

BRITISH MINING No.49

# THE WHARFEDALE MINES

by

M.C. GILL



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## ABBREVIATIONS

BCRA	-	British Cave Research Association
JRL	-	John Ryland's Library, Manchester
NCMRS	-	Northern Cavern & Mine Research Society
NMRS	-	Northern Mine Research Society
PDMHS	-	Peak District Mines Historical Society
PRO	-	Public Record Office
SCL	-	Sheffield City Library

## INTRODUCTION

### LOCATION

This monograph covers all that part of Wharfedale which is upstream from Appletreewick. The latter place, which had extensive lead mines, has already been described as part of the Greenhow lead mining area.<sup>1</sup> The Grassington mines have also been excluded from this monograph because they are extensive enough to warrant a monograph of their own, which was published in May 1993.<sup>2</sup>

Lead and coal have been mined in Upper Wharfedale since monastic times, but, apart from agriculture, some limestone quarrying and tourism, the area now has little industry. The mining field has been dead for around a century and, because it is generally poor and in the Yorkshire Dales National Park, there is no likelihood of work ever being renewed.

The monograph is split into sections dealing with specific liberties, the boundaries of which nearly all coincide with those of the modern civil parishes. Because the ownership of the minerals was an important factor in the way they were exploited, each section is prefaced with notes on the history of its ownership. The system of customary mining law, which was restated as *Rara Avis in Terris* at Grassington in 1737, was discussed in a paper by Dr Arthur Raistrick.<sup>3,4</sup> This paper gives the impression that these laws applied to all of the area's liberties, but they only ever applied to the Earl of Burlington's liberties.<sup>5,6</sup> The liberties of Kettlewell, Conistone and Hebden had similar laws, but were entirely independent of Grassington because their minerals were owned by the freeholders. Malham Moor, Bordley, Kilnsey, Thorpe and Hartlington were private liberties where the minerals were owned by individuals.

Sunter's North Level. This part of the mine was connected to Wiseman's West Level North by Bauden's Crosscuts Nos. 1 and 2 and provided a route for tramping ore to the surface. The northern-most part of the Main Pipe was also reached by 18th century workings from Smithy and Gin Shafts. It is not known if the shafts were used during the 19th century, however.

The patchy nature of the ore-bodies at Buckden is shown by the production figures, which have runs of a few very good years interspaced by runs of poor years. Because the mine was mainly on one horizon and carried very little water, once the main level was driven, production costs were fairly low. Even years of low production were, therefore, not necessarily unprofitable, while years of high production were a bonanza, rather than just a bonus.

The ore was brought out of the level in waggons and dressed near the portal. Because of the way it occurred, most of the ore was very clean, being free from clay and gangue minerals. No details of the dressing floor are known, but it was very simple and probably had a knock stone, for crushing, with a hotching tub, slime pit and a dolly tub. There is no evidence for a waterwheel-powered crusher or other machinery.

#### **BUCKDEN HIGH SMELT MILL**

At first, ore from the new mine was smelted at the Birks Smelt Mill, but, in 1815, following a comparative test between the Birks Mill and the Grassington Cupola (see below), smelting was transferred to Grassington. From 1843, however, the ore was also taken to the Starbotton Cupola using the track over East Side and Knucklebone Pastures. Smaller amounts of ore were smelted at Kettlewell mill and, before 1827, at Kilnsey mill.

One hundred years before the level was driven, however, the Gavel Mine's ore was smelted at Buckden High Smelt Mill, which is at the foot of the tip from the level, at SD954781. Sometimes also called the Out Moor Mill, this site was excavated by members of the Northern Cavern & Mine Research Society in 1974, and a report was published.<sup>31</sup> Objects found (including a hearth bottom and side stone, both of iron, and a gritstone pipe-stone) are on display at the Earby Mines Museum.

The 35 feet long by 19 feet wide building had two rooms, one for the bellows and the other for the ore-hearth, which was also used for smelting slag. The water-wheel pit was not found and appears to have been washed away by Buckden Beck. A few yards upstream from the mill, a small paved area bounded by stones may either have been a type of buddle or a store for the ore prior to smelting.

The mill appears to have given problems from when it was first built, in 1698, which probably explains why Emanuel Justice was allowed to take ore to his mill at Marrick. Despite being rebuilt in 1704/5, it had closed by 1706, when smelting was transferred to the Buckden Low Mill. Between September 1732 and September 1733, some of the hearth stones were taken from the High to the Low Mill. The former was then described as "*the Old Mill, on the Out Moor*".

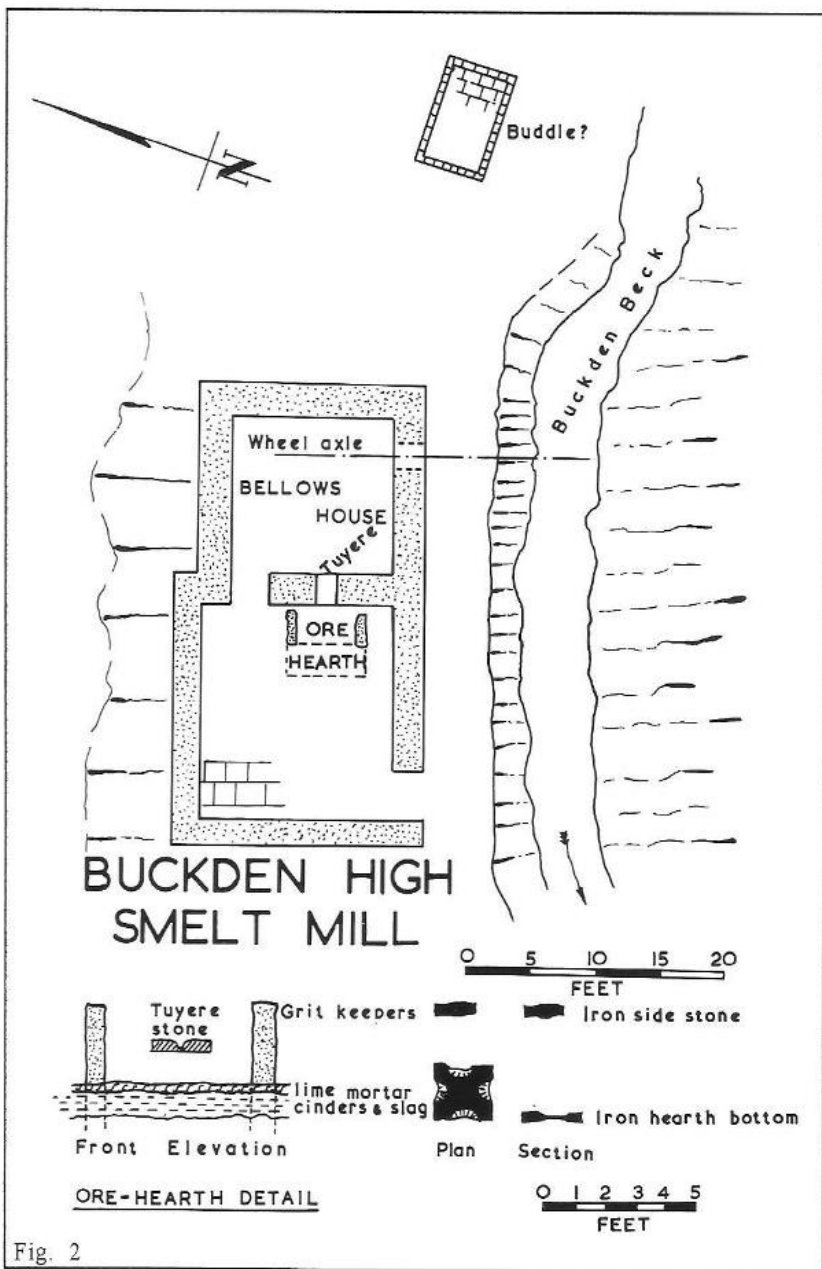


Fig. 2

## KETTLEWELL

### EARLY HISTORY

At the time of the Dissolution, the Nevilles, Earls of Westmorland, owned one half of the manor of Kettlewell and Coverham Abbey held the other half. These halves were reunited in 1569, however, when the Neville estates were sequestered by the Crown because the then Earl was a leader in the Rising of the North. The Crown kept Kettlewell, along with lands running northwards to Richmond, until 1628, when it was sold to a group of London citizens, who resold it to a group of local men in November 1656.

The total of the manor's ancient rents was £17 13s 7d and the new owners sold the freehold of various properties, with a proportion of land according to their ancient rent. The minerals, among other manorial rights, were retained in trust, however, and any profits arising from the mines were to be shared out amongst the freeholders in proportion to the ancient rent of their property. Some time after 1670, when all but two of the original trustees were dead, it was agreed that a group of people, called Trust Lords, would be chosen by the freeholders to administer manorial affairs.

### SMITHSON AND SWALE

The first record of the Kettlewell mines is given in the 1605 survey of the Honour of Middleham, of which Kettlewell was then part, which noted that they were of little value. It also records that "*the mines are taken of the King since the Cities contract, by Humphrey Wharton, receiver here*".<sup>1</sup> Wharton, who was Lord of the Manor of Gilling and had a smelt mill there, also leased the Crown's Grinton mines between 1629 and 1649. Dr Raistrick, however, wrote that "*there is no direct evidence of working in Kettlewell until Solomon Swale took the mines from Wharton, probably after the sale of the manor to the freeholders in 1658*".<sup>2</sup>

If that is the case, Swale cannot have done much work because the mines were leased to Francis Smithson, of Richmond, merchant, in September 1663. There is, however, a relationship between the two men. Solomon Swale's brother, Robert, was married to Mary Etherington, the sister of Smithson's wife.<sup>3</sup> This family link was repeated in March 1670 when Smithson surrendered his lease and, in partnership with Philip Swale, of Hartforth, Yeoman, renewed it for 21 years. This lease, for the farm of Kettlewell's minerals, gave Smithson and Swale the right either to mine themselves or to allow other miners to work in return for the payment of duty. They were also allowed an additional term of seven years in which to finish working any unwrought mines at the close of the main lease and they got the use of the smelt mill. In return, their annual rent was fixed at £17 13s 7d, which was the ancient rent, to be paid in equal parts at Michaelmas and Lady Day each year. They also agreed to pay a quarter of all the lead produced at the smelt mill in return for the Trust Lords' finding the fuel. In other words, in return for an annual rent and a hefty duty, they assumed the mining rights of the Trust Lords of the manor of Kettlewell.<sup>4</sup>



Having secured the lease, Smithson and Swale took Robert Barker, a miner of Kettlewell, as their partner.<sup>4</sup> Barker, who was also a shoemaker, originated from Chesterfield in Derbyshire. He had been a partner in Smithson's first venture and had moved north in 1669 to manage the mines. Under the agreement, Barker got a half-share in return for promising to pay 20 shillings for every fother (22 cwts) of lead due to his half-share. He was also to be paid £20 per year for managing the mines, but, if he left the area or was otherwise unable to fulfil his duties, he agreed to find a suitable replacement. The parties also agreed *"that the townsmen of Kettlewell be permitted to work for lead in the liberties thereof, as they have of late times done"*.

Swale and Barker were also co-partners with Philip Lord Wharton in a lease of lead mines at Caldbeck, in Cumberland, and Healaugh, in Swaledale.<sup>5</sup> By 1675 Barker had moved to Richmond, where he resumed his trade as a shoemaker, and his replacement at Kettlewell was his brother Adam. Robert kept an interest in the mines, however, but, when he died in 1680, after a short illness, Philip Swale wrote that *"all our concerns for lead in Swaledale, Craven and Thorpe Edge seemed to decline like him. In Craven (Kettlewell) for a long time we got nothing comparatively, because our get would not bear charges, of late it seems to promise better and so doth Swaledale"*.<sup>6</sup>

Robert Barker divided his half-share in the Craven stock with a group called the Derbyshire Partners, though not all of them were in Derbyshire. The same partners also had one-third of Swale and Barker's Swaledale stock. By 1684, Adam Barker was paid at the rate of one shilling for each pound being paid to the Derbyshire Partners on the Craven stock. The balance was then divided as follows:-<sup>8</sup>

Widow Mills	1/5
Dorothy Inman	1/5
John Renshaw	1/5
1/5th to the children of the late Robert Barker	
Mary Thomson	1/20
Ann Wilson	1/20
Lidya Thomson	1/20
Judith Barker	1/20
1/5th amongst shareholders in Richmond	
William Raw	1/20
Robert Loftus	1/20
Gilbert Heathcoate	1/40
John Wigley	1/24
Godfrey Bore	1/30

Philip Swale died in 1687 and left his mining interests to John Chaytor, Thomas Johnson, Richard Robinson and Michael Robinson. It is not known how long Chaytor & Co. kept an interest in Kettlewell, but in Swaledale the Duke of Wharton had renewed their lease by 1719.<sup>9</sup>

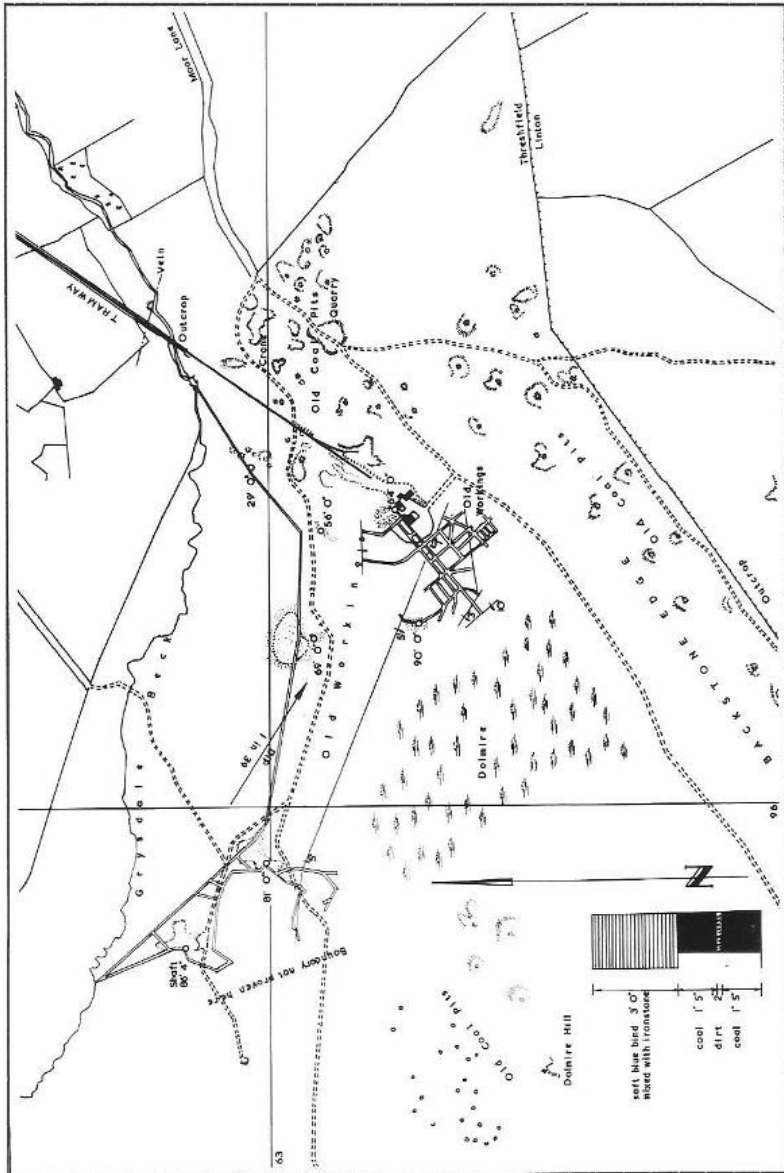


Fig. 15. THRESHFIELD COLLIERY.

## WINTERBURN AND HETTON

Brockabank SD934569  
These liberties, whilst not in Wharfedale, have been included for completeness. They only ever produced small amounts of ore, but these were smelted at Grassington. Moreover, some of the adventurers were involved in Wharfedale mines.

In 1705, Emanuel Justice, of York, and John Blackburne, of Friar Head, had a trial lead mine at Brockabank, near the latter's home. No production data are known and the most likely places for the mine have been quarried for limestone. Justice and Blackburne were also involved at Buckden Gavel and Arncliffe, as well as in Swaledale, but they became embroiled in litigation at Marrick and their Winterburn venture was probably soon stopped.

Between 1773 and 1779, a Mr Wilkinson had three parcels of Winterburn ore smelted at Grassington. These made a total of 0.99 tons of lead. The source of the ore is not known, but it may have been Brockabank.

Similarly, Stephen Newhouse produced 0.30 tons of lead from an unknown place in Hetton liberty during 1773. No other output has been recognised from Hetton.

## LINTON IN CRAVEN

The only significant deposits of lead ore in Linton were found on the north-east end of Swinden Hill and were owned by the successors to the Earls of Cumberland. Swinden is also the site of a major limestone quarry and, during a large modernisation programme in the early 1970s, Michael Dickinson published a paper on its mineral veins.<sup>1</sup> The quarry has been greatly expanded since then and many of the features he described have gone. This section is based on Dickinson's fieldwork, therefore, but, because he did not differentiate between veins in Linton and those in Cracoe, will only cover his veins seven and eight. Veins one to six are dealt with under Cracoe. The last of these veins, whilst originally nearly all in Linton, is dealt with under Cracoe because it had been quarried away, leaving just its northern end, which is in Cracoe.

## SWINDEN

Vein 6	SD983615
Vein 7	SD983619
Vein 8	SD985618

At the eastern end of the quarry, Dickinson noted several NW-SE strings which had a purple fluorspar selvedge on their northern checks. Number 7 Vein runs NW-SE and is crossed by Vein 8, which runs NNW to SSE. They can both be traced from the roadside at Catch Hall. There are several pits and some trenching on the veins, which appear to carry only calcite. Nevertheless, in the late 18th century, 38.66 tons of calamine were produced from Linton Swinden.<sup>2</sup>

had, around 1838, from Daniel Bowden, the then Hebden Barmaster.<sup>32</sup> This grant, it was claimed, still allowed the Duke's miners to follow the Grassington Out Moor veins over the boundary. No record of the grant appears to have been made in the Barmaster's book, but a copy of a letter from Eddy asking Matthew Wilson to arrange a meeting of the freeholders to discuss a possible lease has survived.<sup>33</sup> Eddy's date, of 1838, agrees with the sinking of Price's Shaft, which is immediately against the boundary with Hebden, but this trial was abandoned when it was only 15 fathoms deep.<sup>34</sup>

Eddy's actions were undoubtedly driven by the richness of the stopes on Cavendish, Middle and Slanter Veins, which all run towards the Hebden liberty. A few weeks after Eddy's letter, news of William Sigston Winn's application to the Hebden Barmaster for a grant became public. Thomas Job and Henry Dakyn, the Duke's Grassington mine agents, were sent by Eddy to see Richard Walker, the Barmaster, and ascertain what the position was. Walker confirmed that others were interested, but asserted that he would not act without instruction from a meeting of the freeholders. Despite this assurance, however, a grant was made to Winn & Co. within a fortnight. Upon further enquiry, it transpired that some of the freeholders, along with Winn, had got Walker to the public house, where they drew up a paper and made him (Walker) sign it.<sup>35</sup>

Notwithstanding his lack of written proof of the grant, which was not recorded in the Barmaster's book, Eddy pressed his claim and questioned the legality of Winn's lease. The Duke's solicitors, Messrs Currey, prepared a case, but the matter was settled out of court. The resulting agreement with the Duke of Devonshire, dated June 1st 1854, allowed the Duke to work the minerals within a 150 yard wide strip of ground next to the Hebden boundary, north from Blow Beck.<sup>36,37,38</sup> In return the Duke was to pay 1/10th royalty on any ore raised. He was also to drive the 72 Fathom Level up to the boundary and sink at least one new shaft. The Hebden Mining Company was also to be allowed to drive the 60 Fathom Level forward on Slanter and Middle Veins as soon as it sank a new shaft.

For his part, Eddy began sinking Cottingham's Shaft, the most easterly lead producing shaft on Grassington Out Moor, in September 1855. The shaft proved that the Top and Main Grits got thinner and had increasing numbers of shale partings as they went eastwards. The Top Grit was 16½ feet thinner than it was at Old Moss, but it carried an oreshoot above the 44 Fathom Level. At the bottom of Cottingham's Shaft, the Main Grit, which forms the footwall at the 60 Fathom Level, was 36 feet thinner than at Old Moss and was split into three by shale bands.<sup>39</sup> Because the Middle Vein has a downthrow to the south of 33 feet, the Main Grit is below the shaft bottom and no significant oreshoot developed.

The company never took advantage of the arrangement and, when Eddy drove the 60 Fathom Level as far as Blow Beck, he found that the Top Grit, on the foot wall of Middle Vein, went below the level. The only option was to drive up a much deeper level, but the results were so poor that, in September 1860, James Ray Eddy wrote to the Hebden Moor Mining Company giving notice that it was intended to

abandon the levels running east from Cottingham's Shaft. He wrote that the rails would be taken up and the levels allowed to close in the heavy ground.<sup>40</sup>

### SMELTING DISPUTE

Under the agreement made with the Duke of Devonshire in June 1854, the Duke undertook to smelt the company's ore at the Grassington Cupola. In return, the company was to pay *"21 shillings per ton of lead produced from all the ore yielding above fifty per cent, the Duke finding all fuel, labour and attendance necessary. All ore yielding only or less than fifty per cent shall be paid at such sum per ton as may be agreed upon, or by arbitration in case of dispute."*

In September 1865, however, Joseph Storr, the Secretary, wrote to James Ray Eddy asking him why the charge had been made on the ore instead of on the lead produced.<sup>41</sup> Eddy claimed that there was a clerical error in the agreement and that ore was clearly meant. He went on to claim that it was usual for smelt mills with reverberatory furnaces to charge per ton of ore.<sup>42</sup> The company was not impressed by Eddy's explanation and, in January 1866, Storr wrote asking Eddy to refund the overcharge of £886 7s 8d, which he claimed was the cumulative difference between smelting lead by the ton of ore rather than ton of metal. The opportunity was also taken to remind Eddy of the unfairness of his threat to inconvenience the company by smelting for it only when he liked and by redirecting water away from its surface works. He was also asked again to smelt some of the company's slags in order to raise much needed cash. This had still not been done by January 1866, despite the company's having first written to Eddy on the subject in March 1864.

Eddy placed the matter before the Duke's solicitor and declined to smelt any slags until the smelting question was settled. He asked for payment of rent arrears for the use of the road from the Hebden Mines to the Grassington smelting works, for which the company paid £2 10s 0d annually. He also asked for the return of a (sumpter) pot and accused the company's directors of wanting honour and principle in trying to take advantage of a clerical error in the agreement.<sup>43</sup>

There was still ill feeling in June 1866, when William Barron, the former manager of the Craven Moor Mines and now at the Hebden Mines, wrote to Eddy asking him *"Will you please allow me to make use of your Low Water Race from below your reservoir at Blagill to Sandhaw, opposite our reservoir?"*<sup>44</sup> The reply was that ordinarily this *"and any other facilities which, as a neighbour, I could have given without detriment to our own requirements"* would have been granted with pleasure. *"Until the questions between us are settled, however, you will easily understand that I am debarred from the consideration of accommodation to you for the present."*

In a letter to W.S. Winn, who had by now withdrawn from the company, Eddy opined that the clause had not been in the original document, but had been inserted later, almost certainly by Winn. As Eddy noted, of the original partners, Winn was the *"more informed on the subject and, excuse the insinuation pardon the flattery more cute than the others"*<sup>45</sup>