CUMBRIA AMENITY TRUST

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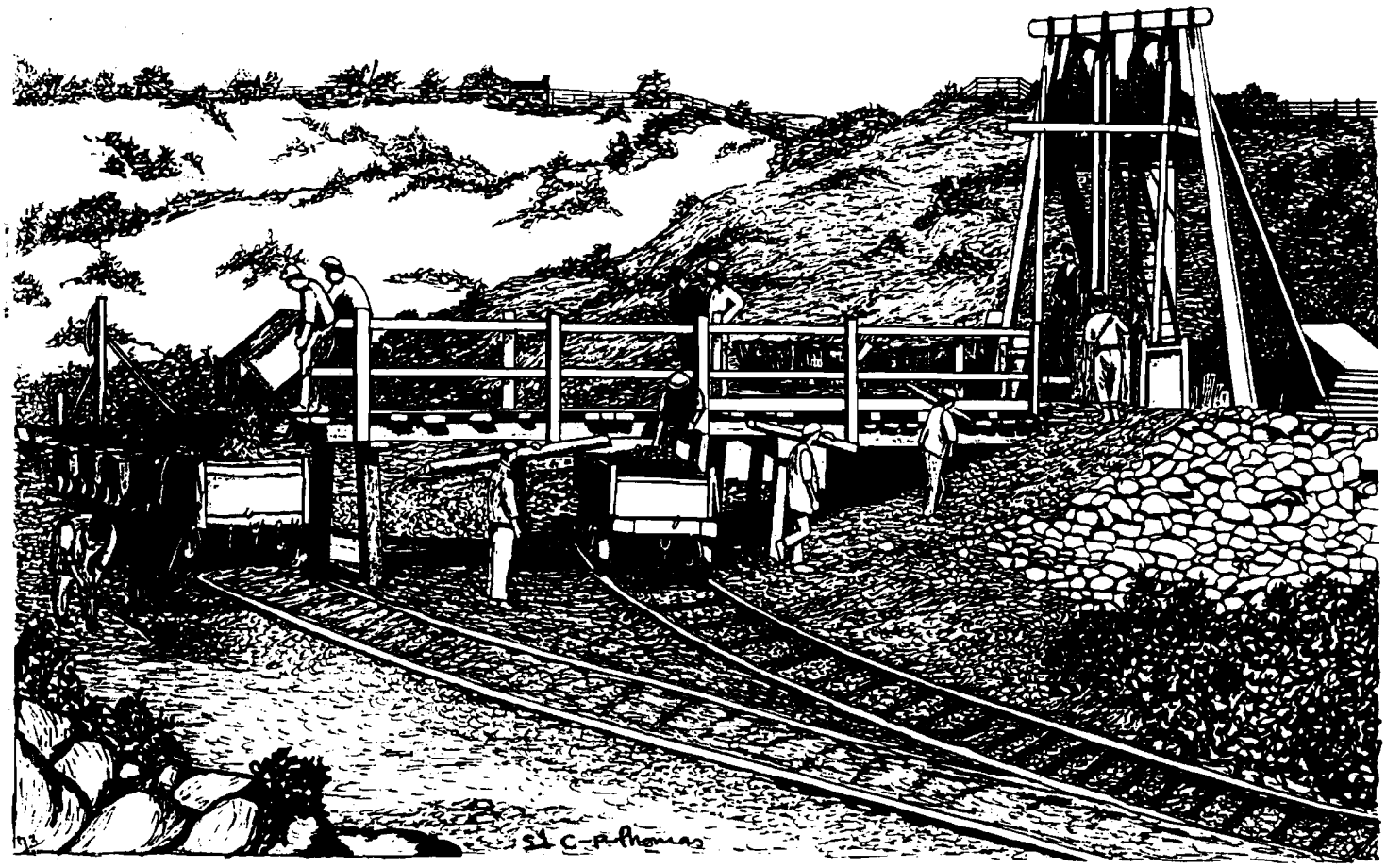
APRIL 1993



MINING HISTORY SOCIETY

Front Cover

B33 Pit in the Main Vein
Brokenground
Lindal- in-Furness 1907

Ink Drawing by Sheila C.P. Thomas.

CONTENTS.

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Editors Comment:-

My thanks go to every one who submitted articles and information for the news letter. every one of which will be publised. I am now more conversant with the foibles of word processors and DTP. to wit when they work they are very good .when they do not do what you wish,they are ------- awful.To put it another way if you are going to use them obtain good soft ware. i.e. pay money.

Now I am wiser and I have a greater admiration for all newsletter editors . the job is not a sinecure.

Next date by which copy should be in by is 28 June photographs will be used where possible and only easily done if they are black and white. Text can be imported as ASCII files on 3.5 ins disc and justified left and right,but good quality printed text is prefered .

Have a go send in an article if you have any doupts give me a ring on 05242 41920.

CATMHS Meets -April to October 1993.

The meets meeting met at the BMSC cottage on the 2nd of March 1992,present were D,Bridge, S,Barker,P,Fleming , M. Simpson. -- representations were received from A. Cameron and A,C,P,Thomas. The following was decided:-

The main thrust of the Society activities to be -

A) The survey and recording of mining history remains in Low Furness.

B) The further exploration of ground in the area of Top Level ,Coniston (In addition to preservation works in the Red Dell area ,see commitee minutes).

C) The provision of meets twice a month - see below. Items A and B are ongoing projects and are in addition to the meets listed.

D) All meets to start at 10.00 unless otherwise stated.

CATMHS MEETS

April to October 1993

APRIL 10/11th (Easter) Welsh Slate. Meet Leaders A.Cameron & J.Knowles
Saturday - Cwmorthin - vast beyond imagination.
Sunday - Croesor/Rhosydd through trip, other workings will be inspected if time and stamina allow.
Meet both days at Cwmorthin Falls road above Tanygrisau at 10.30. GR SH683455. Phone 0274 871012 for details.

23-26th NAHMO Conference, Isle of Man.

25th Low Furness Meet Leader Anton C.P.Thomas.
Meet at Ding Dong lay-by. GR SD246786
To work at B30 Shaft & Siding

28th (Evening) Complete mining display at Mandells Slate Office. 7.00 pm. Meet Leader Sheila Barker.

MAY 8/9th Derbyshire Lead. M.L. M.W.T.S and P.C of PDMHS
Meet Saturday, 10.30am, at Speedwell car park to look at Peakshole Sough and Odin Mine.
Sunday,10.00am, at PDMHS mining museum at Matlock to go to Old Millclose Mine. SRT gear required.
Accommodation can be arranged. Ring M.Simpson a.s.a.p., tel. 05242 41920, for details.

19th (Evening) Woodbine Mine Chimney.
Meet at track end, south of Dalton. GR SD237722. Bring pointing towels, etc.

23rd Gold panning. Pete Blezard and Anne Danson
Wanlock Head. Phone Pete Blezard on 05396 23w212 if you are going.

26th (Evening) Thrang Slate Quarry. M.L. Peter Fleming
Chapel Stile Tel. No. 0229 824103

JUNE 6th Furness Iron M.L. Anton C.P.Thomas
I.A. Survey. Meet at Ding Dong lay-by to move on.
To sketch, measure and generally record I.A. mining sites.
Bring clipboards, tapes, etc. (20-30 metre)

19/20th Nent Head weekend M.L's. Mike Mitchell & Dave Blundell
Saturday - Garrigill to visit Rotherhope Fell and Greencastle area. Meet outside George & Dragon Inn Garrigill 10.30am. (EXP)
Sunday - Assist North Pennine H.T. at Rampgill.
Meet Leaders Sheila Barker, Don Borthwick
Meet at 10.30 at Nent Head car park.

23rd (Evening) Woodbine Mine - Furness M.L. A.C.P.Thomas
Work meet. Meet, as May 19th. GR SD237722

JULY	4th	Eskdale Iron. Meet at Dalegarth Station. GR172007 SRT in Nab Gill - optional. Members of Earby Mines Research Group will attend. Grade E/D Phone A.A. 0946 67002 for details.	M.L. Albyn Austin
	18th	Caldbeck Fells - Roughten Ghyll. Meet at Fellside GR 305376 Grade EXP	M.L. to be arranged
	28th	(Evening) Coniston restoration work -	Organiser t.b.a.
AUGUST	1st	Furness Iron I.A. Survey, as June 6th.	M.L. A.C.P. Thomas
	22nd	Swale Dale. M.L's T.Whitaker(Northern Mines) & M. Simpson Brandy Bottle Incline to Hard Level - through trip, very wet. Meet at 10.30am, Punch Bowl. Low Row breakfast can be arranged.	
	25th	(Evening) Slate at Caw. Duddon Valley. Meet at Hoses. GR 214933. Grade Easy.	M.L. P. Fleming
SEPTEMBER	5th	Castle Crag and Rigg Head Slate Details later.	M.L. A. Cameron
	12th	Cumberland Geological Soc. Meet at Force Crag - Help required. Details later.	M.L. Dave Bridge
	25/26th	Nenthead Weekend - Smallcleugh (Overnight experience to be organised) Meet Saturday at car park Nent Head.	M.L's S. Barker & D.Borthwick
OCTOBER	17th	Buckden Gavel Lead Mine. Meet at car park by the Buckden Inn 10.30am. Grassington Moor Lead Mines can be visited on Saturday if there is demand. Grade EXP. No SRT.	M.L. M. Simpson
	31st	Greenhead Ghyll, Grasmere. Survey of Elizabethan Lead Mine. Meet on the road behind the Swan Inn. GR 341084.	M.L's I.Matheson & D.Bridge

PLEASE NOTE: The above is subject to change and all members should read their newsletter/news sheet or contact the meets secretary.

YOUR SOCIETY NEEDS YOU!

CLARION CALL February 1993

Recent events have highlighted the enormous pressures to which Furness`s mining heritage is being subjected.The Dalton Bypass has claimed the sites of Eure pits,Greehaulme and Mouzel, to infilling. The superb tramway tunnel along with engine beds and tramway kerbs have been recently `modified` at Tytup/Crossgates.A winding engine house was recently demolished at Woodbine.Areas of Poaka beck have been disturbed, and imminently,Lowfield Mine site is going to look very different. In the waiting room is a proposal for an industrial park near Maidenlands.and Cairds are in the process of rubbish infilling at Park/Thwaite flat.Within recent history there was a significant loss of mined ground at Whitriggs/Crossgates when a large tract near Tytup Farm was rubbish infilled.

All these sites contained mining remaines, the significance of which will now never be fully appreciated or understood, As far as I`m aware.ne serious study or recording work was ever conducted.

Recent discussion with Mr A.Barker -Urban Development Officer for Barrow Town Hall - re-protection of sites has emphasised the need for `work`to be done in this field.He tells me that a recent attempt was made to get Woodbine chimney listed.English Heritage were not sufficiently impressed by this solitory feature,and Mr Barker suggests that we put forward a "package" of mine sites, the whole of which would be more wholly representative of the Furness Iron mining industry than would a solitary brick chimney.

This shortlist would probably need to include one of each of the following:- a chimney,a tramway tunnel,atramway bridge/junction/embankment/bridge abutment,a mineral siding/ loading platform,an engine house...one of our more typical brick built examples,a change house/office/workshop.an engine bed.and perhaps a mine entrance.Consideration may also need to be given to features such as spoil tips,resevoirs etc.

Mr Barker is ready and willing to help push any shortlist we may come up with , and thus give us a second bite at the listing cherry.

A team of local members is currently out and about doing preparatory field work to this end.but WE NEED HELP.Help firstly to cover the ground and evaluate what we`ve got and secondly to select the most representative and important features. We do not want to be left responsible for an inappropriate shortlist by deed of default from those more qualified and experiences than ourselves.so if anyone has an input ,please let me know..

A further point arising from this field work is that in view of the relentless onslaught of "progress" upon our relics. should we not be doing a more detailed study.Should we,for example, be recording dimensions,construction materials etc etc. Debate is raging on this topic,with one party attempting to offset the enormity of the task with the fact that once a relic is lost, it becomes uninterpretable to anyone unless there exists some definitve record (Like a sketch of the thing).Enormouse tasks become less so if tackled by many hands,and here again is an area where it would be if the body of our society could swing to our aid.

Furness is a large area,unfortunately it also falls prey to the threats of urbanisation,a pressure which,of all the areas within CATMHS`s purliew.is nowhere more intense than here.

The Furness Iron Industry Survey need your help.

Anton C.P.Thomas.

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The following are welcomed as new members to the Society.

Graham Atkinson	Barrow
Paul Gooden	Cleater
Christopher & Audrey Brown	Ulverston
Christopher Crowe	Ulverston
Ray Gilbert	Barrow
Stuart Hartley	Barrow
Ian Nocholson	
Jeff & Heather Wilkinson	Coniston
Paul Tolcher	Bolton-le-Sands
Ian Nicholson	Spennymoor.

Your efforts in the field of Mining History will be appreciated and if you require any help do not hesitate to ask anyone on the committee.

Mandells Slate Office.

After much time ,wonders,doupts and a lot of work It is planned to open to all who have an enquiring mind and the general public as well.on May 3rd.Any photos or small artifacts will be welcome to go on display,in fact, any information and or assistance.

There will be and evening work meet on April 28th to get this project finally completed.

March 1993 Sheila Barker.

Inquiry re Land at Coniston Coppermines Belonging to P.Johnson.

LDSPD SUMMARY OF CASE

A) What had occurred on the site amounts to a complete reversal of the applicants statements when applying for planning permission .and in the boards opninion can only be described as commercialisation of the site.

B) The Powder store has changed from a temporary site building with unauthorised extension to a permanent dwelling. The temporary period of 5 years has now elapsed.

C) If the extension was removed but the alterations to the Powder Store remained, the Board reserved the right to take further action on the grounds that what remained would not be a habitable building.

D) The Board contends that the Carpenters Shop building. now converted into four dwelling units is contrary to planning policies. The Field Study centre was still born and no attempt had been made to make a success of it.

E) There is no guarantee that there will be a constant profit from the letting of these units,or that if there is a profit it will be used for the purpose of site preservation.

F) It is perfectly normal for holiday accomodation to be controlled without a resident owner.

G) The Board is about to appoint an archeologist with financial help from English Heritage, and it is conceivable that future work could be carried out by the Board,as it has been in the case at the iron furnace at Duddon Bridge.

DEFENCE CASE SUMMARY

A) Before 1982 the site was being despoiled at a rate which would probably have meant by now it would have ceased to exist as such.Mr Johnson's stewardship of the site has been of lasting benefit,he has stopped vandalism,secured some of the remains,spent £150.000 On the site plus his own time and energy.

B) Before 1982 the Board or any other groups had taken little interest in the site.It was largly through the efforts of Mr Johnson that the site was given Ancient Monument status.

C) Other groups in the area, the YHA had carried out alterations to the hostel and the Cumbria Amenity Trust had carried out work both above and below ground without the approval of English Heritage.

D) Mr Johnson has never made a secret of the fact that income was required from the site to generate profit to use in restoration work.

E) Planning permission has been granted for residential accommodation in the Powder Store and because its use was changed in the 1930's and it was modified for this change of use. it now bears little relationship to the original building and should therefore only be classed as a general industrial building. it should now be classed as a new residential building.Residential accommodation is now required by the owner to manage the holiday accommodation and site security.

F) The carpenters shop has now been converted to self catering accomodation when it was found that the Field Study Centre was not practical. It was run as a small business and therefore the Government allows certain relaxation of planning controls.

G) The applicant is willing to accept a number of modifications e.g. removal of the lean-to behind his dwelling,removal of site lights etc.

Greenside Meet Oct 1992

The meet was originally intended to be run as a Low Horse Level exploration excercise,with Peter Fleming doing a surface interpretation excercise. However, events concerning the re-opening the Lucy Tongue Level ment a certain alteration in the days events.

A goodly number of members turned up and it was decided to all meet up at the site of the excavation to see what help might be required before dissappearing off.

This project was a joint excercise with M.O.L.E.s and had been running by now for several weekends.The stage having been reached that the level had been entered but after 20ft a concrete barrier had been constructed with some 100mm pipes set in.The next stage was to get through it and some mechanical help was required ,this being in the first instance a couple of electric hammer drills being powered by a portable generator.

Only a small number could work at this at any one time and since no further work was going to be undertaken at the level mouth until the state of the rest of the level was known.the meet could go ahead as planned.

Several of our number stayed to assist in the dig and the rest of us made our way up to the Low Horse Level via the 1830 incline .This had been built to take the output of this level to the smelter and dressing plant that was built at this this time at the foot of the Lucy Tongue Gill.

It is to be noted that the flue for the smelter can still be seen winding its way for a mile up the hillside and over 1000 ft higher.

Between the top of the incline and the Level are various structures and two large ore hoppers (in a bad state of decay,),which were inspected by the party which then made its way into the level itself.

The original intention of the visit was to try and force a way through the boulder collapse at the end of the level as it appeared from the most recent availeble mine section plan that the level continued beyond.The level was draughting well at this point and following this up the side of what was a vein hanging wall.for 20 ft approx a chamber was reached with many large blocks in the roof and north side which wa the direction we wanted to go.The draught was not obvious but appeared to be coming from the direction of the blocks in the roof.After a good look round for any possibilities we decided that braver people than ourselves could have the glory of making further progress.

Back in the level it was decided that time could be usefully spent lowering the water level to below welly depth and clearing a way for the ore tub that is there.

We also tried to move this artifact with end object of putting it with the wheels further down the level.This looks very similer to the classic Greenside Ore Tub Photo.

The weight of it defeated us.rope and a Z rig will be required,plus plenty of bodies.

Lunch time was declared after which we made our way out several members looking down the level on the ---- veir before exiting.

Peter Fleming took over the meet at this point and we made our way up to the site of the High Horse level dressing floors and tips which were active in the early 1800's.The site of the buddle and ore crusher were inspected,the visible remaines now covered up curtesy of the National Park.although photos are availeble in the C.A.T.M.H.S collection. The dressed ore at this period of the mines history was carted via Glenridding to Alston Moor smelter run by the London Lead Company.

We then proceded up by the Washings dam to the site of the High Horse Level driven circa 1800 at an altitude of 1850 ft and is 35 fathoms above the Low Horse Level.The level is now run in after 10 ft.

The party then made its way up to the large quarry like feature in the hilside to the North East of the High Horse Level.Above this level one Sunday in 1862 a great fall of rock ,some 120000 tons of it subsided into the the workings beneath and this this surface feature may be associated with it.

There were other levels in this area Gilgowars Level about 30 meters above High Horse Level and is probably the one that can still be seen.also Middle and Top level were higher still but what with the Great Crush and stoping out little surface evidence survives.

The weather turning somewhat dismal,time getting on, and being detained by a 'friendly' park ranger.we made our way back ,passing by another big depression in the ground on the vein just before the washing floors.This seems to be more recent than than the one up on tne hill side to the north and as the collapse at the end of the Low Horse Level is under these washing floors, it seems that the depression is the source of boulders in the level.Considered opinion is that a way through is unlikly.

Back at the Lucy Tongue Level work was in full swing but with all the effort all thru the day only a 3 x 4 hole 3 ft in was the result.Perceived wisdom is at the time of writing that sterner measures in the form of windy picks are required.By the time this is read it is to be hoped that this has been successful.

By 4.00 oclock darkness and rain were coming on and a halt was called to proceedings,tools cleared and the site made secure,an end to an interesting day.

Further information is availeble in:-

Mining in the Lake Counties	W.T.Shaw.
Mines of the Lake District Fells	J.Adams
Greenside	I.Tyler
Beneath the Lakeland Fells	C.A.T.M.H.S.

and many other books .

M.W.T.S. 11/92

Boxing Day Meet 1992

Another Boxing Day Sucess !

ML Ian Matheson , Mike Mitchell, Peter Fleming , Mark Simpson, Alistair Cameron, Mark Scott , Anton C.P.Thomas .

There has been a tradition in C.A.T. that the Boxing day meet should be a dig, and these have usually been successful, often leading to new discoveries. The Boxing day dig of 1982, for instance , gained entry into the main adit of Top Level, and that of 1983 succeeded in opening up Taylors Level and much new ground in Red Dell. In 1986 the weather was seasonally cold, and hardy CAT members gained shelter from the sleet and dissipated their hangovers by excavating the floor of Simons Nick. Their efforts were rewarded by the remains of a jackroll windlass, and, not much else. As hopes faded and enthusiasm dwindled the numbers diminished until , at the end of the day, someone turned their attention to the part of the nick which faces Levers water, and five minutes later Jack Roll Shaft was discovered. This was the start of a major series of discoveries which included Dead Dog Passage, M.A.G. s Catwalk, Woodends Rise , Top level Extension, Earthquake Passage. Levers Water Mine Connection and so on. Whilst there are no more large unexplored areas at Coniston Coppermines, there is still some detail yet to be discovered, and the 1992 Boxing Day Dig was concerned with one of these. True to tradition it was to meet with some success.

Both Top Level and Middle Level used to come out to day amidst the screes beneath Simons Nick, They are now heavily run in and are only accessible by descending through the stopes. The Boxing day Dig of 1990 was an attempt to clear a way into Middle Level from the surface. Some large roof timbers and part of the wall of the level were exposed, but progress was blocked by a large boulder buried in fine loose material. After several visits the project was abandoned because of its size and conspicuous location. In April of this year a meet was held with the intention of clearing some underground blockages on Top Level , and what appeared to be the inside end of the roof of the adit which leads out to day was briefly exposed. This lies beneath a huge stope of small stones rising up towards a flight of ladders and a blocked ore pass,and the excavation quickly refilled itself with loose materials running from above.

Early in December the COMRU helicopter practice was cancelled at short notice, and so it was decided instead that they would transport timber and materials to the Top Level site in preparation for a full scale attempt by CAT on Boxing Day to clear a way through.

Seven members were sufficiently recovered from their Christmas dinners to assemble at the BMSC hut on Boxing Day morning, encouraged by Mike Mitchell, who promised "We'll be in it in an hour or so ".Alas it was not to be quite as easy as that! They made their way up to Levers Water,abseiled down to orange box Corner,crawled through the Boxing Day dig of 1982, walked along Top Level to the blockage and set to work.Stemples were braced across the stope, and scafold poles and timber were spiled in behind in order to stabilise the slope. Once this was done work commenced digging it back,and back breaking work it was! The level of the whole slope downstream of the dig had to be reduced, and the nature of the material was of stones too small to lift by hand and too large to shovel and there was the problem of disposing of the spoil without

blocking the access. After five hours of hard graft there was still no sign of the level, and hopes were fading. However, some last minute prodding with a drill steel did expose what seemed to be a cavity, but unfortunately this was directly beneath the spiling timbers, which were now seen not to be well placed. Careful rem,oval of stones by hand revealed that this was indeed the way into the continuation, and the floor of the level and part of the wall with some blue deposits could now be seen. Eventually a hole was created beneath the unsatisfactory timbering just large enough for a slim person to squeeze through. Anyone doing so would need to be more couragous than wise,but there was a person present with just those qualities.He wriggled backwards down the cavity, having to remove his helmet in order to get in, and reported that this was indeed a level, he splashed off to investigate,whilst his collegues waited apprehensively,listening to spontaneous movements in the debris above the hole.

The explorer returned after about 100 feet to report that the level continued. but the water was over welly depth the others urged him to come out It may have been the increasing depth of the water.. or perhaps doupts about the security of his exit which caused him to agree. so a rope was passed down and he was hauled out like a worm from its hole. to everyones relief. By now it was late. and enough had been done for that day another visit is required. and further timbering. to enlarge and make safe the way in to yet another fragment of the Coniston Coppermines.

January 1993 **Ian Matheson**

Harelawhill Limestone Mine - Penton

Sometime during May 1992 when I was preparing the last meets list a certain somebody by the name of Allstair Cameron suggested that it would be a good thing to include on the list a meet at the begining of January 1993,and mentioned Penton Stone mines. It seemed a good idea and was duly included,the name of the leader being left out.I assumed that Allstair would lead it and thought no more about the matter.

Mid -December --- panic ! no leader for this occasion so I volunteered. My first thought was , where is the place. Somewhere North-East of Carlisle on the Scotland/England border at a place called Harelawhill GR 42757898 I subsequently discoverd.

On the map it looked miles away from anywhere,surely no-one would want to go there. I had visions of driving up there all on my own, to a spot I never knew existed.waiting to lead people who were probably not going to turn up,round a hole I knew nothing about.

Still the meet was on the list and so it had to take place.Jon Knowles said he wished to go ,which ment that at least there would be two of us. A second bit of good fortune Allstair sent me a copy of an article from Descent about this place,so that I would not be entirely ignorant.A person who turned up at the meet was heard to mention that it was not uninown for meet leaders to have little knowledge of their meet subject and I need not have worried.I would like to think that this situation ,if it existed.is now in the past.

However,as arranged ,I stopped at the motorway services south of Carlisle and found some more people who were going.After half an hour we set of to Penton and , actually found it.(Allstair had given detailed instructions on how to get there).-- Lo !!! there was a roadside full of cars with people attending the meet. It just goes to show that however obscure a place is you never know who will want to see it.The fact that the weather though cold with a biting wind, was dry, must have helped. This fact certainly assisted in the speed at which folks got changed.

The mine is up a track through a small wood on the North East side of the B6318 adjacent to Harelawhill farm. On the opposite side of the road was what appeared to be a council amenity tip, of which more later.We made our way to the gaping entrances to the mine,holes about 20ft high, and after counting everyone and checking that all were suitably equiped, made our way in.

The main entrances were in the side of what had been the original quarry, the floor of which is now about 50 or so feet below the original ground level, access to the mine leading directly off it. At first the dip fo the floor, which keeps to the line of the rock strata, was very gentle but further in it rapidly increased (see plan) to what my information said was about 22 degrees. we made our way without difficulty down dip to the bottom passages. The mine was worked on a system of leaving pillars with ceiling heights of over 7m and passage widths of up to 10 m. We turned south along the bottom gallery which was at right angles to the dip slope, and proceeded to the end artefacts encountered on the way,were few and far between and consisted of bits of rusty ironwork and the top half of an old ore tub. We worked our way back along a higher level which showed the way in which this part of the mine may have been worked. (see photo)

While walking back along this level some very dubious water was encountered, the source of which was from a rubbish chocked opening to day seen at a higher level,you would not smell to good if you fell into it.When the party arrived back at the main entrance passage , the line of an internal incline was discerned ,which started of from the lowest point in the system and turning through what must be nearly 60 degrees at the point where we stood, continuing up to the outside going through a small hole a bit apart from the main entrances.Looking back along the incline from the point where it headed out, it was possible to see the line of the original way it went.It appears that all the quarrymen did was to leave the top half of the incline as it was and move the rope and rails round to serve the lower levels .From what remains the job was rough and ready and it would have been interesting to have seen this thing in action.

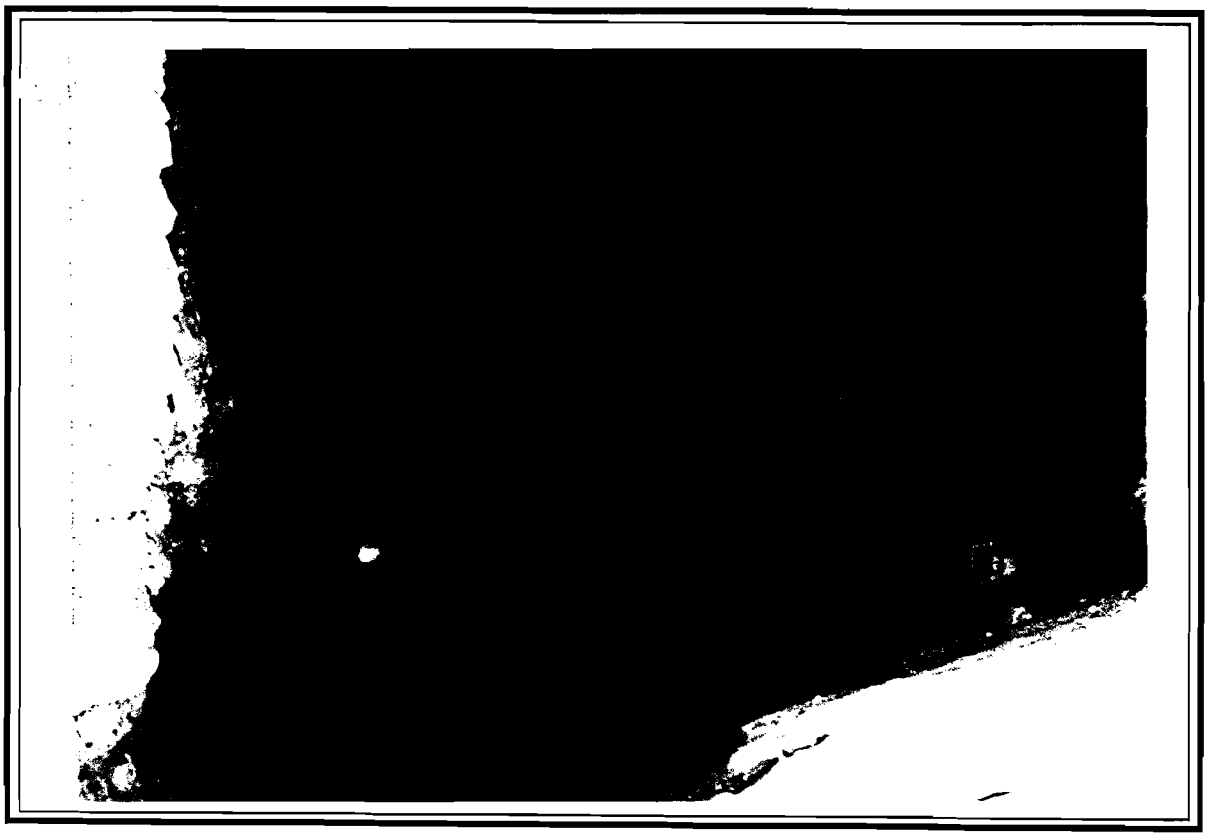
After wandering about some more it was noticed (more to be more accurate my daughter noticed for me ,every one else being too polite to say) that it was lunch time. Thus it wasdeclared to be so and partaken in the North-West corner of the workings,after which we made our way out.The natural cave was pointed out in the quarry but not investigated.

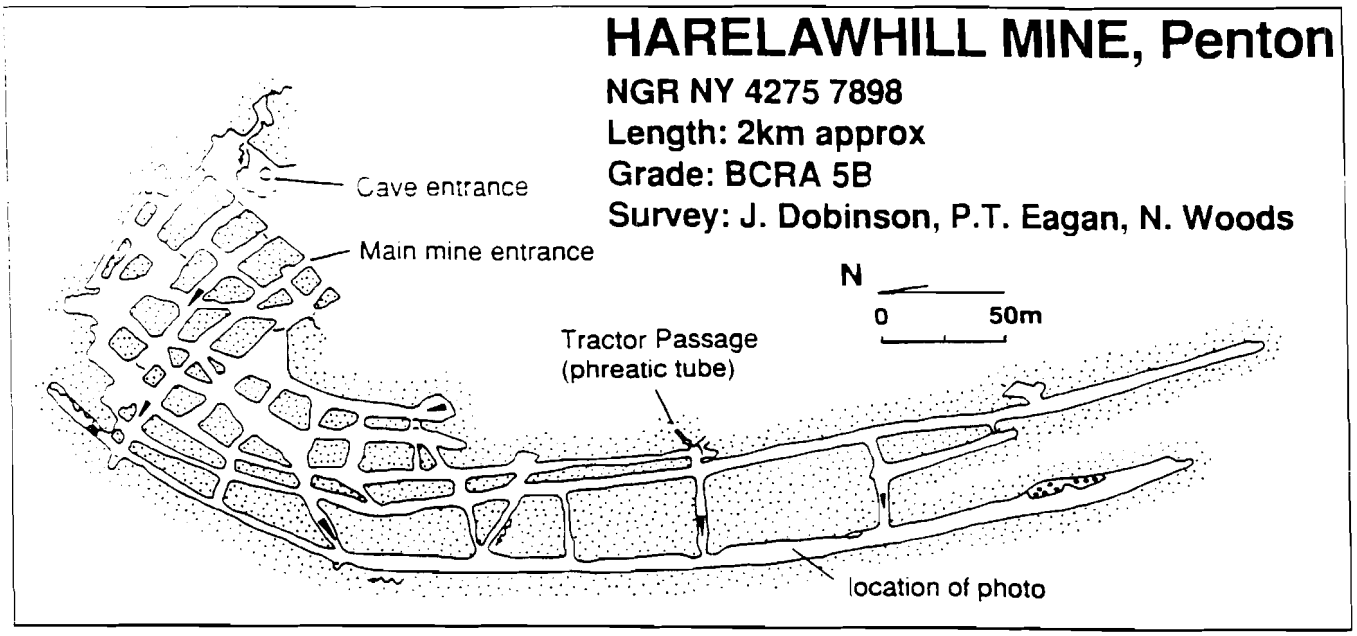
We located the exit of the incline and followed this up through the trees to the top of a mound on which the drum house must have stood ,together with its associated hoppers etc. all that remains now is a small brick flat roofed building not far from the road to which the party then made its way to.

If you have a limestone quarry or mine ,then there is probably a lime kiln nearby.and, across the road by the entrance to the tip, were the remains of a large one with two apertures at low level. Also by the this entrance was a weighbridge,with a brick flat-topped bulikding next to it. The tip itself was inspected ,but not for too long, and it would appear that it was an earlier stone quarry the northern end of which (nearest the road) was holed by the underground workings,hence the source of the fetid water.

By early afternoon we had looked at every thing that we could think of looking at,and,it was too cold to linger and so I called it a day. My thanks to all who took part,and if any one can find out more information about the place it would be welcome .

January 1993 Mark, Simpson.





Harelawhill Mine

WHEN I was told that there was a large limestone mine near Penton, just over the Scottish border north of Carlisle, I became interested. In addition, according to the Bridge Inn at Penton, a small natural passage led off from the mine, this being corroborated by a farmer, a local couple, and a chance encounter with a miner.

The main entrances to Harelawhill Mine are in a small clearing to the east of the B6318, with another obscured by rubbish to the west. Although confident of finding the rumoured cave passage, after many visits it remains undiscovered, although it has proved possible to follow a passage into one side of the hill and exit by another near a small stream. A few small phreatic tubes were found, the longest being about 10.5m, and barely body sized: it was named Tractor Passage after a toy tractor found near the entrance. There is a lot of evidence that a natural passage did exist.

A separate cave was also found outside the mine, which consisted of a small muddy entrance and a short passage up to 2m wide, showing a prominent coal seam on one side.

The mine was worked for many years until the 1960s, the stone being used for agriculture and roadstone as well as, possibly, the iron and steel industry. The limestone is from the Upper Liddesdale Group: two beds, the lower being 2m and the upper 7m, are separated by 0.5m of calcareous shale packed with productoids and spiriferids. These can be found in one area of the mine where a steeply descending passage comes to an abrupt end, where we believe the lost passage existed. Below the limestone is a 10in coal seam, probably the same as that found in the cave, resting on seatclay. Crinoid columnals are common, and polyzoa and brachiopods constitute the bulk of an otherwise sparce fossil record. Some 5m of mudstone and siltstone with abundant ironstone nodules separate the limestone from a higher 1m band of limestone. The dip is obvious as the mine is entered, with clinometer readings varying between -8 and -22 degrees.

The mine is very easy to explore, as many passages are over 10m wide, and never narrower or lower than a few metres. There are seven entrances, so one is never far away.

Small gours have formed on some floors, stals are few and small, but the mine's impressive proportions make it well worth a visit. It is possible to park off the B6318 near an old weighbridge, which is down a dirt track opposite the mine, or in a lay-by a short walk away.

References

LUMSDEN, G.I. 1967. *The Geology of the Neighbourhood of Langholm.* HMSO, London.

DAY, J.B.W. 1970. *The Geology of the Country Around Bewcaster.* HMSO, London.

Report: Peter Eagan

MEETS REPORT - KENTMERE SLATE WORKINGS

January 17th 1993. M.L. A D Cameron

The meet leader, who, the previous evening, had been indulging in beer-drinking with his mates in Coniston, was not feeling particularly dynamic as he drove up the valley road towards Kentmere for the meet. In fact, on arrival at Kentmere church, he was feeling extremely rough and was secretly hoping that no one would turn up and he could go back to bed. Imagine his dismay when he was greeted by twelve keen and determined souls (including the Chairman!) who were all prepared to brave the gale-force winds and freezing conditions. There was nothing for it but to look enthusiastic and proceed.

The Kentmere workings are nearly three miles above the village. Most of the way is on an unsurfaced road. The road is private although driveable and the meet leader had previously asked permission from the farmer at Hartrigg Hall Farm to take cars along it. This saved about forty minutes of hard slog.

The first venue for the day was the Jumb Quarry on the east side of the river. The main level (No 2 Level) was entered. The main drive was followed and, after 60m the way passed through deads which had been worked from above. The drive ended after about 100m. On the return the party took the route over the deads which lead up into an area where slate had obviously been dressed. Beyond, the route fell steeply back into a side tunnel which lead to the main drive and daylight. Two drawings of the Jumb Workings are reproduced below, one showing the external tips and another a survey of the internal workings carried out by pupils of Queen Katherine School, Kendal in 1981. The Jumb workings closed in the early 1950's.

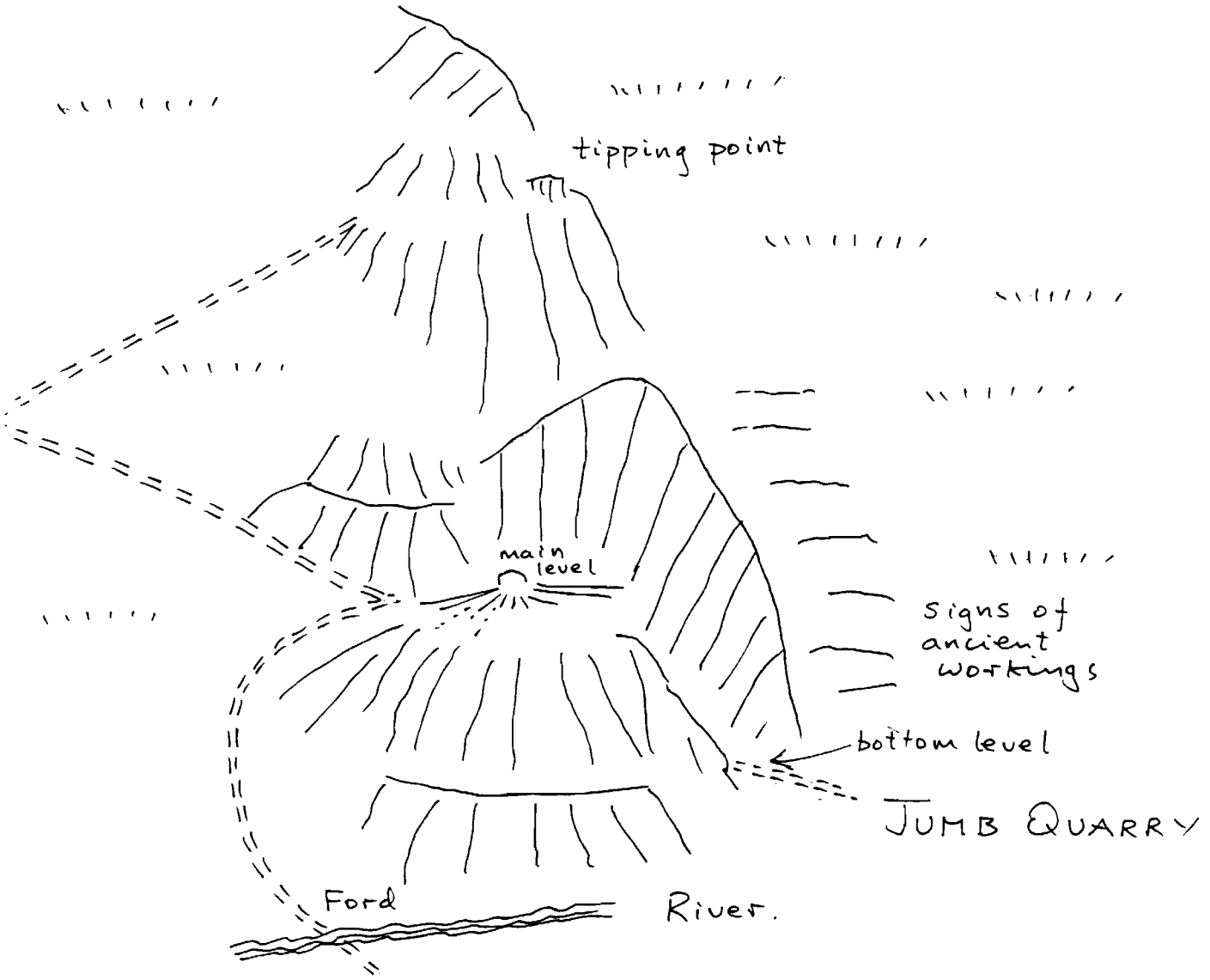
High on the fellside above Jumb are some ancient workings which were recorded as being closed on the 1897 maps and, further to the south, slate was still being extracted from Tongue Quarries in the 1940's.

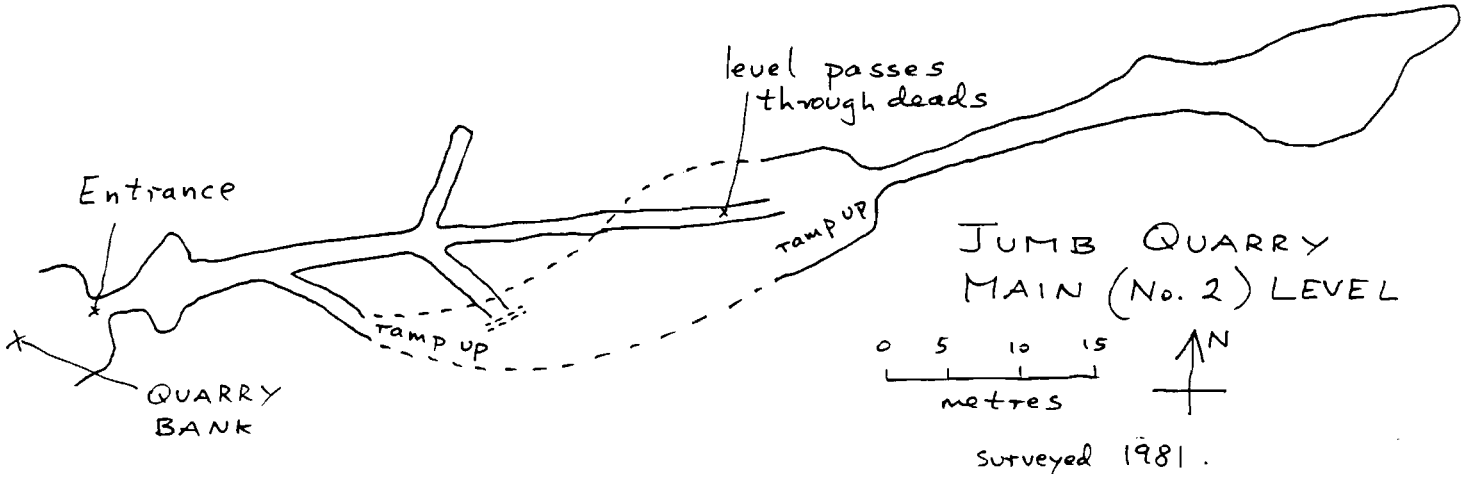
The party then crossed the river and made for the Steelrigg workings. The main level at Steelrigg runs in at a low point, just behind Reservoir Cottage. It is now flooded up to eyebrow height and in the freezing conditions of a January day didn't appeal to anyone, although it did occur to the meet leader that a quick wade up the level might do him the world of good. The group then moved up to a higher point at Steelrigg and entered an open quarry from which a descent was made using an electron ladder and SRT. Jon Knowles descended further through the roof of a small chamber and checked out a tunnel that ran off and looked promising but, as it turned out, was blind. An attempt was also made to gain access to the bottom level from this point but the ground was very unstable and the attempt was aborted. Steelrigg was the last quarry to be worked at Kentmere.

The party then turned their attentions to workings high on Rainsborrow Crag. Cauldron Quarry occupies a position at the head of the screes and at the foot of the buttresses. The workings consist of two large open-fronted caves which inter-connect. Remains of the inclined sled-gate can be seen clearly running from the workings towards the valley. A few hundred feet along the crag is the Lambfold Workings. It is reputed that these quarries were worked almost entirely for stone for the reservoir dam.

The party returned to the cars and prepared for the journey home. Three weeks later, on a perfect winters day, two of us walked up Kentmere Pike on the opposite side of the valley. From here, through binoculars, a further working was spotted higher on Rainsborrow Crag on the steep spur that encloses Rainsborrow Cove. It is inconceivable that anyone could ever work in such a steep location. One day, when we have time, we will climb up and explore it.

JUMB QUARRY
KENTMERE





Top Level Dig (2) Jan 31 1993

There was a time when the slightest hint of new ground sparked off a burst of urgent activity,angry words were spoken if individuals were thought to be taking unfair advantage in order to be first in,and the entire active membership had visited any new and hard won discovery within a week.It was surprising therefore that , despite the certain prospect of the first new ground for years,five weeks elapsed before a second visit was made on Jan 31st to the dig on Top Level.Several of the original party of seven were supporting Alistair Cameron, who was leading a Barrow M.S.C meet through his major interst.Honister Quarry. Of the original Boxing Day group only the Meet Leader Ian Matherson. and Mark Simpson were present, joined by Dave Bridge ,Clive Barrow and Angela Wilson,though she had another engagement for that afternoon. Going to measure up some young men she said,but didn`t say what for - something to do with Millom Operatic Societies production of West Side Story.

Stemples were required,and spiling boards,some of which had been obtained by Pete Fleming from Peter Blezzard, and stored in Mandells Office in Coniston.Accordingly the team met there,and the heavy gear was transported part way up the hill in Clives Landrover. It was carried the rest of the way to Simons Nick,and the timber was launched `carefully` down Lake Stope.One of the spiling boards bounced halfway down. taking off horizontally and comiong to rest well out of reach parked neatly across two very old stemples.where no doupt it will lie for many years and perhaps puzzle future mine explorers.The rest of the boards made it to the dig.

It was seen that part of the timbering which had been put in on Boxing Day to retaine the the slope had collapsed probably due to water from the heavy rains of the last few weeks,and that there was a lot of hard work in prospect.New stemples were cut and placed,and backed with timber and stone to hold back the ever flowing river of stones which moved freely downwards of its own accord,yet resisted every attempt to move it with shovel and pick.After several hours of graft the level of the stones was lower, but the hole was narrower as the boards had crept down and compressed it. This was discopuraging to say the least. How ever. more by good fortune than good planning, a board was hammered home which finally stopped the run of stones, and the hole was then enlarged by much pocking and proddling with poles and feet to a sufficient size for a slim person to wriggle through.

Mark was elected to go first, having previous experience of such things, followed by Ian and Dave. After several attempts Clive decided that he was not a slim person. The level curved gently ahead,the welly deep water rimmed with white tide lines,which are only found in places which have been undisturbed for many years.

There were some patches of green malachite, but little else of interest.until after 50 yards the solid rock roof ended abruptly in a steep slope of yellowish clay and stones which had flowed in from the surface to block the adit. After a quick inspection Ian left in order to hurry to Troutbeck Bridge swimming pool for a hours lifesaving.whilst the others carried out a rather more leisurely examination before making their way down to the BMSC hut, where they reported to P.Fleming who had called in to enquire onway back from Honister.

So concludes the final exploration of Top Level.which has now been opened up from end to end.There is however still more to discover in the stopes above and below for those with enthusiasm and the time to pursue it.

February 1993 Ian Matheson.

Top Level --The story continues:-

When Ian left Dave and I ,a bit of digging was undertaken to see what would happen and if it was possible to get any further. It was assummed at the time that we were into the loose rock and debris over the original entrance to Top level but! it would be nice to be certain.After about 15 mins we had not progressed forward but a lot of fill had come in and it was draughting through the loose rocks. At this point it was decided to call it a day.

The following Sunday which was supposed to be a CATMHS meets at Coniston but it would appear that Greenside had peoples prior attention.Several members did turn up to go with P.Fleming,these were Angela and Jeff Wilkinson.I was working at the hut and had my daughter with me .Peter decided to go and show the others some obscure corner of middle level.I asked Peter to call in at the site of last weeks dig and make suitable digging noises while I waited on the outside.to see if I could hear.

We all made our way up to the Top Level entrance where at 11.00 Peter left me to go up to Simons Nick. I found what appeared to be a recent depression in the scree slope and waited events. At 12.08 the earth moved .knocking and a voice was heard emanating from beneath my feet, Peter could not have been more than 6 ft away.Suddenly these sounds ceased.I learnt later that the boxing day dig boards had stopped doing their job and a hasty retreat had to be made.After putting in a 5 foot drill steel to mark the spot I and my daughter made our way back to the hut.

It gave much cause for thought that it had taken over an hour for 3 people to reach a spot probably 6 feet from where I was standing.and they had only personal gear with them. There is still much to do in this part of the mine.

March 1993 Mark Simpson

Recent developments on mine sites

Shropshire County Council has awarded a £715,000 contract to Kinmain Construction as the first phase of environmental clearance and heritage site development at the former lead mine at SNAILBEACH. The scheme, designed by Wardell Armstrong and funded by Derelict Land Grant includeds stabilising and filling old workings, capping shafts ,and putting in safety grills.

Surveyor January 1993.

KILLHOPE

The popular Weardale attraction - which has been brought back to life by Durham County Council over the past 12 years at a cost of some £750,000 ,has been awarded the 1992 Civic Trust Award.

From uncertain beginnings as a cluster of derelict buildings on an isolated,overgrown site,Killhope has become the most complete example of the Victorian lead mining industry in Britain.

Existing buildings have been carefully restored,a new 350,000 visitor centre opened and the 33ft 8in diameter water wheel - the largest now in Northern England - is turning again after a £100,000 rebuilding.

The county council has also announced plans to open up to the public a section of the old mine workings.

Abstracted from Local Government News January 1993

Above items sent in by Dave Blundell February 1993

General I.A. News

Clippings from local South Cumbria News Papers.

Award for furnace:- Duddon Iron Furnace near Millom has won national recognition by scooping a top environmental award.

The iron furnace,built in 1736, is one of only 18 schemes to win acclaim in this years Civic Trust Awards.

Closed down in the 1860`s when coke had replaced charcoal as the main fuel used in iron smelting, the site is the most complete surviving charcoal fired blast furnace left in England.

The site was left to revert back to woodland but archeological excavations have been carried out to reveal remains of the complex,including the casting areas,bellows room and wheel pit,and is now a scheduled Ancient Monument.

General I.A. News (cont) 2

Ironworks display planned :- Millom Council is to commemmorate the 25th anniversary of the closure of the towns ironworks with a display in the council chamber.

Councillors have agreed to hold an exhibition next September with momentos from Millom's ironworks past on show. They hope the public will come forward with souvenirs and suggestions

3-12-92 A.D

Light at the end of tunnel for ex-miners pay-outs.

A number of former Millom iron ore miners are set to get compensation following a long running battle over industrial deafness.

Ten former miners from West Cumbrian pits have already received a £ 25.000 pay out at Cleator Moor and with many more throughout the county`s mining areas in line for payments, the total is expected to run into hundreds of thousands of pounds.

Cumbria agent for the mine bosses union.the National Association of Colliery Overmen,Deputies and Supervisors. John Mann, said at the weekend. These were the forgotten men--- we feel this is a big success story. Most of them are old men who have now retired ".

Another 300 ore miners are expecting pay outs for hearing difficulties as a result of working underground with heavy and noisy machinery including a number from the former Hodbarrow pits which closed in 1968.

The union began the fight for compensation more than 18 months ago,entering claims backed up by medical evidence.

Quarry opens after 15 years;-Work has started again at the Brathay Quarry,near Skelwith Bridge ,Ambleside. despite being designated a S.S.S.I

The Lake District Special Planning Board is being urged to negotiate with the quarry owners to limit the extent of the working to ensure the site remains hidden.

Evening Mail Feb 1993

Coniston folk to have say on Ruskin museum plans. The future of the Coniston Village Ruskin Museum is to be fully investigated and considered after a £ 6000 contract was this week awarded to L and R Leisure of Pierhead Liverpool.They will present to the management committee a forward action plan detailing targets over the next 10 years

One suggestion put forward for discussion will be the possibility of including local history such as the slate industry,coppermines, social history,lake and public highway,both for work and leisure.

Press News (cont) 3

Park to hire archeologist

Lake District planners are to employ an archeologist to help conserve the National Park.Until recently the planning board was served by the county archeologist but although the county,has decided to reapoint one,he or she will only now deal with the area outside the park.

Chief planning officer John Pattison told the planning policy committee the biggest advantage in having their own archeologist was that it would compliment other expertise.

"English Heritage would fund the post in the first year and after that even if the board did not have funds for the post,we could still fund it out of money the archeologist would generate".

Conservation officer Andrew Lowe said the archeologist would be able to encourage "pump priming " grants from English Heritage which would not be available and generate funds for archeological work.

Mr Bruce Hanson who runs John Ruskins historic home, Brantwood at Coniston,said " To be one of two national parks without an archeologist makes us a banana republic"

"We are charged to look after what we`ve got and we can`t do that unless we know what's here".

Editors note:- Please supply clippings with date ,origin and credit

Quarry to close :- Goldmire Quarry near Barrow is to close with the loss of 13 jobs.The closure was announced yesterday (Wed) by the owners ARC.

The quarrying side of the business will close next Sunday (Feb 28) but the company`s existing plant at Thwaite Flat will remain open.

Evening Mail 18/2/93

Abstracts from press cuttings from other areas.

Rail track gets go-ahead :- Gwynedd councillors have given themselves the go ahead for a railway track to run between Porthmadog and Caernarfon. The councillors will will now be applying for a light railway order to run the narrow-gauge raiway service.

Cambrian News 25 December 1992

Mine Plan Approved:- Plans to turn the working Gwynfynydd Gold Mine at Ganllwyd, near Dolgellau into a tourist attraction were given the go-ahead by the Snowdonia National Park committee on Wednesday.

An estimated 35,000 visitors are expected to visit the mine at the head of the Mawddach valley and park officials say that the visitors must be transported to the mine by minibus from Dolgellau.

Cambrian News 18 December 1992.

Spreading the word about Mining History.

An illustrated talk on the Coniston Copper Mines was given to a capacity audience at the Presidents Evening of the Cumbria Metallurgical Society,on the 27 january 1993.This resulted in twelve members signing up for a walk - in trip through the mines and,considerable interest was shown in CATMHS book "Beneath the Lakeland Fells,"

A slide show entitled "Exploring Cumbrian Mines " was enthusiatically received at a meeting of the St Bees W.I.on the 8th of February,and prompted the comment that the beautiful copper mineral formations would make an ideal subject for needlework designs,classes in East Bonser perhaps?

February 1993 Dave Bridge

Eric Holland gave CATMHS an astonishing show of slides at January social involving a recent series of trips through early chiselled workings in,it is thought,France and Austria, some as early as the 15 century.
It is to be hoped that more information will be made available for publication in our newsletter.

If any member is giving talks on mining history please let me know.to show people the range of CATMHS activities- Editor.

Millom Folk Museum Society

1993 brings to us the twenty fifth anniversary of the closure of two of Millom's once major industries. In March 1968. the famous Hodbarrow Mine was closed after 113 years of operation; followed by the Millom Ironworks in October 1963 after 100 years of operating. At a stroke these once major employers of the town of Millom were lost.

It has been decided by the Millom Folk Museum to hold two photographic exhibitions dedicated to these once famous industries. to be held in the foyer of the towns library adjacent to the Millom Folk Museum.

One of these exhibitions would cover Hodbarrow mines , the other would cover Millom Ironworks. It is envisaged that these two exhibitions would run for three weeks each.in the summer of this year.

The Folk Museum is appealing for the general public, and a number of specialist groups such as CATMHS for the loan of any photographs. 35mm slides or any pictures relating to these industries. for display in these exhibitions.

Anybody willing to loan any items for these exhibitions please contact :- Chris Moore. 41 Albert Street , Millom Cumbria LA18 4AF. Any items loaned and selected fior display would be laser copied: thus the original picture would not be exposed to mis-use or handling by the general public.

We cannot offer any financial remuneration for the loan of the items. but would give any laser copies displayed to the owner.

Hodbarrow Mines exhibition scheduled to run June 14th to June 28th

Millom Ironworks exhibition scheduled to run June 28th to July 11

Opening time please telephone Millom Folk Museum (Millom 0229/772555) After Whitsuntide bank holiday

North Pennine Heritage Trust

Appeal for Volunteers **** The trust is working to identify,conserve, restore and interprete sites important in the mining and agricultural history of the North Pennines. Present projects cover bingsteads, chimneys flues limekilns and fords. A major task which we started at the end of December 1992 is the conservation and restoration of the Rampgill buildings at Nenthead,which will house the exhibition area, audio visual presentation and Trust Offices. This phase 1 of the conservation of the whole of the Rampgill site will alone require several thousand man-hours of volunteer labour ranging from heavy demolition work to light tasks such as pointing. As you can imagine, we would be extremely grateful for any help offered ,either at our own work parties (each 2nd Sunday from the 3rd January 1993) or in your own groups when visiting the area.If you would like to now more information. please contact Tom Barkas on 0434 683573

The CATMHS reps are S.Barker and Don Borthwick

Mine Abandonment plans for Cumbria

The abandonment plans for metalliferous mines in Cumbria are at present held by the British Geological survey at Murchison House. West Mains Road.Edinburgh EH9 3LA,pending transfer to the Cumbria Record Office. Carslisle. The BGS contact is Richard Gillanders (031 667 1000).

Below is a list of plans held by the BGS, The question of the missing plans has been taken up with the Health and Safety Executive Mining Records Office at Bootle. It is thought that these sheets may have been sent to the wrong County record offices by mistake and HSE are looking into the matter.

The 57 plans ticked (140 sheets) have been inspected in Edinburgh and a list giving brief details of each plan has been drawn up. This includes size,scale,date (where known). extent of coverage. degree of detail etc. This list is held by Anton Thomas (CATMHS Achivist) who is now liaising with the BGS photographer.Fergus McTaggart,with a view to obtaining copies of selected sheets in microfiche form which could be reprinted to any required size. These would be backed up by 35mm colour transparencies where colour is necessary for the interpretation of thwe plan.

It is hoped by this route to supplement the 90 or so mine plans at present supplied by Dave Blundell from tracings

February 1993 Dave Bridge

Brief Title	Plan Number	Sheets	
✓Alston Moor Manor	AP	12	
Acorn Bank	AP12156	1	
Aldby	AP13116	2	
Aldingham	AP 134	2	
Anty Cross	AP11250	3	
Askham No 6	AP 5439	3	
Ayle Manor	APR 382	3	(1sh missing)
Beckermet(Plans elsewhere)	AP15228	29	
✓Bentyfield	APR 399C	1	
Berkuna Nos 2,5,6,9,11	AP 5926	5	
Berrier	AP 6981	2	
Bigrigg	AP15070	5	
Bigrigg	AP10949	18	
Bigrigg,Woodend,Cleator,Moor Row	AP--	3	
✓Birchy Bank	APR 284	1	
Birks No 7	Ap 3713	1	
Birks Nos 1 to 6	AP15071	30	
Blagill	APR 10	1	
Blueberg Level	APR 400B	1	
✓Bolton Heads	AP15149	1	
✓Bonser	APR 209c	1	
✓Borrowdale	APR 311C	2	
✓Brandlehow	APR 317D	3	
Bunkers Hill	APR 393A1	1	
Cabbish	AP 8482	1	
Carrock Fell	AP15292	1	
Carrock Fell	AP15335	6	
Carrock or Carrock fell	AP13669	3	
✓Cashwell	AP 7482	3	
Clargill Head	APR 120	1	
Cleator (no number) 25"	AP--	8	
Cleator Glebe	AP	2	
Cleator Moor	AP15072	2	
Cleator No 11	AP 2902	2	
Cleator Nos 21 & 25	AP 5758	2	
Cleator Nos 6 & 24	AP 6898	2	
✓Cleugh Flats	APR 143C	2	(1sh missing)
Clinty	AP 2986	2	
✓Clough Flats	AP15093	1	
Cocklakes	AP15240	1	
Craig Green North	APR 46B	1	
✓Crossfell	APR 371B	1	

CROSSFIELD	AP 7065	1	
CROSSFIELD	AP 3148	3	
CROSSFIELD NO. 2	AP 6360	5	
CROSSGATES NOS. 1, 2, 3, & 4	AP 6432	2	
CROSSGILL	AP15073	6	(1 sheet missing)
✓ CROSSGILL HEAD & TEES HEAD	APR 120A	1	
CROWGARTH	AP 3324	1	
CROWGARTH	AP15142	3	
CROWGARTH	AP14375	1	
CROWGARTH	AP15143	3	
DAFFENSIDE CLEUGH	APR 318	1	(missing)
DALTON NO. 14	AP 4436	1	(missing)
DALTON NO. 15	AP 4466	1	
DALTON NO. 16	AP 4586	6	
DALTON NO. 17	AP 6081	1	
DALTON NO. 7	AP 2942B	1	
DALTON NOS. 10 & 12	AP 2942A	2	
DALTON NOS. 2, 3 & 4	AP 4735	6	
DALTON NOS. 7 & 8	AP 2942	2	
DALZELLS MOOR ROW	AP 8423	1	
DAVID LAWN	AP13446	1	
✓ DOWGANG	APR 46C	1	
✓ DUFTON FELL	APR 281B	7	(3 sheets missing)
EBEN	AP15076	9	
ELLISCALES	AP 5907	1	(missing)
ELLISCALES	AP15278	16	
ELLISCALES	AP 4269	2	
ENID NOS. 1 & 2	AP13148	6	
✓ ENNERDALE	AP 3589	2	
✓ ESKDALE	AP 6009	1	
✓ ESKDALE	APR 307B	1	
ESKETT PARK MINES	AP15077	15	
FAWNCROSS	AP15074	2	
FLETCHER	AP15078	14	
FLORENCE/ULLCOATS	AP15250	8	
FORCE CRAG	AP15337	1	
FRIZINGTON PARK	AP 5089	2	
✓ GALLIGILL SYKE	APR 10A	2	
GILL BROW	AP 6334	1	
GILLFOOT PARK	AP15079	4	
GILLFOOT PARK NO. 5	AP 3518	1	
GLEBE	AP 4298	8	
GOLDMIRE	AP 4199	1	
✓GOLDSCOPE	AP15092	2	
✓GOOSE GREEN	AP 3628	1	

✓ GOOSE GREEN NO. 2	AP 6010	1
GREEN HAUME	AP 99	2
GREEN HAUME	AP 5191	2 (1 sheet missing)
GREEN LANE	AP 6333	2
✓ GREENSIDE	APR 316C	1
GREENSIDE	AP15195	4 (missing)
✓ GUTTERBY	AP 2913	1
✓ GUTTERBY	AP 9942	2
HAILE MOOR	AP15273	6
HARDSHINS	AP 2525	1
HARTSOP HALL	AP14515	1
HELDER	AP 7798	11
HIGH HOUSE	AP 133	1
HIGH HOUSE	AP 4889	3
HIGH HOUSE NO. 4	AP 7740	1
✓ HILTON	AP 729	1
HODBARROW & MOORBANK	AP15241	2
HOLEBECK	AP15082	26
HOLEBECK NO. 7	AP 4076	2
✓ HOLYFIELD	AP15115	1
✓ HOLYFIELD	APR 396A	2
✓ HUDGILL BURN	APR 78E	1
HUNGARY HILL OR FARM NEW	AP 309	2 (missing)
✓ HUNTERS VEIN	APR 330D	1
JACKTREES	AP15140	2
JACKTREES	AP 7417	4
JACKTREES	AP15139	12
JACKTREES & CROWGARTH	AP15138	1
JACKTREES NO. 2	AP15141	1
✓ KELTON & KNOCKMURTON	AP 6156	6
KIRKBY THORE	AP12532	1
✓ KIRKLAND	AP 8469	1
✓ KNOCKMURTON	AP 7688	1
LADSTOCK	AP15107	1
LADY VEIN	APR 120B	1
LAMPLUGH	AP10518	3
LINDAL COTE	AP 6430	2
LINDAL COTE	AP 6429	1
LINDAL MOOR	AP 6541	1
LINDAL MOOR	AP 6191	3
LINDAL MOOR	AP 6431	4
✓ LINDAL MOOR	AP10766	4
LONG KATE LOCK	APR 120C	1
LONG MEG	AP 6294	1
LONG MEG	AP15353	1
LONGFELL	AP15223	3
LONGLANDS	AP 3163	1
LONGLANDS	AP 7971	2
LONGRIGG	AP 1231	2
LONSDALE	AP 7919	1
LONSDALE NO. 4	AP 5225	1
✓ LOWESWATER	APR 83C	1
LOWFIELD	AP 6080	4
MANOR HOUSE	APR 120D	1
MARGARET	AP 8020	4
MARRON	AP 4432	1

MICKLAM NO. 5	AP15289	3
MONTREAL	AP 8476	3
MOOR ROW	AP 7941	1
MOOR ROW	AP15081	7
MOSS BAY	AP 2965	1
MOSS BAY	AP10782	15
MOUZELL NO. 1	AP 4295	1
MOUZELL NO. 3	AP 3744	2
MOUZELL NOS. 5 & 6	AP 4476	1
MOWBRAY	AP 7463	1
~~MOWBRAY~~	~~AP 3352~~	~~3~~
MOWBRAY	AP 3325	3
✓ MURTON FELL	APR 136E	2
✓ NENTFORCE LEVEL	APR 10B	1
✓ NENTHEAD	APR 318B	1
✓ NENTHEAD	AP 7612	6
✓ NENTHEAD	AP15334	9
✓ NENTSBURY	AP15336	5
✓ NENTSBURY	AP15165	14
NEW PARKSIDE	AP15084	10
NEWTON	AP13939	30
NEWTON EAST	AP10006	1
NEWTON NORTH	AP 2905	2
OXENCLOSE	AP 7207	1
PALLAFLAT (Plans in another office)	AP 6201	11
PARK NOS. 1, 2, 3, 4, 9 & 13	AP 7559	7
PARKSIDE	AP 8479	1
PARKSIDE	APR 54A	5
PARKSIDE	AP 6212	3
PARKSIDE & GOOSE GREEN	AP15075	5
PARKSIDE NEW	AP 4446	1
PATTERSYKE	APR 10C	1
PENNINGTON	AP 7071	1
POSTLETHWAITES	AP15080	22
POSTLETHWAITES ESKETT	AP 4860	2 (missing)
POSTLETHWAITES ESKETT	AP 4869	2
POSTLETHWAITES MOOR ROW	AP 4528	2
POSTLETHWAITES MOOR ROW	AP 9941	7
POSTLETHWAITES MOOR ROW	AP15085	10
~~POTTS GHYLL~~	~~AP15238~~	~~1~~
✓ POTTS GHYLL	AP15238	5
PRIORSDALE	APR 49B	2
RENNYS FOLD	APR 398C	1
ROANHEAD	AP13149	(?) 316 (1 sheet missing)
✓ RODDERUP FELL	APR 120E	1
✓ RODDERUP FELL	AP15100	2
RODDERUP FELL & TYNEBOTTOM	APR 318C	2 (missing)
✓ ROTHERHOPE FELL-SMITTERGILL MAP	AP	1
ROWFOOT	AP 4068	2
SALTERHALL	AP 5722	3
SALTERHALL NO. 1	AP 5542	2
SALTERHALL NOS. 1 TO 9	AP15086	17
SANDWITH ANHYDRITE	AP15354	1
SCAITH HOLE	AP12646	2 (missing)
✓ SCALEBURN	APR 274	1
SCALELANDS	AP15087	14

	SCORDALE BECK	APR 339	2
	~~SILVERBAND~~	~~APR 399D~~	~~1~~
✓	SILVERBAND	AP15222	3
✓	SILVERBAND	APR 339D	1
✓	SILVERBAND	AP 702	3
	SIR JOHN WALSH	AP12636	22
✓	SMITTERGILL & FOXFOLD	APR 10D	2
	SOUTHAM	AP 4074	3
	STAINTON	AP10124	1
	STAINTON	APR 175E	2
	STAINTON	AP 2904A	2
	STAINTON NO. 2	AP 7206	1
	STANK NORTH OR NORTH STANK	AP 3432	4
	STOCKHOW	AP 5211	2
	SWATHBECK	APR 400C	1
	SYKE HOUSE	AP 4804	3
	THISTLE	AP12533	1
	THORNGILL	APR 136B	3
	THORNTHWAITE	AP 7815	6
	THORNTHWAITE	AP 7814	6 (missing)
✓	THRELKELD	AP11359	7
	TITHEBARN	AP 8882	1
	TOWNHEAD	AP 7681	3
	TOWNHEAD NO. 1	AP 6025	2
	TOWNHEAD NO. 3	AP 4743	4 (missing)
✓	TROUTBECK	APR 274C	1
✓	TYNEHEAD	APR 136C	3 (2 sheets missing)
	ULLBANK	AP 6914	1
	WHICHAM	AP 3413	7
✓	WHINFIELD	AP 9451	4
✓	WHITRIGG	AP 6433	4
	WINDERGILL	AP 2920	1
	WINDERGILL	AP15088	14
	WINDERGILL	AP 5992	2
	WINDERGILL	AP 3436	2
	WINDSHAW BRIDGE	AP15114	2
	WOODEND	AP15089	11
	WOODEND & NEAR HOLSTERS	AP14794	2
	WOODEND NO. 10	AP 3179	1
	WOODEND NO. 4	AP 1782	2
	WYNDHAM	AP13657	1
	WYNDHAM EGREMONT	AP15090	9
	YARLSIDE & STANK	AP 4147	14
	YEAT HOUSE	AP15083	4
✓	YEW CRAG	AP15258	2
✓	YEWTHWAITE	AP15091	1
✓	WHITEHAVEN IRON DISTRICT	AP	1

WELSH AND CUMBRIAN SLATE WORKINGS - SOME COMPARISONS

by Peter Hay

Having spent two weeks in 1991 and 1992 surveying underground in the slate mines at Penarth and Moel Fferna between Corwen and Llangollen in North Wales, it seemed useful to look at some Lakeland slate workings underground to try to draw some comparisons. After all, Welsh slate mining is supposed to have begun as a consequence of the arrival of the Lakeland miner William Turner of Seathwaite, whose father ran Walna Scar quarry. In the earliest Welsh workings that were not simple open quarries - Clogwyn Y Fuwch and Pen Y Ffridd near Llanrhychwyn - there is a notable resemblance to Lakeland practice.

After I had looked at more than a dozen Cumbrian workings, three major points of difference from North Wales were apparent to me. The first concerns transport. Honister and Yew Crag apart, the railed incline which is so common in North Wales was little used in Cumbria. I believe the inclines in the Honister area date from the end of the nineteenth century, often in groups joined by level stretches to make lengthy routes. The Cumbrian use of aerial ropeways for moving blocks (clogs) was rare in Wales, though the `Blondin` flight spanning a quarry (rather than connecting it to the outside world) was in use until recently.

The second major difference I noticed concerns the working of the slate after extraction. Sawing of slate in North Wales probably began around 1775 and by 1803 there were two mills sawing with water power. The circular saw was in use by 1810, though sawing blocks prior to splitting them into roofing slates did not happen until the 1850s. Two consequences of this form of slate processing are that even quite small workings could muster a mill of sorts; and there is an abundance of sawn ends of slate in the walls of buildings. In Cumbria they seem to be a rarity. I got some very funny looks in Keswick as I wandered around literally fingering the walls of old buildings. Digging out ruined mills is a significant part of Industrial Archaeology in the Welsh slate industry; to uncover the evidence of saws, other machinery and their power sources. (Inevitably the tons of rubbish shifted is always dumped exactly where the uncovering indicates should be the next part to be dug.) It would not happen in Cumbria for few sites have much by way of mill remains to dig, though there is plenty of evidence of underground slate processing. I am not sure why there should be this difference, but it did seem that Lakeland slate often appears to split very neatly, across the strike of the vein and at right angles to what in Wales is called the pillaring line, along the strike of the vein. If this is so, there would be less need to saw to obtain a rectangular block which can then be split. Therefore no mills for sawing and most of the work done underground. As a further consequence there would be no blocks to move over a distance to a mill, and hence (perhaps) no inclines. Might the coming of the latter, and the aerial ropeways, coincide with concentrating processing in mills to improve efficiency ?

The third major difference I noticed was in the shape of the underground chambers (closeheads) and the way in which they appear to have been worked. In Wales whether the dip of the slate is less than 10 degrees (Moel Fferna) or nearly 90 deg. (Aberllefeni) the chambers have ceilings that are reasonably regular and horizontal at least in one plane, making roughly a right angle with the walls (pillars). Many Lakeland chambers, I noted, have ceilings which `grow out of` the walls and are hard to distinguish from them, the point of transition from wall to ceiling being hard to determine. My initial reaction to this was to see it as evidence of slovenly working, but underground discussions with Jon Knowles have altered my view. In Wales a vein dipping nearly vertically typically produces a chamber of definite width and sometimes great height, with a clear run from ceiling to floor. Some at Aberllefeni are several hundred feet high. By contrast, in Rigg Head for example, though a chamber may

be reached on three floors, its height is concealed by the fact that there is much waste present, stacked or otherwise, and that the chamber appears to `step` sideways. Work seems to have begun at the bottom and proceeded by what Jon Knowles perceptively calls `overhand stoping` as in a metal mine. As the chamber got taller the workers stood on a growing pile of their own slate waste, using comparatively short ladders to reach the working face above them. I saw none of the chains hanging from long-inaccessible places in the roof, by which the Welsh suspended themselves as they drilled and levered the rock.

These observed differences - real or the product of my imagination or ignorance -were at least the ones that struck me during several days touring Lakeland slate mine and quarry sites. Those with more knowledge of their history and practice will, I hope, refine our understanding of these matters. From somewhere I got the information that triangular drill holes were to be found in Lakeland slate mines and in due course I found some, high up in Coniston Old Man. Being on my way to an Industrial Archaeology meeting at the Snowdonia National Park Study Centre, I thought I might mention such a curiosity there. Recognizing that the experts would never believe me - `been at the wine again Hay` - I managed to get several pieces of waste with triangular holes to take with me. On announcing the finding of triangular holes to the I A experts I was greeted with the expected incredulity and ridicule. Producing the waste pieces drove the experts into silence but, more to the point, to find out how such holes had been made. So something useful came from one man`s ignorance.

Below is a list of the sites visited and a brief description of the workings. Some of the names I have taken from nearby physical features on the O S map.

Low Wood (205947) North west of the river Duddon. One open quarry and one with several chambers opening off one another. Several approach adits.

Stainton Ground West (217932) Underground with several chambers,one having two adit accesses and a skylight.

Stainton Ground East (222934) Open quarry

Lingmoor Fell (310043) Several quarries, some with access adits and chambers, open and closed.

Thrang Crag (Chapel Stile 321055) Accessible shaft to blocked underground workings. Several independent chambers, one with the remains of a slate wheelbarrow. The `slate stretcher` shown in the 1833 engraving was not seen.

Upper Rigg Head (235152) I found one chamber only.

Rigg Head (235153) Several open chambers, some approached through corbelled tunnels through the waste. Also adits direct into the hillside, leading to several chambers in line across the vein reached through corbelled tunnels through tipped waste in the outer chambers. The innermost (?last worked?) chamber almost clear of waste. The gauge of the internal railway appeared unusually large at about 2' 8". Remains of an aerial ropeway.

Hows Wood / Castle Crag, south of Grange (250160). A number of small open quarries, some much overgrown.

Quayfoot (252167). An open quarry with a few chambers.

Wren Gill (475084) Top: one long narrow chamber. Several open chambers lower down. A

long slot quarry with much slate debris washed down by a stream flowing through the workings, which appears to have flooded one or more chambers.

Selside Brow / Upper Longsleddale (480090). A series of small open quarries, mainly on the Kentmere / Wren Gill vein, which strikes west-north-west towards:

Mosedale (495097). An open quarry working a long face on the northern side of Mosedale.

Rainsbarrow Crag (445071). There appear to be at least two open chambers on the eastern face of the crag, and just north of it on the eastern face of Steel Rigg is an open quarry. Chest deep water and lack of a rope prevented investigation of its underground portions.
On the opposite side of Kentmere valley is:

Tongue Scar quarry and mine (451072) which has a completely blind trial adit at bottom level. By its size great things were expected. Higher up an adit with most unusual patent rail track which gives access to several chambers, one of which has been worked to a height of approximately 100ft. The usual corbelled tunnels through waste piled up in the chamber.

Further quarries were seen from a distance as slots into the western flank of Kentmere Pike above Ullstone Gill, and these remain to be visited.

I hope these brief notes will stimulate discussion and extend our knowledge of slate mines, quarries and their workings.

CONISTON EXHIBITION

A major exhibition organised by CAT is taking place in the Ruskin Museum at Coniston over the Easter weekend. The Society were approached by the trustees of the museum just before Christmas and since then publicity officer Alastair Cameron has been working to put together the display boards and have photographs prepared.

The times of the exhibition are 10am to 1pm and 2pm to 5pm. It will be open on the four holiday days (Friday to Monday). The exhibits will consist of a number of poster displays including the Coppermines, the Slate Industry, Coppermines Valley as an ancient monument, the work of CAT in conservation, the history of the slate industry etc. A number of exhibits will be provided by Peter Fleming and Major Hext of Coniston.

Please contact Alastair (0386 750494) if you can help to man the exhibition at any time during the event.

J.O`Mara of Coniston (1872 -- 1949)

On the Red Dell track above the row of miners cottages a rock outcrop is reached,chiselled into this is;-

J.MARA I887

This old inscription is mentioned on page 25 of Eric Hollands book `Coniston Copper Mines a Field Guide` as a miner who chiselled his name into a rock outcrop in 1874 & 1887. Apart from the obvious inaccuracy of the year,J.Mara was not a miner of copper.

I am indebted to his son Jim and my father in law for revealing his history.

He was born in the coppermines valley in 1872 and given the name of James Mara,as was common practise at that time. The `O` was not used until-- (at the insistence of his wife to be !) he was married in 1912. His early childhood was spent playing around the coppermines and he recounted seeing the Old Engine Shaft water wheel in use, and, of miners descending the ladders down to the workings. Another incident he remembered from that period was of a winter in the late 1800`s when Coniston Water completely froze over,and of John Ruskin, in a rocking chair with ropes attached,being pulled up and down on the ice.

At 13 J.Mara started work at the slate quarries,high up on the Old Man of Coniston,and in later life, often boasted how he had worked 25 years and never missed a day. To which "Young Jim" would reply "Show us your medals then".

It was at the age of 15 that he chiselled his name and the year 1887 into the rock,proudly showing it to his own son when when he was a young boy.

As he gained experience in the quarries,James became a skilled rock hand in the Closed Head workings of the Old Man and,later,working at Broughton Moor he rose to become a share holder/Works Manager.

My father in-law,Cyril,had an interesting first meeting with him. As usual Cyril obtained his deleivery orders at the garage,these said:-Pick up slate from 2 companies at the Moor. On arriving,a stranger at the weighbridge told him to go and bring some blocks down from the top saw shed."No"said Cyril,"I have my orders for the day".He was then taken to the office, shown a letter head with the names of the bosses-- Mr C,Cann, Mr A.Cann, Mr Brown, Mr J,O Mara,and ,with a finger pointing to his name Mr O Mara ,sternly said " Thats me".

His only break from slate from slate was during the First World War,when to help the war effort, he went to work at the Haematite Mine at Hodbarrow.

James O`Mara died at the age of 76 and is buried in the Coniston Catholic Churchyard. He had 5 children.

His son Jim now lives in Maghull, Liverpool and regularly returns to Coniston

February 1993 Jeff Wilkinson.

TRIANGULAR DRILL HOLES

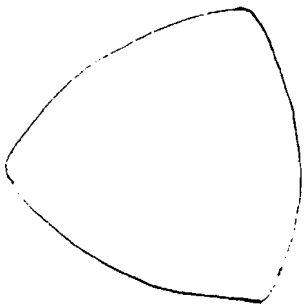
Elsewhere in this newsletter Peter Hay makes reference to the triangular drill holes found in some lakeland slate quarries. The formation of these was also discussed on the Dubs & Round How meet in late November. Having recently aquired, on favourable terms, a copy of Le Neve Foster's Ore and Stone Mining I gleaned the following.

With reference to hand drilling with a drill and hammer, as opposed to a jumper, he states

"In starting a hole a short drill is chosen, and longer ones are taken as the hole is deepened; the Smith is careful to make the cutting edges (bits) diminish slightly in width as the borers increase in length, because the hole gradually decreases in diameter as the tool wears. The bore hole is therefore not a true cylinder but a frustrum of a very elongated cone. It may even happen that, owing to the manner in which the miner has turned his borer, the section of the hole forms a triangle and not a circle. The deep holes bored for quarrying granite invariably become triangular after a small depth has been reached; but the sides are straighter and the corners less sharp than shown below (Fig 1) which represents a shape sometimes seen in slate".

Figure 2 is taken from a drill hole found on one of the highest workings on Coniston Old Man and shows that shapes other than triangles were produced. Figure 3 was found at Jumb Quarry - Kentmere.

Fig 1



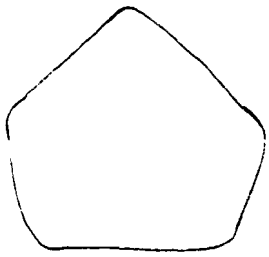
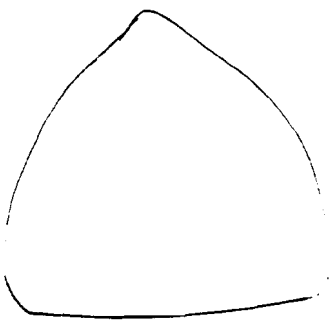


Fig 2

Fig 3



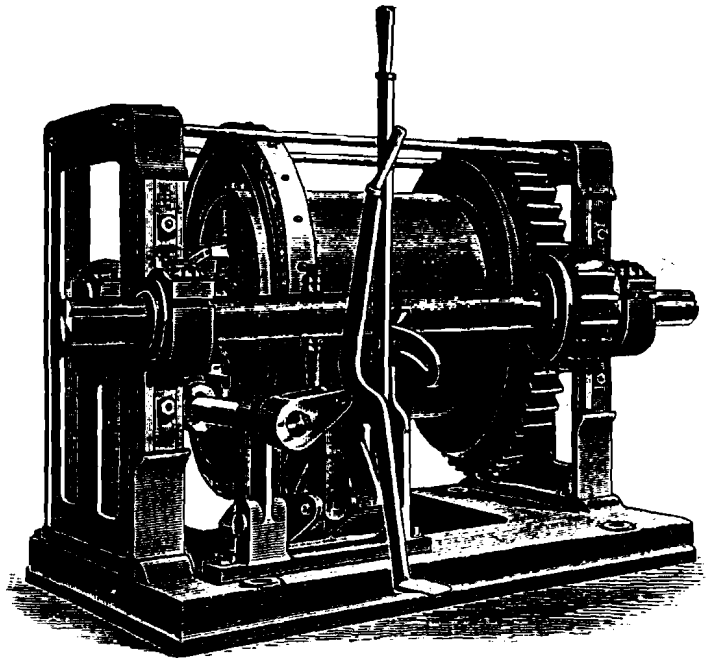
On the same page is the following passage which whilst not being connected with the above is of interest

"In a rock boring competition in Cornwall a few years ago, three men from Tincroft mine, two striking and one turning, bored a hole 13 inches deep in hard granite in 6 minutes 43 seconds, making 91 blows per minute; three men from Dolcoath bored 12 1/8 inches in 7 minutes 18 seconds, making 130 blows per minute, whilst a like number from Carn Brea bored 12 3/8 inches in 8 minutes with 117 blows per minute. The Tincroft men slung the sledge round, the others did not."

Jon Knowles

Haulage Winch

arranged to be driven by Shaft rotating in one direction.



6581

The Drum is fitted with a Friction Clutch for hoisting, and a Brake is provided for lowering.

One Lever throws Clutch out of gear and applies Brake; no possibility of load running away.

When lowering the Brake may be manipulated by the Short Foot or Hand Lever quite independently of Clutch.

No possibility of both Brake and Clutch being accidentally applied together.

Prices and Particulars against Specification of Requirements.

Greenhead Gill -- Lead Mine -- Grasmere

The small lead mine situated at about 1000 ft up Greenhead Gill to the North East of Grasmere was visited on the 8th and 15 of February 1993 to record details of the remains there.

The mine produced poor quality ore for a short period in the 16 th century and, in 1569 a water powered stamp mill with 12 stamps was built on the site. It is commonly beleived that the remains are truly Elizabethan (See W.T.Shaw -- Mining in the Lake Counties.),but, a drilled adit level indicates that a more recent trial has been made.The two derelict buildings which can be seen today do not conform with a descripton of the mine given in a inventory which was drawn up in the 1580`s by the Company of Mines Royal after the mine closed.

Nevertheless the workings are intriguing as many features, e.e.terraces. box buddle depressions,water leat etc. appear to date from Elizabethan times.

The site is to be surveyed and more accurately recorded by CATMHS later in the year.

Ian Matheson
March 1993 Dave Bridge

A HISTORY OF QUARRYING AT KENTMERE HEAD

David Glover

There are six named quarries at Kentmere Head - Steelrigg, Lambfold, Cauldron, Jumb, Hart Crag and Tongue. Unfortunately, early sources are too imprecise to deal with them as individuals. One of the earliest references is to the lease held by Robert Wilson, who also had Longsleddale. The quarries were managed by Michael Mattinson and George Wallas who had previously worked in the Troutbeck quarries until they were closed in 1755. The quarries in Kentmere were leased from the widow of the late Lord of the Manor of Kentmere, Henry Fisher.

Quarrying continued throughout the Napoleonic Wars and Parish records show quarrymen to be living in Kentmere in the first three decades of the 19th century. They may not all of course have actually worked in the Kentmere quarries. Thomas Allomin 1830 chose to include Kentmere in his series of engravings of slate quarries and the scene shows plenty of activity. Parson and White's 1829 Directory refers to Blue Slate and Blue Limestone Quarries at Kentmere.

As with many others the quarries probably closed in the middle of the century but were working again in 1875. They were run by Thomas Field of Leith, near Edinburgh, and he probably also had an interest in Parkbrow Quarry further down the valley. Field's interest was in producing the small 'Peg' slates which were very popular in Scotland, From 1877 a company was formed called the Kentmere Slate Co. In 1877 it produced 182.5 tons of dressed slate with ten men; in 1878 229 tons with 10 men but in 1879, only 63.5 tons with six men. The 1878 figures show a higher production rate than most other quarries at that time. Field died in 1881 and his executors tried to let the quarries but without success. In 1882 they appointed a Mr Standing who also managed Elterwater and Crossgates and Scott Copy in Langdale.

In the early 1900's the workings were taken over by James Stephenson and Co. who had offices in Stramongate, Kendal, and who placed an advertisement in the 'Westmorland Gazette' on 7th January 1905. In 1906 they became part of the Tilberthwaite Green Slate Co...- manager and later director J.J.Thomas of Kendal. Further details of Mr Thomas appear under Tilberthwaite. At some time in the past a 'silt trap' had been built across the River Kent between Steel Rigg and Jumb Quarries.This was a sort of 'loose' dam to prevent silt and rubbish from flowing down the river. In 1908 there were disputes between the local farmers and the quarry company with regard to responsibility for cleaning out this 'trap'. The 'trap' is still there today but is completely blocked and the water flows right over the top and down a waterfall at the far side. Between 1910 and 1913 there were further disputes between J.J.Thomas and William Little of Hartrigg Farm over the quarry road which passed over his land. The dispute involved the cost of repairs to the road and Thomas eventually agreed to pay a rental of 10 shillings per annum for the right to use the road. He also undertook to repair the road, and widen it in places. The quarries continued working during the First World War and Thomas had the foresight to stockpile 600 tons of slate which were sold at advantageous prices during the housing boom after the war had finished.

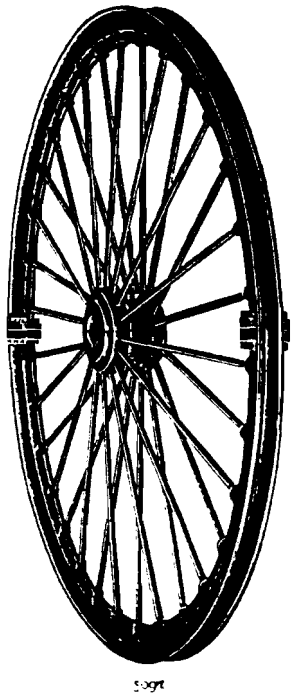
In 1913 Thomas appointed Hugh Williams, a Welshman, to manage the quarries and also introduced compressed air. This involved building a pipeline on stone piers across the river and once again there were complaints from the local farmers. In 1919 the company was still paying rent to the Rigmaden Estate at #13.16s per annum. Between the wars the quarries usually employed 10 men and there was still a ready market for slate in Scotland. Mr Wilkinson, a farmer of Goose Howe, had the contract for carrying the slate to Staveley Station. The horse-drawn wagons travelled in pairs as two horses were needed to pull the wagons up the steeper hills. When lorry transport was introduced, the slate was taken instead to Burneside Station because it had a bigger weigh-bridge. In 1939 both Jumb and Steelrigg - top and bottom levels - were being worked and the company was taken over by the

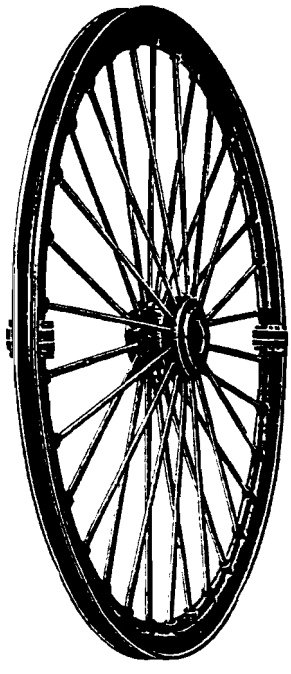
Westmorland Green Slate Company of Keswick. They advertised silver grey and deep olive slate from Kentmere. With the advent of war and the younger workers being called up (and the older ones near retirement age) the quarries were closed.

However, in 1947, William Williams, Hugh's son, re-opened the quarries under another Kentmere Green Slate Co. with himself and two members of his family as directors. Their work was mainly at Steelrigg but a serious roof-fall during the war had made the bottom level difficult to work so activities were restricted to outside. There was another fall in 1951 which made things even worse. Officially the quarries were closed in 1953. This was partly because of the age of the staff and also because Williams couldn't afford the equipment or wouldn't accept change, and boring was still being done by hand! It is said that Williams and an elderly colleague worked intermittently until 1956.

Up until the mid 1960's another old man (or was it still Williams?) used to work the unworkable bottom level of Steelrigg. He did this until he died. Also in the 60s the author remembers there being younger men there clearing out some stone huts. There was a very small hut between Steelrigg and the ford crammed full of old leather-bound books, ledgers and documents. They were probably all thrown out, and although quite young at the time, I always regret never having salvaged them.

In 1967 a company decided to make use of some of Kentmere Head's extensive spoil-heaps. To this end they improved the un-mettled road from Hartrigg to the valley head. Almost all the gates were replaced with cattle-grids, other gates were locked and notices declared the road to be private. The spoil was to be used for road metal / infill and some was taken in large wagons for the improvements at Ings. Needless to say there were some protests from the locals and others about the noise, dust and general inconvenience of large trucks on narrow valley roads. It transpired that the company had not obtained planning permission anyway, so the whole operation ceased in 1968. A large Smith's excavator was left there until the early 1970's. The cattle-grids have gradually filled in but the road itself is still in reasonable condition for use by the farmers and for access to the cottage, the barracks and the reservoir itself.





A Tail Of Two Addits.

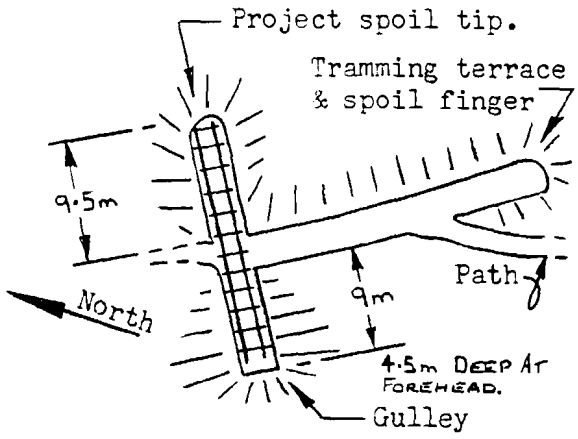
A. Thomas

The Furness diggers have long been aware of the potential of access to the ginnels of Belle Hill afforded by the B36 level system. This is the story so far of our two attempts on this brutal and unyielding mine.

1. Magpie Dig. (Note; this entrance has no official name on the mine plans, and is referred to as Magpie on account of the remains of a Magpie bird found nearby.)

We picked up on this dig site first because the original mine plan intimated that bedrock was closest to surface here. Having no real field clues to go on, the site of the addit was located by survey from Belle Hill cottages, with double and triple checks by means of cross bearings from nearby shaft hollows. This survey landed us roughly at one end of a tramming terrace which finishes at the other end as a small spoil finger.

Fig. 1.
Magpie project site.



A prospect gulley was started in December '88, and shortly thereafter we constructed and installed there our 2ft gauge (heavy) railway and bogie.

By July '89, the gulley had become too big and deep for efficient progress, and with no bedrock yet in sight we attempted to start tunnelling. Fig. 3 shows the method we adopted, whereby a spiling tool (see Fig. 2) was hammered into the bank to form a pilot hole and clear a way for the spiles. The spiles were then driven into these holes after the spiling tool had been withdrawn with the aid of the slide hammer. After the installation of an array of spiles, and the first doorframe, excavation could proceed.

This method had worked quite well when we opened the Horse level where the material was relatively loose from caving ground. Here though, the ground was well compacted, and all this heavy sledgehammering of spiling tool and spiles was hideously exhausting. By the time we had got a full set of spiles in place, and the first doorframe up (see phase 2 of Fig. 3), our enthusiasm was waning as Autumn turned into yet another slushy winter.

This site now stands idle, awaiting a fresh injection of enthusiasm.

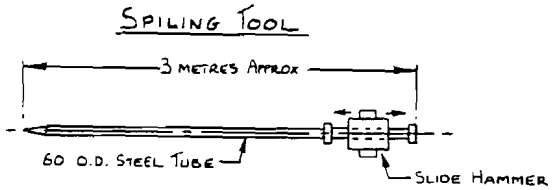
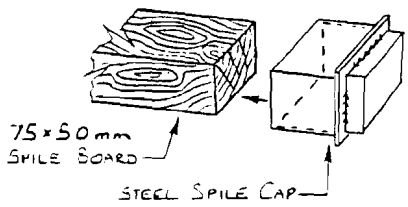


Fig. 2.



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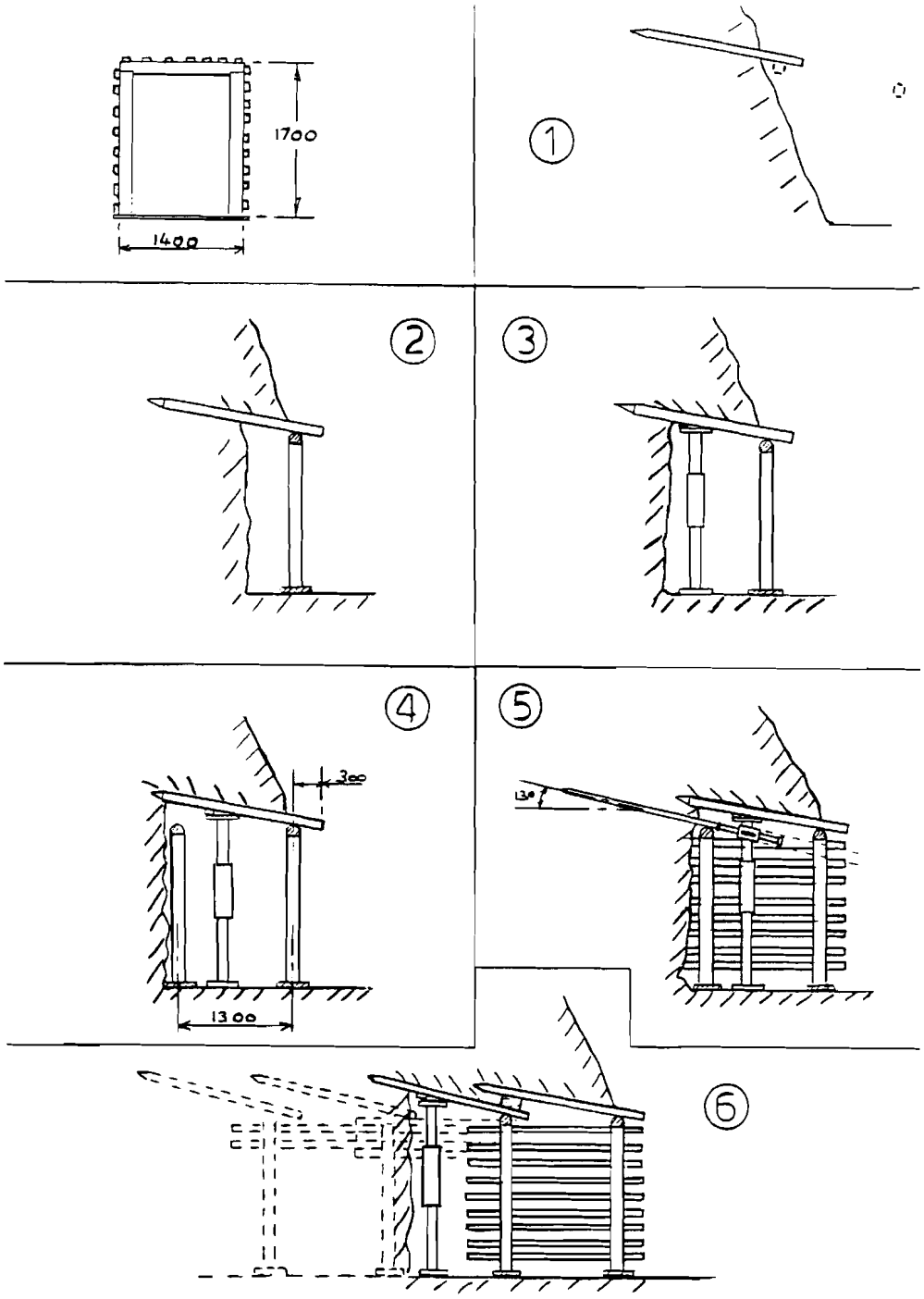
(two addits contd...)

Fig. 3.
Magpie tunnelling method.



2. B36 (Day) Level dig.

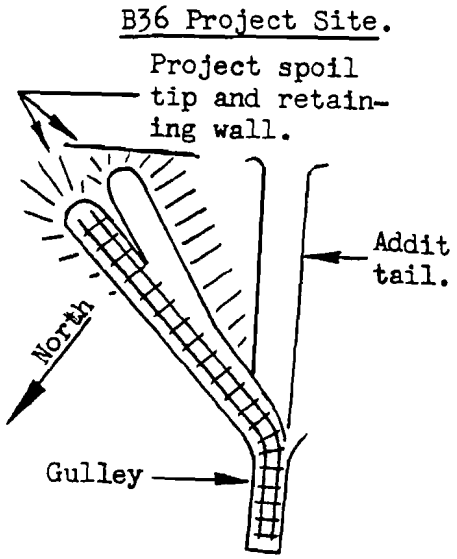
In 1990, we again picked up the gauntlet, and transferred our rail stock to the B36 level project site. The original addit tail still existed as a pointer so no survey location was needed, and again we started off with a gulley. In May '91, the gulley was getting too big, and a tunnel was started. With the lessons learnt from Magpie, and the impossibility of driving spiles into the rocky overburden, the method shown in Fig. 4 was used. This has proven to be a very workable system with forehead advances of up to 450mm recorded on some meets.

This project -our most humane dig to date - was attended with an unprecedented level of domestication, team welfare and comfort being the watchword. At the portal we erected a sheet iron roof structure,

(contd...)

affording shelter to the bogie handlers. Immediately adjacent was a dustbin brazier to ward off the winter chill, and bench seats and water butts for washing off in complemented the sumptuous accommodation. Affixed to the tunnel portal, and delivering cool fresh air to the descending drive via plastic guttering pipes, was a pedal cranked air fan, contrived from the rear portion of a kiddies bicycle.

Spoil was initially withdrawn from the tunnel by means of a plastic drag boat. At the portal, the spoil was transferred to our 2ft gauge mainline bogie and trundled off to a tipping site alongside but clear of the original addit tail. As the tunnel progressed, we found that we were needing more and more people located at various points along the passage just in order to get the drag boat back to the forehead after each emptying. This prompted the construction of our light railway (see fig. 5), the installation of which immediately speeded up the whole process and made the job easier all round. The tunnel inclined downwards going in, and this allowed the bogie to self return to the digging front, and when full, was hauled by rope from a position at the portal. The rail track is made of tannalised slate battens which cost about a quid for a 3m length. This means that a ten foot track section works out at about £3. The bogie, though very light and portable, has demonstrated its durability as we would often sit and ride inbye on it.



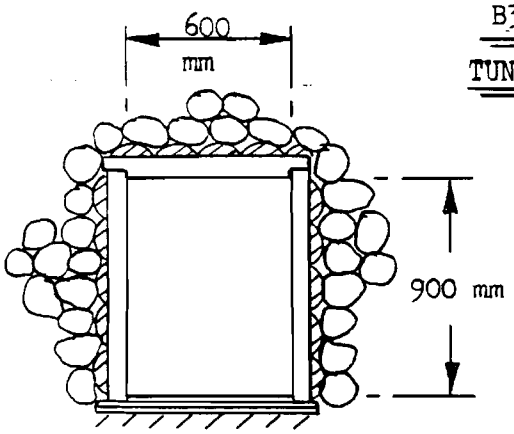
The spiling method used here was a departure from the norm in that usually the driving of the spile should preceed the excavation. Here, the rocky nature of the ground made this impossible. Instead, the ground immediately ahead of each spile is excavated away for a few inches, into which the boards are driven forward before proceeding again. Door frames are erected every 300 to 450mm, and after each spile set is complete, the door frames are nailed through to the spile board cladding to key the structure together before starting off the next spile flight inside the last doorframe. Note that our tunnel is an incline, which allowed us to drive the overhead spiles horizontally without loosing passage height. A horizontal tunnel would need to be driven with the top spiles inclined upwards to account for the thickness of the next spile set and door frames.

On 30/10/92, the tunnel finally yielded to the bedrock opening of the original mine tunnel. Having now tunnelled and timbered for 11.8 metres (39 feet), we felt that the Gods would be sure to reward us well for our toil .... a kilometer of passage perhaps, with say an underground water wheel or a bogie train chucked in for goodwill. But no. Exploring euphorically forward, we were astonished to find our progress blocked at a point only 13m beyond our tunnel end. The bedrock here is hideously fractured overhead, and the blockage consists of some van sized blocks which have dropped from the roof. Doubtless we shall return if we can work out a way of dealing with this inconvenience.

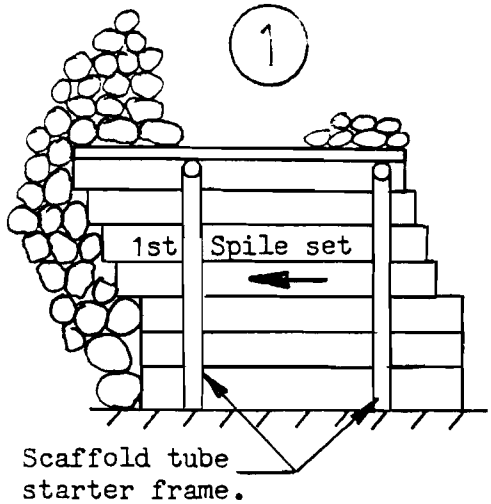
Looking back in my notes I see that the Magpie project accounted for 60 workmeets. Driving the B36 tunnel took 45 meets, and I would guess at maybe 30 meets prior to that for digging the gulley. Four years so far, but we'll get there in the end.

Fig. 4

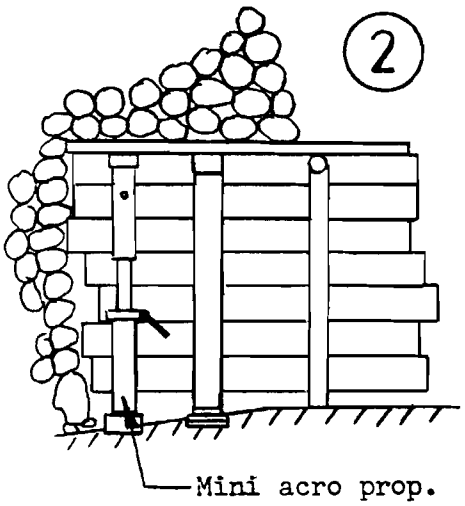
B36 LEVEL ACCESS TUNNEL CONSTRUCTION METHOD

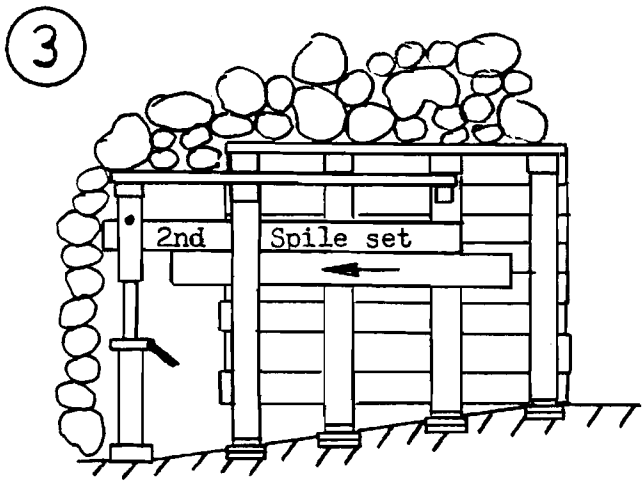


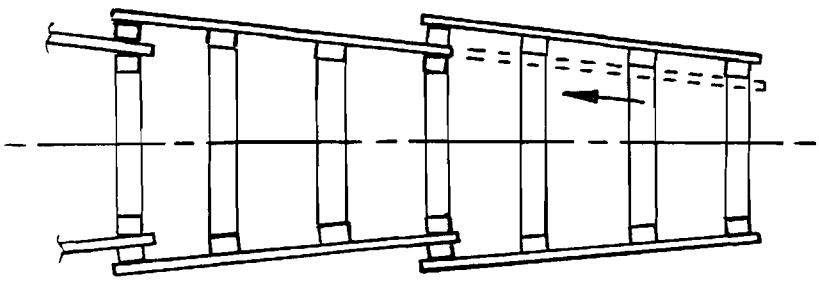
Typical Cross Section



Scaffold tube starter frame.

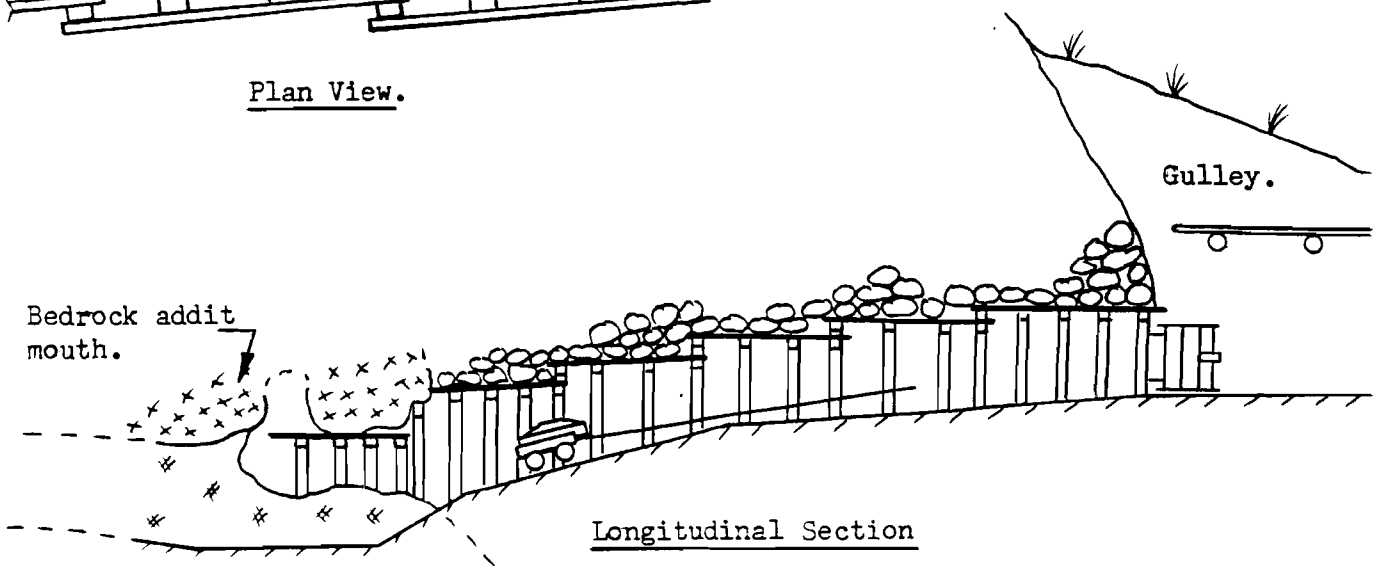




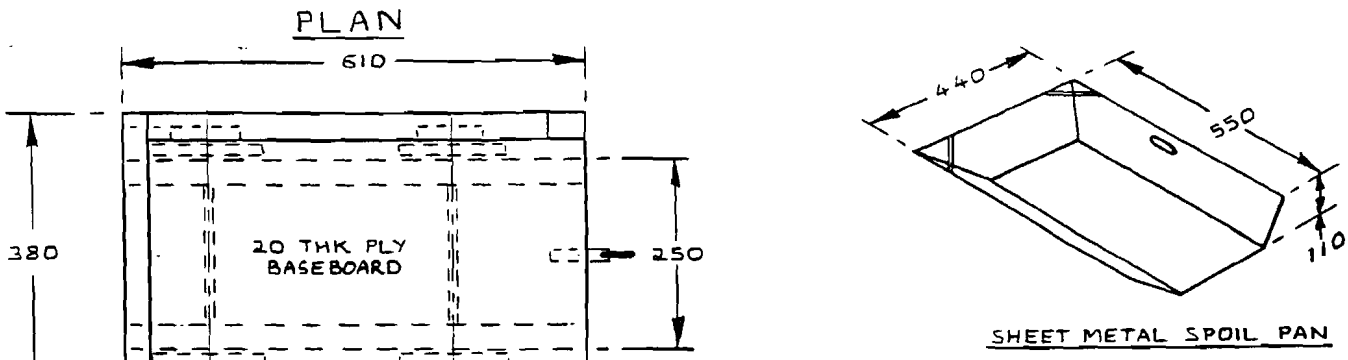


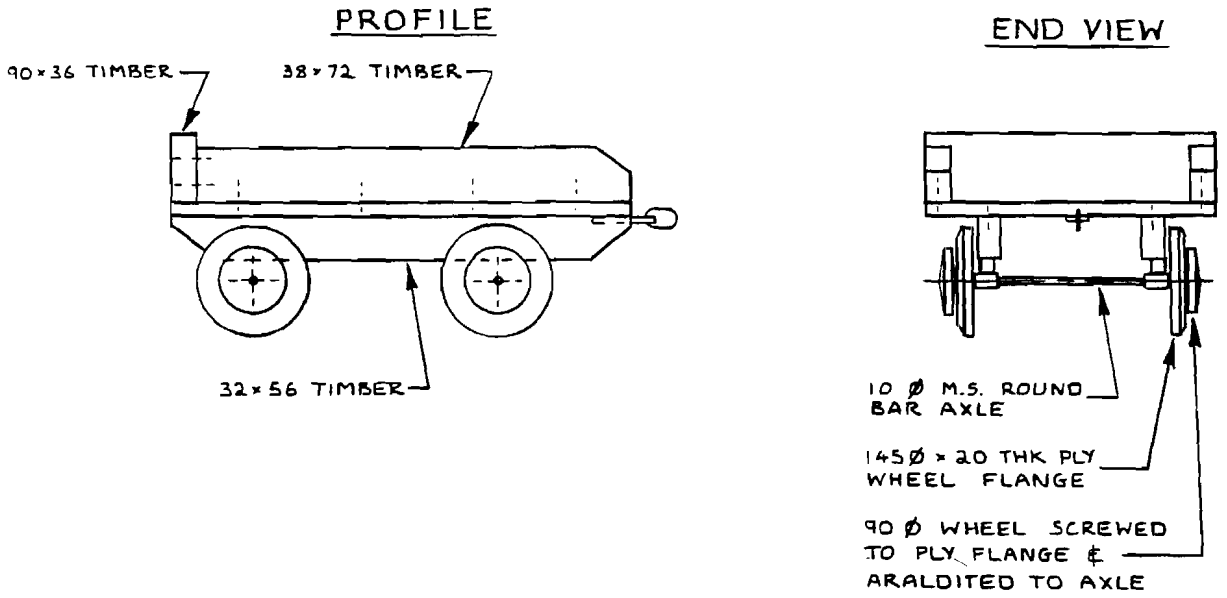
Plan View.

MATERIALS	
Door Frames ;	80mm x 80mm Timber
Spile Boards;	Log Slivers 2.1M (7') long.



Longitudinal Section





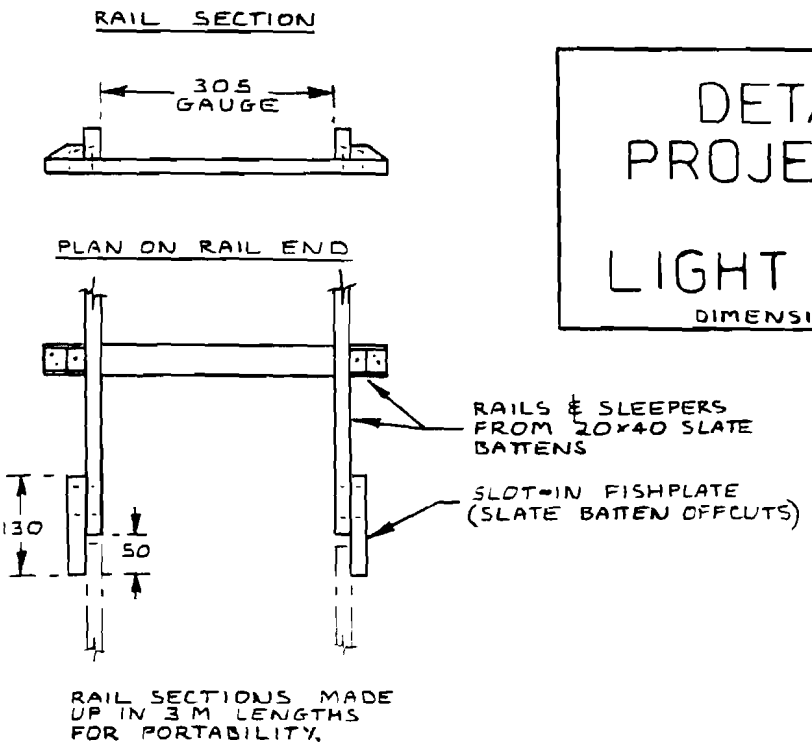
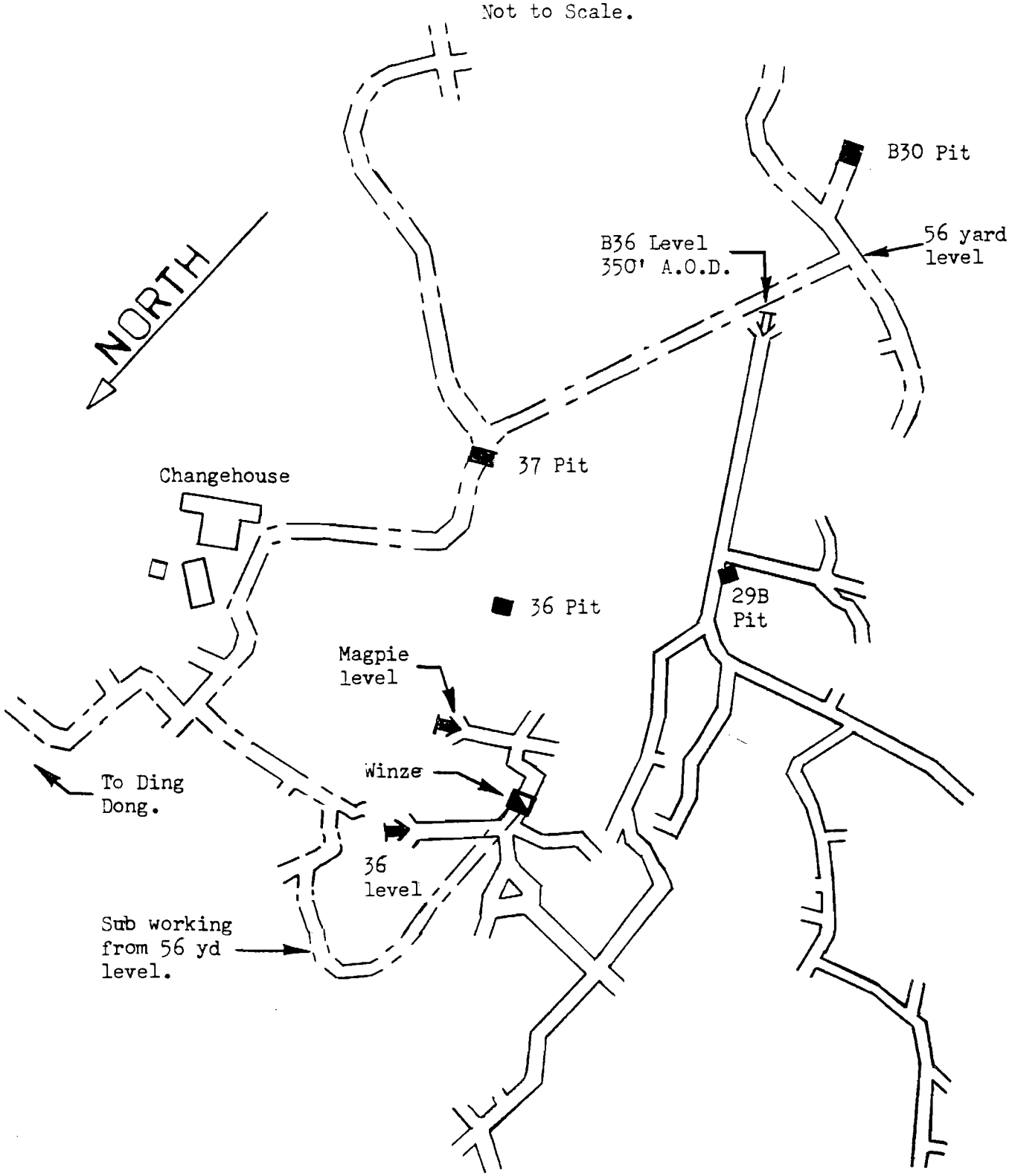


Fig. 5.

DETAILS OF PROJECT BOGIE & LIGHT RAILWAY

DIMENSIONS IN mm U.O.S.

Sketch Showing Simplified Arrangement of Both B36 Level
And 56 Yard Level Workings.
Not to Scale.



This sketch is a "loose" depiction of the large scale mine plan No Mp24 which resides in the Barrow Archives. The inner reaches of B36 level, in the area West of Magpie, is here very, very much simplified, but on the original looks like a plan view on a bowl of spaghetti, with passages all over the place and on different horizons.

B30 SHAFT : A PROJECT PROGNOSIS.

A.Thomas

Henning Valley, with its plethora of levels and mining remains, must surely rate as one of the main focal points of Furness mining history, with the B30 ..... one of the main producing shafts in the area .... as the centrepiece. The F.M.A. have recently devoted considerable energies to the scrub clearance of the B30 mineral sidings that we may better appreciate and understand this monument, and this has inevitably led to an increased awareness of its archeological value ..... and concern as to its future. Having given the matter some thought, we believe that the fate of both the shaft and the shaft head/siding complex are inexorably linked.

We know from original mine plan sections that the shaft is approx 60 feet deep at the point where it enters bedrock. Were this upper portion of the shaft ever to collapse, it would create a massive surface crater which would consume and destroy most of these surface remains ..... the sidings, the shaft head pit walls, and the engine house. Currently there is no evidence of subsidence, and we may conclude that either the shaft is filled to collar, or that the timber lining remains substantially intact. It has been asserted that the shaft head was closed over with rails and sleepers, and given that this state of affairs is probable, the question is should we be preparing ourselves to act in order to spare the B30 complex from sinking eventually into oblivion.

This is not the time to go into fine details but if we were to act, it would probably require a Ding Dong type solution, only perhaps more involved and more expensive. It should be a relatively easy matter for us to excavate the shaft head and establish whether the shaft is open or not, even to measure depth to water and lower a shaft camera maybe, but once the shaft has been opened to atmosphere, it will literally be a race against decay if we are to do anything other than turn our backs on it and leave it to its fate.

Everyone who has seen the B30 complex since brush clearing has extolled its splendour and significance. If ever a Haematite Trail leaflet was to be written for the area, the shaft and sidings, along with that superb 1907 photo of how it used to be, would probably constitute one of its major highlights. It would be a shame indeed to have to read "... that in this crater once lay the B30 mineral complex."

B30 Shaft Details.

B30 shaft is at least 101 yards deep, having levels off at 20,56,66.

(contd....)

(B30 contd...)

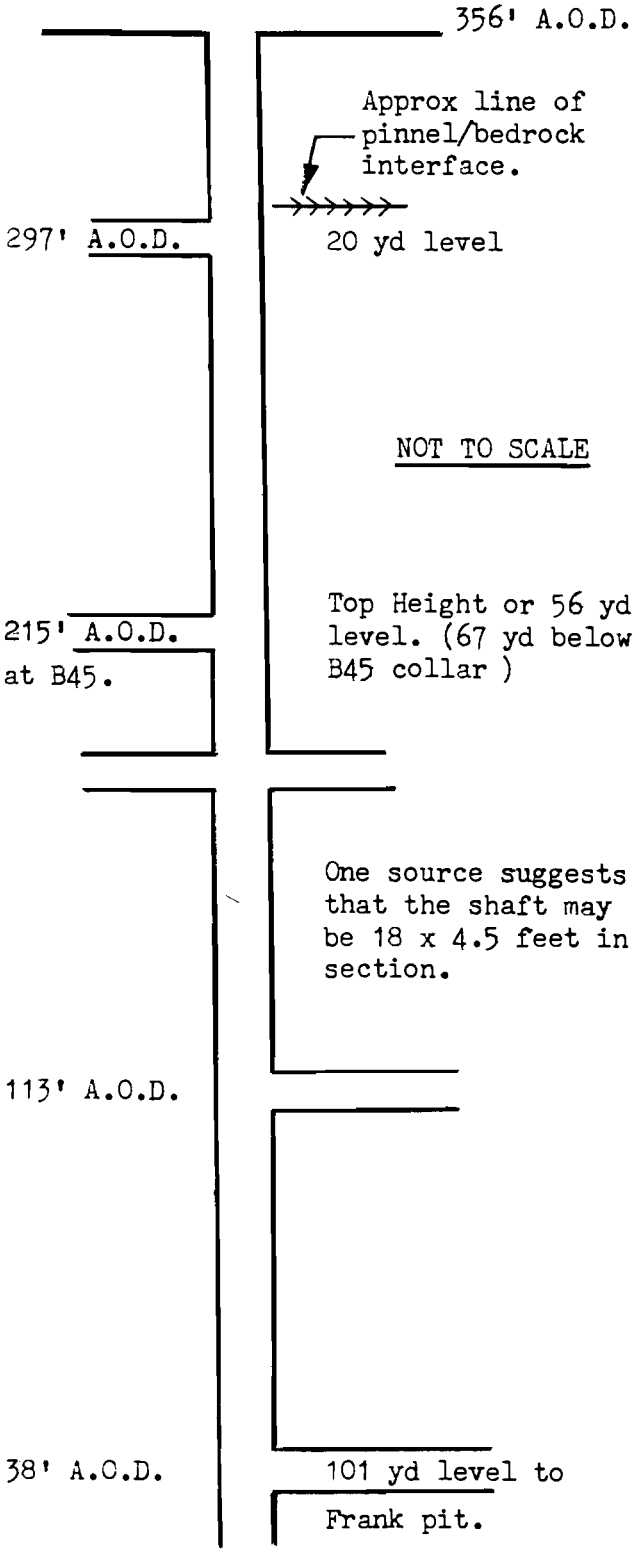
76 and 101 yards below collar (see section). The 20 yard level was a drainage level which once emerged where the vast B30 spoil tips are now. The 56 yd level (or top height) is the level which runs to Ding Dong and beyond, and was the main tramming road for several of the pits upstream of B30, including the Derby trespass. The mining engineer, John Rigg, in a report published in "The Iron Moor" (p128) states his view that if the B30 pumps were stopped, he doubted if the water would ever rise to the 76 yard level. We know that the 56 yd (67 yd in Ding Dong) is only partially accessible in drought, but we don't know if this is caused by local ponding due to a collapse or shaft fill between Ding Dong and B30. It would be ace if both the 56 and 76 yd levels were still accessible from B30.

In any event, the thing needs some forethought, and interested members are invited to consider the matter .... we want to hear some opinions. If the job were to go ahead it would require a lot of preparation, and maybe a bit of dosh throwing at it.

Members will be advised of any developements on this issue.

Section Through B30 Shaft.

(based on info from mine plan dated 1878)



Note, B45 (Ding Dong) collar is at 416' A.O.D. The yards below surface do not tally very closely with the A.O.D. heights lifted from mine sections. A 56 yd level is clearly stated on plans, is this at odds or additional to the 50 yd level mentioned in " The Iron Moor ".

MINED READER

Members may wish to participate in this amazing experiment, whereby the team parapsychologist Dr Anton Chenylle - Proctor - Mesmer will astound you by a convincing demonstration of mind reading through medium of C.A.T. newsletter. Please pick up a pencil and give it a go, it'll be a bit of fun, and its close enough to April 1st to be a little silly. So ;

(1) Think of a number between 1 and 10.

(2) Multiply that number by 9.

(3) You now have a two digit number, O.K. , so add these two numbers and then take away 3. What number does this leave you with ?

(4) If A = 1, B = 2, C = 3 etc through the alphabet, pick the letter that corresponds with your number.

(5) Now think of a Cumbrian mine site, the name of which begins with that letter.

(6) Now think of a common metal, the ore of which has been mined in Cumbria, which begins with 4th letter of that mine site name.

(7) Think of a mammal beginning with the 5th letter of that metal name.

(8) Finally, what colour are these mammals.

Please keep your findings from this exercise uppermost in your head whilst I now focus my attention to the thought waves now streaking through the ether .....

..... yes ..... no ..... yes, its garbled ...and nonsense .... but I think I've got it, complete rubbish though because of course, there is no syndicate of grey elephants currently mining copper ore at force crag mine, still, I didn't make it up, you did, impressed huh !

So then, has this newsletter mystic supernatural powers. Does some of this mystic prowess rub off onto he who promptly stumps up his 1993 subscriptions. Or is it your correspondent, is it he who commands these mystic forces, is he telepathetic ..... or just plain pathetic ? Perhaps the next newsletter will reveal all.

DUSTING ALONG THE BOOKSHELF.....

SNIPPETS FROM THE CAT ARCHIVES. By SHEILA C-P-THOMAS.

STEAM ENGINES AND WATERWHEELS by Woodall. MG 47

The Cornish Beam Engine, invented by Thomas Newcomen and developed by James Watt, was the ultimate economic steam pumping engine used in deep mines.

Cornwall was amongst the last strongholds of these engines and this book shows photographs previously unpublished. Included is a superb picture of Kathleen Pitt at Kennedy Brothers' group of mines near Askam in Furness, C 1936, and the 1899 Harvey Engine at Hodbarrow mine in Millom.

There is also an excellent photograph of the Dorothea Slate Quarry, near Caernarvon, in 1951 with the 68" Cornish engine still working.

Examples of waterwheels and much simpler and earlier machines are also included. In fact the whole book is packed with photographs and drawings which will not fail to fascinate. The text is historically informative and it makes an excellent book to read or just to browse through.

THE FACIT & BRITTANIA STONE MINES

Jon Knowles

In late November two CAT members plus friend visited the above mines which are situated at Shawforth which lies on the A671 between Rochdale and Bacup in Lancashire. These extremely extensive workings mined the local Haslingden flags to produce building materials in the form of flags, setts, kerbs and window sills.

The workings, which appear to have been on only one level, were by conventional pillar and stall means although how the rock was extracted is unclear since there was no evidence of sawing, as at the similar Bath Stone Mines, or drilling for blasting.

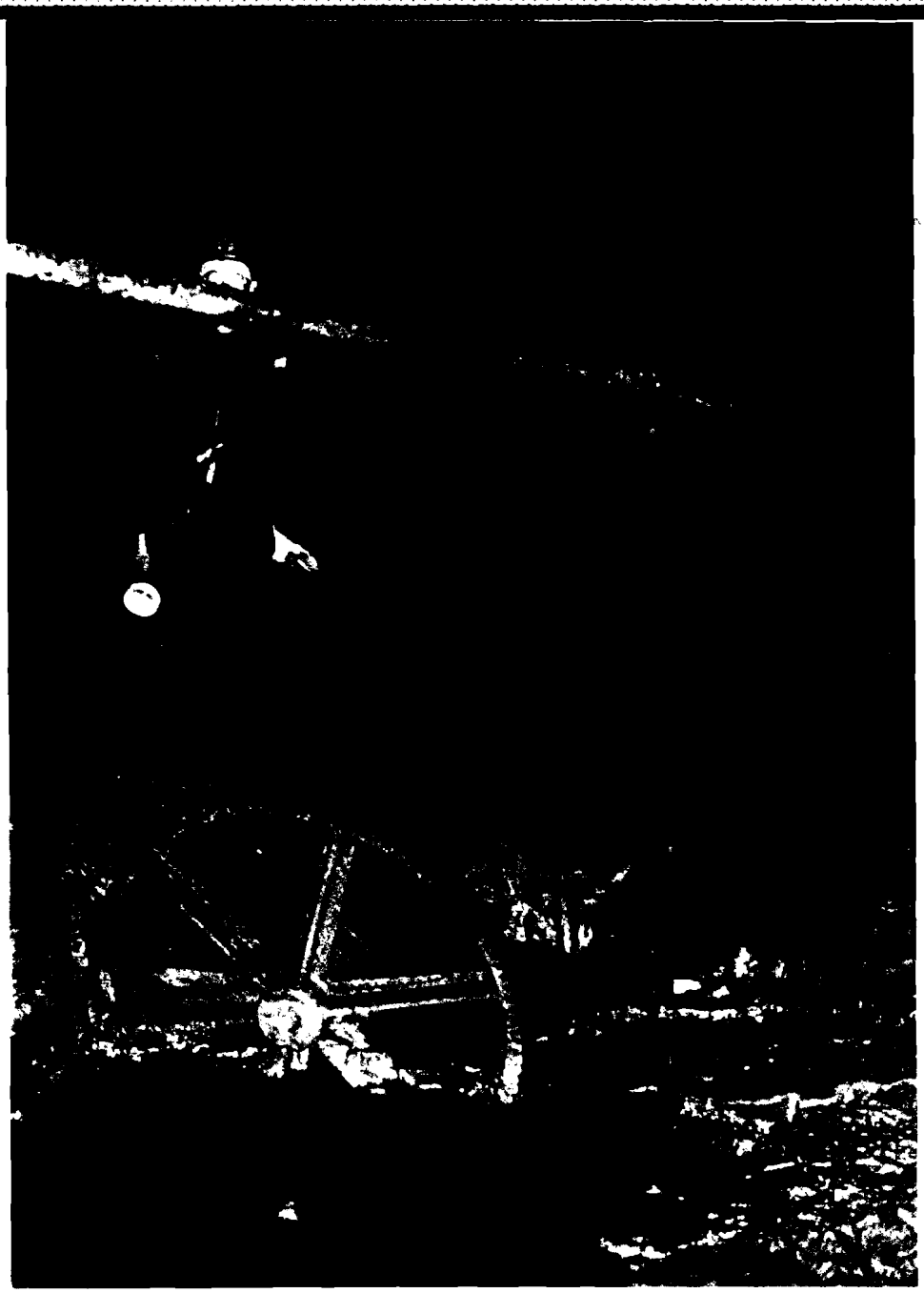
Knowing little about the mines we were lucky to stumble upon an entrance in the back of an abandoned quarry reasonably quickly, although first impressions were that this would not take us far !. How the mighty have fallen !, 3½ hours later we returned to day uncertain of exactly where we were or how we had got there, but I digress. On entering the mine it was immediately apparent that it would only be possible to see a fraction of the available workings in the time available so we decided to follow a piece of string that somebody had conveniently left in place. A number of balls of string later the string stopped but was replaced by yellow arrows painted on the walls. However, we were following these in the reverse direction to which they were pointing which made route finding somewhat tedious especially as the route had, in places, completely disappeared under large roof falls. When we eventually exited we found that the starting point for the through trip consisted of nothing more than a small hole in the side of an earth bank which would be almost impossible to find without a guide. It is hard to convey the enormity of the workings, even by Welsh Slate standards they are big, but during the time we were in the mines (they connect underground) we must have walked in excess of two miles and workings went of to left and right all along the route.

Very few remnants of machinery or items of interest were found with the exception of one partially toppled wooden crane (see photograph) and beside it a pile of flags awaiting transport to the surface. In addition the remnants of a primitive water collection system were observed, which appeared to consist of barrels placed under drips from the roof. The barrels being piped to a central tank.

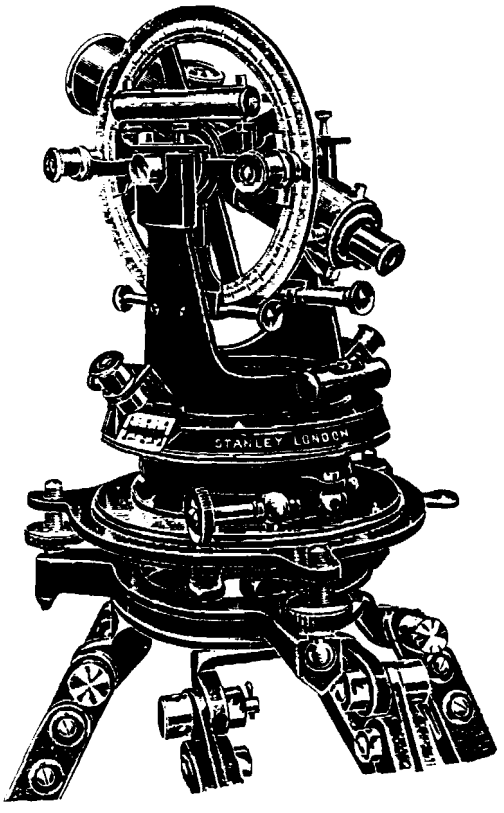
Further general details on the uses of the stone and a surface walk are contained in a booklet titled "The Changing Faces of Rossendale" published by The Rossendale Countryside and Tourism Interpretive Project (ISBN 0 947738 13 4). If your thinking of going don't wait too long as the whole area appears to be threatened by Landfill. The best way in is via the entrance in the bottom of a quarry at SD887202 but give me a ring on 0274 871012 and I can advise.

Crane found in the Facit and Brittania Stone Mine

See Text on page 47



STANLEY'S MINING THEODOLITE.



This Theodolite is a most useful form for all underground work. It is built very low and the telescope transits. The vertical axis is made hollow, so that any angle to about 10° may be read directly below the vertical. This will be found very useful in transferring lines underground from the surface, by sighting down a shaft, and also for plumbing. The hollow centre is supported upon a sliding fitting, so that it may be displaced 1¼ inches about the centre of the tripod and clamped to its position.

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Glynceirog Slate Mines -- Llangollen

****

1 **Martins Pit** - served by and incline at **1A** to transport spoil only ` ` incline probably water powered. This pit was one of the earliest quarries in the area. exit adit at bottom of pit to the south east and adit to later underground chambers to the north-west.these were also served by an inclined shaft to the north west of this pit.
2) **Magazine**

3) **Townshends Pit** - served by an incline similar to Martins Pit From a chamber to the north of this pit which opens into the pit is the head of an incline which served two deep levels of underground workings.which are now flooded.
4) **Dennis` Pit** - developed in the mid 1870`s along with Townends pit which took advantage of the long drainage adit running west to east to aid dewatering. Both of these pits were started by blasting a shaft down to the drainage adit before normal quarrying was commenced.
5) **Pit with No Name**- not connected with drainage adit but worked as a `normal ` pit with adits draining it from the south.Both this and Dennis`s pit have water at their bottom.
6) **Drum House** above old incline to mill at 10

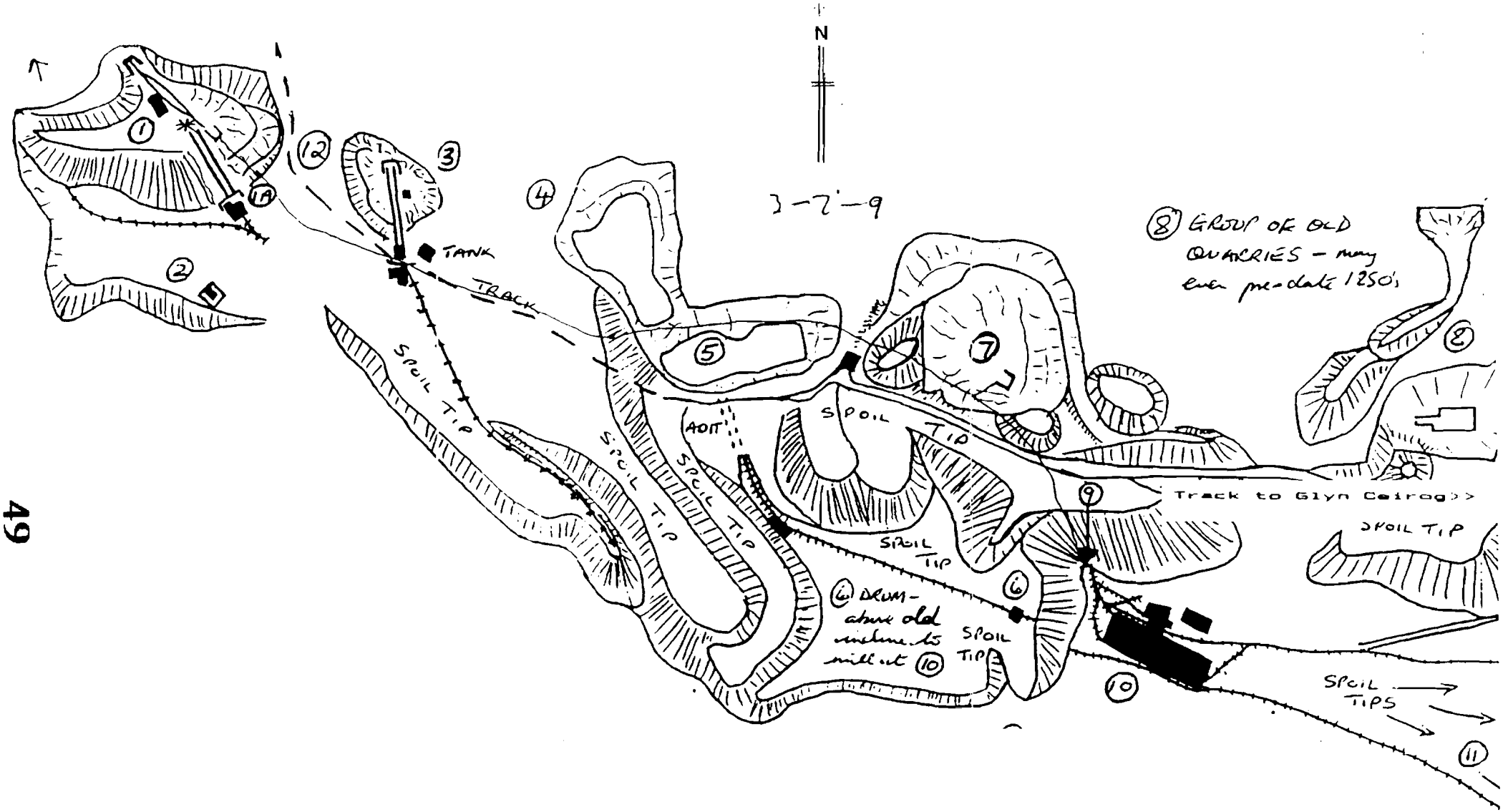
7) **McEwens Pit** - Originally one of the earliest quarries of the Cambrian Slate Quarries -Linled to the drainage adit but probably abandoned by 1880`s.
8) **Group of Old Quarries** -may pre date 1850`s

9) **Drainage Adit Entrance.**

10) **Slate Mill**-built in 1887/8 and water powered originally. served by drainage adit and incline from 6
11) **Exit Tramway**-to top of long incline which connected with the valley tramway at Gly Ceiriog.
12) **Waterwheel** - site of old waterwheel which pumped out Martins Pit until the drainage adit was completed.

To be read with plan of the quarries on facing page.

These quarries where visited by Mark Simpson and Sheila Barker. on Monday 29th of June 1992 as part of the NAMHO Field Meet of that year ,which was hosted by Shropshire Caving & Mining Club.



CAMBRIAN SLATE QUARRIES MAP

Based on 1912 1/2500 O.S.Map.

Map and notes :- Richard Williams.

SKOL-UHEL AR VRO
INSTITUT CULTUREL
DE BRETAGNE

Hon dave/N.Réf. BLN/YC/76
Ho tave / V.Réf.
Fax : 99 38 50 32

Rennes, le 13 janvier 1993

Mr Mark W.T. SIMPSON
Cumbria Amenity Trust
Station Gates
Bank Top
INGLETON
Carnforth LA 6 3HG

Cher Monsieur,

Votre lettre en date du 4 janvier nous est bien parvenue le 11 janvier dernier et j'en ai pris connaissance personnellement avec beaucoup d'intérêt.

L'archéologie industrielle est beaucoup moins avancée en Bretagne (et en France en général) qu'en Grande-Bretagne et il n'existe actuellement aucune mine métallifère ni aucune ancienne exploitation ardoisière ouverte à la visite. Les anciennes mines de plomb argentifère de Huelgoat et de Pont-Péan, les anciennes mines de charbon du Pays Nantais et diverses petites mines de fer sont abandonnées, certaines seulement depuis quelques dizaines d'années, et leurs galeries noyées. La mine de fer de Rougé, exploitée par la Société Minière et Industrielle de Rougé (La Minière 44660 ROUGE, Tél. : 40 28 85 16) est toujours en activité. Les mines d'étain de Saint-Renan et Abbaretz sont, à ma connaissance, encore en état de marche de même que les mines d'uranium de Gorges (L'Ecarpière) dont l'exploitation ne s'est arrêtée que très récemment.

Avec une autorisation demandée longtemps à l'avance, il vous serait possible sans doute de visiter les carrières de kaolin de Ploemeur près de Lorient ou de Berrien.

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  Tél. : 98 99 01 26
  Fax : 98 99 04 20

La dernière exploitation ardoisière importante de Bretagne en activité est celle de Moulin-Lande, à Maël-Carhaix, dont l'exploitation est en grande partie souterraine, et il est envisagé de la transformer prochainement en site touristique. Vous pourriez sans doute obtenir l'autorisation de la visiter en prenant contact avec son directeur longtemps en avance :

- **Société d'exploitation des Ardoisières de Maël-Carhaix**
  Moulin de la Lande
  22340 MAEL-CARHAIX
  Tél. : 96 24 62 42
  Fax : 96 24 64 16

Non loin de la Bretagne, dans la région d'Angers, où il existe aussi de grandes exploitations ardoisières, l'une d'entre elles est déjà transformée en site touristique (comme c'est le cas dans plusieurs sites ardoisiers du Pays de Galles) mais je ne dispose malheureusement pas d'informations à son sujet.

Par courrier séparé, je vous adresse ci-joint un petit "guide de la Bretagne naturelle, rurale, maritime, industrielle et scientifique" qui est paru en 1990 et qui vous intéressera peut-être. Je reste à votre disposition pour vous donner toutes les autres informations que vous pourriez souhaiter.

Je vous prie de croire, cher Monsieur, à l'assurance de mes sentiments distingués.

Le Directeur,

Bernard LE NAIL

Editors Note:- *If any one is interested in going to Brittany to see some mining I.A. there. please let me know. In the meantime I intend to carry out further correspondence.*

The letter gives the names and addresses of several china clay works and slate quarries.

The magazine cover I leave for you to decipher.

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