Northern Mine Research Society

Newsletter

Society established 1960

www.nmrs.org.uk | May 2017 | www.nmrs.org.uk

Presidents Jottings

Thank you to all of our members who attended our **recent AGM** and to those who were unable to make it but sent in their apologies. As usual it was another enjoyable and productive event and it was good to see some new faces. Our two indoor meetings are an opportunity to meet with like minded people, catch up on news, make book purchases and sample our excellent buffets. There should be a report elsewhere of the informative walk led by Graham Topping which followed the formal part of the meeting and which was taken up by reports which will be available on our website in the members area. We welcomed two new members to Committee –James Cleland and Graham Topping. Elected Officers are as follows

President	-Barbara Sutcliffe
Vice President	-Malcolm Street
Junior vice-president	-Len Morris
Treasurer	-Tim Cook
Secretary	- Mick Cooke
Publications editor	- Richard Smith
Recorder	- Mike Gill
Librarian	- Sallie Bassham
PRO Newsletter editor	- Graham Topping
Meets Leader	- Mick Cooke
NAMHO rep	- Sallie Bassham
Website Adminstrator	- Malcolm Street
Membership Secretary	- still in discussion
Committee Member	- James Cleland

We would like to thank Peter Pearson for his time on Committee and Rob Needham for his work on our Newsletter. Rob has done an excellent job, will be missed greatly and will be a hard act to follow. The long and loud round of applause at the AGM is proof of how his enthusiasm and commitment has been appreciated. We wish Rob all the best for the future. Sallie has now stepped down from her position of Meets Leader after arranging many interesting and informative meets over the years. A big "thank you" to Sallie as well. Mick Cooke has now taken over this position and is looking forward to hearing of suggestions for either extra meets in 2017 or for the 2018 programme.

On behalf of our Society I would like to welcome the following **new members**

Graham Cannon	- Foulridge
Jonathan Currie	-Oldham
Steven Daniels	- Netherton

Retiring Editor

Rob Needham
Pike House, George Lane, Littledean, Glos.
GL14 3LL tel.:- 01594 823487
email:- rob.needham2@hotmail.co.uk

New Editor

Graham Topping
Chapel lodge, Chapel lane,
West Bradford, Clitheroe.
Lancs. BB74SN
tel:- 01200 444685, mob. 07973905883
email:- Glt2top@aol.com

Would you please note that the deadline for inclusion with the August 2017 Newsletter is 31st July . Submissions are welcome that would be of interest to members of the NMRS. These can be forwarded to me as text/disc by post or you can email or telephone. If you require anything returning please ask. Photographs, plans and drawings are acceptable as long as they can be reproduced in black and white.

Contents

Alastair Hetherington – Newcastle upon Tyne
Phil Jenkins - Newport
Martha McGuinn -Rotherham
Mark Smith - Stockton-on-Tees
Val Vayro - Bishop Auckland
Robert Walker - Brighouse
Michael Billett - Edinburgh

Sadly last month we heard of the death of Ivor Brown, a long standing NMRS member, who was the author of numerous books, articles and papers on mining history. He regularly gave talks on mining and mining history and had been involved with NAMHO since its founding. His expertise will be missed. He was also very generous in his donations to our Library which have been very much appreciated and will be enjoyed by many in the years to come.

There are several interesting meets before our next newsletter. Please make sure you book your places. I am already taking bookings for the **short presentations at our Autumn meeting** at Gisburn on Saturday 21st October – more details in the next newsletter – so please remember this while out and about.

The week before the AGM I represented NMRS at a local book fair, helped by my elder grandson. It was an excellent opportunity to chat with people showcasing our publications especially our coal mining ones relevant to the area. We even attracted a new member – thanks. Also we have a dedicated stand at the Mineral & Fossil Fair up at Tennants at Leyburn on 27th-28th May so if you get the opportunity please pop in and say hello. Parking and entrance are free.

At the book fair preceding another meet on Saturday 12 August there will be a good variety of books available, all of which are donations and many from the late Norman Thompson. We also have two boxes of large scale rolled up maps available so hopefully we will see some of you there. Details on your Membership card and website.

Finally another BIG thank you to Rob and please continue to support Graham as he takes over.

Barbara Sutcliffe

LIBRARY NEWS

Thank you to generous givers to the library. I returned from the March
NAMHO Council meeting with many boxes and folders, and then had a further delivery of more beautifully packaged boxes from John Hine.

Recent donations include "Perspectives of Mining Archaeology, 11th International Symposium on archaeological Mining History, 2016" from Peter Claughton; and, from Ivor Brown, English Heritage publications on Stone Slate Roofing and Department of Environment leaflets on Slate Waste Tips and Reclamation of Damaged Land. John Hine's gifts include Cave Research Group Newsletters, Cave Science (volumes 12 to 24), BCRA Bulletins and Transactions, Caves & Caving (from the 1980s), Cave & Karst Science (volumes 25 to 33), Coal News (number 359), Mountain Rescue, Mining and Construction (2001 to 2003), RJB New Scene (volumes 37, 39 to 44, 57, 58), UK Coal New Scene (volumes 60, 62, 64, 66-68, 79, 80, 81) and Transactions of the Cave Research Group. This is not a complete list and I am still adding these welcome gifts to the Library Catalogue, but if you are particularly interested in these latest additions I have the full details in a separate file, and can send it to you on request.Some time ago, the Russell Society gave me copies of their Journals and Newsletters for 2007 and 2008: apparently it was assumed that I would donate these to NMRS library and that has now been done.

At the April AGM I was given more material to the library. Many thanks to William Houston (a long-standing member of the Society) for Transactions of the Cornish Institute of Miners (Volumes 16, 19, 22, 23 and 24); Memoirs of Geological Survey on Fluorspar, on West Shropshire and on The Pennines; Mineral Resources Consultative Committee on Fluorspar; List of Memoirs, Maps and Sections in Ireland; Sources of Industrial Silica in Ireland; Grosvenor Caving Club Newsletters (Issues 168 to 171 and 173 to 177); Camborne School of Mines Journals (1974 and 1979) and IMM Transactions B for August 1971. Thank you to Barbara Sutcliffe for bringing these and for donating Tony Brooks' "Kelly Mine" and "Down to Earth" Issues 95 to 98. Thank you too to Malcolm Street for Friends of Killhope Newsletters 8 to 33 and 35 to 58, 62 and 71; North Pennines Heritage Trust Newsletters 1 to 4, 6, 8 to 13, 15 to 30 and 32; and Haig Colliery Mining Museum Newsletters 18 and 20.

Sallie Bassham (Honorary Librarian)

EDITORIAL

This is my last issue of the newsletter as editor. From the August issue Graham Topping will be taking over the position of editor. So I would like to take this opportunity to thank all members for their support in providing the material from which I have produced each issue and for their tolerance in putting up with my efforts. Special thanks to Peter Hay for proofreading each issue and finding my typos. I hope you have enjoyed reading the newsletter as much as I have enjoyed producing it. So thanks once again, and you could well hear from me occasionally as I put pen to paper to provide odd

items for Graham to use.

Rob Needham

Meets and Meetings

Saturday 13 May Hanson Quarry, Ingleton
Meet 10.30am at the quarry entrance car park on the B6255 Hawes road out of Ingleton. Be the first to view the new mega (and much needed) east wall extension and the quarry production buildings. Please bring a hard hat.
Leader is Bernard Bond (01524 241 857 with answer-phone)

Saturday 10 June The Collieries and Geology of West Calderdale
Meet 10am at Walsden Library, Rochdale Road, Todmorden, OL14 7SN.
A moderate walk of 4-5 hours over good ground, looking at the abandoned Foul Clough Collieries workings and The Temperlays Pipe Works Collieries. Bring lunch, and wear good walking equipment. Leader is Graham Topping 07973905883. Glt2top@aol.com.

23 to 26 June
NAMHO Conference at Godstone, Surrey. www.namhoconference.org.uk

Sunday 30 July Nenthead Lead Mines
Meet 11am at the Nenthead Heritage Centre car park, NGR NY 78 43, on the south-west side of the A689. Surface walk.
Leader is Mick Cooke (01282 427 428)

Saturday 12 August
10.30am to 12.30pm, Garage Book Sale at The Old Manse, 93 Halifax Road, Nelson, Lancashire, BB9 0EQ. 01282 614 615 or mansemins@btopenworld.com. Followed at 12.30pm, by a surface walk to look at the archaeology at Fox Clough Colliery, Colne, led by Graham and Gary Topping, 07973905883. Glt2top@aol.com. Meet at 93 Halifax Road, Nelson, BB9 0EQ,

Saturday 2 September Guisborough Jet Mines
Meet 11am outside Hutton Lowcross near Guisborough.
Whole trip will involve stooping and crawling in low and loose shale passages, hence requires a good level of physical fitness.
Max group size 8 due to adverse conditions, contact Chris Twigg to confirm details (chris.twigg90@gmail.com)
Replaces the ironstone trip originally advertised on meets card.

Saturday and Sunday, 9 and 10 September
Heritage Weekend – see their website for details of local events.

Saturday 21 October
Autumn Meeting at Gisburn Festival Hall SD 82 48. Book sales from 11.30am. Buffet lunch (pre-booking essential) at 12 noon, followed by meeting and presentations. Bookings and presentation details to Barbara Sutcliffe (01282 614 615 or mansemins@btopenworld.com)

Mick Cooke

NMRS Subscription to the Association for Industrial Archaeology

NMRS has subscribed to the Association for Industrial Archaeology (AIA) for many years and the library has an almost complete set of its publications going back to 1977. Recent changes seem to show that continuing with AIA subscriptions is not worthwhile, and so we propose to stop. If any members wish to argue for continuing subscribing, please get in touch me with because the situation can be reviewed.

One reason for the decision is cost. Society membership of AIA costs £42 a year, but for an individual the cost is £33. (VAT was wrongly charged a couple of years ago, but it is possible that VAT may be payable in the future: this would lead to a subscription increase.) The only additional benefit of a Society subscription (contrasted with that for an individual) is that we receive additional copies of the 24-page AIA Bulletin. These Bulletins are brought to NMRS General Meetings; but are so unpopular that it is not possible to give them away to our members. This relates to a second reason for the decision.

AIA publications are now of less relevance to mining historians. The last issue of the AIA Review was a themed issue on textile mills and in it there were only two book reviews of possible marginal interest to NMRS members. The decreasing relevance is demonstrated in library loans. Recent copies of AIA publications are not borrowed from the library, only the earlier ones are requested.

Thirdly, one of the most useful aspects of AIA membership was receipt of a gazetteer for the area of the annual conference – eg Cheshire in 2014. These include brief mining references – eg Alderley Edge and Bickerton copper mines in Cheshire. It seems that production of these gazetteers is to be discontinued.

Sallie Bassham (Honorary Librarian)

Membership of the Association for Industrial Archaeology

NMRS has been a member of the Association for Industrial Archaeology for some years; but, until recently I had not realised that one of the benefits of membership is a 20% discount on Routledge archaeology books. There are two numbers on our AIA forms, but I am not sure which you need to quote. The membership numbers are 321 1317 and 1122 0537.

If you have any questions please contact John Jones on <joneshines@btinternet.com

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Dales Countryside Museum, Hawes

The museum is preparing to display 860 lead mining relics from a nationally important collection which were moved there when the Yorkshire Dales Mining Museum, at Earby, closed in 2015. This has been made possible by a grant of £90,600 from the Heritage Lottery Fund. One wonders what became of the Eric Olthwaite Shovel Collection.

Mike Gill

Hawes, 11 April, 2017

The Dales Countryside Museum in Hawes has won support from National Lottery players to re-house and exhibit one of the country's most fascinating lead mining collections.

A total of 860 objects, including mining wagons and tools, were given to the DCM by the Yorkshire Dales Mining Museum in Earby when it closed in 2015.

A grant of £90,600 from the Heritage Lottery Fund (HLF) means that the artefacts can now be re-examined and displayed, while the stories of miners and of the members of Earby Mine Research Group who assembled the objects over 50 years can be told.

The project is being called, "A Rich Seam: Lead Mining and Textile Heritage in the Yorkshire Dales".

As well as bringing the lead mining collection back to life, new exhibitions will be created from the DCM's extensive textile holdings. The lead mining and textile industries were once vital to the Dales, especially in the 19th century. They went hand-in-hand, with miners often knitting on the way to work to supplement their income.

"A Rich Seam" will run over the next 18 months. Significant building work will take place at the DCM, which is owned and run by the Yorkshire Dales National Park Authority (YDNPA). A mezzanine floor will be extended to create more space, while the lighting, electrics and decoration will be improved. Designers will be commissioned shortly.

A team of around 20 volunteers will be recruited to work alongside staff on the re-interpretation and display of the lead mining collection. One of the most challenging tasks will be to reassemble what has been described as the most complete water wheel and double roller ore crusher in the country. The wheel was rescued from the Providence Mine near Kettlewell in Wharfedale and was transferred to the museum in pieces.

Four former trustees of the Yorkshire Dales Mining Museum have agreed to tell the stories which lie behind each of the artefacts. Objects range from personal items, such as hats and bottles left underground by miners, to tools and ventilation equipment.

The project will include a raft of creative and learning activities. The DCM will work with North Country Theatre, as well as local schools and drama groups, to create performance pieces inspired by the collection.

The money from the Heritage Lottery Fund covers 82% of the project costs. Other funding has come from the YDNPA (£10,000); the former Yorkshire Dales Mining Museum (£6,000); Friends of DCM (£2,000); and a private donor (£1,250).

DCM Manager Fiona Rosher, said: "We are thrilled to have been successful with our application to the Heritage Lottery Fund. We've been given a wonderful opportunity to highlight the importance of lead mining within the Yorkshire Dales. The money means we will be able to display our collections in a way which reflects their significance.

"In the past whole families in the Dales would be involved in both lead mining and knitting. Women and children worked at the mine top, processing the ore, while knitting was a constant activity. We have an iconic collection of knitting sticks, which were often made as love tokens."

Yoredale, Bainbridge, Leyburn, North Yorkshire DL8 3EL Tel: 0300 456 0030

Email: info@yorkshiredales.org.uk

The above is from the museum's facebook page, and was also repeated in an article in the Craven Herald, with the illustration below.

Photo:- Mining wagons from Earby are to go on display at the Dales Countryside Museum

CONONISH DIARY

After the excitement at the beginning of this year, when Scotgold Resources minted twelve golden 'rounds' and invited sealed bids from potential purchasers, there has been little news from Cononish. Even my Glasgow 'snout' has no news.

Nevertheless, the company's PR adviser has had to create some interest … even by repeating earlier dispatches. With a mark-up of almost 400%, ten ounces of Cononish gold raised £46,000 … and the hope is that this Scottish gold will have a special appeal to tourists and jewellers. The people of nearby Tyndrum are now planning a visitor centre, which will promote gold items.

Looking ahead, Scotgold promises to use 'clean, modern methods to recover gold; there will be no mercury or cyanide used. A gravity and flotation method separates the gold from the host quartz.'

The late Bill Harvey and I took up gold panning in the 1980s and, of course, we followed the fortunes of this gold mine that had just opened in Perthshire. We hoped it would be a success !

Ron Callender

HELP PLEASE - identity of an 18th century portrait

This request was received via a contact form on the NMRS website:-

I am researching an 18th century oil portrait of a gentleman standing in a landscape next to rocky escarpment, in his hand he is holding a piece of ore, which looks gold in colour with his other hand he is pointing to this piece of ore. On the relined canvas there is the word "Tissington" written in modern ink, probably by the re liner (taken from the original canvas) I was wondering if you knew of any academics who I could contact who have a good knowledge of the key players of mineralogy and geology in the 18th century, who might be able to help me identify the sitter in the portrait. The portrait itself is 50 x 40 inches, so grand and imposing, so I would suggest that the sitter could be a significant personality in the field of mineralogy or geology.

Greg Page-Turner
(greg@commissionaportrait.com)

APRIL NEWS FROM QUEEN ST MILL, Harle Syke, Nr Burnley

Photo:-Lancashire boilers taken on the last day before closure that evening

"English heritage has decided that whilst recognising the great significance of the mill it is not currently in a position to take on its operations management. We will be meeting with Historic England to see if there is another sustainable way to keep the building and its machinery safe and open to the public. In the mean-

time we will continue our care and maintenance regime for the Mill."
For more information ring 01282 4125555 or email queenstreetmill@lancashire.gov.uk

Taken from the Lancashire Museum`s website

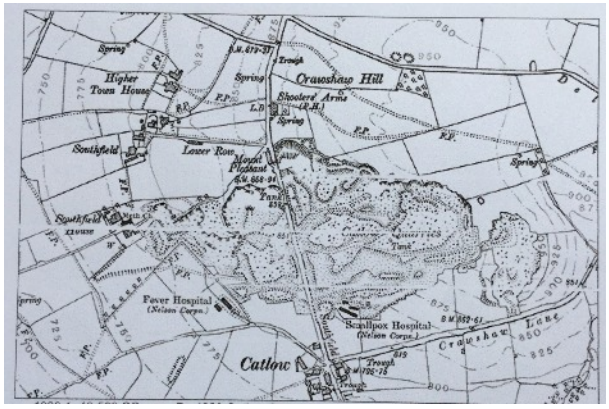
It has been pointed out by Ian Gibson, former curator of Industry and Technology, Museums Service, LLC, that the boiler flamebed is below mill pond water level and with no fires lit over many months the fire brick will get wet enough to start disintegrating.

Obviously a prolonged shut down with just the "care and maintenance" is not enough to save this grade one listed building. The longer this goes on the less likely the Mill will reopen

Barbara Sutcliffe

CATLOW QUARRY, NELSON, LANCASHIRE

In the Nelson and Colne area nearly every farmer, in former days, had a quarry in one of their fields from which rough stone for walling or repairs could be obtained. At Catlow Quarries better stone for walling could be obtained, the value of which in 1848 was £576 a year.



The development of the quarries at Catlow mirrored the growth of Nelson and by the end of the century extensive extraction was underway on both sides of the road at Catlow. Employment grew from 70 in 1850 to 250 by 1890
Ben Chaffer (1815-1883) was the principal quarry master during the middle years of the nineteenth century. He invested in a road steam engine which was good for haulage purposes but destroyed "every road on which it travelled." A railway siding box was named after him but this was removed when the railway line was reduced to single track. It was Ben Chaffer who called the public meeting at Salem Chapel (now demolished) in Nelson which directly led to the formation of the town local Board in 1864. He was followed about 1890 by William F Chadwick. By then stone from the quarries was used for

building projects including terraced housing, weaving sheds, religious and civic buildings both locally and further afield via the Leeds to Liverpool Canal and the railway. In fact it went as far as South Africa.

By 1930 W Chadwick Ltd went into liquidation and four years later was reopened by J & A.M Lupton Ltd. who operated until 1950. At that time the workings were abandoned. Some spoil was removed when the M65 was being constructed. About 1990 the eastern most part of the quarry was taken by Green`s Natural Stone in order to rework the spoil. In recent years building applications for holiday chalets have been instigated but nothing has come of them.
A great deal of the workings have been infilled and planted. North of the Shooters Arms, disturbed ground near the junction of Delves and Southfield Lanes indicated older workings. The inn itself, now named the Shooter`s Arms, dates from 1660 and was primarily for the benefit of the local miners and quarrymen.
Regarding archaeology at OS grid SD884367 there was a tumulus (destroyed) and the writing of Thomas Booth (1899) records,
"*in March 1854, at Catlow quarry, in Marsden (Heights) a few miles across the hills from Todmorden in the direction of Colne, where a number of workmen were engaged baring the rock came across two or three cinerary urns. These were very carelessly handled by the men, and as these vases are almost always made of clay only partially baked …. They are very easily broken: the result, therefore, of the rude treat-*

ment of the quarrymen was that the vessels were broken to pieces."
The mound from which the urns had been dug was destroyed but the last remnants of the urns were given to Burnley Literary Institution in the late 1890`s. Paul Bennett has no idea where they are now.

The following have been consulted for information:-
The History of Marsden & Nelson – Walter Bennett
A Guide to the Industrial Archaeology of Nelson, Barrowford, & Brierfield – Mike Rothwell
The Northern Antiquarian – Paul Bennett
This was Nelson – John Bentley
Disused Stations – Alan Young

Barbara Sutcliffe

THE WORLD COMES TO SCOTLAND

Following a very successful event in 1992, the British Goldpanners Association will host the world gold panning championships for 2017 in the small but picturesque town of Moffat, one mile east of the M74. The event will run from 7th to 12th of August.

Although there are nine categories, my plan is to compete in the veterans category (£23 entry fee), rather than, for example, the Proficient class, which will attract professional prospectors from around the world.

Photo:- The custom-built stadium at Wanlockhead in 1992, with a heat for professional men in full swing

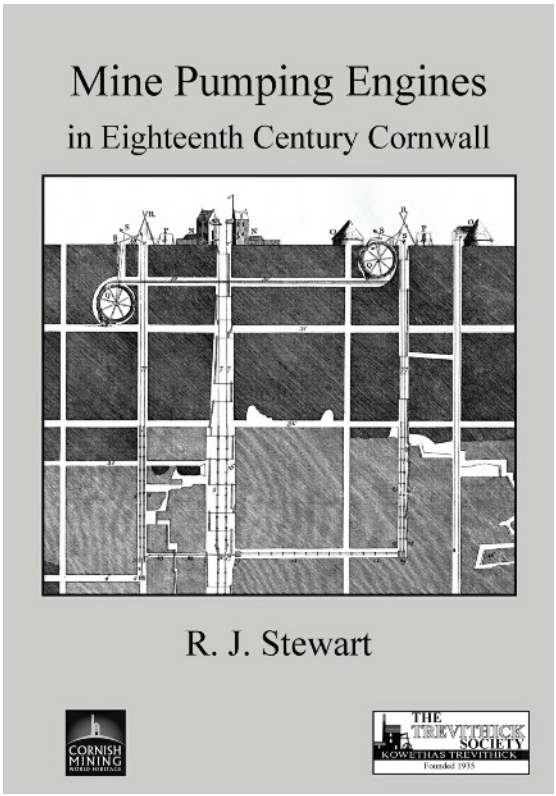
My recent demonstration of gold panning at our 2016 autumn meeting raised interest in some members and I can foresee the possibility of NMRS creating a team to compete in one of the team categories; that is, 2, or 3 or 5 persons. My wife, Margaret, is a very good gold washer but with one or three more persons, we could form a team that would qualify for one of the team events (£15 per competitor). If there is any enthusiasm among readers, I am willing to provide equipment and tuition between now and August. (Contact me via finlaggan@hotmail.com.)

Photo:- At the Swiss National Championships, Margaret Callender has panned a bucket of gravel, and is now transferring six gold grains to a phial

On the other hand, it is worth saying there is merit in attending the championships as a spectator and participating in the ancillary events that take place between lulls in the heats. But be warned, the hotels and B & Bs will be packed that week.
For more information, refer to the website by tapping in:- 'world goldpanning championships 2017'.
Ron Callender

NEW & RECENT PUBLICATIONS

Mine pumping engines in eighteenth century Cornwall



A review of this recent publication has been received and is included on page 9. There seems little point therefore in including the information from the publisher's flyer which is covered in the review. *Mine Pumping Engines in Eighteenth Century Cornwall* by R. J. Stewart is published by the Trevithick Society as a large format paperback at £17.50 ISBN 978-0-9935021-2-5

Yorkshire Collieries 1947-1994 by: Eddie Downes,

Published by Think Pit Publications, ISBN 0995570906 Paperback, 210 x 297 mm, 650 black and white images

Photo:- *Ex miners Tony Banks and Eddie Downes at The National Coal Mining Museum for England*

It was an industry that was once the very lifeblood of Yorkshire's communities ... but it has now gone forever.

The coal mines in the county have shut but a new book is out called *Yorkshire Collieries 1947-1994* which will be unveiled at the National Coal Mining Museum for England near Grange Moor.

The book has been written by former under manager Eddie Downes along with former ex-colliery worker Tony Banks and will be launched on April 27 between 1pm and 4pm.

The 680-page book takes in history, politics and sociology, covering the history of each pit – from sinking to closure – as well as topics such as Yorkshire Coal Seams, Yorkshire Disasters from 1755, The Mines Rescue Service, the National Union of Mineworkers (NUM) and the National Coal Board (NCB).

Eddie left school at 19 and started at a pit in the early 1970s as a roadlayer, progressing to faceworker, then junior official. At the same time he studied Mining Engineering, obtaining an OND, HND and BSc (Leeds).

He was awarded his Mine Managers Certificate in 1979 and entered colliery management in 1980, becoming mining manager of Colcrete Ltd and working at numerous British pits and mines in Canada, USA, Germany and Spain.

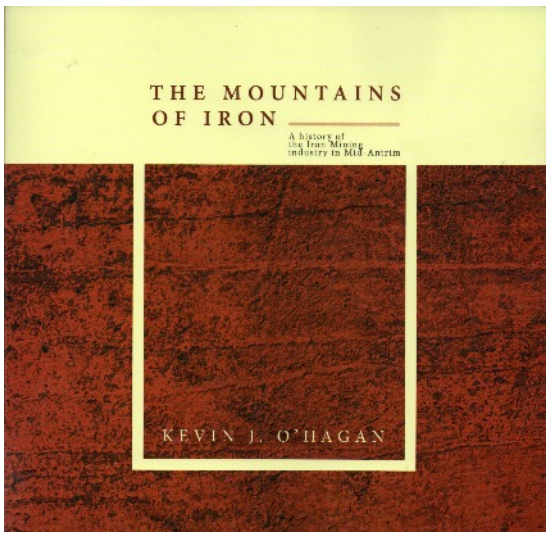
Eddie left coal mining at the end of 1993 and formed a manufacturing company making souvenirs from coal dust and resin. He sold the company in 2005 and worked as a landscaper until retiring in January 2008 when he began the research for his book.

Tony Banks who co-wrote *Yorkshire Collieries 1947-1994* at the Lives Lived Lives lost memorial at The National Coal Mining Museum for England

Tony went underground aged 16 as a pony driver and at 18 started coal face training. He operated ploughs, multi-jib cutters and shearers at Manor Colliery before moving to Lofthouse Colliery in 1966 and became a deputy from 1971. He was the relief overman during the Lofthouse Disaster and the subsequent rescue attempts and aftermath.

Having reverted back to deputy in 1977, Tony then worked on the shaft sinking at Wistow Mine in the Selby Complex where he became Colliery Overman in 1983 – a position he held until ill-health retirement in 1995.

Huddersfield Examiner



The Mountains of Iron, by Kevin J. O'Hagan

Published by Shanway Press, 2016, ISBN 978-1-910044-12-4, 140 pages, available from Amazon, £11.99

This book tells how iron ore mining began in Co. Antrim 150 years ago, how the mines were worked and how small farmers became skilled miners, toiling in cramped conditions beneath the Antrim hills. The industry gave birth to the Irish narrow gauge railway system.

The mines trnsformed the bleak hills of the Antrim Plateau into a hive of industry. Today the red spoil heaps, disused railway cuttings and the Drum Brae are reminders of a once thriving industry - a story that had to be told.

REVIEW

Mine Pumping Engines in Eighteenth Century Cornwall – RJ Stewart, Published by the Trevithick Society. ISBN 9780993502125 176 pages, £17.50 plus P&P

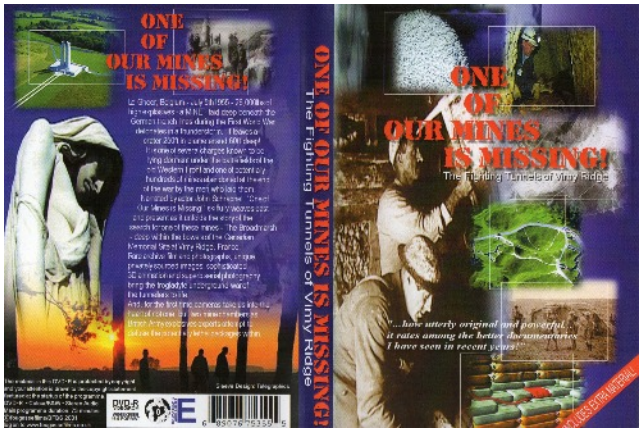
Whilst the development and deployment of the Cornish Engine in the nineteenth century has been extensively documented, the background and context for its development in the preceding century has not received the same level of attention. Rick Stewart's new book, published to coincide with the International Early Engines Conference in May 2017, goes some way to filling this gap.

Rick has done an excellent job in setting out the development of mine pumping in Cornwall during the eighteenth century, this broad account starts with adits, water wheels and rag and chain pumps and so is not concerned with steam power only. The sequential technical development of different engine types are clearly described as are the challenges associated with copper mining in hard rock. I found the section describing the influences of the Coster family during the early part of the century of particular interest. Ricks account sets out the key external influences on the economics of Cornish mining which help the reader understand the somewhat stop-start deployment of both Newcomen and Boulton and Watt engines during the century.

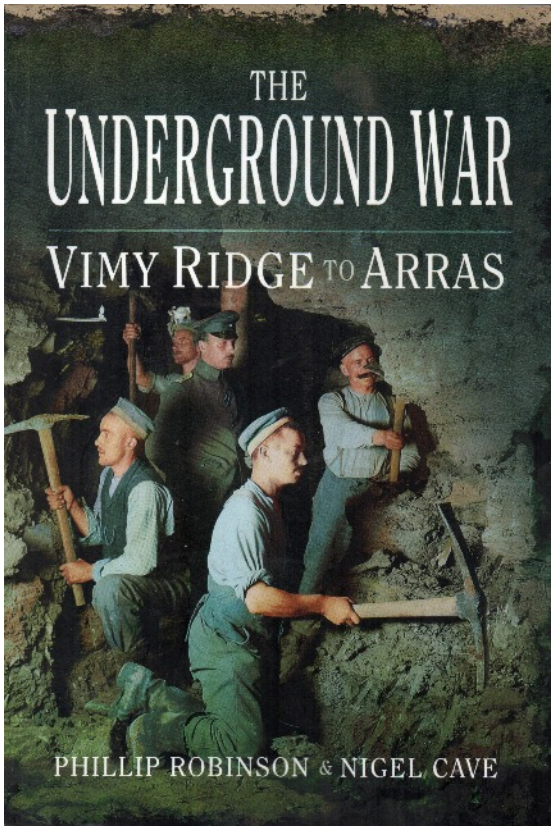
The book is well written and clear with a logical chapter layout and with the bonus of an inventory of engines of the Newcomen, Boulton and Watt, Hornblower and Bull types included in their respective chapters. There are sufficient illustrations to support the text, many sourced from the Boulton and Watt archives and Rick has addressed an issue of interest to this reviewer by providing details of the known erectors of local engines. Whilst an account of a period and topic of this scale cannot include all the available detail Rick has managed to include enough to support his account. I wonder if there is scope for a follow up giving more insight into some of my areas of interest such as the development of engine building skills and boiler plate manufacture locally? Highly recommended

Steve Grudgings

ONE OF OUR MINES IS MISSING!, a DVD produced by Fougasse Films, running time 73 minutes



Not really a review. Recently I was looking at the Naval & Military Press website, looking for any books on Malta and Gibraltar during WW2 that might have any information on the use of rockershovels in tunnelling operations. But there was a sale on and a book title caught my attention - The Underground War, Vimy Ridge to Arras, price £2.50 plus postage. Too good to miss. Then, reading about the mining activities that took place under the Western Front, I came across



mention of the Durand Group, whose activities have been recorded by Fougasse Films. The Durand Group have, since the 1980's, been investigating and, where possible, exploring the remains of the World War 1 mines and tunnels in Northern France and Belgium. The impetus to start the group was the spontaneous detonation in 1955 of a WW1 mine under a field in Belgium, which resulted in a crater 60 feet deep and 250 feet in diameter. Research indicated the likely presence of more intact mines that had not been fired. The DVD records the search for and location of one such mine, and whether there was any necessary action to make it safe. Apparently during WW1 it is thought that some 150,000 personnel (from both sides of the conflict) were involved underground in tunnelling and mining operations. Many of the UK personnel were ex-miners enlisted into Royal Engineers Tunnelling Companies. The DVD includes a ROM folder with extracts from some of the RE Tunnelling Companies War Diaries. The underground war was fought in great secrecy and it is only relatively recently that much information on it has become more widely available. Fascinating!
I can also recommend the book The Underground War, Vimy Ridge to Arras, by Phillip Robinson & Nigel Cave, published by Pen & Sword Military, 269 pages. Apparently many of the WW1 tunnels used the old workings of chalk mines.

Rob Needham

JAPAN TO "E" MINE METALS FOR MEDALS IN 2020

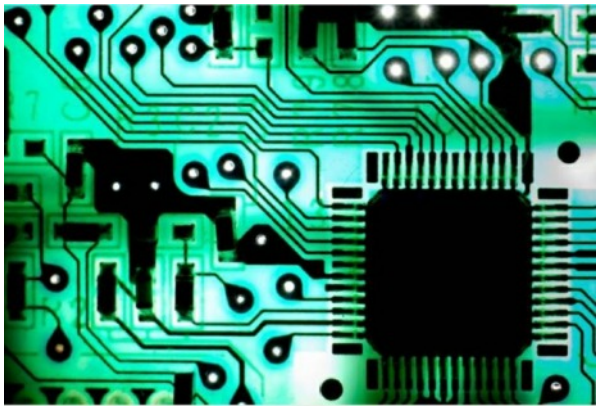
A New Mine Resource

The Japanese 2020 Olympic Games organisers have announced that they do NOT intend to conventionally mine any precious metals to produce all the medals for the games. How are they going to achieve this you may wonder?

They intend to recycle Gold, Silver and Bronze from an "Urban Mine" the resource being e-wastes. This idea isn't as farfetched as it seems, as all smartphones, computers and electronic items contain gold, silver and copper, albeit in small amounts.
It is estimated that 16%of the world's gold and 22% of the planet's silver is currently sitting inside Japan's tech. The games organisers are asking businesses and the public to donate redundant tech. The precious metals will then be leached from it by existing recovery methods. The scope is huge and it will enable the Tokyo Games to be the first environmentally neutral impact games in history in relation to medal production.

Quantities required

The London games 2012 used 9.7kg of gold, 1,210kg of silver and 700kg of copper which is the main ingredient when producing bronze. The London games medals were the largest ones ever produced being on average 20% bigger than any other games medals.
In 2014 Japan discarded 143kg of gold, 1,566kg of silver and 1,112 tons of copper from its e-wastes. (Source Nikkei)
The reason why so much silver is required is that gold medals are made up of an amalgam of gold and silver, gold being used as a colorant. Also tin is used in producing bronze. All of the source metals are present in sufficient quantities to satisfy all the athletes aspirations.
However there are potential hurdles to cross for the mines resource to be exploited. Japan's electronics industry already recycles the rare mineral resources in redundant tech. The games organisers are hoping to promote the concept that your old toaster or smart phone could be recycled into to an Olympic medal will encourage generous giving to the cause.



Smart phone printed circuit board

Recovery and processing methods

The recovery of precious metals from redundant electronics is a very complex and highly specialised process. It involves the following processes
1. Disassembly of the electronics items.
2. Separation of the metal bearing components.
3. A series of chemical processes.
4. Refining of the liberated metals.

It has been calculated that 1ton of e-scrap contains 1oz of gold which is roughly the same ratio of gold in high grade ore mined from the earth.
The technology is currently available and the entire process does not involve the use of Mercury or Cyanide. It does require the use acids and energy for heating purposes. All of the waste materials can be recycled such as the steel and plastics and so forth. The Rio 2016 games medals were made from 30% recycled metals and the lanyards were made from 50% recycled plastic, and this would be an added bonus to the process.

Summary

The ethos of the Olympic Games is fair competition to each and everyone. This ethos is now being adopted by other non competitive aspects of the games. The impact on Mother Earth has to be a consideration going forward. This small but significant contribution of sustainably sourcing the metals for the medals is a step in the right direction. We could looking forward to the 2024 games be looking at the javelins and the shot puts being produced from recycled e-wastes. The scope is endless. I get a buzz from the thought of the 100mts final being won by, Usain Bolt and him having a bit of my smart phone hanging around his neck, (he might have hung his medals up by then). Now that's "Bling"

Graham Topping

MINING HEADGEAR STRUCTURES

On a recent visit to London the skyline is dominated with skyscrapers that defy human ingenuity and imagination. If we could turn the clock back to Victorian Britain the skyline in most towns and cities would be dominated by mill chimneys and coal mine headgears, these structures would be the skyscrapers of their day. Mills and chimneys have been described in classical history as " dark and satanic ". In contrast the Pit headgear is looked upon as a symbol of much affection and it is still an evocative symbol of this once great industry. Why is this is a question that needs to be asked.

Photo:- The evocative silhouette of a mine headgear. (South Wales)

Headgears tower over mine shafts that descend into the bowels of Mother Earth where man has endeavoured to win minerals from within. The term "headgear" is generic in that it applies to all structures connected to the handling of men, materials and minerals up and down the shaft. It is the most striking surface manifestation of the size and scope of the mining activity below ground. Distinct to all other manifestations of mining activity the stark outline of the mine headgear asserts itself on the skyline because of its functionality and industrial beauty.

History

With the development of mining techniques from simple bell pits to deeper mining activities the need for shafts became necessary. These were often brick or stone lined and were of a permanent nature in scope and function. As deeper seams were accessed the need for more suitable winding equipment became apparent. This led to the development of headgear structures capable of handling minerals, men and equipment from these deeper reserves. A rope attached to a basket (later a cage) would pass over a winding wheel mounted on top of the headgear and attached to a source of winding power. The development of steam winding engines dramatically increased the development of these structures enabling increased production to be achieved. A general rule of thumb that can be employed is that the bigger the headgear structure, the deeper and greater the scale of the underground activities.

Types of headgears

There are basically two types of headgears. The most common type in older mines is the A frame structure. Also four post and six post structures were common. This type of structure would be used were cage winding is employed and the sheave wheels are usually exposed.In modern mines the headgear is part of a tower structure which employs the use of skips for winding minerals. These often have cages mounted on top of the skips for winding men and materials. These are often seen with a supporting truss to the rear to make them more stable.

Photo:- A frame structure of Thoresby Colliery

Photo:- Skip winding headgear towers

Construction materials

Early headgear structures were commonly made of wood. Mainly made from pitch pine although oak was also used. As wrought iron became cheaper and more stable it often replaced the struts and braces of former wooden structures. Steel and riveted construction was very common in the late 1800s early 1900s. The legs of the structures were often of a built up construction with four very large L shaped beams being riveted together with struts and braces attached. Later structures were often made from reinforced concrete. It is also common to see later structures made from both steel and concrete.

Photo:- Very early wooden structure. (South Wales)

Photo:- A locally made wooden structure (Peggy's mine Wakefield 1940s)

In Conclusion

The global demand for mining headgear structures is actually growing (amazing as it might seem). This is because as open pit mines reach the limit of their workable reserves they are adopting underground mining methods to exploit deeper reserves. Rio Tinto's Palabora Copper mine in South Africa is a case in point. South African mines that have concrete structures that have been abandoned are still largely intact as they are hard and expensive to demolish. Steel structures fare the worst as they have a residual scrap value and are easier to demolish. Cornish Tin mines in general lost their steel headgears during the Second World War because of their scrap value. As for British coal mine headgears still remaining, they are mostly attached to a Museum or trust. As of March 2017 Kellingley Collieries headgears are still standing but they too will

soon disappear from the sky line. In answer to our question, "why do these monoliths of a bygone age still hold the public's affection?" A question for you to ponder over but when you see one it will raise a smile on your face. So appreciate the "last of the few".

Graham Topping

NEWS

School closed over chalk-mine alert

A primary school has been forced to close amid fears that it could collapse into a 19th century chalk mine.

Pinner Wood School, in north London, was shut down yesterday by Harrow Council after geotechnical surveys detected the old mine workings beneath its playground.

Laser imaging of these previously 'uncharted and unknown' tunnels showed they stretch under school buildings and the mine roofs have collapsed in certain places and are likely to open up new surface holes at some point that could swallow the entire building.

Deb Spruce, the school's head teacher, said: 'This is a huge and sudden shock to all of us. I'm certain we will all rise to this challenge.'

Daily Telegraph 25 March 2017

Fresh lease of life for one of Britain's oldest slate mines as roof for Cambridge college

Nigel Smith inspecting a seam of slate in his newly re-opened mine in Collyweston, Northamptonshire, sixty years since it was shut down Credit: John Robertson/Barcroft Images/The Telegraph

For centuries it was the material which protected buildings across Britain - both humble and magnificent - from the elements, before the slate workings which produced it were abandoned in the late 1960s.

As reclaimed slate from derelict farm buildings became cheaper to find, Collyweston slate from mines in Northamptonshire and Lincolnshire was no longer required.

But now one of the country's oldest Collyweston mines has re-opened and its distinctive limestone tiles (**ed:** should this read slate?) will soon adorn one of the roofs at King's College, Cambridge.

The 600-year-old mine, on the outskirts of the Northamptonshire village of Collyweston, had been turned into a builder's yard following its closure half a century ago.

'Willie' Smith, 2nd from left on back row, the great grandfather of current mine owner Nigel Smith, with other miners at Collyweston in 1913. Credit: Barcroft Images/The Telegraph

That changed when Nigel Smith, the yard owner's son, hit on the idea of once again exploiting the material.

"Reclaimed slate has become harder to find and so more expensive, so we thought 'we're sitting on top of tons of the stuff, why not use it?'."

Mining consultants told Mr Smith he would be able to extract around 200 tons of Collyweston slate a year over the next 10 years before the mine was exhausted.

At the same time he was approached by King's College to supply them with £350,000 worth of slate for a new roof to replace the existing one on Bodley Court, whose uninsulated tiles have become thin and degraded from being exposed to condensation caused by its central heating.

"That sealed the decision to re-open really," said Mr Smith, 50. "Now we've also been approached by other building owners, including Clare College, Cambridge, with a view to supplying and fitting a new slate roof for them."

Slate from Collyweston mines across the region - including the abandoned one bought in the 1980s by Mr Hope's father Claude, now 83 - can be found on farm buildings and ancient manor houses around Britain.

The material was used on London's Guildhall - the home of the City of London Corporation - and can even be found on a 19th Century manor house on Long Island, New York.

But not everyone welcomed the idea of the Collyweston mine re-opening.

Indeed Collyweston Parish Council - fearing the noise and traffic which mining would bring - objected to planning permission, before it was eventually granted by East Northamptonshire Council as a way of helping to preserve the local character of villages in the area.

Mr Smith said: "The parish councillors asked why people couldn't use concrete imitation tiles instead. Some of the villagers were also nervous about us re-opening, until we showed them round the mine. They are very supportive now."

The Claude N Smith Collyweston slate mine has now hired three miners, along with two 'clivers' and two 'dressers' to work the seams, which extend for hundreds of acres 20 feet beneath arable land around the village.

The clivers split the mined blocks of slate along their natural veins after they have been frozen for eight hours at a time, before the dressers finish off the individual tiles.

Before work began on extracting slate from the mine decades of rubbish dumped there had to be removed. But there was also the tricky question of a colony of bats which had made the old mine its home.

These have now been moved to one half of the mine while other areas are worked. When those seams are exhausted the bats will be moved across so the process of mining can continue.

Historic England stipulated that the slate used to restore the roof at Bodley Court, laid originally in 1893, should come from the Collyweston mine, due to its historical significance.

Work has begun on mining the slate and the new roof is expected to be finished in 2018.

Shane Alexander, King's College's clerk of works, said: "There is evidence that Collyweston limestone slate was used as far back as the Romans."

Philip Isaac, Domus Bursar at King's College, added: "The College will be re-roofing Bodley's Court using Collyweston stone as part of a refurbishment of the building in 2018 - 19, in line with recommen-

dations from Historic England and Local Conservation Officers.

"This distinctive stone, which is used on a number of buildings throughout this part of the country, adds to the architectural character of the College and sits well with the nature of the Court."

DailyTelegraph 8 March 2017

HEMINGFIELD COLLIERY

Open Day and Working Party Weekend, Saturday 18th March

With the heavy lifting over. And tools being tidied away, the site was secured for another day. Our thanks indeed again to the Northern Mine Research Society (NMRS) which was an early and firm supporter to the group, supporting the provision of

security shutters which continue to protect the site and keep it looking smart.

Coming together: Open day and community activities, 15th April 2017

The Friends of Hemingfield Colliery had a busy and varied day this weekend. In addition to an Open Day at the colliery, Friends Director of Volunteering and Community Engagement, Christine, went to join in the exciting **Elsecar Making History** event held from 10 to 1pm at the Heritage Centre. The event brought together examples of local history materials from Barnsley Archives, together with an open invitation to visitors to bring their own records, letters, pictures and stories to share.

Back on site, Site Manager Glen opened the gates and was joined by regular volunteers Keith and Frank followed by newcomer Neil. Later volunteer Chris served to lend a hand, and later still we welcomed Andy and Luke.

Protecting our environment

The mission of the day was to start the process of erecting a new fence to secure the site.

Busying themselves during the morning with some heavy lifting, the Friends and Volunteers caught up with developments in and around Elsecar, and looked forward to many of the events which are coming up in the months ahead.

The first of which is the ***Elsecar Heritage Railway Beer Festival***, 28th April-1st May, presented by Barnsley CAMRA and hosted by our friends at the Elsecar Heritage Railway. Steam trains will be running on Saturday, Sunday and Monday.

Later in May, on Weds the 24th, there is a fantastic illustrated talk in the evening, at 7pm (£1 charge incl. refreshments) given by Dr Nigel Cavanagh, a supporter of the Friends, who will be giving a talk about Elsecar, Wentworth Woodhouse and the Fitzwilliams: Landscape, People & Industry.

Doing our bit

After lunch, the Friends headed down to Tingle Bridge, to join in with the **Elsecar Canal Spring Clean**, a community litterpick which began in the morning, organised by the Heritage Centre and provisioned by the Forge Community Partnership Tidy Team. Local people, visitors, and members of the Barnsley, Dearne & Dove Canals Trust came

together to improve the appearance of the canalside. It's easy for people to forget how fortunate we are to have such a green and pleasant canalside environment to enjoy. Earlier in the day visitors to Elsecar took part in a Nature Discovery Day event, organised by the Dearne Valley Landscape Partnership, and guided by the Sorby Natural History Society experts, looking at the wildlife alongside the canal.
Proceeding down the canal footpath from the Elephant & Castle, at Tingle Bridge, the new litterpickers from the Friends of Hemingfield Colliery got to work, collecting the sadly considerable amount of rubbish tossed aside along the canal.
With groups working the length of the canal from Elsecar basin, right past Smithy Bridge and on to the Cortonwood end, there was a lot to pick up
.Under Smithy Bridge, in particular, there was a lot of

unusual items, and the picking group stopped to haul out a coffee machine, two car seats, a bridleway sign, and various other bits and pieces.

At the end of the day, the organisers reported that 65 bags of rubbish, seven tyres and two supermarket trolleys had been collected from the canal and towpath between Elsecar and Cortonwood.

The Friends of Hemingfield Colliery

DID YOU SEE?

On Yesterday TV on 30th March at 7pm Alexanders Lost World, Land of the Golden Fleece, with David Adams.

In the programme he visits a lapis lazuli mine in Afghanistan (ancient Bactria) where the blue gemstone had been mined for Tutankamun's death mask. It is the oldest continuously worked mine on earth (over 6000 years) at an altitude of some 3000m and in an active earthquake zone.

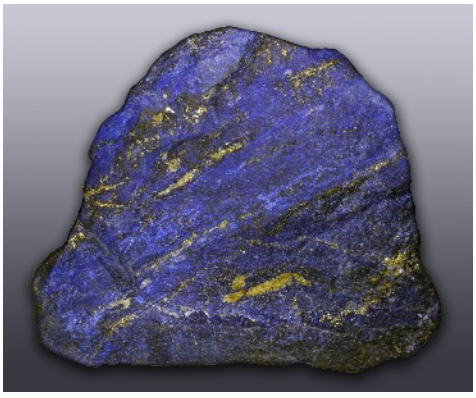


Photo:- Lapis lazuli

MORE NEWS

British Nobel winner develops cyanide-free gold extraction

A British Nobel Prize winner is hoping to revolutionise the mining industry with a new technique for extracting gold that does away with poisonous cyanide.

Sir Fraser Stoddart, the Scottish-born scientist who won the Nobel Prize for Chemistry in 2016, is behind a new start-up that is testing a starch-based method of separating gold from ore.

The 'serendipitous' discovery by Sir Fraser's research team at Northwestern University in Chicago is being developed by his company, Cycladex, in Nevada.

The technique uses a hydrogen peroxide-based substance that combines with a cornstarch-derived compound to extract gold at ambient temperatures.

Cycladex believes its technique is cheaper than current methods and could eventually replace the cyanide leaching process that has been used in most gold mines for the past 120 years.

'It's a very much greener way of extracting gold,' Sir Fraser said. 'It's my hope that this will put increasing pressure on the gold industry to move away from cyanide use.'

Cyanide has been blamed for contaminating waterways and poisoning wildlife. Sir Fraser said he was confident his technique stood 'a pretty good chance' of becoming the new method industry-wide: 'That's my dream.'

Cycladex has won a $1m grant from the National Science Foundation in the US and is now working with Comstock, one of the world's oldest gold mining companies, on a trial that could move to a commercial scale within 18 months.

The company is now looking for further partners, and has also teamed up with a miner in Slovakia, where the use of cyanide is banned.

Sir Fraser said the chance discovery of the technique showed the importance of allowing scientists to pursue research without being set onerous goals.

'Politicians think they can tell the science community what to target', he said. 'More funding that is given with less direction would in the fullness of time, provided it went to research groups with good track records, be very much more productive for society in general.'

Sir Fraser's collaborator is Roger Pettman, a former research student of his, who developed non-stick, biodegradable chewing gum and now serves as Cycladex's chief executive.

Daily Telegraph 15 March 2017

Helium firm predicts ballooning demand as airships take off

Giant helium-filled airships could soon be plying the skies, and a Tanzanian-based gas explorer hopes to be joining them for the ride.

Helium One, a start-up crewed by oil and mining industry vetrans, is teaming up with Lockheed Martin to work on using the US giant's new airships to transport helium from its project in Tanzania to port for shipping.

The company hopes that the partnership will eventually result in it supplying helium to Lockheed's entire fleet of hybrid airships.

Lockheed plans to launch its first helium-powered airship for commercial use in 2018, and already has an order for 12 craft from an aviation firm in Alaska. The giant aircraft can carry minimum 21 tonne payloads and are intended for use in the oil, gas and mining sectors, delivering bulky supplies to remote installations where there are few roads or airstrips, as well as for use in tourism.

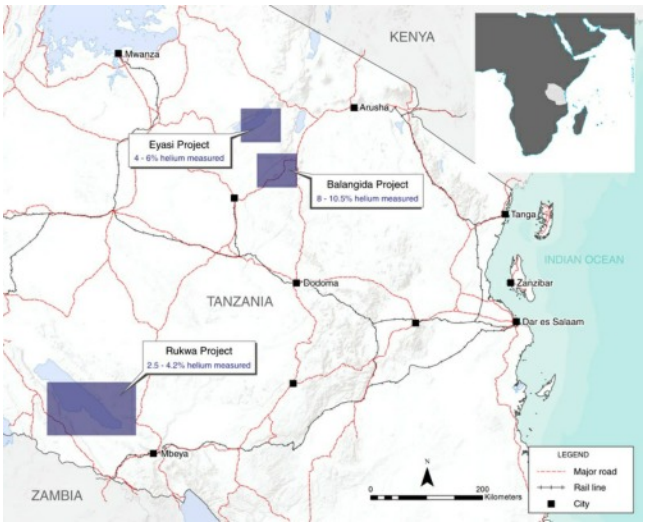
Tom Abraham-Jones, Helium One's chief executive, said:- 'We like the thought of shipping our product using our product.'

Helium One claims it has one of the largest untapped resources of helium anywhere in the world, totalling 98.9bn cubic feet, and is expecting a surge in demand if Lockheed's airships take off.

Helium One is privately held by its founders and a group of high net worth individuals, but recently gained the Aim-listed Solo Oil and Gas as a 10% investor.

The company's helium deposit in Tanzania could begin producing by late 2018. Using airships instead of trucks to transport the gas would provide a 'direct, point-to-point delivery' to the port in Dar-es-Salaam in seven hours, Mr Abraham-Jones said.

Helium is inert and therefore much safer than hydrogen, which was used to propel the Zeppelins of the 1930s. The development of helium-fuelled airships for commercial use has only recently become possible thanks to military patents being available in the public domain.



Daily Telegraph 5 April 2017

My first reaction on reading the above article was that it was an April Fool joke, although the date was April 5th! Also the reporter is under the mis-apprehension that the gas in an airship is used for propulsion, whereas really it is used to provide lift. However, an internet search revealed that Helium One is a real company. The company website gives the following information:-

Current project areas

The Company holds in excess of 4,500km² of exclusive Prospecting Licences encompassing four project areas referred to as Rukwa, Balangida and Eyasi. All of these areas have surface seeps with helium concentrations ranging between 2.5% – 10.5% by volume, and have ideal geology to host sub-surface helium accumulations.

First mover advantage has given the Company the ability to control a globally significant helium-bearing province.

The licences are held under the Tanzanian Mining Act, and are not within national parks.

A maiden prospective resource assessment for Rukwa and associated Competent Persons Report (CPR) is currently work in progress by Netherland, Sewell & Associates Incorporated (NSAI). Geophysical surveys are planned in the near term at Eyasi and Balangida with the intention of advancing them to the same status as Rukwa.

All I can say is that I'll watch to see what happens.
Rob Needham

NEWS FROM THE INTERNET

Billionaires who plan to get filthy rich from mining the moon are facing one huge problem

PA:Press Association

Our planet's satellite is thought to contain vast amounts of gold and platinum, but it might prove difficult to make money from it

Moon Express wants to mine the moon

Exclusive by MARGI MURPHY
3rd February 2017, 9:31 am

LUNAR prospectors dreaming of getting rich during a gold rush on the MOON could face disappointment, a space law expert has revealed.

Later this year, five space mining companies will send reconnaissance missions to analyse the surface of the moon for valuable gold and platinum.

But those eyeing up the priceless precious metals are unlikely to cash in, thanks to international space law which has existed for several decades, the director of the London Space institute of Property and Law, Professor Sa'id Mosteshar told The Sun Online.

He said: "Once it becomes feasible [to mine the moon] the whole range of space treaties will kick in and the 16 member states that have ratified it will raise an objection to appropriating any part of outer space."

Current space law works similarly to the sea bed treaty, which allows nations to explore the oceans but states that any materials they extract will be pored over to consider how to distribute it fairly.

"There is an international treaty to which virtually every country in the world is a party to and that parties cannot appropriate any part of Space.

"Any individual they authorise to carry out Space activities must be subject to control," Mosteshar added.

His warning comes as one billionaire and his pals boasted that they were one step closer to mining the moon for gold, platinum and rare materials worth trillions.

Moon Express on Tuesday announced it was handed £16 million ($20billion) from wealthy donors to start carving up our planet's satellite.

Moon Express is one of the five companies that will send a robot to the moon this year.

Naveen Jain, Moon Express' billionaire co-founder and former Microsoft employee hopes to find water, Helium-3, gold, platinum and rare earth metals on the surface.

The company describes itself as a "privately funded commercial space company created to develop and mine the resources of the Moon and further space exploration."

It's reported to be backed by Trump donor Peter Thiel.

It is hoping to win its next bit of funding through the Google Lunar X competition.

Winners must be the first to send a robot to the moon, make it travel 500m across the surface and then beam its surroundings back to Earth in HD by the end of 2017.

Google said: “The first team that successfully completes this mission will be awarded the $20 million Grand Prize.
“The second team to successfully complete the mission will be awarded $5 million.
“To win either of these prizes, teams must prove that 90 percent of their mission costs were funded by private sources.
“Teams now have until the end of 2017 to launch.”
Doomed by a legal minefield, space mining billionaires are more likely to make money by raising it through funding and are more interested in doing something with their piles of cash, Mosteshar added.
“A number of individuals just want to do something with their money,” he quipped.

Duke of Devonshire announced as patron for Institute of Quarrying centenary celebrations

Feb 21, 2017

The Duke of Devonshire has been announced as patron of the Institute of Quarrying (IQ) in its centenary year, in support of the positive impact the quarrying industry has in Derbyshire and beyond.

IQ represents professionals working in quarrying and minerals extractives. Its centenary is an opportunity to showcase to the public the progress that this essential sector has made in its operations and accountability over the last 100 years.

The Duke said: “I am honoured to take on the position of centenary patron for the Institute of Quarrying. Derbyshire enjoys a rich history of mining and a thriving quarrying community, which spans many generations. It’s a big part of our region’s identity and our economy.

“I look forward to celebrating this in my capacity as patron over the course of the year and I am particularly pleased that I will also get to enjoy the IQ Quarry Garden so close to home in the summer.”

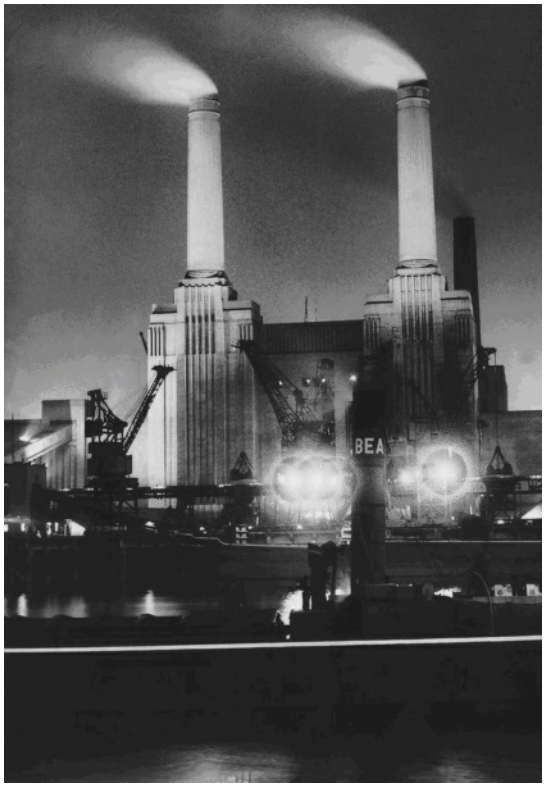
Miles Watkins is President of IQ. He adds: “The Duke’s patronage in this our 100th year is great news for IQ and its members and we are very appreciative of his support. 2017 promises to be a very exciting year for our members, with a number of major partnerships including the National Memorial Arboretum and the Royal Horticultural Society.”

IQ is investing in a major programme of public-facing communications throughout 2017, the highlight of which is a show garden called ‘Quarry Garden’, created by award winning designer Paul Hervey-Brookes, at RHS Chatsworth Flower Show in June.

End of an era with NO coal set to be used in any UK power station for the first time since 1882

National Grid says the country is likely to go a whole say without using any coal to generate electricity for the first time since the Industrial Revolution

The first day without coal - Britain used no coal to produce power for the first time in more than a century
Today is set to be the first working day since the Industrial Revolution that NO coal will be burned to generate power.
National Grid tweeted the prediction, marking a historic milestone in coal’s long term decline.
There have been previous days when the UK went as long as 19 hours without any coal being burned to generate power.
But National Grid this is likely to be the first 24 hour period without.



For more than a hundred years coal-fired power stations provided the electricity for our homes and workplaces - but now Battersea is being turned into flats

A spokeswoman said there were no specific reasons. However, it coincides with warmer weather as we head into summer and a number of coal fired plants undergoing maintenance.
National Grid confirmed that today was on track to be "the first time the UK has been without electricity from coal since the world's first centralised coal fired generator opened at Holborn Viaduct in London in 1882."

The power of coal

. Coal used to be vital for fuelling the nation's power stations and in homes. At its peak, more than a million people were employed in Britain's coal mining industry. Even in the 1960s, British Rail was still running steam trains using coal. A decade later saw a strike by miners that left the country on the infamous three working week.
Coal use was already in decline by the time railways began switching to diesel and electric trains. The demise of the industry hammered once thriving coal mining communities. The bitter miners' strike of 1984-85 saw workers clash with Margaret Thatcher's Tory government in a bid to prevent a wave of pit closures.
By the mid-2000s, the industry was a shadow of its former self, with a handful of open cast mines. A drive to cut green house gases has driven a switch to gas fired power stations, nuclear and renewable energy such as wind. Three coal plants closed last year. Coal accounted for just 5.8% of the UK's power mix between April and June last year, down from 20% the year before.

Sunset on a proud industry

Mine worker walks towards the pit head at Kellingley Colliery on its last day of operation in north Yorkshire (Photo: REUTERS/Phil Noble)

Last May saw the UK hit another milestone, when more power was generated from solar energy than coal. Last year also saw more electricity generated from wind than coal for the first time. Britain's last deep coal mine closed in December, with the loss of 450 jobs. Kellingley Colliery in North Yorkshire was capped off, bringing centuries of deep coal minig in Britain to en end. The Government has pledged to end the burning of coal in power plants completely by 2025.
Hannah Martin, head of energy at Greenpeace UK, said: "The first day without coal in Britain since the Industrial Revolution marks a watershed in the energy transition. A decade ago, a day without coal would have been unimaginable, and in 10 years' time our energy system will have radically transformed again.
Unmanned wind farms are taking over from coal-fired stations
"The direction of travel is that both in the UK and globally we are already moving towards a low carbon economy. It is a clear message to any new government that they should prioritise making the UK a world leader in clean, green, technology.
"They will need to get on with the coal phase-out plan and recognise the economic potential of renewable energy and energy efficiency. We can meet the UK's needs for skilled jobs and fair bills, whilst also meeting our climate targets."

Prehistoric Norfolk mine Grimes Graves to open second pit to public

Tourists will be winched deep underground to see 4,000-year-old site where Neolithic miners used antlers to hack out flint
The remains of the ancient pits created an extraordinary pockmarked landscape.

Photograph: English Heritage/PA Wire

Maev Kennedy

Monday 6 March 2017 00.02 GMT

A challenging descent by ladder, winch and harness into a prehistoric underworld will open to the public for the first time this year, allowing exploration of shafts and galleries cut deep under Norfolk heathland more than 4,000 years ago.
The extraordinary surface landscape of Grimes Graves, pockmarked with hundreds of shallow depressions, puzzled people for many centuries until they were identified about 150 years ago as neolithic flint mines.

The name Grimes Graves has Anglo-Saxon origins, given long after the mines fell out of use as metal tools replaced flint, and some of the convenient hollows were used as burial grounds in the Iron Age. Under the Normans the site was used to keep rabbits for their meat and skins, as the poor sandy soil was ideal for the animals' warrens.

The area was only excavated and identified as a flint mine – yielding an almost indestructible jet-black flint – in 1870 by William Greenwell, an Anglican priest and archaeology enthusiast.

Many ritual deposits were found in the shafts including an axe made of greenstone from Cornwall and human and animal bones. Much of Greenwell's vast collection is now in the British Museum, and the shaft opening to visitors for the first time is named Greenwell's Pit in his honour.

Just 10 prehistoric flint mines have been identified in England and only Grimes Graves is open to the public. Of hundreds of pits originally sunk up to 13 metres deep, dug with immense labour using antler picks, visitors to the site were only able to go into Pit 1. This year English Heritage will open a second, Greenwell's Pit, giving a better impression of the original appearance of the shafts.

Booking starts this week for visits by English Heritage members from April and for the general public from June.

Naming ceremony for North Yorkshire potash mine

24 Feb 2017 Andrew Percy MP: "Today marks an important step for Sirius Minerals' North Yorkshire mining project." *Photo: ITV Tyne Tees*

The construction of a new potash mine in North Yorkshire will begin in the spring.

The site, which is expected to employ more than a thousand people, was officially named on Friday.

The "Woodsmith Mine", as it will be called, has not been without controversy, due to its location on the edge of the North York Moors National Park.

The name was unveiled today by Andrew Percy MP, the Minister for the Northern Powerhouse.

The Woodsmith Mine has been named after two of the original geologists that worked on the Sirius project, Mr Peter Woods and Dr Frederick Smith.

When complete, the site will extract a form of potash to be used as an agricultural fertiliser. The mineral will be sent via a 23 mile underground tunnel to Teeside, for distribution.

The project is costing between two and three billion pounds. It is due to open in 2021, with the potential of creating more than a thousand jobs.

Preparatory work before construction gets underway in April this year. Credit: ITV Tyne Tees

The prospect of signficant numbers of jobs here has won over many local people in this area. But the location of this mine on the edge of the protected national park has been a sticking point for environmental groups and nearby residents.

Speaking at the plaque unveiling, Andrew Percy said:

Today marks an important step for Sirius Minerals' North Yorkshire mining project, which is a real vote of confidence in the economic potential of the Northern Powerhouse.

The Woodsmith Mine has the potential to create over a thousands jobs and generate billions of pounds of exports for the region, and so I'm excited to see it progress.

Reopening South Crofty Mine could mean up to 1,000 jobs

A new study has shown reopening South Crofty at Pool could transform the poorest areas of the county into its economic powerhouse.

A total of 275 permanent jobs will be created when the winding gear at South Crofty turns once more, according to a preliminary economic assessment (PEA) of the project.

Although mine owner Strongbow has not conducted its own employment study, it quotes other mining companies, which insist that for each direct job three to four indirect ones are created.

Chief executive Richard Williams said the just-published document had delivered great news.

"The completion of a PEA for South Crofty is another significant step in advancing the project to a production decision," he said, adding that further study had supported "our belief that South Crofty can become an operating mine once again".

The PEA delivers the most positive news for South Crofty Mine in a decade, saying the ambitious project to resume activities underground is officially a money spinner.

Moreover, it predicts that with current buoyant prices of tin, a $118million investment will be recouped within four years.

Mr Williams said it was full steam ahead, especially as the mine has permission gained by its previous owner for long-term activity.

"We now have a project that not only shows it is potentially economical under the PEA parameters, but also benefits from a mine permit valid until 2071, planning permission to construct a new process plant, and strong community support."

Strongbow, the Canadian-based exploration company, completed its purchase of the disused in June last year and began initial testing in September.

An environmental study into how water can be treated when it is discharged from the flooded mine, which will be the next big hurdle to clear, is under way.

Mr Williams said: "The next step for the company is to complete the current water treatment trials by the end of February 2017 and submit an application to the Environment Agency for a permit to commence dewatering the mine."

According to the PEA, which has just been released, the initial investment in the mine could pay back within a few short years.

It is estimated that $118.7million will be required to get it operational again and construct any surface buildings.

During that 36-month period, a total of 110 jobs are expected to be created.

However, after that and when the mine is working a total of 275 people will be employed at the mine, as well as hundreds in the vicinity as the local economy gets a much-needed shot in the arm.

Strongbow said it believed the project had the potential to generate several hundred indirect jobs, with local suppliers of products and services to support mine operations.

Studies by other mining companies have indicated that three to four indirect jobs are generated for every direct job, although Strongbow has yet to make a formal employment study for South Crofty, which closed in 1998 after tin prices crashed.

The company said it would provide full training and skills development where necessary in order to maximise the employment of local residents at the project.

"The current and historical mining industry in Cornwall means that many of the skills required to operate the mine are already present in the local area and wider in the county," it said in a statement.

Strongbow added that development of the mine should form a fundamental part of the existing plans to regenerate the Camborne, Pool and Redruth area, by providing much needed, well-paid, permanent jobs as well as enhancing the visual impact of the mine site following decades of neglect and under-investment.

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Tarmac is looking to dig deeper at Dales quarry in Cracoe

Swinden quarry.

10 March 2017

Clive White, Senior Reporter

QUARRY giant Tarmac is seeking to sink Swinden Quarry, at Cracoe, deeper by more than 150 feet and to extend its working life by an extra nine years.
The application to Yorkshire Dales National Park comes just six years after it was given permission to continue quarrying until 2030.
It would extend the working life of the site to December 31, 2039, with another two years tagged on to complete the environmental restoration of the workings.
But the excavation would not encroach beyond the existing footprint which was approved at the 2010 permission.
A full planning application has been submitted to the national park for a "deepening scheme" which would see the quarry plunge another 50 meters beyond the current permitted extraction depth.
As well as the extra extraction of limestone, the benefits would see the maintenance of 35 full time direct jobs followed by 12 full time jobs during the two year restoration period, said a Tarmac spokesman.
Indirect jobs connected to the quarry works were estimated at 85 with the creation of 45 indirect jobs during the restoration.
The limestone would continue to be removed by rail with a reduction of mineral movements to and from the site by lorry with a further reduction especially between 2035 and the end of 2039.
Broadly it was aimed to have 60 percent of minerals exported by rail between 2031 and 2039, the remaining 40percent by road.
"The site's operating hours are to remain unchanged with quarrying, processing and earthmoving taking place between 6am to 7pm Monday to Friday and 6am to 1pm on Saturday," he said.
North Yorkshire County Councillor Robert Heseltine, said: "At a first look the plan appears to be a reasonable one. The effect of deepening the quarry means there will be no scarring of the landscape but there could be some concern relating to water courses."
Craven Councillor Richard Foster (Con) who represents Grassington ward, said he was content with the proposal because it was confined to the present limits of the quarry and would not infringe further on the landscape.
"And I'm pleased that jobs are to be maintained. Employment in the Dales is difficult to find so it is good that jobs will continue," he said.

Tin exploration returns to Cornwall as Strategic Minerals kicks off campaign
2 Mar 2017

Council approval has come through and the first exploration hole is expected to be drilled at the end of the month.

Programme is ahead of schedule said Strategic
Strategic Minerals PLC (LON:SML) is ready to go with its first drilling programme at its tin and tungsten project at Redmoor in Cornwall.
Energold Drilling will drill 13 holes in the first phase to be followed by a second phase of 10 additional holes. There is provision for a further six holes subject to additional planning and land owner approvals.
Peter Wale, a director at Strategic Minerals and Cornwall Resources Limited, said: "The early commencement of the drilling programme is a key milestone in our plans to develop Redmoor into a producing mine.
"The aim of the programme is to confirm and extend the high grade resource at Redmoor."
"We are particularly pleased that arrangements to undertake the drilling programme were prepared with support from the local community.
"The work of our highly experienced exploration team has placed us ahead of schedule and ensured that drilling will occur in more favourable climate conditions.
"The Company expects to complete both phases of the drilling programme this year and anticipates being in a position to update the market on the results from initial drill holes in the third quarter of 2017."

Report of activities at Cwmbyr Lead Mine for 2016
The year began with further work on the horizontal timber with projecting bolts on the Dressing Floor. A fourth water wheel is known to have been on site and used for dressing the lead ores. Our best location is concentrated on this horizontal timber, each end is bolted to timber posts driven into the ground. Excavation soon found a further timber post to the west of the

timber. This all points to this as the site of the fourth water wheel. Water used to turn the wheel must have flowed west between two shale block walls, Unfortunately these walls consist of loose shale blocks, roughly positioned as a wall, and not even having foundations, simply placed on the shale ground. So what happened to the water from the wheel? The answer must have been a timber slip-way to clear water from the wall and into the local stream.

At a right angle running north and south the wall continues for 18 metres in a similar state of poor construction and no foundations with a width of about 1 metre. Built to mark the change in height from the wooden settling boxes to the lower Buddle floor, the wall is marked on the Ordinance Survey maps of the period. We first cleared the waste and fallen blocks from the face of the wall and traced it along to a turn near the Buddle water wheel site. During the forestry operations of the 1970s, a plough was dragged through the wall at this point and much destruction took place. One feature of the destruction was to expose some earthenware pipes just above the water wheel pit. We carried out excavation along the course of the pipes towards the Buddles. The pipes were buried in about 1 metre of shale, but pointed directly to the east side of the Buddles, suggesting a connection to clear water from the Buddles. When we excavated the Buddles an opening had been noted under the east wall, so it was re-opened to find the same earthenware pipe system below the Buddle wall. Enough timberwork remained around this opening to suggest a gate was placed to restrict the flow of water from the Buddle into the pipe system. It suggests that as the Buddle worked, sorting the lead from the waste, water would have been allowed to drain into the pipes and away north, past the Buddle wheel and back to the local stream.

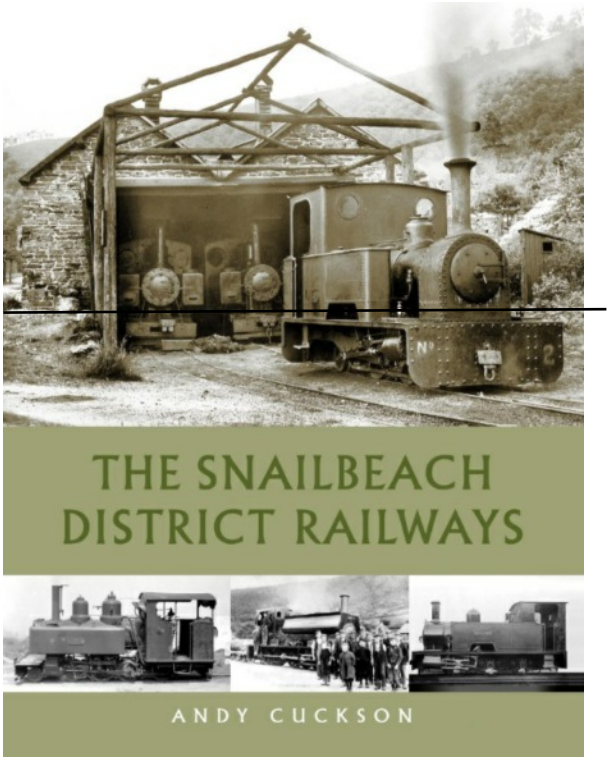
Excavation along the face of the wall also located two bright orange heaps of slimes, probably containing lead ore. With a settling box on the higher level of the dressing floor, feeding lead ore and water on to the two Buddles, then some form of wooden channel would have delivered the slimes. Made of four planks of timber these two channels must have leaked slimes on to the lower floor level, leaving two large heaps. These heaps line up nicely with the settling box and the two Buddles, suggesting poor maintenance during the later stages of the mine. Having found one system of earthenware pipes, bought back memories of a second system of pipes on the dressing floor. Further excavation soon located this second system, which proved to be smaller in diameter and to be an isolated run from a shale lined drain toward the stream. Following on from these discoveries, we want to look at more of the dressing floor to attempt to discover what water wheel number four was doing.

Many thanks to these who have worked on this excavation over the year. I hope to see you on site during 2017 when much remains to be done.

Nigel A. Chapman. December 31, 2016

STOP PRESS - just received
New publication from Twelveheads Press

The Snailbeach District Railways was one of Britain's lesser known public narrow gauge railways. Never carrying passengers, its history and workings have never before been fully explored but after many years research Andy Cuckson is able to reveal a fascinating story, not just about the railway but also about the mines and minerals the line supported and the people who built and worked it, including Henry Dennis, the entrepreneurial civil engineer and mine manager.



The book tells of the early railways in the area and the many plans to bring rail access to this part of Shropshire, and of the development and impact of the mines. Of the railway all aspects are described; a variety of steam locomotives, rolling stock, engineering, operation and people. The rundown of the mines brought problems but despite all the line survived, finding a new role hauling roadstone, and became part of the Colonel Stephens light railway empire. After all the steam locomotives were condemned an agricultural tractor kept traffic moving. After 82 years, from 1877, the line finally closed in 1959 but, surprisingly, the company still exists, on paper.

As well as a great deal of work in archives and historic records Andy got to know many of the older residents of the area who told him much about how the railway worked and ran in its later years.

Many photographs have never been published before and many of the maps and drawings have been specially commissioned. This is the fullest account possible of the Snailbeach District Railways and will become the standard work on the line.

The Snailbeach District Railways by Andy Cuckson

218 pages, 273 illustrations. Hard back with full colour cover. £30.00 ISBN 978 0 906294 901

Order by post or on-line through our web site twelveheads.com where all our other books are listed. Postal orders to: Twelveheads Press, 2 Woodside Cottages, Chacewater, Truro TR4 8LP

Dr Ivor Brown (1937-2017)

We regret to announce the death of Ivor, a long-standing member. A fuller appreciation will appear in the August Newsletter.

Mike Gill

News from 1915

Mystery of frog's survival after being encased in coal

A letter sent to the secretary of the zoological society from Ernest Giles Brain, collier at Trafalgar dated 14 January 1915 read:-'I am a butty collier, and about 10am I was at work at the coal face when I noticed a small cavity had dropped onto the ground out of which came a live frog!

This frog had a bright yellow band running down the length of his back. The enclosed picture shows the piece of coal in which the frog was found and the cavity where it lay.'

The frog's remains and the coal are preserved in a bottle. The mystery of how a small frog came to be in a lump of coal and survive made headline news.

The Forester 15 March 2017

And finally, to finish, here's the rockershovel working at Lea Bailey at the weekend when we had our open days.

Rob Needham

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