

South Wales RIGS Group Site Record RIGS Description

SECTION A

General	South Wales
Site Name: Talachddu Copper Mine	File Number: DH_3
RIGS Number: 754	Surveyed by: AJ Humpage / D Hawley
Grid Reference: SO 08510 34243	Date of Visit: 8 October 2011
RIGS Category: Historical	Date Registered: Unknown
Earth Science Category: Mineraology	
Site Nature: Wooded valley	Documentation prepared by: AJH
Unitary Authority: Powys	Documentation last revised: 13 October 2011
OS 1:50,000 Sheet: 188	Photographic Record: See images attached to this report
OS 1:25,000 Explorer Sheet: OL13	
BGS 1:50,000 : Sheet 214 (Talgarth)	

RIGS Statement of Interest: This site forms part of a network of significant historical sites across the South Wales RIGS area.

The Old Red Sandstone in mid Wales is largely barren of mineral veins of any worth. However, at this location within the Silurian age Raglan Mudstone Formation has been reported chlorite, galena, blende, feldspar and copper and iron pyrites. The origin of mining at this site is uncertain, but by October 1817 one David Mushet was operating a mine on lease from the Lord of the Manor of Talachddu. The lease was re-let in 1819, but the mine was soon was soon abandoned, and a document of 1904 indicates the site was not reworked after abandonment (Lloyd's Historical Memoranda of Brecknockshire vol 2 1904 says the mine was more of an attempt than a going concern). This was reinforced by Roderick Murchison, who visited the site in 1834 and described the mine as abandoned (Murchison 1839). The origin of the mineralisation and its subsequent exploitation is unknown. There are no other mineralised veins or reports of minerals elsewhere at this level in the Old Red Sandstone.

The site shows evidence of an ore processing platform, adjacent to an infilled vertical shaft with associated spoil tip, and approximately 70m away next to the River Dulas is an open horizontal adit leading to the location of the shaft plus a second spoil tip. The tips are largely barren of vegetation apart from tress, possibly due to the disturbed mineral content of the ground.

Downstream of the mine, is an excellent 10-12m high vertical section in sandstones of the Raglan Mudstone Formation which is included within the RIGS designation.

Geological setting/context:

Reprinted from: Gloucestershire Society for Industrial Archaeology Journal for 1986 pages 23-25

A MUSHET MYSTERY

by DAVID BICK

The name of Mushet is more or less exclusively associated with Scotland and the Forest of Dean, and it was therefore a surprise recently to discover evidence of David Mushet running an unusual mining operation in Breconshire, in 1817. With little doubt the workings coincided with a site near Talachddu in the heart of the countryside (Grid ref SO 085 342) and described by the geologist Roderick Murchison in 1839 as follows:(1)

"The Old Red Sandstone does not contain any mineral veins worthy of notice ... I have met with only two which have been deemed worthy of the slightest attention and these are both of copper ore. One occurs north of Ludlow, and the other in Breconshire ... at Felin Fach, four miles north-east of Brecon, on the right bank of a mountain stream ... The vein-stuff thrown out from the trial shafts (the works having been abandoned) contains much crystallised carbonate of lime with sulphurets of copper and iron partially diffused through a mass, the remainder of which is made up of scales of green earth, crystallised blende in very minute particles, and a little red oxide of iron".

Unaware at the time of any Mushet connections, Murchison's account led me to explore this forgotten site in 1960. Clear evidence of former activity was found, including a leat, the mound of a shaft, and a flooded adit which had been driven in as deeply as possible from the little River Dulas.

On a later visit the adit was drained with a syphon and proved to be 75 paces long, the first 60 being very narrow. The end came in a fall, probably at the shaft, about 40 feet below surface, the whole drivage being in flaggy beds of the Old Red.(2) There was no sign of a vein either below or above ground, where scrub had considerably obscured the workings. However, plenty of mineralised specimens were lying about, and conforming in great measure to Murchison's description. These samples gave rise to much discussion and debate, and it would not be wide of the truth to say that no two opinions coincided. Among the various constituents claimed to be present were calcite, rhodocrosite (a manganese mineral), chlorite (the 'green earth' of Murchison), feldspar, galena, blende and copper and iron pyrites. Altogether a very curious and remarkable deposit.

The origins of mining here are uncertain, but valuable light is cast on developments by the above-mentioned evidence, discovered in the National Library of Wales.(3) It takes the form of Counsel's Opinion on alleged violation of a lease dated 29 October 1817, of "mines and grooves of copper ore, lead, tin, manganese, lapis calaminaris, black jack" etc., on the lands of Vunglas and Llwyncunnog. The lessor was the Rev. J H C Lefroy of Ashe in Hampshire, Lord of the Manor of Talachddu, the site being on Llwyncunnog property. The lessee was David Mushet.

The document relates that "a few days after the execution of the lease, Mr Mushet set two labourers upon the work and in about a month after, he discharged them and employed men regularly brought up to the business (from the Forest of Dean?) who drove levels and sunk shafts to get at the ore which turned out to be all copper and they got some small quantity out but then from the work not being sufficiently encouraging or from want of pecuniary means on the part of Mr Mushet no man has done the least thing in the work since 8 August last and the ore taken out now remains in a rough state in a cottage contiguous to the work ..."

The upshot was transfer of the lease in November 1819 to John Palmer of Shrewsbury, James Freme of Liverpool and James Webster, a chemist of the Vitriol Works, Co Lancaster. Whether the new parties accomplished much is very doubtful. The workings were afterwards reported to have been 60 yards in depth.(4)

This brief account sums up all I have been able to glean about a very singular enterprise, leaving unanswered a host of queries. Not least, what was Musket seeking in so remote and unpromising a district, and what enticed him there in the first place?

David Bick 1986. ©

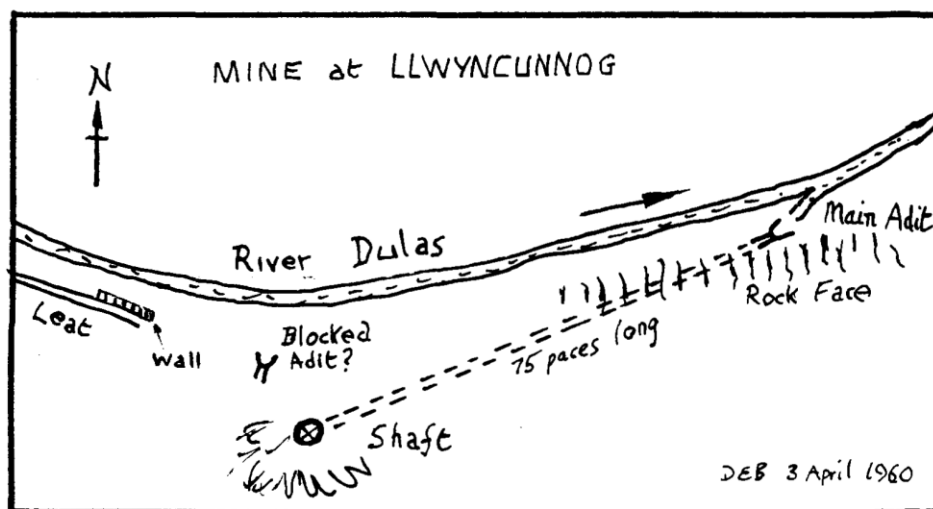
References

- 1 R I Murchison, The Silurian System, 1839, p 188.
- 2 See G W Hall, Metal Mines of Southern Wales, 1971, p 90. for further details of the site.
- 3 Maybery Papers 4028.
- 4 Samuel Lewis, Topographical Dictionary of Wales 1849.

Acknowledgement.

I should like to acknowledge the help rendered by the National Library of Wales with regard to early maps of the area.

FIG.1



The site, from a rough survey made in 1960.

Geologically, the mine is wholly within the outcrop of the Silurian age Raglan Mudstone Formation of the Old Red Sandstone. This mineralisation is extremely unusual, as sandstones more typically contain lead ores, although other minerals do occur.

Mineralogically, the following have been reported:

Primary saddle dolomite with marcasite, magnetite, chlorite, pyrite, calcite, galena, sphalerite and pyrrhotite. baryte. An earlier identification of rhodochrosite has been shown to be misidentified – it was pink dolomite. Bevins and Mason (1997) record “the only mineralisation now present at the site consists of pink saddle dolomite with some associated pyrite and marcasite”. They estimated around 10 tons of dump material is left.

The mine was located on ground belonging to Lwyncynog Manor. The mine was said to be 60 yd deep and was “very rich” but this may be sales talk. Currently, the main adit from the stream is about 75 paces long and is blocked approximately below where the shaft is, although it is considered to extend further.

It was reported to George Hall (Hall 1971) that in the forestry opposite there were signs of mine workings. However, these have not been located, although downstream of the site there is suggested the presence of additional shallow trial workings along joints in the Raglan Mudstone Formations sandstone which dominate the stratigraphy at this locality.

There is however a second, trial, adit upstream at [SO 072 358] (presumably Melin Wern-ddyfwg on the 1888 OS 1:2,500 scale map) “but it is only seven paces long, and has proved no mineralisation” (Hall 1993).

These obscure workings are worthy of note and do not seem to be documented together in one place. The metalliferous deposits are a long way from the areas of high mineralisation and metal mining in general. There are barites veins here and there, one at Talgarth in Pwll-y-Wrach but not ores of metal.

At some point in geological history there seems to have been an underlying mineralogical source. Many of the Mid Wales ores were formed in the Devonian Carboniferous period. There may be mineral veins still awaiting to be discovered in the hills.

References:

Bevins, R and Mason (1997). *Welsh Metallophyte and Metallogenic evaluation project: Results of a Minesite Survey of Dyfed and Powys*. National Museums & Galleries of Wales.





Bick, D. (1986). A Mushet Mystery. *Gloucestershire Society for Industrial Archaeology; Journal*. P23-25.

Hall, G.W. (1971). *Metal Mines of Southern Wales*. Westbury on Severn, G.W. Hall.

Hall, G.W. (1993). *Metal Mines of Southern Wales*. Griffin Publications.

Murchison, R.I. (1839). *The Silurian System*. London, John Murray

SECTION B

PRACTICAL CONSIDERATIONS: Please score Accessibility and Safety Red Amber or Green			
Accessibility:		X	
Comment: Private Property. Located on edge of field			
Safety:			X
Comment: Generally safe			
Conservation status: There are no known designations of this location.			

OWNERSHIP/PLANNING CONTROL: Owner/tenant: Unknown Planning Authority: Powys County Council Planning status/constraints/opportunities: There are no known planning constraints or opportunities.
--

CONDITION, USE & MANAGEMENT: Present use: Pasture and woodland Site condition: Generally Good – some selected tree clearance may be advised to show features. Potential threats: None known. Site Management:
--

SITE DEVELOPMENT: Potential use (general): Potential use (educational): an important site to discuss unusual mineralisation. The stratigraphic relationships of the thick sandstones at this location in the Raglan Mudstone are not well understood.
--

Other comments:

Photographic Record



The approach to the Copper Mine site



The infilled vertical shaft



Barren tipped material downslope of shaft.



Track leading from shaft towards adit



Entrance to adit looking WSW– stream out of photograph to right. Note sandstone bed above entrance



Interior of adit – now a partially waterfilled bat roost. The adit extends at least 50-60 yards to the infilled shaft. Sandstone bed forms roof of the adit.



Possible tramway leading from adit to spoil tip in middle distance



Erosive-based Sandstone bed in Raglan Mudstone approximately 6-8m above adit level



Section in Raglan Mudstone siltstone and sandstone rising c.10-12m above stream level



Evidence of possible mineral trials



Trial heading following possible joint set.