Interim Newsletter April 2005

NAMHO
National Association of Mining History Organisations

Temporary editor's letter

I'm not sure that title is still strictly true as I was elected 'editor' at the AGM in March. The preparation for this newsletter was well ahead of the intended issue date but personal circumstances meant delay. So I must apologise for the short notice on some items listed in 'forthcoming events' and the omission of some items now long since past.

Group / society newsletter editors are getting better at sending me copies of their publications and that ensures I'm better placed to keep a wider audience informed.

CHAIRMAN'S ANNUAL REPORT

This last year has provided for a steep climb up the 'learning curve' for your chairman. It's easy to come into a job like this with fixed ideas as to what needs to be done and how your going to do it, when what it really needs is the ability to take into account the needs / aspirations of others and move the organisation forward as a whole. I hope I've gone a little way towards the latter goal over the last year.

The first of a new series of regional research seminars was held on April 9th (brief report below) and, judging by the response, it was a success. It certainly generated some heated discussion on the Internet list after the event. NAMHO has to include the interests of a diverse grouping with differing approaches to mining history, and that was evident in the presentations and the response from the audience. New approaches, perhaps taking on board the approaches used by others, can move the subject forward with the potential to re-write some elements of 'mining history'. There was some deterioration into the sort of north - south arguments over our approach to research which can divert us from the real arguments which are worth of further study. There are real differences between mining in Cornwall / Devon and, for example, Yorkshire and the way they are viewed but that has more to do with elements like location and the minerals being worked rather than the methods used for study. They provide good reasons for comparative study rather than dispute.

Similarly the approach of the archaeologist will be different to that of the historian, neither of which is 'better than the other'. What is needed is a co-operative approach - both disciplines contributing pieces to the same jigsaw.

Having resisted the temptation to title the next regional seminar 'the north strikes back', I would prefer to see it as an opportunity to present research into mining in the northern parts of England, metals and coal, and examine how you would like to see it progress.

One of the real strengths of NAMHO is the in the groups that are its constituents. They provide us with a focus in the annual conference and last year's event at Coniston was no exception. It was well run, informative and thoroughly enjoyable. As usual it was impossible to take part in everything; so you can have mixed feelings of fulfilment and disappointment but that is the nature of the event - something for everyone. I certainly look forward to seeing you all at the 2005 conference in Dorking.

The business of the last year has been the usual variety. Potential problems for underground access have been averted by the successful introduction of the new British Caving Association (BCA) insurance scheme. Steve Holding has contributed to the BCA's discussion on our behalf and will

continue to monitor its implementation. Nevertheless potential restrictions to access in other forms continue to be a problem. The guidelines put forward by DEFRA for the new access lands under the Countryside and Rights of Way legislation have been examined by Martin Roe and modified as a result of our concerns. However, there are still grounds for concern over the actions of some land/mineral owners to limit the perceived liabilities by closing off mine entrances; as is proposed for the Cwmystwyth mines in mid Wales. Response to such concerns will fall to local/regional or national interest groups but NAMHO council will provide full backing.

The smooth operation of an association representing such a diverse grouping of organisations would not be possible without the support of the representatives and officers in council. I would like to thank them all for their hard work over the last year.

NAMHO research seminars

Mining in the South-West of England; new approaches, new history? - the first in a new series of regional and topic based research seminars was held on 9 April in Exeter. It was attended by around 40 delegates; most were from the south-west of England but a few came from further north. There were six key presentations on aspects of mining in the region and a discussion on the way forward for mining history research, the scene for which was set by a brief presentation on the changes over the last 40 years. Discussion raised a number of points to be addressed - better use of primary sources, more recording of the aural evidence for recent mining activity and the need for a greater awareness / research into 20th century mining in general. The subject of improved mapping for mine sites caused a deal of heated discussion particularly when it was suggested that the north of England was far in advance of the south-west in that respect. Some of the suggestions from the floor and made privately after the seminar will result in new initiatives to provide improved resources (see, for example, the suggestion on a Register of Current Research below).

For those of you with an Internet connection there is the opportunity to catch up on the lively post-seminar discussion on the mining-history list. Go to the list archives at
http://www.jiscmail.ac.uk/lists/mining-history.html

and search on 'the South West of England'.

We are planning for another regional research seminar for the north-east of England, probably in Newcastle provided a suitable venue can be found, for late November this year. Offers of presentations would be very welcome. More details once we have a venue.

The following seminar will be topic based, on Working with Coal; its History and Archives, and will be held at the Coal Authority HQ in Mansfield on Saturday, 21 January 2006 - more details in the next issue.

JOINT SEMINAR - NMRS and PDMHS

The second Northern Mine Research Society and Peak District Mines Historical Society joint seminar is to be held on Saturday 21st May 2005 at the National Coal Mining Museum for England, at Wakefield. Once again, the theme is work in progress (in its broadest sense) and anyone who would like to give a 15-20 minute talk, with or without illustrations, should please ring Mike Gill, Tel: 01535-635388. A full range audio-visual equipment, including video, is available.

All mining historians are cordially invited to participate in this event, which will feature a series of short presentations as well as an underground visit and a buffet lunch. There is ample parking and room for displays and publications will be provided.

SILVER IN THE NORTHERN PENNINES

A seminar is planned for Saturday 8 April 2006, at the Northern Pennine Heritage Trust Centre, Nenthead, to discuss the issue of late medieval silver mining in the northern Pennines. Silver is

something of an enigma in that area - good statistical evidence for significant production in the 12th century; scepticism on the part of the geologists as to the silver content of the ores, although that is changing; and little or no archaeological evidence available for the period. So if you are a geologist, local historian, mine explorer, or archaeologist with an interest in the area make a note in you diary for next Spring. More details in a further issue or by contacting Peter Claughton, Blaenpant Morfil, Clynderwen, Pembrokeshire SA66 7RE - P.F.Claughton@exeter.ac.uk

THE MINES OF DEVON

A. K. Hamilton Jenkin's two volumes on The Mines of Devon (1974 and 1981) are to be republished under one cover by Landmark. The second volume was published on a short run by Devon Libraries after his death and is probably difficult to find these days so the new edition is very welcome. Even today Hamilton Jenkin's work remains the source of first resort for information on the small mines of some parts of Cornwall and south Devon.

COUNTY RECORD OFFICES - CHARGES

Last year the Carn Brea Mining Society advised NAMHO Council that the Cornwall Record Office had introduced charges for readers accessing their archive collection. We contacted the record office and their historic collections manager to discuss the options for exempting mining history researchers from payment. Now, as it turns out, the charges have been abandoned. This was done in response to the introduction of Environmental Information Regulations and is likely to affect all county record offices. However, discussion on the subject has highlighted the low regard for directly delivered non-statutory services, such as record repositories, at county level. With many county councils reassessing their priorities, particularly with increased pressure to stabilise council tax rises, there is a real threat to archive services. Members should take every opportunity to emphasis the value of such services.

Peter Claughton

FORTHCOMING EVENTS

NAMHO 2005 conference - Dorking, 8-10 July

Full details on the programme and booking forms are available on the conference website - http://namho2005.wcms.org.uk/index.shtml - or by contacting the organisers by post - NAMHO2005 Conference Organisers,
13 Beaufort Road, Reigate, Surrey, RH2 9DQ

Regional Research Seminar - North-East of England - probably late November - date and venue to be decided.

Research Seminar - The History and Archives of the Coal Industry - Coal Authority HQ, Mansfield, Nottinghamshire - Saturday 21 January 2006. Full details later.

Seminar on Northern Pennine Silver - Nenthead, 8 April 2006

See page 1 above.

NAMHO 2006 conference - Llangollen 9-11 June

More details will be provided as they emerge but the conference will be based in the Royal Pavilion with a good range of accommodation in the town. The field trips will take in great variety of mining in the north-east of Wales and there will be a lecture programme on the theme of 'Mines in the Landscape'. Organisation is being undertaken by the Shropshire groups.

If you have an interest in particular sites in north-east Wales, and are willing to help lead a field trip (surface or underground), or are interested in contributing to the lecture programme, please contact Mike Moore <mike@moorebooks.co.uk> or 53 Vineyard Drive, Newport, ShropshireTF10 7DF

Tel: 01952 405105

IMHC 2006

The International Mining History Congress in Belgium, 9-17 October 2006 - for details go to

http://www.miningheritage.org

or

http://www.patrimoineminier.org
http://www.bergbau.org
http://www.mijnerfgoed.org

where the Congress web site should be in place in the near future.

SYMPOSIUM ON DUST AND DISEASE IN BRITISH MINING

A symposium on Dust, Disease and the Politics of Ill Health in mid-20th century (c.1930 to 1970s) British Mining, to be held at the University of Exeter, 22-23 September 2005.

For more details contact the Centre for Medical History, Amory Building, Rennes Drive, Exeter EX4 4RJ, e-mail <cfmhmail@exeter.ac.uk> tel. no. 01392 263289.

ONLINE EVENTS CALENDAR

Steve Henley, the NAMHO webmaster <webmaster@namho.org> is proposing to set up an events calendar on the NAMHO website. Initially group secretaries would have to send him information regarding their events programme but in the long term they will be able to access the calendar online and update it themselves.

Contact Steve for more information. Once the calendar is up and running it will be announced in this newsletter. It should prove to be a useful tool providing information on local, national and international mining history events.

A REGISTER OF CURRENT RESEARCH IN MINING HISTORY AND ARCHAEOLOGY FOR BRITAIN AND IRELAND

Following on a suggestion made at the Regional Research Seminar in Exeter I've put some thought to the idea of publishing a Register of Current Research on the Internet. The idea came from a researcher who was trying to find out if anyone was already working on the area she was considering and could find no information. Once research is finished and published it is generally easy to identify the work but the register would provide basic details of work that is ongoing.

The level of information which might be provided in the register would be down to the contributors. One would expect a subject title, a few keywords to identify the subject area and some idea of the geographical area covered, if relevant, and the period(s) being researched. Personal contact details could be either full or limited to contact through a third party, perhaps through a mining history interest group like, for example, NMRS.

I would appreciate some feedback from researchers on the idea - is it workable, would you contribute details of you research, are there any pitfall, or has it already been tried? I know the Centre for South Western Historical Studies, at Exeter, did run such a register but only for the south-west and over a wider range of topics.

MATERIAL FROM THE NEWSLETTERS

The following item is from the newsletter of the Carn Brea Mining Society, No. 53 (December 2004). It will be of interest to members of many of our constituent groups as it provides some information on what has happened after the demise of the Trevithick Trust and how the valuable King Edward Mine site is to be managed in the future

King Edward Mine: the way forward, by Tony Brooks

At the end of October 2004 the Trevithick Trust ceased to exist. The demise of the Trust did trigger the question - what would happen to the sites that the Trust managed? Cornish Engines at Pool has reverted to the National Trust and Tolgus Tin has been returned to the Gold Centre. Both of these sites will continue to be operated by their owners. That leaves St Day Church and, of interest to us, the King Edward Mine Museum.

The legal and lease situation at KEM is too involved to discuss here but, suffice it to say, that as the result of the Trevithick Trust ceasing operations the responsibility for the lease of the museum part of the site passed to Kerrier District Council. Anticipating this, early in July 2004, KDC invited the King Edward Mine Preservation Group (KEMPG) to manage the museum on their behalf. This was a logical step as the museum was then being managed and staffed by KEMPG volunteers, supported by the Trust.

To operate the museum a charitable company needed to be formed. KEMPG is small group and most of the volunteers are also members of the Carn Brea Mining Society (CBMS) and/or the Trevithick Society (TS). Thinking it through it was decided that the answer was to set up a company, as King Edward Mine Ltd, jointly sponsored by the 3 societies. The grouping brings together the two major Industrial Archaeology/Mining History societies in Cornwall plus the expertise of the KEMPG - a grouping that has a joint membership of over 600. This then is to be a partnership between public sector and the volunteer/enthusiast sector where neither could operate successfully without the other. A budget for the period up to March 2006 was submitted to KDC. This was approved at a KDC Cabinet meeting on the 14th October and ratified by the full Council on the 10th November 2004.

Partnership is the key word here because this is what it must be. There has to be an honest arrangement with no hidden agendas. The company will not make any money; there are no management fees. The KEM budget will be ring fenced and we shall have to account to KDC for every penny spent. The first company directors (who are to have a 'hands-on' role) are :-
Trevithick Society
Kingsley Rickard
Vernon Baldry
Carn Brea Mining Society
Kevin Baker
David Blight
KEMPG
Tony Brooks

At the time of writing (10 November 2004) the company formation is not complete, the lease (and it must be a long one) is yet to be drafted and certain insurance issues remain to be resolved. There is no guarantee that KDC will continue funding after March 2006. It is up to us to increase visitor numbers, to reduce the financial deficit and, importantly, to continue to maintain and to improve this unique site. **So what can you do?** Being a society member should be more than just attending the odd evening meeting and reading the newsletter !

1. Volunteers are needed both to work in the shop/reception and to act as guides in the mill. At least two people are needed to present the site at its best. One employee will be engaged for the season. He/she will run the site on a day-to-day basis supported by volunteers. How about doing half a day in the shop reception/area? Never done that sort of thing before?
Neither had any of us until this year, it is dead easy - particularly now that we have got rid of the till which was something like Arkwright's till in 'Open All Hours'. You also get to meet interesting people.
2. Join the Sunday morning work team. There is plenty to do: refurbish a steam engine, repair a model, paint a wall etc.. We can guarantee you will have a laugh or two.

3. Visit the site at least once a year and bring your friends and visitors. As a society member you get in free, and you get a 20% discount in the shop. Buy the latest mining or industrial history book and more.
As mentioned above we will be employing one person for the 6 months of the 'season'. That post is, as yet, unfilled. Should any member be interested in the job then please contact me. So finally the Society has its own museum, or at least a shared one. It is up to us to see that we keep it. Tony Brooks tel no is 01209 713506 and email: tbrooks@telinco.co.uk

Use it or lose it - it's up to you all, not just the few !

WORKING AT HEIGHTS

The following press release outlines the change of heart by the UK government on the new legislation.

MARCH 15TH 2005

COMMON SENSE ABOVE AND BELOW

OUTDOOR ADVENTURE SECTOR WELCOMES RESOLUTION OF WORKING AT HEIGHTS IMPASSE
Representatives of over forty organisations in the outdoor adventure sector have welcomed a decision in principle by Minister Jane Kennedy to allow for the development of sector specific Temporary Working at Heights Directive regulations in relation to specified adventure activities such as climbing and caving.

The sector and MPs had lobbied the Minister following lengthy negotiations with the Health and Safety Executive, on the grounds that the Directive was not aimed at sporting activities, and that imposing it in its entirety could have severe and damaging effects on safety and businesses.

Alistair Burt MP for North East Bedfordshire accompanied John Cousins and Doug Jones of Mountain Leader Training UK , Tom Redfern of the British Caving Association and Brian Lamb of the Institute of Outdoor Learning to a meeting with the Minister and Health and Safety Commission Chairman Bill Callaghan on March 8th.

Alistair Burt MP said “We are very pleased with the outcome. The sector always recognised the point of the Directive in relation to those whose work temporarily involved working above ground, as in scaffolding or construction, but felt very strongly that it was never intended for sport. This view is held throughout the EU, and was confirmed in a legal opinion prepared for the Minister last November, which offered the opportunity that we had been seeking of allowing National Governing Bodies in climbing and caving to remain the key guardians of safety, a responsibility they have exercised superbly over the years.

This decision finally lays to rest the threat which had hung over the sector of inappropriate safety provisions applying to mountain training and mountain surfaces. It is a victory for common sense, and we are grateful to Jane Kennedy for her understanding of the situation”

John Cousins, Executive Director of Mountain Leader Training UK said “we set out to ensure that adventure activity providers could continue their activities unhindered and believe that the proposal to except us from specific elements of the Regulations is an excellent outcome. We are grateful to everyone who has made their views known and for the support of the media and politicians, especially Alistair Burt and Jane Kennedy. We can return to the business of developing good practice and enjoying our sports.”

Alistair Burt MP 0207 219 8132
John Cousins 01690 720272

THE SIMS COMBINED BEAM ENGINE

The following article appeared in the Peak District Mines Historical Newsletter, 114 (April 2005), 9-12. I know there is some interest in the Sims Combined engine amongst members of other groups and it warrants greater circulation and discussion. The original had two diagrams which have been omitted.

The Sims Combined Engine as used for pumping at The High Rake Mine at Windmill was an unusual form of Cornish Pumping Engine. This article is an attempt to decipher the working cycle of the engine, and to give a few of James Sims reasons for developing the engine.
The engine was a fairly early form of
vertical compound steam engine, although preceded by Homblower and Woolfe, and was developed in the 1840's to overcome some of the main problems of the large single cylinder Cornish engines then in use for mine pumping.
The advantages of the combined engine given by Sims himself were: -

a. Only one connection to the beam reduces the complexity of the connection compared to a Woolfe compound beam engine
b. One cylinder being above the other, thus using the whole of the leverage of the beam
c. No packing on the large piston rod reducing friction and admittance of air, and no cooling of this rod, as it is not exposed to the atmosphere.
d. Large piston lubricated by grease falling from small piston
e. No large cylinder cover to lift for maintenance, small caps being provided for inspection and maintenance, which can be easily done by a "little boy"
f. The constant vacuum applied between the two pistons offers less resistance to the force applied by the steam to the pistons
g. The same amount of power could be obtained from the engine without the high piston speeds inherent in big single cylinder engines. With more gradual admission of steam to the high-pressure cylinder, expansion then occurred under the large piston, thus reducing the number of disastrous and expensive accidents which occurred in the high steam cut off single cylinder engines.

James Sims gave these reasons for his developments in a statement to the Mining Journal of January 1843. They are of course meant as an advertisement for what were then the latest advances in beam engine technology and as such are at best exaggerations of the facts; they in fact proved to be mostly untrue in operation. It should be noted that items one to four only compare the Sims to other compound engines, only items five to seven actually compare it to single cylinder engines. The above points are not quotes from the document, but my interpretation, except for the statement about the little boy.
The Sims engine in fact proved to be overcomplicated, difficult to maintain, and in general was outperformed by the equivalent single cylinder engines then being developed.
It found favour mainly as a rotary engine (for winding, stamping, crushing etc) due to it being double acting. It was, however, installed in quite a number of mines as a pumping engine, in this guise a large weight was placed onto the top of the large piston, being approximately equal to half the load of the engine, which stored the energy produced in the up (outdoor) stroke, and which then assisted down (indoor) stroke of the engine, thus saving on the steam required to run the engine.
James Sims claimed that there would be a reduction of 50% of coal used, compared to an ordinary Boulton and Watt style engine. This statement was, in practice, found to be untrue. However a well maintained, well built Sims engine, was every bit as efficient as any of the large single cylinder engines, this fact being proved by the performance of the original 50/90 inch engine at Cam Brea Mines near Camborne in Cornwall, which either headed, or was in the top three, in Lean's engine reporter in the early 1840s. However this was the exception rather than the rule and the engines soon lost favour, being mostly converted to single cylinder engines in the course of time. The largest Sims engine built was the 60/100 inch engine for Great St George mines at Perranporth. The engine at High Rake is reputed to be the largest of this type built outside Cornwall, although two larger Cornish built 50/90 inch engines were installed, one at Ty Gwyn mines at Llandudno and one at Cornelly mines on the Isle of Man.

The Sims Pumping Engine in operation
Although not as complicated as some compound engines, the operation of the Sims engine is quite different to other engines, be they single cylinder or compound. Here follows a simplified version of its operation.

Steam or Indoor Stoke

When the steam inlet valve is opened, steam pressure is applied to the top of the small piston, forcing it downwards, at the same time the exhaust valve is opened which connects the underside of the large piston to the condenser, the steam contained in the large cylinder is
condensed causing a partial vacuum under the large piston thus assisting the downward movement of the piston rod. The steam is cut off in the Sims engine towards the end of the stroke and the exhaust valve closed to arrest the movement of the piston rod. This concludes the indoor or downward stroke of the engine.

Transfer, Expansion or Outdoor Stroke
The opening of the transfer valve commences the outdoor or upward stroke of the pistons. Steam from above the small piston expands into the large cylinder below the large piston. As this piston has approximately four times the area of the small piston, it is pushed upwards with a force approximately equal to the down stroke, making the Sims engine double acting. The outdoor stroke is terminated by closure of the transfer valve, shortly before the end of travel is reached; any steam left above the small piston is compressed and hence stops the movement. A short pause then occurs before a repeat of the above cycle, this is
controlled by the cataracts, which are water
dashpot timers, that control the opening of the steam inlet valve and hence the number of strokes per minute. This allows the amount of water pumped to be varied to suit underground conditions.

Note - As with all pumping engines, which are reciprocating only (ie have no flywheel and crank), the distance of travel of the piston is controlled solely by the opening and closing of the valves, which are controlled by plug rods from the beam striking adjustable tappets opening and closing the valves at the appropriate moment. Once set the engine should continue to travel at an even stroke. If the engine did not reach its full stroke, the steam governor valve would be opened a little and vice versa if it under-stroked.
The problem with all condensing engines occurred at start up before a proper vacuum had been created in the condenser, on first applying steam to the engine, the piston was forced down only by the steam above the small cylinder, there being air below the bottom cylinder and in the condenser, this was drawn out along with the condensates by the air pump over the first few strokes, on the second downward stroke and all downward strokes thereafter, steam from below the large piston was drawn into the condenser where a spray of water caused it to condense, creating a partial vacuum. This vacuum could take a time to reach its full strength and was a little unpredictable; this had great effect on the power and length of travel of the downward stroke. This start up period of the engine was always controlled by the driver and he had to judge when the vacuum was "solid", if a mistake was made and he put the engine onto its own valve control to early, a very expensive crash could result, caused by the violent over stroke resulting from full the sudden full vacuum taking effect, resulting in cracked cylinder bottoms broken pistons etc.
One of the Sims engines major advantages was that steam was admitted more gradually over the steam (downward) stroke than in a normal single cylinder engine, making the piston speed slower and hence the downward travel more easy to control, even with the unpredictability of the vacuum, upward travel was inherently gentler as it was driven by only the expansion of steam from the small to the large cylinder.
The engine itself passed out of favour due to the complicated design, awkwardness of maintenance, and unless very carefully built alignment of the two pistons and cylinders, caused it to perform poorly, when compared to the much simpler single cylinder pumping engine. Many Sims pumping engines were later converted to single cylinder beam engines. This fate awaited the High Rake 36/70 inch engine when it was later re-erected as a 50 inch single cylinder engine at Mixon Mines in the Staffordshire Moorlands.
The Sims engine was an interesting development and in many ways ahead of its time, but the engineering capabilities of the era struggled to do justice to the design and the inherent difficulties of maintenance all militated against it. It was, however, for a time in the 1840's, a very popular alternative to the single
cylinder, single acting beam engine for pumping
and much used for winding, stamping and crushing engines.
No examples of a Sims engine are known to still exist, and very few engine houses are left standing in any condition. The example at High Rake is a very fine survival and is still giving up secrets of the engine design. It is a must to visit this site if you are interested in early steam technology.
Paul Smith

THE NEXT NEWSLETTER

The next newsletter should appear in the summer, after the conference in Dorking. If you or your group/society has information, queries or anything of interest to the wider mining history community, then please send it to me; preferably in a common digital format.

Peter Claughton <P.F.Claughton@exeter.ac.uk>