

## OBSERVATIONS ON “IRONSTONE MINING IN DERBYSHIRE”

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Dr. Willies's account (Willies 1997) of Derbyshire ironstone mining is to be greatly welcomed as a first view of this important industry. As he so rightly states Derbyshire was, in living memory, an important iron producing county and the availability of the local iron ore was an important factor in the growth of the industry.

I should like to comment on, and possibly expand, some of the observations Dr Willies has made in his article, using as the source a collection of newspaper cuttings from the Derbyshire Times of the period 1850 to 1865. These, for obvious reasons, principally report and comment on events around Chesterfield and the north end of the county.

He states that “each iron producing site appears to have openworked or mined its ore from within a very short distance”. This appears to apply more to some ironworks than to others. For example the Sheepbridge Company, previously the Dunston and Barlow Company, seem to have obtained most of their ironstone very locally to the works, the farthest distant mine being on Glasshouse Common, a distance of no more than 2 miles. The Staveley Company, whilst mining a good deal of their ironstone around Staveley, at the Hopewell Pit and at Inkersall, also obtained a good deal from both mines and opencasts at Hady, some 4 miles away. The farthest flung supply seems to be that used by Messrs. Appleby's, the Renishaw Works, who had local pits around Eckington, a share in the Glasshouse Common pits, but also ran a series of pits at Walton, Chesterfield, a distance of some 7 or 8 miles.

Further to his statement that “some iron ore (or stone) was sometimes ‘brought in’” it is clear that a considerable quantity was brought in. A series of butties and contractors operated their own pits and opencasts and also dealt in ironstone. Robert Pocklington was one such. He operated an opencast iron pit at Brierly Wood, Newbold, where he employed 40 to 50 men. He also operated a brickyard and was involved in a contract for railway tunnel driving. William Higginbottom was another. In 1857 he was buying in ironstone from Unstone for resale to Renishaw.; in 1859 he was described as a colliery owner and in 1860 he was advertising for 30 or 40 good ironstone pickmen. However by 1862 he had become bankrupt, and his colliery had been sold by auction. A W. Higginbottom later advertised as an earthenware salesman in Derby Lane, Chesterfield. Several of the local collieries also produced ironstone which was presumably sold to the ironworking companies. These include Sloads Colliery, Dronfield; the Inkerman Colliery, Brampton; the West Staveley Colliery and the Foxley Oaks Colliery at Whittington. All these collieries were owned by small colliery companies not obviously connected to the integrated iron companies.

With regard to the methods of working ironstone the newspapers only give a few vague clues. Surface openpits appear to have been fairly common and some of them were quite large. Thomas

Dooley was holing at an open hole at Hady when a fall buried him. The face at this time was 12 or 14 yards above him. At the inquest on Amos West, who was killed at the Brierly Wood open pit, the ganger described how the deceased was employed driving horses that brought the waggons from the tip back to the hole, which was a distance of about 200 yards. Another fatal accident, probably also at the Brierly Wood open-hole, describes the quarry as being “50 feet from top to bottom. This was divided into some 4 or 5 levels, the face of the stone getting more backward at each level similar to steps. Deceased was at work on the second level from the bottom picking up ironstone when about a ton of bind fell upon him, though the face was not undermined”. A haulage incline also existed at the ironstone quarries at Birdholme. In 1855 an open ironstone pit at Hady, belonging to Messrs. Knowles, the Brimington Moor Ironworks, employed 15 or 16 men.

Even fewer clues are given concerning the manner of working underground. A coroner's inquest after a fatal explosion at the Hunger Hill Pit, the property of the Wingerworth Iron Company, gives some details. The pit was worked on behalf of the Wingerworth Company by a bailiff, John Renshaw, who did not go underground every day. The inspection duties were performed by Enoch Goodwin, the deputy. The pit was 94 yards deep, had two shafts, 28 or 30 yards apart, and was ventilated by furnace. The men worked by naked lights and the explosion occurred in No. 4 Bord gate early on Monday morning. Accusations were made at the inquest that three-quarters of an hour was not a sufficient period of time on a Monday morning for the deputy to rake and make-up the furnace, fodder the horses and inspect the mine.

An account of an earlier explosion at the Birdholme Pits in September 1857 reveals that a furnace ventilation shaft had been sunk to the Tupton seam of coal several yards below the ironstone workings. The coal workings having been exhausted, the disused levels were used as a reservoir and periodically emptied by pumping apparatus connected to the engine. As might be expected firedamp accumulated in the partly filled levels. Once again the furnace man went down to renew the fire but fortunately returned to the surface, it being a Sunday. In about half an hour, “the fire presumably having reached a certain height, the whole accumulation exploded, carrying all before it - timber, brickwork, and everything on top and bottom of the shaft. The debris was scattered in all directions several hundred yards from the shaft mouth. This is the third explosion that has taken place in these pits within the past year or two, all of which have occurred in a

similar way". Normally from 18 to 22 men worked in these pits.

The Spitalwell Ironstone Mine, where an inundation occurred (Williams 1992), was "worked by two principal shafts, 92 yards deep, one is the engine shaft, and the other the winding shaft. At a distance of about 500 yards from these shafts the workings communicate with another shaft at Upper Hady, called Wagstaff's Pit. The workings from the bottom of the two shafts at Spitalwell divide themselves into two different levels, one called the Top Rake and the other the Bottom Rake". There are usually employed in the mine from sixty to seventy men. Men were employed in the middle district of the Bottom Rake, in the district of the Top Rake, and in the north and south districts of the Bottom Rake.

On a smaller scale were some ironstone pits at the Foxley Oaks Colliery, Whittington. These were 17 yards deep at the most, and ventilated by natural means. However, there were three explosions in the space of a fortnight, injuring 3, including a boy of 12. Following the last explosion safety lamps were introduced.

The multi-shaft winding system at Glasshouse Common, mentioned by Willies and described by Barry Job (Job 1992), was by no means unique. The fullest description of another of these winders concerns one at the Abbey Dale Ironstone Mines, Newbold, which were the property of Samuel Beale and Company of the Newbold Ironworks. It is worth quoting the newspaper report of the inquest into the death of John Smales in January 1861. James Howe, the engine-tenter stated "There are eight different ironstone pits, all worked by the same engine. The nearest pit is about 110 yards from the engine house. The furthest is 200 and odd. Three pits are north east of the engine; three lie east, and two south east. They vary in depth from 34 to 60 yards. There is one drum, with eight different sizes regulating the ropes for each pit. In usual working we draw up and down the eight pits at the same time, that is up four pits and down four pits. We have no printed rules. There is no means of signalling from or to the bottom of any of the pits. If there is an accident, a little lad who hangs on shouts up the shaft to the banksman, who is either there or emptying his corves. There are three bells, one at each for the three pits in different directions. If there is a bell at the banksman's pit, who hears of the accident, he rings it; if not, he shouts to the banksman as whose pit the bell is, and the latter rings it. When they ring, if the engine is going on, I stop it. If they ring when the engine is stopping, I wait for them to bring me word of what to do. In our regular work we go on without signalling. I can see two pits from the engine house, and the banksman "stands at ease" as a signal for me to go on either in raising or lowering. Some of the pits are old coal shafts, but I don't know which. I have known the pits two years and five months. On Thursday, the 3rd. instant, I was in the engine house. Six of the eight pits were working; two were stopped. Smales had been working at one of the pits south-east of the engine house, next but one to the engine house; and about 160 or 170 yards off". Charles Hall, Newbold, overlooker of Newbold Mines, said, "The pits where the accident occurred are called the Abbey Dale Mines, in Newbold Township. They are ironstone mines, the coal has been got: It lay 11 yards below the ironstone, 5 of the 8 shafts are old coal shafts. There are no Rules established under the recent Act, there has never been any printed Rules". Smales had been greasing the ropes as the engine ran and was crushed between the drum and the engine-house wall.

In 1855 a youth named Thomas Marriott was killed at an ironstone pit belonging to Mr. Barrow, of the Staveley Ironworks, at Inkersall Lane. There were four pits worked by one engine and Marriott fell out of the corve and fell 30 yards. He was the second person who had fallen down this pit inside 6 months. The Hunger Hill Pits, mentioned previously, comprised several pits "worked by an engine fixed at the bottom of the valley near where the

Derby road crosses it, about a mile from Chesterfield". Other such systems may have existed at Walton.

The surface stacking of ironstone as described seems to have been common and was also a frequent source of litigation. In August 1857 William Higginbottom sued Miles Mason over the purchase of 101 yards of ironstone. Higginbottom had paid 7-0d. per ton and the ironstone was to be stacked 2ft. 8ins. high, and properly cleaned. He had then charged Mr. Appleby at the Renishaw Ironworks for the ironstone. Six months later the ironstone was weighed by the Midland Railway and shipped out. The tonnage was then found to be short, hence the litigation. In 1860 "Thomas Nash, ironstone getter, in the service of the Wingerworth Company, was brought before the magistrates on Friday week last, for packing his ironstone, in an intention to defraud the Company. It appeared in evidence that it was customary for the contractors, previous to the weighing of their stone at the machine at the furnaces, to receive money every fortnight on account, on a calculation of measurement, on the pit-bank a square yard of ironstone put up in the proper way, averaging a ton weight; but Nash had in this manner been paid £108, on 270 tons, measured in the usual way, but which when weighed yielded only 220 tons, making a deficiency of 50 tons or £20 in money, and the charge against the prisoner was, that this had been knowingly and intentionally done". Another such dispute, involving William Higginbottom, reveals that ironstone was shipped by canal from Whittington to Renishaw Ironworks.

These, and other newspaper reports, demonstrate the human side of the industry and give form to the bare historical facts. In the period between 1850 and 1865 the coalmining industry in Derbyshire changed out of recognition with the expansion of the railway system. Coal that previously had been sold at landsale, or at best shipped by canal or tramway, could now be sold in the Home Counties or other distant markets. However, the ironstone mining industry, although a major industry, did not receive the stimulus of expanding markets and remained very much a localised and latterly a shrinking industry. The legislation of 1850 and 1855 (Job 1991) forced the coal mining industry to modernise itself but the absence of any legislative pressure on the ironstone mining industry until 1860 left it to continue in an outdated and inefficient manner. By 1866 it was already being reported that ironstone had been imported from Lincolnshire and the expansion of the railway system, which proved such a stimulus to the coal industry, was to sound the death-knell for Derbyshire ironstone mining. By 1885 the industry was dead.

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