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The Newsletter of the Cumbria Amenity Trust Mining History Society

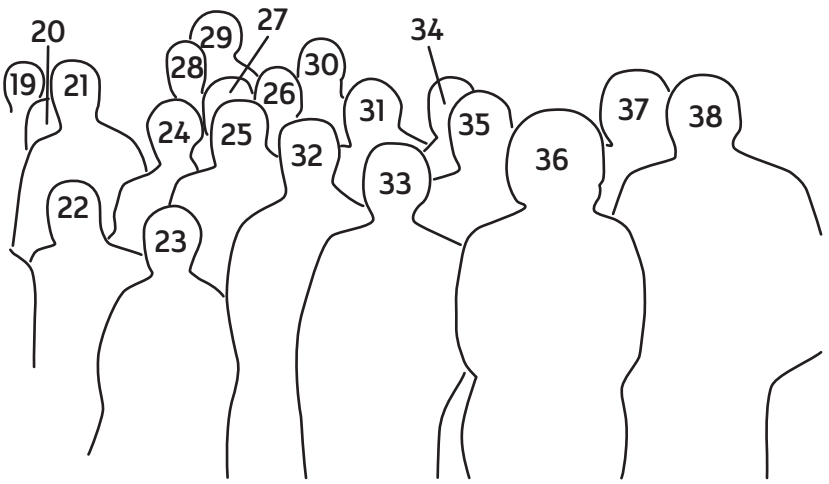
CAT 30th Anniversary at Rydal Hall. Photo John Aird

No. 98 **February 2010**

Members and guests attending the CATMHS 30th Anniversary celebration at Rydal Hall

John Aird
Man behind the Camera

1 Chris Jones
2 Margaret Fleming
3 Ros Leach
4 Jen Kaines
5 Mark Scott
6 John Helme
7 Warren Alison
8 Don Borthwick
9 Alan McFadzean
10 Ann McFadzean
11 Kate Tyler
12 Tony Holland
13 Peter Blezard
14 Anne Danson
15 Joan Helme
16 Barbara Mitchell
17 Mike Mitchell
18 Sheila Barker



19 Peter Fleming
20 Diedre Ryan
21 Alan Westall
22 Mark Simpson
23 Angela Wilson
24 Lesley Aird
25 Ronnie Calvin
26 John Brown
27 Jane Brown
28 Chris Cowdery
29 Joanne Cowdery
30 Mark Waite
31 Phil Meredith
32 Roger Ramsden
33 Barbara Ramsden
34 Monique Devriese
35 John Ashby
36 Meg Matheson
37 Rudy Devriese
38 Ian Matheson

Cumbria Amenity Trust Mining History Society
Newsletter No 98, February 2010.

Contents:

Membership
We welcome:
Richard Veitch, from Redcar, who is interested in underground meets, exploration and photography.
Joseph Bell, from Egremont, who is interested in local history.
Ian Bretherton, from Penrith. Ian is a rope access NDT technician and was a member of CAT in the 1980's. He is interested in most aspects of mining and caving around the UK, especially the Nenthead mines.

CAT 30th Anniversary Special Newsletter
Several members have pointed out that their copy of the CAT 30th Anniversary Special Newsletter has pages missing, in particular pages 10 – 19. I am afraid that there may be more. If you have pages missing then let me know and I will send you the missing pages. To avoid heavy postage charges please don't return the whole thing. You can easily replace pages yourself by removing and replacing the black plastic spine.

News
Damian McCurdy

Sheila Barker and Don Borthwick attended the 8th International Mining History Conference held at Redruth in Cornwall in June of last year. After the conference they had a few days holiday in the area, during which they visited Wheal Coates to see the results of restoration work completed since their last visit many years ago. As they approached along the cliff top path from St Agnes, there was an inviting resting place The bench had a small plaque, which on inspection they we were surprised to find commemorated the life of the late Damian McCurdy, a CATMHS member of more than 20 years.

CIHS Spring Conference
The annual CIHS Spring Conference deals with metal smelting in Cumbria & includes a paper on lead/silver by Sam Murphy. Date 24th April, price members £12.50, non members £14.50. At the moment it will be at the Ambleside campus of the Cumbria University. I have booking details if non members are interested. The latest CIHS "Bulletin" contains the news that Noree has given to the CIHS Mike Davies-Shiel's collection of slides (more than 25,000). The society is seeking to catalogue & digitise this collection in order to both preserve it and to make it widely available. CIHS have committed £500 to this and are inviting anyone else with an interest to contribute.

John Helme

Mike Davies-Shiel

The December Bulletin of the Cumbria Industrial History Society contains the following:

TO REMEMBER MIKE DAVIES-SHIEL

The Society has been entrusted with the remarkable and irreplaceable collection of slides and photographs of mainly Cumbrian industrial archaeological sites and artefacts assembled during years of research by Mike Davies-Shiel. Plans are afoot to ensure the cataloguing and digitisation of this wonderful archive so that both its preservation is assured and the material made generally accessible. Your Committee has already committed £500 from the Society's reserve to launch a fund to enable this task and now invites contributions from members and other friends of Mike who share a wish to see that this aspect of his life's work is preserved, appreciated and used. This is very large collection of 25,000+ slides.

Contributions, marked CIHSS [MD-S Memorial], should be sent to: The Treasurer: CIHS, Eymore, 17 Railway Terrace, Lindal in Furness, Cumbria LA12 0LQ.

Coniston Station Housing Development

A report in the NW Evening Mail states that development of five houses on the site of Coniston Station has been shelved, as the housing association behind the scheme has pulled out due to financial difficulties. The site is owned by the National Park and is currently a car park. CATMHS has a lease on Mandell's Slate Office, which is nearby. The Coniston Parish Council Clerk is reported as saying that it would be comparatively easy to get another housing association to 'come along'. The site is overlooked by a fifty foot high slate cliff of doubtful stability, so it seems unlikely that there will be much interest, at least in the short term.

Tyndrum may get it's gold mine back

Tyndrum is a former gold mining centre. The hamlet of Clifton are the former mining cottages, and up on the hillside beyond them the tailings of a former lead mine can be seen. The actual gold mine is a couple of miles to the south and west of Tyndrum at Cononish, situated above Cononish Farm. .

However, now Tyndrum could find itself at the centre of a gold rush if plans to mine gold there are given the go-ahead. The Australian-funded company that owns a small mine near the village is meeting with locals to discuss their plans to expand and extract around four and a half tonnes of gold that they believe to be buried there. Residents will be able to see a computerised model of the mine and engineers and planners will answer questions.

According to STV channel, the vein of gold at the Cononish mine was discovered 20 years ago, but the mine has never been used commercially on account of the difficulty and cost of extracting the gold from the rock that contains it. However, the increase in the value of gold has made extraction a profitable proposition. Each tonne of rock could yield up to ten grams of gold, worth around £200. The company reckons that there is around five tonnes of gold and around 25 tonnes of silver in the mine. The mine would employ around sixty people for eight years

Petzl Stop Safety Bulletin

From Jon Knowles: IRATA have published a safety bulletin after being informed that 3 Petzl Stop descenders have been inspected and cracks found on the upper pulley. It seems that these cracks do not cause a risk to the user because the pressure of the rope on the pulley during use

is such that the main force applied to the pulley does not open the crack, but closes the crack, so the performance of the Petzl Stop is not affected. The crack is caused by fatigue as a result of manufacturing tolerances of the metallic pin which is inserted in the upper part of the pulley. The report is quite lengthy, and members wanting more information should visit the Petzl website, www.petzyl.com , ref Safety Bulletin Alert 2009 003 IRATA on Petzl Stop.

Information request

"There are various artificial tunnels mined in the brockram rock beneath the town centre in Kirkby Stephen in Cumbria, just north of the main Dales caving area. No-one really seems to know much about their history, although there are anecdotal tales about them being constructed to move beer barrels from breweries to pubs below ground, to avoid customs and excise duty! Can anyone shed any light on these tunnels? In particular I'd like to find out about their age, main purposes and mining methods (as there seems to be no evidence of old shotholes). Are there any contemporary written references? If anybody can help, please let Chris Cowdery know – chris@cowdery.org.uk

CATMHS Library and Archive
Some recent additions to the Library/Archive

Books

Roughton Gill and the Mines of the Caldbeck Fells –2009 – Ian Tyler's latest but now possibly not his last book in the Blue Rock Publishing series.
Minerals of Northern England – Symes R.F. & Young B. National Museums Scotland 2009 – long awaited and with much information on the mines and geology of the region.

Russell Society off-prints

Zoned oxidation deposits in Tyne Bottom Mine, Garrigill
Mineralogy of Brae Fell Mine, Caldbeck Fells Cumbria
Geology & Mineralogy of Pike Law Mine, Newbiggin in Teesdale
Review of Supergene Mineralisation at Silver Gill, Caldbeck
A Review of the Mineralogy of the Roughton Gill Mine, Caldbeck Fells, Cumbria: Part 2 The Roughton Gill South Vein on Balliway Rigg
Kindly donated by Trevor Bridge who is a contributing author to all the above papers. Scholarly as would be expected from the Russell Society, each contributes to the broader history of these mines, the Pike Law paper is particularly valuable aid to interpreting this interesting but puzzling site.

English Heritage

Force Crag Mine, above Derwent, Cumbria Archaeological Survey of the High Force Workings
Hilton Mine, Scordale, Cumbria – Identification of Mineral Samples
High Force Workings complement the previous survey of the main mine site, Hilton Mineral Samples is the first report following a recent survey of the eroding site.

Isle of Man
Member Brian Cubbon donated a series of articles on the Laxey group of mines on the IOM.
Unusual Water Powered Engines in the Isle of Man
The Pump System of the Lady Isabella Waterwheel
Exploration and Survey of the Great Laxey Mine
Recollections of a Laxey Mine
The Glen Mooar Winding Turbine Laxey

Ore Dressing and Coniston and Caldbeck References
The Dressing of Lead Ores by Thomas Sopwith Junior with an abstract of the discussion upon the paper. NEIMME - 1870 informative article on CD donated by Shelagh Bridges
References to Coniston in "The Georgian Gent & Co." (The Life and Times of Charles Roe) – a list compiled and donated by Dave. Bridge
The Lost German Mines at Caldbeck – Smith, Murphy & Allison Trans CWAAS 2001 classic article donated by Warren Allison

Mining Ancillary
The History and Development of Colliery Ventilation by Alan Hill, May 2000 – donated by S. Barker
Electric Loco. A manufacturer's catalogue from Cambokeels Mine in Weardale. Wingrove & Rogers, Liverpool

Photos and Field Meets
Blundell Slides – More than 150 Lake District mining pictures taken by the late Dave Blundell c1980/81. Broadly: Caldbeck, Coniston, Force Crag and Keswick. There is a CD prepared by Mark Simpson from slides.
NAMHO 98 Field Meet at Nenthead. Notes for field trips - Tynebottom Mine, Brownley Hill Mine, Brownley Hill Trip, Smallcleugh Mine, Collieries of the South Tyne, Visit to the Gin on the Scaleburn Vein, Rotherhope Fell, Caplecleugh Mine Trip, Cowshill Area Trip, Garrigill Village – donated by Sheila Barker.

Archiving members records
The CATMHS Archive consists mainly of books, mine plans and papers. There are some images, Dave Blundell's collection, some from Anton Thomas, and Peter Fleming gave the archive a copy of the slides he used at our 21st anniversary and a copy of his notes. CAT members have been taking photos for the last 30 years or more and these images are becoming historic. Things change, mines become inaccessible, artefacts corrode or disappear. What will happen to these records in the longer term? We should be thinking of preserving these images for posterity. A number of people have been digitising their slide collections, and it is a very easy matter to copy or back up a digital record. It has been suggested that the CATMHS Archive should be collecting information and images from members and preserving them.

In order to classify and catalogue such material it needs to be captioned and preferably accompanied by some notes. Members willing to share their information in this way should contact our Archivist, Don Borthwick.

CAT 30th Anniversary AGM & Dinner

Forty seven people attended the CAT 30th Anniversary AGM and Dinner held at Rydal Hall, including past members Chris Jones and Alen McFadzean. It was a most enjoyable occasion and several people expressed the opinion that we should make Rydal Hall a regular venue for our AGM and Dinner.

Dave Bridge resigned from the committee and Mark Simpson stood down as chairman. Warren Allison and Colin Woolard joined the Committee, Warren as the new Chairman. A suggestion was made from the floor that, in order to recruit more young members, we should consider changing our name to one more appealing. Cumbria Amenity Trust was a name chosen by our founders to support an attempt to purchase historic mining remains at Henning Valley, and the society was widely known as CAT. Later the words 'Mining History Society' were added in order to specify our interests, resulting in the rather awkward acronym CATMHS that we use today. If you have an opinion or a suggestion then please contact CATMHS Secretary, Sheila Barker, or write a piece for the Newsletter.

The excellent dinner was followed by a presentation on CAT's achievements over the last 30 years by Ian Matheson and an amusing collection of photos of CAT members by Mike Mitchell, followed his video of work in progress at Tilberthwaite Horse Level. Angela Wilson provided the balloons and party poppers and a very fine 30th Anniversary cake. Thanks to Mike and Barbara Mitchell for organizing the event.

On the Sunday, Tony Holland offered his big meet at Coniston, reported in the meets section of this newsletter, and others went to Coniston to examine the effects of the big Cumbria flood.

CHANGES TO THE CATMHS CONSTITUTION AGREED AT THE AGM

As members will be aware, a motion to replace the Constitution of the Society was proposed at the AGM on 21st November 2009. The adoption of the new document was unanimously approved and the website has been amended.

My purpose in writing this note is to draw attention to the document annexed to the Constitution entitled "MEMORANDUM OF CATMHS POLICIES ANNEXED TO THE CONSTITUTION". This lays down the way in which the Society conducts itself so as to

achieve its stated aims while retaining the trust and respect of other bodies which are impacted by the Society's operations, including the general public. This document will be drawn to the attention of all new members and should be familiar to all existing members. If any member is unable to read the document on the website then a paper copy will be provided. Additionally the form entitled "Release of Claims" will shortly become available for download from the website by anyone requiring a copy.

John R Aird, Treasurer.

Chairman's report to the 2009 CATMHS AGM

My report could almost be a repeat of last years, namely a full selection of meets has been arranged and carried out, newsletters have come out regularly and are full of interesting articles, the financial situation continues to be sound and, most important of all, your committee has ably continued the running of your society. There are no passengers on the committee, all are necessary, and CATMHS would not exist without them. However we are all getting older and new members are necessary.

Dave Bridge is retiring from the committee. Dave has been a contributor to CATMHS for many years; his Coniston Copper Mines CD has stood the test of time.

Carrock Fell and Silver Gill are still waiting for lift off, but Tilberthwaite Horse Level is progressing. There are of course other projects awaiting people to make them happen.

I have been fortunate in my time as your chairman, a period of some eight years, the same period of time as Mike Mitchell, and a year shorter than my predecessor Dave Bridge. Sometimes things have gone smoothly, sometimes not, some of the committee members being an unruly bunch. I have always regarded the post as representing CATMHS in all its activities above and below ground and have endeavoured, with guidance from the committee, to press CATMHS aims where ever possible.

Much has happened over last eight years, and I am indebted to Don Borthwick and his list of dates for refreshing my memory, (prone to senior moments, as folks will testify). Several key events stand out, the finish of the Coniston Paddy End survey (what is it that Dave Bridge said, "we have survived another day", hum!!), Secondly the 2004 NAMHO conference, where I can say with all my heart that it was a privilege to have been chairman of such a fine committee, producing such a good occasion. Thirdly – the blood sweat and frustration of the production of the CATMHS Health and Safety Statement and Risk Assessment procedure. That we have a working procedure is a tribute to all those who gave it birth.

Other things happened during that time and you will no doubt have read your newsletters and kept abreast of them all.

Over a longer period, it is surprising what CATMHS members have been involved with – the Furness Relict Survey, Newlands Iron Furnace project, production of publications, such as the trail leaflets and Lakelands Mining Heritage. It should always be remembered that we can do what we do because of the money we make on publications!

Ian Matheson has compiled a special edition publication with memorable events from those last 30 years. We should show our appreciation of the efforts of Mike Mitchell and Barbara in organising the 30th Anniversary celebration at Rydal Hall.

Thank you all, Mark Simpson, Retiring Chairman.

The Chairman's Award was given to Peter Sandbach – well deserved

Newland Furnace Report 2009

This weekend is an opportunity for celebration and reflection on past events mirrored, in a smaller way, by our work at Newland. It is 20 years, this month, since Dave Blundell, Mike Mitchell and myself joined Dr John Marshall and the owner Mr Stevenson to see how we could help to preserve the furnace buildings. The rest, as they say, is history.

I looked at my last year's report and it hardly seems possible that 12 months ago we were starting to receive tenders, seek funding and wondering how things would turn out. I'm not going into the details of the year; with the help of Ian we have managed fairly frequent reports, but suffice to say it has been a real roller coaster ride. However, finally, the contractor finished on the Thursday afternoon before Heritage Open Day on the Saturday and we were able to clean up, erect our display material and welcome about 80 people to see the new protective roof over the flue.

In the last few weeks the blacksmith has erected the new gates and security fence in the bottom arch entrance, which were funded by the Cumbria Community Grass Roots Scheme, and they certainly enhance the appearance of that area, and are a tribute to the hard work and perseverance of our Treasurer, David Smithson.

I have often said that we couldn't have done much of what we have achieved without the support of CATMHS. This year that support has been fundamental; without it not only could we not have completed the capping scheme, we couldn't have started it. Without the assurance of financial cover we couldn't have signed the contracts. English Heritage have been as generous as possible, our 100% grant was more than expected, but all the grant systems they operate require the payment of accounts before they repay the money. Again they gave us their most favourable system 50% as soon as contracts are signed, but the other 50% is only available in two grants, one of 40% after completion of contract, and payment of all accounts, and one of 10% after the retention period. So you can see, that, even with their best grant system, a hole would soon have appeared and we could not have completed our financial commitments without your support. We are grateful for that support, encouragement and commitment to the continuing work at the Newland Furnace.

John Helme.

Coniston Coppermines Flood
The November floods have caused some damage and changes around the surface features at the Coppermines as follows.

Hospital Level - The cutting to the level has some damage to the top of the revetment wall. The nearby footbridge supporting wall on the western side has a large hole scoured in it. Further down stream the river has taken away a considerable amount of the spoil from the Paddy End tips revealing what appear to be 2 upright telegraph poles.

Hospital Shaft Top - The entrance to this is now partially open due to the scouring effect of Levers Water Beck on the lower slopes of the spoil /scree. The small waterwheel pit in the beck bottom has been partially demolished.

Paddy End Spoil Heaps

The river has changed course and reverted back to its original bed by flowing underneath the tips. This course is shown on the 1st edition OS 6" maps of 1850. There is now no water flowing around the bottom of the tips as before. This has caused the water authority some problems as it was threatening their filtration beds. They are still taking remedial action. In addition they have had to remake the road up to Leverswater, which is now better then it has been for years.

Paddy End Incline - The bottom 10 metres of this has been completely washed away. Only parts of the outer masonry walls remain.

Deep or Horse Level - A landslip just beyond and above the portal has obliterated the old cart track leading up to Cobblers Level for over several metres. Debris is partially blocking the cutting out of the level causing a back up of water into the tunnel. There are also two smaller landslips below the level. Owing to the movement of large boulders in the beck it is now difficult to cross the beck at the usual place.

Leverswater Mine – A large amount of debris outside the entrance is holding back water which is almost as high as the protective boards recently installed there. Very little water is coming out of the drainage pipe, suggesting a blockage.

I sent the details of the flood damage to Coniston Coppermines to John Hodgson and he replied as follows:
"Peter – some of this sounds quite serious. I'm unable to get out before Christmas to have a look, so if it's possible, it would be very helpful if you and/or CAT could provide more information on each of the damaged areas and perhaps some suggestions about what – if anything – could be done to repair the features. I will get out in January to look at this."

Peter Fleming

Tilberthwaite dig.

The last constructive work meet in the Tilberthwaite Horse Level took place on 15th November. Six headframes had been erected and the team was able to drive a set of 20 foot plus spiling bars in prior to excavating the next section. This was to be the last visit before the disasterous floods which caused serious damage at Cockermouth, Keswick, Ambleside and elsewhere.

The same flood resulted in damage to the Coniston mines and to the Tilberthwaite dig. It would seem that water built up inside the mine until the pressure caused it to burst through the blockage in the Horse Level. It probably took out the material from the top of the blockage, and redeposited it in the cleared area of the dig. The water was then forced behind the pack wall, pushing the top half of the stacked bags together with the spoil behind them, into the cleared walkway

This blocked the adit with bags and loose spoil for the entire length of the packwall, some fifty meters, and blocked it to the roof just outby of the steelwork.

On surging out of the adit mouth the water washed out the track and caused some minor damage to the mill.

Mike Mitchell and Ian Matheson visited the site on 23rd November to report, and the digging team visited on 27th to inspect the damage. It was decided that before anything could be done inside the mine the track would have to be repaired. They made two visits during December to complete this, but over New Year and into January snow and ice prevented any further visits. IM.

After the Floods – Site meeting 27th November 2009

Following the shocking news broken to me by Pete Blezard and after seeing the images by Mike Mitchell, a site meeting at Tilberthwaite Horse Crag Level of project volunteers was arranged. The purpose of this site meeting was to assess the extent of the damage following the flooding in The Lake District, week commencing 16th November 2009. Warren Allison, Pete Blezard, Ian Matheson, Mark Simpson Andrew Woollard and I were in attendance. Peter Sedgewicke and Colin Woollard were unable to be there.

The first task requiring our immediate attention will be the track up to the mine. Some of the eroded holes are in the order of one metre deep on the left hand side looking up towards the mine, these holes need filling with large stone which could be discretely scavenged from the floor of the cutting leading up to the adit. We estimate that this will take between one to two weeks depending upon volunteer numbers available.

Upon walking into the Level leading up to the closehead it becomes obvious there are substantial deposits of white clay fines and these quickly become mobile when disturbed underfoot. On reaching the closehead, it was a relief to see the dam was intact, but once over it, the floor is covered with thick clay deposit and this has also deposited itself on our stockpile of spiling tubes. Some of the filter bags which were laid in the lagoon between the closehead and the pack wall are now lying in the closehead. Some empty plastic sacks from the dig and one of Colin Woollard's blue tubs are stacked up on the waste slate clogs on the left hand side as you step over the dam into this area. These were gathered from outside by Mike Mitchell and put up there out of harm's way.

Continuing the journey from the closehead to the collapse, I was surprised to see the 'walkway' which had been laid on the left hand side of the Level by ourselves some weeks earlier, was left undisturbed, but again this has the usual covering of white clay fines, but the lagoon leading up to George Tarr's dam is relatively clear. The sight which amazed me most of all was the circular end off the wooden cable drum, which has always been laid against the right hand wall, is still there! Surely some joker has carried this back into the mine for a laugh! The wreckage of three wheel barrows can be seen abandoned in the lagoon, one of these may be recoverable. Over the other side of George's dam, the lagoon soon becomes filled with clay fines to the same level as the 'walkway'. Heavier silts then cover the floor raising it up slightly before reaching the remains of the pack wall.

The images sent to us by Mike show the remains of the pack wall and beyond. It is obvious, when you are there, that the water has forced its way in behind the top of the wall and pushed the bags off into the other side of the Level. Debris from the collapse has washed in and quickly climbs near to the roof of the Level. Beyond Jane's green garden wheelbarrow (she was wondering where it had gone) as seen in Mike Mitchell's images, the way forward soon becomes a flat out crawl requiring me to move my FX5 battery to my side allowing me to advance the remaining 18-20 metres. Without doing any digging it is only possible to reach within 2 metres of the steelwork, which thankfully is still standing and it is possible to see the foot of a stored Acrow Prop and the blue 5ltr bottle containing our 16mm bolts still remaining on the crash barriers. A void can be

seen to the left of the steelwork and this is where Ian Matheson had been standing taking photographs the previous week whilst we were driving in the first round of tubes. I had carried Pete's surveying tape forward to this point and it is worth noting that the air quality here was quite poor.

There appear to be three options open to us to get back to where we were before this little inconvenience and these we discussed as follows;

1. Clean up the lagoon and floor leading to the pack wall and restore to their previous condition, remove bags/rock/silt from the right hand side of the existing remains of the PW and extend this out-bye. This would free up space to re-build the remaining wall to the full height, accommodating the recently deposited material. Obviously this space would not take all of the volume of material and some would have to be taken out-bye to the extended pack wall. The difficulties of this option were discussed and this could at least enable us to quantify the extent of the task which lay ahead, but could well compromise the second and third options if this was started and then aborted for whatever reason.

2. Using our stock of rail, currently stored at Ash Fell Farm, rail out from the closehead by clearing the Level to the sole and this would include the removal of the 'walkway', George's Dam and at the same time reinstate the gutter on the right hand wall. The rail would be advanced to the steelwork, removing all materials including all previously stacked bags from the wall

3. Using our stock of rail, extend the 'walkway' towards the right hand wall to accommodate the sleepers and rail out on top of the 'walkway'. This would cause far less disturbance to the clay deposits, maintain the track height with the closehead and at least maintain some of the lagoon. The height of the WW would have to be lowered at George's dam to provide sufficient head room.

'Tramming' material into the closehead was discussed, this is assuming the second or third options were chosen. The wall immediately to the right of the Level (looking in-bye) was thought to be the most convenient for storage, but then it was identified as the site of George Tarr's most recent extraction and it was deemed unacceptable to build in front of this. The opposite wall, having already a slate waste dump against it, was identified as the most appropriate place and all were in agreement that the bags could eventually be faced with a wall of rock to reduce the visual impact.

Bypass piping already in use at the head of the dig has been quite successful, but more of this will be needed to ensure that the quality of the water exiting the mine is maintained to the best possible standard, whatever option is chosen.

Pete Blezard has now calculated that there is approximately 98 meters (325') of rail in stock and this would be enough if Option 2 or Option 3 were deemed to be the most favorable. A decision will be made after the track has been repaired.

John Brown

Research Framework for the Archaeology of the Extractive Industries in England (Mining and Quarrying)

NAMHO has embarked on a project which will benefit mining history and help with the making of decisions about future archaeological research and the heritage of mining landscapes in England. Crucial to its success will be the support of NAMHO members, who it is hoped will wish to become involved.

The Research Framework is a two-year project, jointly funded with English Heritage, which will enable NAMHO groups and individual members to contribute towards and help influence research priorities. It will also provide guidance towards conservation and education strategies, and raise awareness of historic extractive industries as part of the wider heritage agenda. At its core will be a coordinated effort to collate the results of previous archaeological research, which will provide the information needed to achieve these wider aims. NAMHO members can support this project by helping with the supply of this information and by contributing to discussions at the series of regional seminars planned for next Spring and Winter/Spring of 2011. Members with regional or specialist expertise, who are willing to provide contacts and advise on less well-known sources of information, are particularly encouraged to attend these seminars.

The first task will be to undertake a comprehensive review of existing archaeological data. Initially this will involve exploring county historic environment records (HERs) and collating bibliographical sources but also vital to the success of this project will be the expertise and knowledge contributed by NAMHO members.

The scope of the project will include all archaeological data associated with mining and quarrying under the following general headings:
Energy Minerals: coal, oil shale, lignite etc
Metals: ferrous and non-ferrous
Bulk Minerals: building stone, aggregates, lime, sand, gravel etc
Other Industrial Minerals: evaporites, clays etc
Miscellaneous minerals: graphite, arsenic, talc, abrasives, pigments etc

The assessment will include surface and underground archaeology of all periods of extractive activity, from prehistoric flint mines to 20th century gravel pits. Infrastructures, such as mineral railways, water supplies and aspects of smelting will also be covered, as well as the social impact on the landscape of extraction, including housing and other material evidence of mining communities.

Once the resources have been collated the next process will be to evaluate the data and the results will be used to inform discussions on a range of issues. Mainly however, we hope to identify:

- strengths and weaknesses in the existing record for the archaeology of mining and quarrying, in particular any conspicuous gaps in our knowledge
- skill shortages in areas needed to further the study of the topic
- common themes in the study of the different extractive industries, including cultural impact, underground archaeology, conservation and education

After the evaluation, the focus will turn to how these issues may be addressed through targeting future research and establishing where priorities for investigation and the allocation of resources may best lie. Through this process the research framework, informed by the results of the resource assessment, will incorporate the views and aspirations of a wide community of researchers.

If you wish to assist the steering group please contact the Project Director, Dr Peter Claughton at P.F.Claughton@exeter.ac.uk If you have data or expertise to offer or would like to contribute to the seminars please contact the Project Officer Phil Newman at projectofficer@namho.org Details of the seminars will be available soon. Please check regularly on the NAMHO website for information and updates - www.namho.org

(NAMHO) has begun a project, part funded by English Heritage over the next two years, to develop a Research Framework for the Archaeology of the Extractive Industries (Mining and Quarrying). As part of the first stage of that project NAMHO will be holding a series of seminar/workshops across England; the first of which will be held at **the Tamar Valley Centre, in Gunnislake, on 20 February**. The purpose of the seminar is to discuss the current state of knowledge for mining and quarrying archaeology in the South West of England. There will be three presentations on aspects of the archaeology over the course of the day with ample time for discussion and contributions from the floor. Would those interested in attending please contact the Project Director - Dr Peter Claughton - by e-mail P.F.Claughton@exeter.ac.uk or by 'phone 01437 532578.

Forthcoming Meets:
Swaledale meet in April
Please note that the Meet Leader (Chris Cowdery) has moved house and has a new phone number. To contact Chris, please use his new number which is 01832 273398.

Tilberthwaite
1st November 2009
John Aird (Notional ML), Tony Holland (The Driving Force), John Dale, John Cameron

Those involved in the severe flooding in Cumbria during the week ending 21st November may not have been aware that a minor dress rehearsal for the event took place (at least in the Coniston/ Ambleside area) on the Saturday night and Sunday 1st November. The ML and Tony met at the car park at Tilberthwaite; well aware that the two Johns were driving over from Yorkshire expecting to descend to the Horse level but quite certain in their own minds that the quantity of rain that had fallen overnight would render the trip impossible. When the visitors arrived it was proposed that a substitute trip involving Tony's multi pitch Coniston through trip be undertaken and this was gracefully accepted. The vehicles were left at the waterworks and the Landrover taken up to Courtney's Crosscut. Everyone got their SRT gear on; at which point Tony remembered he had left something behind in his car and ran off down to get it. Fifteen minutes later he was back to say that he'd actually left his helmet and light at home! Undaunted he suggested the ML rig South Shaft and take the meet down to Deep Level while he would nip off and get the missing gear.

This worked out well, literally just as the team gathered the last of the gear at the top of the shaft after a pleasantly dry descent/ascent Tony reappeared complete with helmet and light. At this point the ML decided, in view of his exertions at Eagle Crag the previous day, that discretion was the better part of valour and opted to allow the others to continue while he would go round to Tilberthwaite again and liaise with the Digging Team. In view of the organisation (or lack thereof) so far the visitors were somewhat reluctant to allow the ML to depart taking all their belongings and car keys but eventually accepted his promise to be back in time to meet them.

Arriving at the Horse Crag close head the Digging Team were found crushing the ends of the scaffolding poles for spiling, using John Brown's hydraulic rig. The ML went along the level to see the forehead; the recently installed walkway along the side wall was excellent given the deeper water level (it had now been raining for more than twelve hours). Since the last time the ML had inspected the blockage the water was trickling out at the base of the fall he was a little surprised to see that water was issuing from various places including the top of the fall. On exiting into the closehead the Digging Team were preparing to get excavations underway, and after a brief conversation the ML headed back to Coniston. (He subsequently discovered that they took one look at the forehead and left immediately.)

Timing again was pretty good the ML getting back just before the group emerged from Hospital level, scattering before them the youth group who had incautiously ventured into the entrance. Not quite the day that had been described in the Meets List but interesting never the less.

John Aird

Wales Weekend, 12th & 13th September and Llanberis Copper Mine

Attendees: Chris Cowdery
John Ashby
John Aird
Lesley Aird (Saturday only
Tony Holland
Roger Ramsden
Jon Knowles (ML)

As usual on a Knowles meet in Wales we were blessed with glorious sunshine.

Saturday

The group assembled at Dinorwig for a walk through the upper levels of the Slate Quarry. For those that have not been, this is a massive site rising from the shores of Llyn Padarn and Llyn Perris to the upper levels, high on the side of Elidir Fawr, over 500 m above. Despite the site having closed, forever, in 1969 much remains and there are still compressor houses full of machinery, slate saw mills, inclines of every description, together with Blondins (aerial cableways named after a tightrope artist) and even a Caban (mess room) which still has coats hanging on the wall.

Photograph 1. A general view of Dinorwig Quarry.

We probably only visited 30% of the site and to do the whole site, its outliers and the former workshop which is now the Welsh Slate Museum, would take a week. Standing on the galleries it is clear to see why Dinorwig and its near neighbour Penrhyn on the far side of Elidir Fawr dominated the world slate industry when it was at its peak.

Saturday evening was spent at the Cwellyn Arms which serves good food and beer although has limited seating and proved to be beyond the navigational skills of messers Holland and Ramsden. Saturday night at the Snowdon Ranger Hostel was fine and it provides a good breakfast.

Background to Sunday

Before describing Sunday's activities some background is needed, although to get the full picture the reader will need to study "The Old Copper Mines of Snowdonia", by the late David Bick, which is a fine tome, although I will leave it to the reader to decide on the photographs which, whilst taken by the author of this article, do include three shots of John Aird!

Photograph 2. The northern workings of the Llanberis Copper Mine seen from Dinorwig Quarry.

The Snowdon massif contains a number of mines, the most prominent being the Britannia Copper Mine above the Llyn Glaslyn, lying between the PYG and Miners tracks up Snowdon. This has been explored on previous meets and need not detain us here other than to highlight that the vein heads north-west under Crib-y-Ddysgl towards the cliffs at Clogwyn Goch (Goch is a mutation of Coch in Welsh, meaning red) where there were further workings. Further mines were situated at Cymerch and Llanberis with the later often being worked as one with Clogwyn Goch, with the miners working at Llanberis in the winter and Clogwyn in the summer. Knowing the weather at Clogwyn in winter this is understandable and is also in keeping with the summer and winter farm houses known as Hafoty and Hendre seen in many parts of Wales.

Photograph 3. Starting to descend Llanberis Copper Mine.

In 2008 the "Welsh Team" of messers Aird, Waite, Cowdery, Ashby and Knowles decided to explore the slate and copper workings on the south-western side of Nant Peris, so on a bright but cold Sunday in March 2008 Ashby, Chris and the author flogged up the slate workings. These are much degraded although with some remnants of sawing machinery on the upper levels, including a saw table, although how this was powered remains a mystery, not clarified by a Snowdon Mountain Railway steel sleeper

found nearby. Descending the site and traversing to the Llanberis Copper Mine the upper workings of the section of the mine above the south adit were explored first. A free climb into an opening goes in both directions, NW it is blind shortly after crossing a flooded winze, which SE it descends into a stope which is presumably the top of the one entered lower down the hillside.

Descending further an obvious adit is entered on top of a pile of stacked waste. This ends in a stope going both up and down. There is an old anchor indicating that the stope had been explored previously. This area has to be revisited.

Lower down the south adit is collapsed.

The full team, less Chris, returned for a weekend trip on the 10th & 11th may 2008 to descend the open workings which lie closer to Llanberis at SH594589. Captain bolted down a series of large steps where rocks were jammed between the sides of the stope and some did not feel stable. The descent then turned vertical for approx, 15m before landing on a sloping ledge which contained loose rocks which when touched crashed into the depths below. Out-bye a short level ended in a collapse, although it did provide a refuge from rocks which were dislodged by those above.

From the ledge the stope again became vertical, descending approx. thirty meters to a steep rubble slope. The author started to descend the rubble slope but withdrew, for safety (see Ref.4 if justification needed), when it became vertical. Ascending, a ledge was encountered on which it was possible to traverse along the stope for approx. eight meters, from where a better descent was possible. Descending behind a large overhanging rock a pitch of approx. ten meters gave access to a strange sub-level which was semi-circular in plan.

At the end of the semicircle the level re-entered the stope at which point vertical timbers nearly blocked the level and it is assumed that these were to ensure that material tipped from above fell to the bottom of the stope. Descending again a pitch of approx. 15 m gave access to a loose rubble slope, immediately beneath a wall of loose deads and above a further loose descent to the floor below. At this point the team returned to surface and the delights of a French filled Capel Curig Youth Hostel. The evening meal was taken at Cobdens which was good for beer but less so for food.

Returning on the Sunday Mark enlivened proceedings by carry his tackle in a “five a day” bag. Descending again to the rubble slope the obvious line of descent was ignored due to the large amount of loose material. Traversing to the right a descent of approximately 15 m gave access to a steep rubble slope. Progressing up the slope a blind level was entered. Descending the slope the stope widened to approximately six or seven meters and at the bottom a drop of four meters above a flooded shaft, complete with pump in situ, gave access to a level. This connects to the drainage adit passing minor workings which contain a shaft rising to unexplored workings above. Following the adit outbye, a section built up in slate blocks is encountered immediately before a collapse at what is assumed to the portal. Returning to the pump the main level heads south-east beneath large stopes above. There is clearly a large volume of workings which have not been explored.

Photograph 4. Mark, the flooded shaft and pumps on the adit level.

Once the pumps had been photographed the team ascended back to day. As the author cautiously ascended, always wary of falling rock, a loud roaring was heard which promptly brought on thoughts of falling rocks and an immanent demise. Fortunately this did not materialise into a large rock fall but was subsequently found to be a thunderstorm outside!

For those planning to repeat this trip please note that it is bolted with 10 mm Hilti anchors and the following tackle is needed:-

1 x 80 m rope
3 x 30 m rope
1 x 10 m rope
25 x 10mm hangers
7 x rope protectors
2 x short slings

Sunday

Returning to Sunday 13th September 2009 the plan had been to further explore the Llanberis Copper Mine or if the weather was fine walk up to Clogwyn Goch, which was often worked as one with Llanberis, with the miners at Clogwyn in summer and at Llanberis in winter. In view of the bright sunshine a walk was clearly in order.

The team quickly walked up the Llanberis path to Snowdon summit in glorious sunshine, as far as Clogwyn, before carrying straight on at the point where the summit path turns to the left and starts to climb more steeply. Studying these paths on the map the author suggests that the Llanberis path up Snowdon follows, for most of its route, the path to the mine which is presumably much older – Crew gives a start date of 1797 – 1805.

Arriving on the site a small working was evident at approximately SH 606557 El 759 m this was entered and found to be a narrow vein with a very small amount of copper mineralisation. Contouring around the base of the cliffs an obvious change in colour of the scree could be seen at SH 605555 El 741. Whilst nothing was immediately obvious Chris scrambled up the rocks above to find an open level. This was entered for approximately 60 m where a large hole in the false floor prevented further progress, at this point the workings could be seen to descend beyond the reach of our lights and to rise for at least 25 m indicating that there are significant workings to be explored and further visits with full tackle will be required in good weather. This is a significant find since other eminent mine explorers are of the view that there is nothing accessible underground here. Viewed from a distance, further workings can be seen rising up the face of Clogwyn Goch almost to the tops of the cliffs.

Further down the site the remains of a large incline is the most prominent feature of the site. Whilst this has no indications that it was ever railed it is assumed to have

connected an adit which is now collapsed with a dressing mill on the shore of Llyn Du'r Arddu. On and beside the incline were a number of pieces of ironwork which the author suggested was part of a set of stamps – this was not met with widespread agreement at the time but after further study the others, reluctantly, agreed. At the bottom of the incline on a flattish grassy area beside the Llyn are the remains of what are assumed to be ore dressing buildings – there was certainly a water wheel. From here the exit route for the ore is unclear. Captain was convinced he could see a horse track but the strong sunshine and lack of a safari hat prevented others from seeing this feature.

Jon Knowles.

Further reading:

The Old Copper Mines of Snowdonia by David Bick. Landmark 2003.
Dinorwic The Llanberis Slate Quarry 1780-1969 by Reg Chamber Jones. Bridge Books 2006.
The Copper Mines of Llanberis & Clogwyn Goch by Peter Crew. Caernarvonshire Historical Society Transactions 1976.
Llanberis Copper Mine. Explorations by Eldon Pothole Club. Journal No.9 Vol 3 1983. This is available on AditNow.
Britannia or Snowdon Mine by Colman & d'A Laffoley. Published in the Bulletin of the PDMHS Volume 9 Number 5 Summer 1986.

Book Review:

"Beneath this Green and Pleasant Land"

John Graham
Tyne Bridge Publishing
ISBN 978-1-857951-43-1
220 pages, £7.99

The subtitle "A miner's life" while true, conveys not a fraction of the contents of this volume. A complete technical description of longwall mining from Victorian techniques through to the very latest technology is accompanied by excellent drawings. Along with this goes a masterly account of the events affecting the NCB, the miners' unions and the miners leading through the 1950's, 60's and 70's up until the apocalyptic strike of 1984/5.

"The miner's life" is extraordinary, at age 15 he starts work on the surface at the local colliery for a weekly wage of £2.50 and within three years by incredible exertion and application has achieved a piece work wage of £26 to £27 per week, among the highest paid miners in the Northumberland coal field. The determination shown so far continues as he works his way up to Colliery Overman at Westhoe, a fully mechanised pit under the North Sea. The physical exertions required and the constant exposure to serious danger is well explained without mock heroics.

For anyone interested in mining, industrial relations, social conditions, management or leadership this book is essential reading.

William Bickford

Eagle Crag, 31st October 2009
John Aird (Notional ML), Roger Ramsden (Guru and Main Man), John "Anyone seen my towel" Ashby.

This mine is not easy to access now that parking has been considerably restricted at the behest of the local farmers, whose access was being restricted by carelessly left vehicles. The ML had devised a strategy to deal with this problem and succeeded in reducing the walking distance considerably. (Details of the strategy cannot be disclosed publicly). This was fortunate since even the reduced distance combined with the need to carry his own gear, a 100m rope and symptoms of swine flu soon reduced the ML to the ranks of the living dead. Having crossed Grisedale beck the party struggled up towards the Smithy below Number 3 level at which point the 100 m rope was abandoned despite Roger's incredulous "but you'll have to come down to get it after lunch" and the going got really rough as progress was made round the side of the crag and up to Number 5 level (the member who callously remarks "well the bracken was down by now it should have been pretty easy going" will find reference to himself in Dr Descender below!). Any credibility our guru may have had was irretrievably lost with his suggestion that his two followers might like to climb up over the top of the crag to view the open stopes and the chest deep (and blind) Number 7 level! It was decided to proceed to Number 5 level directly.

The three standard works on Lakeland mining by Adams, Shaw and Tyler are unanimous in only three details; that no plans for the mine exist, little profit was made and that the last working took place c 1876. Adams suggests that there are a total of nine levels while Shaw will only accept there being seven. This latter figure appears to be correct with Level 1 being at Grisedale beck side, Level 2 will be mentioned later, Level 3 is buried and Levels 4 & 5 were the focus of this meet. The vein is considered to be that worked at Wythburn mine, being narrow but of high value, requiring little treatment apart from hand sorting, and having high strength country rock walls.

The re-discovery and drumming out of Levels 4 and 5 were model demonstrations of mining exploration. No 5 Level is accessed from about six to ten metres above the sole of the adit down a steep rock slope; without precise guidance finding the entrance would be near impossible. Once found, all that remains is to remove 50 kg or so of loose rock (all of which is then poised to fall into the void) and then allow the lid of the drum to fall into the hole, which the ML duly did. A hand line installed, descent was made into a wooden railed level.

A short way on the level becomes a stope with a false floor and then a succession of collapses from the stopes above require climbing and descending until a fine clog is found.

After carefully passing a flooded stope, an ascending traverse allows passage over a totally collapsed and flooded area, before a short abseil back to adit level.

Slightly further on a finely constructed jack roll sump and an abandoned kibble appear.

Although there is not a high flow rate of water into the level, the water level in the stopes and sump seems to be fairly constant suggesting a restricted amount of access to the lower levels in the mine. The flow rate can be judged at the right side of the sump. The kibble is remarkable for the fine metalwork and the top bar, which does not rotate, the lug presumably being to keep the haulage rope centred.

At this point the stopes end and the level continues, a couple of short blind crosscuts have been driven off to the left and there are two rises in the roof just before the end of the level.

One of these has considerable amount of water descending, although no connection has been established with the workings above. The sinuous nature of the level and the very restricted dressing floor area at the level mouth suggest that this area was worked around 1780-1800.

Returning to the surface, the cover having been retrieved and replaced, progress was made down to the site of Level 3 for lunch and the recovery of the 100m rope. Lunch gave the party time to appreciate just how many buildings had been constructed on site; viewed from the valley paths it is very difficult to pick the remains out from the background, but, judging from the remains, there must have been a large work force and considerable expenditure. The size of the spoil heaps also confirms this as the main production horizon.

Level 4 is in a very exposed location on the crag and has the added attraction of a small stream running down across the entrance drum, at the inner end of which is 600mm drop to the sole of the level. The level clearly dates from a later period, being of good size and running dead straight inbye. A single rise discharges water and has not been explored. On the walls is some fine graffiti.

A sump in the floor shortly before the end of the level gives access to the main stopes. It is difficult to work out the chronology of operations here; there is little evidence of the vein anywhere in the level, the position of which is advantageous only for the disposal of waste and certainly not for access of either men or materials. An SRT descent of the sump (about 20-25 feet) lands on a false floor above the main stopes, which, while narrow, are extensive. From the false floor a straight hang off the wall gives a direct descent of about 140 feet to Level 3. Ashby and Aird made the descent, noting about 40-50 feet down a level that ran off inbye but which requires bolting to reach.

Again wooden rails are evident throughout, with no attempt at bends but simply an angled joint where necessary. It appears that metal straps were not used except on the outside rail of such joints in the immediate vicinity of the joint.

Inbye, after passing a flooded sump the vein becomes too slight to work and the stopes give way to an exploratory level, just as they did on Level 5, finally terminating at a blind forehead. Outbye involves passing a horizontal displacement of the vein of about six to twelve feet (moved left facing outbye), until stopes going down towards Level 2 require a rope traverse to access the final section of the level to the collapse of the entrance. The presence of mud in this area suggests the surface is not far away, while the absence of water in this adit or the stope below suggests good drainage.

The prussick out, while long, had one feature discovered by each participant in turn; about three quarters of the way up one's head crashed straight into a horizontal rock shelf! De-rigging followed, along with exiting through the stream at the drum.

A descent to view the site of Level 2 commenced; Roger had laboured long and hard over several days and had reached the rock face only for the whole thing to run in. The level is of interest for the widespread deposition of hydozincite as can be seen from the photo on the left. This view is unlikely to be seen again unless serious support equipment is brought in to hold back the scree from above.

Enough was enough! Back to the vehicles! Hero Ashby carried the 100m rope (doubled in weight with the water content), the ML focused resolutely on the idea of a glass of Bluebird XB, and Roger led the way at a brisk pace. This had been a day where the interest was in inverse proportion to the number attending.

John Aird.

References:

"Mines of the Lake District Fells" John Adams
"Mining in the Lake Counties" W T Shaw
"Greenside" Ian Tyler

Thanks to Roger Ramsden for the photographs of (1) Sump and Kibble (2) Graffiti and (3) Number 2 Level
Thanks to John Ashby for photograph of rails in Number 3 level.
Thanks to Tony Holland for bolting the pitches.

Doctor Descender

Dear Descender,
It has come to my notice that a member of the Society is in the habit of relaxing after a hard day underground by sharing a "hot tub" (whatever that may be) with a Catholic priest who is an expert on Indian cooking. While as open minded as the next member I am concerned that this may affect the member's performance (in the field, that is), what do you think?

Yours
Concerned of Coniston

Dear Concerned,
Do not worry; the only likely result is that the member will suffer a short term memory loss; this will be easily cured by a two hour drive in appalling weather conditions.

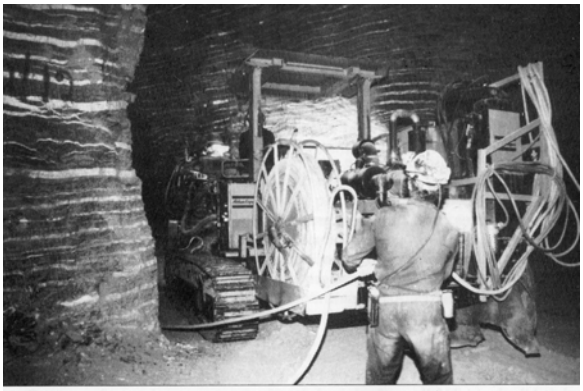
Yours
Descender MD

Birks Head Gypsum Mine. 17th November

ML Sheila Barker, Peter Wilkinson, Jon Knowles, John Brown, John Ashby, Roger Ramsden, Ian Matheson, Bill Heyes, Colin Woollard, Alan Westall, Dave Bridge, Mike Mitchell, Mark Simpson, Mark Scott, Jason Lowcock, and Gerrard Marsh. Sheila and Don turned up to make sure all went well but didn't go underground as there were only fifteen places and they had been on a previous occasion.

The meet began with a presentation and Q and A session. The material mined is 75% gypsum with some clay. The product is mixed with Spanish gypsum to bring it up to 78%. There is no waste and hence no tips or spoilheaps. All of the product is loaded in the mine onto by a conveyor, on which it goes direct to the factory, 2 miles or so away, to be used to make plasterboard.

The gypsum occurs in fine bands of crystals. There are lots of old mines in the vicinity now closed and unsafe. The present mine leaves 13 square meter pillars to permanently prevent settlement, and the adits are in the shape of a gothic arch 9 meters high which makes the roof to be self supporting without bolting it. Forty per cent of material is extracted. At the present time the mine is on short time working due to recession. There have been 18 redundancies recently; now there are11 men working one shift per day.



Jumbo Boring Rigg
Moving into heading ready to bore shot holes

We were taken by Landrover down the main drift, a gradient of up to one in four, and were shown all the operations. Unfortunately photography was not allowed underground, but there are some photos in Ronnie Calvin's article on the mine in CAT Journal No. 4, one of which is reproduced here. The machinery dates from the 1080's and has been maintained underground from new.

Production is from three sites arranged around the head of the conveyor system. Whilst one is drilled a second is prepared for firing and the third is mucked out. Shotfiring is carried out at the end of the shift each day. The shot holes are 2 meters deep and drilling

is done by a machine powered by electricity from the national grid, but it also has its own diesel engine to enable it to move from site to site. Each hole is charged with a pack of gelignite with a detonator embedded, and ANFO (Ammonium nitrate fuel oil) which is made on site, is blown into remainder of shot hole and stemmed with clay. The shots are fired in a pattern at end of shift, with precise timing delays to control the way the face is broken.

We were given full access to these sites and were able to handle the materials, climb on the machines and talk to the men working there. When we left at the end of our visit they were preparing to fire the days charge. A fascinating meet, thanks Sheila for arranging it.

Ian Matheson

Furness History in far off Weardale

Killhope Lead Mining Museum has an impressive collection of Spar Boxes mainly assembled from local Weardale minerals. The column shown though is made out of minerals from Stank Hematite Mine at Newton. The mineral is calcite and the red colouring is due to hematite. Killhope Museum purchased it from a mineral dealer, who in turn had purchased it from a person whose relative had worked at the mine. The column is approximately 400mm high.

Thanks to Ian Forbes for permission to publish the photograph and David Hacker for mineral and historical information. . The 'Minerals of Northern England' book that our library acquired recently has a picture of a similar column in the Hacker's private collection.

Don Borthwick.

A Tour Through The Underground Workings At Paddy End, 22nd November

As part of the 30th anniversary celebration, on Sunday 22nd November a party of eleven kitted up near the shores of Levers Water for the descent through the Paddy End workings. Far from following the usual route, we followed a very convoluted and complex way from Brow Stope exiting at the Hospital Level via sixteen pre-rigged rope pitches. The group size was larger than I had anticipated, but knowing nearly the entire group personally, the only one whose competency could have been questioned, was that of the meet leader himself, after over indulging during the previous evenings celebrations.

Down through Brow stope we descended, before climbing up to the ore wagon on Top Level and via MAGs Catwalk arrived at the Arête Chamber. Here we discovered that a new section of floor has collapsed. This serves as a reminder that this whole area is both false and unstable. In addition, the installed safety lines are very worn and need replacing. We dropped down to Top Level once more before going over the pack wall into the big Paddy End Stope and the spectacular drop to its floor behind the Twin Tunnels. After climbing up to Middle Level, we dropped part way down the South Vein Stope to arrive at the Balcony Stope. This was the last rope pitch before we popped out onto the Puddingstone Level.

Kate Tyler at the top of Brow Stope. A Tyler leading a CAT meet in 2009, surely some mistake!

For such a large group, progress was quite rapid, though inevitably we became quite strung out along the route. Fortunately no one became lost and some four hours after entering the system, the full party emerged safely at the Hospital Level portal.

Thanks to everyone who attended this meet and hands up everyone who thinks that the two club stalwarts who backed out at short notice should be given the onerous task of de-rigging and then washing all of those ropes?

Tony Holland

The Meet leader, paying homage!
Photos John Aird

New Ground At Nenthead - Carrs Mine
Roger Ramsden, Tony Holland.


Roger Ramsden

On Saturday 28th November, Roger & I decided to visit Carrs Mine at Nenthead, one that neither of us had seen for quite some time. We accessed the workings via Rampgill and its Hanginshaw Level, exploring a few of its ore flats on the way, one in particular that I had not seen before. After reaching the workings of Carrs mine, I saw a rise that had previously escaped me and, as it looked climbable, I was soon chimneying my way to the top. Here a roof fall seemed to have blocked further progress. A second rise lay to the side of the one I had climbed and although choked some 15ft down, almost certainly connected to a hopper on the main level below. I thought I could see a hole through the collapse and with some careful digging, sending the blocks down into the adjoining rise, I soon had the hole enlarged enough to wriggle through.

Almost immediately it was apparent that no modern visitors had entered this ore flat. Before me in the clay lay a nice clog print which I carefully side stepped and went for a quick explore before climbing back down to where Roger was enjoying his lunch. Once back up in the new ore flat we began a systematic and thorough examination of the working. Artefacts we found included a shot hole scraper, numerous tallow candles and a very nice snuff box sitting on a pack wall. Various blind headings radiated out from the central ore flat, this typical of Carrs mine with its high pack walls and intermittent timber supports. A very interesting rise some 10ft square rose maybe 20ft where a level could be seen. An 8inch cast iron pipe was pinned to the wall of this rise. Sadly there was no way to climb this rise (I returned the following day with Ian Hebson. We carried a maypole up to the rise, but it was found that the higher level was a small trial, a mere 20ft or so in length).

As is usually the case with exploration at Nenthead, the day proved to be a long one, nearly eight hours underground but as we showed, for those willing to push things a little further than Sunday afternoon saunters to the 'Ballroom', there is still new ground to be discovered in the North Pennines.

Tony Holland

Boxing Day Meet 2009

Present: Ian Matheson, Mark Simpson, Paul Timewell, Chris Jones and Jenny Kaines
Peter Fleming (Leader)
Maureen Fleming attended the start
Also seen during the day – Max Dobie and Joanna Casson

Owing to the difficult winter conditions of snow and ice, the venue was changed at the last minute to start in Coniston. We set off in quite heavy rain, walking up Coppermines Valley to the BMSC cottage where we had coffee and waited for the weather to improve, which it did.

We then crossed Red Dell Beck to Deep Level and viewed the recent landslip nearby; a result of the November floods.

Continuing up through deep snow we reached the old engine shaft wheel pit. The sun occasionally broke through the cloud to lighten up the snowy landscape, and down in the valley Coniston Lake was covered in a layer of mist, adding to the atmospheric effects. It was here we met another group of walkers. They were members of the Red Rose Potholing Club, also on their Boxing Day walk. Our two groups then remained together for most of the rest of the walk. It transpired that several of them remembered a social event that took place at their headquarters, Bull Pot Farm, in 1978, when Eric Holland, Alan Westall and myself attended to show them some very old glass slides we had been given, with scenes of descents of Gaping Gill and other pot holes in the area. They were taken in the 1930's and included views of antiquated equipment, clothing and old motor cars. They decided to purchase these historic slides from us. The money we raised was used to cover our setting up costs to launch Cumbria Amenity Trust in 1979. These old slides are still in their archives today.

Our walk continued to the New Engine Shaft then up the Triddle Incline and over to Leverswater which was not frozen despite the low temperatures of the previous week. We had lunch here in the shelter of the dam. Our route then took us past the "Back Strings" and down Boulder Valley, still in very snowy conditions. As we approached the footbridge over Levers Water Beck, changes to the Paddy End spoil tips due to the recent floods were quite evident. We then continued down to Coniston where some of us had a seasonal drink and a debriefing session at the Sun Inn to round off an interesting winter walk.

My thanks to all those who attended in spite of the potentially hazardous road conditions.

Peter Fleming

Furness Relic Survey
This work was started around 1993 in order to compile a record of the mining remains of the Furness peninsular, which were perceived to be disappearing fast as a result of time and weather, as well as to landfill and agricultural development. Although momentum was lost due to the foot and mouth episode and because of the commitment of the FMA to the Newland Furace, a lot was done, and a very high quality record compiled. It is hoped that interest can be re-generated and that we can complete this very worthwhile project. Anyone interested in joining in should contact Ian Matheson

Ian Matheson, Peter Sandbach and Mark Scott have made a start by photographing and recording some of the more accessible sites. We meant to spend a day recording every two weeks during the winter, but the floods of late November followed by the snow and ice have made that difficult. However, two meetings took place before the weather forced a halt.

Sites photographed so far include Backguards, Elliscales water tank, Stainton railway, a nameless mine at SD250867 and Frank Pit. The latter was particularly interesting.

Frank Pit SD 2473 7605
Photographed 11.11.09 by IM, PS MSc
Shaft with twin pump rods, Ruined engine house comprising rubble with several large dressed sandstone blocks, tie down bolts and end of leat. The site appears to have been cleared recently and some of the rubble removed for use as hardcore.
Subsidiary engine beds at 2473 7608

Frank Pit was twelve feet by six and a half feet with two 21 inch rams which worked at three strokes per minute in summer and four and a half strokes per minute in winter. Main pumping pit for Lindal Moor Buccleugh Royalty. 1896, 1906 Frank Pit being repaired.
Kelly, Red Earth.

The two pumprods can still be seen protruding from the top of the shaft

The base of the chimney still remains and the shape of the buildings can still be determined. The site is strewn with bricks and dressed sandstone blocks. Examination of the bricks revealed various makers marks

A MINING CURIO.

Last September, on a visit to Cartmel, I came across a strange little book 'Mines and Mining' published by , of all people, The Religious Tract Society . The book is Anonymous and undated, but appears to have been written in the late 1850's, making it quite early. It was printed as a companion to an already published volume on 'The Caves of the Earth'; also Anonymous, undated and published by The Religious Tract Society.

The whole treatise is obviously now very,very dated, and is offered here just as a curiosity.

The book's coverage is Worldwide, encompassing a number of subject areas. Starting with a General View of Mines, it goes on to Great Mining Districts and Processes; The Mineral Kingdom; Earthy Alkaline and Acidiferous Minerals and their properties; Metalliferous Minerals – Gold, Silver, Iron, Copper, Lead, Tin, Mercury, Antimony, Manganese, Zinc, Platinum, Cobalt, Chromium, Bismuth and Arsenic are all covered and their properties outlined and compared. Next covered are Combustible Minerals – Sulphur, Diamond, Graphite, Amber, Bitumen, Petroleum, Naptha and Coal,including it's varieties and giving an overview of British Coal Fields. Finally some of The Perils of Mining are outlined.

Interspersed with the descriptions of Mines, Mining and Minerals which for the time are based on quite good Science there are liberal references to Scripture which it seems are being quoted in order to re-inforce the account and bring all the Science and Religion into line – glorifying God in the process! Buried in the text however are a number of gems of real interest to students of Mining History today. For example, of interest to Furness :-

Red iron ore, also called *hematite*, in allusion to the blood-red colour, though there are other shades, is plentiful in a vast number of localities. It traverses, in a thick vein, the mountain limestone near Ulverstone, in north Lancashire, and affords iron of very superior quality. But in Great Britain the great supply of the metal, equal to nineteen-twentieths of the whole, is drawn from *clay iron-stone*, of a grey, brown, or bluish-grey colour, scarcely distinguishable from an ordinary stone, except on account of its greater weight.

Clay iron-stone occurs chiefly in the coal formation. It is found in the form of rounded boulders, in thin beds, several of which usually overlie one another in the same locality, separated by sandstone strata, indurated clays, or layers of coal. The iron-stone mines are generally much more wet and cold than those of coal, and are proportionably more productive of those diseases which result from such circumstances. In consequence of the thinness of the beds, and the clearing away of as little space as possible on account of the expense, horses cannot be employed in conveying the ore from the workings to the foot of the shaft, a service therefore performed by manual labour, while the same cause renders it more difficult to ventilate the mines properly. Except in these points our iron-stone and coal mines agree in their main features, and both products are often raised to the surface through the same shaft. The ore is comparatively poor, containing, on the average, not more than thirty-five per cent. of iron; but its abundance, with the juxtaposition of coal and limestone for smelting it, are amply compensating advantages. Oxygen gas, carbonic acid, small quantities of earths, and a few other ingredients, appear in combination with the metal in the ore. The process of smelting, by which they are separated from it, consists in subjecting the iron-stone to very powerful heat, and bringing it in contact with other substances, which, having a stronger attraction for oxygen and carbonic acid, destroy the combination, and set the iron free.

The countries which produce the metal upon a great scale are, Great Britain, France, Belgium, Spain, Saxony, Austria, Sweden, Russia, and the United States, in all which the supply appears likely to last for ages. The chief home sites of production are Staffordshire, Shropshire, South Wales, Derbyshire, Yorkshire, Lancashire, in England; Lanarkshire and Stirlingshire, in Scotland. The total annual amount of British iron made is now probably not far short of two millions of tons. In the year 1839, it was estimated at 1,350,000 tons. In order to obtain this quantity, it was calculated

that upwards of 4,000,000 tons of ore, 1,500,000 tons of limestone, and 7,000,000 tons of coal, were extracted from the bowels of the earth; while, in addition to steam power, the labour of 100,000 human beings was employed in the process.

The existence of the iron manufacture in any locality being determined by the readiness with which the iron-stone, as well as the limestone and fuel necessary for its fusion, can be procured, its site is liable to change whenever any one of the three raw materials is either exhausted, or can be procured at less cost elsewhere. Thus, from this cause it has been transferred, in our own country, from the undulating sylvan glades of south-eastern England, north-westward to the rugged region of the coal fields. Iron ore of rich quality is plentiful in the Weald, or woodland of Kent, Surrey, and Sussex. This district, now abandoned to hops, pastoral and agricultural occupations, once had roaring furnaces, sending up tall columns of smoke, prominent in the landscape; while, day and night, the clashing noise of iron hammers beating upon iron was heard far and wide. Camden says, "Sussex is full of iron mines everywhere, for the casting of which there are furnaces up and down the country, and abundance of wood is yearly spent; many streams of water are drawn into one channel, and a great deal of meadow ground is turned into pools, for the driving of mills by the flashes, which, beating with hammers upon the iron, all the neighbourhood, night and day, with their noise. The iron here wrought yields no small profit to the proprietors of the mines, who cast cannon and other articles in it."

One of the earliest notices of the manufacture in Sussex dates in the year 1290, and relates a payment made for the iron-work of the monument of Henry III. in Westminster Abbey, to master Henry, of Lewes. In the time of Edward II., the sheriff of Surrey and Sussex had to provide within his district, for the expedition against Scotland, three thousand horse-shoes and twenty-nine thousand nails, which, with the expense of carriage and delivery in London, cost £14. 13s. 10d. The first iron cannons cast in England were manufactured at Buxted, in 1543, during the reign of Henry VIII., the production of heavy ordnance giving a great impulse to the trade. Richard Woodman, a native of this place, and a considerable iron master, was one of the Marian martyrs, burned at Lewes in 1557. In his examination before the bishop of Winchester, he affectingly states. "Let me go home, I pray you, to my wife and children, to see them kept, and other poore folke that I would set aworke, by the helpe of God. I have set aworke a hundred persons, ere this, all the yeare together." In consequence of the great extent of the manufacture, and the enormous destruction of timber, a scarcity of wood for ship-building was apprehended, so that the legislature interfered in the time of Elizabeth, prohibiting new iron-works, except within certain limits, and placing restrictions upon the consumption of the forests. But, in the seventeenth century, there were one hundred and forty furnaces in Sussex alone. Their multiplication was effectually checked, and the existing works abandoned, when the cheaper method of smelting with pit coal was discovered. Gradually the noise of the hammer ceased—the smoke ascended in fewer columns—furnace after furnace died out—pastoral life regained its ancient ascendency—and the manufacture vanished from the Weald. Yet monuments of it remain in some fine sheets of water, though many have by draining been converted into hop gardens or osier beds; and in St. Paul's Churchyard, the passenger may see a specimen of Sussex-made iron, in the balustrades around the cathedral.

Pure iron holds the first place among the metals in point of tenacity, its strength being nearly four times that of gold, and almost twice that of copper, the next to it in the possession of this property. A copper wire, one-tenth of an inch in diameter, will support 392 pounds' weight; but one of iron, of the same diameter, will sustain 705 pounds. Next to platinum, it is the most infusible of metals, requiring a heat equal to 3,480° of Fahrenheit to bring it into a melted state; but this difficult fusibility is more than compensated by the power of welding being possessed in high perfection, or of being made to unite by hammering when at a white heat. Cast iron, or the pig iron of the workmen, is the raw, impure material, first obtained from the smelted ore, the state in which the metal is commonly sold. It is neither ductile nor malleable, but very brittle, and incapable of being welded, as it melts with facility at a red heat. Malleable, or bar-iron, is produced from it by repeated processes of melting, during which its impurities are removed. The more completely the iron is set free from them, the more infusible it becomes, till, at the same temperature, it remains solid, and acquires the name of malleable iron, from the property of altering its form under the hammer. Steel is the metal at a particular stage in the transition from cast to malleable iron, rendered harder, more elastic, and brittle, by immersion in cold water while red hot. The various products we have named enter into the construction of an endless variety of important objects—the hardwares of domestic economy—the implements of agricultural industry—roads, and the mighty locomotives that traverse them—steamers ploughing the ocean—buildings, machinery, and the tools by which most handicrafts are pursued—while iron officiates as a most important medicine.

Copper.

In the list of metallic bodies distinguished for extensive utility, copper ranks next to iron, and officiated in its place among the ancient nations, who, if not ignorant of the art of procuring the other metal, were unable to do it with

facility. It is frequently found in a state of purity, and some large masses have been observed, but they are not of common occurrence. The commercial supply is obtained from ores, extracted from veins or beds, the varieties being very numerous, and in several instances very beautiful. *Malachite*, a highly valued ornamental stone, is a green carbonate of copper, noble specimens of which have been yielded by the Uralian mines. A monster block, in the museum at Petersburg, weighs more than forty tons, and is valued at a sum exceeding twenty thousand pounds. The most common and the best ores are those in which the metal is combined with sulphur and iron, in nearly equal proportions, forming copper pyrites, other metals sometimes occurring, but holding a subordinate place. This is the chief ore in Cornwall, the most productive copper district of the globe. It supplies considerably more of the metal than what is required for home consumption, and hence shipments of it are made to foreign countries. For want of fuel, the ores are taken to South Wales to be smelted, the vessels bringing back coal for the use of the steam-engines at the mines.

There are upwards of a hundred copper mines in Cornwall, principally situated between the town of Truro and the Land's End, the most important lying around Redruth. The following graphic description has been given of this district, as seen from the summit of Cairn Marth, a granitic hill, rising from seven to eight hundred feet, in the neighbourhood of the last-named town: "Over a surface, neither mountainous nor flat, but diversified from sea to sea by a constant series of low undulating hills and vales, the farmer and the miner seem to be occupying the country in something like the confusion of warfare. The situations of the consolidated mines, the united mines, the Poldice mine, etc., are marked out by spots a mile in length by half a mile in breadth, covered with what are termed *the deads* of the mine—that is, slaty poisonous rubbish, thrown up in rugged heaps, which, at a distance, give the place the appearance of an encampment of soldiers' tents. This lifeless mass follows the course of the main lode, and from it, in different directions, minor branches of the same barren rubbish diverge through the fertile country, like the streams of lava from a volcano. The miner being obliged to have a shaft for air at every hundred yards, and the stannary laws allowing him freely to pursue his game, his hidden path is commonly to be traced by a series of heaps of *deads*, which rise up among the green fields, and among the grazing cattle, like the workings of a mole. Steam-engines, and *whims*, (large capstans worked by two or four horses,) are scattered about; and in the neighbourhood of the old, as well as of the new workings, are sprinkled, one by one, a number of small whitewashed miners' cottages, which, being neither on a road, nor near a road, wear, to the eye of the stranger, the appearance of having been dropped down *à-propos* to nothing. Such, or not very dissimilar, is in most cases the superficial view of a country, the chief wealth of which is subterraneous.

"Early in the morning the scene becomes animated. From the scattered cottages, as far as the eye can reach, men, women, and children of all ages, begin to creep out; and it is curious to observe them all converging like bees towards the small hole at which they are to enter their mine. On their arrival, the women and children, whose duty it is to dress or clean the ore, repair to the rough sheds under which they work; while the men, having stripped and put on their *underground* clothes, (which are coarse flannel dresses,) one after another descend the several shafts of the mine, by perpendicular ladders, to their respective levels or galleries—one of which is nine hundred and ninety feet below the level of the ocean. As soon as they have all disappeared, a most remarkable stillness prevails—scarcely a human being is to be seen. The tall chimneys of the steam-engines emit no smoke; and nothing is in motion but the great *beds*, or levers of these gigantic machines, which, slowly rising and falling, exert their power, either to lift the water or produce from the mine, or to stamp the ores; and in the tranquillity of such a scene, it is curious to call to mind the busy occupations of the hidden thousands who are at work, to contrast the natural verdure of the country with the dead product of the mines, and to observe a few cattle ruminating on the surface of green sunny fields, while man is buried and toiling beneath them in darkness and seclusion."

The metal is obtained in other parts of the United Kingdom, but not extensively. It was at the now exhausted copper mine of Ecton, in Staffordshire, that gunpowder for blasting was first used in England, introduced from the continent by some German miners, brought over by prince Rupert, about the year 1632. Some idea may be formed of the extensive scale on which this dangerous operation is carried on from the statement, that in Cornwall only the annual consumption of powder is estimated at four hundred tons' weight. Copper is largely produced in Chili, Cuba, Germany, Sweden, the Urals and the Altai; to a far less extent in France, Spain, Hungary, and Norway; South Australia and Lake Superior being newly discovered districts of the richest promise.

Copper derives its name from the island of Cyprus, where it was obtained by the Greeks. It was known in the earliest ages of society, and could hardly fail to attract the attention of mankind, as in uncccupied countries, even in the present day, it is often met with by explorers exposed at the surface. The Hebrew, *nechusheth*, translated "brass," obviously means copper, as in the passage, alluding to the mountains of Judea, "out of whose hills thou mayest dig brass," a substance which does not exist in nature, but is always made artificially, copper entering into its composition. The arms

and armour of the ancient nations, their implements of agriculture, with much of their domestic and temple furniture, were of copper, hardened with tin, as occasion required.

Pure copper is of a reddish-brown colour, and, except titanium, no other metallic substance exhibits this hue. It closely approaches to iron in its numerous adaptations to the purposes of common life, but unlike that metal, solutions of which are a valuable medicine, those of copper are highly poisonous. Besides being used for coin, sheathing the bottoms of vessels, parts of machinery, a great variety of utensils, and for engraving, it is capable of forming alloys with other metals of great value. Mixed with zinc, it forms *brass*, the material of most philosophical and astronomical instruments, of many parts of almost every machine, and of the humble, but most useful domestic article, pins. Mixed with tin, it forms *bronze*, which the ancients cast into statues of enormous dimensions, and made into tools. A small bronze knife, found at Thebes, after being buried at least two thousand years, had its edge so perfect, that it was used for a penknife for several months after its exhumation. The metal of the four celebrated statues of horses, taken from Constantinople to Venice in 1204, and set up in the portal of St. Mark, transported by the French to Paris in 1798, and finally returned to their ancient pedestals in 1815, consists of nine hundred and ninety-three parts copper, and seven tin, according to the analysis of Klaproth. *Bell-metal*, the material of "the church-going bell," consists of three parts of copper to one of tin, with an addition of zinc, antimony, and silver, which improve the sonorousness of the product; *speculum metal*, so called from its employment for optical purposes, is composed of copper, tin, and silver, with a little zinc and arsenic; and the imitations called *German silver*, are alloys of copper with tin and nickel."

Locally, besides Iron and Copper, both Lead and Plumbago get a mention, and also among his descriptions of the mining districts our anonymous author refers to the

> "remarkable metalliferous district is in the north of England, on the borders of Northumberland, Cumberland, Westmoreland, and Durham, where the mountain limestone, intermingled with gritstone and shale, forms an elevated dreary tract, of which Alston Moor may be deemed the capital."

He does however in this context, actually mention the Lead ore!

A fair amount of the British coverage in this book is of course for Cornwall – in fact his reference to Wheal Wherry on the beach at Penzance helps provide a rough guide to the date of the publication. Besides Britain there is a surprising amount of coverage for far flung parts of the world, not just Empire, where mining was being carried on in Victorian times. Believe me, I am not (in common I suspect with many CATMHS Members) in the habit of reading religious tracts; but if you can find a copy of this little period piece, large parts of it do make quite compelling reading.

A final chapter deals with the perils of mining, giving a number of gory examples drawn mostly from actual explosions in coal mines, but also covering the dangers inherent in mining too close to the sea bed in submarine workings. Even the dreadful effect that mining for Mercury had on those compelled to do it, is covered in some detail.

Truly an odd but interesting publication.

Brian Cubbon.

CUMBRIA AMENITY TRUST MINING HISTORY SOCIETY

Committee Meeting held on the Wednesday 21st September 2009 at the BMSC Hut at Coniston, starting at 6.00pm.

Agenda.

1 Apologies for absence
2 Minutes of the last meeting
3 Matters arising
4 Secretary's Report
5 Treasurer's Report
6 Membership Sec. & Newsletter Reports
7 Meets
8 RA forms
9 Publications
10 Library
11 New projects
12 Publicity Officer
13 Coniston Coppermines & Quarries
14 GPS
15 Mines Forum meeting
16 Any other business
17 Date and venue next meeting

Present: M. Simpson (MS), J. Aird (JA), S. Barker (SB), I. Matheson (IM), D. Borthwick (DB), D. Bridge (DGB), J. Brown (JB), P. Fleming (PF), M. Mitchell (MM), M. Scott (MSc).& A. Wilson (AW).

The meeting commenced at 6.00 pm. 11 committee members attended.

1 Apologies for absence – T. Holland (TH).

2 Minutes of the last meeting

The minutes of the committee meeting held on Monday 13th July had been previously circulated to members. **PROPOSED** by MM and **SECONDED** by JA that the minutes be signed by the Chairman as a true and correct record of the proceedings. This was carried unanimously.

3 Matters arising

3.1 Item 17.1 – JA. SB had traced the original correspondence in 1994 and also in 2000 with owners, Lake District Estates Co. Ltd, who appear to have forgotten us. No rent is paid and we get the rates refunded as a Reg. Charity. No action.
3.2 Item 12 JA. - I. Tyler's new book "Roughton Gill & The Mines of the Caldbeck Fells", is now in the shops. It was reviewed in the Evening Mail.
3.3 Item 7.2 SB - JB to put up plaques at HGB shortly.
3.4 Item 13 MSc reminded us of the need to clean rubbish out of the wheel pit at Red Dell, Coniston Copper mines. - Action TH.

4 Secretary's Report

Received since last meeting

4.1 Notification of events: CIHS Autumn Conference at Abbey House, Barrow in Furness. on 18th October. CLHF Annual Conference at Newton Rigg, Penrith on 26th September. LDNPA 'Archaeology in the Lake District' on 14th November at The Theatre by the Lake, Keswick.
4.2 The next NAMHO council meeting will be held in Nenthead on 14th November.

5 Treasurer's Report

JA had circulated the balance sheet to committee members covering the period from 14th July to 21st September. Income was from: subscriptions, donations and publications. Expenditure on: Agreed bridging loan to Newland Furnace Trust, NL & travel expenses.

The Treasurer wished the committee to approve his expenses of £163, Approval **PROPOSED** IM, **SECONDED** JB, all in favour. The current a/c stood at £4189.33 and the Scottish Widow a/c at £365.31.

Newland Furnace project, work had finished on the new roof. The bridging loan will be paid back after the snagging period is complete and funds received from EH.

6 Membership Secretary & Newsletter Editor's Reports

IM reported that the next NL would be out by 21st October. Work on the special 30th Anniversary Newsletter was well in advance, and would be ready for the Rydal Hall weekend. Printing costs were discussed, in the region of £300. This expenditure was agreed.

7 Meets Report

Jon Knowles had sent out the next meets list, it covered 12 months. SB said the Birks Head Gypsum Mine trip had been arranged for the 17th November. MM reported plans were well advanced for the Rydal Hall 30th Anniversary weekend, there were still a few places vacant. It was decided to invite Alen MacFadzean and Chris Jones to attend the weekend as guests. Action SB.

8 RA Forms

MM reported the system was working well. JA would prepare RA forms for the Eagle Crag and Tilberthwaite meets.

9 Publications

MM reported that the Tilberthwaite/Little Langdale leaflet is progressing, PF will get a quote of cost from the printers. PF said he was finding it difficult to sell our books now BLF was out of print. He always felt LMH was easy to sell and the other books were accepted on its back. He thought we should reprint LMH. MM would contact A. Cameron who was editor and discuss position regarding Black Bear (printers).

10 Library

Another day had been spent checking the general contents of the library. People using CAT's copy of the Lambton plans need to additionally acknowledge Rydal Estates et al, DB to propose a form of words for next meeting. The hoped for opportunity to ask UK Mining Venture (Rogerley Mine) about mine plans was withdrawn. DB proposed a yearly budget to buy for the library; £250 was agreed seconded SB, all agreed.

11 New Projects

11.1 Carrock Fell Mine – No progress.

11.2 Silver Gill –Phil Meredith (UCL) and student Sarah Mallon had carried out the GPR survey of the site on 15th/22nd August. Results were awaited.

11.3 Tilberthwaite Horse Crag Level – JB reported that phase one had been completed. See attached report. JB had priced the second phase (to beyond the collapse), which amounted to £6,192.66, this included a gate. JB was willing to produce drawings to allow prices for steel work to be obtained from other sources. After discussion JA **PROPOSED** that we proceed with the 2nd phase, then review the situation. We may not be able to continue, depending on circumstances. **SECONDED** by PF, all were in agreement. Steel to be purchased before the expected increase in VAT.

11.4 Penny Rigg Mill. A meeting (17th July) had been attended with the LDNPA to discuss the possibility of CAT doing consolidation work on the mill. There may be funding available, John Hodgson is looking into this. Further discussion will take place at the next Mines Forum Meeting. We need a clear picture of what needs to be done - action MS.

11.5 Sebastian Level – to be next year's project.

11.6 Force Crag – nothing to report.

11.7 Bardsea Breakwater Boundary Stone – The stone had been re-instated and work was completed, publicity required – action MSc.

11.8 Saddlestone Bank needs consolidation work done, MSc to contact A Cameron for information as a first step. A preliminary investigation visit to be arranged 6th October.

12 Publicity Officer

MSc had put posters in local libraries and is meeting an Evening Mail journalist shortly. MM is updating the CAT publicity leaflet.

13 Coniston Mines & Quarries

JA had inspected the portal of Leverswater Mine, still draining well.

DGB had been contacted by member Hossein Gharib who he had assisted in his studies of radon gas underground at Coniston. Hossein has been awarded a 1st class Honours Degree in Geology at Durham University. SB to send our congratulations.

Coniston Walking Festival - PF is to lead walks around Coniston Coppermines on 26/27 September.

PF reported that the developer had withdrawn from the housing project at Mandall's car park.

Sallie Bassham of NMRS had requested we lead an easy meet for them into mines at Coniston. PF will lead and arrange temporary membership for insurance purposes.

14 GPS

MS has the GPS, DB the laptop. MS and MM had met with LDNPA archaeologist to demonstrate geo tagging images and the use of Expert GPS, as a possible method to be used when surveying for MARS. IM suggested we should finish the Furness Survey, he would discuss this with Peter Sandbach. DGB thought we should also survey Greenhead Gill Mine.

15 Mines Forum Meeting

Next meeting: 10.30am on 16th November at Honister Quarry. MARS project - which sites and recording method to be discussed.

16 Any Other Business

16.1 AGM – Copies of the agreed changes to the Constitution, Field Research policy and Artefacts and Physical Features policy to be sent out with the AGM minutes. SB asked if Officers and committee members were willing to stand for re-election. All were willing except: Mark Simpson who wished to retire as chairman, Dave Bridge and Don Borthwick did not wish to stand for the committee next year.

16.2 PF noted that Jeff who had sold our leaflets in Coniston TIC for many years had left, to be replaced by Tracy Ingram.

16.3 PF noted that new CAT member Jane Foal was giving a paper at the LDNPA 'Archaeology in the Lake District' on 14th November at The Theatre by the Lake, Keswick.

17 Date and Venue of Next Meeting

This to be held on Monday 2nd November 2009 at the BMSC Hut, Coniston at 6.00 pm.

There being no further business the meeting closed at 9.00 pm. SB 23/09/09

CUMBRIA AMENITY TRUST MINING HISTORY SOCIETY