LEAD MINING IN THE EYAM DISTRICT IN THE 18th CENTURY.

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THE long, low escarpment of the Hucklow and Eyam Edges, surmounted by the old engine-house of Miners Engine and the modern headgear of Ladywash Mine, dominates the limestone country above Stony Middleton. Today, there is little to remind the observer that, during the 18th century, the Hucklow Edge Old Vein, which runs beneath this feature, was one of the principal lead producers in Derbyshire.

When mining operations first began on this vein is uncertain. It is, however, obvious that ore was extracted on a considerable scale in the 17th century. Speed and Silence Mines in Grindlow Liberty were probably at work in the first decade of this century.¹ Part of the vein was drained at a later date by Francis and Ralph James, and their successors raised 10,421 loads of ore from 1683 to 1701, making a profit of $\pounds 3,672.^2$ Litigation shows that lead merchants such as John Rotherham, John Bagshawe, Benjamin Ashton and George Bennett were mining along the vein at the end of this century.³

The suggestion that the Hucklow Edge Old Vein might extend into the Liberty of Eyam was apparently made, according to a note appended to a map now at Chatsworth, by Francis Drabble, "an eminent Miner", with a wide knowledge of the veins in the adjacent liberties of Hucklow and Grindlow. Trials made about 1711 proved its continuation under Foolow and Eyam Pastures, where the vein was found to be 20 ft. wide and "well filled with

549. ³ The Case between Mr. John Bagshawe and Mr. Lees and between Mr. Bagshawe and Mr. Rotherham. British Museum, Additional MSS. 6682/552.

¹ Antiquarian Papers. Sheffield City Library, Bagshawe Collection (hereafter S.C.L. Bagshawe). ^a The Case of Samuel Bagshawe against Francis James. S.C.L. Bagshawe,

ore". Such a rich discovery led to the whole length of the Edge being given by the Barmaster to various partnerships, which generally took the name either of the actual field in which the shaft was sunk or of its owner. Nearest to Hucklow were the six meers of Have at a Venture. Next came the eighteen meers of Butlers, Slaters and Bradshawes Engines, followed by the seven meers of Morewoods Engine. Further along the Edge were the twenty-five meers of Milnes and Middletons Engines. Adjacent to these were the thirteen meers of Miners Engine and the eight meers of Little Pasture Mine. Finally came the eleven and seventeen meers of Helen Mower's Hay-cliffe and Ladywash Mine.⁴

The partners in these mines were drawn from a comparatively small group of lead merchants, ironmasters and landowners who, naturally, spread their holdings as widely as possible to minimize the financial risks inherent in lead mining. John Nodder I of Sheffield, Richard Milnes of Chesterfield and Robert Clay of Walkley were all lead merchants with smelting mills at Dore. John Bright of Chesterfield, Richard Bagshawe of Castleton, George Norman of Winster, Benjamin Ashton of Hathersage and Joseph Rodgers of Cowley were, again, all lead merchants. Probably, Ashton may have been responsible for the introduction as partners at Ladywash of John Fell I of Attercliffe Forge; John Watts of Kirkstall Forge; Denis Heyford of Staveley Forge and John Simpson of Eckington, as these ironmasters were all business associates of his son-in-law, William Spencer of Cannon Hall, Cawthorne, Yorkshire. John Arthur belonged to a well-known family of Doncaster lawyers, previously associated with the Heyfords in the South Yorkshire iron industry. Robert and William Middleton were members of a family with estates at Eyam and Leam; John Wright lived at Eyam Hall and Thomas Gell, M.D., was connected with the Hopton Hall family of that name, which had done so much to develop lead mining around Wirksworth at the end of the 17th century. The background of Charles Turner of Swanwick Hall, Alfreton, was again that of a landowning

⁴ Plan of several rakes and veins of lead ore within the Manor of Eyam 1716. S.C.L. Bagshawe, 181.

family, which in this case had acquired its wealth in the previous century from coal mining and iron smelting.⁵

The great potential value of the Hucklow Edge Old Vein excited the cupidity, both of the shareholders in the various mines and of the landowners beneath whose properties the vein lay. Evam and Stony Middleton had been, since a grant made by King John when Count of Mortain, a private mineral liberty with its own code of mining laws, entirely distinct from the neighbouring King's Field. A part of the Liberty - the ancient demesne of the Lord of the Manor, the common and waste land was "open" in that the miner could search for and mine ore freely, paying the customary duties of lot and cope. The remaining freehold land was "closed" in that the miner was compelled to obtain the consent of its owner before prospecting for ore and to pay him a royalty to mine any vein found. In 1664, the demesne was sold by the Marquis of Halifax to the tenants, although he retained the mineral rights. To the lead miner, accustomed to the mineral laws of the King's Field, the situation in the Liberty of Stony Middleton and Eyam was anomalous in that although this Liberty had its own Barmaster, this official had no power to allow the miner to search for ore there, his duties being limited to measuring the ore and to holding courts.6 With the discovery of this rich vein. the miners believed it possible to assimilate the customs of Evam and Stony Middleton to those of the King's Field and to increase their own gains from the mines along the Edge by securing the abolition of the dues paid to the freeholders. The landowners, on their part, were determined to uphold mineral custom to ensure that they shared in the wealth likely to be won from the new vein.

When in 1712 the miners set up their stowes in Foolow Pasture and in the Upper and Lower Pastures in Eyam, to mark out their meers, these were seized by Charles Potts, the guardian of the infant, Thomas Wright. However, from the standpoint of the other freeholders, Potts proved ineffective as he made an agreement with Ash-

⁵ See Appendix for a list of the partners in the various mines about 1730. ⁶ State of the Case of the Freeholders in Stony Middleton and Eyam. Antony Tissington of Swanwick. n.d. BM. Add. MSS. 6685/166.

ton and Bagshawe, whereby in return for the withdrawal of his opposition, he was made a partner in various mines. Bagshawe proceeded to defy the other landowners and when one of them, Mrs. Butler, expostulated with him, he "in an imperious insulting manner cracked his whip at her and told her she should have no other recompense than that". The freeholders then formed a partnership to mine the ore under their lands and in addition agreed to appeal to the Court of the Exchequer to try the dispute, as they felt it impossible to obtain justice from a jury nominated by a Barmaster, appointed by Bagshawe and Potts, who had leased the duties of lot and cope from the Lords of the Manor, a lease which carried with it the right to appoint that official. The chief witness was Thomas Bagshawe, a Bakewell attorney and a specialist in mining law. Before the trial, he received from the landowners in Eyam "a basket of golden pippins". However, his evidence at the trial was such as to leave the "matter in doubt", and when reproached for this by the freeholders, he declared that "an unlucky pig had come and eaten them up", implying that he had received another bribe from the miners. According to the great Derbyshire antiquary, Adam Woolley, no decision was given in 1713, an agreement instead being made between the two parties to the suit.⁷ Nevertheless, this case was pursued at a later date in the Duchy Court, where a verdict was given in favour of the freeholders.⁸ Certainly, during the remainder of the century, it was customary for the miners to secure permission from the landowner before mining for lead. A few examples will suffice. In 1725, John Wright agreed to allow the Cussey Rack partnership to search for ore on his estate, paying a duty of one-twelfth; William Mettam contracted in 1759 to pay John Spencer one twenty-fourth of any ore mined under the West Sidcup and, in 1778, the same due was to be paid to the Rev. John Carver on ore mined in a vein which ran out of the Towngate Mine to the Shoulder of Mutton Close.⁹

⁷ Depositions in the Case between Bagshawe and Potts. S.C.L. Bagshawe, 703; The Case of the Freeholders of the Manor of Eyam. BM. Add. MSS.

⁷⁰³, ¹¹⁶ Case of the recenter in the form of Holme. ⁶Letter dated 12 December 1721. Letters from John Archer of Holme. S.C.L. Bagshawe, 313. S.C.L. Bagshawe, 716, 731, 747.

A somewhat similar situation developed in the neighbouring Liberty of Grindlow. According to its own Barmote Court Records, it was an "open" liberty, where the miner had the right to "take up and possess any new or old vein by the setting up of stoces". In the 1720's, a partnership composed of William Spencer, John Bagshawe, John Bright. John Burton of the Hallowes. Dronfield, and Avmor Rich of Bullhouse, Penistone, was mining ore in this liberty under a lease granted by Frances, Countess of Bellmont, paying a duty of one-twentieth. On the expiration of the lease, the new owner, Lord Cullen, demanded that the partnership should pay a royalty of one-thirteenth and ordered the Barmaster to refuse to measure any more ore mined at Speed, Bank and Silence. The partners, however, contended that Grindlow was an "open" liberty and that as in the King's Field, so long as the mines were worked, their owners could not be dispossessed. In March 1738, the partnership decided to close the mines and to empower Rich and Spencer to negotiate with Cullen for a new lease. In June, the latter served the partnership with a writ of ejectment and during the month his agent, Warren, came to the mines and took possession. The partners then sued Cullen, won their case but lost it on appeal. Cullen sent his agent with the Deputy Sheriff to eject the partners from the three mines. With that nicety of legal formality which so often distinguishes the lead mining litigation of the century, Cullen's failure to serve warrants on two of the partners led to their refusing the Deputy Sheriff possession. A mob of miners appeared, the Deputy Sheriff read the Riot Act, and "a bloody battle ensued"; whereupon that official fled. Stalemate continued until 1749, when the partners secured a lease of the three mines for Cullen's life, paying a duty of one-twelfth and accepting his contention that Grindlow was a "closed" liberty.¹⁰

Little information exists as to the history of lead mining in Eyam in the period immediately after the discovery of the Hucklow Edge Old Vein. Middleton Engine freed its first founder — or came into production — on 10 March 1714; Haycliffe on 30 April 1715; Ladywash on 28 March

¹⁰ Case Papers. Grindlow Mines. Cullen v. Rich. S.C.L. Bagshawe, 704.

1717; Little Pasture on 20 August 1718 and Miners Engine on 28 June 1720. By 1722, however, most of the mines along the Edge were facing problems of drainage. Fortunately, the topography of the area lent itself to soughing and, in 1724, Ashton and Bagshawe, advised by Francis Drabble, decided to drive Stoke Sough under the escarpment, with the intention of lowering the watertable by twenty-seven fathoms, winning ore from the Hucklow Edge Old Vein in the process. To provide the necessary finance, a partnership was formed. Although no contemporary account of its members has been found, a list dated April 1747 shows that the chief elements in this syndicate were the families which had financed lead mining in the Liberty in its early stages. The two most important shareholders then were Charles Turner of Swanwick Hall and Nicholas Twigg of Holme, Bakewell, one of the leading lead merchants in the Peak, each of whom held fifteen shares. The two Simpsons, William of Stainforth and John of Stoke Hall, owned another eleven shares. Local landowners, such as Rich, Galliard and Wright, held eleven shares; the lead merchants, Milnes, Bright, Clay and J. Staley another five shares; Heyrick Athorpe of Nottingham, Samuel Heathcote of Derby and Richard Calton of Chesterfield, all lawyers, a further six shares and the ironmasters, Heyford, Watts, Spencer and William Milner of Burton Grange, near Barnsley, seven more. About the same time, another partnership in which Richard Bagshawe held a quarter share and Benjamin Ashton, William Spencer and John Arthur each held a twelfth was formed to drive Magclough Sough under the Edge to drain Haycliffe, Middleton and Morewood Engine.

The Stoke Sough partnership, with a strange lack of business capacity, had neglected to make any contract with the various mines along the Edge to secure some composition for the services of the sough in draining them. To enforce such a payment, Samuel Heathcote, in his capacity of Steward of the Manor of Eyam, called the Grand Jury together in 1733 and induced them to add another article to the Mineral Law, whereby all mines in the Liberty, which were drained by soughs, were to have watermarks made and one quarter of all the ore mined

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below these was to be handed over to the sough owners.¹¹ In the following year, Stoke Sough began to draw off the water from the Edge and the watertable was lowered by many fathoms. Some of the mines made an agreement with Stoke Sough, whereby a composition of a sixth of the ore mined was to be handed over to the soughers. The group of mines drained by Magclough Sough, however. refused to follow suit, on the very obvious ground that the forefield of Stoke Sough was a mile away from Morewoods Engine, three-quarters from Middletons Engine and half from Haveliffe. In addition, the Magclough partners asserted that as the Mineral Law was essentially custom. the Barmote Court was incompetent to add to it; that only Parliament was competent to diminish their property in their mines by the introduction of a new duty and that Samuel Heathcote, who presided over the Court, was, as a shareholder in Stoke Sough, biased. In September, Heathcote ordered the Barmaster to arrest one quarter of the ore raised at Ladywash, Havcliffe, Middletons and Morewoods Engines, for non-payment of the composition to Stoke Sough. In the following month, however, another session of the Court repealed the additional article. The partners in the four mines then brought a successful action in the Barmote Court for the restoration of the ore, but the Barmaster, supported by the Steward, not only refused to hand back the ore but continued to arrest a quarter of all the ore won at these four mines. Heathcote ordered a second trial on this issue, packing the Grand Jury with his creatures, men who had been members when the additional article had been ratified. With these, he was able to secure a verdict in favour of Stoke Sough. The owners of the four mines appealed to the Court of Chancery, which ruled that the Barmote Court had no power to compel them to pay a composition to Stoke Sough.12

In their defence, the partners in these mines had somewhat foolishly declared that the easiest way to prove that these were not drained by Stoke Sough would be to stop

¹¹ The watermarks were as follows: Shaw Engine 100 fathoms, Brookhead 83 fathoms, Haycliffe 69 fathoms, Middletons 86 fathoms, Morewoods 80 fathoms, Bradshaws 72 fathoms, Miners Engine 104 fathoms. ¹² Stoke Sough v. A. Lissett, etc. BM. Add. MSS. 6680/31, 6681/398,

it up. The Stoke Sough partners decided to take them at their word and began in June 1738 to wall it in, in the expectation that the watertable on the Edge would be raised by some seventeen fathoms. In this, they were disappointed as, although the water rose in Brookhead by five fathoms and in Haveliffe and Ladywash by three yards during the next week, an increased flow of water through Magclough Sough prevented any further alteration in the height of the watertable in the limestone. In fact, the Stoke Sough partners were the chief sufferers by their action, as not only had they lost their composition but had also drowned a vein discovered in driving the sough. Despite the fall in the output of ore in the liberty and the great misery inflicted by unemployment on the mining population of the district, no real attempt was made to settle the dispute until 1742 when, in April, three representatives from each sough met at Edensor to negotiate. Rhodes, the Wakefield lawyer, who acted as Receiver of the Ashton Trust Estate, opened the proceedings by suggesting that the Stoke Sough partnership should pay all the law charges incurred in the suit and that, in the future, the composition should be equally divided between the two soughs. The Stoke Sough partnership responded by proposing that a composition of a sixth should be levied and that two-thirds of this should be made over to them. As neither side would move from their proposals, the meeting broke up. During the next few days, Rhodes stayed privately with Bagshawe to endeavour to find some compromise solution, but he was compelled to write to William Spencer, "I find such Dregs of Old Grudges remaining that I think it will be almost impossible to agree about the Soughs."

În the following June, William Spencer met Anthony Tissington, who after the death of Charles Turner handled the mining interests of his heirs, to discuss a plan submitted by Rhodes, by which out of every twenty-nine dishes of ore mined below the water-marks, three were to go to the soughers as composition and of these two were to go to the Stoke Sough syndicate. Tissington, however, immediately rejected the scheme as it would have reduced the duty ore paid to the Lords of the Manor. No further negotiations were held until October 1746, when it was agreed that a composition of a sixth of the ore "made merchantable" was to be levied, although unfortunately there is no record of how this was to be divided between the two soughs. A further dispute, however, arose as to whether the miners or the soughers were to pay tithe on the composition ore; finally it was decided that it should be borne by the former, as the agreement had stipulated that the composition ore should be freed of all charges. Stoke Sough was then re-opened in the first week of April 1747. Six years later, an agreement was made with the miners in Hucklow and Grindlow Liberties to extend Stoke Sough there; one-eighth of the ore was to be paid as composition.¹³

Probably. one reason for the long duration of this quarrel between the two sough partnerships was the fact that their chief shareholders, as partners in Miners Engine and Little Pasture mines, were involved in one of the most prolonged and costly law suits in an industry notorious for its litigation. In 1734, after winning ore in the twelfth meer of Miners Engine, the men began to work backwards in the vein. In January 1735, a break vein was discovered on the north side and forty-five pairs of stowes were placed above ground to claim it. In May, as was customary, four of the Grand Jury were sent down to inspect this break vein. They reported it to be a new vein and consequently in June it was freed by the Barmaster for the customary dish of ore. In August 1736, ninety-one pairs of stowes were set up to take possession of another part of this vein and a Lord's meer purchased for 400 guineas from the Lords of the Manor. This break vein proved to be extremely rich and, during the next three years, no less than 12,000 loads were mined in it.

In February 1740, a cross cut was driven from Little Pasture to the break vein worked by Miners Engine. William Rhodes, against all advice from the other partners in Little Pasture, insisted that the break vein into which they had struck was, in reality, the Hucklow Edge Old Vein and that as a consequence Miners Engine had been

¹³ Correspondence of William Spencer. Letters from William Rhodes 1735-55. Spencer Stanhope MSS. Sheffield City Library.

winning ore in that section allocated to Little Pasture when the vein was first discovered. Should it be possible to prove this, as a younger title had always to yield to an older one, compensation for all the ore raised by Miners Engine in their so-called break vein, without any claim for the cost of production, would have to be made to the Little Pasture partnership. Conversely, should it not be possible to prove this, more than a mile of the Hucklow Edge Old Vein, under the stowes set up by Little Pasture, Haycliffe, Brookhead and Magclough would be forfeit to Miners Engine, claiming this part of the vein by reason of the stowes placed in position in August 1736. There were, at first, suggestions that the Little Pasture and Miners Engine partnerships should be amalgamated and the titles worked as one, but with such a considerable amount of money at stake and with both groups certain that they had a sound case in law, it was almost inevitable that recourse to legal action should be taken.

Richard Bagshawe, who dominated the Miners Engine partnership, struck first by having the new workings of Little Pasture arrested by the Barmaster. The case came before the Barmote Court in March 1740, where a decision was given that the break vein was part of the Hucklow Edge Old Vein and therefore belonged to Little Pasture. As Rhodes pointed out to William Spencer, that partnership had secured an unexpectedly good verdict when "the Interest and Influence" of Richard Bagshawe in the area was considered, although he was under no illusion that the struggle was over. The stakes were too high for that.

Bagshawe then appealed against the verdict, protesting that many of the Grand Jury were ineligible, as they had no mineral interests in Eyam. In addition, he alleged that no dialling had been carried out underground to ascertain the range of the veins. In the following March, the case was retried in the Small Barmote Court, and the previous verdict reversed. The Little Pasture partners appealed, declaring that the foreman of the Jury was outside the Court, drinking at the time the Little Pasture witnesses were giving evidence. In May, the Grand Jury once more descended the two mines and this time came to the conclusion that the break vein was not part of the Hucklow Edge Old Vein, a verdict confirmed by a group of miners from the High and Low Peak, who inspected the veins in June. Nevertheless, when the case was retried, the Barmote Court decided that the break vein belonged to Little Pasture, an announcement which "Occasioned a Sudden Silence and Change of Countenance" amongst the Miners Engine shareholders present and caused Richard Bagshawe to mount his horse and ride off "in high displeasure". The Court ordered the stowes set up by Miners Engine to be dispossessed and to be replaced by others belonging to Little Pasture.

The struggle was then transferred to the Court of Chancery, where Bagshawe argued that the Miners Engine partnership had been in lawful possession of the vein since 1720; that all the customary dues had been paid to the Lords of the Manor; that a Lord's Meer had been purchased and that a verdict favourable to it had been given in the Barmote Court. As the case was now before Chancery, Bagshawe refused to accept the verdict given in June 1741 in Eyam, stationing twenty men armed with clubs in the workings to prevent the seizure of the break vein by Little Pasture. The Steward, Sir William Abdy, called together the Grand Jury in May 1742, to declare that it was no part of the functions of the Petty Jury, but only the prerogative of the Grand Jury, to "enquire into the Antiquity of Claims and to Dispossess the Younger". To bring Bagshawe to heel, the Court fined him $f_{.50}$ for each day he retained the break vein and by 5 October 1742 his fines for contempt of court amounted to $f_{I,300}$, a figure unprecedented in the history of the industry. Even this, however, did not move him, and three days later the Grand Jury passed a resolution that Bagshawe's conduct was "a Notorious Unprecedented Practice and that such Rejecting and Disregarding the Acts of ve 24 and their orders manifestly tends to the Ruin and Subversion of all the Antient Laws Usages and Customs and to the destruction of every Honest Miners Property within the Liberty." Despite this fulmination, Bagshawe's men continued to mine ore within the break vein

When the case came before the Court of Chancery in

December 1743, the Lord Chancellor declared that the Mineral Law was as old as the Common Law and ought to be supported in both law and equity. He also asserted that he would enforce the mineral law and stop miners flying to Westminster to set aside the decisions of the Barmote Courts. In accordance with this principle, he ordered the Grand Jury to descend the mines and to inspect the veins. On Bagshawe's continued refusal to allow them to go down Miners Engine, Sir William Abdy threatened to report this continued defiance to the Lord Chancellor, at which Rhodes, writing as an eyewitness of the scene, declared, "George Heyward sweat at every visible Pore and John Hall's lips trembled so much that he chattered whenever he offered to talk", and that these two agents of Miners Engine "altered all at once from being impertinent and became as fawning as any tame spaniel." As a further punishment, using the excuse that Miners Engine had wrongly freed the break vein, all its meers were declared forfeit to the Lords of the Manor.

In May 1745, Chancery ordered the suit to be tried in the Court of the King's Bench with a Derbyshire jury. This Court ordered twelve miners from the Wapentake of Wirksworth to view the veins. Their decision was that the break vein was part of Hucklow Edge Old Vein. As a result, a verdict was given in favour of the Little Pasture partnership and the Miners Engine syndicate was compelled to make compensation for all the ore mined in the so-called break vein. Recriminations, however, continued between the various members of the two partnerships, as each member was in law compelled to bear his share of the legal costs of each mine in which he was a shareholder, a fact which meant that some had to contribute to the expenses of both prosecution and defence, which amounted to £8,472. It was not until 1756 that the affair was cleared up by submitting the controversy to arbitration.14

Another similar situation arose in 1757, when the Hay-

 14 Case of the Proprietors of Miners Engine. BM. Add. MSS. 6677/121, 6678/309, 6678/322, 6682/319, 6682/381, 6683/27, 6686/208, 6692/177. Papers relating to the Case about Miners Engine. S.C.L. Bagshawe, 587/49, 50, 52-5, 62. Letters, Jury Lists, etc. relating to the Barmote Trial 1742-6. S.C.L. Spencer Stanhope MSS.

cliffe partnership alleged that Ladywash Mine was working the vein under their stowes. Taught by events to avoid litigation, the Ladywash partners agreed that, should this be the case, they would be accountable for all the ore raised. In the next year, the case went to arbitration and the shareholders in Havcliffe received $\pounds 825$ as compensation.¹⁵

Another case of the same type, however, did lead to litigation in 1768. In 1766, the Black Hole partnership, which appears to have been composed of working miners. found a vein under the Morewood estate. To obtain permission to work this, they agreed to pay the landowner £500 for a Lord's meer and a royalty of one twentyfourth of all the ore mined. The vein was, however, claimed by the Little Pasture partners as part of the Sun Vein already possessed by their stowes. The case was tried before a Barmote Jury "full of ignorance and unprecedented Impudence", carefully packed by the Steward, Heathcote, to give a verdict against the Little Pasture partnership. However, a second trial, after "a number of Sensible Miners and Men of Property'' had inspected the veins, led to a reversal of the verdict. The Black Hole partnership then appealed to the Court of Chancery, alleging that it had been impossible for the Grand Jury to make a thorough survey as the veins had been choked by rubbish. In addition, they asserted, what was probably true, that it was impossible to obtain a fair trial in the Barmote Court, when so many of the Jury worked for John Spencer, one of the chief shareholders in Little Pasture Mine. However, when the workings met, it was obvious that the Black Hole Mine had been working the Sun Vein and, in accordance with Mineral Law, that partnership was ordered to hand over the £6,000 profit it had made from 1764 to 1770.16

Probably more material exists about output at the mines along Evam Edge during the 18th century than for any other lead mining area in Derbyshire at this time. Little Pasture raised 2,181 loads of ore in 1720 and made

¹⁵ Brief, Haycliffe v. Ladywash. S.C.L. Bagshawe, 587/52. ¹⁶ Correspondence and Papers of John Spencer concerning Little Pasture and Black Hole Mines 1747-75. S.C.L. Spencer Stanhope MSS. Suit concern-ing Black Hole Mine. BM. Add. MSS. 6685/230.

a profit of £6,976 from 1721 to 1724. At Ladywash, 5,130 loads were mined at a profit of £1,680 from 1721 to 1727. In the period from September to December 1720. Middletons Engine produced 869 loads, Old and New Bradshawes 474 loads and Morewoods Engine 58 loads at a profit of £580, £241 and £6 respectively.¹⁷ Figures for the next decade indicate an even larger output. From April 1727 to January 1736, 12,296 loads were mined at Ladywash with a profit of $f_{,2,880}$. During the next five years this mine cleared another £7,168 profit, and in the period 5 February 1736 to 29 September 1739 mined 19,564 loads of ore. From 1 February 1734 to 31 March 1739, 8,731, 4,533 and 10,060 loads were mined at Middletons Engine, Morewoods Engine and Haycliffe respectively. At Miners Engine, where the vein to the west of the eleventh meer proved to be very rich, 10,761 loads were won from April 1733 to June 1736. There can be no doubt that, in this decade, the Liberty of Eyam was amongst the leading producers of lead ore in the county.

The stopping up of Stoke Sough led to a diminution of production at the mines which were affected by flooding. Nevertheless, output at the other mines continued to run at a high level. Miners Engine in one wonderful week ending 26 September 1743 raised 1,013 loads of ore. During the next two years, another 5,980 loads were won at this mine. Morewoods Engine produced 3,907 loads from 1738 to 1744; Ladywash Mine 7,753 loads from 1738 to 1746; Milnes and Middletons 3,569 loads from 1740 to 1747 and Haycliffe 3,882 loads from 1740 to 1748.18

During the early years of the third quarter of the century, the mines along the Edge continued to produce large amounts of ore. Consolidated Titles - an amalgamation of Magclough, Brookhead, Stoke and Shaw Engines - raised 6,311 loads from 1750 to 1755.19 At Haycliffe,

¹⁷ Accounts of ore and charges for Engines at Eyam and Foolow 1729.

S.C.L. Bowles Deeds, 89. ¹⁸ Miscellaneous Correspondence and Reckonings. S.C.L. Bagshawe, 587/12. It should be noted that there is a probability of error in these calculations as the series of reckonings is incomplete. ¹⁹ Reckoning Book, Consolidated Titles 1747-68. John Rylands Library, Bagshawe Collection B. 12/1/61.

4,707 loads were mined in the same period. At Ladywash, 9,719 loads were won between 1754 and 1759. The latter mine made a profit of $f_{12,288}$ from 1756 to 1759; the profit at Milnes and Middletons from 1748 to 1759 was $f_{3,814}$ and at Haycliffe from 1759 to 1762 $f_{5,901}$. The whole situation, however, had changed for the worse at the end of this quarter century. Despite the sinking of a new shaft between Morewoods and Bradshawes Engines in 1764, little ore had been won from the latter mine since that date. Production at Milnes and Middletons had also almost ceased at that time. The partners in both mines held a meeting in Chesterfield in 1771, at which the overseers were ordered to make every reckoning show a profit. As this proved to be impossible, the two mines were closed in the following year. At Little Pasture, the vein was reported to be poor and only one drift was being worked. Odd reckonings show that Miners Engine was losing money at this time. Although Ladywash produced 6,800 loads of ore from 1773 to 1775 and Haycliffe 4,944 loads from 1766 to 1775, both mines were facing serious difficulties. In 1774, the overseer at the former mine was ordered to make a report on its prospects. at each reckoning to try to stop heavy financial losses. Haycliffe was down to sough level and was obviously threatened in the future with considerable pumping costs.

During the last quarter of the century, lead mining continued to decline in Eyam. Composition ore at Stoke Sough, which amounted to 2,778 loads between 1770 and 1775, was less than half that quantity in the decade 1780 to 1790. Probably the most important mine at work during these twenty-five years was Haycliffe, where 13,125 loads were produced. At Little Brookhead, 5,041 loads were mined from 1782 to 1786, but during the next fourteen years only 1,179 loads. At Ladywash, Oxley's Vein was discovered in 1778 and during the next two years produced 3,886 loads. In 1781, however, the partners were compelled to ask for a reduction in tithe, mineral dues and sough composition "in consideration of the poverty of the mines". Although a trial was made in the forefield of Stoke Sough and a drift driven to a vein at Shaw Engine, only 829 loads of ore were mined there.

A new vein was discovered at Old and New Bradshawes in 1700 but heavy charges incurred in re-opening the mine led to a loss of £1 a load on the 1,418 loads sold from this mine between 1793 and 1803.20 An entirely new venture, Morewoods Sough, lost its shareholders $f_{1,540}$ during the last decade of the century, no ore at all being found.

The only other mine of importance at work during this period was Watergrove, alongside the Hernstone Lane Head Turnpike. This mine, as shown by a deed consolidating the Watergrove and Eyam Dale Sough titles, was at work in 1738.²¹ Its partners were then Richard Milnes, Robert Scoller of Rowsley and Wiliam Milnes of Litton. A Newcomen engine was installed here in 1748 by William Soresby, a Chesterfield red lead manufacturer, but was taken out six years later. The mine was again at work in 1771 but no account of its fortunes has been discovered until the next decade, when it was worked by Joseph Clay, the Bridgehouses lead merchant, and by Barker and Wilkinson of Chesterfield, who held twelve and ten twenty-fourths of its shares respectively. From 1783 to 1786, Watergrove produced 5,902 loads of ore at a profit of f I a load. However, during these years heavy expenditure was incurred on pumping. Reckonings in the next year show considerable financial losses, and the fact that a large part of the labour force was engaged in searching the old hillocks for ore seems to suggest that the mine had been drowned. Although a profit was realised in 1788, later reckonings to 1795 show that only small amounts of ore were mined at a heavy loss. Although a Newcomen engine, built by Booth and Company of Sheffield, was installed in 1797, this failed to clear the mine of water and little ore was won in the remaining years of the century. When the mine was drowned in September 1800, thirty women, eighty-six men and a number of lads were thrown idle.²²

659. ²¹ BM, Add. MSS. 6680/63. ²² Reckoning Books, Watergrove Mine 1783-97 and 1797-1825. S.C.L. Bag-

²⁰ Reckoning Books, Old and New Bradshawes 1790-1828; Morewoods Engine 1748-96; Milnes and Middletons 1747-1813; Haycliffe 1765-99; Lady-wash 1771-1821; Little Brookhead 1781-1804. S.C.L. Bagshawe, 377-9, 387-8,

The decay of lead mining at the end of the 18th century, accentuated by the rising food prices caused by wartime inflation, brought with it considerable suffering to the population of Eyam. William Wyatt of Foolow, the Duke of Rutland's mineral agent, writing in 1796 declared that "the poor people in this neighbourhood never suffer'd as they do now''. Four years later, he was writing: "This part of the country is sore distressed for Bread, how we shall manage until the next Crop. I do not know." In his diary, he wrote: "A strange Xmas this. I have known every family in this Town have plenty of roast beef pies. Cheese and Ale etc — a great many vears when the Water Grove flourished. At this time there is not more than five families here that has bread enough." Local landowners attempted to alleviate the miserv either by giving food or by subscribing to a fund to buy cereals, which were sold to the miners at a reduced price.²³

Fortunately, after 1800 lead prices began to rise, the metal more than doubling in price between March 1799 and March 1806. During the following two years, there was wild speculation in lead, the price of which finally reached a peak at £38 a fodder in November 1808. This increase in price enabled some of the mines to be brought back into production. Watergrove, for example, mined 2,540 loads of ore at a profit of £5,398 between 1803 and 1806. After the price of the metal had collapsed, little mining was done in Eyam during the remainder of the Napoleonic Wars and once more unemployment with all its attendant misery descended on the village.

I should like to thank all who have in any way contributed to making this article possible, particularly the staffs of John Rylands Library, Manchester, the Manuscript Room at the British Museum and the Local History Department, Sheffield City Library. I owe a great debt to the Trustees of the Leverhulme Fellowships, who made this piece of research possible.

 23 Letters dated 28 March 1796 and 2 March 1800, Correspondence of E. Smith and W. Wyatt. S.C.L. Bagshawe, 608.

APPENDIX.

Shareholders in the Eyam Mines about 1730.24

	Morewoods	Brookhead	Little Pasture	Ladywash	Haycliffe	Milnes
B. Bagshawe		1/96	I/24			
R. Bagshawe	1/16	I /4	1/12	1/8		1/4
R. Bagshawe Jnr.		I/24	1/96	1.0		1.0
J. Nodder	1/64	10	1/48	1/48	1.0	1/16
R. Middleton	1/64	I /8	1/24	I /24	1/48	1/16
Mrs. Middleton	1/48			1/16		I/I2
Mr. Arthur	1/24	,	,		1	1/6
Mr. Ashton	1/48	1/12	1/3		I/4	1/12
Mr. Potts	1/48					1/12
Mr. Wright	I /96		- 1-6	- 1	- 1-0	-1.9
R. Clay	1/48	- 1	1/16	1/12	1/12	1/48
C. Turner	1/8 1/8	1/24	1/24	1/24 1/24	1/24	
Mr. Simpson	1/24	1/96		1/24 1/48	1/24	
Mr. Rodgers W. Fearn	1 /16 1 /96		1/48	1/40	1/24	
T. Gell	1/90 1/16	1/16	1/40	1/16	1/48	
Mr. Lysett	1/10	1/10	1/10	1/10	1/24	
G. Norman		1/10	1/48	I/24	1/~4	
W. Spencer			1/24	-/-+		
J. Bright	1/16		~/~4	1/48		
J. Fell	1/10			1/48		
D. Heyford				1/48		
Mr. Watts				1/96		

 $^{\rm 24}$ Bundle of miscellaneous items relating to Milnes, Middletons and Black Engines. S.C.L. Bagshawe, $587/\,{\rm I4.}$