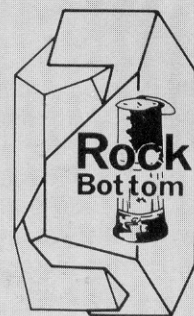


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'From under the Sea'

By James Clarke Hooke (1819 to 1907) (Painted 1864)
Showing the Boscawen Diagonal Shaft at Botallack Mine,
St. Just, Cornwall.

Reproduced by permission of City of Manchester Art Galleries.

The history of Ystrad Einion Mine

S.J.S. Hughes

Mining Services, Talybont, Dyfed, Wales

One of the most impressive remains of Nineteenth Century metalliferous mining in the United Kingdom is the Cwm Einion waterwheel. However in comparison with nearby Cwmystwyth, Goginan or Darren Mines, Cwm Einion's output was insignificant and its history is little documented. In this brief article, the history of the mine, from its discovery to its abandonment, will be delineated and further consideration given to the present day remains.

Passing through the village of Furnace in North Dyfed, between the towns of Aberystwyth and Machynlleth, one cannot fail to notice the impressively restored remains of the Dyfi Furnace standing on the banks of the River Einion with a picturesque backdrop of waterfalls and oak woods. Following the meandering track up the valley for two miles the remains of the Cwm Einion mine can be seen both in the forest and out onto the open moor.

It is almost certain that the mine was discovered by employees or agents of the Company of Mine Adventurers about the year 1700 in their frantic search for mineral wealth in Mid-Wales. The Company acquired the entitlement to the mineral rights in the late 17th century from the Pryses of Gogerddan but, due to mismanagement and fraud they became inactive after about 1710 and eventually their leases lapsed, the mineral rights reverting to the Gogerddan Estate.

The next lessees were the Flintshire Mining Company who acquired a reputation for not settling their accounts. Work at Cwm Einion eventually commencing sometime about 1745. The records do not clearly show when they abandoned the mine but it is unlikely to be any later than 1770.

The Gogerddan Estate had re-established its claim on the site following the expiry of leases to the Mine Adventurers. Their records though incomplete, suggest there was no work undertaken from about 1760 until 1853. In that year a lease was granted to Sir Charles Kirkpatrick and Thomas Readwin for 21 years and the property became known as the Ystrad Einion Mine. Kirkpatrick and Readwin also took the lease from the estate of several other small mines at the same time, all in the vicinity of Talybont, although none met with any success and the Ystrad Einion lease was surrendered within the year.

The next lessees are recorded as being Thomas and Henry Jones who took the lease for 21 years from 1855 but abandoned it in 1869. The lease was then taken up by Mr. Adam Mason of Horwich near Bolton in about 1870. It would appear that by this date all the ore above adit level had been stoped away and that the mine had three main adits to the east driven in an attempt to discover further reserves. The most recent of these adits was a long cross cut driven from the western part of the mine into a fairly rich pod of copper/lead mineralisation below the old stopes. About 20 fathoms above this was the crosscut driven about a century previously by the Flintshire Company. The shallow adit, probably driven

by the Mine Adventurers, was about 12 fathoms higher and intersected the lode a few fathoms in from its mouth. However the lode was rather poor and a drift was extended to the west where a reasonable quantity of ore was discovered and stoped away to the surface.

Mason's only option was to deepen the mine either by a new shaft or by driving a very long adit. Sinking a shaft on the lode at the end of the adit was the cheaper option and this was carried out in the summer of 1871 down to a depth of 12 fathoms and a level commenced. This was abandoned with the onset of winter when the water became more than could be handled with the water kibbles. The lode was reasonably rich and the terms of 1/14th were acceptable enough to view the deepening of the shaft as a profitable proposition.

It was therefore decided to continue the winze on down to the 24 fathom level with the assistance of a waterwheel in the stopes to draw both the ore and water. All the water from the old mine flowed down a winze below the middle adit into this stope and was further supplemented by cutting leats to the river Einion from the mouths of both the upper adits. In the middle adit the water appears to have been channelled through box launders before being discharged into the winze.

By 1874 the value of the lode had been tested and it was felt that the mine deserved further capitalisation. Absalom Francis suggested that for an investment of £3,000 a new plant could be provided and a new shaft sunk behind the dressing mill to a depth of 50 fathoms below adit level. During the course of 1875 Adam Mason raised the necessary finance for the development of the mine in depth, and during 1876 the Engine Shaft was down to 30 fathoms below the adit. Building of the new dressing plant was well underway and three waterwheels had been erected, a 30 foot by 3½ foot for driving a jaw crusher and Cornish Rolls, another of 22½ feet by 3½ feet for pumping and drawing, and the smallest, 18 feet by 3½ feet for driving the jiggers and buddles.

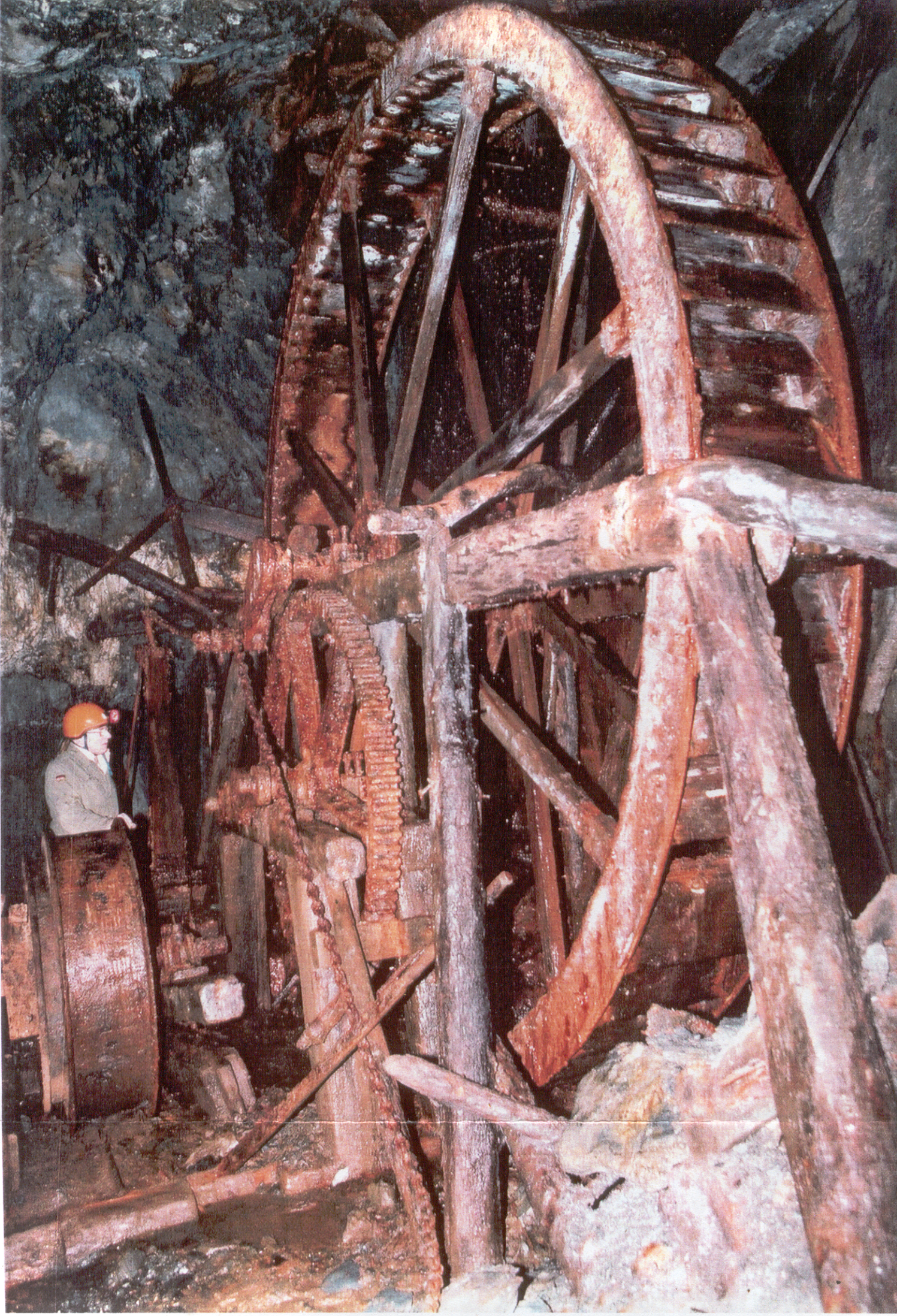
The shaft reached its ultimate depth of 50 fathoms and the surface works were completed during the summer of 1877. The jubilant Adam Mason, now in partnership with a Mr. Richards, held a celebration dinner for the staff at the Black Lion Hotel in Talybont on the 21st September.

By 1880 the mine was failing but Adam Mason persevered and finally in December of that year sent the official royalty return form to John Graham Williams, the Gogerddan Estate Mineral Agent,



Cwm Einion Waterwheel

Photo: Mr. I. B. Richards



showing that the company had raised sufficient ore to prepare 20 tons of poor grade zinc concentrate which had been sold to the Swansea Vale Spelter Company at 10/- per ton "due to it not being clean enough". From the £10 that Mason received for the ore a 24th of its value, (eight shillings and four pence), was sent by postal order to the Estate. 1881-1883 were non-productive years. Mason's agent, Thomas Thompson, observed the formality of informing Williams "No ore sold this quarter". By 1885 the situation had worsened to "We have not made any returns whatever during the last year". During the unproductive decade from 1881 to 1891 salaries had been paid for a total of 59 man years. Costs must have amounted to some £2,500 over this period. It is surprising that Mason did not abandon the mine and sell the plant to recoup his losses. 1891 saw ores to the value of £59 being sold. This consisted of five tons of 70% lead concentrate containing about 600ppm. silver, 10 tons of 20% zinc concentrate, and five tons of 5% copper concentrate. Four tons of 75% argentiferous lead concentrate were sold for £27 in the following year. Production then ceased until 1896.

Returns of 20 tons of 22.5% copper ore were made in 1896 by eight miners who appear to have hand picked the ore from a rich lens as it required no dressing.

The following year a similar quantity of the same grade ore was worked by two miners with the assistance of a solitary surface worker. These 40 tons of ore realised £280 and represent the last ore to be raised from the mine.

Apparently the dressing mill, waterwheels and other surface plant were dismantled at the time of abandonment and it cannot be ascertained if they were sold to one of the few remaining mines still working or broken up for scrap.

The latter option seems the most likely as low metal prices were responsible for the decline of the Cardiganshire mines. By about 1914 the site was derelict and the workings flooded up to the T&H Jones adit. Some odds and ends were left on the site such as the pumping bob, the pumping column, parts of a worn out roll crusher and the complete shaft head installations and wheel at the end of the adit. Some local lads removed the top brasses from the wheel but failed to remove the bottom set with the simple equipment that they had taken with them. It may very well have been these same people who detached the winding drum from the framework of the wheel. When they eventually returned to salvage the bottom brasses a fall in the mouth of the adit had damned back the water and they abandoned their mission.

This story was told to me by Mr. Felix Roberts, an ex Bwlchglas and Bryn yr Afr miner, on the evening of 16th September 1971. He supposed that it was still there, and next morning I confirmed the fact. The water was backed up to about four feet deep behind the fall in the adit mouth. Volume 3 of the Old Metal Mines of Mid-Wales (Bic, 1976) and Yesterdays Golcondas (Bird, 1977) include mention of these remains. These references caught the attention of the late historian Wynford Vaughn-Thomas. As a result the water level was reduced so that the remains could be filmed by the B.B.C. for a series of industrial archaeology programmes.

During early 1984 plans were announced regarding the removal and preservation of the wheel, winding drum and pumping column for re-erection at the George and Charlotte Mine Museum at Morwellham in Devon.

Mining historians and preservationists were outraged by the proposals and raised objections. Problems of ownership of the remains arose as the mine workings lie under Forestry Commission property and a farm. The mineral rights are vested in the Trustees of the Gogerddan Estate. The general consensus of opinion was that the wheel should be preserved in situ or be housed at the Llynwernog Mining Museum. However the Mining Museum felt that it was important to preserve these remains in situ and that it would be possible to re-create such a feature using another waterwheel of similar dimensions at both Llynwernog and Morwellham.

The Ceredigion Mines Group proposed a scheme for the preservation of the surface remains using Manpower Services Commission funded labour. The underground remains were to be preserved by members of the society on a voluntary basis. Problems arose when it transpired that the Manpower Services Commission were not prepared to allow their employees to work in the vicinity of open mine workings and the Mines Group felt that they were unable to act as permanent custodians of the site. The District Council and the National Trust were approached but felt that the responsibility attached to the site under the Landowner's Liability Act was more than they wished to undertake.

At present the situation is stalemate. The surface remains continue to deteriorate, it is only a matter of time before ruin is total.

ACKNOWLEDGEMENTS

My thanks to Dave Ely-Brown and Steve Simmons for their assistance in surveying the underground remains, to Ifor Richards of Aberystwyth for the photograph of the waterwheel, to Dr. Marilyn Palmer of Leicester, the staff of the National Library of Wales for access and assistance with the Gogerddan Estate records, and finally to the late Felix Roberts who inspired me into getting very wet.