

C A T

The Newsletter of the Cumbria Amenity Trust
Mining History Society



No. 84
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August

Cover picture:

Richard Hower in the Waiotahi Valley in New Zealand. Thames Mine
The author by the transverse ore carriage. The ore hopper is to the left,
And behind Richard's left shoulder in the side of the level are many
Minor veins of mineralisation. See Richard's article in this issue.

Cumbria Amenity Trust Mining History Society

Newsletter No 84, August 2006

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Society Officers and Committee Members

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News

New Members

We welcome the following new members:

Mike Dawson, from Darlington.

Derek Cutmore, from Lindal. Derek is an extractive metallurgical engineer and has worked as a metallurgist at various mines in Southern Africa all his life. He is currently looking for a suitable property to start a mining museum near Lindal-in-Furness.

CAT Library and Archive

The CATMS Library and Archive, which is currently housed at the Armitt Collection in Ambleside, is to be moved to the Ruskin Museum. We are very grateful to the Armitt, but now feel that it would be more appropriate for our collection to be at Coniston, close to the copper mines. The Ruskin Museum already has a mining display, to which CAT has contributed, and it houses the Brownlee Collection of slate memorabilia. In order to create space in the Archive Room for our material CAT has agreed to provide additional shelving for stationery that is currently stored there. Mark Simpson was asked to do this and after he had measured up and designed the shelving John Aird purchased the wood and had it all cut to size. Mark and Ian Matheson installed it.

Coniston Local History Initiative

Part of the Coniston Local History Initiative approval for funding was that data must be deposited in an archive that is approved to BS5454. The Archive Room at the Ruskin Museum conforms to this British Standard, and that material will also be at the Ruskin. The project has now taken off and many local people want to help. A start has been made on the ground survey of the Old Man. The process of surveying and photographing the remains of the

Straw House and the Nail Road, which apparently was named after someone, is in progress. If anyone would like to help there is a task to do, and that is to carry out a GPS and photographic survey of the old Spion Kop aerial flight from the Spion Kop bank down to the Flight Road. The only remains of the flight are a few slate pillars on the fell side. (CAT has decided to make this the object of a meet in October) Each is to be photographed and its location logged. The only problem is that the course of the flight is up extremely steep ground. All volunteers welcomed with open arms.

Laser Scanning.

A friend of mine who lectures at Aberdeen University was talking to me in January about a research project he was carrying out on a piece of equipment which is capable of surveying with great accuracy the inside of buildings. At that time there were only two working units in operation in the UK. I remember thinking at the time that it sounded ideal for underground surveying. As part of the Local History Initiative Project I have asked if we could get a unit for a trial in Moss Head on the Old Man.

I am conscious that, if I do manage to get it to Coniston, it may be of interest to CAT. But I think that one location is all that we will trial on this occasion. I will check with Mike Dickinson at Burlington to see if he wants to be involved and perhaps transport it up to Brossen Stone for us. Then we may have to use rescue team gear to get it over to Moss Head.

Alastair Cameron

Hospital Level Conservation Project

The repair and conservation of Hospital Level has been completed. The level had originally been protected

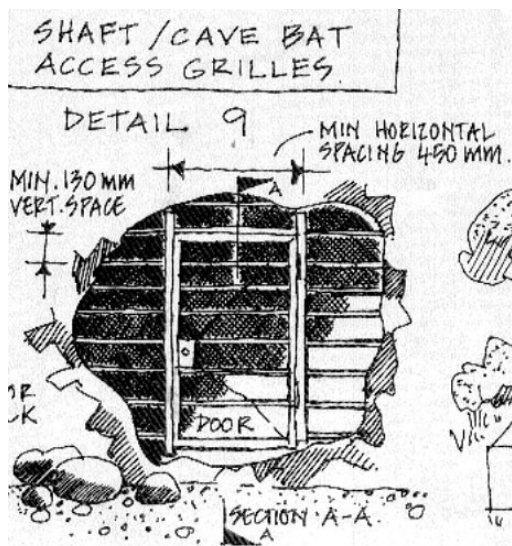
by substantial timbering where it passes through a rift filled with boulder clay and rocks. These timbers have decayed, and a substantial fall of boulder clay had occurred. This has been cleared and the area protected by seven timber sets carrying a roof made from reclaimed motorway crash barriers. Congratulations and thanks to the digging team; John Brown, Pete Blezard, Pete Singleton, Colin and Andrew Woollard.



The finished job. 17.7.06.

Kernal Level Project

Mark Simpson has now obtained the final permissions required for this project. The LDNPA, English Nature, English Heritage and the landowner have all agreed, and it is hoped that work can start in September. English Nature has specified a door which will enable access for bats:



CATMHS Publications

The above projects would not be possible were it not for the income from CAT publications. (Lakeland's Mining Heritage and Journal 5, which were joint efforts by several authors, Alastair Cameron's Slate from Coniston and Slate from Honister, Trail Leaflets by Peter Fleming and others, and Dave Bridge's CD ROM of the Coniston Copper Mines). The authors have all donated their intellectual content to CATMHS. Dave Sewart saved us a lot of money by putting them onto CD ready for publication. We are also indebted to those who sell them for us.

Geo-archaeological study at Levers Water. (Search for lost Elizabethan Level)

In Newsletter 82, February 2006 there was a report concerning a proposed geo-archaeological field study in the Copper Mines Valley in conjunction with the Earth Sciences Department at UCL. The main aim, as far as CAT was concerned, was to locate an Elizabethan adit some 80 yards long driven below Simons Nick to de-water Levers Water Mine.

Several prospective arrangements fell through, but a meeting was arranged at Coniston on Thursday 25th May between Professor Phillip Meredith and Dr Ruth Siddel of UCL and Peter Fleming, Mark Simpson, Dave Bridge, John Brown and Ian Matheson of CATMHS to walk around the site to evaluate its feasibility, and its suitability for a student project

Subsequently Phil Meredith emailed:

It was good to have the opportunity to meet up with you all and have a walk around the project site the week before last. Ruth and I both got a lot out of the evening - so many thanks for your time and effort.



Mark Simpson, Phil Meredith and Ruth Siddell evaluating the probable site of the lost Elizabethan level below Simons Nick.

We have subsequently discussed the feasibility of the work as a student project and we think it can be done. We hope you will appreciate that we have to bear in mind that it is necessary for an undergraduate student to get a do-able project out of this. So we propose the following strategy:

1. Calibrate the ground penetrating radar (GPR) over the known coffin level in Red Dell.
- 2a. Use the GPR to locate the "missing" level coming out from under Levers water (relatively straightforward work since it is on essentially level ground)
- 2b. Attempt to locate the position of Hospital Level where it turns and goes under the track above Miners Bridge.
3. Attempt to locate the Elizabethan coffin level under the steep scree below Simon's Nick.

We recognise that what you are really interested in is item 3, but we feel that this is a bit too risky to form the basis of a student project. Obviously, once we get the equipment up to Coniston we will do our very best to do all of these measurements.

With regard to timing, we are proposing that we should do the work

over about a week during August. Obviously, everything also depends on the student who wants to do the project passing his exams this summer. We will know the outcome of that this Friday (9 June).

Finally, it was very generous of John (Brown) to offer to make the sledge required to drag the GPR equipment over the ground (and especially over the steep scree).

(The terrain beneath Simons Nick where it is thought the old adit came out to day is very steep, rough and loose, so it was decided that the best way to proceed would be to mount the equipment on a sledge and support it by ropes from rock bolts inserted in the rock face above. In that way it could be moved across the survey area in a series of shallow arcs.)

On the 9th June Phil emailed again:

I am pleased to tell you that the student who wants to do the Levers Water mine project (Jack Walpole) passed all of his exams, so it looks like our project will actually go ahead after several years of talking about it.

I have checked the availability of the Ground Penetrating Radar and the Magnetometer, and they are available for the time we wanted. So I have booked the equipment for the period 4 - 13 August. That is the only time period over the summer when Jack, Ruth Siddall and I can all be around at the same time. As previously discussed, we will need some help with moving the equipment about and specifically for getting it up to Levers Water for objectives 2a and 3 in my previous e-mail ...

... Jack, Ruth and I are meeting with the Technician who looks after our geophysical apparatus (Richard Rabe)

to measure up and take digital photographs of the kit. I will then e-mail all the information to John with a first draft design of the "sledge" he is going to make for mounting the GPR. Incidentally, Richard Rabe has become very enthusiastic about the project and is keen to come along for at least the first few days of the fieldwork programme. That would be excellent because he knows the instruments and how to get the best out of them better than anyone.

This project will go ahead, commencing on August 6th. We have obtained the consent of the Barrow Mountaineering and Ski club to use their Club Cottage as a base, with accommodation for personnel and safe storage from equipment. We may have to hire a Land Rover for the later stages, in order to transport the equipment up to Levers Water. Peter Fleming, who initiated the project, will be co-ordinating.

Newland Furnace

The Newland Furnace Trust is waiting for news from English Heritage following a meeting with them at the end of June to discuss possible schemes & funding for the capping of the stack. Something may be possible but there are no details yet. Guttering on the south wall, which was requested by their landlord, is nearing completion. The Furnace will be open for Heritage Open Day on Saturday September 9th.

Book review

SMITH, Dorothy Bentley, 'A Georgian Gent & Co: The Life and Times of Charles Roe', Ashbourne, Landmark Collector's Library, 2005, hardback, £25.

Dave Bridge & Don Borthwick each have copy. Don lent me his, but I haven't found time to read it all yet! It is a mega tome – 650 pages, very thoroughly researched and with lots of black & white photos. A superb reference book.

Part one sets the scene, whilst parts two, three and four cover the history from the beginnings in 1700 to the termination of the partnership in 1833. Appendices deal with the Roe family pedigree, sources of copper, lead and calamine, and details of company shares. There are over 50 pages of notes and references.

Not a book to read quickly, but fantastic value at £25. CATMHS has purchased a copy for our library, together with Ian Tyler's latest on Goldscope.

IM.

New Books

A guide to Cumbrian Historical Sources by Michael Winstanley and Rob David. Pub CNWRS.

Available by post from The Centre for North-West Regional Studies, Lancaster University, Fylde College, LA1 4YF. Cost: £3.50 + £1.50 p&p.

A Dictionary of Lake District Place-Names' by Diana Whaley. Nottingham: English Place Name Society.

Evening Meet, August 9th

A large area of broken ground near Belle Hill was tidied up during 2004. Come and see the difference on 9th August.

Peter Sandbach

Potential failure of certain Petzl jammers.

Jon Knowles brought this to our attention. The following was published on line by Petzl:

To limit the risk of slippage due to improper loading

- attach yourself to the rope with two ascenders, each with its own lanyard,
- load the ascender in a direction parallel to the rope,
- if you cannot load the ascender in a direction parallel to the rope, clip a carabiner through the two top holes of the ascender, making sure the rope is captured inside the carabiner, or pass the rope through the lanyard carabiner (see diagrams opposite).

Product information

Even though slippage can occur with any ASCENSION or BASIC ascender, it is more likely to happen with the first series of ascenders having a nylon trigger, introduced in 1998. Specifically, those with the following serial numbers:

- B17 R from 97206 to 99109,
- B17 L from 97253 to 99091,
- B18 from 97308 to 99112.

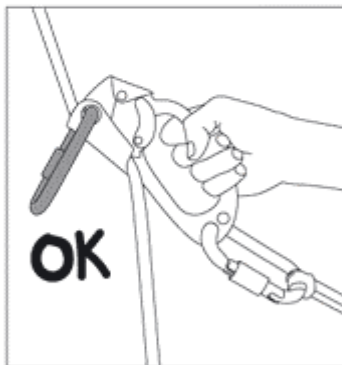
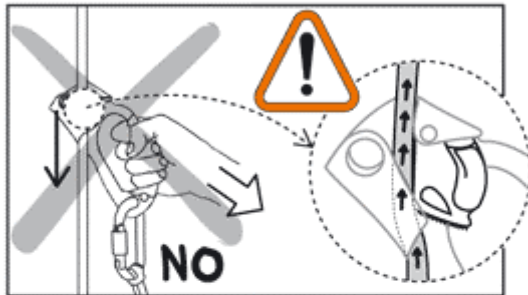
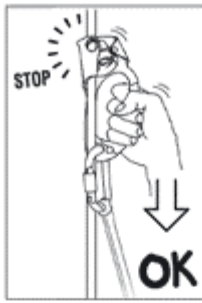
The serial number is stamped on back of the product, near the top. In 1999, modifications were made to the trigger and return spring to help reduce the risk of slippage. But the downside of these modifications is greater difficulty in opening the cam and sliding the ascender down the rope. If you would like, we will make these modifications free of charge to any ascender having a

serial number within the ranges listed above. To have this done, send the ascender(s) to Petzl SAV, ZI Crolles, 38920 Crolles, France, or to the distributor in your country.

Petzl reserves the right to refuse to modify worn-out product.

Improper loading was the likely cause of a recent incident in which a caver was ascending a flowstone slope. He was using an ASCENSION (attached to a lanyard) for self-belay/aid on a fixed rope, walking up the slope with his feet while using the ascender as a hand hold to pull himself up. At some point during the climb, the ascender slipped down the rope and the caver fell 7 meters (without serious consequences).

ASCENSION / BASIC B17 / B18
Improper loading can prevent the ascender from grabbing the rope



The ASCENSION and BASIC ascenders are designed to be loaded in a direction parallel to the rope; if loaded at an angle to the rope, the cam may not correctly engage the rope and slippage can occur (See the **technical notice**, diagram 2)

Report on Inspection of No 1 Level, Force Crag Mine, 15th May 2006

Access was gained to No 1 Level by descent from No 3 to No 2 level and then down via Gunn's rise. The water flow down Gunn's rise was believed to be less than normal.

Inspection of the furthest out-bye section of the level indicated that the drainage arrangements consisting of the two pipes embedded in concrete were functioning as designed, with water level in the pipes being less than one third of the pipe diameter deep.



At all times the air quality in the mine was entirely acceptable.

It would appear that the following conclusions can be drawn from this inspection: -

- 1) The large (15 metres plus) difference in water levels between No 1 and 0 level suggests the water gains access to 0 level by overflowing the ad hoc dams and down the inclined rise and the 1200 foot ladderway and not by natural fissures or percolation. The large natural dam present at Shaw's rise excludes the latter as a source of water to 0 level (except possibly in the most extreme of flood conditions but no traces of water from Level 1 flowing across the dam and down the rise could be seen).
- 2) Both the inclined rise and the 1200 ladderway could be isolated from the water flow in No 1 level by installing

simple dams. Assuming No 1 level to be reopened to day then the suggested mechanism would be to use 25kg bags of concrete laid to a height of say 45 cm above the sole of No 1 level

- 3) The existing dam in the bypass level inbye of the 1200 ladderway could be isolated from the No1 level by the same procedure, allowing the existing body of water to evaporate or once the water level in 0 level has fallen far enough by breaching the existing dam.

Re-opening of No 1 Level

The re-opening of No 1 level would permit the construction of the dams mentioned above and also permit regular inspection and evaluation of the water depth in Level 0.

In deciding on a method of working the following should be born in mind: While it would be perfectly possible to work in the conventional manner the reduced height in the adit would make the installation of headtrees followed by spiling into the fall over them very physically demanding and tiring

Having re-opened the level serious consideration would have to be given to relining the whole of the timberwork since it is all of exactly the same age and condition.

It is suggested that the fact that the concrete has been installed could be used to advantage if a completely different method of working were adopted. The concrete surface would permit the transport of large diameter concrete or steel pipe on rollers up to the fall and provide an anchorage for hydraulic jacks to "pipe jack" through the fall. Once this was achieved the pipe could be extended back to the level entrance thereby safeguarding against further failure of the timbering, whilst providing simple access.

John R Aird, 18th May 2006

Bloomeries and Bloomsmithies, Sunday 21st May

ML: Ian Matheson & Allan Westall.
Sheila Barker, Don Borthwick,
Maureen Fleming, Peter Fleming, Meg
Matheson, Mike Mitchell, Peter
Sandbach and Fred.

This meet was a follow up to the iron furnaces meet last year. It was intended to appeal to geriatric members of our society, and consisted of more driving than walking, with a pub lunch (Nearly all our active members are geriatric) The chosen sites are all described in the English Heritage publication 'Furness Iron', edited by Mark Bowden.

The weather forecast was atrocious, but in fact the day began bright and sunny. We met at Colwith Bridge, the gateway to Little Langdale. Iron ore was brought here for smelting from the mines at the head of Langdale and from Conistown. We had hoped to be able to visit Hackett Forge, which operated from about 1630 until 1720. Allan Westall had previously obtained permission from the owner, but unfortunately the day was not convenient to him. We hope to arrange an evening visit later in the summer.

There is however a bloomery site further downstream, below Colwith Force. We followed the footpath through the woods on the east side of the river Brathay, and within yards discovered an old pit where bracken was burnt to make potash. The bloomery site is just below the spectacular Colwith Force, and consists of the outline of some ruined buildings and some heaps of slag on natural terraces beside the river. Above the force are a series of dams and a leat, supplying water to a working pelton wheel turbine on the opposite side of the river which

generates electricity for houses at High and Low Hackett.



Colwith Force

From here we drove to Glen Mary to investigate the Tom Gill bloomeries. These at first proved slightly difficult to locate, as there are also remains of charcoal pitsteads and the ruined Lane Head Farm. Careful study of the plan in Bowden's book revealed all, though all is not very much. There is a small mound of slag and an L shaped stone channel partly cut into the bedrock halfway up a small waterfall. This may have powered a small undershot water wheel or fed a launder to an overshot wheel.



The L shaped channel.

In the bed of the stream below we found a spike that seemed to be

anchored in the bedrock, but the water level was too high to examine it properly.

There was speculation regarding the age of the many bloomeries that surround Coniston Water. It seems likely that they pre date the blast furnaces which were established in the early 1700's and the earliest may have been operated by the monks of Furness Abbey around 1100. The North West Regional Archaeological Research Framework's resource assessment for the medieval period, states that C14 dates from the current Lake District research project range from the twelfth to the sixteenth centuries.

We next drove to Beck Leven Foot bloomery, which consists of a large mound surmounted by a stand of trees in the corner of a field. It had been excavated in 1984, and is estimated to contain about 130 cubic meters of material. The bright weather had disappeared by this time and it had begun to rain. It was also lunchtime, and it was felt that the awkward scramble across the beck would not be worthwhile, so we contented ourselves with viewing it from the car park.

Brantwood is nearby, so we went to the Spinning Jenny Café for lunch. Unfortunately, what with the rain and the time of day, it was packed out and there were no empty seats apart from the wet ones outside. We gave up and went to the Crown in Coniston.

Peter Fleming suggested that we might visit Coniston Hall to look at the banqueting hall. There had been a wedding reception there the day before, and the father of the bride still had the key. Maureen Fleming offered to fetch it, and soon returned, with an invitation to help ourselves from a barrel of Bluebird bitter that was left

over from the event. We felt it would be churlish to refuse. In his haste Peter Fleming put his glass to the wrong part of the spigot and squirted beer all over his trousers. Neither Peter nor Maureen Fleming, who are not themselves related, claim links with the le Fleming family that built the hall.



Too much hospitality Alan?

Richard le Fleming acquired the Manor of Coniston in 1250 as a dowry on his marriage with Elizebeth de Urswick, and soon after established the first Coniston Hall. Around 1580 William Fleming began work on the present hall, but le Flemings re-located to Rydal Hall during the late seventeenth century. Coniston Hall was maintained as a hunting lodge until the park finally fell out of use around 1710. In 1815 the hall, which had by then fallen into a state of some disrepair, was



converted for use as a farmhouse and the great hall was converted for use as a barn. The National Trust bought Coniston Hall in 1971.

By this time it was raining properly, but we didn't really mind, and everyone seemed determined to complete the itinerary. Accordingly we drove through Coniston Hall campsite as far as possible to Hoathwaite Beck in order to examine Springs and Harrison Coppice bloomeries. There was much evidence of previous strong winds in the form of camping debris and broken umbrellas.

Springs Bloomery is one of a number of bloomeries on the west shore of Coniston Water and consists of a large oval mound of slag material estimated to contain 1100 cubic meters of material. It was excavated by W G Collingwood in 1897 when three furnaces were identified beneath the slag and charcoal remains. Harrison Coppice, a kilometre further south, consists of two mounds of slag, the slight remains of a building, and a potash kiln that post dates the use of the bloomery.

Ian Matheson.

Ellesmere Port
Sunday 25th June
ML Peter Sandbach.

This was a visit rather than a meet, and was poorly attended, perhaps because England was playing Ecuador in the football World Cup. Only Mike and Barbara Mitchell and Ian and Meg Matheson made the effort, and were rewarded with an interesting day out.

We were due to meet by a big crane on the ship canal, but this turned out to have been demolished. There were fine views of the Ship Canal and a large ship was passing through, apparently a

rare event now, but we were politely asked to leave by a security guard.



Not quite a mine visit, but there *are* several connections. Ellesmere Port was a canal port off the river Mersey before the Manchester Ship Canal was built. Now it is a canal leisure complex and museum, and a mecca for narrow boats. In the old days it handled bone, stone and flint, and china clay imported from Cornwall for onward transportation to the potteries via the canal system. The Harrison Ainslie ship Warsash, which carried Furness iron ore, was built and launched at Ellesmere Port. The old launching slip still exists, now separated from the sea by a road and the Ship Canal. A series of displays recount the history of the canals; particularly interesting is the one on the Bridgewater Canal, which was taken right into the Duke's coal mines at Worsley.

There were many machines and lifts at Ellesmere Port – a woodworking shop with everything driven by line belting was owned and operated by Peter Sandbach's uncle, and he told us that his grandfather once lived at No 2 Porters Row, one of a terraced row of workers cottages, some of which have been restored and furnished to represent periods from 1840 to 1950.

The whole complex was powered by a single large horizontal steam engine,



The two Lancashire boilers

fed by two Lancashire boilers, which pumped water into an accumulator tower in order to provide hydraulic power.



Meg operating a lock? The power house and accumulator tower are in the background.



Narrow boat



Jolly group enjoying a boat trip

The final event of the day was a narrow boat trip up the Shropshire Union Canal through the now derelict remains of the ironworks it once served.

Ian Matheson



A tight fit!!

Summary Report on a trip to the Upper Long Crag area of Wetherlam

On 25th May 2006 a small group visited the Upper Long Crag area of Wetherlam to investigate old copper workings which are located high on the north side of the mountain approximately 95 meters below the summit at an altitude of 662 meters.

In December 1989 ADC had briefly inspected the site with Ian Tyler, Allen McFadzean and Alastair Lings as part of a trip to the Greenburn and Pave York mining areas on the north slopes of Wetherlam. At that time there was no information on the Upper Long Crag site. Only one member of the group was aware it existed, but had never visited it. The group decided to make amends and on arriving at NY 286 012 they had been surprised to find a number of terraces built into the steep mountainside to create working areas. They were on very difficult ground and clearly these workings were very old and hardly ever visited. On that occasion, in 1989, no attempt was made to date the workings but further exploration above this point revealed a couple more terraces at an altitude of approximately 680 meters. There was little time to carry out anything more than a brief survey as it was late in the afternoon and getting dark.

The group in May 2006 consisted of Alastair Cameron, Eleanor Kingston (LDNPA Archaeologist), Maureen Fleming (Chairman, Coniston Local History Group) and CAT members Mark Simpson, Peter Fleming and David Bridge, with a Spanish friend. It was decided to gain access to the site from Coniston rather than Greenburn. Originally it had been planned to travel along the Erin Crag ridge from Levers Water and descend to the site from the shoulder of Wetherlam. On the day the actual route chosen was via Swirl Hause and then a traverse across the mountainside to the site. For future visits the former route may be the preferred one. A GPS was used to locate the actual

site (Magellan 'Explorist') and to record the location of specific artefacts. As with most GPS instruments the 'go-to' feature of the Magellan was found to be unreliable once within 100ft of the site.

The site (NY 28630 01297) consists of two small levels driven into the flank of the mountain, one of which is blocked by a large stone fallen from above. At NY 28610 01327, approximately 60 ft below, a levelled platform had been formed using large blocks of stone. Quartz, magnetite and pyrite were found on the platform. There were obvious remains of a building at the back of the platform with some evidence that it may have contained a blacksmith's hearth. To the north east of the site at NY 28667 01330 further possible trials were also noticed. An attempt by ADC to ascend to other possible levelled platforms, spotted on the trip in 1989, was abandoned. The ground here is extremely steep and loose.

There was a lengthy discussion about the possible age of the workings and the means of access. Although there was little available evidence it was felt that the mid to late 18th Century was the most likely date of working but there was some discussion as to whether it may have been earlier.

It was decided to return to Coniston by completing the traverse of the north of the mountain to Birk Fell Hause at the foot of Wetherlam Edge. This was a fortunate decision as the group soon picked up an old but well engineered track which may have been the former access route to Upper Long Crag and the despatch route for ore. The route was logged using the Magellan GPS. Two further trials were passed at NY 28967 01495 and at NY 29002 01502. A further trial was spotted adjacent to the walker's path at the bottom of Wetherlam Edge. From Birk Fell Hause the group returned via the Elizabethan workings above Dry Cove Bottom and then joined the Hole Rake track back to Coniston Coppermines.

Reference to the site is made briefly in Eric Holland's Field Guide to the Coniston Coppermines. Available maps show conflicting detail of the workings. The 1:10,000 2nd Edition O.S. shows no reference to the site. It is felt that the site was so remote that it missed the attention of the surveyors when the 2nd Edition was being prepared. Unusually, more recent maps refer to the presence of old mine workings at Upper Long Crag but, as with most contemporary O.S. maps, the detail is poor in comparison to the 2nd Edition and no specific location can be determined. The site is not visible on Anquet Maps aerial photography.

The location of the main features was recorded using the GPS. The positions were downloaded to a lap-top and logged as waypoints on Anquet Mapping software. The Magellan Explorist is fitted with electronic systems for improving the accuracy of readings. Accuracy was stated as being 18 to 28ft while on the north side of Wetherlam. As soon as the southern horizon improved (at the base of Wetherlam Edge) accuracy was enhanced to between 9 to 16ft. This particular GPS and the mapping software were used very successfully during a survey of old trackways on Fleetwith Pike during January to April 2006.

There are still a great many interesting features to investigate and interpret on Wetherlam. Aerial photography is proving very useful and has shown up a number of former tracks which are not easily seen on the ground. One, on the eastern side of Steel Edge, was investigated in March 2006 and was found to lead to a small copper working at an altitude of 405 meters. A zig-zag track on Glassy Crag has yet to be investigated. There are also possible indications of copper workings high on Hen Crag (as reported by local climbers) and similar on Ling Scar and Swallow Scar to the south of the summit in the area of NY 293 005. The late W Barnes, explorer, mountaineer, writer and former

crane-driver at the Barrow shipyard, explored Wetherlam with great enthusiasm while living in the Coppermines Valley. He frequently reported on interesting sites he had found on the mountain but, sadly, no written records remain.

Future Work

- Return to Upper Long Crag to check out the underground levels and locate the upper workings.
 - Carry out a detailed survey of the Elizabethan workings above Dry Cove Bottom, try to put an accurate date on them and develop a permanent archive survey record.
 - Investigate the ziz-zag track on Glassy Crag.
 - Investigate possible industrial remains on Ling Scar and Swallow Scar.
 - Visit the site of the Wetherlam Slate Quarry, as yet never properly surveyed or interpreted.
- Alastair Cameron.

Long Crag Workings

Observations made in May 1977 and November 1983, by Dave Bridge.

In view of the recent visit organised by Alastair Cameron to investigate surface features at the Long Crag workings near the summit of Weatherlam, I thought it would be of interest to record field notes I made many years ago when I explored the workings underground:

Upper Workings

Three old levels situated high up in the crag. There is a dressing floor to the SW with the remains of a stone structure and also a knockstone.

Level at SW end.

A level directly on the vein in the side of a shallow gully.



The entrance is almost blocked by a large boulder. Deep water inside and much water running from the roof. Approx 14 yds to the forehead. The narrow vein is stoped above and there is an 8 yd long sump. This can be crossed using a ledge on the footwall but timbering over the open stope must be avoided. The timbering is under water and becomes obscured by disturbed mud. Drilled. Explored wearing a wetsuit.

Middle level

This is situated approximately 40 yds along the crag to the NE of the above level. A rowan tree by the portal seen in May 1977



was found to be dead and broken off in November 1983. A 5 yd cross-cut in a shallow gully leads to the vein. To the SW (right) is a 3 yd long trial. The level

to the NE is dry beyond the entrance and passes through an extensive 20 yd long stope .



There are floor timbers and two sumps. The first sump which is shallow can be passed on solid ground to the right. The second sump is very deep and continues beneath the floor of the level which is supported by a rock bridge. The floor and roof rise after the second sump and could be blocked at a further 20 yds or more where there is much collapsed timbering from above. Drilled.

Level at NE end

A cross-cut in a shallow gully is collapsed at the entrance.

Both the middle level and that at the NE end have a rock platform built out near the portal. The situation of these levels is very impressive.

Lower Level

Long Crag lower level consists of a 120 yd cross-cut to the vein. Trials along the vein in both directions, and on a parallel vein, found little or no ore. The cross-cut extends a further 50 yds. In November 1983 a collapsed powder keg was found here and the top or base of another keg. Also the neck of an old bottle. There is a built-up trackway across the stream near the portal.

Dave Bridge.

A journey to the Gold Workings of New Zealand, by Richard Hewer.

Introduction

Eileen arrived home one day in late Autumn 2005 with a smile on her face.

“How would you like to go and live in New Zealand for three months? The Ministry of Health have made me an offer to work as an advisory consultant for the QA programme?” What could I say? “I’ll get the bags out of the loft.” As quick as that. I closed the family business, sacked the staff (me) and called at the doctors for a health check. Mistake no1... sent for tests...High blood pressure and a diabetic to boot. See what happens, retire and they put you on pills!

Eileen and I implemented a programme of rapid planning for our stay including a two-week holiday in the middle, when our family would come out to join us. I quickly delved into the mining sites near Auckland and found that there was plenty to see. It was time to go hunting. We flew to Los Angeles for the New Year and then directly on to Auckland. The following report is geared towards the mining sites rather than other distractions, namely; beaches, bars, wines, restaurants, rafting, shopping, seal watching etc etc.

North Island

Intense volcanic action and rising hydrothermal fluids formed most of the gold bearing quartz and mineral reefs in the North Island. These reefs tend to follow fault lines and fissures and a few of the reefs opened out into rich pockets or bonanzas where the gold replaced the quartz; every miners dream! Through the following thousands of years the volcanoes have eroded and the hard reefs have become exposed. The country rock largely consisted of Andesite lava, known as the Premier Andesite Flow, Dacies and Jarosite. Mineral deposits were usually in the form of Galena, Sphalerite, Manganese, Stibnite, Pyrites and other minerals, rarely did pure gold appear. Prospectors, after negotiating with the Maoris, were allowed to pan the fine alluvial gold, following the deposits to their source. Having established the reef or deposit by clearing the ground and burning the brush the prospectors then had to decide whether to work the claim or to sell it to the large financial institutions.

The Coromandel Peninsula.

Gold was first discovered during the 1840’s. The initial rush bated as the easily recoverable alluvial gold became exhausted. Capital, expertise and the necessary equipment were required to make any venture profitable. The gold was so finely dispersed through the quartz and surrounding mineral zones that the stampers of the day lost up to 60% of the gold through their tailings. It was only when the cyanide process was introduced that recovery increased to 92% and upon fine tuning higher returns were achieved. A great deal of the gold went down the rivers. Interest in the remaining deposits has (2005) returned with an estimated four billion pounds worth ore bearing gold still untouched, however, Thames Council have rejected the outline planning applications and a high court judge has concurred with the council. The whole area is now classified as an ‘Environmental Reserve’. There will never be any mining on the Coromandel Peninsula.

Travelling south from Auckland then east across the flat lands and finally north, some 80 miles from Auckland, we arrived in Thames, now a rural coastal holiday town, clean and proud of its past. Thames School of Mines opened in 1886 and was instrumental in introducing new innovations of mining technology to the area.

At the north end of the town are the sites of A.G. Price and the C. Judd foundries. Two major concerns who provided the much needed castings and machinery for the mines. It is fair to say, that at the majority of the mines we visited invariably metal work would have one or the other names cast in them. A.G. Price is still operational and world renown for its quality castings and equipment.

Close to the foundries is the Golden Crown Mine, a tourist and working mine. It operates as an interpretive centre and processes ore the traditional way before being transferred to a modern mill (next door). We were taken through the lower adit to view part of the old stopes and the Caledonian Reef; the level turned and continued forward towards the Caledonian Mine. At this point we climbed a shallow incline and emerged from a second adit. The main adit was being repaired; Eileen wandered down and took a flash photo, thus

blinding the manager who was measuring the timber! We were quickly ushered into the mill where a five head Californian stamp was crushing the ore and feeding it onto a Wilfley table, this in turn fed a Berdan Pan. (Recovery 40% – 60%). From this point the ore was passed to the modern process (I understand that the mine is allowed to process two tons of ore a year from it's



Golden Crown mine

workings). The Golden Crown in its heyday made substantial returns, just missing out on the Caledonian Bonanza by 5 metres from the end of it's sett and only a few feet away is the Tookeys Shaft (417ft deep), which returned \$41,000 of gold. The veins and mines are so close together that it is difficult to identify them with certainty; within 200 metres there are nine mines!

A hundred metres away, just off the H25 road is the site of the Shotover Mine. (Shotover produced over 100,000 ounces of bullion) This was the site of the first major discovery of gold at Thames in 1867. There I was standing on a flat banking and I couldn't see a thing. I could see a sub tropical jungle comprising of palms, creepers, trees, lush vegetation, little 'things' dodging in and out of the undergrowth but no mine as such. After much searching with Steven (my son) I did find the shaft or rather it found me, fortunately it was full of bushes and small trees. Nearby up the banking I found a level, I charged in, all sandals, shorts and torch. The drive ran for 70 feet to a fall, I emerged coated in yellow Jarosite, tripped and fell down the banking. I think I missed the main site.

Moving north we visited the site of Russell's and Sylvia Battery, the area had been cleared,

though in the steep sided valley I did find a 60-foot long trial leading to a white reef, and on the opposite side, across the ravine, a cascade of ochre laden water tumbled out of the undergrowth down into the stream. Obviously there was an adit somewhere in the lush undergrowth, I could not see the source and approach to it was impossible. Nature heals very quickly.

We made our way back, passing the Golden Crown Mine, when Eileen saw a War Memorial on the hillside adjacent to the Waitotahi valley, now unwittingly, she was leading me to quite an exciting area. We drove up the steep valley road and completely missed the turn off to the memorial, however, in front of us by a tight bend in the road was a Department of Conservation notice board. This presented a resume of tracks, walks and viewpoints in the area and the way to the Moanataiari Battery (15 minute walk) also interestingly a warning to keep out of the many mine tunnels and shafts. Well, what can I say? I grabbed my bag of mining gear, camera, food and shot off up the main track and guess what? I had read the sign incorrectly; *I was in the wrong valley*. Eileen ran after me but I was off and away. Not surprisingly I couldn't find the battery! Having climbed 400 feet, thoroughly cheesed off, and being eaten alive by countless mosquitoes, I turned round and headed back.

On the way down I noticed a short level and a small sidetrack leading around the flank of the hill. Still grumbling I decided to follow the old and rather ill defined, overgrown track until I tired. I turned round and there tucked in at the rear of some bushes was a small level, another trial I thought. It was old, hand driven about 4 feet high and wandered haphazardly along a vein for 150 feet (northwest) or so before ending at a forehead, **or** was it a forehead? It just proves that one should always go to the very end. In fact a main drive had cut through the end of the level at right angles to it at about three quarters of the way up the forehead. I squeezed through and the drive went. There was a fall to the left where the level came out bye but continued to the right. A quick check showed that there was much to see, however, I had to return to Eileen, who of course gave me a lot of grief for mis-reading the sign.

I returned (on my own!) the following week after the tail end of a cyclone had lashed the Peninsula. I continued my inspection. I think I was in the upper workings of Waitohi valley. What appeared at first to be a series of drives became more expansive as it was planned out. The main drive was spacious, about five feet wide with a deliberate groove on either side about four feet from the ground, the rock had been cut in places and rubbed in others by the upper edges of the ore wagons as they trundled through. The adit height was about six feet and the sleepers were all still in place. The way up the main drive led to a crosscut following a string and blistered areas running southeast to a forehead. A number of zinc air ducts lay to one side, the second crosscut followed a vein northwest before splitting at a junction, both drives ended at foreheads.

I then came to a well-preserved and very solid hopper set to one side (NW) from the main drive and opposite a short drift on the other side. A great deal of rock had spilled out of the hopper covering half of an ore wagon transfer frame and wheels. A set of rails about 5 feet wide had been placed in an excavated track at right angles and below the main adit drive. Then another short pair of rails in line with the drive, had been secured to a frame that had four flanged wheels standing on the wide rails. The operational sequence was as follows. The empty truck came along the adit and onto the short rail section; the framed wheeled assembly was pushed so that the truck moved sideways into the sub level and under the ore chute. After it was filled it was drawn back and out by. I tried to film into the hopper but it was full of rock, still spilling out whilst I was there. Obviously there were substantial workings above but no way up from the present horizon.

I continued to another drift running southeast this eventual gave way to a moderate stope. Substantial stemples and planking supported a considerable tonnage of deads. The small vein was exposed in the roof. The level ended a short way ahead of the stope. Returning to the main drive, further ahead a small side drift was stacked with timber. Just after this drift a reverse junction was encountered with an underhand stope going down from the sole of the level into a sub level and an overhand

stope rising above. A lot of deads had run into the stope or had been tipped down, whilst the timbered stope above was quite sound. Descending the shaft to the rubble and down into the sub level would have been difficult without a means of assistance. I will explore further on the next visit. The reverse level continued beyond the open stope, curving away further into the hill, the gap needs to be bridged before further exploration can be continued. On the main drive a small drift ran southeast and then the level entered timber sets that had totally collapsed suggesting that the level was coming to an out-bye. There is still much to explore in this working and I intend to return with suitable equipment (How do you explain to a forest warden the reason for carrying a ladder half way up a mountain side, Dear Doctor-suggestions please?) After I emerged and rounded the corner of the sidetrack I found any area of spoil and looking up the steep slope I thought I saw a platform of rock. This being so, just perhaps an upper level exists above. This would tie in with the workings near the ore hopper (next time).

Three days later I returned. Why? Because it occurred to me that the little overgrown track could lead to other workings. The track continued beyond the workings previously mentioned and climbed to the lower summit of a double humped hill. Nothing, apart from a dead possum, however after blustering through the undergrowth I found a ridge trail and a track descending into the Moanatairi valley. The upper section was very steep and I soon realised that I was in a substantially worked area. A small artificial plateau appeared on my right; at the back of which lay a collapsed level but immediately on the opposite side of the path an eight-foot circular shaft could be seen with the ubiquitous bushes growing out of a collapse of timber and earth. I suspect the plateau was the foundation for the winch house or aerial ropeway. A little further down the remains of another shaft and adit appeared. My path then came in at right angles to a dray road. The upper section was completely taken over by bush but fighting my way through and down the lower portion I came across a total of eight adits.

The first area still retained three huts, a concrete base for the compressor and a water

tank in one hut, another was an equipment hut and the third an office. The compressed air line entered the adit that had totally collapsed, a slump above showed that the fall was impressive; could be dug though! A very large tip trailed off into the side of the stream and the waste had been tipped over the old dray road suggesting a later working, perhaps 1920s or so. Several lengths of rail lay around. Undeterred I skirted the tip and picked up the dray track. A few yards on and I could see mineralisation running parallel to the track, pick marks along the face showed where the miners had tried the vein, this was quickly followed by two adits that showed promise but were in a poor condition at the entrance. The third adit had a frame and door fitted, inside the drive went for six feet and a few tons of pyrites and minerals had been removed. It later proved that the first area of mineralisation ran in line with the valley side and appeared after only six feet within all the levels and had been cleared to the surface some ten feet above.



Moanatairi Valley adit

The following level was partly open, after that the final two levels were well constructed, sound but the floor was covered by nine inches fine slippery white, yellow and orange mud (Andesite) and blood red water. Then things got a bit hairy. I entered the first level slowly sinking into the mud; you know the routine! Test the floor, look at the roof, move on, and stop. Ten feet in and the adit cut through the first vein, this had been removed more or less to surface. I looked along the stope and then heard a sound like ratchets clicking; I slowly raised my eyes and saw an army of very large New Zealand spiders and huge (slim) cockroaches with very long legs, (harmless Wetas).



They jumped on me! It was WW3. I was out of that adit like a cork from a champagne bottle. They were all over me, I thrashed around sending orange mud everywhere, and they were crawling down my neck, over my clothes and so on. Eventually they got the message and left, spiders' running back to the adit, the Wetas jumping three feet at a time, up the adit wall and into the stoped area.

Having recovered and coaxed my heart back into position (it wanted to go home). I considered the situation. It was the slow movement and the cap lamp that activated them. I only required a quick dash through the stope into the adit. The insects positioned themselves in that area to catch passing flies and bugs. I charged through, albeit in slow mode, with mud up to my knees. After fifteen feet the spiders had gone. I worked my way forward passing several cross cuts and small stopes until after rising up over several small falls the way forward dropped into deep water. There were no shot holes, just sweeping pick marks. The adit continued into the distance. I returned, ploughing four hundred feet back to the entrance.

Thirty feet further down the valley the final level appeared as promising as the last only it was bigger, a major haulage tunnel. My little friends were there waiting for me. I charged through and continued down the adit passing several small stopes and cross cuts. A branch went off to the left and then started wandering, a fall stopped progress, deep water. A tidemark half way up the side marked previous waterlines. Back to the main drive, this continued passing a colourful encrusted ore chute and the level widened to

about ten feet for a distance of about fifty feet, obviously a passing loop for the trams. After another hundred feet or so a small fall dammed up the level to an unacceptable depth. I will return with the necessary aids next time. (Waders!). I was six hundred feet in and it was time to go. All the adits showed the grooves from rubbing tubs.

When I emerged it was pouring down, the weatherman said it was to be a sunny day. Wrong! I stood just in the entrance looking at my orange yellow legs, wondering how on earth I was going to remove the stuff and explain myself to Eileen when my peripheral vision caught a movement, a pair of antennas were waving around on my shoulder, a Wetas had joined me to watch the rain. I returned to thrashing mode and mumbling to myself, made my escape climbing back over the summit into the Waiotahi valley and to my car, but there was still surprise for me. A hundred yards from my car a Department of Conservation van was parked on the track, there I was covered in bright orange mud looking like Daffy Duck, what explanation could I give? Luck was on my side; the guy was working in the stream and never saw me. By the way, three months on and my feet are a lighter shade of yellow! It's time to move on.

We moved on north towards Coromandel town. Left the highway for several gravel roads in an effort to find the Kapanga mine (Larnach). The track led to a closed gate, a sign painted in blood red said. 'Private, all dogs will be shot!' I offered a couple of woofs and beat a hasty retreat; well, Eileen was mouthing at me. The next track led to the Kapanga mineshaft. A notice stated, 'Keep Out'. Actually you couldn't get in. The site was fenced and the sub tropical plants were squeezing the wire like 'triffids' trying to get out. The main shaft was sunk 300 metres and from the 1860s worked two reefs, Kapang and Scottys. There were some large stopes and initially the operation was very profitable, the mine survived for 50 years before closing down. I surveyed the scene; a couple of sheep stopped chewing and glared at me. Ok, we'll try the Hauraki and Kathleen mines to the north of Coromandel.

We were dismayed to find that the Hauraki mine site is now the municipal rubbish centre.

The mineshaft was 165 metres deep but the lower levels were poor producers of gold. On the opposite side of the road was Kathleen mine (in the middle of a water treatment plant). The main shaft was sunk to a considerable depth and produced not even an ounce of gold. Returning to Coromandel and around the base of Jack's Point, several adits appear right by the roadside on a tight bend. Around the corner a fish and oyster processing plant now occupy the Union Beach Battery. Just offshore is the Hauraki mine main lode shaft. Several levels and shafts penetrate the point, but local knowledge is required to gain access. The gold at Jack's Point was much easier to recover and could also be panned due to its coarse nature. Nearby Bucklands Battery was situated up a narrow valley, but all that remained was the water leat and tunnel. The river did pan out black magnetite but no gold.

We left Coromandel town and headed back to Thames and then east to the Broken Hills Gold Mine. Gold was discovered in 1893, after initial sampling returns proved to be poor. Over two hundred people worked in the valley. The mine struggled through the years and some high-grade ore was discovered after the turn of this century keeping the mine solvent for 8 years. Operations continued until the 1930s.

It was a gorgeous day, the girls went paddling in the river and Steven and I scurried up into the jungle. By the rough roadside stood two large circular cyanide tanks minus their bases these were found in situ at the battery site above. Nearby lay part of a Cornish boiler draft doors and faceplate, a hopper and the remains of a Pelton wheel control system, also a very deep mud filled three-foot diameter steel line shaft. The concrete bases supporting the 20 head battery and primary power foundations were evident (Originally powered by steam but then replaced by a Pelton wheel). A tramway ran from the top of the mill site to Battery Level, now padlocked. The level has been cleared and helmets and mining gear could be seen on benches a little way up the level. Recent exploration has revealed that the level extends for 600 metres drawing from four reefs. Sampling has established values of around 14 ounces of gold and up to 425 ounces of silver per ton that could be extracted from ground adjacent

to the reefs. The rails from the level led to a tip head. It would have been great to enter the level but the padlock was too secure! We joined the girls and tried some panning in the Tairua River, maybe a couple of specks of gold, it was hard to tell. Mosquitoes were more successful as was the seven-inch stick insect that hitched a ride as I was tracing a leat by the river.

Then came the news that a £3200 nugget had been found in the Arrow River at Queenstown, South Island (Mainland). In the same area we were going to visit the following week. The news set off a 2006 gold rush. Prospectors poured in hauling dredging equipment, vacuum pumps, generators, and mini riffle machines. A helicopter had been hired and transported equipment under the cover of darkness, however the area is a national park. One can pan for gold legally provided the tools are restricted to a pick, a shovel and a gold pan, no more. Needless to say there was a mass round up.

From Broken Hills we dropped south on the I25 to the Karangahake Gorge near Waihi and the sites of the Crown, Woodstock and Talisman mines and batteries. (In New Zealand, stamps or stamper is the drop head Californian stamps. A battery is the whole extraction unit or to us the mill). The battery sites clung to the sides of the gorge and utilised water from the side streams and the Ohinemuri River to power the mills. The forests have covered much of the industrialisation, however, the Department of Conservation have recognised the importance of the industrial sites and have now instigated a programme of creating paths and information boards for visitors to the area. They have also provided car parking facilities and easy access. The township has disappeared but the impressive stamp mill bases and some machinery remain. Unfortunately at the time of our visit the huge Crown and Welcome stopes were not accessible due to recent rockslides destroying part of the paths.

Gold was first discovered in the hills above the Waitawheta River around 1875 but access was only achieved after Maori resistance subsided. The Crown, Woodstock, Bonanza and Dubb Reefs were the main source of mineral, but dressing methods of the day

were unsuited to this quality of fine ore. The small mill in 1876 could not cope with the ore, losing up to 60% through the tailings. As a consequence the Crown mine only operated at a restricted rate until 1889. A new battery was constructed in 1892-93 by the side of the Ohinemuri River and enlarged in 1889. Originally equipped with a 20 head stamp this was later increased to a 60 head battery. Two hundred and twenty seven men were employed. The mill was powered by three Pelton wheels and later by steam and electricity. A horse tramway transported ore from the mine to the mill. The breakthrough came in 1889 when the cyanide process was introduced. The Crown mill was the first to field trial this process. The recovery rate increased to 92% for gold and 50% for silver. It was known as 'The McArthur-Forrest Process'. The best years were from 1898 to 1903. The Crown battery closed in 1916 and the mine in 1927 having produced 21,875 lbs of bullion. In total the combined mines produced over 4million ounces of gold from 700,000 tons of ore.

The Crown Battery Process. (Simplified) 1893 The McArthur-Forrest Process

The ore was dropped into a grizzly; the fines ran into a hopper and the roughs to a stonebreaker, the ore was taken to a drying kiln and then on to the stamps. After stamping the fine ore was tipped into a rotating tube then either to agitation cylinders for treatment or if the ore could be better treated it was taken and tipped into percolation tanks. For extracting from the quartz a similar method was employed. The ore was stamped till fine, no drying. The crushed quartz was then mixed with potassium cyanide, the gold and silver was dissolved either by percolation of the cyanide through the ore and out through a filter or quartz and cyanide were agitated together in tubs with revolving paddles. The solution containing the dissolved gold and silver was then passed through boxes of zinc shavings. A black mud or slime formed on the zinc this was separated, washed, treated with acid and smelted producing a gold silver bullion.

The Crown Battery was easily accessible with the huge concrete and stone buttress that supported the stonebreakers standing out from the undergrowth.



Crown Battery

The final processing plant base must have been a form maker's nightmare. A short journey along the connecting tramway led to a swing bridge (it swings in every direction). On the far side and below was the site of the Talisman vat house (cyanide) on the opposite side of the tributary river (Waitawheta River) the site of the old Woodstock Battery and directly around the corner, the Old and New Talisman Battery. The Department of Conservation is in the process of clearing the Woodstock site and revealing quite a number artefacts. The huge water supply pipe that fed the mill has largely collapsed however part of the Pelton wheel and controls have just been discovered and exposed through the silt. Upon walking up Waitawheta valley the whole of the massive Talisman battery is revealed. Scrambling through the concrete structures we came upon the main water supply pipe and air release Tee. The pipe turned into a concrete vertical bore that fed the Pelton wheel(s). The mill operated a 50 head of stamps and later a tube mill. It finally closed in 1940. After climbing up through the building to the site of the primary crusher, by the side of which lay a 20ft solid steel shaft and crank that supplied the brute motive force to the upper mill, we made our way along the tramway to the 4 large ore roasting pits. These were situated in a line by the adit. They were 20 feet wide and about 25 feet deep. Somewhere below there should be a tunnel leading to the pit outlets where a steel levered hopper would release the ore into wagons and carted away for further treatment. I would have like to have seen a few more information boards around the mill site; it was very hard to interpret all the construction work.

We continued our journey to Martha Mine. Hiding behind a grassy rise overlooking the town of Waihi is the huge circular pit of Martha Mine. At this moment in time the pit is in the process of cleaning up and closing down. The 860 metre long by 600 metre wide and 250 metres deep pit will be allowed to fill with water over ten years and the area become part of a recreational park.



Martha Pit

In 1878 a local miner called John McCombie had observed a few large quartz veins surfacing through the scrub. He and his partner, Robert Lee, mined a small quantity but the assay figures were not promising. They left and William Nicholl acquired the claim in 1879 and he named the claim after a relation (some say his sister). By 1882 the mine was becoming established and the first battery became operational. The 'Waihi Gold Mining' commenced operations in 1890, eventually 7 shafts were sunk the deepest being 600 metres deep and through the years 175 kms of levels were driven on 15 horizons. Profits further increased with the introduction of the cyanide process in 1894. A Cornish pump (Beam Engine) was installed in 1904 at the No 5 shaft; this raised 9 million litres of water a day. Electric pumps superseded the Cornish pump in 1914. The nearby Victoria Stamps pounded the ore through the 100 stamp heads (installed by A & G Price of Thames) a further 100 were added in 1902. The primary power was by Pelton wheels though a steam engine and hydro electricity were added later. The mine continued apace working the rich Royal, Welcome and Empire veins and employing a workforce of approximately 600 men. 1909 was the peak year with a total of 1500 men working at the mine and battery. However the reserves were depleting and the mine closed

down in 1952 after producing 174,000 kg of gold and 1.2 million kg of silver from 12,000,000 tons of ore.



Martha Pit Cornish Engine House

Interest was renewed in the 1970s and after a series of surface trials and 92 boreholes located large reserves of low grade ore, the authorities allowed the mining company to proceed subject to stringent control and work started in 1987 with the first gold pouring in 1988. 18 years on and the pit will close. It has employed 250 workers and sub contractors, producing over NZ\$1million per week of precious metals. 1.3 Million tons of ore was processed annually at the treatment plant sited 2.7km away from the pit.

Prior to arriving at the mill, the ore is searched for foreign objects such as wood and metal then passes through a primary crusher. The ore travels to the mill where it is ground to a slurry by steel balls mixed with lime and water. The slurry is then fed into the cyanide tanks; the cyanide dissolves the gold and silver. The slurry continues to tanks of activated carbon granules. After treatment the carbon is washed by super heated water and the gold and silver are deposited onto stainless steel cathodes using electro winning. The cathodes are rinsed and the muddy sludge is dried, mixed with fluxes and placed in a furnace. The result is 99% pure bullion of gold and silver. The huge pit can be viewed from a platform near to the mining museum. An information board presents details of the old workings, tunnels and veins. One can clearly see the original vein, several levels and shaft remains. The Cornish engine house is being stabilised since recent rotating ground movement have weakened the foundation.(information board details).

Martha Mine, owned by Newmont. The Gold Company is now actively working a new mine called Favona, just to the east of Martha Pit. An incline service tunnel is accessing the old and newly planned workings. It is hoped that the community will remain involved in mining for many years to come.

South Island (Mainland)

We caught the ferry from Wellington and landed at Picton, the approach to Picton was quite spellbinding, the deep fjords, high hills and bright greenery was a wonderful sight. We travelled towards the west coast our first stop taking us to Lyell a historic gold mining town (the road map mileage calculations were somewhat elastic). The site is now a picnic area, also the home to billions of sand flies. The flies were vicious, now three months on, the bites still itch and permanent circular scars cover my handsome body. Gold had been discovered in the adjacent Buller River, prospectors traced the gold back to its source, a reef high up the mountainside. A mill was constructed on a flat plateau and ore delivered by a self-acting incline to a grizzly and stonebreaker then passed through the stamps. The fine sands were amalgamated with mercury and separated by retorting in a furnace at the assay room. The sands were then taken for cyanide treatment. Power was supplied by water travelling down a flume to a Pelton wheel. The town grew quickly incorporating a cemetery, hotel, post office, shops, blacksmith and miners homes. Dredging also occurred in the Buller River.

A path climbed from the town to the mines, through a thick forest canopy. I'm afraid the sand flies won and we had to retreat. We did see the wall of the post office (the only remains of Lyell) through the thick soup of sand flies attacking us in the car!

Queenstown was our next destination; we rested at the Millbrook Resort (where the cast of Lord of the Rings stayed). It was a welcomed relief from being on the move and gave us the opportunity to recharge our batteries. Having experienced the Arrow River trip to Macetown, previously, we decided to take a Jeep trip up the old mining road to Skippers Canyon. Rented cars are prohibited, it was a sporty gravel single lane track, and a bit tight and steep in places, reversing could be tricky. There was evidence

of driving miscalculations on the side of the canyon wall, as in layers of different coloured vehicle paint. Gold was first discovered by Thomas Arthur and Harry Redfern (at Arthurs point) in 1862. By late 1863 the discovery had led to the influx of over 3 thousand miners. Initial panning produced startling results; a couple of miners at Maori Point recovered nearly 20 lbs of gold in an afternoon. However by the following year most of the easily panned alluvial gold had disappeared and by 1865 only 265 miners remained. It was at this time that the larger concerns moved in and started hydraulic sluicing the huge gravel banks on the Shotover Gold Diggings. The settlement grew that included hotels, shops and a school. As we wandered along the Skippers Road we could see the flumes, pipes and dams in the distance. Part of the gravels have been washed away, however, a substantial amount of gravels still remain. Other mining remains lay scattered in the undergrowth.

Upon further research I discovered that our guide (Dept. of Cons. Employee) had failed to indicate the position of other mine workings and that by the rivers side stood the remains of a large stamp mill. What was even worse, when we were finally allowed to pan in the Shotover River, our first pan recovered four medium flakes of gold each, he would not let us pan any more, saying it was time to leave. Next time, they can drop us off on the way up and pick us up on the way back, if you get my drift!



Shotover River

The next day was cold and wet. We returned to the Kawarau Gorge Mining Centre and walked around China Town, inspecting the long drifts into the gravels that were to assess the gold content before hydraulic sluicing was started and then moved down to the

recent river gravels, to pan. Not a lot of luck that day, however 30 Japanese visitors came and were shown how to pan, we watched aghast as the guide *salted the pans*, the Japanese never saw the sleight of hand *but we did*, three flakes of gold turned up in the pan. They gasped with joy and clapped their hands. There was no stopping them; they were off into the gravels, under boulders, everywhere. Water from the washing boxes flew into the air, gravel flung everywhere and they didn't get a single flake. *But we did...* 2 flakes between four of us!

After a few days we moved on north along the I8 highway (Lindis Pass road). I assured the family that mines were far from my mind on such a glorious day, however, there just happened to be a nice scenic route (gravel track leading to boulder strewn!) that took us through the part of the wine-producing region and led up to Bendigo, Logantown and Welshtown. It was only when we arrived at the notice boards did my deception become apparent, so, whilst we were there we might as well explore (in temperatures of 32 degrees C). The high rough mountainside was dry, dusty, covered with Sweetbriar bushes, boulders and swarming with rabbits. There were open shafts everywhere; you really did have to watch where you were walking. A number of roughly built miners huts dotted the landscape as well as leats, dams and dray tracks.

Steve and I left the girls sunbathing whilst we scoured the surrounding area. Gold was discovered in the lower creeks in 1862 and was systematically worked for 4 years. The main source, the quartz reefs were discovered in the hills above by Thomas Logan and these became the principal mining sites for the next 40 years. Over 500 miners worked here at the peak. By 1880, 1775 lbs of gold had been recovered. What surprised us was the lack of mine dumps; perhaps the upland high winds had blown the waste away. Most of the 4 foot square shafts were open and quite deep. We found a sub level about 20 feet below the surface but could not get into it (we did try). Moving around the corner to Matilda No 2 Shaft. (The associated stamp mill base lay another 200 metres along the track). The two shafts were covered with grills. Hefty walls supported the winding gear base and across the approach track stood the carpenters yard

and smithy. The main shaft was 178 metres deep and partly filled with water. It was sunk during the late 1880s and early 1890s. Operated by the new Cromwell Quartz Mining Co. and Cromwell Gold Co. Matilda Shaft was refurbished with heavy lifting machinery, pumps, electricity and compressed air. The gold returns were poor and the mine ceased working in 1892. However spasmodic mining carried on into the twentieth century. There were further workings in the next valley but our car couldn't make it over the boulder-strewn track and it was too hot to walk...next time! On the way back down the track we passed workers covering the vines with nets.

"Could you please tell us why you are covering the vines with nets?"

"Ah, yeah, sure. It's to keep the tourists out!"
Nice one!

It was time to return to the North Island and to have some fun before the final expedition. The 20/20 Cricket match between the West Indies and NZ was awesome, as were the Mexican Waves including plastic bottles (half full of beer) being thrown through the air and the four streakers running across the pitch. Variety is the spice of life!

Komata Reef Mine was our next port of call on the H26 just north of Paeroa, (Famous for it's mineral lemonade) 6 kms up a gravel side road led to a locked gate and a short walk into jungle led to the No 8 level. A heavy flow of deep water flooded from the mouth of the 3000-foot long adit. Nearby we found a cylindrical chain driven drum with wood paddles fitted to the inside. A cog with a chain led to a drive shaft. (Ideas please) and a pressure cylinder straddled the stream.



Backing against a rock buttress stood a workers hut complete with armchair and nearby several storage bunkers, a leftover from the 1940s workings? The object of the trip was to reach the Tangyes boiler at the No 1 level near the summit of the mountain, however, I realised due to the ferocious climb, that I had not left enough time to complete the trip so that will also have to wait too. Gold was first discovered in 1891, a great deal of development produced poor results. Two reefs were worked containing pockets of high yield ore haphazardly dispersed throughout the veins. Mining steadily declined until closure in 1942. Approximately 33,000 lbs of gold and silver bullion were obtained from 200,000 tons of ore.

The last visit was to be an epic. Well it was for my heart! I wanted to visit the workings along Buck Reef. (Buck meaning devoid of). This was sited in the Waiorongomai valley near Te-Aroha. First discovered by Hone Werahiko in 1881 on an outcropping reef unfortunately the results were poor, later further claims on Buck Reef were established and other reefs were discovered and several claims were pegged out. Within the mining area, there was a huge stope (Buck Reef), 6.5kms of water races, adits, abandoned compressor, 3 inclines and drums, and a battery complete with machinery, cyanide tanks, rail lines and a tunnel. Eileen allowed me 5 hours for what I thought would take 3 hours. So I set off to 'belt it'. Immediately, I had to climb 400 metres up the one in four hill alongside the old Fern Spur Incline, I staggered out at the top only to see the 'High Route' and 'Buck Reef Route' heading almost vertically upwards and away from me. I just could not do it, so instead I set off on the old tramway, easy going for an old man until I reached the tunnel. The entrance had collapsed; there was a narrow track that ran around the edge of the rocky bluff, it was about a foot wide and a 200-foot drop below. 'Don't look down Richard.' I whispered as I edged forward along the one hundred and eighty foot long path. However, upon reaching the far side I found the tunnel was open. There was the usual 'Danger Do Not Enter' sign that beckoned to me. Out with the camera and torch. It was quite good. High and wide, built to allow the £800 steam engine (soon abandoned after it was found

that it couldn't travel round tight corners!) and ore wagons through. The haulage reverted to a horsepower. The timber sets were all joiner marked and of a substantial size, although many had fallen.

I continued along the track until I saw the wrought iron rails emerge from the clay and fallen rock along the track bed. The Dept. of Conservation had cleared the track revealing all the old rails and points, the track gauge of 2 feet 9 inches was unusual and it was designed to carry 2000 tons of ore per week. As I approached the Butler Incline I could see on the right hand side the remains of the aerial ropeway and large timbers for transferring the ore down to the Bendigo Mill.

From the end of a short branch line side-tipping wagons tipped the ore into hoppers and then transferred the ore to buckets on the aerial tramway. The Butler incline was the second along the tramway. It was a self-acting system, the descending full wagons drawing the empty one upwards to the loading bay. The weights, gradient and 2.5 tons of wire rope had to be taken into account to make the system work successfully. The three inclines, 5 kms of tramway network, two tunnels and bridges had originally cost £19000.



The Butler Incline



soaked. Little birds, wagtails, blue tits and

It was lunchtime and the heavens opened, it poured down.

My sandwiches turned down at the corners as they became

chaffinches landed a couple of feet away. Were they singing or laughing at me? I stood up and advanced to the start of another 400-metre incline set at a one in four gradient. The ascent appeared to go on forever, two feet up... slip... one foot down. It was a nightmare. The rails assisted in the climb and then towards the upper part the whole of the trestlework over a ravine had collapsed so it was necessary to zig zag my way up, under and into the bush before landing at the top and Buck Rock Tramway. The winding drums were in situ albeit collapsed on the ground. Originally they were erected onto a stout wooden gantry. The braking mechanism, rope rollers, ropes and rising rails stood out from the undergrowth. The tramway continued left to some trials and right to the May Queen Incline. It was banana time and I must admit my brain must have been fuddled. I forgot to go to the trials and they were only 40 metres away. I was shattered and fearful of the descent, what was worse, at the top of the incline a notice stood at a drunken angle, 'Please do not climb down the incline, doing so may destabilise the ground, walkers have fallen and broken bones!' What; how do I get down? I was not in any shape to continue to the May Queen Incline and decided to head back down. I fell 30 feet before managing to catch one of the rails. It was sometime at this point when I lost my bedraggled map. I returned to my lunch spot, cut, bleeding, battered and bruised but the sun had come out and the blue tits were laughing; wonderful!

I dropped down a rough track by the aerial ropeway and found the Low Level Track and from it I perceived a sign stating '5 minutes to Bendigo Mill.' Oh yeh! Twenty-five minutes later I stumbled and rolled out from a sub jungle slippery track and streambed into the middle of the small mill complex. Above stood a large concrete buttress supporting the base section of two stone breakers (the upper half of one lay buried in the silt at the base). Behind the buttress in the undergrowth lay the drive shaft, rods and cams for a 5 head stamp, most of the parts were there, however, the records state a 10 head stamp, it would appear that the other five have been spirited away!

A complete Berdan Pan lay half buried to one side at a lower level as well as part of an

oscillating fork with ratchet gearing, cogs and bevelled cogs (for the cyanide agitation operation). Below and just up the banking from the Waiorongomai stream stood 5 cyanide tanks. A couple still had the drive shafts and paddles in place. The circular corrugated sides were set on wood floors. A twin hopper fed the system with a series of valves and pipe work radiating out from the base. The remains of the sand collection tanks could be seen on the edge of the stream. The workshop frame had given way, much of the contents were unreachable but still in place. Nearby the large water supply pipe emerged from the forest, descending towards where the Pelton wheel had once stood. Just above the site the double track went through a tunnel. This was excavated in order that any ore arriving by the aerial tramway did not fall on persons below. The mill was abandoned in 1921. The operation was experimental and a failure.

I returned to Eileen at the car park where the remains of the failed Firth and Clark's Battery stood. Two very wealthy merchants by the name of Firth and Clark brought the equipment from Thames and started crushing in 1883. The crushed ore was transferred to 12 Berdan pans; the ore was then mixed with mercury. The mix was heated, leaving the gold. The original £20,000 mill was inefficient and eventually £60,000 was spent on the plant but it still under performed. Edwin Hardy bought the mill, operating it successfully by feeding the stamps with selected ore. In 1912 it burnt down and a new plant was built with a 10 head stamps and cyanide plant. 70,000 ounces of bullion was recovered from a massive amount of work and exploration by a number of companies. The Mines Inspector, Mr. Downey described the ventures as a complete disaster.

A quick trip to the far north allowed me to see and collect a sample of the purist silica sand in the world. Also to drive down the sands of 90-mile beach (which is actually 62 miles) at 60 mph passing cars half buried in the sand whose drivers had misjudged the tide. One can only drive from 2 hours after high tide and there are only three entries onto the beach as a Mercedes, Ford Falcon and others found out.

It was time to leave. Three months passed very quickly. It is a wonderful country and

what is more wonderful.... We have been invited back to work for a year.... that means a full year of mine exploration! The visit has been a learning curve. I expected to see mine tips and adits clearly visible on the hills. This is not so, one really has to search out the workings and it's more by luck than management. Mine sites and 'histology' are conspicuously missing on large scale maps. Some specialist maps offer basic information and books offer more. Now that I am aware of these issues, the terrain, the insects, and time factors I will be better prepared for some serious mining next time.

Richard Hewer.

References and bibliography:

Department of Conservation information notice boards; Department of Conservation route information notices.

Coromandel Gold. Phil Moore, Neville Richie, Lloyd Homer.

Coromandel Landmarks. Marios Gavalas.

The Years of Gold, Karangahake. Climie and Staples.

Martha Mine Museum & Information Notice Board.

Newmont – Marthas Gold. Historic Hauraki Gold Towns. Discover Waihi. Tourist Leaflets.

Newmont. The Gold Mine. Information Newsletter.

Waiorongomai Department of Conservation notice boards and information packs.

Guide to the Otago Goldfields Heritage Trail. Gerald Cunnigham.

Bendigo Goldfields. Department of Conservation information boards.

Otago Goldfields. Heritage Trail.

Goldfields of Otago. John Hall Jones.

Otago Goldfields. Department of Conservation information boards.

Queenstown Visitor Guide.

Kawari Gorge Mining Centre.

Information supplied by park and conservation rangers, fieldworkers, track and trail staff at Karangahake, Waiorongomai, Thames, Coromandel; S. Island. Bendigo, Skippers Road and Otago.

Web sites:

www.newmont.com

www.crownminerals.gut.nz

www.Legislation.gut.nz

www.MarthaMine.co.nz

www.Ausimm.co.nz

www.Waihi.org.nz

CUMBRIA AMENITY TRUST MINING HISTORY SOCIETY

Committee Meeting held on the Monday 20th March 2006 at the BMSC Hut at Coniston, starting at 6.30pm.

Agenda.

- | | |
|--------------------------------|--------------------------------------|
| 1 Apologies for absence | 2 Minutes of the last meeting |
| 3 Matters arising | 4 Secretary's Report |
| 5 Treasurer's Report | 6 Proposed Amendment to Constitution |
| 7 Amendment to H&S/RA docs | 8 Membership Secretary's Report |
| 9 Meet Secretary's Report | 10 Newsletter |
| 11 Publications | 12 Library |
| 13 Coniston Coppermines | 14 Hudgillburn |
| 15 Mines Forum meeting | 16 CATMHS website |
| 17 Date and venue next meeting | 18 Any other business |

Present M. Simpson (MS), J. Aird (JA), S. Barker (SB), I. Matheson (IM), D. Bridge (DB), J. Brown (JB), P. Fleming (PF), M. Mitchell (MM) M. Scott (MSc) & A. Wilson (AW).

The meeting commenced at 6.30 pm. 10 committee members attended, and D. Borthwick as an observer.

1 Apologies for absence from: None.

2 Minutes of the last meeting

The minutes of the committee meeting held on Monday 16th January had been previously circulated to members.

It was **PROPOSED** by IM and **SECONDED** by JB that the minutes be signed by the acting chairman as a true and correct record of the proceedings. This was carried unanimously.

3 Matters arising

- 3.1 Item 3.1-SB had contacted Goodman Baylis who had credited us with £3.20 for two damaged copies. It was decided that the fault was now less noticeable and we would not proceed at present.
- 3.2 Item 3.2 Mandall's - JA had been in touch with the LDNPA, who said they wished to sell the whole of the station site. We would await developments.
- 3.3 Item 11- JA had sold some of our books to PR Books.
- 3.4 Item 16.4 - SB said SMC had been applied for and NPA Ltd. had applied for some funding towards the Middlecleugh project.
- 3.5 JB had been up to Levers Water Mine, but there had been too much snow to adjust the door.
- 3.6 Item 13 (Nov 05) IM reported on discussion taken place regarding Force Crag Mine. Our comments regarding the BGS and Wardle Armstrong (WA) surveys had been sent to the NT. The NT have had recent discussion with the WA engineer regarding increased water outflow from Zero and No. One levels. The need to retain the historic aspect of the portals was expressed. IM and JA to consult with NT.
- 3.7 Item 16.1 PF had rebooked the AGM and annual dinner venue.
- 3.8 Item 16.2 MSc reported the scaffolding had been removed and work stopped.

4 Secretary's Report

Received since last meeting:

- 4.1 LDNPA – Nil
- 4.2 NAMHO – SB had attended the March NAMHO council meeting. National Trust had met to discuss underground access on their property, they have decided to set up a 'contact group' (see Steve Holding article in NAMHO NL) who would represent all the NAMHO mining history groups in negotiations with official bodies.

4.3 SB had received a request from the Deposit Library, requesting copies of our newsletters. SB to write and explain the nature of our Newsletter (internal info only).

5 Treasurer's Report

JA presented his report and the balance sheet covering the period from 16th January to the 20th March. Income from subscriptions had been 720.00, publications 181.20; the greatest expenditure had been 999.50 for BCA insurance.

The current a/c stood at 977.10 and the Scottish Widow a/c at 12500. 00.

JA had contacted John Hodgson regarding their insurance cover for the Greenside visit, their LDNPA insurance gave them sufficient cover. JA had made enquiries regarding our subs to be paid by Direct Debit and was told we were too small a group to make it practical.

6 Amendment to the Constitution

JA **PROPOSED** that we amend clause 3 of our constitution, to read: Applications for membership of the Society are invited from any person or organisation in sympathy with the objects of the Society. The Society welcomes diverse membership and is committed to taking all reasonable steps to ensure participation for all, irrespective of race, ethnic origin or nationality; age; gender or sexuality; disability or physical fitness. It endeavours to offer equal access to all its activities, subject solely to considerations of safety. The Society has three classes of membership (1) Basic conferring voting rights and the right to receive appropriate publications (2) Surface as Basic with the additional right to attend surface meets (3) Underground as Basic with the additional right to attend all meets. Surface and Underground Members must have appropriate Public Liability Insurance cover as determined by the Committee. Membership applications shall be accompanied by the appropriate subscription, the amount of which shall be determined by the AGM of the Society. In the case of applications for membership from persons under the age of 18 years, the consent of the parent or guardian should be obtained, such persons are only eligible for Basic membership and members under the age of 18 should note that they are not entitled to a vote in the event of any ballot concerning the affairs of the Society that may arise from time to time. **SECONDED** by IM, all were in favour. To be presented at the next AGM.

7 H&S Document & risk assessment forms

New documentation to apply to all meets and conservation work carried out on all properties other than National Trust and LDNPA land. Colin Woolard (CW) had done further development work on documents for general society use. JA **PROPOSED**, "That these documents be passed for general society use", **SECONDED** by IM, all were in favour. CW had been consulting with Chris Cowdery and the documents were now on the CAT website and could now be downloaded from the Members area. A password would be required. Meet leaders to download a template, fill in a logbook entry at the meet and send to Meets Secretary. Full explanation to go in next newsletter. JB would contact JK, asking him to inform meet leader of new system. Thanks were expressed to Colin and Chris for this work.

8 Membership Secretary's Report

IM reported that we had 91 members, 10 had not renewed to date. We have had two new members this year.

9 Meets Report

Nothing to report other than the last Greenside meet had been cancelled due to the amount of snow in **Glencoyndale**.

10 Newsletter

Nothing to report

11 Coniston Mining Project

The Steve Dickinson's Coniston Project was discussed at length. It was decided that we could not take up his proposal as we were too heavily committed with other projects e.g.

Greenside mine, Kernal level, Middlecleugh level, maybe Force Crag mines and Hospital Level. SB to send our regrets.

12 Publications

SB to send copies of 'Slate From Coniston' to be reviewed by: M. Moore, M. Gill, Cumbria Magazine (Terry Fletcher) and Evening Mail. DB commented on a new leaflet, by Anna Grey, called Mineral Wealth. It was thought to be time we updated our trail leaflets, IM would produce drafts. It was decided to shelve 'A walkers Guide' for the present.

13 Library

PF had approach the John Ruskin Museum (JRM) regarding the possibility of us keeping our collection at the museum. They would like more details of space required. IM would discuss with them.

14 Coniston Coppermines

It was thought that more debris had come down at Levers Water Mine, to be checked regularly. MSc reported there had been a collapse in Hospital Level. JB will assess the preservation work required to stabilize the area. MM to contact Coniston Mountain Rescue Team about the dangerous condition of the level.

MSc had visited Hospital Level, a considerable fall of rock had occurred. He had found a tallow candle in Deep Level, which was in danger of falling down the shaft, so had removed it. To be given to the JRM.

MS and IM had started surveying the Paddy End dressing floors and treatment plant; they had looked at aerial photographs and old maps, this work to continue.

15 Hudgillburn Mine

SB to contact Dr S Morton, informing him he can go in to collect research samples, but must get permission from the mineral rights owner to remove any quantity of mineral.

16 Mines Forum meeting

MM asked several leading questions, followed by discussion: Force Crag was discussed. More reports from the NT were expected as they had had a meeting to discuss the mines and general access. The next meeting will be on 4th April 2006

17 CAT website

See matters arising.

18 Date and venue of next Meeting

This to be held on 15th May 2006, at the BMSC Hut Coniston at 6.30 pm.

19 Any Other Business

18.1 JA commented on the high cost of batteries for the CAT drill, not to be bought till required.

18.2 DB reported on the Borrowdale Graphite Mine trip when the NT team had visited the mine, all had gone well.

There being no further business the meeting closed at 10.00pm.

SB 30/03/06

Committee Meeting held on the Monday 15th May 2006 at the BMSC Hut at Coniston, starting at 6.30pm.

Agenda.

- | | |
|-----------------------------------|---------------------------------|
| 1 Apologies for absence | 2 Minutes of the last meeting |
| 3 Matters arising | 4 Secretary's Report |
| 5 Treasurer's Report | 6 Membership Secretary's Report |
| 7 Meet Secretary's Report | 8 Newsletter |
| 9 Coniston Mining Origins Project | 10 Publications |
| 11 Library | 12 Coniston Coppermines |
| 13 Hudgillburn | 14 Mines Forum meeting |
| 15 CATMHS website | 16 Date and venue next meeting |
| 17 Any other business | |

Present M. Simpson (MS), J. Aird (JA), S. Barker (SB), I. Matheson (IM), D. Bridge (DB), P. Fleming (PF), M. Mitchell (MM) M. Scott (MSc) & A. Wilson (AW).

The meeting commenced at 6.30 pm. 9 committee members attended, and D. Borthwick as an observer.

1 Apologies for absence from: J. Brown (JB).

2 Minutes of the last meeting

The minutes of the committee meeting held on Monday 20th March had been previously circulated to members.

It was **PROPOSED** by IM and **SECONDED** by PF 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 14-MM had contacted Coniston Mountain Rescue Team.
- 3.2 Item 3.2-Mandall's-JA had been in touch with LDNPA, who said they still wished to sell the whole of the station site. He had contacted English Heritage regarding the Listing of Mandall's Office, the forms and photographs had been submitted and we were awaiting a decision.
- 3.3 Item 3.6-JA had sent John Hodgson our views regarding what was required at Force Crag mine. JA had also spoken to the WA engineer. The NT was looking into their legal position if damage was caused by escaping mine water.

4 Secretary's Report

Received since last meeting:

- 4.1 LDNPA–Nil
- 4.2 NAMHO–Nil
- 4.3 Request from The Beacon, Whitehaven who are holding a local history fair and wanted to know if we wanted a stand. A decision will be made later.

5 Treasurer's Report

JA presented his report and the balance sheet covering the period from 20th March to the 15th May. Most significant income (£1394.94) from Gift Aid, it had been received 14 days after submission! Money had been spent on materials for conservation work in Hospital Level.

The current a/c stood at 1171.43.10 and the Scottish Widow a/c at 13500.00.

It was decided that JA would supply members (who sold books) with numbered invoices.

6 Membership Secretary's Report

Nothing to report

7 Meets Report

The next meet on Sunday 3rd June, will be a ride and walk around bloomeries in South Lakeland.

DB was disappointed that the description of his Greenhead Gill meet had not been printed in the meets list, he felt that if it had been published there would have been a better attendance.

8 Newsletter

IM had bought a new printer (the last only did 4 issues of our newsletter). The replacement cost £84 and prints very good photographs. IM asked that items 6&8 be combined on the next agenda.

9 Coniston Mining Origins Project

SB had written to Steve Dickinson as requested, but had not received a reply.

10 Publications

It was agreed that our Coniston leaflets should be updated, as they played an important role in the interpretation of the Coniston mines. They sold well and visitors enjoyed them and thought they were good value. The money from the leaflets has provided funding for our conservation work for many years. PF wanted to return some 'Slate from Honister' to Alistair Cameron, as he thought they could sold be more easily at Honister Slate Mine. It was decided that we should buy The Life and Times of 'Charles Roe' and Ian Tylers 'Goldscope' – action D. Borthwick.

11 Library

IM had met with Vicky Slowe at the John Ruskin Museum regarding the possibility of the CAT library being moved to the museum. Agreement was reached with the condition that we provide extra shelving, as they are short of storage space. IM and MS will cost material for shelving. It was **PROPOSED** by AW and **SECONDED** by JA that we accept JRM's offer to house the CATMHS library. All were in favour. SB to write accepting their kind offer.

12 Coniston Coppermines

Re-opening of Kernal Level – MS reported all permissions had been agreed with the appropriate authorities, he was awaiting written confirmation. Hopefully work would start in September. Congratulation were given to Mark on his achievement. JB was doing the method statement work. More crash barriers were required. Phil Meredith was expected next weekend in Coniston regarding the GPR survey, IM would contact him. No news from LDNPA regarding conservation work to be done to repair the flood damage to Paddy End dressing floor. We would be willing to do a basic GPS and photographic survey and record it on CD. MS would try and get any available maps. MM would ask Mark Weir about the feasibility of him taking aerial photographs from his helicopter. A wrestler slate from the Black Scar working had been found and would be given to JRM.

13 Hudgillburn Mine

Nothing to report.

14 Mines Forum meeting

The minutes of the April meeting had not arrived see IM's notes in last newsletter.

15 CAT website

The website was working well, JA to ask Chris to remove meet details after each meet.

16 Date and venue of next Meeting

This to be held on 17th **July** 2006, at the BMSC Hut Coniston at 6.30 pm.

17 Any Other Business

MS had received an email from Channel 5 who wanted to do a programme about Coniston miners. MS had answered them and awaited a reply.

There being no further business the meeting closed at 9.00pm. SB 24/05/06

CUMBRIA AMENITY TRUST MINING HISTORY SOCIETY

Honorary President:

Vice President:

Lord Egremont

Major J.W.B. Hext

Chairman:

Mark Simpson,
7 Railway Cottages,
Selside
Settle, BD24 0HY
Phone: 01729 860303
Email: jane_simpson@tiscali.co.uk

Secretary:

Sheila Barker,
The Rise, Alston
Cumbria, CA9 3DB
Phone 01434 381903
Email: sheila.barker@cybermoor.org.uk

Treasurer:

John Aird,
1 Hillcroft Crescent,
Ealing, London, W5 2SG
Phone: 0208 997 5985
Email: LANDJAIRD@aol.com

**Membership Secretary
& Newsletter Editor:**

Ian Matheson,
1 Rothay Holme Cottages
Ambleside, Cumbria, LA22 0EE.
Phone: 015394 32957.
Email ian@rothayholme.freeserve.co.uk

Meets Secretary:

Jon Knowles
46 Dukewood Road
Clayton West
Huddersfield, HD8 9HF
Phone: 01833 640885
Email: jon.knowles@ukonline.co.uk

Librarian / Archivist:

Vacant!

Committee members:

John Aird	Sheila Barker	Dave Bridge
John Brown	Peter Fleming	Ian Matheson
Mike Mitchell	Mark Scott	Mark Simpson
Angela Wilson		