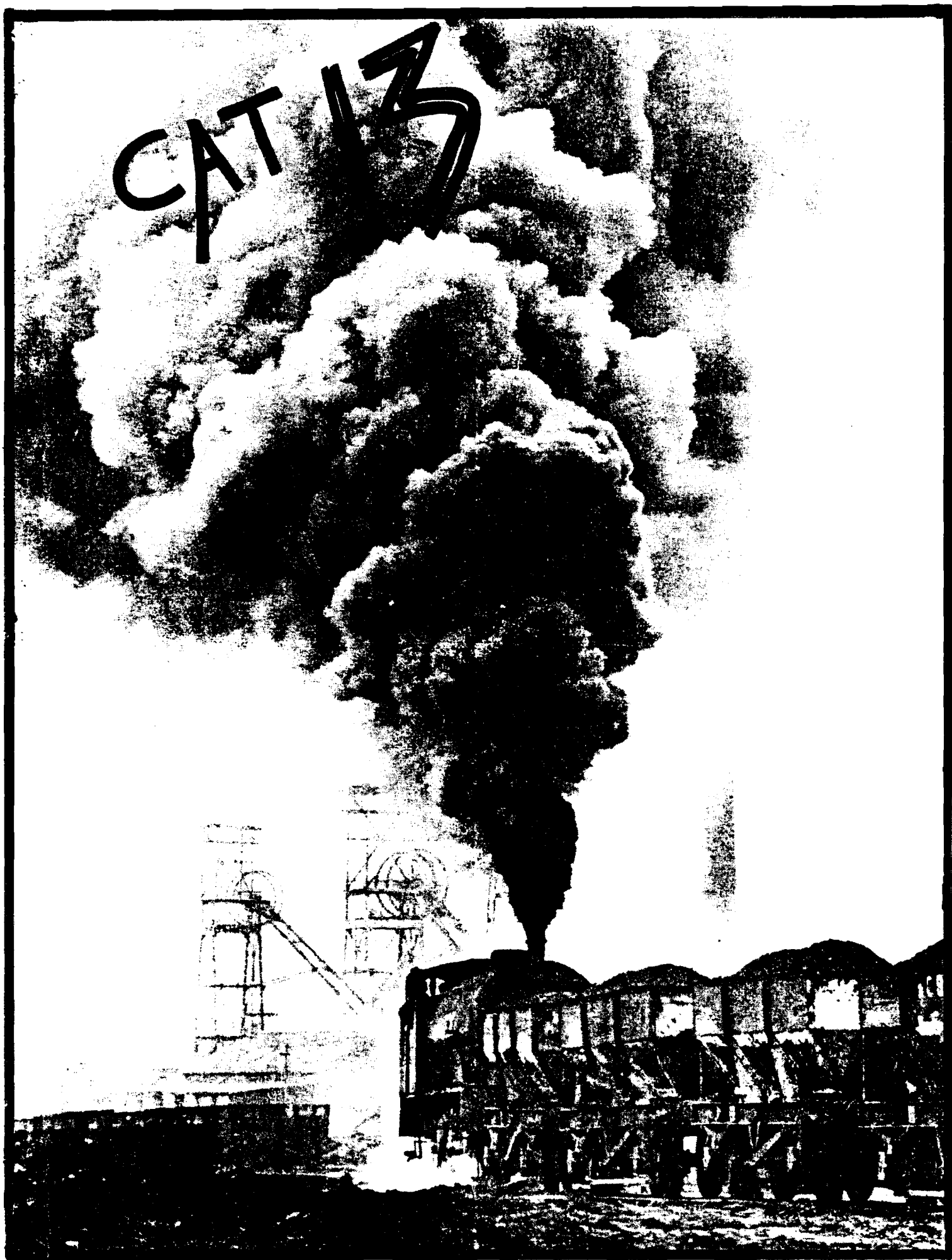


CAT 13





# EXPEDITION DIARY

Fourteen CAT members returned from Ireland on the 1st of June after participating in the second overseas expedition run by this society. Two of the main mining sites visited, AVOCA and ALLIHIES, were examined during the 1983 expedition though many new and startling discoveries were made in the lead mines of GLENMALURE and the copper mines of BROW HEAD and BANTRY BAY. Chris Jones organised the expedition, Alisdair Lings provided valuable historical and geological information. The brief notes which follow are extracted from the diary of Alen McFadzean.

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24.5.86

We set off from Ulverston at 8:30 last night, arriving at Stranraer in good time to catch the 3:00 am ferry. We didn't get much sleep on the crossing to Larne, perhaps the odd wink, and some of us have been awake now for over forty hours. Belfast was quite a surprise; speeding through this sleeping city at 7:00 this morning we didn't see a single soldier. It was just like driving through Preston or Carlisle, both the transit van and mini-bus passing unhindered. However, armoured Land Rovers were in evidence in Newry and a discreetly situated machine-gun post overlooked the R.U.C. border checkpoint.

The copper mining complex of AVOCA has changed considerably, many interesting features having disappeared since our last visit. Bulldozers have run riot and the fine mill building is in ruins. The headframe of the Ballygahan Shaft has been removed though the electric winding gear is still complete in its iron shed. The entrances to the Knight Tunnel, the huge access incline, and the drainage level by the main road, have been blocked. All the offices are in a state of dereliction, papers and ledgers rotting on the floors.

All the old engine houses are still intact though the big chimney up at Ballymurtagh has been demolished. Every shaft has been capped with concrete and all opencast workings fenced off with eight-foot high mesh.

We are now camping in GLENMALURE, a remote valley in the Wicklow Mountains once famous for its lead mining industry. It is midnight and the rain is thrashing down on the van roof. The ghost of Fiach McHugh O'Byrne, a celebrated local hero who put to the sword's edge a punitive force of English soldiery in this very spot, is stalking through the bog.

25.5.86.

Got up at 8:30 to find the morning warm and pleasant. After breakfast we examined an old crushing house, in the trees on the southern side of the valley. This building had the dimensions and appearance of a Cornish beam engine house but the bob-wall and cylinder foundations were absent. Instead there was an aperture in the eastern wall, thought to have been for a water-wheel shaft to pass through, and a crude hopper at the foot of the southern wall. Outside there appear to be the remains of a waterwheel pit and leats. This is all, by the way, conjecture, though we are quite sure we are correct in our thinking. While the building was being examined Lings, Merrin, Blezard and Sibbald climbed the steep valley sides to the mines of Ballynagoneen, finding all the entrances collapsed. On the opposite slope one level was still open at the Baravore mine though this was very short and not worth Dave Bridge filling his wellies with dirty water to explore it.

After coffee we set off for the main Glenmalure Lead Mines further down the valley. However, the same picture presented itself here as well, all the adit levels collapsed and just a couple of the higher crosscuts open, these running into shattered ground where they entered the workings on the Ballinaf-unshogue Vein. Mitchell located a narrow masonry-lined shaft in the woods, though this was flooded about forty-five feet down, a shame because it dropped onto what appears to have been the main adit level. Jones made the descent. The masonry ginging formed the first forty feet of the shaft and this, although expertly constructed and still intact, was resting on rotten timber.

Glenmalure Mine has been a large operation - a shame we couldn't

win into the main workings. The ore was crushed and smelted on site and although none of the relevant buildings remains, the tips and graded waste heaps are quite extensive.

In the evening a small party walked to the head of Glendalough and examined another lead mining site, finding amongst other things an old crusher.

26.5.86.

We were breakfasted and away for 10:30, heading for the south-west. We arrived in Schull at 7:00 pm after passing through Cork City and a plethora of little towns, Bandon, Dunmanway, Skibbereen. No mines visited today though the transit van contingent (Jones, McFadzean and Sibbald) glanced briefly round an old slate quarry they spied from the road. There was a tall masonry chimney, the sole visible remains of a winding engine that had once provided motion on an inclined tramway. On the top of the tip was a memorial to the men who had been killed whilst working in the quarry. An old chap passing along the road informed us that quarrying in the area had finally ceased seven years ago.

We are now firmly entrenched in Schull, a fishing village huddling round a cove of Roaringwater Bay. The Purists have pitched their tents and the Dissenters have hired a caravan. The site proprietor, a large man with a face as brown and as wrinkled as a raisin, has offered sound advice - "You boys get yersels into the pub for the drinkin and don't be wastin time cookin yer fancy meals."

27.5.86.

At last, a thoroughly enjoyable day. We set off early, about 9:15, heading for BROW HEAD, a cliff-girdled promontory thirteen miles south of Schull and within earshot of Marconi's pioneering radio station on Mizen Head. After some searching we found the remains of the Brow Head Mine dressing floors, perched on the very crest of these three-hundred foot high cliffs above tremendous foaming breakers. The wind was lifting the foam over the cliffs and into the gorse dykes and heathery fields. Far below us fulmars were gliding, seals bobbing in the deep green sea.

According to Lings' documents some sort of wooden incline had lifted copper ore up the cliffs during the last working years of the mine. We soon located what we thought was the site of the incline, though no levels could be discerned below, the cliffs being smooth and sheer. McFadzean abseiled down a hundred-and-thirty feet, following what was thought to have been the course of the incline, and was rewarded by finding grooves in the rock, worn by a cable. He never reached any workings, having run out of rope, though by this time the others had spied two levels further down in the cliffs.

Bleazard, Lings, Sibbald and Westerman, using a roundabout route managed to descend to the highest level. This turned out to be a blind heading. In the lower level, however, they discovered two thirty foot shafts in the floor. Lings climbed back up the cliff for another rope and Danson and McFadzean returned with him, descending an extremely dangerous grassy trod that the miners had used. The level was situated on a narrow ledge and was hidden behind a heap of shale. The level was quite large in section, possibly 6' x 6' with a covered shaft about fifty feet inside and an open shaft a further fifty feet after this. We abseiled down the inner shaft into a large chamber that had a bad section of roof supported by a length of cast-iron rising main pipe. Several levels ran off, the longest heading in a straight line for three-hundred feet. One level went out to the sea, concluding in an impressive square-cut chamber with a shaft rising from it up inside the cliff and another descending below sea level. We were able to clamber out of the chamber and onto the rocky beach where, we presumed, the spoil had been tipped.

We discovered evidence of electrical gear in the main chamber and a stack of rising main pipes in a heading. One interesting feature was the timberwork supporting a back-filled stope. All the wood was sound and clean, showing absolutely no signs of rot. Although the mine was worked for copper a deal of the workings were set in what appeared to be good slate metal. On the cliffs evidence of experimental quarrying was discovered on the westernmost ridge of the headland, above an horrendous drop, where McFadzean unearthed, in

a frenzy to prove a theory, an iron wedge amongst the rock debris. Quarrying had also taken place in an adjacent cove where both purple and green slate are situated in alternating bands.

To round off the day we visited two copper mines to the north-east of Schull. The first, Cappagh, had a tall chimney and three shafts though all the workings were flooded. The second was Ballycummisk, though by this time we didn't have the energy to climb out of the vans and just stared at the tips through the windows.

It is 9:00 pm and our friendly proprietor has proffered some more sound advice. "Ah now lads," he has shouted across the field from the front door against which he is leaning, "If yer get yersels into The Greyhound before closin time yer moit just find yersels still there at two in the mornin."

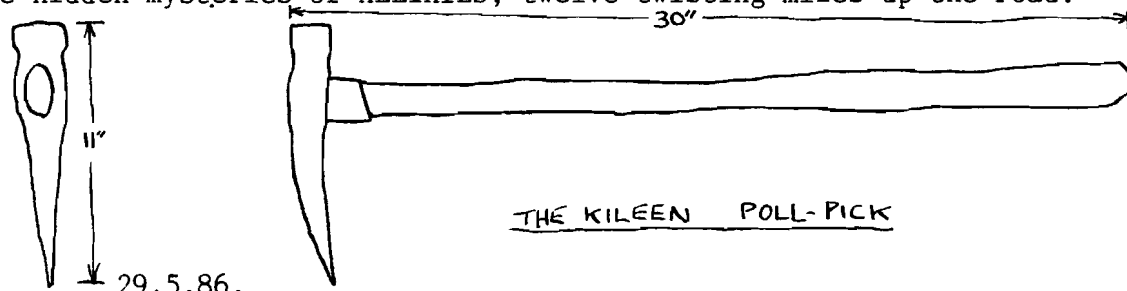
28.5.86.

We packed up and were on the road for 10:30, stopping briefly to examine some Bronze Age copper mines on the eastern slope of Mount Gabriel. Next stop was a barytes mine above Drishane Bridge. Here were sets of concrete engine beds and several rubbish-filled shafts. Plenty of barytes scattered about. Sibbald and Westerman followed what they thought were the concrete foundations of ropeway pylons, running in a line over the brow of the hill - but there were no other workings. There is a "Barytes Quay" marked on the map, just west of Drishane Bridge. We think that perhaps the barytes was transported to the quay via the ropeway from the mine.

The main stop was the SOUTH BEREHAVEN COPPER MINE or, alternatively, KILEEN MINE. The remains of a waterwheel pit, single-room cottages, and other ruins were just discernible amongst the impenetrable undergrowth of gorse and briar. We managed to aseil down three shafts. Jones explored the first, finding it to be blocked thirty feet down. McFadzean, Merrin, Sibbald and Westerman abseiled to the bottom of the second shaft and followed a restrictive and partially flooded level along a vein for several-hundred feet to where a collapsed shaft, thought to have been the shaft down which Jones had just abseiled, prevented further progress.

Lings discovered an open stope in the undergrowth and Merrin abseiled down it, followed by McFadzean and Sibbald. The stope, about fifty feet deep, was in a dangerous condition, there being many loose sections with massive rocks piled on top of each other. At the bottom a short filthy level gave access to a an equally filthy stope, very slimy and filled with flood debris. McFadzean discovered a poll-pick, complete with shaft, embedded in the mud. This was removed and will be cleaned up and preserved.

Tonight we are sleeping in comfort; even the Purists have left their tents in the van. The Quiet Contingent have the run of a holiday cottage kindly lent by Merrin's boss. The Noisy Contingent, which includes the Marton Revolutionary Front, the Anarchists, and the bloodlusting heir of the Butcher of Drogheda, have retired into self-imposed exile in a nearby caravan. It is a pleasant May evening. Ardgroom Harbour mirrors the dusky dark shapes of the Caha Mountains. As we sit sipping Guinness in the Holly Bar, so warming to talk of the hidden mysteries of ALLIHIES, twelve twisting miles up the road.



29.5.86.

Another exhausting though highly rewarding day. We were on the road for 9:30 am and heading for ALLIHIES. We spotted a level right on the coast, which we hadn't seen in '83, and resolved to look into it tomorrow.

Things have changed at Allihies. All the open stopes and shafts have been fenced off and the main adit level has been blocked. Mitchel, Sibbald, McFadzean, Merrin, Wilson, Bridge and Jones, abseiled a hundred-and-fifty feet

down the Skip Shaft to the horse whim chamber on the main level. Blezard, Kealy, Lings, Danson and Westerman entered by another route, a low-level scramble which, although not involving any ropework, took several hours to complete.

The colossal stopes of the Mountain Mine, lying a little to the west of the whim chamber, had, according to Lings' wad of information, attained a depth of 1500 feet as far back as 1928, many years before the mine closed. Our 1983 exploratory trip had not taken us beyond these flooded workings simply because there were plenty of interesting corners to look into without getting wet. Lings' literature alluded to a further series of workings, on a different vein, which could only be reached by crossing the water. Merrin took the plunge and swam the thirty feet to a level mouth in the opposite wall. He rigged a safety rope and the rest of the team followed. A crosscut ran six-hundred feet to the Marion Lode where, in the foot of a huge stope in two-feet of inky black water, stood a sheave wheel, an upturned tub, and two magnificent kibbles. The whole place reeked of bad air so we had a swift look about then made tracks, noting a large compressed-air pipe disappearing into the mirky depths of a flooded shaft. A trial level at the western extremity of the stope followed the vein for three-hundred feet.

Back in the main stopes, Merrin followed the workings westwards, swimming with a rope attached to him, and reached the end after climbing out and scrambling over a false floor positioned about ten feet above the water. He found an old shovel and streaks of secondary mineralization on the walls of the stope. The final exploratory excursion took place in the eastern stopes of the same vein, in a section of the workings illuminated by daylight filtering down through the open cuts behind the North Engine House. McFadzean attempted to abseil thirty-five feet down to water-level, through a gap in an extraordinarily wide false floor. Halfway down a large portion of plank partition which had once cordoned off a deep shaft, collapsed into the water. Because the way on passed beneath the remaining portion the attempt was prudently abandoned.

During the morning Lings explored the two Marion Levels which penetrate the mountain high above the coast. He found one to contain two shafts. We reckon one of these could drop into the stope where we discovered the kibbles. (Subsequently learned from Lings' documents that the Marion Levels were abandoned before they reached the ore body where the stope is located.)

30.5.86.

We drove down to Dursey Island to drop off Blezard's walking party then returned to Allihies, ascending the cart track to the Mountain Mine. Another party disappeared in the mini-bus to scale Carrauntuohil, Ireland's highest peak. The weather was atrocious (our only bad day) and enthusiasm lacking, though following Mitchell's stoic example we got changed in the horizontal rain and waded off to explore the Marion Levels with Lings as our guide. Our depleted numbers, besides Mitchell and Lings, included Jones, McFadzean, Sibbald and Westerman.

It transpired that the lower of the two levels, Marion No.1, was in fact Farmer Murphy's Mine which we had explored in '83. This was a long drive on the Marion Lode with a crosscut to the California Lode. The upper level was several-hundred feet long with two shafts, one immediately within the entrance and the other a few paces inbye. Lings abseiled down the inner shaft, which had a wooden ladder pinned to the cheek wall, but found it to be blocked about sixty feet down. The other was of a similar depth with blind levels running along the vein.

We trudged off in search of the Great Mountain Mine but were separated in the mist, Lings, Mitchell and McFadzean being the only ones to locate it. There were two levels here. The highest was a couple of hundred feet long and terminated in a flooded sump. This had been driven along a quartz vein and the spoilheap was quite a startling colour. The lower level was perhaps a hundred feet long and driven through a very dark rock.

It is still raining and the caravan windows are steamed up. The Dursey Island party returned in two groups after being chased by bullocks. The Carrauntuohil party climbed 3414 feet in dense mist and are now shedding wet clothes in front of the cottage fire. Tomorrow we make our reluctant departure.

# THE IRON ORE MINES OF FURNESS

The exhibition, 'The Furness Iron Ore Mines', staged by the Cumbria Amenity Trust in conjunction with Barrow Museum, was, we are pleased to report, a phenomenal success, so much so that the curator, Mr David Hughes, extended the running period by an extra two weeks, projecting the closing date to mid-June.

Although the exhibition was open to the public from the 2nd of May the official launching night took place on the evening of the 6th, when Doctor Bill Rollinson, local historian and author, opened the proceedings with a speech alluding to the importance iron mining played in the economic development of the Furness area. Sherry and fruitjuice were thoughtfully provided by the Museum.



Left to right: exhibition organiser, Lindsay Harrison, Doctor Bill Rollinson and museum curator Mr David Hughes.

Much of the exhibition's success was due to the coverage received from the media. The Evening Mail published an article by their news editor, Alasdair Northrop, the West Cumberland Advertiser managed to squeeze in a few lines and a photograph, the Westmorland Gazette gave it a brief mention, and the local radio station interviewed Mr Hughes who informed the public about the masses of interesting photographs, odds and ends, diagrams, maps, and documents they would see if they just got themselves along to Ramsden Square. Such was the response that a few days after the Evening Mail ran their article, they published another story about a Barrow man who had unearthed a lump of hematite in his garden. The man is reputed to have said: "I knew it were iron ore 'cause I saw a lump in THE EXHIBITION."



Top: some of the artifacts on show. Bottom: members sipping sherry.



All this would not have been possible, of course, had it not been for the dedication, hard work, and resorsefulness of a small group of members who gave freely of their time, and no mean amount of money, to get the exhibition off the ground. Chief organiser was Lindsay Harrison. Lindsay it was who set the ball rolling and saw things through to the end, despite frequent and painful visits to the hospital with a back complaint. Ace photographer and the man responsible for enlargements, colour prints, reproductions and black & whites, was Dave 'Bert' Wheeler. The Newsletter staff helped out with typing and diagram work.

Special thanks must go to Peter Fleming for loaning his excellent mineral collection, Peter Holmes for his series of photographs relating to the mineral lines and mine locos, Eric Holland for his artifacts salvaged from Stank and Yarlside, and Russ Ellis for his drilling machine.

Thanks go to the staff of the Library and Record Office for contributing bills, maps, and diagrams. Special thanks go to Bill Rollinson for squeezing us into his agenda at short notice and for delivering a superb and highly-illuminating speech. And last but not least, a very special thanks to Mr Hughes for his professional advice, patience, cups of tea, drawing pins, sherry and peanuts.



Photographs by Dave 'Bert' Wheeler.



# SPECIAL REPORT

by McF

CONTROVERSY IS STILL RAGING at the Bonsor Mill in Coppermines Valley where Mr Philip Johnston, an architectural salvor from Congleton, is in bitter deadlock with the Lake District Special Planning Board over his attempts to convert the mill site into an 'interpretive centre'. Members following this saga in the Newsletter will recall that in the last edition it was stated that C.A.T. is opposed to any development on the grounds that the Copper Mines have been designated as an Ancient Monument and any development, excluding genuine preservation work, would have undesirable consequences.

Mr Johnston submitted three sets of plans to the L.D.S.P.B. The first, the restoration of the foreman's hut for exhibiting information and display boards was approved. The second, the conversion of the powder house, complete with new extension erected by the owner with no planning permission, into staff accommodation was rejected on the grounds that officially the building is non-existent. The Westmorland Gazette reported that.... "The Planning Board claims that the building has been put up without permission and in planning terms does not exist. And according to the planners you cannot change the use of a non-existent building." In another article the Gazette reported..... "the board is insisting that the building should be returned to its former state, even though the conversion is almost complete."

A decision on the third application, to convert the sawmill, carpenters' shop and copper store, latterly known as the power house, into "upmarket accommodation for up to eighteen people", has been deferred.

The Copper Mines saga has generated plenty of interest in the local press. Mr Johnston has been interviewed on several occasions and his views have been treated sympathetically. Some of his statements and the information he has provided, however, although reported in good faith by the respective publications, warrant examining more closely.

Westmorland Gazette: "I merely wish to educate residential visitors and provide information for those passing on foot," he said.

FACT: Mr Johnston has consistently tried to prevent "people passing on foot" from walking across the mill site, irrespective of the fact that a public right of way runs through the middle. Fences have been erected and huge iron gates positioned between the Youth Hostel and the B.M.S.C. hut, which is where the right of way enters the site. An attempt to have the footpath officially diverted around the boundary did not succeed.

Westmorland Gazette: Mr Johnston's aim is to restore the main features of the mine's workings, such as the buildings, embankments and water-wheel pits.

FACT: Mr Johnston's aim is not to restore the buildings, it is to convert them into a visitor complex and thereby alter them substantially. Restore, according to the O.E.D., means "To build up again; to re-erect or reconstruct. To repair and alter (a building) so as to bring it as nearly as possible to its original form." As for restoring the embankments - trees have been planted on the embankments without any consideration for the damage their roots will cause in years to come, hardly the actions of the "industrial archaeologist" Mr Johnston is now styling himself.

Lakescene (April 1986): Philip has the wholehearted backing of Coniston Parish Council for his scheme.

FACT: Philip does not have the wholehearted backing of Coniston Parish Council for his scheme. Initially, when his intentions were made public several years ago, the Parish Council did in fact express their support. That situation has now changed and a council representative has written to Lakescene informing them of this.

## News Briefs

AND STILL AT THE COPPER MINES, rumours that the major land owners of the fells above Coniston, Rydal Estates, are to have all the levels gated and shafts securely fenced off proved to be pie in the sky when the Estates' representatives, Fisher Hoggarth, informed CAT secretary, Dave Blundell, that the Estates' insurers were quite happy with the existing safety measures.

The newly formed Coniston Mines Safety Committee, set up primarily to carry out the gating and fencing, seems now to be defunct before it has had time to distribute the minutes of the inaugural meeting. The Safety Committee, which is composed of representatives from CAT, the Lakeland Mines and Quarries Trust (also NAMHO members), the Cumbria Ore Mines Rescue Unit, and the Planning Board Ranger Service, was founded on the 11th of April in the Crown Hotel, Coniston, at a meeting called by Chris Lane, of the L.M.Q.T., who claimed that Rydal Estates had contacted him expressing their intention to restrict access to the mines.

Somehow, somewhere, wires have been crossed. Hopefully we'll have a full explanation for the next edition. Meanwhile, sighs of relief are the order of the day - access remains unrestricted, no gates, no ugly fences, no unnecessary committees.

IAN MATHIESON is to give two illustrated lectures on the Coniston Copper Mines, featuring many of his spectacular slides, on Sunday the 13th of July at 3:00 pm and 7:30 pm in the Mechanics' Institute, Coniston village centre. Artifacts, plans, surveys, and mineral collections will be on display. There will be a small charge at the door, but all proceeds go to club funds. For more details ring Ian. Posters placed at strategic points around Coniston will direct interested parties to the exact location.

THERE WILL BE NO WEDNESDAY SOCIAL EVENINGS during July and August, the next one being on the 10th of September at the Farmers' Arms, Lowick, when Ronnie Calvin will treat us to more slides from his unique and seemingly limitless collection. All members are urged to bring their slides along for an airing and contribute to what has become a thoroughly enjoyable evening. Remember - second Wednesday of every month from September to June - 8:00 pm prompt.

A VISIT TO THE INDUSTRIAL REMAINS OF TYNESIDE has been arranged for the 27th of September. Don Borthwick has kindly offered to conduct members on a guided tour of the mining remains, and other interesting industrial features, which litter his neck of the woods. Some of the many locations that will be visited include the ruins of Stublick Colliery, Lemington Glass Cone, Newcastle Quay Side, and Washington 'F' Pit museum. A mini-bus will run from Furness provided sufficient bookings are made. Members wishing to book a seat please ring Alen McFadzean on 0229 64172.

FOLLOWING THE SUCCESS of CAT's two visits to Eire, plans are underway to launch a series of overseas research expeditions, the first one taking place in 1988. The object of these expeditions is to explore, study and record, as scientifically and practicably as possible, the mines of a particular area and to have the results published. Transport will be subsidised from a special expedition fund so that participants will be under an obligation to regard the expeditions as a serious undertaking and therefore do their bit.

The expeditions will be open to all CAT members though several places will be reserved for members of any N.A.M.H.O. member group who possess a specific interest in the areas to be visited - the reason for this is twofold: 1) to ensure the expeditions acquire as much background knowledge and expertise as is possible 2) to promote the exchange of information and strengthen the ties of friendship and cooperation between CAT and the other member groups of N.A.M.H.O.

The first expedition, scheduled for Spring 1988, will be coordinated by Alen McFadzean. No definite plans have been made as yet though the possibilities of visiting the slate mines of northern France and Belgium are being looked into. Any member who has any information they would like to offer (no matter how insignificant) regarding the slate districts of Anjou, Basse Bretagne, Fumay, the Ardenne, Bassin D'Herbeumont or elsewhere, please do not hesitate to contact Alen.

And from Bideford, Devon, Chris H. Jones sends us this interesting snippet gleaned from a technical journal.

**USING** the latest technology in the shape of computerised plotting, structural failures and loss of life due to the presence of old mine workings may become a thing of the past. A sample study being conducted in one of the worst affected parts of Cornwall gives cause for optimism that the recording methods being adopted may ultimately be applied nationwide.

The Lofthouse Colliery disaster in Yorkshire in which miners were drowned some years ago when they accidentally broke into flooded abandoned workings highlighted the problem of literally thousands of mineshafts which lie undetected in some parts of Britain, sunk before any legislation compelling accurate charting existed.

Though accidents involving massive loss of life are rare, the risk to life and limb, to livestock and to structures built in areas of past mining activity remains. Cornwall poses a special problem due to the age and multiplicity of tin and copper workings, some of which date back to the 18th century.

Further problems are posed by the annual influx of summer visitors, most of whom are unaware of the dangers which exist even in some of the prime tourist areas; and the huge tracts of derelict land which are crying out for development to attract industry to a region with above-average unemployment. While shaft-capping programmes to protect the public are in progress, they only deal with one aspect of a complex problem.

When the deliberations of a working party set up by the Association of Local Authorities led the Department of the Environment into commissioning a major desk study two years ago, one of the most badly affected areas in Cornwall was taken as the sample.

Rectangular in shape, the 20 sq m area lies west of Truro and includes the villages of Chacewater and St. Day in the mining heartland centred on the one-time great copper mines on United Downs.

With another year of the study still to run, some 1,500 shafts have been identified in the study area, three quarters of which are no longer visible at surface.

But the study is doing far more than just pinpointing old shafts, important though it is. When the DoE appointed Freeman Fox to head the study early in 1984, the consultant was instructed to look at ground conditions from several other standpoints.

These included defining areas of potential future mineral exploitation considered important to prevent becoming sterilised by surface development, and highlighting places where toxic substances exist due to random tipping of mine waste. Ecological aspects, for instance where old workings provide breeding places for bats, have been taken into account.

Freeman Fox was also asked to put forward proposals as to what to do with all the information once gained: how, for example to make the information available to Cornwall County Council so that it could readily be augmented and updated, and how to deal with possible problems due to commercial security.

Just how well the study has been progressing was revealed at a recent public meeting at the Camborne School of Mines. A trio of speakers from the study team — David Holt and Mark Lamport of Freeman Fox, and Mark Zytynsky, computer specialist — revealed how the DoE's stringent brief is being met by using the latest technology.

The result is a novel approach to storing masses of information and its retrieval in a way members of the public can comprehend.

Locating mineshafts is done by consulting every known type source by way of plans, documents and books, which are either held at the County Records Office or in private collections.

Their positions are then plotted to a common scale using a computer system devised specially for the purpose, using the national grid system and five-figure co-ordinates.

Every possible place where a suspicion of a shaft exists is pinpointed, and groupings of such positions very close together can be taken as confirmation of the shaft's existence, even though its precise position may still be indeterminate. The scatter of possible positions is, of course, still valuable to a building developer as indicating an area of

possible subsidence.

In addition, features of archaeological and industrial archaeological interest, such as enginehouses, have been fed into the computer. These, too, can affect development schemes, in that they constitute existing or potential structures of protected ancient monument status.

The study team stress that their brief does not extend to underground survey work, though of course the positions of shafts and the known strike and dip of the mineral veins or 'lodes' in the locality indicate the probability of underground workings. Drainage tunnels or adits which are sufficiently near the surface to affect building, and whose inadvertent blockage could upset ground-water levels, are recorded.

An incidental important outcome of the study is that an extensive system of drainage tunnels through the mined areas known as the County Adit, into which the water pumped from Wheal Jane tin mine is discharged, will be properly mapped for the first time.

Use of a computer means that maps can be produced automatically of any part of the mining areas which show at a glance where shafts, mineral lodes and adits exist; providing a tool as useful in mineral exploration as in formulating or adjudicating on schemes put forward for planning consent.

Extending the study to include locating undesirable chemical constituents in the ground has produced another 'first' from the team. Clearly such information is vital to farmers and market gardeners as well as influencing decisions on tree-planting and landscaping schemes. There have been some classic cock-ups in Cornwall in recent years where local authorities have tried to hide the scars of mining by simply levelling off and planting!

Finding that there was little information available on the geochemistry of the area, Freeman Fox decided to use airborne remote sensing, backed by soil sampling in 250 positions in five parts of the area.

The technique used is similar to aerial mapping. The Daedalus equipment carried in the aircraft works on the same principle as carried usually carried by satel-

lite, but is of course much nearer the ground. It records the degree of solar radiation from vegetation in 11 different spectral bands.

Thus instead of trying to measure the toxicity of the ground itself, it highlights the different types of plant growth which flourish at different toxicity levels.

This part of the study is still going on and its results have to be fully assessed. However, it has already shown that what may appear visually to be a normal farmer's field can contain all kinds of trace minerals left over from mining which might affect future development on the site: such as copper, lead and arsenic. Quantities of such substances are, however, invariably highest on derelict mine waste.

The real value of this land use study lies in the problems which comprehensive mapping of ground conditions have thrown up, and the pointers which the consultants have devised towards developing a system applicable to other parts of Britain. It highlights differences between metaliferous as opposed to coal mining, where the hazards posed by waste tips appear to dominate.

The encouraging results could be to the long-term benefit of not only Cornwall but parts of North Wales and Derbyshire.

# CALVIN'S COLUMN



SERVICE OF COMMEMORATION

THURSDAY 27TH MARCH 1986

This service was held in the Colliery yard on a bright but windy day. As one walked about before the start of the service the shout of "Howes thou keeping Ron" rang out for in among the groups of miners were a lot of old workmates, time for a short chat with them. It was time for reflections and good to meet your old mates again. Some you may never see again. From time to time one of your old Managers, Undermanagers and Senior Overmen would stop to talk, all of them were in a quiet mood knowing this was the Final Chapter in Haig's long and happy life.

Some of these men had travelled a long way to be at this Service for Haig was still a part of them as it was the centre of all our lives. The Service was a simple but moving one. You could see the strain on the faces in the gathering as it progressed, but the miners of Haig would have one last go. All the Colliers past and present formed up to proudly walk out of the pit yard for the last time. Carrying the last Pit Banner through the centre of Kells and on down the hill to the recreation ground, they were accompanied by the town band.

As the procession passed the rows of houses, groups of people were gathered, most of these people had connections with Haig. So it was a quiet wave to the miners as they passed by. So ended a very sad day for as one now takes a walk down town you don't see the groups of Miners standing chatting in the Market Place.

Now and then you bump into an old workmate and the talk is about the weather or "have you found work yet?" Still a lot of them say "why did they close Haig? there is still plenty of coal down there".

It is the same when Elsie and me take a walk along the cliff tops past Haig to Saltem. You see the lone old Collier standing looking across at Haig and he will say the same "why did they close Haig and leave all that coal trapped in forever?"

### WHY?



Relatives, friends, miners and officials at the Haig, well wrapped up against the chill wind, hear the closing speeches.

### MY TRIBUTE TO THE COLLIERS PAST AND PRESENT

The sorrow that is mirrored in the hearts of womenfolk and families of Haigs tough collier breed, must also be tinged with relief, relief that no more husbands, sons and sweethearts have to ply a dangerous hard and dirty game that has cost the lives of many fine men in order to earn their daily bread.

This was the way of life in this area, in ones hour of grief, you did not suffer alone there was always comfort to be found, for all around you, was this special breed of people ready to come to your aid, whether it was in your home, or an accident and explosion down the mine, they were ready to lay down their lives in the rescue of a trapped collier mate, and some of them gave their lives. They knew no fear, only their strength to toil, till they were beaten back by conditions that no man could live in. It was an honour and a privilege to work alongside these men all my years in coal mining and I was and always will be proud to be called a collier.

R. CALVIN R.M.

Cover photograph of Haig Pit and loco supplied by Ronnie Calvin R.M.

POLAR FOIL REVISITED

The humble Battersby wishes to apologise most grovellingly to those members left with egg on their faces. It would appear that the POLRA FOIL samples so generously given by that humble guru were faulty. May the Pi-Dogs of Vishnu sniff the armpits of his abjectness.

Prof. A. Phooole of the manufacturers, Associated Polymer Research International Ltd., has contacted Mahatma Bhatti to apologise that they inadvertently sent a sample of PILAR FOOL that was shiny on both sides. Using Codd's third equation it is obvious to any fool that POLAR FOIL will therefore exhibit latent anagrammatical properties causing it to transfer heat both ways at once giving the impression that bog all is happening, although of course in reality the temperature change is vanishing up its own infrastructure.

I understand from the aforementioned Prof. Phooole (Avril to his friends!) that the sample can probably be made to work by coating the negative side with an organic thermal source such as Chicken Vindaloo but this of course is highly dangerous and anyone attempting it does so entirely at their own risk.

Here's another brief extract from the North Lonsdale Magazines of the last century. On this occasion the writer - who is unknown - finds himself in the quarry bottoms at Kirkby, and witnesses a shot going off.

I tornd rownd an' leeakt abowt me, an' I cud see rubbish hills on t' fell for a mile or mair, an' t' fellas keekin' waggins o' steeanns ower t' batteries, as they co'd 'em, an' flingin' girt uns down wi' a terble clatter to t' boddom, slap bang on tul an ahd howse 'at poor foke hed bin flayt out on, likely. Down belah was Beeanthe, Grizebeck, Brou'ton Tower, Dunnerhowm, t' mosses, an' t' railrooad, an' o' that. Behint was Cunnisen Ahd Man, Scofell, an' a lock mair, an' a cruel lumpy country ano'.

I leet on a chap gahin' wi' a jumper fra t' smiddy to yan o't' quarries sooa I followt 'em, an' just as we gat tul it, thay fyert a shot wi' a tremendius bang, like thunner, an' smook com up i' clouds. When it cleart off ther' was a hooal big enuff to hod o' Ooston amaist, an' down i' t' boddom t' quarry fellas was runnin' abowt as rank as mice in a meeal kist. I was fairly gloppen'd, sooa I mud as weel speek truth at yance, for I nivver seed sic an awful spot i' o' me life. Ther' was menny mair sic like, but I cuddent bide to see 'em, sooa I gat on t' fell side an' set off torts t' Chapels.

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This short article has been included at short notice for the benefit of Mister Anton Chenylle-Proctor-Thomas, a gentleman from Lowestoft who, amongst other things, is learning to talk reet.

Easter Meet- Mid-Wales.

A superb turnout despite the weather which alternated between driving rain and brilliant sunshine and we even got a thin covering of snow on one day. Eleven people were present at various times over the holiday weekend. Friday was spent looking at various small mines around the campsite and culminated in a visit to Nant-y-cria mine which lies at the head of a remote, densely forested valley and which requires Forestry Commission permission to visit (yes, we had it). The mine was pretty insignificant and had been largely obliterated by the F.C. (not the 'Fat Controller'). Saturday was spent visiting various mines all of which proved pretty nasty with little to see, although it was nice to see Taylor's Inclined shaft at Glogfach. So if you're thinking of visiting Cwmsymlog, forget it! We also visited the Mid-Wales Mining museum at Llywernog near Ponterwyd, well worth a visit if you've never been before (I have also heard that at last the waterwheel, so long lying neglected is to be erected on this year). Sunday brought the certainty of a little bit of underground work at Cwmystwth and sure enough this proved to be the case. Entering Bonsall's Level Fawr the full team descended the inclined shaft to explore the lower workings. After this a small team of three pushed the shaft upwards to discover a fascinating hopper system. Above this was a ladder and this, in turn, led to a system of massive stopes, one of which had daylight filtering down from high above. All three decided that a future visit to this mine would definitely lead to an incredible through-trip of some 5-600 ft. in depth. Monday was a travelling home day although the whole party did take in the quite exceptional mine at Ystrad Einion. A very unprepossessing entrance which thanks to the attentions of an over-zealous landowner, meant one needed to be a contortionist to get through led to the incredible sight of the underground waterwheel. The air positively screamed with the warming up flashguns, there can be fewer more photographed places underground. In the car park Alastair Lings was required to demonstrate his ability to run 100 m. in 32 secs. carrying 2 people. He failed though it was a good effort. He was also required to back up a claim (made in a moment of alcoholic exhuberance) that he could cram 3 chocolate digestive biscuits in his mouth all at once. Once again

he failed, quickly running across to hide behind his Land-Rover to dispose of the contents of his ...

A special mention should also be made of Phil Merrin who, not wishing to let the opportunity of a mention in the newsletter evade him made sure of a place by taking a shower and shave in the Ladies toilet at the campsite. Some less charitable members of the party suggested he may have been shaving his legs. An excellent meet but needed more holes in the ground although Cwmystwth would absorb a whole meet by itself.

#### New Lamps for Gold.

The club now has a supply of lamp tops and various other bits and pieces for Oldham Cells. These have been contributed by member, Ronnie Calvin. There are a small number of complete lamp tops, cable and lights also for sale priced between £5.00 and £7.50 depending on quality. A new battery (Oldham Type T3) is only around £20.00 so this is a good way to buy a cheap lighting set. Contact C.J. on (0229) 63892 for further details, cheques payable to Cumbria Amenity Trust.

#### Borthwick's Bequest.

Don Borthwick has contributed a copy of Sir Kingsley Dunham's classic work "Geology of the North Pennine Orefield, Vol. 1". This will be raffled and tickets will be sent out with the next newsletter. Thanks, Don.

#### Irish Slides.

There will be a slide show in the near future to illustrate both the original journey to the emerald isle in 1983 and the more recent (May) one. Look out for the venue.

#### Journal No. 2.

Yes, it really does exist...you should be getting a copy soon...ish. We have at last got a cover photo. courtesy of Ian Matheson. The cover will, unfortunately be b+w, the funds won't stretch to colour this time.



# Meets Review

by McF

This is a whistle-stop meets review. Absolutely no time to elaborate. Have just returned from Ireland. The Newsletter is expected at the printers for tea time today. Bailiffs hammering at the shed door and the typewriter refuses to balance properly on the seed boxes.

Never attended the Dale Head meet on the 16th of March, neither have I received a report from the meet leader, Secretary Blundell. Exit Dale Head. Jones is preparing details of the Welsh meet. Exit Wales.

Eagle Crag Mine, 13th of April. Hold it right there. Vague memories of wind and snow, long lines of shambling peasantry twisting along a grey valley bottom, Tyler lurching among the boulders, crazily swatting his daughter behind the ear with an ice-axe for drinking the coffee before dinner time. Good job she didn't eat the sandwiches. Yes, I remember Eagle Crag Mine, I recall the long winding levels with their wooden rails, the gleaming white walls of hydrozincite, the enigmatic ruins perched high in the crags. And then there was the open stope on the felltop, an eighty foot pitch to a low passage, a further short abseil to the crushed stope bottom where a hibernating bat dangled from a wall flecked with galena. An extremely interesting mine and an excellent day. Hats off to Mr Tyler.

There was a good turn out for the Tilberthwaite Shaft meet. All members made it to the bottom with the exception of one individual who inadvertently mislaid his flat cap on the way in and spent the rest of the day looking for it. The water in the Horse Level at the foot of the shaft was rather high so no new ground was covered.

And on the 11th of May we were back down Greenside Mine to push exploration on the Lucy Tongue Level. There was a good turn out, which was just as well for there was a stack of gear, Mitchell bringing the maypole along just for a laugh. We managed to scale the lower stage of Brooke's sump (which rose in three stages to the 48fm Level) but found the middle stage sealed off with iron rails and sleepers. No way on at present. Commiserations to the meet leader who, on his belated return to the carpark, discovered his clothes in a heap by the fence and the car in which he had bummed a lift parked two miles down the road outside the Travellers' Rest. Which just goes to show that pseudo-northerners hailing from Lowestoft should be treated with caution.

P.S. Reminder to Mr Peter (Did-you-all-have-a-good-day-?) Fleming. Meets begin at 10:30 am, not 7:30 pm. This is becoming a habit. Watch out, the eye is upon you.

Never attended the training meet though Don Borthwick has kindly forwarded this glowing account. Over to you, DB....

Saturday morning saw six greenhorn CAT members at the ford in Little Langdale. Resplendent in their new S.R.T. gear they awaited their learned friends to come and instruct them in this not so ancient art.

Were they to wait in vain? Were they to be left to walk lemming like off the cliffs of slate into the abbys below? As the skies darkened up the road came two knights in shining armour (one set of shining armour bearing the legend 'Lakeland Heat Pumps - Mitchell Maintenance'). The other was the noble knight Thomas of Suffolk via Furness.

Off they trooped to the place of learning, to queue for a spot

from which to test the textile engineers defiance of gravity. Gingerly, after turning our backs to the abbys and with words of wisdom and encouragement from our chairman, slow descents were made until terra firma was regained. But whereas for those other groups around us it was once down then walk out, CAT funds do not allow the leaving of even new members at the bottoms of mine shafts so prussicking became the order of the day. So on went the CAT yo-yo, experience speeding the downs and tired legs slowing the ups. Then after some practise at 'change overs' an intermediate belay was installed, the passing of which our Guhrus Mike and Anton made look so easy...well perhaps they were slow and hamfisted once upon a time.

A very worthwhile day - much gratitude to our instructors. Full marks also to the weather forecasters, most of the day was spent with the meteorological conditions that hide the great scenic beauty of Lakeland, but keep the numbers of tourists to manageable proportions.



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