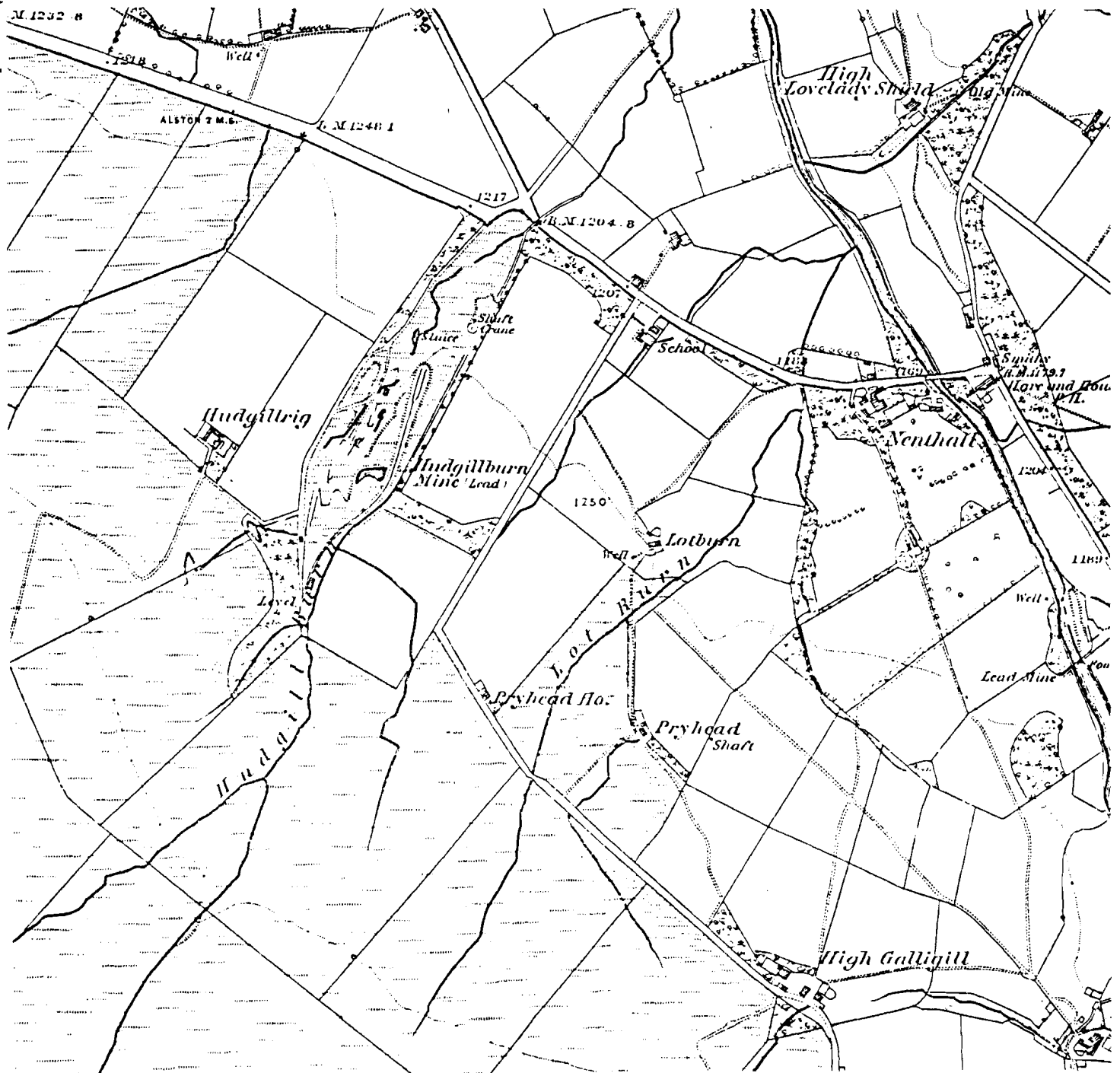




No 45
January 1996



The Newsletter of the

Cumbria Amenity Trust Mining History Society



Front Cover

Hudgill Burn Mine

from Ordnance Survey 6" Sheet XXXIV
1859 Survey

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Social Evening and slide show**Farmers Arms Lowick****February 14th**

Opinions and articles in this publication are those of the authors and do not necessarily reflect the views and objectives of the Cumbrian Amenity Trust Mining History Society





Diary Dates

4th February	Florence Mine
25th February	Greenside Ladderway
10th March	SRT Training.
17th March	Faggergill
25th March	Meets Meeting
31st March	HUDGILL.

Please do not forget :-

Greenside - The Lucy Tongue project still needs you !

There is also - The Furnace Iron Survey and Newlands Iron Furnace Projects.

Meets News

For those long term planners amongst us (?) note that a further combined meet with the Russell Society is being planned for the weekend of the 27th & 28th July. This will be based in the Alston - Nenthead area.

Staying with the long term for a moment please note that the 1996 NAMHO Field Meet will be held over the weekend 27th-29th September at Princetown on Dartmoor. For this reason the Cornwall trip will be re-scheduled to include the Field Meet and will therefore take place from the 27th September to the 5th or 6th October. Further details will be given in due course.

Turning to the immediate future and the trip to Florence Mine on the 4th February. A visit to the Haig Pit winding engine at Whitehaven has been arranged for the afternoon as guests of the Haig Pit restoration Group - yes we will get in this time !

Note that the trip on the 17th March is still being arranged. Please contact the meets secretary nearer the time for full details.

Don't forget the meets meeting on the 25th March to which EVERYBODY IS WELCOME. This is the time when YOUR CLUB plans its trips for the next six months.

The programme for the Welsh Weekend is as follows :-

Friday 12th April - Ratgoed Slate Mine

Last year we ran out of time and didn't

complete that slightly daunting descent down the vertically sided chamber from floor 7 to floor 8. This year it will be done. Meet at the Forestry Commission car park at 769093, between Corris and Aberllefenni at 10.00 am. Grade D/SRT.

Saturday 13th April - Cwmystwyth Copper Mine

This has always been a popular area for mine explorers with workings dating from the Bronze age right through to the 20th Century. There is much of interest to see in this area and one day will only allow us to scratch the surface. Meet at the mine 805745 (Aberystwyth 1:50000 map) at 10.00 am. Grade D although there may be some optional SRT.

Sunday 14th April - Bwlch Glas Lead Mine near Talybont

Bwlch Glas had a major re-working this century and consequently there is much evidence remaining. This ranges from numerous concrete foundations outside to ladders and winding equipment inside. The object of the trip is descend to see the cages as well as having a general look around. Meet at the mine at 710878 at 10.00 am. Grade D/SRT.

If there is sufficient time it is proposed to stop off at Ystrad Einion on the way back to look at the superb underground waterwheel (cameras essential, but a wide angle lens avoids disappointment) and the kibble.

If there are any queries on any of the above please contact Jon Knowles on 0274 871012.

New members

Stan Owen	35 Halsbury Road West, Northolt, Middlesex, UB5 4PN
John Wood	1 Sandringham Drive, Wistaston, Crewe, Cheshire. CW2 8HZ
E.J. Edmondson	Lilac Cottage, Low Row, Richmond, North Yorks. DL11 6PG
Graham Theobald	12 Loughrigg Park, Ambleside, Cumbria. LA22 ODY
Gerald Colling	Myrtle Cottage, Jarvis Street, Eckington, Pershore Worcs.
C.J. Archer	171 West Lane, Keighley, West Yorks..BD21. 2NB
Andy Harrop-Smith	Pen-y-Daith, Village Hill, Llandeglo, Clwyd. L111 3AG





FINANCE

JOHN HELME

Yes, I know it's a dirty word and not as exciting as many other aspects of our work but a definite financial policy is essential to any society to enable it to carry out its aims and objectives. These notes are therefore intended to give those members who are uncertain of the financial details of the club some insight into the way we operate.

The annual subscription is £10 per member or £12 per couple; we only send one set of literature to "couple" members. The financial year runs from 1st. November to 31st. October of the following year. These dates are needed in order to allow the treasurer time to complete the records and to have them audited before the A.G.M. which is held in December. It is an obvious advantage to the treasurer, and the club, if members pay their subscription as soon after 1st. November each year as possible. It saves time, and expense, in sending reminders and helps the club with its "cash flow"

Some members covenant their annual subscription. This is a scheme whereby anyone paying income tax can sign a simple form and then, without any more forms being needed by the member for four years, the treasurer can claim from the Inland Revenue the amount of tax that the person has paid on the subscription. The society can therefore claim £3.34 for each £10 subscription and £4 for each £12 one. At this time about 30 members covenant their subscriptions and the club claims about £108 from the Inland Revenue each year. If all the club members were covenanted an extra £250 would be added each year to club funds at no extra cost to each member. If you would like more details please contact the treasurer.

The income of the club, on a regular basis, can be roughly grouped under the following headings, and for 1994 /1995 year these were as follows:

Subscriptions(average)	£ 10.31 per member
Donations	1.33
Tax Rebate	0.97
Interest	0.72
Raffle at A.G.M.	0.31
This produces about	£ 13.64 per member

The expenses for the same period similarly were :

Printing (Average)	£ 4.74 per member
Expenses (Postage etc.)	3.87
Subscriptions (N.A.M.H.O. etc.)	0.19
B.C.R.A. Insurance	1.21
This uses about	£ 10.01 per member
Projects(Equipment,materials etc.)	6.50 per member
Library & Mine Plans	3.15
This makes a grand expenses total of	£ 19.66 per member

As you can see the income and expenses do not "balance". How then do we continue to operate and achieve a satisfactory reserve balance ? The answer lies in our literature sales. Last year this produced about £19.70 per member (£2206) almost exactly equalling our total expenditure.

For many years we have published information and surface walk leaflets on the Coniston and Glenridding areas. These have been sold, largely to visitors, via the Tourist Information Offices and together with the sale of our early Journals have produced, and are still producing, a steady annual income.

Then, in 1992, a number of our members, with specialised knowledge, wrote separate chapters for the book "Beneath The Lakeland Fells" which was published by "Red Earth". Royalties from this book have totalled £1640 and we have now purchased the last 70 copies so that we can distribute them through our shop contacts. This was followed in 1993 by Alastair Cameron's book "Slate from Honister". This book has sold well over £500 worth of copies, and after photocopy costs have been deducted, has produced a substantial income for the club. In 1994 we produced our Journal No.4, this time a superior book with better binding and covers than issues 1 to 3. So far sales are approaching £2000 towards the production cost of £2145. This next year we should cross into the "profit" side for this book. Plans in the "pipeline" include another book by Alastair, "Slate from Coniston" and eventually Journal No.5.

I would, as treasurer, like to thank those members who have given time and energy to contribute to these books and for donating the proceeds to club funds and to those members who help with the distribution of the books to shops over a wide area of the north of England.

I hope that these notes have gone some way to indicating the way the club's finances operate and the efforts of your committee to establish a permanent and stable financial base.

P.S. The figures given for the covenant tax rebate are correct at the time of writing but will be slightly different as a result of November 1995 budget.

John Helme November 1995





CATMHS45

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CATMHS45

COPPER VEIN FROM BONSOR MINE, CONISTON

This photograph shows a large cut surface of a block of veinstone from the dumps at Bonsor Mine.

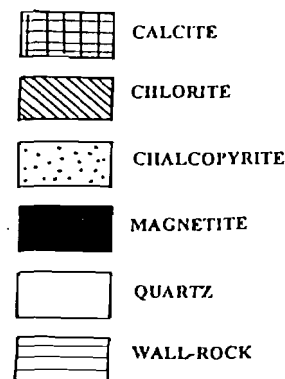
The specimen shows the country rock, in this instance a greenish grey volcanic tuff, forming both walls of the vein. The vein is composed mainly of white quartz, black magnetite and yellow metallic chalcopyrite : minor constituents are cream to white calcite and greenish grey chlorite. Several other minerals are present but are not easily visible to the naked eye. The main minerals are indicated in the accompanying sketch.

Within the vein the minerals occur in crude bands. Banding is best developed nearest the vein walls. Bands of quartz are relatively continuous. Magnetite occurs as rather discontinuous bands and chalcopyrite is mainly present as pockets of small disseminated masses in a quartz matrix. Some chalcopyrite is also present in narrow veinlets which penetrate the wall-rock. Calcite mostly occurs near the centre of the vein where in places it fills cavities in quartz.

Chalcopyrite was the only copper ore worked at Bonsor Mine.. The accompanying minerals, known as gangue minerals, were separated from chalcopyrite after the ore was crushed. The difficulty in separating chalcopyrite and magnetite by the ore dressing techniques available last century was a factor, which combined with the falling world price of copper, lead to the mine's closure late last century.

This specimen may be a section of Bonsor Vein itself or of an associated small vein.

The specimen shown here is now in the collection of the British Geological Survey, Murchison House, West Mains Road, Edinburgh EH9 3LA. Copies of the photograph (MNS 5932) may be obtained from the British Geological Survey at Murchison House.



British
Geological
Survey



CATMHS45

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CATMHS45

Veinstone from Coniston Coppermines

In the report for the joint Russell Society Cumbria Amenity Trust Mining History Society, Coniston Coppermines meet on 15th 16th July 1995 (see Newsletter No.44), mention was made of the veinstone block which was removed from outside the Youth Hostel by Brian Young on behalf of the British Geological Survey.

The specimen has now been dissected and analysed as per the attached sketch and description. It measures 14" across the vein and 17" long. The half shown in the sketch on the previous page has been retained by the British Geological Survey in Edinburgh, the other half has been received by Cumbria Amenity Trust for handing over to the proposed new extended Ruskin Museum, where it will be exhibited in the mining and quarrying section to which our Society will hopefully be making a substantial input in terms of artefacts, photographs and knowledge, etc.

A copy of the colour photograph, which accompanied the specimen was sent to the Coppermines Youth Hostel. It was not considered worthwhile to reproduce it in black and white for publication in this newsletter, when the sketch provided all the detail necessary. However, colour photo's may be obtained from the British Geological Survey at the address given.



Brian Young emerging from Lucy Tongue Level

Do You Glow in the Dark ?

A few years ago it was a common rumour that, the "Ready Brek" adverts with the glowing child on his way to school had been made in West Cumbria for obvious reasons. But could this be you after a trip down your favourite mine or cave ?

Earlier this year CAT and many other groups going underground were approached by the National Radiological Protection Board (NRPB) and were asked to comment on their proposed advice on limiting radon exposure during caving and similar activities. This advice is repeated below.

My comment on the advice was primarily that it would be helpful to include advice on what geological features are associated with Radon formation i.e. is it just Granite and Limestone. Whilst it is difficult to practically measure radon on a trip people often have a good knowledge of the geology of the area. The NRPB are still evaluating all the responses prior to revising their advice.

At the time of responding we also asked what the trak etch detectors were and where they could be obtained and what they cost since this was immediately before the Cornwall trip.

Cornwall being renowned for its high Radon levels.

The advice from NRPB was that the detectors cost £15.40 plus VAT each but that since we were embarking on the Cornish trip they would let us have one free provided we sent them details of where we had been and the time spent underground. The detectors consist of a small plastic box designed to be clipped to the outside of clothing but I used it fixed inside my helmet for practical reasons. After the trip, during which we spent an estimated total of 20 hours underground, the dosimeter was sent off for analysis.

The results indicated that the dosimeter recorded a total time integrated exposure of 135 kBqm-3h. This meant that we could undertake seven such trips a year without exceeding the advisory limit of one million Bqm-3h that is being proposed. NRPB calculated that the radon concentration would have been approximately 4000 - 5000 Bqm-3 based on spending thirty hours underground. Since we actually spent only twenty hours underground and not thirty the concentration must therefore have been nearer 7000 Bqm-3, however this assumes a



constant level of exposure which I think is an unrealistic assumption.

A number of the mines visited had very good ventilation since they draughted strongly such as Wheel Hermon and Magdalen Mine or there was forced ventilation in operation at the time of our visit, e.g. South Condurrow. Therefore the levels in the other mines were probably far higher. These mines include Wheel Uny, Cligga Head, Wheel Bellan, St Just United, Mount Wellington and West Phoenix. The air in Wheel Bellan was very still and felt low in Oxygen and it was this that halted our exploration.

Whilst the above article probably raises as many queries as it answers discussions are still ongoing with the NRPB and we keep members posted on developments. If anybody wants to buy a dosimeter please contact the undersigned for details of how to get them. Note that we have asked the NRPB for advice as to how long the detectors can be worn before they should be returned for analysis.

Jon Knowles

Proposed Advice on Limiting Radon Exposure During Caving and Similar Activities

The National Radiological Protection Board considers that there is a need for advice on the limitation of exposures to radon (and its decay products) during recreational visits to caves, abandoned mines and similar places. The numbered points below constitute the essential elements of the proposed advice. Comments on the proposals are invited. They should be addressed to Dr G M Kendall at the address given below to reach him no later than the end of June 1995.

Both the content and format of the advice may change as a result of this consultation exercise. NRPB would also welcome suggestions on how this advice might most effectively be promulgated.

- 1 Radon is a natural radioactive gas given off by most materials in the earth's crust. Amounts can build up in enclosed spaces such as caves, mines and buildings. Under certain circumstances exposure to radon, or more strictly its short-lived decay products, can lead to excessive doses to the lungs of people. Elevated levels of lung cancer have been observed in miners and also in those exposed to high domestic levels of radon.
- 2 Occupational exposures to radon, including those incurred underground, are controlled under the Ionising Radiation Regulations, 1985¹. The Board has also issued advice on the limitation of domestic exposures.
- 3 Hitherto there has been no guidance on the limitation of exposures to radon during recreational visits to caves, abandoned mines and similar places. The Board now feel that it is appropriate to make such a recommendation. This advice is aimed mainly at individuals, trained and equipped for the activity, who are likely to penetrate beyond the outer parts of such places.
- 4 The Board recommends an annual limit of $10^6 \text{ Bq m}^{-3} \text{ h}$ (1 million $\text{Bq m}^{-3} \text{ h}$) for exposure to radon gas.
- 5 This limit is broadly similar to the exposure from living for a year in a house just below the Government Action Level. Under most circumstances it is equivalent to a limit of roughly 1 Working Level Month (1 WLM). The Board believes that this limit is appropriate and that it will not unduly affect the activities of most of those who visit caves, abandoned mines, and so on.
- 6 The exposure limit is appropriate for an equilibrium factor of approximately 0.4. In exceptional circumstances, where equilibrium factors are known to be consistently higher or lower, a modified limit may be appropriate.





- 7 This limit is advisory and has no regulatory or similar significance.
- 8 The Board advises that measurements should be undertaken to ensure that this limit is not exceeded. In some caves or abandoned mines radon levels may be well established. In most circumstances, however, personal monitoring will be required.
- 9 Track etch detectors are a simple, cheap and robust means of monitoring. In most circumstances a track etch detector worn for a period of three months will be adequate. If radon levels are known to be generally low and predictable this period can be extended to six months. If many visits are to be made in a short period or radon levels are high or unpredictable a shorter wearing period may be appropriate. Alternatively, shorter term measurements may be made with electrets or electronic equipment.
- 10 The recommended exposure limit is designed to protect against the possibility of long-term development of lung cancer. The Board wishes to stress that the development of lung cancer is not inevitable and that early effects are not likely to be a matter of concern.
- 11 Nevertheless, radon exposures do carry a risk and the Board advises that leaders of parties going underground should explain these risks to those they lead and that, as well as keeping within the recommended limit, exposures should be minimised insofar as this can be done without unduly constraining the recreation.
- 12 Organisations involved in this consultation exercise will be asked to help promulgate this advice to their members.

References

- 1 The Ionising Radiations Regulations 1985. London, HMSO, SI (1985) 1333.
- 2 NRPB Exposure to radon daughters in dwellings. Doc NRPB, 1, No. 1, 15-16 (1990)
- 3 NRPB Radon affected areas: Cornwall and Devon. Doc NRPB, 1, No. 4, 37-43 (1990)
- 4 NRPB. Radon affected areas: Derbyshire, Northamptonshire and Somerset. Doc. NRPB, 3 No. 4, 19-28 (1992).
- 5 NRPB. Radon affected areas: Scotland. Doc. NRPB. 4, No.6, 1-8 (1993).
- 6 NRPB. Radon affected areas: Northern Ireland. Doc. NRPB, 4, No. 6, 9-15 (1993).
- 17 March 1995 National Radiological Protection Board Chilton Didcot, Oxon OX11 0RQ

An 'activity' of 1 becquerel (Bq) corresponds, on average, to one nuclear disintegration per second. The 'activity concentration', becquerels per cubic metre (Bq m^{-3}), is the activity in a cubic metre of air.

Exposures to radon are given as $\text{Bq m}^{-3} \text{ h}$, which represents activity concentration integrated over time, and where h stands for hours. Thus spending 200 hours in an atmosphere containing an activity concentration of 1000 Bq m^{-3} of radon would give a time integrated exposure of $2 \times 10^5 \text{ Bq m}^{-3}$; the same time integrated exposure would be reached by spending 100 hours in a radon concentration of 2000 Bq m^{-3} .

The 'equilibrium factor', F, is the ratio of the total alpha particle energy emitted by the actual mixture of radon decay products to that which would apply at radioactive equilibrium. F is frequently found to be in the range 0.3 to 0.5 in caves; the values in mines are more variable.

The practical unit of radon decay products, the Working Level (WL), was originally defined as 3700 Bq m^{-3} of radon gas in equilibrium with its decay products. A Working Level Month (WLM)

is defined as exposure to 1 WL for a working month of 170 hours. With an equilibrium factor in the region of 0.5, 1 WL is about 7000 Bq m^{-3} of radon gas, and 1 WLM is very roughly equivalent to a radon exposure of a million $\text{Bq m}^{-3} \text{ h}$.





Rockfall at Hodge Close

December the 9th saw a rockfall of huge proportions from the overhanging face to the right of the popular abseil point. The following account was given by John Adams who lives close by, and who actually witnessed this frightening event - which occurred shortly after 3pm.

"I was working near by when I heard a loud rumbling - like a jet overhead. So I rushed round to see what was happening. The whole face could be heard cracking and popping before it fell. Most falls appear to slip down the face, but this one belly flopped as it hit the pool, sending water across the road." (The road must be the best part of a 100ft above the pool!)

Apparently there had been two divers in the pool and also climbers near by only 20 minutes earlier! This is not the largest fall at the quarry, and is only one of several larger falls noticed locally within the space of a year. An exceptionally hot summer followed by sudden frosts within wet and fractured rock appear to be the main causes.

I want to thank John Adams for the information which allowed this article to be written.

John Davis

Before



After





THE ROYAL COMMISSION OF HISTORICAL MONUMENTS SURVEY OF CONISTON COPPERMINES

Peter Fleming

In the spring of 1995, before the bracken surged through and obscured ground patterns, an aerial photographic survey was completed covering the whole of the scheduled area of the Coppermines site.

This was to provide a basic and general plan upon which a detailed ground survey would be built.

An intensive and painstaking ground survey was carried out during the summer months and the surveyor responsible, Colin Lofthouse, who is also a qualified archaeologist, was based at the Yewdale Hotel, Coniston, during most of this time.

The Royal Commission of Historical Monuments was commissioned to do this work by the Lake District Special Planning Board in order that it would assist their future management plans for the site in conjunction with English Heritage and the landowner, Rydal Estates.

Previous surveys completed by the Royal Commission include Greenside lead mines in 1991, made up of five plans between 1 - 10000 to 1 - 500 scale, plus a detailed description of the remains. A copy of this is in the Cumbria Amenity Trust Mining History Society archives. More recently a survey of the Seathwaite Graphite Mine was completed. Members who have seen these plans have been very impressed by the high standard and attention to detail.

At the time of writing (December 1995) the Coniston survey is almost complete. To make quite certain nothing had been missed and to provide some historical interpretation of the remains, I was invited to go over the whole site with Colin Lofthouse on 18th November. The choice of date was fortunate as it was a clear, warm day for November. Mark Scott joined us for the rough ride up to Levers Water in the Commission's Land Rover.

We spent some time going over the Back Strings and Simon's Nick area, and it soon became evident that Colin had missed very little and was well aware of the overlapping time scales relating to the differing working periods hereabouts. Of particular interest was the ruined stone hut and the mortar stones it contains. Three of these he knew about but there are two more outside. He pointed out the varying levels of the ground surface, some artificial and some natural, in relation to the walls of the hut. The small wood-lined buddle alongside Simon's Nick, which Cumbria Amenity Trust excavated some years ago, was described to him, and the possible site of a gin shaft which is marked on some contemporary mine plans was also pointed out, not far from Brow Stope.

The high and remote Black Scar workings below the main ridge near Great How Craggs was discussed. Colin mentioned that this site was not included in the survey, but on learning of its possible importance as an Elizabethan working with a small ruined hut and crude roofing slates, etc. he said he would have to consider extending the survey to cover it.

Whilst we did not have time to visit the site he expressed an interest in seeing the old stone fox trap at the base of Great How crags. On the way there we showed him another ruined building some 75 mtrs below the fox trap. This provoked a discussion as to its age



and purpose. the building had once been roofed with slate and had undergone alterations with sealed window spaces and added walls. Due to the low angle of the sun an important clue was spotted - an inscription was noticed on a large stone opposite the door. After studying this, it was agreed that the date was 1738 followed by some initials which were not clear enough to decipher. No mining activity is recorded for this part of the 18th century in the Coniston area so therefore the building could have been used as a summer dwelling for a hill shepherd and could have had a working connection with the nearby fox trap. There are several of these traps in the western fells which were built in the 18th Century.

The stone trap itself was then examined and the skill of its builders was commented on. The nearby associated "borran" with its sealed and walled in entrances was then visited. A lot of work has gone on here a long time ago.

We then returned to the Land Rover and drove down to the Grey Crag Level horizon. A short walk brought us to the base of the lower waterfall in Levers Water Beck. This is a most interesting area. It still contains the remains of a waterwheel pit and several retaining walls associated with ore storage and dressing floors. Over the years several artefacts have come to light here including a copper pricker, hammer, wedges and chisels. It was here that Hospital Level was sunk, now covered by the heavy timbers which project from the scree slope above the beck. According to old contemporary mine plans, winding in this shaft was powered from the New Engine Shaft wheel, therefore the small wheel on this site could have been used for stamping machinery. The evidence for this is nearby as there is a distinct layer of fine crushed ore and slime emerging from beneath the overlying spoil and scree from Middle Level. Doubtless much has gone on at this small neglected site prior to 1880 when the shaft was sunk, but it has largely been buried from later work above.

One of the few features Colin had missed was where the South Shaft came to surface on the fellside above Courtneys Cross Cut. We had a look at this before returning to the Barrow Mountaineering and Ski Club Cottage for a late lunch.

The afternoon was spent pondering over the mysteries of Red Dell. Sheila Barker joined us for this excursion.

Colin had studied Eric Holland's "Coniston Copper, A History" and was aware of his research, assumptions and omissions. After a brief look at the area between Cobblers Level and Taylors Level we were unable to explain how a waterwheel sited next to the square stone-lined pit by the beck could have provided power to work in Taylors Level due to the configuration of the ground in between, and why would there be any need for this facility anyway. It is highly likely that John Taylor, on taking over the mine, had to refurbish the two waterwheels used by Charles Roe in the previous century and which would have been disused for at least thirty years. The Bonsor West Shaft wheel (Millicans) could be used on the Taylors level when the connection was made and workings deepened below the sole.

According to Eric's history, John Taylor was using the Bonsor West Shaft wheel in 1833 and 1838 to power the New Engine Shaft and Triddle Shaft respectively.

We moved up to the ancient open works east of the Old Engine Shaft, spotting what could be two more mortar stones. A short inspection of Charles Roe's 18th century works at Bonsor East followed in an attempt to interpret certain of the remains.

Most of our attention was, however focused on the site of the old dressing floors in Red Dell outside Flemings Mine entrance, where the greatest puzzles are found.



It is generally known that Flemings mine was started in 1824 by John Taylor but on site today, blocking the entrance, is a leat and holding lagoon which served the waterwheel and stamps and which according to Eric's history (see page 222) is 17th century? To confound the problem even more it is well documented that a trial over pollution in the beck was brought against the miners in 1620. Eric is of the opinion that this is the site, however we were not so sure it is. There are certainly at least three periods of working evident on site. The driving of Flemings Level started in January 1824 and the vein was reached in December, 1825. The finger shaped spoil tip can be seen reaching towards the beck. To its right are the reception areas for the ore and paved dressing floors, but overlying this is the substantial masonry work supporting the leat and holding lagoon serving the waterwheel and stamps. It was our opinion that the large heap of hand cobbled ore was brought out of Flemings mine from the extensive overhand stopes and was partially re-worked at a later date after Flemings Level had fallen into disuse, hence the extensive heap of fines nearby. Early 17th century operations could not account for this volume of spoil.

According to Davies-Sheil, the leat serving this mill, which is the higher of two on the site coming from Levers Water Beck, was built in 1830. This date would be about right as by that time the deepening workings on Bonsor Vein would have connected with Taylors Level and rendered Flemings Level obsolete. It is possible the leat from Red Dell Beck which comes to the same point was also built in 1830, but this one now continues along the lower leat built in 1850 to drive the New Engine Shaft wheel. (But is this really so?) The head race to the old wheel at the mill was then dammed off and is still evident.

One interest discovery made by Colin during his survey was that of an iron stamp head in the rubble of the Red Dell stamp mill site.

We would like to put forward the theory that the 1620 stamp mill was not here at all but much lower down Red Dell Beck outside the Elizabethan Cobblers Level, hence the assumption of a waterwheel sited there. Again all positive evidence has been obliterated by later workings (Charles Roe's and Taylor's) and by the ravages of time.

The last area we looked at was the New Engine Shaft wheelpit and shaft. Its earlier association with Charles Roe, Millican's wheel and the Bonsor West Shaft was also considered. The masonry set in the ground and the walling behind the wheelpit caused us problems. To interpret their purpose was not easy.

A week later I returned with Mark Scott and Mike Mitchell for another look. The buried masonry is at the end of a long depression which lines up with and leads right to Bonsor West Shaft where there is a large block still covered in grease. Does this area of masonry mark the site of Charles Roe's Bonsor West waterwheel pit (circa 1760), now filled in? Further evidence to support this idea can be found towards Red Dell Beck where the stone arched tail race from the New Engine Shaft wheelpit can be found. A few metres to its left is a smaller tail race partially buried. This seems to line up with the site identified as Bonsor West Shaft wheelpit!

When John Taylor took over the mine in 1824 he began driving Flemings and Taylors Levels. He later commenced sinking various shafts including the New Engine Shaft in 1838, and according to Eric's History he was using Charles Roe's wheel to power this. It was not until 1850 that he made the larger New Engine Shaft waterwheel pit next to it. It is my opinion that Taylor did not simply enlarge Roe's wheelpit because it would interrupt production from the mine during construction and the new larger wheel was





in line with the incline to Triddle Shaft, which carried the pumping rods between the two. In addition there is the separate tail race already mentioned.

One more puzzle remained to be solved - where did the water come from to drive Roe's wheel. There can only be one explanation. The leat running from Red Dell Beck must pre-date the stamp mill and Flemings Level, and is not of 1830 origin after all because it must have served Roe's wheel from 1760. The leat must have been breached to drive the level in 1824 and reinstated later, say 1830 for the mill, which means Flemings Level only had a working life of six years and Roe's wheel was idle during this period unless a temporary, moveable, wooden leat bridged the gap across the level mouth.

The section from the stamp mill to what is now the New Engine Shaft wheelpit was rebuilt and enlarged in 1850 by Taylor for this new wheel, which then received the water from the higher leat from Levers Water Beck. In other words John Taylor built the higher leat and also the Red Dell stamp mill.

This would explain why the first part of the old leat from Red Dell Beck is in such a decayed state. It would not have been maintained after this date. I am sure you are all thoroughly confused by now, but such is the nature of the site.

To sum up, the whole exercise was interesting. We all learned something new. Several problems have been provided with likely answers but there are still many that have not.

The drawing with this report does not provide any geometrical accuracy but pinpoints the features mentioned and hopefully gives a clearer picture of the decisions arrived at. If anyone reading this has reasons for doubting these findings or could add to them, I should be pleased to know.

The Royal Commission of Historical Monuments' plans for the site will be as follows; one plan covering the whole area on a scale 1 - 2500, three plans in greater detail on a scale of 1 - 500, one covering Bonsor East and Old Engine Shaft area, and one covering Red Dell, and one covering Paddy End and the Back Strings. These, with a description, should be available for a fee to anyone interested from February 1996 onwards from Royal Commission of Historical Monuments England, Information Section, National Monuments Record Centre, Kemble Drive, Swindon, Wilts, SN2 2GZ.





CATMHS45

12

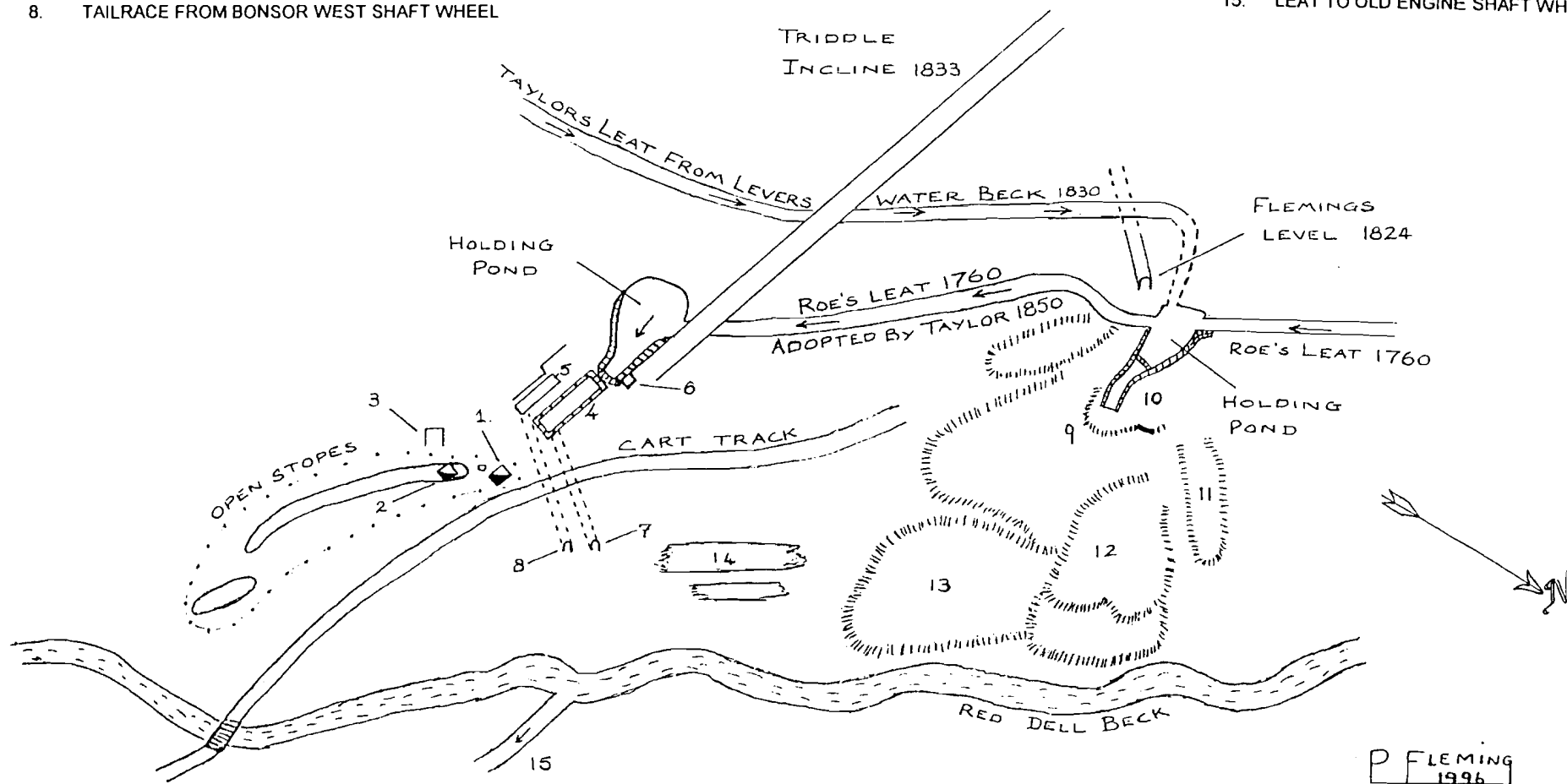
CATMHS45

CONISTON COPPERMINES

Red Dell Mill Site

1. NEW ENGINE SHAFT 1838
2. BONSOR WEST SHAFT 1760
3. SITE OF FORGE
4. NEW ENGINE SHAFT WHEELPIT 1850
5. BONSOR WEST SHAFT WHEELPIT 1760
6. PIT FOR ANGLE BOB
7. TAILRACE FROM NEW ENGINE SHAFT WHEEL
8. TAILRACE FROM BONSOR WEST SHAFT WHEEL

9. SITE OF RED DELL MILL FROM 1830
10. PAVED DRESSING FLOORS
11. SPOIL TIP FROM FLEMINGS LEVEL
12. HAND COBBED ORE TIP
13. FINES FROM STAMPMILL
14. SITE OF SETTLING PONDS
15. LEAT TO OLD ENGINE SHAFT WHEEL



SCALE
0 10 20 30 40 50 60
METRES

DRAWING BASED ON ARIEL PHOTOGRAPH TAKEN 12-3-72



CATMHS45

12

CATMHS45



Low Water Slate Workings

CAT members Martin Carter and Roger Ramsden have completed the dig at the blocked lower level of the Low Water Quarry. The quarry is situated on steep ground just below the summit of Coniston Old Man above Low Water Tarn and was one of the first areas to be worked for slate by mediaeval man on the Coniston Fells. It was operated by the Mandell Company at the turn of the century and finally closed completely in about 1920. Within a year of closure the entrances to both the lower and upper levels were blocked by debris washed down the mountainside in heavy rain. Quite clearly, it is an important industrial archaeological site and it certainly warranted attention by CAT's digging team.

It did not take long to dig down to the entrance portal. Martin lowered himself down to view the state of the level and, in particular, the roof. One look was sufficient. The timber support immediately in front of his face was in a very precarious state and along the level, as far as he could see, all the other supports had collapsed under the weight of the heavy over burden. The level was completely blocked for some distance. Martin wasted no time in getting out and they collected up their tools and left.

The upper level is on steeper ground and it would be a considerable undertaking to dig downwards to the estimated position of the level portal. We must now be resigned to the fact that no one will ever again walk through the closeheads just under the summit of the mountain.

Alistair Cameron

MEETS REPORTS

Middlehope Mines, Weardale. 21st October 1995

On the 21st October a very select group of CATMHS members met at Westgate in Weardale to explore the mines of the Middlehope valley. The main vein in the valley is the Slitt Vein, this is the longest single vein of the orefield, extending 13 and miles from Wearhead in the west to some point east of Frosterley.

It was a sunny, very clear day, excellent for photography and spotting mining remains. The path up the valley along the side of Middlehope Burn is very pleasant and a popular local walk. The first level marked on the 1st and 2nd series O S maps was soon reached, this is Spring Bank Level (or Slitt Low Level). This is a drainage adit for the Low or Old Slitt Mine shaft. It starts 2700 ft south of the shaft, 950 ft above datum and approximately 150m north of the High Mill by the side of the footpath at 9066_3856. The mouth of the level was in good condition and quite a lot of water was issuing from it (not explored).

Following the burn a little further we came to Low or Old Slitt Mine (9058_3920). The main shaft here is beside the Middlehope Burn, it was sunk in the shale above the Three Yard

Limestone to a depth of 585 feet on the Slitt Vein. Below the 70 Fathoms Level there was an extensive oreshoot, as much as 4-5 feet wide to the west of the shaft above the Whin Sill. Below the Whin Sill the thicknesses increased to 6 feet. A sump was carried down 54 feet beneath the Whin Sill, there are reports of 'coarse spar' (fluorite). There is very little information available regarding stopes above the 70 fathom level. In the latter years production costs became prohibitive, these are quoted as 8 a ton in 1872. In 1878 the mine was closed down and dismantled. The recorded production was 40_706 tons of concentrates during the years 1818-1880. By comparing the stopes for this period with the total volume extracted, Dunham estimates that "the mine contributed not less than 100_000 tons to the aggregate Beaumont production". The shaft to-day is fenced off and covered by rusty iron sheets, this 'capping' looks fairly unstable. There are substantial remains, including a wheelpit, engine beds, dressing area and bouse teams. The burn here is a popular swimming spot with local children.

Next we reached Middlehope Shield Mine 9058_3976. The level is called White's Level, it operated first for the extraction of lead and





later for iron ore. This 19th century Beaumont mine is situated on the east side of Middlehope Burn. Water from the level mouth was channelled south to power a water wheel and crusher, there are extensive remains of these mill buildings. The mine workings extended for more than 1.5 miles from the portal. At 650 ft from the portal the level cuts Shield Close Vein, flats were worked from rises above a branch level for a length of 1300 ft in the Great Limestone.

Ironstone seems to have been obtained from these flats by way of an intersecting NE string (Dawsons Vein). On which a level (9088_3963) was driven by the Weardale Iron Co. when they took over the mine in 1864. Middlehope Shield Vein was entered in the Great Limestone. at 2700 ft, it was followed east for 400 ft then the Middlehope Shield Vein was entered in the Great Limestone at 2700 ft. This was followed northwards for approximately 1 mile, access was gained to the old London Lead Company's workings on the Scarsike Vein and also Richard's Vein.

To-day White's Level is collapsed a little way in, looks a good place for a future dig. Total production by the Beaumont Company amounted to 15 831 tons of concentrates in 1818-64 when their operations ceased. Lunch was eaten at Middlehope Mine (9044_4011). The level starts in the tuft on the east bank of Middlehope Burn at 1174 ft OD, it reached the Great Limestone at 500 ft and the Scarsike Vein at 2175 ft. At 1200 ft the New Scarsike Vein was reached ENE of the level head, this vein cut through the main vein (Scarsike Vein) which is in two sub branches 50-150 ft apart. Nine hundred feet ENE of this intersection Middlehope Shield Cross Vein cuts through. Owing to the presence of the sandstone the oreshoot has an unusual vertical extent, reaching 175 ft in height. The London Lead Company figures for 1816-1847 were for 15 720 tons of lead concentrates. In 1847 the London Lead Company gave up all of its upper dale leases to the Beaumont Company who then took over the mine. As part of this swap deal, London Lead Company obtained leases at Bollihope. The Beaumont Company made trials at Middlehope Mine, they extended their White's Level along Middlehope Shields Vein Cross Vein to the Scarsike Veins and continuing 2800 ft NNW along the main vein as a prospecting level in the Great Limestone. Richard's Vein 660 ft NW of Scarsike Vein was worked from this level. In later years the Weardale Iron Company got iron from the NE workings.

To-day the level was blocked a little way

in and the remains of the dressing area and smithy can be traced. There was a good view of the branch of the Consett to Stanhope railway going SE through a cutting, around towards the ironstone quarries.

Further up the Burn is Dowk's Level (9022_4026) (Not visited). This Level reaches Lodgefield Vein at 1180 ft (by way of Longsike Vein). A mine report of 1861 states that the vein was 3 inches wide in the shale and 2-3 feet in the Great Limestone (spar with ore). Lodge field vein was worked for 1150 ft SW of the Longsike Vein but not followed across the valley NE of Longsike Vein. A mine report of 1863 states that the vein in the forehead (SW) was hardly traceable, while in the Great Limestone it was 1 ft 6 inches thick. In 1971 SAMUK investigated Longsike Vein by drilling 9 bore holes, the results were disappointing. This level was explored on an earlier CATMHS meet, it was open for quite a distance, but eventually blocked by a collapse.

Further up the Burn and beside the Westgate to Rookhope road lies Middlehope Old Mine (8902_4054), which starts in the Firestone at 1450 ft OD. Plans, some of the oldest on record of the district show the main levels but not the extent of the stoped ground. Its length is at least 4200 ft and may have a connecting raise into High Sedling Level. In 1977 following SAMUK taking over from ICI, Middlehope Old Mine was worked for Fluorspar. This mine was not visited, as it was also explored on a previous meet. On that occasion the level was open for a good distance but ran into the Shale, became loose and unstable. As the explorers were Wilson and Barker they retreated.

After lunch the burn was crossed at the ford and the route of the tramway to West Slitt Mine (9015_3923) (Middle Slitt on 6" OS) was followed. This ironstone level on the Slitt Vein, was driven into the outcropping great limestone at 1200 ft above OD. The flats are known to have been worked 2,000 - 3,000 ft west of the portal and probably extend considerably back towards it. West Slitt Level terminates at 4,210 ft from the portal.

To-day it is blocked a few yards in. To the north at (9023_3950) another adit was driven into the Great limestone at Seeing Sike, this cuts the vein at 1 000 ft west of West Slitt Level. We did not find this level. Evidence of surface as well as underground workings extend 1 500 ft further west. These workings are very ancient, predating both Beaumont and the Iron Company's plans. After crossing back over the ford we climbed out of the Middlehope valley to Slitt Pastures Ironstone Mine (910_392),





which lies to the west side of the Westgate to Rookhope road. This and West Rigg were the Weardale Iron Company's principal producers in the second part of the 19th C. By the late 1850's they had laid their railway to this point (a branch of the Consett to Stanhope, via an incline to Rookhope and a high level way to the upper reaches Middlehope). At this time the Weardale Iron Company employed 1,700 men in Weardale. Records of iron mining in Weardale date back to the 12th C, but it was not until the forming of the Weardale Iron Company in 1842 by Charles Attwood (a Gateshead factory owner) that it took off in a big way. At first the ore was smelted at Stanhope. In 1845 furnaces were built in Tow Law and Tudhoe, on the edge of the coal field. In 1862 steel manufacture started at Wolsingham. By 1870 the Weardale Iron Company was extracting 100,000 tons of ore each year from its Weardale mines.

West Rigg Quarry (911_392) was the next to be visited, it lies on the east side of the

Westgate to Rookhope road. The open cut extends 800 ft east from the road with Slitt Vein exposed at its centre. In 1884-85 the average iron content 34.3 - 43.4 percent. There is an unproductive gap of 900 ft to the next open cut at Rigg Mine (915_390) (not visited), ironstone flats were worked here in the Great Limestone. The lower horizons were accessible from Sider's Level (9169_3866).

A short walk down the hill took us back to the village of Westgate. Before returning to the safety of Cumbria a quick visit was made to Burtree Ford. A short walk was taken up the side of the Sedling Burn to visit the famous Burtree Pastures Mine (the most productive lead mine in Weardale).

S.Barker 1st December 1995

For further information on mining and geology in Middlehope the reader is referred to:

K.C.Dumham, Geology of the Northern Pennine Orefield, Vol.1 Tyne to Stainmore, BGS, HMSO Peter Bowes, Weardale: Clearing the Forest

Hudgill Burn. 22nd October 1995

After pumping out, there had been a collapse which had to be cleared first. The working face was advanced to allow the next headtree to

be installed and the sides timbered, spiling boards were then driven forwards. Problems with poor ventilation were experienced for the first time, methods of providing a flow of fresh air for those digging was discussed.

SB 2nd December 1995

Tilberthwaite Waterfall Level to Horse Crag Adit. 5 November 1995

This is a good trip with lots of interest regarding both artefacts and the layout of the workings. During the descent it quickly becomes apparent that the deads were stacked in every conceivable space. Most of the trip is spent on a ladderway between a wooden ore chute and timbers retaining waste. This has a serious feel to it!!.

Upon reaching the Horse Crag Adit a wade develops into a swim as the first stope is reached. It was hoped to get beyond this point after the long dry summer. Unfortunately water levels were too high and the airspace in the adit leaving the stope soon disappeared. However another party on a Coniston MRT practise led by Roy Garner and Angus Baillie,

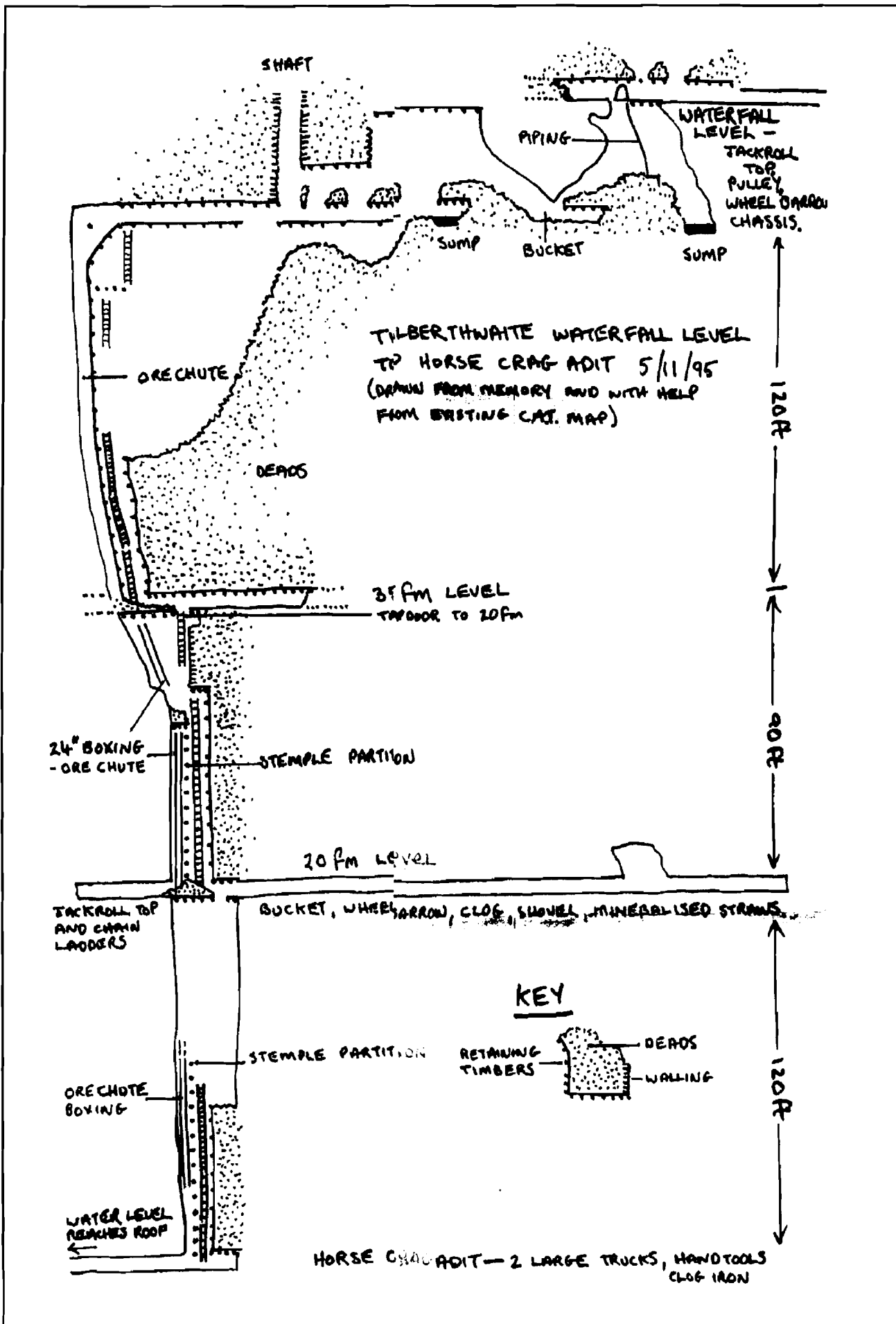
found lower water levels when they attempted the trip at least a month beforehand. As can be seen by their map they managed to swim quite a bit further to a terminal blockage. Due to the nature of the workings ! and the scarcity of exceptional summers ! it is likely that this may never be seen again. The false floor on the 20 fathom level enjoys ? dropping rocks.

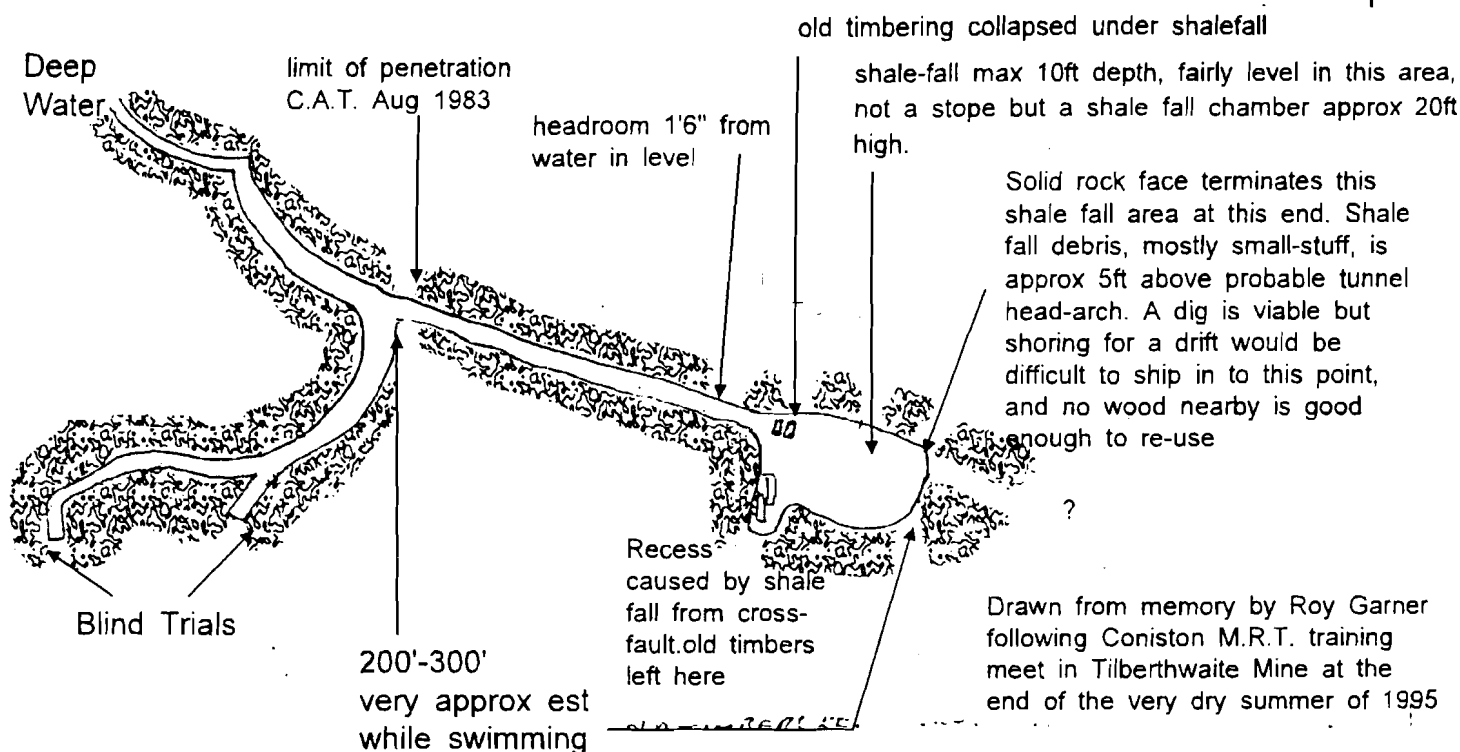
On the surface, the blocked shaft (shallow depression) at the eastern end of the North Lode has sunk by at least 10ft fairly recently.

John Davis and Bev Stevens. January 1996.

Yes I know that the above was not a scheduled meet, but is included here to show you that people are doing things at other times to what is shown on the meets list. If you are interested it is up to you to indicate this interest -- Editor







Coniston Coppermines, 19th November, 1995

The object of this meet was to re-examine the complex area on Middle Level both above and below the collapse on the outbye (south east) end of the level. A 6 metre vertical manway was ascended and a handline left in situ to help gain access to a stope piled with collapsed rubble. At the extreme south east end of this stope the rubble slopes down to within 2 metres of the roof of Middle Level on the far side of the blockage which seals off this section of Middle Level and is as yet un-entered.

At the other end of the stope which is part of the Paddy End vein there are two connections one above the other with the Blue Rock Chamber area; the upper one still contains a wooden ladder.

Below Middle Level at this point is another stope. Part of this is used for the descent whilst completing the Paddy End through route. There are two sumps at the far end. A heavy chain hangs down into the water of the farthest one for no apparent reason. It is the author's theory that this is a sealed mud choked manway into lower workings, otherwise the water level would rise much higher and the chain was a climbing chain for access from below! Now there's food for thought.

A rough survey of these two chambers was completed. Mark Simpson and John Davis also re surveyed Middle Level, (tunnels M1, M2, M3 and M4). Having done this a rope was rigged down the South Vein at the end of tunnel M2, A 28 metre abseil and a pendule landed us on a rock pile at the end of a tunnel leading into another large stope which has become known as The Balcony Stope on account of the large ledge which is just over halfway up on its north west side. A full account of the original discovery of this stope by Dave Bridge and Angela Wilson can be found in Newsletter No.25, Dec. 1989. Three members descended from this ledge to the rubble-choked bottom at 40 metres, which is very close to the Grey Crag Level Horizon on the Pudding Stone Level, Some years ago, voice contact was made through the rubble here. This could provide an alternative through route if it was cleared.

Everyone prussiked back up to Middle Level and then abseiled down the standard route to Grey Crag Level and so out to surface,

Those attending the meet were as follows.

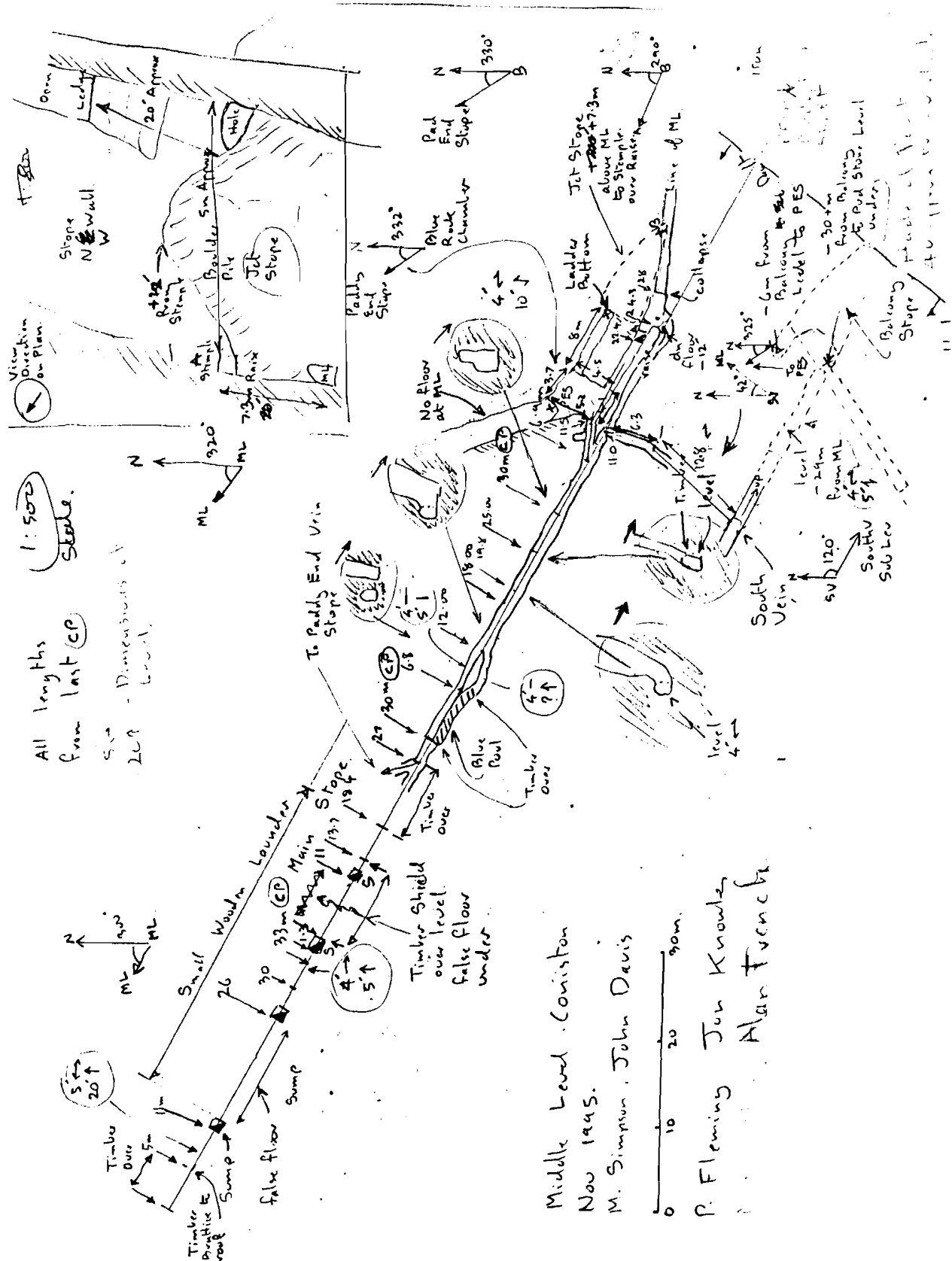
Mark Simpson, Jon Knowles, Alan French,
John Davies, Peter Fleming (meet leader).

Peter Fleming- December 1995





Preliminary Plan of part of Middle Level (Tunnels M1, M2, M3, M4.) drawn from survey notes December 1995. Plan below has been reduced from A4. More work is still required especially around the 'Blue Rock Chamber, Pinnacle Rock' areas. M.W.T.S.





Hudgill 3 December 1995

Four members, Sheila Barker, Ann Danson, Clive Barrow and Ron Calvin, turned up and, as the digging work requires more people, then went down to Nenthead after inspecting the site. The day was spent in the River Nent, rebuilding the river bank retaining wall outside the entrance to Capelcleugh Mine Level.

We then had a look in Rampgill Level and a walk up the valley to view some of the work the local group (NPHT) had done.

A very pleasant day out even if it did rain most of the time

Ron Calvin RM.

(Sheila did in fact do a phone round and obtained very little in the way of a positive response for the above meet, otherwise I would have there been myself. Editor.)

Hudgill 7 January

A good turnout. Jon Knowles, Mark Simpson, Paul Timewell, Dave Robson, Sheila Barker, Ron Calvin, Clive Barrow, and Anton Thomas.

The weather was over cast with the promise of wetness but not as cold as expected even if there were small patches of snow around. The mine was pumped out (It seems to take longer each time) and workings inspected. Apart from a bit of clay run-in at the far end all was as we had left it - thankfully.

Peter Blezards insistence on timbering properly is paying off, that clay we are digging through is heavy stuff.

Starting the pump always has an air of excitement, will it or will it not go ! This time it did. Will it prime, well -- after several buckets of water down the priming hole it did. The trick appears to be to put the plug in before it does so and if you fumble or lose the plug at the same time as the pump primes - well I leave it to your imagination. All I can say is the sight of Jon frantically trying to stuff his thumb over the hole at the same time as searching for the plug, and the water spraying out, will be worth remembering.

The rest of the time was spent in the by now usual routine of dig, bucket out, barrow, dig. Lunch time came and went and by early afternoon we were in a position to install the remaining spial boards, which was duly done. The Sledge hammer I had brought along for this purpose was too heavy although Jon made a good attempt at using it. (All I can say is that the men you see in pictures of drilling shot hole in level roofs using what appears hammers of this size, must have been very strong. - "they were men in those days".)

Anton installed the fresh air system, which consisted of 1.75mm dia pipe attached to a bucket with a battery power fan in it. Perceived opinion from those working at the face was that air appeared to be coming from the pipe end and the air did appear to be fresher. A positive induction device is to be made, a barrel with piston, balance bobs and water powered trip buckets were mentioned.

For those outside space heating was provided by a fire in a barrel, pity it only got going by the time to leave.

Well the spial boards are in, and faced with a wall of clay ready to be dug, by common consent we called it a day. I suppose we could have continued but the lure of a brew in Sheila's van proved irresistible. (There was another consideration in that we can be confident that even with the clay wall running in there will be enough material to hold the roof boards up, as the next meet is not until the end of march, the risk of continuing excavating and reducing roof support was too great. There is a full days labour to dig the next lot of material out and put in the next head frame.)

The biggest problem is that you can only shift so much clay in bucket at a time, and unless something better can be put in, we are stuck with this limitation.

My thanks to Sheila for the brew. We all left by 5.00.

Hudgill seems to have become a social occasion and one is left with the thought - what will we do when we break through? !!

Mark Simpson January 1996





Boxing Day Meet Alastair Cameron

During the day prior to the meet, Coniston had been cut off for several hours by snow. The meet leader was absolutely convinced that no one would turn up the following morning. He had even made other plans just in case. But CAT members are made of sterner stuff and a total of twenty had arrived at the village by 10:30. Some came with their full winter mountaineering kit. The sun was shining and the sky blue and they decided to do their own thing on the tops.

The original plan had been to visit Low Water Quarry to complete the dig and, hopefully, to explore the inside of England's highest green slate working. Both the winter conditions and logistical problems knocked that one on the head. In the end it was decided to visit Red Dell and then cross the fell to Tilberthwaite and explore the Penny Rigg area.

The track up to the Coppermines was icy and required care. We viewed the area of the New Engine Shaft and Red Dell mill and discussed the sequence of historical events. We then

ascended the fell to Old Man Old Wife Quarry and explored the level, which must have been a good twenty degrees warmer inside than out. A short stop was made at Moor Quarry after which the group proceeded to Penny Rigg. The level at the upper end of the quarry pit is still open - for a few yards. The meet leader reminisced about the time, as a young lad, he could just about remember exploring the level and discovering an endless sequences of colossal caverns that seemed to go on for ever. The level is now blocked by a roof fall after about 20 meters. Age has a strange effect on the memory.

The party, which by this time numbered only four, decided to pay a quick visit to Hodge Close to view the site of the recent collapses. It was beginning to get dark as we looked across the flooded pit to the wall above the arch from which a huge quantity of stone had fallen. Roof falls at Hodge Close are not new. During the late 1800's and early 1900 they happened regularly and often resulted in loss of life and damage to valuable equipment.

The group then headed down-track to Yewdale to be met by the meet leader's wife in the car.

NEWS

Main Band Colliery, Mirehouse, Whitehaven, Cumbria

Update on the Mine

A new owner has taken over the Main Band Coal Drift Mine. This was in January 1995. They obtained a licence from the Coal Regulators in July 1995

The new owners started to pump the mine out on October 1995. On the day I visited the Mine, on Wednesday 29 November 1995, Mr John Brown was running the pump and the

water level was down to the 140 metre mark in the main intake drift, which goes down at 1 in 4.

The type of plant in use on the surface is a 100KVA generator, 480 volts, supplying power to a Grindex submersible pump, 650 gallons/p/m max at a 63 metre head. Pumping arrangements to be reviewed when 200 metres down. Pumping has to continue to 500 metres in order to re-establish the ventilation and prepare for the restart of production.

Ron Calvin RM January 1996.

October 25, 1845 Frog in coal

ON MONDAY last, in the Duke of Hamiltons colliery at Wallacetown, near Falkirk, a living frog was found embedded in 8 small piece of coal about three inches long and two-and-a half broad, and at a depth of 42 fathoms from the surface, and 300 yards from the bottom of the shaft. It was seen by seven men when taken out

of the coal. It does not have any mouth, but seemed by the motion of the throat to be breathing rapidly. It is small in size, its limbs appear to be longer than usual, and are of peculiar confirmation; and what is not a little singular, considering the place in which it was found; it is provided with a pair of large and brilliant eyes

Westmorland Gazette 20-10-95



Mining in Irian Jaya Indonesia

UP TO \$1.7bn. (£1.1bn) of British investment is being put into an Indonesia project by London based mining company Rio Tinto Zinc (RTZ). The backing comes despite reports of army torture, murder, and widespread environmental destruction in and around the project in the forest-clad mountains of Irian Jaya. Last month the US government agency, the Overseas Private Investment Corporation (Opic), withdrew \$100m in political risk insurance because of the mine's devastating impact on rainforest.

This project is centred on the world's biggest gold deposit and third biggest copper deposit and is controlled by the US company Freeport-McMoran Copper and Gold, which has invested \$2bn. It is estimated that there are deposits of 22 million ounces of gold, 37 million ounces of silver and 15 billion cubic pounds of copper with a total value of \$50bn. The mine is located 2,700 miles east of Jakarta and is Indonesia's biggest development project.

The concession of more than a million acres awarded by the Indonesian authorities over the lands of the Amungme tribe stretches from the snowclad peak of Indonesia's highest mountain to coastal rainforests. The killings and torture inflicted on the Amungme and others were first reported in May this year by the local Catholic bishop Mgr H F M Munninghoff to the Indonesian Conference of Catholic Bishops.

He reported torture carried out in the area of the mine by the Indonesian army units brought in to protect it. His report has been confirmed by an investigative team sent in by the Indonesian government's Human Rights Commission. They found 16 had been killed and four were missing. An investigation by the Australian government in July put the number of deaths since mid-1984 at 22.

Many of those killed are of the Amungme tribe, some members of which had protested the loss of their lands. RTZ dismissed these accounts when they were drawn to its attention by two shareholders, Mr and Mrs Wilcox. John Hughes, head of public affairs at RTZ, wrote to them on 22 June saying: "We understand all the villagers were released and accounted for subsequently."

As for the reports of serious damage to the rainforests and environmental hazards to local tribespeople, these were verified by scientists from Opic in July this year. Their report led to the withdrawal of political risk

insurance as of 31 October. Robert O'Sullivan, Opic's general counsel for insurance and claims, wrote to Henry Miller, a vice-president of Freeport, on 10 October, giving as the reason for Opic's action: "the massive deposition of tailings in the Ajkwe River and Minajeri River severely degraded the rainforests surrounding them." He said the tripling of the mines production beyond original plans had overwhelmed the capacity of these rivers to wash away the effluent. Indonesian authorities have permitted the mine to dump 110,000 tons of industrial waste a day into these rivers.

The World Bank is now under pressure from the World Rainforest Movement to withdraw its political risk insurance. The original reports of environmental damage came from the Indonesian environmental organisation Walhi (Indonesian Forum for the Environment), affiliated to Friends of the Earth and funded by the USAID and the Ford Foundation. It has accused the mine of causing massive pollution and damaging a wide tract of rain forest.

A Walhi spokesman said: "This huge mine is massively damaging the rich biodiversity of the areas and harming the health and sustenance of local indigenous communities." Walhi also points out that Freeport would not be permitted to dump potentially toxic mine waste directly into rivers in the United States. A spokesman for RTZ said: "If we were not satisfied with the way the project was operated, we would not have not have invested." RTZ is proceeding with spending between \$450m and \$850m to buy into the parent company and is investing a further \$850m in the expansion plans that Opic said would overwhelm the rainforest rivers with mine waste.

The cancellation of the insurance comes despite an intensive lobbying effort by Henry Kissinger, the former US Secretary of State, who is a director of Freeport. The company also tried, unsuccessfully, to stop the US government funding for Walhi. The mine's future was reported to have been raised by President Suharto of Indonesia when he dined at the White House in late October.

Mgr Munninghoff said in his report of torture by government troops garrisoning the mine site: "The torture caused bleeding head wounds, swollen faces and hands, bruises, loss of consciousness and death because of a broken neck. The torture was conducted in Freeport containers, the army commander's mess, the police station and the Freeport security post." He continued: "Surveillance is so tight in the area that it causes fear and tension among the



the civilian population. Surveillance is conducted in churches, during prayer meetings, in villages and towns, and in the streets where passersby are monitored. Surveillance is conducted by training guns on people, and threatening everybody who is deemed to defy the army security units ... It has been like this for years.

Mgr Munninehoff said he had spoken to witnesses to the violence and added "It's been going on in Timika for years. In my report, for instance, on Easter Day, one person was stabbed and one person was shot dead. They had done nothing wrong. Over there, people are always being accused of being members of the OPM [the local independence movement]. In fact, they were just celebrating Easter."

Amnesty International is now calling on the Indonesian Government to "allow access to all areas of Irian Jaya for international and domestic monitors, including journalists", to guarantee the safety of all witnesses and to prosecute those believed guilty of human rights violations. Amnesty said the report by Indonesia's National Commission on Human Rights "provides damning confirmation of grave violations, at a time when the Indonesian government is continuing to assert domestically and internationally that its human rights record is improving."

Independent On Sunday 26 November 1995

Extracts from the National Association Of Mining History Organisations Newsletter Autumn 1995

MINING HISTORY SOCIETY OF IRELAND

Mining historians from the UK have been visiting Ireland for many years and many have said that an Irish mining history society was needed to co-ordinate activities on the wealth of remains over there. There are a number of Irish mining historians but these often worked independently, unaware of the existence of others. This has now changed thanks to the initiative of John Morris and others, who have set up the above society.

The society will deal with all aspects of the pre-historic to recent extraction and processing of metalliferous, industrial and other minerals in the whole of Ireland (both Eire and Ulster). Objectives will be :-

- * the general promotion of awareness and appreciation of the mining heritage of Ireland
- * to create and maintain an inventory of surface and underground mining heritage
- * to actively participate in, facilitate and promote physical surveying and documentation of the extant mining heritage.
- * to create and maintain a catalogue and library of information to assist research

into all facets of mining history and development

- * to provide an active programme of lectures, field excursions, publications and newsletters
- * to initiate, support and/or participate with others in the development of examples of mining heritage as tourist amenities.
- * to promote a "Code of Practice" in relation to visiting and accessing sites above and below ground.
- * to provide representation on mining heritage to relevant statutory authorities.

A meeting of interested persons was held at Dublin on 14/10/95 and the society was formed with a steering group to develop the constitution, etc. Acting Officers are:-
John Morris (Dublin) [Chairman]
Iain Legg (Belfast) [Vice-Chairman]
Des Cowman (Waterford) [Secretary]
Martin Critchley (Dublin) [Treasurer].

An inaugural general meeting will be held in Dublin on 10/2/96 to formally elect officers and to agree the constitution. A group from Shropshire Caving & Mining Club are going across for the weekend to attend this meeting, if you want to join them please contact Adrian Pearce (T. 01952 - 405369) for details. New members are welcome to join now and the first subscription will be valid up until 31/12/96.





It is hoped to organise a week long field meet next year, probably at two major mining sites. Activities could include exploration (hopefully including a winch), underground/surface surveying, recording, photography and basic preservation work. This will give new members the chance to visit some of the Irish mines and, in exchange, to help with the above activities.

There are many mine entrances that have never been explored since abandonment and these are crying out for mine explorers. A database of information is being built up and the new group would appreciate donation of any original documents, plans, photographs, etc of Irish mine sites. Copies would equally be welcome.

Further information on the society can be obtained from John Morris at :-
c/o Geological Survey of Ireland, Beggars Bush, Haddington Rd, Dublin 4
TEL 00-3 53-1-604-1473,
FAX 00-3 53 -1-668-1 782.

INSURANCE

As NAMHO is a member of NCA, member organisations of NAMHO can participate in the BCRA insurance scheme. This gives public and member to member liability insurance up to £2 million for activities associated with mining history, eg underground/surface exploration, surveying, preservation, training, even social events. The cover is for anywhere in the world EXCEPT North America and the premium for an individual is ridiculously small, ie £1.25 for 1995/96. It is NOT for commercial activities but individuals may be covered for a similar operation as long as it doesn't form part of their livelihood. It is not personal insurance - it is meant to cover you if you are sued. For £5, you can get a landowner covered under the same insurance and this is a good way of getting access. You will deal direct with BCRA who will invoice you, etc. If you are interested, and don't already participate, ring the BCRA Insurance Rep, Bryan Ellis, who will answer any questions you have and send you an application form.

If you haven't already heard, the BCRA insurance company has changed but the cover is the same. Although the old insurance was due to run out at the end of September, we were given an extension to the end of October and those who pay by the end of November will be backdated.

CBA PRACTICAL HANDBOOK - UNDERGROUND ARCHAEOLOGY

The Council of British Archaeology has indicated that it is interested in the possibility of publishing a guide to underground archaeology as an issue in its "Practical Handbook" series. The proposed publication would be modelled on Practical Handbook No 12 - "20th Century Defences in Britain". To be successful, however, the proposed handbook should have contributions from a number of organisations/specialist authors.

Any organisation or individual who would like to become closely involved with this project can obtain details, including details of previously published CBA Practical Handbooks, suggested topic headings and reading list from Paul Sowan, c/o CNHSS Ltd, Brighton Road, South Croydon, Surrey, CR2

TANKERVILLE MINE SHOPSHIRE

Adrian Pearce sends thanks to all those who wrote to South Shropshire District Council about the threat to Tankerville Mine engine house. There has been a complete change over the last few months and things have changed from doom and despondency to optimism. Funds have been found from the council and English Heritage to build up the shaft, cap it and underpin the engine house - this work is currently taking place. The site is being acquired by the council and is soon to be transferred to the Shropshire Mines & Building Heritage Trust. The latter is being set up with 3 trustees from the local councils and 7 from Shropshire Caving & Mining Club. The trust will be applying to English Heritage for a grant to repair the engine house itself in Spring and will be responsible for ongoing maintenance of the site. Further sites may be acquired as appropriate.

An application has been made for EEC funds to pay for setting up mining trails and interpretation boards in Shropshire.

SCMC carried out a public relations exercise over the weekend of 4-5th November 1994. They took parties of local villagers into Perkins Level of Snailbeach Mine over both days and built up a bonfire for the evening. Wood for the latter came from work they have been doing on site to remove trees and vegetation from the immediate surrounds of mine buildings.

SCMC is very concerned at the activities of





unknown persons who are exploring mines in Wales and Shropshire. They removed a fence from around a shaft at Rorrington Mine and left it unprotected. It took delicate negotiations to persuade the landowners that it wasn't SCMC and to allow future access. In another incident in a Welsh cave, they made a number of models in clay underground and left the initials "SCMC" in the mud (no SCMC member was involved). In the latest incident, they cut fixed ropes and removed hangers in Bwlch-y-Plym Mine. The equipment had been installed by a local outdoor centre who used the mine for trips and they asked SCMC if it was them. SCMC is not just concerned at the irresponsible behaviour of these persons but the fact that they seem to be setting up SCMC to take the blame.

NAMHO FIELD MEET 1996

The NAMHO Field Meet in 1996 will be hosted by the Plymouth Caving Group and will take place on 27th-29th September 1996. The meet will be based at Princetown on Dartmoor. "Bunk space" accommodation has been prebooked and camping facilities are available. Other types of accommodation is available if required.

For further information, and to make requests for specific trips, Please contact Pia Benson, 7 Marchants Way, Meavy, Yelverton, Devon, PL20 6P W.

NAMHO CONFERENCE 1997

The next NAMHO Conference will be hosted by the Peak District Mines Historical Society. It will be held from 11th to 14th July 1997 and will be based at Darley Dale, Matlock, Derbyshire. The centre will have facilities for camping and caravans, as well as residential accommodation.

FIRE AT THE PEAK DISTRICT MINING MUSEUM

A fire broke out in the Pump Room of the Peak District Mining Museum at about 1.00 am on Sunday 20th August 1995. The cause of the fire appears to have been due to an electrical fault. The automatic fire detection system activated the alarm system and the fire brigade were quickly on the scene. The night club on the floor above the museum was in full swing and the several hundred persons in the club were all safely evacuated.

The Museum itself was not affected by the fire but there was considerable damage in the Pump

Room. Whilst the fire itself was contained to a small area, a large number of books and some showcases were damaged by heat, water and smoke. There was also some structural damage to the Pump Room. It is expected that the repairs and redecoration will take several months to complete.

Some 10 members spent the Sunday assessing the amount of the damage, tidying up the best that they could and making the Pump Room secure. Thanks are also expressed to the attendant from the night club who attempted to douse the fire before the fire brigade arrived.

CARBON DIOXIDE LEAKAGE FROM DISUSED COAL MINE

A 60 year old man and his dog collapsed and died whilst walking through a factory at Widdrington in Northumberland. The factory was close to the site of a coal mine that had been closed some 30 years ago and it is believed that carbon dioxide had migrated from the mine at a time when the barometric pressure was very low.

Other persons in the factory were also overcome by the gas but they were revived. The Coal Authority are trying to identify the source of the gas. (*Daily Telegraph*)

LARGEST SAPPHIRE FOUND IN THE BRITISH ISLES

The largest gem sapphire to be found in the British Isles has been discovered on the Island of Lewis in the Outer Hebrides.

The 9.6 ct green-blue stone, a 1cm cube, was found by a member of a Scottish Gemmological Group when a piece of rock was cracked open. It was found that there were sapphires having a market value of some £200,000 inside the stone. The contents of the stone included a heavily fractured 242 ct sapphire and a 39.5 ct fragment which was cut to provide the 9.6 ct barrion cushion-cut gem. Large single crystals of blue sapphire were first discovered on the island in 1984. Sapphires are frequently found in Scotland but most of them are not of gem quality or gem size. (*Mining Journal*)

MASSIVE MINING SUBSIDENCE

Recently there was a reported earthquake, which measured 5.2 on the Richter Scale, in south west Wyoming. This earthquake caused the death of 1 person, injured a further 11 persons and severely damaged the Solway Minerals Mine.





Subsequent investigations showed that there had not been a natural earthquake at all. The "earthquake" had, in fact, been a massive collapse of an area of 2 km square of old mine workings. (*Mining Journal*)

MINING PRESS SNIPPETS

1. "Zinc-lead ore mining." Construction has started at the Galmory zinc-lead project in County Killienny, Ireland. It is costing £37.8m and production is due to start in December 1996. It will be the first new metal mine in Ireland for over 20 years. There are 6.2 million tonnes of reserves (11.4% zinc and 1.1% lead) and the rate of production will be 650,000 tpy of ore. The mine will be one of the biggest zinc producers in Europe.

Further reserves have been located by drilling at the lead-zinc deposit at Keel, Co Longford in Ireland. High silver values in this ore is described as "particularly encouraging."

2. "Serious accident in South African gold mine." News of the horrendous accident at the Val Reefs Gold Mine, 150km SW of Johannesburg, reverberated around the mining world in May 1995. Despite several safety devices a locomotive somehow jumped a rail and entered the No 2 Shaft at the 56 level, 1700 metres below the surface. The locomotive then fell 500 metres before striking a double deck cage that was full of night shift workers. The winding rope broke and the cage fell to a depth of 2300 metres with the locomotive and carriage on top. Everyone in the cage, 100 or so miners, was killed. The driver of the locomotive managed to jump clear. *Alan Williams*

JAMES WATT ARCHIVES

The James Watt Archives, which contains some 4,500 letters to the inventor and 2,500 copies of his own letters, has been bought by Birmingham City Archives. The archives were described as "the most important collection of scientific manuscripts to come onto the market in Britain." The cost of the archive was over £1,000,000. (*SCMC*)

ROMAN COINS FOUND AT ALDERLEY EDGE

A caver, who with other members of the Derbyshire Caving Club, was exploring one of the Alderley Edge Mines, found an earthenware pot full of bronze coins. The find was reported to The National Trust, who own the land at Alderley Edge, and their archaeologists have stated that the find is of great historical importance.

The pot was found about eight feet down a shaft that was being dug out. Initially it was thought that the coins had been minted by the mine owner in the 19th century with which to pay the miners. The laurel wreath round the head dispelled this idea and everyone became excited.

It has now been agreed that the 400 coins date back to Roman times and proves that the copper mine was in use more than 1700 years ago. The National Trust archaeologist explained that the coins themselves were not all that important but their context was extremely important. The coins, mainly issues of Constantine I and II were minted in Trier and London in the 320's and 340's. They may have been buried in the shaft during a raid on the Roman Province by Picts, Saxons and Scots in the 360's. (*Stockport Messenger*)

TITANIUM KARABINERS

Members are warned that some of the titanium climbing and caving products that are becoming available from Eastern Europe should be treated with great suspicion.

Most of the equipment is made from commercial grade titanium which has no advantage over mild steel other than a small reduction in weight and superb corrosion resistance. The most important point to note is that titanium is VERY prone to fracturing from scratches and notches. A very small surface mark can make commercial titanium act like cast iron. There is also a real problem with heat dissipation which could, if you were using a titanium rack, cause the rope to melt before your very eyes! (*SCMC*)

MUSEUMS OF MINING IN NORTH STAFFORDSHIRE

Following the closure of the Chatterley Whitfield Mining Museum, two proposals have been mooted to acknowledge the importance of coal mining in North Staffordshire in the past. These are:-

1. Revamping the Foxfield Pit at Dilhorne, near Cheadle, and linking this up with the Foxfield Steam Railway which runs from Blythe Bridge.

2. A proposal by Aurora Mining Ltd to convert the abandoned Bassey Drift mine near, Apedale, into a walk-in example of a working mine. (*NSGA*)

LETTER FROM GERMANY

The following letter was received earlier this year from a German Mining Historian. The letter is published in the "as received" form. "Besides caving I am interested in mining





archaeology and underground exploration in abandoned mines. In the moment I am working on a somewhat difficult topic. In 1833 in the Harz Mountains in Germany, a mining engineer called Doerell invented a special mechanic to transport miners quick, safely and without exhaustion to the bottom of the shafts and to the surface again. This device was called "Fahrkunst" (known in the UK as a "man engine") and it was initially made out of two long parallel wooden logs which reached several hundred metres deep into the shafts. Every five or six metres there was a small board to stand on and a handgrip for the miners. Each log was moving alternatively up and down with a short standstill in the middle of the movement where the miners switched from one log to the other. So they were able to climb a 500m deep shaft in about half an hours time (amazing for the 1830's isn't it).. These "Fahrkunst" machines got popular in many 1900 mining areas as in Harz, Czechoslovakia, Erzgebirge, Britain, Norway, Belgium, France etc. They were used until the beginning of the 20th century when more modern techniques were introduced. Nowadays only two (to my knowledge) Fahrkunst machines have survived, in Kongsberg/Norway and in St Andreasberg/Harz.. In almost every book on mining history the principles of the Fahrkunst are explained, but more information is rare. I am now collecting data on these topic to write eventually a paper about. Since now I have found 44 Fahrkunst machines, which beside Germany/Austria I have located in England (Dolcoath Mine in Cornwall and Silkstone Coal Mine in Yorkshire, in Kongsberg/Norway and on coal mines in Belgium. If you know any other or are interested in these topic, please let me know. THANKS". Thomas Krassmann, Echternstr.25, 31552 Rodenberg, Germany. *(Letter submitted by Phil Marshall)*

AMERICAN AWARD FOR DR TREVOR FORD

Dr Trevor Ford, the Editor of the Peak District Mines Historical Society Bulletin, has recently been presented with an international award for his "outstanding services as editor of the journal of the British Cave Research Association, Cave Science." He received the Award of Merit from The National Speleological Society for his services as honorary editor of Cave Science for 30 years. He retired from the post in December 1994. Dr Ford is also editor and part author of a series of books on the scientific study of caves covering the various regions of the UK and of

the only comprehensive text-book on the Science of Speleology. He lectured at the Department of Geology at Leicester University for some 38 years and he says that his interest in geology grew from exploring caves as a teenager. He started caving in 1942 and has explored caves in the UK, France, Spain, China, Australia, New Zealand and the USA. "I got to know the people who own Speedwell Cavern in Castleton, Derbyshire, and, to this day, this is my favourite cave, not only from nostalgia but because new sections are still being discovered." "There are 30,000 active cavers in Britain alone and one or two new caves are being discovered in the UK every year. The techniques for caving have changed a great deal over the years - the introduction of the single rope technique and the use of wet suits or thermals to replace woollies and overalls are examples." Dr Ford was recently presented with a large framed photograph of Speedwell Cavern by the British Cave Research Association and the Certificate of Merit from the USA will add to the accolades that he has received.

BOOK REVIEWS

1. "Seathwaite Wad and the Mines of the Borrowdale Valley" by Ian Tyler. Published by Blue Rock Publications, Carlisle, 1995. Soft covers, 220 pages and over 120 photos, diagrams and illustrations. Cost; 13.99.

Despite the title, the first 60 pages deal with copper, lead and silver production with graphite working making up the rest, almost as a separate book. The whole is full of historical detail but however much he is tempted there are few clues to enable the reader to find out more. This being said, it is a very readable book in good chronological order that documents nearly 400 years of production. It even includes some lighter descriptions of recent visits by the author and colleagues to the early working areas. The diagrams and other illustrations are clear, well chosen and an added bonus.

This is the fourth book by the Author in a series on the mines of the Lake District. It is valuable to anyone interested in these mines and an essential tool for the full understanding of the sites. *Dr I J Brown*

2. "Thomas Sopwith, Surveyor" by Robert Sopwith. Pentland Press 1994. Hardback, 270pp, 27 illustrations mainly illustrating town features that Sopwith knew well. Cost 15.50.

Thomas Sopwith (1803 - 1879) initially trained as a cabinet maker but went on to become an eminent mining surveyor, engineer and innovator. His creation of a levelling staff





for use in surveying, his work on geological model making and the advocacy of the preservation of mine plans and education are all of significance, even today.

The book, written by Thomas's great-great grandson, is surprisingly detailed for a life that was lived over 100 years ago. People, places and feelings are all recorded here. The list of Thomas's mining interests are enough to make any mining historian sit up. He was a mine surveyor in Cumbria, the official mine surveyor in the Forest of Dean (which concentrated his interest in geology and models) and in 1845 he got the plum-job of Agent of the then WB Lead Mines in Northumberland. The latter appointment resulted in the publication of his famous work on that mining area. This was not the end, however, for he continued his interest in mining and in writing his mining diaries for over 30 more years. He also had a keen interest in the work of his mining engineer sons, in lead mining in Spain and coal mining on Cannock Chase, Staffordshire.

This is a fascinating story of a great surveyor but the book is one for dipping into now and again rather than a bedtime read.

Dr I J Brown

3. "Blakeney Hill Stone Mine" by David Priddis. The Journal of the Forest of Dean Local History Society No 10, 1995. ISBN 0950 - 8256 A4 glossy. Cost £4.50 + £0.70 p/p from Hon Secretary, Diana Watkins, "Sangria", Brockhollands Rd, Bream, Lydney, Gloucestershire, GL15 6NB.

Records show that the Blakeney Hill Quarry produced Pennant stone slab and roof tiles from 1875 and that the underground workings had started by 1890. The mine was closed around 1900 but was reopened briefly in 1928.

The account describes the rediscovery, exploration and survey of the mine. This is followed by a detailed description of the working of the mine in 1928-29. There are 18 active photographs, including 3 underground scenes, to illustrate this era of working the mine. An excellent plan of the mine is included. (*David Pollard*)

4. "Review of the Geological and Mineral Planning Research Programme 1993-4". Department of the Environment. Cost £19.00.

Each year the D of E spends about 2.9m on the use of consultants to study problems relating to mineral working and geology in order to monitor and guide policy in respect of mineral planning. The projects come

under five headings, namely mineral resources, restoration and aftercare, environmental effects of mineral working, applied earth science information and land instability and safety. The latter area which deals with mine entrances, subsidence, earth movements, tips, gases and water pollution is of most interest to members of NAMHO. Projects completed, or nearly completed, of interest to members include treatment of mine entrances, are as liable to subsidence, the Black Country Limestone Mines, gases from old mines and stability of tailings dams. Results are published as they become available.

The review considers that the following might be included in the next few years; gypsum dissolution, radon emissions, inland landslipping, effects of changing water levels on mine pillars, water quality, radon emissions, inland landslipping, effects of changing water levels on mine pillars, water quality, geochemical effects of mine spoil, seismic monitoring and gas emissions from old workings.

As in the past, representatives of NAMHO may be invited to take part on some Steering Committees associated with the individual projects. *Dr I J Brown*

5. "British Archaeological Yearbook 1995-96" published by Council for British Archaeology, Bowes Morrell House, 111 Walmgate, York YO1 2UA. iv + 296pp, ISBN 1 872414 51 6. Cost £24 incl p/p.

This useful publication sets out to be a complete guide to archaeology in Britain and includes, amongst other subjects, an extensive list of "archaeological organisations" clearly intended to include industrial archaeology. It includes chapters on internet resources, forthcoming events and grants and funds. It is clearly intended to be an annual publication and there is no charge for entries in the publication.

Sadly, yet again, industrial archaeology in general, and particularly mines and quarries archaeology, is generally overlooked. Mining history societies, industrial archaeology societies etc are advised to ensure that the details of their organisations appear in future editions and so take advantage of the free publicity that is available. *Paul Sowen*



CUMBRIA AMENITY TRUST MINING HISTORY SOCIETY

Committee Meeting held on the Monday 25th September 1995 at the BMSC Hut, Coniston.

Agenda

- 1 Apologies for absence
- 2 Minutes of the last meeting
- 3 Matters arising
- 4 Secretary's Report
- 5 Treasurer's Report
- 6 Membership Secretary's Report
- 7 Meets Secretary's Report
- 8 Publicity officers Report
- 9 Furness Projects
- 10 Hudgill Burn Mine
- 11 Newlands Furnace
- 12 Greenside Ladderway
- 13 Coniston Coppermines Site
- 14 Library
- 15 Date and venue of next committee meeting
- 16 Any other business

Present D. Bridge, S. Barker, J. Helme, P. Fleming, A. C-P-Thomas,
A. Wilson.
6 Members in total.

The meeting commenced at 7.30 pm.

1 Apologies for absence

M. Simpson, I. Matheson, M. Mitchell, D. Parsons, A.D. Cameron and J. Knowles.

2 Minutes of the last meeting

The minutes of the committee meeting held on Monday 23rd July 1995 had been previously circulated to members.

It was PROPOSED by J. Helme and SECONDED by D. Bridge, "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 The secretary reported the LDSPB had refused to grant planning permission for the erection of a mineral water bottling plant in Kentmere. Appeal pending.
- 3.2 Item 8.1 The secretary had picked up the kibble from Mandall's and was to keep it at her home until the new extension of the John Ruskin Museum was completed. She is seeking advise on its continued preservation.
- 3.3 Item 4A D. Bridge told the committee that on the recent Cornwall meet they had used a Radon detector, it was decided to ask J. Knowles to make inquiries regarding the cost of a similar detector, with a view to purchasing one.

4 Secretary's Report

The secretary had received copies of newsletters from the RFDCC, NAMHO, CLHF, and a list of NMRS's publications, which she would pass to the newsletter editor. No other correspondence.

5 Treasurer's Report

The treasurer presented a balance sheet covering the period since the last committee meeting. He made the following comments:

- 5.1 Literature sales included an excellent, nearly £100 from J. Knowles.
- 5.2 Income includes the first contribution from 'Adit' publications.
- 5.3 We had bought 70 copies of 'Beneath the lakeland fells' from 'Red Earth' publications at a cost of £250. J. Helme had divided these between members of the committee for resale. Retail price is £14.95, trade price to be £10.00 per copy. Royalties received to date, amounted to £1639.53.
- 5.4 Expenses included almost £300 on solicitors fees associated with the P. Johnston incident.

5.5 Journal No 4 sales now amounted to £1900.

The treasurer reported that he had received no information regarding the state of funding for the Greenside Mine dig for some time. D. Bridge to contact P. Blezard about this matter.

The remaining money for the sale of Dave Blundell's gear had been received, the secretary was asked to write and thank Cathy.

6 Membership Secretary's Report

The Membership secretary had sent a written report as he was unable to attend the meeting. There had been 4 new members since the last meeting, as follows: Richard Eley of Reading, Alan French of Appleby, David McAnelly of Newcastle and David Waller of Rhos-on-Sea.

7 Meets Secretary's Report

J. Knowles had also sent a written report as he was unable to attend the meeting.

7.1 Letter received from the National Trust regarding Cathedral Quarry. They require more detailed information on the costing of scaling and bolting work. It is then proposing to call a meeting of all user groups, to discuss the way ahead.

7.2 He will be sending out the new meets list with the next newsletter.

7.3 The Cornwall trip was a great success, with much exploration left to be done. There will be a return trip next year, if we decide not go to Ireland.

D. Bridge had written to J.G. Landless answering an appeal (in the NMRS's newsletter) for assistance with exploration work at Wanlockhead Mine. He replied, saying at present they were concentrating their efforts on the show mine and doing work on a shaft (escape route). They would however contact us next summer, when they hope to re-start exploration work.

D. Bridge met R. Fellows recently, Roy had very kindly consented to send us articles he had written about the Cornish mines.

8 Publicity Officer's Report

A.D. Cameron had contacted J. Helme asking the committee to discuss the publication of 'Slate from Coniston'. This was done, but it was felt no decision could be made until A.D. Cameron produced details of the costs.

9 Furness Projects

9.1 Woodbine Pit, Newton. A. C-P-Thomas reported work on the chimney was going very well. Rolf Fischer (our expert bricklayer) expects the brickwork to be completed in two weeks time. A. C-P-Thomas suggested we give Rolf a copy of 'Beneath the lakeland fells' as small token of our appreciation for his work at Woodbine.

9.2 Furness survey.

The work is continuing.

10 Hudgill Burn Mine

The opening of HGB mine continues steadily, more wood was required, after discussion it was decided J. Helme should get wood to timber the sides and M. Simpson would buy spiling boards.

11 Newland Furnace

The removal of some of the scaffolding has improved working conditions, the work of replacing the firebricks is proceeding slowly. Difficulty in transporting the heavy corbelling stone's from the quarry is still being experienced.

12 Greenside Ladderway

No progress, a meet to be arranged in the future.

13 Coniston Coppermines site.

P. Fleming had spoken to John Hodgson of the NPSPB regarding conservation work at the Old Engine Shaft laundry tower. Rydal Estate is still holding up the work because of what they consider to be insurance problems, it is now two years since we obtained scheduled monument consent to carry out this work.

Nothing further has been heard from P. Johnston, so we presume that this is the end of the matter. The solicitors bills have been paid, it was very unfortunate that our hard earned money had to be wasted on this incident.

RCHME are still active in the area.

14 Library and Mine plans

A. C-P-Thomas had received a bill from VSEL for the production of microfilms.

15 Date and venue of next Committee Meeting

This was arranged for 7.30 p.m. on Monday 20th November 1995 at the BMSC Hut at Coniston.

16 Any other business

- 16.1 J. Helme asked committee members to send him details of their expenses before the end of the month.
- 16.2 S. Barker asked about arrangements for the AGM and annual dinner. These to be the same as last year.
- 16.3 S. Barker reported that repairs were to be carried out to the boiler house at the Lowwood gunpowder works at Haverthwaite. EH have given the works a three star rating under the MPP. LDSPB have allocated £6000 for this work and also hope that EH will provide some funding.

SB 27/10/95

Chairman

CATMHS Financial Statement Sept. 1995

Balance July 1995			3035.93
Subscriptions 5 members	53.00		
Literature sales Journal 4	135.70		
Journal 3	31.82		
Adit (CAT share)	5.00		
Interest Current	0.63		
Red Earth Royalties	303.76		
	Total	<u>529.91</u>	<u>529.91</u>
			<u>3565.84</u>
Expenses			
Printing (Staples)	141.00		
Buckleuch Estate (panning)	14.00		
Red Earth 70 x Beneath the L Fells	250.00		
Solicitors Fees (Gough)	94.00		
Solicitor Fees (Kendal & Fisher)	205.62		
	TOTAL	<u>704.62</u>	<u>-704.62</u>
	Balance		<u>2861.22</u>
Balance held as:			
Building Society	2660.63		
Bank	200.59		
	TOTAL	<u>2861.22</u>	

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The meeting commenced at 7.30 pm.

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3 Matters arising

3.1 Item 3.3 J. Knowles had priced Radon protection equipment, the film badges were £15.40 + VAT, this included processing. The full detection kits were very expensive and the committee decided not to purchase one at this time. D. Parsons thought members could provide their own protection if required. J. Knowles to try and obtain a years supply of badges. A. C-P-Thomas asked if some could be made available for use in the Furness mines, as these were predominately driven in limestone, therefore susceptible to Radon.

3.2 Item 9.1 It was decided to give R. Fischer a book token as he already had a copy of 'Beneath the lakeland fells', action D. Bridge.

4 Secretary's Report

4.1 The secretary had received a copy of the NAMHO newsletter and minutes which contained several items of interest:

A) The 1996 Field meet will be held at Princetown on the 27th/29th September, to be organised by the Plymouth Caving Group.

B) The 1997 Conference will be held at Darly Dale on the 11th/14th July, to be organised by PDMHS.

C) The newly formed Irish Mining History society had become a member of NAMHO, a week long meet in Ireland is hopefully to be arranged next year.

D) The Haig Pit Restoration Group had also become a member of NAMHO.

4.2 The secretary asked if we wished to continue our NCA (Speleo Scene) subscription, all agreed, action J. Helme.

4.3 A communication received from P. Sowen of Subterranea Britannica (SB). The Council for British Archaeology (CBA) had indicated to them that it would be interested in the possibility of publishing, in its CBA Practical Handbook series, a guide to underground archaeology. SB think the proposed handbook should include contributions from a number of organisations/specialist authors. They would like any interested persons to contact them. The secretary to write for further details.

5 Treasurer's Report

The treasurer presented a balance sheet covering the period since the last committee meeting. He made the following comments:

5.1 The yearly accounts had gone to the auditor prior to the AGM.

5.2 Literature sales amounted to an excellent, £194 for the period.

5.3 These are the figures at the 31st October and are therefore the end of year figures which will be presented at the AGM.

6 Membership Secretary's Report

The Membership secretary reported there had been one new member since the last meeting, a J. Wood from Crewe, total membership is now 120. D. Parsons suggested the secretary should include the CATMHS's information leaflet in books sold by post. The leaflet required re-printing, action D. Bridge.

7 Meets Secretary's Report

J. Knowles reported the winter meets list had gone out. He had been disappointed with attendance at recent society meets. On the recent joint meet with PDMHS at Force Crag, only two CATMHS members were present. P. Fleming said the number of members attending the Wednesday evening social meets had also dropped dramatically, this subject to be discussed at the AGM. P. Fleming had attended a talk given by Mr Dickinson (manager at Kirkby Quarries) which he had found very interesting, suggested CATMHS asked him to speak to the society on some suitable occasion.

8 Publicity Officer's Report

A.D. Cameron had sent a message via J. Helme: He was preparing a draft of his publication 'Slate from Coniston'. When this was done, he would be seeking details of printing costs.

8.1 Fund rising for the re-development of the John Ruskin Museum at Coniston was going well, although the trustees were experiencing difficulties with the proposed purchase of the adjacent telephone exchange.

9 Furness Projects

9.1 Woodbine Pit, Newton. A. C.-P-Thomas reported work on the chimney was going very well. It should be completed after another couple of work meetings.

9.2 Furness survey. The work is continuing.

10 Hudgill Burn Mine

The opening of HGB mine continues steadily. On the next meet it will be necessary to install a ventilation system, as the air circulation was very poor on the last visit. Action A. C.-P-Thomas.

11 Newland Furnace

The work of replacing the corbelling stones to the height of the wooden beam is proceeding. On the November meet it is hoped that a fresh supply of stone will be obtained from the quarry. The CIHS held a Sunday meet recently, when they completed the support wall on the left hand side of the furnace. J. Helme had been contacted by a Mr Parker who is hoping to restore an old charcoal furnace in the Forest of Dean. He hopes to arrange a trip to look at the work carried out at Newlands.

12 Greenside Ladderway

A date for a work meet has been fixed for February. This item to be removed from the agenda, till after that date. John Keavey had given J. Knowles a copy of an old report referring to Greenside mine for the CATMHS library.

13 Coniston Coppermines site.

Rydal Estate is still holding up the start of work at the Old Engine Shaft launder tower, because of what they consider to be insurance problems. P. Johnston has won his appeal regarding the use of the carpenter's shop at the Coniston coppermines. P. Fleming said "In his opinion the Inspector was swayed by the use of inaccurate valley usage and bed space figures".

RCHME are still active in the area, three CATMHS members accompanied the archaeologist on a trip around the Coppermine site and a lot of useful information was exchanged.

14 Library and Mine plans

Member R. Seton had sent A. C.-P-Thomas a copy of his new book 'The Reasons for Stone Circles in Cumbria' for the CATMHS library.

15 Date and venue of next Committee Meeting

This was arranged for 7.30 p.m. on Monday 22th January 1996 at the BMSC Hut at Coniston.

16 Any other business

16.1 S. Barker asked about the final arrangements for A) the annual dinner and B) the AGM. To be as follows: A) J. Helme to buy table decorations etc. The committee to bring raffle prizes. B) The following committee members do not wish to stand for the committee in 1996: A.D. Cameron, J. Knowles, D. Parsons and A. C.-P-Thomas. J. Helme told the committee he would be willing to hold the post of Treasurer for one more year.

16.2 J. Knowles told the meeting of the difficulties he was now having with the printing firm who produced the society's newsletters etc. It was decided to obtain prices from printing companies in Barrow-in-Furness. Action P. Fleming.

16.3 The secretary had received a letter from Barbara Mitchell, thanking member's for the flowers.

There being no further business the Chairman closed the meeting at 10-00 pm.

SB 24/11/95

Chairman

CATMHS Financial Statement Nov 1995

Balance September 1995		2861.22
Subscriptions 6 members	64.00	
Literature sales Journal 4	42.90	
Journal 3	27.28	
Honister	67.45	
BLF	49.90	
Misc.	6.95	
Interest Current	0.37	
Unused expenses(Sec)	10.59	
	<u>Total</u>	<u>269.44</u>
		<u>269.44</u>
		<u>3130.66</u>
Expenses		
Printing (Staples)	89.45	
Micro films (VSEL)	16.03	
BCRA Insurance	136.00	
Meeting room rent	6.00	
Expenses Memb Sec	45.30	
Treasurer	27.82	
Pub Officer	37.95	
HGB mine timber	17.30	
Photo copy (CCC)	3.87	
Woodbine Chimney	43.07	
	<u>TOTAL</u>	<u>422.79</u>
		<u>-422.79</u>
Balance		<u>2707.87</u>
Balance held as:		
Building Society	2693.25	
Bank	14.62	
	<u>TOTAL</u>	<u>2707.87</u>