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The Newsletter of the Cumbria Amenity Trust Mining History Society

Aerial view of Coppermines Valley, Coniston. Photo Mark Simson

No. 127 **May 2017**

Cumbria Amenity Trust Mining History Society
Newsletter No 127, May 2017

Contents:

The value of Facebook to CAT members
CATMHS Members Only Facebook group continues to serve as an excellent way to share information on mines and meets. So far around half of CAT's members are using the Facebook Group and we would dearly like to see this number increase. Any information, discussions or photographs on the CAT Members Only Facebook Group cannot be seen by non-members.

CAT also has a Public Facebook Group which has proven very useful in attracting new members to join CAT. We are careful to post only information and pictures about mines on that group, which serves to capture people's interest. If they want to find out more they are invited to become full members of the Society or to attend an Open Meet. You are welcome to invite friends and family to join CAT's Public Facebook Group.

If any other members would like to find out more about joining the CAT Facebook Groups please contact Mark Hatton on mhatton304@aol.com or telephone 07774 499589 or send him a Friend request.

Changes to the Meets Lists
In the past the Meets list has been issued once a year around June and sent to members with their newsletter and also uploaded to the CAT website at www.catmhs.org.uk
In future we are proposing to issue a quarterly Meets List which will be sent out with the newsletter, uploaded to the website and shown on the CAT Members Only Facebook Group. This will allow us more flexibility to ensure that the meets we are arranging respond to the requests of members, the availability of volunteer Meet Leaders and the available mines to visit.

Mark Hatton is now coordinating these meets lists having succeeded John Brown, who did this job very capably for a good few years. With this Newsletter you should receive a copy of the Meets List for Quarter 3, 2017.

If any member wants to know more about meets, to suggest a meet they would like to see on the list, or to volunteer to lead a meet - please get in touch with Mark Hatton at mhatton304@aol.com or phone 07774 499589.

Please note that it is essential that you contact the Meets Leader in advance of the day of each meet so they know you are coming and can send you the latest details of the meet, and advise on what to expect, what to bring, where and when to meet.

SRT Training
CATMHS member Graham Derbyshire has been busy in recent weeks running SRT courses for new and prospective CAT members. Four courses have now been run, with a fifth in late April. Each course takes four trainees and there is a waiting list of four other members wanting to join the sixth course, which is yet to be arranged. These courses cater for novices or those with some experience, who are wanting to enhance their skills and confidence at SRT. The courses are spending the morning at the SRT climbing wall at Ingleton and then putting theory into practice at suitable local potholes. So far we have used Yordas, Bull Pot of the Witches and Alum Pot. Feedback has been exceptionally good, with everyone commenting on how enjoyable, interesting (and at times exhausting) the days have been. Graham is an exceptionally good teacher due to his extensive knowledge of the subject, confidence boosting style of teaching and enthusiasm for mine exploring.

New members
Our membership continues to increase! We would like to welcome:

Richard Beadnall from Moorsholm, N Yorks, interested in exploration, underground meets and photography.

Chris Buckingham from Carlisle, interested in underground meets and photography.

Stewart Brown from Barrow-in-Furness.

Iain Townley from Macclesfield, interested in surface meets, local history, geology & conservation.

Derek Mitchell from Appleby, a builder, interested in exploration, local history, photography, conservation and geology

Steve Owens from Pontefract, interested in all aspects of mining history

Russell Nicholson & Angela Taylor from Northolt, Middlesex. Russell is a very keen photographer.

Stuart Morley, who lives in Windermere and has Archaeology skills.

Brian Abbott, from Bardsea, nr Ulverston

Kevin Starkey and Mark Smith, from Darwen in Lancashire. Both have underground and SRT experience.

Chris Sharman, from Fullwood, Preston. Mining interest: exploration.

Clare Harvey, from Kendal.

Martyn Langley, from Consett. A member of COMRU and a Trustee of Nenthead Mines Conservation Society

Michael Pringle, from Appleby in Westmorland

Additional information regarding the loco at Aberllefenni, from Nick Baxter
A comment from my brother who was Resident Engineer on the Dinorwic Tunnels in respect to the article on P23 of the last newsletter, NL 126:

"In truth, that loco (1974) was, if I recall correctly, not new and was donated to them by my contractors after we had finished the trials we were doing!!!! Their existing loco was on its last legs and the track work was absolutely appalling (the driver, blind as a bat, couldn't complete a run in or out without derailing at some point!!), and we upgraded it so we could get on with our job. If I recall correctly also, that same driver had lost a loco into the first flooded chamber because the points had slipped. It's a long time ago, and my memory may not be all that good, but I know we left behind several plant items".

Groverake Mine Head Frame Appeal

The headframe at the mine had been under threat of demolition for over a year and an appeal was launched by the Friends of Groverake and the Friends of Killhope to raise £18,000 in just a few weeks to prevent this happening. CATMHS contributed £500 towards the appeal to save this iconic structure which is just over the border from Nenthead. If the structure could not be saved due to not being able to raise the funds, then money would be returned to the donor. However, the owner has recently decided to take on the headframe and a statement has been issued by the Friends of Groverake and the Friends of Killhope which is below:

The future of the iconic headframe on the Groverake mine at Rookhope is now safe. The threat of demolition which has hung over the last remaining headframe in County Durham for more than a year has been lifted.

The Friends of Groverake were formed to secure the future of this much-loved landmark and have been working hard with interested parties to reach a positive outcome. The Friends, working with the Friends of Killhope, set up an appeal in a bid to take over the headframe and money poured in from all over the country and from as far afield as Ireland and the United States. The Friends rapidly reached the target set.

But now the landowner has agreed to take on the headframe rather than it being demolished in accordance with the original planning permission, now that the mining lease has come to an end. Margaret Manchester, chair of the Friends of Killhope, says "We are all delighted with the landowner's positive response. This is an excellent outcome for a historic structure which is dear to the hearts of local people. My father worked at the mine and I know how happy he will be at this news. We would like to say a massive "thank you" to all those members of the local community and the wider public who supported us and our appeal. Without such huge public interest, we would probably have lost this vital part of our heritage for ever. All those who gave money will now receive a full refund and we wish the landowner all the best for the future of Groverake. We have offered him any help he might need in the coming months and years".

Warren Allison

Hospital Level notes.

High Tech access

Mark Hatton has ushered Hospital Level into the modern era by replacing the aged plank over the first hole in the floor going inbye with a miracle of modern science in the shape of a fibreglass “board” more usually used to un-ditch off road vehicles. Not satisfied with that he has secured the “board” in place with bolts hangers and stainless steel cables

Doctor Descender observed: - If he keeps this up the Committee can fit a broom in a suitable part of his anatomy and he’ll have the level swept out in no time!

Irresponsible bolting?

I've recently been saddened to see random bolting happening in the horse gin area of Paddy End. There appears to be someone practicing bolting in this area. Whilst people need to ensure their bolting is up to scratch I see it in poor choice to be doing it in such an historic area. There are bolts appearing everywhere. If people could put their feelers out and try to get this stopped I'd appreciate it. Many thanks.

Kate Tyler.

CATMHS Archive

Our archive at the Armitt Library has seen quite a lot of activity recently due to the Coniston copper Project. There have been some days when the Bonsor Dressing Floor survey has been rained off, and the archaeologists have used the time studying at our documents at the Armitt. Some of the research volunteers have also been there to further their projects. A great deal of the original material has been digitised by Mike Mitchell, Mark Simpson and myself. We are happy to share it and anyone wanting to do so should contact Ian Matheson, imatheson007@btinternet.com

We have collected all of Eric’s mine plans and ledgers from Maureen Holland. She still has some more documents and photographs which we hope to acquire in due course. There are also some artefacts and a mineral collection. Messrs Mitchell and Simpson delivered an ore tub and some other items to the National Trust at Force Crag Mine mill, where they will be displayed and preserved.

Developments at Penny Rigg Mill, Tilberthwaite

Eleanor Kingston met with Mr Le Fleming (Rydal Estates) and his land agent recently, and he agreed that an archaeological dig could be carried out at Penny Rigg Mill. This took place from the 24th to 28th April. The reason for the short notice is that the archaeological company can only be there on that week due to other commitments. It was supervised by John Pickin, who has been involved in the recent surveys.

Conditions were OK for the project. Although it started with icy winds and hail showers, the week was mainly dry. A flag floor with post holes was exposed in the crushing mill and a fine cobbled floor in the jigging shed, but so far nothing new has emerged to shed light on the detail how the mill operated. On the final day the exposed areas are to be backfilled and turfed over. There will be a more detailed report in the next newsletter.

Tilberthwaite Mine Survey

The third and final Coniston Copper community archaeological survey will take place at Tilberthwaite Ghyll Mine from 22 May – 9 June (not including bank holidays and weekends). Situated at the head of the beck, Tilberthwaite Ghyll mine was first formed under the auspices of the Mines Royal in the 16th century but continued to produce ore well into the 19th century. Please note that there is a strenuous walk to site, which takes at least 30 minutes. If you would like to book a place on the survey please email archvol@lakedistrict.gov.uk with your availability – initially only 3 days will be assigned to each person because of the popularity of the surveys.

There will be an Introductory Day on Sunday 14 May, meeting at 10.00 am at the Tilberthwaite car park (NGR NY3063 0100) As part of this session there will be an opportunity for people who would like to, to go underground into the mine with CATMHS. In order for us to plan the day, which will also involve a guided walk to and at the mine and an explanation of archaeological survey techniques to be undertaken, we need to know the numbers of people who would like to attend and of those who would also like to go underground. Please email archvol@lakedistrict.gov.uk to book your place.

Dales Mining Museum Collection saved

The Dales Countryside Museum in Hawes has won support from the National Lottery to re-house and exhibit one of the country's most fascinating lead mining collections. A total of 860 objects, including mining wagons and tools, were given to the DCM by the Yorkshire Dales Mining Museum in Earby when it closed in 2015. A grant of £90,600 from the Heritage Lottery Fund (HLF) means that the artefacts can now be re-examined and displayed, while the stories of miners and of the members of Earby Mine Research Group who assembled the objects over 50 years can be told. The project is being called, "A Rich Seam: Lead Mining and Textile Heritage in the Yorkshire Dales".

As well as bringing the lead mining collection back to life, new exhibitions will be created from the DCM's extensive textile holdings. The lead mining and textile industries were once vital to the Dales, especially in the 19th century. They went hand-in-hand, with miners often knitting on the way to work to supplement their income. "A Rich Seam" will run over the next 18 months. Significant building work will take place at the DCM, which is owned and run by the Yorkshire Dales National Park Authority (YDNPA).

One of the most challenging tasks will be to reassemble what has been described as the most complete water wheel and double roller ore crusher in the country. The wheel was rescued from the Providence Mine near Kettlewell in Wharfedale and was transferred to the museum in pieces. Four former trustees of the Yorkshire Dales Mining Museum have agreed to tell the stories which lie behind each of the artefacts. Objects range from personal items, such as hats and bottles left underground by miners, to tools and ventilation equipment. In the past whole families in the Dales would be involved in both lead mining and knitting. Women and children worked at the mine top, processing the ore, while knitting was a constant activity.

The Sankey Photography Collection.

Julia Parks is a Project Manager at Signal Film and Media in Barrow-in-Furness. They are currently in the early stages of developing a Heritage Grant from the HLF to develop, celebrate and make available, the Sankey Photography Collection.

Edward Sankey and later his son, Raymond Sankey, ran a photographic business in Barrow from the 1890's - 1970's. The Sankey family documented events, people and places throughout Barrow and Cumbria. The photographs taken were used primarily to create postcards, which are well represented online. The Sankey Archive is made up of 15,000 negatives and is currently housed with the relatives of Edward and Raymond Sankey.

The Sankey family captured a whole range of industrial activity happening in Cumbria over 70 years, eg. ship building, railways, etc. There is to be an initial consultation meeting to gauge interest around the project. The dates will be: Wednesday 3rd May: 6.00 - 7.30pm and Monday 8th May: 6.00 - 7.30pm.

The collection is entirely uncatalogued, and part of the funding bid will include the re-housing, cataloguing and digitisation of the collection. If anyone is interested but can't make the two dates Ms Parks is very happy to talk on the phone or arrange a separate meeting.

Julia Parks <julia@signalfilmandmedia.co.uk>

Coniston Copper

The Coniston Copper Heritage Lottery Funded project progressed well last year. Conservation work has been completed on some of the structures, including the Thriddle Incline, a nineteenth century dry stone structure which supported a set of rollers carrying pumping rods from the New Engine Wheel to the Bouncy Mine level, which in turn served to pump out the horizons of Flemings, Taylor and Deep levels. The dry stone walling – all undertaken by hand, has been completed.

One of the few places where you can see largely unaltered eighteenth century remains on site is Bonsor East, a wheel pit and associated structures which pumped out the Bonsor East shaft. The conservation work, including stone walling and the removal of spoil and fallen masonry, has been completed to an extremely high standard and we are looking forward to the conservation contractor returning in the Spring to complete the rest of the work on site. The contractors have started back on site and are currently working on the Bonsor Low Mill; please feel free to go and see what they are doing.

We completed an archaeological survey of Penny Rigg Copper Mill, a single phased nineteenth century ore dressing and processing plant associated with Tilberthwaite Copper Mine. Volunteers assisted on all aspects of the survey, gaining lots of new survey and building recording skills and having lots of fun. A report, Penny Rigg Copper Mill, has been produced by Northern Archaeological Associates on behalf of the LDNPA, and they have provided a copy for the CATMHS archive at the Armitt, Ambleside.

There are a number of other volunteering opportunities available, including research, conservation and guiding training. If you would like to find out more please email archvol@lakedistrict.gov.uk or telephone 01524 65206 to find out more. More activities will be taking place in the coming months. They include projects with Coniston C of E Primary School, mining heritage events and developing new interpretation.

Volunteers at Bonsor Low Mill on Sunday 12th March; introduction to a 3 week survey project.

Coniston Copper Mines HLF update

The conservation work will start again in April and it is hoped that all the work will be completed this year. Some of the volunteers have signed up to carry out archive research and the first session, to let them know what areas would be of interest and to make sure that they did not waste valuable time going over new ground, was held on the 6th December at Kendal Record Office, which Ian Matheson and I attended. A second session was held at the Armitt Museum in Ambleside on the 27th January where some of the CATMHS archive was brought out for the volunteers to look at, which Ian and I again attended.

At the second session, various areas from the shareholders, supporting infrastructure, development of Coniston, Health and Safety (accidents), transport, mining families in particular looking at health, welfare and living conditions, who were the miners, the Barratt family in particular John Barratt, focusing on a Coniston family and Tilberthwaite Mine were agreed as worthy of looking at. A huge thank you should go to Ian for providing advice on what the volunteers should be covering.

On the 10th March, we all met at the Ruskin Museum to discuss what had been found so far and I think it is fair to say that Ian and I were extremely impressed with what they had discovered in such a short time; much of the information is new. It was anticipated that two hours would be long enough, but we overran by half an hour and could have carried on for much longer.

On Sunday 12th March, Mike Mitchell, Mark Simpson, Ian Matheson and myself met at the Bonsor Lower Dressing Mill with Eleanor Kingston, John Pickin and Kate Chapman from Northern Archaeological Associates, and 25 volunteers, who over the next three weeks, were going to survey the remains of the mill. It is an area that one tends to walk through on the way to somewhere else, but this is a fascinating area with a surprising number of features still present. Mike and Mark explained the site from the research they have been carrying out and much time was spent using old photographs to see what could be still identified. We started to piece together what went where on the site, with many of the features still be clearly identified.

This meeting had clashed with a CATMHS meet where Mark Hatton was conducting a tour of the Copper Mines Valley with some twenty people turning up. With the 25 volunteers for the HLF meet plus others, this must be one of the largest meets the Society has ever had at over 50 people.

Figure 1 Mark Simpson, explaining the site to the volunteers

There are also ongoing discussions with Coniston Secondary School as to the next phase of collaboration with the HLF project, as well as other projects in the community, so there is a lot happening this year.

Warren Allison

Newland Furnace - Archaelogical Investigation

After 26 years of work trying to stop the Furness buildings from falling down the furnace area is almost free of building work and we feel able to concentrate on studying what we have saved. At the very start of the project when we were just the labourers on a CWAAS project, we carted spoil away until there was room to get through the partially collapsed stack.

There was no indication of where the floors of the Blowing Chamber and Furnace Stack should be and we wanted to find out. Informal discussions were held with Historic England who agreed with the proviso that the project was supervised by a professional archaeologist. After a few false starts, Dan Elsworth of Green Lane Archaeology agreed to do the work and show us the proper procedure for the project. His project proposal was submitted with the scheduled monument consent application and permission to dig a number of test pits was granted late summer 2016.

Unfortunately attempts to obtain funding for the work from the DONG energy Community Fund proved unsuccessful but the project was saved after Ian Matheson approached the CATMHS committee for support and got agreement from them to fully fund the work.

The path was now clear to set a date for the work and 18th and 19th November were chosen to dig. Word was put out for volunteers and thankfully seven people armed with picks and shovels turned up bright and breezy at nine o'clock on the Friday morning.

Plots ($1m^2$) were marked out and the digging began. Initially plots one to three were excavated and a further three were dug. The last one was dug to merge two earlier pits which were showing interesting features at depth. (See plan). The excavated material was put into one ton bags (like the type Warren and his mates throw around when full) After two days of hard labour this is what we found:

Pit 1: Against the back wall of the blowing chamber, showed that the wall is built on bedrock but the bedrock then falls away steeply. A clay pipe, glass, pottery, metal objects and pieces of wood were found. These and other finds are being dated and identified by Dan Elsworth. There was also a slab which lined up with the engine beds further on, or it may have been a step down to the wheelpit.

Pit 3: Investigated a crudely built wall across the blowing arch. It was agreed that this was of a late date and probably not archaeologically significant.

Pit 5: This was dug to find the other end of the wall in Pit three but no sign of the wall was found despite digging to a considerable depth.

Pit 6: This was dug ion the centre of the stack in the hope of finding the hearth. There was no hearth and the hearthstone had been removed. Beneath a layer of hard packed sand there was the remains of a vent which protected the furnace from water ingress.

Pits 2, 4 and 7: These were all dug in line with the now missing waterwheel axle. Pit 2 was against the internal bearing blocks and was through 15cm of clay and then at least 60cm of slag in various forms. Underneath this were large stone blocks but nothing that made sense, ie no floor could be found. Pit 4 was dug 1 meter further south from and in line with Pit 2. This was chosen because big stones protruded next to the internal buttresses. This again had a layer of clay and slag but revealed fire bricks and building bricks which made interesting shapes but no sense. Further down we eventually found huge flat worked blocks with hold-down bolts protruding but also a vertical block. At this point it was decided to join the two pits together, Pit 7 and Pit 4; this showed that the flat blocks continued through Pit 7 just below the floor in Pit 2.

Throughout the dig Dan Elsworth constantly took measurements and made a laser survey of the many levels exposed.

Following the dig we met with Andrew Davison of Historic England to show him what we found. He seemed happy with what had been achieved and was supportive of additional work being carried out on Pits 2, 4 and 7 (all one now remember) to better understand the purpose of large stone blocks that we had uncovered. Now that there is no evidence of anything of archaeological significance below the Blowing Arch he could see no objection why the floor could not be lowered to improve access for people who struggle to stoop below the iron beams.

Those present were:- Peter Sandbach, Paul Timewell, David Robson, Philip Robson, Roger Benbow, David Smithson, Dan Elsworth, Ian Matheson, Tony Mayo and Peter from Carlisle who travelled especially for the occasion.

At the December work meet Pits 3, 5 and 6 were backfilled with their original spoil. This is a requirement of the scheduled monument consent for the dig.

So what happens next?
Firstly Pit 1 will be backfilled.
Secondly excavation of Pits 2, 4 and 7 will be continued and surveyed and then backfilled.
Thirdly the archaelogical survey by Dan Elsworth will be presented to the Trust, a copy will be deposited in the CATMHS archive and a summary will be written for the Newsletter.

The Trust would like to thank CATMHS for their financial support.

Notes, Lake District Mines Forum Feb 2017. Bowe Barn NT Office, Borrowdale
The Mines Forum is held about three times each year to discuss issues regarding mining heritage in the Lake District. There are usually representatives present from the Lake District National Park Authority, the National Trust, the Environment Agency, NAMHO, CATMHS, Coniston History Association, Honister Quarry and occasionally from English Heritage and the National Coal Board

Present this time were: John Hodgson, Eleanor Kingston, LDNPA; Liz Withey, Environment Agency; Warren Allison, Mike Mitchell, Ian Matheson, CAT; Alastair Cameron, Coniston History Association; Donald Angus, Honister Slate Quarry.

The meeting commenced with updates on various mine sites:

Coniston. Liz Withey reported that a survey of Church Beck and Yewdale Beck had been carried for the Environment Agency to determine flood risks. The Coal Authority, who have responsibility for all discharges from mine sites, are considering installing mineral pollution filters. Sampling shows that about half the flow of Levers Water Beck is passing through the spoil tips. A farmer has been stopped from taking gravel from the beck near the Bonsor spoil heap as this contravenes Scheduled Monument regulations. Alasdair Cameron suggested that it was important to obtain samples from Deep Level shortly after events such as extreme rainfall or earth tremors, but that it would be difficult to schedule.

Force Crag. An EA survey had determined that reduced levels of minerals were going into Bassenthwaite Lake following the establishment of the filter treatment beds at Force Crag mine.

Greenside. The John Muir Trust is seeking to lease Glenridding Common. The lease wouldn't include scheduled mine sites. Their objectives are unclear, but there is concern that their management might not conserve the archaeological heritage of the area. The forestry Commission is also involved in land and flood management of the Glenridding area.

Greenburn. The NT has agreed that restoration work is needed to the dressing floors above the wheel pit at Greenburn mine. Revetments had been rebuilt circa 2004, but have collapsed again.

Tilberthwaite. Work to reopen Penny Rigg adit has been completed. The early mine site at the head of Tilberthwaite Ghyll is to be surveyed in June as part of the Coniston Copper Project.

Threlkeld. At Gategill the Coal board are looking to establish water treatment at the adit entrance. Alastair Cameron reiterated that money might be made from processing pollution minerals which mcould defray the costs.

Sandbeds. The survey carried out by volunteers has been finished. Mike mitchell and Mark Simpson had provided an aerial survey of the site after flood damage had occurred.

Carrock mine. The gate to the track leading to the mine entrance has again been cut off with an angle grinder. John Brown and Co have already repaired it once. It is thought to be the action of quad bikers.

Goldscope. There has been recent interest in a niche in the main adit of Goldscope mine which it is thought might be a shrine hand chiselled by early 'Dutchmen' circa 1565. They were miners from the Tyrol in Bavaria, where a number of such shrines are known to exist. There is a photo of it in Ian Tyler's 2005 book on Goldscope. Alasdair Cameron has been in touch with a museum in Innsbruck.

The Austrians were actually more interested in the hand picking than in the shrine. Handpicking patterns differ by date and location. This led to a discussion on handpicked workings in Cumbria, of which there are quite a few, mainly around the Newlands valley and at Coniston and Tilberthwaite. We should consider protecting, listing or scheduling them, and Eleanor Kingston asked members to make a list and send it to her. It was suggested that mortar stones and copper heaps, which are known at Manesty, Castle Nook and Copper Heaps Bay, be included in the inventory. It was suggested that a reason for the existence of these heaps might be the supposed destruction of the Brigham smelter by Parliamentary forces in the 1840's.

Hogget Gill Smelter. Circa 1995 John Hodgson had a project to protect the site from walkers taking away samples of slag and campers spoiling the site, moving stones, etc. Recently the central hearth stone seems to have been destroyed or removed. Mike Mitchell said that he had carried out a pole survey about a year ago which could be used as reference.

Coniston Copper Project. Eleanor Kingston reported that conservation work had been suspended for the winter, but a meeting with the conservation team was to take place at the end of February. Work still to be carried out includes both lower and upper Bonsor dressing floors, Penny Rigg mill, Paddy End, and the Old engine shaft launder tower.

A survey and interpretation of the lower Bonsor dressing floors is to start on 14th of March and is expected to take 3 weeks. There is to be a meeting with Rydal Estates to determine suitable sites for interpretation boards.

The archive volunteers have made a start. The British Newspaper Archive looks to be a promising source of nation-wide references for Coniston copper.

AOB. Alastair Cameron is producing a new book on Lake District Metal Mines in a similar format to his recent publication on Lake District Slate. It will be predominantly pictorial, aimed at the general public, and he would like to include photos of restoration carried out by the EH Coniston Copper Project.

After the meeting concluded there was an informal discussion regarding sales of books at the Honister Slate Quarry shop. Alastair Cameron's Slate from Honister is out of print, but apparently they were not getting supplies of recent book, Slate mining in the Lake District.

Alastair published Slate from Coniston through CATMHS, and it was suggested that, as we have a large surplus stored at Mandel's office, we should provide them with a supply at a reduced price. If we could get any money at all for them it would be a bonus, and would also fulfil the aim of our constitution to educate and inform the public.

At the CATMHS committee meeting on 29th February it was agreed that copies could be made available at meets to new members free of charge. IM

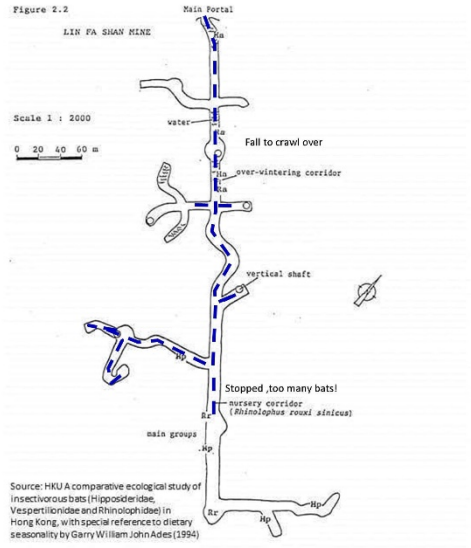
Minerology Society of Hong Kong (Facebook)

Normally I'm vicariously joining your adventures, but this week I have something to add from afar. So here are a few photos from my first underground mine visit out here in Hong Kong.

This is Lin Fa Shan Mine which was worked in the early 1950's to early '60s for tungsten (wolframite) when prices sky rocketed during the Korean War.

The adit is accessible for about 400m and supports a couple of bat species, the guano in turn is supporting a fish (up to 10cm) & shrimp population behind the first fall.

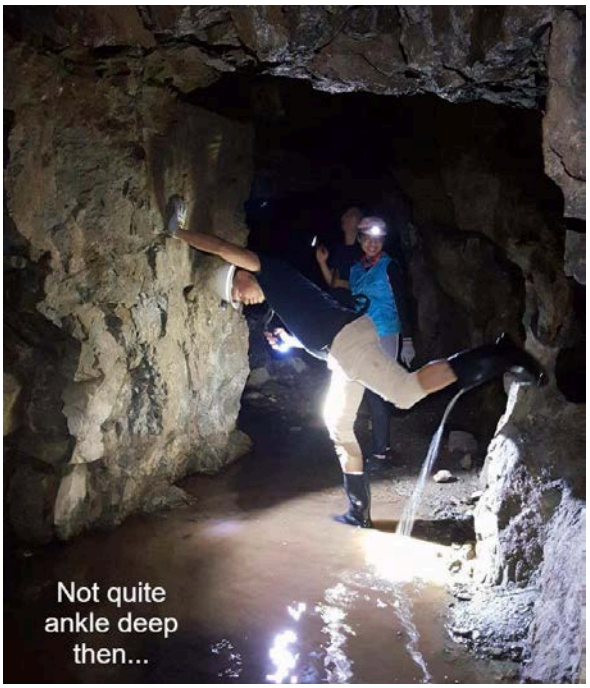
In this the lowest level there is no stopping and no tungsten mineralization seen, so I suspect that it's a haulage level with the ore being dropped down the rises above. David Clayton.



Mine Layout

This must be the best looking group of mine explorers I have ever seen! IM.

Last year CAT member David Clayton visited Cumbria with 13 members of The Mineral Society of Hong Kong. They visited Smallcleugh Mine at Nenthead and West Pasture Mine in Weardale during their stay, with a visit to the West Cumbrian iron mines. Steven Derbyshire conducted an evening exploration of Carrock Mine for them. (Read the report in NL 124. There is a write up of the mine history at http://industrialhistoryhk.org/lin-shan/ *)*



Borrowdale Meet, 30th October 2016

The shores of Derwent Water have witnessed a good deal of mining activity over the centuries. Yet 100's of people walk past these mine sites every day completely oblivious to the work that has been done here. This meet was aiming to visit various Copper and Lead Mining sites and see just how much remains for the mine explorer to enjoy.

We started at Grange where 12 members met before walking up to Copperplate Mine. This site was worked by the German Miners from the 1560's and was a rich source of good copper ore for them. Today there are various small hand chipped adits dotted around the fellside and in the private gardens of a large house. We had written to the landowner in advance of the meet and obtained their permission to visit the working on their land. Most of the workings hereabouts are exactly as the Germans left them. However an early 19th Century mining group had a try at reworking a couple of the levels but thankfully without any success. As a result the hand chipped workings are remarkably unsullied by later more aggressive mining techniques.

After feasting on the 16th C levels we walked over to Manesty where we were given a flea in our ear by a landowner for straying off the public path to look at a large calcified copper heap that still sits here. It is a mystery as to why so much copper ore ready for smelting was abandoned here, with a similar heap in Newlands and another further along Derwent Water in a bay named after it, being Copperheap Bay. One theory is that on the outbreak of the English Civil War, Parliamentary forces chased the miners away and destroyed the smelters so as to deprive the Crown of their Royalties. With no miners or smelters left in the area the work in progress was simply left to calcify. It was many years before mining and smelting returned to the area by which time the ore was unusable.

We then followed the shore of Derwent Water, spotting the profusion of veins and surface workings in this area, before arriving at Brandlehow. Here the 19th C mine was a large scale operation with many levels and shafts, a large water wheel and spoil heaps to match. These workings went deep below the lake but today there is relatively little accessible underground but plenty to see on the surface. We then climbed along the flanks of Cat Bells to visit Old Brandley Mine and John Tebay's Level to end the day with a good bit of underground exploring of what appears to be a relatively unproductive vein.

Mark Hatton

Cwmystwyth Mine
The Cwmystwyth mine site is under the ownership of the Cambrian Mines Trust. The Trust was formed in March 2012 and acquired the site shortly thereafter for a nominal sum from the Crown Estate. The trust is run by avid mine explorers, led by the legend in his own lifetime Roy Fellows, and access is possible by prior arrangement.

An abbreviated mine history is as follows (precis'd from the CMT website):

The Cwmystwyth Mines probably constitute the most important mining site in central Wales, and just like many other sites have something of a chequered history making fortunes for some while bankrupting others.

Earliest mining is on Copa Hill (Welsh: Copa = Summit) where the Comet Lode is exposed in an Opencast. Here mining has been carbon dated to around 2100 cal BC, although it may be even earlier. An artefact has been discovered at the foot of Copa Hill (probably from a grave) that provides a possible link with Beaker prospectors, and perhaps even the very start of mining at the end of the 3rd millennium BC.

Investigations of the blanket peat on Copa Hill suggests that there is also Roman mining for lead (probably during 1st-2nd century AD).
Although no Roman workings have been found in that location, a Roman lead bole (i.e. a lead smelting hearth) was uncovered at the foot of Copa Hill.

We next have evidence for Early Medieval mining, as suggested by the ancient leat for hushing on Copa Hill, plus some evidence for a medieval prospecting shaft within the Comet Lode opencast, and several lead smelting hearths at Banc Tynddol, at the foot of Copa Hill.

The later phase of early mining was controlled by the Abbot of Strata Florida Abbey, which would have continued up until the dissolution of the monasteries by Henry the Eighth in 1536. Following this little was probably done until Elizabeth 1st took the throne and formed of the Society of Mines Royal which was the start of the first intensive mining. Under the society there were several lease holders including the ubiquitous Sir Hugh Myddleton and Thomas Bushell.

In 1693 the Mines Royal Act ended the monopoly of the society and laid the way open to the Company of mine Adventurers under Mackworth and Waller.

In 1759 the mines passed into the hands of Chauncey Townsend who engaged the services of Thomas Bonsall from Derbyshire to manage the mines.
Bonsall stayed on after the death of Townsend in 1770 working the mines for Townsend’s son who inherited the lease, later in 1785 he took on the lease himself.

Bonsall died in 1807 and the lease passed to his son, and then was taken over by the Alderson Brothers from Swaledale and James Raw who has local descendants.

Unfortunately the price of lead plunged in the 1830s and the Aldersons were declared bankrupt. The lease was then taken by Lewis Pugh of Aberystwyth who had the luck of the devil as metal prices started to soar immediately and he made a fortune from stocks of ore in hand when he took over the lease.

In 1848 John Taylor of Norwich took over the mines; in 1885 after a period of poor output the mines passed to a new company "The Cwmystwyth Company"

In 1900 the mines were taken over by The Cwmystwyth Mining Company Ltd under Henry Gammon. In 1905 the company was reformed as Kingside Zinc Blende Ltd but still struggled to turn a profit. By 1909 Gammon had blown all his money, but managed to attract Brunner Mond to invest in his existing company.

In 1912 the mine was again split into two sections, with part being taken over by The May Mining Company formed by one of the old mine captains John Howell Evans. This company is notable in one of the few metal mining concerns that used Kell Drills developed by Moses Kellow of the Kelldrill Works at Croesor Slate Mine near Blaenau Ffestiniog. History was to repeat itself however and these two companies went to the wall in 1915 and 1916 respectively.

In 1916 two gentlemen named Thomas and Stocks managed to form a new company Cwm Ystwyth Mines Ltd which struggled on until 1923 when the mines passed into the hands of the British Metal Corporation.

In 1925 the mines were being worked by a partnership of a Craig and Herbert and finally The Gallois Lead and Zinc Mines Ltd until 1950 when the mines were finally abandoned.

Eventually the ownership of the land and mines passed into the hands of the Crown Estate who in 2012 spent a great deal of money consolidating the remaining buildings, and then in 2013 the whole site was acquired by Cambrian Mines Trust the present owners.

4th February 2017 - Chris Cowdery (ML), John Aird, Mark Waite, Mark Hatton, Graham Derbyshire.

After an uneventful journey (in spite of the sheet ice) over the mountain track from Llangurig, the ML waited for the rest of the party to arrive via a more sensible route. Capt Aird also came over the mountain track and remodelled some roadside scenery on the way. Fortunately the Land Rover was unharmed. Mark Waite arrived with his car smelling strongly of Diesel, seemingly a consequence of a previous close encounter with a ditch.

Figure 1- The explorers with Graig Fawr behind

The ML had planned a descent from the Rosa Level (which is one of the upper levels adjacent to Nant Trefach). This level enters an extensive stope on the New Lode which drops all the way to below the valley floor and is therefore flooded. Neither the ML nor anybody else in the party had visited this particular part of the mine, thus it was an adventure into the unknown.

The stope could also historically be access from Mitchell's Level and Gill's Upper Level, which were observed on the surface (albeit run in).

The group ascended the steep hillside to the Rosa Level portal via the miner's path to Graig Fawr (affording an excellent view) and one of the many tramways and incline drumhouse at the top of the incline above the mill.

Rosa Level runs in-bye for a short distance until the forehead. This is essentially at the top of the New Lode stope, although this isn't too obvious at this point. On the right hand side is the top of a shaft, and on the left hand side is a rubble slope down.

Figure 2- The top of the descent n the New Lode

The ML elected to descend the shaft using existing rigging points, however it became apparent after about 20m that the way on down was unbolted and would take some time to set up. The ML re-ascended to the top.

The way on was down the rubble slope and a short abseil to the top of another rubble slope. This was followed by a multiple stage abseil with a few re-belays and a tight constriction half-way down. The bottom of this is at the horizon of Mitchells Level, and afforded sufficient shelter for lunch.

Most of the level has been stoped away, so the ML rigged the next descent which dropped to the horizon of Gill's Upper Level. Across the stoped away level the top of a ladder could just be made out. From here a further short descent and rubble slope led to a level which is on a similar horizon to Gill's Lower Level, but is not connected with it. This final descent required a deviation bolt which rapidly gave the lie to Mark Hatton's claim that his super lightweight drill would make 8 holes. It failed after 2. Subsequent clarification indicated that it took 2 batteries to make 8 holes (which still doesn't add up!) From here, a footway descends to water, and a 48ft ladder ascended back up to Gills Upper Level at the point that the adit enters the stope. A static rope (circa 1991) was next to the ladder. The ladder appeared sound at the bottom, so the ML attached to the rope and started to ascend the ladder. Near the top, the ML observed that the right hand side was becoming soft and spongy to the touch. Upon looking up, it became clear that the right had side had completely disappeared just leaving the left hand side with the rungs poking out. The ML decided to continue anyway to the top, albeit very carefully, hoping that the rope was more secure than the ladder.

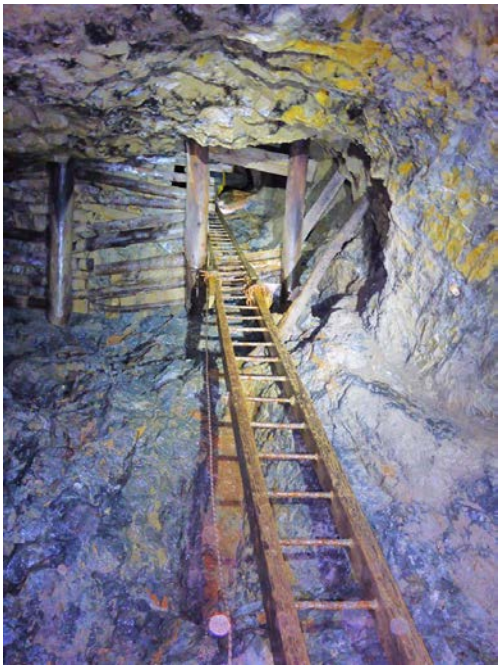


Figure 3- Ladderway near Lefel Fawr

At the top, the ML indicated that the ladder was safe to climb and so John Aird and Mark Waite followed. Graham sensibly decided to stay at the bottom, and Mark H had turned around earlier anyway.

A quick inspection of Gills Upper adit was undertaken which had wooden sleepers with slots cut in for the rails. Wooden wedges were present suggesting T rail with the wedges used to hold the rail in place.

The way on at Edwards Winze down to Gills Lower adit was found, but not descended.

With the levels explored, the group returned to day derigging as they went.

A fine evening was spent at the Miners Arms, Pontrhydygroes.

Figure 4 - Crosscut into stoping

5th February 2017 - Chris Cowdery (ML), John Aird, Mark Hatton and Graham Derbyshire. Mark 'Del Boy' Waite returned to Corris Mine Explorers on Sunday.

Figure 5 - The skipway from Lefel Fawr to Kingside Level

Figure 6 - Descending the skipway

It was decided that a fairly simple trip into Lefel Fawr would suffice.

At the skipway, a descent was rigged and descended, followed by a full exploration of the Kingside level. Level Y Fordd (driven by Brunner Mond) was noted for the obvious vertical misalign-ment where it intersects with the older Kingside level, and the subsequent out-bye incline and high roof! The surveyor probably lost his job!

Once the skipway was re-ascended, the group partook of lunch, whereupon a light (reasonably bright) appeared, with Roy Fellows beneath. Banter was exchanged with Roy, who took pleasure in showing us some of his handywork to keep the level open. Roy also took us up a

ladderway into the stoping and across from the Comet Lode into the Kingside Lode via a plank across the stope. Roy took his leave, and the group then explored that area of the mine.

Time being pressing, day was attained early afternoon whereupon everybody set their sat-navs for home.

Figure 8- Lefel Fawr

Figure 7 - Skip from the Skipway, lying just off Lefel Fawr

Figure 9- Kitting up at the end of Rosa Level

Figure 10 - Ore wagon at the inbye end of Lefel Fawr

Grasmere mine meet, 12th February.

After gathering the 12 members from the various lay-byes in Grasmere, we started to walk up towards Greenhead Gill which is the site of one of the first German workings. After pausing at the bottom of the gill to view a very short trial near the structure which carries the Thirlmere aqueduct, we carried on up the gill to arrive at a large tumbled down structure whose purpose is unknown. Just across the beck is the entrance to a chest deep water filled level which Ian Tyler and I dug out many years ago, it was driven around 400 yards to undercut the old German workings higher up the gill and had been blasted. It is basically a straight drive and was a failure as the vein was not worth working at depth.

We soon arrived at the main site which consists of various structures, buildings and shaft workings much of which could be attributed to the Germans. In the 1586 survey, there is reference to the stamping house which had been built of stone and lime, slated over and was 36 foot-long by 35 foot-wide and floored throughout with boards. There had been a great wheel to serve 7 stamps, but these had been relocated to another site. There had also been a number of washing tables and troughs.

The survey mentions a smithy which was about a quarter of a mile from the mine being 33 feet long by 20 feet wide again built of stone and lime and was a two-story structure. There is also mention of a small rowlle wagon for serving within the mines and in the west end of the smithy a ten-fathom shaft had been sunk. This structure has never been located.

The mention of a rowlle wagon (or hund as referred to in Agricola) is intriguing as these have also been mentioned at Goldscope and Silver Gill mines and were effectively mine tubs running on wooden boards underground. CATMHS has found evidence of the wooden waggon way in Emanuel and New Stoln levels at Silver Gill Mine. This would suggest that there could be a German level, probably close to the stamping mill, which has yet to be found. The mine was surveyed a couple of years ago as part of the Windermere Reflections project, and it is my belief that there is more work to do here to get a better understanding of the site.

Upper level.

The wind had now become bitterly cold, so Mark started to get the members to walk up the leat towards Alcock Tarn so we could view the other German workings behind Dove Cottage at the opposite end of Grasmere. These workings consist of two short coffin levels which are as they were during the German period, but they can take a lot of finding, especially if the bracken is up. The top level is about ten yards long and driven directly on a vein, whereas the lower level is around 20 yards long, is again driven directly on a vein, but it is very tight. Both levels were unproductive and there are only slight showings of copper present in the veins.

We then walked along the permissive footpath back to the opposite end of Grasmere, where

the cars had been left. The weather was closing in and it started to snow, but Mark and some of the more intrepid members decided to visit the Tongue Gill Iron Mines, known as Fairfield and Providence, which are reputed to be 17th century and were last worked in the late 1800's.

Warren Allison

Coniston Coppermines meet, 12th March

20 attendees, mostly members, and a handful of guests met at the Coppermines for today's tour. The weather was better than forecast, which was just as well as the plan was to spend quite a bit of time above ground.

ML Mark Hatton delivered a brief scene setting talk at the mill (with helpful input from Warren Allison and Mike Mitchell) before the group walked on to the Deep Level Portal. The route then ascended to Cobblers, up to the Old Engine, East Bonsor, New Engine and Thriddle Incline. Many tales of death and mayhem were delivered on the route, in an attempt to bring the mines to life and provide a flavour of the people who made their living here.

A quick up and over brought us to Levers Water Mine where lunch was taken whilst a hand line was installed and the portal opened. The group then explored Levers Water Mine in 3 shifts, all suitably impressed by the delicious palate of colours on display in this extraordinary level. The route then crossed The Back Strings before descending via Boulder Valley and across the Pudding Stone leat under Grey Crag. Here a breakaway group went off to explore the depths of Hospital Level, whilst the less adventurous amongst us visited Courtney's Cross Cut and Gaunt's level.

After the short descent to the Bonsor Mill via the leat from Red Dell, a few hardy members decided that they had energy remaining for the wade up Deep Level to view the Old Engine Shaft. Those waiting outside were read an excerpt from a book written in 1849 called "Ravings and Ramblings Round Conistone" which describes entering Deep Level, descending the ladders and watching miners at work 70 fathoms below. (Written by Dr Alexander Craig Gibson, who was the medical officer to the mines from 1844 until 1851. The excerpt was reproduced in CATMHS Journal No 2, 1986, page 41. Ed.)

The day had given everyone an overview of the centuries of work that have taken place at these mines and the plentiful interesting remains of this work.

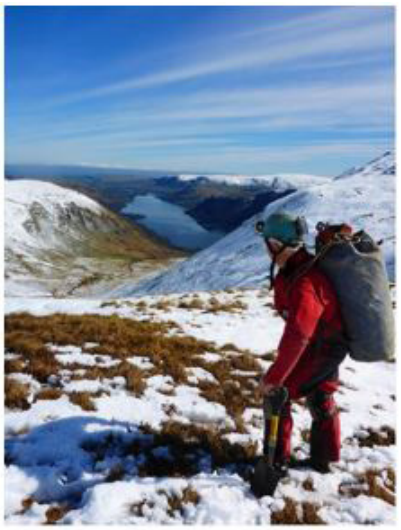
Mark Hatton.

Greenside Through Trip
John Aird Mark Hatton 24th March 2017

John Aird (ML) Carl Barrow Pete Brookdale Chris Curry Dave Donkin Nick Green Michael Oddie Allan Richardson Chris Sharman Kevin Timmins 25th March 2017

Friday 24rd March On the last two occasions the ML has been to Greenside for the through trip the weather has been truly awful, so much so that the most recent meet was abandoned on the basis that locating the Glencoyndale Adit would have been difficult, if not impossible. Well this time it really was different; the Friday Saturday and Sunday weather consisted of blue skies, sunshine, light winds, high temperatures and almost complete snow cover.

Approaching "Disappointment Corner" Raise and Sticks Pass in the distance.

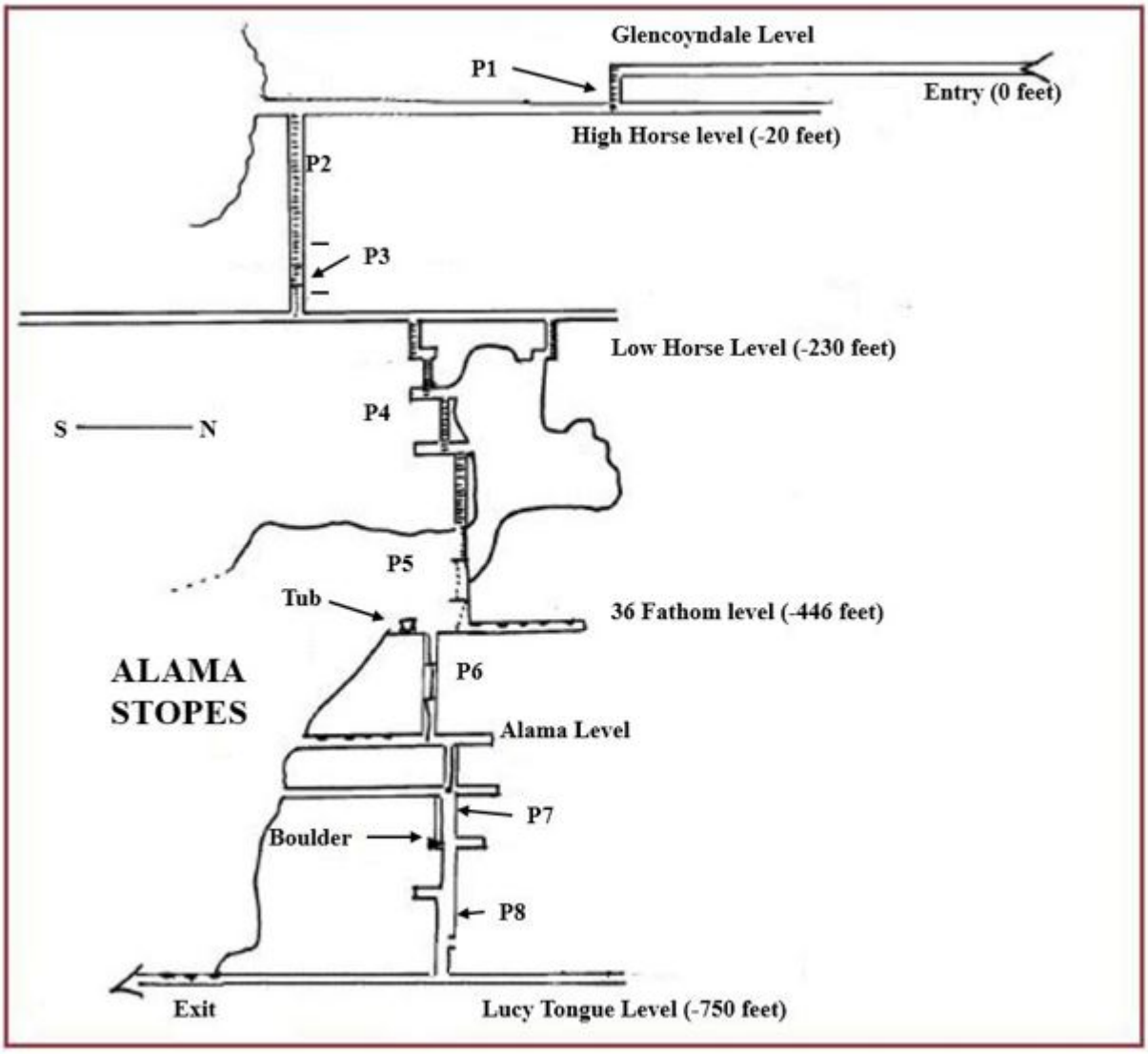


Glencoyndale and Ullswater.

En Route, 'Disappointment Corner' to Glencoyndale Level. Birkhouse Moor in the distance.

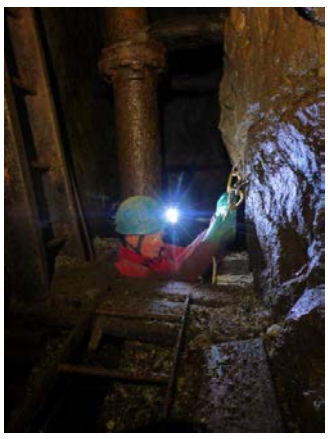
"Disappointment Corner" lies on the coll between Sheffield Pike and Green Side, so named because the adit is hidden in Glencoyndale by a rocky spur.

These photos were all taken on the Friday when Mark Hatton kindly agreed to assist the ML in carrying all the equipment needed up to Glencoyndale and then rigging the descent and exiting by the Lucy Tongue Level. Warren Allison met us at the mine to open the Lucy entrance and check on the state of the level. Each of the party was carrying around 17kg and so Warren's suggestion that a shovel might be necessary to open the upper level was not well received but was acted upon.



Mine Section Glencoyndale Level to Lucy Tongue Level

A reasonable time was taken getting to the Glencoyndale entrance; there had been a couple of minor avalanches just beyond the beck; not a usual Lakeland feature. Mr Hatton expressed disbelief, verging on mutiny, when asked to immerse his bag in the beck to wet the rope but reluctantly complied. A brief pause at the level to don SRT gear then a quick crawl in thigh deep water through the gate and then down to the High Horse Level via pitch P1. The view below of the P2 ladderway gives some idea of the difficulty of managing large bags, not to mention the shovel! Arriving at the bottom of the ladderway the ML was startled to find that the chain ladder (P3) was not there and in its place were a pair of ring hangers bolted to the wall opposite the foot of the ladder. An extensive search of the web the previous evening had failed to find any mention



of this change to the route and, since a significant part of the ML's load consisted of steel maillons to repair the chain ladder, a certain degree of displeasure made itself felt. Fortunately another part of the load was a spare 35 m rope which was rigged with a Y hang; at this point it became clear the hangers had been installed much too low on the wall and the combination of the position and the small hole in the staging would make it virtually impossible to climb back up the pitch. The ring hangers allowed for a pull through but, with no knowledge of the rest of the route below, this would be very risky.

Descent was made to the Low Horse Level; the lower section of the chain ladder was still in place but the upper section was found piled on the level floor. Leaving the rope in situ, rapid progress was made down into the area of the mine that was worked right up until closure. The ore produced was stockpiled in a worked-out stope, providing a reserve in the event that production in the deep mine below Lucy Tongue Level was disrupted, which it was on at least one occasion. Arriving at the boulder with its plethora of support straps and rigging did little for Mr Hatton's wellbeing when he understood we were to abseil down below it. His demeanour brightened perceptibly once relieved of the wet rope he had carried (the ML pointed out that the rope *he* was carrying was the pull through rope, and so had not needed to be wet) and improved further when he realised the pitch rigged on to the RSJ.

All that remained was the descent to Lucy Tongue and the mile and a bit walk out to day which was accomplished in short order, the ML having considerable difficulty in keeping up. The day couldn't have been all bad since the participants, along with Nick Green, met at the Brothers Water Inn for dinner.

Saturday 25th March. Everyone gathered in good time at the mine and after a briefing on what was to be expected and how to deal with it the party was off on the walk in. With a party of ten and only one person at a time on the ladders everyone gets fairly strung out, so it was decided that after we left the High Horse Level we would continue down to the Low Horse Level and regroup. Pete Brookdale took the vital role of sweeper to ensure no-one got left behind. The High Horse Level runs along behind the breached dam shown in the photo and in Victorian times was flooded to provide a water supply to drive a hydraulic engine for pumping and winding via the large valve down to the Low Horse Level. Going along the level beyond the dam leads to a magnificent cast iron bulkhead which sealed off the stopes below. The ladderway P2 descends immediately in front of the valve and the supply pipe running down can be seen next to the rope in the photo on the previous page. The enormous effort (and cost) required to drive the 210 feet shaft and install the pipework between the two levels gives some

idea of how profitable the mine was in early Victorian times.
Continuing down, the ML got Chris Sharman to go down the rope first and then replaced the 35 m rope with a 15 m one which hung just short of the floor, Chris's report was positive so everyone descended and had a look around the quite extensive Low Horse Level. Once you descend from this point you meet more modern mining equipment, compressed airlines and steel ladders; these have to be treated with care. The example on the left is in two sections bolted together four rungs down from the top; regrettably the bolts are not tight so the two sections wobble around the joint! The descent now enters the stopes going down to the 36 Fathom Level where the tub remains at the side of a very large stope. Unfortunately a collapse has completely blocked access to the level so the explosives kibble made out of conveyor belting is no longer on view.

Further descent to the Alma Level brings a mass of artefacts into sight, including in the head lamp light the taut wire rope which stretches down to the Lucy Level, up which supplies were hauled. The next level below provides a fine example of a signal hammer, presumably used to control the hoisting on the wire rope and foot operated. It is easily missed since it sits on the wall right at the head of the ladder. This is the point from which the abseil down to Lucy Level is supposed to start and two fine ring hangers have been provided on the wall for the purpose (at a perfect height!), however experience has taught the ML that, (a) it is almost impossible to provide rope protection due to the number of obstacles and, (b) it is impossible to pull the rope through even with 5 or 6 people exerting maximum effort. The party was assembled and stayed in the level while Chris Sharman and the ML descended to the boulder; noting as they did so that the ladder they descended only rested on the boulder landing when under load!

If you refer to the photo below you will see the boulder supported by the blue webbing straps with the descent line, complete with rope protector dropping between the boulder and the

platform. The upper section of orange rope is the pull through line carefully stowed in its bag on the platform to avoid any temptation to use the wrong rope. The photographer is poised above the ladder leading on down. This does not look too promising initially since it goes down about 6 metres and then terminates in open space, but it is firmly fixed at the top and midway down, so the technique is to descend about 1.5 metres, clip onto the ladder, reach across to the left for the rope, attach the descender, unclip from the ladder and then step leftwards across the two vertical pipes and abseil down the footwall the 36 metres to Lucy Level. The party did this in fine style, Pete Brookdale clipping the pull through rope bag to the ladder which left the ML to remove the rope protector and take the bag down. Once on the level Michael Oddie supplied the strength needed get the pull through moving.

The ropes were stuffed into sacks and distributed to stalwart fellows for transport out and as we set off out who should we meet but Mark Hatton and Warren Allison who were showing people round Lucy Level. Since some of the party had never been in the level they got a free tour allowing the ML to slope off out to sit in the sunshine. From my point of view this had been two of the best days I've had underground, great group of people to have on the trip, many thanks to all for your assistance most particularly Mark for his hard work on Friday and also for all the photos.
John R Aird

Dear Dr Descender,
As the Meet Leader, I allowed a well known loudmouth and knowall to rig a pitch for me, much against my better judgement. My suspicions should have been aroused when he declined to descend (too much recent exertion he claimed!), telling me it was a straight 130 foot hang landing on a level. I abseiled 190 feet and came to rest on a steep rubble slope leading down to an evil looking hole, with 6 feet of spare rope. Climbing up the slope I found myself looking down an identical slope into the same sort of hole. On my return, perspiring slightly, I was blandly told there must have been a collapse. I had already had to rebuke the rigger for throwing rocks down on the rest of the party as he attempted to re-open an adit that was actually a good 30 m below his position and had watched in amazement as in returning to the correct horizon he sledged down (completely out of control) some 20 m on his back; my question is "What is his likely medical condition and should the CATMHS Committee forbid it?" Yours sincerely, Active IPad 304.

Dear Active IPad 304
This condition is "Senior management syndrome aggravated by age and infirmity". No need to involve the Committee, time will solve the problem; just make sure you avoid going underground with the sufferer in the meantime.. Yours sincerely, **Descender**

Eagle Crag, Sunday March 26th

Sunday March 26th dawned an hour earlier than expected as the clocks had gone forward, but no one was caught out and everyone was assembled at Patterdale in good time. The sun was shining, the sky was blue and there was still snow on the tops - all creating the most magical scenes of The Lakes at its very best.

Seven CAT members rode in two Landrovers up to Elmhow (permission having been gained from Matson Ground Estate). From there the walk to Eagle Crag is quite easy but supremely rewarding with spectacular views of the course of the vein running vertically over the full height of the Crag.

A quick detour to inspect St Sunday Crag Level (a futile attempt to seek the vein on the South side of the valley) before starting the steep climb up through the spoil heaps to No. 2 and No. 3 levels (both run). These were the younger workings on the set (19th C) and include a delightful stone vaulted entrance and a large smithy building tucked under the Crag.

We then climbed to No. 4 Level which was explored at some length. The descent from No. 4 to No. 3 Level involves a technically challenging rigging exercise followed by a butt clenching descent and a very strenuous ascent through 150 feet of vertical stope. Sadly the first man down didn't find no. 3 Level as expected - instead of landing on a soIid horizontal level the rope dropped on to steeply sloping, unstable slope with no way on without re-rigging. This might be the result of significant collapses down here but not having seen this place before, no comparison with the past was possible. The ascent back to No. 4 Level was quite exhausting, so lunch outside in the bright sunshine was relished.

John Aird is hanging under a false floor above a 160 foot vertical drop whilst installing rigging for the descent.

The group then skirted the foot of the crags and climbed up to no. 5 Level. Here the surface remains are quite extraordinary and on a clear days the views are breathtaking. The underground party explored No. 5 Level, which offers various challenges and interests.

Climbing up to the top of the Crag and in to Nethermost Cove brings the oldest workings to hand. Here there is a delicious open stope and building in a fabulous state of preservation, possibly dating back to the 16th C. Rich reward for the physical effort needed to get up here. We explored the stope and the cross cut Adit (very tight entrance holding chest deep water). Well to be more precise six of us supervised the one member who was volunteered to do both.

The path back down to Elmhow starts further in to Nethermost Cove and follows the steep gill past delightful waterfalls. A couple more levels just off the route are worth exploring too.

Returning to the cars after a full seven hours out on the sun baked hill had everyone sporting red faces and big smiles. A delightful and memorable CAT meet. Mark Hatton

A delightful bothy. The working up here seems very old.

Seathwaite Wadd Mine, 9th April

Eight CATMHS members (plus 2 more doing an independent route through the mine) met at Seathwaite Farm on a bright Sunday Morning. The plan was for the main group to explore Gills Stage before descending through the mine to Farey's Stage. The crossing of The Grand Pipe (which is necessary to exit from Farey's) was rigged on the way up. Bolts and hangers are already in situ to facilitate such rigging, so this mission could be accomplished quite rapidly.

Gills is a very interesting level which gives access to a labyrinth of workings, including rises up to Goaten's and Harrison's stages. This gave various less experienced members of the group a chance to refresh their abseiling and SRT techniques before committing to the larger descents.

Lunch was taken in bright sunshine before commencing the through trip. Harnesses were checked, fixed ropes were inspected, safety lines fitted and off we went. Some "interesting" pitch head launching techniques were on display, causing the Meet Leader a few twitchy moments, albeit the safety line made sure no one was going down anything faster or further than planned. And the use of Petzl Stops provided some irksome challenges to those not experienced with these descenders.

The Group arrived at Farey's with mind, body and soul still largely intact. However whilst we had been underground the weather had taken a distinct turn for the worse, with cold, damp clag having replaced the bright conditions enjoyed on the way up. Never the less most of the group were still keen to explore Gilbert's, before walking back down to the cars (via Robson's run in entrance).

It was good to see the pair of intrepid Mine explorers who had done the full through trip via Dixon's were also safely back at the cars (albeit with the usual mental scars associated with long descents through vertical rock strewn bowling alleys with running cold water to keep you wide awake). They have booked in for intensive psychological therapy and are expected to make a full recovery.

So another enjoyable day in The Wad, with many smiles smiled and lessons learnt.

Mark Hatton.

Goldscope, 23rd April 2017

Sixteen members and 1 guest gathered at Littletown in eager anticipation of a gloriously sunny day's tour of Goldscope. The short walk up to The Grand Level was sufficient time to briefly explain the history of copper and lead mining in this beautiful area and the course of the various veins. Being quite

a large group we split in to two to explore the Grand Level, understand what went on at the wheel pit and discuss whether the "shrine" was just that, or the start of a cross cut. Everyone was amazed to consider the effort and ingenuity required to originally cut this level and wheelpit in the 16th C.

We then crossed over to the Littledale side of Scope End and gazed in awe at the open stopes. After signing the official secrets act and pledging an oath of discretion, the water Adit was unveiled. Everyone who slid in through the bin gasped with amazement and joy at the sight of the immaculate coffin cut Level, hand chipped shaft and gutter in here.

After lunch in beautiful sunshine, the party walked along the leat, passed the Great Crush and up to Sealby's Level. This is a surprisingly long and interesting level, largely through sugary Quartz. But you can't help but think it was a huge disappointment to the miners who worked here.

We then returned along the leat exploring the waterwheel Adit and on down to the old processing floor. A delightful cobbing stone received a lot of attention, even from Warren who hadn't spotted this here before.

The party then had a leisurely walk back to the cars with the sun continuing to bathe us in its glorious warm rays. On a day like this Newlands is one of the finest places to be out and about, hence the big smiles on everyone's slightly sun burnt faces.

Mark Hatton.

Environment Agency training day

I suggested to Liz Withey and Peter Bardsley from the Environment Agency (both are members of the society) that perhaps we should organise a training day for members of the Agency so they can have a better understanding of mining sites. The invitations went out which also included the Coal Authority, National Trust, LDNPA, Eden District Council, and Historic England.

Around 20 people met at the Agency's offices at Penrith on the 16th November, where Peter and Liz did two presentations on the background to the legislation regarding mine sites and the work that the Agency is doing on sampling at various sites. I then did a presentation on the history of Greenside Mine before lunch.

In the afternoon, we drove to Greenside where the intention was to go up to the top workings, however time was short and the weather was not particularly good so we went onto tailing dam one which sits on top of the old Lucy spoil heap to look at the recent work the LDNPA has done in conjunction with the army. This was to repair the drainage channel at the back of the tip to prevent as much water as possible from getting onto it.

The repairs to the drainage channel.

This part of the tip consists of a sand like material which was pumped up from the mill that was built in the mid 1930's as a slurry onto the old Lucy dump, where the water was allowed to drain out leaving a 'solid' material. However, the concern is that the tip could collapse as happened to No two tailings dam in 1985 and 1995 and end up covering the youth hostel. We saw this at first had in 1995 when we were digging through the collapses on the Lucy Level when we turned up on a Sunday after a period of substantial rain to find the beck was running white as was the bottom of Ullswater. Roy Harding the LDNPA Ranger came racing up the road and asked if we had been pumping out which was causing the problem. We went onto the top of the tip to find it under about two feet of water which was coming from the blocked drain which goes diagonally up the fell. Starting at the bottom we cleared all the debris out of the drain which stopped the tip getting washed away anymore. In the mid 1960's the LDNPA had commissioned Cyril Conner the ex-manager of the mine to report on the tips and his advice was to keep the drains clear and stop excess water getting on to the tips and they would be perfectly alright. Unfortunately, his advice was not heeded.

We walked through the workings which were explained using old photographs and plans, before crossing the beck where Martin Lord from the LDNPA explained the work which had gone on recently not just at the back of the tip but also the repairs to various parts of the beck walls damaged by Storm Desmond. A material which looked like cloth had been laid in the drain, but it also has an additive which turns into a very hard material similar to concrete when it comes into contact with water. It is ideal for forming around difficult and uneven structures and is completely waterproof. Martin regularly monitors the level of the water in the tip and since the repairs to the drain have been done has seen a drop in the levels, perhaps Cyril Conner was right after all.

Martin explaining to the group the work that was done at the back of the tip

When we got back to cars, some of went with Martin to look at the flow monitoring equipment which is in the drain at the bottom of the Lucy tip.

Warren Allison

Copperplate Mine

Following the successful meet to the Copperplate and Brandlehow Mines on the 30th October, I had a look at what has been previously written about Copperplate, given the huge amount of work that has been done there, and other than Ian Tyler in his book Seathwaite Wad and the Mines of the Borrowdale Valley, some vague references in other publications and a small amount in Daniel Hechstetter The Younger, very little has been written.

In Daniel Hechstetter The Younger, it states that the mine was the first one to supply copper ore to be smelted at Keswick and continued working until the end of the century.

There appear to be only two further references:
Copie of a letter wryten by my father D H to his parteners in germany the x^0 August 1567 Concerninge our Meltinge first for the 194 cs stone which cam of the ewer gotten in Barowdale.

In 1602, George Bowes and Francis Needham visited all of the operating mines and stated that:
In Borrowedale there are vj Englishe pickeman leaners, Reasonable workeman who are kept in practise in that olde worke though smale gaine vntill more roome cann be gotten at Conistone…..

Ian Tyler quotes various dates for the mine being worked from 1567 to 1571 and that the mine was re-worked by John Tebay in 1819.

There are many workings (both surface and underground) on several veins scattered over a wide area from part way up the fell to the house at Ellers, where two levels have been driven from the beck side, one of which appears to go under the house. We were very fortunate to be allowed access to the gated level by the new owners of the house and be able to walk through their garden.

Also beside the entrance to a large level above the house at Ellers is a three-roomed building which was presumably a lodging shop. It is almost certainly German and indicates that the miners were here for a considerable period of time.

It is only a short walk from Grange to the Southernmost workings which stretch from a plateau and up onto the fell.

The entrance to one of the top levels

Inside the level, which is still as it was when the Germans worked it

The vein on surface which has been worked above the garden of the house at Ellers

The upper level driven on the vein above the garden of the house at Ellers, which also has a flooded shaft at the entrance.

Remains of the three-roomed building, which would be worth clearing the vegetation away and surveying it.

The levels by the house at Ellers appear to have worked a NW-SE vein and there is a flooded shaft just inside the entrance to the gated level on the southern bank. This level heads towards the house and just past the shaft it has been stoped out to surface. Pick marks adorned the walls and there is a lot of household debris on the floor as it was used as a rubbish dump at one time. However large rocks have been dropped in from surface to seal the stope off.

Picture right: The stope is just above Mark Hatton's head

Picture left: The level continuing, which is German

Some parts of this level have hand drilled holes so is presumably the part of the mine which was worked by John Tebay, but it is predominantly German.

This is a fascinating area and there is much to see, and I think still to discover. One of the most interesting facts is that much of what we saw is Elizabethan and most of it has not been re-worked, so it is as it was some 450 years ago.

Warren Allison

British Newspaper Archive

One of the volunteers working on the archive project as part of the HLF grant for Coniston Copper Mines has been using a web site called British Newspaper Archive and has found some interesting material about the mines from the Westmorland Gazette. I had a look at the web site and subscribed at a cost of £80 which gives unlimited access and you can download the page that you are interested in. There is a huge amount of newspaper reports relating to mining in Cumbria, some of which has never been reported in various publications. You can look at a particular newspaper, but there are reports in newspapers throughout the country. Below are transcripts of some articles as examples of what is available.

The Kendal Mercury and Northern Adviser 1848

ACCIDENT- A young man of the name of Jas Benson, waller, on Wednesday last met with a misfortune which might have been attended with serious consequences. He was assisting with walling at Thornthwaite Mine a wheel case, when the scaffolding gave way and threw the young man to the bottom of the case. His hands are dreadfully lacerated and the thumb of the right hand was nearly torn off and he is otherwise much bruised.

The Carlisle Journal 1st January 1853

MATTERDALE- Two miners, John Cleater and John Killgourn were proceeding to Greenside Mine and when on a mountain locally called Jenkindale Fell, and about a quarter of a mile from the mine, a strong blast of wind blew John Killgourn up off the ground and carried him about 50 yards and landed him safe again on terra firma. He was stunned and unconscious for a time. When he came to himself he looked about for him comrade, John Cleater, but he could nowhere to be seen. Killgourn made the best of his way to the mine thinking his companion might have reached there, but there he had neither been seen nor heard of. Killgourn then, with a number of miners, went back to the fell where he had been blown off and after searching many hours the poor man, Cleater, was found amongst some craggs, with his skull driven in and quite dead. He had been carried from the place where the wind first took him about 300 yards.

The Carlisle Journal 12th November 1861

FATAL ACCIDENT AT GREENSIDE MINES- On Friday last an inquest was held at The Royal Oak Inn, Keswick before Thomas Howson, Esq, Deputy Coroner of the Western Division and a respectable jury on view of the body of James McIntosh, who was accidentally killed at Greenside Lead Mines on the 5th instance.

Charles McIntosh gave the following evidence: - I am brother of the deceased. He was twelve years of age and has worked at Greenside Lead Mines about one and a half years. He and I worked there on the 5th instance. He was driver and had the management of a pony which was used for drawing wagons on the tramway. He had also to shift the points to let the other wagons past; he used a coal-rake for that purpose. About half-past four p.m. on the day in question, someone shouted he had fallen over the wall, which is within a few feet of the tramway. I looked towards the place and saw him lying on the edge of the rocks, having fallen a distance of twenty feet. I made towards him, but before I could reach him he fell down the embankment into the water which runs from the reservoir. I endeavoured to get hold of him, but the water was running so strong that it carried him over a waterfall before I could do so. I then lifted him up, he was bleeding about the head and seemed to be much injured, and begged of me to lay him down again. I think he must have been in the act of turning the points when he fell, for they were half turned after the accident occurred.

Teasdale McIntosh, father of the deceased, stated that he lived at Brigham and was working at Greenside on the day he was killed, and assisted in conveying him home. He died on the Turnpike Road about three miles off. He was attended by Dr, Rumney, of Watermillock, who stated that death was caused from fracture of the skull and compression of the brain.

The jury without hesitation returned a verdict of "Accidental Death" and presented the father of the deceased with their usual fee of six shillings.

Since the accident occurred the company have caused railings to be placed by the side of the wall alluded to, in order to prevent accidents in the future.

Barnsley Chronicle 13th September 1879

A dreadful explosion of dynamite has just occurred in the Lead Company's Mines at Nenthead by which a man named Michael Cowling lost his life by being blown into atoms. A box had to be carried into the mine to gather up the fragments of the mutilated body. Being at a time a good way from the other three men in the mine - one of whom was the man's son Michael. It is not known how the accident happened. The men hearing the explosion hastened to the spot and found the deceased as above stated.

Aberdeen Press and Journal 15th April 1765

We hear from Newcaftle, that Ann Gibfon, aged 110 died laft week at Nenthead near Alfton. She came from Derbyfhire, 70 years ago, and has wrought in the Lead Mines ever fince.

Lancashire Daily Post 28th August 1907

CUMBERLAND MINES SOLD - The Carrock Mines near Mungrisedale, Cumberland, the property of the Carrock Mines Company Limited - which was formed in July 1904, with a capital of £12,000, of which £9,000 was subscribed, - have, with the plant and machinery, been acquired by The Cumbrian Mining Company Limited and will in future be under the management of The British Mining Company. From the Carrock Mines is obtained Wolfram, which is used for hardening steel.

Cumberland Paquet and Ware's Whitehaven Advertiser 30th October 1838

LEAD and COPPER MINES near KESWICK, CUMBERLAND FOR SALE

To be SOLD - THIRTY 64th SHARES in NEW BRANDLEHOW LEAD MINE, near Derwent Lake including the Water Wheel and other Machinery connected therewith.

During the last Three Years that this mine has been worked, there have been nearly 400 Tons of Excellent Ore raised, with every prospect of its continuance.

Also, to LET for the remaining Term of the Lease, upwards of Nine Years of which is unexpired, several MINES and VEINS of LEAD and COPPER, situate in Portinscale, Newlands, Braithwaite and Thornthwaite, in the manor of Braithwaite and Coledale.

Applications, (if by Letter, Post-paid) addressed to Mr. JOHN TEBAY, King Street, Whitehaven, will be promptly attended to.

Cumberland Paquet and Ware's Whitehaven Advertiser 6th May 1851

A meeting was held at Liverpool on Tuesday for the purpose of reopening and working the Cockley Beck Copper Mine near Coniston. It was originally in the hands of a small and weak proprietary, whose perseverance was ultimately crowned by cutting into a body of solid copper ore, eighteen inches wide, which realised £14 per ton, in the rough unwashed state, to Vivian and Sons. The water at this stage utterly overpowered all the petty appliances they ventured on for its reduction; consequently, the mine was suspended, with a view to obtain more wealthy proprietors, prepared to encounter the necessary outlay for the due prosecution of the works. Such was the favourable view of the inspection that three-fourths of the mine (being the number of forfeited shares) were immediately taken up by parties via ample means and resolution to meet the difficulty. At this meeting the constitution was remodelled; a call of 20s. per share on 10,000 shares; and Captain John Boundy, late of Wheal Ellen, appointed to the management - Mining Journal of Saturday.

Lancaster Gazette 7th June 1851
COCKLEY BECK COPPER MINE - The committee have at length resolved upon working these mines with spirit. Captain B. Tucker who takes with him several Cornish miners, has been appointed manager. The lodes are reported to be from three to four feet wide, composed of white Hookam and fine Gossan, with large leaders of ore, which, upon being analysed by Dr. Sheridan Muspratt, is found to contain 24.69 percent of copper.

Preston Chronicle 5th July 1851
WANTED TO PURCHASE – 20 -1000th SHARES in the COCKLEY BECK COPPER MINE, Saithwaite at £6 10s each. Applt to A.B. Post Office, Preston.

London Daily News 6th September 1851
At Cockley Beck copper mine the lode in the deep level is now 3 feet wide and a kindly lode. Some fine stones of copper ore have lately been broken, which is estimated to produce at least 30 percent for copper. The shallow adit is now cutting into very kindly ground, showing spots of copper.

London Daily News 15th September 1851
At Cockley Beck copper mine a branch of good copper ore has been cut in the deep level from 3 to 4 inches wide. In the shallow level it appears to be on the back of a bunch. In the shallow level the lode is split by a horse of killas; there are some spots of copper in the end. The lode before splitting had become 4 feet wide; but the branches will come together again in a few fathoms further driving.

Westmorland Gazette and Kendal Advertiser 30th June 1855
GOLDSCOPE MINE - On Sunday week several hundred tons of rock fell from the roof in one of the excavations of Goldscope Mine, breaking eighteen massive wooden pillars which had been placed beneath the roof to support it. This portion of the mine had been considered unsafe to work in by some of the miners, who had left the mine in consequence, and the cost of repairing the damage is estimated at 200/.

London Evening Standard 14th April 1859
BARF LEAD MINES APRIL 11 - W Mitchell reports; - "We are driving Lowden's level to cut No. 2 vein, the men have cut through No. 1 vein and taken away the lead. We have but a short distance to drive to intersect the main lode. If it holds down as it is seen in the side of the mountain there will be a good mine, with 1500 feet of backs to stope away. The ground between the two veins makes rocks of lead, which leads us to suppose the vein will cut rich. These veins appear to be the same as they are working to such profit in Goldscope Mine to the south, where they have a body of lead 3 feet wide.

THE CUMBERLAND BLACK LEAD MINE - "Under date April 11, the Captain reports: - "We have sunk a Winze on Hastings pipe 18 fathoms which contains good wad and have 27 fathoms more to reach Robson's level; a rise is being put up to meet this winze, when a large quantity of ground will be laid open. We think Hastings pipe is making towards the grand pipe and it seems probable that the former is a branch of the grand pipe; if so there is a prospect of meeting with a great body of wad at the junction which will be advance in Robson's level and in my opinion will lead to such a body of wad as will last for many years. We are still taking good wad from the grand pipe. The old men's stage and the forebreast of the same adit is in very promising ground indeed. The adit is being driven towards the lead lode at 4/. 10s. per fathom. There is about 2 fathoms to cut the vein, which at surface is full of quartz impregnated with rich lead and copper; there is no doubt of a good result attending this operation. A public sale of black lead will take place at Keswick on the 13th - No, 1, parcels of very pure lead, ¾ cwt; No.2, about 2 cwt; No.3, about 8 tons".

The Carlisle Patriot 28th August 1868

ACCIDENT AT SANDBEDS MINE, CALDBECK - On Tuesday morning last an accident which might have been attended with fatal consequences, occurred at the above mine. It appears that two of the miners were engaged in blasting, and when one of them was pressing down on the gun-cotton it suddenly ignited and caused an explosion, whereby he lost the forefinger of his left hand and two others were fearfully mutilated, so that it is feared that amputation maybe necessary; he received at the same instance a fearful gash in the breast, and his face was much burnt. His partner was also fearfully burnt in the face, resulting in total blindness for two or three days. They were speedily conveyed home, and are now under the care of Drs. Taylor and Brown, under whose superintendence it is hoped they may soon recover. Had the blast been ready for firing they would have undoubtedly have been blown to atoms.

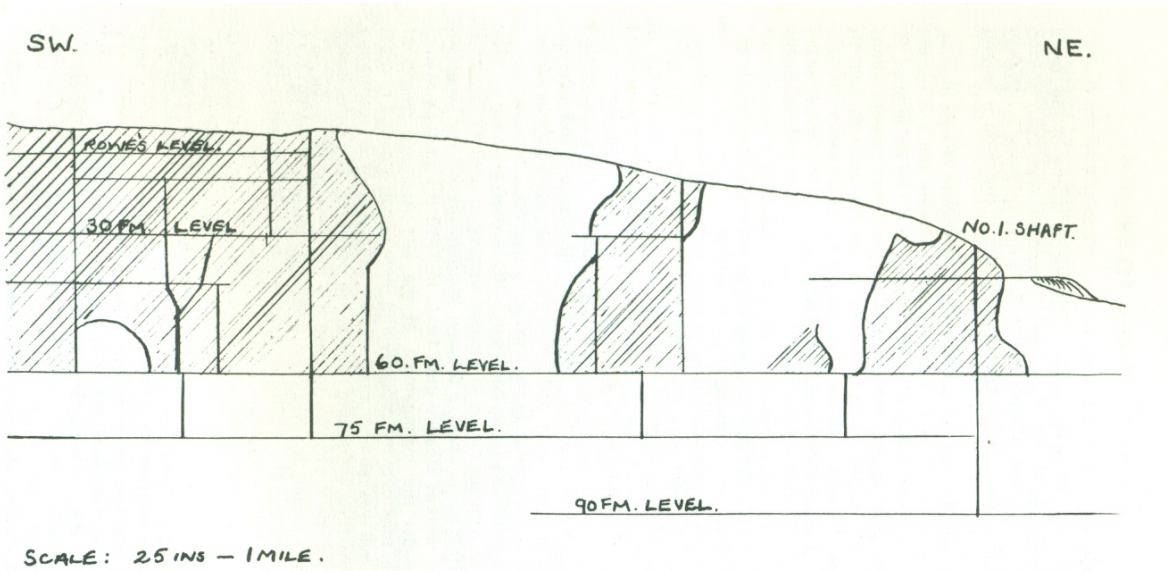
Warren Allison

Driggith Mine

This ancient mine is on the Eastern side of High Pike on the Caldbeck Fells and was worked probably from the Elizabethan times for Lead and Copper up to the late 1940's when Bartyes was being mined on a small scale.

Late last year Don Borthwick sent me an e-mail regarding reports on Driggith Mine:
Some years ago while Sheila and I were archiving at Killhope a few very faint typescripts of Jim Foster-Smiths came to light. Some of his notes were (still are) of particular interest, so I volunteered to get them into a more usable form. These are his only LD entries but I thought possibly of interest to you. One day perhaps more of the Mining Journal will get digitised and be an aid to researchers.

These are reproduced below with a section of the mine taken from W. T. Shaw's book 'Mining in the Lake Counties' which will hopefully help to interpret the reports.



Longitudinal section of part of Driggith Mine

The following reports are extracted from volumes of the Mining Journal on various North of England mines, which were not numerous enough to be worth assembling into individual folios. The reports were originally extracted in 1953, and were assembled in this folio in 1957:

28 April 1860

Caldbeck, Cumberland. W. Jeffrey, 23 April. The stopes over the 30 fathoms level, Nos 1 to 5, look well, on an average 1 ton per fathom, the working cost being from 30/- to 40/- per fathom. The end driving east from the western sump, at the 45 fathoms level, is worth from 10 to 12 cwts per fathom; and the end going west has got a rib of ore 1 foot wide, mixed with copper, about 60 cwts per fathom. In the 60-fathoms level, or present adit level, at the west end, there is very good ore, and the best ever yet seen at this mine; this ground will stope at great profit. The level driving on the south lode is very fair at the end, and will stope at a fair profit. The stopes above this level average 20 cwts per fathom, stoping at 60/- per fathom; this are is richer for silver than any other ore in the mine, worth at least £16 per ton at the present price of lead.

In the new 90-fathoms level, which is now driven about 160 fathoms, the vein has been cut, and some fine lumps of ore have been got, but at present it is in an unsettled state, in consequence of the abruptness of the hill and some north and south veins crossing at this point, as the vein over this end has not been seen in consequence of the upper level being commenced further west than this point. Ore may be expected every day; but the first run of ore known in the 60-fathoms level will be reached by driving the 90-fathoms level 70 fathoms further.

5 May 1860.

W. Jeffrey Jun. 3 May. The 60-fathoms level end still continues productive; the vein is rather smaller but the ore is more solid. We have a very fine branch of copper in this end, sometimes even 1 foot wide, whilst at others it is very small. The two veins, one we commonly call "strong" and the other "big" vein -- are here very near together, I think about 6 feet apart, and the rock is mixed with ore throughout, so that it will all do to come down. It is the opinion of the men that there is more ore in this rock than there is in the vein itself. I should think that the end in the vein is worth about £20 per fathom. In the 45-fathoms level end, 15 fathoms above the 50-fathoms level, the vein still continues good; in the top of the end the vein is 3 feet wide, hardly anything but lead and copper; whilst lower down there are two branches, the one of lead, the other of copper, separated by a rib of barytes; these ribs of ore are about 3 inches wide each. This end going east is at present standing, though there is good ore in the end. Our stopes will soon be up from below, which will save us the expense of driving. The stopes in the back of this level are also standing, being inconvenient to work them at present. I have put two men to drive the 30-fathoms level end and to break through the vein; at present it is poor, but there is every indication of ore being near at hand. The end is pretty fair for driving -- about 3 fathoms with two men per month.

In the back of this level the stopes are very good, I think altogether they will average 1 ton per fathom; this is the phosphate or carbonate ore. Our stopes in the place commonly called "Scotland" are very good, producing, I should say, about 1 1/2 tons per fathom, of galena. Our new, or. 90-fathoms level has not as yet cut any ore of value, but pieces are still found in the end. We sampled and sold 20 tons of phosphate ore to Messrs. W.J. Cookson and Company, for £9.3.6 per ton, on Monday last. We shall have about 12 tons of blue in a few days.

12 May 1860.

W. Jeffrey Jun., 10 May. Our mine still continues to look very promising. The 60-fathoms level end, going west, still keeps good. He have broken some very fine lead and copper during the last week. The vein seems to improve in height, for even in the roof of the level, the vein is larger, and contains a great deal more ore.

We have had a change of rock during the week, which is likely to make a great alteration in this end. The north rock has been very hard, and has been gradually inclining to the south, so that the vein was getting smaller; but with the change of ground the vein has again been opening out, and contains a great deal more lead. In a few weeks, I expect to have to inform you that we have a very fine vein indeed in this end.
The 45-fathoms level end continues as when last reported, producing very fine lead and copper. In the 30-fathoms level end we have additional evidence of ore. In shooting down the vein last week we set free a very large stream of water, which ran for a considerable time. Before cutting the several runs of ore in this level there has invariably been a large stream of water set free, as in this instance, so that I almost feel certain that we shall have ore in a few fathoms driving. The stopes throughout the mine continue to be productive. In the new, or 90-fathoms level, we have as yet no ore, though the indications continue good.

9 June 1860.
W. Jeffrey Jun., 7 June. Generally speaking, our mine is at present looking well. In the 30-fathoms level end the vein is very promising, but as yet we have no ore to value. We expect however, from appearances, that we are very near to something that will be remunerative. In the back of the level the stopes are good; they will on an average produce 10 cwts per fathom of phosphate ore, which can be got for 27/6 per ton, and the market value 59/- per ton.
In the 60-fathoms level end, in the roof, we have a branch of ore 6 inches wide, but which at the bottom is only 3 inches wide. I think this end is at present worth 10 cwts per fathom of ore that is worth £15 per ton. The stopes in the back of the level also continue good. In the place called Scotland, in the big vein, we have two stopes that I think will each yield 1 ton per fathom, value £15.10. In the 90 fathoms level end we have again discovered the vein, and are now driving on its course. It is at present rather disordered by the heave which it has sustained, but I hope soon to have to inform you that we have a good vein in this end. We have during the last few days been sinking some pits west of all our workings at surface, and discovered some very fine ore. We sold last week 16 tons of phosphate ore, at £9.1 per ton.

23 June 1860.
W. Jeffrey, 20 June. There is no change of importance in our mine since I last reported. The stopes throughout the mine continue good. In the 30-fathoms level end occasional stones of ore are found, but not yet to value. The 60-fathoms level end continues as when last reported, producing from 10 to 15 cwts per fathom. In the 90-fathoms level end the vein has not yet assumed a regular character, but it is loosing a very large feeder of water. In my last I mentioned having cut some ore west of the mine at surface. We have now sunk about 9 feet and have a very fine vein, worth about 20 cwts per fathom. Should this continue we have a new mine before us, as we have levels within 40 fathoms that together will amount to 90 fathoms vertical height. I intend to send you some pieces of ore that were broken yesterday. I would call your attention to an error as printed in my last report. The ore, instead of being worth 59/- per ton, as stated, is fully worth £9. We have sent off during the last week about 12 tons of copper ore, but it is not yet sold. We shall sample 18 tons of phosphate ore in another week.

Salida, Colorado.
1 December 1957.
J.F.S.

Warren Allison

Cobalt in Lake District mines

In the Coledale Valley, across from Force Crag mine, there is a working known as the Cobalt Mine. According to Adams in his excellent book 'Mines of the Lake District Fells, it was opened c. 1848 by the Keswick Mining Company, who erected a dressing plant and constructed a road from Stoneycroft. However, the total output of the pure mineral is supposed to have been only a few ounces of the pure mineral.

Recently there has been some interest in deposits of cobalt at Coniston and speculation as to whether it was ever mined commercially there. This is an attempt to draw together the available information.

Traces of a pinkish mineral, which were thought to be cobalt, have been noticed on the walls of Hospital Level and Pudding Stone Level. In his article 'Minerology in Coniston Coppermine' in NL 124, Geoff Wilkinson remarked '*First impressions after 20 years away was the damage to the false floor at Paddy End shaft. The green post mine minerals at that location looked a lot smaller and not as vivid. Further along in a stoped area the staining of the Cobalt ore - "Erythrite" was much more prominent and wide-spread than before. The shades of pink/purple are really stunning. What can appear as a long nondescript tunnel on the way to the Y branch is still quite interesting…if geology is your thing of course. The often single fault fracture line running through the roof is regularly stained with Erythrite. It does make one wonder as to whether the source of the Erythrite staining; primary cobalt is present somewhere above this horizon'*

It is not known whether or not any cobalt ore was produced at Coniston, but there was certainly some interest, as these letters show:

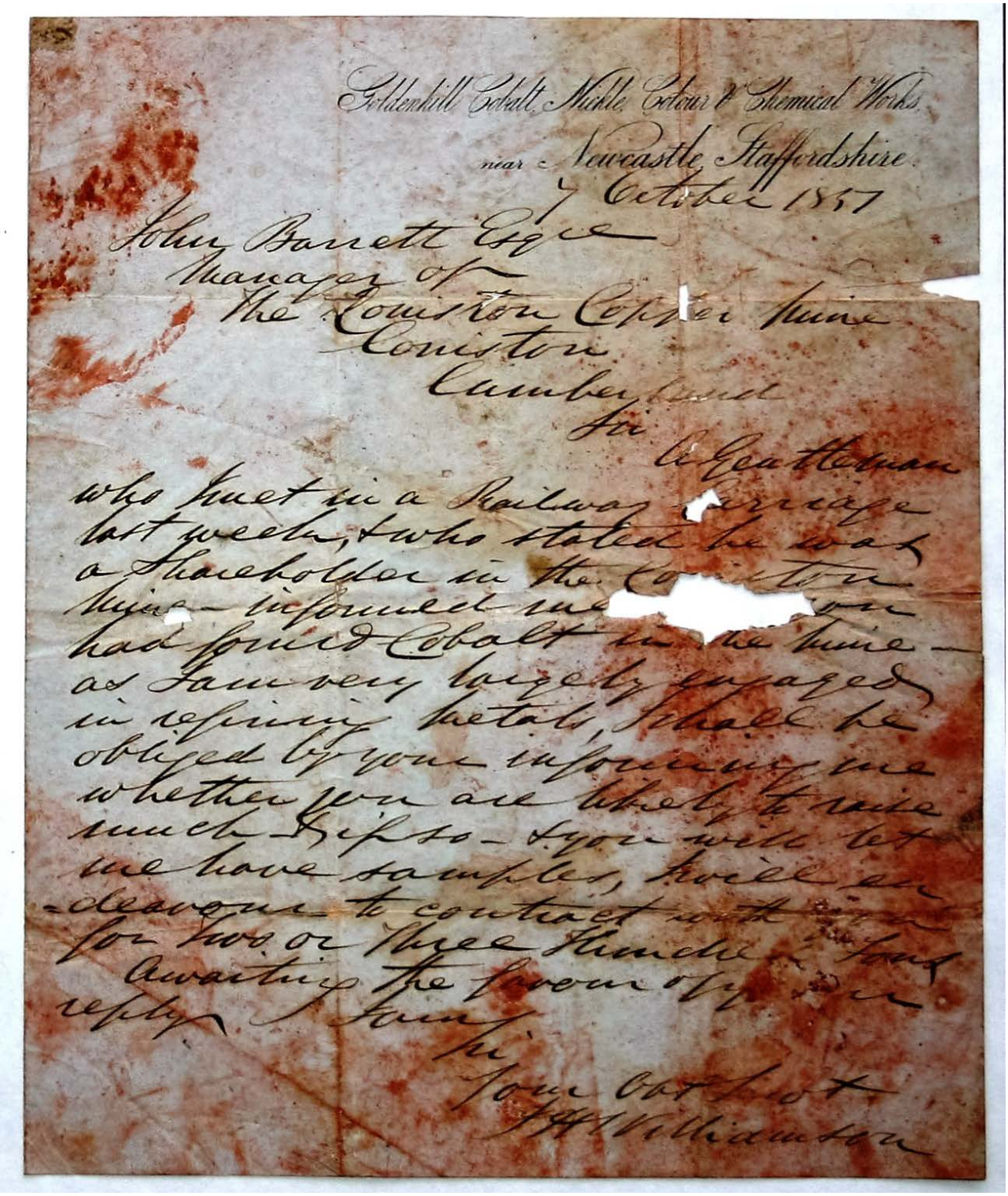
Goldenhill Cobalt, Nickle, Colour & Chemical Works
Near Newcastle Staffordshire
7 October 1857

John Barrett Esq..
Manager of
The Coniston Copper mine
Coniston
Cumberland

Sir

A Gentleman who I met in a Railway Carriage last week, and who stated he was a Shareholder in the Coniston Mine informed me (that) you had found Cobalt in the mine – As I am very largely engaged in refining Metals, I shall be obliged by your informing me whether you are likely to raise much - and if so - if you will let me have samples, I will endeavour to contract with you for Two or Three Hundred Tons.
Awaiting the favour of your reply.
(?) (?) your Obt Servt
J H Williamson

(Hext document purchased by CATMHS at the Hext sale in 2010)



Goldenhill Cobalt, Nickle, Colour & Chemical Works,
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Sir

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Sir
Your Obt Servt
JH Williamson

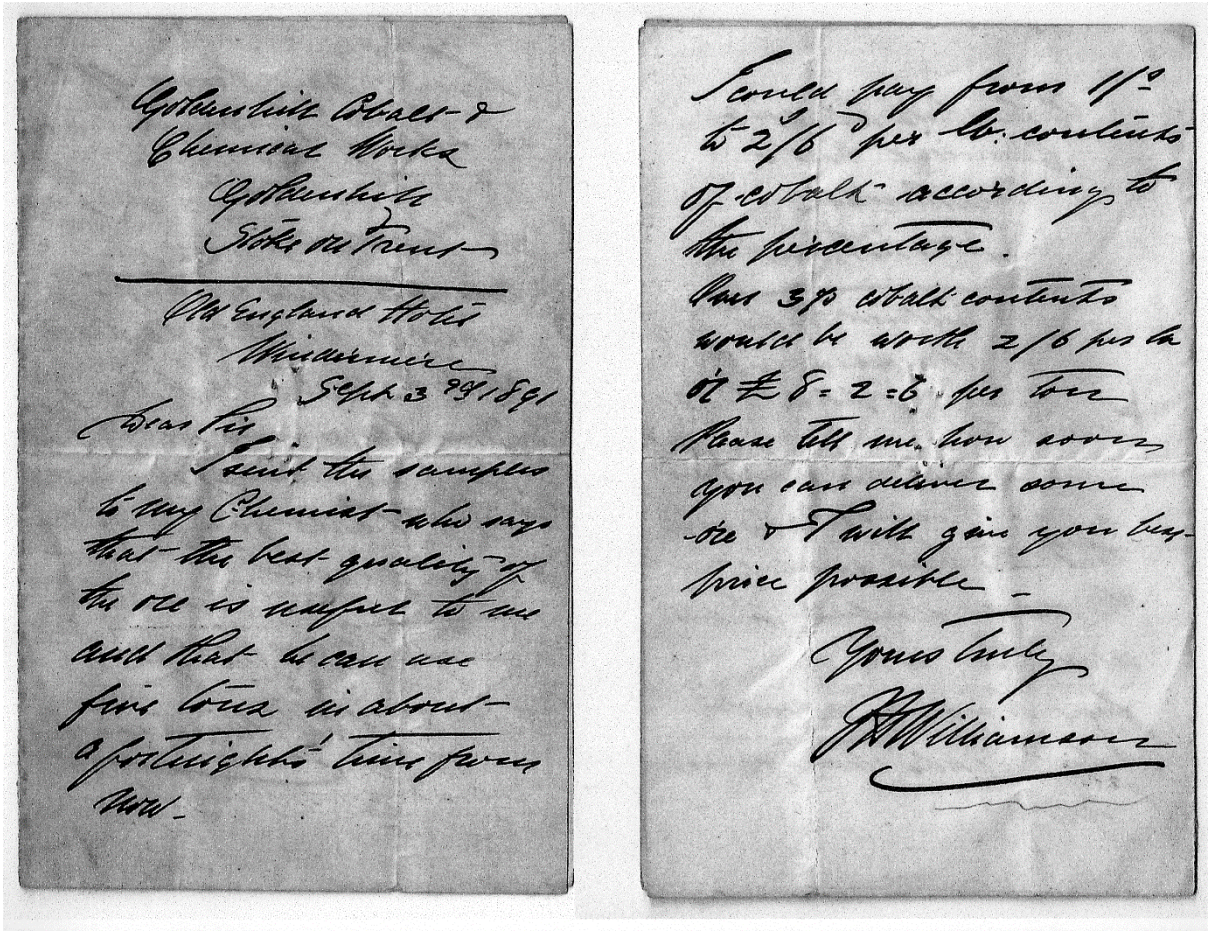
It seems probable that some agreement was reached, because the association with the Goldenhill Chemical Works continued. Some 34 years later, in 1891, when the mine was then owned by Thomas Wynne, who was in the process of selling it to his manager, Thomas Warsop, JH Williamson was staying in Windermere and again wrote to the Coniston Mining Company:

Goldenhill Cobalt & Chemical Works
Goldenhill
Stoke on Trent

Old England Hotel
Windermere
Sept 3rd 1891

Dear Sir
I sent the samples to my Chemist who says that the best quality of the ore is useful to me and that he can use five tons in about a fortnights time from now.
I could pay from 1/- to 2/6 per lb content of cobalt according to the percentage
(?) 3% cobalt contents would be worth 2/6 per lb or £8 2 6 per ton *(of ore. IM)*
Please tell me how soon you can deliver some ore and I will give you best price possible

Yours truly
J H Williamson



(John Belton collection of mining documents, copies in the CAT archive.)

At this time the copper mine was in serious decline, with Wynne having difficulty in paying the wages. It seems that they were seeking about for any source of income, and the lead deposit in the east end of the Bonsor vein on Deep Level was being re-investigated. (Holland, Coniston Copper, p209) I would be grateful for any further information on this subject. IM

CUMBRIA AMENITY TRUST MINING HISTORY SOCIETY

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