BRITISH MINING No.3

MEMOIRS
1976

Madoc-Jones, G.W. 1976
"Synopsis - Clogau St Davids Gold Mine, Bontddu, Merionethshire"
British Mining No.3, pp.12-16

NB
This publication was originally issued in the 10 by 8 inch format then used by the society. It has now been digitised and reformatted at A5. This has changed the original pagination of articles, which is given in square brackets.

ISSN 0309-2199

SYNOPSIS - CLOGAU ST. DAVID'S GOLD MINE, BONTDDU, MERIONETHSHIRE

G.W. Madoc-Jones

This mine is situated about 1½ miles from the railway station of Penmaenpool, a few hundred yards from the village of BONTDDU, in the county of Merionethshire. BONTDDU lies on a first-class road A496, between the county town of DOLGELLAU (five miles) and BARMOUTH (four miles).

The old milling machinery, comprising 50 head Stamps and 5 Britten Pans, was dismantled and utilised for defence purposes during the war.

The mine is held on a take-note, or lease, which is the usual document issued by the Mines Royal, and covers an area of 111 Acres 1 R, 6 P, with 1/25th Royalty paid on gold and 1/30th on silver. This area also covers two small freehold farms for which an annual rent of £20 each is payable for surface rights to construct roads, watercourses, buildings etc. to facilitate the working of the mine.

THE GEOLOGICAL FORMATION

I feel that only a preliminary note should suffice on this specific point since so many geologists of repute have studied the ground and written many masterly reports on this subject. Perhaps more should be known of the general geology of what is known as the Clogau bed, running from near Barmouth to the Gamlan River near Ganllwyd - a distance of about 12 miles. A reminder of the geological formation might be helpful. The top or upper bed, known as the Silurian bed, which adjoins the property and where the copper (referred to later) is to be found. Also in this Silurian bed on the top of Clogau we have a strong copper vein. In the second or middle bed, known as the Clogau bed and the third or lower series known as the Gamlan bed. It is the middle and lower beds which carry gold, with little copper, silver, lead and other base metals impregnated through the quartz; and it can be fairly described as the "copper cap Clogau St.David's Gold Mine".

The bed of satin-like black shale in which the great reef consistently runs is approximately 3,000 feet wide. Of course there are several easily recognisable faults occurring in the distance of 12 miles which naturally disturb the reef for a short distance. And also [12] several scores of cross-courses and veins coming in at different angles and thus forming junctions. Several of these veins have been worked in different places and proved to carry a good percentage of gold. And it has been proved in the Clogau St. David's Mine that, whenever these veins form a junction with the reef, almost without exception there is a run of rich gold. And here there are six veins running SE by W of N. intersecting the lode in the main level from its portal to the comparatively short distance of 300 yards. Along this stretch, on junctions, stopes were driven on rich gold to surface (distance only about 45 feet).

Bearing in mind that it was here, about 1862, that in six months gold to the value of £3,664 was mined - at the then price of only £3 17s 0d per ounce, It is quite evident that mining never proceeded beyond the prospecting stage, here, and was never followed down. But in fairness to our forefathers in those years the job of sinking was formidable when they had to reckon with water, black powder, make-do winch and pump. So sinking has been left to the modern generation with its mechanical power to facilitate mining progress.

A BRIEF AND CONCISE EPITOME OR HISTORY OF THE MINE

The Clogau St. David's Mine has been worked remuneratively, off and on, since 1845, when at that time gold was sent to the market as copper. And, as history gives it, between 1845 and 1862 gold was identified as this precious metal. At this time a ton of broken pieces was collected containing free gold which yielded several thousand pounds. And at this time a company was formed. The following is a very interesting Report of production given by the Manager for each month and produced by Brittan Pans.

1862	Ore-	T	C	L	Gold-	Oz	DWT	GR
Jan			2	-		63	-	-
Feb		28	11	56		171	-	-
Mar		40	18	56		198	5	-
Apr		38	5	-		161	15	-
May		24	18	-		171	17	-
June		32	4	-		142	12	-
July		28	2	8		144	15	-
Aug		13	5			257	15	-
Sept		51	2	2		303	18	-
Oct		54	17	70		358	17	7
Nov		58	5	45		362	19	-
Dec		75	4	8		546	8	-

These figures were copied from the book of records of the Merioneth Mines - compiled by J. Parry (Jnr). In round figures it shows 2,893 Oz gold from 455 tons of ore. [13]

THE OPENINGS - OR SYSTEM OF WORKING: UP TO THE PRESENT

The main level has been driven from its portal, on the bank of the river Cwmllechan., on the course of the great lode or reef, the strike of which is 42 degrees E of N by W of S to a distance of 2,150 feet.

Higher up the hill known as Tyncornal a crosscut, 7' x 7' has been driven to a distance of 900 feet to intersect the lode. A few feet easterly from this point a shaft has been sunk to a depth of 300 feet, thus connecting the top of the mine with the Llechfraith level. By this the ore can be tipped down the shaft and trammed to the Mill. Extensive stoping of very rich gold has been

done here at the top from the crosscut up to the surface. Also a number of levels have been driven on the lode and - too - on the veins; especially the one known, locally, as the John Hughes, carrying high grade ore. This has been worked extensively from this level upwards but no attempt was made by the old management to follow this rich ore downwards.

MINING METHOD AND PROGRESS TODAY

Clogau St. David's Mine is worked now by three enthusiastic men holding the Crown take-note or lease, signed by the Mines Royal. One - a middle-aged, strong man with general mining knowledge. No.2 - an industrialist having contacts with mining engineering at home and abroad. The third is an elderly man with many years experience of mining in its collective branches. All working jointly as partners and employing two men part-time for winching, tramming etc. By surveying we find that the strata dips westerly at an angle of 30 degrees and the lode dips South at an angle of between 60 and 70 degrees. Our method is to follow the rich ore downwards and to open up to it. We started striking on the John Hughes and after doing down about 12 feet we had to abandon work - just as we believed we were entering rich ground - because we had not the necessary equipment air compressor, winch, adequate pumping facilities etc. Consequently we moved down to the main Llechfraith level. Here we started sinking a vertical shaft to meet the lode dipping 60 to 70 degrees South and the strata above, carrying rich gold with a dip of 30 West. This point, we calculated, should be reached at 45 feet below the main level. With this achieved .levels can be driven in both directions on the course of the lode into nearby rich ore such as was found in the level and stopes above to the surface; a distance of only about 18 feet.

In the few feet down the vertical shaft we came into one of the veins already mentioned which forms a junction with the lode and which still keeps in the shaft - as its dip is not so great as that of the lode. This vein still carries visible gold all the way down and, here and there, we get tellurium. A small sample which was treated by a [14] friend assayed at 23½ oz gold to the ton. As we meet the point where the stratum meets the reef, as mentioned above, we should be in as good a run of gold, if not better as any obtained higher up. To facilitate the work we have an air compressor - rather an old fashioned model - running on petrol and frequently in need of repairs which result in stoppage of the work. An air pump is operated off this compressor and when the latter machine is not working this pump shuts down and when this happens we have to leave the shaft and commence work further along the main level with the old style hand drill and hammer. Here we get visible gold from the start and we have gone down about six feet. For a distance of about 20 feet this is again a very interesting point - being a junction - but it is the vein that carries rich gold just after leaving its junction with the lode to run SE.

Again - another vein forms a junction with its strike NE. All this fissure development takes place in a small distance of 35 feet and evidently - the SE vein being the stronger the NE carries along SE (or has amalgamated) for a

distance of about 135 feet; after which each vein keeps to its original course. Very rich gold was got in this section by stoping the whole length of 135 feet upwards to about 30 feet. Stoping probably ceased at that height - due to foul air - as this was before the 300 feet shaft was s u n k to connect Llechfraith main level to the Tyncornal crosscut. Now - the air here is perfect and the virgin block of 300 feet can be stoped upwards on the course of this rich ore as well as downwards to an unknown depth. Obviously the job of tackling this is too much for us. We need capital to procure the necessary mining machinery and equipment, labour etc. to match the undoubted possibilities. We believe this to be an unusual opportunity - making use of native resources of raw materials - for bringing employment to the area and offering to the public dividends for their investment.

PRODUCTION, UP-TO-DATE, OF ORE FOR MILLING ON BANK

We estimate that we have mined 105 tons of ore., from those three points referred to, ready to be milled. With a few more miners, working on this six foot wide lode and contributory arteries and veins, enough ore should be won to keep a fairly big mill operating at full capacity. Also many tons still lie on scaffoldings in the old stopes and all could be milled with advantage - as the last company working the mine have proved to their satisfaction.

The present method of dealing with the ore is to winch it from shaft and tip it outside. Visible gold is picked out and the remainder [15] shovelled into stockpile. Estimated tram-weight 10 cwt. ore. Estimated time, picking and shovelling, between loads - 45 minutes. The free or visible gold, so picked out, is sent periodically to Messrs. Johnson Matthey Ltd. Refiners, of Birmingham for treatment, by arrangement.

The information is reproduced, with apologies for any errors or omissions - from manuscript compiled by the late Mr Hugh Edwards, Caerdeon Farm, Bontddu, Dolgellau - a much admired friend of the contributor.