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## THE CASTELL & NANT Y CREIAU MINES

S.J.S. Hughes

### SYNOPSIS

*Very little attention has been paid to the mines which lie between Dyffryn Castell and Cwmystwyth. The most accessible of these is the Castell Mine which lies alongside the A44 trunk road from Llangurig to Aberystwyth, whilst a mile south, lies the Nant y Creiau Mine which was famed for its remote location. Today, it is surrounded by the dense Myherin Forest which has added a greater feeling of absolute desolation.*

*Castell appears to be a mid to late eighteenth century discovery whilst the origins of Nant y Creiau are considerably more ancient according to Lewis Morris. As with most ancient mines, subsequent work has destroyed the early evidence; however, the site has many features in common with other ancient mines in the district. It was not known to Waller and the Company of Mine Adventurers around 1700 nor to the Society of Mines Royal some 120 years previously. The drowned works that Lewis Morris recorded in the 1740s must have been commenced at a very much earlier date altogether and it can only be hypothesised that they were pre Roman. Unlike many of the other ancient mines in the district there is a paucity of both silver and copper in the lodes; richer lead lodes are more common and the use of zinc blende was very limited before Morris's time. It is possible that some work was undertaken, prior to Morris's time, in search of calamine which existed in the gossan on the back of the lode though this is not confirmed. It is also worth noting that the early workings were very shallow by ancient standards, probably no more than ten fathoms deep. Stone hammers were found on the surface at Nant y Creiau some years ago but it could not be established if these were for mining or dressing purposes. The oldest workings which have been examined are, typologically, mid to late 18th century as might be expected.*

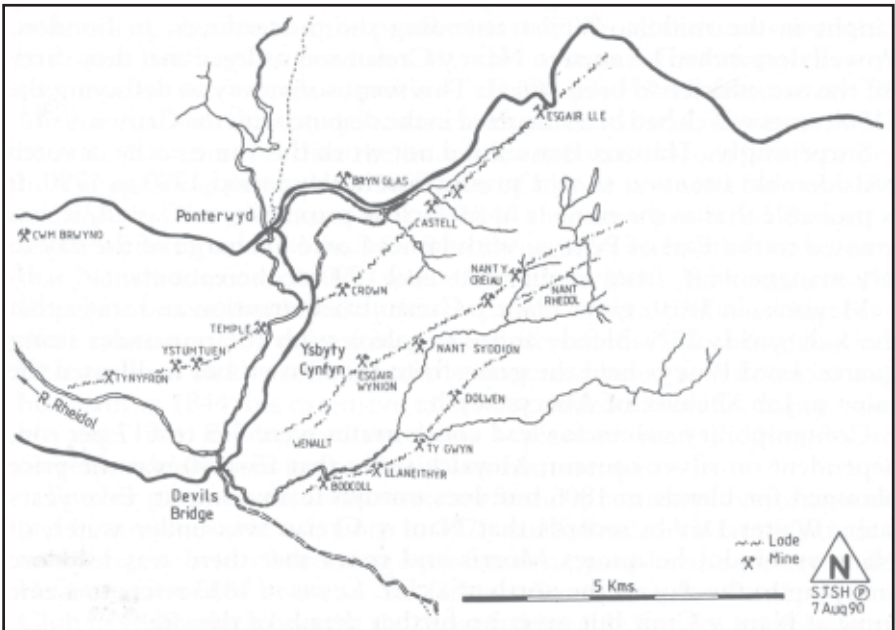
**Some cautionary words; Nant y Creiau is one of the most unstable mines I have ever seen. Most of the stulls have long since rotted away leaving thousands of tons of backfill suspended above the drifts. The deep adit is prone to flash flooding over most of its length, water enters the workings faster than it can percolate through the fall at the portal which results in most of the lower workings becoming completely submerged at a very rapid rate.**

Lewis Morris, in 1747, describes the Nant y Creiau mine as an ancient drowned working in the bed of the brook, which he was attempting to revive on behalf of the Crown. His miners took about three years to bring the mine into a reasonable state and it was then leased to a London merchant named John Vaughan. However, Thomas Powell of Nanteos directed some miners in his employ to commence working there in the September of



*Location map.*

*Location of mines and lodes around Castell.*



## THE CASTELL & NANT Y CREIAU MINES

1751 and we must presume that John Vaughan's miners were not active there at that time. Morris, as the Deputy Crown Steward for Cardiganshire, instructed Powell that he must either withdraw from his occupation of the mine or face legal proceedings. Morris thus acquired considerable alienation from the Powells and in the following year the issue of Crown ownership of mines was to escalate out of all proportion, with the discovery of a valuable ore shoot at the Esgair Mwyn Mine near Ffair Rhos, and also at the Bwlchgwyn Mine near Ystymtuen, to a lesser extent.

William Morris (his son) notes that these were on a one inch or more, rib of galena some 20 to 30 yards long. He also notes other veins discovered in the vicinity by Jenkin of Llywernog; one at Nant Rhedol, another at Blaen Nant Rhedol and a third at Ffrwd Myherin to the east of Nant y Creiau. He also notes that, 100 yards west of Nant y Creiau, Mr. Powell had let William David have a tack note at 15/- per ton but that he had no right to do so. There is no mention of zinc blende being raised and generally, at this time, it was unmarketable as the ore could not be smelted and calamine was the chief ore of zinc used in brass making. Nant y Creiau had the reputation of producing calamine (hydrozincite) but this has not been substantiated, though it is quite likely to have occurred in the upper workings of the old mine.

The illegal occupation of the Esgair Mwyn Mine resulted in a lengthy law suit between the local gentry and the Treasury with Morris being caught in the middle. Whilst attending the proceedings, in London, Powell despatched his men to Nant y Creiau and ordered that they carry off the ore which had been raised. This went some way to defraying the £1500 costs which had been incurred in the dispute with the Crown.<sup>1-4</sup>

Surprisingly, Thomas Bonsall did not work this mine, as he devoted considerable attention to zinc production in the period 1770 to 1790. It is probable that as the mine is in such close proximity to Castell, it was granted to the Earl of Powys, with James Lowe in charge of the day to day management, from about 1770 until 1790 or thereabouts.

Meyrick, in 1810, gives Nant y Creiau brief attention and states that the lode yields 25% blende and 2% galena with the remainder being quartz. Lord Powys held the grant from the Crown but had leased the mine to Job Sheldon of Aberystwyth.

Contemporary values for lead concentrates were £15 to £17 per ton, dependent on silver content; Meyrick states that £5-10-0 was the price obtained for blende in 1806 but does not quote any output. Five years later, Walter Davies records that Nant y Creiau was under water; of Nant yr Hudol he quotes Morris and notes that there was lead ore cropping to the day on the north of a cliff. Lewis in 1833 refers to a zinc mine at Nant y Crair but gives no further details of the site.<sup>5,6</sup>

The presence of a South Nant y Creiau Lode is noted by o.T. Jones who states that little work had been done on it. The recent Geological Survey map shows nothing to the south of Nant Y Creiau but the 1845 edition shows two lodes, the southern one bifurcating at its western extremity. Two lodes are shown by Ball & Nutt in the MRP map and there is geochemical support for further lodes. It would appear that the southern lode is the Nant Rhedol Lode and that apart from a few trial pits, and possibly an adit near its intersection with Afon Myherin, it has been unworked. Warrington Smyth lists the lodes of the area as Nant y Creiau, South Nant y Creiau, Nant Syddion and Wenallt (southwest of Llaneithyr and north of Bodcoll Mill).<sup>7-9</sup>

This may equate to the Llaneithyr Mine of Ball & Nutt who show the lode continuing as far as Wenallt, though this name only appears on the older Ordnance maps. Due to the nature of the terrain, there could be many undiscovered lodes at the head of the Myherin Valley.

About 1840 the lease was taken by Messrs Crockford and Salmon who ran the mine until 1859 when the lease was transferred to T & H Jones & Co. Salmon was the H.C. Salmon of Esgairmwyn who later published the *Mining & Smelting Magazine* in the early 1860s as a challenge to the unvetted pages of the *Mining Journal*, whilst Crockford owned the St. James's Club, commonly known as Crockford's. They are reputed to have sold thousands of tons of blende at £2 per ton; carriage varied from 11/- to 13/- per ton. 27/- per ton covered the cost of mining and milling the ore and the profit was made from the lead sales which had cost nothing to produce. By this system of working they are supposed to have made a profit of £2,000 pia.<sup>10</sup> Unfortunately, the *Mineral Statistics* do not show zinc sales prior to 1854, however, it can be seen that after this date the lead:zinc ratio varied from 3 to 5 to one, thus suggesting that at least 1000 tons of blende was sold between 1845 and '54.<sup>11</sup> Smyth shows that in 1846 the mine produced 30 tons of lead concentrate whilst the *Min Stats* show 57¼ tons. Smyth also states that Nant y Creiau sold 130 tons of blende in 1846. Bick suggests that 50 persons were employed at this time, and Smyth confirms this. From these contemporary reports it must be inferred that Crockford had very little to do with the running of the mine and acted as a financier until his death in 1844; his extensive estate continued to run for many years. He does not appear to have been a pleasant man judging by the correspondence seen in the Druid Inn manuscripts.

Further glimpses of his character are found in contemporary magazines and biographies. He was born in 1775 and followed his father's trade of fishmongery before becoming a professional gambler and moneylender. He transformed a house in St James's Street into his Pandemonium Club in 1828 which became the most fashionable London establishment

for Regency beaus. William Crockford's greatest claim to fame was that during a 24 hour session he won the sum of £100,000 from Lords Thanet and Granville. He retired in 1840, with an estate estimated to be worth some £8 million, but much of this was squandered and at the time of his death was valued at £1.2 million. According to a lengthy obituary, a mining agent showed him some samples and learned reports in 1840. This gentleman had a lease on the properties but no capital. Mr Crockford was induced to embark, and made considerable advances of cash for the sinking of shafts and purchasing new machinery. As time progressed the demands became greater and he concluded that mining was not as profitable as roulette (on which he was paid 1½% commission per game). A disagreement took place with his partner which led to the dissolution of the business with the assets being split.

Crockford knew nothing of mining and was left with the poorer mines, whilst the partner retained the more valuable properties and equipment. The disappointment and embarrassment at losing such a great sum caused him so much grief and anxiety that it resulted in his death on the 25th of May 1844.<sup>12</sup>

It would therefore seem that the sequence of events were:- that Francis persuaded Salmon into taking the Crown Lease of Esgairmwyn and Nant y Creiau in about 1838, but to raise further capital Salmon, who was still impressed by Francis, approached Crockford. Salmon may possibly have been a St James's Club member. A great deal of money was then spent on Esgairmwyn whilst ripping down the walls at Nant y Creiau. Circa 1843, Esgairmwyn was not yet productive and after the severance, Crockford was left with Nant y Creiau - knacked, whilst Salmon & Francis continued at the better equipped Esgairmwyn. Francis managed to jolly along the operations until about 1856 when he was dismissed by the almost bankrupt Salmon.

Warrington Smyth probably visited the mine in 1846 during the preparation of the Geological Memoir on *The Mining District of Cardiganshire*. He illustrated the volume with a small engraving showing the nature of the lode at Nant y Creiau and it can be seen that two ribs of sphalerite completely enclosed ribs of galena on a central rib of gangue.

Unfortunately, no scale is given but, from other descriptions, it can be seen that a width of six feet is likely, the sequence is therefore 18" of blende - 9" of galena - 24" of gangue - 9" of galena - 18" of blende. Knowing the specific gravity of each of the constituent parts enables us to calculate the yield (w:w) as 42% blende, 37% galena and 21% gangue. This equates to 25% Zn and 27% Pb (w:w) over the vein width.

In 1849, Captains Nicholas Ennor and Jehu Hitchins examined the Sett on behalf of the *Cardiganshire Crown Mines Co. Ltd.* (Crockford Estate & Salmon). At this time Nant y Creiau was only sunk to 15

fathoms below the deep adit, and at the eastern end of the 15, a winze was down 30 feet and yielding 1½ tons of galena per fathom (10¼%) according to Hitchins. Ennor comments on the fact that the shoots of lead were accompanied by ribs of solid blende from one to three feet wide. The ten fathom level was said to be about 60 fathoms long but neither of the Captains had the chance to verify this as the workings were flooded up to adit level. To the west lay fairly extensive old workings and another adit with excellent prospects; Ennor is explicit as to the fact that the mouths of the new and old adits are a few fathoms apart and that the workings were on the verge of communication. A shaft had been sunk to 10 fathoms below the west adit and it must have been these levels which are referred to. This communication would have been very desirable and effectively pensioned off the need to raise the water to adit level in the old workings, though the fall of the levels would have presented some difficulties. Hitchins calls this new working the Western Engine Shaft and confirms that a 10 fathom level had been driven east, with the intention of connecting the old and new workings. It would also provide improved ventilation.<sup>13</sup>

The 10 had also been driven several fathoms westward towards other old workings but had not holed through. From the wording of the report, a degree of uncertainty existed as to the extent of the western stopes below the surface, and as to whether there was any ore left worth mining in this ground.

This company failed to make a profit and appear to have suspended their operations shortly afterwards. The Crown Mines Company appears to have been formed by Salmon & Co., prior to 1847, for the promotion and development of mines on the Commons of Perveth and Mevenyth. Esgair Mwyn was the most prized of these mines and in a frantic effort to bring it to dividend status the other mines were undercapitalised. Nant y Creiau produced easy profit and the principals seemed loathe to invest capital at that time. During 1847 it was thought that Nant y Creiau, Castell, Esgair Lle and Blaen Myherin were good mines but enthusiasm waned rapidly and, by 1848, the Bodcoll Mine was being pursued as a potential source of rich ore.

The higher galena ratio and lower carriage costs must have seemed very favourable compared to Blaen Myherin and Nant y Creiau. The attitude of the Cardiganshire Crown Co. was very similar to Sir Thomas Bonsall, and we must consider that the *modus operandi* was to flit from one high grade pod to another with no thought of leaving cash in a development fund.

Judging from the output following the publication of the report, it stimulated no interest and the work remained suspended until 1854. This suggests that the bottomless pocket of Crockford, and his Estate, had

now dried up. It is also quite possible that the involvement of the Crockford family ceased in 1844/47 and this was the cause of the formation of the Cardiganshire Crown Co. Apart from gaming, the Crockford firm are known to have been involved with illicit banking and moneylending, and were quite used to “cooking the books”. It would have been particularly easy not to have declared production from these mines, especially when many influential people were personally committed to financial extravagance at the club. Within the strongroom at the club, was a safe containing IOU’s, mortgages and promissory notes, which had been issued to cover gambling debts. Crockford had never allowed anyone, other than himself, into this safe and he bragged of its contents being more valuable than money, meaning that he could call favours of the most influential citizens of the British Empire with the certain knowledge that these requests would have to be honoured. It must have grieved him sorely to have been so badly ripped off by Matthew Francis.<sup>14</sup>

An unknown company took over from 1854 until 1859 (when T & H Jones & Co took the leases of both Esgairmwyn & Nant y Creiau) and dressed 2340.2 tons of blende (@ £4/ton) and 191 tons of lead concentrates from the latter. Nant y Creiau was in a good productive state when the Joneses took over and they produced the greatest annual output recorded, of 854¼ tons of blende, along with 42 tons of 83.33% lead concentrates. An exceptionally pure grade. The Joneses company was also involved with the running of the Ystrad Einion Mine and it is probable that the idea of installing a waterwheel may have been brought about by their experience at Nant y Creiau.<sup>15</sup>

Thomas & Henry Jones relinquished Nant y Creiau in 1865 but retained Ystrad Einion until 1869, as they believed it was the more viable of the mines. In 1865, the yield of Nant y Creiau amounted to 200 tons of blende, worth £775, and no lead.<sup>16</sup>

In 1870, both Liscombe and Spargo produced brief reports on the area. The former blamed its slow development, and shallow depth of only 30 fms., on the poor system of leases then issued by the Crown Commissioners.

Spargo states that the Nant y Creiau Mine was let to Mr. Humby of Neath but the *Mineral Statistics* suggests that the mine had been idle since T. & H. Jones & Co. relinquished their lease in 1865 or ‘66. The nature of the lode was observed to be six feet of solid blende containing shoots of galena from one to six inches wide. Spargo concludes with:- “Nothing is now done on this, the best mineral vein in the county, nor is it likely unless some alteration takes place in letting Crown Setts.”<sup>17, 18</sup>

Liscombe’s report on Llaneithyr states that the shaft had been sunk to 20 fathoms and some rich ore encountered, but that capital was required to make a more



extensive trial at depth. Spargo notes the development of other mines in the vicinity; Llanelithyr is supposed to have been sunk to 20 fathoms by the Pugh family of Abermad and then taken up by the firm of John Taylor & Sons under the local management of Mr. Henry Taylor. Some good ore was cut but the mine did not thrive.

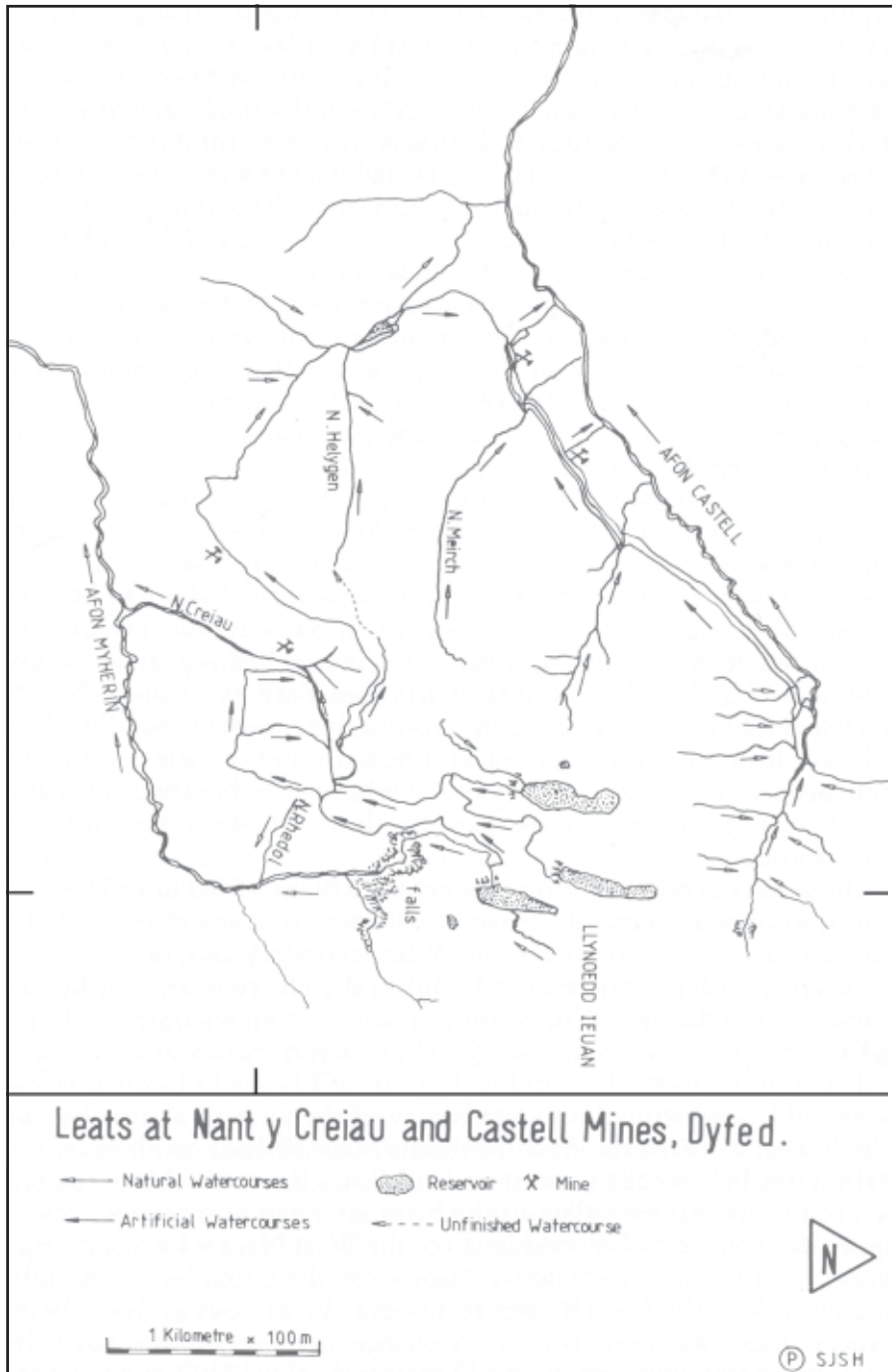
By 1874, Francis notes that the adit had gained a back of 15 fathoms when it struck ore of sufficient value to justify the sinking of an engine shaft to 20 fathoms below the adit. The lode contained good galena, blende, gossan and quartz; another lode was discovered 30 yards south of the shaft which was supposed to have formed a junction with the North Lode at a point some 120 yards east of the shaft. His predictions of the riches lying in wait failed to rouse the imagination of the speculators or raise the £10,000 necessary for further development. According to Francis's map of 1878, the shaft had only been sunk to 10 fathoms under the adit.<sup>19, 20</sup>

The old workings and adit to the west of Nant y Creiau were formed into a new Sett in the January of 1869 and let by the Crown to Captain James Lester (of the Llywernog, Pencraigddu and other mines) for 21 years at 1/18th royalty. Spargo suggests that three lodes had been cut, the Nant y Creiau, the Frongoch and an un-named lode. Twenty years previously, Jehu Hitchins and Nicholas Ennor had reported the good potential of these mines. Captains Michael Barbery, Robert Northey and Jehu Hitchins produced another favourable report in 1869-70.<sup>21, 22</sup>

It would seem that this raised a limited amount of capital which may have been spent on the erection of the wheelpit and cutting the leat but insufficient galena was contained in the lodes to merit any great development.

The series of lakes on the plateau between Nant y Creiau and Eisteddfa Gurig, known as Llynoedd Ieuan, are shown to be in existence by 1870 but their date of construction cannot be accurately ascertained.

Smyth's geological map of 1845 shows that the two largest lakes were in existence at the time of his survey. There are two separate leat systems in the Creiau and Myherin valleys which divert the streams in a careful and sparing manner. The middle leat out of Llynoedd Ieuan appears to be the oldest which fed into a tributary of the Creiau, above the mine. The lowest leat taps the Afon Myherin/Nant Rhedol confluence, some 600 metres below the escarpment, and flows down the Myherin valley before turning up the valley to the Nant y Creiau pumping wheel. The upper leat connects Llynoedd Ieuan to the West Nant y Creiau pumping wheel, from where the tailrace leads over the shoulder of the hill to discharge into the Castell catchment area. In its course above Nant y Creiau, there was provision to discharge any excess into that valley. This upper leat commences at 530 metres AOD (1740') and discharges



at 475 metres AOD (1560') some three kilometres down the valley. The lowest leat follows the 400 metre (1300') contour but discharges at about 370 metres (1200') AOD after about 1314 kilometres.

Spargo also reports upon the neighbouring Esgair Wynion Mine to the west, apparently previously promoted as the Erw Barfau or Harrow Barvey Mine. In 1870, Captain Corbett of Ponterwyd was the resident manager. Ten years previously an adit was driven and shaft had been sunk to seven fathoms on the Nant y Creiau Lode but no returns had been made. The number of employees engaged on the site numbered six. Unlike the Myherin mines, the Sett was on the Nanteos Estate and subject to a reservation to Colonel Powell.

Absalom Francis's report of 1874 adds very little to the knowledge of Nant y Creiau and is rather non committal, apart from his thoughts that "It is the best filled lode with mineral that I have seen in the country."

The lode is reported as being 8 or 9 feet wide in almost solid blende with leaders of galena from 3 to 6 inches wide. The agent was much acclaimed but not named, nor does an agent's name appear in the *Mineral Statistics* for that period. Maybe Francis had lined himself up for the post he had held 30 years previously!

West Nant y Creiau is also reported upon, with much enthusiasm by Francis, who notes that a good bunch of lead ore was cut before entering the main Nant y Creiau Lode. He thought that these two shoots would form a junction and heighten the chance of the deposition of a good orebody.

Despite his previous enthusiasm, he failed to include the West mine in his plan prepared in 1878 but showed it on the 1881 plan.

Esgair Wynion is reported upon and stated to be on a continuation of the main Nant y Creiau Lode. "Gossan, Spar and nice stones of lead ore" were observed in a lode 5 to 6 feet wide exposed by an adit.

Liscombe mistakenly applies the name of East Llwyn Teifi to Esgair Wynion. From the description of the work on this site it appears that the 1870 workings lay a kilometre east south east of Ysbytty Cynfyn and it appears that the trials in the fields opposite the church date from a different period.

Nant Syddion may have commenced as a satellite venture of West Nant y Creiau or Llaneithyr but did not encounter sufficient ore to justify further expenditure. Ball & Nutt show it as lying on the Nant y Creiau Lode but this does not seem to be altogether correct as it would have to change strike, or dip, abruptly after the West Nant y Creiau Mine.<sup>23</sup> Two adit cross cuts are driven north from close to the bank of Afon Myherin. The one nearer Nant Syddion house was being worked by the late Alf Jenkins of Ysbytty Cynfyn, and his uncle, circa 1913. The site is now very overgrown and the adit is flooded to within inches of

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the roof; the adit, driven 500 metres north east of this, is in dense woodland and has not been found yet. The *Min Stats* record that John Owen initiated the workings in 1898 but progress was erratic and frequently suspended.

From 1908 until 1913, the mine was idle and the last two miners were officially laid off in 1907. After Owen's death the mine was taken over by F.E. Boycott & William Green but they relinquished the lease in 1913 with no declared production during the previous fifteen years. The next phase of activity in these mines occurred as the price of lead was falling. In 1880/81, the *Nantycreiau Mining Co.*, under the guidance of Captain Robert Uren, commenced production after 15 years of standing idle. 200 tons of 40% grade zinc concentrate and 19½ tons of 74.3% grade lead concentrates worth just over £728.

With the exception of 1886, regular production continued until 1895 with 10 or 12 men being the usual numbers employed.

George Green, of the Aberystwyth Foundry, took over the lease of the Nant y Creiau Mine in 1883, in some form of partnership with T.S.G. Kirkpatrick, and from 1887 until 1894 Green acted as company secretary and it would appear that the mine just about covered its costs during the 1880s. By the early 1890s, the output was ailing and the number of employees dropped to seven in 1890-91. George Green died in 1895 and his business interests passed to his son, William Green, who attempted a resurrection in 1899, but this was not a success and he then formed a partnership with Captain John Owen in 1900.

A little is known of John Owen's background, and he was to become the driving force behind mining in this area during the first decade of the present century. Evidently he was a native of the village of Cwm Brwyno, between Goginan and Ponterwyd, and may very well have worked in the Cwm Brwyno Mine with John and James Paull. In 1890, he became co-owner of the Esgair LLe Mine but, buying out John James in 1891, he thus became owner and manager in 1892. This was of little consequence, as the mine was suspended during this period and the two employees registered in 1890 may have been the owners! He became the agent to the Castell Mine in 1896 for the partnership of Bainbridge, Boundy and McIlquhan but left in 1898.

The McIlquhan family resided in Aberystwyth and, until fairly recently, ran a warehouse business alongside the harbour. In November 1888, James McIlquhan and Peter Ferguson, of Glasgow, took the lease of the Pwll Roman Mine at Taliesin but the *Mineral Statistics* show no production. They relinquished their lease in 1893. The Boundy's were a Cornish mining family who had settled in Cwmsymlog some forty years previously but it is not known which member was the partner at Castell. (qv. ref 3H)

In 1898, John Owen was the chief agent of the *Crown Blende Syndicate Ltd.* but the scale of the operation was restricted to the employment of only two men underground and none at the surface. They cannot have found anything of significance as they were laid off within a year.

In 1899, he was involved with the reopening of the Blaencennant Mine, near Trisant, for Robert Smith. However, Smith died in 1900 and Owen was forced to move on despite the mine being good. As previously stated, in 1900 Owen entered into a partnership with William Green for the working of the Nant y Creiau Mine.

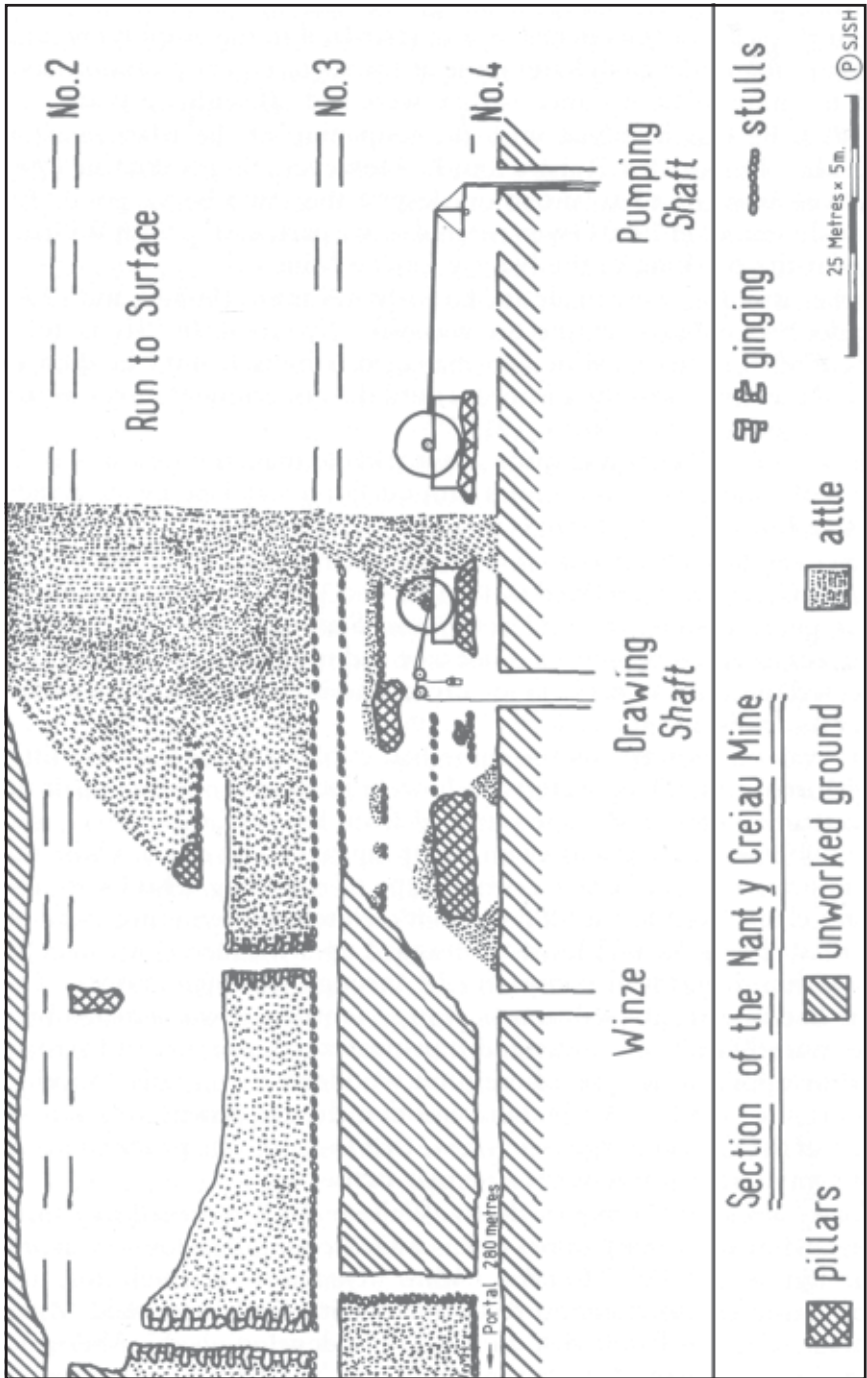
Further attempts were made at The Crown Mine in 1905-06 and 1908-09, under his guidance, but no ore was officially raised. In 1910 he took the lease of the Castell Mine and managed it himself until he died in 1911 and the mines lost their impetus until the government intervention in home production of zinc in 1915.<sup>24</sup>

Captain John Owen was quite a remarkable man and despite his 20 year involvement with the mines around Ponterwyd he never gained the reputation of the first rate Captain, which he was.

The Green & Owen partnership was registered until 1913 but activity at Nant y Creiau was confined to 1901-02 and 1905-09 when Alf Jenkins and his uncle worked there. The *Mineral Statistics* show that primary mining ceased in 1895 but this is not true and it must be considered that a false declaration was made in an attempt to keep the Mines Inspector well away from the site.<sup>25, 26</sup>

This was no wonder, as the mine had evolved comparatively little since Morris's time; two waterwheels were located about 350 yards up the deep adit to the east. One pumped from the 30 fathom level, and had possibly used a rag and chain pump up to its last days, whilst the other appears to have been a kehrrad type of reversing wheel with the winding chain fixed to the axle without a clutch. No winding shaft, as such, existed and the kibbles were dragged up a wooden chute held by stulls within a bratticed compartment through the open stopes. The ladders had not progressed to iron rungs, ventilation was assisted by a simple waterblast box launder and transport was a mixture of barrows and front tipping waggons running on wooden or iron rails. Another recollection of the late Alf Jenkins was that the catchment area was so great, and the Creiau gorge so narrow, that the mill was prone to being swept away by flash floods on a regular basis.

Shortly after John Owen's death, Wallace Paull returned to North Cardiganshire to develop mines on his own account. The longest lasting promotion was the *Melindwr Mine Syndicate*, formed for the consolidation of Pencraigddu & Ceunant with Bwlchyrennaid Mine. However, Captain Paull took an interest in developing the Abernant, Nant y Creiau, Castell & Esgairlle Mines but the schemes never reached



fruition and many of the mine plans and papers were filed away in his solicitor's offices until recently. It is worth noting that in 1890-91, the Captain of Castell was John Paull.<sup>27</sup>

O.T. Jones examined the site circa 1920 during the preparation of the *Geological Memoir*. He noted that the western adit had now been driven about 100 yards along the lode from a short crosscut in a quarry. An ore shoot of 20 to 30 yards had been worked here but not below the sole of the adit. He is mistaken in this, as a stoped shaft was fitted with a small set of pumps, the rod and bob of which can still be seen opposite the wheelpit. Since 1845 the output was estimated to be 905½ tons of 70% lead concentrate and 6057 tons of 40% zinc concentrate. However, this is a considerable shortfall in the total output since the mid 18th century. Mill efficiency for the zinc blende was probably as low as 50% and a considerable quantity of lower grade blende was either dumped or used to backfill old stopes.<sup>28, 29</sup>

Flash flooding over the past eighty years has now virtually destroyed the site and it is difficult to imagine that this remote valley was once a hive of industry.

In the index of Lewis Morris's *Manor of Perveth*, the Castell River is mentioned. He describes the exposure of the Bryn Glas Lode in the bed of the river but nothing else.<sup>30</sup> Bick suggests that the mine was being worked by Bonsall circa 1785 but had been abandoned prior to 1803 on account of a regional labour movement towards South Wales. This is not so and the confusion may be caused by the multitude of names by which it was known.<sup>31</sup>

Sir S.R. Meyrick fails to note the Castell Mine in his description of the mineralogy and mines of Cardiganshire but refers to it as the Nant y Meirch Mine, which in 1810 yielded 1/4 black jack and the rest being quartz. The ore was considered a good flux for the manufacture of hard brass and sold at £5 10s per ton in 1806.<sup>32</sup>

In 1815, Walter Davies notes a mine at "Dyffryn Castell – sulphat of zinc; but not much worked hitherto: the texture of the rocks hereabout are enticing in the eye of a miner."

Davies also notes that there is a mine at Nant y Meirch, the tributary of the Castell, which flows through the Castell Mine. Of this he gives further details though he is rather confused and his map makes little sense of the situation. At Nant y Meirch there is a greater proportion of black jack than galena and, until recently, the price was only £5 10/per ton though by 1815 the price had risen to almost equal that of lead ore. Davies had a specimen of crystalline sphalerite from this area in his collection, though its exact provenance is not noted. He suggests that Nant y Meirch is a separate mine from Dyffryn Castell and this was opened about the year 1700 by James Lowe of Dol y Gors on behalf of

the Crown tenant, The Earl of Powys. This cannot be the case and a misprint is suspected; the date is more likely to be between 1770 and 1780. This information appears to have been taken from Meyrick's work which also suggests that Lowe discovered the site in 1700.

In 1815, it was being worked by Job Sheldon & Co who appear to have taken a lease from Lord Powys in about 1802. This information was mostly gleaned from Meyrick's account and the errors are repeated. It is worth noting that Sheldon also occupied the neighbouring Nant y Creiau Mine, also a Crown Mine, granted to the Earl of Powys at that time.<sup>33</sup>

Samuel Lewis, in his *Topographical Dictionary of Wales* (1833) refers to the Nant y Meirch and Nant y Crair Mines as having a predominance of zinc over lead but gives no indication as to if they were being worked at that time.<sup>34</sup>

By 1850, the mine was being promoted as the West Esgair Llee Mine and the correspondent's notes suggest that work was not only confined to Castell. Most of the ground above the 20 had been taken away but a level had been driven to come a few fathoms under the opencast, near the end of the level, i.e., under the opencast. A winze had been put down nine feet but had only shown about one inch of galena in a two foot wide lode. This was computed to yield about 12 hundredweights of ore per fathom of 10.4% galena.<sup>35</sup>

During the 1840s, the lease of Castell, and other Crown Mines, appears to have been granted to Crockford & Salmon's "Cardiganshire Crown Mines Co.". It is difficult to decide what this company did as there are so few reports of their activities. Smyth lists Esgair Mwyn, Esgairlle and Nant y Creiau as being spasmodically worked in the late 1840s; "Nant y Meirch, a continuation of the Penrhiw lode" refers to the Castell Mine. The Crockford & Salmon partnership was dissolved prior to 1844, when the former died, and the mines were also divided. Salmon, with Matthew Francis, retained the newly equipped Esgair Mwyn Mine whilst Nant y Creiau was relinquished to Crockford who knew little of mining matters. It is presumed that the Castell, or Nant y Meirch Mine was also relinquished to Crockford. His executors may have assigned it to the West Esgair Llee Co. or returned the lease to the Crown. One fact which can be safely deduced is that very little work was done at Castell between about 1825 and 1850.

Foster Smith, quoting from the *Mining Journal*, states that the Engine Shaft was being cleared of rubbish in 1850 and that at the time it was 20 fathoms deep but does not state if this was below adit or surface, which is seven fathoms down at the shaft. At this date, the ore consisted of a two foot wide rib of sphalerite which would give a yield of about 8 tons per square fathom. Allowing for the shortfall in the *Min Stats*,



this would yield about 25000 tons over the stoped area of 3200 square fathoms.<sup>36</sup>

Bick informs us that the mine was working in 1856; Captain Nicholas Ennor ridiculed the course of working taken by Captain James Lester and was proved correct when the mine was put up for sale in the November of that year by T.P. Thomas. He was a man who was involved with several scandalous mining affairs, usually in association with J.J. Attwood.<sup>37, 38</sup>

Castell was not even listed as a non dividend paying mine in 1868 and we must assume that trading had been suspended. In 1870, Liscombe refers to the mine as being 27 fathoms under adit level and making good returns of blende despite the *Mineral Statistics* showing that the mine had not sold any ore since 1865, and then only to the value of £63. The ownership and management details are not divulged.<sup>39, 40</sup>

Some months later, Spargo, like Liscombe, refers to the mine as the Castell or Gwaith Du Mine. He acknowledges Crown ownership but then states that it was run until 1868 by a London Co. who raised forty tons of blende per month through the efforts of about sixty persons.

He is wrong in stating that the adit was 24 fathoms from surface but confirms that the deepest level was 27 fathoms below adit level. The reason for the 1868 abandonment is explained by the fact that the Crown raised their rental and royalties. This is not born out by the figures available through the *Min Stats*.<sup>41</sup>

For some devious reason, Absalom Francis considered the Castell Mine as an annexe to the West Esgair Llee Mine. "The western portion of the grant (sett) contains the old Castel Mine, which had been worked, and has yielded a considerable quantity of blende ore, ... ". This also provides a clue to an affair which cannot be explained with any degree of satisfaction and, indeed, there may have been an intent to cause confusion on this point.<sup>42</sup>

About 500 metres to the north east of the main workings of Castell Mine lies another small working consisting of a short cross cut to a shallow shaft sunk on the Castell Lode/Fault. The associated workshops, office and wheelpit are in reasonable condition and are presently used for agricultural purposes. The mineralised rock on the dumps exhibits galena, chalcopyrite and a selection of secondary minerals but a considerable paucity of zinc minerals in comparison with the Castell Mine. It appears that this was the West Esgair Llee Mine which is recorded as having sold 25 tons of 6.8% copper concentrate in 1874. There were no dressing facilities available and it must be assumed that the ore was carried to Castell for concentrating.

## THE CASTELL & NANT Y CREIAU MINES

Under the *West Esgairllu Mine Company Ltd.*, Castell was given an extensive refit with a new waterwheel, crushing plant and dressing mill, erected under the supervision of Captain Roach in June 1873.<sup>43</sup>

By the extent of the operation, it must have been short lived. Also, in 1874, the mine is recorded as having produced 109 tons of 74.9% lead concentrate and 53 tons 4 Cwts of zinc concentrate of an undisclosed grade. It is probable that the bulk of the lead concentrate, and all the zinc, was derived from the workings at Castell. Francis's map of 1878 only shows the West Esgair Llee Mine but it is obvious that the description is pertinent to Castell. In his map of 1881 no descriptions are given but Castell is wrongly shown to the south of West Esgair Llee on a parallel lode. The 1884 Ordnance Map shows both sets of workings and names them as Castell and West Esgair Lle.<sup>44</sup>

Liscombe, Spargo & Francis all consider the mines along strike of Castell as containing blende but in lesser quantities than at the main mine.

Castell, but apparently not West Esgair Llee, continued to work until 1890 and despite the *West Esgair Llee Mining Co. Ltd.* becoming insolvent in 1876, the name was used by subsequent operators. 1882 was the most successful year of this period of work when 390 tons of 48% zinc concentrate was sold for £1170 but the employment of 26 miners and 12 dressers must have showed a loss of at least £250, without taking the merchants bills, and other costs, into account.<sup>45</sup>

Various companies attempted to revive the Castell Mine during the 1890s but it must be appreciated that the price of base metals was particularly poor, lead had fallen to the same price as it had been in about 1715 (£10 per ton) but the cost of labour had increased about four fold. The price of zinc was much steadier than that of lead, with the metal averaging about £20 per ton with fluctuations between £15 and £25, this steadied the price of the concentrate between £3 and £5 per ton. Even with superior methods and technology it was inevitable that most attempts were doomed to fail with such low prices. After 1900 the price of lead rose significantly but also tended to fluctuate quite wildly, zinc remaining relatively stable as it had done for the previous half century.

In 1897, the *New Castell Mines Ltd.* took over operations from the short lived Bainbridge, Boundy & McIlquhan partnership. Captain John Owen continued to be employed by the new company and he supervised the re-erection of the 1873 plant in the spring of 1898.<sup>46</sup> It must be considered that the refit was successful as the company's output rose significantly despite the departure of Captain Owen in 1898.<sup>47</sup>

Under the guidance of Henry W. Francis, son of Absalom, the *New Castell Mines Ltd* survived entirely on the production of zinc blende, 3037 tons being sold between 1899 and 1908.<sup>48</sup>

The mine was then sold to Captain John Owen, but he died shortly after taking over; his executors ran the mine during 1911 but fared poorly and sold out to the *New Castell Blende Mine Ltd.* in 1912. Photographs of the site were seen some years ago but, sadly, these have now been lost.

During 1912 they only sold 70 tons of blende for which they were paid £500, £7.14 per ton. This was followed in 1913 by 166 tons for which they received £5.74 per ton; the price of metallic zinc was about £22 per ton at this time.

In 1914 the price of metallic zinc rose a little due to the domestic demand being increased by the hostilities in Europe. Castell produced an unknown quantity of blende but the mine then ceased production. During 1915 the price of metallic zinc leapt from about £28 per ton to £68 per ton and created an upsurge in interest. Government assistance was also provided to assist in the domestic production of lead and zinc and these grants were instrumental in the formation of the *Lisburne Mines Development Syndicate* and *The Erwtomau Mining Co.* Bwlchglas and Van became more productive, with the guarantee of higher prices. Castell Mine came back into limited production for 1916 and 1917, the quantity of ore produced is not known, but, that it only yielded 30 ounces of silver is a reflection of a pitiful amount sold.<sup>50, 51</sup>

Government engineers visited the mine in the June and July of 1917 to prepare reports on the potential for increasing the output but these have not been located.

The War Commissioner's Reports do not show any production for Castell during 1915 & 16, but O.T. Jones shows that some concentrates were sold in 1916 & 17. O.T. Jones, J.W. Astley and H.F. Collins all visited Castell Mine on behalf of various government agencies in 1917 but it is difficult to find the extent of the work being carried on at that date. The 20 Fm. level was dry and there is suggestion that there was a 27 Fm. level which was flooded. A narrow lead lode, lying south of the main lode is noted, by Jones, as only having been worked to a small extent. In the November of 1919, Captain R.R. Nancarrow, manager of the Lisburne Mines, wrote an extensive commentary on the state of the mines of the area for the Committee of Enquiry appointed to investigate the Non Ferrous Mining Industry. However, he did not note any activity at the Castell Mine.<sup>52, 53</sup>

Preserved at the Llywernog Mining Museum is a wages sheet for the New Castell Blende Company Ltd. showing that the company was still buoyant in 1918. Peter Harvey has a recollection that they operated until about 1922 before liquidating and this tallies with interviews that I held with former miners.<sup>54, 55 & 50</sup> During the modernisation of a house in

## THE CASTELL & NANT Y CREIAU MINES

Ponterwyd in 1988, it materialised that a slate slab on the kitchen floor was the commemorative tablet off the Castell Wheel pit which had been laid with its face down as a flagstone. This is also preserved at the museum; the inscription reads:-

WEST ESGAIRLLU MINE  
COMPANY LIMITED  
THIS  
WHEEL  
&  
MACHINERY WAS ERECTED  
JUNE 1873                      CAP R(OACH)?  
RE ERECTED MAY 1898      Ca(p OWEN)?

Beneath the damaged inscription is a rather quaint portrayal of a Cardiganshire miner wielding a poll pick.

Very little of the Castell Mine remains in testimony of the quantity of ore raised. The ruinous remains of the wheelpit and crusher house re-erected by Captain Owen in 1898 are in a poor condition and most of the earlier remains have been razed in the retrieval of hard core from the site. The site of the Engine Shaft is still discernible, with a small balance bob pit sited on the northern side. The shaft, and many of the other open workings, have been used to dispose of agricultural refuse in recent years and now have a highly disagreeable aroma of dead sheep wafting from them.

The great width of the lode can be gauged from the cavernous opencast workings; it is only a question of time before these fall foul of fly dumping. This is a sad fate for a mine which was much loved by the miners who worked there. It was considered to be a good mine to work at and the men did not suffer from the dreadful ailments which afflicted the Cwm Rheidol miners.<sup>57</sup>

Local tradition suggests that one of the Castell waterwheels was sold to the Nant Iago Mine but David Bick reports that the wheel actually came from the Esgair LLe Mine, a mile to the east, in about 1861.<sup>58</sup> Curiously, Captain James Roach also moved from Esgairlle to Nant Iago at the same time but returned in 1872 to manage the mine, when it was run, with Castell and West Esgair LLee, under the promotional guise of The Great West Van. From the foregoing descriptions, it can be seen that there was probably an intent to deceive speculators and shareholders by confusion through applying a multitude of names to these mines without revealing to what extent the Setts had been consolidated.

Captain James Roach was also associated with the Bryntail and Glyn Mines near Van for many years but that is a different tale altogether.<sup>59</sup>

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\* Those references marked with an asterisk are derived from material in the author's, and other private collections.

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3 September 1990.



*Open workings at Castell Mine. (Photo: R.H.B.)*