

# CAT

**The Newsletter of the Cumbria Amenity Trust  
Mining History Society**

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**Cover picture:**

Richard Hewer has been on his travels again, this time to Chile, Australia, Tasmania and New Zealand, and found a good deal of mining interest. He has written an article, which will be printed in the May Newsletter. The cover picture is of a set of stamps at Sovereign Hill, near Ballarat, in Australia. Sovereign Hill has been re-created similar to Beamish, designed as a mining township and put together with as much authentic and original equipment as possible.

Photo: Richard Hewer



### **Can you help to identify these people?**

I found this picture in the Armitt Library photograph collection. It was labelled 'Mining group, Coniston?' but I don't think it is, although it does seem to be set in a mountain environment. The distinctive building doesn't look right for Coniston, and there seems to be a mine shaft adjacent to it. There is a boiler to the right which looks as though it may power some winding gear. So far as I know there were no steam boilers at Coniston, which was operated by water power.

The group of men appear too well to do to be mine workers; more likely shareholders, although the mine captain might be amongst them. Can you recognise any of the faces? If you can help to identify the site or any of the men, the Armitt would be grateful. I will publish your response in the next newsletter .

IM

# **Cumbria Amenity Trust Mining History Society**

## **Newsletter No 78, February 2005.**

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## News

### AGM and Dinner

17 members attended the AGM and there were people 35 at the dinner in the evening. We were very well served by the staff of the Crown Hotel, and amused ourselves with silly behaviour during and after the meal. Thanks to Angela Wilson for providing the materials with which to do so.

After the customary raffle the Mark Simpson presented the Chairman's Award to Andrew Woolard, in recognition of his dedication and effort with the digging team at Hudgillburn, Coniston and Greenside. Andrew is now at University and so will only be able to turn out to work for CAT during vacations. We wish him well.

Once the ceremonies were over we were treated to some visual presentations. I can't call them slide shows because we are getting a bit more high tech now. Peter Fleming did show some slides, from his presentation shown at the CAT 21<sup>st</sup> Birthday celebration at Rydal Hall. Only Peter himself was easily recognisable from the early days, the rest looked very youthful and hairy. Jon Knowles showed some spectacular images of Welsh slate caverns, recording the recently closed Abergavenny slate mine, which is being allowed to flood. Mark Simpson gave a Powerpoint presentation recording some of the meets that he has attended this year. Mark is very keen that we keep a comprehensive photographic record of all our activities, and of the mines and quarries we visit. Finally Mike Mitchell, using his new digital projector, showed a set of images recording the recent work to re-open and stabilise Levers Water Mine entrance.

### Chairman's Report to the AGM

This year 2004 has been dominated by the one thing - the NAMHO Conference. The organisation started back in the summer of 2003, and this event nearly did not happen. Insurance problems reared their head and it took much effort by all parties to sort the problems out, but has led to increased subs for all of us. The co-ordinator was Sheila Barker, without whom life would have much more difficult, also at the same time Jon Knowles volunteered to organise the field visit side of things. The rest of the committee assisting where required. It soon became apparent that work would be required to ensure access to several mine sites, especially Levers Water Mine and Greenside.

Levers Water Mine dig and entrance stabilisation was headed by Mike Mitchell and access was gained in the middle of the year, the gate and supporting steelwork has only been completed in the last month. Greenside safety work, carried out by John Brown and company, centred around Warsops' crosscut by Smiths Shaft, an altogether bigger operation, you have to see the site to appreciate the amount of materials, and the distance up the Lucy Tongue level this stuff was moved. All credit to those involved. Other safety works were carried out to other visit sites. We would have liked to have visit Force Crag underground but were refused permission by the National Trust. This was due I understand to a bureaucratic error!!

As well as the above the Mines Forum meetings have been started and has met regularly through out the year, the last one being yesterday Friday. Archaeologists from the LDNP and the NT, representatives from CATMHS,



MOLES, COMRU and other interested parties, have regularly attended. A useful occasion and discussion being mainly on regularising requirements for visits and works to mine sites, insurance, risk assessment, licensing system etc.

I am afraid that visiting mines and mine sites will become a more bureaucratic process in future and CATMHS will have to take this on board. It goes without saying that we cannot condone members having their own explorations that are not sanctioned by the landowner and statutory authorities. If folks persist in doing this then I would suggest that the Society is not the place for them.

The normal work of CATMHS went on – committee meetings have been held, newsletters produced, finances managed and lo! another year has gone and another AGM is here.

The future as usual depends on you; more publications are planned, meets to mine sites will be organised, projects such as securing and maintaining access to mines (Greenside, Goldscope and others) are ended. The archive has to be maintained, and other archives visited. Other projects are being investigated and you will be informed via the Newsletter, the editor of which always welcomes copy for it.

So there is much to play for I hope the coming year will be as interesting as the last.

Mark Simpson

### **Membership**

We were led to understand that payment of a BCA insurance premium was mandatory, a requirement of membership of our Society. This resulted in the unfortunate situation

whereby existing members who don't participate in outdoor meets and so don't want to pay this insurance were told that they could buy the Newsletter but could not continue to be members. After review the Committee agreed that individuals not paying for BCA third party insurance could nevertheless have full membership rights, but they would not be able to attend outdoor meets. I have written to those individuals who renewed on a Newsletter only basis re-instating them as full members, and sent a reminder explaining the situation to those who have not yet paid. I understand that the BCA have now decided that those individuals who have insurance via other organisations do not after all have to pay multiple surface insurance premiums.

Membership reached 108 last year, a slight fall from the year before when there were 117. I believe that the new insurance arrangements may result in a further decline in numbers this year. At the time of writing 21 people had not renewed their subscription

Our single membership fee, which remains unchanged, is £15, and joint membership is £20. It costs about £12 each to produce and distribute the newsletters, leaving just £3 for other matters. In order to encourage young members it has been agreed that for individuals between 18 and 21 and for all students the membership fee should be reduced to a nominal £1. There may be some refunds due! If you think you are entitled then contact our treasurer, John Aird.

Ian Matheson, Membership Sec.

### **Library**

The CAT Archive is currently housed in the Armitt Library and Museum in Ambleside. The Armitt was established nearly 100 years ago and houses an

interesting and valuable collection of local history, literature, art and photography. The Trustees agreed to house our own collection free of charge on the basis that it is relevant to their aims, but on condition that it is used and not just taking up space. The agreement was to be reviewed after two years, not long now, so it is important that our members visit regularly and make themselves known. If you visit Ambleside then please go to the Armitt. There is no charge for visiting the Library.

During the year we have made several additions to the CAT collection.. A suggestion that it might be possible to convert the electronic Cardfile Index to Microsoft Access has not yet born fruit, but we have spent some time updating the catalogue and listing unrecorded plans. There is still a lot to be done. Although the library is closed at weekends the museum is not, and it would be possible by prior arrangement to work on our collection at weekends as well as during the week. If anyone is willing to help then please contact Sheila or myself and we will organise it.

### **Newsletter**

There are four issues each year, which go out during the first weeks of February, May, August and November. Copy deadline is a month before, although as I print and assemble it myself I can squeeze in last minute contributions. The printer, which the Society bought last year at my request, has now printed four issues; that's about sixteen thousand pages, and it has more than paid for itself. I see no reason why it shouldn't be capable of producing several more issues. Cheap compatible ink cartridges have become more reliable and this has made the printing task much easier.

I would like to thank the small number of contributors for their high quality contributions, and to appeal for more. The minutes of committee meetings and of the AGM record the business of the Society, but Newsletter records it's activities and those of its members. I do think that it is important that the record is complete. It is disappointing that meets take place that are never recorded, and important events such as the recent Archaeology Conference at the Lakes School and the Lake District Mining Forum meetings are not reported. *Anyone* can submit a report on these things; it doesn't have to be the meet leader or the organiser or the Newsletter Editor.

I will accept copy in any form, handwritten jottings, bits torn out of newspapers, anything, but the preferred way is in Microsoft Word sent by email or on a CD or floppy disk. When you are setting it out please remember that it will be published in a two-column format. It is much easier for me to organise the layout if pictures and diagrams are provided separately and not embedded in the text. Indicate where you would like them to go and I will do my best. I reduce the size of most pictures to column width because larger pictures use a lot of expensive ink, so crop them carefully. Colour is best. Greyscale uses even more ink because the printer makes grey by mixing colours. If you don't have the means to provide digital images then send me a print or a slide and I will scan it. The original is best, and I promise to return it.

### **Publications**

Membership fees just about cover the running costs of the Society. Our main income is from the sales of books and publications that we sell. Particular thanks are due to Alistair Cameron for his books *Slate* from Honister and

Slate from Coniston, to Dave Bridge for his CD ROM of the Coniston Copper Mines, and to Peter Fleming for his Coniston Trail leaflet. They are all major earners for the Society, and the authors take no money for themselves. As a joint effort we have produced two hardback books, *Beneath the Lakeland Fells* and *Lakeland's Mining Heritage*. Slate from Coniston is out of print, though I hope that Alistair will soon produce a second edition, for I am certain that it will continue to sell, and we have less than 200 copies left of *Lakeland's Mining Heritage*. In order to provide us with capital for future projects we hope to write and publish a third book, aimed mainly at tourists, but intended to broaden peoples' awareness of industrial and mining heritage in the landscape. A provisional title is 'A Walkers Guide to Lakeland's Mining Heritage'. After an introductory chapter there will be a collection of walks in the Lakes and West Cumbria taking in mining and mining related sites. For each venue it is intended that there will be a map and a detailed itinerary, a potted history, including the social context, a current photograph, and where possible historic and underground photos. It is expected that various members will each write chapters reflecting their knowledge and enthusiasm. A start has been made, but we need suggestions and offers of help.

#### **Society's books lost in flood.**

Most of the stock of CAT books is stored at the Membership Secretary and Newsletter Editor's house in Ambleside. Unfortunately it was affected by the flood on 5<sup>th</sup> January. At midnight that night the River Rothay overtopped its banks about half a mile away and the whole of the lower part of my property was under three feet of

water. As the water rose Meg and I managed to rescue most of the books, but the bottom layer of the stack, consisting of 60 copies of *Lakeland's Mining Heritage* and 96 copies of *Journal 5* were submerged. We are hoping that they will have been covered by my household insurance. IM

#### **The Newland Furnace Trust**

Conservation of Newland Furnace began as a CAT project more than fifteen years ago. It became a stand alone project when the Newland Furnace Trust was formed, but could nevertheless be described as Cat's longest running project. Most of the people involved with the project are still CAT members.

The Newland Furnace Trust has recently encountered a potential cash flow problem. As reported recently in the CAT Newsletter a grant of up to £29,000 was obtained from English Heritage to repair the roof and gable end of the Charging House. Costs have increased and English Heritage has revised their offer to 80% of the new estimate. The Trust has assurances of other grants that are expected to cover the full rebuilding costs of nearly £53,000. A tender has been accepted and work is expected to start in the Spring.

The work will be staged, each stage to be certified by the consulting engineers, Blackett-Ord, before payment of an invoice. Each stage would probably require a payment of some £15,000. The shortfall arises because English Heritage will only pay out on a receipted invoice, in other words the Trust will have to pay the bill before they receive the grant. English Heritage will pay within 28 days of receiving the invoice, perhaps sooner.



The Newland Furnace Trust hope that some commercial sponsor will be found to cover the shortfall, but if not then they will have to arrange loans to cover the period(s) of the shortfall(s). They have funds for part but not all of the shortfall. In order to accept the English Heritage grant, to secure the tender and to allow the contractor to schedule the work they must commit to the arrangements as soon as possible. They are unable to do this unless they can guarantee to raise the shortfall money.

A meeting of the Newland Furnace Trust was held on 2<sup>nd</sup> December to discuss this. One of the directors of the Trust offered a personal loan of £10,000 to cover the shortfall, and I suggested that CATMHS might be prepared to help. Members of the CATMHS committee supported this, and at the AGM a proposal was passed that we should guarantee the Newland Furnace Trust a loan of up to £7,500 from CATMHS funds to cover the period between payment of staged invoices and receipt of the grant monies from English Heritage.

Ian Matheson

### **New CDs**

Dave McAnelly has spent many long hours researching the mining history of the Nent Valley and Weardale. He has recorded the results of his research on three CD's, which are:

#### **1) Lead Mining in the North Pennines**

Contents include:

The early history of lead mining, miner's health, leases, bargains, food shortages, The London Lead Company, Nenthead, mine shops, education and transport, Rampgill & Scaleburn Mines, lead mining strikes & disputes in the North Pennines, the

Stagg family, silver & lead sales, the Blackett Level & Hudgill Burn Mine, W.B.Beaumont Lead Company & the Ecclesiastical Commission.

Over 400 pages of text & 31 colour photographs Price £15 plus p&p £1.

#### **2) Abstracts from the Minutes of the London Lead Company**

This document contains information gathered from the Court Minute Books of the Governor and Company for Smelting down of Lead with Sea Coal and Pit Coal.

The Court minute books begin on the 13<sup>th</sup> October 1692 and end 21<sup>st</sup> November 1899, these are numbered 1 to 37.

There are also two half yearly minute books of the General Court, these start on 25<sup>th</sup> May 1731 and end 30<sup>th</sup> March 1869, and are numbered 38 and 39.

570 pages of text Price £15 plus p&p £1.

#### **3) Extracts from the Hexham Courant, Hexham Herald and the Alston Herald relating to lead mining and the people of Weardale and Alston.**

Contents:

Emigration information, notice of personal injury at WB Mines 1876-1900, record of fatal accidents at WB Mines 1876-1883, Carrshield Chapel records, Weardale memorandum book 1860-74 and names found in newspapers and other documents.

290 pages of text Price £10 plus p&p £1.

All available from: D. McAnelly, 92 Regent Farm Road, Gosforth, Newcastle upon Tyne NE3 3HD davidmcanelly92@btinternet.com  
Format: Adobe Acrobat (portable document format.PDF).

All profits are being given to Northumberland County Record Office, in order to help fund the

purchase of equipment needed by researchers.

The copyright has also been given to Northumberland Record Office.

### **Doctor Descender**

Dear Doctor

I am about to get married and yet my future wife and I can't agree whether our disposable income should be spent on a tumble drier or Landrover cylinder heads. Is this usual ?

Anon, The Garage.

Dear Sad Git

No, waiting for the dry weather of spring to dry your clothes or not washing them until Summer will never do. Buy a tumble dryer – that way she might even wash them for you! Just remember, that even the man with no cooker has a tumble dryer !

Doc.

The following anonymous contribution has been received:-

Pete Blezard continues to hurl himself into the 21st century with new technology, first of all with logging on every evening, but he informed us on Sunday that he now has a web site. Any CAT member is welcome to visit it, just call round at Ash Fell and Pete will show you where Anne has neglected to dust in the corner of the kitchen.

### **COMPETITION**

Yes it's back, the free Doctor Descender easy to enter competition.

To enter all you have to do it tick the people who you think did not fulfil the spending money at the bar part of the good Doctor's "£2 and a pint for a copy of 'The British Lead Mining Industry by Roger Burt' offer". Choose from : Mark Simpson

Alastair Cameron

Please tick no more than two and send to:-

Who's the Tight Git competition

C/o Dr Descender

Our best wishes for their future happiness together go to members Joanne Snowdon and Chris Cowdery, who are to be married in February.

### **Return to Hudgill Burn, 7<sup>th</sup> November**

On Sunday 7<sup>th</sup> November I met up with Sheila Barker in Alston and drove up the Nent Valley to visit the Hudgill Burn Mine. I seemed strange to go back to the site of the project that had taken up so much of our lives in the 1990's. It had been four years since I had been there so, as the car bounced up the rough track to the site, I was not sure what to expect.

Sheila explained that during the past couple of years a further major project had been carried out at the mine. A serious collapse of the stone arching close to the entrance had had to be completely replaced. This had been done by the CAT Project Team using traditional methods to re-build the arching. A wooden former had been constructed that was moved along the tunnel as the stonework was replaced. Now it looks very sound, a credit to the team that undertook the work.

We put on our underground gear and walked up to the mine portal. I had the usual struggle opening the locked barriers so it was some minutes before we could set off walking up the main wagon way. The mine seemed in remarkably good condition. The notices were still undamaged and even Gerald's tally board was still attached to the wall – and all the tallies were in place!

Prior to the foot-and-mouth restrictions being applied a lot of work was taking place at Hudgill Burn. The digging team had progressed some distance along the workings on the Hudgill Burn Vein and the Sun Vein. Nils Wilks and his team had surveyed much of the accessible parts of the mine. Most of the accessible rises had been explored, I had placed name markers at significant points in the mine and we had set a survey line up in the Cavern. The purpose of the line was to help with future surveying. But it had another purpose as well. The Cavern is a confusing place and it is quite easy to get disorientated. The survey line leads directly back to the rise up from the mine!

By the end of the morning we had checked out all the accessible areas of the mine and had thought hard about future projects there. The most pressing need is to improve access to the Cavern, install a ladder and stabilise the base of the ascent by supporting a rather dubious cracked sill. We were concerned that if the sill collapsed while we were up in the cavern there would be no other route of exit. The possibility of continuing the dig on the Sun Vein was also considered as was an alternative dig at the end of the 'By-pass' Level. There was also quite a lot of surveying still to complete.

The Hudgill Burn Mine was an excellent project for CAT and one of which they should be justly proud. It involved many skills and much expertise – structural engineering, surveying, mine excavation, archaeology, photography, caving skills and many more. Perhaps we should return there to continue the work.

Alastair Cameron

### **Mine Forum Meetings - a Personal View, by Alastair Cameron**

About twelve years ago the Lake District National Park Authority established the Mine Forum meetings, followed the next year by a series of Slate Forum meetings. The meetings were hosted by the National Park archaeologist, John Hodgson. Eventually both 'forums' were combined and a short while later fell into abeyance. There were several reasons for the 'forums'. They provided a good system for exchange of views between the specialist groups and the National Park & National Trust. Projects could also be reviewed. Looking through the old minutes, items which were frequently discussed, were the Honister Slate Workings, Coniston Copper Mines, Greenside Lead Mines and Force Crag Mine. However, in my opinion one reason why the forums were set up was to make it easier for the authorities to keep tabs on the work being carried out by the specialist groups.

In 2002 the Mine Forum Meeting was re-convened. I made a point of attending when ever possible, representing the work that is going on in Coniston with the village community. Recently it has become clear that one aspect of the meetings is to allow the specialist groups to keep tabs on the plans of the authorities, a fact that became very clear with the plans by the National Trust to develop Force Crag Mine as an attraction.

In 2004 the Trust arranged a number of dates for public visits to Force Crag Mine, accompanied by Trust personnel, who explained the history of the site and the workings of the mill. Previous to this, part of the mill had been re-equipped to allow better interpretation of ore processing. The

Trust involved a firm of consultants to help them with this work. For 2005 the Trust are planning to continue the events and are also planning to place interpretation panels at the site to explain the history and working of the mine. Sadly it seems that neither of the specialist groups have been involved in this work or asked for advice.

There is a very real danger here that wrong information will be provided and the public will be mis-informed about details of the mine. This annoyed me somewhat and at the last Mine Forum meeting I made the strong recommendation that no more interpretation work should be carried out at Force Crag until key people in the groups had been consulted. The National Trust agreed and I put them in touch with Pete Blezard and Anne Danson, two CAT members who were part of the small team that last worked the mine. I also made the point that no other projects of this type should be started without a significant involvement of members of the specialist groups. This should guarantee that the correct information and interpretation is given and hopefully, will prevent funds being spent on expensive project consultants. Time will tell!

(Editors note: The National Trust did hold an open day at the mine on 11<sup>th</sup> October 2003 with the aim of gathering information about the mill buildings and it's machinery. Peter Fleming attended and his report was published in CAT Newsletter 73, November 2003.)

### **Want to buy a pothole?**

The following is from a newspaper cutting contributed by Jon Knowles:

'It suffers from rising damp, has no views to speak of and would not be suitable for the claustrophobic. A 250

feet deep pothole that leads to a flooded chamber has been put up for sale with a guide price of £10,000. The hole, known as Cuckoo Cleaves, is popular with cavers.

The limestone hole, near Priddy in the Mendip Hills was discovered in 1947 by the Wessex Caving Club. The current owner's father left it to him when he sold the surrounding farmland, but now the son has decided to sell.

The hole comes with mineral rights and a small area of land surrounding the opening, which is at the bottom of a depression. It is very popular with cavers and at the moment has a manhole cover to make sure that only those who know what they are doing get in. It may be that someone will buy it and donate it to a caving charity. We have had one offer and three or four people have written asking to view.'

Editors note: CAT was originally formed in order to facilitate purchase of a mine site in Furness. Could this be the beginning of the PAT?

### **Change to 20<sup>th</sup> February meet.**

Due to unforeseen events, our expert guide at the Faggeggill meet is unable to attend. This is a very complex mine system and is gated and controlled by the Earby Mining History Society. It is hoped that we will be able to hold the meet, in June. So as an alternative to this venue, the meet will take place at Hudgillburn at 10.00pm. We will be able to complete a few tasks above ground if the weather is suitable, but there is also some work that can be done below ground. Don't be frightened! It won't be too arduous and it will be another chance to have a good look around for those that have not been there for some time. If you wish to attend please contact John Brown on 01325 487999 or e-mail [john@baydale22.freemove.co.uk](mailto:john@baydale22.freemove.co.uk)

## Meets

### A Spring Event:

One of the events on this season's meets list is a trip that is bound to appeal to many CAT members, and their families. The event is on Sunday May 22nd in Langdale, and we have booked a fine and warm day with the weather-men.

Alastair Cameron is organising the day and has arranged for Don Kelly, manager of the Elterwater Slate Workings to show us round the quarry at Elterwater during the morning. Don will explain the workings of the quarry and the plans that the Burlington Slate Group has for the future. Don started his career at Elterwater Quarry before moving back to Coniston to work on Coniston Old Man, as his father and grandfather did before him. He is now nearing retirement and is taking an active part in local industrial history work. Don has been involved in CAT trips before and has shown us round the Broughton Moor Quarry during the trip to Torver in 2003.

For the second half of the day we will then proceed to climb a short way up Lingmoor visiting the disused surface and underground slate workings on the mountain, some of which are felt to be several hundred years old. Both the light green and silver grey slate bands pass through Lingmoor and both have been quarried there in the past.

Alastair Cameron.

We will then make a leisurely return down-track to Elterwater. (and the Britannia Inn! Ed.)

### Reports:

**Duddon Furnace and Bluebell Quarry evening walk. May 12<sup>th</sup> 2004**  
Mark Scott, Ian & Meg Matheson, Mark Simpson, Peter Sandbach, Peter

Fleming Anton Thomas, Mike Mitchell, Ceilia Hancock & Tim Oulton + dog. Angela Wilson turned up later. Some of these evening gatherings have been better attended than weekend meets!

We spent some time looking at the Duddon Furnace and the building work taking place on the adjacent site of what was presumably the manager's house. This was followed by a pleasant walk up through the woods. There were some bluebells, but not much evidence of quarrying. However in the distance was something which looked like a lime kiln, so we went to find out.

The local rock does not appear to be limey, so there was some doubt, but on inspection it was certainly a lime kiln, with an adjacent tree and grass filled quarry. Some of the group ratched about in the undergrowth, finding a bit of a rift and a cavey hole with water issuing from it. The conclusion was that this was part of the Coniston Limestone band. Just to be certain Anton took a sample of rock home and subjected it to a dose of vinegar. Sure enough, it effervesced, conclusive evidence of lime. In fact there were known to be at least ten kilns on the Coniston limestone. There is one at Coniston, near Low Yewdale, and another at Dove Nest, beside the main road between Ambleside and Low Wood. It was repaired in 1996 by the Lake District National Park Authority. It would be interesting to locate the other seven.

Ian Matheson.

### Levers Water Mine, 31<sup>st</sup> Oct 2004.

John Brown, Pete Blezard, Colin Woolard, Mike Mitchell, Mark Simpson, Peter Fleming, Clive Barrow, Ian Matheson.

Following an earlier visit to measure up John Brown had prepared three steel head frames and a substantial steel gate to strengthen and protect the mine entrance, together with twenty four 6 X 2 treated wooden boards for packing the sides. He then brought the whole lot up to the BMSC hut in his van, where it was transferred to a Pitzgaur.



*The Pitzgaur crossing the outfall below Levers Water Dam*

This remarkable military type vehicle belongs to Dave Atkinson, garage proprietor and friend of Mike Mitchell. It has hydraulic four-wheel drive and a huge ground clearance, and will go anywhere.

It certainly made light work of the track up to Levers Water, crossing Levers Water Beck and on up onto the dam to within 20 yards of the work site. In half an hour it probably saved us the best part of a days heavy carrying. Thanks Dave and Mike.

Whilst Messrs Brown Blezard and Woolard set about preparing the site the rest of us rigged a ropeway to transport the materials down the Funnel to the mine entrance.



*Carrying the steel up to the mine*

It took a while to set the first frame, which was to be the middle one on which the gate was to be hung. It had to be accurately positioned, but once it was in place work proceeded a little more quickly, a leg at a time.



*The gate being lowered down the ropeway.*

The uprights, were dug into the floor and the structure was tied together with longitudinal braces at the sides and spreaders at the base. To make room for the head-frames and ties it was necessary to remove some of the existing wooden frames. At this stage the gate was hung temporarily to check that it fitted. It did of course, millimetre perfect, a credit to John Brown's engineering skills.

It remained to fit the wooden boards and to pack the space between them and the walls of the tunnel with earth



and stones from a bank of spoil remaining in the adit from the original blockage. This was completed as darkness fell, leaving some tidying up and packing of the roof for another visit, arranged for next Sunday.



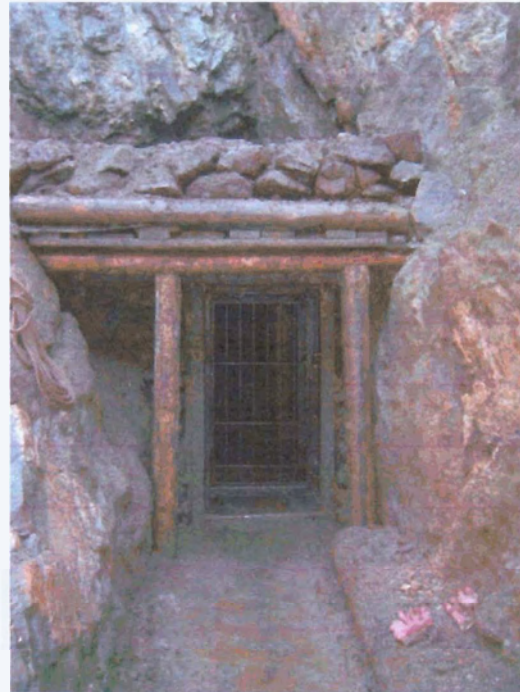
*Final adjustments*

#### **Levers Water mine, Sunday 7<sup>th</sup> November.**

John Brown, Colin and Andrew Woollard, Mike Mitchell, Ian Matheson.

Thanks to maintenance work by NW Water we were able to drive up to the dam with all the tools and materials. Since last week a substantial chunk of rock had fallen out of the hanging wall outbye of the portal. Once again we rigged a zip line to lower everything down to the portal and then set about collecting stone to pack the sides and the roof. Some was collected from the surface, but it proved difficult to lower it down the zip line, so most was obtained from within the mine and barrowed to the entrance. Once the sides were completed stone was laid on the roof and covered with a layer of finer material in order to absorb the

impact of future rock falls. The job was completed by 3.30 pm.



*The finished job.*

#### **Rampgill 14<sup>th</sup> November**

John Aird (ML), Sheila Barker, Karen Beer and Dave McAnelly, John Brown, Chris Cowdery, Jon Knowles, Roger Ramsden, Mark Waite, Colin and Andrew Woollard.

All the above met at the car park at Nenthead on what could only be described as a balmy day for the time of year and the Alston area, no wind, low cloud and drizzle with a temperature just above freezing.

Little time was lost kitting up (apart from a brief beauty contest between two attendees to see whose Tirfor was the most attractive!) and getting into the relative comfort of the Horse Level. Although encumbered with a considerable amount of equipment good time was made to the Underground shaft.

For details of the previous crossing of the shaft see Newsletter 73 November 2003; suffice it to say that strong representations had been made to the Meet Leader that the use of the existing pipe work and receiver vessel to assist in the crossing did not accord with CATMHS policy regarding artefacts. It had been suggested that recovering the three lengths of compressed air pipe from the shaft and re-installing them across the other side of the shaft would solve the problem. Accordingly a reconnaissance had been carried out to measure the length of the pipes and check the width of the shaft top.

Initial activity involved descending the shaft and attaching time-expired CATMHS SRT ropes via slings to the top and bottom of the first length of pipe. Meanwhile a bolt and hanger were installed in the roof just back from the shaft edge for a pulley to permit vertical lifting of the pipe. This was followed by Jon Knowles crossing by the previous meet's route and installing a traverse line. John Brown, Andrew Woollard and Chris Cowdery followed to form the far-side hauling crew. A further bolt, hanger and pulley were installed in the roof on their side of the shaft.

When the nearside crew commenced hauling it became clear that the Meet Leader's breezy assurance that "we shouldn't need the Tirfor" was not strictly accurate. Once rigged, the latter reigned supreme and the first pipe rapidly rose four feet vertically, at which point no amount of force (and that included C Woollard) would persuade it to rise further. It became apparent that the far-side hauling crew had neglected to point out that the ropes (presumably used to dislodge the pipes from the shaft top) still tied to

the pipe were buried in the shaft debris and so holding the pipe in position. Once they were cut free it was a relatively easy task to raise the pipe as high as possible then with the far-side crew hauling in their end position it across the shaft top.

A repeat performance with the second pipe benefited from experience with the first and possibly led to over confidence with the third (the first two were about 125mm diameter and the third about 85mm diameter). The latter was simply slung from just below the top and hauled up without the Tirfor, however the lower end became wedged between two of the remaining bits of pipework. Since the top now required pulling downward to clear the roof while the centre of the pipe rested on the shaft lip the bottom of the pipe became ever more tightly wedged. Eventually the inevitable was accepted and it was lowered back down to clear the obstacle, while the far-side team regained credibility by successfully fishing with a sling on the end of the haul rope and catching the bottom of the pipe. Once all the pipes were in position it was time for lunch.

After eating, the pipes were secured in position at each end with wire rope and a wire rope traverse line was installed to protect the crossing. Once tidying up and collecting the gear was complete it was too late to contemplate the route through the flats so the party split, some to cross the shaft and examine the winding chamber and the rest to go back along the Horse Level to look into the winze at the site of "Waite's kibble". From the plans this could be Ramsay's Sump going down to the Four Fathom Limestone exploited by the Vielle Montagne for sphalerite. Hero Knowles, having bolted the pitch, graciously offered first go to the Meet Leader who declined, and he set off

down a grand total of four metres. The chaotic state of what presumably had been a partitioned shaft with ladder way prevented further descent. However if the debris littered about over the top of the shaft area was cleared further descent might be possible.

Despite putting that off until a future meet the trek to the surface was undertaken in reasonable spirits on the basis that two out of the three objectives had been achieved.

Many thanks to everyone for their hard work and special thanks to J Knowles for providing both drill and Tirfor.

John Aird

***Dear Dr Descender,***

*I was recently underground with a well known farmer who in preparation for throwing a coil of rope across a shaft called for all on the other side to stand clear. What should I have done at this point?*

*Dear Meet Leader,*

*You really only had the following options:-*

*Invite the farmer to use the newly installed bridge across the shaft to carry to rope to the other side,*

*Relax and remember the whole of agriculture is just a black hole anyway,*

*Mentally rehearse the chorus of "John Brown's rope lies a' mouldering in the shaft"*

*Resignedly don your SRT gear with a view to recovering the ancient and exhausted rope since C W\*\*\*\*\* was very anxious it should not go waste.*

## **Gating**

Around 1980 the Glencoyndale entrance to Greenside Mine was dug open and a steel gate was inserted. For a time it was secured by a nut and bolt that could be removed by anyone with a spanner and which was a deterrent to casual passers-by and kept the sheep out, but then it was locked. Most of the mine entrances at Nenthead are fitted with swinging gates that make passage through quite awkward, but they aren't locked. Rydal Estates have recently gated and locked four levels at Coniston. At Caldbeck Warren Allison gated the Elizabethan adit in Silver Gill, and CAT has recently re-opened and gated the entrance to Levers Water Mine. We are negotiating with the LDNPA Archaeologist to restore the Lucy Tongue Adit at Greenside, and there is a proposal to open and gate the Elizabethan Coffin level at Goldscope, so that the public may visit it safely.

An aim in our constitution is to advance the education of the public concerning the industrial history of Cumbria, and in particular it's mining history and archaeology. It cannot be appropriate for any group to clandestinely dig open a mine entrance, cover it over again and keep it to themselves. CATMHS have come a long way in persuading owners and authorities of the value of mining sites. Now, instead of destroying or seeking to landscape them, they are prepared to conserve them, but, mindful of their responsibilities and of potential litigation, they usually insist that entrances be gated and locked.

Arguments against gating suggest that installation of a gate and an increase of visitors may damage the archaeology, that health & safety risks would be increased, and that possession of a key denies access to others. What do you think?

## Tilberthwaite Meet, 12<sup>th</sup> December.

Meet Leader Ian Matheson, Peter Fleming, Ken Geddes, Alan Westall, Roger Ramsden, Maureen Fleming, John & Phillipa Tindall, John Aird.

Following an enjoyable evening at the annual dinner at the Crown in Coniston we met on a still, grey, but dry and mild December morning at Hodge Close. The Meet Leader, having spent the night by himself at the BMSC hut, was late!

First stop was Peat Field Quarry. This was re-opened a few years ago, I believe by Sam Dugdale of Ambleside, and worked on a small scale, mainly by processing the waste. More recently it was taken over by the Burlington company, and we were amazed to see how it has changed. Roadways have been made in accordance with modern working practices, and it looks as though slate is being taken from two levels. There was no machinery, as apparently it is parked overnight and at weekends at the nearby farm to prevent vandalism.

Next we went to Klondyke, which has changed very little. On the open floor of the quarry is a large pile of waste slate through which there are two tunnels that give access to the adits beyond. They have been nicely built by the Mathew Spedding technique, whereby rising layers of slate overhang one another to form a stepped and pointed roof. The longer, right hand adit, leads into a dry close head. In the left hand one there is a concrete dam, which was built in the 1980's(?) to contain waste slurry from the Moss Rigg works. The liquid slurry was poured from above into a shaft adjacent to Peat Field Quarry.

From Klondyke we scrambled up through the trees to the old tramway

that runs for some distance through the woods. It originates from Calf Howe Quarry, but it is not clear where it used to terminate, for it seems to end in the middle of no-where.

The entrance to Calf Howe was blocked, but it looked as though there might be a scramble over the top of the blockage. Not wanting to be seen as a big woos in the eyes of the party John Aird persuaded himself to give it a go and crawled in. On seeing his success the meet leader followed. Inside there is an adit leading to a close head with a blind heading leading off it. There are sleepers and some rails still in place in the adit, but the close head is nearly filled with rubbish, mainly old cars, that has been tipped from above down a vertical shaft. The top of the shaft can be seen from outside, where a vertical slice of good slate has been taken out. It has been worked out beneath a different vein of poor slate rock, which remains as an overhanging cap. The rift is bridged by a masonry wall which would have been a barrow way or perhaps a tramway, used to transport material out of a large close head nearby.



*This graffiti was noted in one of the closeheads It reads: 'Jon + Kate 30/5/04'. We couldn't help but wonder. Where did Mr Knowles and his good lady spend their summer holiday? Does Doctor Descender know about this?*



From here an old track leads out to the Holme Ground cottages. We split up, those without wellies going down the incline into Parrock, those with wellies intending to wade through the divers adit into Hodge Close. The plan was to communicate across the arch between the two quarries. Alan Westall led the way into the Hodge Close Adit, with the meet leader close behind. When the water began to soak Alan's trousers above his wellies the meet leader turned back and Allan did so soon after. John Aird is made of sterner stuff. Clad in his all weather buffalo outdoor gear he made light of getting his feet wet, and splashed on alone, completing the planned communication with the older and wiser group. Waiting at the entrance we heard someone slashing back along the adit, but instead of John three divers emerged. Apparently the depth of the water has been substantially reduced by recent rock falls. The underwater part of the quarry has been surveyed, and there is a plan at [www.romseysac.com/Hodge.htm](http://www.romseysac.com/Hodge.htm)

After this episode we all returned to the cars for lunch and a change of footwear.



*Does Mr Westall's chair set a new standard for comfort on mining trips? He just needs a G & T to complete the luxury! (And longer wellies.)*

After lunch we crossed the valley, meeting lots of mountain bikers. At the CAT Dinner Alastair Cameron mentioned a project to restore a riving hut at Atkinson Coppice, on National Trust Property, so we went to find it. Maureen Fleming and Alastair had recently dug out some roofing stones from the floor of the ruin, but even with her help we had difficulty finding it. The problem was that the 1:2500 O/S map shows Atkinson Coppice to be some distance away from the site. I met Alastair by chance a few days later at Coppermines, but he insisted that the National Trust refers to it as Atkinson Coppice. Reference to the 6 inch map confirms this. Anyway, we did find it, beside the path which leads to the top of the Black Hole.

We had a wander through the spectacular Cathedral and then located the relatively new track built to tip spoil from Moss Rigg into Atkinson Coppice Quarry, noting the substantial regeneration of birch and larch trees along its length. We looked into Moss Rigg Quarry from the top, and then made our way to the site of the old slate works. This was abandoned a few years ago when all the dressing was consolidated at Broughton Moor. It was left very untidy for quite a while, but has now been cleaned up. It is an attractive level site in the woods, and there are still lots of sawn and polished slabs lying around.

It was beginning to get dusk so we decided to leave Broad Moss, Styer Rigg and Hall Garth for another time. You can't do justice to the Tilberthwaite valley in one short day. Some of us decided to go to the 3 Shires pub, and fortunately we opted to drive there because it was closed. We were however able to get a nice beer at the Britannia at Elterwater.

Ian Matheson.

**Technical investigation at Coniston,  
Sunday 20<sup>th</sup> December**

Peter Fleming, Phil Meredith, Steve Dickinson, Mark Simpson, Ian Matheson, Mike Mitchell, Dave Bridge, Clive Barrow.

A conversation which took place on my boat last summer gave rise to the possibility that we might get access to ground penetrating electronic equipment owned by University College London. This would depend upon finding a suitable student project to be arranged by Phil Meredith, now a Professor of Geology at UCL but once one of the group of pre CAT mine explorers which included Peter Fleming, Eric Holland, Peter Blezard, Ann Danson and others. Another project, by member Steve Dickinson, an archaeologist, is to study the area around the Back Strings at Levers Water. This visit to Coniston was to investigate the feasibility of these projects and to consider some sites.

One priority is to locate an Elizabethan adit 40 fathoms in length, thought to be buried in the screes below Simon's Nick. Documentary evidence in the form of the letters of David Davies (1684) indicate that it was intended to drain the workings, that it took three and a half years to drive and was completed in 1620 at a cost of £180. (Ref P Fleming, CAT Journal No V, German Copper Miners at Coniston.)

The weather and the visibility were fantastic. There was light snow down to Levers Water, but the sun was low and bright so that one could see things that are not usually visible. We set off up Red Dell to examine the dressing floors outside Cobbler Level. It is thought that these dressing floors would have been used successively by the Elizabethan miners around 1600, by Charles Roe of Macclesfield from 1750, and by John

Barratt from 1824. However it was decided that there would be insufficient differentiation of materials for the equipment to register. We continued to Flemings Level which Phil had not seen since about 1981, when he carried an oil drum up there to preserve it, and then on up the Red Dell incline, noting the new gate installed by the landowner across the entrance to Bouncy Mine.

At Levers Water we considered the possibility of finding artefacts around the Back Strings, and investigating Woodend's Level which is shown on an old plan running out beneath the tarn. We believed that we had found it when we discovered the Wooden Plug and what we thought was Woodend's Rise but they are not at the location shown on the plan. NW Water used a drilling rig to bore into the adit and poured concrete down to seal it against a potential leak from Levers Water. As that location is known these works could be used as a reference for the electronic equipment. Another question is whether there are any holes in the floor of Simon's Nick, so we examined that too, before scrambling around the crag to view the primary objective, the site of the Elizabethan 40 fathom level.

We had feared that the terrain and access might make it impossible, but in fact that is not the case, and the area of search can be reasonably defined. Further study of the documentary evidence might narrow it down, and a sledge could be constructed on which to mount the equipment.

Back BMSC Hut we studied the RGS plans of the area and discussed possibilities. The feelings were optimistic, and it is hoped that both projects might be possible in summer 2005 if the necessary permissions can be obtained in time.

Ian Matheson.



## Ratgoed Project, Autumn 2003

Jon Knowles (ML)

John Ashby

Chris Cowdery

Mark Waite

Readers may remember the author's long held interest in the Ratgoed Slate Mine, which lies to the north-east of Aberllefenni in mid-Wales, and comfortably close to chez Waite in Aberangell. Reference will need to be made to Newsletters 63 and 47 to obtain the full background to this meet. To briefly recap, a sub-level was discovered in the mine which appeared to have been previously unexplored. Above this sub-level could be seen a winch chamber which was originally accessed by a very poor wire rope ladder which was not deemed safe enough to ascend. This chamber remained unexplored, but not out of mind, until the author purchased a DeWalt battery drill and this opened up a number of interesting possibilities in this mine and elsewhere.

On a Sunday in Autumn 2003 the above members entered floor 7 and descended to the sub-level and then split into 2 groups. Whilst Mark and Chris started bolting up with the drill, John Ashby and the author rigged the shaft down to floor 8 before descending to it and climbing back up outside. The rope on the first pitch was then pulled through. This enabled subsequent trips to enter from floor 8. Arriving back at the sub-level we were surprised to find that Mark was already up in the winch chamber with Chris not far behind him. After some re-rigging we all ascended and found a superb wooden winch in good condition, although its location on a small window in the pillar between two chambers meant that the photographs don't do it justice.

Chris Cowdery's Land Rover was used to access the mine and one occasion much entertainment was caused by a large forestry vehicle that was blocking the road. Whilst this was easily passed on the ascent it was a very near thing of the way down and some manual assistance was required.

Some months later I was a little surprised to learn from one of the guru's of illicit mine exploration in North Wales that a resident of Borth-y-gest had climbed the wire ladder into the chamber some years previously, although he had accessed the sub-level using ladders made from trees cut in the forest under the cover of darkness !



*A general view of the chamber showing the existing ladder. Note that the reflection of the light from the flash on water droplets gives a surreal effect.*



*John Ashby and the inscription "EJ 1936"*





*Chris needs Mark's help to get the Land Rover past the forestry machine.*



*Detail of the winch mechanism*

During the visit to Aberllefenni a few weeks later the winch was also visited by John Aird and Steve Brown whilst the meet leader gave an impromptu demonstration of how not to do a pull through ...

The team have other explorations ongoing in this area and members who are interested taking part in this should contact the meet leader. Prospective participants must be competent at Grade EXP and be thick skinned.

Jon Knowles



*Mark bolting his way up.*



*Chris and John viewing the winch*

**Aberllefenni Weekend,  
15<sup>th</sup> & 16<sup>th</sup> November 2003.**

Attendees Jon Knowles (ML), Peter Hay, Mark Waite, Tristan Goldsack, Joanne Snowdon, John Ashby, Chris Cowdery, Mark Waite, John Aird, Lesley Aird, Mark Simpson, Tim Oulton, Steve Brown, Bill Patten, Michael Patten and Harold Morris.



*An overall view of the quarry from Ceunant Ddu.*

This meet seemed like a good idea when I first started to organise it, and it was on the actual day but the period in between became a nightmare. After getting outline permission for a group to be taken through on the basis of being part of a bona fida group with insurance cover etc. the nightmare of the NAMHO/BCRA insurance appeared. Without dwelling on the detail the owners, Wincillate Ltd, fortunately agreed to go ahead with the trip on the basis of a disclaimer that we all signed although it was very touch and go until the last minute.

Slate has been quarried at Aberllefenni from possibly the 14<sup>th</sup> century and almost certainly from 1500 when Plas Aberllefenni was apparently roofed with immediately available material - Ref. 1. With time the workings moved underground as the immediately available material on the surface was worked out. The method of underground working also developed and whilst the original upper working on Ceunant Ddu seems to resemble the working at Bryn Eglwys, lower down the

more conventional Aberllefenni practice of working down around a shaft was adopted. This is different to slate extraction in other districts and from information provided by Mark Simpson in newsletter 59 it has many similarities with La Mine Blue near Angers in France. The working methods were of such interest that Clement Le Neve Foster, who was a Mine Inspector in North Wales, wrote the following paper regarding them.

**Notes on Aberllefenny Slate Mine by C. Le Neve Foster, B.A., D.Sc., F.G.S.**

Aberllefenny Slate Mine lies about two miles N.E. of Corris, Merionethshire, near the mouth of a small valley, through which runs the Llefeni, a tributary of the river Dulas. The rocks of this district, which are of Caradoc age, consist of slate, interbedded with grits and sandstone, and form part of the zone of slaty beds which extends from Towyn, on the west, to Dinas Mawddwy, on the east. The workings at Aberllefenny are carried on upon two of the veins of this district. I use the term vein in the sense given to it by miners and quarrymen, who often call any sheet-like deposit a vein. At the same time, to prevent any misapprehension, I may state that the veins of slate are in reality beds, i.e. deposits of sedimentary origin.

The principal vein worked at Aberllefenny has a thickness of 57 to 63 feet, and about 60 feet on an average. Its strike is from 34° to 44° E. of N. (true), and the dip is about 70° to the S.E.

Owing to the fact that the sides of the valley rise up to a height of seven or eight hundred feet above the brook in the bottom, the vein can easily be attacked by adit levels.

The method of working a slate vein depends very largely upon the natural joints, the direction of the cleavage, and the nature of the roof. These features can best be explained by a diagram (fig. 1), which exhibits a cross-section of the main Aberllefenny vein. A is the so-called "spotted rock" lying under the vein. It is a hard spotted slate with an imperfect cleavage, and it often contains iron pyrites. B is the vein, separated from A by a



plane of stratification DE, known as the bottom slip. The cleavage planes of the slate vein dip in a contrary sense to the vein itself, and make an angle of  $2^{\circ}$  to  $3^{\circ}$  with the vertical. The strike of the cleavage planes is the same as that of the vein.

Above the vein, and separated from it by the plane of stratification FG, comes the hard C, a bed of bluish grey argillaceous grit with interstratified thin beds of slate. Running across the vein from wall to wall are more or less flat joints, known as foot joints, marked f, f f in the sections (figs. 1 and 2), and back joints, b, b, b, b in fig. 2, which represents the two kinds of joints as they are seen when one is looking across the strike. The foot-joints are from 2 to 8 or 10 feet apart. The back-joints run from N.W. to S.E. (i.e. at right angles to the strike), and dip steeply either to the N. E. or S.W.

Lastly, we have to mention the important line of pillaring. The slate possesses the property of rending along planes at right angles to the cleavage planes in other words, in a N.W. and S.E. direction-and these planes of pillaring dip to the N.E. at an angle of about  $80^{\circ}$ ; in fact, they are parallel to some of the back-joints. We have thus-1, the cleavage; 2, the foot-joints; and 3, the back joints and the pillaring planes. The intersection of the two first sets of planes with back-joints or pillaring planes divides the slate into rough parallelopipeds.

These peculiarities of the Aberllefenny slate having been explained, I will now proceed to describe how the blocks are severed from the vein and conveyed to the surface. The method of working may be described as that of alternate pillars and chambers following the line of dip. The pillars are from 24 feet to 30 feet long in the direction of the strike; whilst the chambers vary a good deal, some being as much as 100 or even 187 feet along the strike. Fig. 3 is merely a diagram, and no such regularity is followed in practice. If the vein were of uniform goodness throughout, such an arrangement would be possible; but as the back-joints are occasionally so numerous as to divide the rock into blocks which are too

small for use, these valueless parts of the vein are not removed. Fig. 4 is a correct representation of the workings. The shading shows the pillars and the slate that is yet unworked, and the blank parts indicate the chambers which have been excavated. The slate of the chambers is worked away in horizontal floors of slices from 44 to 150 feet in thickness, starting from levels driven along the strike of the vein. The slices are removed in descending order, and the cavities produced are not filled up.

I will suppose that the vein has been worked away to the level AB (fig. 5), A being a gallery or tunnel along the "bottom slip." In order to commence the attack upon the next floor or slice, a level, C, is driven along the bottom slip, at a depth in this case of 80 feet below A. A shaft, CD, about 6 feet or 7 feet square, is then put through, partly by sinking and partly by rising. A strong chain is fastened across from side to side, and a block suspended at I), immediately above the centre of the shaft, and a powerful winch erected in the level A, with a chain passing from its drum through the block, and hanging from the shaft. All is now ready for removing the slate.

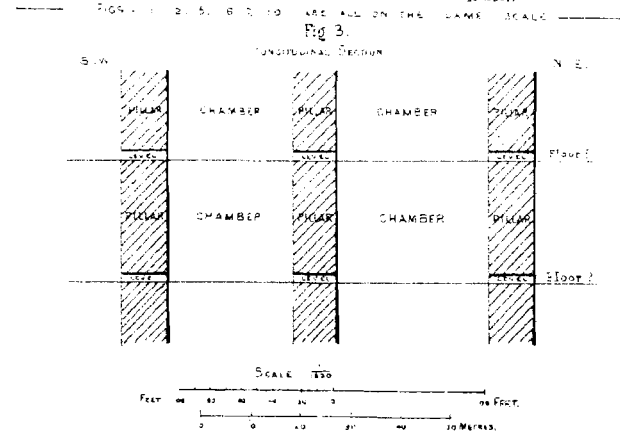
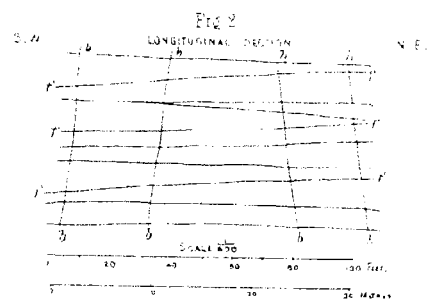
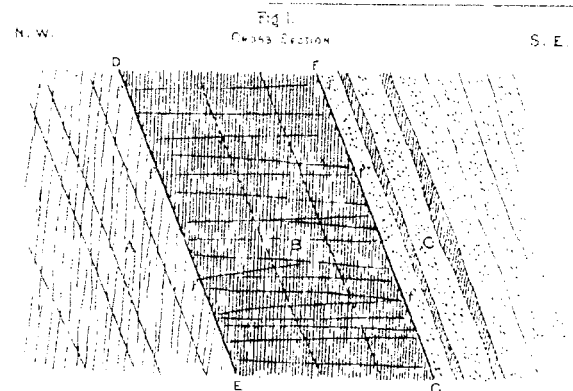
A trench about 4 feet wide, called the opening (fig. 6), is blasted out all along the foot-wall side, and carried down till a foot-joint is met with (fig. 7, f, f). A second trench, also about 4 feet wide, known as the loose end, is then excavated across the vein (fig. 6), and the slate is free for a certain depth on three sides. The rock-men, or men employed in removing valuable slate, now take the place of the miners, who do the preliminary work of making drivages and cutting the openings and loose ends. The rock-man endeavours to get off block after block of slate, taking advantage of the joints and planes of splitting. He first of all produces a split along the cleavage planes, about 6 feet from the opening. This is effected by boring or jumping a hole A (fig. 5) along the line of cleavage, and reaching down halfway to the next foot-joint, or occasionally to the foot-joint itself. The hole is charged with  $\frac{1}{2}$  or 3 inches of powder, lightly tamped, and fired. The blast causes a crack along the line AB. If

the crack is not large enough to effect the desired severance, the hole is re-charged, and fired once more. In order to set the block completely free, it is now only necessary to produce a rent along the line CD. If a suitable back-joint exists, the rock-man naturally avails himself of it, and by driving in wedges finally detaches the block from the parent bed. If no suitable back joint can be found, recourse is had to the property of pillaring, or cross-rending, already alluded to. A groove about an inch deep is cut along the line CD, and wedges are driven in until a cross rent is produced which extends to the foot-joint below. It may happen that there is a difficulty in forming the desired fissure, and in this case a hole is bored in horizontally from the opening (fig. 9) in the direction of the pillaring, and charged with powder very nearly to the top. About 2 or 3 inches only of tamping are put in, and the hole is fired. The result of the blast is a crack along a pillaring plane, and the block can now be thrown down by means of wedges and crowbars. The workmen then split it by wedges along the true cleavage into blocks weighing 2 or tons.

A chain is passed round each block, and hooked on to the winding-chain. After being raised and swung over the shaft, it is lowered on to a trolley in the level, and trammed outside. By means of self-acting inclines the loads are lowered to the mill-floor to be made into slabs, or are split into roofing slates in sheds near the entrances to the tunnels. Block after block is detached in the manner described, and after sufficient space has been cleared the opening and loose end are deepened to a second foot-joint; so that in time the workings present a step-like outline, as shown in fig. 10, which represents a slice or floor, between two levels A and C, about half worked away. Of course, whilst the slice AC is being removed another level should be in course of drivage for the purpose of working away the next horizontal slice below C. The workings in the main Aberllefenny vein are prosecuted on both sides of the valley. Those on the N.L. side furnish a slate well adapted for slabs, whilst the S.W. part of

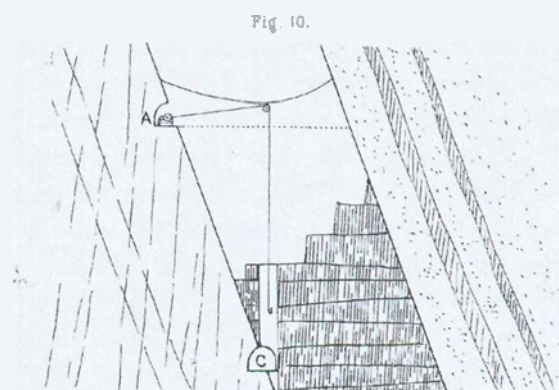
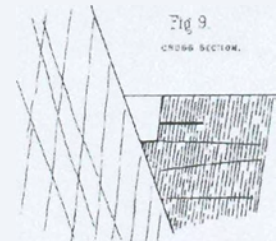
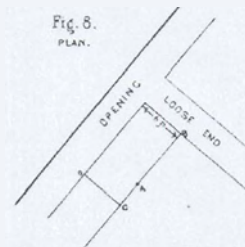
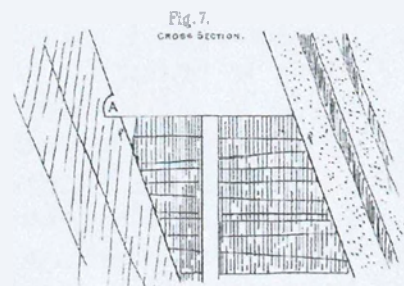
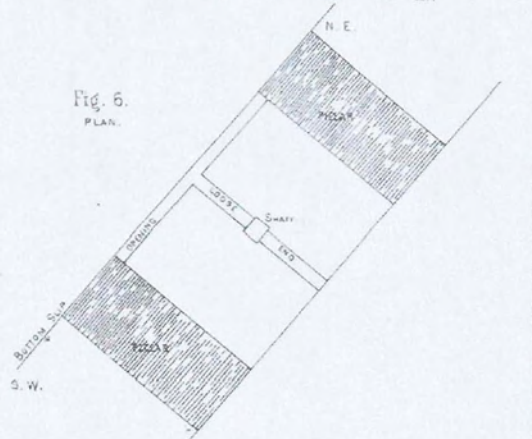
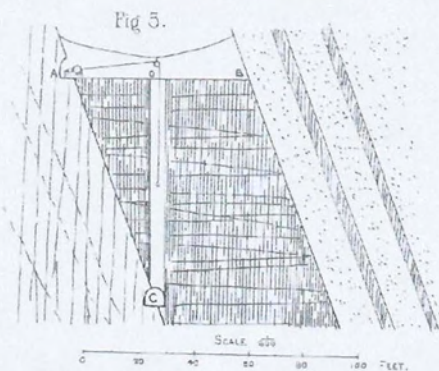
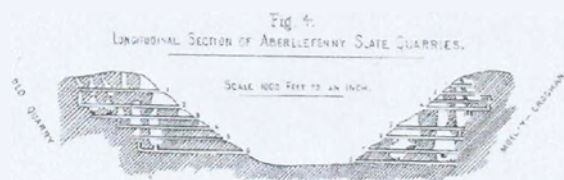
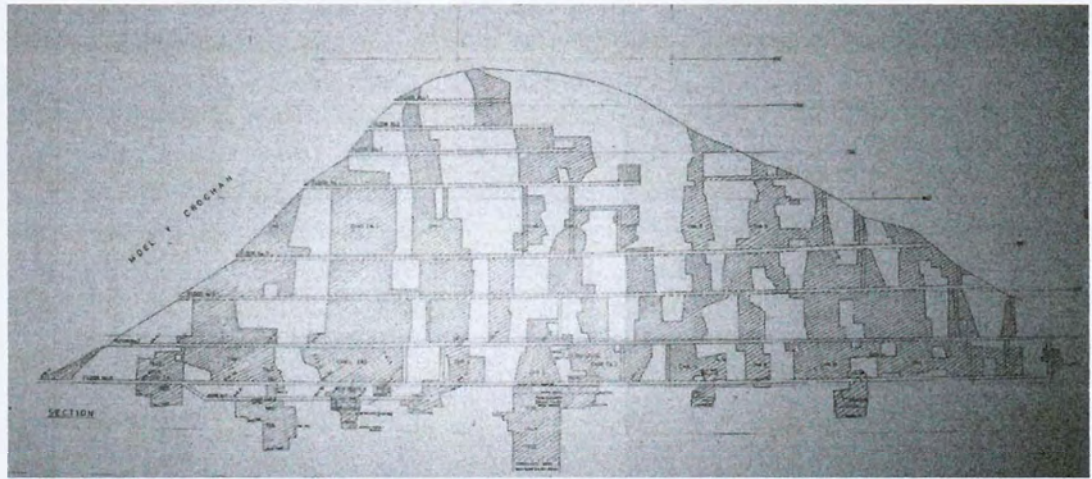
the vein produces a good roofing slate. The slate blocks destined for slabs are split into slices about 3 inches thick, and then sawn by circular saws into rectangular form. These pieces are finally split to the desired thickness, and after having been planed are fit for the market. In the year 1882 Aberllefenny Slate Mine employed 101 hands underground and 74 above ground, and produced 4656 tons of dressed slates and slabs.

In conclusion, I desire to express my thanks to Mr. David Jones, the manager of Aberllefenny Slate Mine, for his kind permission to publish these notes, and to Mr. Michael Roberts, the resident agent, for much useful information concerning the workings.



It was announced in 2003 that the mine would close at the end of the year and this drove me to request permission for an official visit. What

eventually stopped the final chamber was a change in working some years ago which limited the depth to which the chamber could be worked. As can be seen in the above diagrams it is necessary to continually undercut the hanging wall as the chamber descends to maximise the floor area and thus the volume of rock which can be extracted. This process had been discontinued so that eventually the two walls came together to



such a degree that the working area became so small that it became un-economic to continue and the Company was unable to spend the approx. £250k required to develop a new chamber.

The licence for underground operation expired on 12<sup>th</sup> December 2003 and extraction stopped at the end of November to allow time



for the recovery of machinery. The closure of this mine draws to a close, probably for ever, a long and proud chapter of underground slate extraction in Wales.

On the day of our meet we assembled in Aberllefenni and signed all the disclaimers before being escorted to the Mine. We were led by Andrew and Anthony Taylor. We first taken into the mine office and were shown the plan of the workings and given a safety talk. Safety in this mine is essential since in places there is very little between this world and the next. To enter the mine the Clayton battery electric locomotive had first to be moved out of the way. We then walked in along the main level.



*Clayton Battery Locomotive and Slab Wagon*

Everybody visiting was amazed at the size of the chambers through which we walked with the total height of the highest being 450 feet although the lower portion is now flooded. To look up a chamber rising almost vertically to small patch of daylight is something that none of us will forget.

Generally the mine is quite dry with pumped out chambers taking a long time to flood. Further into the mine we saw a Butters Bros. Of Glasgow Scotch Derrick which was used to haul slate from the bottom of the chamber to adit.

Going further inbye again we came to the last working chamber and Andrew explained how



*Butters Bros Derrick Crane*

the rock had been extracted. Large rectangular blocks were cut out using a Korfmann saw (effectively a large chain saw for slate) for the vertical cuts and a wire saw for the horizontal. The blocks thus extracted were manually broken down into blocks of a size which could be lifted by the crane. Using the crane itself seems to have been a particular challenging task due to the dip of the vein. As can be envisaged a hook will hang vertically from its point of attachment and eventually the dip of the vein means that it will cover very little of the working floor at the bottom of the chamber. To overcome this an additional Holman air winch was used to drag the hook at the bottom of the chamber to its required location. This worked OK but the consequences should the secondary hook have become engaged prior to the main rope being vertical could have been serious.

The final working chamber was spanned by a "blondin" style of hoist. Some years ago the mine inspector had complained that as the chamber had been worked down the anchorage for this had become completely inaccessible and could not be inspected. To overcome this a local Mining Engineer, Bob Gunn, was engaged to install a walkway around the top of the chamber to this anchorage. The highlight of the trip was being taken out along this catwalk which is an expanded metal floor with cable sides and enable you to look directly down into the chamber which falls beneath you for over 120 feet. For some the thought of this was too daunting.



*Looking up the working chamber from near the bottom. The catwalk above and the ladders used for descending to the bottom of the chamber can be seen.*

Following a detailed look at the final working chamber we passed inbye seeing the remains of an EIMCO rocker shovel before we came to the emergency exit ladder. The more adventurous took the ladder to the higher level whilst the more timid walked back to day and climbed up the path outside. Part way up the ladder a fine winch could be seen on a shelf to the right. The winch had clearly been steam powered at one time although it would have been compressed air powered at Aberllefenni. Aberllefenni were no different from other Slate quarries in the Corris district, and also in Cumbria in using former marine equipment underground.

On the upper level we could look down in awe at the floor below where we had been previously and up to see daylight over 200 feet above. We were then taken inbye to see some of the abandoned chambers. One chamber which could be seen breaking out to day above was partially fenced off and our guide explained that this was to keep Mine Explorers out. A member of our party

muttered "haven't been here for years". After exiting the mine we walked back down to the mill in village and saw all the slate processing machinery. This primarily consisted of modern diamond saws and polishing machines but an unused reciprocating frame saw could be seen in a shed in the yard.



*Climbing the "emergency exit" ladder*

Following lunch we walked around to the back of the mine where the workings break through on the far side of the Foel Grochan - an area known locally as Red Crane. Here there is a nice Scotch Derek manufactured by Rushworth of Colne who also manufactured the large sand saw used at Penarth Quarry near Corwen. There is no prize for guessing the colour of the crane although perhaps rusty brown might be more appropriate than red. It is not out of place to quote the following sections, verbatim, from the Wincilate Company newsletters regarding the retiring Manager Wally Simmonds and his replacement Andrew Taylor.



‘Wally Sydney Simmonds, or Wally as he is affectionately known, retired from Wincilate Limited in December after 50 years continuous service to the one company. He started his working life at the age of 15 and followed his father into the slate industry with the Bow Slate & Enamel & Co Ltd, in Bow in the East end of London. He quickly learned the business and after National Service in the parachute Regiment he rejoined the firm. There followed a period of expansion and one of the companies bought was John Fletcher & Dixon Ltd in Caernarfon, North Wales. Wally was asked to move there and run the factory. This was a big wrench from his grass roots in the East End but was one that he was willing to make.

With the acquisition of Aberllefenni quarry and subsequent changes within the company, Wally took over responsibility, for quarry production as well as the company's other factories In North Wales. Slate mining was a completely new aspect to Wally but was vital to the future of Wincilate Ltd. He quickly learned the art of slate mining which was unique to Aberllefenni.

The success of Wincilate Ltd over the last 50 years can be attributed to a very large part, to Wally's hard work, commitment and total dedication to the firm of which he has been a director for many years. He has always loved a challenge, but never, ever, compromised on quality.

Andrew Martin Taylor has worked at Aberllefenni for over 16 years and took over from Wally Simmonds in January 2004. He had an excellent tutor in Wally and he has settled in well and accepted the new challenge.

Andrew was born in Warwickshire in 1962, and joined the army at the age of 15. He did a 2 year apprenticeship as a plant fitter. In 1984 he started drilling water wells for the army and for a period of 3 years worked all over the world. He left in 1988 and then worked for the drilling company AMOCO.

Later that year he returned to Wales to be close to his family and started work for

Wincilate Limited in the same year. He continued to work for the Territorial Army drilling water wells for a couple of weeks a year with the blessing of Wincilate who considered it was good experience for him.

Andrew took over from Wally in 2003 and is keen to keep up the high standards that customers expect. Andrew's hobbies are restoring old motor bikes and camper vans. He recently became engaged to his long time girlfriend Janice. Andrew is 6' 6" tall and Janice is 4' 11 ", so they make a striking couple! Janice's dad worked for many years in the quarry and looked after the company's Anderson Grice frame saw machine, which was revolutionary when it was first installed.

Jon Knowles

References: 1. Slate Quarrying at Corris by A.J.Richards. Page 76.



*The Catwalk.*

#### **Oakley, April 2004**

Jon also sent me a report of his meet at Oakley last April, but since I have been fortunate in receiving such a wealth of material for this Newsletter, I shall hold it over for the next one, due out in May. This will include Richard Hewer's Article and, hopefully, a report on the recent Mines Forum meetings.

Editor.

### Mining Archaeology in Scotland

The following is an extract from a letter from Robert Gurr, who has recently moved to Keith, near Aberdeen in Banffshire:

Mining archaeology is thin on the ground in north Scotland, the sites I know about are mostly slate quarries; these include the Glens of Foundland slate workings in Aberdeenshire. The slate from here was carried part of the way to Aberdeen by canal and the Aberdeenshire Canal Company used the same methods of construction as the Lancaster Canal, and even employed the Lancaster Coal Company as consultants. There are slate quarries at Perthshire and at Ballachulish, which has produced some high quality roof slate and used several miles of tramways operated by petrol simplex locomotives. Skye Marble Quarries and the Raasay Iron mines are a must for anyone in the area, but more local to me is the Lecht Iron and Manganese mine.

Very little is known about this mine; there is an interpretation panel inside the machinery shed which suggests that the mine was worked for iron between 1730 and 1737, and for manganese around 1840.



*Machinery shed, restored by Moray Council*

Iron was smelted at Nethy Bridge and the manganese was taken by cart to Portgordon on the Moray Coast. Exploratory drilling was carried out in the 1980's for whatever reason. I have enclosed pictures of the Lecht mine for

anyone who may be interested in them. Considering that the mine has not been worked for over 160 years I can only presume that the spoil is rather toxic as there are areas with no vegetation.



The interpretation inside the building suggests the mine was worked from adits, but the photos imply open-cast workings or even close-heads. The scale is lost on most of the pictures, but most hollows are around 30 feet deep. One thing I am sure about is that barrows were the main method of transportation to the stamps.

I don't get the impression that the Moray council went to any great lengths in their search for details and I have not found any evidence of an archaeological dig. There is however iron rich spoil which may have come from bore samples in the 1980's. The heather is rather thick over the site, which makes it very difficult to see what's what. Maybe the Glenlivet estate will burn it soon as the rest of the moor has been done. If you are looking for the mine on the map it is just at the foot of the hill where the ski centre is, at a place called the Wells of Lecht on the A939, about three miles from Tomintoul. The road follows the glen of the Conglass Water, (the Wells of Lecht being at the head of the glen) You will notice a sharp bend in the road at the head of the glen; that is the point where the mine road starts and pulls away to the east for a short distance. The mine is visible from the road and the ski centre is visible from the mine!

## **So You Have a Digital Camera Part 2**

In the last edition of the CAT Newsletter I went into the reasons for having a strategy to save your image files. An ideal use for a digital camera is in recording archives; you can take literally hundreds of images at high resolution. BUT There is the permission of the archive to obtain, and conditions will usually be attached to your activities, not forgetting copyright. It is not unknown for people to squirrel away original material for their own private use, thus rendering the material inaccessible to future researchers.

The advent of digital cameras has made the capture of documents much easier. The usual way to deal with this is to forbid cameras, or to specify the resolution in which the document can be recorded. In our case, for non archive material and in line with the recommendations in the last article, the primary archive is high resolution 300dpi TIFF. For distribution to interested researchers the resolution is 100dpi Jpg (800 X 600 pixels), adequate for images on a computer screen but only printable at a coarse resolution.

All digital cameras have the means to set the pixel resolution to 600 X 480, 800 X 600, 1024 X 768, and instructions are to be found in the user manual on how to check this. The lower the resolution the lower the quality, but the more images you can store. 800 X 6000 is the resolution archives may normally permit. Resolutions higher than this normally come under the title of high definition images, and should not be used unless your agreement with the archive permits it. (Just in case you were wondering how people can find out the resolution, this data is saved with the original image, plus the date and a whole host of other information.

Obviously in an archive it is doubtful that anyone will check up, and all societies and groups can do is to inform their members of the digital facts of life and to ask them to sign that they have read and understood the Archive Permit information.

Just by way of an illustration, an image on a computer monitor set to 800 X 600 pixels which was scanned at 800 X 600 pixels, or 100 dpi, will appear to be the same size as the original at 100% enlargement on the screen.

Remember – Do you wish to have the use of cameras totally forbidden as a means of copying archival information? I know that people being what they are the desire for keeping high resolution images of original documents is strong. In the end there is not a lot that can be done by societies, especially if people work outside the group.

Mark Simpson.

If what you want is a camera that will work with a desktop inkjet printer to produce high-quality printouts at larger sizes, more pixels are paramount. In terms of exactly matching the results of a 35mm film camera and traditional lab printing, it takes a whole lot of pixels. For example, the new 3-megapixel cameras will make very good 8x10 prints. Technically, to match film quality, a 6-megapixel camera is required. But in reality, a great print can be achieved with only a 3-megapixel camera. The detail in film-based printing is tremendous, but unless you're holding a lab-made silver print next to its inkjet duplicate, you'll probably be hard-pressed to find many flaws with the digital version. That's why you can sometimes get away with fewer pixels than the mathematics may require. In short, the more pixels a camera's CCD has, the bigger the prints you'll be able to make.

## CUMBRIA AMENITY TRUST MINING HISTORY SOCIETY

Committee Meeting held on the Monday 19th November 2004 at the BMSC Hut at Coniston, starting at 2.30pm.

### Agenda.

- |    |                       |    |  |
|----|-----------------------|----|--|
| 1  | Apologies for absence | 2  | Minutes of the last meeting              |
| 3  | Matters arising       | 4  | Secretary's Report                       |
| 5  | Treasurer's Report    | 6  | Membership Secretary's Report            |
| 7  | Meet Report           | 8  | Newsletter                               |
| 9  | Publications          | 10 | Library                                  |
| 11 | Coniston Coppermines  | 12 | Hudgillburn                              |
| 13 | NAMHO 04              | 14 | Date and venue of next committee meeting |
| 15 | Any other business    |    |  |

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

The meeting commenced at 2.30 pm. 9 members attended.

### 1 Apologies for absence from: none

### 2 Minutes of the last meeting

The minutes of the committee meeting held on Monday 27th September had been previously circulated to members, it was **PROPOSED** by JA and **SECONDED** by MSc 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 3.2 The next Mines Forum meeting to be held at the John Ruskin Museum (hosted by CAT) on Friday 10th December.
- 3.2 Item 3.4 PF reported he had been in contact with the Lancashire County Museum Service regarding the intended conservation treatment of the tub recovered from Daylight Hole, Lindal in Furness. They had received a quote of £500 for shot blasting. This was thought to be high and we would seek another estimate. The remaining conservation treatment would cost £250.
- 3.3 Item 15.2/3 PF would arrange separate site meetings at Coniston with S. Dickinson and P. Meredith. The latter would require a student project proposal for next year ASAP.
- 3.4 15.2 JB had been to Goldscope; he would draw up plans and give an estimate of cost for steelwork. Advice from a structural engineer would also be required. When this information was available, PF would look into applying for funding.

### 4 Secretary's Report

Received since last meeting:

- 4.1 LDNPA- nil.
- 4.2 Renewal notice for the Magpie insurance for the contents of the CAT library. It was decided not to renew the insurance as the Armitt is a fireproof building and they do not have their contents insured.
- 4.3 An email (July) from Alan McFadzean who is having a clear out of books & documents and asks if we would like them - I said yes, and am waiting to hear from him.
- 4.4 SB had attended the NAMHO council meeting on 13<sup>th</sup> November meeting at Killhope. The 2005 conference will be held near Box Hill, Dorking on 8-10 July. The booking forms are available on the NAMHO web site.

### 5 Treasurer's Report

JA presented his report and the balance sheet covering the period from 28th September to 27th November, the current a/c stood at 2496.46 and the Scottish Widow a/c at 12400.00. Income for the period was 2756.86 and expenditure 1364.55. The Trustees Annual Report required by the Charity Commission was discussed. It was decided CAT should adopt a reserve policy. JA **PROPOSED**, "Since the Society has no regular financial commitments, it should ensure that under normal circumstances the Society's reserves do not fall below £500, that being the 'excess' applicable the Public Liability Insurance Policy. **SECONDED** by MS, all were in favour.



**6 Membership Secretary's Report**

72 members had paid their 2005 subs, 8 or 9 had paid newsletter only, 30 had not yet renewed. IM had received two letters from members who had resigned for personal reasons. It was decided to drop the newsletter only category; all could be members but if they did not pay the PLI, they could not attend any outdoor meets. IM would inform relevant members of the change. It was decided to add the following to the application form:

**"CATMHS recognises that industrial archaeological field activities, particularly in a mining and quarrying environment involves danger of death. Participants in these activities must be aware of these risks at all times and behave accordingly"**

Prospective members could attend meets for 17 days in their first year, without paying PLI (they must not have been a member the year before). To encourage younger members IM PROPOSED, "that students or 18/21 year olds would pay only £1 subscription (plus PLI) for their first year", SECONDED MS, all were in favour.

**7 Meets Secretary's Report**

A payment to JA of £100.23 for equipment used on the recent Rampgill conservation meet was agreed. It was also agreed that JA could purchase 20 ring hangers for pitch project equipment. After the Rampgill meet the rope used for hauling was scraped. The social meet at the Britannia on 11th October had not been a success: It was decided to cancel the social meeting for the present.

**8 Newsletter**

The next NL would go out in February. The quantity of articles had been going down, IM appealed for copy.

**9 Publications-A long discussion took place, see separate sheet.****10 Library**

IM, SB & D. Borthwick had spent a day at the Armit Library cataloging mine plans. Jamie Lund (NT Archaeologist) had also visited. Cardfile disks to Access files- no progress as yet. JA reported that the transcription of the Haygill letters had been completed and they were now on a CD. SB to inform donor (J.K. Almond). The original documents to go in our archive. Thanks to Leslie Aird for this work.

**11 Coniston Coppermines**

JB had fitted the steel gate at Levers Water Mine; keys were now available, one to be given to COMRU and 2 to be kept in Mandall's. PF will need to contact English Heritage, to give a progress report of the work at Levers Water mine and will need photographs of all stages to accompany the report. It was agreed we should invite them and other partners to view the mine, when the work was finished. We could not be responsible for their insurance.

**12 Hudgillburn Mine**

SB and A. Cameron had visited HGB; all was well in the mine. Surface water was draining into the level through the roof; a work meet was needed to re-dig the drain.

**13 NAMHO 2004**

The conference a/c had been completed; surplus from the event was £555.55. This item can now be removed from the agenda.

**14 Date and venue of next Meeting** To be held on 17th January 2005 at the Hut, Coniston, at 2.30 PM.**15 Any other business**

**15.1** PF - Plans for the reconstructions of the entrance to Lucy Tongue Level were discussed.

**15.2** IM had been in contact with the Newlands Furnace Trust, who were to have a meeting with English Heritage to review the cost of the repairs to the charging house roof.

**15.3** AGM & Dinner - Details of the after dinner entertainment were discussed. PF and J. Knowles to show slides, there will be the usual raffle.

There being no further business the meeting closed at 9.00pm.

SB 03/12/04

## **CUMBRIA AMENITY TRUST MINING HISTORY SOCIETY**

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<b>Vice President:</b>	Major J.W.B. Hext
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<b>Committee members:</b>	John Aird      Sheila Barker      Dave Bridge John Brown      Peter Fleming      Ian Matheson Mike Mitchell      Mark Scott      Mark Simpson Angela Wilson
<b>Honorary Members:</b>	Sheila Barker, Peter Fleming, John Marshall, Mike Mitchell, Dave Bridge.