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CONTENTS

	Page
History of Coventry Colliery, Warwickshire Nigel A. Chapman	2
Old Roundwood and Manor Haigh MoorCollieries, Ossett near Wakefield John Goodchild	7
A post-war jig, S.E. of Moor Intake Farmstead, Arkengarthdale, North Yorkshire Shaun Richardson and Richard Lamb	30
Smallcleugh Mine - exploration history John Lawson	41
Parkfields coal and ironworks, Wolverhampton Nigel A.Chapman	46
Eshott Colliery, Northumberland – an unsuccessful venture of the late 18th century John Goodchild	54
Lode continuity and controls at the Eaglebrook and Camdwrbach Mines, Ceredigion David M. D. James	56
Not fit for purpose? - Two examples of levels being re-driven Mike Gill	66
South Yorkshire Mines Drainage Committee Activities in November 1939 Steve Grudgings	71
A Tudor lead mine at Ashnott, Lancashire David Went	88

HISTORY OF COVENTRY COLLIERY, WARWICKSHIRE

Nigel A. Chapman

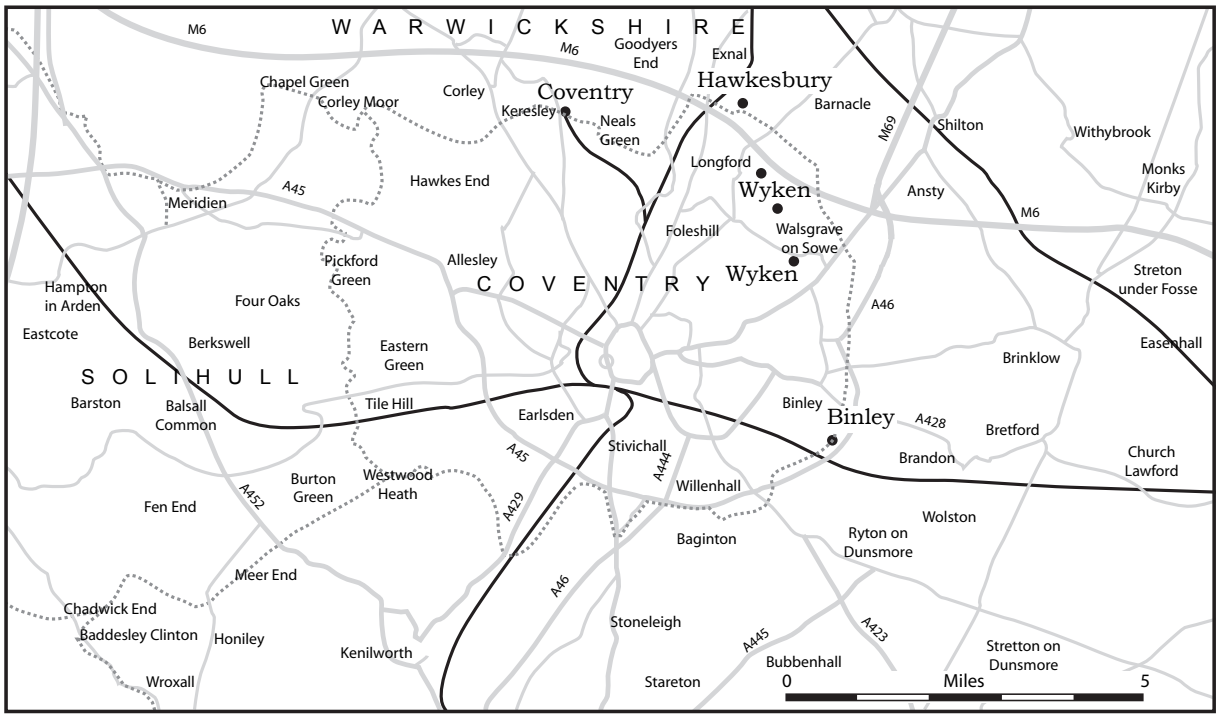


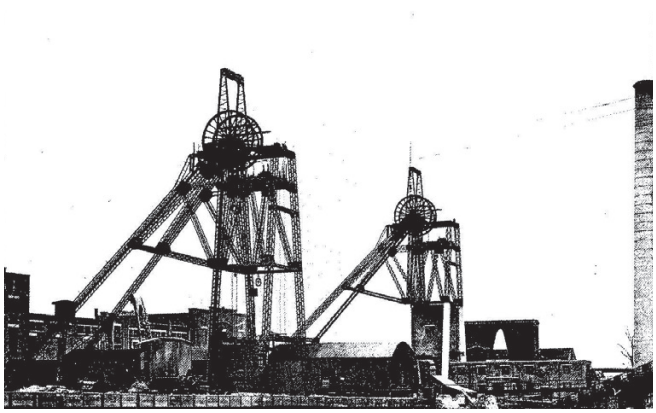
Figure 1. Collieries around Coventry in the 1920s.

INTRODUCTION

Henry Houldsworth, a successful cotton manufacturer of Manchester had by the early nineteenth century developed business links in Glasgow. With the profits from his business he purchased the Coltness estate with its estimated 36 million tons of coal and 2 million tons of ironstone. From this beginning he developed an ironworks at Newmains, Lanarkshire with a single furnace producing pig iron from 1839. The Coltness Iron Company had been incorporated in 1837 and expanded to operate 7 blast furnaces at Newmains with collieries and iron mines in Scotland. By 1900, while continuing to develop collieries in Lanarkshire, he started looking for new areas to supply coal to new or established markets around the country.

BEGINNINGS

The first Warwickshire Coal Company was registered in 1901 by the proprietors of the Wyken Collieries, who owned three small collieries to the north of Coventry. Their shares were purchased by the Coltness Iron Co. in 1902 but it took nine years of negotiations to acquire a royalty of 4,500 acres from local landowners. During this period a number of boreholes were put down within the acquired estate to prove the coal seams. Not only did the borings find the expected coal seams but it was discovered that they came together to form a seam of coal 20 to 24 feet thick. Two borings located this thick coal at depths of 708 and 814 yards with a dip westwards of 1 in 16.



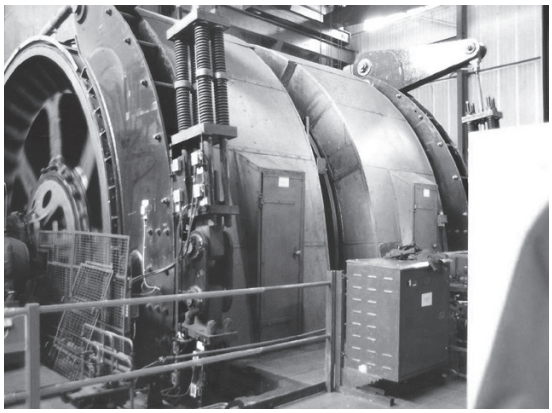


Figure 2 (left). Headframes at Coventry Colliery in the 1920s. Figure 3 (right). The electric winder from Mosley Common Colliery.

During 1911 the company was liquidated, being replaced by a new Warwickshire Coal Company with a capital of £450,000 in shares of £1 each, all were held by the Coltness Iron Company. The directors of the company were J. H. Houldsworth and Capt. J. F. H. Houldsworth, D. J. Barr, W. A. Wilson and the Rt. Hon. Lord Invernairn while W. H. Telfer was the mining engineer and Managing Director of the concern. These directors also formed the board of the Coltness Iron Company, and lived in Scotland.

SINKING

Two shafts of 21 feet 6 inches diameter, placed 180 feet apart were being sunk from March 1912. At first a 10 ton steam crane was used to sink the shafts to a depth of 80 feet. At this point the permanent plant was erected and sinking continued in a more traditional form. Water to the extent of 500 gallons per minute was shut off by means of brickwork, backed with concrete coffering, down to a depth of 80 yards. Water at the rate of 1,100 gallons per minute was encountered from a depth of 148 yards and sealed off with 160 feet of cast iron tubbing in No. 1 Shaft. Water flowing into No. 2 Shaft reached 2,670 gallons per minute requiring 130 feet of tubbing to seal it off. Sinking continued with heavy flows of water into both shafts until it was decided to shut off the water by means of the cementation process. A plug of concrete 20 feet thick was placed in the shaft bottom shutting off the water completely. Twelve holes were then bored through the plug for 90 yards to inject concrete into the strata of No. 1 Shaft to reduce the water flow to 75 gallons per minute. No. 2 Shaft required 60 yards of concrete to be injected to reduce the water flow to almost nothing. The thick coal seam was intercepted on 30 September 1917 at a depth of 2,160 feet. The shaft water was later put to good use, being raised from an inset at 242 feet down the shaft to be fed to the mains of Coventry at the rate of 750,000 to 1,000,000 gallons per day.

With an intended daily output of 4,000 tons of coal, two large twin-cylinder winders of 38 inches by 72 inches stroke were supplied by Markham of Chesterfield and Robeys of Lincoln to lift two double-deck cages with three tubs per deck, each tub holding 14 cwts, giving an output of 4 tons of coal per wind. The exhaust steam from the winders was fed into a 2,500 kVA turbo alternator and a three smaller alternators to supply the colliery with electric power. Ventilation was supplied by two Sirocco-type fans, one of 105 inches diameter driven at 730 rpm by a Belliss steam engine, while the 175-inch diameter main fan

OLD ROUNDWOOD AND MANOR HAIGH MOOR COLLIERIES, OSSETT NEAR WAKEFIELD

John Goodchild

INTRODUCTION

Figure 1. Location map of the area. The hotel adjacent to the M1 is on the site of the Old Roundwood Colliery. Manor Haigh Moor Colliery was at Westgate.

This paper explores the history of the collieries of Old Roundwood and Manor Haigh Moor which were situated between Wakefield and the smaller town of Ossett, which lies $3^1/_2$ miles to the west. Roundwood, which became Old Roundwood after 1901, should not be confused with the Roundwood Colliery in the Don Valley, about two miles north of Rotherham. Perhaps one of the most striking features of the area has been the extent of urban development since the publication of the 1st Edn. O.S. map which was surveyed in 1849-51.

COAL MINES AT OSSETT AND ALVERTHORPE

In almost every instance where large scale mining developed on the exposed West Riding Coalfield, there was evidence of much earlier mining, sometimes going back to Roman times and reviving appreciably from the fourteenth century. Such was the case at the Roundwood Colliery which opened in the 1850's and which subsequently grew in a not atypical way from the initial modestly-sized venture. It was sunk close to the boundary between the townships of Alverthorpe with Thornes and Ossett cum Gawthorpe, where mining has been documented since the beginning of the eighteenth century, although it had taken place from much earlier times.[1] Before that the Wakefield Manor Book of 1709 refers to a small colliery at adjoining Ossett Lights[2] and between 1712 and 1752 one Jo. (sic) Naylor occupied a colliery there. In 1787 the Manor of Wakefield paid for a *'Spring Pole when boring on Ossett Lights'*;[3] a steam pumping engine existed there in 1767-70,[4] suggesting a substantial investment of capital. A little to the north of Roundwood, the ambitious Smithson and Fenton collieries on Haig Moor opened in 1798, each with its own tramway to the navigable River Calder close to Wakefield.[5]

Closer to Wakefield, John and Richard Woollin of Haigh Hall worked a 17-inch seam and below that a 34-inch seam at 60 ft, near Flanshaw Lane under a lease dating from 1816, with a 'downhill lead' on the nearby turnpike road[6] and largely on the Wakefield side of the local toll bar. There is a plan of John Woollin's colliery on Hagg's Lane

Figure 2. Alverthorpe and Wakefield on the 1st Edn. O.S. map surveyed in 1849-51. The Lancashire & Yorkshire Railway can be seen bottom right near the River Calder. The Wakefield & Halifax Trust turnpike runs E-W across the centre with Smithson's Tram Road serving pits to the N. Old Roundwood Colliery was not built at the time of the survey and was at the junction of Haggs Lane and the turnpike in the west of the map and at the point now occupied by the hotel shown in Figure 1.

A POST-WAR JIG, S.E. OF MOOR INTAKE FARMSTEAD, ARKENGARTHDALE, NORTH YORKSHIRE

Shaun Richardson and Richard Lamb

INTRODUCTION

In July 2014, a survey was undertaken of the remains of a decaying jig, lying to the south-east of Moor Intake farmstead in Arkengarthdale, North Yorkshire (NY 98792 03570).[1] The work forms part of an extensive programme of ongoing detailed archaeological survey being undertaken by Ed Dennison Archaeological Services Ltd in Arkengarthdale, most of which has been commissioned by the Yorkshire Dales National Park Authority. This survey work encompasses the landscapes of the Octagon and New Mills (including the full length of both flues), the 20th century chert quarrying activities on Mould Side and the complex system of 18th to 20th century watercourses on the southern slopes of Arkengarthdale. The recording and appreciation of the 20th century re-working activities is a vital part in the proper understanding of the development of lead mining landscapes, as the earlier phases of these landscapes could be radically altered by the later re-working. As those associated with post-Second World War re-working activities pass away, thus removing the possibility of oral history research, the recording of the physical remnants of re-working assumes an even greater importance.

The jig is located in an isolated position on the southern slope of Arkengarthdale, to the south-east of Moor Intake farmstead. It lies within a complex and extensive former lead mining landscape, on the southern edge of a large spread of spoil, itself lying within unenclosed moorland.

HISTORICAL BACKGROUND

Much work has already been undertaken on the history of lead mining in the wider area, and more specifically on the chert mining and quarrying in the immediate vicinity[2] and so this is not repeated here. In brief, the 1857 Ordnance Survey map[3] depicts a raised sub-triangular spread of spoil or waste at the site of the jig, adjacent to a sub-circular area of marshy ground named 'Black Mires'; there is also a larger spread of spoil to the west, closer to Moor Intake farmstead. The site is similarly depicted on the later editions of the Ordnance Survey 25-inch maps.[4] These tips were associated with the nearby Danby and Dam Rigg Levels, which were begun in the earlier part of the 19th century and which were linked by inclined planes which still partially survive.[5]

The form of the existing spread of spoil (i.e. relatively flat but with minor local variations in height and crossed by vehicle tracks) is similar to other recorded examples known to have been re-worked in the second half of the 20th century.[6] Eastmead includes a photograph of the jig in his survey of the nearby chert quarries, and states that it is a barytes/fluorspar jig probably used by Ernest Shevels during the 1950s to the 1970s, an attribution supported by others.[7] Ernest Shevels, together with his brother Cecil and a third man Charlie Woodward (as Swaledale Mines Limited) are thought to

Figure 1. Jig, looking north-east.

have worked this area in the 1950s-60s. They re-opened some old levels but did not proceed further by extracting minerals from them and instead utilised the extensive spoil heaps exclusively, working spoil heaps at Gunnerside Gill and Hard Level Gill (both in Swaledale), as well as in Arkengarthdale.[8] Comparison with the company's similar equipment elsewhere, for example the barytes recovery plant at the Old Gang Mines,[9] suggests that there would have been a small crusher (much of the waste having already been crushed by the lead miners at source), a log washer to remove mud etc, probably a small trommel to size the feed, one or more jigs and perhaps a Wilfley table to treat the undersized material.[10] This is again confirmed from oral sources. The jig was accompanied by a crusher, rotary screen and a Wilfley table for the undersize which had passed through the mesh screens of the jig; it is not known exactly how the undersized material was taken from the jig to the table but Swaledale Mines Limited made no use of settling ponds at Arkengarthdale as they did at Hard Level Gill. Some of the equipment was housed in a large pantechnicon-type vehicle, the remains of which remained on site in the summer of 1977 - this van had a number of holes cut in its sides through which various sizes of material fell into heaps; similar vehicles were used by Swaledale Mines Limited when reworking tips elsewhere in the Dales (see Figure 6). The main product of the operations in Arkengarthdale always appears to have been fluorspar, as it proved impossible to consistently obtain a sufficiently high specific gravity material to sell into the industries which made use of barytes. It is believed that no more than a few hundred tons of material were actually sold, and that they were bought by Horace Taylor Minerals Limited of Matlock in Derbyshire, who acted as mineral agents for several producers in the area, including a William Taylor working Wet Grooves in Wensleydale.[11]

The involvement of Horace Taylor Minerals Limited of Matlock is of interest, as in February 1962, they received planning permission for the 'erection of temporary

SMALLCLEUGH MINE - EXPLORATION HISTORY

John Lawson

INTRODUCTION

I have been involved in exploring the Mines accessed from Smallcleugh Horse Level for many years. This task began in the mid 1960's, coincidentally with the formation of the then Northern Cavern and Mine Research Society, which later became the Northern Mine Research Society. I have felt for some time the dates of major exploration breakthroughs, should be recorded before it is too late for anyone to remember when they happened.

A BRIEF HISTORY OF THIS HORSE LEVEL

Alston Moor was owned by the Greenwich Hospital Company, who used the rents and mineral duties raised to help pay pensions given to the seamen of the British Navy. They were given these estates in 1735, after their confiscation from the Earl of Derwentwater.[1]

Initially, the company were going to work some of the mines by themselves, but after trying this, it was decided to let the mines of a large part of their estate to the London Lead Company (LLC). This company has a number of alternative names, The Governor and Company or the Quaker Company, (so called because many of the major shareholders were Quakers).

In the 1750s the LLC took the lease of the Middlecleugh Veins, which include Middlecleugh Vein, Middlecleugh North Vein, Middlecleugh 1st Sun Vein and Middlecleugh 2nd Sun Vein (see Figure 1).[2] The veins were worked initially from surface shafts and from sumps sunk from Middlecleugh Horse Level. They yielded a lot of good ore and so the LLC's Alston Moor agent Thomas Dodds, decided to drive another horse level to intersect the veins at a lower horizon and at the same time work Smallcleugh Cross Vein. Accordingly the LLC began driving the Horse Level on 22 September 1787.[3]

When they reached Smallcleugh Cross Vein, sumps were sunk into the Great Limestone, finding rich deposits of ore. In 1793 the mine made a profit of nearly £10,000,[4] which translated into modern values is between 1 and 16 million pounds.[5] They reached the first Middlecleugh Vein in 1797 and very soon after this a mine surveyor, George Hethrington, made a spectacular discovery[6] when he found the rich Smallcleugh Flats. Initial access was made by him via the small crosscut which still bears his name and the flats were located by driving a series of cross cuts to them from Smallcleugh Horse Level and also by working them northwards (see Figure 1).

In 1882 the LLC relinquished their Alston Moor leases which were subsequently taken up by the Tynedale Lead & Zinc Company, who in turn, in 1896 passed them to the Vieille Montagne Zinc Company of Liege Belgium. This company surrendered the majority of their Nenthead leases in the early 1920s.[6]

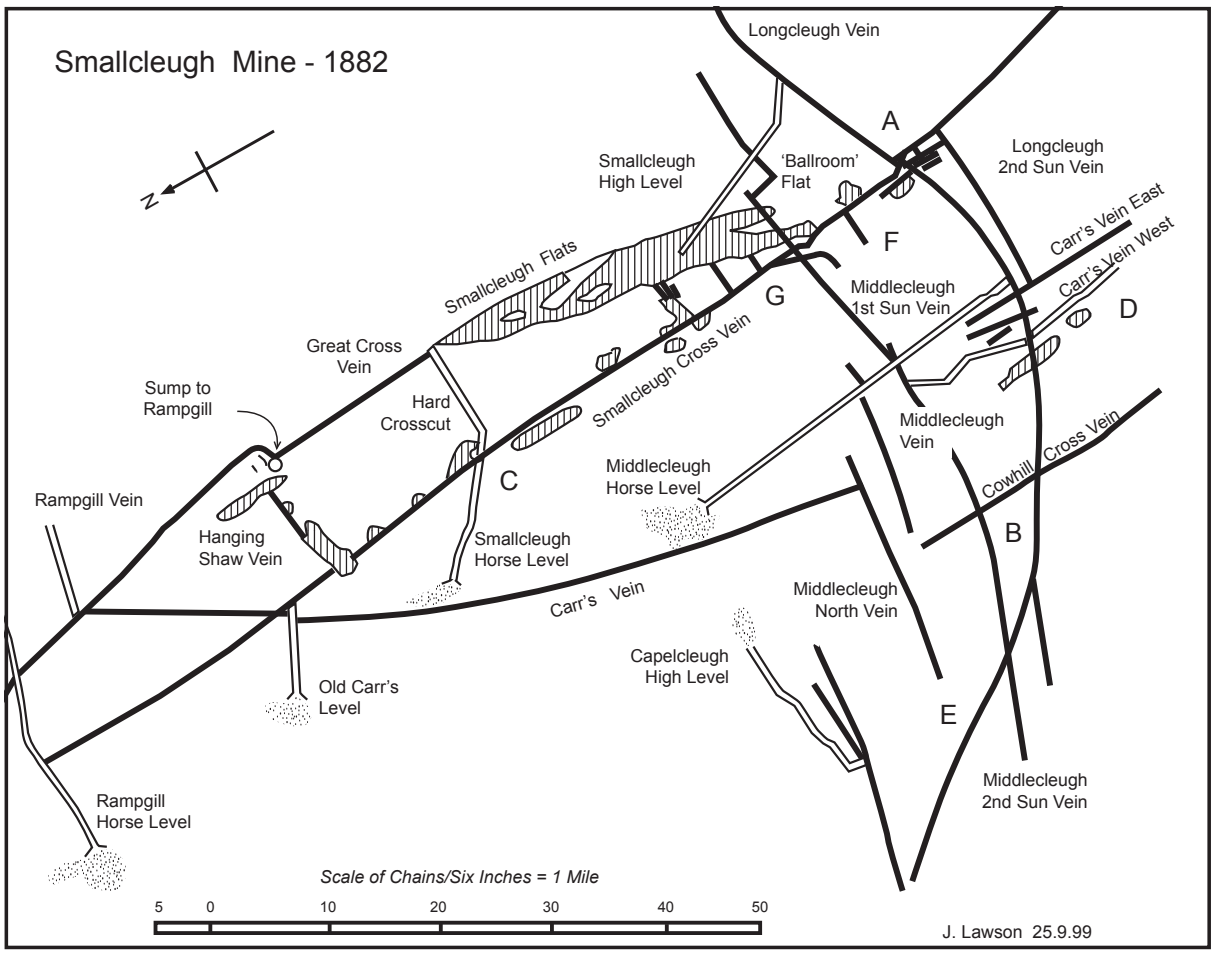


Figure 1. Plan of Smallcleugh Mine taken from the prospectus of the Tynedale Lead & Zinc Company, 1882.

'MODERN' EXPLORATION HISTORY

In 1963 Eric Richardson, a local retired mine process worker, along with a partner took over the Smallcleugh lease. The following year, with help from members of the newly formed NM & CRS, the Horse Level entrance was dug out and reopened.

The photograph, taken in August 1972 by the late Harry Parker, shows Eric seated, chatting to a group of NMRS and PDMHS members. They are returning after making the second modern known descent of Proud's Sump. David Politt is adjacent to the entrance, next to him is the late John Macferson, standing in front of Eric is 'Bob' Guthrie, also deceased, behind him is Mike Luff and finally the author makes up the group.

The wagon has long gone and the picture also shows the changes taking place with helmets. The ones worn, by Dave and Bob and the one next to Eric are standard National Coal Board issue and basically were made of layers of cardboard. Mike, John and myself had changed over to the now familiar plastic helmets. Two years earlier in 1970 Peter Jackson had made copies of his accurately, surveyed, Smallcleugh plan available to mine explorers. This map stimulated new directed, mine exploration.

PARKFIELDS COAL AND IRONWORKS, WOLVERHAMPTON

Nigel A.Chapman

Members of the Bishton family had by the late 18th century become major iron producers at the Snedshill and Wrockwardine Ironworks in Shropshire. The fame of the family was such that John Bishton had become by 1802 a partner in the Lilleshall Company with Lord Stafford, James Birch, John Onions and William Phillips. George Bishton by 1822 had become the Agent of George William Lord Stafford. As part of the family estates, Lord Stafford owned large areas of land at Parkfields to the north of Wolverhampton. Coal and ironstone had been located under the estate and by 1810 was being exploited by Fereday & Co. Gibbons & Bickley and Messrs. Smith.

At this period several large industrial concerns on the Shropshire Coalfield began to look to the South Staffordshire Coalfield as ripe for exploitation. Messrs. Bishton having business connections with Lord Stafford were in an ideal position to acquire leases of land from his lordship. During 1822 Messrs. Bishton along with John Underhill and William Picken obtained a lease of 45 acres of the Cockshutts Colliery at Parkfields. They seem to have made profits, as they were soon looking to expand their holdings and acquired in 1825 a further 100 acres of the Parkfields estate. The sinking of shafts and the extraction of the coal and ironstone from under the estate was soon in full swing. These workings proved profitable to the extent that the partners decided to develop the smelting of the minerals under the estates to produce pig iron. During 1826 the partners constructed two blast furnaces with the necessary steam driven blowing engines and large boiler plant. To supply these works, tramroads were constructed from the mines to open areas so that the coal could be burnt into coke and the ironstone calcined to drive away impurities and improve the percentage of iron in the stone.

The iron trade must have been buoyant at this period as the partners went on to add a third furnace to their existing plant during 1827 and a fourth in 1828. To finance this expansion the partners raised a mortgage of £17,000 against their holdings. During 1829 the works and estates were conveyed to the Parkfields Iron Company, a partnership of John Underhill with John, William, and Thomas Bishton. George Bishton retained a share in the company, and took out a partnership with Harry Parkes in the management of the Capponfield Ironworks. Parkfields Ironworks produced pig iron, which was then loaded into barges on the Birmingham Canal and floated a couple of miles south to the Capponfield Ironworks at Spring Vale to be puddled into wrought iron for rolling into bars and plates.

George Bishton was still agent for the estates of Lord Stafford. However, this involvement was to lead in 1833 to a civil action by Lord Stafford to recover sums of money held by George which should have been paid to his Lordship. This court action resulted in George being made bankrupt and brought ruin to the family. The outcome of the bankruptcy case caused a heavy cost to John Bishton of Dawley, who faced bankruptcy during 1835. This was the end of the association of the Bishton family with the Parkfields Ironworks. Operating the ironworks devolved to other members of Parkfields Ironworks Co. the burden of management was undertaken by John Underhill. He was to continue in charge until

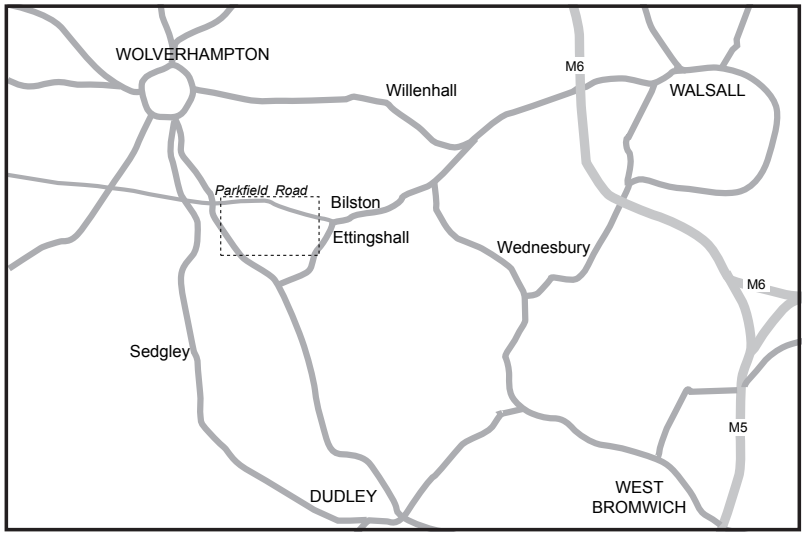


Figure 1. Map showing location of Parkfields Colliery and the position of Figure 2.

his death, when his trustees took over and continued the works with John Pugh as managing partner.

The Parkfields estate consisted of 100 acres of mineral lands with along the eastern edge the Thick Coal seam much famed as the best coal seam of Staffordshire. Unfortunately, this seam instead of being about 30 feet thick was separated into several thinner seams with a thickness of about 8 feet 3 inches known as the Bottom Coal under the Parkfields estate. However much of the seam was further broken up by bands of shale within the coal. Other coal seams, such as the New Mine of about 7 feet thick, the Fireclay of about 7 feet 6 inches thick and the Mealey Grey Coal of about 3 feet thickness were to be found under the estate. The ironstone seams were Blue Flats, the Getting Rock, Poor Robins or White Ironstone, both the Robin and the Gubbin ironstones were the best and much worked at Parkfields. Each of these seams was being worked to supply coal and ironstone to the furnaces, any surplus was then sold to the highest bidder. In these thin seams the standard method of working was by the Longwall which as they extracted the seam meant that the strata above the workings was much disturbed. The surface of the land became a series of humps and hollows that filled with water. Gradually the water was percolating into the workings and slowly flooding the mines. To the north of the Parkfields mines was the Rough Hills estate that had been worked for minerals for many centuries. Because of the shallow depth of these mines, and the much disturbed state of the ground water had collected in the old workings and gradually drained downhill towards the deeper mines of Parkfields. To the south of Parkfields and therefore to the dip of the mines was the Ettingshall Park estate which from the 1830s had provided the drainage of the Parkfields mines by the use of a large steam pumping engine. Known as the Sandy Gay pump, this was a 58-inches diameter by 84-inches stroke beam engine that lifted water from the mines and pumped it into the Birmingham Canal system, naturally for a small financial return.

As the ironstone seams under the estate were of a limited quality, it soon became necessary to import hematite from Cumberland and high quality ironstones from Warwickshire and North Staffordshire. By combining these ironstones in the blast furnace a high quality iron was produced for which South Staffordshire became famous. Fortunately the high quality coal raised from the estate was converted to coke and used to smelt the ironstones. Limestone from the huge quarries near Walsall was floated by barge to the canal basins at Parkfields. Having unloaded these barges the cargos were taken by wagons and horses along tramroads to the furnaces for smelting.

ESHOTT COLLIERY, NORTHUMBERLAND – AN UNSUCCESSFUL VENTURE OF THE LATE 18TH CENTURY

John Goodchild

The rich coal resources of Northumberland occur only under some parts of that county; in others is no coal and in yet others there exists coal of poor quality or extreme thinness, whose working did not warrant connection to distant markets by wagonways to the nearest navigable river or seaboard. Nevertheless, these areas did produce some saleable coal but references suggest it was used by farmers, local inhabitants and limekilns. Such appears to have been the case at the village of Eshott, Northumberland, some miles north of Morpeth, where an unsuccessful but costly attempt was made to work the coal during the 1790's and which finally ended in 1801. Its story has emerged in outline from a number of papers recently purchased for The John Goodchild Collection at the West Yorkshire Archives, Wakefield. These are mainly letters written to the colliery's owner, Thomas Adams, together with his draft replies.

Adams lived at Alnwick and may have been employed by the Dukes of Northumberland. In May 1793 a boring to find coal was put down in Eshot parish to 220 feet 8 inches but found no workable coal. However, in 1795 an evaluation of an engine and pumping was made here and in 1797, Adams was in need of an engineman; it appears that he let the working of the colliery but supplied the engine, engineman and possibly other equipment ; the colliery was worked from more than one shaft. One Adam Sibbot, whose letters to Adams are simply addressed from 'Green's House', appears to have had local management of the venture.

In 1795, Adams had some difficulties with his engineman, *'sent from Tyne'*, who had left without notice even though he had been *'recommended as very attentive'*. The man was paid on the basis of the quantity of water pumped, at an unstated fixed sum. A blacksmith, aged 41, from nearby Shilbottle was recommended as a replacement at fifteen shillings per week, to include attendance at the engine at night.

In April 1798, Adams wrote of himself: *'I have been remarkably unlucky in this Colliery Business...*[it] *makes me very uneasy'* and that it seems that the amount of water to be dealt with was too great for the engine. In November 1799 it was standing unworked and needed £270 spending on it. Adams wrote: *'This colliery has been an awkward concern to me & I scarce know what to do with it'*. New boring did not find coal below the seam which was already being worked, despite being anticipated, and by mid-1800 all the workings but one were reported as being drowned out when the workmen of the colliery wrote to Adams asking if the ventuhre waould be continued, as they were all under-employed, and they offered £40 per year to rent the colliery and its associated houses. A month later an offer was made to work a small area of coal remaining in the old pit and the colliery was to be advertised at the end of the month.

The papers make a passing refererence to a colliery at Ulgham, some four miles distant

LODE CONTINUITY AND CONTROLS AT THE EAGLE-BROOK AND CAMDWRBACH MINES, CEREDIGION

David M. D. James

INTRODUCTION

The Eaglebrook Mine, otherwise known as Nant-y-Cagl, lies around SN 735 892 at the northern end of a periclinal inlier of late Ordovician strata on the west flank of the major Plynlimon Dome (Figure 1). It is known to have been active in the period 1708 to 1722 under the Company of Mine Adventurers[1] and its mid-Victorian development between 1853 and 1878 gave returns of 598 tons of dressed galena and 71 tons of 'copper', presumed to be largely chalcopyrite, which after 1876 is known to a rather variable extent from the record in the Mining Journal. No abandonment plans appear to have survived but plans of parts of the mine, one dated 1860 and another presumed around 1869, are available. The site is renowned amongst mineralogists on account of a large suite of secondary minerals produced by supergene processes.[2,3,4,5,6] It is easily reached from the Pont Erwyd-Talybont mountain road.

The Camdwrbach Mine lies around SN 746 891, about 1.2 km E of Eaglebrook. It lies in the W flank and core of a gently N-plunging anticline which is contiguous with the principal anticlinorium of late Ordovician strata within the Dome. Its discovery, with 'ore in paying quantities', and its location 'on the same lode as Eaglebrook' was announced by Absalom Francis in 1874.[7] The mine was worked as South Cambrian from 1877 to 1881 when owned by the Cambrian Mining Co. and later under different companies as North Brynyrafr, finally as Camdwrbach, a supposed 'new discovery', from 1898 to about 1905. Returns were very disappointing: only 2 tons of dressed galena being reported, in 1880 and 26 tons of dressed sphalerite, in 1904-5. During the last revival a lengthy but abortive crosscut trial was driven about 750 m SSW of the mine in a location now just above the level of the Nant y moch reservoir. Reports in the Mining Journal span from 1874 to 1904. The 1879 plan and section of South Cambrian survives.

It is clear that the promotion of Camdwrbach was strongly influenced by the belief that it lies on the same lode as that proven productive at Eaglebrook. If so, average lode strike should be about 095°. O.T. Jones was much more cautious than Francis about lode continuity between the two mines and his suspicion is reinforced by the 1984 map produced by the British Geological Survey (B.G.S.) which indicates two separate lodes at surface and little likelihood of linkage at depth. At Eaglebrook the B.G.S. map[8] shows the lode to strike ca 067° which is in considerable conflict with strikes of ca 080-125° along the footwall exposed at the mine and the 105° strike shown by Jones. At Camdwrbach B.G.S. show a lode strike of ca 090°. A new look at both of the mines and the geometry of their lodes thus seems warranted, the more so following the reinstatement of safe access to the Camdwrbach adit in 2012 and the availability of archival material not fully utilised in previous accounts.

LODE SURVEYS AT EAGLEBROOK

Surface mapping

The lode footwall is well exposed in several pits and exhibits clearly defined jogs in strike (Figure 2a). A few slickensides, where preserved, indicate dominant dip-slip with very small dextral strike-slip. Bedding dips in massive grits define the crest of the anticline fairly closely but exposure on the flanks of the fold do not, in my opinion, justify the distribution of 'disturbed beds' shown on the B.G.S. map (apparently confined to the W of the anticline) and for this reason my map (Figure 2c) is more simple. The position of the top of the grits is locally subjective as fines from the dressing floors mask extensive areas and the stream bed is choked with boulders. Tips contain large volumes of ferroan dolomite. There is a tip (with deads of Cwmere Formation) and a plausible site of an adit in thick forestry at SN 7323 8912 which lies on the line of the only lode shown hereabouts on the B.G.S. map. It was driven, following 'opening on the lode', in 1853, 70 fm SW of Western engine shaft.[9] Of the two adits, presumed shallow, mentioned in 185310 only one, at SN 7349 8919, has been located but its approach cutting is infilled. The entrance to the extensive (deeper) adit level shown on the 1860 plan is buried below fines from later crushing but its position is consistent with the reported depth of ca 10 fm below Old Shaft. I have found no adit E of the road and none is shown on the plan of the workings hereabouts. The two adits E of Nant Rhyddlan are both collapsed at portal but the tip to the upper adit displays lodestuff. I suspect both were driven as drifts as the map trace of the lode between them on the steep W-facing slope of Bryniau Rhyddion is consistent with the lode strike and dip proven in the workings off New Engine Shaft. The lower of the two, known as Hurd's Adit, may be that begun in 1877[11] which, judging from the size of its tip, drove several tens of metres.

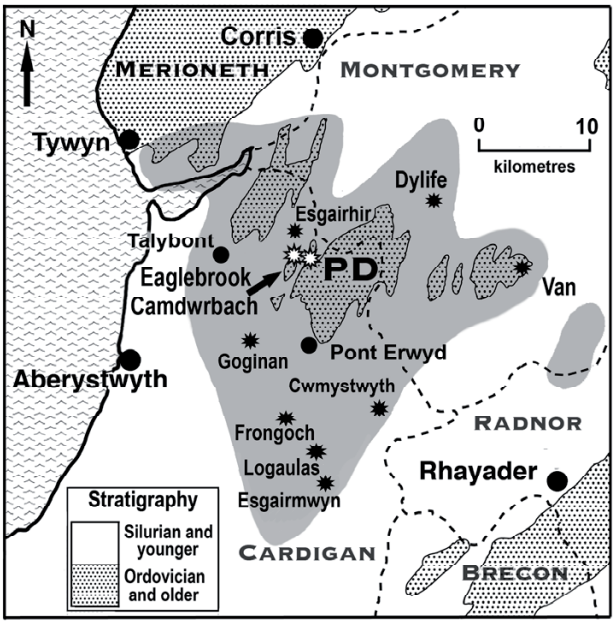


Figure 1. Location map for Eaglebrook and Camdwrbach within the orefield (grey highlight) centred on the Plynlimon Dome (PD).

In the western workings shafts appear to have been sunk on or close to the lode outcrops and followed the underlie but the two major eastern shafts appear to have been sunk vertically. Surface archaeology is sparse but the remains of the pits for the 40ft and 30 ft waterwheels are still visible (Figure 2c). Calibration of the shafts with those shown on the 1906 O.S. map is simple E of Copper Shaft but the O.S. map does not show Middle Shaft and Old Shaft. However their sites have been identified using tape and compass survey and the report of the 80 fm distance between Western Engine Shaft and Old Shaft (the shortlived first engine shaft).[9]

NOT FIT FOR PURPOSE?

TWO EXAMPLES OF LEVELS BEING RE-DRIVEN

Mike Gill

This paper looks at two examples of levels being re-driven. Both are in Yorkshire, the first at Cononley Mine near Skipton and the other at the Old Gang Mine in Swaledale.

In April 2012 the Yorkshire Archaeological Society deposited a collection of mine plans, covering the Greenhow and Cononley areas, with the NMRS Records. They were part of a larger collection of plans at the University of Leeds which was dispersed on the closure of the Mining Department.[1] Because they were originals, the plans were transferred to the North Yorkshire Record Office at Northallerton.

One plan, though untitled, was clearly of the central part of Cononley Lead Mine, on either side of Nethergill. Having been drawn on cartridge paper, probably around 1850, the plan was in a very poor condition with parts of it having become detached. Nevertheless, a fragment from the bottom left corner shows an 'Old Level', as parallel broken lines and another level, in solid lines, driven from exactly the same point but following a roughly curved course to the north-east of the old level, to reach almost the same point 87 metres away. Though unnamed, without doubt it is the Upper Adit Level.

The mine's history is given in the writer's The Yorkshire and Lancashire Lead Mines,[2] while the accessible part of the Upper Adit and its surface layout were described by Martin Roe.[3] He, however, had no reason to suspect that the first part of the adit had been driven twice.

Walter Hall & Co. worked Cononley Mine in the 1820s and began the Low Level, which became the Deep Adit. They also began driving the Top Level, or Upper Adit but gave the mine up around 1830 during the slump in lead prices. Prices had recovered enough by July 1836 to encourage Stephen Eddy, the Duke of Devonshire's agent, to resume work at Cononley, where the Duke was also the mineral lord. Eddy also developed the Upper Adit horizon.

The broken lines denoting Hall's Level show it to have been driven in a straight line until it met a fault, which it followed to the Main Vein, at 96 metres from the portal. Given the absence of archival evidence, we can only speculate as to why Stephen Eddy found it necessary to incur additional expenditure by abandoning Hall's Level and starting again.

The plan (see Figure 1) shows the course of the old level crossing that of the new one a short distance before the junction at 90 metres and again a short way beyond it. There is, however, no sign of it in the new level, so they were clearly driven at different gradients and one passed over, or under, the other. At that distance, a difference in gradient of plus or minus 1 in 45 would let one level graze past the other. Of the two options, it seems more

SOUTH YORKSHIRE MINES DRAINAGE COMMITTEE ACTIVITIES IN NOVEMBER 1939

Steve Grudgings

HISTORICAL CONTEXT

Whilst the South Yorkshire Mines Drainage Committee (SYMDC) was established by formal order in 1929, it had in effect been operating since 1919 as a voluntary scheme known as the South Yorkshire Pumping Association. SYMDCs remit was to take over the water pumping duties of a number of Earl Fitzwilliam's older Barnsley Seam pits and pumping engines previously known as the Fitzwilliam Drainage Scheme.[1] The purpose of the scheme was to prevent surface water from draining into the Barnsley Seam workings and the rationale for its continuation after the exhaustion of the Fitzwilliam Barnsley Seam pits was to prevent this water penetrating to the deeper workings of adjacent collieries. The scheme had its origins in a series of papers and reports produced in the early twentieth century by C.E. Rhodes,[2] at the request of the South Yorkshire Coal Owners Association.

The committee took over the existing atmospheric pumping engines at Westfield (Parkgate) (SK434956) and Elsecar (SK394009) and converted Hemingfield Colliery (SK471869) after coal winding ended in 1920, to a pumping station. A transition from steam to electrical power was progressively made in the 1920s and 1930s at all three locations.

SYDMC was, as the name suggests, run by a small committee of mining experts and employed twenty or so workmen on a range of activities which this article examines. The funding for SYMDC's work came from a proportional charge on the adjoining colliery companies working the seams below the Barnsley Bed (Parkgate, Thorncliffe and Silkstone). The charges are understood to have been calculated on the basis of the water ingress which the scheme prevented into each colliery's 'take' or working area and this was the subject of some discussion and negotiation.[3]

SYMDC went through a second structural change in 1936, to extend its remit to include pumping at other South Yorkshire Pits facing closure where there was a requirement that water extraction should continue. These eventually included Strafford and Rob Royd Pits near Dodworth, formally taken over from January 1939 and also pumping operations at Grimethorpe and Monk Bretton; all three were managed by the respective sub-committees. SYMDC was taken over in its entirety, along with most of the UK's coal industry by the National Coal Board (NCB) in 1947. The NCB and subsequently British Coal continued SYDMC's work largely unchanged, as the South Yorkshire Mines Drainage Unit until around 1990, when the residual activities were contracted out.

DATA SOURCES

Because SYDMC charged the local colliery companies for its services, it needed to maintain comprehensive activity records to support these charges and these are the

Figure 1. The headgear of the Westfield Newcomen engine house being changed over ca. 1936 [Courtesy of Rotherham Archives].

sources on which this article draws. The committee produced an annual report to summarise its activities and expenditure.[4] The author thanks Chris Jones, one of the founder members of The Friends of Hemingfield Colliery (FOHC) for his efforts in locating and making these reports available to the team.[5] They have been particularly helpful in enabling us to identify the timings of major changes on the Hemingfield site.

The details of individual workmen's activities during November 1939 comes from their weekly timecards and if readers will allow a brief diversion, they came into the author's possession as follows: Following a series of surface and underground visits to Silverwood Colliery during its closure and demolition in the first half of 1995, I was told of the existence of a number of older pumping stations that I might be interested to visit. One of these was the 1823 Newcomen Engine House at Westfield,[6] which had served, together with the adjacent workshops and Westfield House (purchased by SYMDC in April 1938), as SYDMCs Headquarters. Access to the interior of Westfield engine house was normally restricted to weekly visits by British Coal's contractors to inspect the switch gear installed in the lower room that previously housed the engine cylinder. The upper floor (which previously contained the pumping engine beam) was accessed independently and not normally visited. I was, however, able to gain access and found, underneath layers of pigeon guano and related detritus, many of the old SYMDC records and other materials. In addition to treasures such as a shaftman's leather harness, lamp racks, a wooden barometer box, the lorry mileage log, a compressed air electric safety lamp etc., the floor was covered in the men's weekly timecards from the 1930s. I retrieved a boxful of the cleaner ones and these have stayed in my loft until Chris Jones' discovery of the SYMDC annual reports prompted me to wonder if the activities recorded in the weekly timecards could be correlated with any of the work described in the 1939 Annual Report. This proved to be the case and in addition to enjoying doing this and learning a lot, I hope the result is of interest to readers.[2]

SYMDC OPERATIONS

Dealing with Groundwater

The study of groundwater travel within and across coal measures exercised the minds of eminent mining engineers of the Victorian and Edwardian eras and was

A TUDOR LEAD MINE AT ASHNOTT, LANCASHIRE

David Went

INTRODUCTION

Ashnott Lead Mine lies in the Newton Fells in the southern part of the Forest of Bowland Area of Outstanding Natural Beauty, about 7km north of Clitheroe in Lancashire. The mine contains evidence of complex and successive phases of mining, potentially originating in the medieval period but clearly documented from the early 16th century. Over time, prior to the 1830s when a major collapse in the price of lead brought an end to these operations, the miners created an intricate pattern of interconnected workings by chasing erratic deposits or ore through the small limestone knoll which gives Ashnott (Ash-Knott) its name. The absence of later or more extensive mining or reworking has preserved these workings in remarkable condition, both above and below ground.

The mines beneath the knoll were partly explored by A.E. Cannell and members of the Northern Cavern and Mine Research Group in 1961.[1] The surface workings - shafts, opencuts, adits, spoil heaps and dressing waste extending over an area of about 2.8 ha - were not surveyed, although their extent was taken into account when the area was designated as a scheduled monument in 1999. Since that time the condition of the monument has given increasing cause for concern, principally due to the subsidence of various shafts and the accumulation of scrap metal and other debris dumped in the hollows to prevent stock from wandering over potentially hazardous voids. The landowners, together with English Heritage (now Historic England) and Natural England are now engaged in a plan to improve fencing, clear the scrap and improve grazing but before this could happen a rapid survey was needed to understand the nature and extent of the mining remains and to identify the locations of the collapsing shafts which require proper and safe capping. The task was given to the northern branch of English Heritage's Assessment Team (formerly Archaeological Survey & Investigation) and happily coincided with our desire to test the effectiveness of a relatively new survey method using aerial photographs to construct a detailed 3D model of the terrain. This method was combined with ground-based observations to inform the interpretations which appear in the full report of this work from which this article is taken.[2]

LOCATION AND HISTORY

Ashnott Mine is located within a prominent knoll rising from the northern fringe of Crag Hill, about 2km south of the village of Newton-in-Bowland where the River Hodder is crossed by the Clitheroe to Slaidburn road (Figure 1). A civil parish since 1866, Newton originated as a township within the wider medieval manor of Slaidburn. Together with the later parish of Slaidburn it was transferred to Lancashire from the West Riding of Yorkshire in 1974.

The workings lie immediately uphill and to the south of a house and barn of mid-19th-century and earlier date (Ashnott Farm) and above a quarried face which may have supplied a former lime kiln situated immediately to the east of the farm buildings. The

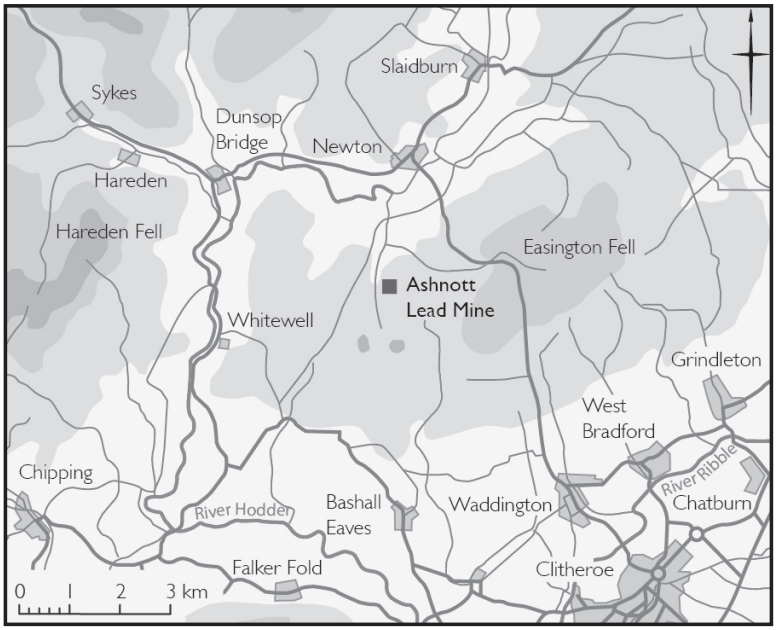


Figure 1. The location of Ashnott Mine. [Drawn by Philip Sinton © Historic England] .

ground to the south, divided into large enclosed fields, rises gently over a distance of some 500m to the foot of Crag Hill proper, whereas to the north and west the ground falls away sharply to the wooded valley of Crag Beck, providing clear views towards the moors which rise into the heart of the Forest of Bowland. In geological terms the mine is located on and within a limestone reef knoll raised by the Slaidburn Anticline and exposed by subsequent erosion of the surrounding Worston Shales. It is one of a number of such knolls to occur along the valleys of the rivers Hodder and Ribble, including that which gives Clitheroe Castle its prominent location.[3]

David Cranstone's entry for Ashnott in the 1993 Lead Industry Step Report for English Heritage (the research which led to the scheduling) listed this mine among the more important examples in northern England.[4] In addition to noting the significance of early forms of workings (i.e. opencuts and rock-cut shafts), he referred to the existence of early documentary evidence, including a suggestion of mining activity at Ashnott in the late 13th century. This possibility had been brought to his attention by the late Mary Higham, a highly regarded medieval historian and archaeologist with extensive knowledge of North West England and the Forest of Bowland. Unfortunately, however, the details of Higham's historical references were not recorded, merely Cranstone's notes on file, the first of which simply referred to a '1296 sough' (or drain) and the second to a map of 1591.[5]

There are no references to the Ashnott mines in Higham's published books and articles, although her numerous works do provide insights into the range of documentary sources with which she was well acquainted. From a reference in one particular article it is possible to suggest that her '1296 sough' may have originated in the estate accounts of Henry de Lacy, Earl of Lincoln, which survive for the periods 1295-6 and 1304-5 and were published together in a single volume in 1884.[6] The later set of accounts include several references to lead, although only two of references these mention precise locations: the movement of seven cart loads and 36 stone of lead from Baxenden (about 15km south of Clitheroe) to Bradford[7] and the sale of this material for £18..18s to the Earl's receiver at Pontefract.[8] In a subsequent list of expenses incurred by the Earl's receiver at Clitheroe, under the heading *'minerae'* (mines or ore), the following are recorded:[9]