PRIDDY MINERIES

A WALK THROUGH HISTORY

Acknowledgements:
Somerset Record Office
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Chris Richards
Chris Winter

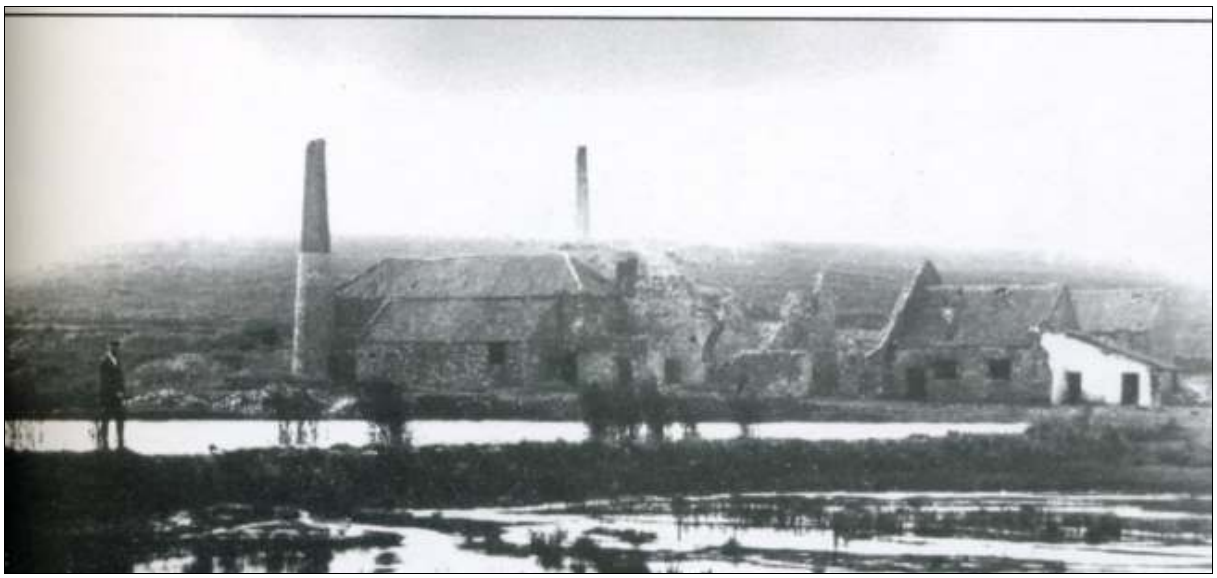
Priddy Lead Mines.

Visitors to Priddy cannot miss the village green with its sheep hurdle. Most historical accounts of the village centre on the ancient sheep fair, which has taken place for centuries on The Green every August, traditionally a continuing event as long as there is a hurdle on the green, but although the Priddy Mineries, where the Chewton and St. Cuthbert's mines once operated, is reputedly a favourite picnic spot for families nowadays, in truth many of us who know Priddy and do not live that many miles away from it are totally ignorant of its industrial past, but an observant eye can still pick out some evidence of it, especially when it is not covered by summer foliage.

Lead mining has taken place on the Mendips for many centuries, from Roman times and even before. By the 16th Century it had become sufficiently economically viable to be split into four areas known as 'Liberties', each with a Lord Royal and agents or Lead Reeves, to whom miners were required to pay tythes., collected on Lady Day and Michaelmas. The Lords Royal and their Liberties were Lord Richmont for Smitham Hill, The Waldegrave Family for Chewton Mendip, The Abbot of Glastonbury for Charterhouse and The Bishop of Bath and Wells for Priddy.

Mining continued into the mid 19th century, and in 1854, Mr Edward H Barwell and his partner Mr T.S.Wright bought the lease of the Chewton Minery from Earl Waldegrave. They had new shafts sunk, but failed to discover new lead deposits, so consequently had to be satisfied with the re-smelting of existing slag, left by earlier less efficient methods.

Typical waste slag, much of which can still be seen near the site of St. Cuthbert's Works.
[marked (*a*) on map on page 17]

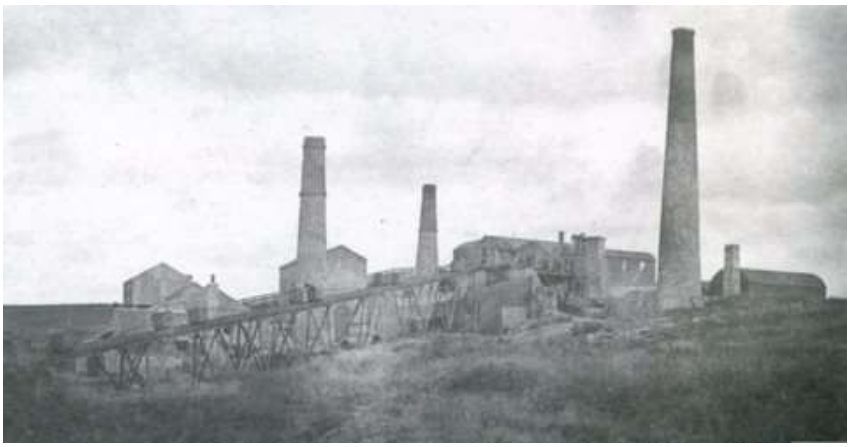


A late 19th century photograph of the causeway across the Waldegrave Ponds, showing the Chewton Mine buildings, already in a state of decay. [(*b*) on map]

All that remains of the causeway today, looking towards the barely recognisable bumpy site of the Chewton buildings on a typical Mendip misty day, the overgrown ponds now being boggy ground.

According to the Censuses, 40 men were employed in 1869, but this was the year when the mine was first closed. Work resumed in1875, but although no lead workers are recorded on the 1881 Census, 23 people were employed in1890.

Although there is little to see of this once thriving industrial site, fortunately, some old photographs do still exist.



These two pictures of the St. Cuthbert's were taken in 1908,
after the erection of the third chimney, shortly before the closure of the mine. [(*c*) on map]

This view of the St. Cuthbert's Lead Works shows The Beeches, miners' cottages, on the right.

And here is the same scene today. Mineries House still stands to the left, but the cottages, now obscured by large trees, are much modernised.

The line of the road can be clearly seen in both photographs. [(*d*) on map]

The 1901 Census shows names which still occur in the village today. Labourers at the Lead Mines recorded are John Matthew Weeks 25, Herbert J. Salvage 18, Stephen Speed 40, William J. Brock 47 and William Y. Brock 19, the last two possibly being father and son. Another member of this family, Wilfrid Brock 17, was a young Engine Driver at the Lead Mines. These men must have been some of the last employees, as the St. Cuthbert's Lead Mines closed in 1908.

It is difficult to find first hand accounts of the mine workers' experiences, but according to Gough, writing in 1930, in the middle of the 19th century the process was briefly as follows:

'Considerable quantities of metal were extracted from the masses of refuse left behind by former generations of miners. Although this had been done in previous centuries, by working this material over again in more modern and powerful furnaces, it was possible to extract lead from it, even

though much of it had already been smelted at least once before. Only about a half to two-thirds of the lead content had been previously extracted.
Barwell and Wright's improvements included reverberating furnaces and round buddles for dressing the materials, before smelting. These buddles consisted of shallow circular pits in the ground, varying from 20 to 30 feet in diameter, lined and rimmed with bricks or masonry, with the bottom sloping gently from the centre outwards to the circumference.
In the centre a kind of boss or dome of masonry was usually built, though some had a cup-like hollow instead. Through a launder (a wooden channel or shoot, V-shaped in section), a constant stream of water poured into the centre of the buddle. The water passed into the buddle from a trough or hopper, into which the slimes and other debris were shovelled. The larger lumps were there kept back by a perforated zinc grating and were cleared out from time to time, but the finer portions flowed down in suspension, into the buddle. Arrived there, the heavier and more metalliferous parts tended to settle around the centre, while the lighter stuff slid farther down the sloping bottom towards the rim, and it was encouraged to do so by an apparatus that was kept continually revolving over the surface of the buddle. Radiating from a vertical axle were four long arms (two on a small-sized buddle), from which were hung brushes of bass, or sometimes simply bunches of heather or furze, or bits of sacking or leather, and as the buddle filled up with deposit, the moving brushes were adjusted in order to keep them always gently in contact with the surface of the slimes in the buddle. The buddles were generally arranged in sets of half-a-dozen or so in a row, with their revolving arms geared up to a common source of motive power, usually a capstan worked by a horse or donkey, walking round and round. Sometimes in the smaller buddles, the apparatus was kept turning by a small boy.

When the buddles were full, the machinery was stopped and the water cut off. The centre portion of the deposit, consisting of the heavier material, was called the 'head of the buddle'. This was the richest in lead and was carted to the furnace. Outside this were the first and second 'middles', progressively less rich, which was generally sent back to be buddled over again. The 'tailings', which settled at the outer edge, were composed of soft mud and were generally thrown aside.

Dressing apparatus of this kind was in use in all the lead-workings on Mendip in the second half of the 19th century, but although they economised labour, compared with the old-fashioned hand-jigging sieves, they were nevertheless wasteful.

The dressed materials were smelted into metal in furnaces, in which a blast was created by rotary fans driven by a steam engine. The effect of smelting lead in a forced draught is to cause a large proportion of the metal to be volatilized, so that it passes off in the form of vapour. Were this to escape, most of the lead would be lost, so to prevent this, long horizontal flues were built along the surface of the ground, often in rows, side by side. The smoke, heavily charged with lead vapour, had to pass through these flues before it ultimately escaped by the chimney-stack at the end, and the soot, which was deposited on the inside was periodically collected and re-smelted. It was found that about three-quarters of all the lead produced came from this soot and only about a quarter flowed directly into the lead-pot of the furnace itself.'

Although nothing but a few lumps and bumps in the hillside remains of the old Chewton Mine buildings, the lines of the flues along the neighbouring hillside are clearly visible. [(*e*) on map]

In the 1850s the northern pool, just north of the St. Cuthbert's Lead Works buildings, was dammed to provide a supply of running water for sifting and washing slag, after which the water was allowed to drain away through swallets. A swallet is a natural hole cause by the removal of soil or rock by flowing water, and it was this flow of water which was the origin of the dispute over water supply.

The Northern Pool today, a haven for wildlife, including rare amphibians. [(*f*) on map]

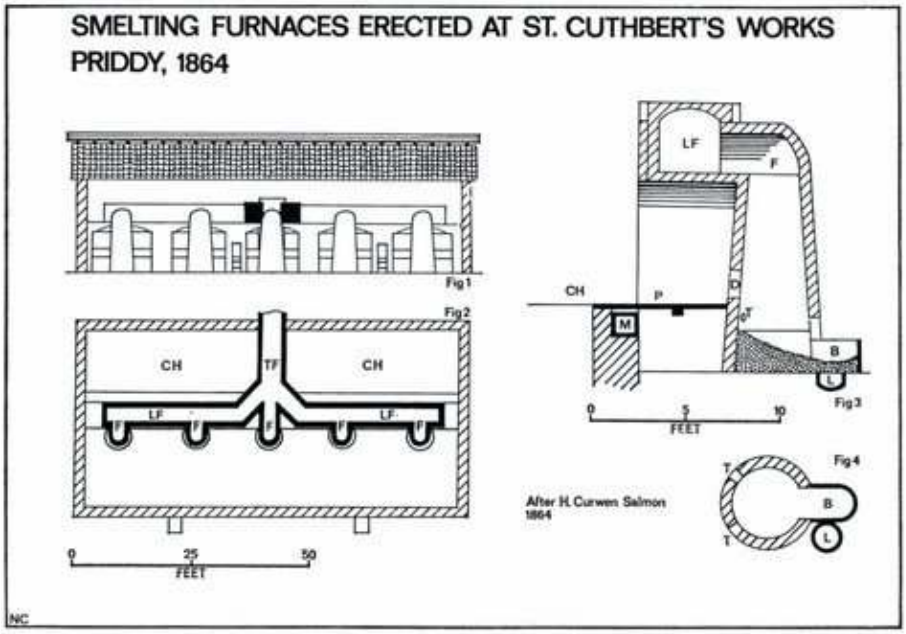
Legal action over the water supply.

The main source of the River Axe, which flows out of the Mendips through Wookey Hole Cave, was discovered because of a 19th century law suit linked with the Mendip lead-mining industry. The Axe is chiefly fed by the sink hole known as Plantation Swallet near the ruins of St. Cuthbert's lead works in the Priddy Pool and Hunter's Lodge locality and was used by the lead workings for extracting lead from the ore, between here and the paper mill, after which it drained away down the swallets. In the mid 19th century there were complaints that the water emerging at Wookey Hole was being heavily polluted by the lead works, making it unfit for the production of the high quality paper, for which Wookey Hole Mill had become famous. Mr Hodgkinson, the owner of the Paper Mill, brought a law suit against the mine owners in 1861, which resulted in an investigation into the matter. Venetian Red was poured into the swallet at Priddy, which emerged at Wookey Hole, thus proving that it was the same stream feeding both industries. Pure, clean water being vital to the process of paper-making, a further case brought before the Queen's Bench, directed the miners to ensure that no polluted water went down the swallets in future. This of course was a major problem for the lead works and a source of recurrent complaints.

Barwell and Wright had the opportunity of buying the St. Cuthbert's Minery, but were not prepared to pay the asking price, so it was acquired by Nicholas Ennor in 1857. Having regretted losing Priddy Minery, Barwell and Wright made difficulties over the water supply for Ennor. Barwell had built a reservoir to supply Chewton Minery and now proceeded to build channels directing surrounding water into it, finally raising an embankment to the south of the reservoir, thus preventing water reaching St. Cuthbert's, which was lower down the valley. This led to Ennor threatening legal proceedings, his men cutting openings in the embankment and finally to free fights between the workmen of the two mines and further legal battles between the owners.

The large reservoir to the north of Chewton Mines is now a popular haunt of fishermen.
[(*n*) on map]

Ennor sold up in 1862 to a Cornishman rejoicing in the name of Horatio Nelson Hornblower. He lost no time in erecting five new furnaces, fitted with more efficient blowing apparatus, driven by a new, more powerful steam engine. Unfortunately the results were not as successful as he had hoped.



Smelting furnaces erected by Mr Hornblower at St Cuthbert's works, Priddy in 1864, based on a drawing by H. Curwen Salmon.

Over the following years St. Cuthbert's passed through various ownerships and improvements. New shafts were sunk, but found almost nothing. By about 1897 the installation of a 'concentrating and smelting plant of the most modern description' was nearing completion. Instead of the obsolete and extravagant round buddles, there were 'revolving barrels for disintegrating or pulping the crude material, a picking belt for the rough materials from the barrels, (mechanical) jiggers, Wilfley tables and a Frue vanner.' Settling ponds were constructed and as the water from the dressing operations slowly passed through them, the tailings and the slimes in suspension, instead of being wasted, would be precipitated and collected, while the clarified water would be pumped and used over again. The dressed concentrates were to be briquetted by machinery and smelted in a water-jacketted blast furnace, which it was thought, would be a more efficient mode of condensing the fume than the old-fashioned condensing flues.

A late 19th Century inspection revealed that the supply of hot instead of cold water to the revolving disintegrating drums, a new venture instituted by Mr. Jones, the Manager, greatly facilitated the pulping of the material. It also reported that the tramroads, constructed from Jarrah wood, were strong and expected to be very durable.

Nearing the end of production in1908, featuring Mark Charles Lovell, and all that remains of this site today. [(g) on map]

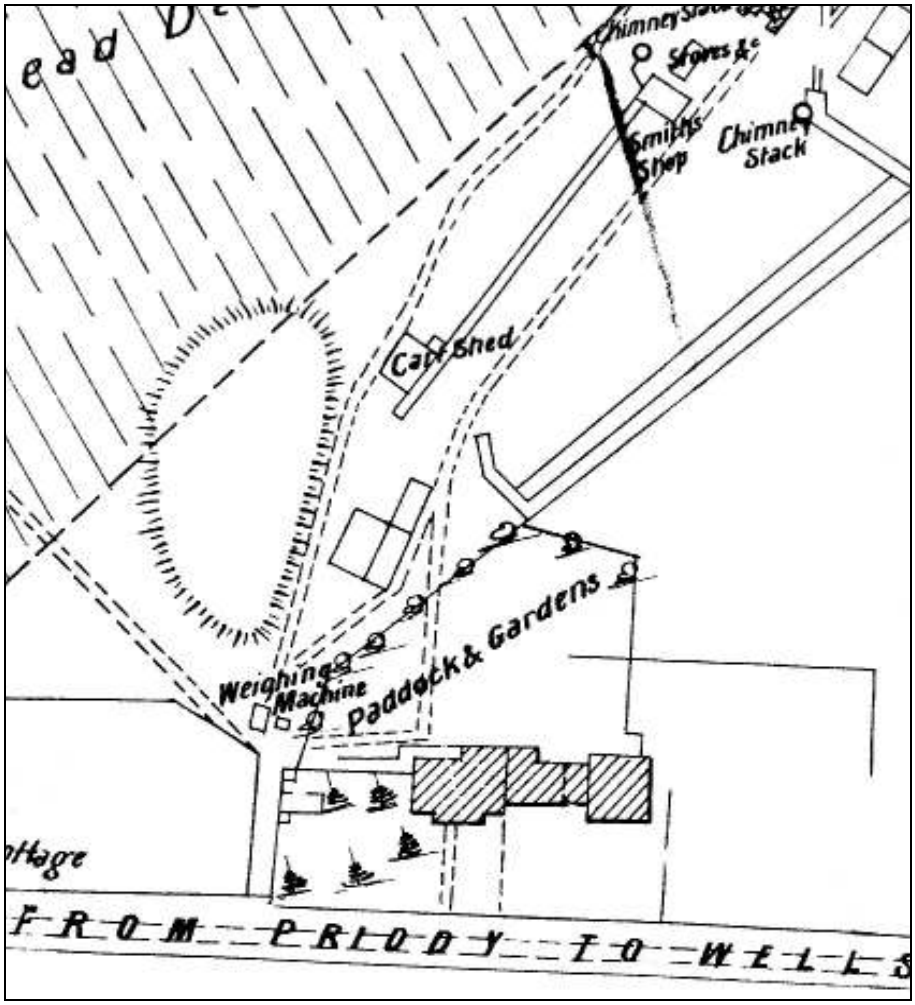
Although an observant eye can pick out a few isolated remains, little evidence of this once thriving industrial site now remains. These are some of the hard to identify remnants of the buildings at St. Cuthbert's, possibly connected to the washing process and what appears to be a flue. [(*h*) on map]

[(*i*) on map]

There was a long line of buddles on the opposite side of the tramway to the Northern Pool, but all evidence of these has disappeared, except for one small area of masonry, (seen above, lower right) which is covered by undergrowth except in winter or early spring

Two views of the remains of flues near St. Cuthbert's. These were built just below the ground, rather than above it, as this was found to be more successful in the condensation process. The close up view is of the flue on the right. [(*j*) on map]

Typical terrain (gruffy ground) near the site of St. Cuthbert's Works. [(*k*) on map]



The old entrance to St. Cuthbert's is still the entrance to The Mineries area. The two ruined buildings, including the old weighing machine to the left of the track, are visible in the old photograph shown earlier and the still existing intact building a little further along the track is the one now used by Shepton Mallet Caving Club. This is marked as the cart shed on the above 1904 map, but appears to have been converted into a cottage at some later date.

[(*l*) on map]

The building now used by the
Shepton Mallet Caving Club. [(*m*) on map

The Mineries today

Since the closure of the mines, the site has been left to nature, the soil being so heavily polluted with lead as to be unsuitable for normal agricultural use. It provides a natural habitat for many species of flora and fauna, which flourish in lead-rich soil, in particular rare species of amphibians, resulting in the Priddy Mineries being designated a Site of Special Scientific Interest. (SSSI)

It is now a popular site, not only for the picnickers and lovers of natural history, but also as a challenging venue for cavers. Caving as a sport and science started on Mendip in the late 19th century. Local cave explorers deduced that a large cave system must exist under the Mineries to channel the small streams which sink in the swallets down to their resurgence at Wookey Hole Cave. Just after the Second World War efforts were concentrated on a swallet depression under a cliff face almost opposite the ruined smelting works.

In 1953 cavers broke into a vast cave system which eventually became known as St. Cuthbert's Swallet, entered by this rift.

Over the next few years they explored over 22,000ft. of passages and chambers, many of them superbly decorated with stalactite and stalagmite formations, and reached a depth of 477ft. Here the stream runs into a mud choke which has so far defied all attempts to dig it out. The cave is regularly visited by present day cavers led by experienced leaders who ensure that the highest standards of conservation are maintained.

Fingers

Curtains

[Photos from the Dave Irwin Collection]

In the 1990s, cavers from a number of Mendip clubs started excavating blocked mine shafts near the edge of Stock Hill forest in the hope of re-discovering the workings driven by the 17th century mining entrepreneur, Thomas Bushell, who planned to drain the lead mines by intercepting an

underground natural streamway. Two significant mines were opened up – the Five Buddles Sink and the Stock's House Shaft, evidence dating these workings to the 18th century, although they had been enlarged in the 19th century to take the water discharged from the ore cleaning processes.

Two caving clubs have huts adjacent to Priddy Mineries, the Bristol Exploration Club and the Shepton Mallet Caving Club, while a third major club, the Wessex Cave Club, has its headquarters a mile to the west. The Priddy area has many large cave systems, including Swildon's Hole and Eastwater Cavern, which have been extended using techniques such as digging, climbing and diving.

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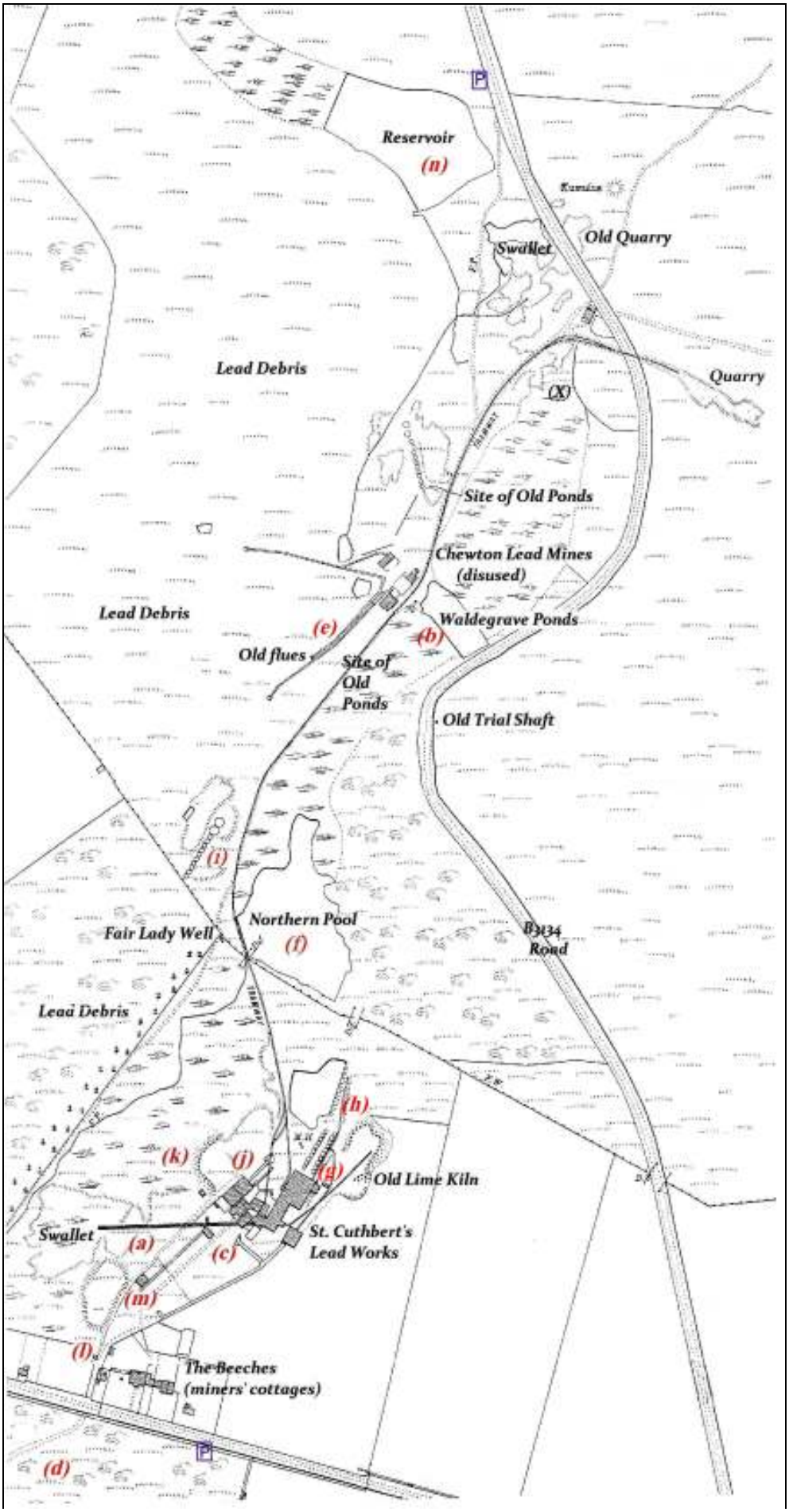
The following map is based on an early Ordnance Survey Map of 1904, showing the area of the Priddy Mineries, with the St. Cuthbert's Works still in production. Although Chewton Mines are no longer in use, the formerly disputed water sources and tramways, now the course of footpaths, are clearly shown, as are the rows of round buddles near the various water supplies.

The road at the bottom of the map leads to Priddy village to the west and the main A39 Bristol Road to the east.


Reservoir
(n)
Swallet
Old Quarry
Lead Debris
Quarry
(X)
Site of Old Ponds
Chewton Lead Mines
(disused)
Lead Debris
(e)
(b)
Waldegrave Ponds
Old flues
Site of
Old
Ponds
Old Trial Shaft
(i)
Northern Pool
Fair Lady Well
(f)
B3134
Road
Lead Debris
(h)
(k)
(j)
(g)
Old Lime Kiln
Swallet
(a)
(c)
St. Cuthbert's
Lead Works
(m)
(l)
The Beeches
(miners' cottages)
(d)