# CUMBRIA AMENITY TRUST



# NOVEMBER 91 MINING HISTORY SOCIETY

THE MOST EFFICIENT ORE STAMPING MACHINE EVER MADE.

ever twenty times the amount of Ore crushed by a single A single head of the large size Stamper crusiling



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As Editor of this newsletter for the last few years, I would like to thank all those people who have contributed. Thanks also to Margaret and Peter Fleming for their time and patience when it came to printing the newsletter. ANNE DANSON

#### HONORARY PRESIDENT

THE SOCIETY WOULD LIKE TO WELCOME LORD EGREMONT AS HONORARY PRESIDENT

NEW MEMBERS

A warm welcome to new members: Pat Gunson from Dent Mr. R. Ramsden from Cockermouth Trevor and Cecilia Tucker from Dalton Mr. & Mrs. J. Kenrick from Barrow.

#### LANCASTER UNIVERSITY CENTRE FOR NORTH-WEST REGIONAL STUDIES FYLDE COLLEGE

MEETINGS

#### Saturday 1 February 1992

# TRANSPORT HISTORY IN THE NORTH WEST IN THE LATE 18TH AND EARLY 19TH CENTURIES

Chairman: Dr J D Marshall

Dr Paul Hindle (University of Salford) Turnpikes and Tourists in late 18th century Cumbria Mr Gordon Biddle Canals in the North West

Professor Roger Fawthrop Railways in North Lancashire & Furness: The Little North Western Railway

Dr John Marshall The General Social & Economic Effect of the Coming of the Railways in the Region

Venue: Fylde Senior Common Room ('B' Floor - Room B18) Map available on request

Parking: Freely available on 3rd Avenue South East or the perimeter road

Fee: £8.00 (£7.00 for Friends of the Centre) RESERVATIONS NEEDED. (Fee includes coffee/tea & biscuits) CHEQUES TO UNIVERSITY OF LANCASTER.

### SUMMER SCHOOL IN WALES

A Summer School on the Geology of South Wales is being organised from 6th to 13th July 1091 by the Department of Extra-Mura! Studies, University of Wales, College of Cardiff, 38 Park Place, Cardiff CF1 3BB (telephone Cardiff 874832) from whom further details can be obtained.

### CONSERVING BRITAIN'S MINERALOGICAL HERITAGE

First announcement of Special Meeting, University of Manchester, early April 1992.

Sites of mineralogical interest, be they outcrops, underground workings or surface spoil heaps, are an important element in the landscape of Britain. They attract a wide range of interest from a diversity of users including mineralogists, archaeologists, historians, botanists, mineral collectors, mining companies, planners, tourist entrepreneurs and the general public.

This Special Meeting is being held under the auspices of the Geological Society Conservation Committee, the Mineralogical Society and the Joint Nature Conservancy Committee, in recognition of the need to conserve mineralogical sites as features of considerable national, regional or local importance as a resource for future research, study and recreational collecting.

The meeting aims to bring together all individuals and organisations who use, own or manage mineralogical sites to share their particular interests and concerns, and examine ways of working together. Such sites are a fragile, and sometimes poorly-valued element of our landscape and are coming under increasing threat from a number of directions. They can only be conserved for future generations if the diverse user groups co-operate with planners in developing integrated land-use strategies.

The 2-day meeting, which will address both mineralogical and land-use topics, will consist of lectures with discussion and poster sessions. There will be an optional half day excursion to Alderley Edge and a one day excursion to Coniston.

Attendance and contributions from all user groups are now invited. For further information please contact Dr Des O'Halloran, Joint Nature Conservancy Committee, c/o Northminster House, Peterborough PE1 1UA (0733 340345).

#### Mandalls Slate Office

Work has now finished for the winter, but will continue next spring. Hopefully more enthusiasm will be generated as it appeared only one group did all the work. Mandalls Slate Office was originally obtained to provide a venue for a photographic exhibition, display area for artifacts and a COMRU base.

#### NEWLANDS FURNACE

Work continues or the last Sat of each month: Contact John 1me Tel: 0229 54895 John's latest report follows:

#### NEWLANDS FURNACE - PROGRESS REPORT - NOVEMBER 1991

During the last two years members of CATMHS have worked, at about monthly intervals, on the remains of the iron smelting furnace at Newlands near Ulverston.

During the time, working in conjunction with Cumbria Industrial History Society and under the direction of Dr. J. Marshall much has been achieved.

- a. A gated access has been provided which does not interfere with the local residents.
- b. Most of the ivy and vegetation covering the furnace has been removed followed by weed killer treatment.
- c. The rubble and rubbish of many years has been removed from the furnace and blowing chamber.
- d. Further masonry collapse has been prevented by erecting both scaffolding and acro props at suitable points.
- e. Access for persons has been protected by the building of an overhead planked scaffolding to prevent injury by any chance stone fall.
- f. A start has been made on rebuilding some of the masonry walls in the arch between furnace and blowing chamber.
- g. With part of the £500 "Shell" Better Britain Campaign money an oak beam is being purchased from Cumbria Broadleaves Ltd of Greythwaite. It is hoped that this beam will be delivered to site and installed in the blowing chamber wall in the next few weeks.
- h. Drawings have been done, modelled on the sister furnace at Bonawe in Scotland, to indicate the positions of reinforced concrete beams, to be cast on site, and positioned across the gap between the furnace and blowing chamber.
- i. We have collected two tons of slate slabs from Burlington Quarry and we have been promised another two tons free and they are willing to provide more material, at a reduced price for the infill material, once the beams are in position.

The work continues and help at work meets is always very welcome. Normally we meet on the last Saturday of each month unless special arrangements have been made.

J. Helme

The local press have minsconstrued publicity officer, Alistair Camerons' description of the finds at Coniston. The stone artifacts found have not been positively dated, but it could prove that stone implements were used in this mining area. See Pete Flemings Meet Report 26/27th Oct. 91

# DIG FINDS MINES FROM 3,000 BC

#### ARCHAEOLOGISTS have discovered evidence of mining in Coniston area 5,000 years ago.

Members of the Cumbria Amenity Trust Mining History Society made the discovery while showing a group of archaeologists from North Wales around the remains of Coniston's copper mines. publicity officer for the mining history group, said: "We found some mining implements, hand tools in which lumps of ore were ground down, and this indicates for the first time that Bronze Age (3,000 BC) mining took place in Cumbria. The visiting ar-

Alastair Cameron, The visiting

NORTH WEST EVENING HAIL 7/11/91

chaeologists, members of the Great Orme Mining Society, are experts in their field and agree the find is evidence of prehistoric copper mining in Coniston.

The trust hope to investigate the site further soon.

## Artefacts may prove Bronze Age mining

Stone relics <u>believed to be</u> the earliest evidence of **metal** ore mining in the Lake District have been found near Coniston Copper Mines.

The two hand-held artefacts have circular depressions and <u>may have been used as early</u> anvils or ore crushers. They are thought to date back to the Bronze Age. The exact location of the

The exact location of the stone artefacts is being kept secret by the Cumbria Amenity Trust, whose members came across the stone tools with a party of ten Welsh industrial archaeologists.

Now Cumbria Amenity Trust plans to invite the archaeologists back in the spring to attempt to date the artefacts and check the area for any more discoveries. One of the trust's founder

One of the trust's founder members Mr Peter Fleming said: "At the moment, the earliest evidence suggests metal mining at Coniston from 1599, but we are sure these artefacts are from much earlier."

He added: "Cumbria Amenity Trust is convinced that if we persevere, we will find evidence of prehistoric mining." The Welsh industrial ar-

The Welsh industrial archaeologists found a hand-dug tunnel which might be of the Elizabethan period, he said.

WESTHORLAND GAZETTE

<u>RED EARTH PUBLICATIONS - NEW BOOK</u> <u>Produced by Members of Cumbria Amenity Trust</u> A photographic record of Lakeland mining will be published in Spring 1992; artitled Beneath the Lakeland Fells

entitled Beneath the Lakeland Fells

- Lakelands Mining Heritage

#### CATHINS LIBRARY & ARCHIVE

This list is correct up to March 1991 but new items are being collected all the time.

In the list references to items such as the purchase price, medium and who donated the publication are omitted but these are recorded in the original catalogue. Where there is a dash in the list the information has not been recorded. The first letter/number combination refers to the catalogue system.

TECHNICAL MINING BOOKS

MT1 D.O.E., (1976) Reclamation of Derelict Land - Procedure for locating abandoned mineshafts.

MT2 - - S.R.T. and Equipment - Whernside Manor, Course Notes

MT3 - Aerial Photography Notes

MT4 HMS0 (1984) British Geological Survey

MT5 Various (1914) Library of Coal Mining & Engineering, Surveying, Mining Methods, Shaft Sinking.

MT6 Agricola, G. (1556) De Re Metailica (REPRINT)

MT7 Chadwick, R. & Knight, C. (1988) The Story of Tunnels

MT8 Waitham, J.W. (1936) Mine Rescue & First Aid

MT9 Scott, J.W. - Technological & Economic Changes in the Metalliferous and Smelting industries of Tudor England

MT10 Scott, J.W. - Theory & Practice in Early Metailiferous Mining in the British isles -Tudor & Stuart Times,

MT11 Forster, W. – A Treatise on a Section of the Strata from Newcastle upon Tyne to Cross Fell

MT12 Osburn, H.S. (1901) The Prospectors Field Book & Guide

MT13 - (1984) Early Mining in the British Isles - Proceedings of Ealy Mining Workshop at Plas Tan y Bwich

MT14 Judson, D. (1984) Caving Practice and Equipment

MT15 Sear, L. (1988) Citizen's Band Radio for Underground Communication

MT16 Metcalfe, W. (1988) Equipment Use & Maintenance at Cleveland potash mine.

#### GENERAL MINING BOOKS

MG1 Fell, A. (-) The Early Iron Industry of Furness & District

MG2 Adams, J. (1988) Mines of the Lake District Fells

MG3 Burt, R., Waite, P. (1988) Bibliography of the History of British metal mining

MG4 Smith, B. (1924) Special reports on the Mineral Resources of G.B. Vol. XVIII, Iron Ores, Haematites of West Cumberland, Lancashire & the Lake District

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MG5 Cole, G.A.J. (1922) Memoirs of the Geological Survey of Ireland - Mineral Resources

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MG6 Duffy, T.J. (1932) Copper Deposits in S.W. Ireland

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MG7 Hallisy, T. (1923) Barytes in Ireland MG8 Kinaman, G.H. (1884) Economic Geology of Ireland Vol. | Metal Mining MG9 Dunham, K.C. (1945) Barlum Minerals in England & Wales MG10 Friends of L.D. (1988) Slate Quarry in the Lake District MG11 L.D.S.P.B. & C.C.C. (1986) Cumbria & Lake District - Joint Local Plan - concerning minerais MG12 -(1983) Open Pit Barytes Mining at Ballynoe, ireland MG13 Duffy, T.J. (1929) Mining District of Allihies, Co. Cork MG14 Reilly, T.A. (-) A Review of Vein Mineralisation in S.W. Co. Cork, Ireland. MG15 (-) Barytes - Ireland : A World leader MG16 (1986) Western World Coal & Lignite Mines MG17 Greenwood, J. (1985) The industrial Archaeology and industrial History of Northern England - A Bibliography MG18 (1962) Iron Ore from Marampa (Sierra Leone) MG19 Raistrick, A. (1977) Two Centuries of Industrial Welfare - The London (Quaker) Lead Co. MG20 Holland, E.G. (1981) Coniston Copper Mines - A Field Guide MG21 Holland, E.G. (1986) Coniston Copper - A History MG22 Rose, W.C., Dunham, K.C. (1977) Geology & Haematite Deposits of South Cumbria MG23 Harris, A. (1970) Cumberland Iron - History of Hodbarrow Mine, Millom MG24 Dunham, K.C., Wilson, A.A. (1985) Geology of the North Pennine Grefield - Vol. 11 MG25 McFadzean, A. (1989) The Iron Moor MG26 Cowman, D., Reilly, T.A. (1988) The Abandoned Mines of WQest Carbery (Eire) MG27 (-) Archaeology in Wales (Papers relating to mining) MG28 Willies, L. (~) Lead & Lead Mining (Shire Album) MG29 Postlethwaite, J. (-) Mines & Mining in the English Lake District MG30 Bolton, J. (-) Geological Fragments of Furness & Cartmel MG31 Banks, A.G. (-) H.W. Schneider (Biography) MG32 Various (1989) industrial Archaeology Review — Metalliferous Mining MG33 Burt, R. (-) The British Lead Mining industry MG34 Wallace, W. (-) Alston Moor, its Pastoral People, its Mines and Miners MG35 Hunt, C.J. (-) The Lead Miners of the North Pennines in the 18th & 19th Centuries MG36 Sopwith, T. (-) An Account of the Mining District of Alston Moor, Weardale & Teesdale MG37 Hughes, S. (1990) The Darren Mines (NMRS) MG38 Bennet, J. & Vernon, R. (1989) Mines of the Gwydyr Forest - Vol 1

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MG39 Bennet, J. & Vernon, R. (1990) Mines of the Gwydyr Forest - Vol II NG40 Draper, L. & P. (1990) The Raasay Iron Mines MG41 Tyler, I. (1990) Force Crag - The History of a Lakeland Mine MG42 Hall, G.W. (1989) The Last 100 Years of Mining at Pontrhydygroes, Dyfed MG43 Willles, L. (1989) Ancient Lead-Zinc-Silver Mines in Rajastan

#### ASSOCIATED INDUSTRY BOOKS

All Davey, C.R. (1984) Reflection on the Furness Railway
Al2 CCC (1988) Cumbria Today - Archaelogical Report No. 3
Al3 - (1920) A Modern Blast Furnace Plant (Port Taibot, S. Wales)
Al4 Davies, M. (-) The Story of Steel
Al5 Hudson, K. (-) The Archaeology of History
Al6 Major, K.J. (-) Fleidwork in Industrial Archaeology

#### HINE PLANS

MP1 Cornwall Record Office - List of all area mining plans
MP2 Surface & Underground Plans of Mid-Wales Mines
MP3 Plans & Details of Laxey Mine & Wheel (Isle of Man)

#### JOURNALS & NEVSLETTERS

JN A Full Series of CATMHS Newsletters from No. 1 to Present

- JN Vols. 1,11 & 111 The Mine Explorer
- JN A Full Series (7) West Cumberland Mines Research Group Reviews
- JN Weish Mines Society Newsletters 7-10
- JN A Full Series NAMHO Newsheets
- JN Shropshire Caving & Mining Club Journal (Spring 1989)

#### ARCHIVE

A1 Geevor pic (1988) Proposed Acquisition of Mainband Co. Ltd.
A2 Geevor pic (1988) Listing particulars for A1
A3 Grant D. (-) The 6th Duke of Somerset, Thomas Robinson & the Newlands Mines
A4 Noian, C. (1988) Index to Mineral & Mining Public Records & Manuscripts in Ireland
A5 Delegate Pack for 1989 NAMHO Conference
A6 Weir, H.E. (1989) Mining in Cumbria - A Bibliography
A7 Mellors, P.T. (-) Legal Aspects of Access Underground (NCA)
A8 - (-) Sir Bevis Buimer - An Elizabethan Speculator

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Atalaya Tours from Aberystwyth are organising mining study tours to Rio Tinto and Andalucia in 1992. The eight day Rio Tinto tour is provisionally arranged for May, price around £570. This includes flights, transport, accommodation and meals, guide, museum entrances etc. The Andalucia tour 10-12 days will be around £700.

alaua Enquiries please to James Thornburn Ceinionfa, Penglais Terrace, Aberystwyth, SY 23 2ET. tel (0970) 625077

#### SO2 in Smallcleugh

On-an exploration meet members noticed gas bubbles emerging from water at the bottom of a shaft in The Baron's sump area of Smallcleugh. It could be SO<sub>2</sub>. The danger level for this gas in unventilated areas (especially down shafts) is 5ppm - see Newsletter No. 20, article on mine gases. It was later found that on the day of the exploration atmospheric pressure had been particularly low. Bulletin No. 9 of PDMHS warns about gases in the Nenthead workings.

#### EXPLORATION AT HONISTER

A.D.Cameron

Following a concerted dig and grovel, a small band of CAT members managed to get themselves into the long sought after closeheads at the end of the E9 level in the upper parts of Honister Crag. Anyone insane enough to follow them will be rewarded with sights of the biggest roof collapses in Cumbria and massively bulging retaining walls. People with bad coughs should stay away.

The expedition took place on August Bank Holiday Monday. The group also re-gained entry into E10 level after a bit more digging. They didn't stay long as the thought of entombment for life didn't appeal.

It is hoped to arrange a CAT trip to Honister again next year when the first complete underground ascent of the crag from base to top will be undertaken. Something to tell your grandchildren about.....



## MEET REPORTS

#### KNOCKMURTON - 7/7/91

The meet was well attended for an outlier (10 members). Those who had recently experienced deep water on the Nenthead through trip were (understandably) content to explore the open levels and surface features. Also, Richard Hewer returned to the mine with his son for a trip into the upper stopes of No 9 vein and the far reaches of No 8. Meanwhile five members descended to the Cogra Moss Adit Level from No 9 level on No 9 vein to explore the adjacent No 2 vein. Some weeks previously the 200ft air shaft had been stempled with two deviations and a rebelay - largely due to Anton with the help of the Furness contingent of CAT - and it was now a quick rope descent. The water was chest deep (lower than on previous visits) and shallower at the collapse about 120yds south of the T-junction on No 2 vein which had halted us previously. Tim, Dave and Mark dug through the collapse and found level beyond to be dry. Water was escaping through boulder filled stopes below the level which confirmed that this part of No 2 vein connects with a lower drainage level, probably via No 13 vein and one of the long cross-cuts to Kelton mine. We may have increased the flow a little but it would take a lot of work to drain the Cogra Moss Adit Level completely. A second collapse was by-passed by climbing into the stopes above, and we then dug through a third collapse of loose stuff finding clog prints in the mud beyond. We eventually got into a very shattered region, which is possibly the point where No 4 vein forks off about 80yds short of the Knockmurton No 1 Shaft. Unfortunately further progress in that direction proved impossible and we failed to reach the shaft, which was disappointing. Also, the air was bad and we were glad to leave the area.

On the way back a rise or ore shoot at the second collapse was climbed for perhaps 80 or 90ft to a tramway level. This was hardly high enough for Low Bottom Level which emerges somewhere behind the mine buildings, particularly when the hade of the vein is allowed for, but it had been an important working level although now impossible to follow due to collapses in both directions. An offset rise or stope continued on upwards but was too unstable to climb with safety. A second rise from Cogra Moss Adit Level – a stempled manway close to the No 1/2 vein fork – appeared to be free from blockages. This was climbed by Ian for a short distance until he found the timbers too rotten for comfort. A third rise or ore shoot was climbed by Mike and Ian from the Tjunction almost to a blockage at about 70ft. Near the top was a short blind level or trial to the south containing daubs of clay with miner's finger prints. It seems that the stopes on No 1/2 vein north of this point have been back-filled thus hampering access to the continuation of the workings to the north. From the bottom of the 200ft air shaft the previously sumped up level driven south along No 9 Vein was found to be clear for 55yds and continues further beyond a partial blockage. Another level (not shown on the plans) running SW from the main intersection near the shaft bottom turned out to be a short trial.

Most of that part of the system which can be gained from a descent of the air shaft has now been explored, but a determined effort to trace the drainage path through the collapsed stopes of No 2 vein could be rewarding.

Dave Bridge

Saturday July 20th 1991

Warton Crag Mines

Present:-	Sheila Barker Joan Helme	Paul Timewell Anton Thomas
	Sheila Thomas	Don Borthwick
		Dave Bowers
		John Helme

The party made the usual late start after waiting for the arrival Of the Publicity Officer, who it later transpired was using Double British Summer Time.

First entering Moss House Mine (Crag Foot Lower Mine), the usual areas were visited, the only'artefacts' found were a family of 6 toads who were surprised and nearly crushed as the party crawled through one of the dug out collapses near the shaft bottom. Shortly after this the meet leader's wife's light went out which made an excellent excuse for her to spend the rest of the day in the sunshine.

Lunch was taken using the gun club's picnic tables before proceeding to the 'Upper Mine'. Again we visited the known sites, including the lake and the air pump. At this point the meet leader was stricken with the 'Ulverston FX2 disease'.

Returning to the surface and the sunshine the party cleaned up and spent the remainder of the lovely afternoon photographing the ore crusher in a vegetation free state and walking through the woods in a search for other likely levels/ shafts.

It was noted that the timber supports just inside the entrance to the 'Upper Mine' are in a poor state and could benefit from a 'timber work party' and, with satisfaction, that the fencing done by the club in 1987 is still largely intact.

Wednesday evening meet August 7th 1991 Tilberthwaite

Present:- Sheila Barker & Rebecca Dave Glover & James Paul & Pat Timewell Dave Robson Peter Sandbach Ian Wood John & Joan Helme

From the path on the N side of the Gill the party cut across Dry Cove to reach Man Arm Mine. After a brief inspection they continued round the lower slopes of Wetherlam noting what is left of the mine dam before descending to the remains at Tilberthwaite Mine. From here the open workings at the head of the Gill were visited before heading for Wetherlam Mine and the derelict horse gin. As darkness approached the group re-crossed the stream to descend to the car park via the path on the S side of the Gill and Fenny Rigg Quarry.

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#### North Wales Meet - Aug. 17/18 ML. MARK SIMPSON

There is a lot to see in this area of Wales in the way of metal mines and if you add slate as well the choice is considerable. The original idea was to have a look at some copper workings on Saturday and then slate on Sunday. On advice the choice for the first day was limited to the Snowdon area and was as follows:-

Britannia Copper Mine SH618548 Prince Edward Gold Mine SH743385 Foel Ispri Mine, Llanelltyd SH704201 Benallt SH536534 Drws-y-Coed SH545535

For surface interest only there was also:-SH605476Rems of an aerial ropewaySH605477Recently restored waterwheel and pumping gearSH526477Crusher wheels etc. (Lliwedd Mine)SH635530

There is also the Sygun show mine at Beddgelert.

There are many other sites of interest in North Wales but many of them are on Forestry Commission land. Access is not encouraged. I would echo Damien McCurdy's request that the efforts of people negotiating with the Commission for access and preservation should not be jeopardized.

Sheila Barker and I went down on Thursday night and camped near Capel Curig which would allow easy access to sites on the east side of Snowdon.

<u>Friday</u> - The weather being reasonable, it was decided to have a look at the Britannia Mine on Snowdon, which was a copper mine worked between 1804 and 1914. As parking at weekends is limited at Penypassan we checked the weather forcast and made an early start. The mine can be reached by either taking the PyG track which brings you out at the top of the workings or by the Miners track which is initially a lot easier. The first buildings passed are a row of miners cottages.

Once across the Llyn Llydaw causeway the first site of interest is the Britannia Mill built in 1873, the ore being conveyed here via an aerial ropeway. The cast iron lumps leaning against the south wall, I am informed, are bits of crushing plant that fell off the back of the scrapman's truck and nobody could be bothered to retrieve them.

The mine track then rises steeply up to the Claslyn, and is in very good condition. The mine is on the north side of the lake. It took us about an hour to walk to the mine site.

Bick is certainly right about the atmospheric setting for the mine, what it must have been like living and working up there, especially in winter, does not bear too much contemplation. Very little now remains of the mine buildings, and of the recorded levels, only the New No.1 and Nos. 1 to 5 are apparently still accessible. We looked into the New No.1 and levels 1 and 3. The knee deep water of the first level meant soggy walking for the rest of the day.

For a full description of the mineralisation and the underground workings reference can be made to the P.D.M.H.S. Bulletin Vol.9 No.5 Summer 1986. Very little appears to have changes since that time.

The site was well worth the effort. There is much to see above

ground and a lot more underground.

The levels are quite moist in places and S.R.T. gear is necessary if the further reaches are to be seen.

Lunch was had at the location of No.7 level, after which it was decided that as the weather was holding up we would continue up to Snowdon summit then across to Lliwedd and possibly look at the Lliwedd mine. We achieved the first two objectives but had to abandon the third due to low cloud and the onset of rain. There were the usual hoardes on Snowdon and in the cafe. I even forebore to imbibe at the cafe, Sheila being keen to get on.

On reflection even allowing for the elevation of the Lliwedd Mine, it would be better to walk in from Nantgwynant where one could take in other mines and quarry sites on the way up.

Saturday - In the morning we all gathered at the car park in Beddgelert where we were introduced to our guide for the day; the well known author, historian and broadcaster, Eric Gray-Thomas. Some discussion followed as to the venue for the day's exploits but in the end it was agreed to keep to the original plan and visit the Nant**1**e Valley which was nearby.

The valley is a wild and desolate place and there are extensive mining remains to be explored. The Benwilt Copper Mine is on the northern slopes of the valley and CAT members made that their first objective. An upper level was entered and explored. A pitch was rigged down a shaft in the floor and a descent made through a number of levels (including one which was cascading with water). Eventually we reached the bottom level and came out to day, close to where the cars were parked.

After lunch Eric Gray-Thomas decided to show us the southern slopes of the valley and a number of shafts, old workings and water leats were examined. Some ancient underground workings which must have dated from the late 1700's were also entered.

Towards the end of the afternoon, just as we were all thinking about making tracks back down to the cars, a sharp eyed Anton noticed a small part of a sheathed wheel on a spoil tip. Eventually it was completely uncovered and found to be intact and about 6 ft in diameter. We decided it was too good to leave there and many willing hands assisted in its transport down to the road side. Our guide suggested that it would make a good exhibit at the Sygun show-mine and we all felt that this would be a fitting resting place, especially if a small plaque could be fitted saying which organisation was responsible for finding it. It was decided to leave the wheel behind a wall for collection by Eric and his friend from Sygun the following weekend.

As luck would have it, Eric Gray-Thomas and his friend from Sygun decided to collect the wheel the following day. This was very fortunate as when they arrived at the place that the wheel had been left they found a car parked at the roadside and a member of the Ironbridge Trust measuring the wheel with a tape measure. The wheel is now installed at Sygun and we understand that a plaque is to be fixed to it making reference to CAT.

To round off the day a visit was made to the Coedmadog slate quarry and especially the Dorothea Engine House. The sun was shining when we parked the cars. Care is required as the quarries are flooded to a depth of 600ft and the sides are mainly precipitous. The photograph below shows what the engine was like up to about five years ago - it does not look like that now, apparently someone took a chainsaw to it. The A frame is gone and the pump spears are lying to one side in the shaft.



DOROTHER ENGINE HOUSE.

It seems a great pity that a machine that is essentially complete, including two Lancashire boilers should be in such a state, especially when one considers the great lengths people go to in the preservation/restoration scene in other parts of the country. After looking round the engine the party had a walk around a small part of the workings which were very impressive in the stillness of

part of the workings which were very impressive in the stillness of the evening and the setting sun. Those who were staying in the area for the trip to Corris on the

Sunday made their way to the campsite at Maentwrog.

<u>Sunday</u> - It was one of those days when the sun shone and the Welsh scenery was at its best. The trip down to Corris was very pleasant. Half a dozen of us met at the car park by the Craft Centre and after extracting members from the lure of the shops the days business commenced.

For those unfamiliar with the area here is a description of the workings and the slate veins that was prepared by Alistair Camaron. See overpage  $\rightarrow$ 

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#### SLATE WORKINGS IN THE CORRIS AREA ALISTAIR CAMERON

Two parallel veins of slate run across Central Wales from Dinas Mawddwy in the east to Tywyn on the west coast. The Narrow Vein is approximately 60 ft wide and, to the north, the Broad Vein is 800 to 1000 ft wide. Between the two lies the Red Vein. The Narrow Vein contains high quality slate which is normally extracted by underground workings. Slate from the Broad Vein is more variable in quality and is usually quarried. Slate from the Red Vein has no commercial value.

Brief details of workings in the Corris area are given below, please refer to the accompanying map for locations.

#### CORRIS VILLAGE

#### Braichgoch Workings

These workings were started in 1835 and were to become the most extensive in the area. Mining was from the Narrow Vein at the point where the vein is folded to the south. The workings were at a standstill between 1906 and 1919 which caused considerable hardship locally. Between 1919 and the final closure in 1971. slate extraction was extensive. The workings were linked underground with the Gaewern mine further up the valley and eventually all output from Gaewern was via Braichgoch. Very soon after closure the area of the offices, cutting sheds and stock yard were "improved" by landscaping and the Corris Craft Centre now stands where slate was once stored.

Despite alterations on the surface the underground workings can still be entered (although discretion is required). At the craft centre is a child's adventure playground and a few yards to the north of this is a depression in the ground from which the Braichgoch 'B' Level runs into the hill. The route of the horsedrawn tramway from the Light Railway to the workings has been all but obliterated by road widening and the landscaping.

#### Gaewern

These workings are also situated on the Narrow Vein and were the first to be operated commercially in 1820. The mine amalgamated with Braichgoch in 1884. The tramway ran below the valley road and a series of access levels ran into the internal workings of Gaewern. The surface remains are quite extensive and include a number of inclines and winding houses.

#### Abercorris

This site also worked the narrow vein and is situated high on the hillside above the valley. Abercorris was never a large concern. Work started in 1840 and ceased in 1913. There was a short lived revival in the 1930's run from Braichgoch. Working was by a combination of quarrying and mining. Little mine exploration has been carried out and no doubt much is to be discovered. A branch of the horsedrawn tramway ran to the foot of the hillside and connected directly to a long incline that ran up to Abercorris.

#### Abercwmeiddaw

This was a very extensive working on the Broad Vein. Much of the workings were by quarrying which has left an enormous terraced pit in the hillside above Corris Uchaf village. Mechanical plant was used extensively on the quarry floor and a huge water-wheel was used to power machinery in the cutting sheds. A well known local landmark are the "Spectacles" - two perfectly round boreholes in the side of the pit (makes a good photographic setting). The spoil tips from Abercwmeiddaw spilled down to the village and were held back by massive retaining walls. Another local landmark was the series of steps protruding from one of the walls. The local authority has been clearing much of the slate spoil recently.

The workings were started in 1876 and were served by a branch and incline from the tramway. The quarry closed in 1939.

#### ABERLLEFENNI

Three separate mines in the Hengae Valley have historically been owned and run as one concern which was known as the Aberllefenni Quarries. All three took slate from the narrow vein. Hen Chwarel and Ceunant Ddu produced mainly roofing slates while. on the opposite slopes of the valley. Foel Grochan produced slabs. One of the most spectacular sights in the area is the huge un-supported roof of Foel Grochan which can be seen from the road as one nears Aberllefenni and is known as the Alma cavern after a battle in the Crimean War.

Workings started between 1810 and 1825. The bottom level of Foel Grochan is still worked today operated by the Wincilate Group. The cutting shed and stock yard is beside the valley road. The Company have recently re-commissioned the bottom level at Ceunant Ddu in anticipation of commencing work there. The hillsides on either side are steep and the underground workings are extensive. Extraction in the bottom level at Foel Grochan is from an enormous underground pit situated about one third of a mile into the hill. The bottom of the pit is below sea level.

There are extensive surface remains including inclines which are of considerable interest.

The steep climb up to the Alma Cavern will be well rewarded by the view inside. A square sided shaft about 100ft across descends to the level of the valley floor.

#### Cambergi

This working is to be found further up the Hengae Valley. Little is known of the history except that in the 1880s it was forced to close because it had trespassed underground onto the Aberllefenni estates.

#### Cymerau

Above Aberllefenni in the Ratgoed Valley close beside the stream are the remains of the Cymerau workings which were opened in 1863. Mining was at and below valley floor level and flooding was a constant problem. The mine closed in 1948. These workings and those further up the valley at Ratgoed were served by a tramway which linked onto the Light Railway at Aberllefenni.

#### Ratgoed

This very isolated working on the Narrow Vein was started in 1847. A small hamlet was built up to house the workforce but closure in 1940 was caused by the isolated location rather than a shortage of slate. Extensive underground workings have yet to be explored at this location.

The Braichgoch workings were the first visited. All the surface remains have been landscaped although one can see where the vein outcrops from the carpark. The entrance we used goes due west until it hits the underside of the slate vein where one can turn south or north. Turning south many infilled openings were passed. At the end of the level on the west side access could be gained to a small room. Here the vein petered out. Going North from the entrance with the 'room' openings on our left it was possible to get into some of them. Their size increased as we proceeded North and it became apparent that we were several floors up from the bottom of the workings. One item of note was the footsteps cut into the footwalls in several of the rooms. As the dip of the vein is quite steep, about 60 deg, the total rise is about 25-30ft. One wonders if handlines were used, no remains were obvious.

The access levels opened into the side of a vast room with a fully boarded incline in it. The bottom could be dimly seen, the top not at all. The party ascended to the next level and into a tunnel that came into the back of the room. After being assailed by many doubters and inspecting other rooms we came again to grass, though not where we anticipated. It had been thought we would be further north.

Lunch was called for in the time honoured CAT fashion and being sunny one had to bow to the inevitable. Time passed and it was time to mobilise, go down to the vehicles and so to Aberllefenni. Foel Grochan is a place of superlatives, impressive is a rather inadequate word to describe the verticle rooms opening to daylight, some rooms apparently go down below sea level. The wooden cranes and the cat walks to them were noted with wonder and amazement. The only other information on this place is in the Machynlleth Information Centre. On exiting it was pleasant to see that the inclines, including some of the water balance type, were still there in the dressing floors, although for how much longer is a moot point. By this time it was five O'Clock and it was time to go. The sun was still blazing and the scenery on the way back looked the best I have ever seen it. Anton and Sheila C.P.T. stayed on for several more days and their report follows.

My thanks to Damien McCurdy for his initial ideas, Eric Gray-Thomas of Caernafon for guiding us on Saturday, Alistair Cameron for the notes on Corris and all those who gave their support over the weekend. - 'Ou sont les autres'?

Refs:- The Old Copper Mines of Snowdonia - D. Bick Bulletins of Peak District Mines History Society Vol 9 No 5 Summer 1986 Brittania Mine - Coleman & Laffoley Vol 9 No 6 Winter 1986 Cwm Bychan Mine - Laffoley & Rex. Slate - from Blaenau Ffestinog - J. G. Isherwood Slate - Gwynedd Archives Service - M. J. T. Lewis





Why not ? To all S.R.T. users and chaps who like me are big where it really counts .... ie, bovine faecetiousness .... this cunnilingly cryptic title will instantly conjure up notions of underground photography ( wide angle, see ), which of course is exactly what it is.

These photo's are presented for the purpose of offering a snapshot window on our activities on the C.A.T. Welsh meet August '91.



This sheave wheel was excavated from Symne Dylluan mine, Nantlle, after a fraction of it was spotted poking through the scree by one of our seagull eyed members. I won't reveal his identity for fear of embarrassment but basically he's so cool, groovy and brill.

This wheel is now said to be exhibited at Sygun mine with an acknowledgement to C.A.T. for its discovery.



Hand winch, Corris. Note the ellaborate spokes in the cast mainwheel and the means by which it is held down, ie, a prop at each corner, one of which has been removed for the purpose of this photo.



Incline, Corris. This was not explored but as Mike Mitchell with his typical abhorrence of exaggeration was later heard to say, ' It obviously goes down for miles.' Note the timber deck upon which the rails are fastened.

#### Acro junction, Corris.





Superb air winch, Corris.

(contd....)



To the North (round the back) of Aberllefenni this derrick stands over one of the yawning shafts into the slate workings below.



Derrick, Aberllefenni.



Incline car, Aberllefenni.

#### MEET REPORT

#### September 29th, 1991. CONISTON

Rather than an exploratory meet, this was more of a working meet. The object was to begin the project that has been talked about so long, and which would take several meets to complete.

The idea is to establish a link across a gap in Taylor's Level within the Red Dell stopes. This would make access to or from the inner reaches of Taylor's Level easier and less time consuming. It would also make "through trips" via Triddle Shaft and Fleming's Level more reasonable and interesting. A second new connection was to be investigated descending from the surface in Red Dell direct to the inner part of Taylor's Level via a very large jammed flat-topped block. Both these lines require a limited number of stemples to provide a catwalk.

Eleven members carried rope, timber and tools up to Taylor's Level entrance and Red Dell Stopes. Over the previous few weeks a small group of members had been bolting up and across the walls of the stope beyond the accessible part of Taylor's Level, past the two barrels. This route was progressed to the top of a large rubble slope supported on staging. Near here a short intermediate level was found. A number of members descended from the surface of the stope to establish contact, having already lowered the stemples and stowed them. Voice contact was made. After some time and more bolting and traversing, the two groups were only about twenty feel apart. A rope was thrown across and secured.

Having established the line of the proposed conection, the rope was left in position ready for use in fitting stemples on a future meet. the other route from the surface to the flat block will be relatively easy to install.

Members then returned to the comfort of their homes, showers and beds, only to be called back to Coniston (wearing COMRU hats) at midnight to search for and rescue three people missing in Paddy End workings.

They were found safe and well, having got lost in Top Level Extension.

P. FLEMING

#### Meet Report

#### VISIT OF THE GREAT ORME EXPLORATION SOCIETY CONISTON - 26th & 27th October 1991

#### Meet Leader : Peter Fleming

Eight members of the above society (G.O.E.S) arrived in Coniston at 6 pm. on the Friday evening, five staying in B & B accommodation and 3 in the B.M.S.C. Cottage.

The following morning at 10.30 am. under a cloudy sky, we gathered at the cottage. Only three C.A.T. members arrived to act as hosts and guides other than the meet leader. They were Alisdair Cameron, Chris Jones, and Trevor Tucker. After a brief introductory talk on the history and extent of the Coniston Coppermines we set off up into the mist to Leverswater and "the backstrings".

I had been advised in advance that most "G.O.E.S" members attending would like to visit the more remote areas of the mines and were conversant with S.R.T. techniques. Accordingly a rather ambitious day's trip had been planned. This involved entering and exploring Levers Water mine then abseiling down via the old ladderway 200 ft to the bottom of Brow Stope, scrambling up into Top Level Extension, exploring this and then on to Arete Chamber, down the Paddy End through trip and out of Hospital Level. As far as I know this has never before been done all in one day. However, I did not mention this until I knew the outcome would be successful.

Trevor Tucker and I led this group, who were very impressed by the colourful secondary copper deposits, i.e. the "Blue Lagoon", etc., in Levers Water Mine. To our surprise we found the first three pitches down Brow Stope were already rigged, but not very competently. We improved the "hangs" and fitted maillons where required. We assumed that the ropes had been left in by an Outdoor Pursuits Centre.

At the bottom of Brow Stope we met Chris Jones who had entered by the Crater Route and had rigged the traverse across "MAGS" catwalk for us. He had with him two lads who had travelled all the way from Cornwall having heard that Coniston Coppermines were worth seeing. Chris had shown them through Top Level Extension. We then did the same for the North Wales group. They saw the ore wagon, the jackroll windlass and "Earthquake Passage" etc.

We then returned via MAGs catwalk to Arete Chamber and started the descent of the Paddy End through trip. Everything went smoothly. All areas of Top and Middle Levels were shown. By now the visitors were saying how surprised they were at the size and complexity of the mine and were thoroughly enjoying the trip. At this point I told them it would be the first time this route has been followed in its entirety in one go, and they were very pleased about this. We carried on down the last pitch into Grey Crag Level and reached Hospital Level mouth at 5.30 pm., having taken ahout six hours for the whole trip.

Alisdair Cameron took the other three "GOES" members into the Arete Chamber area and then the Levers Water Mine tour. this was followed by the Hospital/Grey Crag Level system. Over a bar meal in the Black Bull that evening it was evident that they were all delighted at the day's activities. On Sunday morning only Mike Mitchell came to assist and show the flag for C.A.T. An easy day was planned, we were to follow the route of our Coniston Coppermines leaflet, which sells so well in the village, but to start with a visit into Deep Level was included, where its history and features were described.

We then showed them the pump rods in the Old Engine Shaft and the restoration work we have nearly completed on the sheaved winding wheel at the top. The various wheelpits in the Red Dell area were examined. They showed much interest in the site of the old blacksmith's forge near the New Engine Shaft and said it ought to be carefully and thoroughly excavated.

Then followed a visit to Flemings Mine area. After this Triddle Incline was climbed and the Triddle Shaft entered to see the balance bob. We then crossed over the ridge to Levers Water.

I was particularly keen for them to have a good look at the surface remains between Simons Nick and the tarn. I believe this area could provide evidence to the expert eye to support my theory that very early mining could have taken place here which would pre-date existing documentary evidence (1599). The Great Orme Exploration Society, as recently as 1988, proved that prehistoric mining took place in their area. With the assistance of the British Museum and carbon dating, bronze age workings for copper at depths of up to 200 ft below the surface have been proved, dating from 1800 BC. So important and extensive were the finds which included stone and bone tools, that a number of their members founded a limited company "Great Orme Mines Limited". They opened a show mine, museum and cafe. It opened in April this year and has had 40,000 visitors in six months. (See Early Mining in the British Isles - C.A.T. Library)

So with this group of experts including at least one of the directors, we spent some time examining in detail the ground and remains above the Back Strings. This included Simons Nick and the nearby buddle site we excavated two years ago. It did not take them long to spot a stone mortar with two round depressions on one side. Soon a second was discovered, having three depressions on one side and two on the other. I catch on quickly, and found a third, but this one was broken. These mortar stones, sometimes called ore dressing stones or anvils, were used for crushing ore by hand, using stone or iron hammers and were in use over a very long period of time, starting in the prehistoric period and were still in use in the eighteen hundreds. This discovery could be the first one proving the use of stone implements in the Coniston Copper Mines (but not necessarily dating back to Prehistoric times).

Our friends from North Wales were very enthusiastic about this area and had said previously that it would only be a matter of time before someone proved that prehistoric mining took place in Lakeland, and this area could be a contender. A statement which I would agree with. (A few moments later, what appears to be the root of an Elizabethan "coffin" level was noticed.)

Time was getting short, so we descended via Boulder Valley and Paddy End workings, back to the cottage, where the group thanked us warmly for our hospitality and said they would like to return again during the winter, having been very impressed by what they had seen.

#### Conclusion

The weekend meet was a success from the point of view of both Societies. "G.O.E.S have broadened their knowledge of the Coniston Mining Field under our guidance. Some said the Saturday Trip was the most interesting one they have ever had, whilst the general walkabout on Sunday inspired them to say they would return in future.

From our point of view, their knowledge of early mining drew our attention to artifacts and features we had overlooked, which could lead (with expert archeological supervision) to quite important discoveries being made. If a serious investigation is eventually undertaken on this site C.A.T. should be heavily involved. We deserve some recognition after twelve years of exploring and documenting Coniston Coppermines.

I was surprised and disappointed at the very poor turnout by C.A.T. members to support this meet and welcome the Great Orme Exploration Society. Most of them were very knowledgeable and interesting people, with a kindred interest from whom we could learn a lot. They assisted in carrying gear and pitch rigging, which I felt they should not have been expected to do.

Finally, I should like to thank the following members, who came and worked hard to make the weekend a memorable one ; Alisdair Cameron, Chris Jones, Trevor Tucker and Mike Mitchell.



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PETER FLEMING

# FORTHCOMING MEETS

#### DON'T FORGET

Boxing Day Meet.....As if you could ever forget..... will be held at Coniston with several interesting things to do including another dig at Middle Level, some work in the area of the old Engine Shaft and much more besides.....



#### <u>Sun. Jan. 5th 1992</u>

Again at Coniston when the much requested trip down the Bonser East Shaft will be undertaken. Veteran Ian Matheson will lead this trip and one can view some of the oldest remains at Coniston.

#### Bonsor Mine at Coniston, Jan 5th 1992.

The Bonsor Vein at the foot of Red Dell is a fascinating part of the Coniston Coppermine because it contains remains from three distinct mining eras. Most of the obvious remains at the surface are Victorian in origin. Deep Level Adit was started in 1825, and the Old Engine Shaft together with its associated leats and the striking water wheel tower was begun in 1834. Nearly a hundred years earlier Charles Rowe of Macklesfield had mined copper here, using gunpowder to stope downwards from the surface for 700 feet, and constructing the Bonsor East Wheel to provide power for winding and pumping. Earlier still, around 1600 the Elizabethans had worked the mine by hand to a depth of 180 feet, and drove the coffin level known as Cobblers Level for drainage.

Remains from all these works can be visited. The Old Engine Shart winding wheel has recently been restored by CAT, and the pump rods which still hang down the shaft have been stabilised. If it is dry enough on 5th Jan then it will be possible to abseil down the 310 foot shaft and to walk out to day from Deep Level. Go further back in time by descending Bonsor East Shaft, which by the way very few people have done. About 100 feet from the bottom the entire stope is hand picked, and there is a marvellous chiseled drainage gully on the foot wall which channels water towards the Cobbler Level. There is still some exploring to be done here. Further down is Charles Rowes work, and rope marks and timbering from that era still remain. After descending about 260 feet one lands close by the 18th Century cast iron rising water pipe, still with a fragment of wooden launder attached which seems to lead the pumped water furtherinto the mine. The eastern extention of Deep Level which is blocked from the adil contains several interesting artefacts and a unique example of underhand stoping, as well as some colourfull mineralisation and a small slate working. To reach here is another 300 foot plus abseil with a prussick out the same way. If you do all three you will have done close on 900 feet of abseiling by the end of the day!

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#### FORTHCOMING MEET - SAT 25TH JAN 1991 - FLORENCE MINE

Florence mine is all that remains of the haematite mines of West Cumbria. It produces high quality haematite for the paint industry and annealing ores for the steel industry. Recently an incline drift has been complated. This allows a second means of access from the surface. Previously all access was via the Florence shaft. Income from visitors augments that from other sources and a charge of £5.00 per head will be made. The trip takes  $2\frac{1}{2}$  hrs. and no mineral collecting is allowed. Starting 9.30 a.m.

The management have said that a minimum party of 20 is required for them to open the mine, therefore would those people who are interested please <u>contact Ian Mathieson</u>, <u>Tel: 05394 32957 before</u> <u>8th December 1991.</u>

After the Florence trip it is hoped to visit Haig Engine house in Whitehaven and Bill Creightons' mineral museum in Cockermouth. <u>Please note</u> - If the Florence trip is cancelled the visit to the museum and Haig will not go ahead.

#### N.A.M.H.O. Biennial Field Event ALISTAIR CAMERON

At the N.A.M.H.O. committee meeting on November 3rd delegates heard about the Biennial Field Event which is planned for the weekend of June 27th & 28th next year. The event is to be based at the Ironbridge Gorge Museum and will include trips to local mining areas, seminars on the theme of preserving mining sites and instruction on such diverse subjects as single rope technique and taking underground video recordings. The hosts are the Shropshire Caving and Mining Club and the cost is a mere £5:00. Contact Sheila for further details. OR ADRIAN PEARCE.

The committee meeting was held at the Clearwell Mine in the Forest of Dean, a magnificent area for walking and exploring industrial remains. Much of the work of the National Association is concerned with legal problems to do with mining sites. N.A.M.H.O. considers that the problem of greatest concern to them at the moment is that of the Coniston Mine and the various legal conflicts which have taken place there recently. They believe that the outcome is of national importance and are awaiting developments with extreme interest.

One other important point at the meeting was that MOLES (The Mines of Lakeland Exploration Society) have been granted membership of the National Association. Afterwards the MOLES, CAT, and LMQT delegates got together and agreed that, in these difficult times of conflict with the National Park. The National Trust and other bodies, co-operation was essential on issues of conservation and on occasions combined action should be employed to fight for our cause.

# Come to Shropshire in 1992



# Do You Want to

- Explore local mines?
- Learn underground surveying?
- · Attend seminars on preserving mining sites?
- · Learn how to take underground video recordings?
- Have a conducted surface tour of local mines?
- · Learn single rope techniques?
- Buy books or equipment?

## WHATEVER YOUR INTEREST, WE CAN CATER FOR YOU

WHEN? June 27-28th 1992

WHAT? This is the biannual field meet of the National Association of Mining History Organisations

WHO? Anyone with an interest in mining history or underground exploration

- Cost: £5.00 per person for the weekend
- Hosts: Shropshire Caving & Mining Club

DETAILS: Can be obtained by sending an A5 S.A.E. to:

### Adrian Pearce

72, Hopkins Heath, Shawbirch, Telford, Shropshire, TF5 OLZ

Tel: 0952-253310

# REPRINT

These photoS appeared in the last newsletter however due to a technical glitch their standard of reproduction was below par. The editor has kindly offered to republish them here in order to get a good copy on the record.



B36 level dig.



Logan Beck.



The Sisis.

For the accompanying text see newsletter No 30 pages 6,7 and 9.

# Wm. Creighton Mineral Museum

Harford House, 2, Crown Street, Cockermouth Cumbria. CA13 OEJ

A private collection of mainly Northern England minerals, incorporating the Late Wm. Shaw mineral collection.

Miners lamps, tools, original artefacts and photographs are on permanent display.

Schools & Private Parties welcome by

arrangement.

# Tel: 0900 828301

Entrance Charge Adults 50p Children under 14 years 25p

Gallery exhibiting Local Artists paintings alongside the museum, no charge