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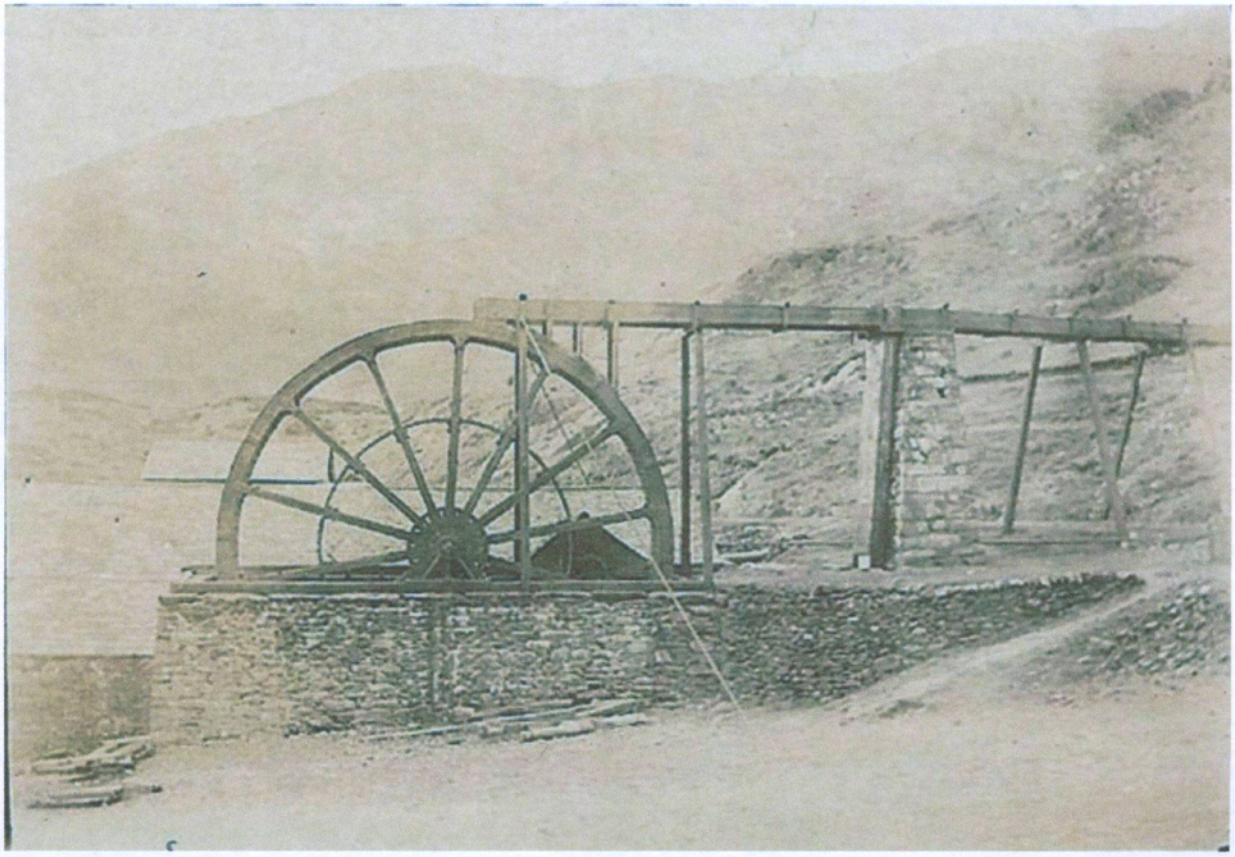
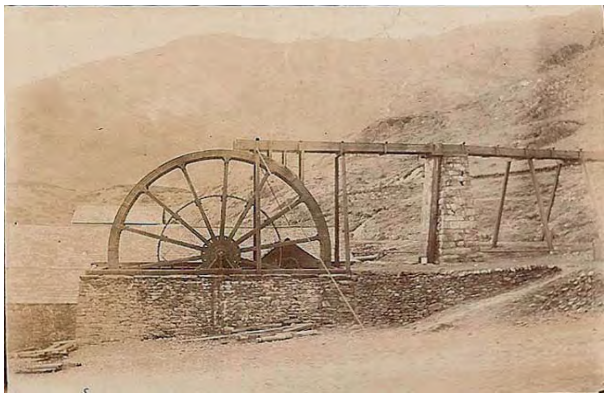
## The Newsletter of the Cumbria Amenity Trust Mining History Society



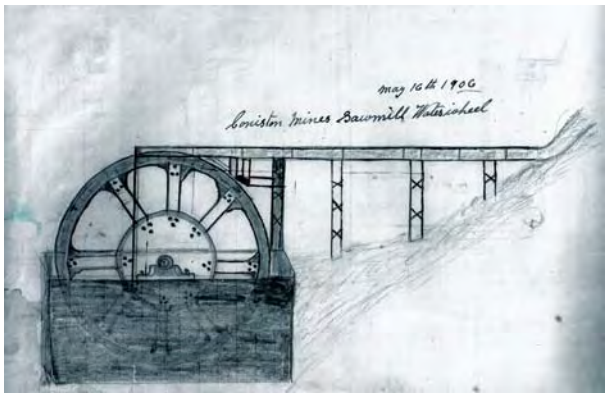
No. 94 February 2009

**Cover picture**



The cover picture is of the Sawmills waterwheel, Coniston, circa 1900, one of the photographs belonging to John Belton, who, as reported in the last Newsletter, showed them to Peter Fleming and allowed him to copy them. There is also a drawing of the Sawmill wheel dated may 16th 1906, but it doesn't look the same and appears to be overshot rather than backshot. Maybe it was to be replaced

Amongst the documents is a record of a contract to Joseph and John Hellen for breaking old iron. In 1892 they dealt with '*Thomas Minigan old waterwheel at thriddle, 30 feet in Diameter and one Waterwheel 18 feet in diameter at low mill; in 1896 at Padyend a Waterwheel 18 feet in Diameter; in 1897 the far Thriddle Waterwheel 42 feet in diameter, the winding engine and air compressor; in 1900 the big Waterwheel Thriddle winding gear and Pumps.'*




In October 1905 Joseph Hellen and Company had a contract '*for taking Machinery and Pumps out of Pady=End Shaftand also air pipes out of Hospital Level at high Pady=end and all the metals out of the Horse Level.'*

This picture is of the Saw Mill in January 2009, now a self catering holiday establishment.

# Cumbria Amenity Trust Mining History Society
# Newsletter No 94, February 2009.

## Contents:

**John Wilfred Barratt Hext.**

It is sad to have to report the death, on the 7th January, of our Vice President. Major J W B Hext. He was 92. His funeral took place at St Andrews Church, Coniston, on 16th January. He was much loved and respected in Coniston and the church was packed to capacity, the gallery full and people standing at the back. In his honour the railway volunteers steamed all the locomotives in his minature railway.

In his collection are a number of original documents relating to the Coniston Mines. He gave us access to these papers and I have spent many Thursdays in his front room deciphering and transcribing them. I am grateful for his kindness. More recently he allowed Mark Simpson and me to photograph them. He always provided refreshments, served on a silver tray, and when we had finished for the day we sometimes had a chat together in his study. He was a true gentleman and will be missed. Ian Matheson.

My acquaintance with John Hext goes back 46 years and I should like to pay a small tribute to him. Despite his illustrious background as a major – he was involved in the evacuation of Dunkirk and served in Burma fighting the Japanese, I soon realised that he was a courteous and friendly gentleman with no edge whatsoever. This was made quite clear in the eulogy delivered in the church service by Major Patrick Brown of the Royal Engineers.


John and his wife Dora had seven children, two boys and five girls. Most of these still live on the estate. I have fond memories of John drinking tea from a large mug with the words 'Big Daddy' on it, obviously bought for him by one of the family.

Being a descendant of John Barratt, who built Holywath during his successful development of the coppermines, he always took a great deal of interest in the research and exploratory expeditions undertaken by CATMHS into the mines. At least two of the Barrett family were present at the funeral. As the cortège reached the churchyard, with the coffin borne on a representative "gun carriage", a low flying military jet aircraft passed overhead; purely a coincidence, but as if in salute.

The last time I visited John was in November. He looked frail but was as sharp as ever. He was sat by the fire in his study and by his side was the latest copy of our Newsletter, which he had just finished reading. He told me he always looked forward to receiving them. I invited him, on behalf of the Committee, to join us at our annual dinner as our honoured guest. He was delighted to be invited. Unfortunately he took ill a short time after my visit and was taken to Furness General Hospital, where he died. He was a worthy Vice-President to us, and will be missed by many.

Peter Fleming.

## CATMHS News

### AGM & Dinner

The CATMHS AGM was held on 13th December at the Barrow Mountaineering and Ski Club Cottage in Copper Mines Valley. Nineteen members attended, and the Committee was re-elected en block. Mark Scott agreed to take on the job of Publicity Officer. After the meeting the Annual Dinner was held at the Crown Hotel in Coniston, and a good time was had by all.

### Chairman's Report

First of all I must thank everyone who has helped with the running of the Society, the Committee, and the meet leaders; we may be few in number but think of the quality. Meets have continued throughout the year and the list of meets is up to the middle of this year. I hope that they will be well supported, although on past experience attendance will be variable.

The Newsletter as usual continues to astound and is full of interest, a credit to the Society and the contributors, not to mention the person who puts it all together.

Our finances are sound, thanks to our production and sale of publications. Indeed without them projects and specialist equipment would not be possible, external funding would have to be resorted to, with all the problems that would entail.

Kernal Level exploration is over, and while it was on, was full of interest; the final report is in preparation. New projects are in the pipeline, Carrock Fell Adit entrance stabilisation and gating has run into problems, and although we hope that it will be proceeded with, no one is holding their breath. This is a pity, as much preparation work has been carried out. Prospects look brighter for Silvergill and approval for work is confidently expected (See article in the new Journal). I must not forget the explorations in slate mines near Corris, Wales, which are still on going - serious stuff.

There are other projects being thought about, and these will be reported on in the Newsletter. Not forgetting of course there are plenty of mine sites that need detailed mapping – we have the kit. Should any member have ideas for projects please let the Committee know.

The Mines Forum meetings continue to be held, and committee members attend, on the principal that some communication between interested parties is better than none at all; at times it is hard to see any benefits.

New publications are appearing, the Coniston trail leaflet, and the latest Journal, a magnificent effort. More trail leaflets are in course of preparation. It should be noted that the old trail leaflets have been a steady earner for many years.

Mark Simpson

*(CATMHS has a policy of seeking approval from the relevant authorities for any projects it undertakes. Chairman's afterthought.)*

### Secretary's Report

We held the usual 6 committee meeting during the year, all were well attended.

Apart from attending to all the usual day to day enquiries:

We have sent a letter of support to Ghyll Scaur Quarry at Millom. They are applying for funding to create a Rock Park at the quarry. This will be an educational facility to advance knowledge of the local geology, minerals, fossils and the natural processes that make up the earth's physical landscape and structure. They also want us to look at some old mining remains in the quarry. We are going on a visit there in April.

In July I attended the 2008 NAMHO Conference at the Lady Victoria Colliery, Newton Grange, near Edinburgh, which was very good and with fabulous weather. Next year the conference is to be in Derbyshire and it is being organised by PDMHS on their 50th anniversary, so should be a good do. Details can be found on the NAMHO website.

I attended the last NAMHO Council meeting in November at Caphouse Colliery when the main topic of discussion was that English Heritage has funded NAMHO for £2000 to develop a research framework for the archaeology of the extractive industries. All archaeology is now development led and funded and English Heritage need guidance laid down in advance. A steering group will be formed, any volunteers will be welcome.

Sheila Barker.

**Treasurer's Report**

To start I would like to thank Mr Douglas Harrison for auditing the accounts. Habitually this is done as an afterthought at the end of countless charity financial reports, but this is an onerous responsibility without any reward other than the expression of gratitude. Our Auditor is both competent and thorough and we are deeply in his debt.

I shall continue by referring to my closing remarks made at this meeting last year when I presciently mentioned *"the generally less accommodating financial climate that is developing";* as an investor in an Icelandic bank I would wish that my observation had been less accurate and that I had extended my foresight to my own affairs! However we have to deal with matters as they are, not as we would wish them. Specifically, in the case of the Society, I have consulted the FSA as to the security of our bank accounts and I am assured that so long as we have less than £50,000 deposited with either of our bankers, the HSBC or Scottish Widows (effectively Lloyds TSB) then we benefit from the Government guarantee, and our funds are totally protected in the event of either institution becoming insolvent.

Reviewing the year in more detail, as far as income goes, there was little change from the previous year once that year's figures for travelling expenses/donations are balanced out.

Members should note that the past year's budget change to the basic rate of income tax results in us receiving just over 3 pence less for every £ given via Gift Aid. However, all charities have been given transitional relief so we will continue to receive the full amount for the next three years. Those of you who are taxpayers will be delighted to know that, as a result of Government's strenuous efforts to increase the efficiency and reduce the cost of HM Revenue and Customs, instead of the five days it used to take to process a claim for Gift Aid repayment it now takes in excess of six weeks.

We should record our gratitude to Peter Blezard, whose talent as a “wheeler dealer” has been admirably demonstrated in his managing of the Society’s stock of rails.

As far as expenditure is concerned the major difference is the fact that we spent approximately £2000 less on equipment than in 2006-07. An increase in the cost of Underground Public Liability insurance occurred of the order of 6.5%; there will be no change in rates for 2009.

Looking forward into next year we have already paid for Journal 6, a total of £3500, and will face more project expenditure in the near future, but given the surplus we achieved in the year under review we can go forward financially in a quietly confident mood.

On a personal note I would like to record how much I enjoyed the past year, visiting Deep Level at Coniston via South Shaft and via Taylors Level, Rachel Wood and Ladstock (the latter deficient in rigging and excessively filthy, did I hear someone mutter “Moles”?), Catherine and Jane Consols, (doubly enjoyable since although I failed the through trip test I wasn’t the only one), Llanberis Copper Mine, great days in the Corris quarries, Wanlockhead, that amazing mine in XXXdale and finally even a stroll to the Ballroom at Nenthead. Very few organisations can boast such a varied and entertaining program; my one regret was not having enough time to attend more of John Brown’s team’s physical training sessions. My thanks to everyone who made mine a splendid year.

John Aird

**CAT Library and Archive.**

Prior to the Committee Meeting that took place on 14th January some members met at the Ruskin Museum in Coniston to begin the task of making a digital record of our collection of mine plans. There is concern regarding the longevity of digital media, so electronic records will not supplant paper copies, but will provide a means of indexing, transmitting information and remote access to our records.

*Photo Ian Matheson*

**Silver Gill Mine**

In August 1997 members of the Mines of Lakeland Exploration Society (MoLES), with permission of the National Park Authority, were engaged upon exploring and recording mining features on the Caldbeck Fells. This group had discovered a number of features at Silver Gill that led to the discovery of a buried level well-above the open coffin level visible from Silver Gill at around 524m AOD. On opening this new level it was found to be a hand cut "coffin" shaped cross-cut to the Silvergill vein. At the vein intersection a backfilled shaft was found with a crude wooden jackroll with iron handles still in place. Blasting in the area of the shaft head had widened the level. The level was explored as far as collapsed stopes and a continuing backfilled main drive driven in the hanging wall parallel to the stopes was excavated to provide a total length of accessible level of more than 100m.

Careful surveying and investigation of this area led to a conclusion7 that the level was indeed the Elizabethan ***Emanual Stolne*** noted to be in existence in 1571. This work provided the confirmation that the open coffin level below was ***New Stolne*** and the decayed level above on the Northern side of the Gill was ***Fortune***. The culmination of this investigation and the historical analysis underpinning the identification of the levels was that Silver Gill was indeed the key site for the Elizabethan phase of mining on the Caldbeck Fells. With this knowledge careful excavation of the backfilled main drive running parallel to the collapsed stopes was undertaken to seek the reported shaft leading down to the New Stolne, (which is blocked and inaccessible beyond the flooded shaft at the intersection of the cross-cut and the vein). During the clearance of this debris a number of wooden artefacts were uncovered and these were preserved within the atmosphere of the level interior.

Warren Allison asked CATMHS for support in an application to 'lnvestigate historical mining levels associated with sixteenth century operations at Silver Gill, Caldbeck, Cumbria' and a comprehensive request was submitted by Colin Woollard, Warren Allison and John Brown.

The document requested permission from the Lake District National Planning Authority to conduct limited investigations of historical mining levels located within Silver Gill near Caldbeck, Cumbria. The purpose of the historical investigation is to determine if a cross-cut to the Silvergill vein, proposed in 1622 to revive the ailing Elizabethan mining venture, was ever constructed. The investigation is focused upon two key areas likely to yield evidence of the adit. These are the flooded shaft located within the accessible parts of New Stolne and an area adjacent to a wall feature discovered in the gill some 15 fathoms lower down. This document provides details of the proposed location, a limited historical overview to put the request into context, details of the aims and objectives of the investigation and information on proposed working methods.

I had hoped to reproduce the application in full in the Newsletter so that members could appreciate what has been involved, but as it runs to nine pages I have never had the space.

The application was submitted to John Hodgson , LDNPA senior Archaeologist, and we have now received his reply:

*The proposal that you submitted last August is very comprehensive and adopts a sensible approach to the research issues that have been identified. I am therefore happy to agree the following:*

*Drainage of the shaft in the New Stolne cross-cut, including fixing a gate to restrict access. You will need to obtain SSSI consent from Natural England and provide a risk assessment, environmental impact assessment and detailed design for the gate;*

*Geophysical investigation of the area of the Fourth adit. I understand that you have now have an offer of geophysical equipment and expertise for this and I am happy that a survey be carried out. We would like you to provide at least two weeks notice of the start of the work so that National Park staff can attend and inspect the work;*

*Intrusive investigation of the possible area of the Fourth adit. I am happy to consider giving consent for this part of the proposal depending on the results obtained from the geophysical survey. If any excavation takes place it would require a detailed proposal, SSSI consent and would have to be carried out under archaeological supervision in order to ensure that appropriate recording takes place. As the area to be excavated would be quite small it is likely that the National Park Authority would be able to provide archaeological staff to supervise the fieldwork.*

**Magpie Mine appeal**

Magpie Lead Mine, near Bakewell, in Derbyshire, operated from 1740 until 1950. The Peak District Mining History Society lease Magpie Mine and its associated buildings and operate it as a field centre. They hope to replace their ageing electricity generator with mains supple at a cost of £120,000. They are launching an appeal, 'Power to Magpie Mine', and would welcome donations, preferably with the benefit of Gift Aid. More information can be obtained from their web site, www.pdhms.com or phone 01629 583834.

**Developments at Newland Furnace**

There was a report in NL 93 about the re-development of the corn mill and of the plans of the Newland Furnace Trust to provide a roof to conserve the foundations of the 19c furnace stack extension & the surrounding paved walkway.A tender from Kendal Building Co. has been accepted by the Trust, which hopes to place an order in the near future. This can't be done until the Trust receives confirmation from English Heritage that grant money is in place. The Trust will now be starting probably the most important part of the project, ensuring that complete finance is available to cover all the expected costs.

An interesting document dated 1787 has been received from Dan Ellsworth, supervising archaeologist for the corn mill development. In 1782 a Mr & Mrs Blundell wanted to bring water back into the "bottom mill" area (Newland Bottom) where the mill had been derelict since 1712. The extracts from council opinion in this case go through the history of the water rights between 1692 and 1782. There are several important phrases regarding the furnace & the forges. He also said that the builders had found pieces of mill stone during excavation of the water wheel pit at the corn mill. The owner, Mr Glass, was willing to donate to the NFT and the pieces are now stored in the Charging House. Five bearing boxes have been found which were also built into the wall. Two of these are back for safe keeping, together with two lumps of pig iron which were stored in a garage. They may be pig iron from the "running channels" rather than true pigs, but nevertheless are very important artefacts.

**An intriguing find at Newland Furnace.**

In October 2007 the corn mill at Newland was sold with planning permission for conversion to a residential unit. The earliest known reference to this mill occurs in documentation associated with the dissolution of Furness Abbey in 1537. In 1746 Agnes Boardley (sister of Richard Ford, the main shareholder in the fledgling Newland Furnace Co.) bought the corn mill from John Benson of Mansergh Hall in order to obtain the all important water rights as a prerequisite for the erection and operation of the iron blast furnace in 1747.

A message from Mr Dan Ellsworth, the archaeologist with a "watching brief" at the mill during conversion, alerted us that a large piece of cast iron had been found built into the

*The hammer head built in as a niche. The opening at the bottom is the water wheel axle hole, with the hammer head above and to the left, and a bearing box above the axle hole.*
*Photo: Dan Elsworth, Greenlane Archaeology.*

south wall of the mill near to ground level. The building contractors had demolished this slate wall, built an inner block wall and reused the slate to rebuild the outer wall. The lump of iron had been identified as the hammer head of a trip hammer frequently used in forges. The artefact had been recovered and hidden behind the building for safe keeping. Having looked at it we approached Dan to find out if there were plans for its preservation. Dan kindly put us in touch with Mr Glass, the site owner, who agreed to donate it to the Newland Furnace Trust as part of the heritage of the hamlet.

Hurriedly a working party was arranged and Paul Timewell, Peter Sandbach, Ian Matheson and John Helme met on the 27th November. A steady drizzle had been falling since early morning


but by the time we met this had turned into a torrential downpour and the building site was a quagmire. Fortunately the mini digger driver, trying to proceed with the building of the garden walls and terracing, readily agreed to move the hammer head to the road. Peter had driven the FMA trailer to this point and as soon as it was safely in the trailer he expertly drove it via the upper road to the charging house entrance at the furnace. The next task was to safely unload it and move it to the chosen display position in the charging house. It was at this point that John suddenly remembered an appointment with one of the contractors quoting for the furnace capping contract and disappeared with him to the furnace stack top, (he hadn't been much help anyway). Efficiently the rest of the team completed the unloading using rollers, crowbars and short lengths of scaffolding poles and it is now safely under lock and key and shortly will have an explanatory notice and tribute to the help of Dan and the generosity of Mr Glass.

The vertical brick extension to the slate built mill (mid 19thC?, SLDC Conservation Area Document) and the removal of some of the lower floors to give increased height for the ground floor had previously led to the idea that this area may have incorporated trip hammer(s) and been used as a forge. The finding of this hammer head much increases this possibility.

The 1997 "Architectural Survey of Newland Furnace" by the Royal Commission for the Historic Monuments of England, (RCHME), published by English Heritage in 2001 (NBR index 95778), suggested that a building, upstream of the furnace and now converted into two cottages (Brookside and Mill Race Cottage), was likely to have been a forge in use between 1783 and 1907. The evidence for this was that the building straddles the leat, close to its take off point, and therefore could have housed trip hammer(s) powered by a bottom fed water wheel. The upstream reservoir dam burst after an autumn storm in 1918 and letters in Barrow Records Office afterwards refer to the loss of water for the corn mill as well as other events. This seems to indicate that the corn mill was active in early 1918.

These and other facts, the mention in some sources of an anchor forge, a chain forge, a foundry and forge(s) as well as the short lived rolling mill, lead to uncertainty about the location and dates of these operations and the relationship between the corn mill and the furnace. Many of these questions can only be resolved by fresh information and documentation which might be revealed by further studies of local and national records.

John Helme and Ian Matheson.

**Loch Aline Silica Sand Mine**

Peter Blezard sent me the following clip from the Oban Times 20.11.08:

*'A crisis meeting is to be held in Lochaline to explore ways of keeping open a silica mine which has been the mainstay of the villages economy for the last 60 years. Eleven jobs look set to be lost in Lochaline with the closure of the Tarmac silica mine on the Morven Peninsular, Scotland West Coast. The Company say the downturn in the UK econom,y coupled with rising input costs and increased competition from abroad, have led to the decision. It has put in place a 30 day consultation period with the 11 strong workforce, all of whom live in the Lochaline area, and say it will try to find alternative jobs for them within the Tarmac organization.. A spokesman from the Morvern Community Council said 'The script is that the mine will shut. It's a huge blow for the area. It's a small community; they are good jobs and well paid. We are trying to organize a crisis meeting to see if there is anything to be done to keep it open at some level. We don't believe that demand has dried up altogether; we think there will be some level at which production will be viable.'*

There has been a silica sand mine in Lochaline since 1940 when it was opened to replace sources of silica needed for the manufacture of optical quality glass lost because of the war. The mine contains some 30 miles of underground tunnels and access is by an adit located on the loch side. The mined sandstone is brought out by dump trucks to the processing plant on the loch side and loaded directly onto ships by a conveyor. The mine's entire output is transported by ship to destinations in England, Scotland, Northern Ireland, and Norway.

The mine is operated by Tarmac Ltd, and provides supplies of some of the purest silica sand found in the UK. It is used in the production of high quality glasses, such as crystal and optical glass, silicon carbide, domestic ovenware and chemically resistant glasses. The Lochaline mine is unique in that is the only silica sand mine in the UK with sea access where the sand is mined rather than extracted by opencast methods. Some CAT members visited the mine a few years ago whilst on a sailing trip to examine the mines and quarries of the Isle of Mull.

## The Hodbarrow Preservation Group 1968

Some members have indicated that they are unfamiliar with this little bit of mining history, so I am giving here a brief account of what I can remember of the H.P.G., to which I belonged for a short while around the time the mine closed. Membership was relinquished for about a year for reasons that will become clear.

In February 1968 a letter to Barrow News and a short report in the paper at about the same time announced that Hodbarrow Preservation Group had been formed to buy the site after closure, which was scheduled for March 22nd; together with plant, machinery, tools etc, with a view to opening a working museum of mining and steam. Supporters included leading Industrial Archaeologists and Railway enthusiasts, mainly from the North of England, and the Committee was mainly made up of university people from Newcastle, Sheffield, Wales and Cambridge.

A broadsheet issued by the Committee gave the aims as being "to raise public interest and thus money to purchase the site of the Hodbarrow (Haematite) Mining Company of Millom." The object was "to set up an indoor/outdoor museum of 19th Century industry, particularly Mining, of the North West, administered by a Committee of representatives of all interested parties". The Broadsheet was undated, but was issued before March 1968. The site was stated as containing much of interest; viz – I quote:

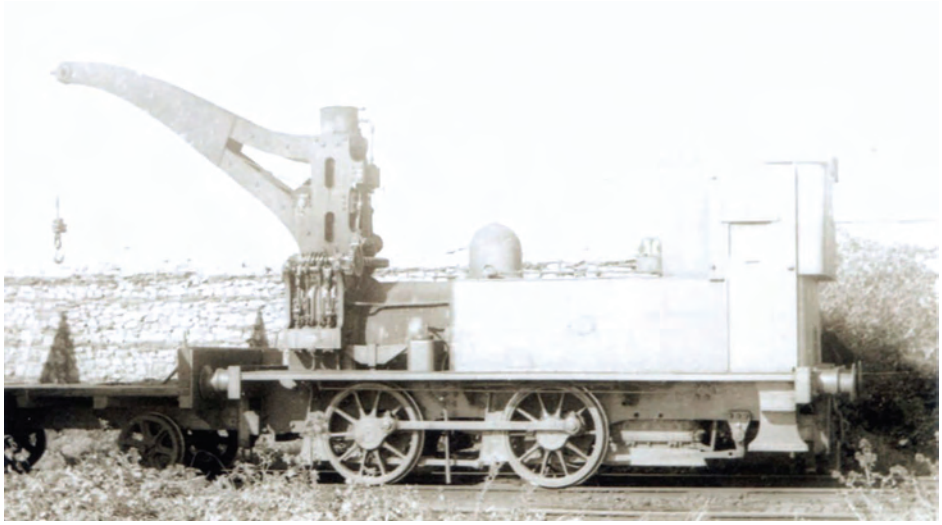
> The Miners Dry and long Engine Shed, circa 1870, still in use.
> Blacksmiths Shop, five furnaces, steam hammer and many tools.
> Workshops, overhead power shafts, travelling woodsaws.
> Various sheds, stores etc., all circa 1860 – 1890.
> Two Cornish Engines and houses:
>  1878 Perran Foundry's last engine. Moved on site 1910, worked until 1959, partially scrapped.
>  1899 Harvey's last engine in a similar condition.
>  Both engine houses in excellent condition.
> Five or six miles network of standard guage railway.
> Four steam locomotives:
>  Hunslett 1882 (0 – 4 – 0 ST), oldest operational.
>  Neilson 1890 (0 – 4 – 0) chimney crane tank – "Snipey". Unique. In daily use.
>  Arnside (0 – 4 – 0 ST). In daily use.
>  Hudswell-Clarke (0 – 4 – 0 ST), 1946.
> Rolling Stock: wooden side tippers (oldest 1880) and others.
> Four steam cranes. One Samuel Butler steam grab, c. 50 years old
> Miscellaneous steam gear and steam pumps – Evans D.A., Holden D.A. rotative.

No photographs were included in the Broadsheet, but I give below a few of them to illustrate some of the more important items. The photos are from a catalogue of some 50 odd held by H.P.G. and sold to swell the kitty. Nineteen of the photos are included in a folder currently offered to CATMHS archives.

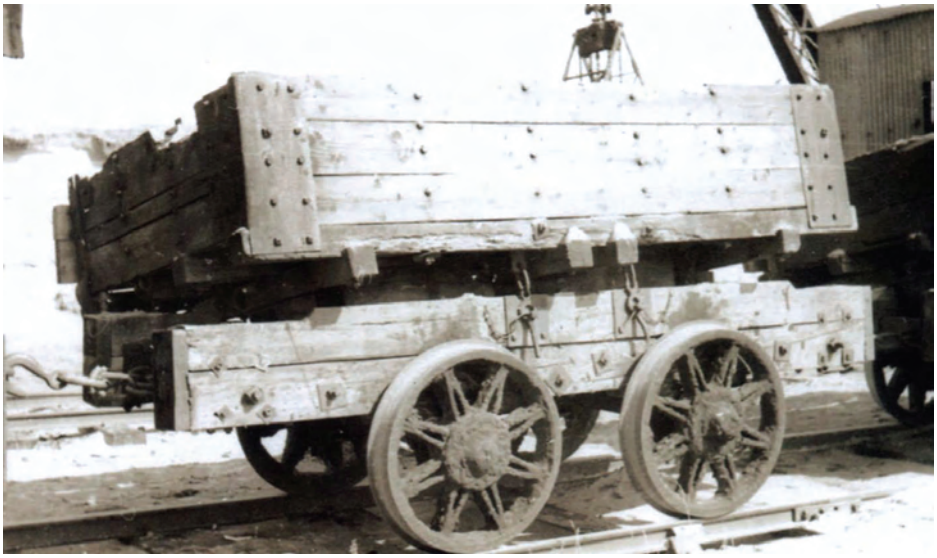
*5a. Perran Engine (70"), exterior from the seaward side. Also shows electric pump house. Photo 7th Sept 1967. H.P.G. E1.*

*5b. Harvey's Engine (70"), outdoor end, headgear and roof of boiler house. Photo Sept 1967. H.P.G. E4.*

*7a. Hunslett 0 – 4 – 0 ST 1882. Outside Miners Dry. Photo Sept 1967. H.P.G. B4.*



*7b. Neilsons1890 chimney crane tank 0 – 4 – 0. Affectionately known as "Snipey". Photo 7 Sept 1967, outside engine shed. H.P.G . A1.*



*8. ¾ view of side tipping wagon. ("Ship Canal Waggon"); steam grab behind. Photo 1967. H.P.G. R1.*

It may have been thought, even at the outset, that this was a rather ambitious project since the Broadsheet goes on to say that failing the purchase of all of it, the intention would be to save as much as funds permitted, giving precedence to the unique locomotives, rolling stock, tools etc., and also pumps. Some items would be lodged with existing collections in the north. It was realised that in this event, the possibility of an open working museum and retention of the Cornish Engines and houses would be lost.

By July 1968 the Group's aims were being revised in the light of the Mining Company's stated aim of retaining and developing the site, necessitating its clearance. Tenders for purchase of locos and rolling stock only were due by 31st July, so it was intended to try to acquire , in order of preference, as funds permitted:

"Snipey"; Neilson chimney crane tank of 1890. Unique.
Hunslett 0 – 4 – 0 ST of 1882, the oldest left.
Avonside 0 – 4 – 0 ST of 1906.
Rolling stock, especially wooden bodied side tipper and one steel bodied on a wooden chassis.

Tentative offers of short term storage and track facilities had been received from Foxfield Light Railway, near Stoke on Trent and storage only at the Ravenglass and Eskdale Light Railway. Any sundries of interest may be destined for the Beamish Hall Museum of the North. Donations to date had amounted to just over £100, a figure that needed to be at least doubled by 31st July.

In October of 1968 the Newsletter announced that the Arnside had been acquired for £160, and two of the wagons, and they were being temporarily housed under cover at Pemberton Colliery, near Wigan. There were also some "miscellaneous tools and equipment". No mention is made of the fate of "Snipey" and the other major items. The same Newsletter also told us that "to enable the Group's interests to diversify in the intended manner the name "Hodbarrow Preservation Group" is not the most suitable. Ideas were sought among members for an alternative name.

The other big item of news in October was that the Group had undertaken maintenance and refurbishment of the 68" Cornish Pumping Engine at Dorothea Slate Quarries. Hopefully this would soon be on public display. This would be the engine shown at work in 1951 in a superb photograph by Woodall in his "Steam Engines and Waterwheels" (CAT Library ref MG 47), but which was found by CAT members in a 1991 visit to be in a sorry state. Woodall refers to the engine as preserved at the time he was writing (1973), but does not give the name of the preservation group- presumably the I.S.P.G.

Members were reminded of the need for suitable premises, and in this connection the ironworks at Backbarrow had been approached with encouraging results, though it would seem "nothing can be done in the near future". If only!

By December the change of name had been approved – H.P.G. was to be known as the Industrial Steam Preservation Group, starting on 1st January 1969. The Avonside had been successfully steamed on several occasions and found to be "very satisfactory" The metal bodied wagon needed some attention. The first working party had made a start on the Dorothea engine and a 15 X 36" condensing engine in a restorable state had also been made available at Dorothea. Several other restoration projects, not based in the north West, were in the pipeline.

In March 1969 a Ruston No 25 100 ton steam navvy was acquired for £50 from Earl's Cement Quarry, Hull, and they were hoping to get a 2,500 hp four cylinder triple expansion horizontal Corliss valve mill engine of 1907 plus a winding engine from a colliery near Stoke on Trent. The last two Paddle Tugs in the UK, built 1910, were languishing in the North East, looking for new owners …..

So, it can be seen how, still in interesting territory, the emphasis moved right away from Hodbarrow in particular and also somewhat away from mining in general. Surely, it is a great pity that the group, by whatever name, did not find a permanent home in the North West. The ultimate fate of the I.S.P.G. is unknown to me at the time of writing. Perhaps someone can enlighten me.

Brian Cubbon.

## Wanlockhead Revisited

The Editor
CAT

Sir,
My attention has been drawn to the reports, in Newsletter 89 and 92 of Meets at Wanlockhead the aim of each being to view the hydraulic engines. While in no way intending to belittle the exertions of the leader (did not Bismarck say “only a fool learns from his own experience”), I write to correct some of the opinions given.

**Water levels within the mine.**

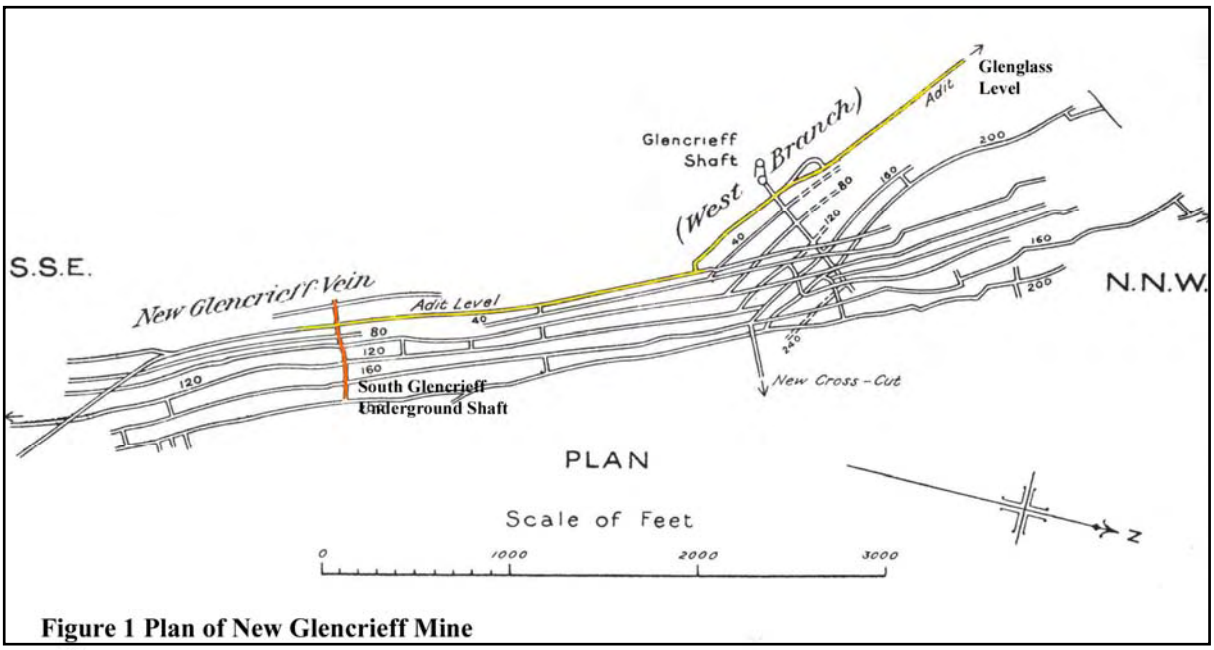



**Figure 1 Plan of New Glencrieff Mine**

The water has two sources, one of which was noted by your reporter while going north along the Glenglass level (driven by Alexander Telfer between 1735 and 1755) from the descent shaft. About 50 metres along the level, a shaft on the east side of the level discharges water from below. When the area of the mine south from here was abandoned around 1916, the levels below the Glenglass were blocked with concrete dams to reduce the pumping load in the northern section of the mine. Thus the flow from this shaft represents the whole of the make of water from the South mine that is not already flowing along the Glenglass level. The second and major water flow comes through stopes in the roof of the level via old workings driven to connect to Straitsteps vein. This water comes from the Wanlock Burn; when water flows are low the whole Burn disappears below ground. Since the car park where your reporter made his remark “there was no water in the beck because it was all in the adit” is well upstream of the sink hole, the absence of water was a good sign. Future visitors should check the state of the burn; if in spate then they may anticipate difficulties underground.

Whether it is fruitful to use rainfall data is questionable, the mining companies were plagued by the rapid run off from the hills, having great difficulty impounding sufficient water for their needs. We can say with certainty that 11mm (approx ½ inch) of rain in a day does not cause the Glenglass level to flood, what is unknown is the drainage rate from the blocked end of the level. This report describes the end of the efforts to re-open the Glenglass level: -

*In 1992 permission to dig was received from the Buccleuch Estates Ltd. and work commenced on 9th January, 1993. The adit was completely run-in for the first 17 metres of ground. Each obstacle was dealt with in turn and the ground was allowed to settle for two weeks before proceeding. In all, 61 feet were cleared, 53 feet inbye and 8 feet outbye from the adit mouth with 6 metres of drainage pipe laid from the end of the concrete pipe inbye. This took two years work at a cost of £1179 13, excluding labour costs, and was funded by Jeremy Landless.*

*When the time came to renew the permission to dig in January, 1995, the Factor for Buccleuch Estates wished to have Historic Scotland and the Health & Safety Executive Mine Inspectorate involved, and this was written into the permission to dig agreement. This resulted in the HSE carrying out a risk-assessment on the adit dig in February, 1995 A new method of working was suggested, the cost of which, for phase two of the work, was estimated at £60,000. As the project is privately funded there is no way that such costs can be met and work has stopped. To be stopped with only 6 to 8 feet to go is a great disappointment to all concerned. If money cannot be found to do the work professionally (£100,000 or so) the engine, which is of great historic value, will he lost forever. NMRS Newsletter August 1995*

## The Vertical Access Shafts

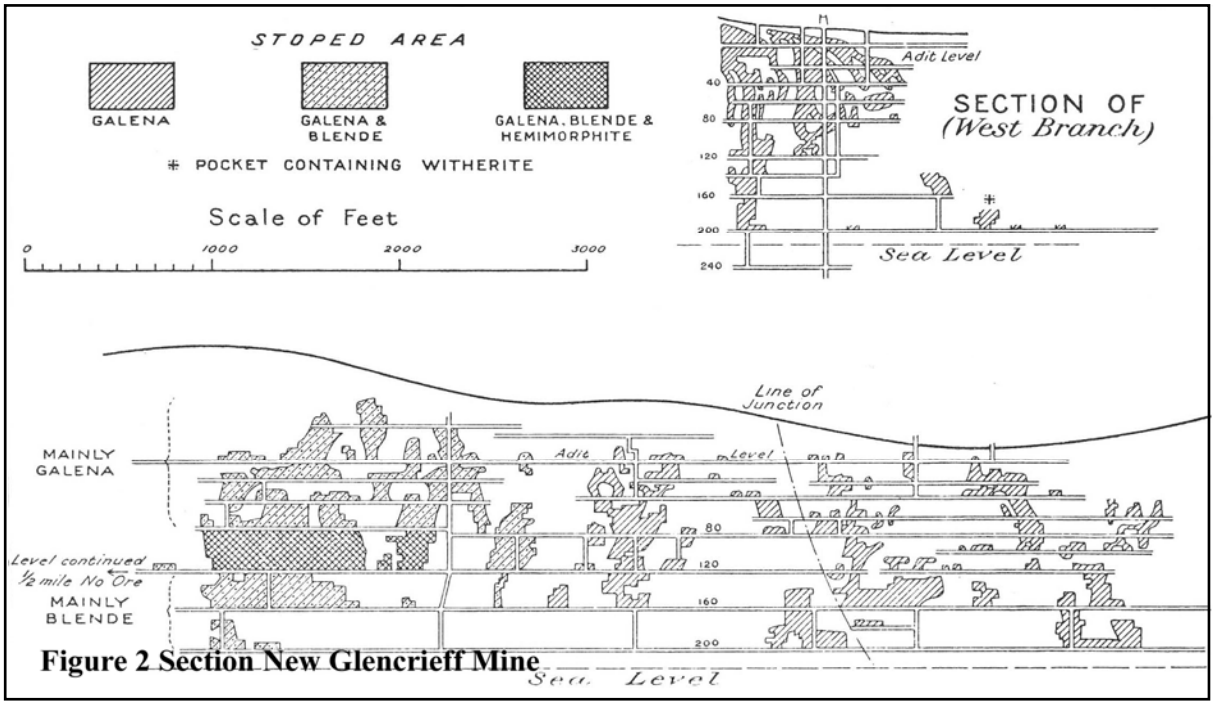



**Figure 2 Section New Glencrieff Mine**

Your reporter's confident statement "This adit and the shafts you are about to descend were cut to accommodate the water feed pipe for the engines" is incorrect. The adit is "Angus's Crosscut" driven before 1735 to provide access to the vein, the first shaft going down to the High Level. Once Telfer had advanced the Glenglass level, he installed Winter's engine (a water wheel) in the large chamber at the base of the upper shaft and sank the lower shaft for the pump rods down to Glenglass level and below. The water supply came from diverting the Glencrieff Burn into Angus's crosscut. This allowed extraction of ore up to 9 fathoms below the Glenglass adit before exhausting the available pumping capacity.

For ninety years after Telfer was ejected from the mine by the Duke of Buccleuch little work was done in South Glencrieff. Eventually in 1842 the Duke, unable to let the mines, appointed

James Stewart manager with economy as his watchword. By 1848 the hydraulic engine was installed, on Glenglass level, in the chamber opposite the lower shaft down from Angus's Crosscut. Levels had been opened 10 and 20 fathoms below Glenglass level working the ore body that Telfer had had to abandon. The flow of the Glencrieff burn was insufficient to power the engine so a surface reservoir was constructed, a surface leat contoured round the hills and four inch cast iron pipe run along Angus's crosscut and down the shafts. Driving the Glenglass level further south an ore body was encountered that rose vertically to within a metre of the High Level. To work this ore body below Glenglass adit Stewart took the bold decision to relocate the hydraulic engine 200 metres south along the level into its present position. This ensured that the new shaft sank directly into the ore body avoiding driving the 20 fathom level through much barren ground. Since it was intended to sink to the 60 fathom level an increased supply of water was needed to provide adequate pumping. A new dam was built to increase the size of the reservoir and a tunnel driven beneath Mennock Hass by an earlier mine tenant was used to bring the water to Glencrieff burn. Due to there being a 5.8 metre difference in height between the water supply and the entrance to Angus's Crosscut an inverted siphon was installed. This is the reason for the location of the wooden cistern five metres below the top of the first vertical shaft; a control valve was located there so that when shut off the siphon pipe would remain full. The original four inch pipe was replaced with seven inch pipe to handle the increased water flow.

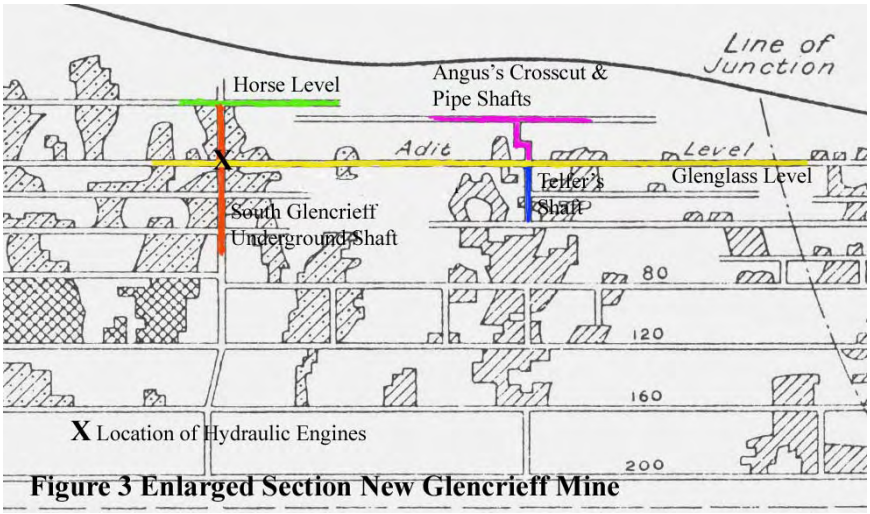


**Figure 3 Enlarged Section New Glencrieff Mine**


The shaft was equipped with a "Jerry", a water balance, a rope passed over a pulley above the shaft, to one end an ore kibble was fastened, and to the other a large bucket, the latter being filled with water at the shaft top and released, its weight raising the ore kibble. Hence "the large bailing bucket" found by your reporter. Water emptied from the bucket had to be pumped back up the shaft. Pumping was given priority, meaning when water was short ore had to be stored in the workings. The three inch pipe which supplied the water for the "Jerry" was tapped off the main pipe and can be seen running along the adit wall in your reporter's illustration of "The Squeeze". Despite your reporters' views ore was always hand trammed along the Glenglass level to the shaft.

By the 1880's the shaft was down 60 fathoms and considerable ore shoots were being worked, production was hampered by the crude winding arrangements and also by the distance the

miners had to travel along the Glenglass level to work. Thomas Barker, who had taken over from his father in 1871 solved both problems by sinking a shaft from an old level in the bank of the Glencrieff burn some 12 metres above the entrance to Angus's Crosscut. Having enlarged the level, he then sank 62 metres through already worked ground vertically down to the head of the underground shaft. The use of ponies gave the level its name "Horse Level". Once laddered this gave a much more direct route for the miners. The winding problems were solved by the installation of the Hastie engine, a new reservoir to supply this being constructed in old workings even further up the Glencrieff burn, the supply pipe running into the Horse level and down the newly constructed shaft. Again the increased working depth of the mine meant that all the water from the siphon was required for pumping. The apparent collapse of the southern end of the chamber in which the main engine is installed is in fact the collapse of the shaft running down from the Horse level.

By 1906 all development work had ceased due to the inability of the pumps to handle the water. A new company took over the mine, adopting a radically different approach. The completion of the light railway in 1902 meant that at last it was possible to use coal fired steam pumps economically. By 1907 two pumps in the northern section of the mine had the flooding under control. By driving the 80 and 120 fathom levels through from the north to the south mine and draining the water northwards, the south mine was also successfully dewatered, leaving the hydraulic engine to cope with the upper levels. In addition the interconnection allowed the workforce to use the skip haulage system in the northern mine rather than climb the 200 metres up to the Horse level.

After the First World War the mine struggled on with increasing pumping costs, chaotic pricing conditions in the metal markets and labour unrest; finally closing in 1934. As mentioned earlier the lower levels of the southern mine had been sealed off around 1916 at which stage both hydraulic engines would have been shut down.

Your reporters' dates are reasonable; it is believed the engine first worked on the Cove vein in the 1830's. Although double acting, as installed the piston rod at the southern end operated the sets of pumps in the shaft by means of a bell crank while the other end of the rod lifted and lowered (by means of the chain and pulley shown in "View from piston rod end") a counterbalance weight in a sump. Power output was 6.5 HP at 3.5 strokes per minute, in 1906 there were five lifts of pumps, total lift of 90 fathoms with a discharge to adit of 51 gallons per minute.

Yours faithfully,
W F Montague-Douglas-Scott

Many thanks to A Holland and D Bridge for their assistance and J Knowles for permission to reproduce the photograph of the Water Balance Bucket

References

Wilson, G. V. The Lead, Zinc, Copper and Nickel Ores of Scotland. *Memoirs of the Geological Survey, Scotland, Vol XVII*
Downs-Rose, G. 1994. A History of the New Glencrieff Vein Wanlockhead, Dumfriesshire 1603-1993 *Northern Mine Research Society Newsletter*, August 1995
Website www.scran.ac.uk

**Natural Limestone Caverns**

The interesting early descriptions of the Ale Burn and Hudgill Burn Mine caverns submitted by Peter Fleming in the previous newsletter and the fact that the Hudgill Burn cavern was re-entered by CAT members for the first time in at least 100 years, put me in mind of our discoveries during the exploration of Frog Shaft. The 19th century geologist and agent for the London Lead Company, William Wallace, in his "Laws which regulate the deposition of lead ores in veins" published in 1861, noted that "while working the rich ground in Cowhill cross vein, the miners holed into a large cavern, the lower part of which was filled with vein stuff, chiefly composed of carbonates of lime and iron, all of which was fractured and broken in a manner similar to the lumps of veinstone left in mines as refuse. When the miners entered the cavern, they felt assured that they had holed into some old works". A later paper sent to the Government office in 1875 based on the erroneous belief that "by some process of Nature's chemistry, not yet understood, the calcium (in the veins) has been transformed into lead" continues even more romantically: "No intelligent mind could observe the phenomena at the southern termination of the rich lead deposits in Cowhill cross vein, when first opened into, without feeling, with a sense of awe, that he had entered one of Nature's secret workshops, where indeed he found the work, so far as it had advanced, perfect though still incomplete".

This working, which lies between Middlecleugh level and Smallcleugh level, was re-discovered during our explorations in 1993, though, due to back-filling and collapse, it was no longer possible to fully appreciate its natural cavernous nature. Quoting from The Mine Explorer Vol 5:

"Two of the three rises below Middlecleugh Level in the Cowhill Cross Vein were carefully descended beneath crumbling unsupported masonry and found to be blocked. William Thompson's rise, where the water disappears, was a different story. Here (the author) slid through the ochrous slot and abseiled down the narrow air vent to a working floor 85ft (26m) below, landing at the edge of a substantially built ore-pass some 10ft long and 5ft wide, which was blocked below and flooded. At last the door had been opened to the workings on the rich ore shoot in this part of the Cowhill Cross Vein described in colourful terms by William Wallace. The remoteness of the place was accentuated by the tight connection with Middlecleugh Level and the sound of running water which cut off the outside world - not a place to linger on one's own - and it wasn't until some time later that Jon and Dave were able to explore the area more fully. The wide stope had been back-filled up to the roof to the south-east but to the north-west was passable for some 50m until a run of finer material blocked the way. Although the accessible part of the stope was of limited extent, we'd once again found ourselves rubbing shoulders with history in this fascinating system".

Dave Bridge

**Corrections to the Meets List**
The following dates in the Meets List might cause some confusion:

The Duddon Meet *will* take place on 9th May, which is a Saturday, but the meets listed as taking place on 21st Feb and 18th April, also Saturdays, will be on the following days, which are Sundays. ie 22nd Feb, and 19th April. Dave Bridge's meet at Ghyll Scaur Quarry will be on *Wednesday* April 1st. You should amend your meets list now. If you want to participate then you should telephone the Meet Leader to make sure.

**Brownley Hill, 14th December.**
This meet was cancelled because it was felt that no one would turn up, with it being the day after the annual dinner & AGM. It is currently due to happen on 1st Feb.

**Boxing day Meet, 26th December 2008**
Twenty-four members and guests assembled at the ford in Little Langdale on a dry and clear morning and followed the track towards Greenburn Valley. The first area of interest was Black Hole Quarry which appears to have originally been two underground closeheads before their roofs were either removed or collapsed leaving a high arch spanning the gap between the two, that still serves as a bridge to provide access from the valley below to high enclosed pastures. The tunnel, with its arched portal, driven for extracting the slate from the lower closehead is still intact but full of water. It contains a submerged canoe. High on the east rim of the now open quarry is a good example of a circular horse gin platform. Assuming this was used to raise slate from early surface workings, it must pre-date the access tunnel considerably.


Horse gin platform, Black hole Quarry, Little Langdale

We then continued through Hall Garth and made a left turn up the fell track leading to High Tilberthwaite Farm. At the high point of the track we turned right to reach the extensive Betsy Crag series of quarries. The remains of several buildings were examined on the way up to a point where we could gain access to the floor of one of the workings where a short hidden tunnel was formerly used by the infamous Lanty Slee as one of his illicit still sites in the mid-1800's. It contains a pile of ash and bits of broken clay pipes and also iron caulkers off old clogs. Hidden in the floor of the tunnel is a compartment covered by flags in which he probably hid his still and bottles. In recent years this short tunnel has "sumped up" after wet weather so we were unable to explore it. Nearby, in bright sunshine, with good views across Little Langdale, we paused for a snack. It was during this break that the meet leader spotted a feature that even our slate guru, Alistair Cameron, was unaware of. It was a sledge track descending diagonally down the fellside between the slate tips and ending at a loading platform. In a good state of preservation it

Betsy Crag Sledgate. *Photo John Aird*

was a surprise bonus. Most of us then followed an engineered quarryman's path across a steep fellside to gain the working bank for the top Tunnel Hole Quarry. Several buildings stand on this bank on either side of the access tunnel which leads into the now roofless cavern of Tunnel Hole Quarry itself.

We then returned to the main Tilberthwaite track and through Moss Rigg Wood to the Cathedral Cavern where Mike and Barbara Mitchell with a small team of helpers had set up a candle lit spread of tasty treats, including mulled wine, cheese, sausage rolls, Christmas cake and mince pies, etc. The effort was much appreciated by all those present & brought to an end a pleasant, if short, day – the final CAT meet of 2008.

Peter Fleming.

**Bannerdale Meet , 11th January 2009. Leader Mark Simpson**

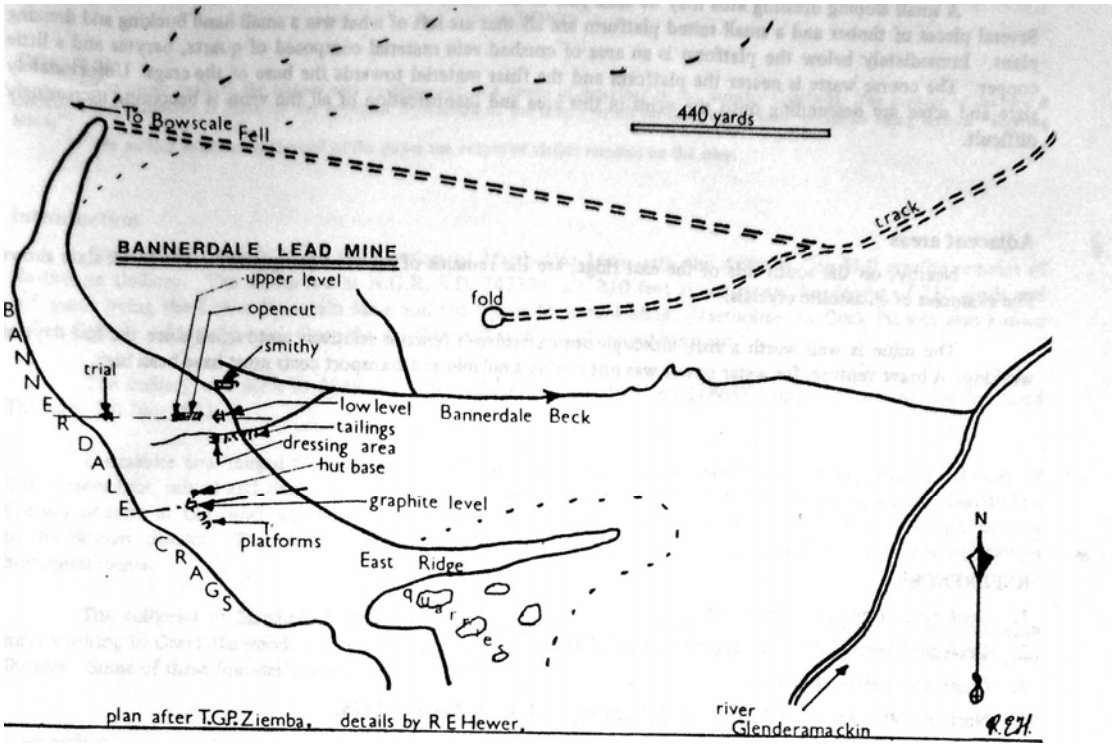
Despite a less than favourable weather forecast, the following people turned up for the meet: Peter Fleming, Mike Mitchell, Sheila Barker, Don Borthwick, Roger Ramsden, Tony Holland, John and Philipa Tindal. All had contacted the meet leader to say that they were coming.

The group assembled at Mungrisdale, and I went through the proposed itinerary and satisfied myself that all were well used to fell conditions and thus were well able to judge their ability to cope with them. The intention considering the weather was to just walk to the mine, look at the site and those who wished to look at the levels could do so. Note: In the event, the people who did go underground were known to the meet leader as being well capable in an underground environment and of assessing the risks involved.


Well the rain was raining and the wind was a blowing, so we muttered the immortal words and set off. John, who had been recently ill, decided early on to drop out, and wait for us. I estimated that we would be back at about midday and was he ok with that. Philipa continued. We went on, with the wind being very gusty; I soon wished that I had put my better waterproof boots on. After about 40 minutes Sheila and Philipa turned back; apparently the wind was too much for people who did not weigh very much. At this point of the walk the party was rather spaced apart. I was in the middle and was unable to communicate to the folks in the front so that the revised situation could be passed on. This is not ideal. I know that in parties this happens, but considering the conditions!! Five minutes later , Peter Fleming let me know that he was returning as he was feeling the effects of a recent illness. Having ascertained that he was ok to do so I continued on, with Don, the others being well on.

There was no apparent track to the mine. so it was a matter of contouring around across rough boggy ground to the site, and thankful we were for the meagre shelter of the mine hut, which does not seem to changed much from the time of Richard Hewer's photograph. Having warmed ourselves by the 'fire' we set off across to the mine entrance, which was not far, and paid our respects to

it. Roger and Tony went in while Mike, Don and I waited outside. The level being duly inspected, the underground team ascended the hillside to the next level up while the rest of us waited in the 'hut'.




When Tony and Roger returned it was decided that enough was enough, and call it a day. There are other sites of interest in the area but this day was not the day to look at them. We returned to Mungrisdale by 1.00pm, where Philipa came out to meet us. The local hostelry seemed a good place to have a visit reappraisal. The intention originally was to have gone to Threlkeld where John and Philipa had kindly offered to make arrangements for access to the site. In the event, every one was too soggy to contemplate going anywhere else. The site plan comes from R.Hewer's article in NMRS Memoir 1984 Vol 125. Pages 26 – 30 and is, I think, the definitive description of the site and its geology. This publication is in the CATMHS Archive and I have a copy should anyone wish to consult it.

After the meet Tony Holland provided the following short description of the mine as he and Roger saw it:
The mine consists of two levels driven on a vein, the course of which can be clearly seen from across the valley. The lower was paced by Roger at 120ft. This was driven along a vein of sugary quartz in which we saw no trace of Galena. No stoping of note was evident. The second level, at some 100ft or so higher, is actually an open work on the vein and appears to be the main (or only) area of production. A lot of material has been removed from this area of the mine and the resulting stope is quite sizable, at about 20ft high. We saw no sign of Galena in the vein, but secondary *copper* mineralisation was evident in the roof of the working. A set of timbers spanning the stope could be the remains of a working platform but hardly seem high enough and are more likely to be stored stacked deads.

Mark Simpson.

**Middlecleugh Meet, 5th October.**

After meeting in the car park at Nenthead, it was agreed to transport everybody and everything in two vehicles up to the compressor house at the head of the Nent Valley. There was work to do to the stove in the mine shop to replace some of the glass in the fire doors and a plaque to fit to the mine tub, newly painted by Sheila Barker. The purpose of this visit was to continue with the exploration of the mine and try and find a sump that connected with Smallcleugh below. Jon Knowles, Chris Cowderey and John Ashby entered the Level after assisting Andrew Woollard with the removal of the tub from the entrance and removing its top from the base. They would start taking more photographs, some specially requested by Sheila Barker. Mike Mitchell, Clive Barrow and Peter Fleming arrived, Mike helped Don Borthwick and John Brown with the stove and the tub had the plaque fitted and drain holes drilled in the bottom of the tub.

*Completed mine tub. Photo J. Knowles.*

Things started to get busy when NPHT started to appear. They also had a meet here this day and quickly disappeared off into the mine. With the surface work completed, Andrew Woollard and John Brown followed to catch up with the rest of the CATMHS group. So far along the level, the old compressor pipe appears in the floor. They say it was a compressor pipe, I think it is some sort of refrigeration device! How else would that thigh deep water get so cold! We found J.K. C.C. and J.A. not too far from the Middlecleugh Second Sun Vein at a sump that takes water.

*John Ashby starting to descend a wet sump on the main level. Photo J. Knowles.*

J.A. was just about to descend and we joined in damming off the water with clay to allow him a more comfortable descent. Disappointment yet again! Despite the amount of water that this was taking, it was blocked at the bottom. We decided to take a look along the Middlecleugh Second Sun Vein and there you can see the compressor pipe running along the left hand wall. There were a series of collapses we crawled over until we could go no further. We then made our way on to the Junction with the Longcleugh Vein

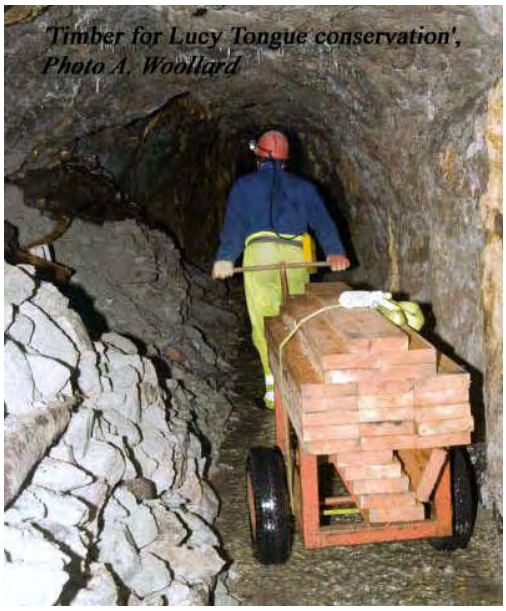
Various other sumps were investigated including one on the Longcleugh Vein which was considered to be too dangerous as it had a piece of timber across the top holding back some rather large blocks.

*Calcite flow near to the junction with the Longcleugh Vein . Photo J. Knowles.*

We met up with NPHT who by now were on their way out. 'Why are all these sumps blocked' I asked, and it is believed that Middlecleugh Level was driven ahead of the Smallcleugh workings below and sumps were driven down in order to provide ventilation. As the Smallcleugh workings progressed, sumps became redundant and were blocked off to maximise the ventilation of those nearest the areas that were being worked. Returning to day, we found that Sheila had the stove in the shop roaring away, but sadly, we had no time to enjoy it.

**Greenside project meets.**

Sunday 28th December 2008 saw a return to The Lucy Tongue Level to carry out the much needed replacement of decomposing lagging boards. Pete Blezard had, at an earlier date, collected one hundred green larch boards, cut to order from Wards Timber in Weardale. Out of these hundred boards, forty were taken by Pete and stored at 'The Rise' at Alston (thank you Sheila and Don) and are to be used to carry out similar work at Hudgillburn Mine and the remaining sixty were taken back with him to 'Ash Fell', Ravenstonedale, ready for delivery to Glenridding.




Assembled on time at the Youth Hostel car park were Colin and Andrew Woollard, Peter Sedgewicke and Pete Blezard complete with a load of boards. John Brown was running late after suddenly remembering whilst arriving at Scotch Corner that he had forgotten his wellies, resulting in an extra twenty miles on his journey after having to return home to collect them. The cargo of boards, by now frozen by the extreme low temperature, were taken up the Lucy Tongue Level in two loads and stored at the first bait station where the oil lamp hangs. Warren Allison arrived in time to give assistance. The remainder of the day was taken up with preparations for the task ahead and some of this included clearing debris from the floor. Further inspections took place to identify areas that would require attention some time in the future.

**Sunday 4th January 2009**

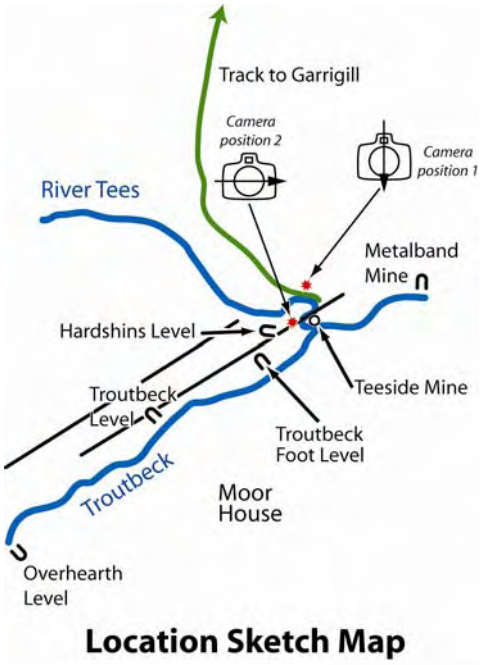
All of the above were present except P.B who had to take time off to go skiing. The mine was a welcome place to be on yet another bitterly cold day, which saw the start of the replacement of the decomposed boards. The target area was just beyond the 'Low Arches' and about thirty of the new boards were used. A pack wall also had to be taken down and relocated.

**Sunday 11th January**

What a contrast from last week, with the road around Ullswater flooded in parts and white cascades tumbling down off the fells. A debate took place as to whether the entrance would be flooded, but to our surprise it wasn't. Nearly all of the remaining thirty boards were used to replace the decomposed ones. With all of the boarding complete, some of the loose material that had been stacked in the early days of the re-opening was bagged up to improve its stability, which has also provided the double benefit of increasing the width of the level in that area.

John Brown


**Teeside Mine Sunday 7th September 2008**
Don Borthwick, ML, Peter Fleming, Ian Hebson, Tony Holland, Roger Ramsden, Martin Willie.



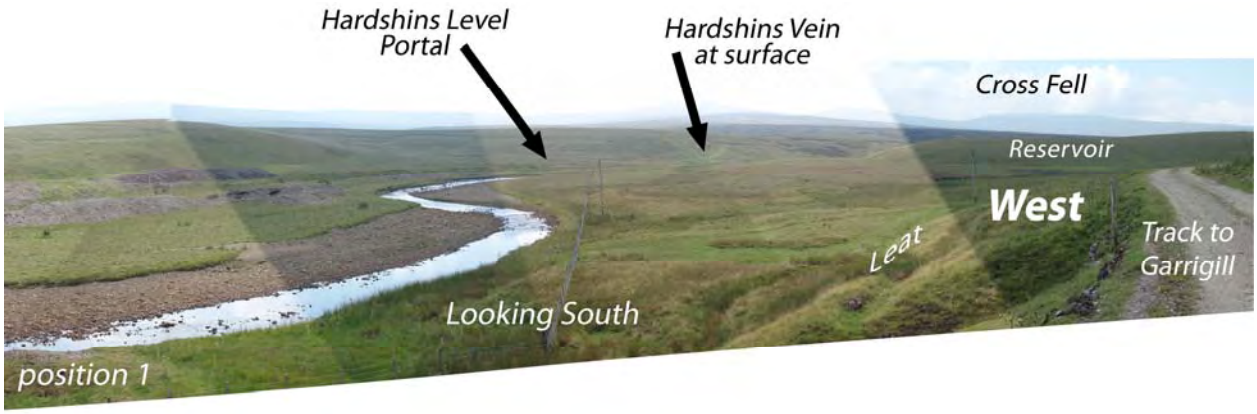
**Location Sketch Map**

What had been intended as a gentle potter around Teeside Mine site and some GPS surveying did not quite go as planned. Holidays and whatever, and particular the weather were to make for quite a different day. Saturday had seen some extremely heavy rain, unusually from the north; as the result of this Sheila Barker was on 'weather watch' for the day. It was dry up until the meeting time but some of the stops intended to point out salient features along the valley had to be severely curtailed due to heavy rain. We had permission to take a limited number of vehicles down the 3 miles of private road to the Tees bridge. Without this concession mapping and exploring in this area becomes really hard work.

Firstly we looked at the site on the south side of the river, puzzled over the arrangement of spoil tips and buildings, then followed the mine outflow, along the cut and cover to the portal. The level is a crosscut to the E-W running Hardshins Vein, it always seems to have a good make of water regardless of the time of year. This level was about 1 mile long, generally running parallel to Troutbeck then turning NW. Later in the afternoon we visited the portal to the NW running Troutbeck Level, which crossed Hardshins Vein. It is assumed that the two intersected as this would have been important for ventilation.

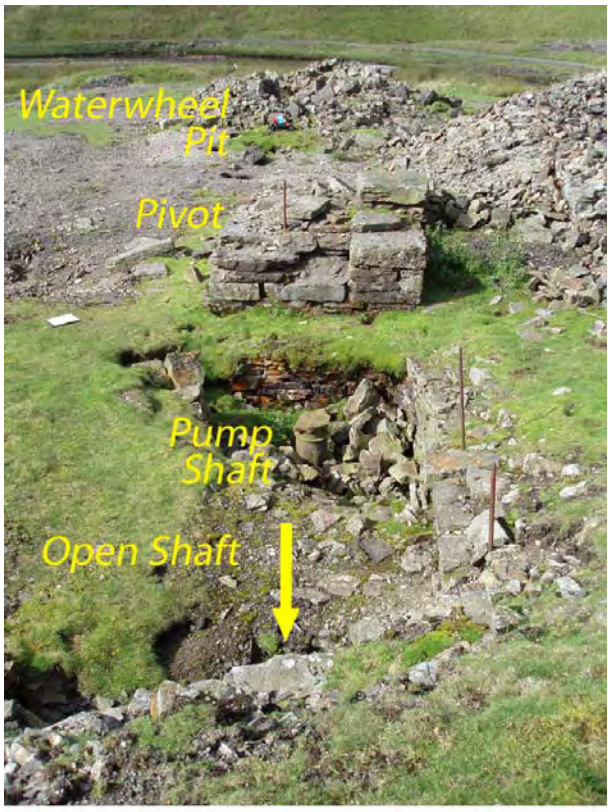
For those not familiar with the site, much of our day was on the Moor House Natural Nature Reserve, the average height is about 1800 ft (550m) (Deep Level at Coniston c200m, Carrock c330m, Hartside 1900 ft (580m)) the average rainfall is 2m. The reserve, much of which is covered by blanket bog is currently the site of many scientific experiments, a high proportion of them are involved with climate change research.

Though advertised on the meets list as Teeside mine (as it is probably the best known), Hardshins Mine is the most extensive. At the time the mines were worked the Tees was the Westmorland – Cumberland boundary: Hardshins in Westmorland and Teeside and Metalband in Cumberland. Hardshins vein was worked above the water table, Providence vein appears to




have only been economically mineralised below the water table, as appears to been the case at Metalband.

The relative flatness of the site would have posed engineering problems. Hardshins portal is just (1-2 m) above normal river level (the horizon of the Tynebottom Limestone) with spoil having to be hauled up-hill to the dressing and dumping areas. The productive ground at Teeside mine is below river level, the river directly crossing the ore body. The major problem must have been maintaining an adequate water supply to the water wheel used for pumping. Current best estimates suggest a maximum wheel diameter of only about 4m. Old maps show water being extracted from the Tees some 1 ½ kilometers upstream and also collected in 1 perhaps 2 reservoirs on the high ground to the north. Currently the biggest uncertainty is how water was routed over the final 200m. Two accounts appear in the Mining Journal of the purchase of a steam engine; there are the remains of engine beds at Providence shaft. Does anyone have any information on the likely design of small steam engines c1850-60? It was stated (MJ) that the fuel was 2/3 peat and that the peat was obtained within 100yds of the engine. There is evidence of peat cutting on the fell above Hardshins mine. As men lived and worked there during the winter, peat would also be required for their survival. Providence shaft is in the NNR (Westmorland) side of the river and has been made safe, the Teeside shaft stands open and care is needed if approach from the north side. A third un-named shaft is covered by railway sleeper is near the river edge, both have been plumbed to a depth of a t least 15m (the length of available cord). A variety of depths are recorded in the literature but are likely to be in excess of 30 fathoms. During a break in the rain, lunch was taken and Teeside site explored, buildings, wheel pit, bob and shaft and gin circle.




Teeside Mine
Shaft and Waterwheel

Later we moved downstream to Metalband Mine, looking at the crag level, possible waterwheel site and some small workings just off the track. Metalband has a level, the remains of a crusher and wheel pit, it was partly worked by a shaft, and a probable location was found next to what may have been a gin circle. Metalband would repay the effort of a GPS survey, a sunny day or two in 2009? The last company to work Teeside mine also worked Metalband and this may have been the profitable part of the venture.


After Metalband we returned to the Tees bridge then set off to explore mine sites along the Troutbeck. First is Troutbeck Foot Level, which tried the Providence or Troutbeck Vein above the water table. The mine was not viable, though the size of the now well grassed tip suggest a serious attempt to find payable ore. Carrying on upstream, Troutbeck Level was visited as with Hardshins the portal is at the horizon of the Tynebottom Limestone. Surprisingly the level is not marked on the 25,000 map; even Dunham gives an incorrect grid reference. A substantial amount of the shop still stands and the tips are proportionate to the 1km drive. We progressed upstream past some fenced areas and other trials, to what the 25,000 map describes as 'Pile of Stones', in fact the remains of a substantial Mine Shop at Overhearth Level driven by the London Lead Company. An unusual site, the level and shop are on the north side of the beck and the spoil tip on the south side, another example of the problems working in a flattish landscape.

We then returned to the vehicles, stopping briefly along the track to look at Calvert Mine (last visited by CAT in 1990), then back to our meeting place. Thanks to people for turning out in such bad weather, particular thanks to Ian Hebson for contributing his knowledge of the area.

Don Borthwick.

**Letter to Dr Descender.**

FAO Dr Descender

Dear Doctor,

As a recent newcomer to the sport of 'Gate opening' I am having a hard time appreciating the finer points of this apparently noble pastime. Having overheard the hushed conversation between 2 anonymous members, whose initials are PF and MM, regarding 'an alternative' route back to the A66, I was overcome with a powerful urge to find out what was going on. Following at a safe distance, I was immediately thrown into the deep end with some 20 or so gates to open, drive through, then close again, before reaching the safety of the A66. Personally speaking, I found getting soaked and windswept on the long heroic trek to Bannerdale Mines far more fulfilling. Am I missing something?

**Tilberthwaite Survey Meet. Sunday November 16th**

On a dry and sunny November morning a group of 12 CAT members and a dog met at the Tilberthwaite car park. The aim of the meet was to do a preliminary survey of the workings at the head of Tilberthwaite Ghyll.

Armed with 2 state of the art GPS's, a note book and tape, the group first surveyed the Benson Lode area. This is located just to the left of the footbridge crossing the head of the beck draining Dry Cove Bottom area, sandwiched between the footpath and the beck. There are traces of a wall leading towards the beck and some fine spoil here. It was proposed that the majority of the spoil from the mine, Benson's Lode and associated veins were tipped into the beck, hence the need for such a small working area. The working may possibly be Elizabethan, modified in Victorian times. 2 mortar stones, graffiti, the letter A and ? are etched on a stone on the retaining wall supporting the path above.

The group then split, one following the right side of the beck, looking upstream from the bridge, the other to the left. There are trials and a trench in what appears to be a geological fault on the left hand of the beck and traces of a boundary wall and fence. This boundary wall and fence can be followed to the open workings, spoil heaps and buildings associated with the main Tilberthwaite Mine. From there it crosses the edge of Dry Cove Bottom, over the shoulder of Hawk Rigg, along the side of Betsy Crag, the site of an open slate working and Lanty Slee's Cave and on to Greenburn. Following it makes for an interesting short walk from Tilberthwaite.

The group met at the main workings and had lunch in warm sunshine, better weather than most of summer had been. The main workings of the Tilberthwaite mine are complex and hard to interpret. Obviously there is the open working and associated spoil heaps, remains of a wheel pit, 2 buildings that have been altered and added to, and water leats. The later workings have covered most traces of 17thC. workings, although close to the eastern end of the open stope, under some spoil, is an older heap of spoil containing copper blue fines. Are these traces of an old dressing floor? If so where was the mill?

It might be easy to write a meet report with lots of maybe's, possibly's, probably's etc. and make it sound like a successful day out. It may be almost impossible, probably. The aim of the meet was to visit the area without " ....preconceived ideas of what we think we know about the area" and " ….to fit together some of the anomalies" I believe that some of these aims were achieved, but we are still not much wiser after the event and will have to return. Perhaps the GPS will reveal something.

Whatever the result of the survey and future surveys of the area, Tilberthwaite is a wonderful place to visit. If we knew the answers to everything (except the next lottery or Derby winner) life would be extremely dull. Thanks to all who attended the meet. When the warmer weather arrives I hope to see you again at Tilberthwaite.

Mark Scott.

**Homework for the Grimes Graves Meet**

In his Grimes Graves article in the last Newsletter (No. 93 pages 9 & 10) Brian Cubbon mentions that the CAT library has a copy of an EH report on the site which is dated 1980. Brian has kindly donated two further EH & RCHME survey reports dated 1996 and 2000, MG394 & MG395.

Anyone wanting to do some reading in preparation for the meet; could borrow one of the library copies. For those who are unable to visit the John Ruskin Museum themselves, I would be prepared on this occasion to retrieve a copy (visits never more frequent than 1 per month) and post it to them. This is not a standard service offered by the Archivist. If another member were to request the item the maximum loan period would be 4 weeks, and the item would have to be returned or forwarded promptly. The borrower would also be expected to pay postal charges.

Don Borthwick.

**Eskdale Iron Mines, August 24th 2008**


Locomotive, Eskdale & Ravenglass Railway. Photo by Matheson

The meet commenced at the Ratty station in Ravenglass where the meet leader was joined by Peter Fleming, Alan Westall and Tony Holland. The idea was to join up two areas of mining interest in the valley by making use of the narrow gauge railway where possible. In previous years we had covered Gill Force and Gate Crag mines on the south side as well as Christ Cliff and Nab Gill mine at Boot and today's aim was to visit lesser-known workings that still offer some potential for underground exploration. The first leg of the journey took us to Beckfoot station at the start of the Blea Tarn track, a convenient starting point for exploring the workings of Blea Tarn mine (also known as Beckfoot mine) which consist of a series of five or more levels on a vein running up the hillside. The haematite lode here was worked by Whitehaven Iron Mines Ltd for a short time in about 1871 but the yield was disappointing amounting to little more than a single pocket of workable ore between the adit and No 1 level. Three of the party inspected No 1 level as far as the understoping and Tony found the entrance to the connecting adit some 10m below.

Soon we were joined by Angela who had driven to Beckfoot after a yoga session and we then continued up the track to look at the only other level that is still open. This is marked as No 3 level on Richard Hewer's plan of the mine. The portal is in a cutting just above the track about 150m up the fellside and inside we discovered flange rails in place and a short section of L-shaped rail lying near one of the two entrances. At Knockmurton mine a bit further north there is part of an ore wagon with narrow disc-wheels showing that plate rails were in use in that mine at some period.

After a leisurely lunch against a panoramic backdrop we made our way across a kilometre of boggy ground to Ban Garth mine where the most notable feature is a large depression several metres deep not far from the Mitredale Forest boundary. This mine was first worked by the Lindow brothers of Cleator Moor in the 1850's when they raised a few thousand tons of haematite and drove a shallow level into the ore body (now blocked). In 1860 Joseph Fearon of Whitehaven took up the lease driving a deeper level and raising about 1000 tons of ore in three years. Much of the productive ground was worked away from below and the "quarry" as it appears today is probably the combined result of surface working and subsidence. Fighting our way through head-high bracken we located the shallow level (now blocked) and below this the ruined smithy. Nearby is the top of the incline that was installed for transporting ore down to Fisherground and after a bit of searching in we managed to locate the portal to Fearon's level

hidden deep in the undergrowth. Twenty years ago this level was open to 300ft and is still accessible but very wet. No-one volunteered to take the plunge on this occasion but the level was marked up for a future visit.

A well-engineered but little-used miner's track then led us from the smithy down to the station at Eskdale Green where we caught the next train down the valley as far as Miteside. This incurred a few fraught moments while the train, already late and bursting at the seams with holiday makers from Dalegarth bound for Ravenglass, was held up by the station attendant while he wrote out a special ticket for Angela with the exact fare to Miteside halt. It can't happen often and it probably made his day!

That sorted, we were soon making our way along forest tracks to search for the lower levels of Brankenwalls Gill mine that is situated on the NE slopes of Muncaster Fell. Little seems to be known about the history of this mine though the Pennington records refer to driving a level on an ore vein in Muncaster Castle deer park in 1760 and there is mention of a vein of ore at Brankenwalls Gill in 1847. The 19$^{th}$ century workings are on two parallel N-S veins that converge higher up the fell. The lower workings which are in deep cuttings are near the track but easy to miss. The easterly cutting has an open level at the back that is reported to continue inbye for a few feet only and this appeared to be the case on inspection. There is almost certainly a level at the back of the other cutting where water drains out, though no sign of one now. We then scrambled steeply up through the trees to an upper track to find a third level, now run-in, but didn't manage to spot any of the charcoal burner's platforms of which there are several in this vicinity. Continuing through the forest on this upper track you reach an area of recent tree felling where the going gets difficult. Just below the boundary wall there are two further levels but a degree of determination is needed to get to them now. We checked that they are still open but as they were both standing in deep water there was little enthusiasm on this occasion to inspect them further. Another mental note for the future perhaps. I have been told by Albyn Austin that the easterly one (the lower of the two) extends for 200ft to a wall of deads with a side passage to the W that intersects a parallel vein at about 150ft. At that point the level turns to the S. The westerly one is said to extend for 150ft. There is a trench above the boundary wall with a possible shallow trial behind impenetrable gorse bushes. All evidence suggests that little if any workable ore was discovered in these workings.

From here we took the most direct route out of the forest by climbing the boundary wall which would have given us the opportunity to visit to Muncaster Tarn where there are further iron workings. But a certain member of the party (who will be nameless) took the unilateral decision to head for Ravenglass, tired of travelling "west all" day across difficult ground, and undecided whether for the experience he should "congratulate or clobber" the meet leader! So to avoid the road walk we made our way through the Muncaster grounds back to the cars and of course the Ratty Arms.

Dave Bridge.

**Dalehead Mines Meet, June 2008.**

The day was as fine as you could wish and I was looking forward to an interesting meet. The Littletown Bridge car park is well known for filling up early on Sundays so I arrived about 9.45 and waited to see who would turn up; several members had phoned to say they were coming. The people who arrived were Peter Fleming, Peter Blezard, Ann and Ken Danson, Sophie (the dog), Phil Meredith and Deirdre, Tony Holland and Roger Ramsden, and finally and not least Alan Westall. I explained the aims and objectives of the meet, and as I knew all the people assembled had no doubts about their capabilities.

The itinerary was first Goldscope, then to follow the mine leat up to the dam and thence follow the valley round to Hindscarth. After that it was on to Dalehead and round to Dalehead Mine and look at the mines in the southern Newlands valley on the way back to the cars. Also on this occasion I brought along the CATMHS GPS with pole to log any interesting features that we would come across.

The route to Goldscope Mine took us through Low Snab Farm where it was noticed that cream teas could be purchased, I thought nothing of it at the time. The site of the bottom level was inspected and then up by the old water course to the main entrance. Those with the gear went underground whilst I did some GPS logging of adjacent features. After that it was up by the pan holes and over the ridge to the open works on the north side of Scarth End. It was here that I was starting to realise that GPS detail poles on steep terrain are not are not easy to use. The workings (including the coffin level, wheel pit and other features) were inspected before the party set off down the leat to the mine dam.

The reservoir was reached at lunch time and so being a pleasant spot it was so declared.. After that it was up the valley to Hindscarth, a bit of a pull with Pete Blezard in his usual position of being out front. The so-called dressing floor on Hindscarth was looked at with many doubts being cast on its provenance and where the ore came from that might have been

processed there. The source appeared to be on the surface of the east facing slopes below the ‘dressing floor’.

On and up over Dalehead with splendid views of Honister Crag slate workings to the South. Then round down to Dalehead Head Copper mine, a very interesting site with a dressing floor and mine building. The bottom level is still open and several members went in.

When all had satisfied themselves it was down the old mine track with the intention of looking at Longwork. It was here that I found that the party had shrunk somewhat with all but two members, Tony Holland and Roger Ramsden, disappearing into the distance. (I learnt later that the lure of cream teas had become irresistible). I thought my thoughts and went on to look at what I had come to do. Longwork is a very interesting set of workings stretching E – W over about 0.25 of a mile where copper ore was extracted from a vein that outcropped in the valley bottom. The east end has some small dressing floors and a mortar stone, by a stream. It really is a classic 16 cent site.

By this time it was getting on about 4.00, that GPS battery was dead, and it was time to be getting back. We looked in at Castlenook Mine and several other workings on the valley side. The car park was reached at about 5.00 o/c.

There are many other workings in the area that would require more time and energy to reach. Maybe another time. Good day interesting valley.

I learnt several things about taking the GPS and pole around. The pole is a fair weight and not really amenable for long walks or for safe logging on steep ground. It is ideal for detailing small sites. What was needed was a separate antennae on a pole in one’s rucksac with the GPS in a bag attached to one’s person. That way one could proceed safely and log at the same time.

The other thing was that losing satellite lock was common due to the terrain, a separate antennae would reduce this, plus readings would be more accurate. As has been said above, the battery was flat by about mid afternoon, so a spare battery was also needed. These points were put to the next committee meeting and permission was given for a survey grade antennae and spare battery to be purchased. The system was tried out on a very wet day at Seathwaite Reservoir and found to very satisfactory.

Mark Simpson. July 2008.

**No Architects Beyond This Point, or, 'Do We Have Enough Rope?'**

'Are you out tomorrow?' I asked Roger as we arrived back at our cars parked near the Coppermines youth hostel. We had spent the day showing the ISSA group (International Society for Speleological Art) the workings at Paddy End. 'Yes', he said 'why not back here?' We had recently discussed a descent he and Gerry Goldsborough had attempted, which started at an open cleft behind Simons Nick, but which had been thwarted by a lack of rope. And so we agreed to meet the following morning to make another attempt.

Fortunately the weather smiled on us as we toiled our way up the track laden down with rope and rigging gear. On reaching the hill top to the rear of Simons Nick, we wandered to and fro looking for the somewhat elusive opening. When we did eventually find it we were very surprised to see that it was unfenced. This presented a slight problem for us in that the nearest fence was quite a distance away. As we had only a 100mtr rope, we could not really afford to lose any of it with an overly long belay. And so we set off on a mission to find an unused fence post. These things are everywhere when they are not needed, but I think it is probably one of nature's laws that their scarcity increases in proportion to their necessity. After fruitlessly combing the area above Simons Nick we proceeded down to the Crater, Levers Water Mine portal and even underground as far as the Arête Chamber, but all to no avail. There were just no suitable unused stemples or fence posts to be seen. Wondering what to do next, a solitary post unadorned with fencing wire was spotted hiding itself half buried in a small spoil heap. We soon had it liberated and carried up onto the hill top where we plonked it over the cleft as our belay. After all this effort it was high time for a break so out came the sandwiches and drinks.

After rigging the rope to the post, backed up to a rocky outcrop, I was volunteered to go first. The landing was about 20ft down onto a false floor strewn with rocks and garbage. There was a solitary hanger in place which was loose enough to swivel and too rusty to tighten. Hmmmmm. Ok so no nice big stainless anchors on this trip. I spotted a single spit type anchor of unknown vintage which looked 'reasonable' and screwed in a petzl twist hanger, fastened the rope to it and shook my head in disbelief that I was actually going to descend off this thing. I was far from happy about the descent but I was able to brace myself across the stope for most of the way down thereby lessening the weight on the anchor. The landing, after the 25mtr or so descent was onto what remained of a false floor. How this 'floor' supported any weight at all is a mystery as there appeared to as many holes in it as there was rock and timber. I called rope free and then chortled to myself as a barrage of curses and abuse echoed

down the stope, as ‘someone’ had apparently not left enough rope before the re·belay to allow easy detachment of a descender. Whilst Roger descended the second pitch I looked for suitable anchors or belay point for the third pitch. A very nicely written sign informed me that ‘No Architects Are Allowed Beyond This Point’. Not being architecturally inclined, I felt it safe to proceed to where the floor terminated and just within reach there was another very old looking, solitary, rusty hanger. I looked in vain for another as a backup and gave up when Roger informed me that ‘that is how they used to do it in the old days’. A very old and soggy stemple seemed to provide the only back up to be had so I commenced the rigging, once again not really believing that I was actually intending to descend off this less than satisfactory set up. The tension in the air was growing as the point of no return loomed. Matters were not improved when Roger informed me that he had felt the false floor beneath our feet vibrate and move when he dropped his tackle bag down onto it.


I fed the rope through my descender and despite all of my instincts screaming at me not to; I gingerly lowered my weight onto the anchor. The little voice in my head kept whispering about this not being in the best interests of self preservation. The louder voice about 10ft away egged me on ‘Well this is how me and Gerry did it!’ There was nothing for it but to set off down. I comforted myself with the thought that above me there were now 3 belay points on the 100mtr rope, and slowly started my descent. Looming out of the darkness below a timber platform appeared, spanning the (at this point) narrow stope. A deviation here allowed the rope to avoid the platforms edge. I continued on down deeper and deeper. I could see no sign of a floor and looking to the right and left I could see no ends of the stope which was also getting wider as I descended. Eventually the hade of the stope reversed so that the hanging wall became the footwall. Here another deviation prevented rope rub. The stope was assuming hugely impressive proportions and was both awesome and intimidating. The rope bag suspended below me was becoming lighter and I pulled out the remaining 20ft or so of rope and let it drop. There was still no sign of a floor and clearly our attempt had failed due to a shortage of rope. This was doubly disappointing because I had hoped to land in a familiar area which might have relieved me of having to ascend back up and spending any more time on that single rusty hanger than was necessary. I paused for a short time before commencing the long climb back up the rope to admire the size of the stope and wonder at the effort that had been expended to form it. In all four directions; up, down, right, left there was nothing but empty space. Rogers’s theory that the descent must reach Middle Level was looking very likely in view the depth I descended to that point. And then I saw in the distance what looked like a rope. This was quite mysterious and I wondered whose rope it could be and what it was doing there!

I slowly climbed back up the false floor to where Roger was visibly disappointed at our failure to bottom the place. We discussed what to do about it and agreed that we needed an extra rope and also we needed to place new anchors on the route, the current ones being totally inadequate. We agreed to come back on the Wednesday to do this work.

Rather than walk back down the mountain track, we decided to take the scenic route down the traditional tourist through trip which was still rigged from the previous days meet. At the top of the second pitch, looking out across the stope I was sure that I could see a rope hanging down! I shouted to Roger and we realised that it was our 100mtr rope from earlier in the day that we had left in place. We now knew what the rope was that I had seen; the second pitch of the through trip. And also we knew exactly where landing would be; Middle Level.

Later that evening I looked through the old CATMHS newsletters to see if there was a reference the route we had attempted. Sure enough, I found one penned by Dave Bridge in newsletter number 41 entitled ‘A New Through Route From Simons Nick’ and the article described exactly the terrain we had seen earlier in the day.

The team reassembled as planned on Wednesday morning with an extra rope for another attempt to bottom the ‘Deep Stope’. Our fence post was still in place across the open cleft and we soon had the shorter of our two ropes rigged and I descended the twenty or feet to the first false floor. The first task of the day was to insert a nice new shiny anchor bolt, to which I fastened an even shinier stainless hanger & maillon. Things were looking up. By gum, this is the way to do it, I thought. None of this belaying to rotten stemples and rusty anchors today! I descended down the second pitch to land on the second false floor and fixed a traverse line to the end of the floor where the big descent was to begin. Two more fresh anchors were installed and our 100mtr rope attached. I began to descend the vast stope passing the two deviations before pausing to see if I could see any interesting features in the far extremities with aid of my big torch. I continued on down and eventually I landed on Middle Level. I called rope free for Roger to begin his descent. The weight of a muddy 100mtr rope restricted the passage of the rope through our descenders and in future, if this descent is repeated, I think a re·belay or two would be a good idea and would certainly make the descent a lot easier.

The day so far had gone very well indeed, we had accomplished our main goal without any mishaps and we still had plenty of time left. I proposed that we should ascend up to Top Level, remove the connecting rope and use it to descend and explore the Windy Stope. This was agreed upon but as we made our way along Top Level passage no. T5, we began to wonder what lay beneath the false floor we were on. A large hole in the floor revealed a stope beneath us, but a search revealed no old anchors. Curious, we decided that while we had the drill, it was a good opportunity to put in an anchor and drop down for a look. The stope narrowed towards the rubble strewn bottom some 20mtr below. There was no way on at the bottom, but as there was no standing water, we decided to try a little dig to see if we could open up a way downwards. After 20 minutes we decided the best thing was to leave this idea and concentrate on Windy Stope.

When we arrived at the Lake Stope, I was very surprised to see no water. This was really good news, because I had wanted to descend this stope for quite some time, especially as recently I thought I had seen in the distance a rope hanging down the stope. I had mentioned this to a number of members, but no one seemed to be able to say just where such a rope could be coming down from. Out came the drill and two shiny new anchors were soon inserted. I was first down to the muddy bottom quickly followed by Roger. We made our way along the stope bottom which began to slope upwards. Sure enough right before us was a red SRT rope disappearing up into the stope above us. A partially buried rope bag held the remainder of the rope and nearby we uncovered a rusty karabiner attached to a sling. We climbed up the ever steepening slope of the stope bottom until we could go no further and it became evident that further climbing was pointless, there being no obvious way on above us. We retreated back to the foot of the red rope. Now then. Its always something of a dilemma when confronted with situation like this. Who knows how old the rope is? How rusty the hangers? Is it some old CAT rope tied to just a rotten stemple? Has a falling rock sliced the rope higher up out of sight? On the other hand, there is just no way that it is possible to ignore such a rope and walk away.

I clipped on my ascenders and warily started to climb up the footwall of the Lake Stope. At about 20mtrs up on the right hand side there appeared a beautiful cascade of green and white in which lay a section of calcified ladder. Up above, I could see the top of the rope which was belayed as a Y hang. On reaching the top at about 40mtr from the bottom, I climbed over an edge and onto a short section of false floor, quickly followed by Roger. A further rope climbed up maybe 10ft or so to another more substantial section of false floor, but from below we could see that some of the main supporting timbers had split in two. I climbed the second, shorter rope, but was disappointed to see that there was no way forward. The roof here was timbered over and curved down to meet the floor upon which I now stood. There were no gaps and everything looked undisturbed and solid. Feeling very puzzled, Roger and I carefully inspected the whole area looking for a clue to indicate where a way on might be found. If there was no way forward, it could only mean that whoever had installed the red SRT rope had done so from below. We estimated that we were a considerable height above the Top Level horizon. This would certainly have been major undertaking and would surely have been documented somewhere; however I was certain I had not heard of anyone attempting this. We had no other option other than to descend back down to the stope floor feeling flummoxed and perplexed.

By now time was getting on and we decided to give the Windy Stope a miss, opting instead for a quick wander along Top Level before collecting our gear and making our way out via the Arête Chamber. We revisited the open cleft behind Simons Nick for the second time that day, where I was volunteered to retrieve the shorter of the two ropes we had installed. We opted to leave the 100mtr in place for a while, both to facilitate further descents for anyone who wants to do this route in the near future and to be readily available for some future explorations.

Words: Tony Holland
Photos: Roger Ramsden

**Gold Dredge at Gillespies Beach. Near Fox Glacier. West Coast. South Island. New Zealand.**
A few weeks ago we went for a long week end trip with Eileen's cousin, from Winnipeg, down on to South Island, NZ. Having arrived in Christchurch, we picked up a 4X4 and set off for the 'Wet Coast', sorry, I mean West Coast!

Once over the hills, it poured down, however upon arriving at Fox Glacier (North West of Mount Cook) the weather improved. It was here that I suggested a minor detour down to the beach, what I didn't say, it was 13 kilometres down a gravel road, crossing fords and skirting round cliffs. I'm not stupid! After ten minutes, there was much clucking, like a couple of old hens. Still half an hour later we arrived on the edge of a lovely sandy beach, this appeared to pacify them.

A DoC sign indicated that the gold dredge was a 15 minute walk through the bush. I was off before they could say, “Be back in five minutes”. I ran along a narrow track through the bush between flax bushes, thorny things and hostile mosquitoes. At the time I didn't realise that I was actually running on top of the dredge tailings now covered with beach sand and bush. Suddenly I shot down a banking straight into the edge of a small deep brown lagoon, of course the old legs changed colour again, brown up to the knees.


Overall view of lagoon dredge

Ahead of me lay a tangled mass of machinery half buried in the lagoon. I followed a narrow track tightly through the mangrove bushes until I found part of the rotary screen, a number of buckets that were held in place near the top of the gantry and were upside down on the other side and conveyor belt. On the other side lay a tangled mass of cogs and gearing as well as plating and more buckets. The wooden ribs of the dredge protruded through the water. A substantial steel frame prevented the encroaching sand and soil from totally filling in the lagoon. There were several six foot in diameter cogs and what appeared to be the buckets of a Pelton wheel. The dredge had been a large lumbering ramshackle affair, the main haulage cables running from the front and over the top of the structure.


Buckets, links, conveyor frame

After the dredge stopped working, several of the 'locals' raided the timber and constructed Baches in the bush, many are still there. It was quite an interesting area, I think some restoration work and recovery would be worthwhile.

The dredge was built at the south end of the beach using local timber, large sections were axed to shape and smaller sizes sawn. The machinery was brought down the Cook River flats and around Otorokua Point on horse drawn timber wagons. Power for the buckets, pumps and winches came from a nearby hydro electric station. The dredge worked from 1932 until 1945. (Source Dept of Conservation notice board at the site).

Deposits of Magnetite and gold were probably concentrated during periods of coastal advance, having been brought down from moraines and rivers, and were buried under ridges of sand and gravel; these were then worked by the dredges. Heavy mineral concentration still continues along the beach areas of the west coast. Several inches of black sand could contain up to several ounces of gold per ton. (Source Transactions and Proceedings of the Royal Society of New Zealand Vol. 72 1942-43)

Further exploration of the area during and after the war revealed that Uranium concentrates were found in the Taramakau River and on Gillespie Beach. Secret exploration of the South Island and at Gillespie Beach reveal radioactive deposits. (Source Encyclopedia of New Zealand. Prospecting for Uranium) Originally the mineral occurred in the sandstone type deposits in the Lower Buller Gorge and Pororau River areas. (Source Crown Minerals, Metallic Mineral Occurences. Economic Development)
It was stated in 1971 that Thorite, assayed at 76.6%, Thorite Oxide and Uranthorite 62.6% $ThO_2$, could be recovered as a by-product of Ilemite and Gold production. (Source. Caffyn 1971 Gillespie Beach Mineral and Sand Deposits. Carpentaria. Exploration Technical Report No 253. Mineral Commodity Report 17).

The results showed promise for the recovery of radioactive minerals and gold, however all was scuppered when New Zealand instigated the Nuclear Free Legislation.


*Photo: Department of Conservation Information board*

I returned to the car, a happy man, only to find that Eileen had discovered that there were several mine workings further down the beach. She glared at me and I knew there was no chance of a visit – perhaps next time!

R.E.Hewer

**Zloty Stok (Golden Mountain Slope) Gold Mine.**
Whilst going into the mountains in southwest Poland with my cousin and his family in October 2008, I could not pass up the opportunity to visit the Złoty Stok mine, especially since Mike Moore had given me a free copy of a book about it.

**History**
The Złoty Stok (pronounced Zwoty) gold mine is located in the south west of Poland on the border with the Czech Republic and lies in the Sudetes mountain range, locally know as the Golden Mountains. Mining for gold on the site probably started around the 7th century, though the first documented evidence is from much later on, the 13th century. The mine is Poland's oldest gold mine and was not only worked for gold but arsenic as well which started in the 18th century.

Being a gold mine and in a region of Eastern Europe that was subject to frequent turmoil, it has had a very colourful history in ownership and where its gold reached. During the Hussite wars at the beginning of the 15th century the mine and much of its holdings were destroyed and in the mid 15th century the mine ended up being given to the Czech's as a fief. After the wars, now approaching the end of the 15th century Prince Henryk Starszy Podiebradowicz restarted the mining enterprise and shortly afterwards the mining rights were given to the town of Złoty Stok.

The 16th century saw much expansion in the mining and the there was a period of prosperity for the mine and town. The fortunes of the mine at this period were reaching further a field and this drew in foreign investors, mostly from Germany who set up smelting companies. The investment did not take long to fruit and shortly the mine was producing around 150kg of gold a year. This was 8% of all European gold production. However during these times the working conditions were very difficult and only primitive tools were used for extraction, along with heating and quenching of the hard rock. This was a very dangerous operation as the heating also released (unknown then) arsenic. The life span of miners was very short. One of the German families, which had invested in the mines, was know to support the Spanish Queen and it is possible that gold from the mines was used to finance the voyage of Columbus across the Atlantic Ocean.

At the start of the 17th century in 1612 gunpowder was introduced, however this probably was the only good thing to happen. A series of accidents occurred at the mine, coupled with disease, and the 30 Years War decimated the mining and town. After the war in the mid 17th century a chemist form Vienna, Hans Scharffenberg turned the recent misfortunes around. He realised the potential for extracting arsenic and worked on methods for doing this. His work was carried on by his sons and in the early 18th century the mine started to produce arsenic as well as gold. The price for arsenic at this time reached 3 times that of gold. The Scharffenberg's concentrated too much on the chemistry and failed to exploit further reserves. Their enterprise came to an end in 1738. During the Prussian – Austrian war mining stopped again and was started once more in 1770. A big breakthrough came in the mid 19th century when a very effective method of extracting gold was discovered, based on using chlorine which increased gold production. In 1883 another German, Wilhelm Guttler bought up all the mining rights and kept ownership until the end of the Second World War. During this period many new technologies were introduced, new rail lines for transportation, steam engines for water pumping and ventilation, and of course compressed air rock drilling. The production of arsenic continued to increase and reached its peak in the early 20th century, when almost 2400 tonnes were produced each year. This accounted for 20% of the total world production.

After the Second World War the mine had suffered no damage and ownership was transferred to the Polish government. Remaining German miners were replaced with Polish ones from the coal mines. The production of gold and arsenic continued and even exploration for new deposits was started. In 1956 the Poznan Uprising brought changes to Poland and the government deemed the mine unprofitable, and in 1962 the mine was closed. This was surprising as gold production between

1946 and 1960 amounted to 20-30kg a year, and fell to 7kg an year in 1961. No official reasons can be found for this.

Złoty Stok during its life produced a total of 16 tonnes of pure gold. The mine complex had grown to such proportions that there was over 300km passages on 21 levels. The metallurgical methods used in Złoty Stok for the production of arsenic and gold became a model for the whole smelting industry in Europe. Today Złoty Stok is a show mine with a number of tourist routes and for the more adventurous, extreme mine visits into the areas that look more like the mines we are used to exploring in the UK. Currently only around 30km of level has been explored as most of the stopes and lower levels are now flooded.

**The Tourist Route**

The trip was in two parts. Firstly we went into the Gertruda Level, where we were given details on the history of the mine, what mining techniques were used, and how the ores of gold and arsenic were separated. The level was lined with bricks and had a concrete slab roof. In places the bare rock could be seen. As we went along the level various displays could be seen, plans of the mine complex, old photographs of miners working, ore trucks and tools. In one place an old ceramic gold smelter, with moulds and crucibles was also on display. In one chamber a mock up of a gold strong room was on display, though I'm not sure such a thing would have existed. Finally we climbed some stairs to enter a higher level. This was all in solid rock and the mine took on a 'proper' feel. A walk along a long passage brought us to the exit adit, which was different to the entrance one.

The second part of the trip after exiting the Gertruda adit was a look at the Black Upper adit. We took a short walk up the hillside following the 'Golden' stream, a small river valley. This took us to a large quarry and the adit. The original entrance was via a shaft, now a newly dug adit took us into the level. Just inside the entrance there was a bat roost, they seemed to favour the environment of the tourist route than the deeper quieter places in the mine and are quite happy to tolerate frequent passers by. In this level the emphasis was on the structure of the mine. Most of it was in solid rock, timbered sections or in steel arching. Part of the trip took us down a shaft with a steel staircase. Some 23m from the top we entered a small passage that brought us to an underground waterfall, a few more metres down and we were at the bottom of the shaft in the Black Lower level. We proceeded along more passage way finally reaching a train. All

aboard and a couple of minutes of riding took us out of the Black Lower adit.

As far as show mines go I thought the trip was very good and the parts of the mine shown to us interesting. With such enterprises it is always tricky to get the general public interested and this reflected in how our guide conducted himself. Key information was dished out coupled with lots of jokes and stories to keep the non mine explorers entertained. At one point when he locked the entrance gate to the Black Upper adit, he pulled a gun on us, asking for money to let us out again. Not sure how that would go down in the UK? A refreshing side to the way it was all conducted was that there wasn't an obsession with health and safety, I told the guide I was keen on taking pictures and that I may lag behind, no problem was the response, just don't get lost as I'm not coming to get you out. The tour lasted 1½ hours, far too short for me.

I have done a history and trip report on it which is published on my website along with many photographs. That's not the end of it. The show mine also runs 'Zwiedzanie Ekstremalne', Extreme Visits, two trips 3 hours each, one 1km long and the other 1.5km. You need to bring all your own gear. Another trip is definitely in order.

Mike Hrybyk.

**Health and Safety at Work**

Few of us can fail to be aware of the impact of H & S upon all of our activities and many consider that this impact is for the worse. However when you read the report below (verbatim from the company minutes of a Corris quarry) it is clear why things have changed in the way they have.

*Recent Accident - Powder Burns.*

*The employee who suffered severe burning was interviewed 22nd April, 1965 and stated that he descended a ladder with one hand, holding a container of black powder in the other which he dropped. He was smoking at the time and the surprise caused him to lose the cigarette from his mouth, this fell and ignited the spilled gunpowder, causing the accident.*

*He stated that he had learned the lesson, and fully appreciated that his action could have had more serious consequence to himself and fellow workers.*

If this were to occur today the company would face massive fines, seriously adverse publicity and the directors and manager might well be held personally liable. The “employee” would almost certainly receive substantial compensation. In 1965 it was only the shortage of those willing to work underground in the quarries which prevented his summary dismissal; almost certainly approved of by his work mates who were well aware you had to be very careful when smoking and carrying explosives!

Moses Kellow

# CUMBRIA AMENITY TRUST MINING HISTORY SOCIETY

Committee Meeting held on the Monday 22nd September 2008 at the BMSC Hut at Coniston, starting at 2.30pm.

**Agenda.**

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

**Present:** M. Simpson (MS), S. Barker (SB), I. Matheson (IM), D. Borthwick (DB), D. Bridge (DGB), J. Brown (JB), P. Fleming (PF), T. Holland (TH), M. Scott (MSc)**,** M. Mitchell (MM) & A. Wilson (AW).
The meeting commenced at 2.30 pm.11 committee members attended.

**1 Apologies for absence** from: J. Aird (JA).

**2 Minutes of the last meeting**

The minutes of the committee meeting held on Monday 28th July had been previously circulated to members**.** The Chairman had taken the minutes in the absence of the Secretary. It was **PROPOSED** by MM and **SECONDED** by PF that the minutes be signed by the Membership Secretary as a true and correct record of the proceedings. This was carried unanimously.

**3 Matters arising**

3.1 Item 3.1 SB had contacted Carlisle Record Office regarding the J. Crompton Collection and was awaiting the conservator's report.
3.2 Item 4.3 Florence Mine artefacts - Anton Thomas and MSc would contact Florence Mine.
3.3 Item 15.2 Carrock Fell Mine – We are waiting for a date to be arranged for the meeting with the major parties to discuss type of lock and a management plan acceptable to all. TH reported that the portal timbers were collapsing.
3.4 Silver Gill – C. Woollard had prepared the Scheduled Monument Consent application and SB had sent it to LDNPA. PF had spoken to Prof. Meredith who thought the site was suitable for a GPR investigation, arrangements were ongoing
3.5 Item 11 IM Arrangements for the visit by the International Speleological Art Group were in hand.
3.6 Item 10 DGB had provided colour slides and information to DB for CAT archive.
3.7 Item 11 DGB had been in contact with Gharib Hossein who had interesting results from the tests and he intends to return to do more tests this winter.
3.8 Item15.3 SB had written a letter of support to the Ghyll Scaur Quarry project and had received an answer from Mr Procter, who would like us to look at some of the old mine workings. DGB will arrange a visit to the quarry, Millom Park and The Hill at Millom.

**4 Secretary's Report**

Received since last meeting:

Letter from Duddon Valley History Society asking for info on Dunnerdale Iron mines – passed to DGB, who answered their questions.

**5 Treasurer's Report**

JA had sent his apologies as he was on holiday.

IM reported on a meeting of the Newland Furnace Trust (NFT), who are raising funds for conservation of the furnace stack. They envisage a cash flow problem during this work and ask if CATMHS could provide a bridging loan (as we have on two other occasions) whilst the work is being carried out. IM **PROPOSED** and MM **SECONDED"** that CATMHS provide a bridging loan to NFT on the same conditions as the last occasion", all were in favour. Recently they held a successful Heritage Open Day, when about 100 people visited.

**6 Membership Secretary & Newsletter Editor's Reports**

IM reported the next NL will go out at beginning of November and would include AGM papers and the next meets list. It was decided to revert to the original AGM date (2nd Saturday in December). The date had been altered this year to avoid the annual car rally in Coniston (a very noisy affair, where we could not hear our 'own noise'). After we had arranged everything on the new date, the rally organisers did the same, hence the change. The venue for the AGM also had to be changed.

**7 Meets Report**

The next meets list was drafted, SB would send it round to Meet leaders and then to J. Knowles.

We would hold a mapping meet at Tilberthwaite on 16th November, leader MSc.

**8 Publications**

I.M was in contact with Elizabeth Sewart who was very busy preparing Journal 6 for us. There are 220 pages to date and Elizabeth hopes it will be completed shortly. Contact has been made with the printer and 1,000 copies will be produced. The book will most likely be ready for Christmas. We are very grateful to Elizabeth for carrying on Dave's work. JB **PROPOSED** "a vote of thanks to Ian for his sterling work editing the journal" **SECONDED** by DB, all were in favour.

SB and IM had received requests for CAT leaflets, following the publication of an article about Tilberthwaite in the Cumbria Magazine.

**9 Library**

Copies of: 'Scarffe – The Great Laxey Mine', 'Western – The Coniston railway', and a CD of North Lancs. old OS maps had been purchased. Brian Cubbon had donated 40 short items relating to mining in the SW, this included his privately published book 'Notes on N. Devon Metal Mines'. Brian had also made a generous offer to donate a comprehensive set of books on SW mining. This offer was discussed, but because of restrictions in storage space and the necessity to maintain our focus on local extractive industries, we will have to restrict acquisitions to our main topics until more space is available. DB to discuss possibilities for increasing library storage space with Vicky Slowe. DGB provided details of CAT's acquisition of mine plans from BGS in Edinburgh. Borrowing of items by members was discussed; the strict reference only restriction will be relaxed, though some items must not be removed from the library. Non members will still not be able to borrow from the library and must be accompanied by a member when visiting the library.

**10 Microfiche and plans to be copied**

TH had got the Lambton plans printed. DGB could scan microfiche but they had to be printed commercially. It was decided it would be advantageous if we had all the Coniston Plans digitised. TH would investigate. PF reported he had 150 plans in his private collection and would provide a list.

**11 Coniston Mines & Quarries**

MM had taken photographs of recent stabilisation work done at Paddy End dressing floor after the flood damage. He would take them to the next Mines Forum meeting for discussion.

PF had obtained copies of documents regarding the Coniston Copper Mines from Maureen Fleming and a John Belton.

**12 GPS**

DB will send out MMCE instructions on CD to interested members. Mike Mitchell now has the laptop and GPS equipment.

**13 Mines Forum meeting**

The next Mines Forum meeting has been changed to 24th November at Brockhole.

**14 Any Other Business**

14.1 PF - a sale of mine plans had taken place, they had been bought by UK Mining Adventures of Rogerley Quarry.

14.2 E. Kingston had sent a leaflet "Discovering Industrial Sites in the Lake District, a history source for Key Stage 3 for the CAT archive

14.3 TH had a request from a member to discuss who should hold keys to Mandall's. To be discussed at next meeting.

14.4 MM thought we should have CAT cheques available when the Treasurer was away for any length of time.

**15 Date and Venue of next Meeting**

This to be held on Monday 17th November 2008, at the BMSC Hut Coniston at 6.30 pm.
Meet first a Mandall's Slate Office, to carry out maintenance work, at 1pm.

There being no further business the meeting closed at 9.00 pm.
SB 26/09/08

# CUMBRIA AMENITY TRUST MINING HISTORY SOCIETY

Committee Meeting held on the Monday 17th November 2008 at the BMSC Hut at Coniston, starting at 6.30pm.

**Agenda.**

1 Apologies for absence
2 Minutes of the last meeting
3 Matters arising
4 Secretary's Report
5 Treasurer's Report
6 Membership Sec. & Newsletter Reports
7 Meets
8 Publications
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10 Microfiche and plans to be copied
11 Coniston Coppermines & Quarries
12 GPS
13 Mines Forum meeting
14 Any other business
15 Date and venue next meeting

**Present:** J. Aird (JA), S. Barker (SB), I. Matheson (IM), D. Borthwick (DB), D. Bridge (DGB), J. Brown (JB), P. Fleming (PF), T. Holland (TH), M. Mitchell (MM), M. Scott (MSc)**,** & A. Wilson (AW).
The meeting commenced at 6.30 pm.11 committee members attended.

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

**2 Minutes of the last meeting**

The minutes of the committee meeting held on Monday 22nd September had been previously circulated to members**.** It was agreed that Mike Mitchell would act as Chairman in the absence of Mark Simpson. It was **PROPOSED** by PF and **SECONDED** by IM that the minutes be signed by the Chairman as a true and correct record of the proceedings. This was carried unanimously.

**3 Matters arising**

3.1 Item 3.1 J. Crompton Collection – SB had been contacted by Carlisle Record Office; the conservator's report had stated that the only document in urgent need of microfilm/ digitisation in the collection was DCro4/1. SB to contact J. Crompton.
3.2 Item 4.3 Florence Mine artefacts - Anton Thomas and MSc would contact Florence Mine.
3.3 Item 15.2 Carrock Fell Mine; no progress, to be discussed at the Mines Forum meeting.
3.4 Silver Gill – SB had sent in the SMC application but had not received a reply from LDNPA. Members attempts to photograph the shaft with an underwater camera had not been very successful, due to failure of the camera. It was decided it would still be worthwhile to continue with the project.
3.5 Item 11 TH reported the International Speleological Art Group had a successful visit, letters of thanks had been received.
3.6 Item 3.8. DGB had arranged a visit to Ghyll Scaur Quarry, Millom Park and The Hill at Millom. Date (possibly 1st April) still to be confirmed.
3.7 Item 14.3 Mandall's keys. It was decided that trustees only should hold keys, in the interest of security. Members must make arrangements with a trustee. With the exception of asking M. Fleming (who lives in Coniston) if she would hold a key, to keep an eye on the place.
3.8 MM had suggested that some CAT cheques should be made available when the Treasurer was away. All agreed.

**4 Secretary's Report**

Nothing received since last meeting, that is not covered by individual items.

**5 Treasurer's Report**

JA had circulated the balance sheet to committee members covering the period from 28th July to 17th November. Income was from: sale of rail, subscriptions, donations and publications. Expenditure on: newsletter, Ruskin Museum archive storage fee and various smaller items. JA wished the committee to approve his expenses of £99.9, **Proposed** IM, **Seconded** MSc, all in favour. The current a/c stood at £1975.92 and the Scottish Widow a/c at £16498.48.

**6 Membership Secretary & Newsletter Editor's Reports**

IM reported the NL went out at beginning of November and included AGM papers, the next meets list and the membership renewal forms. IM had problems with a print cartridge, which had damaged the fairly new printer. He was in negotiation with the print cartridge company for compensation, but would probably need to buy another printer. Consent to purchase given.

**7 Meets Report**

The next meets list had been sent out, some dates needed adjustment, JA would contact the web master.

We held a mapping meet at Tilberthwaite on 16th November, leader MSc. It was decided it was a worthwhile project and another meet would be arranged in the spring. DGB would look for clues in 'Elizabethan Copper'. To be put on the January agenda.

**8 Publications**

I.M reported that Journal 6 was at the printers, IM expects to have the books back in time to distribute members copies at the AGM. A 1000 copies are to be printed at a cost of £3452 (printing cost 3.50 each) Authors will get a free copy, plus free copies for their contributors if required. Journal 6 pricing was discussed, to be: wholesale price - £7.00, trade – £8.00, retail – £12.50 each.

It was decided to raise the price of the few remaining copies of LMH to £20 trade.

**9 Library**

DB had been unable to have an archive session at the JRM since the last committee meeting. Some scanning of slides and microfiches and documenting had been done at home. More archive material had been received from members including Brian Cubbon, Tony Holland and Peter Fleming. There was a request for information on Greenside Mine from a final year student at Newcastle U. In addition to providing guidance to the standard sources, a little research was done which located two final year project reports from the U Lancaster on Contamination Risks and Chemical Fluxes entering Glenridding Beck.

**10 Microfiche and plans to be copied**

DGB had photographed the BGS Cashwell and Crossfell plans and would give JPEG copies to the CAT archive. PF provided a list for the archive of the 150 maps in his private collection.

**11 Coniston Mines & Quarries**

TH had rodded the Leverswater drainage pipe as the level was flooding. Some of the pipes appeared to be missing. A work meet would be arranged shortly to deal with the problem. TH and R. Ramsden had recently descended the shaft on the top of Simon's Nick, which is still not fenced off.

DGB had been in contact with Gharib Hossein who is retuning in the 2/3 weeks in December to place radon detectors, he will also return in January to find the results. He also asked if we knew of any evidence of Coniston miners dieing of lung cancer. We did not know of anything.

PF, MM and IM contributed to a weekend mining course held at the YHA in Coniston, taking walks and giving a slide show. A letter of thanks and a donation was received.

**12 GPS**

DB sent out MMCE instructions on CD to interested members. Mike Mitchell now has the laptop and GPS equipment. Training days on a one to one basis need to be organised. CAT buying a GIS camera was discussed. Details of a RICOH 5000SE had been downloaded. It was not thought to be necessary to buy one at present, but would be discussed again at some time in the future.

**13 Mines Forum meeting**

The next Mines Forum meeting has been changed to 24th November at Brockhole. Items to be discussed: Carrock, Silver Gill and Backbarrow Iron works.

**14 Any Other Business**

14.1 IM thanked TH for his work on the index of the newsletters.

14.2 IM had received several documents from John Helme regarding the late John Marshall. To go in CAT archive.

14.3 PF had been in contact with Maureen Holland, who is anxious to distribute Eric's collection of documents and artefacts to the appropriate places. PF has drawn up a list for her and will help in any way required.

14.4 PF suggested CAT should reopen the Tilberthwaite Horse Crag Level, he thinks it would be a good standby project to fill in idle times whilst we are waiting for other projects to develop. All agreed, site meeting arranged for 2pm on day of AGM.

14.5 SB & DB had been to the recent NAMHO Council meeting at Caphouse Colliery. The prime project discussed was: English Heritage had funded NAMHO for £2000 to develop a research framework for the archaeology of the extractive industries. All archaeology is now development led and funded; EH need guidance laid down in advance. A steering group will be formed, any volunteers will be welcome.

14.6 AGM - members are reminded to bring raffle prizes. Anybody wanting to show slides please contact Mike Mitchell.

14.7 JB had ordered larch boards for repairs in Greenside & Hudgillburn mines.

**15 Date and Venue of next Meeting**

This to be held on Wednesday 14th January 2009, at the BMSC Hut Coniston at 6.30 pm.

There being no further business the meeting closed at 9.21 pm. SB 18/11/08.

# CUMBRIA AMENITY TRUST MINING HISTORY SOCIETY