13 <sup>th</sup> 1711. 24 week Bristle pit 16 score - value 1:10:0 Profit 10 <sup>th</sup> due 0:10:0
Decemb <sup>r</sup> 14 <sup>th</sup> 1711. 32 week Gaskill pit 18 score - value 1:10:0 Profit 9 <sup>th</sup> due 12:4	Octob <sup>r</sup> 13 <sup>th</sup> 1711. 24 week Gaskill pit 16 score - value 1:10:0 Profit 9 <sup>th</sup> due 0:10:0
Decemb <sup>r</sup> 21 <sup>st</sup> 1711. 33 week Bristle pit 18 score - value 1:10:0 Profit 10 <sup>th</sup> due 0:15:0	Octob <sup>r</sup> 20 <sup>th</sup> 1711. 24 week Bristle pit 16 score - value 1:10:0 Profit 10 <sup>th</sup> due 0:10:0
Decemb <sup>r</sup> 28 <sup>th</sup> 1711. 33 week Gaskill pit 19 score - value 1:11:4 Profit 10 <sup>th</sup> due 0:15:0	Octob <sup>r</sup> 27 <sup>th</sup> 1711. 24 week Gaskill pit 19 score - value 1:11:4 Profit 10 <sup>th</sup> due 0:15:0
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Decemb <sup>r</sup> 28 <sup>th</sup> 1711. 33 week Gaskill pit 19 score - value 1:11:4 Profit 10 <sup>th</sup> due 0:15:0	Octob <sup>r</sup> 27 <sup>th</sup> 1711. 24 week Gaskill pit 19 score - value 1:11:4 Profit 10 <sup>th</sup> due 0:15:0

Mr. A. C. ...

Feb <sup>r</sup> 7 <sup>th</sup>	20	
14	25	
21	28	
28	31	
March 7	24	
14	25	
21	28	
28	31	
Apr 4	24	
11	20	
18	21	
25	29	
May 2	29	
9	29	
16	30	
23	16	
June 6	23	
13	23	
20	20	
July 4	26	
11	26	
18	18	
25	25	
Aug 1	20	
8	20	
15	20	
22	25	
29	15	
Sept 6	24	
13	25	
20	25	
27	26	
Oct 4	18	
11	18	
18	24	
25	22	
Nov 1	21	
7	18	
14	18	
21	16	
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Dec 5	28	
12	27	
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9	10	33 10

By Deed work 2:9:5  
By payment to B. ... 3:5:0  
By ... 0:5:7  
33:18:-

the lower slopes of the moors where the seam was deeper. Higher up much of the coal had gone.

The moors formed part of the wastes and commons of the former royal forest of Peak. When the lands were divided between tenants and king in the seventeenth century, the minerals excepting any gold and silver were reserved in both parts to the duchy.<sup>24</sup> Hence the duchy could continue letting to third parties the coal under all the commons including the tenants' part. Thus, the coal partners under the duchy lease with John Shalcross



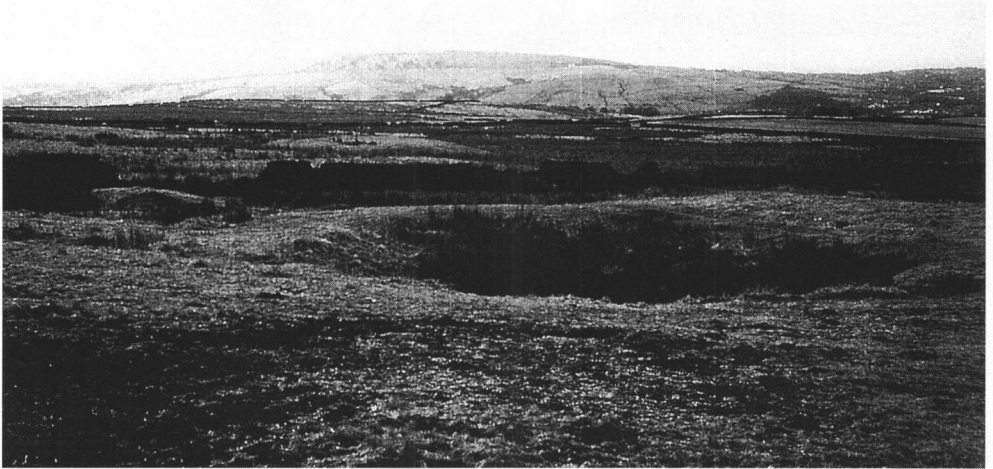


Plate 1: Early eighteenth century coal pit on Ollersett Moor. This is one of over 30 such pits sunk by the coal partnership in the years 1711–57. (SK 029847).



Plate 2: Site of former entrance to the adit of Pingot pit. (SK 015855).

worked the tenants part for coal, the owners of the land in this case being the descendants in law of Randolph Ashenhurst who had, unusually, obtained the whole of the tenants part of Beard Common in the seventeenth century, presumably because he owned a large acreage of contiguous inland. In 1728, this anomaly gave rise to litigation against John Shalcross and the partners when, in a petition to the court of duchy

chamber, the plaintiffs, ie the tenants, were seized in fee of Beard Moor — ‘part or parcell of a Moiety of the Wasts and Commons within the mannor and Forrest of High peake in the County of Darby which was allotted to the Freeholders upon a division of the said Wasts and Comons for their shares and Moiety thereof . . .’ and as such objected to the damage done to the common land. They maintained that the minerals under their land had *not* been reserved to the duchy and that

. . . the said William Carrington William Bennett John Mottram and John Shalcross . . . made dug or sink five or more pitts or shafts in and upon your orators said parcel of ground called Beard Comon and have already from thence gotten and carried away and converted to their own use very great quantities of coal to the amount or value of £1000 at the least . . . and by opening making and digging such pitts and soughs . . . have committed and still continue to do and comit very great waste and spoil in and upon your orators said lands called Beard Comon and more particularly by working and digging and making a sough from a place called Ollersett into the ground where they have dig such pitts and are driving and carrying on the said sough through your orators lands to unwater or lay great quantities of coal dry . . .

It was further alleged that

the plaintiffs are great sufferers by the defendants getting and carrying away their coals as aforesaid and by the damage done to the soil of the same moor by digging the same up and by laying great heaps of coal thereon and by the great numbers of horses that come to carry away the said coals grazing thereon and trampling down the grass . . .

A temporary injunction was granted but it was dissolved.<sup>25</sup> The case illustrates the conflict in the use of the common land for mining and agriculture before enclosure — the freeholders and tenants had common rights but the mineral rights remained with the duchy and therefore could be leased out. The partners had anticipated this problem. In an agreement dated 30 May 1712, John Shalcross agreed to release them of half their rent and pay any damages they incurred should they be deprived of the freeholders’ and tenants’ part.<sup>26</sup> (The other half of the rent applied to the part of the commons and wastes granted to the duchy, ie the crown.) The conflict of interests arising from the juxtaposition of crown and commoners land was to cause further friction and litigation between leaseholders of coal and landowners well into the nineteenth century.

Production as recorded in the account book is continuous throughout the 46 years, often two or three pits being at work at the same time. The total coal produced is an astonishing 123,258 scores, an average of 2,622 scores per year (Table 2 and Figure 6). This new level of coal production must have been associated with new local demands and it is necessary to consider what they were.

By 1700, coal was the preferred fuel, with wood in short supply and expensive.<sup>27</sup> Further, from the late seventeenth century there was an increase in small-scale industrial enterprises, which stimulated coal production — for example, forges, bakeries, breweries, and dye houses,<sup>28</sup> and after about 1650 there was an almost revolutionary increase in the number of lime kilns for liming lands with acidic soils.<sup>29</sup> The soils of the local ‘dark peak’ derived from gritstone and shales were certainly acidic and needed improvement with lime for the important corn crop (mainly oats and barley), made more significant by the increase in population in about the 1720–30s. The one reference made in the account book to a market for the coal is in a note regarding the repayment of expenses — ‘coal given to Lyme burners’, but it seems unlikely that the coal would have been sent to the



Table 2. Coal production at pits on Ollersett and Beard Moors and at New Milne Pit, 1711–57.

YEAR	PROFIT			OUTPUT IN SCORES
	£	s	d	
1711	36	15	0	785
1712	99	5	8	2383
1713	118	13	8	3027
1714	78	10	0	1447
1715	22	3	6½	505
1716	147	10	6	3204½
1717	64	19	5	1694
1718	57	12	11½	1186½
1719	59	14	5	1695
1720	114	4	2½	1837
1721	132	11	5½	2313½
1722	100	9	2½	1816
1723	91	13	1	1655½
1724	116	11	7½	3291½
1725	104	3	6½	2003
1726	106	18	1	1749
1727	105	18	5	1782
1728	122	2	7½	2141
1729	91	16	8	1850
1730	88	1	4	1758
1731	96	15	6½	1932
1732	87	15	7	1989
1733	87	15	6	2404½
1734	78	13	6	1925½
1735	78	2	3	1894½
1736	69	6	1½	1532½
1737	76	4	8	1733½
1738	103	5	3½	2337
1739	101	4	1	2430½
1740	103	19	2	2574
1741	41	0	4	2045
1742	123	4	8	2919
1743	178	5	7	3745½
1744	188	0	4½	3799
1745	245	19	8	4124½
1746	167	16	11½	2611½
1747	149	12	6	2873
1748	214	3	11	3806
1749	251	12	5	3989
1750	284	7	6	4551
1751	199	10	8	3556
1752	228	3	7½	3722½
1753	278	7	10	4570
1754	371	16	2	4992½
1755	263	1	1½	4220
1756	269	4	3½	4417½
1757	285	15	4	4440
TOTALS	£ 6,482	0	1	123,258½

Source: DRO, D3226 Z/1/1. Coal mining account book.

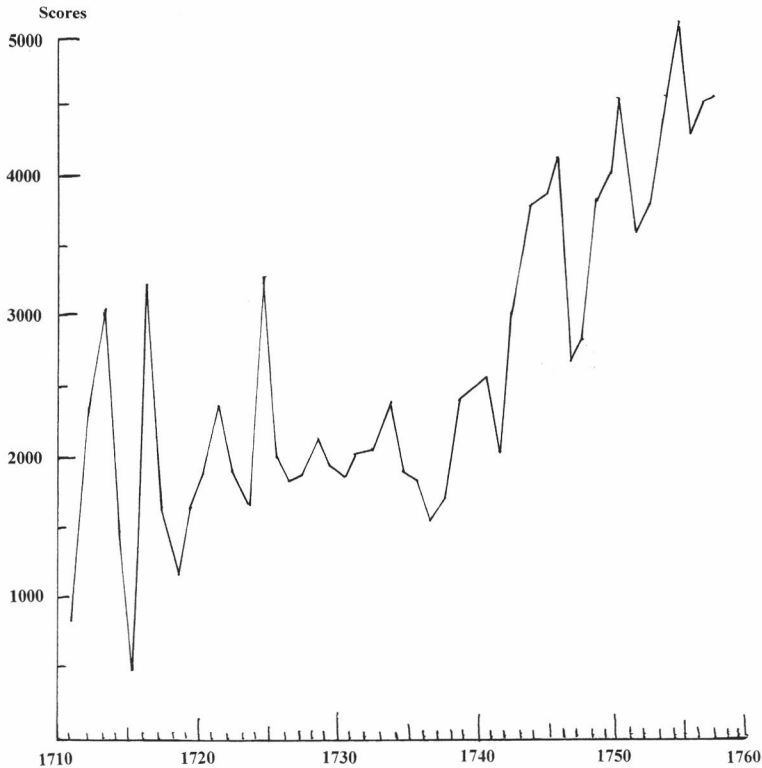


Fig. 6: Graph of total coal production 1711–57 on Ollersett and Beard moors and at New Milne pit. Source: Coal mining account book, DRO, D3226 Z/1/1.

Dove Holes and Buxton areas for use in lime burning as they had their own local coal supplies.

Furthermore, there was a rising demand for lime mortar associated with the rebuilding of houses in stone and the increase in the number of fireplaces. The rebuilding of rural England in Elizabethan times is now recognised to have spanned a much longer period running through into the eighteenth century.<sup>30</sup> The hearth tax assessments between 1662 and 1670 show an increase of hearths in Bowden Middlecale and in the whole of the Glossop parish the increase was 90.<sup>31</sup> The timing of the establishment of the local coal mining partnership and the subsequent level of production fits exactly these developments in the use of coal as well as the date of the final agreement allocating the share of the wastes and commons (1711). The graph of production shows a sudden increase in the early 1740s (Fig. 6) significant enough to raise the question as to its cause so many years before the growth of large-scale industry and the rise of steam power. The Peak Forest Canal (upper level from Buxworth to Marple) was not opened until 1796<sup>32</sup> and the first turnpike road following the Goyt valley (Manchester-Buxton) not built until about 1805.<sup>33</sup> The cause may lie in a sudden spurt of economic growth in the mid-eighteenth century coinciding with a sudden rise in population as reflected in the balance of births

and deaths in the parish registers. There may have been a rebuilding of houses and farms with an increase in coal fires.

There is some evidence that it was the custom for local householders to buy in a quantity of coal at the beginning of winter. James Clegg, minister of Chinley Chapel 1702–55, noted in his diary for December 14 1743 ‘at home all day, the mares being at work in getting in our winters coles’.<sup>34</sup> William Carrington and William Bennett lived near Chinley and as the coal pits were near a moorland track leading there perhaps this is a guide to one possible market.

The scale of production is all the more remarkable because the isolation of the pits at the top of the moors must have meant arduous journeys for pack horses or carts, particularly as mining continued through the winter months.<sup>35</sup> Up to 1725, the net profit after the deduction of wages, partners salaries (£3 per year each) and working expenses was equally divided among the partners in sundry amounts related to different pits. After 1725, it is possible to identify the total annual profits from all the coal pits by convenient summaries at the year end.

### THE LATE EIGHTEENTH CENTURY

The Shalcross estate was purchased by the Jacson family in 1728 and eventually passed to Simon Jacson, who had married Anne Fitzherbert. They were cousins, both grandchildren of John Shalcross. In 1765, the coal mines were being leased by Jacson for 15 shillings per year, not only the same rent paid by John Shalcross eighty years previously, but on similar terms to the Elizabethan licences two hundred years previously. A duchy of Lancaster account for the period notes

15 January 1753. A lease of the Tolls of the Coal Mines in Chapel le Frith and Middlecale was granted to Simon Jacson for 18 years, from January 1765 under the following rents. Tolls £1–3–4, Licence 15/-.<sup>36</sup>

But before this lease had run its course of eighteen years the local economy had been overturned. In the last quarter of the eighteenth century, the industrial period began to get under way. Arkwright had opened the first water-powered cotton spinning factory at Cromford in 1771 and by the mid-1780s, after he had lost his patent rights, new cotton mills had appeared locally.<sup>37</sup> It therefore became clear to the duchy that there was an increasing demand for coal, so when, in 1773, Simon Jacson expressed an interest in renewing his lease, an independent surveyor was appointed to review the coal mines and to recommend the terms to be set upon a lease of 31 years.

However, the report by John Goodwin, the receiver of the duchy revenues for the lordship, and Anthony Tissington was considered by the duchy court to be ‘a very imperfect return of the value and particulars of the coal mines so that no proper judgement could be made as to the expediency or renewing the lease and on what terms’.<sup>38</sup> The court ordered the surveyors to make another report and its concern that coal mining was now of growing economic importance was made clear:

They [the surveyors] will consider (for so the fact is) that the Officers of the Duchy are totally Ignorant of the Mode of letting Collieries in Derbyshire and are therefore in want of the fullest information that can be had — They will also consider upon what Terms they would Grant Leases of the Coal Beds in the grounds in Question in Case they were their own property and advise the

Officers of the Duchy accordingly, Not forgetting to have due Regard to the Interest & Convenience of all the Inhabitants in the neighbourhood.

The second report (dated 22 October 1774) went into more detail and recommendations and usefully lists the mines at work in the district under Simon Jacson's lease: one shaft or coal mine at New Mills and two other shafts or coal mines at Beard Wood Head, or Beard Moor, and Ollersett Moor 'at all which shafts or mines great quantities of coal are daily got up at small expense': another shaft or coal mine at Cown Edge in Thornsett hamlet, adjacent to coal works of his Grace the Duke of Norfolk (Manor of Glossop): coal in Horridge [now Whaley Bridge] in the parish of Hope: and coal in Eccles in the parish of Chapel and in several other places 'which at present lie unwrought and which we apprehend and believe might be got to advantage of the said Simon Jacson at a small expense'.

The report points out that in other parts of Derbyshire it was customary to let out the coal at a certain price per acre, whereas locally the practice was to let out or sell at a certain rent all the coals which could be got 'in a certain range or quantity of land in a certain term of years'. It therefore made the important recommendation that coal should be sold at a certain price 'per acre superficial measure' finding that the mines were worth: New Mills ten pounds per acre, Beard Wood Head or Beard twenty pounds per acre, Cown Edge five pounds per acre, and other parts an average of ten pounds per acre. It went on to suggest that all the mines in Beard, Ollersett, New Mills, and Cown Edge should be let under one lease for a rent of twenty five pounds; and that the mines in Horridge, Eccles and other parts should be let under one lease for the clear yearly rent of twenty five pounds 'which several rents we are of the opinion the lessee of the crown might well afford to pay'. [A note appended to the report says 'There is an abundance of lime kilns supplied with coals from Mr Jackson's pits or mines'.]

Goodwin and Tissington's report therefore suggested a fundamental change from the practice of issuing licences to mine coal over a wide area without having to pay royalties on production, yet as a whole the report was still not considered satisfactory and the duchy court ordered that the matter be referred to Richard Richardson the deputy surveyor of the duchy lands north of the Trent. He was to consider the terms to be set for a lease of 31 years and if the lease should be extended to cover collieries not yet opened by Simon Jacson. Richardson's report of 1775 is important in that it provides a detailed record of coal mining in the area just at the commencement of the industrial period, before fundamental changes came about, and the surveyor's opinion as to what future policy should be in light of the changing economic situation.

... I have taken a View and Survey of the several Commons and Waste Grounds and other Grounds in the Parishes of Hope and Chapel le Frith ... and do find that there are two Several Collieries called Beard Moor otherwise Ollersett Moore and New Mills now in Work under the said lease and no others ...<sup>39</sup>

Richardson noted that the current lease to Jacson covered a wide area 'at least forty miles in circumference' and that since there was much coal in this area which had not been worked but which 'may probably be worked to Advantage when the Demands of the Country require it' that any renewed lease should be restricted to 'certain Spots or Quantities of ground' particularly the two collieries in question. This was an important

suggestion, reflecting a fundamental change from previous practice. He suggested a lease of 23 years commencing 10th October 1783 (at which the present lease expired) under a neat Yearly Rent of Fifty Pounds . . . or on payment of a Fine and Rent to be set for the same rating the said Collieries at the neat yearly Value of Fifty Pounds which rent the Lessee may well afford to pay for the said term and receive a reasonable profit thereby provided he works the said Collieries during his present Lease in a fair honest manner . . . 'and that Jacson should not work more shafts' than was usually done before the Year 1774. He having obtained his Subsisting Lease upon the payment of a very small Fine and under so small a Rent as Half a Crown a Year.<sup>40</sup>

The small fines and rents of the seventeenth and eighteenth centuries covering extensive areas were now a thing of the past. Experience gained and the prospect of increased production was teaching even remote landowners like the duchy to safeguard their interests. Within a few years, leases were to become much more complex documents. Entering the nineteenth century, the economic value of coal was now for the first time recognised not only as a capital asset but as a source of fuel amidst growing industrialisation and the application of steam power. Although the surveyor did not recommend the payment of royalties, within a few years they became one of the most important elements in mining leases not only as a means of recovering part of the value of the coal being removed but also as a vehicle to measure and in some cases to control and conserve that amount. The change is reflected in a lease of collieries to Simon Jacson in 1788, in which coals were demised at a royalty of £150 per acre with a rent of £14 per year.<sup>41</sup>

*Table 3. 'An account of the quantity of coals got at, and the expences and profits of the Dutchy collieries, in lease to Revd. Simon Jacson'*

Year	Fire Coal		Kiln Coal		Expense £ s d	Remaining Profit £ s d
	Scores	Price s d	Score	Price s d		
1793	1293	4. 1	2452	1. 6	404. 0. 0	160. 2. 0
1794	n/a		n/a	n/a	220. 5. 0	146. 0. 0
1795	n/a		n/a	n/a	n/a	n/a
1796	612	3. 1½	3314	1. 0	253 12. 0	76. 14. 0
1797	784	4. 0	2987	1. 6	425. 12. 0	120. 9. 0
1798	363	5. 5	3252	1. 9	297. 2. 0	72. 0. 0
1799	359	4. 9	1705	1. 8	303. 3. 0	43. 7. 0
1800	103	3. 2	2131	1. 5	219. 6. 0	16. 17. 0
1801	589	6. 0	1849	1. 4	242. 10. 0	115. 9. 0
1802	546	7. 0	1967	1. 2	237. 7. 0	133. 17. 0

n/a Not available

Interest of money advanced £1200 at 5% for 9 years £540.0.0. Deficit of the year 1800 £16.17.0. Total profit of 9 years £311.1.0 [approximately 3s 10d profit per score or ton].<sup>42</sup>

An affidavit sworn by Roger Jacson provides a rare view of production and finance at this period, 1793–1802 (Table 3).<sup>43</sup> Jacson says that the profits included the rents from two under tenants of £23.10.0 and £14.14.0. In his opinion it was necessary to extend the grant to include the whole of Middlecale or at least to the five hamlets Thornsett, Buxworth, Beard, Ollersett and Whitle. However, to extend the area covered by a lease

was to run counter to the new opinion. The changes in the level of rents and the introduction of royalties was now to be followed by restricting leases geographically to much smaller areas.

A report from John Crowder in 1807 in response to a commission from the chancellor and council of the duchy of Lancaster said that the townships or hamlets in lease to Mr Jacson were Fernilee, Beard, Ollersett and Whitle and indicated that the mining was not reaching its full potential.<sup>44</sup> It noted that there were two pits at work in Beard and Ollersett but that a level had been improperly driven and more coal should have been laid dry. A fresh level would allow a large quantity of coal to be won and then the colliery would be worth £150 per year. In the hamlet of Whitle, Crowder reported that there was a working colliery called New Mill colliery where there were two shafts open in the possession of Mr Robert Langdon or his tenant held by assignment from Mr Jacson under the annual rent of £23.12.0, an amount which the surveyor considered very inadequate as it was, he considered, well worth £100 per year. He recommended that Mr Jacson be confined to Beard, Ollersett and Whitle 'and leave the rest open to any adventurers that may offer . . .'. Mr Crowder was correctly interpreting the future development of the local coalfield in light of the changing economic conditions.<sup>45</sup>

The collieries were leased to Rev. Simon Jacson on 3 February 1810. Jacson immediately set about sub leasing these collieries. A lease dated 14 September 1810 demised collieries called Ely Bank, the Shaw Marsh, New pieces, Potts coal pit, and the New Mill or Eaves Knowl coal mine to Ralph Bower. The rent was £120, with no mention of any royalty although the amount of coal extracted was to be measured and certified.<sup>46</sup>

It is at this point that legal problems arose with respect to the duchy mineral and stone rights leased to Jacson but under privately owned ground. In 1810, the above lease to Roger Jacson included the seams of slate-stone, limestone, freestone and other stone in Fernilee, Ollersett, Beard, Whitle, Bugsworth and Thornset for 31 years at a rent of 5s plus 3s for all stone raised beyond the value of 15s

as were theretofore part or parcel of the open Forest or chase called High Peake Forest or as then were or were at any time theretofore the Lands of his Majesty or any of his Royal Predecessors and were then held by any of his Majesty's Subjects by Virtue of any Grant or Demise whereby or in which Slate-stone, Lime-stone. Free-stone and other stone were excepted and reserved . . .<sup>47</sup>

Bizarre difficulties arose from the juxtaposition of lands which were within and without those parts of the former commons and waste of the royal forest granted in the seventeenth century. In 1818, Roger Jacson presented a petition to the duchy court in respect of a piece of land at Bank Head, Thornsett, part of the crown's moiety of the 'new lands' inland of which was a parcel of 600 acres of 'old lands' decreed to the freeholders.<sup>48</sup> Under the latter was a large bed of coal, the Yard seam, which could only be laid dry by driving a sough (also to be used to tram out the coal) through the crown's part either in the stratum of coal or in the stone, both of which were reserved to the duchy. An attempt by the owner of the 600 acres had been made to drive the drift. An affidavit from the Reverend Jacson's overlooker reported

Joshua Hague of New Mills Collier and Anthony Ollerenshaw of Raworth collier for several months have made a tunnel through the stone in a close called Thornset Brow belonging to John Gregory unto certain lands adjoining called Bank head Land belonging to the coheirs of the late

Edmund Bradbury of Wethercotes gentleman for the purpose of getting coal lying under the said Bank head Land and by such tunnel or sough to convey and bring out the Coal so gotten and therefore is driving through the Stone part of the mines and minerals comprised in the Duchy lease to the said R Jacson . . .<sup>49</sup>

The petition maintained that if the coal were mined and sold it would lower the price of coal locally and prevent the petitioner from paying his rent and royalty under his lease. An affidavit signed by John Lowe of Buxworth and Joseph Hall of Phoside, colliers, confirmed that the tunnel had been driven to the public road through the stone and under the coal of the king's part and a plan attached (Fig. 7).<sup>50</sup> Some years later when Roger Jacson was appealing for a lease under revised terms one of the reasons given was that

the tenants in Thornsett and Whittle make loud complaints and will the Memorialist has reason to fear be induced to give up their Leases. . . from the Proprietors of the Old Land there loosing their Coal through the Stone within the New Land since the Court declines restraining them as was expected. . .<sup>51</sup>

In 1824 Roger Jacson was petitioning again regarding a dispute involving his three tenants William Drinkwater, Joseph Hall and John Lomas. They had received a notice from the attorney of Joseph Braddock of Buxworth requiring them to refrain from entering his land for the purpose of working coal. The petition quoted the decree of 1711 which reserved the mines and quarries of the 'new lands' within the former forest and succinctly summarised the difficulties arising, since

the whole district is so impregnated and intermixed with stone that it is impossible to get at the coal without working in the most instances the stone also . . .<sup>52</sup>

For close on fifty years Simon and Roger Jacson had been engaged in correspondence and in presenting memorials and petitions to the duchy, a period which was marked by the most fundamental changes to the economic conditions within which coal mining was taking place. Towards the end of the third decade of the nineteenth century yet another survey of Jacson's leases was undertaken by John Wilkin, the duchy mineral agent.<sup>53</sup> The details show that considerable progress had been made in extending the coal works and raising production but much more could be done, the coal being worked 'without spirit and on very limited scale — the lessee taking little or no interest in their success, nor embarking any Capital in the Concern'. Within a few years this was to change as a series of more modern leases were granted to various coal entrepreneurs seeking deeper coal. In his report, Wilkin provided useful descriptions of the mines at work at a period just before serious mid-nineteenth century mining got under way.

Beardmoor Colliery is worked by the same parties [Joseph Hall, William Drinkwater, and Thomas Drinkwater]. About ten shafts are sunk, only one is now at work, which raises from a 3 feet seam daily from thirty to forty loads or about five tons, of which one fourth is best and three fourths of inferior quality. From twenty to thirty acres are yet to get, and from fifty to sixty acres more of the 3 feet coal might be got if the ground was drained by a level. The sale is at this pit very dull and the adventurers seem inclined to suspend their workings . . .

Ollerset or Burned Edge Colliery is worked by the same parties. About ten shafts are now at work on the 3 feet seam and from thirty to forty acres of coal are yet to get, but the ground requires drainage. The coal is of good quality, three quarters of the best, and one quarter inferior.

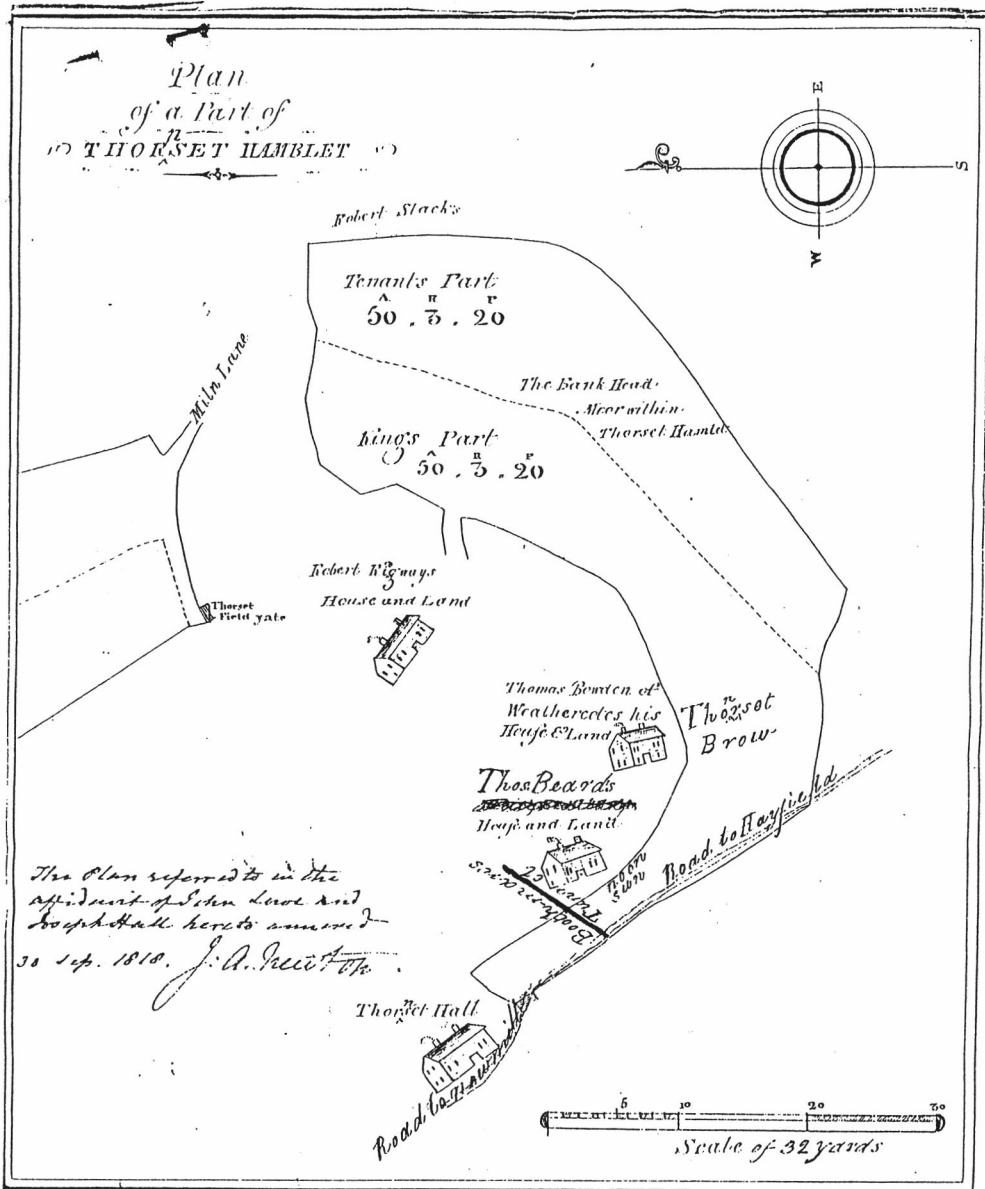


Fig. 7: Part of Thornsett in 1818. Reproduction of a plan drawn in 1818 of part of Thornsett hamlet to show the coal tunnel passing from the 'old lands' through the 'new lands' to the road. Source: PRO, DL 41/62.

Brigreve Edge or Broadhurst Edge Colliery is worked by Jonathan Jowatt as under tenant. It is in the hamlets of Thornsett and Whittle, seven shafts have been sunk in the newly enclosed land, five of them are worked out and two are now in use. The west shaft is forty four yards deep, the seam varies from fifteen to eighteen inches in thickness and produces about three loads and a half or about half a ton to a square yard. It is raised for 4d and sells for 9d exclusive of royalty. It burns



to a red ash [hence Red Ash Mine or Little Mine]. This seam will last for seven years at the present rate of working, about seventy loads or three tons and a half being raised daily. The works are drained by a level . . .

Lee or New Mills Colliery is worked by the same party [Mr Ralph Bower]. Three shafts are sunk to a depth of from seventy to nearly a hundred yards to the 3 feet seam of coal. Two of the shafts are nearly worked out and one only is at present in use. A level is driven but the drainage is rather difficult. The seam unfortunately deepens into the hill towards the north but, the roof being solid, nearly the whole of the coal is got, very little being left for supporters. The cubic yard produces about six loads and a half or nearly one ton — it burns to a white ash.

### THE MID-LATE NINETEENTH CENTURY

In the 1840s–50s, economic circumstances in the country brought about an expansion in coal production. Between 1850 and 1875 output doubled, stimulated by the growth of steam power in mills and factories and on railways and ships.<sup>54</sup> Wilkin's survey is valuable in that it describes the state of coal mining in the New Mills district as the industry passed from a level of activity, rooted in eighteenth century economy and practice, to that of the early to mid-nineteenth century with a much greater demand for coal, a revised and up-to-date system of leasing the mining rights — which appears to be



Plate 3: Burn'd Edge colliery No 2 (New Pit Pingot) alongside Over Hill Road (J Hemsworth). (SK 022857). This pit closed in 1897.

based on practice in well established mining areas elsewhere — and the exploitation of deeper coal which had not been touched locally. He also recognised the potential for change over the next few years,

This District is very favourable for Collieries; a canal runs within half a mile of the Pit at Whittle, and at a distance of little more than a mile from any of the Pits; but the great dependence for consumption is on the numerous manufactories which have of late years sprung up in the neighbourhood called New Mills — with every prospect of further increase. There is very great competition in the Sale — many of the small freeholders have been raising Coals in their private land, otherwise the price would very much exceed that now obtained, and as soon as the small Seams are worked out, and the Seams at a greater depth are worked by the aid of powerful Steam engines, this extensive Mining property of the Duchy will, if hereafter let on a fixed Royalty per ton, be productive of a very large Revenue.<sup>55</sup>

Fortunately at this period, a series of coal mining leases is available, particularly between 1844 and 1868, which provide dense detail of the new mines and working practices in the period of great expansion of the industry locally.<sup>56</sup> These splendid documents for individual coal mines, often running to many pages, contrast with the scanty agreements for the whole area made with the Jacson family. Simple rents were replaced by royalty rents paid on coal production either by ton or, as became common, by the acre or foot-acre, with an additional annual, certain, dead or fixed rent, payable whether coal was mined or not.<sup>57</sup>

As coal mining expanded, a new race of viewers, managers, and coal masters grew up, and mineral agents were employed by the larger landowners.<sup>58</sup> It was not difficult for the viewer to calculate the amount of coal removed at regular intervals, usually every six months. The estimation was based on an acre of coal containing about 1500 tons for every foot thick), although in practice a lower figure might be used. Leases became more sophisticated, detailing the extent of the proposed concession, the length of term, the type of rent and royalties, the payment of wayleaves and a host of covenants providing that lessees should pay for damage, restore agricultural land, repair buildings and leave them standing, and fill in or enclose disused pits.

The challenge for providing for the increased demand for coal was taken up by local men, who were in some cases already coal masters or mill owners — the brothers Levi and Elijah Hall of Ollersett, James Stott of Yeadsley, Thomas Brocklehurst of Lyme, Thomas Bennett of Birch Vale, and Jonathan Jowett of Mellor. These men negotiated long leases with local landowners (acting for the duchy) for the coal mining rights, which were always, like mineral rights or shooting and hunting rights, kept quite separate from the purchase or renting of property and land.

In England, alone among the countries of Europe, minerals (apart from gold and silver which belong to the crown) are part of the land: ownership of them, established by an Act of 1688–89, goes with ownership of the land.<sup>59</sup> The owner is the tenant in fee simple, ie an owner who owns everything and who can dispose of his land freely without restriction, except where the mineral rights have been reserved by a previous owner. This was, and still is, the case with the coal underlying the wastes and commons of the former royal forest once owned by the duchy of Lancaster. In such cases, the owner in fee simple has an obligation to rent out the coal mining rights separately and to set aside for the benefit of the duchy part of the rent and royalties. However, some of the new deeper



mines opened in the mid-nineteenth century, being lower down the hill slopes were not part of the former wastes and commons, or if they were, were part of the 'old lands'.

The Jacson connection dating back to the Shalcross family of the early seventeenth century was still involved in the leases of the mid-nineteenth century. When a lease was granted to Roger Jacson by the duchy in 1823 the annual rents for each colliery were fixed per acre. In 1852 in a lease granted by the Jacson family the royalty payment for each acre of coal won was added to a fixed rent. as follows:

Coal	Rent	Royalty per acre
Upper or thin seam	)	£25
Other seams over 24 inches	) £260	£150
Other seams under 24 inches	)	£150

The payment of a fixed rent separately from royalties became a standard arrangement through the nineteenth century. However, if the royalties on coal won in any year were equal to or above the fixed rent, then the latter need not be paid. If below, then the fixed rent had to be paid but the deficiency could be made up in any succeeding year by winning excess coal without incurring a royalty charge once the current fixed rent had been paid. These arrangements ensured that the lessee actually mined some coal every year and guaranteed income to the lessor. The contrast with the licensing arrangements of earlier centuries could hardly be more apparent. This 1852 lease is also the first evidence of the change in the practice of paying for the right to mine coal, and the extract (Appendix 4) shows just how far leases for the mining of coal had come in the nineteenth century.

Most other succeeding leases in the nineteenth century follow, with variations, the same pattern. The most important variation was when the royalty became payable per foot-acre rather than for the whole seam. The main seam was the 'Yard' (averaging three feet thick) although a thinner seam the 'Red Ash' or 'Little Mine' was sometimes included in the agreement often for a smaller royalty (Table 4). Other leases locally provided for royalties between £25 and £150 per acre. At this time in the West Riding of Yorkshire, where some seams were very much thicker, royalties averaged between £50 and £300 per acre.

The heyday of coal mining in and around New Mills was approximately the mid-late nineteenth century. 83 men (3.0% of the total workforce) were employed in coal mines in

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Fig. 8: The workings of two collieries on Ollersett Moor in the late nineteenth century, showing some pillar and stall, coloured on the Ordnance Survey 25 inch map (first edition 1879) by the duchy of Lancaster's mineral agent. The shaft to the Yard Coal at Burnt Edge No 1 was 396 feet deep. The coal is upthrown to the north by the fault shown, so that the shaft at Burnt Edge No 4 is only 66 feet deep. Little Mine Pit was 91 feet deep to the Red Ash coal, the only other seam worked in the area. Immediately above this coal was the *Gastrioceras listeri* marine band. Specimens of this goniatite (a fossil cephalopod), which is only found at this stratigraphical level, can be found on the present spoil heaps. Note the tramways which served the pits on the moor, taking the coal down to the nearest road about one mile away. They are marked on the original Ordnance Survey map. Reproduced from a copy of a map prepared by William Eagle, the duchy of Lancaster mineral agent. City of Manchester archives (See Appendix 2 for details.)

Table 4. Rents and royalties of New Mills coal mining leases, 1825–1922

Date	Estate	Term	Annual fixed rent	Annual rent	Coals
1825	Cold Harbour and Areleyshawe		£ 21	1/6 value 1/8 value 1/9 value (1)	Over 3ft Over 18 ins 18 ins or less
1845	Ravensleach Over Lee Gib Hey Stone Pit Lane Side Ollersett Hall (part)	21	£100	1/7 sales	
1852	Ollersett Moor Beard Moor	31	£260 £260	Thin Seam £150 per acre over 24 ins £150 per acre	Other seams 24 ins or less
1853	Clough Head		£102.18. 4 per acre £105. 5.10 per acre(2)		Yard Half Yard
1853	Haugh	30	£100	£100 per acre(3)	Yard
1858	Ravensleach		£13		
1863	Shedyard	21	£100	£100	Yard over 24ins
1863	Jodrell's estates in Disley and Whaley etc	21	£500(4)	£40 per foot/acre £30 per foot/acre	Yard over 24 ins Other over 18 ins
1868	Knight Wick and Lower House	14	£70(5)	£150 per acre of 3 ft	Av thickness
1886	Ollersett	20	£58	£5	Tunnel and tramway
1891	North of Hayfield Road	21	£10	£150	All seams
1894	Brownhill	12	–	£120	All seams over 6ins.
1906	Ball Beard and Pingot (part)	20	£40	£60/£100/£120 (6)	Yard
1919	High Hill Quarry	3	£5	4d/ton	Yard
1922	Ollersett	10	£35	–	Tramway
1922	Lark Hill	3	£1	1s/ton	–

## Notes:

- (1) Minimum of £20 annually to be paid if royalties do not amount to such
- (2) Any shortfall on £113.4.2 to be made up.
- (3) No more coal to be gotten in any one year as would produce a rent or rents of over £300.
- (4) £500 for the first three years, then £600 for the rest of the term.
- (5) Plus a yearly rent of £4 per acre of the surface.
- (6) Rates respectively for lands differently coloured on the map attached to the lease.



Plate 4: Converted engine house on Dolly Lane. Dolly was the name of the pit. (SK 022831).

New Mills in 1851<sup>60</sup> and this had increased to 139 (5.6%) in 1881.<sup>61</sup> In 1854, there were four mines locally which were listed as being under the jurisdiction of the Inspector of Mines and this had increased to eight by 1856 and fourteen by 1876.<sup>62</sup> But from the 1880s, mines began to close as recorded by the mine abandonment plans, and with one or two exceptions the shaft mines had ceased production by the first decade of the twentieth century.<sup>63</sup> This was due either to the exhaustion of coal or competition from much higher quality rail-borne coal into the district. The opening of the railway from Manchester to Whaley Bridge in 1857 and from Manchester to Derby in 1867 led to the construction of goods stations in New Mills. Warehouses, sidings, and road/rail transfer were completely new facilities and provided considerable stimulus for the local carriage of bulk goods. New Mills became connected to the superior coal of east Lancashire and in 1894, with the completion of the railway to Sheffield, to that of the Yorkshire coalfield.<sup>64</sup> Local mines could not compete. The closure of the Beard and Bugsworth Colliery in 1903, the largest of the local mines, was directly attributed to this competition (Fig. 10).

In the autumn of 1902, Hall Bros decided to close the Gowhole Pit and the Lady Pit and the same gentleman who addressed the miners at Barn Coal Pit in 1887 addressed them at Lady Pit head. Mr Hall said that owing to the coal seams running out and the fact that, with the opening of the Cowburn Tunnel in 1894 linking the Midland Railway with the Yorkshire coalfields, there was a large quantity of slack coal coming into the district. This coal was superior to anything that they could produce and cost little more. He thought that the time was coming when there would be little or no demand for their class of coal. That was the sole reason he had decided to close the pits.<sup>65</sup>





Plate 5: Reservoir (for steam engine) and beyond it the shaft for Burnt Edge Colliery on Ollersett Moor. Note the line of a tramroad leading down the slope. On the right, the circular depression is the filled-in reservoir built on the site of a spring for the Ollersett Waterworks in 1831. (SK 033852).

In any case, the local coal was not suitable for gasification or steam raising (it was best for lime kilns) although the largest colliery could produce 60 tons per day.<sup>66</sup> Coal mining struggled on with closures and attempts to reopen or start drift mines, particularly at times of national difficulties such as the national coal strikes, depressions of the 1920s–30s, and during wartime. The last official mine, a drift mine, operated by James Morton of Marsh Lane closed in 1946. From the time of John Farey (1811) until 1946 a total of 48 named collieries can be recognised and located (Figs 11 and 12 and Appendix 1).

The thin seams, the poor quality of the coal, and the competition by rail from the larger coalfields were in themselves sufficient to ensure the limited life of the New Mills coal mines. But what also contributed was the fairly rapid exhaustion of workable coal due to the methods of working arising from the thin seams. The mine abandonment plans show that the general method of working was the pillar and stall method, by which the seam was honeycombed with a grid network of tunnels from which the coal was taken, separated by pillars of coal left to support the roof (Fig. 14).<sup>67</sup> This was wasteful of coal since as much, if not more coal, was left underground as was extracted. The conditions of the leases were that workable and marketable coal whether got or left (except pillars left to support buildings on the surface) were liable to be charged royalties. Thus, some mine plans show that the pillars of coal were robbed by working backwards from the mining boundary once it had been reached.

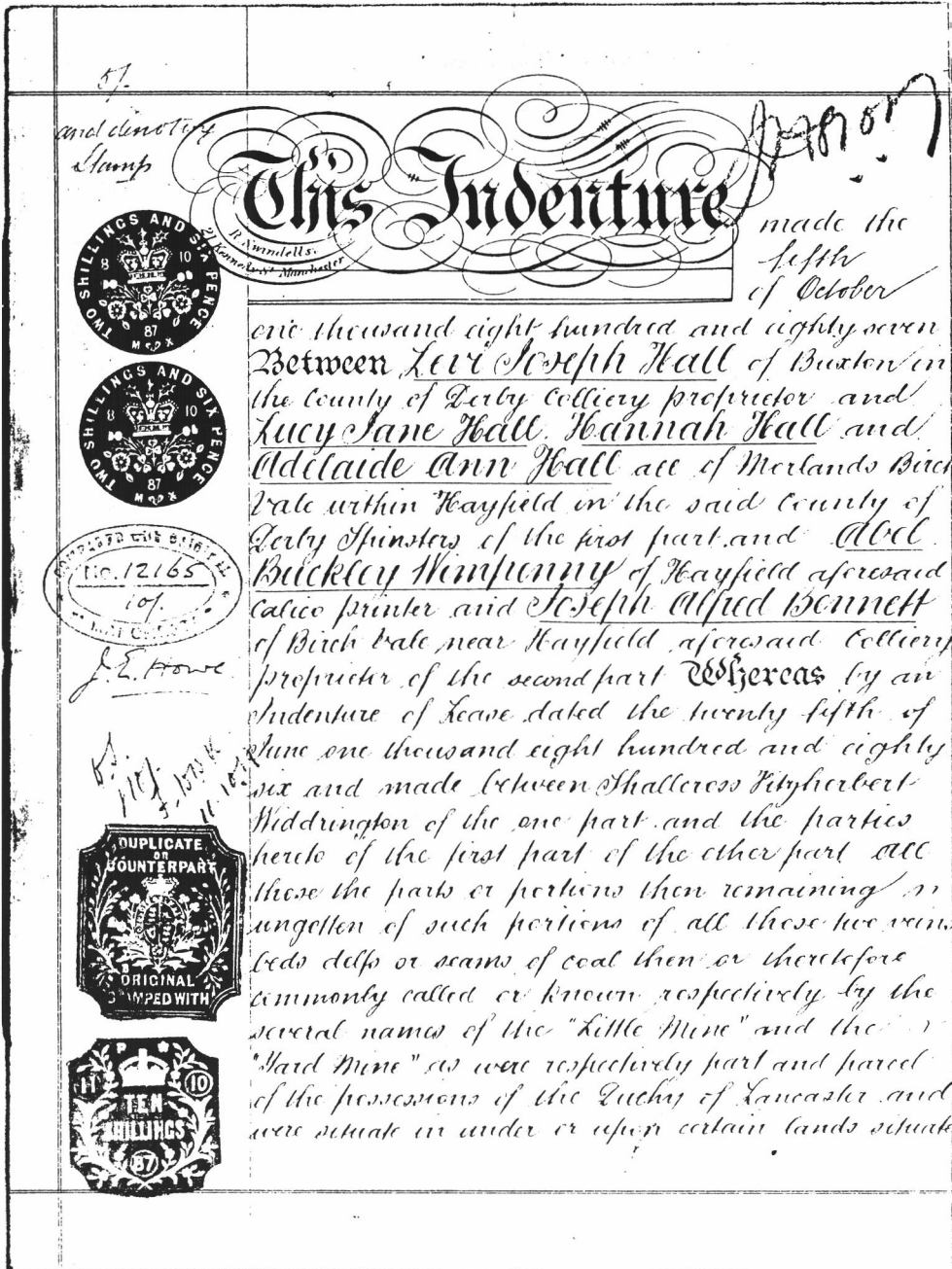


Fig. 9: First page of indenture dated 5 October 1887 leasing the seams known as the 'Little Mine' and the 'Yard Mine' in Bugsworth, Beard and Ollersett. New Mills Local History Society archives.



## APPENDIX I: OPENING AND CLOSING OF NEW MILLS COAL MINES

Earliest known opening date	Name of coal mine	Latest known closing date
Before 1815	Ollersett and Beard moors	–
Before 1815	Aspenshaw	–
Before 1815	New Mills	–
Before 1815	Ely Bank (Bank End)	–
Before 1815	Shaw Marsh	–
–	Bugsworth	–
–	Burn'd Edge	–
–	Eaves Knoll	–
–	Lower House	–
–	Moor Top	–
–	Tor Mine	–
–	Warps Moor	–
–	Broadhurst Edge	–
After 1825	Cold Harbour and Arleyshaw Estates	–
By 1840	Dolly (Clough Head)	–
–	Thornsett Hey	–
After 1847	Ollersett Estate (Brocklehurst)	–
After 1853	Hough Estate	–
1855	Thornsett	–
1855	Thornsett Brows	–
1856	Laneside (Pingot)	–
1856	Beard and Bugsworth	1903
1863	New Mills	–
–	Birch Vale	1876
–	Little Mine	1884
Before 1874	Shaw Marsh	1875
Before 1874	Burn'd Edge Nos 1 and 2	1887
Before 1874	High Lee	–
1876	Thornsett Hey (Cave of Adullam)	1885
1876	Dolly Tunnel	–
–	Burn'd Edge No 2	1878
–	Burnt (Berry)	1881
–	Barn or Dolly	1886
–	Aspenshaw	1887
–	Burn'd Edge No 3	1889
–	Lower House	1887
1888	New Pit Pingot	1897
1890	High Lee	1890
–	Ollersett Hall	1892
–	Burn'd Edge No 4	1893
–	Birch Vale	1907
1892	Pingot	1913
1913	Ollersett Hall	1924
1916	Bank End Nos 1 and 2	1921


1917	Ardern	1919
1919	Ardern No 2	1925
1924	Lark Hill	1945
1925	Pingot Clough	1928
1926	Thornsett Brows	1927
1926	Wethercotes	1927
1926	Hague	1937
—	Park	1931
—	Marsh Lane	1933
1930	Butterbank	1933
1935	Noon Sun	1941
1945	Marsh Lane	1946

Sources: Farey (1811); Ordnance Survey 2 inch map (1840); Coal mining leases: Mine abandonment plans: R Hunt, Mineral Statistics of the U K (1856 and 1857); Catalogue of mine abandonment plans (1929 and 1933); Colliery Year Books (1923–39).

**DISMANTLING SALE.**

**BEARD & BUGSWORTH COLLIERIES,**  
**FURNESS VALE, NR. STOCKPORT.**

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Catalogue of 

**STEAM ENGINES,**  
**LANCASHIRE and CORNISH BOILERS,**  
**STEAM PUMPS, and GENERAL**

**COLLIERY PLANT,**

which will be SOLD BY AUCTION by

**GEO. R. BRADY**

on the premises, on

**WEDNESDAY & THURSDAY, SEP. 2nd & 3rd, 1903,**  
 Commencing on Wednesday at 12 o'clock,  
 and on Thursday at 1 o'clock,

By Order of Messrs. L. & E. HALL, whose lease has expired.

---

The place of Sale is within half-a-mile of the Furness  
 Vale Station on the Buxton & Manchester (L.&N.W.)  
 Line; and about one mile from Bugsworth Station  
 on the Midland Railway.

---

**MAY BE VIEWED ANY WORKING DAY.**

OFFICES:—69 St. Petersgate, Stockport, and Whaley Bridge.

Fig. 10: Title page of catalogue of colliery plant for sale, Beard and Bugsworth Colliery (Lady Pit), 1903 (Author's collection).

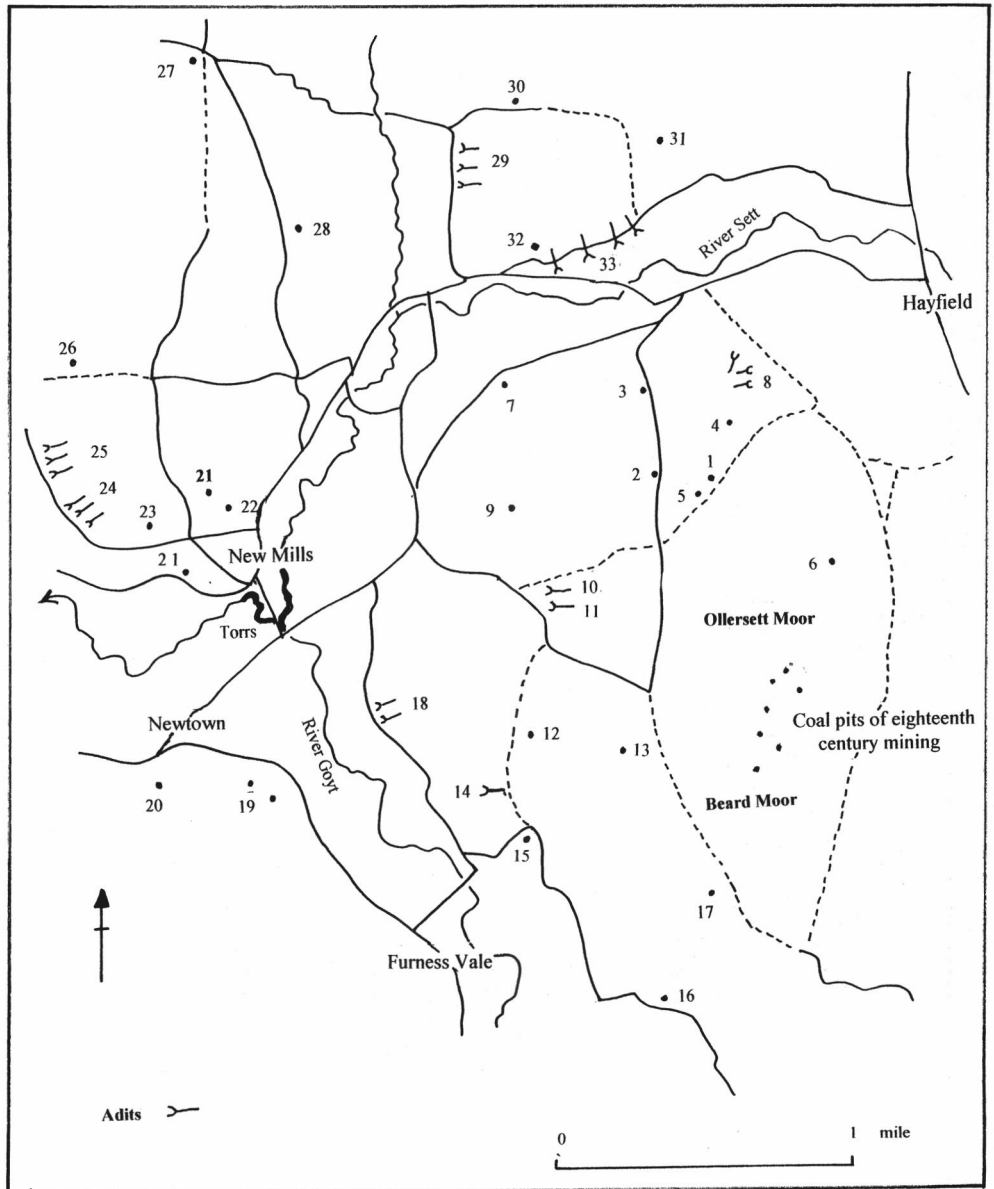


Fig. 11: Coal pits of New Mills. 1 Burn'd Edge No 1. 2 Burn'd Edge No 2 or New Pingot. 3 Burn'd Edge No 3. 4 Burn'd Edge No 4. 5 Little Mine. 6 Burnt Edge or Berry Edge. 7 Ardern. 8 Arden No 2. 9 Ollersett Hall or Brocklehurst. 10 Pingot. 11 Pingot Clough. 12 Butterbank. 13 Bullbower. 14 Park. 15 Lady Pit (Beard and Bugsworth colliery). 16 Barn or Dolly. 17 Old Dolly. 18 Marsh Lane. 19 Bank End No 1 and No 2. 20 Red Moor Lane. 21 High Lee (two pits this name). 22 Eaves Knoll. 23 Lower House. 24 Lark Hill. 25 Hague. 26 Shaw Marsh. 27 Mellor or Broadhurst Edge. 28 Thornset Hey or Cave Adullam or Broom's. 29 Thornset Brows. 30 Aspenshaw. 31 Wethercoates. 32 Noon Sun. 33 Birch Vale.

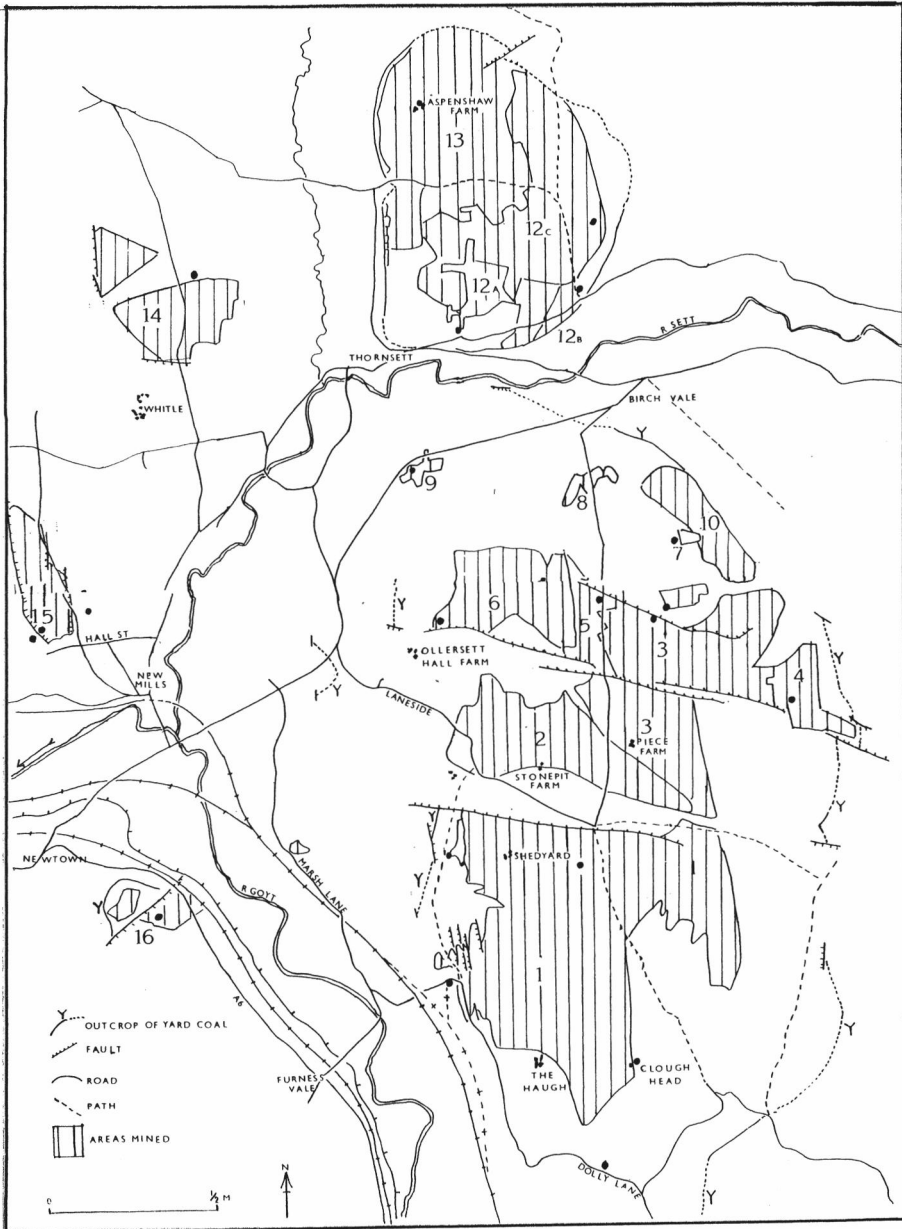


Fig. 12: Area from which the Yard Coal has been extracted (not including the eighteenth century mining). The collieries are: 1 Beard and Bugsworth. 2 Pingot. 3 Burn'd Edge Nos 1 and 2. 4 Burnt Edge or Berry Edge. 5 New Pit Pingot. 6 Ollersett Hall or Brocklehurst. 7 Burn'd Edge No 4. 8 Burn'd Edge No 3. 9 Ardern. 10 Ardern No 2. 11 Butterbank. 12 a, b, c, Birch Vale. 13 Aspenshaw. 14 Thornsett Hey (Cave Adullam). 15 High Lee and Lower House. 16 Bank End Nos 1 and 2. Source: Mine abandonment plans.

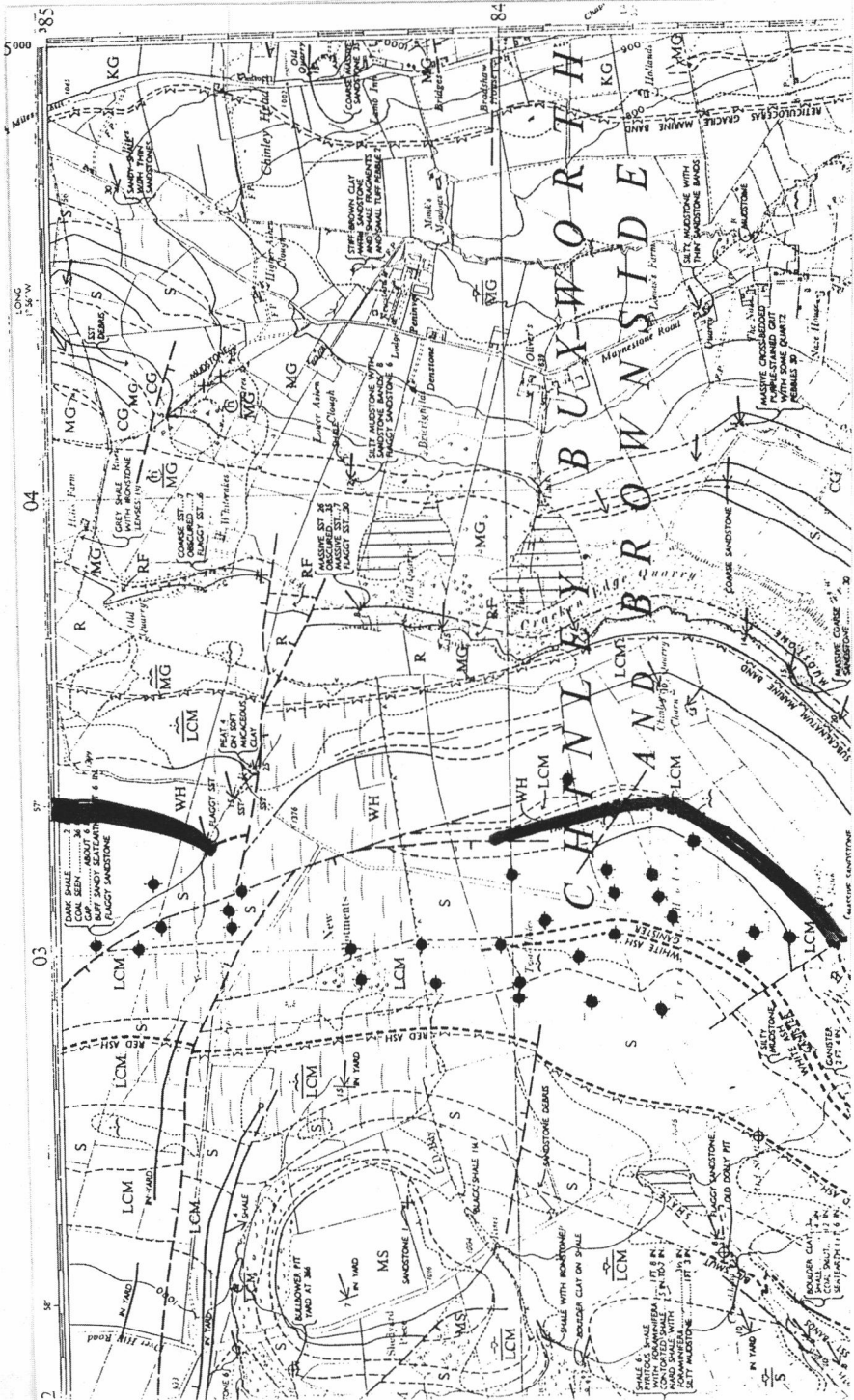


Fig. 13: Geology map on scale of 1:10,560 or six inches to a mile. The map shows the outcrops of the Yard seam (highlighted) and the eighteenth century pits on Ollersett and Beardmoors. British Geological Survey. Sheet SK08 NW.

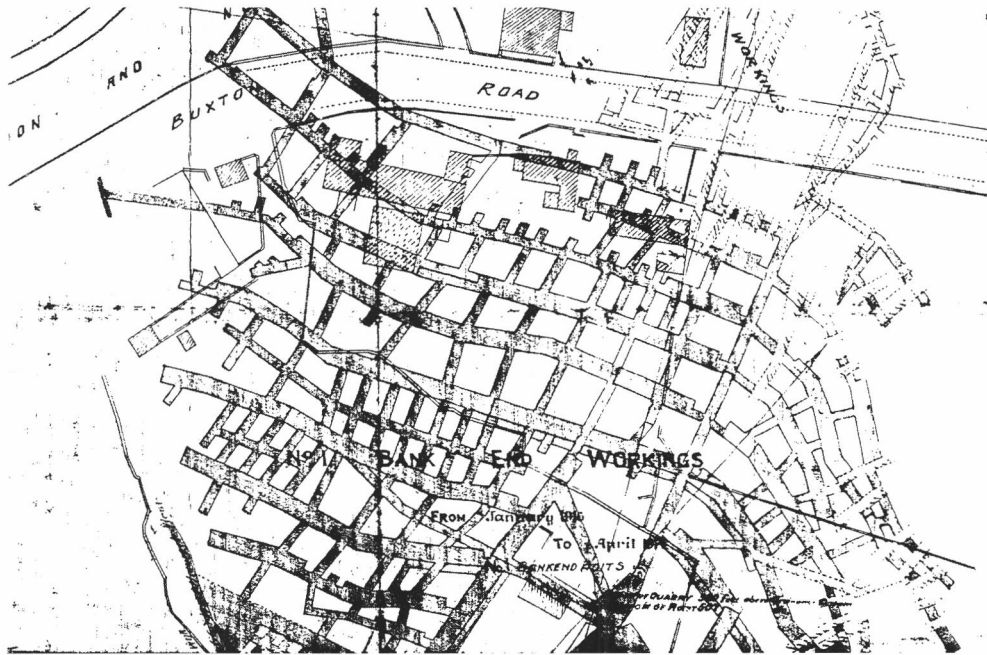


Fig. 14: Coal workings at Bank End Mine, showing pillar and stall extraction. Mine abandonment plan No 7188.

It is not possible to be certain in every case of the earliest opening date or latest closing date. Some closure dates are not given in any source, while others although given, turn out to be temporary. It cannot be assumed that mining was continuous between any given dates. In the pre-1840s, locations were given only in general terms and when the names of mines are used again in later years they do not necessarily refer to the same locations.

## APPENDIX 2: SUMMARY OF SOURCES

1. **Duchy of Lancaster papers**
2. **Coal mining account book 1711–57, DRO D 3226 Z/1/1**
3. **John Farey, *General View of the Agriculture and Minerals of Derbyshire . . . 3 Volumes 1811.***

A reprint has been issued of Volume I which includes his list of collieries in Derbyshire, running to twenty seven pages (Vol I pp. 185–215). The list of collieries includes ten from the New Mills area:

Aspinshaw, W of Hayfield, in Glossop, 2nd Coal  
 Bank-end, NE of Disley, in Cheshire, 2nd Coal  
 Broadhurst-edge, 1~m SE of Mellor, in Glossop, 2nd Coal  
 Bugsworth, NW of Chapel-en-le-Frith, in Glossop, 2nd Coal  
 Burn'd-edge, in Ollersett, SW of Hayfield, 2nd Coal

Eaves-Knowl, (Bower's and Longden's Pits), W and SW of New Mills, in Glossop, 2nd Coal

Lower-house (or Cucko-bush Hill), 3/4m SW of New Mills, in Glossop, 2nd Coal.

Moor Top (Top of Moor) near Chinley, 2nd Coal.

Tor-mine, one third m. SW of New Mills in Cheshire, 2nd coal

#### **4. Mine abandonment plans**

40 mine abandonment plans, 1876–1945 are available for study in New Mills Library. Abstracts of each have been published in Brumhead, *The coal mines of New Mills* (1987). A catalogue of plans of abandoned mines was published by HMSO in 1929, with supplements, Volumes I–V, 1931–39.

#### **5. Geological Survey six inch maps**

A major source for studying coal mining are the six-inch (1:10 500) map of the Geological Survey of Great Britain. Six inch geological maps have been published for all the coal mining areas and they form an underused resource for the historical study of coal mining. As well as the primary geological data including coal seams and the dip of the strata and faults, all the information recorded on the mine abandonment plans is included such as adits, tunnels, pits; and depths in the pits to the coal seams. However, information about coal mines before mine abandonment plans were available, ie 1872, is not shown. The local maps are Sheets, SJ 98SE, SJ 99SE, SK07NW, SK08NW, SK08SW.

#### **6. Duchy of Lancaster mineral maps**

A set of Ordnance Survey 25 inch sheets of the various collieries in Whaley Bridge and New Mills drawn up by the duchy's mineral agent in Manchester William Eagle in the late nineteenth and early twentieth centuries. The colliery workings are coloured in great detail to show the coal extracted at different dates. See Note 58. I am grateful to Margaret le Motte of the Local Studies Unit at Manchester Central Library for drawing up the list of these maps:

##### *Derbyshire 1880 edition*

v.15 Burnt Edge Pit, Little Mine, New Pit Pingot, Thornset Hey

viii.3 Pingot, Beard-Ollersett, Beard and Bugsworth

viii.7 Bugsworth, Beard and Bugsworth, Lady Pit, Dolly Pit

viii.11 Ringstones, Whaley Bridge, Bugsworth, Waterloo

viii.15 Shallcross

##### *Derbyshire 1898 Edition*

v.10 Thornset Hey

v.11 Thornset Hey (Aspenshaw)

v.14 Thornsett Hey, High Lee

v.16 Burnt Edge

viii.4 Berry Edge

viii.15 Waterloo

xiv.3 Fernilee

##### *Cheshire 1872 Edition*

xx.15 Redmoor Lane, Bank End

xx.16 Furness Clough

- xxix.3 Diglee
- xxix.4 Ringstones, Whaley Bridge
- xxix.8 Whaley Bridge

### **7. Coal mining leases**

New Mills Local History Society is fortunate in having in its possession a superb collection of 24 nineteenth and twentieth century coal mining leases, which were found quite fortuitously for sale in a Manchester secondhand bookshop. See Note 56. Abstracts of each have been published in Brumhead, *The coal mines of New Mills* (1987).

### **8. Ordnance Survey 25 inch maps**

There is also topographic information about coal mining on the Ordnance Survey 25 inch maps, which in the New Mills area go back to the late 1870s. They are particularly useful for showing the lines of tramways. Coal heaps, since they are topographical features even when many years old, are also usually shown. The importance of this when there is no abandonment plan available was dramatically illustrated in the case of an old shaft discovered when an extension to a school car park was being made near Meadow Street in New Mills. See Appendix 3. The sheet numbers of the local 25 inch maps are: 1st Edition 1880, 2nd Edition 1898–99. Sheets: Derbyshire v:10, v:11, v:14, v:15, v:16, viii:2, viii:3, viii:4. viii:7.

### **9. Probate documents**

Probate documents occasionally provide references to coal mining such as this extract from the will of William Carrington The Elder of Ashton [Ashen] Clough. Will dated 9 June 1728: ‘Item my will and mind is that my sonn William Carrington do give and allow unto his brother Joshua Carrington the quantity of tenn loads of Coals yearly and every year before each Christmas he paying the work and wages during the continuance of tenure of the coalmines’.

### **10. Inspector of Mines reports**

Details of fatal accidents in New Mills mines are given in the following reports:

- 1855 22 January. Ollersett Colliery. William Cooper. Suffocated by choke-damp.
- 1879 Aspinshaw. Joseph Bennett, 25, stallman. Fall of roof. Deputy cautioned the deceased not to enter the stall, but he did not fence it off.
- 1880 Beard and Bugsworth. Joseph Hill, 19, trammer. Roadway too small; tub caught a prop and knocked it out, roof fell upon deceased.
- 1882 Thornsett Hey. Samuel Pott, 50, Miner. Unramming a missed shot, when it exploded. . . . Workmen were engaged in clearing away, and making way for an underground engine and they found it necessary to blast the floor. Samuel Pott and another man, drilled and charged a hole for the purpose, the fuses were lighted, and the men retreated some distance out of the way. They waited a short time, but finding the shop had mis-fired, they went back to it, and by direction of the underviewer proceeded to drill it out, and whilst so engaged a spark from the side came into contact with the powder, causing an explosion, which mortally wounded Samuel Pott. [The underviewer was later charged at the Chester Assizes with manslaughter and found guilty. On account of his long service and previous good character he was recommended to mercy and sentenced to four months imprisonment without hard labour.]
- 1883 Aspenshaw. John Thomas Florey, 25, stallman. Fall of roof.



1884 Aspenshaw. John Bramall, 50, stallman. Fall of roof; place insufficiently timbered.  
 1888 Burn'd Edge. Joseph Bowden, 28, labourer. Assisting to take arch off the top of an old coal pit, and is supposed to have slipped; fell down the shaft.

1891 Birch Vale. Benjamin Howard, 39, Deputy. Fall of roof. Withdrawing back timber by knocking it out with a hammer, and standing under roof, instead of using a ringer and chain. Died 8th May.

1906 Birch Vale. William Barker, 65, header. Fall of roof, deceased was working in the end of a narrow heading when a large stone fell from the roof and killed him. An item in *Echoes from the Peak* in the High Peak Reporter for 28 July 1906 described this accident: 'Last Friday a collier name William Barber (sic) was left working at the Thornsett Colliery, and when the deputy went down to see how much crouching position, with a huge stone on his head and shoulders, and buried in loose coal. He had been a collier for 50 years. What a shocking death after all these years of hard work! How little people think of all those dangers, when they sit by a cosy fire, and follow less dangerous occupations, which could not be carried on without the aid of coal which the colliers get. They ought to have every sympathy and the best of pay in their dangerous work'. (Reprinted in Bill Williamson's column, High Peak Reporter 28 July 1991.)

#### 11. Miscellaneous documents from New Mills Local History Society archives

1. Report of a survey by Messrs Cross and Eagle, mineral surveyors for the duchy of Lancaster, of the workings by Mr Levi Joseph Hall at the Beard and Bugsworth Colliery in the coal mines under the 'old lands' of the Haugh Estate and an estimate of the rent accruing from commencement (Lease dated 11 May 1898) to 29 September 1898.

Coal	Surface Quantity				Rent per acre full thickness	Amount		
	A	R	P	Y		£	s	d
Yard Mine	3	1	6	9	£80	263	3	0
Do	0	0	10	16	£60	3	19	0
						267	2	0
One half years certain rent to 25 March 1898						25	0	0*
						242	2	0
Deduct property tax at 8d in £						8	1	4
						£234	0	8

[\*The certain rent was not payable once royalties exceeded the amount.]

2. Letter from L and E Hall to J E Braddock of The Haugh dated 16 July 1894 headed 'Haugh Coal':

About 280 yards down our Engine Brow at Beard and Bugsworth Colliery, we have our East level, the end of which is near to the boundary of your Freehold Coal. If agreeable to you, we are willing to continue this level (and other necessary straight work for ventilation, water, etc) some distance in your coal, with a view to prove it more fully. We would pay you a royalty of five pence for each four waggons of coal gotten from your Freehold Estate. An accurate account of the number of waggons of Coal got from your Estate would be kept. . . . You or your Agent to have reasonable liberty to inspect, and to survey the coal workings . . .'

3. Letter to the duchy of Lancaster mineral agents, Messrs Cross and Eagle dated 9 October 1903 from Tom Bowden of Hayfield. See also Appendix 3.

Some time ago I drew your attention to the very dangerous condition of a number of the old coal shafts on the Ollersett and Beard Estates. There appears to be quite a large number of them all up and down the estates, which have a number of years ago been covered in, and now the timbers have begun to decay, thereby making it very dangerous for either people or cattle to walk over. I should be very glad if you, as engineers to the duchy of Lancaster, would ascertain from the old plans the exact positions of these shafts and either have them fenced round or filled up. I am enclosing you a tracing showing roughly the positions of four of the said shafts; the coverings of numbers 1, 3 have already fallen in and I have temporarily fenced round number 1 and filled up number 3, the cost thereof being £3.0.0. I shall be glad if you will remit me this amount at your early convenience. I trust you will give this matter your very early consideration as it is becoming more serious every day.

4. Some years ago a few oral recordings were made by elderly persons who had had experience of working in local mines. The following is a transcript made in 1985 of a talk with Mr W Stafford, who in the 1920s worked at John Hawthorn's Canal Foundry at Newtown and often visited local mines in the course of his work

Q. Ollersett Hall pit ?

A. Well now, it was a wet pit and subject to flooding. They would open up a new seam and then the water would probably pour in. The pumping arrangements that they had had to be extended to the new working. The pumps were the Worthington type.

Q. What type of pump was that?

A. Well, there were two pumps side by side . . . so you had a continuous flow.

Q. Was it a steam engine?

A. Oh yes, steam had to be piped down into the pump.

Q. The pump was down the mine? \*

A. The pump was down the mine . . . on one occasion I asked if I could see this friend Mr Sharply and they took me to him and he was working in a coal seam which was probably twenty one inches or two feet thick and the floor was wet. He was lying down with a minimum of clothing on, a piece of corrugated iron sheet above him propped up on wooden props and he would be lying on his side picking his way and that was the conditions of work, so that he used to get damaged whilst he was doing it, he had a sore back and elbows and all that sort of thing.

\*The steam engine in Ollersett Hall pit was replaced with an electric motor. It failed during the Christmas holiday 1924, the pit was flooded and never opened again. 45 miners lost their jobs.

## 12. Reports of the Mines Record Office

These provide details of the numbers working at certain collieries between 1894 and 1933. For example, Beard and Bugsworth (Lady Pit) employed 39 underground and 8 on the surface when it closed in 1903. Pingot, a large drift mine with extensive workings (1892–1913) employed at its maximum, in 1900, 41 underground and 5 on the surface. When it closed in 1913 the figures were 31 and 8 respectively.

## 13. Poor rate and land tax assessments

Poor rate assessments and land tax assessments are not so informative as one might have hoped. The recording of industrial premises is very variable and seems to depend in part on the assessors. Locally, places that obviously had industry often have little or nothing recorded. The poor rate assessment made by the Overseer of the poor of the hamlets of Beard, Ollersett, Whitle and Thornsett. ' . . . after the rate of threepence farthing the pound yearly value of all the estates within the said hamlets, on the fifth day September

1768' includes: Ollersett. Mr William Carrington for one coal mine . . . 1s.7d. Whitle. Mr William Carrington for a coal mine . . . 11d.

#### **14. Census reports of Great Britain**

The number of persons and places of residence employed in coal mining in the second half of the nineteenth century in New Mills can be found from the enumerators' returns of the decennial censuses of Great Britain held 1851–1901.

#### **15. Papers of Thomas Oldham, boiler maker**

The late Tom Oldham of Mellor, who was a member of New Mills Local History Society, generously provided extracts from the business correspondence of his grandfather who was a boiler maker in Heaton Norris and did much work for New Mills collieries in the late nineteenth century and early twentieth century.

12 February 1885. Thomas Bennet Esq., Thornsett Hey Colliery: 'I propose to cut up the boiler I fixed for you at the above colliery into pieces similar to what it was when taken up into to its position, and use every care to keep the plates good for putting together again. You to provide candles and all light, and remove plates away as the work proceeds . . .'

29 November 1887. Supplying valves, Fittings etc and doing work on a boiler (113 hours) at Burned Edge Colliery Co. £9. 11. 7

27 November 1888. The Aspenshaw Coal Co. Supplying one Second Hand Boiler £110. 0. 0 and fixing the boiler at colliery. 4 men a total of 233 hours. £23 12. 7. Cartage £11.

June 1888. The Pingot Colliery Co. One Second Hand Boiler. £60. 0. 0. Delivery Charge £10. Cost of installing £6.15. 9.1

21 March 1895. The Aspenshaw Colliery Co. An extract from a lengthy quotation for a Lancashire Boiler 6' 2" diameter × 24 ft long: 'The boiler to be built up here and removed in parts to your colliery, and moved up the tunnel by you in parts, and erected and finished off by me. You to provide the bed. Price £350.'

6 April 1900. A description of the work required to re-flue a Lancashire boiler. ' . . . a good deal depends on how the men are taken down to their work, and the lights they have when at work. I would like one of two good "Wells" lights — tallow dips are too much trouble. The job would take three to four weeks and cost £90.

#### **16. Newspaper advertisements**

Advertisements regarding local coal mines can be found in *Manchester Guardian*, *Stockport Advertiser*, *Manchester Mercury*, *Glossop Record*, *Ashton/High Peak Reporter*. The following extracts were brought to my attention by the late Tom Oldham.

11 December, Stockport Advertiser. /Aspenshaw Yard Mine, Beard and Ollersett. To let, 3 beds of coal, 18", 20" and 3' 6" thick. Railways and wagon roads all complete.

August 1794, Manchester Mercury. To let, Eaves Knoll Estate. Under the whole of the estate is a valuable coal mine laid dry without a fire engine, and now worked by one coalpit. Also leasehold interest in a coal mine called New Mills Mine in Whittle Hamlet.



Plate 6: Brick-lined air shaft (200 feet deep) found when a school car park was being constructed on Meadow Street. (SJ 999857).

### APPENDIX 3

#### 1. The discovery of Eaves Knoll Colliery

There is little or no map information about local coal mining before mine abandonment plans were first required following the Coal Mines Regulation Act 1872. For this reason there are, as in all coal mining areas, in and around New Mills many old shafts which are not recorded. This was dramatically illustrated in 1988 when an old shaft was uncovered near Meadow Street during some excavations for a primary school car park (Plate 6). Its discovery was purely fortuitous. The only piece of evidence of a possible shaft was a 'hairy caterpillar' drawn on the OS 25 inch map (Fig. 15), which suggested a heap of some material; in a coal mining area this is likely to be spoil from a pit or adit. After local enquiries, a map of the coal workings was discovered in private hands. It was drawn on the 1841 tithe map as a base, and it showed a shaft close to the position of the 'hairy caterpillar'. When the soil was stripped away the brick-lined shaft was revealed.

The shaft, which was about 250 feet deep, was associated with Eaves Knoll Colliery, which had been listed by Farey, but whose location had been hitherto unknown. The shaft formed one of a series connected underground by a tunnel which runs under New Mills. This tunnel is a sough draining water from the mine and the shafts would have

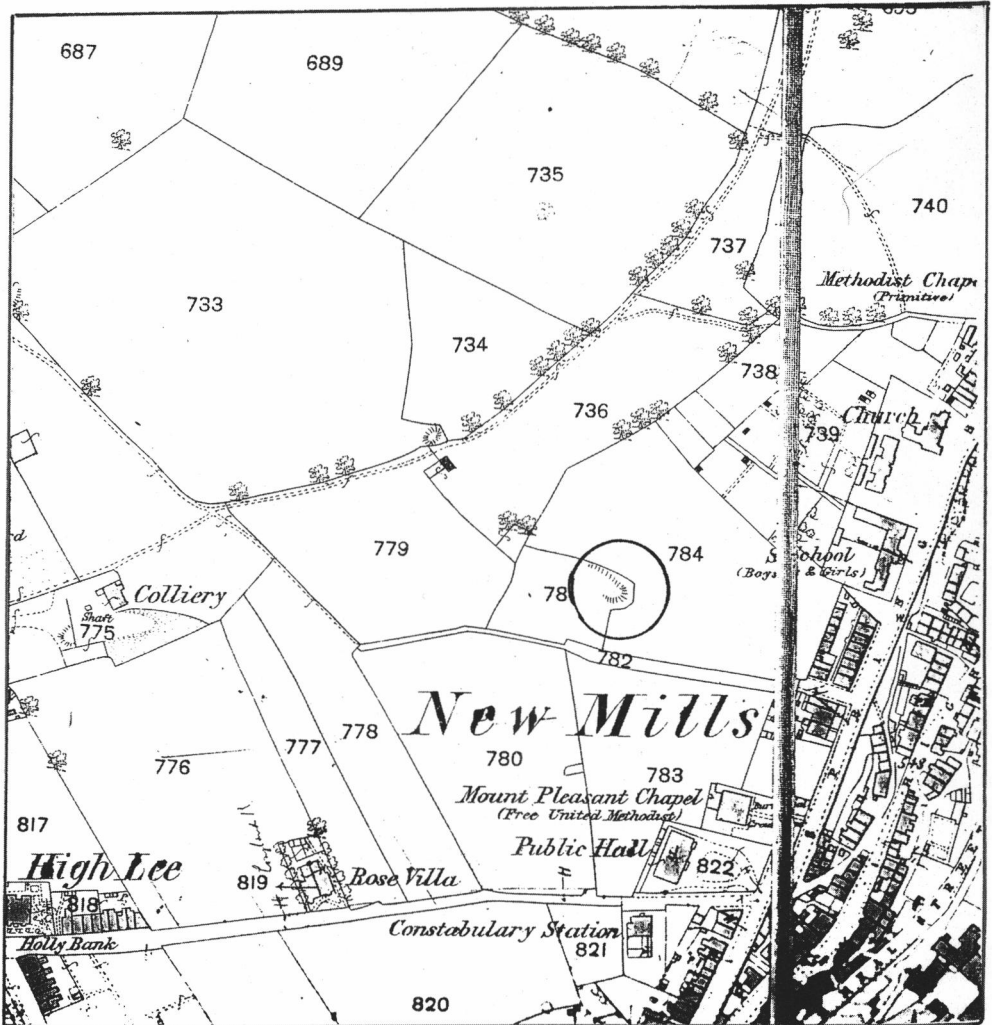


Fig. 15: Extract from Ordnance Survey 25 inch map V14 (1880, surveyed 1872), showing the 'hairy caterpillar' (highlighted); indicating spoil from a nearby shaft. The site is now the location of New Mills Primary School.

been air shafts. The exit of the sough can still be seen in the bank of the river Goyt below the Millennium Walkway.

The Ordnance Survey 25 inch maps with their topographical detail show features such as spoil tips, old tramways and reservoirs. This case shows that they may contain vital historical information about unknown coal mines.<sup>68</sup>

## 2. Thornsett Hey coal tunnel

In July 2002, a hole in a field adjacent to Ladygate (Lydiate) Brook about  $\frac{1}{4}$  mile north of Bate Mill proved on investigation to be the lost entrance to this tunnel, which was constructed in the early 1870s to bring coal out of a mine (known as Cave Adullam (sic)

or Broome's Pit) beneath Broadhurst Edge. From the tunnel exit a horse tramroad took the coal to a wharf on Bate Mill Road, now the site of a children's play area (Fig. 16). The owner of Thornsett Hey Farm, on whose land the tunnel is, contacted the Coal Authority who arranged for a firm of consulting engineers to fill in the tunnel entrance and make it secure, and he invited me to be present. A JCB broke open the entrance to reveal a fine tunnel lined in stone so providing a unique opportunity to obtain photographs of a feature not seen since it was closed in 1885 (Plates 7 and 8).

There is some interesting geology associated with this coal mine which worked two coal seams, called the Yard Mine and the Little Mine, both of which dip towards the east at about 1 in 7. As the section shows (Fig. 17), the Yard Mine outcrops just above Aspenshaw Road, and in fact was mined by adits in the 1920s by James Morton, formerly the Under Manager of Ollersett Hall Pit (It closed in 1924). The Yard seam here is at an altitude of about 600 feet, yet to the west in Broome's Pit it was found at 258 feet below the surface. The reason is that a fault has dropped the rocks a matter of c. 666 feet. This dislocation would have taken place hundreds of millions of years ago when all the rocks were far beneath the surface; they only appear now in this position owing to the erosion of the landscape which has produced hills separated by the Ladygate valley.

The old workings in the Little Mine, shown on Figure 17 pre-date the construction of the tunnel. They are not recorded on any plan but there is field evidence which indicates the working of coal below the surface. I walked with the owner across this field and beneath our feet was a rectilinear pattern of lines of subsidence. These were the stalls (tunnels) of the ancient pillar and stall workings which were now beginning to show at the surface. Nearby, an unrecorded pit was discovered at the same time as the Thornsett Hey tunnel — a hole had appeared in the ground. This pit was also filled in and secured by the contractors.

Despite the fact that only thin coal seams have been removed, after more than a hundred years, subsidence is beginning to appear at the surface above shallow coal workings in the New Mills area. Recently, several farmers have had fields affected, and the golf club had a troublesome pool of water on one of its fairways.

#### APPENDIX 4

Extract from indenture made 1st September 1852 between Frances Jacson of Newton Bank, widow, and Shallcross Fitzherbert Jacson of Newton Bank, county of Chester, and Levi Hall and Elijah Hall, both of Ollersett, Colliers. New Mills Local History Society.

All that Colliery or veins of coal called Ollersett Moor Colliery . . . parcels of the possessions of Her Majesty's Duchy of Lancaster . . . and also all veins beds delfes and seams of coal being the property of Her Majesty aforesaid . . . and also all such part of the Colliery or works of coal called Beard Moor Colliery . . . also parcels of the possession of Her Majesty's Duchy of Lancaster, as lies on the Northerly side of the great fault running from East to West through the township of Beard aforesaid and passing under or nearly under certain farm buildings known by the name of Brown Hill . . . Yielding and Paying . . . the certain yearly rent of two hundred and sixty pounds and also yielding and paying. . . the clear quarterage rents or Lord's parts following (that is to say) for and in respect of every four thousand eight hundred and eighty yards measured on the surface of the ground and so in proportion for any greater or less quantity of Coal gotten out of the thin

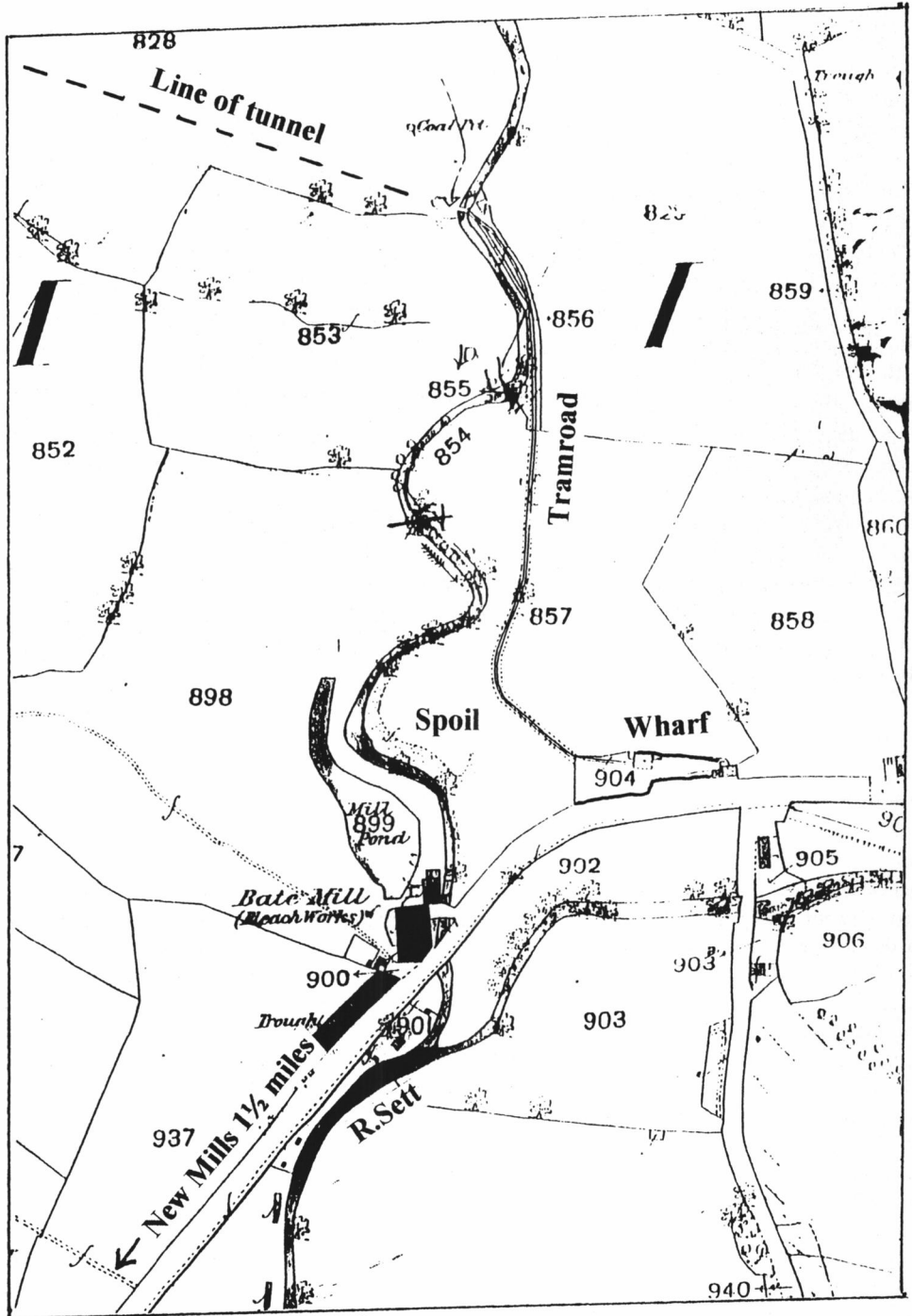


Fig. 16: Tramroad from Thornsett Hey tunnel to Bate Mill Road shown on OS 25 inch map (reduced), 1st edition, surveyed 1879. Labels have been added.



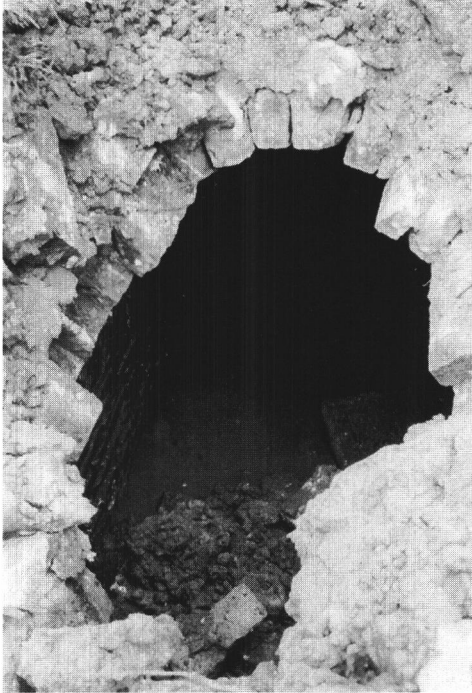


Plate 7: First view of Thornsett Hey coal tunnel when exposed by a JCB in July 2002. (SK 007872).



Plate 8: Thornsett Hey coal tunnel in July 2002. It was last used in 1885. (SK 007872).

bed or Upper seam of Coal in Beard and Ollersett aforesaid the clear quarterage rent or Lord's part of twenty five pounds And for and in respect of every four thousand eight hundred and eighty yards measured as aforesaid and so in proportion for any greater or less quantity of Coal twenty four inches and upwards in thickness gotten out of the said Collieries and Mines hereby demised (except the said thin bed or Upper seam) the clear quarterage rent or Lord's part of one hundred and fifty pounds And for and in respect of every four thousand eight hundred and eighty yards measured as afore-said and so in proportion for any greater or less quantity of Coal gotten out of any of the said Collieries and Mines hereby demised (except the said thin bed or Upper seam) under twenty four inches in thickness the like clear quarterage rent or Lord's part of one hundred and fifty pounds . . . But it is expressly agreed that when the said respective quarterage rents or Lord's parts in any year exceed the sum of two hundred and sixty pounds the said rent certain is not to be payable . . . Provided also . . . that the several and respective measurements upon which the computation of rent shall be made as aforesaid shall include the posts and pillars left for the support of the works but shall not include barren ground where coal does not exist or posts beneath which the coal is destroyed by faults or parts beneath which the coal is less than two feet in thickness unless such coal be worked and gotten And it is also agreed that the Mine called the 'Little Mine' shall not be worked or gotten without the consent in writing of the said Frances Jacson and Shallcross Fitzherbert Jacson . . .

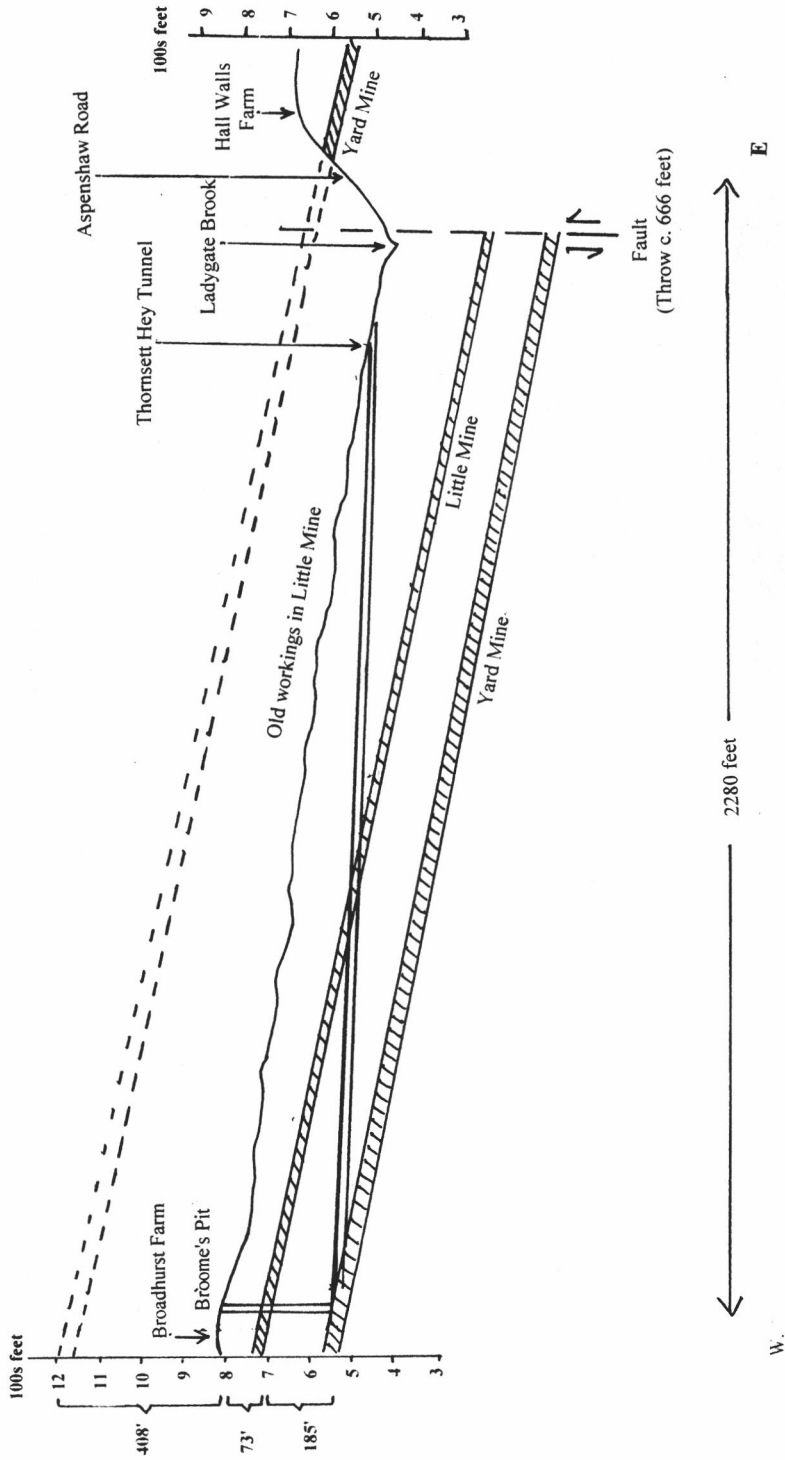


Fig. 17: Geological section west-east to show the disposition of the coal seams on either side of the great fault. Sources: Mine abandonment plans, numbers 1990 and 1991. Geological Survey of Great Britain, Sheet 99 (Chapel en le Frith).

## NOTES AND REFERENECES

- <sup>1</sup> I P Stevenson and G D Gaunt, *Geology of the country around Chapel-en-le-Frith*, 1971.
- <sup>2</sup> Bowden Middlecale consisted of ten hamlets. Its name distinguished it from Bowden Chapel an adjacent division of three hamlets. Together they were known as Middlecale. The names are no longer in use.
- <sup>3</sup> R Somerville, *History of the Duchy of Lancaster, I, 1265–1603*, 1953, p 52.
- <sup>4</sup> Somerville (1953), pp 309–10.
- <sup>5</sup> Public Record Office (PRO), DL 25/3605. Indenture 19 May, 41st year of the reign of Elizabeth I (1598–99).
- <sup>6</sup> PRO, DL 25/3607.
- <sup>7</sup> J Hatcher, *The history of the British coal industry. I, Before 1700*, Oxford, 1993, p 272.
- <sup>8</sup> Hatcher, (1993), p 273.
- <sup>9</sup> Hatcher, (1993) p 275.
- <sup>10</sup> PRO, DL 32/7. Survey of the Manor of High Peak, July 1650. Wolley Ms 6687, folio 34. Copy in Derbyshire Local Studies Library, Matlock.
- <sup>11</sup> L Jewitt, 'Pedigree of Shallcross of Shalcross in the High Peak of Derbyshire', *The Reliquary*, 6 (1865–66), opposite p 150.
- <sup>12</sup> G Berry, 'For the use of ye cole pits. A study of coal mining tokens of the 17th century'. *Coin and Medal News*, 22 (3), (March 1985), pp 50–51. In 1987, a High Peak coal mines token (halfpenny) in VF condition was sold at an auction for £150. (Information provided by W A Kennett).
- <sup>13</sup> PRO, Rentals and Surveys DL 43, 20/9B, 32 Charles II (1680–81).
- <sup>14</sup> Cited in a lease dated 23 June 1702. John Rylands Library (JRL), Manchester. Bagshaw muniments 13/3/136. The lease demised the coal mines within the parishes of Chapel and Hope and the tollage passage and stallage of the markets and fairs of Hayfield which had been demised on 2 April for 31 years from 29 September 1684 for a yearly rent of 2s 6d for the tolls and coals.
- <sup>15</sup> Derbyshire Record Office (DRO), D 3226 Z/1/1. A fuller description of the account book is provided in D D Brumhead, 'An early eighteenth century coal mining account book for New Mills, Derbyshire', *Manchester Region History Review*, VI (1992), pp 91–95.
- <sup>16</sup> M W Flinn, *The history of the British coal industry, 2, 1700–1830*, 1984, p 39. J U Nef, *The rise of the British coal industry*, two volumes (1932 reprinted 1966), 2, p 51.
- <sup>17</sup> Duchy of Lancaster, State of Title pp 101–106
- <sup>18</sup> J U Nef (1932), 2, Appendix K, pp 422–434, in which transcriptions of accounts are given from the fifteenth and seventeenth centuries.
- <sup>19</sup> The account book was purchased at a London auction. The immediate provenance is not known, but a letter in the High Peak Reporter dated 2 May 1931 described it as being in the possession of E Bennett a descendant of William Bennett, one of the partners. I am grateful to Roger Bryant for this reference.
- <sup>20</sup> A F Roberts and J R Leach, *The coal mines of Buxton*, 1985, pp 32–55.
- <sup>21</sup> J U Nef, (1932), 2, p 374.
- <sup>22</sup> J Farey, *General view of the agriculture and minerals of Derbyshire. . .*, 3 Volumes, I, 1811, p. 340. Farey was one of the most outstanding of the earliest professional geologists and mineral surveyors. His three-volume book presents the results of a survey of the agriculture and minerals of Derbyshire which he conducted in 1807. A reprint (by the Peak District Mines Historical Society) has been issued of Volume I which includes his list of collieries in Derbyshire, running to twenty seven pages (Vol I pp 185–215). The reprint also includes a modern appreciation of Farey including a bibliography of his writings. The list of collieries includes ten from the New Mills area, which are listed in Appendix 2.

- <sup>23</sup> R A S Redmayne and L Stone, *The ownership and valuation of mineral property in the United Kingdom*, 1920.
- <sup>24</sup> The long drawn-out process of dividing the commons and wastes commenced with the first surveys in 1640, interrupted by the civil war and interregnum. See the seminal article by R Somerville, 'Commons and wastes in north-west Derbyshire — the High Peak "New Lands"', *Derbyshire Archaeological Journal*, XCVII (1977), pp 16–22. Also, D Brumhead and R Weston, 'Seventeenth century enclosures of the commons and wastes of Bowden Middlecale in the royal forest of Peak', *DAJ*, 121, 2001, pp 244–86. A copy of the 1711 decree is held in the archives of New Mills local history society (NMLHS/SS).
- <sup>25</sup> DRO, D3470/6/5 is a copy of the injunction in D1673 Z/Z8
- <sup>26</sup> DRO, D3470/6/3. This agreement cites the lease of coal mining right to the partners and gives the date, 1 May 1711.
- <sup>27</sup> Hatcher, (1993), p 458.
- <sup>28</sup> Hatcher, (1993), p 458.
- <sup>29</sup> E Kerridge, *The agricultural revolution*, p 248.
- <sup>30</sup> W G Hoskins, 'The rebuilding of rural England, 1570–1640', *Past and Present*, 4, (1953), pp 44–59.
- <sup>31</sup> The assessments for 1662 are found in PRO E 179/94/378, transcribed in D Brumhead, *The economic history of New Mills in Bowden Middlecale c 1640–1876*, unpublished PhD thesis, University of Manchester 1996. The assessments for 1670 have been transcribed by D G Edwards, *The Derbyshire hearth tax assessments, 1662–70*, Chesterfield, 1982. See also, D Brumhead, 'Social structure in some 'dark peak' hamlets of north-west Derbyshire in the seventeenth and eighteenth centuries', *The Local Historian*, 28 (November 1998), pp 194–207.
- <sup>32</sup> O Bowyer, *The Peak Forest Canal: its construction and later development*, New Mills, 1988.
- <sup>33</sup> R M Bryant, *Turnpike roads and riots*, New Mills, 1984 reprinted 1989.
- <sup>34</sup> V S Doe (Ed), *The diary of James Clegg of Chapel en le Frith, 1708–55*. Three volumes paged as one, Chesterfield, 1978–81, p 503.
- <sup>35</sup> James Clegg records in his diary, 21–22 January 1752, 'The stormy weather still continued and a great deal more snow falls . . . the carriers can't pass, thers (sic) an universal complaint of want of Fuel and its our case to be destitute of coles'. V S Doe (1978–81), p 789.
- <sup>36</sup> Duchy of Lancaster, State of Revenue North Parts [1717 and later]. PRO, DL 28/69.
- <sup>37</sup> J V Symonds, *The mills of New Mills*, New Mills (1991).
- <sup>38</sup> PRO, DL 44/1285. Special commissions and returns. Document dated 23 November 1774.
- <sup>39</sup> PRO, DL 44/1285. Special commissions and Returns. Document dated 30 October 1775.
- <sup>40</sup> PRO, DL 44/1285.
- <sup>41</sup> Dated 13 June 1788. Referred to in a commission of 24 June 1801 to survey the Rev Simon Jacson's collieries in the High Peak. PRO, DL 42/164, Miscellaneous Books 1769–1806, p 133. The lease was granted following a 'memorial' from Roger Jacson on behalf of his father Simon Jacson, who was blind, requesting a new lease upon a term of 31 years throughout the whole district of Bowden Middlecale.
- <sup>42</sup> The profit per score over the period 1793–1802 averaged 45.6d compared with the profit of the pits on Ollersett and Beard moors in 1757 which was 15.4d.
- <sup>43</sup> Sworn 25 June 1803. PRO, DL 41/62, 1773–1817. Collieries and stone quarries, Derbyshire. Includes various papers on the coal mines of the New Mills district 1800s–1820s.
- <sup>44</sup> In PRO, DL 41/62, dated 17 June 1807.
- <sup>45</sup> Collieries were leased to Rev Simon Jacson, clerk, of Bebbington under a lease dated 3 February, PRO, DL 42/165 (1806–1813), p 203. Jacson immediately set about sub leasing these collieries. A lease dated 14 September 1810 demised collieries called Ely Bank, the Shaw Marsh, New pieces, Potts coal pit, and the New Mill or Eaves Knowl coal mine to Ralph Bower. Rent £120, with no mention of any royalty although the amount of coal extracted was

- to be measured and certified. PRO, DL 42/166(1813–16), p 68. See also two leases dated 1810 (coals in Bugsworth and Thornsett) and one dated 1814 (coals in Whittle), Cheshire Record Office (CRO), DDW/3765/128/4.
- <sup>46</sup> PRO, DL 42/165 (1806–1813), DL 42/166(1813–16).
- <sup>47</sup> In PRO, DL 41/62. The lessee was required to ‘mark out upon the surface of the ground the extent of the coal worked beneath the same that the quantities of coal got and the rent to be paid for the same might be with greater certainty ascertained.’ These conditions heralded the new economic climate and the approach to coal as a capital asset.
- <sup>48</sup> In PRO, DL 41/62. The ‘old lands’ were those parts of the commons and wastes granted away by the duchy of Lancaster before 1634. R Somerville, (1977), pp 16–22.
- <sup>49</sup> In PRO, DL 41/62.
- <sup>50</sup> PRO, DL 41/62, dated 30 September 1818.
- <sup>51</sup> PRO, DL 41/62.
- <sup>52</sup> PRO, DL 41/62.
- <sup>53</sup> PRO, DL 41/62. Report 21 April 1827 by John Wilkin.
- <sup>54</sup> B P Mitchell and P Deane, *Abstract of British historical statistics*, Cambridge, 1962.
- <sup>55</sup> PRO, DL 41/62.
- <sup>56</sup> New Mills local history society archives. 24 coal mining leases between 1825 and 1922 are summarised in D D Brumhead, *The coal mines of New Mills, New Mills*, 1987. pp 25–26. New Mills is fortunate in having these leases, discovered quite fortuitously a few years ago for sale by a second hand bookseller in Manchester. They provide rich information on the geology, the extent of the proposed concession, the length of the lease, the type of rent and royalties, the payment of wayleaves if any, the right to erect engines and buildings, the right to drive roads, tramways or tunnels, and covenants regarding damage to land and stock.
- <sup>57</sup> J T Ward, ‘West Riding landowners and mining in the nineteenth century’, in J Benson and R G Neville (Eds), *Studies in the Yorkshire coal industry*, Manchester, 1976, pp 46–7.
- <sup>58</sup> For many years the duchy of Lancaster’s agent was William Eagle whose offices were in Manchester. He produced some fine plans of the Whaley Bridge and New Mills collieries drawn on a set of twenty Ordnance Survey 25 inch maps in great detail to show the coal extracted at different dates. These unique maps appear to have been deposited in the 1950s in Manchester local studies library by the duchy agent (Fig. 8). At that time their significance was not recognised, but they have since been placed in the archives department. The collieries covered by these maps are listed in Appendix 2.
- <sup>59</sup> At the end of the century it was clearly set out by the Royal Commission on mining royalties: ‘Mineral leases differ from leases of land either for agricultural or building purposes, at the end of which the value of the land should either remain the same or be increased. A mineral lease is, properly speaking, a sale of minerals in consideration of certain payments spread over a term of years, and the lessee expects during the period of the lease to recoup the whole of his capital expenditure upon mining the minerals, erection of buildings, machinery, etc. together with interest, and compensation for the risk which he undertakes, and the skill which he bestows in the conduct of such operations.’ Royal Commission on mining royalties (1889–1893), Final report, London, 1894.
- <sup>60</sup> J H Smith and J V Symonds, *New Mills: a short history with an analysis of the 1851 census*, Manchester, 1975.
- <sup>61</sup> D A Pitcher, *New Mills in 1851 and 1881 as seen through the census returns*, New Mills, 1980.
- <sup>62</sup> R Hunt, *Memoirs of the Geological Survey of Great Britain and of the Museum of Practical Geology, mining records. Mineral statistics of the United Kingdom of Great Britain and Ireland*, London, 1855 and 1877.
- <sup>63</sup> These are summarised in D Brumhead (1987). See Fig. 10. The importance of mine abandonment plans being available or not available was dramatically illustrated in the story of

the discovery of an old shaft in Meadow Street, New Mills. (See Appendix 3.) Mine abandonment plans have been used by the British Geological Survey in the construction of their six-inch maps (1:10 500) which are available for all coal mining areas. They form an underused resource for the historical study of coal mining. As well as the primary geological data which outlines outcrops of the strata including coal seams, dip of the strata and faults, all the information recorded on the mine abandonment plans is included such as adits, tunnels, pits, and depths in the pits to the coal seams (Fig. 13).

<sup>64</sup> D D Brumhead, 'Railways of New Mills; their development and impact 1842-1902', *Trans. Lancs. and Ches. Ant. Soc.*, 86, (1990), pp 50-85.

<sup>65</sup> Buxton Advertiser, no date. Brought to my attention by Alan Watson.

<sup>66</sup> This quality of their coal resulted in the paradox of the colliery having to purchase coal from elsewhere to work its steam engine. For instance, in the five months August-December 1818, the colliery purchased 240 tons of coal at a cost of £71 from a colliery at Whaley Bridge. From a document held by the Chatsworth Trustees brought to my attention by Tom Askey. For Whaley Bridge coal mining see J Leach, *Coal mining around Whaley Bridge*, Matlock, 1992.

<sup>67</sup> Mine abandonment plans were not required by law until the Coal Mines Regulation Act of 1872 and the earliest one for New Mills is dated 1876.

<sup>68</sup> The case is described more fully in D D Brumhead, 'Old mine plans: a key to predicting subsidence', *Chartered Surveyor Monthly (CSM)*, February 1994.

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