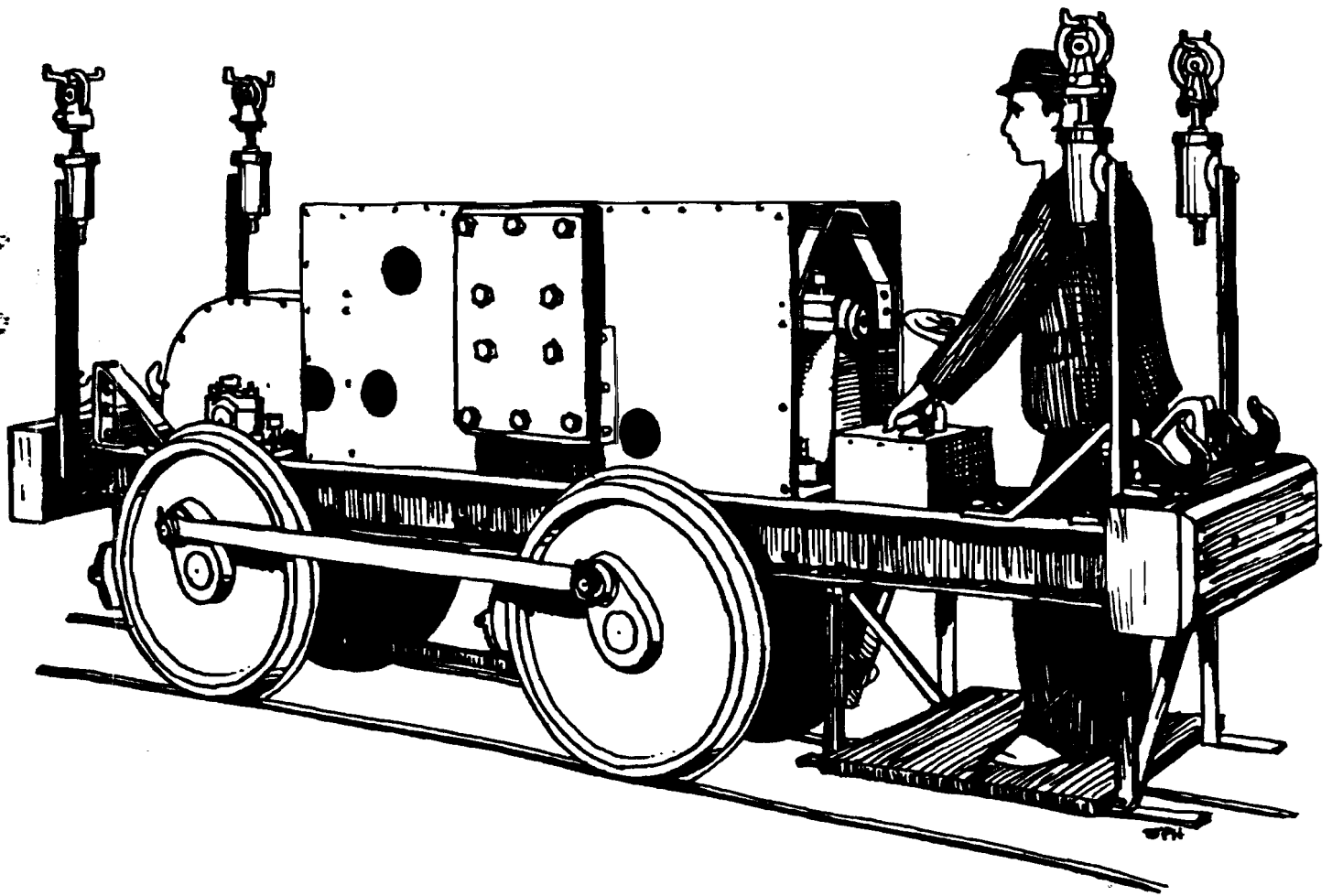


CAT NEWSLETTER NO 9





The recent trip to Greenside prompts me to write a few notes on the electric locomotives that were used there. The earliest loco on the site is of particular interest as it is believed to have been the first electric loco in any British mine; it certainly predated Kellow's 1904 loco at Croesor quarry for which the title of "first" has been claimed.

The Greenside trolley locomotive was introduced in 1892 for haulage in the Lucy level, as part of the big electrification scheme which was going on at the mine at that time. It was described in the "Electrical Review" of August 26th, 1892. The builders were the General Electric Power and Traction Co. Ltd. of Kentish Town, who to the best of my knowledge had no connection with the present-day GEC organisation, as they were liquidated in 1894. The Greenside loco was probably the only one they built.

I have traced the wood engraving from "Electrical Review" and this appears on the cover of this issue. The accompanying text was as follows:

"The accompanying illustration represents an electrical locomotive recently made by the General Electric Power and Traction Company, Limited, at their Kentish Town works, and is part of a large installation supplied to the Greenside Mining Company, Cumberland. The locomotive is for mining work underground, the road on which it runs being in some places as narrow as 32 inches, the gauge of the rails being 22 inches.

It was found impossible in the small space available to place the motor across the frame with its shaft parallel to the axles, so it was arranged parallel to the rails. Three reductions of gearing are employed, one necessarily being through bevel gearing. The whole framework of the machine is hinged from the driving axle, which is made extremely strong for the purpose, the weight on the other wheels being taken through strong spiral springs on the top of gun metal axle brasses.

The design of the 'Immisch' motor, as shown, was chosen owing to the protection afforded to the field windings by this type of machine.

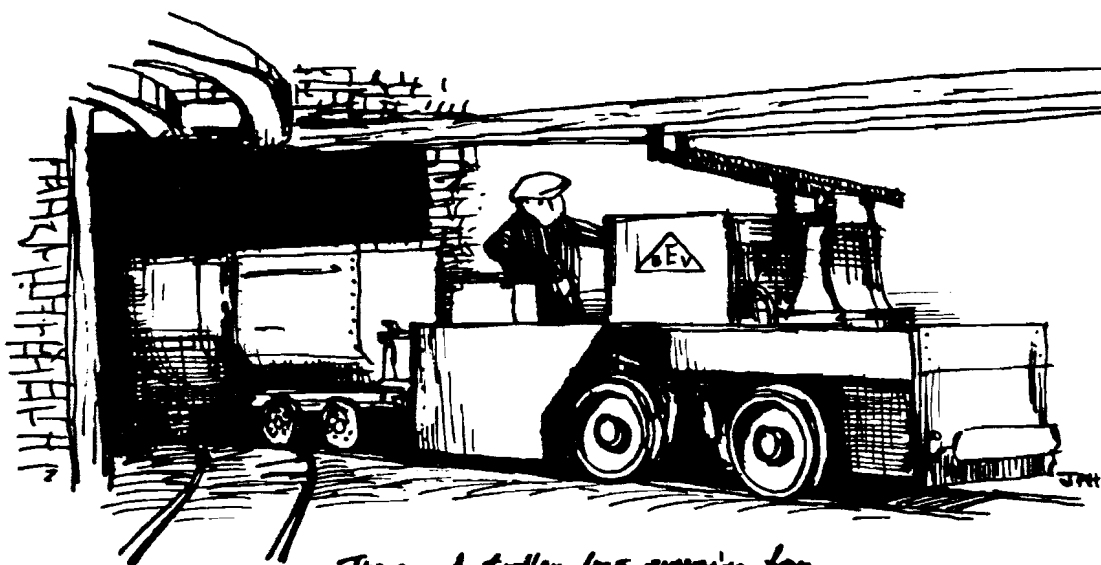
The motor is series wound for a difference of potential of 200 volts, and develops 15 brake H.P. at 1000 revolutions per minute. The length of the road is 1,200 yards, and the current is collected from two bare copper wires carried on insulators overhead. The E.M.F. is reduced from 500 volts to 200 volts by means of a motor transformer placed at one end of the line. The whole installation is rendered doubly interesting from the fact that a copious natural supply of water on the side of a hill is utilised as a prime source of power to drive a large 'Vortex' turbine, the water being conveyed down the hill through 15-inch pipes. A building has been erected on the hillside of this wild looking country, in which the turbine drives an 'Immisch'

A-pole dynamo which develops 100 electrical H.P. at about 600 revolutions per minute. The dynamo is compound wound with a working difference of potential of 600 volts, and supplies current also for motors driving pumping and winding plants besides lighting the colliery both above and below ground."

I didn't know Greenside Mine was a colliery! But the article says so, in black and white.

The GEPT loco was rebuilt at Greenside several times; the four vertically-sprung current collectors were replaced by a pair of sprung pole collectors, trolleybus style. Presumably two overhead wires were used because it was easier to string a second wire from the roof of the level, than to bond all the rail joints to ensure a decent earth. It would also avoid corrosion troubles due to stray currents. Later photos of the loco show a round-topped bonnet over the motor, instead of square, and the wooden buffer beams went through various different designs, probably because they wore out quickly.

I have read that the GEPT loco was scrapped in 1936, but it actually lasted until 1938 and was photographed in that year by members of the Newcomen Society. As part of the re-equipping of the mine, the Bassinghall Syndicate acquired a new loco in February 1938 and scrapped the old one later the same year. The new one was another overhead trolley type, built by Wainrove and Rogers Ltd. (British Electric Vehicles) of Liverpool, and designed to use the existing system of overhead wires. The only photo of it I have seen is an indistinct one in "Mine and Quarry Engineering" from which the sketch was traced.

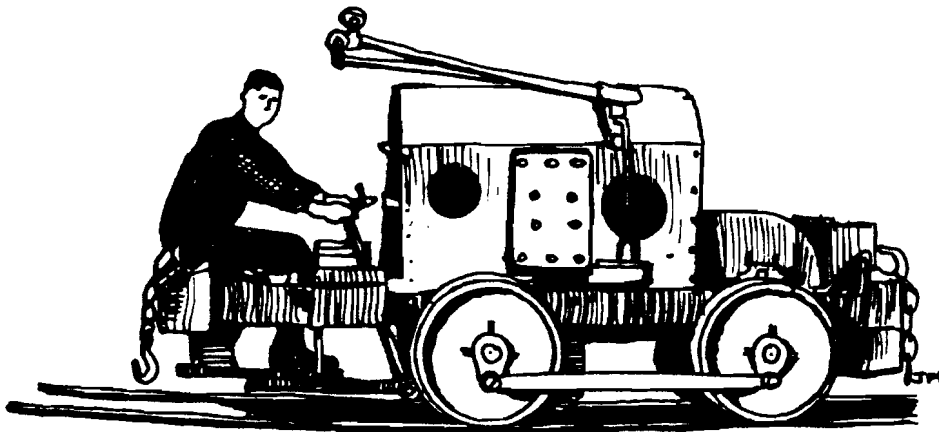


*The second trolley loco emerging from
hazy level - traced from a photo
in "Mine and Quarry Engineering".*

The principal external difference between the two trolley locos was that the GEPT had the wheels coupled by outside coupling rods like a steam loco, while the BR/BLW had two motors and therefore no coupling between the axles. So if you find a photo of a trolley loco at Greenside, look at the wheels. If it has coupling rods it is the GEPT machine, no matter what shape the body is.

The overhead wires had wooden skirting boards fitted, probably to prevent people banging their heads and electrocuting themselves, as the wires were only about five feet above rail level. Early photos show no such boards, so either people were smaller in those days or they just took more care when walking near the wires. Incidentally I believe that the men rode to work in the wagons and a photo of this exists somewhere.

Between 1938 and 1952, Wingrove and Rogers supplied five $1\frac{1}{2}$ ton battery electric locos for use in the deeper levels of the mine, particularly on the 175 fathom level. The 1938 trolley loco was always used in the Lucy level; in about 1950 the overhead wire system was scrapped and the Lucy loco was converted to battery power. This battery had a capacity of 290 A/h while the smaller locos had a battery capacity of 240 A/h.



*The GEPT loco in its final form - track
from a photo taken in the 1980s.*

When Greenside closed in about 1962, the ex-overhead loco of 1938 was sold to the Weardale Lead Co. - can anyone say at which mine? It recently ended its days at the Cambo Keels mine in Weardale. The smaller Greenside locos were sold to various owners; one went to McKechnie's at Driggeth, one to Force Crag, and one to Blanchland Fluor Mines at either Grove Rake or Whitcheaps.

THE ALMA - GREENSIDE REVISITED

by McF

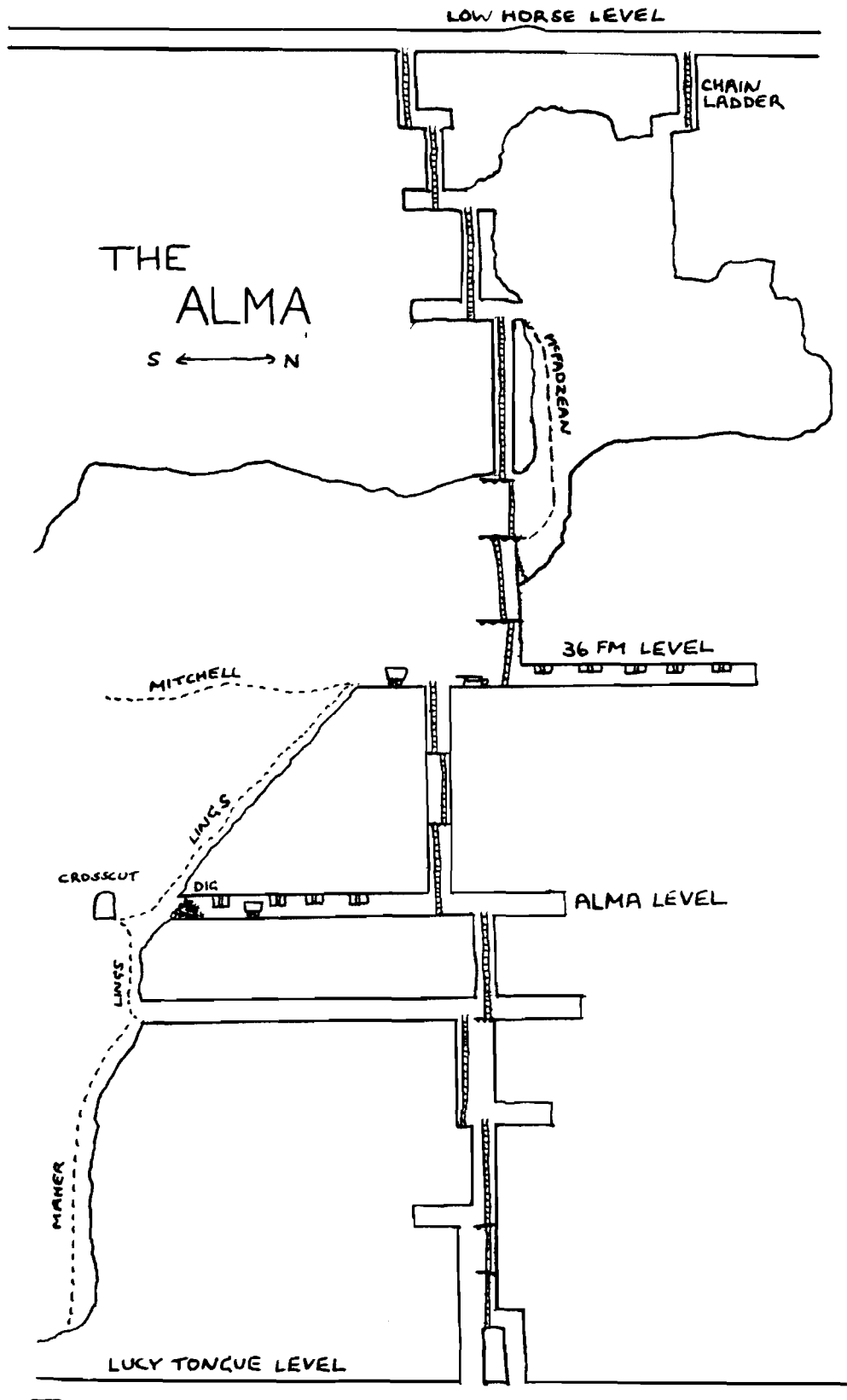
On the 5th of May a C.A.T. abseiling team won into a tunnel in the stopes of the Alma ore-shoot, in Greenside Lead Mine, and established beyond doubt the exact location of the Alma Level, the main level which traversed the northern reaches of the mine. This is a very significant discovery; firstly, because it is now possible to relate our knowledge of the mine to the old plans with a certain degree of accuracy, and secondly, because it increases our chances of winning into the ever elusive 48fm Level, the magical tunnel which should, by rights, deliver us to the Willie Shaft and the colossal areas of stoped ground which were worked out during the nineteenth century (see the diagram in Newsletter No.7). Sunday's campaign in the stopes of the Alma, although not revealing a great deal of new ground, has increased our understanding of this, Lakeland's largest and most secretive, mine.

There was a good turn out, there always is for Greenside, thirty-two people making the descent in November 1983; the number on this occasion was nineteen, twelve members completing the full descent of 740ft on miners' ladders to the Lucy Tongue Level, while the remaining seven: Gilchrist, Jones, Lings, McFadzean, Mitchell, Moore, and Tyler, laden with ropes and halogen spot-lights, probed the environs of the Alma.

The Alma is the smallest of the three great ore bodies which rise above the Lucy Tongue Level and was worked sporadically from its discovery, towards the end of the nineteenth century, up to the final days of the mine in 1962. The ore has been stoped away over a vertical distance of five-hundred feet, which accounts for almost the entire extent of ground between the Low Horse Level and the Lucy Tongue Level. The ladderway, down which access to the Lucy Tongue Level is gained, passes through the Alma in its own series of shafts, for the most part separated from the stopes by a narrow rock wall, but at one point actually descending on the footwall of the vein. And it was at this open place, where the ladders are fixed to rickety stagings slung across the stope, that we commenced our exploration.

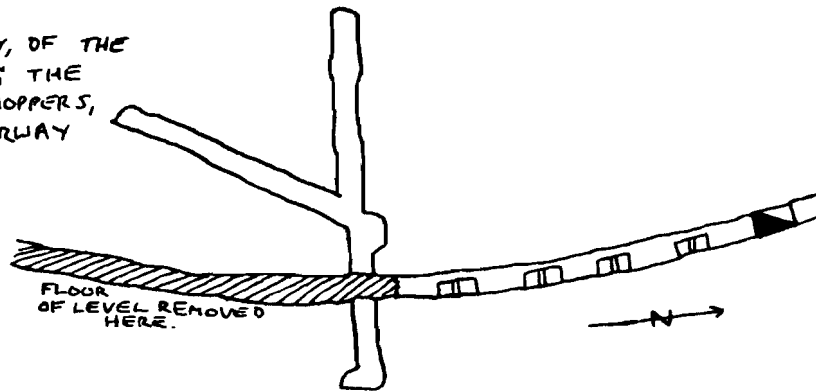
There is an impressive level here, equipped with hoppers, an ore tub, a wheelbarrow, and various other odds and ends, which links the two major stopes of the Alma. Above this level the stopes rise on the northern side of the ladderway, while below they are to the south. It was always assumed that this was the Alma Level, that it had been the main artery through the ore-body and would lead us into greater things, but as time unravelled and our exploration progressed it became obvious that the Alma Level was somewhere beneath us and that this important tunnel, with its equipment and manifold signs of once virulent mining activity, was something else entirely. For the sake of clarity I shall refer to it as the 36fm Level, which is probably its proper name anyway, though I must emphasize that it is not contiguous with the other level of that name - which cuts through the Main ore-shoot and the South ore-shoot, following the Greenside Vein for many hundreds of feet - although it is situated on precisely the same horizon.

The northern end of the 36fm Level concludes in a blind heading but the southern end drops into the top of an incredibly large stope. Mitchell, with his halogen spot-light, attempted to traverse across a ledge in a vain bid to win into the continuation of the level. At this time we were still under the impression we were on the Alma Level; unbeknown to us there was no continuation, there being a solid wedge of barren ground separating the two 36fm levels, but when all said and done we were treated to a first rate exhibition of stope traversing. It was now obvious that we were not going to get across the top of the stope, which was fifty feet wide in places, so we decided to abseil down into it and attempt to get across at some other point. There is a steep slope of very fine detritus which drops from the 36fm Level, down which ore from the hoppers had been tipped to the hoppers on the Lucy Tongue Level three-hundred feet below; it appeared to be clean and safe, and heading in the right direction, so we lowered a rope and Alistair Lings abseiled to a convenient ledge, where he was joined by McFadzean. Seventy feet down they alighted at a junction of levels; the



sole of the main level, which followed the vein, had been removed and we were aware of the stope continuing down into the darkness, but two crosscuts branched off into the country rock directly opposite each other; Lings pendulated into one and McFadzean the other. In the easterly crosscut Lings discovered some old gelignite; not to be outdone McFadzean unearthed half a dozen No.6 detonators and a length of sump fuse - it was mutually decided that if we didn't find a way into the continuation we could always force one. The westerly crosscut was a veritable Aladdin's Cave; not only were there detonators but dozens of empty detonator boxes, an old cross-bit drill steel (unbroken), a dozen or so 45 gallon oil drums, a large coil of $\frac{1}{2}$ " steel cable, a fine collection of exotic-looking cigarette packets, none of which are available today (I wish I'd noted the brands),

SKETCH, FROM MEMORY, OF THE ALMA LEVEL, SHOWING THE NEW CROSSCUTS, ORE HOPPERS, AND THE MAIN LADDERWAY SHAFT.



a newspaper dated 1933, the lid of a ladderway trapdoor (presumably removed when the sole of the level was blasted out), a pile of rails, a bottle, and an edition of the Sunday Post from 1960. Quite an interesting little spot, but a shame that no one had a camera. Incidentally, just in case you're wondering, the detonators were damp and quite harmless and the sump fuse had deteriorated to a soggy mess; the gelignite, however, was potentially lethal and was disposed of in the safest manner possible.

Jones and Mitchell joined us in the western crosscut; their appearance startled us for they hadn't abseiled down the rope. It transpired they had descended the main ladderway to the next level and, after hearing Lings' voice, dug through a fall at the end, to emerge from the detritus slope at the junction of the crosscuts. So we now had a four-way junction; back along this level, and heading towards the ladderway, were a set of hoppers, an ore tub, and the famous veil of hanging fungus which, somebody once said a long time ago, was a species peculiar to Greenside Mine. On studying one of Lings' portable waterproof surveys we determined beyond doubt that this was the Alma Level, the tunnel at the top of the slope being the 36fm Level. There was absolutely no chance of traversing the stope to the supposed continuation into the nineteenth century workings so we resumed abseiling and alighted on another level about fifty feet below the Alma Level. A quick recce by Lings revealed a connection with the main ladderway; on the arrival of Mitchell we were informed that this was the spot from where Martin Maher had abseiled, eighteen months previously, on his solo descent to the Lucy Tongue Level. This, then, was the end of the road so far as any connections with the old workings were concerned. We were a shade disappointed, to say the least.

Not being men to wither in the face of adversity we climbed back up the ladderway to a tiny sub-level which opens out into the big stope on the northern side of the shaft. At this point we were approximately a hundred feet below the Low Horse Level and a hundred-and-fifty feet above the 36fm Level. We could vaguely discern the floor of the stope about sixty feet beneath us and to some degree determine, with the aid of the halogen light, its extent, though to do the job properly we decided to abseil down and explore it. McFadzean abandoned his attempt after dangling on the rope for twenty minutes in a hapless bid to pendulate onto the floor, for there was a massive crater directly in line with the rope and it was impossible to avoid being drawn into it. Thwarted, he continued into the crater and found himself descending parallel with that part of the ladderway which is suspended on stagings in the open stope, directly above the 36fm Level. One final swing and he managed to grab hold of a cross beam supporting the staging and hoist himself back onto the ladderway. Lings then had a go but he too failed to avoid the clutches of the crater and the unfortunate fellow, not being as lish as McFadzean, failed also to pendulate onto the salvatory staging and was obliged to alight on some dark ledge beneath it and smash his way up through the wood with a broken drill steel. Not in the best interests of conservation.

So that's all for now, the latest news from Greenside Mine, tidings from the front line. Again we failed to establish a route into those vast nineteenth century workings, but there is time yet, there will be another day. I look forwards in eager anticipation to writing proudly about the discovery of hydraulic winding and pumping engines at the head of the Willie Shaft, to the exploration of the 36 and 48 fathom levels, and the scaling of Brookes Sump. Yes, plenty of work for eager hands; Greenside Mine has secrets to divulge yet.

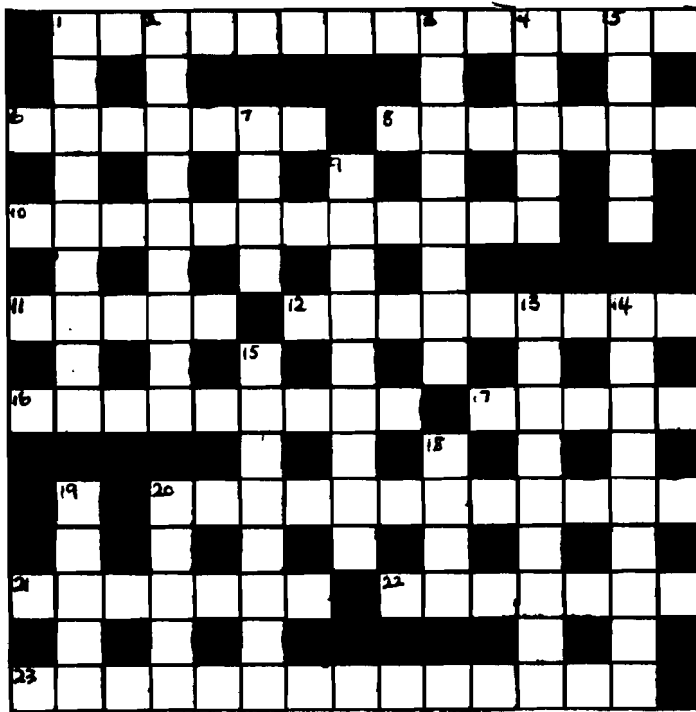
Copper Trials, Swinside Stone Circle, Millom.

Albyn Austin

These trials are marked on the 1899 Ordnance Survey map, 25 ins. to the mile as 'Old Level (copper)'. The trials should be approached from the uninhabited Windy Slack farm (SD 176888) and then an old track should be taken through the fields parallel to the stream to SD 173888 where there are two fairly big tips from two run-in levels. The tips compose of a hard black rock with thin quartz veins. This contains very small traces of iron and copper pyrites. The second working can be found at SD 174888 where a 20 ft. long adit has been driven into the north bed of the stream with a little stoping in the roof. The level walls are stained blue-green with copper and the forehead shows a large quartz vein. On the south bank of the stream opposite, a small depression indicates other small workings.

Permission to visit the above should be sought from Mr. Atkinson of Fenwick Farm, SD 168894.

Mr. J.C. Braithwaite of Broughton-in-Furness has supplied the present writer with a reference to copper ore being discovered on the "9th June 1771 in the Cumberland manor of Thwaites" in a letter from Mayor Cooper of Wha House, Dunnerdale to Sir James Lowther. The trials described are on Thwaites Fell and the Manor was owned by Joseph Thwaites of Ulerigg. Mr. Braithwaite has also noted that some of the waste at these trials is very finely pulverised and thinks that a small stamp mill may have been set up to treat the material obtained.

ACROSS

- 1,5 County's pleasantness has given confidence to us (7,7,5)
 6 Country for example, in 1ac.(7)
 8 In team at European Games but obviously no Pro. (7)
 10 Does he play a supporting role in 1ac? (5,7)
 11 Initially perhaps, extra rope instruction lessens danger (5)
 12 Bring about east English order for gun lashing (9)
 16 Does the Lady Isabella feel no longer wanted in this male dominion? (4,2,3)
 17 Wheel-less carriage though losing direction might give a welcome rest to those in 1ac. (5)
 20 All furs there are grease-absorbing when rearranged (7,5)
 21 Group five policy of silence about northern model (7)
 22 Green olivine as a fairy dowry (7)
 23 In ravine, constant change makes local curiosity interesting to 1ac. (8,6)

DOWN

- 1 Proximity of secret headland (9)
 2 Made the claim, "a basic carbonate mineral is found here" (9)
 3 Recollections of stirred French wine, waiter left out (8)
 4 Endless cabbies grouch, or plea to the council from 1ac. (2,3)
 5 See 1 across
 7 Hair-raising region new copy gives when affraid (4)
 9 Avid cinema-goer with telescope (4-5)
 13 Bloody drunk we hear, providing a specimen for 1ac. perhaps (9)
 14 Evening dress (5,4)
 15 With abounding wealth a change of leader brings waste (8)
 18 Actual existence you can have both ways (4)
 19 Soccer's ultimate error when lacking a friend (5)
 20 Sounds an amusing chap, this mushroom man (5)

Crossword compiled by HAMSON TAKARING (ana.). Answers in the next edition of the newsletter, I hope. The clues are mining/geology/etc orientated. I trust you will have no problems with 1 across.

News Briefs

HONISTER SLATE MINES, presently under the ownership of the Buttermere and Westmorland Green Slate Company, are in the process of being taken over by McAlpines. McAlpines are no newcomers to the slate industry, they have been working the massive Penrhyn Quarries in north Wales now for many years and have recently purchased Hodge Close in the heart of the Lakeland slate country. If the deal comes off then they will work Honister primarily for monumental stone, roofing slate taking second place - this was decided when the results of a feasibility study showed that the slate metal, mined from the Kimberly Vein, would not rive on the Welsh riving machines.

BURLINGTON SLATE LIMITED are on the move in a big way. England's premier slate quarrying combine, whose sister companies include Broughton Moor Green Slate Quarries Limited, Mandalls, and the Lakeland Green Slate and Stone Company, are streamlining their industry to sail into the 1990s and take the foreign markets by storm. Commencing this summer, all sawing, riving, and monumental work within the group, will take place under the rooves of two new sheds at the Kirkby Quarries, clogs of green slate being transported by road from all the fell quarries. From an environmental point of view this can only be a good thing for there will be less waste dumped within the National Park; also the controversial slurry pits (formed by effluent from the sawing processes), long a bone of contention, should soon become a thing of the past. However, motorists beware, there is likely to be a considerable increase in traffic; heavy wagons rolling from Broughton Moor, Elterwater, Brossen Stone, Spout Crag, Moss Rigg, and Brandy Crag will be heading south, adding substance to that ancient Furness maxim - all roads lead to Kirkby.

THE NEW COLEDALE MINING COMPANY is steadily progressing in its bid to reopen Force Crag Mine. All the rails in No.1 and Zero levels have been dogged out from 1' 10" guage to 2' guage to suit the new loco which arrived at the mine during the Easter break. Manager Blezard, in an exclusive interview, said that he hopes to be producing barytes very soon from the rises at the head of Zero Level, then later extract sphalerite from the stopes immediately below No.1 Level. Much work is being done on the mill to get it into working order. C.A.T. is having a work meet up at Force Crag on the 18th of August, an excellent opportunity for members to study and photograph all the aspects of a working Cumbrian ore mine. There will also be a visit to the upper, and older, levels for those with enough energy left to struggle up the mountain.

A SLIDE COMPETITION will be held at our next monthly social evening, Wednesday the 12th of June, at the Farmers Arms, Lowick. The winning slide will be immortalised as the cover photograph of the next Journal, which should be in the shops for spring '86. Quite an honour, you must admit - so bring all your good slides, and don't be shy. The winning slide will be returned to the owner when the printing process is complete.

DING DONG WORK MEET, Saturday the 15th of June. Many hands needed to throw many old tyres down the shaft to back-fill around the access pipe. Meet at the mine, 10:00, S.D. 245 768.

AN EXHIBITION of mining artefacts and documents is being assembled by the Cumbria Amenity Trust and will go on show at various museums around the county. If you possess any tools, old surveys, pieces of equipment etc., which are easily transportable, which you think would be interesting to the public, and which you would be willing to lend, please telephone Lindsay Harrison on 0229 26478, with the details.

SITS. VAC.

WANTED driller/shotfirer, Force Crag Mine. Must know what he is doing and be prepared to supply his own matches and wheelbarrow. Applications in hand-writing to the manager, stating experience, qualifications, and condition of bank account.

A recent series of excursions beyond Dun Fell have given a few lucky members something to think about. There were levels and shafts all over the place and as a result this has been put on the meets list for the coming season. Mike Mitchell discovered a beautiful stone lined shaft under a snowdrift covered with rocks and on another occasion Alastair Lings drove his Land Rover into the only snowdrift on the fell and got it stuck. Luckily two other members were able to dig him out. Alastair is now considering a Suzuki 4WD.

JOLLY FINE BOATING WEATHER.

Recently several west Cumbrian members have taken to car inner tubes to get them across vast flooded stopes in a new mine which they have dug open near Millom. Unfortunately its a bit close to surface so a slight shower of rain is enough to send the water level flying up. Access is restricted at the moment by the landowner but this may soon change. This is by far the biggest underground discovery in West Cumbria and several digs are proceeding in its murky depths. A full report will be in Journal No. 2.

MILLOM WATERWORKS.

Still in west Cumbria, Gordon Gilchrist is on the lookout for some 2 in. pipe for a small portable water pump which will be made available for CAT use. Any length will do, as long as it is rigid enough to stand up to the suction. Phone him on Millom 4539.

NEWS FROM INDUSTRY.

In this and subsequent newsletters there will be a section on whats going on in the British Isles and perhaps beyond in the mining industry. Any copy for this section will be gratefully received.

N. Ireland: Ennex International have found 16 gold bearing veins near the Curraghinalt Burn in the Sperrin Mountains. Assay values of up to 40 grams per ton have been returned from some samples. Diamond drilling is expected to commence soon.

S. Ireland: At the Silvermines project economic veins of Zinc and Lead have been discovered by R.C. Drilling.

Scotland: Ennex International have discovered economic gold values in the Grampian Mountains.

England: The N.C.B. have found 160-180 M tons of coal at Witham on the Notts./Lincs. border.

Down in Cornwall R.T.Z. have gained full control of Wheal Crofty and Wheal Pendarves Mines. The latter is to be explored for a year when a decision will be made on its future. At South Crofty a programme of refurbishment of Cooks Shaft has started and it is planned to drive a 2.4 km. decline from the Tuckingmill Valley to the bottom of the mine. Work continues at Wheal Jane and the Wheal Maid decline.

Cornwall: Geevor tin mines, St. Just, are extending a sub-incline shaft to the 23 fm. level of the Levant mine. They are also planning to link the Botallack incline shaft with Allens shaft. Completion date is 1986 and the cost £2.2m.

The Concord Milling Co. of Blackwater, Cornwall has announced that it has bought the Kernow Tin Ltd., known as Tolgus Tin it will now be called Concord Mineral Proessors Ltd. The company plans to modernise the mill while at the same time preserving the historical aspects of the site.

Wales: Clogau Gold Mines p.l.c. are extending rail, compressed air services, etc. throughout the mine. Following the removal of substantial quantities of waste rock, 1,150 metres of track have been laid along the Llechfraith adit and along the Tyn Cornel crosscut and the two have been connected by a 60 metre ladderway on the main lode. The company is now in a position to start a bulk testing programme from 15 areas underground.

The Vancouver based Imperial Corporation has started a core drilling programme on Parys Mountain, Anglesey. Previous work by other companies infer mineral reserves of some 3m tons of ore grading 10% copper, lead and zinc with 2 ozs. per ton silver. If a decision to go ahead is taken then a shaft/deline could be started next year. A further 3 years drilling would then be required to prove the property.

TAKING THE HIGH ROAD.

CAT member Alastair Lings has taken a job prospecting for gold in the Scottish highlands with Ennex International for the next few months. I was lucky enough to be able to see him on his way at the Ullswater General Stores. He looked a fine sight setting off up the A6 dressed in buckskins and an old 10 gallon hat with a small mule train laden down with panning equipment and beads which he hopes to trade with the natives. No stranger to the nomadic way of life he has often been seen in the past striding across the Cumbrian fells wearing a black plastic tent looking for bigger and deeper snow drifts to bury his Land Rover in.

RELIGIOUS GATHERING IN THE LAKES.

Saturday 18th May saw various CAT members assembled at Cathedral Cave, Tilberthwaite to hear the guru of S.R.T., Maharishna Mahesh Mitchell preach to his flock. He sat cross-legged on a stone, his shaven head and saffron boiler suit reflecting the suns rays, murmured several tantric verses, cast his runes and began. "When you are as old as me, Grasshopper..." After several minutes of reciting from the holiest of books "Caving Practice and Equipment" and "Venturing Underground" he performed his first miracle of the day, he made a small demon disappear, and it must be said, the meet leader was not seen for the whole day. After this he seemed rather tired and withdrew to a rock to take sustenance. Following this he led his disciples to a rocky place and told them to cast themselves off into a void and that they would not be hurt. Many were reluctant but did so and were not harmed. Grateful praises were then offered to the god Petzl. High spot of the afternoon was the induction of a new initiate to the path of enlightenment, Liz from Millom was cast from a high place by the yogi himself. She was not harmed, such was the power of the demi-god. Finally the Maharishna taught his flock how to climb magic ropes into the heavens, many reached the plateau of true heavenly bliss, being able to pass knots on the way (no small feat). The day was rounded off by the drinking of a potion with magical properties at a nearby temple.

CHARABANC TRIP.

As you will see from your meets list a CAT charabanc outing is being organised near Christmas. First stop will be the Salford Mining Museum which is an excellent small museum devoted to the coal industry. As well as the more usual 'glass case' exhibits it contains a small reconstruction of a mine and a pit top. Later we will visit the North Western Museum of Science and Industry in Manchester, which although not specifically devoted to mining has many excellent exhibits on many industries which have been operating in the North West. Any members wishing to do some Christmas shopping can miss out on this second bit as it is quite close to the centre of the town. Non-members are welcome so bring your friends. Specific details will be published in the next newsletter.

CAPTION COMPETITION.

If anyone can think of a humorous caption for the picture below please send it to CDJ for inclusion in the next newsletter. A small prize will be given.



TILBERTHWAITE DIG.

As you will see from the meets list this is occurring with some frequency and will become CAT's next long term project. The rewards of getting through will be considerable, we will be able to boldly go where no man has gone before, well not for quite a few years anyway.

It will certainly provide one of the most spectacular through-trips in the county.

ALSTON FOLLIES.

As reported in an earlier newsletter several members have a dig going near Alston, it is still not complete but I have managed to wheedle some information out of one of the diggers by buying him lots of drinks and applying many threats. I lost interest when was told that the entrance is neck deep and this continues for nearly 500 yds when a climb into some flats provides a drier route to their present dig which is being rather "difficult". Several interesting artifacts have been found including a local newspaper from the turn of the century, clogs, tools, tubs, etc. But best of all, a small hand crushing mill in quite good condition has been found, unfortunately its position makes it a bit awkward to move. Watch this space...

IRISH EYES ARE SMILING.

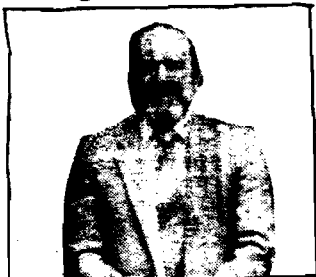
The proposed CAT excursion to the emerald isle in 1986 appears to have been greeted with more people interested than I first imagined. It may now be necessary to have a minibus to carry the people and a van for the gear. The proposed route will take in Avoca, the Wicklow mountains and if time allows a trip down to County Cork for a wallow in the paradise of Allihies. Please contact CDJ for further details etc.

Meets Review

by McF

The work meet at Ding Dong, on the 26th of January, was well attended. We succeeded in positioning the iron trapdoor on the top of the access pipes. This trapdoor, or grille, was made from $\frac{1}{2}$ " steel bar by our trapdoorsmith, Mike Mitchell, and is at present just bolted down for we haven't got round to purchasing a lock. The Ding Dong project is now nearing completion; all that remains is to backfill the shaft around the access pipe with rubble from the Derby Pit spoil heap, work that will commence 'as soon as the ground is firm and dry.

And as Ding Dong ends, so another major project looms on the horizon. In February work began on mucking out Horse Crag Level, which once drained the Tilberthwaite copper mines. Horse Crag Level is 3,240 feet long, has its portal close to the Tilberthwaite carpark, and ends in a blind heading at the foot of the Tilberthwaite Shaft. Four members, C.D. Jones, C.H. Jones, Wickenden and myself, have been down the shaft and along the level to where it sumps to the roof, about half way along the gill. The plan is to clear a massive collapse from the adit end and release the water, this should give us access to a deal of new ground and create an enormous through-trip into the bargain. There is much work to be done; the collapse lies in bad ground just to the south of Penny Rigg Quarry and when mucked out will have to be timbered. Fourteen members turned up for the initial dig and good progress was made, resulting in a steady flow of water percolating through the fall and washing clay and small stones with it.



CALVIN'S
COLUMN

The seventeenth of March was one of those funny sort of days, another of those mystery enshrouded occasions when (because you haven't turned up) you try to find out what went on but receive conflicting accounts from everyone you approach. Thank heavens my man in the field, my ever dependable foreign correspondent, was there to jot down this eyewitness report. Ronnie Calvin R.M. (the Right Honourable Member for Hensingham) typed this reliable bulletin and had it delivered by carrier pigeon before the dust settled on Newlands Valley. Over to you, Ronnie.....

Six members meet up at Stair village. I noticed a lot of movement between the vehicles, maps, secret papers being passed about, all very hush hush. Then watches synchronized we set off for Newlands, three vehicles parking alongside gold scope mine. C.A.T.'s own walking May Pole and today's Meet Leader, Ian Tyler, splits us into two groups. D. Blundell, as some of you now know, works as an under-cover agent for the fast extraction group that's moved into the Coledale area and myself, who now acts as the interpreter for C.A.T. when they are in West Cumbria, and Ian Tyler. The rest will attack Dale Head mine. I thought he was joking at first but when I saw Major M. Mitchell take what looked like a bunch of 2" mortars out of his half track truck plus his ammunition boxes, I knew they meant business up there at Dale Head. We moved cautiously up the track and above the climbing hut. We met up with Brigadier Fleming and his batman, Corporal Weeb outside their command truck. Brigadier Fleming then inspects us and checks that Major Mitchell has sufficient ammunition. He then spots my favourite digging shovel, the one I got for my birthday. Bellowing his orders out, "Hand me that shovel, it's far too good for the likes of you Privates, and help us hump our gear farther up the valley!" Moving off, we soon come across a wellcamouflaged Land Rover. Cautiously we check around. ForLaying beside the front wheels was Lance Corporal Ling's heavy machine gun and ammunition (why had he left it). Obviously, he had been surprised by the enemy and had made a fast retreat up to Dale Head, Travelling light to avoid detection, we left the small detachment of C.A.T. Special S.A.S. members, above Castle Nook.

It brought a lump to your throat, watching those heavily laden brave men. Short handed but still determined to take Dale Head mine, even though their route was blocked by heavy snow. We got stuck into digging what was starting to look like a gun emplacement, when we came under very heavy and sustained Snow Ball fire from Ian Tyler and daughter Katie. Dave Blundell received a direct hit to his arm and head. This only left two able-bodied men on the dig, although Blundell was suffering from loss of blood and shock. He got his Action Man pick out of his handbag and carried on with the dig. It was then the dig received a direct hit and the front and sides fell in, completely blocking the dig. But who should come along, none other than C.A.T.'s own (spectator) Alpine Cram and his Minder. He then told us about the unselfish way that Major Mitchell had split away from the rest of the Dale Head party to engage the enemy and draw them away from Dale Head mine.

It was about an hour later that he was able to join up with Brigadier Fleming's group, after what one can only describe as a hero's action. Alpine Cram said he would like to help us with the dig but they were not dressed for digging and besides "we have to meet some very important people down the valley" (I didn't know the Mafia were into Newlands). We move over to look at some old trails and shafts in near Broadgill. Some very large boulders are moved from the dig. This is a good way to start a hernia off, then we shift a load of muck out but time is beating us.

It's 5.30 p.m. and the cold is starting to get into us. We make our way back to the vehicles but not home. We wait till 7 p.m. before we see the lights of our Dale Head group descending safely.

P.S.

Sergeant McFadgen was unable to be with us on the Newlands meet, says he was ill, But there is a wisper going round Farnes, about his goat, or maybe its the things he keeps in his wellys, that's got to him,

If CAT had a Branch in Australia we would never be short of diggers,
R. Buhner MS

The 2" mortars carried by Major Mitchell were in fact lengths of scaffolding tube to be fitted together as a May Pole on arrival at Dale Head Mine - shaft climbing, for the use of. By all accounts this team scaled a rise in the upper level and won into unexplored ground. Means most dangerous and foul were employed to get up the rise, illuminating the determination and lack of respect for life and limb some members of this organisation possess. The May Pole was not long enough, in fact someone said it was about twenty-five feet too short, so it was hoisted up as far as possible, jammed in a crack, and used again. The lengths folk will go to just to get a mention in the Newsletter.....

I could go to town and write reams about the Caudale Moor slate quarries, but, sadly aware of the fact that reams of slate quarrying literature would induce sleep into the minds of most normal folk, I shall curb my enthusiasm and concentrate on the more seedier details of the meet. The 30th of March was a bad day, not only did it bucket down from dawn to dusk, but because of an ad-

ministrative blunder in the otherwise super-slick mechanics of this society, the lay-by in which we were supposed to meet had also been chosen by the elders of the Ullswater Fox Hounds as their mustering point. Confusion reigned. By the time we had sorted out miners from dogs the rain was falling like cats and vixens and spirits were wavering. Unperturbed, Mitchell set off up the fell followed by Lings, Merrin, Moore, McFadzean, Jones, Dido, Bendigo, Towser, Bonny Lass and Bellman. It was to be a day of mishaps, a calamitous venture into the mountain wilderness of Patterdale.

First victim was the C.A.T. doctor, Merrin, who wandered off into the mist and - we learnt afterwards - walked round in circles for nearly an hour. His absence was first noted up at the quarries when Mitchell said: "What's happened to that funny chap who was wearing a surgical glove on the top of his head?" An immediate search and rescue was organised (Mitchell in his element at this juncture) and the hapless doctor located in the highest quarry. "Bloody hell," said Mitchell under his breath when the fuss died down, "If he can get lost in a simple spot like this then I wouldn't want him fumbling in my intestines."

The upper quarries at Caudale Moor date back to the 1830s and possibly earlier, while the lower group, the ones we were about to investigate, were worked from the turn of the century up to the Great War, then again during the 1930s. The lower group are all close-head quarries (slate mines) and accessible only by abseiling down a shaft. Three levels have been driven, Grisenthwaite's, Jock's, and Brownlee's, but they have run at the entrances. On a previous visit to the quarries several years ago (torrential rain that day, too) we abseiled part way down the shaft to the highest level, Grisenthwaite's, and spent several happy hours exploring, it being quite extensive. The plan this time was to abseil the 100' right down to Brownlee's Level.

Jonsey went first. Now it's not often I sing the praises of Mr C.D.J. but credit where credit's due, on this occasion he performed quite gallantly, abseiling into a waterfall and clad only in his fellwalking gear. Whether this was intentional, I know not, but everyone was reasonably impressed. The only drawback was that we were expected to follow. Now, slate mines are usually dry, cosy places with perhaps a puddle or two on the floor, and expecting Brownlee's Level to be nothing out of the ordinary we had dressed in breeches and woolly jumpers. The bottom forty feet of the shaft was a torrent of water and there was no avoiding it; what possessed Jonesy to abseil into it I cannot fathom. The shaft opened out into a fine close-head, in a very stable condition, and with good slate metal showing in the roof and walls. There was a wagon still standing on its rails and an excellent turntable at a four-way rail junction. A very interesting place and little frequented, though Mitchell had been down many years ago.

If I said the Easter meet in Scotland was a raging success then I would perhaps be exaggerating. If, on the other hand, I said it was the most abysmal, depressing, soul-destroying, barrel-scraping, what-in-God's-name-are-we-doing-in-this-place, type meet I have ever attended in the short though prolific life of this society, it would be nearer the truth. The weather was grey and drizzly, the mines bulldozed off the face of the earth, the beer...well I won't describe the beer, the campsite £2.50 per night, the ground lumpy, the natives hostile, and the showers cold. The only warming thought which consoled us during this trek into the Sub-Roman nether regions of Galloway was that it was extremely unlikely we would be accosted by an irate Welsh farmer, an event which appears to be traditional on our Easter trips. High point of the weekend was when Alistair Lings removed his clothes and waded across the river Fleet wearing nought but a hard hat, and Oldham lamp, and a badge proclaiming he was a member of the Young Conservatives, for what reason - other than to scare the salmon - we know not.

Our campsite was on the outskirts of Newton Stewart, an iron-age settlement and stronghold of the Romano-British kingdom of Rheged, a picturesque remnant of more barbaric times though still suffering, apparently, from Pictish incursions and slave-gathering raids from Ulster and Connaught. Jonesy and I, being the first members to arrive, pitched our tents in the smouldering remains of a hut circle, and so as not to appear conspicuous, smeared ourselves with blue paint, a fashion which seems to be all the rage in those parts. During the afternoon, the day being Good Friday, we were joined by Lings and Blundell who boosted

our numbers to four - the full complement - and in the evening, in the glow of the Beltane fires and the thud of the drums from the surrounding forests and hills, we forded the Cree and entered the wooden stockade of Newton Stewart to sample the legendary water-of-life the locals are said to distil from the dew-soaked heather.

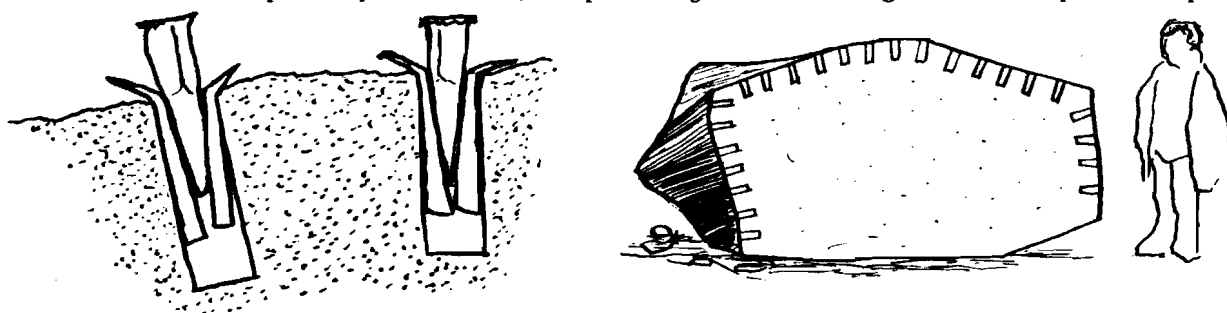
We were rather impressed by some of the quaint customs which are regularly enacted in the drinking-houses; a popular example, practised mainly by the older generation and honed to perfection by the dedicated few, is to stand in the centre of a room, bottle in one hand and cap in the other, garble some ancient Celtic war-cry, tumble over backwards and not move a muscle for the remainder of the evening. We were also impressed with the feats of daring performed by the younger men who were apt to dash boldly across crowded rooms, knocking down adversaries with their right hands while clasping their left hands firmly over their mouths, no doubt to stifle the hideous battle-cry inevitably uttered as they burst dramatically into the cold and drizzle of the night.

Having a keen ear, as well as an observant eye, I would like to take this chance of scribbling a few notes concerning the archaic language still prevalent amongst the indigenous population. After spending several nights wandering within the confines of the town, and indulging in cryptic conversation with a one-eyed, one-armed, one-legged man who attached himself to Alistair Lings, I feel I can speak with some authority on the subject. The language, used extensively amongst the lower orders, is a Celtic dialect of Brythonic - as opposed to Goidelic - extraction and is akin to Old Welsh, Cornish, and the Celtic dialects of Brittany; one would have supposed it to be related to the Goidelic tongues of Ireland and the Scottish Highlands, Galloway being in close proximity to these places, but no, it is as Brythonic as the silver tongue of Taliesin and probably hails back to the times of the mass folk movements instigated by the Roman usurper Maximus. Allow me to illustrate with a few brief examples: GIES ANNIDA YIN YA BASSA, is a polite request for a refreshing drink; WY-DONCHA PASSOFF BAKTAE INGLAND, an enquiry as to how long visitors from England are likely to stay in the vicinity; and GROOTMAHWAY YA PLUDDI IMBASEEL, the utterance of a female attempting to play pool in a crowded bar.

I must apologise for straying so far from the subject but you must admit it's not every mining club newsletter that gives its readers such fascinating insights into the cultures of exotic peoples. I would like to think you have all benefited from this brief interlude, especially those amongst you who have never dared to venture to the pagan glens of Newton Stewart.

We visited a great many mines during the Easter break but found that most of them, usually those situated on Forestry Commission land, had been bulldozed off the face of the earth, buildings, adits, shafts, the lot. Two mines, barytes, had been blocked up and utilised as farm water supplies, others we could find no trace of at all. Saturday was the only day worth mentioning, the remaining days producing little of interest with the exception of Friday afternoon, when we paid a visit to the mineral museum at Creetown.

First stop on Saturday morning was the massive granite quarry east of Creetown, owned by the Scottish Granite Company and worked for monumental stone and aggregates. It was enlightening to note how the huge blocks of monumental stone were split by hand ready for the saws - a series of holes, perhaps fifteen or twenty, were drilled around the block, six inches deep and the same distance apart. Slug and feathers (plug, or stope and feathers) were inserted in the holes and hammered till the block split along the desired plane. A very laborious method of working, considering that a good clog of Cumbrian slate, because of its inherent capability to rive, requires just one slug hole to split it perfectly.

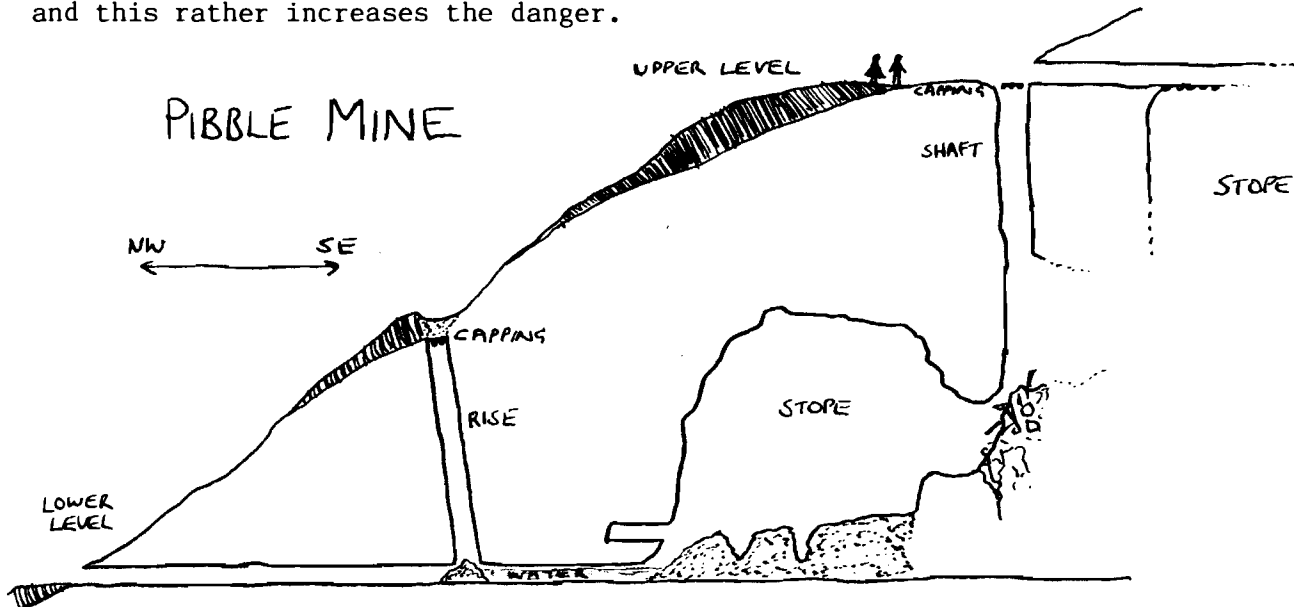


The aggregate stone was, of course, blown to smithereens, carted across the main road by a fleet of Volvo dumpers and tipped into the yawning maw of a jaw crusher.

Pibble Mine is about three miles north of Creetown - if you follow the right track - and is situated high on the slopes of a heathery hill. Now we were quite taken with Pibble, thought it was a marvellous place, and agreed that we would not hesitate to return and explore it properly at some later date. Its most dramatic feature is the ruin of a beam engine house - the last thing you would expect to find in this desolate place; there are also the remains of a boiler house, and, further down the hill, a fairly large waterwheel pit. Both the engine house and the waterwheel served the shafts and levels of the lower mine.

The upper mine was worked by two, or possibly three, levels driven along the NW-SE vein, with a connecting shaft somewhere in the region of a hundred feet deep. Jones and myself explored the lowest level, entering a large stope after wading along a passage chest-deep in water. At the end of the stope (where your intrepid reporter inadvertantly toppled backwards into an ore hopper) we broke into the foot of the connecting shaft though we were deterred from progressing further for Lings and Blundell, many fathoms above us, were dislodging rocks in an effort to guess the shaft's depth.

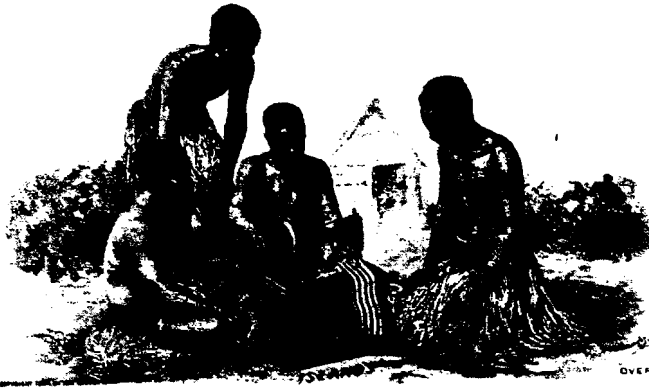
The top level offers some scope for serious exploration. At one time it followed the vein on into the hill but the floor has fallen away, leaving a yawning stope just within the entrance. The collar of the connecting shaft is situated right outside the level entrance and although sound enough is a hazard to walkers for it is not fenced. The railway sleeper capping has rotted extensively and this rather increases the danger.



The next mine, if it was a mine at all, lay secreted in verdant undergrowth on the banks of the Fleet. According to the mass of documents and bulging portable filing cabinets brought along by our travelling archivist, Dave Blundell, there should have been no mine within several miles of the place; yet Lings had a fl.99 AA road atlas he bought from a second-hand book shop in Appleby which he argued, quite defiantly, depicted on its dog-eared pages a mine of incredible magnitude. So to appease the chap we aquired permission from a farmer to cross his field (actually, a slurry pit with cows and rocks sticking through it) and wandered down the glen to the brackened banks of the Fleet. "Where's the mine?" we asked. "Ah," said Lings, "It must be on the other side of the river," and with that he ripped off his clothes, thrust his hat on his head and leaped into the water. I must admit the man deserves some credit for the river was in spate and the salmon were biting. He returned some minutes later, gabbling about two levels he discovered in the undergrowth. Whether, in fact, there was anything there only Alistair Lings knows.

The last mine of the day was called Dromore. I will mention it only briefly for we spent three hours searching for it, having discovered that the map reference in one of Blunder's manuscripts was several digits to the wind.

Dromore Mine is a mile further north than it should be. We arrived at the site in the fading light of dusk and had a quick look about. There are three fairly large spoil heaps on the fellside and two of the levels are open; remains of buildings and crushing arrangements can be discerned. If I remember correctly, this was a venture dating back to before the Great War; one of the local lairds put up the capital, a deal of ground was laid bare but not much mineral found.



BLUNDELL, JONES AND MCFADZEAN WATCHED IN EBULLIENCE AS LINGS RAN UP ANOTHER PATCH FOR HIS INCREDIBLE HOME-MADE TENT. 'THE NEXT TASK,' SAID LINGS, EAGERLY, 'IS TO PICK OUT THE STITCHES ON THE BUTTONS AND TACK ON THIS SHINY BRASS ZIP!'

And to end on a lighter note - the Cumbria Amenity Trust meet attendance record was broken on the Paddy End Through-Trip at the Coniston Copper Mines, on the 20th of April. The previous record of thirty-two, established at Greenside Mine in November 1983, finally toppled when thirty-four members and guests slogged up the rocky road to Levers Water with the intention of abseiling all the way back down again in the gloom and the damp of the Paddy End stopes. Everyone had a good time, even John Crammond who had to crawl on his hands and knees through all the levels. Clare Dobie had a nasty fright when she fell A over T down a hole, but luckily she survived and recovered sufficient to drink husband Max under the table in the bar of the Crown.



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