



Welsh Mines Society

(Member of the National Association of Mining History Organisations)

NEWSLETTER 43

October 2000

Editorial Thoughts

1. Many thanks to all those who have sent in contributions, a glut around the copy date has resulted in making this Newsletter a bumper edition in addition to helping delay its publication. I apologise for the lateness, I'm afraid my employer has had a monopoly on my time and mind in recent months, but I hope you feel it's been worth the wait.

On a more positive note I've taken receipt of some substantial articles from S.J.S.Hughes for the Journal, which may well make a publication possible prior to the NAMHO 2002 event, (see Item 7) the papers of which will be issued as a WMS Journal.

Events - Dates for Your Diary

2. WMSoc. 2001 Programme

Winter Meet - Sunday 11th March. Host; **George Hall**, Tel./Fax. (01584) 877 521. George has again offered the use of his home for an informal indoor one day winter meet. He lives at 'Abilene', Sheet Road, Ludlow, Shropshire, SY8 1LR. Arrive at any time from 10:30 a.m. onwards, tea and coffee will be provided. If you want a buffet lunch these will be available, cost ca. £5-00 but need to be booked a week in advance, otherwise just turn up and bring a few slides - all are welcome !

To get there - Sheet Road goes into Ludlow from the southern of the two roundabouts on the Ludlow by-pass (A49), 'Abilene' is about 200 yards down on the right, the third house beyond the N.F.U. Mutual Office.

Summer Meet - Weekend 9th-10th June. Leaders; **George Hall & Ian Tyler** (MOLES). Location, **The Lake District**. Headquarters: **The Middle Ruddings Hotel**, Braithwaite, Keswick, Cumbria, CA12 5RY. Tel: (01768) 778 436. E-mail: **reception@middleruddings.co.uk** Website: **http://www.middleruddings.co.uk** Bed and breakfast for one night is £30 per person, with a reduction for further nights. Hotel proprietor Bernard Moore, promises superior comforts.

Saturday - Meet at 11 a.m. at Threlkeld Quarry and Mining Museum. (NGR NY 327 245) This is on the B5322, signposted off the A66 at Threlkeld, 3 miles east of Keswick. After visiting the Museum we will go to Goldscope Mine, in the Newlands Valley. Meet at Little Town car park. It would be advisable to share cars from Threlkeld or Braithwaite if possible.

Honorary President: DAVID BICK, The Pound House, Newent, Gloucester, GL18 1PS.

Secretary/Treasurer: **DAVID ROE**, 20 Lutterburn Street, Ugborough, Ivybridge, Devon, PL21 0NG.

Editor: **MIKE MUNRO**, 64 Bron Awelon, Garden Suburb, Barry, South Glamorgan, CF62 6PS.

WMS Home Page http://www.mike.munro.cwc.net/mining/wms/wmsoc_hp.htm

Saturday Evening - Dinner at Middle Ruddings Hotel. Dinner £13.95, **6:30 for 7 p.m.** Will members please try to be punctual for dinner, as otherwise our after dinner time becomes seriously eroded. A menu will be enclosed with the next newsletter & posted to the web page as soon as available. Bookings should be sent to G.W.Hall at least one week in advance. If members wish to give short presentations please contact George who will ensure a slide projector is made available.

Sunday - Meet at 10 a.m. at Fellside, (NGR NY 305 376) on minor road 2 miles southwest of Caldbeck, for visit to the Roughten Gill Mines, the inspiration for 'Caldbeck Fells well wrought are worth London Town dear bought.'

Ian Tyler, of the Mining Museum, local expert and author of several Cumbrian mining books, has kindly offered to lead the field trips to these famous and fascinating mediaeval mines. Bring lunches. There will be opportunities to go underground.

Please Note: There is (very regrettably) a ban on *any* mineral collecting anywhere in the National Park unless a permit (from the Lake District NPA) has previously been obtained.

Autumn Meet - Weekend 8th-9th September. Organiser **George Hall**. Location, **North Wales**. Saturday : **Parys Mountain**; Sunday : **Llandudno Copper Mines**. Headquarters : **The Warwick Hotel**, 56 Church Walks, Llandudno, LL30 3HL. Tel: (01492) 876 823. Bed and breakfast £22. Dinner ca. £10, 6.30 for 7 p.m. Our vegetarian members may like to use the Plas Madoc Vegetarian Guest House, Tel: (01492) 876 514, which only a few yards from the Warwick.

Both Saturday and Sunday meets will be led by members of the local mining societies, and there will be a choice of surface, easy underground, and difficult (SRT) underground. Full details will (d.v.) appear in the April Newsletter.

For both weekends, will members who wish to stay at the named hotels please make their own bookings direct, mentioning the W.M.S., as soon as convenient.

3. Accommodation - For those interested in exploring the mines around the Nenthead area during the week after the June 2001 field meet, Mole (AKA John Hine) will have basic accommodation available in the Nenthead/Alston area near Garrigill. For further details regarding availability and prices, contact Mole on (01594) 833 217.

Other Societies & Organisations

4. NAMHO 2001 - Conference, Ireland. Weekend 22nd-23rd September, with associated events the following week, Monday 24th to Friday 28th September. Hosted by the **Mining Heritage Society of Ireland** it will be located in Avoca, Co. Wicklow. For further details contact Matthew Parkes MHSI, c/o Beggars Bush, Haddington Road, Dublin 4, Ireland, or visit the MHSI website at <http://www.gsi.ie/mhsi>

5. The Northern Mine Research Society - Halkyn, N.Wales, April 2001. Contact Steve Mitchell, 38 Main Street, Sutton in Craven, Keighly, W Yorks, BD20 7HD for details.

If you're aware of events or trips which other organisations are holding or making to/into Welsh mines, please let me know & I'll include them here.

Important Announcements

6. Obituary.

It is with much sadness that I report the unexpected passing away of the wife of Mike Breakspear. We extend our condolences to Mike and his family.

7. NAMHO 2002 - "The Application of Water Power in Mining" A mining history conference to be held at the University of Wales, Aberystwyth. Fri - Mon, 5th-8th July.

This conference will be the central theme of the National Association of Mining History Organisations (NAMHO) meeting for 2002, hosted by the **Welsh Mines Society**, with a full programme of related field trips and underground visits.

Conference co-ordinator, Peter Cloughton, provides the following request :-

Preliminary notice and first call for papers.

Water has proved a hindrance to mining since its inception but it has also been used to the benefit of operations from antiquity until the present day. The positive use of water power was initially limited to the hydraulic working of alluvial and soft rock deposits. By the late medieval period it had been applied as the motive power for pumping and other processes ancillary to mining. Its heyday came during the nineteenth century when waterwheels and turbines provided the power for a range of applications on mine sites across the world.

In Wales, the metal mines of the Cambrian Mountains provided ideal locations for the application of water power to pumping, winding and, later, for generating electricity. A high average rainfall and locations remote from the major coalfields meant water generally found favour over the use of steam power. Examples of the use of water power, and the infrastructure developed to support it, from the period of Roman occupation through to the 20th century can be found within easy reach of the conference venue at Aberystwyth.

Papers are invited on the subject of the application of water power in all aspects of mining from across the world. In addition to examples of its application based on archival and archaeological research, papers are particularly requested on technological innovation and the economics of water power.

Outlines of papers for submission should be sent to the conference co-ordinator; Peter Cloughton, Blaenpant Morfil, Rosebush, Clynderwen, Pembrokeshire, Wales SA66 7RE, UK. E-mail: P.F.Claughton@exeter.ac.uk

Further information will be posted on the Internet at the following URL;

http://www.exeter.ac.uk/~pfclaugh/mhinf/namho_02.htm

First call for volunteers

It goes without saying that this conference cannot be organised by one person working alone, it requires the co-operative effort of a number of members. Assistance in the running of the conference can be at various levels; from leading an underground visit or manning the reception desk at the conference venue, through to co-ordinating the accommodation requirements of 200+ delegates. Many of you will have attended a NAMHO conference or field meet in the past and have some idea of the work involved. If you can help in any way, please contact Peter Cloughton, at the above address or;

Tel. (01437) 532 578; Fax. (01437) 532 921; Mobile (07831) 427 599.

One non-mining skill we do need at an early stage is the services of a graphic artist to develop a conference logo - any ideas, soonest, to Peter as above.

New Members

8. The Welsh Mines Society says 'a croeso' (hello and welcome) to the following new members :

Mr Roger D BADE 104 Monkleigh Road, MORDEN, Surrey, SM4 4EP.

Mr B D CLARKE	Glownant, Talsarn, LAMPETER, Ceredigion, SA48 8QE.
Mr Tim COTTERELL	Flat 3, 216 Newport Road, Roath, CARDIFF, CF24 1DN. (A, IA, M, Ge, U, H)
Mr R A FELLOWS	Greengables, Stafford Road, Great Wyrley, WALSALL WS6 6AX
Mr A FISHER	12 Station Road, Ystrad Mynach, HENGOED, Mid Glamorgan, CF82 7AT. (H, IA, C, Old lamps, Records of 700 coal mines)
Mr John G GIBSON	83 Grove Road, Millhouses, SHEFFIELD, S7 2GY. (Peak District M.H. Soc. etc.)
Dr David JAMES	13 Finedon Hall, Finedon, WELLINGBOROUGH, NN9 5NL. (Ge, M, S, U)
Ms Catherine MILLS	38 First Avenue, Selly Park, BIRMINGHAM, B29 7NS.
Dr S PETERS	38 First Avenue, Selly Park, BIRMINGHAM, B29 7NS.
Mr Roger SMITH	17 Llwyn-y-Grant Road, Penylan, CARDIFF, CF23 9ET.
Ms Ros WESTGATE	Awel y Mor, Staylitttle, TALYBONT, Ceredigion, SY24 5EQ.

Field Reports

9. Kellows Wanderings - Adrian Barrell reports on some of the explorations he and fellow adventurers made during the May Day bank holiday weekend earlier this year.

Maenofferen. (NGR SH 714 465)

We entered (Cooke's Level) via the gallery on the Votty Office Level. The gate was chained but there was sufficient clearance for the stoutest member. Immediately inside was the 'Hunter' dual-bored section which was much shorter than anticipated. Further progress was along a dry and well-paved gallery. Clearly this is an old part of the quarry and for many years has been used only for access. Plodding on, we emerged at the rear of the winding gear of the first incline inbye from the foot of the daylight incline, much higher up than the meet leader's predictions. In an adjacent chamber we found a stoneware flue similar to that at Croesor, suggesting that the incline was once steam-powered.

We continued inbye to the main incline where, at the far end of the caban, we discovered a door which gave access to a 4' diameter axial fan installed to extract air from a long development gallery with few chambers and roofing shafts; the air at the far end was of doubtful quality.

Bryn Eglwys. (NGR SH 695 054)

We located the entrance to 10C adit thanks to excellent directions from Jon Knowles. On reaching the working bench at the top of the last chamber we located the anticipated 120' abseil down to floor 15C. However, another window into the same chamber gave access to a shorter descent on to waste piled below; we took this route, which was already rigged after a fashion.

On 15C we found two complete and workable winches, one half-buried winch and a "winch kit" together with a wagon and various smaller artefacts. We also located the route on down to 20C, which is down a short face and a great deal of waste in the chamber behind the second winch reached, the one with the "winch kit".

On reaching 20C we began to head outbye. The subsequent water reached parts one wished it wouldn't, certainly for short fat people, and was followed by a gravel crawl and a doubtful-

looking section under some very bent rails. Having admired the massive proportions of the shaft down to 75C we emerged finally through the wide Daylight Adit into a bog.

[Following our underground trip, the Welsh Mines Sheep Rescue Team were called into action, and brought back to safety a distressed lamb which had somehow got itself into the open workings on the Broad Vein, above the Beudynewydd Incline. *M.P.M.*]

Abercorris. (NGR SH 754 089)

This was a rather uncoordinated trip. Having cooled off after the thrutch up the zig-zag to Level 4, our first objective was to locate the through route from Level 5 to Level 2/3 which we had failed to find last time. John and Richard went off to descend to 2/3 via the window in the twll, with instructions to make much noise. The rest of the party went up to 5, where the meet leader descended the tip chamber and through the window into the one below; here he hung about making plaintive cries until eventually those cries were answered and a head popped out of a hole in the side of the chamber. The remainder of the party then descended and explored 2/3. At this point the meet leader volunteered to return to 5 and derig. When he returned, pointing out that he had now got wet three times as opposed to everyone else's once, the entire party had returned to grass and was having lunch. The observation that we should have stayed on 2/3 in order to go lower, and that it was now necessary to re-descend, met with some sales resistance and a decision to bring forward the trip to Ystrad Einion. We shall return to Abercorris.

Ystrad Einion. (NGR SN 707 938)

Under the direction of Mike we entered the unlocked adit and spent some time drooling over the magnificent water wheel and appurtenances. Dave and Richard crossed the flooded winze and, reaching the foot of the shaft, were able to ascend and photograph the kibble, becoming extremely wet at the same time.

Cwmystwyth. (NGR SN 803 746)

Graham had kindly arranged for a friend from Aberystwyth to meet us at the mine. Kelvin explained that he could be with us only until noon and that he proposed to give us a brief tour and then leave us to our own devices. However, Kelvin's brief tour turned into an extensive, informative and at time hair-raising expedition round the surface workings during which we covered most of the eastern area of the mine and slithered precariously round Craig Fawr. He then departed two and a half hours late with our very sincere thanks for his help and enthusiasm. The diminishing group then went to the western end of the mine to look at where we remember the mill, by which time it was rather too late for an underground trip. Never mind, it was an excellent day and we will return.

Adrian (Moses) Barrell, May 2000

10. WMS Summer Field Meet, 10th-11th June 2000. Ogofau Gold Mine and the small mines of the southern Cambrian Mountains, Brynambor and Rhysgog.

About 30 members met at the National Trust car park at Dolaucothi Gold Mines. Our leader, Peter Claughton, gave us a brief outline of the site then handed over to Emma Plunkett Dillon, the National Trust Archaeologist on the site, who described the Roman Workings and the findings of her team and of the recent work carried out there by a group of French Archaeologists. We were also introduced to Simon Dominy of the University of Wales, Cardiff, who is the site Geologist and Dr Barry Burnham, Archaeologist from the University of Wales, Lampeter.

We then split into smaller groups, Emma and Barry taking a group on a surface tour of the Eastern half of the workings, whilst Simon took a group underground to explore the levels and workings not accessible to the public. Others did the guided visitors underground trip. Peter also kindly ferried people up to the high leat to save the 3 mile walk. On the surface walk we were first shown Roman Pit, a large openwork, then after a quick detour to look at Middle Adit we walked on up the hill past Mitchell Adit to the reservoir known as Tank C. Many of these tanks exist on the site though at this time of year they are difficult to view due to the undergrowth. Various theories were put forward as to their age and use as were the leats that fed them, early hushing being a possibility.

After lunch, those who missed the morning's surface tour went off with Emma and Barry, our group went on the underground trip with Simon (thanks to Harold for the loan of his lamp). We were first given a talk on the geology of the site then entered Long Adit where we were shown some of the workings then made our way up, using the ladder ways, to exit at Mitchell Pit. Simon pointed out some geological features and also the different periods of working. We were also taken into Mill Adit, a short level that was once used as an ore pass from the older workings to the mill.

The main buildings on site came from Olwyn Goch shaft on Halkyn Mountain, these include various sheds, the winding house and the headframe. The Winding House still contains the Winder, inside the workshop was an Eimco shovel together with an electric loco, charging rack and various machine tools.

After cups of tea we headed off to later meet at the Black Lion Royal Hotel, Lampeter.

On Sunday we met at the car park in Llanddewibrefi then headed off to Brynambor Mine. This was a very interesting site with many remains including a small wheelpit near the stream, a length of flat-rod and possibly a support roller were seen nearby. The later 28ft. wheelpit still contained parts of the waterwheel and the axle in the stream still had attached parts of the winding drum and brake band. Walking further upstream we came to the Engine Shaft, still open and complete with the pump-rod and angle-bob, now fallen over. A broken crank was also found and Harold unearthed a clack-valve casing with the valve still inside, it was suggested that these may have been used as balance weights.

After being chased away by a swarm of midges we walked back to one of the buildings above the mine, this was interesting in that on one the walls a list in faint pencil of tools including hammers, picks and chisels could be seen. Heading back to the cars, a kibble was found beside the new bungalow, this was much photographed.

From here we drove back towards Llanddewibrefi, and after stopping for lunch at a suitable wide spot in the road, continued on to our next site, Rhysgog Mine. The spectacular leat to this mine could be seen high above the road. The location of this site entailed a walk of about a mile. Peter showed us around the surface remains including the run-in engine shaft and wheelpit, nearby is a fine dressing floor and a boggy patch near the stream indicated the site of the deep adit. Higher up across the stream some opencuts were looked at and also a shaft. Here we had a break while George recalled his early exploits here (and in the FOD) in the distant past. From the shaft we walked to the reservoir that supplied the mine and then followed the leat for a short distance along the Afon Brefi valley. Looking down on to the valley floor could be seen the tips and trench of the unfinished deep adit.

After a final look around the site we made our way back to the cars to conclude a very enjoyable weekend. Many thanks to Peter Claughton for organising the meet and arranging

the fine weather and also to Emma Plunkett Dillon, Barry Burnham and Simon Dominy for their assistance at Dolaucothi.

Nigel Burns

11. Llanddewibrefi mines - Cwm Brefi: Humble pie.

After the June field meet at Lampeter George Hall supplied me with a number of extracts from the Mining Journal (MJ) re. Rhysgog and Cwm Brefi mines. They do set the record straight and allow me to date the plan and sections in NLW Lucas 2341 to circa 1860, rather than post 1861 as I suggested in the notes handed out for the WMS meet.

A key extract was that from MJ 1861, p.334, which refers to work on both the Rhysgog Deep Adit and Cwm Brefi mine. Which all means I was wrong to suggest in the notes (above) that George had confused Cwm Brefi with the Deep Adit workings.

Peter Cloughton

12. Ramblings north of Lampeter.

After the June field meet had wound to a close, a fine body of mine explorers, charged with the activities of the previous two days, assembled themselves with a non-too carefully set plan of exploration of some of the mines of Cardiganshire.

First on the list being **Caron** mine, NGR SN 715 645, see Item 30 for details of what we found and a short history of the mine.

We next managed a walk around the features remaining at **Abbey Consols**, after obtaining permission from Dolebolion farm, noting the rails in the field above the quarry like workings above the deep adit. The stone arched culvert which used to drain the (now obliterated) odd shaped wheel pit still remains. Up above the fields

Next day, at **Fairchance**, we noted the interesting inclined skip shaft and ore bin on the top of the hill. The adit (as shown in DB's OMMofMW Pt.1, p.35) is still open, and rails remain, but it's thigh deep in water and after a few yards, unstable ground prevents further progress.

Esgair Mwyn; We peered down the laddered Pen Mynydd shaft above the tailings dump - this allows access down to adit level, although the ladders can no longer be relied upon ! It apparently continues a further 75fms beneath adit level, although that is all now flooded.

Frongoch; Located the deep adit and found a winze into this near the Wemyss mill, but didn't descend it. Took a walk around the Frongoch site, once the owners had gone home, to view the open cut and the various mine buildings.

Onto our last day and the **Rheidol Valley**. A shaft by the roadside (SN 6672 7776) and a flooded adit and the possible location of another, both in the woods below the road, are claimed to be the workings of **Nantyrönen** by J.R.Foster Smith (British Mining No.12, p.56)

Gelli; Located various workings; Above the obvious tip by the road, an adit (SN 7029 7955) can be entered a short way, further progress prevented by a fall. Moving east along the forestry track, then up another waste tip an adit (SN 7058 7958) was entered, some 150 paces in length - terminating in a run-in probably on the stope. A heading to one side connected with a draughting shaft. Continuing our climb up the hill, we moved up the 'Rheidol Stag' finding another short adit, which required a slight dig to allow access. At only 42 paces long, it terminated in a run-in, likely to be the shaft (in the antlers of the 'Stag'), a short distance above the adit. A few yards to the west an obvious trench into the steep hillside marked the probable location of an adit. A quick bit of hand digging located the top lip of an adit entrance under some 12" of soil & turf. Being without conventional digging tools, the use of only hands and wooden implements comprising a shovel handle and a fence post proved

sufficient to create a 'body' sized hole enabling access into the short cross cut. (Early Mines Research Group eat your heart out !) Subsequent inspection of my photographs show the adit entrance as resembling a 'coffin level', having a narrow roof, and showing signs of chisel marks. The working on the vein were however much more irregular.

Ty llwyd; Working down the hillside, all the adits (~ SN 698 797) were entered (some no doubt from the 1700's) as were some of the stopes. There remains much to be explored here including the stone lined shaft close by the Visitor Centre.

Caegynon; Walked into the main adit (above the dumps) a short way, but ropes are required if one is to explore the vast stopes. A large hand winch and a pulley on an RSJ remain from the last working in 1937-8. Next to this are substantial rails, which run into space over one of the stopes - these weren't followed !

By now only Dave and myself remained, and with the light of the setting sun spinning across the hay fields of the Rheidol Valley, we cracked open a cask of Daves best homemade cider (with spectacular results !) and took a toast to 'absent friends'. Perhaps an echo to those made in the 1780's by Francis Thompson to 'all friends in England, as also the mines.'

Mike Munro

13. The Kelly Mine.

This is an account of a guided afternoon trip with the West Sussex Geological Society around the surface workings of the Kelly Mine, 2½ miles N.W. of Bovey Tracey, where a lode of micaceous haematite used in paint making had been worked from 1790 (when it was first mentioned in mining records) until about 1960. In 1902 there were 4 miners working underground and 9 surface employees. The ore was dug by hand as it was soft and friable and easily disintegrated if explosives were used.

There is an active restoration society trying to stop vandals destroying what remains of the mine buildings, and rebuilding and restoring as much as they can of the remainder, including the machinery. Quite a task !

The lode was worked by adit levels in the steep hillside but a **shaft** was sunk in 1902. Much has collapsed and cave-ins still occur so the tunnels are considered unsafe. Our first stop was at the entrance to an **adit** (very wet) then we followed the remains of the old **tramway** above ground. The ore was taken by winch up the tramway to the **washing house** then to the **wash-box** where sands and mica were washed away leaving pure iron oxide. The high grade ore left was put through **stamps**.

The **engine room** houses a **1934 oil engine** (completely vandalised) which had replaced a water turbine (1915). This **water turbine** is still there. Then on to the **office** where the walls were packed with horse-hair and white washed - the forerunner of wall insulation!

The **brake jig** was similar to those used in lead, zinc and copper mines, but smaller and was operated by women. Still quite a heavy job to jig the washed ore and separate the lighter feldspar and quartz from the heavy ore. A set of **California stamps**, in pieces but being repaired, broke the ore to release the flakes of haematite. Five **separating** tanks have been restored. An **overshot water wheel** had also been fully restored but was not working at the time.

The mineral lode is associated with the Sticklepath Fault which runs E.N.E through part of the Dartmoor granite mass. Specular haematite, which was mined here, is a variety known as micaceous haematite or 'shiny ore' and is almost pure oxide of iron, Fe₂O₃. The main difference between this and common haematite, which is the primary source of the metal ore,

is the structure of the oxide crystals. When viewed under a microscope they resemble the structure of mica, hence the term 'micaceous'. It is this property coupled with its chemical inertness which makes it ideal for use as a special paint for protecting metal structures. It was a high value product and the quality was better than the highest grade produced in Austria.

MIP paints, or Micaceous Iron Paints. It is the platelets of flakes of 'mica' that shield the medium from the degrading effects of U.V. radiation. The Forth Bridge has been painted with this type of paint which will last for 25 years - by far the best for external work of this kind. A synthetic variety has been produced - Hammerite. It is applied directly to steel as a primer, and provides a protective weather resistant coating.

Betty Steel, March 2000

14. WMS Autumn Field Meet, 2nd-3rd September 2000. East and West Logaulas and the lower part of the Lisburne leat. Grogwinion and Gwaith-goch

From the meeting point at Pen-y-gwaith, (SN 7415 7170), next to the open-cuts of **East Logaulas**, we made our way first to **Eddy's Shaft** at NGR SN 7442 7182, which is still open, with the remains of tailings next to it. After following the road further east for a short way, we made our way across a field, past the remains of a wheel pit to look at the overgrown top of another shaft at NGR SN 7458 7192. Returning briefly to the road we passed what is thought to be the smithy, still roofed (but for how much longer ?), and followed a track northwards, and down the hill to a curious wheel pit and a run-in adit. This is postulated to be the original **Logaulas Deep Adit**, or could it be an substantial trial on the Logaulas Vein ?

A return back up the hill, with a stop for lunch, took us up an old trackway, across the route of the Lisburne leat, and eventually to the **Penygist Shaft** (SN 7450 7155). Back on a metalled road, we continued further up the hill until we could view some of the workings of **Glog Fach**. George explained the long waste tip we could see (SN 754 714) had been created to allow a tramway to be run from a shaft to the main dressing floors at Glog Fach.

Retracing our footsteps, we rejoined the run of the **Lisburne Leat** tracing it back to the workings of **East Logaulas** and our initial meeting point.

In the evening, after dinner at the George Borrow Hotel, there was an opportunity to view a fine display created by Simon Hughes on the mines and miners of Talybont.

On Sunday morning we assembled on the tailings and remains of dressing floors of the **Grogwinion Mine**, near the Deep Adit, on the north side of the Ystwyth at SN 715 721. Under the direction of George Hall, we headed up the hill past the Deep Adit, and across a most substantial leat which supplied the water to the 1940's mill at Gwaith-goch. A steep climb brought us to the '**Intermediate Adit**' which was until very recently only accessible through chest deep water, but as George had previously arranged for an excavator to open up the entrance, this allowed all interested parties a somewhat dryer and easier access. George hadn't however been able to locate the levels which 19th Century reports describe as being 'ancient, coffin-shaped, 3ft high and 18 in. wide at the widest.'

We continued up the track, across the hillside, and after a brief rummage in the woods looking for an ancient adit, headed further up the hill to the impressive open cut where lunch was taken in glorious sunshine - an opportunity to admire the wonderful views up and down the Ystwyth, more than 600 ft below us. We descended back towards the track where Chris Williams found a stone maul - evidence of early working. We kitted up to take our turn in having a look inside a short coffin level (SN 7118 7244) delightfully located next to a small stream. This had been driven as a cross-cut to the vein. The group then made its way to

Gwaith-goch where Kelvin showed us into **Level No.4**. We then divided, part of the group, led by Kelvin, went to view **Gwaith-goch Level No.3**, the remainder followed the track down the hillside to take a look at **Gwaith-goch Mill**, managed by R. R. Nancarrow, and built to process the dumps of Frongoch. Only the machinery plinths and the retaining walls remain, making interpreting somewhat troublesome. For a cross-sectional view (albeit at low resolution) of the mill, go to <http://www.llgc.org.uk/ardd/pensaeri/architect.htm> click on 'Industrial, Commercial & Military'.

Thus, another most excellent WMS field meet drew to a close. Some of us, however, continued our explorations onto other mines in the area, but more of that another day !

We are indebted to Forest Enterprise Wales and the owner of Pengroginion for giving permission for our visit.

Mike Munro

15. George Hall adds a follow-up to our visit to Grogwinion

'I would like to apologise to members for talking a certain amount of nonsense on our visit. If the large adit that we went into first, called by John Kitto in the 1870s the 'Intermediate Adit', was Indeed the Mines Adventurers' 'Great Level', it was not, as David Bick pointed out at the time, driven in the late 17th century, but in the second quarter of the 18th.

If Thomas Bonsall drove the present deep adit, this would have been in the last quarter of the 18th century. However, numerous reports in the mid-19th century refer to the Long Drift, a very extensive level midway between these Deep and Intermediate Adits. Absalom Francis refers to this as an adit, and it's difficult to suppose that so extensive a level was not one. But if so, where does it enter from surface, and which is the Mines Adventurers' Great Level ? Any comments, anyone? There is a great research project here for someone.

I am indebted to Simon Hughes for lending me a copy of his extensive records of ancient workings at this mine, data from which I have used above. However, these pose almost as many problems as they answer !

I would like to take this opportunity to thank members who generously contributed to the cost of hiring a machine to dig into the Intermediate Adit. This was greatly appreciated, and to my pleasure I only had to find another £5 to meet the bill. However, I had dug hard beforehand.

Since the Society's visit, Hugh Ratzler, Dave Seabourne, et al. have started digging east from the Intermediate Adit, in the ancient workings on No. 1 lode, and intend to continue with this. If anyone would like to join in, would they get in touch with Hugh or Dave.'

G. W. Hall.

16. Simon J.S.Hughes adds;

'I had a wonderful weekend at Logaulas, the George Borrow and Grogwynion, but my legs were just not up to the walking. Thank you all for being so complimentary about the display boards which I brought along.'

'Whilst I was driving past Lletty Ifan Hen mine, I noticed some heavy earthmoving equipment parked near the few surviving remains. I had heard that the shafts were backfilled about a year ago.'

'Following on from Sunday afternoon at Grogwynion Mine; can I persuade and encourage someone, more active than myself, to **write an article** on "The Coffin Levels of Mid Wales", with photographs and surveys ? (More of this in the next N/L) Note that reclamation

schemes have recently stopped up the access to the coffin levels at Cwmerfyn, Bwlch and Pwlllyrennaid. These levels ought to have been surveyed and photographed.'

17. Excavations at Dylife - Chris Williams reports;

Over the last few months a small group of members has been taking an interest in the Dylife mines. We have walked over the area several times with Cyril Jones, the author of *Calon Blwm*, the book on the story of Dylife, and photographed artefacts and other remains of mining activity. I have completed research on the mines in the Cobden and Bright period, 1840-73, using new material in the Wynnstay archives.

Recently we have spent two days digging out an old level on the south side of Pen Dylife, about 100 yards south-east of the Boundary Shaft. The late Mr Will Richards once told David Bick that when he worked at Dyfngwm, in the 1930s, they re-entered this level, and found some old wooden pumps. The portal of the level had collapsed, although a trickle of water emerged from the fall. On the first day, we dug out the entrance sufficiently to find that the level had flooded almost to the roof. On the second day, a larger party spent a whole day digging a trench through the fall to lower the water level. When there was an airspace of about 12-18 inches a group of four were able to get in. The level proved to be later in date than expected, and looked to be of late nineteenth or early twentieth century date. The rock is very friable, but any shotholes seen seemed to have been made with a rockdrill powered by compressed air. After about 25 yards the level met the vein, running east to west, at a right angle. There was a flooded shaft at this point with the remains of a windlass over it. To the left the level had been filled to the roof with deads; to the right it was followed for about another 25 yards to a fall where timbering through bad ground had given way. The only artefact found was a small iron gad, which was left in situ on a ledge. Photographs were taken before we left and blocked up the portal, leaving a pipe in place to drain the water. Those who took part were David Bick, Rod Goslin, Brian Grimston, Alan Hawkins, Tony King, Cyril Jones, Harold Morris, Hugh Ratzer, David Seabourne, Tom Thomas and myself.

Incidentally, in the spring David Bick and I photographed a number of kibbles which were lying on the dumps, probably uncovered when much of the material was removed to build the Clywedog reservoir. Since then, the best example has disappeared. Does anyone know who took it and where it has gone ?

C.J.Williams, 18 October 2000

News & Developments

18. Bryn Eglwys - Back again as 'Memories of the Slate'

Dave Seabourne kindly sent in a cutting from *The Cambrian News*, 4/5/00, reporting on the forest walks which have recently been set up around the Bryn Eglwys Slate Quarry, near Abergynolwyn (NGR SH 694 054). Guidance has been provided by Forestry Enterprise employee Wil Jones, of Hafodlas fame. Information for the interpretive panels has been supplied by WMS member Alan Holmes, author of 'Slates from Abergynolwyn' which details the history of Bryn Eglwys Slate Quarry - Ref. last N/L, Item 24.

"The forests have largely protected medieval farmsteads and field patterns, hedgerow, walls and industrial sites as well as buildings," says Forest Enterprise Wales Regional Director Bob Farmer. What he fails to mention is the fact that in the 1970's the Forestry Commission razed the majority of the quarry's surface buildings and structures! Hopefully this new

initiative will be carried out elsewhere and brings a welcome change in the approach the forestry have traditionally taken with Industrial Archaeological remains in Wales.

19. UK Gold Panning Championships - Wanlockhead, Scotland. 27th-28th May 2000.

I had the pleasure of witnessing Welsh Mines Society member, Eric Gray-Thomas, '*The Welsh Wizard*', pan his way to victory in the UK Gold Panning Championships, Veterans Class. Eric found all eight grains of gold (each smaller than a pin head) in a two gallon bucket filled with sand and gravel, in a mere 11:02 minutes. Well done Eric !

20. Cwmystwyth Mine - Proposed safety work. (Ref. N/L 42, Item 9): Simon J.S.Hughes responds:- "I am far from convinced that this reclamation work can be undertaken in anything like the required manner, or that it is as necessary as is being made out. The 'tube through a wall' approach was used at Bwlch and is a wholly inappropriate method for dealing with the adits, cheap and nasty comes to mind. The capping of Pugh's and Kingside shaft is going to pose a huge problem with much disruption and will achieve little, whilst a road will have to be driven up to Taylor's shaft if this is still included in the plan.

The pollution is insignificant in comparison with Cwm Rheidol. No one has got trapped, lost or injured since the mine closed, unlike Darren. No stock has died as at Van, Goginan, Cwmerfin or Mynydd Gorddu. No great quantity of rubbish has been dumped on the site, like at Glogfach or Frongoch. So why does an ancient monument, probably a thousand years earlier than Stonehenge, and a S.S.S.I. of some note, need to be made into a pretty park costing many millions ?

Not one of these reclamation jobs has yet come up to expectation, despite many promises, and I cannot foresee a greater effort being made especially for Cwmystwyth. I am wholly opposed to this scheme until such a time as the undertakers can demonstrate an adequate degree of competence and of selecting contractors by the lowest quote. Cheap & Nasty ?"

S.J.S.Hughes

21. Register of Landscapes - The Register of Landscapes of Outstanding Historic Interest in Wales is available in summary on the Internet at <http://www.ccw.gov.uk/register>

Many of the landscapes on the register, around 10 of the 35 listed, have a significant mining element. See, for example, Parys Mountain, Holywell Common and Halkyn Mountain.

Peter F.Claughton

22. Accident in Bwlch-y-plwm Lead Mine - Near Llanfrothen, Penrhyndeudraeth.

In the last week of October, a women and a male instructor fell 40 ft while abseiling down a stope in this mine. (NGR SH 627 415) It is presumed that the group of three women plus the instructor had entered by the upper adit and intended to descend to the lower adit to exit the mine, making a through trip. The first two girls had descended the stope and the other girl and instructor fell down landing on the two below. At least one managed to get out of the mine and use a mobile 'phone to summon help. The local Mountain Rescue Team attended and it took some 4 hours to recover those injured (broken bones). The HSE are investigating.

Mining-History Discussion Group

23. Slate News

Bryneglwys Slate Quarry - There has been an apparent recent fall within a chamber on 20C level, anyone intending to enter the workings should be most careful.

South Dorothea Slate Quarry - The tips have been disturbed as slate waste has been used for hardcore etc. for the new Penygroes bypass.

Nantlle Tramway - A wall of stone sleepers from the tramway has been found during clearance work for the Penygroes bypass. The tramway was 3'6" gauge and was horse worked until closure, it was used by many of the Nantlle Slate Quarries.

Pen-yr-Orsedd Slate Quarry - Working has recommenced on the southern side as McAlpines are trying to get to the green band slate. A number of the old buildings are in danger of destruction.

Oakeley Slate Quarry - It is understood that McAlpines have paid off a number of workmen took on last year. The site was formerly part of the Gloddfa Ganol tourist attraction that was closed. Much of the quarry has now been untopped.

Llechwedd Slate Quarry - After the closure of the working pit by the Inspectorate some 18 months ago, the quarry is now said to be 'struggling'. The Tourist operation though, has had a good season, and without it, the quarry would probably be closed.

Croes y Ddwy Afon Slate Quarry - The site which was re-opened in the 1980's has been abandoned and all the 'new' buildings have gone. All that currently remains on site is a JCB digger. The former levels sited at the rear of the property which were untopped, the pit (thus formed) is now water filled with a definite blue hue and looks like a scene from a film on a tropical island!

Caermeinciau Slate Quarry - On the main dressing level the, one of the walls of the quarry office (?) appears to have recently seen a collapse. The site is much larger than I first thought and well worth a visit.

Dorothea Slate Quarry - Grant aid has been secured from CADW (Welsh Historic Monuments) and work has now started on the restoration of the beam engine. Stage 1 is to remove asbestos from the cylinders.

Aberllefenni Slate Quarry - A slab wagon similar to that used by the quarry on the Corris Railway has been rebuilt by a member of the Corris Railway Society and now stands proudly in the yard at Maespoeth.

John A. Knight

24. European Habitats Directive On The Conservation of Natural Habitats And Of Wild Flora and Fauna. (92/43/EEC)

Special Areas of Conservation recommended by the Countryside Council for Wales (CCW). Of the 91 Special Areas of Conservation, either recommended to government or submitted to the EU for designation, seven have been identified as encompassing sites of former mining activity:

Grogwynion (candidate SAC) submitted for EU designation, Ceredigion.

The area submitted for designation covers the Ystwyth valley bottom, below the Grogwynion mine, from Coed Maenarthur downstream to Coed Tynybedw. All of which form part of the Gro Ystwyth SSSI. Designation is based on the flora of the valley bottom, particularly the dry heath flora and certain of the metallophytes. The latter are of particular interest for mine conservation.

In their submission CCW cite the presence of Calaminarian grasslands of the *Violetalia calaminariae*, 'for which this (Grogwynion) is considered to be one of the best areas in the United Kingdom'. 'Grasslands on soils rich in heavy metals. This is open, grassy vegetation on thin, dry soils which are often lime-rich and have high levels of one or more heavy metals, usually lead, zinc, copper, chromium or cobalt. This vegetation occurs where ore was mined, where metal-rich have accumulated beside rivers, or on outcrops of serpentine rock. The

vegetation contains a number of plants which are tolerant of high levels of metals, such as spring sandwort *Minuartia verna*, alpine penny-cress *Thlaspi caerulescens* and alpine catchfly *Lychnis alpina*'.

If such designation is accepted it could afford an element of protection for some lead ore processing areas, particularly dressing floors, and the accumulated residues from those processes (tailings heaps). Similar flora feature centrally to Halkyn Mountain and the Gwydyr Forest Mines which are two other possible Special Areas of Conservation recommended for designation by CCW.

Halkyn Mountain, recommended as a possible SAC, Flintshire.

The area covers the high ground from Brynford in the north to Rhosemor in the south but excludes two active quarrying areas. It is recommended for its Calaminarian grasslands, dry heaths and the presence of the great crested newt.

Gwydyr Forest Mines, recommended as a possible SAC, Conwy.

A scatter of isolated sites within the Gwydyr Forest, largely centred on sites of former mining activity. Again, the recommendation focuses on the Calaminarian grasslands along with the presence of the lesser horseshoe bat, hibernating in 'caves, mines and other cave-like places'.

Alyn Valley Woods, recommended as a possible SAC, Denbighshire.

The valley of the River Alyn, and its tributaries, from immediately upstream of Loggerheads, in the south, to Rhydymwyn in the north. The recommendation is based on the forest types, alder and mixed woodland, and the limestone grasslands. Metalliferous flora was not included in the recommendation for designation.

Johnstown Newt Sites, recommended as a possible SAC, Wrexham.

Former coal mining sites within and to the east of Johnstown, these are recommended for the presence of the great crested newt.

Deeside and Buckley Newt Sites, recommended as a possible SAC, Flintshire.

A scatter of sites between Buckley and Connah' Quay, some of which appear to be former coal/clay working sites. Again, these are recommended for the presence of the great crested newt.

Blaen Cynon, recommended as a possible SAC, Rhondda, Cynon, Taf.

Four separate sites between Pontbren Llwyd, in the north, and Bryn y Gaer, in the south, some of which are former coal working areas. The recommendation here is based on the presence of the marsh fritillary butterfly.

Conclusions: If the above areas are designated as SACs under the European Union Habitats Directive the wildlife there will be afforded added protection. Such protection should not compromise the surviving mining features in those areas. In practice, designation should afford some indirect protection to mining features. The inclusion of metalliferous flora habitats should be seen as a positive feature in the designation of areas containing the remains of lead mining activity, as it will afford protection to areas formerly targeted for land reclamation on the grounds of heavy metal contamination.

The Countryside Council for Wales are to be applauded for submitting and recommending areas of former mining activity for designation as SACs. In particular, they are to be commended for highlighting the value of metalliferous flora.

I would like to acknowledge the work of Tony King in drawing attention to the proposed designations and making representation to CCW on the sites in north-east Wales, and Alan Hawkins for providing information on the Gwydyr Forest sites.

Peter Cloughton

Query Corner

(Please reply direct to the correspondent. Any follow-up info will however be gratefully received by your editor to allow a suitable response to be placed in the next newsletter for the benefit of all.)

25. Iron Mines of Cader Idris - In scanning through the 1860 edition of the M.J. I noticed a promotional report for the 'Cader Idris Ironstone and Tramway Company' located near Mineford, Merionethshire. It was evidently working an ironstone deposit from an open quarry on the south side of Cader Idris at that time, and was proposing to construct a tramway to connect to the Corris Railway. Does anyone know if this venture ever got off the ground ?

Mike Munro

26. All in a days work - Simon J.S.Hughes responds to George Hall's query regarding early tunnelling records, ref. N/L 42, Item 22.

My original thoughts were that this may refer to the Well of Hezekiah, however, when I checked upon the facts, this was not the case at all. If you will allow me a few lines to recite a potted history of tunnelling in the first millennium BC. :

The Well of Hezekiah was constructed to bring fresh water into Jerusalem whilst there was the threat of an Assyrian invasion around the year 700 BC. This tunnel has a length of 583 yards.

The Samos tunnel is more recent having been driven in the sixth century BC. It was regarded by Herodotus as one of the three greatest engineering works of the Greek world. A tunnel nearly a mile long, eight feet wide and eight feet high, driven clean through the base of a hill nine hundred feet in height. Within this runs a second cutting thirty feet deep and three broad, along which water from an abundant source is led through pipes into the town. This was the work of a Megarian named Eupalinus, son of Naustrophus.

Lake Albanus was largely drained by the Romans in 359 BC. by driving a 2000 yard tunnel, of 5' wide by 8' high, through hard lava. Fifty four shafts were sunk to the required grade along its proposed course, and it was therefore possible to work on 110 headings at the same time. Rock cutting was performed entirely with 1" chisels, and it was reputedly completed in one year. Livy V.xv. and Cicero provide commentaries on this project and I suspect that it is this tunnel which is cited in M&Q Engineering.

Livy & Suetonius both comment on the Fucinus Emissarium which was an even more remarkable project to drain Lake Celano; A 6000 yard tunnel, 9' wide by 20' high, which took ten years to drive by the efforts of 30,000 men, and all under the supervision of Narcissus the engineer. The broken rock was removed from the 150 shafts by windlasses hauling copper buckets. It was completed in 51 AD. and added a further 50,000 acres to the Emperor Claudius's estates.

Whilst considering the old world, one of the oldest, and most commonly available accounts of mining & metallurgy was pointed out to me by my friend the late D. Morgan Rees :-

"Surely there is a mine for the silver and a place where they fine gold. Iron is taken out of the earth and brass is molten out of the stone. The stones of the earth are the place of sapphires and it hath gold ore. Man putteth his hand on the flint. He overturneth the mountains by the roots. He cutteth out rivers among the rocks and his eyes seeth every precious thing.

Wisdom cannot be gotten for gold, neither shall silver be weighed for the price thereof. It cannot be valued with the gold of Ophir, with the precious onyx, or the sapphire. Gold and crystal cannot equal it and the exchange of it shall not be for vessels of fine gold. No mention shall be made of Ramoth coral, or of pearls, for the price of wisdom is above rubies. The topaz of Ethiopia shall not equal it, neither shall it be valued with pure gold." Job 28:

Supposedly, this account of the state of knowledge regarding mines, metals & gems within the Land of Uz, was taken in about 1520 BC. If his plague of boils, life in the ashpit and his other troubles are ignored, it becomes quite obvious that Job, apart from being a Holy Man, had a good knowledge of contemporary metallurgy.

Furthermore; Jeremiah VI:29 was supposedly written about the year 612 BC., according to theologians, and appears to show a knowledge of cupellation. "The bellows are burned, the lead is consumed of the fire; the founder melteth in vain: for the wicked are not plucked away."

Simon J.S.Hughes

27. The Kellows Brushless Dynamo.

Some members of the Society will know of my great enthusiasm for Moses Kellow, the Manager and Engineer of Croesor Slate Quarry; my grand-daughter Rosie has even written a song which starts '*Moses Kellow is a boring old fellow...*'

In addition to his major inventions such as the magnificent hydraulic Keldril, Kellow was a prolific inventor of oddities such as his inverting smokeless fire grate and his Pelton-wheel-powered churn, although the latter succumbed disastrously to centrifugal force. Another project was his brushless dynamo; a prototype was built but is remembered as being unsuccessful.

For several years I have been searching for Kellow's research notebooks which vanished after his death in 1943; recently I was very gratified when they were found intact in an attic in Neath. One book contains an extensive section on his brushless dynamo, from first thoughts to the final design.

I wonder if we have in the Society an electrical engineer who would be prepared to spend one or two evenings evaluating this dynamo and producing some comments on the design which I could include, suitably acknowledged, in my supplement to *The Croesor File*? I'd be most grateful for any such help; my address and telephone number as per recently revised list.

Kellow was never one to hide his light under a bushel. Members of the Society who know Croesor Quarry may find it difficult to recognise the Keldril Works in the following description, taken from Kellow's application in 1903 for membership of the institution of Civil Engineers.

"(I have been responsible for) the erection and complete equipment of the Keldril Engineering Works, which are railway connected, and electrically driven, lighted and heated. The most modern and efficient machinery has been installed throughout these works, including capstan, geared-head engine, and screwcutting lathes, planing, milling, grinding, drilling, and other machinery. Tool-room, store rooms, drawing and commercial offices, etc., have been provided, These works have an output capacity, at present, of about £800 to £1,000 per week of manufactured goods, but this is capable of substantial increase."

It sounds more like Longbridge than the eastern half of the Old Mill !

Adrian Barrell

28. Cilent Valley Lead Mine

The following letter, and accompanying photograph, originally published in Country Quest, February 1979, has been brought to our attention by our President, Mr David Bick.



Lead Mine Kibble

"I was interested in Mark Bourne's article 'The lost gorge of the Clywedog' (July Quest) and particularly in the photo of a kibble. For many years I had in my possession a larger type of kibble (above) now in Brecon Museum. This was used at the Cilent Valley lead mine in Abergwesyn. This mine was worked at various periods during the last century especially between 1844 and 1850 and again later in the century when it was well known to the parents of older men in the district. Mrs Ruth Bidgood, of Abergwesyn, wrote a very interesting article in Quest a few years ago which gave the full history of this lead mine."

David Jones. Post Office, Abergwesyn, Llanwrtyd Wells.

Mr Bick raises the questions of 'Where is the Cilent Valley Mine?' and 'Has anyone seen Mrs Bidgood's article which tells all about it?'

D. Bick

Could this in fact be an alternative, and unofficial, name for Abergwessin Mine? According to G.W.Hall (Metal Mines of Southern Wales, pp.88-90) it is located at NGR SN 843 515 and was most active 1844-1850. On inspection of the current 1:25,000 O.S. it lies, in part, in a small valley through which the Culent flows.

M.P.Munro

29. Tewgoed Lead Mine - Glamorganshire.

On pages 76-77 of 'A General View of the Agriculture & Domestic Economy of S.Wales' by Walter Davies, Vol. 1, pp. 76-77, details a lead mine in Glamorganshire known as Tewgoed Mine. Davies states 'This circumstance (whereby ore tends to be richest at the junction of two veins)....will be further explained by a sketch in Plate 1. fig. 4.' Perhaps I've

been unlucky but on inspection of the copy of this publication residing in Cardiff Central Library and that in the library at Haverfordwest, Pembrokeshire, both are devoid of this particular figure. Opposite pages 62 & 63 resides Plate 1 with figs. 1-3 but no fig. 4. Is this omission common to all copies of this publication, or have I just been unlucky? If anyone can find a copy of the elusive 'fig. 4', to which Walter Davies refers, I'd be most interested.

M.P.Munro

30. Caron Mine, Proceedings RCPS 1884 - An up-date. (Ref. last N/L, Item 23.)

With help from Hugh Ratzer, Graham Levins, Roger Bird, Peter Claughton and Simon J.S. Hughes, the location of this mine has been confirmed and an outline of its history can now be presented. It is in fact, as suspected, that marked on the current 1:25,000 O.S. (Explorer No. 187) between Pen y Garn and Bronmwyn at NGR SN 715 645. When first worked, 1870-77, it was known as Bronmwyn, with agents John Williams 1870-75, and Thos. Williams 1876-77. It was however re-opened in 1877 as Caron Lead Mining Co. Ltd. with John Kitto as the manager until closure in 1881 with a total recorded return of 89.2 tons of ore. (Burt et al 'The Mines of Cardiganshire', pp.7-8 & 19.)

The reference J.R.Foster Smith provides in British Mining No.12, p.85, incorrectly associates it with Brynhope/New Lisburne. For Bronmwyn however (p.86), he relates it to the output figures (1854-56) for a mine called Brongwyn, for which Burt et al provides no grid reference - S.J.S. Hughes supports the theory that this is in fact Bron Mwyn.

The origin of the name 'Caron' is probably from its location within what was then the parish of Caron-uwch-clawdd although it could also have been related to the fact that it's only a mile east of Cors Caron, some nearby lakes.

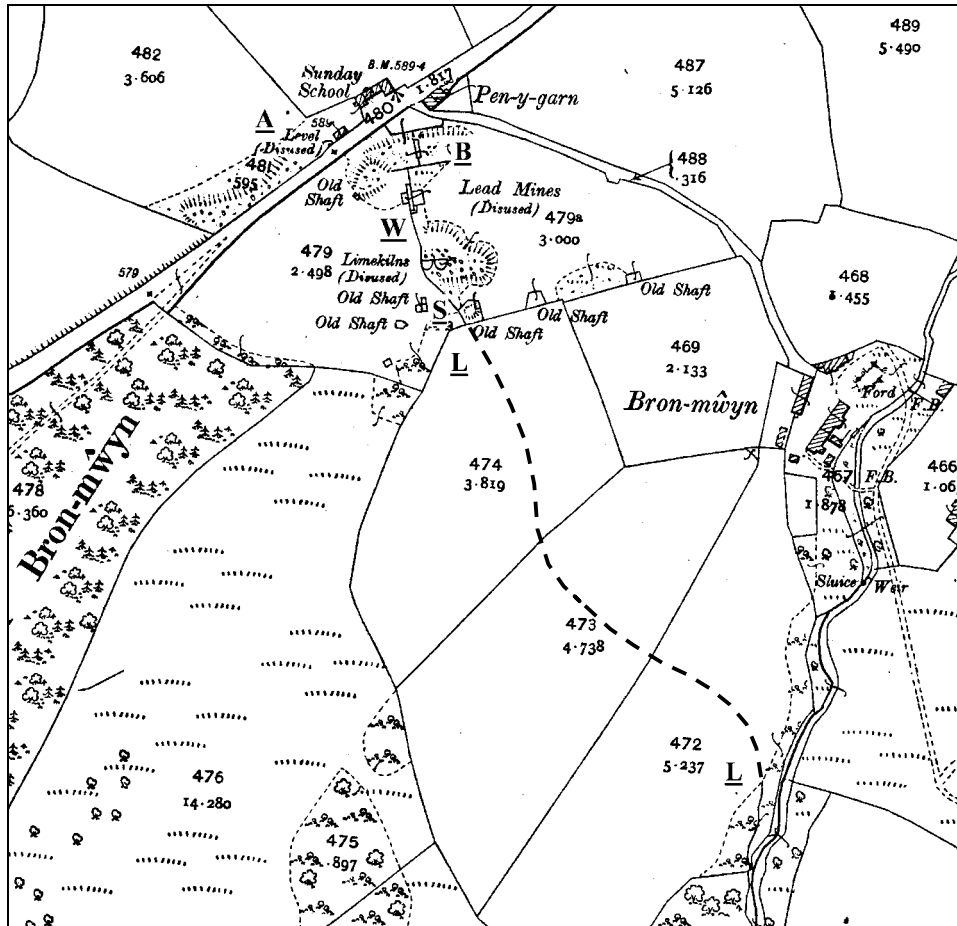
The site was visited after the WMS June 2000 field meet with Peter Claughton, Geoff Fitton, Dave Seabourne and Mole. Having first gained permission from the farmer at Bronmwyn, we noted several features still existant such as the drainage adit (NGR SN 7135 6450) c/w fine masonry portal, with 1870 and the initials W.P. engraved in the keystone. The date ties in with that of the first recorded working as 'Bronmwyn', but who was W.P.? The adit cuts directly beneath the B.4343, and is neatly walled up six or seven paces in, thus preventing access.

In the field on the opposite (east) side of the road, the shaft marked at NGR SN 7146 6442 is still open, and the walling supporting a long gone angle bob is still existant. One supposes the wheel pit was nearby, almost certainly located further down the hillside where several large stones now lie. A short length of the leat remains close by the shaft, water originally being supplied from the Nant Gorphen, close to the point where the stream crosses the 200 metre contour. The run of the leat is no longer visible in the fields but is clearly marked on the 1st Edition 6" O.S., Cardiganshire Sheet XXI NE. Finally, there is evidence of two circular buddles at the bottom edge of the field, close to the B.4343.

Peter Claughton states; 'I've checked the old OS maps and the mine we looked at is in Caron-uwch-clawdd parish - the modern community boundary appears to have been shifted south so that the mine is now in Strata Florida. There is an abandonment plan for Caron, now in Ceredigion Record Office. The Cat. Plans Abnd Mines entry is Caron (1410) (a) Caron-uwch-clawdd. (b) LEAD ORE (abandoned 30th June, 1882; received 5th September, 1882). (d) OS 6 inch County Series 21.NE (1906), E 1, 2.'

'Had sight of the 25 inch O.S. 1st edition, but on microfiche only - so no copy available. Survey dated 1888 shows settlement ponds on the low ground to the north-west of the main

road, to the west of the spoil from the deep adit. There is perhaps more detail of the structures adjoining the waterwheel, (than on the 2nd edition) although no evidence of a launder from the leat to the wheel. Two circular features in the centre of the site, south of the large water wheel, are marked as lime kilns. Site overall is marked as 'disused'.



*Caron Mine Detail from 25 inch O.S., Cardiganshire Sheet XXI.7
2nd Edition, Surveyed 1887, Revised 1904. (CdRO)*

- | | |
|----------------------|---------------------------------|
| A Drainage Adit. | B Buddles (Wheel pit between ?) |
| S Shaft (Pumping). | W Wheel Pit - Pumping Wheel. |
| L - - L Run of leat. | |

Roger Bird adds; 'I can confirm the link between Bronmwyn and Caron. The Caron Mine Plans survive in Ceredigion Archives as abandoned mine plan 1410, Local Ref T/AMP/1/21-22, and are signed "John Kitto and Son, Aug. 31st. 1882". Sheet 2 of 2 is a plan view and clearly identifies the location as immediately adjacent to the Tregaron-Pontrhydfendigaidd road at the junction with the lane to Bronmwyn Farm'.

He continues 'The name Bronmwyn (ore hill-breast) seems to me as likely to be medieval (c.f. Esgairmwyn) and probably indicates much earlier working, but the site is largely obscured by trees and I can't see the layout from below. I understand that it has recently been explored by students from Birmingham.'

Simon J.S. Hughes comments; as I provided Roger Burt with the grid references and many of the synonyms, way back in '85, I feel that I owe you an update and reply to this question. Caron' is Bronmwyn, if you want further confusion, read on :-

Cwm Mawr was originally known as Penywern Hir and described by Smythe in 1846 as an old mine, then 35 fms. deep. It was taken up by John Taylor along with the other Lisburne Mines, but little worked. The neighbouring Bron y Berllan Mine was working on a small scale in 1846. Bron Mwyn was evidently first worked around 1810, and some trials had been recently made at Bryn y Gors, maybe by the same concern as at Branberllan? This appears to be what was, over the next 30 years, called Bryn Hope, Bryn Crach, West Florida, Bendigaidd, and possibly even Cardigan South Bog.

Page 5 of the 1884 Halse paper clearly states that the Florida mine lies between Esgair Mwyn and Caron. Florida is one mile east of Pontrhydfendigaidd, and close to Strata Florida. Page 6 states that Caron is the most southern mine in the area and 1.5 miles south of Florida. At this time Florida was sunk to a 30 fathom level, and Halse had kept a detailed record of development from April 1879 to May 1883. Note that Edward & Andrew Halse were involved with the Llwynllwyd or South Lisburne Mine between 1877 and 1882 and that one Thomas Halse is recorded as being the purser at East Darren Mine commencing in August 1858. In the 1880 List of Mines, the Florida, South Lisburne & West Lisburne were all owned by Richard Attenborough and run by Edward & Andrew Halse with Nicholas Bray of Tregaron.

According to the 1871 prospectus of the West Florida Silver Lead & Blende Mining Co. Ltd., their sett was of 150 acres under Taverndy, Tymawr and Cnwch (SN 733 655) in Caron and Gwnnws parishes. To the west, it adjoins the Florida Mine now being worked as Bronmwyn (SN 714 644), and is within 1.5 miles of Strata Florida station (SN 711 671). Two shafts have been sunk to 10 fathoms and another to 20. West Florida is also known as the Bendigaidd Mine and an assay shows 42 % lead and 32 Ozs. of silver per ton. Surely it adjoins Bronmwyn to the west and Florida to the east?

Thomas Spargo in 1870 lists the following :- Bron Mwyn, Bryn Crach, Cwm Mawr, Bronberllan - half a mile east of Bryn Crach and on the same lode. Liscome also comments on Bryn Crach in 1870 by which time a shaft had been sunk to 10 fms. and many tons of ore were picked out of the bog which lies over the vein.

Absalom Francis in 1874 confirms that Bendigaidd is sometimes called West Florida. Bronberllan is about half a mile east of Bendigaidd and lies on the same lode. In his Map of 1878, Bendigaidd lies between Caron & Bronberllan, but in 1881 Bryn Crach lay east of Cwm Mawr and north of Abbey Consols. This is obviously a mistake and fails to tally with his earlier descriptions. Absalom & Matthew Francis were involved in the management of Abbey Consols Mine between 1855 and 1861.

The 1878 Ordnance Survey 1" map shows the course of the lode from Bronberllan, through Bryn y Gors, where lead ore is indicated Σ in a lode dipping to the southeast, and striking southwest towards Bryn Hob, later Bryn Hope. More recent maps and fieldwork confirm that there were several shafts sunk within the grounds of the present caravan park at Bryn y Gors.

The Geological Survey mark other workings near Bryn Hope farm, but of these I could find nothing.

According to the Home Office schedules, Caron was abandoned on the 30th June 1882 when a plan & section were deposited; Nos. 1410/1 and 1410/2. The same schedule shows Florida, Abbey Consols or Bronberllan as being abandoned on 8th July 1905, No. 5136. Both these are now preserved at the Ceredigion Archives in Aberystwyth.

From about 1907, Cwm Mawr was worked with Bronberllan, or Abbey Consols, by the St James' Syndicate who formed the Cambrian Lead & Zinc Mines Ltd. in 1912-'13 but closed in 1917. Their prospectus was illustrated using photographs taken in 1910 by E. Geoffrey Crudge of Pontrhydygroes, and incorporated some underground scenes taken in Cornwall.

J.R.Foster Smith in British Mining No.12, page 85, is very confused in this district and equates Bryn Hope with Caron, and Bryn Crach is equated with Cardigan South Bog. Whilst the latter conclusion may very well be correct, the former is most certainly not. There are many invented names within this volume and it is not a reliable source. However, official databases now contain Bendigaid = West Florida = Cardigan South Bog. The CSB name was evidently used in the MJ in the 1850s.

It is suggested that Bryn Hope lies to the west of the B.4343 road, whilst Bryn Crach lies to the east. This may be so, but I suspect the reverse if indeed there is any such division.

The worst / funniest mis-entry is "Bryn Cach" which occurs in the CCW database and is very politely translated as "The Dunghill"

To the best of my understanding, I have listed the names and years worked :-

- 1835 Penywern Hill (SN 734 673)
 1835 - 1907 Cwm Mawr, little worked, part of Lisburne Mines.
 1907 - 1911 Cwm Mawr No.1
 1912 - 1917 Cambrian Lead & Zinc Mining Co. Ltd.

1848 - 1854 Bronberllan (SN 744 662)
 1859 - 1865 Abbey Consols
 1870 - 1905 Florida
 1907 - 1911 St James' Syndicate (Cwm Mawr No.2)
 1912 - 1917 Cambrian Lead & Zinc Mining Co. Ltd.

1846 Bryn y Gors (SN 728 657)
 1862 Bryn Hope (Farm @ SN 717 658)
 1863 Brynhope (XWD ref.)
 1871 Bendigaid
 1871 West Florida, includes Cnwch (SN 733 655)
 1874 Bryn Crach

1854 - 1856 Brongwyn (Probably Bronmwyn)
 1870 - 1877 Bronmwyn (Gundry & Williams) (SN 714 644)
 1877 - 1882 Caron (Kitto)

Finally, for 1857-1861, & 1864; during which time the Francis Bros. were involved. And finally in 1875; when the New Lisburne Mine, near Pontrhydygroes, was revived by George Pell and Joseph Ball but yielded nothing under their management. Ball may have been the son of Thomas, Captain of the Lisburne Mines; whilst the Pells owned the Belle Vue Hotel,

Glanystwyth Farm, and had extensive mining interests. According to Francis's map of 1881, New Lisburne lies slightly east of Llwynmalus, possibly the workings near Bryn Villa at SN 701 684. JRFS is of the opinion that New Lisburne is synonymous with Brynhope and Caron, but I am far from convinced of this.

Simon J.S.Hughes

32. Mystery Mines - Can You Help ? David Bick writes:

Half a century ago, I began exploring old mines, mainly in Wales with George Hall. I may add that at the time, such an interest was looked upon as the height of eccentricity, when mining societies, far less NAMHO, were undreamed of. I usually made field notes in a series of little books, nearly always in pencil because there were no Biro's, and ink was useless with water poised to drip upon the page.

Those notes, amounting to some hundreds of sites, many of which no longer exist or else are no longer accessible underground, have now become something of an archive, and I am pleased to say that the Royal Commission on the Ancient & Historical Monuments of Wales is interested in making a copy for their records. Presumably, they will then be open to public consultation. (How well the fading scribbles in a blunt H pencil will photocopy remains to be seen).

But a problem has arisen which was never envisaged at the time. Many of the sites were little more than trials, with neither name nor record, so we simply called them after the nearest feature on the map, such as a hill, stream or farmhouse. The Royal Commission has naturally requested grid references, but now, forty or fifty years on, in several instances the task of recollection has defeated us. Where on earth was **Llwyn Tew**, visited in August 1959, with a shaft 15 feet to water, two blocked adits, copper pyrites on the tips, and farm buildings nearby ? The next entry was **Siglenlas** mine near Llanidloes, so it may have been near there.

And where was **Llwybr Madin**, with an adit 97 paces long cutting a lode at 75 paces, on which a heading had been driven 70 paces on a vein of quartz with flukan and copper ore, calcite and barytes, dipping west running 10 degrees east of magnetic north ? Where indeed ! On the same day we went to Pen y Clun, also near Llanidloes.

The next mystery is **South Cader Idris**, where an adit, visible from a road across a stream, went in 25 paces a few degrees east of magnetic south on a 'vein' comprising dark rock and clay joints with a band of pale gray soft rock 1 - 2 feet wide, and some phytolite in quartz on the dump.

[Could this be the same mine as that referenced in Item 25 ? *M.P.M*]

Another enigma is **Blaen Y Cwm**, which could apply to hundreds of places. According to my notes it was on the estate of Miss Thomas, of Tremadoc. An old man told us there were lumps of lead in the stream below Blaen y Cwm opposite an old house, but we 'missed the spot' and apparently found no workings. What brought us there in the first place ?

In Shropshire we found considerable workings at **Rountain**, on two lodes, one running north-west, and the other, east- west. To the former had been driven a crosscut adit, then blocked - with an open shaft upon it, near a green lane. At the foot of the hill was a road and several houses, opposite which were adits driven on the east-west lode. Calcite and barytes were present on the site.

The next puzzle is **Esguan Hall**, very probably in Merionethshire, where across the main road was a level, quite run-in, and perhaps for slate. Also appended is the note; '3 levels close together in cwm 400yards behind tannery'.

The strange thing is that I can remember some sites as if it were yesterday, whilst for others the memory is quite beyond recall even after the stimulus of going there again. But of course, many have changed out of recognition, and George and I intend shortly to embark on a kind of pilgrimage, retracing some of our former explorations to gain a better idea of what time has done to these forgotten and unprotected little mines of Wales. Meanwhile, any answers to the above riddles would be more than welcome.

David Bick 15th September 2000 Tel. (01531) 820 650

33. **Whatever happened to....‘The Adit digging group’? & ‘Mining Shares Listing’?**

Both of these were mentioned in some earlier issues (Nos. 24 & 18 respectively) of the WMS N/L, copies of which I recently obtained. Perhaps the former has become reincarnated judging with activities at Dylife - ref. Item 17. If anyone wants to resurrect the latter, let me know, as I'd like to place a listing on the web site.

34. Taliesin Afron Thomas - Ms Y Thomas; 43 Trinity Close, Solihull, W Midlands B92 8SZ is looking for information on her grandfather T A Thomas who died in a pit accident at Merthyr Tydfil in 1915.

35. Sir John Conroy's Estate - Mr Andrew J Harpham; Tylwyth Teg, Cwmbechan, Llanidloes, Powys SY18 6QN would be grateful for any information on Ty-Isaf, Llanerch-yr-Aur and Ceulan Mines on this estate.

36. John Pascoe - Do you know anything of John Pascoe who was at the Mottram St. Andrew Copper Mine in 1862 ? If so, David Thompson (Tel. 01270 820 514) would like to hear from you.

David Bick

Book Reviews, Publications Available & Bibliographical References to Welsh Mines & Mining

Book Reviews

37. “The Bronze Age Coast Project / The Great Orme Explained” by Diane and Nigel Campbell Bannerman. 81 pp. illus, map, loose-leaf photocopy. Price £8-00 from Diane Bannerman, 27 Abbey Road, Llandudno, LL30 2EH. [a printed full colour edition with lots of photos is also planned next year, cost about £10-00]

This is an excellent multi-disciplinary introduction to Great Ormes Head, a limestone promontory, at Llandudno in North Wales. The Bronze Age Coast Project was started in 1994 and this gazetteer lists 221 sites of which over 70 are mines or sites associated with mining activities. Both the study of aerial photos and field work has led to the discovery of many small mines, potential washing sites, jetties built for the export of ore and limestone, and revealed piles of copper slag ballast, jettisoned by sailing ships that came from the Swansea and Warrington copper ore smelting works. One of the first finds was the discovery of Badger Cave, already known as a Neolithic habitation, but as a result of charcoal dating it has now been designated as a Prehistoric mine. An interesting insight into current mining history research in North Wales.

38. “Discover The Amazing Great Orme Ancient Copper Mines” by Nick Jowett, 1998, 24pp. survey, illus. Available at the Mine, price £1-00.

A well written and nicely illustrated visitor's guide with plenty of controversial remarks e.g: “The discovery of the prehistoric mines on the Great Orme at Llandudno will radically reshape our knowledge of the commercial history of the Bronze Age” and “The results of my study suggest that the total copper output for this mine during the Bronze Age was between 885 and 1769 tonnes, indicating that it is probably the largest copper mine in antiquity”.

39. “The Bronze Age / A time of Change” by Nyda Roberts, 1994, 52 pp, many illus, SB. Signal House Publications, Telford, Salop. [I bought my copy at Great Orme Mines for £1-00] This is a very readable account of life in the Bronze Age although I feel that many aspects of this book have been fictionalised. How can M.S. Roberts be sure that Bronze age people were into poetry, dance and drama? Did children and adults really have time to play games? Did the women wear mini skirts? Speculation apart, this is an interesting account of the times and discussed in some detail is the mining and smelting of copper, tin and gold.

Tony Oldham

40. “Mining in Cornwall” Volume Three - Penwith and South Kerrier compiled by L J Bullen. Tempus Publishing Ltd., The Mill, Brinscombe Port, Stroud, Gloucestershire GL5 2QG. 128 pages, over 200 photographs, Cost £9-99.

A fascinating collection of photographs dating from the 1860's to the 1990's capturing the life and death of the mining in the Lands End peninsula. Many of the photographs are published for the first time and each has a brief description. Ranging from the visit in 1865 of the Prince and Princess of Wales to the Botallack Mine (suitably festooned in greenery to mark the occasion) to the clearing the shaft at Rosevale in 1994 the photographs continually surprise and delight. Contact Liz Mabley on Tel. (01453) 883 300.

David Roe

Available Publications

41. WMS 20th Anniversary Publication. David Roe has a few copies of “The First Twenty Years” - the publication celebrating (in typical WMS style) the 20th anniversary. A stamped and addressed A4 envelope to David Roe secures a copy.

42. NAMHO Mining Heritage Guide 2000. Copies of this, a revision of the 1997 edition, are now available at the reduced price of £4-60 inc. P&P. c/o Rob Vernon, 78 Oakenshaw Lane, Walton, Wakefield, West Yorks, WF2 6NH. Cheques made payable to **NAMHO**.

43. ‘The Miners lamp’ by Jim Williams. ‘A literary exercise which takes the reader back to life as it was in the coalmining community of the Rhondda Valleys.’ ‘A story encompassing a hundred years of coalmining and its people.’ WMS members can obtain copies at the reduced price of £6-95 inc. P&P from GJW Publishing, 4 The Mead, London, W13 8AZ. Tel. 020 8997 5883.

Bibliographical References to Mining in Wales

44. Mining Miscellany - Supplied by Tony Oldham;

Memorial to 30,000 miners. Rhondda Cynon Taff. Western Mail 13 May 2000 p.6, photo. A six foot tall miner's lamp, lit by an eternal flame stands in the Rhondda Heritage Park at Trehafod.

Descent: The magazine of underground exploration. June/July 2000 (154): p.12 Mining in the British Isles part 5 Lead, illus. by Chris Jones.

p.12 Welsh mines and the film industry. The Mid-Wales Film Commission has included Cwmystwyth in its latest glossy brochure.

p.12 Welsh slate under change by John Knight. Gloddfa Ganol in North Wales closed as a tourist attraction and old Holland's Level Fawr is now an opencast site.

p.16 The northern portal is entered by Anon. Pwll Du Tram Tunnel at Blaenavon entered.

[See also Descent 153 & N/L #41, Item 21]

Descent; August/September 2000 (155):

p.29 The changing scene at Cwmystwyth.

Descent; October/November 2000 (156):

p.15 'Cardiff's Green Mantle a review of The Garth Countryside' by Mary E. Gillian. Mentions Garth Iron Mines.

p.23 Changes at Cwmystwyth.

Tower Story to be made into a film. Western Mail 1 July 2000 p.1. Tower Colliery at Hirwaun, South Wales.

Tower Colliery: The Movie with Helen Mirren as Anne Clwyd by Nick Dermody. Western Mail 4 July 2000 p.9, photo. Also suggests, Robbie Coltrane as Tyrone O'Sullivan and Rowan Atkinson as John Redwood.

Westgate at Westminster by Nick Speed Western Mail 12 July 2000 p 11. Ann puts her name forward. Ann Clwyd is keen to act herself in the Tower Colliery movie.

Remaining Headgears [120] by Adrian Pearce. Chelsea Spelæological Society Newsletter Vol 42 No 7 July 2000 pp 85-86.

Tony Oldham

45. Geological References to Mines & Mining in Wales :Bassett, M.G. (Ed.). 1982. *Geological Excursions in Dyfed, South-West Wales*. 327pp., National Museum of Wales, Cardiff :

Bates, Denis, 'The Plynlimon Area', pp. 91-102, details geological and some topographical features to be found at the Hafan, Castell, Temple & Cwmystwyth Mines.

Owens, R.M. and Fortey, R.A., 'Arenig Rocks of the Carmarthen-Llanarthney District', pp.249-258. Page 254 mentions the geological features to be found around Cystanog Mine.

46. 'Mining Plans of Cardiganshire: The Human Dimension' by Marc A. Rowlands, pp.1-10, 'Ceredigion' The transactions of the Cardigan Antiquarian Society, Vol. XIII No.2.

47. Great Orme Exploration Society - Journal Issue No.2, 2000. Article on Parys Mountain by Richard Keen of the National Trust and item on Haulfre Gardens Trial Level.

48. Welsh Mines Preservation Trust - July 2000 Newsletter, 4pp. Articles by Rob Vernon & David Bick both cover Beam Enginehouses in Wales. To join send £3-50, cheques payable to Welsh Mines Preservation Trust, to Rob Vernon, address as per Item 42.

Mike Munro

49. A Forgotten Literary Goldmine

The study of ancient mining in this country received a great boost some 20 years ago, when several copper mines in Wales were attributed to the Bronze Age by C 14 dating. Since then, there has been almost an industry producing books and papers from popular to academic, combined with a flurry of archaeological activity at many widely dispersed sites within these islands. But unfortunately it does not appear that the same exploratory zeal has been applied

to the most fundamental of sources - the written word. It is a common failing to which I myself must plead guilty, even after half a century of keeping my eyes open and yet still somehow missing a vital source until by chance encountering it quite recently in the library of John Bennett. How such a work can have fallen so far into obscurity is a total mystery.

I refer to Alexander Del Mar's **A History of the Precious Metals** first published in 1880. Its absence from the bibliography of early mining is all the more remarkable since in its day and for long afterwards, the work was heralded as a classic in its broad approach and sheer scope. Unlike the narrow treatment of many modern studies, its 500 pages covers with a depth of practical learning not only mines and mining all over the ancient and later world, but equally important, the economic and political factors behind such activities - influences which very often were quite different to those assumed today.

Del Mar was an American mining engineer of widespread experience. He exposes, in country after country, the rapacious greed of conquering nations for gold and silver, and the appalling effects of slavery and how such methods renders void any attempt to apply modern economic ideas to such activities. Del Mar was well equipped for such a task, for he was also Director of the U.S. Bureau of Statistics and a Commissioner to the U.S. Monetary Commission, enabling him also to explain the important role of coinage in the demand for precious metals and copper. He gives details of the enormous quantities of gold obtained in the ancient world from alluvial and placer deposits, pointing out that hard-rock mining came relatively late on the scene. His evidence is backed up by production statistics and a very extensive bibliography, much of it from classical authors.

A History of the Precious Metals was revised in 1902, and a reprint appeared in 1969 as one of a series of economic classics published in New York. It sometimes turns up in booksellers catalogues and I have been lucky enough to get one. I feel it is the most important and informative book on early mining history I have ever read.

David Bick 8/8/00

50. Welsh Mines Society on the 'World Wide Web'

I've continued to update and expand the society's web pages; URL on front page - add it to your favourites ! They contain details of future field meets, (posted as soon as I know them) the last few WMS & NAMHO newsletters (earlier ones will be added when I obtain them and find the time to put them in) and a list of previous field meets with links to photos (if you've any, please do send them in) and details from those meets, including reports where I have them. So far this year, the pages been accessed over 2,500 times from various countries around the globe, including Lithuania, New Zealand, Austria, Estonia and Peru !

Dont forget to visit the 'Welsh Mining Links' page (accessed from a link on the WMS homepage) which now has some 90+ links to other sites containing information on Welsh mines, mining museums, research resources & other societies with an interest in Welsh mines. If you find any more relevant sites while surfing around or are working on one of your own, then do please let me know and I'll add them to the list.

I intend to give the WMS webpages a bit of a facelift this winter - the content won't change too much but the layout will be modified to improve navigation and upload time. If you have comments about any of the pages, please do let me know.

51. Mining-History Discussion List - This discussion group, co-owned by Peter Claughton has now moved server. If you're not a member go to <http://www.jiscmail.ac.uk> for details.

52. An index to several hundred pages of information on Welsh Mines !

The complete set of the Newsletters, as published by the Welsh Mines Society, currently amounts to quite a few hundred pages of information on the exploration, research, recording and preservation of Welsh mines. (I've not personally counted them all but 42 x ~8 pages gives a big number !) To improve the accessibility of this information, which is a veritable feast of facts and an historical record in its own right, I've started to compile an index - a job that could take some years to complete. To date I've only covered Nos. 24, 41 and 42, and will continue to index all future newsletters, but would very much appreciate a hand in indexing earlier newsletters. (I'm missing N/L Nos. 1-14; any offers ?) If you're prepared to give me a hand in this gargantuan task, (there must be someone ?) please contact me first, and let me know which one(s) you'd like to do, this way I can avoid duplication of effort, and ensure that the format used is compatible with existing work. Once complete this will be published in its own right, with all contributors duly credited. It may however be necessary to break it into a few parts to cover say 20 issues at a time, but I'll see how things go. In the meantime I'll place a copy of work to date (in Excel Ver.5.0) for download from the WMS home page. If you've not got access to the Net but would like a copy of work to date, on disk or a hard copy, just send me a blank 3.5" disk and/or save as appropriate.

53. 1st Edition 6" O.S. maps for 'Free' - Too good to be true ? The entire set of six inch O.S. maps covering the UK from the late 1800's have been digitally scanned and made available on the Internet by a company called Landmark working in conjunction with the Ordnance Survey. Maps are selected first from a county gazetteer and then from a list of towns & villages. Navigation arrows allow you to look at the maps next to the one currently being displayed. Being in .GIF format, they require only a normal Internet browser to view them. The approximate date of each map is displayed in a blue footer. To print out each image complete, right click on the image, and 'save image' to your hard drive. Any simple graphics viewer or editor can then be used to print off a full copy. File size is around 150 to 250 KB, and on a standard phone line each one takes less than a minute or so to download. They can be found at: <http://www.old-maps.co.uk>

The down side is that the scan resolution is a bit low, resulting in some loss of detail, although most of the writing remains legible. Each file only covers a quarter of the original six inch map (i.e. the same area as the 25") and the file names as downloaded don't quite mirror the numbering system used by the O.S. for six inch or 25" maps. Nevertheless, as a starting point prior to a visit to an area previously unknown and even as a kick-off point for research they are not to be scoffed at - the alternative being either a visit or a postal request to the NLW, and the parting with a fair amount of hard earned cash.

Geoff Fitton recently pointed out to me that if something more up to date is required, visit :

<http://www.streetmap.co.uk>

Access is via a search engine which will work on; Postcode, Town Name, O.S. Grid Ref. etc. The results can be displayed at various scales, from 1:10,000 to 1:200,000 including, 1:50,000, i.e. an extract from the O.S. Landranger.

54. RCAHMW - On Line Data Base. This can be accessed by going to:

<http://www.rcahmw.org.uk>

Click on the icon on the left hand side which takes you to 'Online Database'. You will need to register first, but that will only take a minute or so. Once logged in, you can then search their database. Try a search on mines or mining and be prepared for several hundred

records. You're only presented with the bare bones of the record, for further details click on the link to E-mail the RCAHMW with your request.

If anyone is aware of any other on-line mapping or research resource, please do let me know and I'll post the information in the next newsletter.

Misc.

55. Moel Fadian. (Ref. N/L No.42, Item 8) It was a kibble from Dyfngwm which, in about 1988, was collected by WMS members Liz Armfield, David Bick, myself and others, and taken to Llywernog for safe custody. The kibble from Moel Fadian has long since gone, and may have simply have rotted and been swept away by the stream. It was already in a poor condition when it was recovered from the bottom of the winze at the far end of the adit when it was pumped out in the early 1970's.

S.J.S.Hughes

56. Mystery Item - N/L No.42 - The more observant members may have noticed an unusually obscure sentence on the otherwise blank back page of the June 2000 N/L. Members might have surmised it was a wrongly captioned photograph of a Welsh Chalk Mines in low cloud or a Welsh White Wash Society practical workshop. We will however attempt to reveal all on page 32 of this edition.

57. Gaseous Metal Mine !?

Captain Herbert Lloyd's daily report for December 11th 1907. 'Examined all places where men travel and work. All found safe except the Middle Stope where the timber men are timbering and making safe. Three men in the New Lode arrived on the surface from the afternoon shift, having been burnt about the face and body due to a sudden outburst of gas caused by firing and a fracture of the strata. They report the presence of gas, so the West End of the New Lode must be fenced off at once and no one allowed to enter until the danger is passed.'

On December 12th Capt. Lloyd wrote to John Thom Managing Director; 'As I briefly reported last night we had three men burnt yesterday afternoon owing to the sudden outburst of gas in the New Lode. They were burnt about the hands, face and back and I am sorry to say the poor fellows are in great pain and will be for a day or two. I am however glad to say that the injuries are not serious and they will be at work again in about 14 days time. I have shut up the New Lode until Monday when I shall see the fan at work and be there myself to conduct operations. Today the Lode is giving off large quantities of gas, it seems to be alive and on the work and rumbling the same as thunder. Water is coming from it in large quantities absolutely black in colour. There is lead all over the place. The discovery has caused great excitement in the district as the indications are exactly the same as when the Old Lode was first discovered and the black water has never been seen since. I am firmly of the opinion that the Van is going to repeat itself.'

December 14th to John Thom; 'I ventured up to the Middle Lode, gas giving off freely put my lamp out. We are busy putting up air pipes, by Thursday shall resume operations, we have sufficient safety lamps.'

December 19th to John Thom; 'With regard to the New Discovery, we have been unable to make good progress on it owing to it giving off large quantities of gas, it looks very promising and now we have the compressed air on to it and the Rock Drills ready we shall

push ahead as fast as possible. On December 11th we had three men burnt owing to the gas, they are, I am pleased to say getting better rapidly.'

Where was this gaseous mine ? Why the Van Lead Mines near Llanidloes, Montgomeryshire.

Nigel A. Chapman.

58. Some Old & New Words - 'With reference to George Hall's contribution (N/L No.41, Item 42) on what is meant by 'The Term Ore', and David Bicks comments (N/L No.42, Item 37), Simon J.S.Hughes responds:

'To illustrate the very serious nature of this misunderstanding between ore and ore: A colleague thought that Mid Wales had very little mineral potential on account of the biggest mines in the area, Frongoch Van and Cwmystwyth, only having 100,000 ton orebodies - but of remarkably high grade. "But O.T. Jones says ore and grade". Having pointed out that they were probably million ton orebodies grading about 10%, from which 100,000 tons of concentrate were recovered, he realised how misled he had been by the use of archaic terminology. Here is a good case for mining students to learn a little history, particularly as many new mines are found below old mines.

It cannot be in our interest to allow this situation to persist, nor can I suggest that the use of ore for concentrate is incorrect. Ore is dug out of the ground, and ore is sold to the smelters or potters, but these are two different products and surely the word is a homonym ? It is often apparent which ore is being considered by setting the context. Ore in kibbles is ore, whereas bagged ore in a shed is in fact concentrate. I am as guilty as anyone of using one word for both.

In modern terms, what used to be Ore is now Concentrate. The whole of the rest of the world now works on this principle and I recommend Ken Lane's "Economic Definition of Ore" for those in any doubt. When presenting data to mining financiers, a series of terms which are legally defined have to be employed. This is to prevent repetition of the scenario at Bwlch under Matthew Francis when 20 tons of ore yielded no ore. The present situation is that Ore Reserves are sub-divided into various categories - Proven, Probable, Possible, Indicated and Inferred. These are far better defined than the old system of Ore blocked out and Ore in sight.

Very occasionally we are given historical values and accounts of Ore Broken, Ore Raised, Ore Milled, and Concentrates sold. Apart from Ore, there are a number of other terms which are applied such as Lodestuff, Ground, Stuff and I'm sure that there are many others. Analysis of this data allows the calculation of the grade value of the lode. I have always felt that the Mineral Statistics would have been a far more useful publication had they included "Tons Milled" as was done with gold mines. It would also have clarified the present situation and I have annotated my MinStats with this information wherever possible.

I find Beneficiation very nouveau and nasty but popular in the USA. I do so hope that it doesn't replace dressing or milling which are perfectly adequate descriptions. Floorings, or dressing floors is a word now so little used as to be endangered.

At risk of becoming Victor Meldrew, is there no b****y end to it ?

The horrible term Prospection appears to have been contrived in the late 80's - no doubt the result of another hands on workshop ! Without doubt, prospection persons will be replacing mineral exploration operatives before too long. Forgive my cynicism. I can only presume

that it replaces the verb, to prospect, for which there is already a perfectly good and unpretentious word - prospecting. I hate this word so much that I just had to find out more -

Advocates of its use will no doubt hide behind the fact that, linguistically, the word ought to exist but I can not find much pre-1985 usage apart from within a couple of Biblical commentaries. According to a small entry in the Oxford English Dictionary; "Prospection" is the rarely used noun of the action to prospect. My software accepts prospect, prospected, prospecting, prospective, prospectively, prospector, prospectors and prospects. However, it rejects prospection and suggests prosecution as a suitable replacement. How apt.

MSTM Word 6.0 also rejects prospection and offers prospecting. Am I therefore correct in assuming that it must have been added to many peoples spellcheckers. I also note that Lord Renfrew, the eminent archaeologist, continues to use prospector and prospecting.

I thoroughly endorse the comments of both GWH and DEB on the concoctions invented to impress readers and academic colleagues rather than to show linguistic skill and dexterity.

59. Electronic Newsletter - If you have e-mail then perhaps you'd prefer to receive the newsletter in electronic format (Word for Windows Ver. 6.0). Not only does this mean you'll receive it a few days sooner but it will also help save the Society costs - and David Roe a bit of time too ! If you're interested, please send an e-mail to me at mike.munro@cwcom.net and .cc David Roe at david@d-roe.freeseve.co.uk

Footnotes

Many thanks to all those who have provided me with contributions and feedback, without these the Newsletter would cease to exist, so please don't stop sending them in. Absolutely any news item concerning Welsh mines and mining history, from the local paper, T.V., radio or 'heard down the pub' will always be welcome ! Likewise larger articles more suitable for the Journal are also eagerly encouraged and sought.

And finally.....**Seasons Greetings and all the best for 2001 !**

Mike Munro & BronwenDog 🐕

WMS Membership - Annual membership is £4, (or to ease administration - £8 for 2 years). The paid up date is shown on your address label - on the envelope you've just thrown in the bin !! If you are "paid up to DEC 2000" or earlier then the date will be **highlighted in red**, your subs are now due and your treasurer, David Roe (address on front page), would be most grateful if you could pay promptly.

'Copy' date for the next newsletter, **31st March 2001**, publication due April. Articles (typewritten and ideally on 3.5" disk, MS Word 6.0 or Plain Text format) to be sent to Mike Munro, (address on front page) or e-mail to mike.munro@cwcom.net

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Opinions expressed in this publication are those of the authors and do not necessarily reflect the opinion of the Welsh Mines Society.



'Ter' Riley with the Mayor of Aberystwyth on Lead Mines Hill during the preparation for the "Riley 24 Trial" c.1935

David Bick asks 'Where is this hillclimb ?'



The Welsh Corrugated Iron Appreciation Society meet at Dylife, June 1999

Raymond Griffith