Northern Mine Research Society

Newsletter November 1987

Wots the November Newsletter doing coming out in December? you may be wondering. It's only 'cos I've been excused building/renovating/decorating for long enough to rush this out, so that its not the January issue instead. The main reason then for the dispensation is so that you will have time to pay your Subs. before the New Year (postal strikes permitting).

Subtle as a lead brick! Following that hint then, Subs. for 1988 are now due (see separate Renewal Form enclosed with this bumph).

If you covenant your subscription, then we can claim 30 odd p. in every pound back from the tax man. That way we get more money at no extra cost to you. (I suppose it's as good as a government subsidy.) Where this falls down though is if you pay through "The Charities Aid Foundation" scheme - then they get the extra, not us, so whilst not encouraging this practice we don't refuse if anyone insists.

Insurance

N.M.R.S. is NOT a registered company with limits on its public liability. Thus in the, unlikely , event of a claim for damages against the Society succeeding, and the Society's funds being insufficient to meet the claim, the committee members would be liable to pay the difference. It may well be that the leader of a Society Meet would also become involved in the case. Therefore, it was agreed at the General Meeting on 13th September that the Society would pay the insurance premium for public liability insurance for all committee members and all meet leaders known by the beginning of the year.

The insurance arrangements are made through NAMHO and NMRS will add the names of any members who also wish to take out insurance against public liability, provided that they pay the premium of 70p each to NMRS before 1st January, 1988. (The renewal form has the appropriate entry).

In view of the above, please send the renewal form duly complted, together with all moneyies to G.B.Greenough, 22 Elmhurst Road, St.Annes-on-Sea, Lancs FY8 3JH, NOW.

Woodhead Mine.

Forget about us going there at Easter, it's lambing time. If problems of access are sorted out, then the earliest we can do anything will be Spring Bank Holiday. Anyone willing to help then please contact me and I'll keep you informed individually of future developments.

Particularly needed are those with experience of surveying and recording sites, as well as the necessary equipment to do this. We also need bodies to hold tapes/staffs etc, draw plans, make tea and in general act as fetchers and carriers.

If you've never done anything like this before, but are keen to learn, don't be put off, you're more than welcome to join us.

(Enquiries to me, Harry Houghton, 29 Parkside Road, Leeds LS6 4LY. Tel(0532)758505.

Dod Level Cross-cut, Wanlockhead.

This is still being energetically dug, on a monthly-meet basis, by Jeremy Landless' team, in search of the North Scraitsteps water-pressure engine.

This dig has been going on since 1984 through collapsed stopes, and very creditable expertise has been developed in fore-poling, setting supports and transporting muck in buckets, wheelbarrows and sledges. The motivation is provided by a 10" clay pipe which took the water supply to the engine and was laid in a worked out part of the vein. A gale of air rushes through the pipe indicating(?) an open shaft beyond the stoping. Unfortunately, the pipe follows the line of the vein and bends every few feet one way or the other, frustrating all attempts to see what's at the end. Rodding suggests a wooden cistern. Anyone got a trained ferrt and midget camera? With 50' of tunneling behind him and about 15' to go the adrenalin is rising. At 3 meets per 5' advance, watch this space!

By the way, any NMRS members interested in water-pressure engines intending to visit the Museum here next year, give us advance warning and we will show you Jeremy's video of the discovery of the South Glencrieff pumping engine - a working model of which is on display.

Geof Downs-Rose.

Stuck for ideas for the Hols.? Costa-too-much not hold any appeal?, then maybe the following will suit?

Riotinto and the Mines of S.W.Spain.

It may be a little early to think about next year's holidays, but would anyone be interested in joining a 7-10 day pioneering package tour of this interesting part of Spain.

We would be based at Minas de Riotinto with its 19th and 20th century industrial archaeology and the site of recently excavated remains with excursions to other mines in the area and other historical sites and places of interest in this unknown corner of Spain. There are also opportunities for time to be spent in Seville or on the beach!

Due to the remoteness of some of the mines it will probably be necessary to limit the group to about a dozen or so. If you would like to know more please contact me and, as it's a pioneering venture, let me know what sort of holiday (more beach, more cities etc.) you would like it to be.

Please write to me - Jamie Thorburn, c/o Ceredigion Archaeological Survey, SDUC, Lynwood, 27 College Street, Lampeter, Dyfed, SA48 7EF.

Editorial time being at a premium, you'll excuse, I'm sure, no intro's to these next few bits from around the country!

Bad air at Cwmystwyth Mines.

Aberystwyth Caving Club have recently had a close call with bad air at a level in the Cwmystwyth Lead Mines, mid Wales which should be a clear warning to cavers as well as mine explorers.

Taylor's Level is at grid ref SN 8088 7499; 320' from the entrance is the first junction. 380' up the eastern passage a roof fall had sumped the passage since the mid 1970's. This was dug out on 22-23 August, 1987, creating 2'6" of air space and a very slight outward draught from the blind workings. From initial desumping until we entered 24 hours elapsed. There was a slight sulpherous taste to the air. After 200' a small roof fall necessitated a crawl.

The first person entered this, and whilst commentating on the stopes ahead lapsed into unconsciousness after a minute or two. Distinct apathy to the situation was noticed in the two people closest to the fall. The unconscious, spasmodically convulsing caver was dragged out and a rapid retreat made; he recovered in four or five minutes, but had no memory of the affair. At no point was panting noticed in any member of the group.

My interpretation, based on information from a number of works on noxious atmospheres, and a talk with a CRO doctor is as follows; bacterial action on the iron and organic materials used up all the available oxygen. The resultant carbon dioxide dissolved in the water, leaving only nitrogen behind. The 24 hours between desumping and our entry allowed for atmospheric mixing as far as the constriction caused by the roof fall. When the caver lay in the crawl he was breathing the atmosphere beyond the fall which consisted mainly of nitrogen. Carbon dioxide provides the body's stimulus to breath, but because he was inhaling almost pure nitrogen, his body was unable to produce any carbon dioxide. Thus he breathed at a normal rate and lapsed into unconsciousness in less than two minutes. It is likely that he would have died in a matter of minutes.

Diggers in both caves and mines should, therefore, be aware of the danger of encountering oxygen depletion, which gives no warning - unlike the prescence of carbon dioxide which causes panting even at low concentrations.

Rob Jones,
16 Westminster Drive,
Cyncoed, Cardiff.

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1. The Chimney at Porth Neigol Mine, Llyn Peninsula, N.Wales, has now, in addition to the bulge, a crack, a big one, has appeared near the top of the chimney - something must be done before the top of the chimney collapses.

2, The Ystrad Einion mine, near Furnace, between Machynlleth & Aberystwyth, has been 'gated' with timber and chicken wire. This is the site of the underground waterwheel. The other mine, Cwm Einion, higher up is still open.

3. There is a company looking at the Penrhyn Du Mines on the Lleyn Peninsula, near Sarn Bach - with what in mind I've no idea.

4. I'm sure you will be glad to know, I've found the William Jones Manganese Mine, or what is left of it. I've been looking for this one for the last 12 years. Its on the Bangor side of the village of Felinheli (Portdinorwig) and at the bottom of a defile, the adit has collapsed. Higher up there are two small scrapings and some timbering

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controlling the streamflow. Pyvolusite on small tip and dressing floor near adit.

Eric:The Book.

Fox Hole Mine, Dartmoor.

This small tin mine is well worth a visit. Dines reports, a small mine worked in granite no records, and Harris, little remains apart from earlier steaming. There are a number of interesting items to be seen on this site.

Park your car up the lane behind the Dartmoor Inn, on the Okehampton to Tavistock road. Walk across the southern slope of Brat Tor, with Widgery Cross on the summit, commemorating the Jubillee of Queen Victoria. Walk to the valley of the Doetor brook, NGR SX546854, you will see much evidence of tin streaming in the valley.

The mine remains are on the south bank of the brook. A two room cottage complete with fire places probably served as the count house and store. Immediately in front of the building is a dressing floor and below this two 12' buddle pits, with a small water-wheel driven from the tail race from the larger water wheel, above the cottage.

This wheel would have been about 18' diameter, the banked up leat behind the pit was connected by a launder, it being an overshot type.

From the dressing floor there is trace of a tramway, granite sleepers are still visible with holes to take the fish plates. This runs up the valley for about 300 yards crossing the brook by a granite slab bridge.

The dump material contains much quartz and reddened granite with some tourmalised granite, very typical of the material found round many of the Dartmoor tin mines.

Returning to your car, on the N.W. side of the tor are the remains of Wheal Mary Emma, they consist of open trench work and the mine was probably only a trial.

Of geological interest the river Lyd is on the boundary of the granite and metamorphic aureole.

Return to the Inn for a drink of the local waters.

Ken Franey.

Conservation of the Lead Industry in the Yorkshire Dales National Park

Visitors to Grinton Smelt Mill this summer will have noticed a dramatic change in the appearance of the site. A management agreement under the 1979 Ancient Monuments and Archaeological Areas Act was signed by the landowner and tenant and the Yorkshire Dales National Park in January 1987. The complex is now in the care of the National Park with the aim of consolidating the existing structures to ensure their long term survival.

The main mill building was completely re-roofed in July and August. This involved carefully removing the stone slates, marking the positions of the battens of the diminishing courses, treating the timbers (the span of the main trusses of the mill is in excess of 50ft) re-hanging the slates on specially made oak pegs, rebuilding collapsed portions of wall and partially repointing the exterior. With minor periodic maintenance the building should now be safe for another 100 years or more although tell tales are being installed to monitor movement of the remnants of the western furnace.

The buttresses of the roofed Peat Store which were collapsing and putting the survival of this building at risk have been rebuilt and plans are being drawn up for its complete restoration, retaining where possible the original roof trusses which are now some 10 degrees out of alignment. It is intended that, finance permitting, this work will be put in hand in 1988.

Grinton Mill has been contained and partially culverted from the dam above the mill building. In recent years some 10m of the stone arched culvert had collapsed and been washed downstream and flood water was occasionally flowing into the mill. Cleaning out of the beck revealed the surviving courses of the culvert and its cobbled floor as well as fragments of mortar bombs washed down with flood debris. The upstream arch has now been partially rebuilt and the surviving courses reinstated as a training wall.

More recently, management agreements have been concluded covering the Old Gang and Surrender mill complexes and programmes for consolidation works are being prepared. It is anticipated that some emergency repairs will take place this autumn with the main consolidation programme starting in 1988.

The National Park has also been instrumental in partially excavating and consolidating the dressing floor complex at Beldi Hill Low Level mine and has negotiated limited public access with the landowner. A report on this site is being prepared for publication.

At Grassington Moor, to supplement the consolidation work carried out by the Earby Mines Research Group, the National Park has installed a series of interpretative boards giving the history of lead mining on the Moor and indicating the main features of interest and built a number of stiles to create a self guided trail.

Interpretation is also provided by the National Park's guided walk programme which

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every year includes a series of walks devoted to the lead industry and its landscape. Details are available from the National Park's Information Centres and are also listed in the free newspaper 'The Visitor'.

These works represent the first phase of the National Park's involvement in consolidating and interpreting the lead mining industry in the Yorkshire Dales. It is currently preparing a long term programme of consolidation works on the lead mining industry for discussion with the HBMC (English Heritage) who have grant-aided work on scheduled ancient monuments and to assist the HBMC in improving the formal protection given to the remains of the lead industry by inclusion on the Schedule of Ancient Monuments - at present only some of the principal mill buildings in the National Park are thus protected, not the associated water sources, bouse teems, dressing floors and of course mines which were integral to the industrial process.

R.F.White. Sept. 1987.

The Lancashire Coalfield.

In the February Newsletter there was a comment that "at Embsay Station there were 7 recent coal mining titles for Lancashire but only 1 from Yorkshire - is there any significance in this?"

First recorded mining of coal is at Colne in 1294, then in 1300 the town charter for Wigan mentions Cannel working in the Borough. By 1500 records show extensive working of Cannel at Haigh (Wigan) and Westhoughton (Bolton).

Cannel is a highly gaseous organic mudstone which burns with a highly luminous flame and is similar to jet. It was a high cost fuel popular with the wealthy as the flames were luminous enough to see by, and cut down on the need for candle light.

Prior to 1573 there are records of "Looses" to drain workings but no indication of whether these were tunnels or open ditches, in 1573 we get the first record of a Sough being driven at Orrel near Wigan. Following this, in 1619 there is a record of permission being given to drain a colliery into the gutter in Millgate in Wigan (this mine was opened up in the 1960's whilst excavating for the new baths at Wigan - these workings were surveyed and were very sophisticated for the period, they were widespread under Wigan and there was talk of making them into a car park). By 1670 the "Great Haigh Sough" had been driven 1120' a depth of 144' to drain the Haigh Cannel.

As output increased, the transport difficuties were resolved by opening up the Douglas Navigation Canal from the sea to Wigan and the Irwell and Mersey Canal from Warrington to Manchester (the Mersey being navigable to Warrington them) these were completed by 1736 and as they were both built to take Mersey Flat boats (equivalent to a Thames Barge) it meant that Wigan Coal and Cannel could be sent straight to any coastal town and, via the sea & Mersey, to Manchester. These were followed by the Sanley (? Ed.) Canal which put St.Helens coal in the same position, and output increased the latter canal being particularly convenient to ship coal up the River Weaver to the Cheshire Salt workings.

To combat this cheaper coal and to drain his coal mines the greatest sough of all was driven in the 1760's by the Duke of Bridgewater who drained the Worsley area by an underground canal. This drainage water was used to fill the Bridgewater canal into Manchester and then on into Cheshire.

By the 1760's Newcomen Engines were pumping at Orrell and in 1795 steam winding was introduced at Manchester.

So as the Industrial Revolution got under way the Lancashire Coal Indusrty was in a position to respond. Output soared and during the 19th C it was second only to Durham and Northumberland in quantity. Liverpool was the second biggest coal exporter in the U.K. shipping coal and cannel to London, Ireland, Paris and New York. As gas works developed the demand for Cannel increased because it produced a very luminous gas for lighting, this demand continued until the 1890's when the incandescent gas mouth became popular and the high cost cannel was no longer required.

By 1890 South Wales had overtaken the Lancashire in production, followed by Scotland in 1900 and Yorkshire by 1910. Prior to this, however, the demand in Lancashire had overtaken production and coal was being brough in.

Sources.

Various books written by Donald Anderson & Associates on the Lancs. Coalfield and a booklet by Wigan Archives, also Hadfield's "North West Canals".

The exercise has raised some interesting points as follows:-

1. Who was the "Mechanical Priest of Lancashire" who was apparently a drainage expert in the early 1700's?
2. What happened at the Steamboat trials on the Sankey Canal in 1793 & 1796."Using a

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Newcomen engine driving oars that strike at 18 strokes/minute" and was Robert Fulton the American steamboat designer at these trials?
3. The Warrington Copper Refineries had by 1752 produced enough Copper Slag to pave a Turnpike Road for Coal from Warrington to Ashton in Makerfield (8 miles). This copper ore being brought by Flat Boat from Liverpool Bay (N.Wales) and Morecambe Bay ((Cumberland).

Alan Sinar.

For Sale & Wanted

1. Unique Christmas Present from Bingstead. The stunning picture of Cononley Lead Mine, especially commissioned from Barry Charles, one of Yorkshire's leading artists, for the cover of B.M. 33, is now available as a limitel edition print.

Copies, 9" x 15", superbly framed by Moldai Studios of Keighley, price £18.50 + £2.30 post and packing (unframed £5.95 + £1.75 P & P) from Bingstead, 38 Main Street, Sutton in Craven, Keighley, Yorkshire BD20 7HD.

2. Out-of-Print back numbers of NMRS Publications are available from A.W.Ashwell, Cuilcagh, Stonyeld Road, Trevor Hill, Church Stretton, Salop.SY6 6JJ.

3. David Gale is undertaking a M.Phil. at Bradford University on grooved stone hammers (stone mauls) and hammerstones from British mining sites. He is intending to produce a catalogue of these artefacts by a survey of museums and collections, and then attempt to produce form types. He also hopes to undertake chemical analysis of material still adhering to their surfaces.

He would be grateful for information on collections containing these artefacts, and any references to their discovery on mining sites and elsewhere.

He can be contacted at 78 Hustler Street, Bradford BD3 0PS.

4. British, Commonwealth and U.S.A. mining share certificates, bought and sold. Please write or phone for details - M.Veissid & Co., Hobsley House, Frodesley, Shrewsbury SY5 7HD. Tel 06944 268.

5. In the February 1987 Newsletter an appraisal of a book "Quarrying & Rockbreaking" by D.Lester was published. After failing to source this booklet through specialist bookshops including W.J.Merrit & Co, who specialise in mineral and mining books I wonder if any member can identify a source.

Whilst on this subject, I intend to try to obtain some publications reviewed in the September 1987 Newsletter. These are:-

a) Tin in Antiquity by R.D. Penhallurick.
b) Cornish Mining Heritage by R.K. Johns.
c) Classic Minerals of Cornwall & Devon by Embrey & Symes.

Again I'd be gratefull for advice.

Please contact Roger Moss, 42 School Lane, South Croxton, Leicestershire LE7 8RT.

6. "History of the Cardiganshire Mines; From the Earliest Ages, and the Authenticated history to A.D. 1874, with their present position & prospect" by Absalom Francis.

Absalom Francis, born in 1823 in Cornwall, was a member of a family whose surname is synonymous with lead mining in Wales and elsewhere. The Francis family had dealings, or were connected with metal mining in Shropshire, Lake District, Isle of Man and many other north European countries. He spent most of his life in Cardiganshire and it was this long association with the area which enabled him to compile detailed information on its mines. Although the author was noted for his somewhat 'overenthusiastic' comments on properties he inspected and wrote upon, this work will be found invaluable to the serious mining historian, whilst also giving the more casual reader an insight into Cardiganshire mining in the mid 1800's.

A useful and fascinating memoir on the author and the Francis family prefaces the main facsimile reproduction and has been specially prepared by Simon Hughes, with the assistance ff Mr. Peter Francis. Two maps of the area, published by Absalom in about 1876 and 1881 also accompany this work. Approx 175pp., 2 maps, soft laminated covers. £12. From. Mrs.H.Bird, Mining Facsimiles, 41 Windsor Walk, South Anston, Sheffield S31 7EL.

7. Re the Sygun Book (Sept.Newsletter). This is a 24 page history which David Bick has written for Phil Amies of Sygun Mine. Price £1.50 from Phil Amies or D.Bick, The Pound House, Newent, Glos. GL18 1PS.

8. "The Mines of Newent & Ross"

Although the Forest of Dean is well known for its mining heritage, the mines which worked over a period of centuries around its northern borders have been quite forgotten.

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The tiny Newent Coalfield was once considered of great potential, bringing a canal to the town. Iron ore was raised for the Newent Ironworks in the reign of Charles II, and there were trials for silver and gold, one of which, near Ross, may be attributable to the Romans.

A history of this neglected local industry, which did not cease until within living memory, is told here for the first time. It encompasses the results of many years research, with details of present-day remains, and is fully illustrated with photographs, maps and plans.

The author is a chartered engineering consultant, and has written a number of books on local history and industrial archaeology, including 'The Hereford & Gloucester Canal', 'The Old Industries of Dean', and 'The Gloucester & Cheltenham Tramroad'. He is a fellow of the Society of Antiquities, and past -chairman of the Gloucestershire Society for Industrial Archaeology.

A5, 88pp, casebound £6.95 + 70p P & P. from the Publisher, The Pound House, Newent, Glos. GL18 1PS. ISBN 0 906885 06 X.

Book Reviews.

1. The Glasdir Experiment by P.R.Jenkins. Pub. Dragonwheel Books, Pulborough,Sussex.

This booklet describes the development of the first successful process to use flotation principles to separate particles of copper sulphides from crushed ore. The brothers Frank and Stanley Elmore, with their father, bought the Glasdir Mine (near Dolgellau) to exploit their ideas over the period 1896-1908 and brought the process to success, initially with a 50 ton/day plant, greatly improving the recovery rate over that achieved by the earlier gravitational methods.

The description is very readable even though the Victorian idiom of the extensive quotations (which are not clearly distinguished in the text) is somewhat disconcerting. Apart from the technical interest the account well illustrates the sound Victorian principle of engineers putting their money where their mouth is, rather than just trying to persuade others to buy their ideas.

There are two line diagrams, but the price of £1.50 (inc. Postage)seems a little high for but 20 pages of A5.

G.B.Greenough.

2. Race Against Time tells the story of the C.R.O. - From its formation in 1935 to the present day - over ½ a century of tragedy and comedy, heroism and high farce, all reflected in the unstinting hard work of thousands of volunteers over the years.

A marvellous compendium of words, contemporary photos and reports, plus maps and line drawings. 208pp, 9½"x 7½", paperback. Price £9.95.

Contact Lyon Equipment, Rise Hill Mill, Dent, Sedbergh, Cumbria. Tel. 05875 370.

3. "Pioneers of Ffestiniog Slate" by M.J.T.Lewis & M.C.Williams. (Snowdonia National Park Study Centre, Plas Tan-y-Bwlch) £1.25.

Excellent booklet, maps, pictures, history.

4. and from the same source "The Slate Quarries of North Wales in 1873". Being a series of letters by a special correspondent of the Caernarfon & Denbigh Herald newspaper, it covers the Quarries at Ffestiniog, Penmachno, Dolwyddelen, Abergynduyn, Corris, Dinas Mawddwy, Nantle, Llanberis, Llanfihangel-y-Pennant, and Bethesda.

Very good reading at £3.95. This one is different to the usual book in giving a lot of background information on the miners, rockmen, their lives, homes etc.

Eric Gray-Thomas.

Well that's all this time around folks, must get back to getting this house in order!!

Keep your articles/snippets coming in - next issue due out in February, 1988 after the A.G.M.

Remember pay your Subs and insurance, if required, NOW - don't delay - if the insurance premium is not received by Geof by 1st January you will not be covered.

Have a very Merry Xmas and a Happy, Healthy New Year.

Cheers

Harry Houghton, 29 Parkside Road,Meanwood, Leeds LS6 4LY.