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The Newsletter of the Cumbria Amenity Trust Mining History Society

No. 90 February 2008

Cumbria Amenity Trust Mining History Society
Newsletter No 90, February 2008.

Contents:

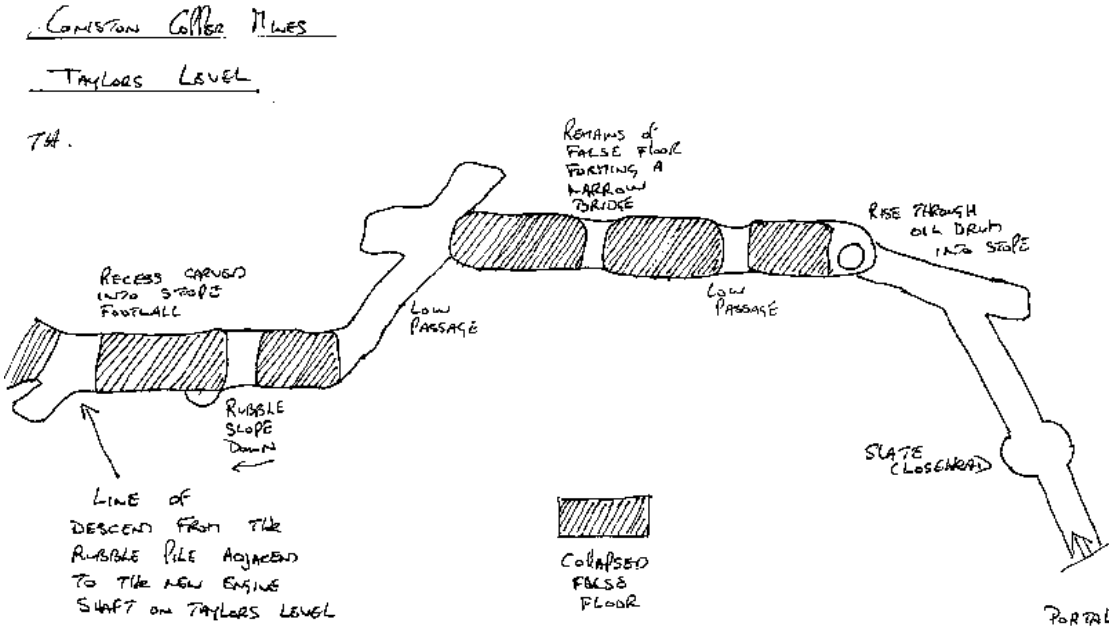
Cover Picture
A ventilation door beneath South Shaft in Deep Level, Coniston. Photo Tony Holland .
See Roger Ramsden's article on page 11.

Editorial

2007 saw a great deal of progress in mine conservation. The Middlecleugh Project was completed, the Kernal Level Project started and the Carrock Mine project planned. We carried out the Geo Physical Investigation below Simons Nick, and helped to arrange the survey of the Paddy End Dressing Floors by Oxford Archaeology North. Unfortunately it was also a sad year as three ladies each lost her battle with cancer. Mark Simpson's wife Susan passed away in August. Jill Aldersly the artist and an early member of CAT died in October after a short illness and Ian Tyler's wife Jean died in December. All three are a great loss and our thoughts and good wishes are with those they leave behind.

Apologies.

On page 26 of NL 89 I published an account of Tony Holland's work in Taylor's Level. Unfortunately I omitted his diagram which illustrates his description. Here it is:



Membership

We welcome Brian and Anne Cubbon from Norfolk, who learned of CAT from Peter Sandbach. Brian lived in the area once upon a time. Previously he was interested in mining in South West England and the biology of caves and mines (see below) but now is specifically interested in Furness Iron

In my comment following the report of developments in Kernel Level at Coniston, I wrote 'Officially this project has nothing to do with the nearby Kernal Level project, indeed the two parties involved seem determined to remain independent of one another.' This was not strictly accurate and should have read '*the two parties have acted independently of one another.*' Whilst there has been communication between them each team has been focused upon their own development and has not wanted to be distracted. On December 2nd, with both projects nearing completion John Brown and Andrew Woolard gave the South Shaft team a guided tour of the Kernal Level discoveries.

and Furness Furnaces. His article on Stank Engine House appears on page 25 of this Newsletter.

Brian's previous publications include:
Flora Records of the Cave Research Group of Great Britain, 1939 – June 1969. Trans. C.R.G.12 (1) p 57-74.

Cave Flora in The Science of Speleology (ch11) Ed. Ford TD and Cullingford CHD, Academic Press.

Notes in North Devon Metal Mines. Private publication. (There is a copy in the CAT Library)

CATMHS AGM and Dinner

CATMHS AGM and Dinner was held on 8th December at the Crown hotel in Coniston. About fifteen members attended the AGM and about thirty five came to the dinner. Tony Holland was elected to the Committee and all of the standing committee members were re-elected.
After a riotous Christmas Dinner there was a pause to get the technology working, and then some slides. Tony Holland showed some stunning shots of the Nenthead mines taken by light painting, Jon Knowles showed slides of his exploration of the vast underground spaces at the Corris slate quarries, Andrew Woollard brought us up to date with the re-opening and subsequent exploration of Kernal Level at Coniston and Ken Geddes showed a segment of an old film showing Yew Crag and Honister quarries in operation. A good time was had by all.

Chairman's Report
A lot seems to have happened this year though not much of an increase in new members. A year ago there were several projects in progress – Middlecleugh and the Aberllefenni explorations. A series of meets were also in hand - despite the lack of support for most of them and these have been continued into next year. Projects in the pipeline were the re-0pening of Kernal Level and digitising and compilation a list of source material for Cumbrian Mines especially relating to Coniston. Some of the events that happened (this is not inclusive):

In **January** I put forward the idea of obtaining our GPS mapping device, with the purpose of encouraging members who did not wish to be involved with underground activities. At the same time it was decided to make available all the information we had on Coniston mines, D Bridge providing break down of 'Charles Roe a Georgian Gent' (now in the CAT archive). Later on that month there was a meeting at Murley Moss re Copper Mining interpretation. Despite a lack of encouragement from J Hodgson we decided to go ahead with new trail leaflets funded by CATMH S– The first one- 'A walk round Coniston' is about to go into publication.

February saw, the preliminary meeting with OAN at Coniston re their Paddy End Mill survey, a CATMH asset list was produced and Don Borthwick our Archivist getting his teeth into the Archive. A Cameron arranged a meeting at the YHA, Holly How to discuss a Mines and Mountains weekend for 14 October 2007 which owing to unforeseen circumstances this did not take place. The archive work continued with D Bridge, Hammersly transcript of Hechetters notes.

March brought a Mines Forum meeting where Carrock Mine was discussed and Middlecleugh entrance mentioned as approaching completion. 11th March saw a OAN training day at

Coniston with Total Station and GPS. Soon, after this OAN started their survey at Paddy End Mil, they have promised CATMHS a copy of report, to date we have not received this. Mid March saw the submission of the method statement and approval of the bat gate for Kernal Level; with a final site meeting at the end of the month - Bats Found.

April. Work started on Kernal level, bats not withstanding. About the same time English Heritage rejected our application for listing of Mandall's. I was still investigating and trialing mapping grade GPS equipment, a decision was made by the end of the month and by mid May we obtained a Thales MMCE GPS and software.

May saw a copy of Coniston GPR Survey of 2006 received and the Kernal Level dig into the collapse complete and level gated – exploration now under way – John Brown and Andrew Woollard leading the way

In **July** A Cameron reported Mandall's Slate office to be retained as part of a new housing scheme.

August – September Kernal level exploration was proceeding and the LMQT dig in South shaft was being dug out. A Section of Middle Stope in Kernal Level and plan v1 was produced by myself.

The 16th **September** saw a meet at Threlkeld Museum, an enterprise which CATMHS has close links with. Please support this venture whenever you are near it.

In **October** we had a visit to Newlands Iron Furnace, another project that CATMHS members have been involved with over very many years – help and support is still needed. Mines Forum 26 October New timbers required in Lucy level was discussed. 13 October we attended the LDNPA conference 'Archaeology in the Lake District' at Keswick, where A. Cameron and W. Allinson gave papers on the Coniston Old Man Survey and The Silver Gill Wagonway. On 31st October meeting held at Carrock Fell Mine to asses the adit entrance and other works.

On the 20th **November** there was the formal thanking of people for Middlecleugh project by NPHT, a good effort by all who carried out the work.
Myself and I. Matheson made a start on digitising cost books at Hollywhath, the Ruskin Museum books will be next. D Borthwick conquered the GPS device and produced an improved instruction manual/ presentation, in addition to continuing sorting the CAT Archive out. Late in November the Newlands Iron Furnace Trust got to grips with covering the furnace stack – a discussion is still ongoing – It is hoped that what is put in place will do justice to all the hard work that has gone on for so many years. By the 30th November Kernal level was fully explored and the plan completed.

Future – Finish off Kernal level survey, start work at Carrock Fell Mine, and thence on to Silver Gill; subject to permissions. A new journal is to be produced and will be brought out this year, assuming all the contributors get their act together. All being well we will finally do a lot more GPS mapping of mine sites and digitising of archives will continue. The events of the previous year have required the help of many people, from the means of providing the funding, to the projects themselves. Sharing is important, it is easy for folks to do their own thing and not contribute to

the Society, activities embarked upon depending as usual on the active membership. If you wish to see what I mean, look who provides input to the newsletter. Our finances are sound and we will help any member with an approved project.

Finally - We are badly in need of someone to look after publicity, to create links to other websites and to send out more flyers. If we are invisible, how are we supposed to attract new members.

Mark Simpson.

Secretary's Report

We held the usual 6 committee meetings during the year, all were well attended. Recently we amended the CAT Field Research Policy regarding conservation work and the protection of minerals and aretefacts. The full version will be printed in the NL and sent out to new members. Apart from attending to all usual day to day enquiries:

BGS and The Mining Information Group are creating a Nation Data base of non-coal mine plans for Great Britain. In the last 2 years all the HSE abandonment plans have been scanned and BGS are adding all their plans. I have not yet been asked if we have any to add to the collection. Website is: www.bgs.ac.uk/nocomico/

I have attended 1 NAMHO Council meeting as CAT representative. The 2008 Conference will be held in Scotland, on 11/13 July, at the Lady Victoria Colliery, Newton grange, nr Edinburgh, the title is 'Mines and people: the Mining Industries of Scotland', details can be found on the NAMHO website.

Sheila Barker.

Treasurer's Report.

If we were to go back to the AGM in 2001 a quick glance at the Balance Sheet would show Funds in Hand of £5000 and assets consisting of a large number of copies of "Lakeland's Mining Heritage". Today's Balance Sheet demonstrates what a sound investment that publication was, having just sold the last copy; we now have Funds in Hand of just over £16000, despite having published in the intervening years Journal 5 and a second edition of "Slate from Coniston".

In addition we have spent £3400 over the past three years on projects to restore underground access to Greenside, Leverswater Mine, Hospital, Grey Crag, Middlecleugh and Kernal levels. Despite our expenditure on these works it's essential to record that our success in these endeavours has been the due to the extraordinary dedication and hard work of the team lead by John Brown.

Comparison of the Receipts and Payments Accounts for this year and last year show a significant increase in both income and expenditure. The cause of both is the fact that we have extended the payment of travelling expenses from simply Committee members to include other members involved in travelling for the Society's benefit. The generosity of both groups in donating these expenses back to the Society under the Gift Aid scheme has been particularly beneficial.

Our single major item of expenditure was the purchase of GPS surveying hardware and software. While it will take time for some of us to achieve proficiency in operation the potential to rapidly and accurately record data will be of tremendous value.

Looking forward we intend to publish Journal 6 along with a revised and greatly improved leaflet on the Coppermines. A number of interesting physical projects are under consideration. In view of these potential expenses and the generally less accommodating financial climate that is developing it is pleasing that we have experienced another good year and go forward in sound state.

In conclusion I would like to thank Mr David Porter for auditing the accounts.

News

Coniston water turbine.

During one of their visits to Coniston Mike Mitchell and Clive Barrow went into Deep Level and found a large blue pipe that seemed to have been used in an attempt to siphon water from the flooded stopes beneath the Old Engine Shaft. We were all puzzled as to who would do such a thing and why. Recently I received the following email from Dave Sewart:

'I was talking to George Tarr recently. As an experiment he syphoned a few feet of water out of Horse Level on Bonzor. It knocked up the output of the turbine by quite a bit for a short time, but dropped the level in the mine remarkably quickly - so there is not much surface area, even when the level is dropped a bit.'

The Coniston water turbine project worked well following its installation, and George said that production of electricity was better than expected. However, the spell of nice weather before Christmas reduced the flow of water in the beck, and this seems to have been an attempt to augment the supply with water from the mine.

IM.

South shaft dig awarded expenses up to £250

At the CAT Committee meeting on 19th November it was agreed that the Society would pay for materials needed for the South Shaft venture, up to a maximum cost of £250.

South Shaft breakthrough.

Email from Tony Holland, 26.11.07.

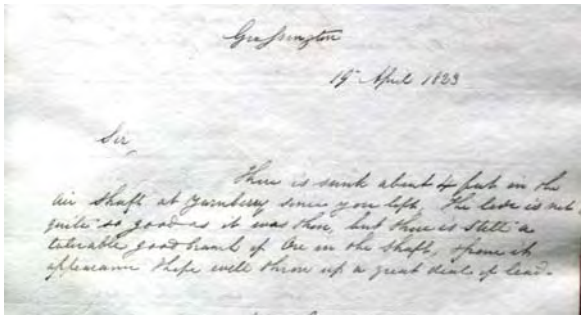
'You have probably heard, but just in case you haven't, we have had a breakthrough at the South Shaft Dig. On Sunday Roger & I got down onto Deep Level. We explored inbye as far as the Hospital Stopes. I recognized this from one of the pics on the disc that you sent. This area is very badly collapsed with no obvious way on. The timbers in this area were very large indeed. We explored in the other direction. A stope was encountered on the left just where the level bends through 90deg to the left. About 150' further along Deep Level a large unstable rubble slope comes in from above blocking the level at that point. I scaled the slope but found it to be totally choked at the top. Back down on Deep Level, it looks very much like LMQT had started to tunnel through the rubble slope. Their shoring is still very sound and doing its job.

Editors note: In 1989 I led meet to have a look at the then recently completed LMQT dig in South Shaft. We were able to ascend the unstable rubble slope and to climb through a small vertical rock hole at the top into a stope containing several false floors, supporting (just) considerable quantities of stacked deads. I'm not surprised that one of these seems to have collapsed, blocking the hole. A short cross cut led to a parallel stope, but we didn't explore properly due to the risks involved. From a rough assessment of the distances and depths, it seems likely that this area is very

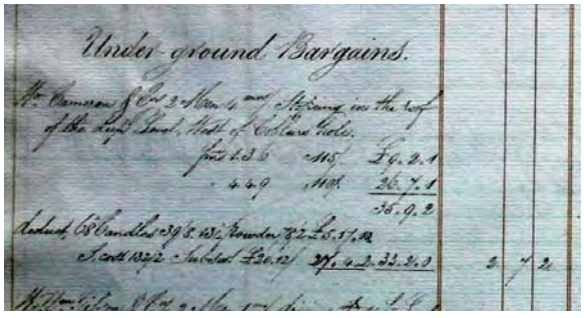
close to the vein that has been worked down from Kernal Level And there may even be a connection. I have recently discussed the dig with Roy Garner, who carried out the original South Shaft project, and he confirmed that the LMQT group had started to tunnel through the rubble slope, and also to bolt up the stopes above, but had given up on both projects.

IM.

Coniston Copper Mines letters and Cost Books. Major J W B Hext, of Holywath, Coniston, and CATMHS Vice President, is a descendant through the female line of John Barratt, who came to Coniston around 1824 to develop the mines for John Taylor. Major Hext has some cost books relating to this period and a bound collection of letters from Barratt to Taylor reporting on developments at Coniston and elsewhere. Some time



ago he very kindly allowed me to see these documents and to transcribe them. My intention was to transcribe just those letters relating to the



Coniston mines, but when I had done so I wanted to continue and do all the others. I didn't complete the job, but now Major Hext has allowed Mark Simpson and I to photograph the documents, so we now have a

complete digital record. Several people have agreed to share the task of transcribing them, and I have prepared copies of the document images on CD together with templates for the transcriptions. If you would like to help with this rather challenging indoor task then please let me know.

Ian Matheson.
ian@rothayholme.freeserve.co.uk

Field Research Policy - 2007

To maintain and further the aims and objectives of this society and to remain at the forefront of mine research in the north of England, it has become necessary to comply with ever changing legislation.

New exploration and conservation work should not be carried out without first obtaining permission from the relevant authority, submitting a full schedule and risk assessment for the work to be undertaken.

The initial agreement with landowners regarding future conservation projects carried out by CATMHS should include: discussion of access arrangements to sites once the work is

finished and our policy on the protection of any artefacts and mineralogical or geological features found.
This policy is not intended in any way to inhibit exploratory digs, or the surveying and documentation of surface or underground mining features and remains; the committee will consider seeking permission on behalf of the society and its members where necessary.
The Cumbria Amenity Trust Mining History Society's artefacts statement (April 1999) was amended to include mineralogical/geological features in November 2006, to read:
The policy of the Society is that any artefacts, mineralogical or geological features found on CATMHS meets should be left undisturbed. A photographic record should be made and details of the find given to the meet leader. They should only be removed if they are under threat, they then becomes the responsibility of the Society, but after being recorded, they can be held in the possession of the discoverer, whilst he/she remains a CATMHS member and has suitable storage facilities.
The arrangement is subject to the condition that they may be recalled for display at some future date.

They should only be removed if they are under threat, they then becomes the responsibility of the Trust, but can be held in the possession of the discoverer, providing he/she is a CATMHS member and has suitable storage facilities.
The arrangement is subject to the condition that they may be recalled for display at some future date.

New Appointment for Richard Newman.
On October 1st 207 Richard Newman ceased to be Cumbria's County Archaeologist and took over the role of Environmental Planning Manager for Cumbria County Council. A new County Archaeologist, to be known as the Senior Historic Environment Officer will be appointed in due course. Richard will still be involved with Cumbria's Archaeology within the County Council as the Historic Environment Service is one of a group of teams for which he has line management responsibility.

Cumbria book collection for sale
I write regarding a collection of books etc. relating to Cumbrian history. I accumulated these largely in the 1990s and they run to some 250+ items with more than half being hardbound. The emphasis in the collection is on Cumberland. After publication of academic articles and one or two other items on Cumbrian history, work has now taken me away from my native county and this has made me decide to sell the book collection. The intention is not to make money but to try to recoup the outlay; important now that I have family commitments.

Items include:
Transactions of the C&WA&AS Old Series - complete ex 3 part volumes.
New Series - 8 volumes
Journal of the Cumbrian Railways Association - complete run
Histories - Nicolson & Burn, Hutchinson, Whellan, Lysons, Ferguson…
Directories - Parson & White, Mannix & Whellan, Bulmer, Morris Harrison and Co, Jollie, Kelly…
Towns Aspatria, Workington, Whitehaven, Cockermouth, Cleator Moor, Arlecdon and Frizington, Keswick… A small number of maps and plans, some framed. I would be happy to respond to enquiries by email dav_ian_smith@hotmail.com) or telephone (01623 403677).

Carrock Mine

At the March 2007 Mines Forum Meeting Peter Fleming noted that MOLES had again asked about the re-opening of Carrock Mine Peter had written to John Hodgson in 2003 about the matter, concerned about the silt building up. Eleanor Kingston requested that he write a summary of the issues, and what would be required. She would find out about sources of funding. This could be a potential joint project with MOLES.

Peter produced a briefing note for the next meeting in which he outlined the background, history and importance of the mine, which was first operated for lead and copper, but later for wolfram which was mined during both World Wars. The mine was again worked in the 1970s until its closure in 1981. The mine survives well and contains a diverse and impressive range of surface and below ground features. Brian Young of the British Geological Survey had pointed out that the mine provides a unique opportunity to study the relationship of the Skiddaw granite with the minerals that are associated with it, for example Sheelite, Apatite and Molybdenite.

The main entrance to the mine is currently blocked by debris, leading to silting up of the main adit and a build up of Radon gas. The solution would involve removing the debris at the entrance to the mine, installing a lockable gate and removing the silt. This would alow air circulation.

A site meeting was arranged and representatives were invited from Natural England, English Heritage, Dalemain Estate, Environment Agency, LDNPA, MOLES and CAT. After initial discussion Ian Hebson suggested that spoil could be stored within the mine thus avoiding problems of pollution and disposal. From then on the response appeared very positive. A second meeting was arranged to discuss the practicalities.

John Brown was unable to attend the second meeting, but visited the mine earlier with Andrew and Colin Woollard and Peter Blezard. They decided that no more silt is being generated and recommended an internal dam and drainage to dry out the silt and to prevent contamination of the water whilst work was being carried out. The timbering just inside the entrance is unsafe and would need some remedial work doing to it. All of the internal work would need to be done before the spoil is removed from outside the portal. A gate could be incorporated with newly refurbished walls inside the entrance.

On November 13th Members of CAT and MOLES met with Eleanor Kingston of the LDNPA and two officers from the Environment Agency. The Brown, Blezard, Woolard team's suggestions were approved in principle

Mike Mitchell, Ian Hebson ad Eleanor Kingston in discussion

and it was agreed that the cost of materials for restoring the portal would be met by the authorities. CATMHS and MOLES have undertaken to assist a joint project with the Environment Agency and LDNPA to excavate the entrance to No 1 level at Carrock Mine and to carry out works to reinstate the entrance portal and erect a lockable entrance gate which will be in accordance with Natural England specifications for bat access.

Messrs Brown and Woolard have submitted estimated costs for restoring the portal, together with a Method Statement and a Risk Assessment. It is hoped that work can begin in the New Year. IM.

Cornish tin and tungsten mines set to re-open.
From Professional Engineering, 12th December 2007, sent by Jon Knowles.

An Australian mining company intends to reopen a disused tungsten and tin mine in Devon on the back of booming prices for metals. The move, by Wolf Mineras, comes in the wake of Western United Mines decision to reopen the South Crofty tin mine in Cornwall.

Wolf has purchased the Hemmerden deposit near Plymouth for AS$1 million, which is said to be one of the largest tungsten and tin resources in the West. The mine has been out of use since World War Two.

The Company said 'This major acquisition moves Wolf towards becoming a world class tungsten and tin producer.' It reckons there is ore in the mine to produce 10.44 million tonnes of tungsten.

Prices for metals are soaring – tin is currently trading at $16,100 per ton, up 50% from last year, making previously un-profitable operations attractive. Global demand is being driven by rapidly developing countries such as China and India, and supply cannot keep up.

Western United Mines is pumping big investment into South Crofty. Ir will spend £3.5 million there by June, with a further £50 million to come by the end of 2009, when production is expected to re-start. By next July South Crofty will have 35 full time employees, said the Company. South Crofty has a 400 year history, but was shut down in 1998.

Tungsten was first discovered at Hemmerden in the 1860s, but the mine was not developed until World War One, when exploration outlined an extensive wolframite deposit. Tungsten alloys were required to produce armaments. Commercial production continued sporadically, supplying the war effort until the end of WW2

The Hemmerden area has been mined for many centuries, producing significant amounts of tin, lead, zinc, arsenic, tungsten, copper and clay. The region retains several large clay mining operations.

Old Mining Collapse on the Tyne & Wear Metro.

On 17th October 2007 when I was at work in the Tyne & Wear Metro Control Room of which I am a manager, one of our train drivers radioed in saying he may have seen a hole under the track on the eastern approach to Northumberland Park Station at Backworth, Northumberland. The control asked him to go back and check and he confirmed that a void had opened up under the track. All trains were stopped pending further investigation, including Network Rail who run adjacent to the Metro tracks. On investigation the hole was found to be about ten feet deep and appeared to be an old road way used for extracting coal. On checking geological plans the coal seam is the High Main which at this location is approximately five feet thick and has been extensively worked over the years. The void was only five feet below the tracks. Old Coal Board Plans have no record of any workings within their time so was probably worked some time in the early 1800s. There are records of an old shaft to the SW which may have been the point of entry but nobody knows for sure. When the Metro was being built in the late 1970s, drilling and grouting work was carried out in the vicinity and further grouting was carried out when Northumberland Park Station was built in 2004/5. The line was closed for two weeks to allow further bore holes to be sunk and survey work carried out. The immediate hole was also filled with concrete slurry. Further work has commenced in January 2008 with more bore holes and grouting being carried out. It is estimated that around three and a half thousand tons of infill will be pumped in which will hopefully cure the problem. A remote CCTV camera was used to try and find the extent of the holes but was unable to travel far. I offered to pop down and check the old workings out for them but, alas, due to Health and Safety restrictions, was not allowed in. Shame!

Malcolm Charleton

Meets:

Boxing Day Meet

About sixteen people turned out for the Boxing Day Meet, led by Mark Scott. The group set off up the right hand side of Tilberthwaite Ghyll, pausing to discuss the adit beside the track which Eric Holland describes as 'a small working on the zinc lode.' At the top of the Ghyll adjacent to Spedding's mine Mark pointed out some drill holes and graffiti that he had noticed previously.

Mark had also dug into the small trial mine on the north lode, but no-one wanted wet feet, so the group traversed

across the fellside to Man Arm Mine, before crossing Dry Cove Bottom to Borlase Mine, and on over Hawk Rigg to a slate cavern overlooking Tilbertwaite Valley, where

Mike and Barbara Mitchell had arranged a wondrous Christmas feast of hot mulled wine, mince pies and a variety of cheeses! IM

The South Shaft Project, Coniston.

In the middle of 2007 myself, Mark Simpson and John Aird had a quick look down South Shaft on a pre-committee meet to find that the old LMQT route had totally collapsed. It was suggested that it would be good idea to re-open the shaft to see if there was a possibility of gaining contact with the exploration going on in Kernal level. I returned with Gerry a few weeks later to move most of the rubble back from the edge of the hole, which allowed us on the next visit, with John and his scaffold poles, to create a fence to protect any later work. John later wired up a traverse line at the shaft top and fixed hangers for the route down, including 2 re-belays.

Looking upwards from near the bottom of the dig.

For several weeks we dug down-ward installing a timbered wall as we went but finding problems with rubble running from under the wall before we could get planks fitted. At this point we recruited Tony Holland and Wendy Brown, as the deeper we dug the harder bucket hauling became (as I am virtually digging retired I let others do the graft) and the shaft dropped to a point where it kicked under the bed rock. Here John Aird returned to do some classy walling to hold things in place, but left a tight squeeze to get through. We passed our statuary H&S inspection by Pete Blezard at this point as we were a very long way down and any collapse would be a little untoward.

At last, late in the year, T.H. broke up a large boulder in the bottom of the hole to reveal the way through to the rest the rubble slope. After some securing we descended to the flooded sump and said a thank you to LMQT for digging out the cross-cut to Deep level. Here the level turns left, through a fine ventilation door to the massive collapse, which could be under Hospital level and turning right along a flooded Deep level we came to the impressive dig LMQT had started to gain access to new ground. Above this a precarious rubble slope, which had been reported as open to large stopes was totally blocked.

As far in-bye as is currently possible, directly below the collapsed stopes below hospital Level. All water from Paddy End passes through here.

We did not find any new ground but re-established old ground; there is a dig if any-one is keen enough, and as yet we have not made contact with Kernal level, but on the plus side we got some great T.H. photos.

My many thanks to: Tony Holland mining fanatic, Wendy Brown fanatic miner, John Aird fanatic treasurer, Peter Blezard consultant, Gerry Goldsborough chief stemple puncher. Photos by Tony Holland, written by Roger Ramsden.

At the top of a very steep slope. Ian Matheson once squeezed up through the vertical section at the rear, into the stope above. It is now very badly blocked with deads and there is no hope at all of opening it from below. The slope in the foreground is actually very steep !

Explorations On Coniston Deep Level

On completion of the Taylor's Level traverse in September 2007, the next logical way forward seemed to be an exploratory descent from the Taylor's Level horizon down to Deep Level. On an evening visit I bolted a route and descended down the stope to land on a slope of rocks and boulders. In-bye from here, after a short climb up a boulder slope, the stope entered into what I thought must the New Engine Shaft. No further progress was possible, so I clambered back down the rocky slope to the rope and considered the possibility of exploring in the out-by direction.

The ground sloped very steeply downwards and consisted mainly of fine gravel and sandy material. It was necessary to use the rope to aid my descent and as I worked my way down, the ground became vertical, now consisting of a dangerous looking pile of very fine, self supporting material that looked fragile enough to collapse if touched. I was very unhappy about continuing the descent, but I decided that I had come this far, so I would go on, but only this one time. Happily I soon landed on good level ground which I knew to be Deep Level. The level had a solid rock floor at this point, but overhead were many deads stacked on timbers, some of which had failed, depositing their load onto the level floor. After maybe 40ft or so, Deep Level was totally blocked by collapsed deads, but curiously, amongst the collapse material was the remains of a rusty old oil drum!

The most interesting part of the evenings adventure was the sight of ropes disappearing down to the flooded stopes some 10ft or so below. I immediately recognised this as the start of the LMQT walkway. This was installed back in the 1980s and provided a fun and sporting traverse along the flooded stopes with foot boards supported on angle brackets secured to the stope wall a few inches above the water level and a rope handline. Back in those days, as many members will recall, it was possible to enter Deep Level portal and reach the far side of the flooded stopes using the walkway.

The ropes looked OK but the hangers were quite badly corroded. I decided not to push things too far. Time for a sharp exit. Climbing back up the horrendous looking unsupported pile of muck and deads was unpleasant and unnerving. I decided this was definitely the last time I would venture down by that route.

Christmas Day. Having had quite a long break from Taylor's Level, I decided to revisit and spend a few hours bolting a new route down to Deep Level. I had a place in mind that should, if I was correct, land right next to the LMQT ropes I had seen on the previous descent. A bit of gardening work was required first and then I set about placing some anchors. This did not go smoothly. The rock in the vicinity is extremely hard and the result was that out of three attempts, I was only happy with one anchor. Time was pressing and my Christmas Dinner was calling so I left everything in place ready for the next visit and went to participate in the festivities, not wholly satisfied with the days work.

5th January. A cold, windy, wet day. I arrived at Taylors Level portal and kitted up as quickly as I could. The water in the entrance level was quite high and as I made my way along the rope traverse, the mine seemed angry and moody. The wind outside was

creating loud sounding draughts inside and water seemed to be coming in from everywhere it could, dripping and streaming, filling the mine with weird noises.

I arrived to where I had left everything on the previous visit and set about trying to get some anchors into the hard rock. This time things went well and soon I was descending down. It was necessary to fit a further anchor part way down for a re-belay. From there it was a long free hanging descent to land just where I had hoped, near to the LMQT ropes. This new route down was far better than the first one. After contemplating those ropes for a while, I decided that it was time to take a closer look at the walkway, so taking all precautions possible, I lowered myself down to the water level below. From this vantage point I could see that the hand lines seemed to be all in place and in reasonably good fettle. I could also see the walkway brackets, but curiously, there were no planks spanning them. I decided to venture a little further. By using cowstails clipped into the handline and bracing myself against the wall, it should be possible to traverse from bracket to bracket, I thought. There was only one way to find out. I managed to reach the first bracket with no problems, the rope and anchors seemed in very good condition considering the number of years they must have been there. Below me, the beautiful green water merged into the inky blackness of the fathomless flooded depths. I could see shadowy stemples, a hundred years under water, still supporting the stope walls, as they had done since skilled hands, long since gone, had formed and placed them…

As I progressed along the walkway, I encountered one or two remaining planks, but they creaked alarmingly when I placed a foot on them to test their strength. Finally I reached the end of the walkway and found myself on solid ground. The remains of a long dead sheep greeted me as I stepped off the final bracket and climbed up a slope to find myself in a quite fascinating area. Above, I could see daylight filtering down and about 10ft or so higher than where I stood, what could only be Deep Level itself. I managed to climb up and from this vantage point I could see another level that paralleled Deep Level in the outby direction. Deep Level is railed at this point and has a solid floor. I followed it a short distance, past a collapsed sunken area containing a ladder, to find a ventilation door.

Unfortunately, the level was blocked at that point. Going in-bye, the solid floor changed to false floor that had long ago collapsed despite the impressive timbering, the remains of which are still to be seen. I climbed back down and turned my attention to the parallel tunnel, but after a half hearted effort, I concluded that I was not a confident enough climber to tackle it.

collapsed sunken area containing a ladder

I was standing on a bridge of detritus that had tumbled down from above. Various artifacts lay around and I felt that the area had an air of importance and significance and was probably the New Engine Shaft. On both sides of this pile were flooded stopes, one of which I had just traversed along, using the walkway, but interestingly, the walkway appeared to continue in-bye across the next flooded stope! Just like the first section, the planks had gone. The ropes appeared OK but the hangers and anchors were in a rather poorer condition. Nevertheless, I had come this far and I had every intention of continuing as far I possibly could. Now an experienced traverser of plankless walkways, I started off across the flooded stope with grim determination. Arriving at the far end, the ropes disappeared upwards, so I clipped on and followed them up a sandy pile to the top, and on down the other side to finally reach solid rock floor once again. At this point I began to hear the sound of water flowing. A branch passage on the left looked promising so I stooped into it and after passing numerous minor artifacts, I came across an anvil. I remembered reading about this artefact in an old Society newsletter. Something about Peter Fleming talking to some cavers that had descended from the surface and had found an anvil?

Unfortunately the passage ended at a forehead with no sign of mineralization so I retraced my steps back to the stopes and that sound of flowing water. Moving further inbye the sound of water became very loud until at last I saw a waterfall flowing down a shaft into the depths below. The passage from where the water issued appeared badly blocked. This was a disappointment. Amongst others a very large boulder, maybe 6ft or more in length appeared to have come down preventing any further progress. It occurred to me that this was probably the site of the ‘Waterfall Dig’. (Later confirmed)

There appeared to be no further progress possible, so I decided to call it a day and make my way back along the two sections of LMQT walkway. It was rather more strenuous and difficult travelling back and at one point I seemed to be leaning so far back on my cowstails that my rear end almost had a dunking. I made a mental note about perhaps tightening up the handline ropes next time. The climb back up to Taylor’s Level was long and tiring and I was thoroughly wet and cold when I reached the portal at 4pm.

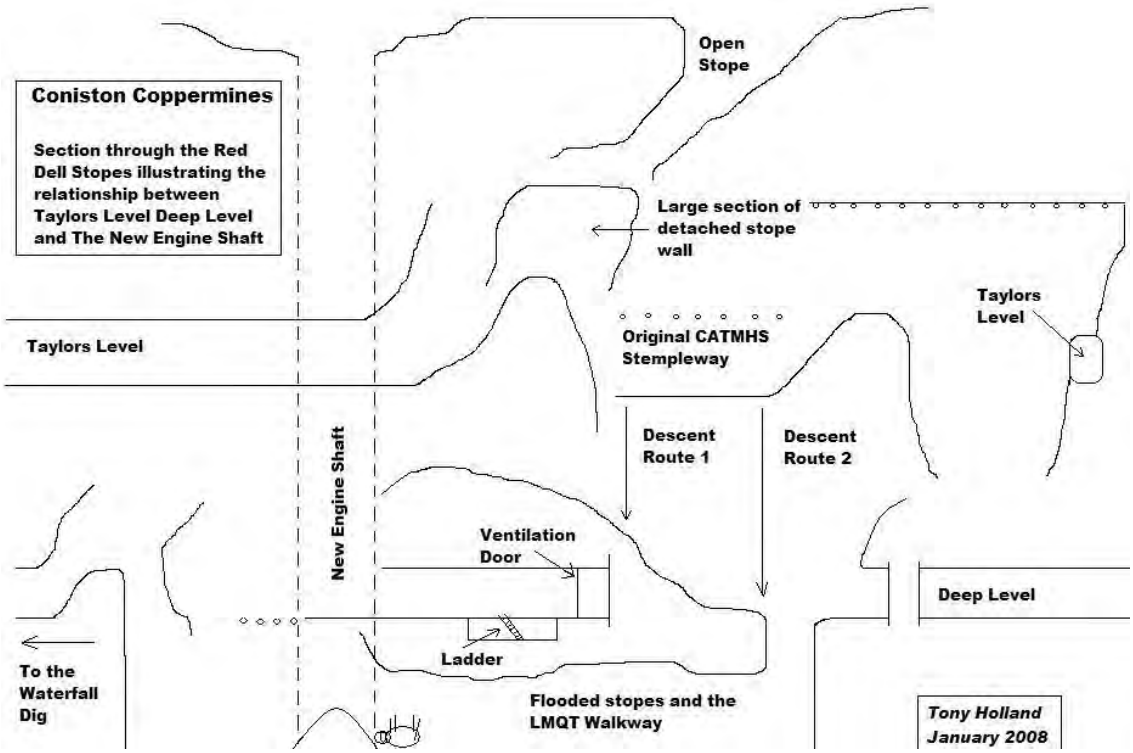
16th January 2008. A trio of bold adventurers: Roger Ramsden, John Aird & myself trekked up to Flemings Mine portal, kitted up and climbed down into the cold water. Descending down four pre roped SRT pitches, we reached Taylors Level, stopping off on the way down to admire the Triddle

Shaft timbering and pack walling from the 'viewpoint'. We proceded out-bye to the falls near the New Engine Shaft, which we scaled then abseiled back down to the Taylors Level horizon. We then descended down to Deep Level and inspected the LMQT walkway. Heeding Rogers's advice (later purported to originate from Peter Fleming) to place himself between the stope wall and the traverse line earned our unfortunate treasurer a dunking in the deep cold water. 'That's what Peter advised me to do' chortled Roger. After lunch we headed for the portal of Taylors Level, where more mirth ensued when it became apparent that one member had left his flask of coffee and butty box back down on Deep Level.

Later the same day, Roger and I entered Deep Adit Level portal and climbed up the LMQT dig into the stope beyond. Inspecting the timbers in the level below the stope, it was quite apparent that the old miners had experienced big problems there. All of the impressive roof timbers had at a later date, been reinforced with additional timers of similar proportions. A pack wall had also been built we surmised, to help support the roof at the expense of nearly half the width of the level.

We then followed the level as far as the blockage, the result of fallen material from Taylors Level, before returning to day in a thoughtful frame of mind as we discussed the gradual and progressive deterioration and resulting inaccessibility of sections of Consiston Deep Level.

Tony Holland.



A Great Nenthead Through Trip
Saturday 1st December 2007

Members present : Ian Hebson, Simon Lowe, Wendy Brown and Tony Holland, together with non members Mark, Martin and Dave.

The great Nenthead through trip was one of the most adventurous underground trips available in the UK. It was also surely one of the most arduous, covering a distance of some 4 miles underground and featuring delights such as neck deep water, crawls and SRT descents. The trip began at the Capelcleugh mine before ascending the ladder way up into Smallcleugh mine, then abseiling down into the Rampgill mine then abseiling down into the Brownley Hill mine and finally down into the Nentsberry Haggs mine to finally emerge a couple of miles down the Alston road many hours later. A trip of epic proportions. The original, traditional route from Smallcleugh down to Rampgill, at the northern end of the Smallcleugh flats is now no longer accessible due to a collapse totally blocking the level, but another way down is still open. Also the Nentsberry Haggs level is currently blocked by a collapse. So, apart from the Nentberry Haggs section, this trip is still possible.

It was a blustery damp Saturday morning at the Nenthead car park as we donned our gear and entered Capelcleugh at 9:40. The level of water in first part of the Horse Level was ominously deep compared to that of a few weeks previously. We made our way up the Capelcleugh incline, inspecting the signalling apparatus at the bottom and top. From the top of the incline we rapidly progressed along the cross cut through the shale to the Browngill Vein junction known as 'Toilet Box Junction'. We turned left here into a section of waist deep water. There are many rises and ladderways along this section of the Horse Level, but most of them are blocked at the top. One, however still affords access to the Capelcleugh Flats and it was this one we climbed to arrive at a sub level beneath the flats. Here we saw a very fine ore wagon and other artifacts. We climbed higher via an ore chute it a large ore flat working where amongst other finds we saw a curious triangular shaped tool box. At the far end of this flat we climbed down an ore hopper to find at the end of a short passage, a ladder rising up into the main Capelcleugh Ore Flats – home to a multitude of very fine mining artifacts including wagons, tool boxes, a kibble, small tools and a wheelbarrow.

We returned back down the same ladderway to the Horse Level and waded our way to the junction with the Capelcleugh North Vein. A few hundred meters from the junction we encountered a very large deluge of water pouring down the ladderway up to the North Vein workings. We climbed rapidly up the ladders, firstly to a sub level then up into the main workings. At one extremity of these workings a shaft comes in from above and we speculated that it may connect with Capelcleugh High Level. At the other end of the North Vein are some sections of wonderful arched roofing that are, unusually for Nenthead, constructed from deads rather than from stone quarried up on Flinty Fell Quarry. Back down on the Horse Level it was discovered that one member's lunch had not survived the Capelcleugh water and he decided that what was still eatable should be consumed immediately while it was still semi – edible.

We waded back to the junction and progressed through deeper sections of

water in the direction of the ladderway up into Smallcleugh. Reportedly, one attempt at swimming produced the anguished wail 'Stop Making Waves' from the person behind as water lapped over his nostrils. Finally we arrived at our goal and proceeded to ascend the ladderway one by one up into the welcome dryness of Smallcleugh. When it was Wendys turn, she was alarmed to realise that her legs were not strong enough to lift the large quantity of water trapped inside her oversuit and other members were called to assist in deflating the 'Michelin Woman', to the accompaniment of much merriment and laughter.

The ladderway rises to a sub level from which a short ladder in turn leads up into the stope off the Cowhill Cross Vein. It was at the base of this short ladder that one member reported that the single most unpleasant thing to ever happen to him underground had occurred when the person above had knelt down and in doing so had emptied 'fetid wellie sludge' into his face. We found this almost as amusing as his story we listened to while we ate lunch, concerning the octogenarian rubber fetish party organiser and the house fire that occurred during one of his 'parties'.

After lunch we made rapid progress as we traversed through Smallclugh stopping briefly at the Ballroom. We took the route through the Wheel Flats, the Smallcleugh Flats and the Hard Cross Cut to arrive at the top of Prouds Sump. This had been pre-rigged and so little time was needed to descend the 17mtr drop from where a rope handline was of limited help in the climb down that followed. This awkward scramble was so challenging to one member, that two hands were felt to be inadequate and so his teeth were also employed in an effort to prevent slipping too fast down the muddy rope. Fortunately the person following did not encounter a set of forlorn dentures still gripping the rope.

Finally the whole group landed on Rampgill's Hanginshaw Level in one piece and with full sets of teeth, bodies and pride intact. We then climbed up a nearby ore hopper up into the Ore Flats where we spent half an hour exploring before heading back to the level to commence the trek out through Rampgill Mine. At Whiskey Bottle Junction, we noted that someone had removed many of the bottles leaving only about half a dozen of the 29 that were counted earlier in the year. We exited into the dark Nenthead carpark at 18:10pm.

It was a sporting fun trip with no particular goal in mind and of course a shortened version of the classic though trip having omitted Brownley Hill and Nentsberry Haggs. Everyone enjoyed the day tremendously but this was 'A Great Nenthead Through Trip', but not *The Great Nenthead Through Trip.* Next time we will exit at Brownley Hill and who knows? Maybe with a little digging, Nentsberry Haggs!

Post Script: Embarrassingly I subsequently discovered that I had, along with others, fallen victim to the old 'rocks in the tackle bag' ploy, finding three large lumps of shale when emptying my tackle bag the next morning…

Tony Holland.

Investigation of a wooden artefact from the Silvergill Mine at Caldbeck

Samuel Murphy & Warren Allison

CWAAS: Report to research Committee

Warren Allison has spent a few years researching the mines at Silver Gill. Together with the CAT digging team he has excavated part of the mine and is seeking permission to carry out more work there. (See NL 81 & 82) In the first phase as well as finding the implement that is the subject of this CWA&AS Report they discovered evidence of Rowle waggons as described by Agricola, and what might be the earliest primitive wagonway in Europe. The National Railway Museum consider this to be the birth of the railway in this country. We are grateful to Warren for permission to print the CWAAS report.

Background

Mining in the Caldbeck fells has a long history, although early details are scant. State records show the presence of a silver and copper mine somewhere in the Caldbeck Fells in 1319, and charcoal from a lead-smelting site near Driggith has yielded a calibrated radiocarbon date of AD 1020–1200.

Emanuel Stolne is the earliest of the three main haulage levels driven by the Company of Mines Royal at Silvergill, in the Caldbeck Fells, and was in use from 1571 to approximately 1630. Copper and silver-rich lead were produced from this mine. The first part was driven under ancient surface workings, and it was from backfill in this part of the level that the wooden artefact was recovered. This object was not recognizable as a hand-tool or part of a mining structure in use in the 19th century or later. Since there was no ironwork attached, it was considered to be of early date and hence of significant interest in potentially providing evidence of early mining in the Lake District.

Research programme

An application was made to the CWAAS in April 2006 for a grant of £711.00 to fund the conservation, recording and radiocarbon dating of the artefact, an application which was approved 20th January 2007. Since the article was stored in the rather inaccessible mine level, it was not recovered for investigation until Spring 2007. In July it was taken by Warren Allison to Conservation Services at the Department of Archaeology of Durham University, where the artefact was inspected and a sample was removed for radiocarbon dating before its return to storage in a refrigerated wet environment at Carlisle. The 0.342g wood sample was sent to Samuel Murphy by Jennifer Jones of Durham on 8th August and forwarded to Beta Analytic Inc. on 20th August. For radiocarbon dating, a standard AMS process was carried out using acid/alkali/acid pretreatment. The results were returned from Beta Analytic on 19th September.

During and since this time, the progress of this work has been delayed by several unavoidable difficulties including the non-availability of the principal conservation officer. However, the investigation will now be completed by returning the implement to Jennifer Jones at Durham for final inspection, conservation and drawing, before passing it on to the Tullie House museum for permanent storage and display. This has been agreed in principle with Tullie House, but no definite arrangements have yet been made.

Results

1. Visual examination

It was confirmed that the object was made of mature oak, and no sapwood was present, suggesting that the piece taken for dating could be at least *ca* 50 years older than the felling date, and possibly several hundred years.

2. Radiocarbon dating

The radiocarbon dating results are as follows:

13C/12C ratio:-26.8 0/00 Measured radiocarbon age: 970±40 BP [AD 1040±40]

Conventional radiocarbon age: 940±40 BP [AD 1010±40]

2σ calibration (2004 database) AD 1020–1200 [cal BP 930–750]

1σ calibration (2004 database) AD 1030–1160 [cal BP 920–790]

Following a brief note of these radiocarbon results at the Archaeology in the Lake District Conference, October 2007, by Warren Allison, contact was made with Martin Straßburger, of Bollschweil, Germany, who recognized the implement as a medieval shovel blade like those found in some German mines (Bliesenbach, Wallerfangen, both *ca* 12/13th century) and at the Boscarne tin mines in Cornwall.

Re-examination of the artefact confirmed that what had been taken as a knot hole, or accidental damage, was in fact the angled, rectangular socket for the (missing) handle. The short extension at the top was used as a tying point to secure the long handle, but is much better formed usual. It was not clear whether the missing right-hand side of the blade had broken off or the blade had been cut to form a straight side. It is possible that the shovel had been adapted from the normal form for working along the side of a mine level, or even as a type of hand trowel. This will require further research and a professional examination for elucidation.

Conclusions The artefact has been identified as a medieval shovel blade, cut from a mature oak and was of a type used for agricultural and other activities as well as mining (Morris, C.A. 1980; Penhallurick, D. 1986). For mining work, this type of shovel had been replaced by iron-bladed ones by the time the Company of Mines Royal started to rework Silvergill (see Agricola, G. 1556, De Re Metallica), but further research may be needed to confirm this.

The radiocarbon date correlates well with this type of shovel, which is better formed than early examples and used a different method for securing the handle. Allowing for 100–300 years before felling, the date indicates a possible link with a recorded mine in the Caldbeck Fells (1319), and a lead smelting site at Calebrack, three miles east of Silvergill which was also dated to AD 1020-1200. There is also the possibility that this Silvergill mine may be linked to the so-far unlocated Mines of Carlisle which produced very large quantities of silver between AD 1130–1200.

This find has identified the Silvergill mine, and possibly other locations in the Roughtengill area, as a place of medieval silver-lead mining and thus of major importance in the mining history of Cumbria.

Notes on Capped Shafts at the head of the Nent Valley

In the early 1990's a group of CAT members attempted to identify the 24 shafts which are shown at the head of the Nent valley on the County Council plan of capped shafts (OS sheet NY 74 SE). These are all given S numbers on the plan (see fig). Most of the open shafts were descended at the time, some during a COMRU meet. In the last few years Mike Hrybyk and co have been exploring shafts in that area (see their excellent web site www.mineexplorer.org.uk) and it would seem a good time to record our own findings from notes that I made at the time.

All the shafts we inspected are circular in section and at least in the upper parts are (where possible to observe) lined with masonry, an exception being shaft S34 which is further down the valley and in solid bedrock.

Most of the shallow workings we encountered are most likely to be in the Slate Sills.

Mike Hrybyk and co have completed the Frog Shaft trip themselves and in doing so have discovered my long lost tackle bag which I dropped nearly 15 years ago while prussiking out. They describe the discovery as a bit like being in Scott's hut in the Antarctic! No doubt the cheese sandwiches would be past it by now!

Photo Mike Hybrick

S21 NY78454204

Approx height of collar above OD = 1880ft (573m)

Concrete sleepers. Not shown on the 1859 OS map. Sumped up to within 5ft of shaft capping.

S22 NY78524192 1880ft (573m)

Bog Shaft. Concrete sleepers. Shown on 1859 the OS map.

Hydraulic shaft on Longcleugh vein.

Depth ~130ft (40m) to blockage. Drained but wet.

Depth from surface to:

Middlecleugh Level - ~150ft (46m)

Smallcleugh Level - ~310ft (94m)

Caplecleugh Low Level - ~390ft (119m)

Descended early 1991 by Tim Banks, Derek Eilbeck (WCMRG) and Dave Bridge. Contains two ~10inch (25cm) vertical iron pipes with a feed from Perry's Dam several feet below the collar. There is a compressed air pipe with a brass valve near the top of shaft. A blockage at ~130ft (40m) is venting at one side. A dig was attempted here to pass the blockage but without success. At ~20ft (6m) there is a short blind level to the S containing remains of a bucket. At ~60ft (18m) there is a short blind level to the NW and to the SW a much silted level leading to timber supports and a partial collapse at ~70yds (64m). This is thought to be at the junction with Middlecleugh Second Sun vein. A kibble was originally found in this level. The level was waist deep in mud and water caused by a partial blockage where it joins the shaft and was spectacularly de-watered before being inspected.

S23 NY78534184 1880ft (573m)

Metal beehive. Shown on the 1859 OS map. n Middlecleugh Second Sun vein and close to the cross-cut from Bog Shaft.

Estimated depth ~60ft (18m). Drained.

(Descend by Noel Wood some time after 8/9/91.)

Un-numbered shaft NY78474184, 1880ft (573m)

Approx 120 yds (37m) W of S23 and also on Middlecleugh Second SunVein.

Has a capping of stone slabs resting on lengths of angle iron and a ow protecting stone wall built up from the collar (originally a beehive?). Shown on the 1859 OS map.

Venting but not descended.

[This shaft and its ramifications have since been extensivelyexplored by Mike Hrybyk and co and a connection made with Smallcleugh Level [seewww.mineexplorer.org.uk].

S26 NY78344202, 1885ft (575m)

Concrete sleepers. Shown on the 1859 OS map. On Longcleugh vein.

Descended 8/9/91 by Trevor Tucker and Don Borthwick during a COMRU meet. Shortly afterwards the shaft was bottomed by Ed Brown.

Depth unknown but thought to be at least 180ft (55m). Dry descent.

At ~40ft (12m) levels off to S, N and NW. The NW level probably along the vein, the others almost certainly cross-cuts. Remains of an iron-banded kibble, a wooden bucket and a wooden wagon seen. At ~80ft (30m) levels off NW and SE. Below this point a clay layer where the shaft had bellied out was considered on the first descent too dangerous to pass due to the large amount of loose material poised ready to collapse.

S27 NY78094201, 1905ft (581m)

Concrete sleepers. Shown on the 1859 OS map. Lies near the line of the Longcleugh vein. Descended 8/9/91 during a COMRU meet.

Depth ~125ft (38m) to water.

At ~30ft (9m) level to WNW apparently with a second entrance a few feet above. At ~95ft (29m))level to WNW which was explored for 15ft. Continues beyond this but loose. Bubbles could be seen rising to water surface at bottom of shaft.

S28 NY78064203, 1910ft (582m)

Concrete sleepers. Shown on the 1859 OS map. Shaft appears to give access to shallow workings on Caplecleugh vein.

Descended 8/9/91 by Ed Brown during a COMRU meet.

Depth ~55ft (17m). Drained.

Level ENE from bottom of shaft to a stoped area. Ladderway down after ~42ft (13m) and an open sump or ore pass after ~60ft (18m) from the shaft. Workings also to the WSW but very loose and not explored.

S29 NY78254205, 1900ft (580m)

Concrete sleepers. Not shown on the 1859 OS map.Appears to lie on Caplecleugh vein and is thought to be in line with a rise seen along a cross-cut from a stope above Smallcleugh Level inbye of Bog Shaft.

Earth filling a few inches below the sleepers appears to cover earlier capping. Prodding opened up a small hole and the shaft was found to be sumped up to within about 20ft (6m) of the capping (8/9/91).

S30 NY78584207, 1853ft (565m)

Fenced off run-in. Blocked. Shown on the 1859 OS map.

On Caplecleugh North vein.

S34 NY78744245, 1755ft (535m)

Concrete sleepers. In bedrock. Not shown on the 1859 OS map. Possibly at the E end of Caplecleugh North vein workings.

Estimated depth ~100ft (30m). Drained but wet.

S35 NY78694223, 1855ft (565m)

Not found (31/5/93). Not shown on the 1859 OS map. At intersection of Caplecleugh South and Cowhill Cross veins.

S36 NY78404195, 1870ft (570m)

Not shown on the 1859 OS map. Appears to lie just S of the Longcleugh vein.

S37 NY78644226, 1835ft (560m)
Possibly the fenced-off shaft which is now a choked depression containing lengths of rusting ventilation pipe. Not shown on the 1859 OS map.
On line of Caplecleugh North vein.

S66 NY79074261, 1720ft (525m)
High Waterblast Shaft (Longcleugh Engine Shaft)
Metal beehive. Top part lined. Not shown on the 1859 OS map. On Smallcleugh Cross vein. Descends ~200ft (61m) to Smallcleugh Level near Old Fan Flats.
Estimated depth ~80ft (24m) to rocks and water. Wet.

S81 NY77964203, 1920ft (585m)
Concrete sleepers. Not shown on the 1859 OS map. Near junction of Longcleugh vein and Black Ashgill Cross vein. Possibly sumped up.

S82 NY77864203, 1925ft (587m)
Concrete sleepers. Shown on the 1859 OS map. Appears to lie just south of Browngill (Longcleugh) vein between Black Ashgill Cross and Archer's veins.
Descended 8/9/91 by Dave Bridge during a COMRU meet.
Depth ~150ft (46m). Drained but wet and dirty.

At ~50ft (15m) level S for 15yds (14m) to a heading and 20ft (6m) timbered rise (manway) with apparent access to workings above. Very wet and muddy here. At ~70ft (21m) small stope to N which curves round the shaft. At ~150ft (46m) solid floor where water drains away but soft mud at E(?) side suggests possible location of silted level. Maybe worth a dig.

S87 NY78954152, 1985ft (605m)
Concrete sleepers. Upper part lined. Shown on 1859 OS map.
Descended 3/5/93 by Mike Mitchell and Clive Barrow.
Depth 50ft (15m). Drained. Links with level L37 which it intersects ~270yds (250m) from portal.

S88 NY79024146, 1990ft (607m)
Not found (31/5/93). Not shown on the 1859 OS map. Near the SW end of Cowhill Cross vein. Nearby, just W of the Priorsdale boundary at ~NY79174147, there is a shaft capped with concrete sleepers that is thought to be at the position of Barron's Shaft and is sumped up to within a few feet of the collar. The descent to Middlecleugh Level from here is about 325ft (100m). There are also two blocked shafts in the vicinity.

S89 NY79104178, 2000ft (610m)
Frog Shaft. Named Longcleugh Shaft on John Lawson's composite plan. Concrete sleepers. Lined to the dogleg. The shaft has a stemple across at ~50ft (15m).Shown on the 1859 OS map. Near line of Longcleugh vein in heavily worked region which includes drift in the Firestone.
Distance (mostly on the hade) from surface to:
Slate Sills - 90ft (27m)
Firestone level - 162ft (49m)
Middlecleugh Level - 288ft (88m)
Smallcleugh Level - 420ft (130m)

A medium bore cast-iron pipe descends the shaft at the S side. This appears to have been fed from a leat and is thought to have supplied water to a hydraulic engine at Barron's sump.
On first inspection the shaft was found to be venting strongly and an initial descent of the first 90ft (27m) to a dogleg was made on 1/8/93 by Mike Mitchell and Dave Bridge. Subsequently throughout August 1993 the shaft and its ramifications were fully explored by members of CAT and a connection made with Smallcleugh Level (see CATMHS Journal 'The Mine Explorer' Vol 5).

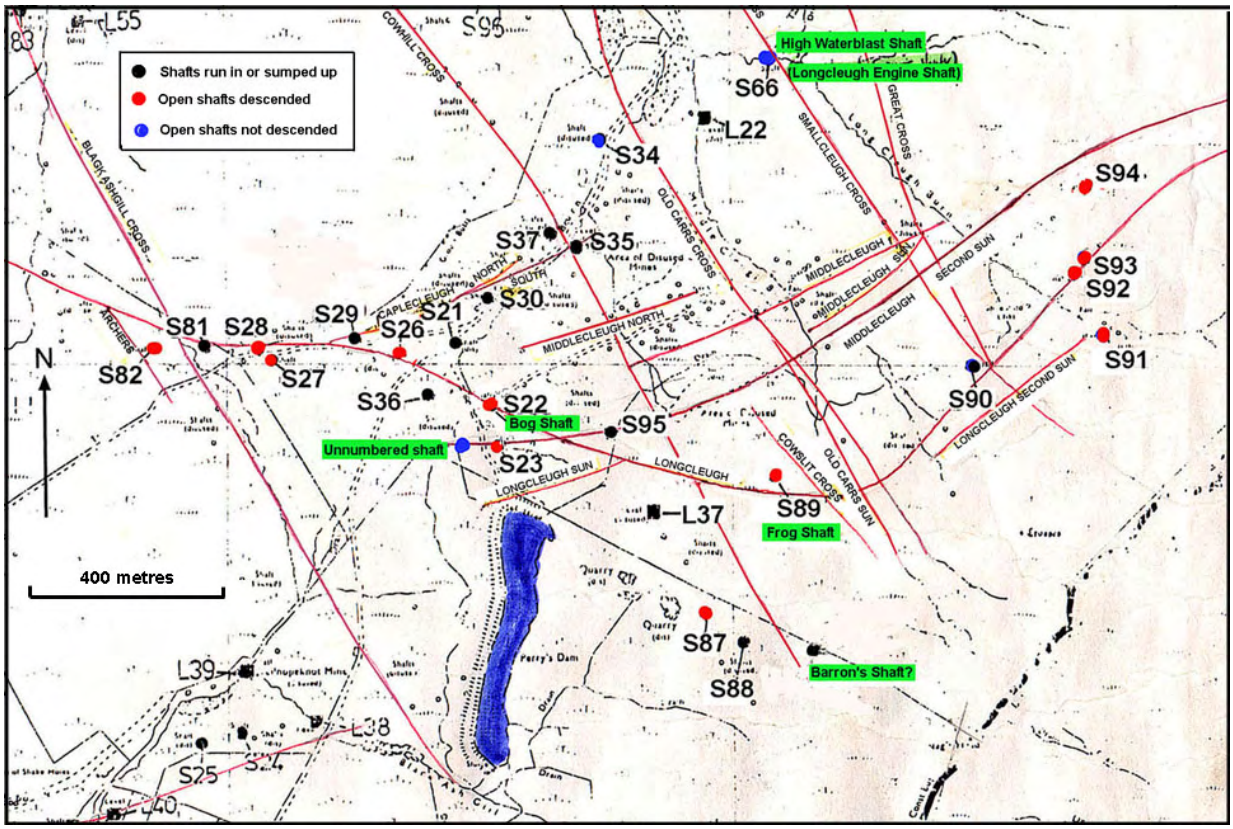
S90 NY79474200, 2035ft (620m)
Concrete sleepers. Lined for the first 25ft (8m), but the lining is badly distorted and pinched in. Not shown on the 1859 OS map.Appears to be near the intersection of Longcleugh and Smallcleugh Cross Veins.
Sumped up to 40ft (12m) below collar.

S91 NY79734206, 2065ft (630m)
Concrete sleepers. Not shown on the 1859 OS map.On line of Longcleugh Second Sun vein.
Descended 20/6/93 by Dave Bridge.
Depth ~80ft (24m). Drained but wet and walls coated with thick irony mud.
At 50ft (15m) shaft inclines to N below a stone-arched roof. Shaft terminates ~30ft (9m) further on with levels off approx E and W in shale but each with a stone-arched portal. Level to W, which can be entered through a hole above the arching, is accessible as far as a wall collapse (or possibly a man-made barrier) at ~7yds but could be pushed beyond this. Rock very unstable. Level to E only accessible for ~3yds to a clay collapse where the roof appears to have been timbered. Vertical planks have been inserted here to hold back the collapse. One iron climbing hoop was found in the shaft wall.

S92 NY79684219, 2035ft (620m)
Concrete sleepers. Lined but loose blocks in walls. Shown on the 1859 OS map. On Longcleugh vein. Descended 20/6/93 by Don Borthwick. Depth 48ft (15m). Drained but wet with muddy deposit on lower walls.
At 15ft (5m) levels off to SE and NE in shale. That to SE waterlogged. That to NE dry but unstable. At bottom of shaft waterlogged level off to NE with a T-junction or right-hand bend at ~5yds. Not explored due to loose shale.

S93 NY79694221, 2035ft (620m)
Estimated to be at the postion of Houp's Shaft. Concrete sleepers.
Descended 20/6/93 by Don Borthwick.
Depth 54ft (16m). Drained.
Not shown on the 1859 OS map. On Longcleugh vein.
If this is Houp's Shaft there will be a kink at ~80ft (24m) according to Dunham. Depth from surface to
Middlecleugh Level - ~320ft (97m)
Smallcleugh Level - ~430ft (131m)
Shaft is blocked at 54ft (16m) but a small hole to NW at the bottom appears to be venting.

S94 NY79704236, 2000ft (610m)
Concrete sleepers. Lined. Not shown on the 1859 OS map. Most likely on Middlecleugh Second Sun vein.
First descended 20/6/93 by Dave Bridge. Subsequent exploration carried out on 1/8/93 by Mike Mitchell, Clive Barrow, Angela Wilson and Dave Bridge.
Depth 114ft (35m). Drained and dry.
Small diameter shaft of sound construction. No detectable deviation from vertical. At ~50ft (15m) level to SE which is mud-choked but maybe worth pushing. At the bottom a chamber is entered with four levels off. Main levels SW/NE through sound rock are open and dry and appear to



Open shafts inspected.

have been important working levels on the vein. Both run for some considerable distance, that to the SW, becoming impassable due to deep irony gunge and that to the NE running to a collapse in shale. A short level NW leads to a rise at ~10yds with timbered stagings but no ladders. A short level SE ends after ~12yds at a partitioned winze that has a timbered collar and a collapsed jackroll above. The depth could not be ascertained and a descent was not contemplated due to the precarious state of the timberwork. On ledges each side of the jackroll were clay pipes left by the last workers there. These workings appear to be very old, almost certainly late 18th century. Bad air was not suspected. The NW level continues as a cross-cut for some considerable distance passing through an area of attractive flowstone deposits and a curtain of fine stalactites which we attempted to preserve by crawling under. The level was found to end at an inclined sump down which there was a strong flow of water. At this point exploration was again halted by a thick

deposit of red mud protecting the entrance to the incline.

S95 NY78764187, 1935ft (590m)
Concrete sleepers. Not shown on the 1859 OS map. On line of Middlecleugh Second Sun vein. Sumped up.

Dave Bridge

John Wilkinson Monument

Background

As friends and supporters will be aware, 2008 marks the 200th anniversary of the death of John Wilkinson. His monument in Lindale, and the area in which it stands, is checked by the Parish Council on a weekly basis, and the grounds maintained as part of their responsibility for public spaces. When it was suggested that the monument looked scruffy and in need of repainting, it was discovered that there had been virtually no maintenance since the major restoration which was carried out in 1984, and that no professional checks had been made as to its safety. No external work could be carried out without such checks.

The Engineer's inspection report

The Council commissioned a local firm of Consulting Engineers to carry this out. It involved removing the plaque, which has a raised impression of Wilkinson's head on it. The space revealed was big enough for the engineer to crawl inside the monument itself, and with the aid of some ingenious ladders and planks, to take a good look at what has been hidden for over 20 years. The report it included some fascinating photographs. Happily it does not indicate any serious defects, but it does advise some remedial and maintenance work to the interior of the monument as part of any refurbishment programme. There is some rusting and pitting; the monument is not actually fastened down, but rests on its own weight. It would be unwise to proceed with external works without attention to the interior and indeed it is likely that Health and Safety could be compromised if its recommendations were ignored.

The engineer has provided an estimate for the likely cost of such work at current prices. Specifications and estimated costs have been obtained for suitable paint treatments for the exterior of the monument from a specialist paint company The project will need sums in excess of £21,000, which is considerably more than originally bargained for!

Donations received

The County Council has already made a grant available specifically for the cost of an interpretation panel, which will be erected at the site to explain something of the Wilkinson story. A kind donation was also received from the Cumbria Industrial History Society.

What now?

Because of the much-escalated cost, it seems a bit unrealistic to hope that funding will be in place to carry out the major works in time for July, but discussions about various aspects of the original project are on-going. They include educational work involving Lindale School, unveiling the interpretation panel and events at Castle Head (to include a lecture by a major academic figure) as well as a village social event and the opportunity for people to visit Castle Head gardens and some other parts of the premises. The celebration weekend is planned for July 19-20.

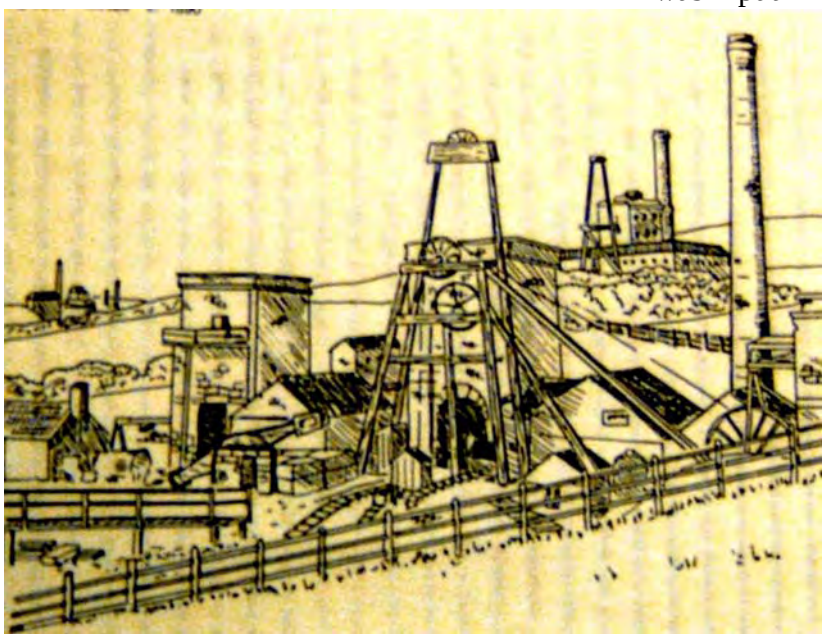
Fund Raising

There is to be a bigger fund-raising drive than had previously been planned. It is hoped that the July events will be an opportunity to raise some funds towards the cost of the work to Wilkinson's monument and the setting up of a permanent fund to ensure that it is properly managed and maintained into the future.

Futher information from:
jane@janehall.wanadoo.co.uk

Stank Engine House

The surviving engine house at Stank is the only one in the area complete enough to still be recognizable as the one time home of a Cornish Engine. An important relic, it should surely be a candidate for preservation work, standing as it does adjacent to the Mines Yard, which though it now contains some farm buildings, also retains the layout and several other buildings from the time of working.



For instance, the building on the left in the illustration with chimney in the end gable, is the Miners Dry and its still there. The illustration is similar to, and probably based upon, a well known photograph taken when the mine was at work.

The Engine House is almost certainly on the No 2 Pit, not No 1 Pit as is often said. The reasons for this assertion are:

During 1985 Mr Kenneth Brown of the Trevithick Society researched Stank and made the following observations regarding Pits 1 and 2.

The shaft of the pit on the left was circular in section, probably indicating that it is older than the one on the right, which is rectangular.

Development of the mine would have progressed outwards from the central services, so the shaft closest in (ie the left one) would be earlier

Existing records show that the No 1 shaft had a 40" engine and No 2 a 70". The left hand house is smaller.

It is known also, that No 1 Engine was put idle in 1883 after additional pumping capacity had been added at the No 5 Pit. The illustration shows the left hand engine as idle since there is no shear legs and pulley over the shaft, indicating that maintenance of pumps in that shaft had stopped. Incidentally this dates the photo to 1883 or later. No 5 Pit in the background (on the right) *has* shearlegs.

Mr Brown communicated his findings to the Barrow Records Office and also put them in a letter to Glyn Carnie, the Stank landowner and farmer, who still has it on file, and kindly allowed me to see it.

Additionally: Bryn Trescatherick, in his book, 'Roose, a Cornish Village in Furness' tells us (p33) that in 1922 the No 1 Engine House was demolished and the stone carted away for use as hardcore on a new section of the Coast Road. (This observation is unsubstantiated, but I see no reason to doubt it)

Brian Cubbon.

Bingham Copper Mine-Then & Now

Bingham Copper Mine is located in Bingham Canyon about 25 miles south west of Salt Lake City in the state of Utah. The area was first settled around 1845 by Mormon pioneers including the brothers Thomas and Sandford Bingham. As well as herding cattle and cutting timber, they also did a little prospecting and indeed did find some ores. Their activities however were not encouraged. The Mormon community was very insular and did not relish a gold-like mining inrush of "outsiders", so their discoveries were soon forgotten, and logging operations became the main local industry.

In 1862 as the logging industry boomed, pioneer farmer and pony express rider John Lowder found some ores in Bingham Canyon and took them to a Salt Lake assayer to be evaluated. The result was "Copper", but upon hearing this, Lowder pronounced "If it is just copper, it is no use to me" and returned to his freighting business. The editor of the local newspaper the "Desert News" observed that the principal thing society desired was Gold and that anyone who sought to engage in copper mining in Utah would have to be considered insane!

At the same time that Lowder made his discovery, US army troops under the command of Patrick E Connor were scouring the mountains looking for precious metals. Patrick was a tough and uncompromising Irishman who had been sent to Utah at the start of the civil war to protect the mail & telegraph routes. And also to keep a close eye on the Mormons, whom he considered disloyal and traitorous. He thought the best thing to dilute the Mormons influence was an influx of outsiders drawn by mining fever. To engineer this, he questioned closely Indians, traders, army employees and others as to the location of possible ore finds and gave his troops, many of whom were veterans of the Californian Gold Rush, generous leave of absence to allow them time to prospect. His efforts paid off in 1863 when an outcropping of ore was discovered. Assay results showed a content of Gold and Silver. A short time later a picnic was organised by officers at Fort Worth and their wives and while eating, one of the ladies found a piece of ore on the hillside. Looking further, the soldiers soon found the vein and staked a claim.

As Utah had no mining laws at that time, Connor used his experience from the Californian Gold Rush days to organise the first mining district and the first mining company in the territory. The boundaries were agreed and the "Jordan Silver Mining Company" was incorporated to raise the necessary capital for exploration and development. General Connor then advertised the silver discoveries to the nation in his military newspaper. Although a few strikes were made, the high cost of transportation and operational expenses made those discoveries unprofitable. The canyon was almost abandoned, however the miners continued, switching to placer mining – using stream side sluice boxes to wash away sediment in order to locate the valuable mineral. The richest claim was that of Clay Bar, which produced $100,000 worth of Gold in 1868 and also the largest ever Gold nugget to be found in Utah. Between 1864 and 1874 $1.5million worth of Gold was recovered from Bingham Canyon, but the stark reality for the majority of prospectors was that the placer deposits, having peaked in 1871, could barely provide enough for the miners to eat, let alone prosper.

The saviour of Bingham Canyon was the arrival in 1863 of a branch of the Utah Central Railroad. This helped revive underground mining so that the miners could follow veins to the mother lode, and soon rich strikes were being reported. By 1874, 4000 claims had been filed, and mines with evocative names such as Highland Boy, Galena, Old Telegraph,

Apex and Yampa soon became local landmarks in Bingham Canyon.
During the 1870s Bingham grew rapidly but haphazardly within the confines of the canyon. With little thought for the future and no municipal controls, the miners erected dugouts and shanties along the canyon floor. Boarding houses, livery stables and many saloons were all part of the sprawling towns landscape, the population of which was over 1000 mostly men (Few women or families chose to take up residence in Bingham which was the considered to be part of the "wild west").

During this period of expansion, other developments added to the prosperity of the mining camp. Stamp mills were introduced to crush the low grade ore into a fine sand. The valuable minerals weighed more than the waste rock and would concentrate together. Smelters, the first of which was built in 1872/3 by the Winnamuck Mine, then melted the concentrate to further purify the precious minerals. The absence of these facilities had forced many mining companies to ship their ore at great expense to Baltimore, San Francisco and even Swansea in Wales for processing. These new facilities allowed output at Bingham Canyon to increase dramatically. The inventions of dynamite and the mechanical drill also contributed towards efficiency and profitability. Prior to dynamite, miners had relied on black powder which only provided a weak charge one fifth that of dynamite or nitro-glycerine which was very unstable. Drilling had been done laboriously by hand and this had consumed 75 per cent of the cost of mining before the introduction of the Burleigh mechanical drill in 1872. Hand drilling was either single jacking where a miner held both the drill bit and a 4lb hammer, or double jacking where one miner held the drill bit whilst another wielded an 8lb hammer. Experienced miners could cut a 60 inch deep hole in one hour. The new compressed air powered mechanical drills allowed miners to strike 300 blows per minute. By 1900 other improvements including better timbering systems, water pumps and ventilation systems enabled Bingham's ore bearing mountains to be honeycombed with shafts, levels and drifts.

There was a downside to these technological advances, however and the price paid was the miner's health. The mechanical drills soon came to be known as "widow makers". They created a deadly dust of razor sharp particles of silica which became embedded in the lungs, later causing death by "miner's consumption". Other dangers the miners had to contend with included defective explosives, cave-ins, pockets of gas, fire, improper use of equipment and faulty ventilation systems.

During the period from 1880 to 1896, Lead and Silver replaced Gold as the main mineral mined in the canyon. It was not until the turn of the century and the dawning of the age of electricity that copper started to be mined. Prior to this, the red mineral was considered inferior and un-mineable. Samuel Newhouse of New York initiated copper mining when he shipped the first copper sulphides from the Highland Boy mine in 1896. He had convinced a friend, Thomas Weir to join him in the venture with help from the Rockerfellers of Standard Oil and later, British investors.

Another man who saw prospects in the mining of low grade copper deposits was Colonel Enos A. Wall. He obtained financial backing and with no competition at all, bought up many old claims. Two young mining engineers were hired to examine the newly acquired properties. They reported that low grade mining could be made profitable if it was mined in large enough quantities using the open-pit process.

Wall's financial backer, however, backed out having lost faith. He believed the sceptics who pronounced the concept too radical and passed his options onto one of the engineers, Daniel C. Jackling who continued to acquire more, until by 1903 he possessed 80 per cent of Wall's property. That same year, with additional financial support, he formed the Utah Copper Company (UCC) which milled its first ore in August 1904.

In August 1906 the UCC commenced open cast mining using rail mounted steam shovels. The company quickly stripped away the 70 feet surface rock to expose the low grade ore deposit. By 1909 the efficiency of the UCC with its eleven steam shovels, twenty one steam locomotives and 145 dump cars, had reduced the cost of mining and smelting copper from its 1872 price of $89 per ton, to just $1.25 per ton. A merger was carried between the UCC and its local rival the Boston Consolidated, to prevent a potentially damaging encroachment problem, and thus in 1910, the UCC gained rights to almost the entire mountain enabling mining to proceed at full speed. Jacklin was a gifted manager with great vision and under his leadership from 1903 until his eventual retirement in 1942, the UCC became the nations foremost copper producer.

large companies bought out the claims of the small prospectors as mining became big business and in doing so created a large demand for cheap labour. To fulfil this demand, Bingham Canyon saw an influx of immigrants from Sweden, Norway, Japan, Britain, France and Austria swelling the population of Bingham Town to over 15000 by the 1920s

Through the decades the mine prospered. During World War II, the demand for copper surged and the Bingham mine produced 30per cent of all the copper used by the Allies. By the 1960s the mines terraces had expanded to 2 ½ miles across and the decision was taken to replace the pit rail operations, with all of its inconveniences if having to regularly

With the formation of large mining combines, the days of the lone prospector with his mule were gone forever. The

relocate rail, cables & towers, with large trucks. 1963 saw the first 65 ton wagon arrive and within 2 years, there were 79 trucks of 4 different types. Trucks were

also phased in for work on the waste dumps, ending all rail operations in the great pit by 1983.

During the 1970s and 1980s, the copper industry went into decline, with historically low prices closing the mine for 2 years in 1985. But with great foresight, the mine owners invested heavily during this period to modernise the mine. In 1988 the revitalised, modern plant went online. By the turn of the century, Bingham Copper Mine had become the largest man made excavation on earth. 6 Billion tons of material having been mined transforming a mountain with a summit height of 8140 ft into a pit ¾ of a mile deep and 2 ½ miles wide. The mine has produced 17 million tons of copper, more than any other mine in history.

The low grade ore mined at Bingham Canyon contains less than one sixth of one per cent copper. Before any of the ore can be moved, it must first be blasted and broken down into a transportable size. Drilling rigs drill holes down into the mine “benches” or terraces. Each is filled with 1000 pounds of explosives, and after blasting, the ore is picked up by huge electric, GPS & computer controlled loading shovels that can lift 98 tons of material in one shovel load. These transfer the ore into 255 ton capacity wagons which in turn carry it to the eleven stories high, in pit crusher house where 140,000 tons of ore per day is broken down into pieces of less than 10 inches.

The ore is then transported on a five mile long conveyor belt to the newly constructed concentrator at Copperton. The waste rock is transported to dumps outside of the mine. At the concentrator, the ore is crushed into a fine powder by the grinding action of large ball mills, and then water, chemicals and air are added, to begin the flotation process, which concentrates the powder into a 28 per cent copper mixture. In large flotation cells, the chemicals cause the copper to stick to the air bubbles which float to the top. The resulting copper concentrate is then pumped17 miles along a 6 inch pipeline to the copper smelter where it is dried in a large rotating dryer and then sent to a flash smelting furnace where it is heated to a molten state and separated into gasses, slag and a copper “matte” which is 70 per cent copper. The furnaces then remove most of the remaining impurities and the molten copper is formed into 99.6 % pure 700lb plates called “Anodes”

At the refinery, the Anodes are immersed in an acid solution next to stainless steel plates called “Cathodes”. For about 10 days, electric current is passed between the steel and copper plates which cause the copper ions to move from the Anode and become deposited onto the Cathode. This final process creates the finished product. 280lb Copper plates of 99.99% purity.

Compiled by Tony Holland from Kennecott Utah Copper Co promotional literature.

Bobbinwood
From Peter Sandbach

This is an abridged article from "The News", 17 May 1884 headed "Local Bobbin Mills". That piece is itself abridged from the English Illustrated Magazine, May 1884, headed "The Industries of the English Lake District" *It begins with a description of the woodland visible from Windermere.....*

'… the mass of foliage is that of copse wood of 14 or 15 years growth which forms the raw materiel for the Lake District home industries. Every particle of this wood is used for some purpose or other. The thin birch branches are bound together and sent away to be made into brooms; the ends of the boughs and twigs are employed for firewood, and the thinner stems are collected and sent to the potteries for making crates; the next size branches again are used for charcoal, whilst the largest growth of the copse wood is used for bobbin making, an industry for which the Lake District is famous.

The oaks are not felled until the summer when they are full of sap, and can be more easily peeled, the bark finding it's way to the Cheshire tan yards. Oak is sold separately at 1s 3d a cubic foot; the larger ends being bought by the basket maker, the smaller by the hoop maker for cask hoops.

Having seen how "country" charcoal is prepared, we will next visit the ironworks at Backbarrow, where a great part of the charcoal made in the Lake District is used. And first let us call to mind the fact that in past centuries the only method of obtaining iron from it's ores was by direct reduction of the metals by means of charcoal; but that after the discovery of coal the whole of the iron smelting in England was revolutionised, and that now of the millions of tons of iron made in this country only an insignificant amount is produced by charcoal. Indeed the difficulty of obtaining any large supply of charcoal has diminished the number of works in England so that this is the only one of it's kind in the country, and in consequence we import a large amount of charcoal iron from Sweden and America where wood is much more abundant.

Why then does iron smelting by charcoal still continue in the Lake District? Partly because of the rapid growth of underwood, from which charcoal can be profitably made, partly because the Ulverston district furnishes an iron ore of exceptional purity, and partly because water power can here be found for nothing, sufficient even in the driest seasons to drive the pumping engines necessary to secure a blast of air to the furnaces.

But it may again be asked what are the advantages of charcoal iron? The answer is that in the ordinary manufacture of iron the impurities of sulphur and phosphorous in the coal render the iron useless for the best steel and cutlery, these impurities are eliminated in the charcoal process and consequently the material obtained in this manner commands a much higher price than ordinary cast iron, as much as £8 a ton being paid for charcoal iron, whilst even Bessemer steel made with coke fetches only £2 10s to £4 a ton. At Backbarrow we see on a small scale the same series of metallurgical operations which take place on a gigantic scale at Carnforth, and all along the Furness and Cumberland

coast from Ulverston to Workington; the only difference is in the use of charcoal.

This is, however, an important exception, rendering necessary special forms of furnace and methods of work. Often much trouble and danger is caused by the inflammable nature of the charcoal which not unfrequently takes fire spontaneously, especially when freshly made. A disastrous fire took place at Backbarrow shortly before our visit.

Leaving the iron furnaces, let us pay a visit to Cowards bobbin mill at Stock Park .... some 30 or 40 mills are found in this neighbourhood, each employing about 30 men besides many boys. The largest mill is at Staveley and belongs to the well known firm of Messrs Chadwick of Manchester, and here so much waste wood and sawdust is made that the distillation process for the manufacture of charcoal is found to pay. *(Goes on to describe the bobbin trade)*

An early heading blast and a drop of Simpson

From Peter Sandbach

Alen McFazdean wrote about heading blasts in Journal 3. This might be one of the earliest examples.

From "The News", Feb 9th 1884

Goldmire Quarry

On Saturday afternoon last, one of the largest blasting operations that has ever occurred in the district took place in Goldmire quarry in the presence of over 200 persons. This quarry has been noted for the very heavy blasts made occasionally by which enormous masses of stone have been displaced, but it was decided some time ago to try the effect of an extraordinary heavy charge of blasting powder as it was felt by those in charge that a much heavier charge could be used to advantage if proper precautions were taken against accident.

A start was made about the beginning of last November with sinking a shaft three ft square and 85 ft deep, a short level between five and six ft being driven at the bottom. On Thursday last about 37 cwt of blasting powder was carefully deposited in the bottom, to which was attached three separate rods of fuse, the shaft then being filled up with rubbish. On Saturday afternoon the three rods of fuse were ignited simultaneously, and in about 37 minutes the body of powder was reached, which exploded, dislodging an enormous mass of stone, amounting to thousands of tons. The sight was splendid. There was very little explosion heard, but the noise of the rocks being torn and upheaved was terrific. Great credit is due to the operators for the excellency of the arrangements.

Mr William Gelderd of Dalton has become notorious. .....on Thursday last we again find him before the Ulverston bench. This time, however, it is not for having a nuisance in the shape of a foul smelling shippon; but for a nuisance almost as bad, that of selling "Simpson". Mr William Gelderd has been vending "blue billy" to his customers and fined £10, rather a heavy penalty, but this is not the first offence, it appears, for the retailer of "Simpson" was fined for a similar offence in 1881.

(Not a moonshiner but an adulterator. It seems that "Simpson" is watered down milk. PS)

CUMBRIA AMENITY TRUST MINING HISTORY SOCIETY

Committee Meeting held on the Monday 1st October 2007 at the BMSC Hut at Coniston, starting at 6.30pm.

Agenda.

1 Apologies for absence
2 Minutes of the last meeting
3 Matters arising
4 Secretary's Report
5 Treasurer's Report
6 Membership Sec. & Newsletter Reports
7 Field research policy
8 Meet Report
9 Publications
10 Library
11 Coniston Coppermines & Quarries
12 GPS
13 Middlecleugh
14 Mines Forum meeting
15 CATMHS website
16 Date and venue next meeting
17 Any other business

Present M. Simpson (MS), J. Aird (JA), S. Barker (SB), I. Matheson (IM), D. Borthwick (DB), J. Brown (JB), M. Mitchell (MM), M. Scott (MSc) & A. Wilson (AW).
The meeting commenced at 6.30 pm. 9 committee members attended.

1 Apologies for absence from: P. Fleming (PF).

2 Minutes of the last meeting

The minutes of the committee meeting held on Monday 23rd July had been previously circulated to members**.**

It was **PROPOSED** by IM 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 6 JA had copied what was needed to the CAT CD, and has given the newsletters etc. to a member.
3.2 Item 8 DB - gave the tapes to AW, who would pass them on to DGB to be digitised.
3.3 Item 11- JA had cleared the portal at Levers Water mine; the drainage pipes were working well. It was decided that we should not clear the portal again till entry was required.
3.4 Item 17.1 - IM reported the meeting had been cancelled.

4 Secretary's Report

Received since last meeting.

1) From BGS: Bringing us up to date on the progress the National Database of Mine Plans being compiled by them and the Mining Information Group. They aim to produce a freely available index of non-coal mine plans for Gt. Britain. In the last 2 years the majority of the HSE abandonment plans have been scanned by the Coal Authority for the group and BGS have done theirs. They now endeavoring to index and scan plans in private collections. See website www.bgs.ac.uk/nocomico SB stated that as far as she could remember they had not asked us to lend them any plans.
2) From Warren Allison who is asking if CAT will formally approach LDNP archaeologist and English Heritage for permission to do work, which is:

a) To pump out the flooded shaft in New Stoln.
b) Dig out entrance of level below New Stoln.

He is taking JH, EK and Marcus Jecock (EH) to see the site some time in October. SB to write and say we agree in principal.

3) 2008 NAMHO Conference will be held at Lady Victoria Colliery nr Edinburgh, on the 11th/13th July.

5 Treasurer's Report

JA had circulated the balance sheet to committee members covering the period from 23rd July to 1st October. Income was mostly from: donations, interest and publications. Expenditure on purchase of bolting equipment and printing costs.

The current a/c stood at £2002.57 and the Scottish Widow a/c at £14000.00.

6 Membership Secretary's Report & Newsletter

IM reported the next newsletter would be out the first week in November, with the deadline in two weeks time.

7 Field Research Policy

SB had prepared a draft copy of our FRP for committee approval, it was decided this should read:

To maintain and further the aims and objectives of this society and to remain at the forefront of mine research in the north of England, it has become necessary to comply with ever changing legislation.

Any new exploration and conservation work should not be carried out without first obtaining permission from the relevant authority, submitting a full schedule and risk assessment for the work to be undertaken.

The initial agreement with landowners regarding future conservation projects carried out by CATMHS should include: discussion of access arrangements to sites once the work is finished and our policy on the protection of any artefacts and mineralogical/geological features found.

This policy is not intended in any way to inhibit exploratory digs, or the surveying and documentation of surface or underground mining features and remains; the committee will consider seeking permission on behalf of the society and its members where necessary.

Artefacts or mineralogical/geological features found on CATMHS meets should be left undisturbed. A photographic record should be made and details of the find given to the meet leader.

No artefacts to be removed except if under threat, they then becomes the responsibility of the Society, but after being recorded, they can be held in the possession of the discoverer, whilst he/she remains a CATMHS member and has suitable storage facilities. This arrangement is subject to the condition that they may be recalled for display at some future date.

8 Meets Secretary's Report

Jon Knowles had nothing to report. IM reported on the recent visit to Threlkeld Quarry and Mining Museum. The extensive site includes a large display of vintage excavators and old quarry machinery. The 2ft gauge railway has been relaid and will eventually go up into the inner quarry. Thanks were expressed to Philippa and John Tindale and all the other volunteers who run the site for a splendid visit. They wish to enlarge their Coniston Copper mines exhibit and asked if we had addition information to add to their display. It was agreed we should do this.

JA reported that the Wanlockhead meet had not been very successful as the mine had been very wet. MSc agreed to lead a meet at Tilberthwaite on Boxing Day.

9 Publications

IM has received several articles for Journal No.6, still requires the others promised; to be produced in spring 2008. MM was still working on our new Coniston copper mines leaflet, quotes for printing would be needed.

Only 10 copies of LMH remain unsold, it was decided not to reprint at present.

10 Library

Very little progress this month, only 1 visit because of other pressures. Made master for library card, will get them printed. Today we looked at the contents of the plan chest, a lot of plans need accessing and cataloguing. IM offered to help.

Recently received: box of mine plans from Clive Barrow, article on Devon mines from Brian Cubbins via Peter Sandbach, copy of CD with old CAT pictures shown at 21st Birthday party from Peter Fleming.

DB had attended CLHF Annual Conference – several papers discussed web publishing and online sources of historical information. See CLHF Website.

Tony Holland has offered to transcribe and digitise the old meet logbooks. JA has added the old news sheets to the newsletter CD

11 Coniston Mines & Quarries

Kernal Level JB reported that exploratory work had stopped for the bat hibernation period. One more visit would complete the survey work, de-rigging could then take place. The area is very unstable and further exploration will be very high risk.

JA **PROPOSED** that we replace IM's ladders that have been left in Kernal Level, **SECONDED** by JB, all were in favour.

It was decide to also replace the drill, MM would research prices.

12 GPS

There are problems in getting data from the GPS into DB's drawing software (DXF files into Illustrator CS2). Neither direct transfer, the use of MMO and 3rd party software have not met with any success. It was decided that Ormston Engineering should be contacted and for them to provide a solution.

13 Middlecleugh Mine

JB had completed the work on the old gate and would be fitting it in the near future. Three sumps were descended on the Middlecleugh meet, but were found to be blind. The artefacts found in material removed when the level was re-opened have been recorded and replaced in the mine. The official opening of Middlecleugh Mine will take place on 4th November at 11am, followed by lunch and the NPHT's Underground at Nenthead Meeting-Part 2. Frank Giecco (NPHT Archaeologist) has put an article about the Middlecleugh project in the CWAAS newsletter. It was decided to place small simple plaques just inside the portals of Middlecleugh, Greenside and Hudgillburn mines to commemorate their reopenings. Action MM.

14 Mines Forum meeting

Next meeting on the 26th October at Threlkeld Quarry Mining Museum at 10.30am. SB, MM and IM will attend.

CAT website

SB to ask Chris Cowdery to link the site to other similar sites.

16 Date and venue of next Meeting

This to be held on 19th November 2007, at the BMSC Hut Coniston at 6.30 pm.

17 Any Other Business

16.1 Details of the AGM (to be held 9th December) were discussed, a mistake on the meets list regarding the date to be rectified in next newsletter. Actions - SB will: send notice of AGM papers to IM, who will send them out ASAP, contact PF regarding menu etc. when he returns from holiday and ask J. Knowles and T. Holland if they will give short (half an hour) slide shows after the annual dinner.

16.2 JB reported that we need to replace spiling boards (about 40/60) in Greenside Mine, permission to be discussed at Mines Forum meeting.

16.3 MS had discussed work at Newland Furnace with John Helme. The group have uncovered the top of the stack exposing interesting details. The original plan was to cover the top of the stack with a membrane, then make it waterproof with a concrete cap. It is now though it may be better to put a roof over the top of the stack to preserve the details. We would be willing to offer assistance when a decision has been made.

There being no further business the meeting closed at 9.45 pm

SB 05/10/07

CUMBRIA AMENITY TRUST MINING HISTORY SOCIETY

Committee Meeting held on the Monday 19th November 2007 at the BMSC Hut at Coniston, starting at 6.30pm.

Agenda.

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

Present: 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 6.30 pm.10 committee members attended.
As the chairman was unable to attend, it was decided that MM would chair the meeting.

1 Apologies for absence from: M. Simpson (MS),

2 Minutes of the last meeting

The minutes of the committee meeting held on Monday 1st October had been previously circulated to members**.** It was **PROPOSED** by MSc and **SECONDED** by JB that the minutes be signed by the acting chairman as a true and correct record of the proceedings. This was carried unanimously.

3 Matters arising

3.1 Item 3.1 JA had updated the CAT newsletter CD, and had included the news sheets.

3.2 Item 8 Thanks were expressed to DGB who had digitised the old oral history tapes, these would now be returned to the Cat archive.

3.3 Item 4.2 SB had not heard from W. Allison regarding the Silver Gill project.

3.4 Item 7 SB had received a suggested change in the wording of the proposed amendment to the CATMHS Field Research Policy from J. Knowles. It was agreed that the final version would read:

To maintain and further the aims and objectives of this society and to remain at the forefront of mine research in the North of England, it has become necessary to comply with ever changing legislation.

Any new conservation work should not be carried out without first obtaining permission from the relevant authority, submitting a full schedule and risk assessment for the work to be undertaken.

The initial agreement with landowners regarding future conservation projects carried out by CATMHS should include: discussion of access arrangements to sites once the work is finished and our policy on the protection of any artefacts and mineralogical/geological features found.

This policy is not intended in any way to inhibit exploration, or the surveying and documentation of surface or underground mining features and remains; the committee will consider seeking permission on behalf of the society and its members where necessary.

The Cumbria Amenity Trust Mining History Society's artefacts statement (April 1999) was amended to include mineralogical/geological features in November 2006, to read:

- The policy of the Society is that any artefacts or mineralogical/geological features found on CATMHS meets should be left undisturbed. A photographic record should be made and details of the find given to the meet leader.
- They should only be removed if they are under threat, they then becomes the responsibility of the Society, but after being recorded, they can be held in the possession of the discoverer, whilst he/she remains a CATMHS member and has suitable storage facilities.

The arrangement is subject to the condition that they may be recalled for display at some future date.

4 Secretary's Report

Received since last meeting:

Contact from Helen Caldwell regarding next years CIHS Spring Conference at St Martins College, on 19th April 2008. They have asked if we could provide a speaker for a 15/20 minutes presentation. Conference title - 'Industrial Archaeology of the Lake Counties – 40 years on'. IM said he would do it, to be discussed at next meeting.

5 Treasurer's Report

JA had circulated the balance sheet to committee members covering the period from 1st October to 19th November. Income was mostly from: donations, interest and publications. Expenditure mostly on annual archive storage fee at the J Ruskin museum, and newsletter printing and postage. JA had received a very appreciative letter from the JRM Curator Miss V Slowe. IM had been re reimbursed for ladder replacement, ring hangers had been bought. The Trustee's Annual Report to the Charity Commission was approved.

The current a/c stood at £2002.57 and the Scottish Widow a/c at £14000.00.

6 Membership Secretary's Report & Newsletter

IM reported that 37 members had renewed to date, with one new member, Brian Cubbon from Norfolk. The newsletter went out in November; thanks were expressed from the committee for all IM's exellent work.

7 Meets Secretary's Report

Nothing to report.

8 Publications

IM had received 2 articles for Journal 6, which he had passed on to Dave Sewart. Simon Hughes had offered an article on German Miner's in Wales and JB is to write about the 'CAT digging team's' work. IM still requires the other articles promised. Journal 6 to be produced in spring 2008.

MM showed the committee a draft copy of the new Coniston Copper Mines leaflet, MSc suggested that a paragraph on the geology of the area should be added, action DGB. Quotes for printing would be needed. It was decided not to print any more of the old leaflet.

9 Library

Very little progress this month, because of other pressures, also the JRM is closed on Mon & Tues for the winter. Accessing work had been done at home (new cards written out). IM & P. Sandbach had offered to help cataloguing the mine plans, a day to be arranged.

MS & IM have again visited Major Hext and have finished photographing the day and cost books. They need help to transcribe the contents. IM would advertise in the next newsletter,

10 Coniston Mines & Quarries

Kernal Level JB had permission from NE & LDNPA to continue work in Kernal Level (see NL for report). One more visit would complete the survey; DGB would look at the geology in the mine, after which de-rigging could take place.

It was decided to renew the plaque at the top of the Old Engine Shaft. We also need to replace the CAT drill. Action MM on both items. He will also arrange for a key to Kernal Level be sent to the landowner.

It was decided that CATMHS should donate a sum of £250 to the South Shaft project.

11 GPS

A GPS training day had taken place today, leader DB, he had produced an interactive training guide accessible with a web browser. Ormston Engineering was contacted and a new version of MM Office supplied. DB took the GPS away again to continue work started at Teeside Mine in the South Tyne Valley.

12 Middlecleugh Mine

JB had fitted the old gate and completed the work at Middlecleugh. The official opening of Middlecleugh Mine had taken place on 4th November; ten CAT members attended the short ceremony at the mine. NPHT expressed their appreciation to CAT for work on the site. We were then entertained to lunch in the visitor centre. MM had the plaque made, this will be fitted to the mine tub when it has been painted.

13 Mines Forum meeting

IM, SB, PF and MM attended the last meeting. Force Crag mine had been vandalised and much damage done. Carrock mine was discussed, to be a joint MoLES and CAT project. There was a site meeting involving LDNPA, Natural England, English Heritage, the Environment Agency, MoLES and CAT to discuss the work to be done. Hopefully funding will be found for material, gate, drainage pipe etc. JB will send costing to Helena Kingston. Next Mines Forum meeting on the 8th February 2008 at Brockhole LDNPA Centre at 10.30am.

14 CAT website

Chris Cowdery will look into arranging links to other suitable sites, JA will send a list.

15 Any Other Business

15.1 Details of the AGM (9th December) were discussed. J. Knowles and T. Holland had agreed to give short (half an hour) presentations after the annual dinner. JB will also show recent CAT work. There will be a raffle as usual.

15.2 IM reported there had been a meet at Newland Furnace. The group have uncovered the top of the stack exposing interesting archaeological details. The original plan was to cover the top of the stack with a membrane, making it waterproof with a concrete cap. It is now agreed to put a roof over the top of the stack to preserve the details, but the design of the roof is in dispute. SB to write to EH suggesting the roof should follow the outline of the original building as at Duddon Furnace.

15.3 DB and SB are attending a Lancaster University course ‘Ecology of Abandoned Mine Sites with Tutor Caroline Langdon from Coniston.

15.4 SB had found the list of artefacts loaned to WCMRS to display in their Florence Mine exhibition by A. Thomas in 1988. As the Museum is now closed, SB to contact WCMRS asking for the artefacts to be returned.

15.5 SB commented on a picture of DGB’s gear lost years ago when CAT first explored ’Frog Shaft’ on Mike Hrybyk’s website. Will send details to DGB and JA.

16 Date and venue of next Meeting

This to be held on Wednesday 16th January 2008, at the BMSC Hut Coniston at 6.30 pm.

There being no further business the meeting closed at 9.45 pm.

SB 22/11/07

Thanks to Brian Cubbon.

CUMBRIA AMENITY TRUST MINING HISTORY SOCIETY