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SIKEHEAD LEAD MINE, RAMSHAW, NORTHUMBERLAND

by Nigel A. Chapman

HISTORY

Little is known of the early history of the exploitation of the lead veins in the Ramshaw Valley. Certainly by 1700 the veins had been discovered and workings were visible on the ground. In 1713 a lead smelting mill was built at Jeffrey's, suggesting the production of a sizeable output. Most of the ore at this period would have originated from the Jeffrey's group of veins, but the Whiteheaps area could have been prospected and probably worked to a small extent. It is tempting to suggest that the series of grass-covered shaft mounds on the line of the Red Vein may date from this period. These mounds are seen aligned with, but slightly north east of, the incline.

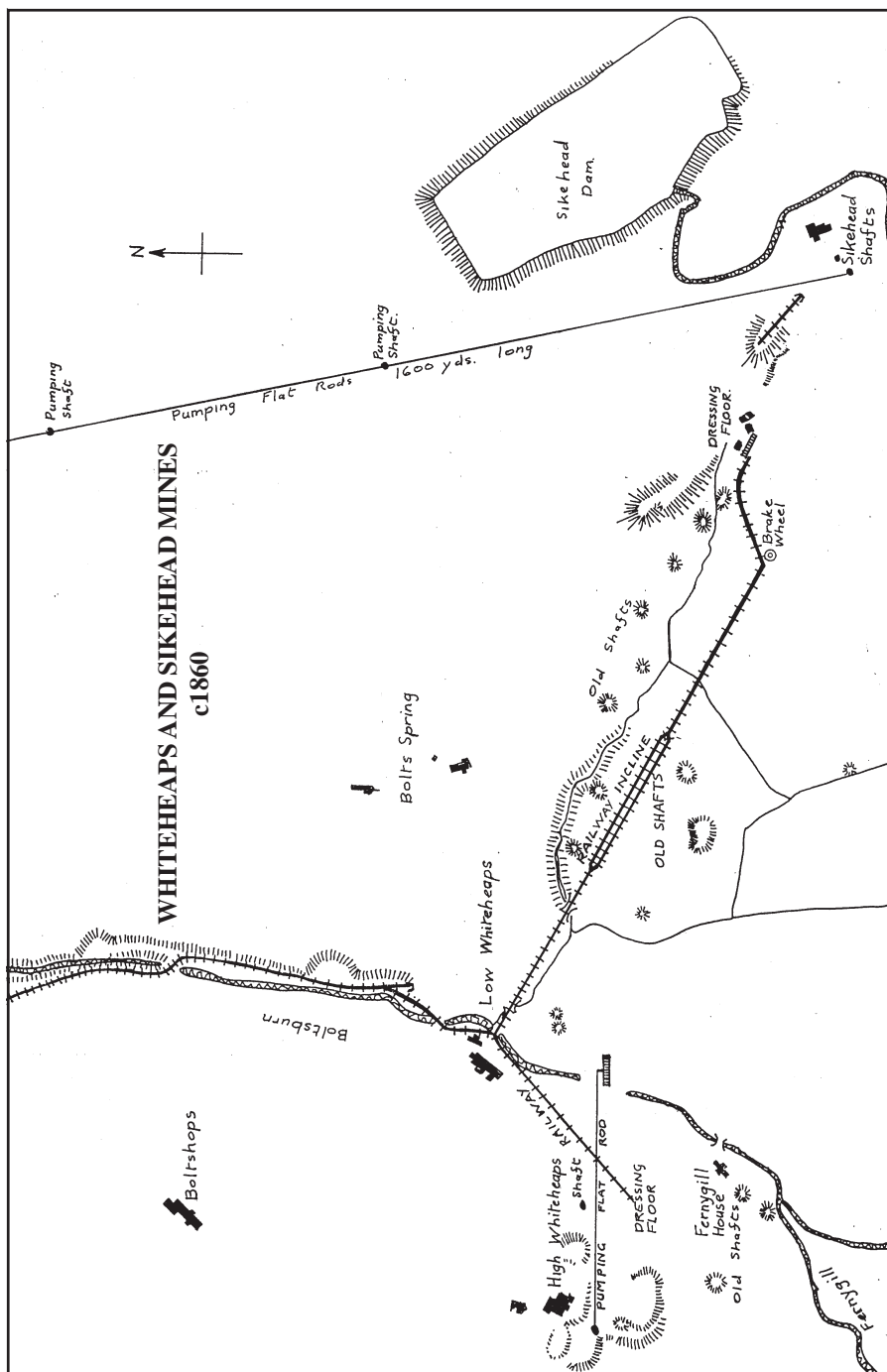
By the early 19th century, several shafts and levels had cut the complex of veins at Whiteheaps and exploration was in full swing. At one point a 100 feet wide opencut is said to have existed. Two mines were developed. One in the valley bottom was known as Low Whiteheaps, while the second, on higher ground to the west, became High Whiteheaps. Workings were developed along the vein complex and gradually to the south west, towards the Sikehead Moors. All the ore was trammed along the levels to the Crag Shaft or Skottowe's Level at Low Whiteheaps.

At some point in the 1840s, the decision was taken to sink two pairs of shafts to test the veins at depth and to centralise the pumping and winding plants. To the north west, on high ground near High Whiteheaps, two shafts were sunk close together. One was to be a pumping shaft and the other was to wind the output. The necessary power was to be provided by a waterwheel.

At the other end of the vein complex, on the moors to the south east, a further two shafts were sunk at Sikehead. One shaft, named Ellen, was to be for winding, while the other, named Ruth, was for pumping. After many unknown difficulties, these shafts were completed to the 80 fathoms level (which was the base of the Great Limestone) by the early 1850s. The driving of a level was undertaken from the bottom of these shafts, but poor ore values were found and operations were suspended.

Mining was concentrated on the existing levels and stopes down to the 50 fathom level, with the output raised by the winding wheels at these shafts. Near the top of each winding shaft, a short level was driven to permit the kiddles to be emptied into waggons underground. In both instances large dressing floors were established at the mouth of each level. In the case of the Sikehead dressing floors, a self-acting tramway incline was constructed to transport the dressed ore down to the valley bottom for delivery to the smelt mills. As the loaded waggons were descending the incline on a rope, the other end of the rope - having passed round a wheel at the top - was attached to an

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empty waggon at Whiteheaps. Once the brake was released, the weight of the loaded waggon pulled the empty one up the incline.

The 20 foot diameter waterwheel at Sikehead was altered to be a winder for Ellen Shaft, while a 48 foot diameter by 4 foot wide breast waterwheel at Deborah's Level in the valley bottom was fitted with 1600 yards of flat rods to enable it to operate pumps in Ruth's Shaft. At High Whiteheaps, a waterwheel placed in the valley bottom, close to the Bolts Burn, performed similar functions at the Whiteheaps Shafts.

For a number of years this arrangement appears to have worked well and enabled a considerable output of lead ore to be raised, smelted and sold at a profit. About 1862 the construction of a private, standard-gauge branch line was begun from the Weardale Iron Co's line at Bolt's Law across the moors to Sikehead. The new line terminated near the Sikehead shafts and the tramway incline was rebuilt to standard gauge and extended to the moor top. Here a steam engine was built on a gritstone block bed, together with a boiler and a coal depot. Loaded railway waggons were lowered by rope, with the aid of the steam engine, into the valley at Whiteheaps and emptied. Coal and lead depots were built at Whiteheaps and goods loaded and unloaded here. The steam engine was then used to haul the loaded waggons to the incline top from where they were taken away to Teesside or to the Tyne by locomotive.

With a ready supply of coal available by rail at Sikehead, the pumping plant was improved and a 40 inch Cornish steam engine was built to pump from Ruth's Shaft. The flat rod system to the 48 feet wheel at Deborah's Level was dismantled and the wheel was either found other work or was removed.

It appears that the output from the Sikehead Mine failed to justify the expense of these improvements, however, and operations over the next few years were gradually run down. Development work moved to the east of the sett, with work centring on the sinking of Taylor's Shaft to test the eastern extension of the vein system. Sikehead shafts, while still producing an output, were no longer the main centre of operations and gradually declined.

During 1872 the 40 inch Cornish pump was advertised for sale and was later removed by the railway over Bolt's Law to a new situation, probably to be reduced to scrap in the furnaces on Teesside.

The plant was demolished and the buildings, including the chimney, abandoned to the wind and rain. In about 1920 the Hunstanworth Mines Ltd reopened the mines to produce both lead and fluorspar, with some prospecting being done on the site. A vertical boiler with a steam engine from a scrapped ship was fitted to wind from the Ellen Shaft. By this period Ruth Shaft had probably collapsed into the hollow which remains today and was of no further use. The steam engine had been made originally at Trelborg in Denmark by J.O. Petersens and carried the number 268. It had been a winch

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on a ship but, being low geared, was useful as a winder at the shaft. When the mines again closed in 1931, the engine and boiler were left on site to be slowly reduced to scrap iron by visitors.

The mines were reopened in 1945 to supply high grade fluorspar to be used as a flux in the production of steel. Eventually taken over by the British Steel Corporation in 1967, the mine supplied fluorspar to some of the Scottish steel plants until it was sold to Weardale Holdings in 1983.

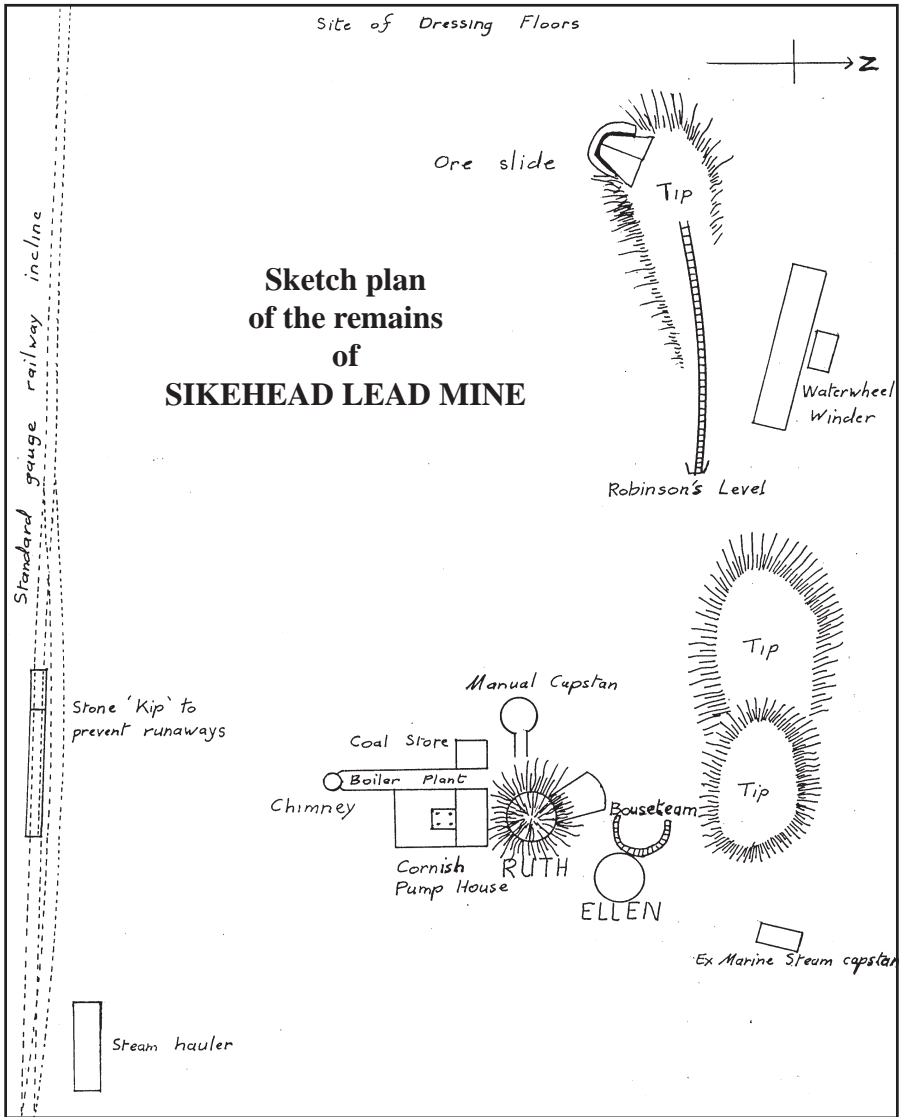
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By April 1982, when we first visited the site, the Cornish pump house had collapsed into the hollow of Ruth's Shaft and the cast iron trunnion that once carried the beam lay near Ellen Shaft. Some excavation in the foundations of the house soon revealed the stone cylinder bed with four bolt holes through it. West of the house were the stone foundations of the boiler plant, terminating in a squat, round, stone-built chimney still in good condition. Further west was a small coal house for the boiler, with a pit for a man-operated capstan next to it. The capstan had been constructed so that the drum was below ground level with a walkway over the rope track.

Ellen Shaft was still open with a concrete cap with a small hand-operated capstan bolted to it. To the east of the shaft top was a stone-built bouse team. However, most of the ore was landed below shaft top in Robinson's Level and trammed along this short level to the dead heap. Built into the far end of the tip was a fine stone-built ore slide of best Cornish design and totally foreign to the area. Ore would have been hand cobbled at this point before being moved slightly down the hillside to the dressing floors, once a waterwheel-powered crushing and dressing plant, but now a few heaps of large pieces of gangue with several heaps of finely crushed material. A track could be seen leading to the incline to allow the concentrated ore to be taken down into the valley and away to the smelt mill.

Beside the mouth of Robinson's Level stood a wooden post with several holes bored through it, plus some marks of an iron strap. This post was believed to have been part of the flat rod system formerly pumping in Ruth Shaft. To the north were the stone foundations of the 20 foot diameter waterwheel, once the winder for Sikehead. Next to the wheel pit was the smaller pit for the winding drum. Slightly further north was a stone pier for the water supply from the nearby reservoir to operate the winding wheel.

During 1993 a return visit was made to the site following the closure of the fluorspar mine. Very little then remained of the Whiteheaps mine in the valley bottom, most of the site being an expanse of white gangue, but climbing the incline to the Sikehead shafts, we found a large stone with a fine example of a rope mark and a couple of holes for a railway chair. At the incline top the stone foundations of the engine bed remained, again with several holding bolt holes in them.



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At Sikehead the remains were much as before except for the removal, probably as part of the salvage operations, of the steam engine and the beam trunnion from the site.

LATER HISTORY

The Derwent Mines were taken over in 1857 by the Derwent Lead Mining Co. with a capital of £84,000 in shares of £300 each. They employed John Taylor & Sons to manage the mines and allowed them to introduce Cornish methods and equipment, using terms such as 'tribute work' for bingtale and 'tutwork' for fathomtale. The company also appears to have brought in several Cornish miners to establish the new system. The resident manager was John Morpeth, who would have been responsible for the construction of the distinctly Cornish remains still visible today. Parallels can be drawn from the extant remains of other mines, mainly in mid Wales, worked by John Taylor & Co. In fact, the major lead mines of the Aberystwyth area appear to have been developed mainly by Cornish mining engineers during the last century. The capstan noted at Sikehead is similar to an example beside Skinner's Shaft at Cwmsymlog Lead Mine near Aberystwyth, formerly operated by John Taylor & Co. The ore slide has parallels with examples in the Rheidol Valley and at the Llettyevanhen Lead Mine near Aberystwyth, while at the Minera Mines, near Wrexham, examples of both ore slides and the capstan have been preserved following excavation.

One notable item on the list of Cornish introductions is the use of a long run (1600 yards) of flat rods to pump the Sikehead shafts. Such lengthy systems of rods were quite common in Wales, while the example quoted here, plus the system to Taylor's Shaft, again on the Derwent Mines, appear to be the only North Pennine examples. Can anyone add to the list?

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Examples of pump rods in Yorkshire are:-

Mine	Location	Shaft	Yards
Keldside	Swaledale	Engine	190
Braithwaite	Wensleydale	Engine	610
Grassington	Wharfedale	Coalgrovehead	713
		Coalgrovebeck	317
		Brunt's	296
		Old Moss	950
		Beevers	384
		New Engine	415
Hebden	Wharfedale	Engine	317
Cononley	Airedale	Engine	50
		Hope	560