

CAT

The Newsletter of the Cumbria Amenity Trust
Mining History Society



Time Team, filming at Back Strings, Coniston

No. 109

November 2012

Cumbria Amenity Trust Mining History Society Newsletter No 109, November 2012.

Contents:

News

Membership	Page 2
Wiltshire Stone Mines weekend	Page 2
LDNPA Annual Archaeology Conference	Page 2
Windermere Reflections 2013	Page 2
LDNPA Parish Tours	Page 3
NAMHO conference	Page 3
Newland Furnace	Page 4
Coniston Through Trip	Page 6
Time Team at Coniston	Page 7
Cobblers Level	Page 12
Sebastian Mine	Page 14
LDNPA Chief Executive visit to Greenside mine	Page 19
Force Crag Mine update	Page 20

Meets and Activities

High Fell and Betsy Crag Meet, 15 April	Page 21
Carrock Fell Mine, 29 th July	Page 23
Peter Fleming at Carrock Mine	Page 27
Joint meet with PDMHS, 5-7 October	Page 28
Sebastian Level - The search continues	Page 30
Penny Rigg Horse Level	Page 31

Articles

The Riddle of Triddle	Page 32
-----------------------	---------

Minutes

CATMHS Committee meeting, 14 th May 2012	Page 37
-----------------------------------------------------	---------

Society Officers and Committee Members

Back cover

Membership

Margaret Forseman, from Millom.

She is researching links between miners who worked for John Barratt at Hodbarrow, Grassington and Wheal Friendship. Her particular interest is a cluster of people from the Tavistock area who came to Millom, possibly recruited by John Barratt or simply following him and his mine captains. Some miners came from Wheal Friendship mine to Coniston before they moved on to Hodbarrow, and she is interested in how Barratt recruited them, and the others.

John Barratt and his family and John Taylor are intriguing people of their time. She reports that John Barratt's gravestone in Mary Tavy is near collapse which seems a shame.

Meets

WILTSHIRE STONE MINES WEEKEND

Arrangements have been made to visit Stoke Hill Mine near Bath on Friday January 25th.

Stoke Hill Mine belongs to The Bath Stone Group; more information here:

<http://www.bath-stone.co.uk/>

Numbers are limited to 15, and there will be a cost of £10.

If you wish to attend, please enrol with Chris Cowdery on 01832 273398

or chris@cowdery.org.uk

News

Eleanor Kingston (LDNPA Archaeology and Heritage Adviser) has arranged to take Hannah Townley (Geologist from Natural England) and Richard Shaw (BGS) to visit Carrock Fell Mine on Tuesday 6 November. Natural England has provided a grant to undertake a geological survey at the mine and the visit is to work out what the survey should include. CAT is invited to send a representative to attend the meeting.

LDNPA Archaeology Conference, Keswick.

The annual Archaeology Conference was held at the Theatre by the Lake, Keswick, on 21st October. The program included reports on the Windermere Reflections surveys of the former Fulling Mills in Grasmere and Great Langdale, and of woodlands around Windermere, an account of recent discoveries of burnt mounds and bloomeries in the Nether Wasdale area, a presentation on Prehistoric mountain Monuments and Rock Art in the Cumbrian Fells, and a report on Time Team's hunt for the Elizabethan works at Coniston copper mines. See the report elsewhere in this Newsletter.

Windermere Reflections 2013

Windermere Reflections part 3, mine and quarries spring 2013. A presentation for this was given by Eleanor Kingston at an evening at the new Ambleside parish room on the 29th September.

Parts 1 and 2 were the Woodlands Survey and the Fullings Mills survey carried out in March and April this year. It had been hoped that for 2013 attention would be directed towards Tilberthwaite Copper Mine and its associated works, but unfortunately, as Tilberthwaite Ghyll drains into Coniston Water, it does not meet the requirement of being in the Windermere catchment area. The sites under consideration are Greenhead Gill and Lingmoor Fell. CATMHS has offered to assist in the project. Mark Simpson

LDNPA Parish Tours

The Lake District National Park Authority runs Parish Tours for Parish Councillors and staff of the authority to various areas of the Lake District. On the 10th July 2012 it was the turn of the Eastern area and was centred on Patterdale. John Hodgson (LDNPA Senior Archaeology and Heritage Advisor) asked if I would come along to represent CATMHS for the part of the tour which went to Greenside Mine.

The objectives of the tour were:

- To enable Parish Councillor and Members to meet informally to discuss issues and topics relevant to local communities.
- To learn about Distinctive Areas of the National Park and the activities and projects we are involved in.

John Hodgson and I met approximately 30 people at Greenside Mine and took them across the bridge over Glenridding Beck so that we could look across to the mine. We spent time outlining the history of the mine and used old photographs to illustrate this and it also helped people to understand the importance of the mine and its impact when it closed on the local community.

John and I then explained how the Mines Forum came about and how organisations such as CATMHS, LDNPA, Environment Agency, English Heritage, National Trust and MoLES work together on various mine related issues. This included CATMHS being asked to advise on Greenside Mine in relation to the re-profiling of tip No2 and the current potential pollution issues, the re-opening of the main entrance to Carrock Mine as well as Force crag and Gategill Mines. I explained the work that CATMHS has done and the relationship it has built up with the various organisations over many years and the benefits that everyone is now getting.

Returning to the mine, Martin Curry (LDNPA Head of Property Services) and Martin Sleath (LDNPA Assistant Surveyor) explained the role of the authority in managing Glenridding Common which includes Greenside Mine and the role that CATMHS is playing in advising the authority and also in maintaining the Lucy Tongue Level.

Warren Allison

The Archaeology of Mining and Quarrying in England

A one day conference to launch the publication of a three year assessment of mining and quarrying in England from prehistory through to the present day

18 May 2013, at the Coal Mining Museum for England, Caphouse Colliery, near Wakefield

Invited speakers will cover all aspects of the extractive industries, from lead and coal to stone and slate, including the investigation of their underground archaeology.

Further details will be published on the NAMHO web site - www.namho.org - and in the newsletters of our constituent groups.

Registration fee will be in the region of £5, including lunch

Advanced booking - contact Peter Claughton e-mail: P.F.Claughton@exeter.ac.uk Tel: 01437 532578

Newland Furnace

Newland Furnace was open to the public for the annual Heritage Open Day on 8th September. The team prepared well and the furnace, blowing chamber and charging barn were very clean, tidy and well presented. Numbers attending were thought to be slightly down on last year, but those attending appreciated what they saw and made a significant contribution to funds through donations and purchase of booklets. Next year it is hoped that the event will be a two day weekend.



The Newland Furnace Trust has produced a 22 page booklet 'A short history of Newland Charcoal Iron Blast Furnace including its final demise and subsequent restoration by the Newland Furnace Trust.' On sale at £5 per copy

It was thought that completion of the roof over the furnace stack in 2009 might be the last major work attempted by the Trust. However, new enthusiasms were kindled, and after consultation with English Heritage permissions were obtained to excavate part of the wheel pit in order to examine and make repairs to the axle hole and other structures. Repairs were also needed to the floor of the charging barn. Work is carried out on Friday evenings and on the last Saturday of each month.

Newland work meet 29 Sept

The wall of the blowing chamber and charging house which emerges from the wheelpit is mostly sound but there are two places which give us cause for concern. One of them is the ragged hole where the axle of the waterwheel went through. There is a hint that there was once a lintel on the inside, no evidence at all on the outside. As far as we can tell, all that holds the stonework up is a bent and rusty piece of lightweight rail.



The other area of concern is a walled up doorway which once gave access to the wheel from the blowing chamber. When the doorway was blocked up they left the wooden lintel above it. This has now rotted away, leaving an alarming amount of stonework unsupported. Both of these areas were below the present ground level so we needed to excavate the wheelpit to find

the extent of the damage, and then go deeper still to make room to work. Before we could start on the wheelpit we needed to repair the offside wall of the wheelpit, which was bulging in places.

With nowhere to tip the spoil, it was taken to the tip by trailer at up to 4 tons in an afternoon, but the wheelpit is wide and long and it has taken two years to get to the point where we were ready to discuss a solution with English Heritage. The axle hole seemed to go down for ever, although after a while the sides were nicely squared off. A cill was found about 2m below what was ground level, ie level with the floor on the inside, and level with the *bottom* of the blocks which held the wheel bearings.

Andrew Davison and Stuart Ellis (Senior Conservation Engineer) visited on 10 July to advise on the repairs, and the advice for the axle hole was to build brick piers on either side of the hole which would support a brick arch at the top.



Fragments of the lintel removed, with an unwilling dog for scale

Work started on the lintel on 29 September using tools to fish out loose stone from the "letterbox". Some bits of wooden lintel were also fished out, leaving the whole 1.8m length supported on the scrap of lintel surviving. Did I mention that this wall was about 1.6m thick and 10m high? At this point Anton pointed out that this was our only opportunity to put some preservative on said surviving lintel. Kingfisher preservative "mayonnaise" was fetched and with a paintbrush tied to a broom handle applied

quickly and cautiously. We had three concrete lintels 100mm x 150mm x 1.5m long and two 1.8. long and the intention was that all but the outermost one would be cut to length. In the event three lintels went in smoothly with no cutting and the stone fished out earlier was replaced as packing. We still have two lintels and a length of rail to put in to finish the job, and squaring up the damaged stonework will have to wait till summer as it involves lime mortar. However, because the wall is stepped in just above the repair, the main thickness of the wall is now supported, a great relief.



Concrete lintels packed into the "letterbox"

Time Team at Coniston Coppermines

In May 2012, CATMHS was approached by John Hodgson (LDNPA Senior Archaeologist) asking if the society would help facilitate the making of programme nine for the 20th series of Time Team. This was due to an issue with another planned dig which had fallen through. Time was short to organise the dig and was done through e-mail, phone calls and a couple of site visits. There was also the added complication of obtaining scheduled monument consent from English Heritage and SSSI consent from Natural England, quite a challenge.

Time Team were to carry out digs in two separate areas, one at the Back Strings where two of the huts would be excavated and the second one at Cobblers Level in the area just below the level mouth and in a building above the level.

In addition it was also planned that CATMHS would hopefully take the production team into Simons Nick, Levers Water Mine, Cobblers Level and at the same time would carry out the dig on the proposed entrance to Sebastian Mine.

In the weeks prior to Time Team arriving there was much for the society to do. Levers Water Mine entrance needed the debris removed and the portal extended, so John Brown and Colin Woollard arranged for United Utilities to take the materials required up to Levers Water and then spent a couple of days extending the portal, including one very late day when they left the mine at 9pm. Over a number of days, Mark Simpson and Mike Mitchell took flexible pipes up to Cobblers Level and siphoned the water out, which revealed much timber in the floor of the far end of the level which was still in situ. The date of the timber is unknown, but may date to the German period or Charles Roe from the early 18th Century. Other members of the society provided documentation and old photographs of the mines to Time Team to enable them to carry out background research. CATMHS also provided Time Team with the risk assessments for going underground, background information on the society including digs it had previously carried out and insurance details to satisfy their insurance company and the Health & Safety side.

The programme was planned to start on the 23rd July which would be setting up day, with the actual digs being carried out over the next three days and re-instatement on the Friday.

Monday

The team had taken the Barrow Mountaineering Club hut at the main part of the mine. Additional facilities arrived including a large marquee, generator, portable kitchen and toilet facilities all being put up in the rain.

Tuesday

Tuesday morning at 8.00 am and it was still raining. During the briefing the decision was made to start the dig at the Back Strings near Levers Water and the United Utilities four wheeled vehicles started to transport people and equipment up to the site. Due to the flow of water over the spillway (normally dry), a rope was fixed to assist people across which made for some good filming although it had now stopped raining. The dig and filming on the two



Excavation at the Back Strings- Lower building

buildings commenced and at the same time CATMHS started their dig on the proposed entrance to Sebastian Mine just below Simon's Nick, which was driven just after 1600.

The mist had now come down, but it gave a good idea of the sort of conditions that people had to work in. Chris Cowdrey and John Ashby were busy setting up the ladder and top ropes to enable presenter Tony Robinson and the film crew to get down into Simon's Nick. In the afternoon just as we were about to descend it turned out that the sound man was not insured and frantic phone calls were made to the insurance company to get him insured. After about 20 minutes everyone went into the Nick and spent the next hour filming. Due to the isolated position of the dig, the last people were not down to the main site until after 6 pm and nothing had been discovered.

Wednesday

Weather wise a much better day and the dig at Cobblers Level started. This was in two parts, one in a building just above the level and the second one outside the level. Soon a beautiful cobbled floor was uncovered outside the mine entrance which had the stones laid end on. This was



Filming at Cobblers Level on the dressing floor; possible site of the Stamp Mill.



Cobbled floor at Cobblers Level indicative of a floor which may have carried heavy machinery and had been constructed by a real craftsman. At this time filming had been going on 150 feet higher up the fell at the top of the original German workings and in the area around the Old Engine shaft, before descending to Cobblers Level to film the area around the cobbled floor

Work carried on at the Back Strings at Levers Water although no conclusive evidence or artefacts had been found.

CATMHS stopped their dig in the afternoon having not discovered the entrance to Sebastian Mine.

Thursday

Work started again at both sites. Two stems from clay pipes were found at the building above Cobblers Level, one with a small bore indicative of being very early and the second one was of a larger bore and was much later. This was because tobacco was very expensive when first brought into this country and the smaller bore stem made it last much longer.



Filming carried on at the Back Strings and in *Excavation of building above Cobblers Level*

the afternoon the film crew walked round and filming took place underground in Cobblers Level. This tunnel is virtually as it was in 1614 and was driven through the rock some 83 yards to reach the copper bearing ground. Just prior to filming the level was siphoned of water which had accumulated due to the entrance being partially blocked.

Right at the end of the day at the Back Strings, the floor of the lower building appeared to be reached and a large piece of timber was uncovered, part of which has been removed to have a carbon dating done. There was also much crushed mineral in this area.

Friday

This was re-instatement day and the only day when the helicopter could film (as it had broken down) although once again in the mist. By the afternoon you would hardly know that Time Team had been on site.



The programme will be screened in 2013, although Wessex Archaeology presented a paper at the Lake District National Park Archaeological Conference on the 21st October 2012.

There will be a written paper on the dig which should hopefully be completed early in the New Year and it will be interesting to see what is reported. The plan is also to hopefully carbon date the timber found in the far end of Cobblers Level.



Filming at the Old Engine Shaft above Cobblers Level and close to the original German workings with the main part of the mine in the background

It was also a huge compliment to the society that it was asked to take part in the programme and a big thank you should go to all the members who gave up their time not only to come to the

digs, but also in assisting in the preparation before Time Team arrived on site.

It should also be mentioned the help and support that John Hodgson and Eleanor Kingston have once again given to the society in obtaining the various permissions required for the dig on Sebastian Mine for which we are very grateful.

The society has received the following letter from Time Team:

Brunel House
Brunel Way
Carlisle
Cumbria
CA1 3NQ



Dear Warren,

I just wanted to send you a quick note to thank you and your team for all your help with the Coniston project. We all thoroughly enjoyed the experience of working at such a special place and it was great to have CAT there for the week as your guidance and expertise were invaluable throughout the dig.

I would also like to thank you for your books and photos that you very kindly let us use in the research period; they proved very useful in a number of history scenes that we filmed during the three days. It's a shame that we didn't have time to explore Lever's water mine and that the opening for Sebastian's level proved elusive but I think the program will be very exciting all the same. The story of the early German miners and the dramatic weather will certainly make it a little different from the other Time Team shows.

We are also raising a cheque as a donation to the organisation, which should be with you by the end of the week. I hope you enjoy the final program when it comes out, we'll let you know when it's due to air.

All the very best and thanks again for everything.

Yours,



Alex Rowson
Time Team.

11 St Andrews Crescent, Cardiff CF10 3DB. Tel: 02920 642 220 Fax: 02920 642 221
E-mail: enquiries@timeteam.net

Colin Woollard wrote the following letter to Katy Singleton from United Utilities who has been tremendous with the help she has given the Society:

12th September 2012

Dear Katy

It seems like a while since the excitement of the Time Team week at Coniston Coppermines. We were able to prepare the entrance to Levers Water mine for the event and have extended the entrance protection so that the falling overburden will hopefully not block the entrance but will slide down beside the timber and into the stope. We are due to make one more visit to remove surplus boards and secure safety lines to the interior of the mine where the floor is false.

May I record our heartfelt thank-you for your support in transporting our heavy materials up to the spillway? Without your willing support we would not have been able to do the work as the track is too rough for our vehicles. Our society tries to do what we can to preserve the local industrial heritage and this is a very special area of Lakeland in this respect.

On another related matter; our committee would like to offer United Utilities our support for any efforts you wish to make to deter unauthorised vehicular access above the water treatment plant at Coniston. A "private road" type of signage would seem to be a simple first step. If you or your employer needs support in this respect we would be willing to do what we can.

Once again thank you for you and your company's support to our endeavours.

Cobblers Level

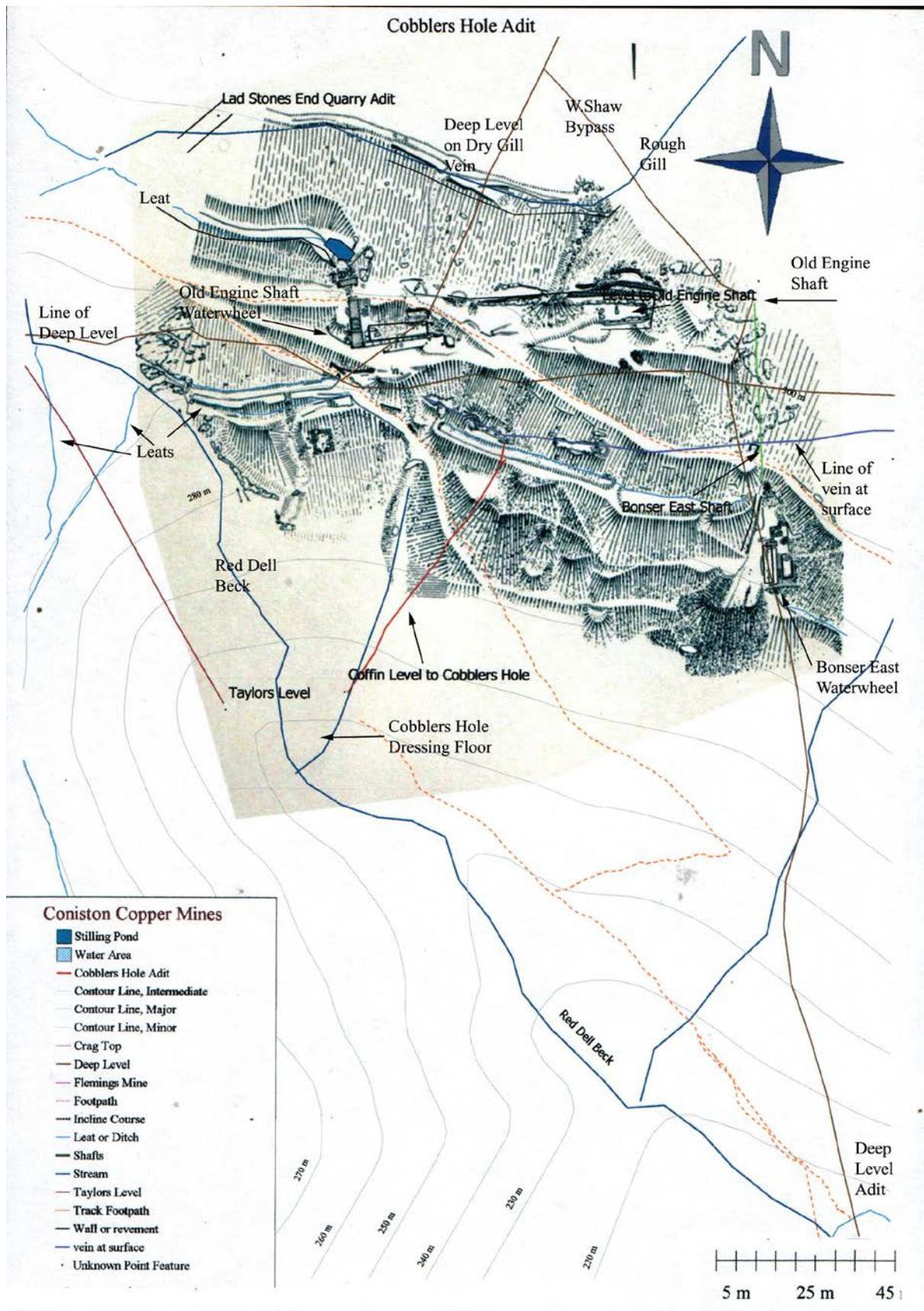
Cobblers Hole Adit was surveyed with tape and compass by Mark Simpson and Maureen Fleming during the week before Time Team. This was carried out as soon as the level was dewatered. Mike Mitchell and Clive Barrow were also there; Mike was taking images of the level and artifacts.

Mike took his quad round to Coniston where Mark Simpson and Clive Barrow had the interesting experience of being conveyed up to just over the Bonsor East Wheel site. Riding quads is not for the faint hearted. Several visits to the adit and a lot of frustration later we finally managed to achieve the de-watering. Managing to make the syphonic action working with such a long length of 2ins hose was not easy, and it was not helped by the fact that the level is under a small stream. This meant, with the wet weather and all, the level had to be dewatered every day we or Time Team wished to enter it. The water normally being about 900mm deep at the entrance.

The effort was well worth it, as inside it is a good an Elizabethan Coffin level as you can find in the Lake District. The level goes in right to the Bonsor Vein and appears to have been the drainage level for the Cobblers Hole workings, and the route by which ore was taken to the dressing floor outside. Was there a stamp mill there? We will have to see what Time Team come up with at the Archeology Conference. We know that stamps would have been in use on mine sites at that period and there are illustrations in Agricola's De re Metallica.

During the TT week Mike and I also went up to Levers Water on his quad. I think that the words "White knuckle ride" would sum it up, an experience not to be repeated too often.

MS



The Elizabethan Adit at Cobblers Hole in relation to surface features and other workings.
 Mark Simpson.

Time Team's hunt for the Elizabethan works at Coniston copper mines.

Steve Thomson of Wessex Archaeology reported on the results of Time Team's investigations at the LDNPA Archeology Conference at the Theatre by the Lake, Keswick on 21st October 2012. The program will be broadcast on Channel 4 TV in the spring as part of Time Team's final series.

The project was unusually challenging for Time Team, and it was said that this was the first time that they have used their Landrover for the purpose it was intended. They found the track up to Levers Water very challenging, the weather was not conducive to filming, and they had to do all their digging by hand instead of using earth moving machinery. Apparently they didn't have insurance cover to go underground, so didn't take advantage of the preparation work CAT had carried out to improve the entrance to Lever's Water mine and to de-water Cobblers Level.

Four sites were investigated: two buildings at the Back Strings and a building and a potential dressing floor outside Cobblers Level. There were few finds, and nothing to positively date any of the sites as being of Elizabethan origin.

Building A, the westerly building at Back Strings, is built from mined material. In the top layer of the floor parts of three pipe stems were found. Pipe stems can be dated by studying the diameter of the hole, and these were thought to date between 1682 and 1782. Some shot hole were found in stones incorporated in the building. The first use of gunpowder was in mining is thought to be around 1693. The conclusion was that the building is likely to be 18th century, although it might be Elizabethan, later re-used.

Building B at Back Strings was built in a hollow. The floor material was analysed and found to contain 20% copper, probably carried there on miners footwear. More pieces of clay pipe were found and dated 1682 – 1747. At the base of the building was some wood that had been part of the structure, and a sample was sent for radio carbon dating. The result, AD 1435 – 1490, suggests a medieval date immediately preceding the Tudor period, but the date was on a piece of mature oak and might not be a true reflection of the time when the tree was cut down as the material dated could be from an inner part of the tree and thus could be a century or more older than the date when it was felled. The timber may have been reused at a later time and therefore the date is not truly contemporary with its excavated features. Additions to both buildings were thought to be associated with sheep farming

There is documentary evidence of a stamp mill in 1619 and this was thought likely to have been at Cobblers Level. Time Team looked for evidence of stamps, but didn't find any, although they did excavate a substantial cobbled floor built on earlier waste This couldn't be dated.

The third building examined, building C, is on the hillside above Cobblers Level. Again, nothing conclusive was found. The north wall was originally part of a retaining wall, which was the oldest part of the building. A fragment of clay pipe found was thought to date to the 18th or 19th century.

We await the programme with interest. It seems that the documentary evidence for Elizabethan mining at Coniston is stronger than that on the ground, although Cobbler Level and the Bonsor East stopes are clearly pre gunpowder in origin. A lot more study is required, to put it all in context, especially in the Red Dell area

IM.

Sebastian Mine

A trial excavation to identify a potential drainage adit to Sebastian Mine below Simon's Nick at Coniston Coppermines, Cumbria, C Woollard and J Brown

Introduction

Research into Elizabethan mining in the Levers Water area has suggested that the area of the Back Strings and Simon's Nick were an important mining area at the time. Records indicate that a mine called "Sebastian" in this area was worked until the pumping effort became very intense. It was recorded that a 40 fathom drainage adit was driven to de-water the workings. Attempts from the underground workings and close investigation of the surface workings have failed to locate this adit.

In August 2006 Cumbria Amenity Trust sought the assistance of the Earth Sciences Department of University College London. Their team came for several days using a magnetometer and ground penetrating radar (GPR) to survey the area most likely to cover the adit entrance. The survey¹ was conducted over the talus slope beneath Grey Crag designed to target the buried portal of the "Sebastian" drainage level. Three magnetometer lines and one GPR line were established to run across the talus/crag outcrop interface. The GPR survey data highlighted one area where a hyperbolic feature was observed. The feature was consistent with the anomaly expected from a void. This anomaly occurred adjacent to a rock outcrop below Simon's Nick - very close to where it was suspected that an entrance might be. The anomaly was no more than 1.5 metres below the present day surface. The survey report provided support for the theory that this location was indeed the specific location of the portal of the "Sebastian" drainage level

In December 2010 CATMHS prepared a document to request permission from the Lake District National Park Authority (LDNPA) to conduct limited investigations designed to find the Sebastian mine drainage adit entrance in an area below Simon's Nick at Coniston Coppermines, Coniston, Cumbria. This document included location details and the historical reasoning behind the theory that the drainage adit was driven from a location close to Simon's Nick.

In June 2012 the LDNPA collaborated with the Chanel 4 "Time Team" programme makers to develop a week long televised archaeological investigation of two mining sites near Levers Water. The scope of this programme was expanded to include the limited investigation of the area below Simon's Nick by CATMHS as an activity associated with this main programme so that some of the underground aspects of the area could be included in the programme material. The relevant consents and agreements to excavate a limited area, under the supervision of a nominated geologist, were provided from the LDNPA, Natural England, English Heritage and the landowner, Rydal Estates under the umbrella of this week long activity.

The two day investigation by CATMHS members was designed to excavate an area of the hillside where the identified anomaly was located. This was adjacent to a rock outcrop below Simon's Nick.

Location

Levers Water has been the focus of a number of historical mining ventures in the Coniston Coppermine area. The investigation was centred on the area between Simon's Nick and Top Level close to Levers Water and above Grey Crag as shown in Figure 1 below.

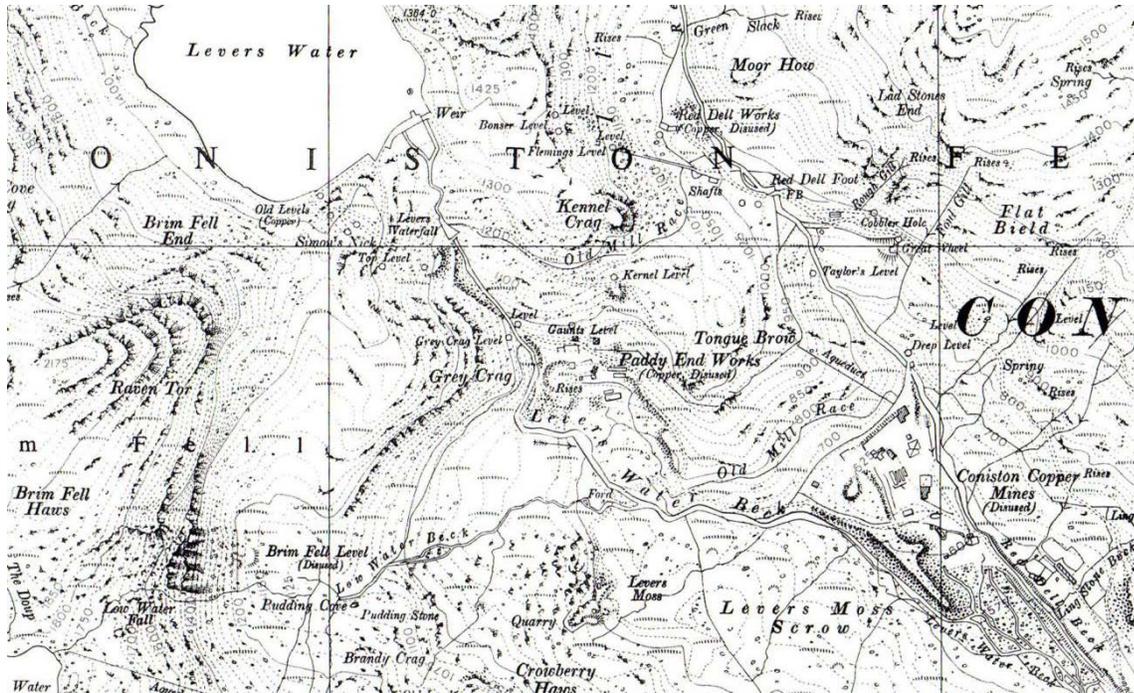


Figure 1: Location map showing Levers Water and key features

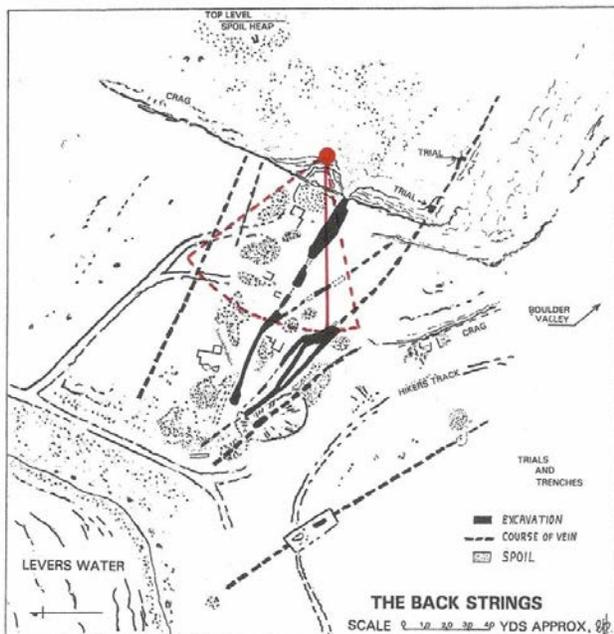


Figure 2: The Back Strings

Numerous early workings are evident at the top of Grey Crag adjacent to Levers Water - known as the "Back Strings". These workings lead to a prominent cleft in the crag called Simon's Nick. Amongst the Back Strings an ancient working known as the Sebastian Mine is believed to be located. Figure 2 shows the layout of the old workings adjacent to Levers Water. A grid reference of SD 280 989 provides the general location for this area. Figure 2 also shows in red the location thought to be the Sebastian Mine drainage adit entrance and the reach of a 40 fathom long tunnel. Interestingly, one of the larger workings known locally as "the pit" lies upon this arc and may be the Sebastian Mine.

Figure 3 shows a view of Simon's Nick at the top of Grey Crag. This area is a Site of Special Scientific Interest (SSSI) and it also has scheduled monument status (No.SM542).



Figure 3: Simon's Nick, Coniston Coppermines

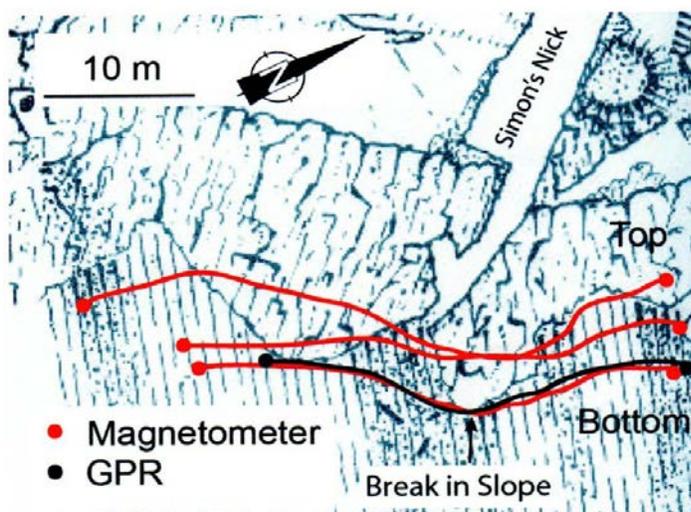


Figure 4 shows the location of the four survey lines set across the slope and the location of the break in slope against which the anomaly is referenced.

Figure 4: The four survey lines across the slope below Simon's Nick

The Investigation



Figure 5 *The location of the investigation*

The location of the survey lines and the reported anomaly were identified on the fellside adjacent to the break in the slope below Simon's Nick in the area shown in Figure 5. A risk assessment was conducted to determine additional controls necessary to manage the safety of the investigation team and also the Time Team members who may choose to visit the location. As a result of this assessment hand lines were discreetly located at the steeper parts of the access route across the crag. The looseness of the surface debris ensured the excavation sides always presented a natural batter during the investigation.

Up to eight CATMHS members were involved at the investigation site and the works were conducted on the two consecutive days of the 24th and 25th July 2012. On day 1 hand lines were installed and equipment was carried across the fellside from the Levers Water spillway location; a distance of some 500m over rough terrain. The initial site condition was recorded by a camera team who filmed the early stages of the dig. The investigation boundaries and material disposal placement were agreed on site between CATMHS, the LDNPA, English Heritage and the Time Team resident geologist so that archaeological and geological interests would be preserved where and when necessary.

The excavation on day 1 succeeded in lifting the surface layer of rocks and debris from the area of the excavation and stacked the debris on the existing steep mine tip. Some material was bagged but this operation did not help and made moving about on the steep loose slope difficult. A depth of some 500mm was achieved by the end of the first day.

Day 2 allowed more blocks and debris to be lifted from the interface between the crag and talus slope over a distance of some 1.5m to a depth of 2m. The crag face was further examined by carefully removing small debris adjacent to the crag at the bottom of the excavation and slightly prising out the larger blocks from the crag face to visually inspect some 300mm below the excavation. This was achieved over a distance of 1.5m to verify if an adit existed in the crag face within the excavated distance. It became obvious that the excavated material towards the end of the crag outcrop was a very different material and that the boundary between the two was significant.

Above this boundary all excavated material comprised blocks of rock weighing 10 to 50kg in a matrix of smaller sharp rock chips leaving a high level of voidage as there was an absence of fine material. This material was clearly debris from mining activity as one block had the remains of drill markings as shown in Figure 6 and edges were generally clean and not rounded. Below the boundary the material lacked the rocks and comprised fine silt material, most likely washed down from the adjacent mouth of Simon's Nick over the tip and round the nose of the crag.



Figure 6 *Rock debris with drill marks*

At the end of day 2 the site was left clear of all equipment and excavated material was blended into the slope. The excavation is expected to very quickly self-fill as soon as there is rainfall due to the nature of the slope and surrounding loose debris.

The Findings



The investigation revealed the likely source of the anomaly as a distinct change in rock type from mine debris, comprising larger blocks with many air spaces, to a compact layer of small surface gravels washed in from Simon's Nick around the end of the rock spur shown in Figure 7. It was clear that the bulk of the debris in the area was a result of later mining activity. This may have been tipped off the crag higher up during later Victorian mining phases. No trace of an adit was found over the area under investigation as the crag was visually examined over the length of the anomaly to a depth of about 2.5m. It is thought that the change in debris density would be sufficient to show up on the GPR survey as the anomaly.

The location of the drainage adit remains a mystery but is likely to be found in the general area although it would likely have been driven upon a line of weakness and the exact horizon is

Figure 7. The change in material at the location of the anomaly unknown. A further investigation from underground may reveal traces of the level at the top of accessible stopes since the level may well have been stoped out by later mining enterprises. To reach that part of the upper stope would require several metres of vertical bolting.



Figure 8. Typical voids at the location of the anomaly

Figure 9 shows remnants of a modern leather hat and an iron chisel and hanger of later mining vintage. Traces of timber boarding were also found in the debris.



Figure 9. Finds from the investigation

LDNPA Executive in Greenside Mine

On Friday the 8th June 2012, CATMHS hosted a visit to Greenside Mine by Mr Leafe (Chief Executive of the LDNPA) together with LDNPA member Mrs J Cooke, Martin Sleeth from the LDNPA property department and two Environment Agency representatives by W Allison, J Brown and C Woollard.

Everyone met at the area just before the bridge over Swart Beck, changed and after the obligatory risk assessment made their way the Lucy Tongue Gill entrance (Lucy Level). It was explained to the group that when you descended from the Glencoyne level and walked back to the Lucy entrance that the water level was building up year on year and that if the level ever became totally blocked the next entry point was 500 feet higher from the Low Horse Level potentially causing an environmental disaster if the level ever blew out. So in 1992, MoLES and CATMHS obtained permission to re-open the Lucy entrance and 20 yards inside the concrete wall was taken down.

As we walked along the level, the timbers in the roof which carried the electric cables for the original electric locomotive (the first underground electric locomotive in a metal mine in the UK) were pointed out. The group found it difficult to comprehend the effort that went into drilling the numerous shot holes by hand, especially when it was explained that the level was worked 24 hours a day, all year for some 20 years to get it to the area at Smiths Shaft.

After approximately 800 yards, the level turns onto the clay vein as the miners took advantage of the soft ground to increase the rate of driving from 80 yards a year in hard rock to 120 yards as the project was so far behind schedule. However this necessitated that the ground had to be carefully supported and it was explained that since the mine closed there had been five roof falls which had blocked the level which caused the water to build up behind. At this point due to a prior engagement John took Mrs Cooke back to the entrance and caught us up later on.

Work had started to clear the falls, the first two were very easy as the small holes in the roof just needed plugged, however the third, fourth and fifth falls were very different. This required proper mining techniques and lots of steel and timber. Mr Leafe commented to his property manager '*I cannot believe that we have societies like CATMHS who spend their money on maintaining our property*'. All the visitors were extremely impressed with the work that had been done and the dedication that had been put in.



The group at Smiths Shaft

We reached the stope at the Lucy Shaft and got out the plans to show the visitors the extent of the ground that had been worked and where they were in relation to the surface. On reaching Smiths Shaft, Colin and John brought out the refreshments including scones and jam. After a short break we pushed on to the bottom of the shaft from Glencoyne and on the way back looked into the large stope near Hicks Sump which is still impressive no matter how many times you visit it.

During a conversation on the way back out the Environment Agency commented that they only consider what is on the surface and not what the effect of the underground workings could have on the environment and this is something they would have to think about in the future. We explained about the Mines Forum and the benefits that all interested parties including the Agency were gaining from it, especially when dealing with issues such as Force Crag Mine. The Agency and the LDNPA now recognise that societies such as CATMHS have information on mining sites and the underground experience that the various agencies would never be able to get.

On exiting the mine all the visitors thanked the society for organising the trip and further discussions were had at a local cafe.

Warren Allison

Force Crag Mine update

Force Crag Mine near Keswick, along with Gategill Mine near Threlkeld, is currently the focus of much attention from the Environment Agency due to the pollution from Zinc from both mines which is ending up in Bassenthwaite Lake.

The Coal Authority has now taken responsibility for dealing with pollution from metal mines in conjunction with the Environment Agency and recently commissioned the sinking of the boreholes into Zero level at Force Crag Mine.

The Environment Agency, Coal Authority and the National Trust (as landowner) have now agreed that No 3 level should be re-instated as it was when the mine was working so that the water comes out of the level mouth instead of going down the internal stope through No 2 to No 1 which is probably picking up Zinc on the way. CATMHS have been asked if it would take on the re-instatement of No 3 level as a project as well as securing the top of the internal rubble slope from No 3 to No 2 so that access can be gained to the drainage pipes in No 1 level (as this has now collapsed in one place).

This project is in two separate parts.

No 3 level entrance proposal

1. Dig out the scree blocking No 3 level
2. Install up to four sets of steel uprights and head trees
3. If required install lagging boards
4. Make the roof in crash barriers
5. Place the scree removed from the entrance on top of the crash barriers to prevent further runoff from the scree slope above.
6. Install a gate similar to that at Carrock Mine

Rubble slope from No3 to No 2 level

This route was forced through when the mine was last working and timber placed at the top to hold back the debris, however over time this has become dislodged and access is now difficult. The intention is to rebuild and secure the entrance to the top of the rubble slope.

The Agencies are paying for the material for the re-instatement of No 3 level entrance and CATMHS is now being asked to advise on various aspects at Force Crag and Gategill mines.

Warren Allison

High Fell and Betsy Crag Meet, 15 April

The purpose of this meet was a surface walkabout looking at slate workings that had been visited for mapping purposes some months earlier by myself. The area of High Fell has many such workings generally consisting of a small quarry, with an associated riving shed remains and a tip. Usually these quarries have a track or sled road leading to them. High Fell quarry itself is a larger concern and is still in operation though not in its original quarry, the new works being a quarry just to the south, so the operators are still being able to use the original mill.

Just to the North of High Fell Quarry is the long gash of Betsy Crag Quarries. Quite a bit in the way of standing remains here, all on the eastside of the workings. Some being in a good state of preservation. Here, we have not just the isolated riving shed, but outside each entrance a cluster of buildings, the most interesting being at Tunnel Hole Quarry on the south end of Betsy Crag workings. Also for the adventurous are the steep sledways that took the finished product away. Finally at the North End is what appears to be the later workings. This is judged by the fact that access is by a cart track and the standing remains are a lot more dilapidated.

For those who wish to read a bit more of the background to the above I would recommend Alistair Cameron's *Slate from Coniston*.

Back to Sunday the 15 April. A bright sunny if cold day, just the day for a walk. Also I wished to take a whole load of images of quarries we were going to visit. Well, Maureen Fleming turned up, and a bit later Mike Mitchell and Clive Barrow. Mike said that he and Clive were going to take a more gentle way round to Betsy Crag and would meet me somewhere at the North end of the quarries. So it was me and there was Maureen. I thought there would have been more interest, because apart from anything else the fine weather.

I gave it few minutes then set off from the Pennyrigg Quarry car park and was soon on the steep pull up the track up to High Fell Quarry. At some points up this track some of the stone pitching from its sled road days still shows through. This provided a welcome breather to look at this feature. We plodded up, through one gate and round a switchback in the road, a not unusual feature of sled roads, and on to the next field gate. Just here can be seen a track coming in from the west, and this was the route taken. This was rock cut in places and at times very steep and it eventually lead us to one of the small higher workings with a level and a well preserved roofed shed. It was here some years ago that Mike Mitchell organised one of his famous cheese and wine parties in the closehead.



Onward and a bit upward, to another small working with a nasty flooded quarry, then over westwards to another concern by a larger quarry that was partially underground. This seems to be the next stage of development of quarrying, the shed remains were larger and there was the end of the Highfell track serving it. We had a look on top of the fell and places where the natural riving has slate had occurred. Round to HighFell Quarry itself, all was quiet, it being a Sunday, and we had

a look around the mill site and workings. There was a poor Bedford Army truck in the entrance; you could still see traces of the red and yellow paint used to pick out the nuts and other bits. Just



inside the entrance is a massive rockfall, which is passable to those wishing to look further. The underground looks interesting but since we not equipped further inspection was not proceeded with.

A quick look round the mill site and it was off down to Betsycrag. It is a short careful descent down to the entrance to Tunnel Hole. There being no obvious way down from the quarry top. It

being lunch time here we stopped for a while amongst the buildings there and enjoyed the situation, which is quite spectacular. In the distance we could see Mike and Clive.. There is



a level nearby and opens into Tunnel Hole Quarry, worth a quick look, as well as the very steep sledway that descends the northside of the tip.

The way off for people, is by a miners trod that contours round north to a working floor serving the south end of Betsy Crag quarry. Quite a few buildings are in this area and several notable features, the slab bridge over the entrance cutting to the quarry and a hole used, it is alleged, for illicit liquor production. There are some quite nice curved walls and revetments, especially at the start of the sledway. An interesting little area, and we spent some time looking at it all.



Time was getting on and it was off to the northernmost quarry. Here we met up with Mike and Clive. There not being much to see, we made our way down the quarry track, passing at the



bottom a level which accessed the quarry from the east. The level is quite short ending in a collapse where it reaches the quarry. Not far away there is what seems to be a loading area for slate from the quarries above, as it is at the convergence of several sled ways .The slate road and our route was through the gate and down to the track that leads over from Tilberthwaite to Little Langdale. Half an hour later we where back at Pennyrigg car park. It was still sunny and all in all a very pleasant day.

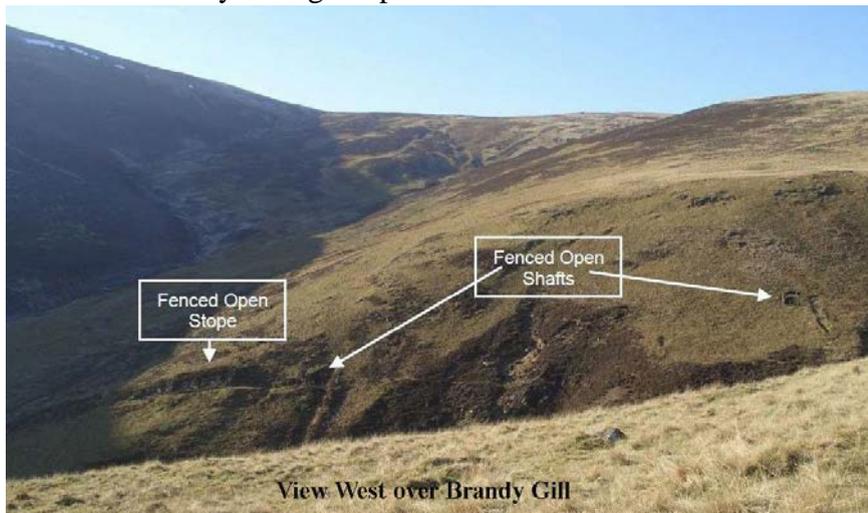
Mark Simpson October 2012

CARROCK FELL MINE

29th July 2012

John Aird (ML) John Ashby (CC*) Jon Knowles Roger Ramsden
(*Close Call)

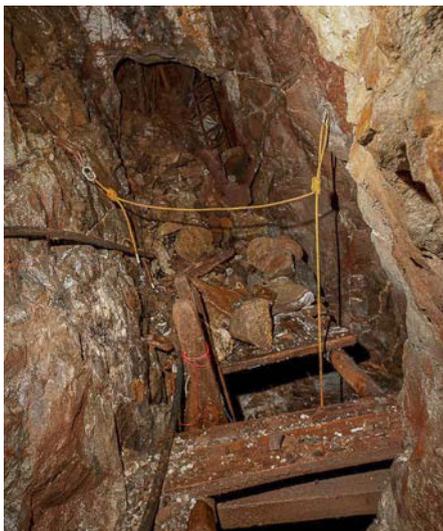
At the Chairman's suggestion and following on from the successful Meet he led to this mine in February, a further Meet to investigate the upper workings was held. A search of the Newsletter archive revealed a 1987 report of SRT descents of the Wilson vein stopes and a 1988 report of SRT descents of both the north and south ends of the Hardin vein. The only other meet report found was a 1995 walk in that involved climbing the remaining ladders into the stopes. Fortunately prior to commencing rebuilding the portal a full surface survey had been carried out yielding the photo below.



View West over Brandy Gill

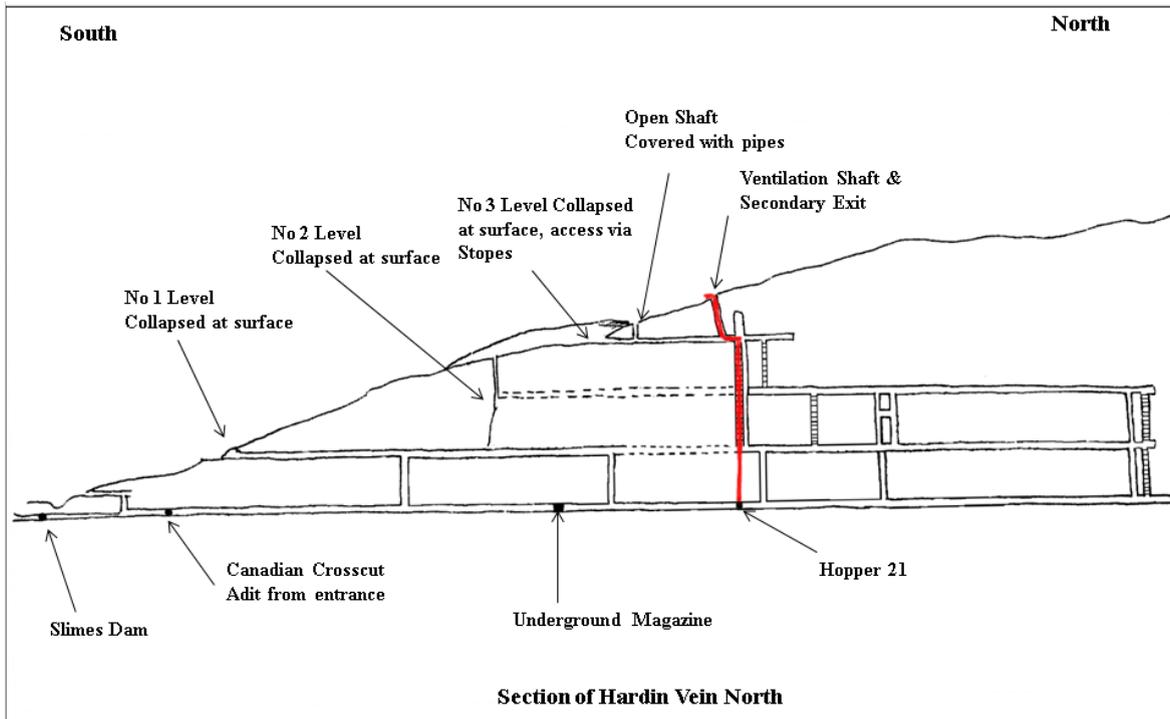
Since there was no recorded descent of the upper of the two fenced shafts this was chosen as the target for operations. It may not appear a long distance or much of a climb from the portal of the Canadian Cross cut but once the track is left behind the ground is very rough and this combined with traversing the very

steep slope down to Brandy Gill left the team delighted to arrive at the fenced shaft. Animated discussions of rigging lead to the deployment of sections of carpet as rope protection with a short rope off one corner post allowing access to a "Y" hang off both the lower corner posts for the inclined shaft descent.

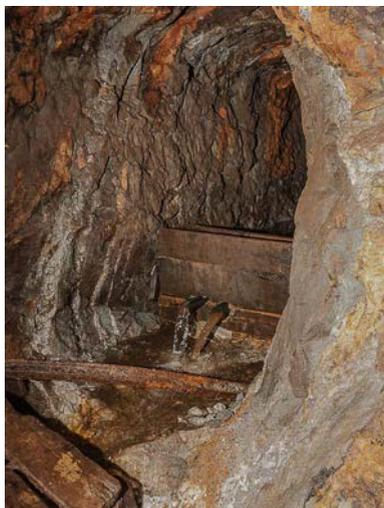


The ML soon found that the lower section of the shaft had accumulated a large quantity of debris, old fence posts, fencing wire, shaft head timbers, rocks and mud; to such an extent that further progress looked dubious. By cunningly rebelaying to a short section of ladder that stuck up from the pile he was able to squeeze past onto No 3 level, without dislodging too much material. The unpleasant nature of this location can be judged from the photo on the left showing the view from inbye looking across the ladderway top to the base of the ventilation rise. Obviously there was no possibility of travelling along No 3 level in the outbye direction! The remainder of the team came down and looked around the level while the ML set off down the ladder/manway. (This move was not universally popular with pointed remarks being made

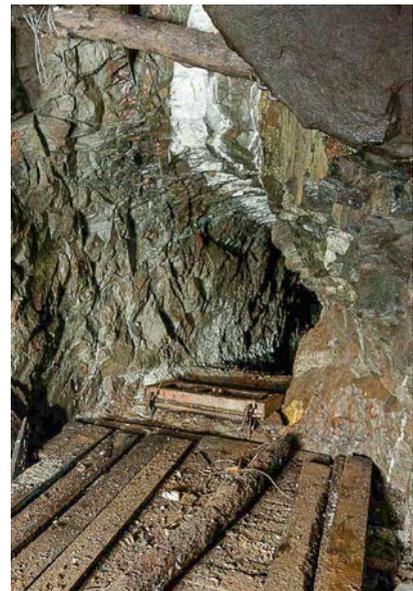
about the amount of loose rock, treacherous ladders and rotten woodwork). Standing on the first ladder the ML chanced to look up and was surprised to see that the shaft above the ladderway had been continued up for some distance and then been timbered over. Reference to the vein cross section below shows that this was recorded on the plans; consideration of why the shaft had not simply been driven to surface had to be deferred for later review.

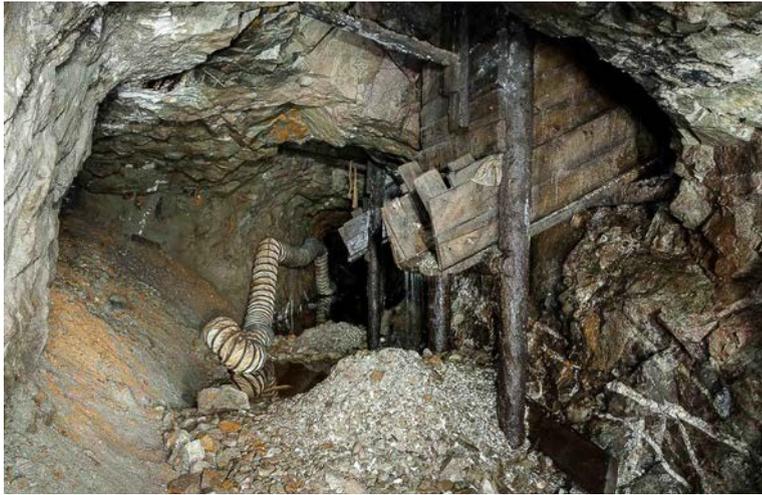


Descent down to levels No 2 and No 1 was not too arduous two thirds of the ladders still being present however each staging required a deviation and a number of bolts and rebays were required where the ladders were missing. As can be seen the outbye sections of both levels have been completely stoped away, going inbye on No 2 revealed a reservoir in a side drive which was used to provide water for the drills, prior to its use drill steels frequently clogged up due to the low pressure supply from outside (high demand from the mill) while once in use pressure on the lower levels was high enough to cause pipe bursts.



Before reaching the dam another item, a heavy rectangular steel base firmly secured to the floor of the level immediately beyond a shaft which was heavily timbered over, had been discovered. Discussions as to its purpose lead to a tentative suggestion that it was the base for a winch. In fact it was the base for a “slusher” a special air driven winch equipped with an epicyclic gearbox and an endless loop of wire rope going round a pulley fixed to the forehead. The scraper bucket attached to wire rope could be drawn from the forehead dragging ore towards the winch and so down the orepass in front of the winch. (The epicyclic gearbox allowed virtually instantaneous reversal of the direction of travel of the scraper). The “slusher” was deeply unpopular with the rock drill operators at the mine due to its high air consumption affecting their drilling rates.





The ore hoppers and ventilation trunking to be found on No 2 level remain from the final period of the mines operation and are associated with work to block out future areas of the vein for production stopes. No 1 level proved to have less of interest merely a large sheet metal object that had presumably been used as a shovelling board.

The ladderway terminates at No 1 level so advantage was taken

of a large stemple to descend straight down the stope into Hopper 21, where a deviation allowed descent to the main level. A commendable decision was then taken to walk out to the entrance, leave the drill and all the unused equipment and have lunch.

Following refreshment the party split up Roger to search for the entrance that gave access to allow descent of the Smith's vein stopes, Jon to take photographs on the lowest level and John Ashby and the ML to climb back up and de-rig. This went well apart from the fact that the 100m rope was now saturated and had to be packed away in its sack at each staging on the climb, the sack demonstrating each time it was hauled up an uncanny ability to snag on all and every obstacle, leading to a re-descent between two stagings to free it. The action of banging the rope bag up and down on the stagings to get the rope in did reveal how delicate some of the woodwork really was!

Eventually No 3 level was reached and the ML set off up the ventilation rise (this is where the CC comes in!). Having squeezed through the lower section and



passed the rebelay attached to the top of the ladder suddenly the whole mass of material underfoot slide downwards precipitating the lower rocks in the pile down the ladderway, blocking the ventilation rise and trapping the rope. The ML became aware that he was suspended on the upper rope and that in fact the ladder providing the rebelay was only standing on the blockage rather than being anchored to the wall. Mr Ashby seemed to remain excessively calm under the circumstances, being trapped below a mass of very unstable material, however as he confessed later "Well I still had the 100m rope if necessary I'd just have tied off at the top of the stopes and pushed off down without bothering about deviations or rebelay". Undaunted he set to work clearing the debris, freeing the rope and eventually first handing up the 100m rope and then climbing out himself. Meanwhile "Jonah" Knowles having done photographing was leaning on the fencing at the top of the rise indulging in a well-deserved bout of "I told you so".

Apart from recovering the carpet and strolling back down that about completed the day. Practically for anyone who wants to do the trip they need a 30m and an 80m rope and it's recom-

mended that instead of descending the ladderway they go further inbye well away from the pile of debris from the ventilation rise and descend the stopes. (Total descent c 280 feet).

Following on from the meet, the ML was involved in a search for information about the mine which rapidly took on a surreal atmosphere, involving Ian Tyler's "Carrock" and Alen McFadzean's blog "Because they're there" the end result of which was that contact was established with Alan Mattinson, who worked at Carrock until it closed. He drove the ventilation rise out to the surface and in his own words resolves the issue of the boarded over shaft.



Originally the shaft was supposed to go straight up in one push. It was then being drilled by my mate Les and another chap called Mel. As you can see the condition of the ground up there was very unstable and Mel decided it was unsafe to continue and quite rightly pulled out. The shaft we were told must go to surface for ventilation reasons or the whole mine operation would be in jeopardy, it could have had something to do with the discovery of radon gas traces on the lower levels. That's when I come into the scene. I hadn't been back at the mine for very long as I had left to work offshore on the North Sea drilling rigs. I got my old job back at the mine but had to start back on a Spannerman's rate until a Driller's job became vacant. As no one else would even climb the rise let alone work up there Alf (Gaskell)

the mine manager turned to me tempting me with the driller's rate to take it on; plus £50 pound break out bonus. I agreed to go and have a look to see how bad it was. It was bad, very bad! I finally agreed to go and give it a go with Les but only on the condition that the last section of the rise was abandoned and boarded up to be made safe. The ladders and staging in the photo (second photo in the report) weren't there until we had finished the shaft. We used to climb up every morning on the steel rings, every 2 foot we would drill a hole about 8 inches deep and flog a steel ring into the wall. That was our ladder more often than not these would be blasted out when shot firing so sometimes it was 4 foot between pins. It all added to the excitement. You can see one of these pins in the photo (one is connected to the karabiner and one is just to the left of the red string on the ladder). We then drove a short sub level to stagger it and started up again, by doing this we reduced the risk of falling all the way down the shaft if the staging collapsed. We then got up a few more rounds and it got real bad again. It was quite frightening there was a big lump of rock the size of a fridge hanging ready to fall. So we chipped away at that for a while to stabilise it. We then drove extension steels up to find out how far it was to go. It was 18 foot; we then hurried down the shaft and ran up the fell desperately looking for the steel poking out of the ground. We eventually found it, about a foot or so sticking up from the ground. We then decided to dig down from above, it was much safer. With the help of a few pounds of Alfie Nobel we broke through the next day. What a relief!

References

"Carrock and the Mines of Skiddaw and Blencathra" I Tyler
"Mines of the Lake District Fells" J Adams

Thanks to Jon Knowles (for the photographs), Alen McFadzean and special thanks to Alan Mattinson for his patient replies to all the questions and for supplying an authentic view of life at Carrock!

Peter Fleming, 1936 - 2012

When first introduced to Peter people tended to put him down as a quiet, self-effacing person; it was only when one found out what he had done himself and what he had got other people to do that you realised his true worth. I still remember vividly reading his article in Newsletter 17 (Summer 1987) "Do Cat Members Have Nine Lives", which Ian Matheson mentioned in his tribute in the last Newsletter. Of the incidents that Peter reported, the one dealing with Carrock showed him at his most analytical and determined, and demonstrated his physical ability and excellent rock climbing skills. His report is below; possibly even *he* might have been more cautious had he had the information provided by Mr Mattinson in the Carrock Meet report.

John R Aird.

Carrock Mine

I was fell walking on the Caldbeck Fells and was returning to the car via Brandy Ghyll and Carrock Mine, when I passed by one of the old air shafts dropping down on to the Harding Vein. The mine operators at the time (1980) had just installed a new extraction fan on the surface and new ladders and staging going down the shaft. Too interesting to be resisted! I had a torch in my rucksack and I was familiar enough with the mine to know my way out from the Harding Vein stopes if I descended these new ladders. I set off down. All went well until at 40 feet down, the ladders suddenly ended for no apparent reason, but I had noticed a line of large iron ring pegs continuing down at 3 foot intervals. So I thought "Fair enough. I'll give them a try." After all the miners of old used to use them.

Another 20 feet and one was missing, which meant a long reach of 6 feet to the next, I was hanging on to the upper one with all my weight and had just got my foot on the lower one when suddenly the upper one pulled out of its socket and I fell backwards into the shaft. It was a split second nightmare - "here we go again" sort of thing. With only a few seconds for thought I knew the shaft was just over four feet wide and I straightened and kept myself rigid, dropped the useless ring peg down the shaft and put my hands behind me just as my shoulders hit the opposite wall. I froze in this position - feet on one side, shoulders on the other and kept a determined calm whilst I tried to think my way out of this fine mess.

I was on my own; no one knew where I was. I decided I must try to go up rather than down in case more ring pegs might be missing or loose. First of all I had to get into an upright position and then attempt to climb the blank nine foot gap up the sheer rock walls without falling down the shaft. I must have remained motionless for 5 or 6 minutes, weighing the sequence of moves and holds available. I inched my shoulders as high as possible until I could reach the wall behind with one foot. Then for the moment of truth - would it take my weight whilst I moved my hands higher. It did, and it was with some relief that I achieved an upright, bridged position, but I still had to make some very hairy moves before I could grasp the ring peg above my head. It felt beautiful to come out to the surface, where I offered up thanks to whichever deity deserved them.

Peter Fleming.

Carrock Mine/Coniston Mine

6th/7th October 2012

Organisers: - Jon Knowles (CATMHS) Paul Chandler (PDMHS)

As a precursor to the actual two day meet Paul organised a visit to Birkshead Gypsum Mine, to which two CATMHS members were very grateful to be invited. A most interesting experience, most of the visitors were unable to believe that the relatively small bungalow that the instructions directed them to could possibly be the mine buildings. There are no spoil heaps because the mine only produces material that is used in the final product, 10 underground staff produce 80,000 tons of gypsum a year (output much reduced due to economic circumstances pre 2008 production was 300,000 tons a year with 30 staff). Production is still by drill and blasting but, once production is required to increase, the introduction of continuous mining equipment will generate a dramatic increase in tonnage. The proposed rapid reduction in coal fired generating capacity will reduce the output of synthetic gypsum from flue gas desulphurization meaning these changes are not too far in the future. Overwhelmingly the impression given to the visitor is that this is a good place to work, pleasant temperature, virtually no water, immaculately organised and tidy stores and engineering workshop.

Carrock Mine: -ML Jon Knowles, John Aird, John Ashby, Chris Cowdery, David Taylor plus PDMHS



Inbye end of Hardin Vein



Blades of Wolfram in Quartz Vein

An excellent day was had by all at Carrock activities included much photography, climbing into stopes and an “accidental” de-watering of the Emerson vein, leading to claims that native copper had been found in the newly drained area.

Thanks are due to Warren Alison for his ensuring that the gate to the mine was unlocked and to Jon Knowles for the photo of the Hardin vein.

Coniston

Through Trip: - ML Jon Knowles, John Aird, John Ashby

Levers Water Mine: - ML's Chris Cowdery and Roger Ramsden, Rosemary Vidler

Another good day (the weather was beautiful, in contrast with the previous weekend when there was so much water in the beck that Roger Ramsden emerging from Deep Level had to walk all the way down to the bridge below Irish Row to cross). All the gear and four of the participants were transported up to Levers Water dam with everyone else hot footing after them. The party split with the majority of the visitors going off to Levers Water mine followed by walking down and going in Hospital/Greycrag level. Three visitors opted for the through trip, which passed off without incident. A detailed report of the state of the route is included elsewhere.



PDMHS meet at Coniston, 7.10.12. Photo Mark Simpson

Dr Descender did overhear the following at the BMSC at the end of the day;

“Where’s the rope”

“What rope”

“The rope I dropped down the final pitch to you before I climbed back out up to Leverswater”

“Well I was in the level and then someone shouted out “Below” and something fell down, I wasn’t going to go up there to look, much too dangerous”

Members will be pleased to hear the PDMHS are offering a weekend meet in 2013 to which CATMHS will be invited.

Sebastian Level - The search continues

Several years ago CATMHS were fortunate to have the use of geophys equipment, courtesy of University College London. This was ground penetrating radar and a CV magnetometer, state of the art kit. The aim was to try and locate Sebastian Level, a level driven under Simon's Nick to un-water the copper workings of the German miners in Elizabeth 1st time. Despite the unfavourable terrain, the results indicated an anomaly that may have been a level. This coincided with the work that Peter Fleming had carried to locate all the Elizabethan excavations.

This year saw the culmination of the results of Peter's researches, with the investigation by Time Team of various sites at Coniston. One of these sites was the supposed Sebastian Level; a report of the dig appears elsewhere in this newsletter.

The anomaly was located, but not the level. So now where else might physical evidence be found? Using our appreciation of where Cobblers Hole adit, (also an Elizabethan level) had been driven, such a level would have been along faults or veins. Remember, this is before gunpowder, all excavation being carried out by pick and shovel.

A good look at the face of Simons Nick showed that the most likely site would have been underneath where the Paddy End vein outcrops to surface. There are other possible sites. Given the most likely horizon that this level would have been driven, the entrance is most likely buried under later mining tip material, way beyond what could be accessed by a simple dig, even if one had the confidence to say here marks the spot.

So what about from inside? Ten or twelve years ago Dave Bridge and I spent quite some time mapping the Paddy End workings, starting with the Back Strings area under Simon's Nick. Looking at plans and sections done at the time, the likely horizon was the Arrette Chamber/ Mag's Catwalk/ Belman Hole crosscut (Dead Dog Passage) horizon. The next horizon down is Top Level, which is probably too low. I should say here that this is based on where the altitude at which the external Sebastian dig was carried out.

If, and it's a big if, Sebastian Level was driven under Simon's Nick itself, then the most likely place we would see it would be inby at the south end of a stope cut at the east end of the Belman Hole Cross cut.



John Aird and Roger Ramsden looking for Sebastian Level

So, on the day of the last CATMHS committee meeting (3rd September) John Aird, Roger Ramsden and I investigated this stope. John bolted up the stope end, but found just no sign of a level, the other possibility being behind a large spoil tip at 'floor' level, too big to dig. A good look with a powerful torch revealed the stope rising some distance, probably near to the surface, but nothing obviously Elizabethan. There are plenty of stemples if anyone wishes to do some C14 dating.

A bit disappointing, but at least one possibility was removed. There being no further reason to remain we came out of the mine, and considered our next move. My taking in a pick and shovel, was an optimistic encumbrance. Where now to look? The only other possibility is to descend down to Top Level, and look at the roofs of the stopes accessible by crosscuts from Top level. With the quality of lighting, which we did not have at the time of the survey, it might be possible to see evidence of a level, if it exists. Beyond that Sebastian will have to remain an archival possibility until some new evidence turns up

Mark Simpson October 2012

Penny Rigg Horse Level

Work has been continuing periodically at Tilberthwaite Horse Level, Coniston. The rails used for the tramway to carry spoil from the first dig to the close-head have been lifted and put into storage. The small dam installed at the beginning of the project in order to prevent runoff of dirty water had been damaged, probably by someone wanting to walk up the adit without getting wet, and this has been repaired .

In-by of the first dig it was found that most of the original miner's tramway is still in place. It is of the same guage as the current one, so the bogey was dismantled in order to get it past the new steelwork, and then reassembled to operate on the old tramway. It saves a great deal of time and effort transporting spoil from the dig to the tip



There are sufficient storage spaces in the wider parts of the adit for the team to construct a bag wall to deposit the spoil,

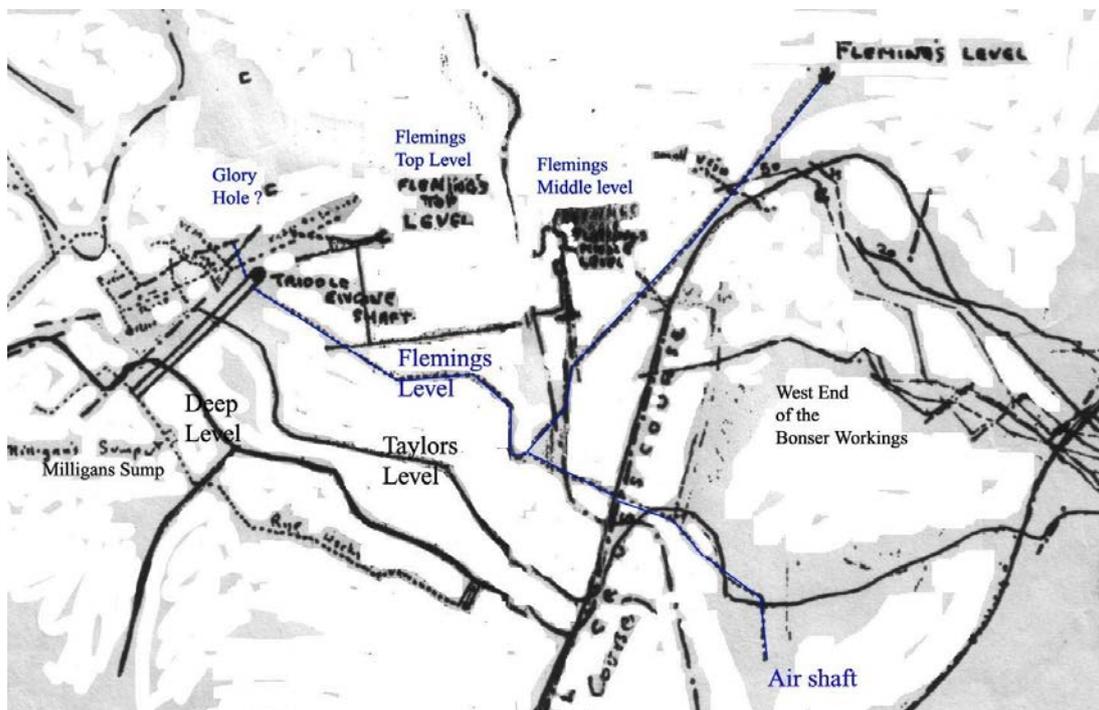


although this means that it will not be possible to remove the bogey once the job is finished. Work had been set aside due to requirements of Time Team and harvesting, but the team is now back on a regular basis. Last Sunday, (14th October) Colin, Andrew, Warren and John managed to shift thirteen full tubs and stack it all back at the pack wall. They probably advanced the face nine or ten feet and the height of the infill is now at eye level.

The Riddle of Triddle, Or why is it there?

This has always been an intriguing question to those who have been interested in the copper mines. Holland and Fleming have put their respective opinions in the Royal Commission report and it is still a case of not proven on either side. It should be noted that Eric had the slight advantage of having access to records which the rest of us have not. (See Eric Holland's Reconsideration of Red Dell, Page 20. and Peter Fleming's reconsideration of Red Dell after the CATMHS field trip 1995, page 25, Royal Commission Report Coniston Copper Mines).

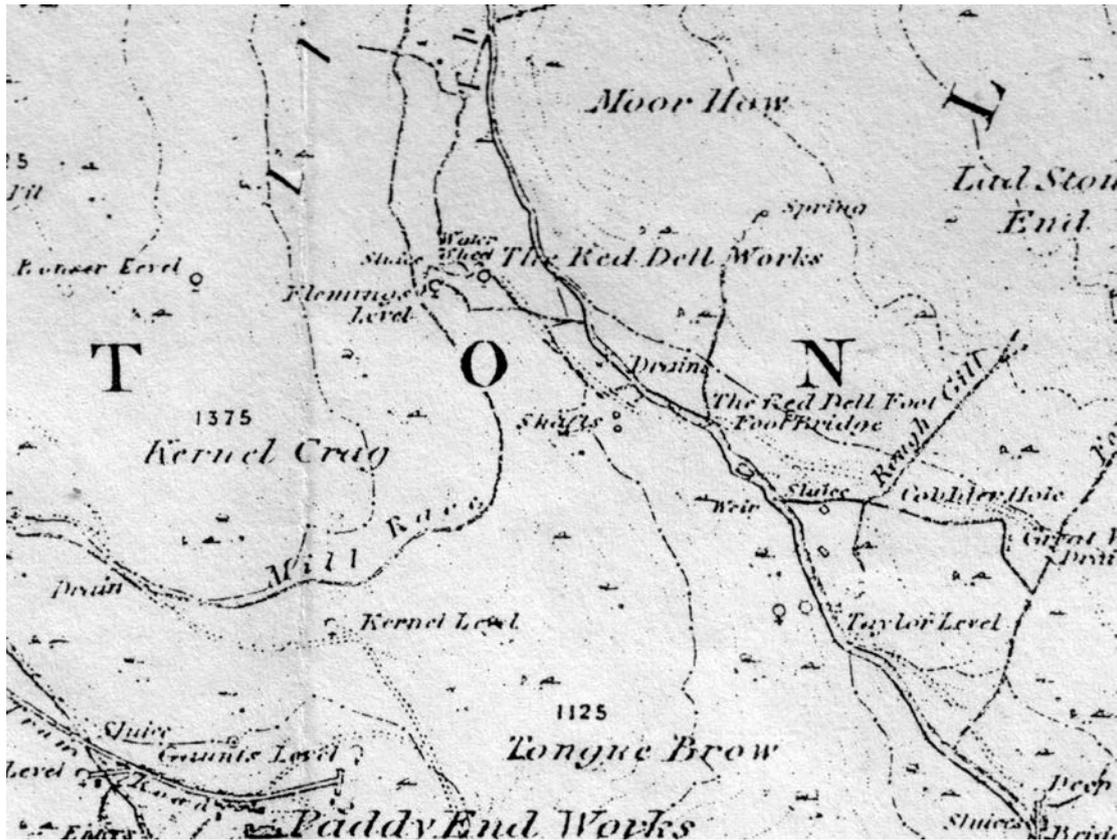
However, like the rest of you I had no cause to think further on this matter until I had a mapping session at Coniston to obtain height data and also included the main features of the site. These would be mine entrances, inclines, etc. About this time, July 2012, I looked again at what plans CATMHS has. These are the Royal Commission plans, the Paddy End and Bonsor Sections, various mine plans, and a copy of a mine plan that originated from Ray Bland. It was this particular plan that was of interest, as it showed Fleming's Top and Middle Level in addition to the rest of the features shown on the other mine plans.



So where are these levels? This is where a bit of map regression comes in. If you know where features on old plans are today, you can overlay them on modern maps. This I did with the Bland plan. Only the Triddle shaft, New Engine shaft and Old Engine shaft and waterwheels are shown.

What comes out is that Fleming's Top Level is shown where Bouncy or Bonsor Level is and Fleming's Middle Level comes out where the Triddle Incline revetting finishes at its upper end. I also did the same with the First edition 6" map, in which the incline and the New and the Old engine shafts are not shown, and the second edition 6" map, where they are shown. Bonsor Mine is where Bouncy mine is, and in the second edition, the incline finishes at its top end where the present day revetting ends.

A word of warning about using 1st edition OS Maps. Good though they are, in certain areas obvious details are not shown; it does not mean they were not there.



1st edition 6" OS map, 1848.



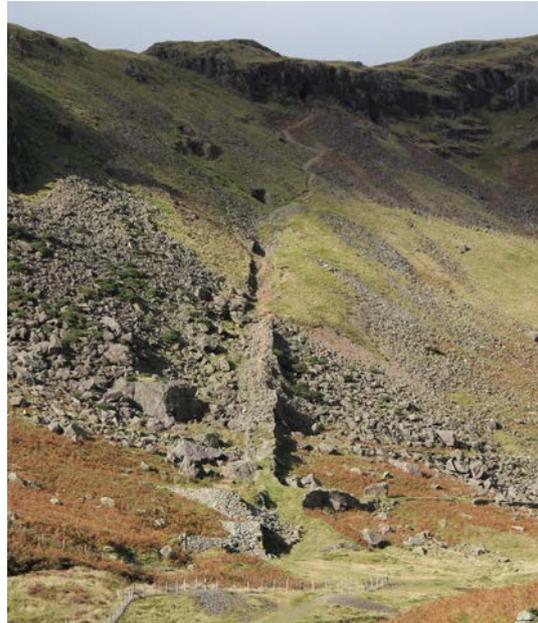
2nd edition 6" OS map, 1891.

So much for maps and plans. It has always been assumed that as the New Engine Water Wheel, Triddle Incline, and the entrance to Triddle Shaft are in line, so therefore they are related in purpose and in time. Is this really the case with these features?

A look at the incline indicates that it is offset slightly from the wheel pit and Triddle entrance. Why is this so? I have no ready answer for this

The incline is a hefty structure and is over two meters wide all the way up; the visible revetting finishing well below the tunnel to Triddle shaft. A closer look at this area reveals the northern revetting bends round towards the south revetting.

The material between the tunnel and the top of the revetting looks more like tip and scree from the hill above. A casual look at some of the rocks revealed a drill hole in one!

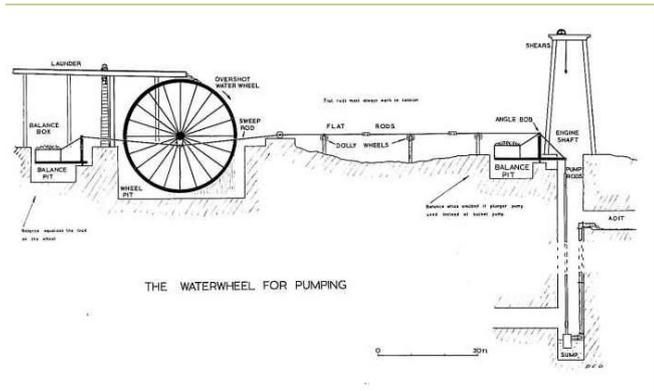


So where does that leave us? Are we looking at a project that was finished, but decayed and the pump rods in Triddle shaft removed? Or are we looking at a project that was never completed? Yes the balance bob is there, but there are no obvious signs of supports for pump rods on the hillside outside. (There are signal wires in the shaft, so at least part was used for haulage.) If you look at

the Old Engine Wheel and shaft there are remains all around, plus we have a photo of the wheel itself.

Go back to the Bland plan and you will notice that the drainage level is Deep Level, there is only Millican's sump below it. A lot of work to provide the means of pumping just up to Deep level. One gets the impression that maybe the mine captain had greater expectations than were in fact realised. Part of the reason may lie in when Deep Level reached the bottom of Fleming's Mine, or whether it was intended to reach it at all. Fortunately we now have Coniston Copper Mines Cost Book 2, covering the period of 1838 – 1843, to help us try a plot the Level's progress Remember Deep Level was started in 1825, much the same time as Fleming's Level.

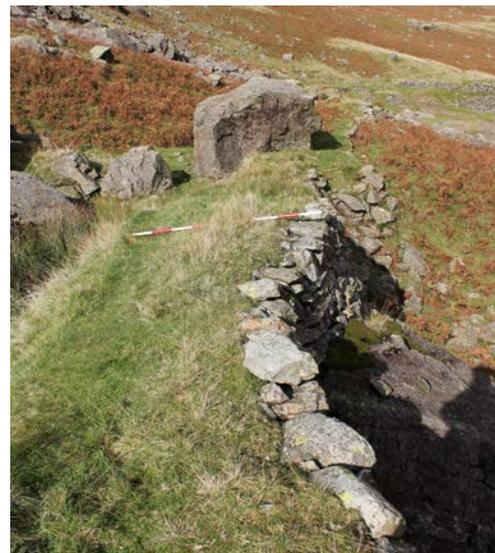
Back to the incline; a look at the plan of a typical waterwheel pumping arrangement. Pump rods are shown supported by posts with rollers on top, or rollers along the ground, or sometimes piers. So why such a hefty incline structure at Triddle? This is more like what is made for tramming purposes. You do not need such a big construction just for pump rods.



To try and find some reasons for this, I had a look at what was happening at Grassington Lead Mines at the same time. The dates are between 1824 and 1833, when Barratt and John Taylor were busy re-organising both mining sites. Both featured the use of large (40ft) water wheels, inclines (Barratt Incline at Yarnbury, Grassington 1828) and long stretches of pump rods and wire rope for pumping and winding. (See Grassington Lead Mines, Mike Gill, NMRS BM 46)

Now if you have a tramming incline, you have to have somewhere for the ore to go, I first thought of the area around the New Engine Waterwheel. There are tips with what look like stamp mill spoil in the area. Plus it may be the area where there was a mill in Charles Roe's days; after all that is where the Waterwheel was, servicing the Bonsor West Shaft.

Another possibility was a tramway from the incline base to the Red Dell Mill. The only possibility is the bank for the leat that goes from Red Dell Beck, via Red Dell Mill to



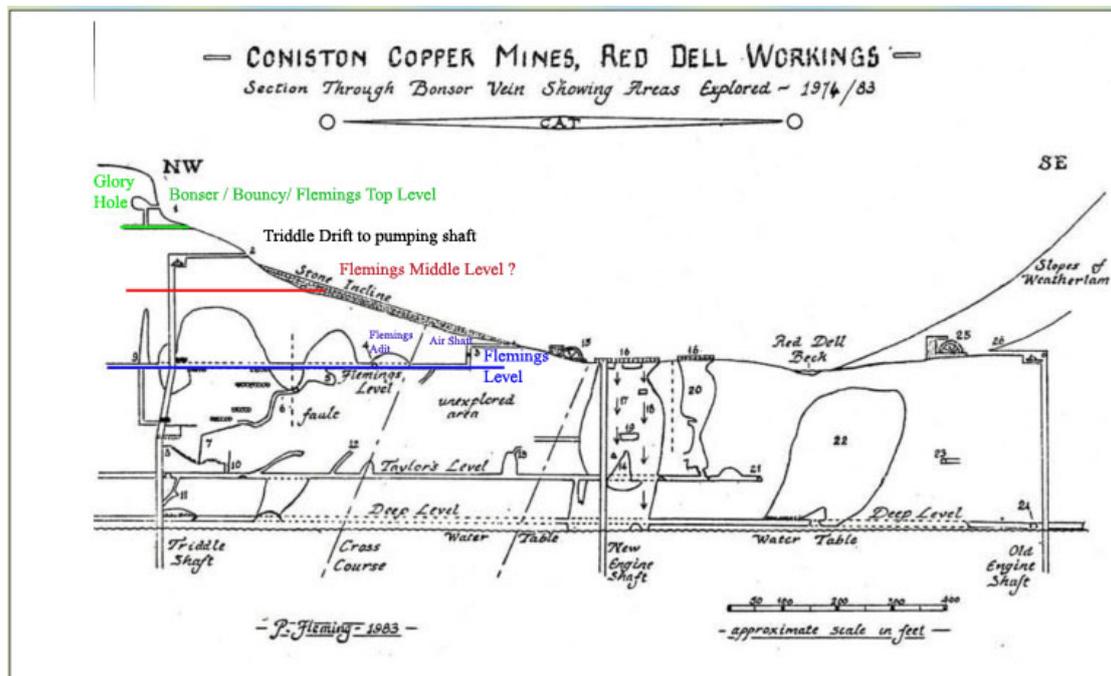
the New Engine shaft waterwheel The southern section is a leat now, but the bank is very wide, wider than any other leat banks, ie as in over two meters, and look at the large foundation stones shown on the next photo. These indicate a large structure here. The sharp eyed amongst you will notice that the width of the arched culvert for the leat is a lot narrower than the incline embankment itself. It might explain the odd arrangement around Fleming's level

entrance. This bank has still to be surveyed accurately to see if it slopes towards the Red Dell Mill.

The large boulder on the leat bank, if it was there when the leat bank was built, there can be no tramway idea. Well, look at the ground spread, to the right hand side. This looks as if it is a result of the boulder dropping on the bank after it was built.



Where this is all leading to is the likelihood that Fleming's Middle Level exists, and that it was situated where the incline revetting ends at its west end. There is one more non invasive activity that can be carried out, and that is a descent of Triddle shaft to photograph the east side of the shaft to see if there is any evidence of a level at the required horizon. A look at Peter Fleming's section indicates that it was mined away. This might account for why Triddle shaft is where it is, and not at the east end of Triddle/Fleming's vein.



The next stage is to have an exploratory dig at the top of the revetting to try to answer the following questions. Is there a level, and what does the revetting do below modern ground level?

Mark Simpson October 2012

CUMBRIA AMENITY TRUST MINING HISTORY SOCIETY

Minutes of the Committee Meeting held on the 14th May 2012 at the BMSC hut, Coniston – starting at 6.00pm.

Attendance: – 9

W Allison	J Brown	J Aird	M Simpson	M Mitchell	P Fleming
I Matheson	A Wilson	C Woollard			

1 Society Administration

1a Apologies for Absence

M Scott, S Barker

It was noted with regret that Sheila Barker felt she could no longer attend evening committee meetings from her Alston base and that she asked not to be co-opted onto the committee. All agreed that we should keep her on the committee circulation as she assists Don with the library and has many other interests related to the society.

1b Minutes of the last meeting

The minutes of the last committee meeting held on the 12th March 2012 had been circulated to committee members. It was agreed that the minutes could be signed as a true and accurate record of the proceedings. (proposed – W Allison, seconded J Aird).

1c Actions from the last meeting

The majority of actions from the previous meeting were completed. The following actions will be carried forward.

- 12/01/05 – Offers of help for S Barker / D Borthwick to sort plans and listings at Coniston.
- 12/01/06 – Arrange to photograph 2 Furness Mine Plans held by P Holmes
- 12/01/07 – Compile current listing of publications held by members
- 12/01/13 – Prepare a proposal for draining the shaft at Silvergill

1d Members Reports

Secretary – covered in the actions above.

Treasurer – The treasurer's claim for expenses of £54.99 was accepted (proposed – J Brown, seconded C Woollard). The treasurer's report for May had been sent to members prior to the meeting, this report was accepted (proposed – W Allison, seconded P Fleming). 7 bookings for the AGM dinner had been received. P Fleming noted that we had run out of "Coniston Old Man trail leaflets". It was agreed that J Aird would investigate scanning a leaflet and printing a short run of 200 if the quality was acceptable to keep the supply going.

Membership / Newsletter – Ian reported that after sending reminders about outstanding membership renewals there were now 90 paid up members and 11 non-renewals. The eleven were sent a reminder instead of the May newsletter. Subsequently two renewed. Two letters were received from members not renewing. One recognised the efforts within the society to preserve Cumbria's mining heritage and wished us well for many years to come and the other highlighted the burden of insurance on continued membership when no longer active in the field.

It was agreed that newsletters are sent to non-member organisations (special editions that do not include minutes) should be reviewed and in cases where no continuing benefit was found

the circulation should be reduced accordingly. 10 newsletters are now sent electronically to members – in the light of increased postal charges this is a big cost saving. Advance purchase of stamps will enable the next four issues to be sent out at “old prices” saving around £110.

Library / Archive – Don’s report indicated that the task of cataloguing the collection of plans and archive material is continuing. The committee felt that this large project is continuing well and would deliver a well-organized and searchable source of society documentation.

- 1e Inventory Check – Further responses on publication holdings are in the continuing action. The Roanhead store contents are confirmed as CATMHS property. A review of the contents will be scheduled to understand what is there and this activity is included as action 12/02/02.
- 1f Meets List – The current draft list of meets was reviewed. Some changes were made to suit meet leader availability and to ensure that a broad range of activities would be provided to meet member’s aspirations. The revised list would be sent by the secretary to the meets secretary in order to finalise dates and issue the programme.

2 Current Projects

Jane Foale Exhibition at Coniston

I Matheson presented an overview of progress towards the exhibition together with photograph sets indicating what would be displayed on the large panels. Panels have been purchased to enable the displays to be erected off site and to avoid damage to the exhibition walls. M Mitchell explained that progress on the video displays using the TV screen was taking time as video work is often in real time – he thought his displays would be ready in time.

The committee expressed the opinion that the display boards could not be kept for long after the event as they quickly deteriorate but should be retained until after the AGM unless a further use is identified in the meantime. (proposed – J Aird, seconded W Allison)

P Fleming was planning a mineral display and required a UV light to locate in the cabinet. M Mitchell agreed to source a suitable UV light for the cabinet. To support the displays W Allison offered to make arrangements and pick up the cost books from the Carlisle Record Office when required. A press release had been prepared by Jane Foale in conjunction with M Scott to support the launch of the exhibition. The display room would be open on the 26th June, press day would be 29th June and the exhibition would open on the Saturday or Sunday 30th June or 1st July- to be finalised. The exhibition would close on the 11th November 2012.

The committee felt that arrangements were adequate to meet the deadline and wished to raise a vote of thanks in recognition of the hard work and commitment from the three members reporting above and the other members who are supporting this exhibition over the next four or so months.

Tilberthwaite Horse Crag Level

The recent project meets had been reported in the May newsletter by J Brown. Only one meet had been held since then and further meets are held as and when a full digging team are available.

Tilberthwaite – Conservation of the mill

Following discussion it was agreed that because the work would need to be carried out on a weekday basis due to it being a publically accessible area and the complexity of the potential works professional assistance should be sought. It was agreed that a local expert in stone walling should be approached for advice and a quotation on which to develop a prioritised project. M Mitchell will undertake this interface as action 12/02/03.

Lucy Tongue Level, Greenside

The blocked drains at the entrance to the level have now been cleared and are running free so access can be gained without encountering deep water under normal weather conditions.

The benefits of carrying out further maintenance to clear the fall in the stope leading to the Lucy Shaft were discussed. J Brown had provided an estimate of the cost of materials for

some 6 sets of steelwork and boards etc. at just under £2200. The committee felt that it was a viable task that would yield access to the top of the Lucy Shaft and possibly an incline to the Low Horse Level. The distance of the fall is known as the back wall of the stope can be seen at a higher level. The proposal was agreed. (proposed – J Aird, seconded M Mitchell)

Lingmoor Fell Quarries Mapping

Colt Howe and Spout Crag have just been photographed and mapped, and the team are about to work their way up the Lingmoor Fell Quarry Incline to Lingmoor Quarry itself and thence to the small workings to the east at the same level. These were photographed during the Boxing day walk about. All imagery is being geo-tagged. After that it is over the wall to do the quarries on the South slope of Lingmoor Fell facing Little Langdale and eventually the Thrang. This work may take a week or more in good weather. Results will end up on a CD in the CATMHS archive.

3. Future Projects

Website Improvements

No progress on this project at present

Sebastian Mine, Coniston

The application for this dig is under consideration with the LDNPA.

Silvergill, Caldbeck Fells

No progress but a meet may soon be arranged to probe the ground in the area of the recent unsuccessful dig.

Levers Water Mine Entrance

It was agreed that the recently cleared entrance to the mine should have an additional two sets of protection installed to ensure that the entrance did not become blocked from the continuing debris running down from above. Materials will be sourced and the project planned. The water utility company who regularly access Levers Water have offered to assist in conveying some materials up to the lakeside.

4. Liaison with other Agencies / Societies

LDNPA - Carrock Fell Mine and Dale Beck Smelter Surveys

The survey work on the Carrock Mine area and the Dale Beck Smelter at Hay Gill are now completed. The Dale Beck Smelter was surveyed by Greenlane Archaeology and the Carrock Mine area by Archaeo-Environmental Ltd. and Oxford Archaeological North. D Borthwick has provided information from the CATMHS archives.

LDNPA – visit to Greenside by Mr Leafe

A visit to Greenside mine is planned for Friday 8th June 2012 by Mr Leafe (Chief Executive of the LDNPA) together with members of the property department and an Environment Agency representative. CATMHS will host the underground tour of the Lucy Level.

English Heritage - visit to Carrock Mine and Haltcliffe Smelter

English Heritage are running a three day training programme for Cumbria and a visit to Carrock Mine and the Haltcliffe Smelter are in their schedule. CATMHS have been asked to assist in the Carrock visit and to provide a short underground excursion. The visit is scheduled for 14.40 on Tuesday 22nd May 2012 and is likely to involve around 20 of their staff.

Environment Agency - Force Crag

The EA have asked if CATMHS would like to put on a display at Braithwaite Village Hall on Friday 25th May concerning Force Crag Mine. It was agreed that W Allison would provide a simple display for the day. Force Crag Mine is owned by the National Trust and is a scheduled monument. The open day is an information event to show what options are available to counter the pollution arising from the mine and its associated tips.

NAMHO Council Meeting - Report

The Research Framework for the Archaeology of the Extractive Industries in England (Mining and Quarrying) is now reaching its second phase. As the assessments from phase one near completion, the help of NAMHO members and others will be necessary to comment on them and to express opinions on directions for future research. To launch this round of further consultation assessments will be posted on the internet for comment and a series of seminars are to be organised to present and discuss the results at various centres in England, early in 2012.

Draft research assessments by topic can be seen on the NAMHO website under the research heading. Any comments are very welcome.

At the AGM the Constitution was reviewed and a new Chairman, Ian Thomas from the National Stone Centre was elected.

Nenthead Mining Complex

A meeting was held at Nenthead to launch a new society to conserve the Nenthead Mines Site. Founder members are S Barker, J Jackson and P Jackson. The meeting felt that the new group's objectives were very important in trying to maintain the mining heritage of the area and many members recognised the times they had spent exploring above and below ground over many years. The meeting wished the secretary to write a letter of support for the new group to be addressed to the local council, as the site's owners, to encourage their recognition and response to the newly formed society. Action 12/02/06 refers.

Other Business

Cumbria Archive Service – Funding for an Archivist

P Fleming had received a letter from Michael Stephens, the Area Archivist, Cumbria Archive Service asking if CATMHS would supply a short statement of support towards their request for an archivist. They wish to catalogue the records of the Hodbarrow Mining Company and Millom Askam Hematite Iron Company and provided a listing of the type of material held. The deadline for their application for the archivist was by Friday 18th May 2012. P Fleming had drafted a response which the committee were happy to endorse since all present felt it was a worthwhile venture. (proposed – J Aird, seconded C Woollard).

Trials of the Truepulse 360R Laser Rangefinder / Compass

M Simpson and M Mitchell have completed a trial of the Truepulse 360R system and Mobile Mapping GPS software loaned by David Shandley and the North Craven Historical Research Group. The trialled system worked very well and tested out underground successfully. It provided highly accurate results capable of meeting the requirements of professional surveys and allowed mapping of quarry workings without the need to place the operators in danger. The system cost and the need to update to compatible software made the option an expensive choice unless high value surveying works were contemplated. The report on the trials is available from M Simpson.

Date of Next Meeting

Monday 3rd September 2012 at the BMSC, Coniston

W Allison (Chairman)

C Woollard (Secretary)

CUMBRIA AMENITY TRUST MINING HISTORY SOCIETY

- Honorary President:** Lord Egremont
- Chairman** Warren Allison
17 Gilbert Road, Cummersdale, Carlisle, CA26BJ
Phone: 01228 523923
Email: chairman@catmhs.org.uk
- Secretary:** Colin Woollard,
1 Lanty Close, Brigham, Cockermouth, CA130UZ
Phone 01900 823686
Email: secretary@catmhs.org.uk
- Treasurer:** John Aird,
1 Hillcroft Crescent, Ealing, London, W5 2SG
Phone: 0208 997 5985
Email: treasurer@catmhs.org.uk
- Membership Secretary
& Newsletter Editor:** Ian Matheson,
1 Rothay Holme Cottages
Ambleside, Cumbria, LA22 0EE.
Phone: 015394 32957.
Email: membership@catmhs.org.uk
- Meets Secretary:** Jon Knowles
46 Dukewood Road
Clayton West, Huddersfield, HD8 9HF
Phone: 01484 860662; mobile 07920
231627 Email: meetssecretary@catmhs.org.uk
- Librarian / Archivist:** Don Borthwick
The Rise, Alston, Cumbria, CA9 3DB
Phone 01434 381903
Email: archivist@catmhs.org.uk
- Publicity Officer** Mark Scott
58 Tarn Flatt, Marton, Cumbria LA12 0NL
Phone: 07743 274115
Email: mark@classicfellwalks.co.uk
- Committee members:** John Aird, Warren Allison, Sheila Barker,
John Brown, Ian Matheson, Mike Mitchell, Mark
Scott, Mark Simpson, Angela Wilson, Colin
Woollard.
- CATMHS website:** www.catmhs.org.uk