

NORTHERN MINE RESEARCH SOCIETY

Newsletter May 1988.

I can't help thinking that something must be wrong. There doesn't seem to be any apologies to make, well none that I'm admitting to anyway.

Forthcoming Meets.

June 5: Sir Francis Mine. Swaledale.

Meet in Gunnerside village at 10.30am. N.G.R: SD 951982.

Aug, 28: Hurst Area.

Meet at telephone box; Hurst. Again 10.30am. N.G.R: WZ 052026.

Sept, 11: General Meeting.

Sicklinghall Village Hall. 2.00pm.

Woodhead Mine.

This project can now be considered to have departed this life. The Casphairn end don't seem to want to know, or maybe not acknowledging correspondence is a local custom! Of course, my letters and such may have gone astray, perhaps they dropped out of the cleft in the carrying stick as the runner traversed the rough ground.

Yorkshire Mining Museum.

Caphouse Colliery, New Road, Overton, Wakefield, WF4 4RH. Tel, (0924) 848806.

The museum is situated on the A642, halfway between Huddersfield and Wakefield, and should be opening in June 1988.

Help wanted.

David Reynolds, of 15, Pruden Ave, Lanesfield, Wolverhampton, WV4 6PT, says he would be forever indebted to me if I mention his need for B.M. 17 (1981) 'The Cwmystwyth Mines' and Brook and Allbutt's 'The Shropshire Lead Mines' with an idea of price and condition, "in my wonderful newsletter".

I have, so he now is.

I hope someone can help the lad, 'cos can he grovel! I haven't come across a crawler like him for many a year now, he ought to hire himself out, with his style he can do nought but go far. He sends bribes/donations too.

Teaching Resource Pack

During the past year we have been investigating the feasibility of producing a series of leaflets each covering different aspects of mining and its history. In consultation with various educational bodies we now have a fairly clear idea of the form and format the package ought to take. Mike Gill had originally been co-ordinating this aspect of the Society's activities, but unfortunately he hasn't enough time to devote to this on top of his other commitments.

The point of all this is that we need a volunteer to take over this project from Mike, and see it through to fruition.

Anyone willing to help with this should be prepared to donate a fair amount of time, at least initially, and be fairly conversant in general terms with some aspects of Mining and Smelting of various types.

A major part of this project will be to persuade various sources to part with "brass", so an ability to write begging letters would be an advantage.

If you're even remotely interested then contact Mike Gill, and have a chat to him about his ideas and progress so far. You can contact him at 38 Main Street, Sutton-in-Craven, Nr. Keighley. BD20 7HD. Tel (0535) 35388.

For some reason or other I have been inundated with reams of bumph concerning Gold mining. Can't help feeling that Ron Callender is using Parkside Road as an accommodation address for his junk mail.

Also, Mike MacLeod has sent a couple of cuttings from the Dundee Courier:-

"Fynegold Exploration Ltd., a subsidiary of a Dublin-based firm, is hoping to start operations on the first phase of gold exploration at Cononish Farm, near Tyndrum, with, at a peak, 20 people being involved.

They first started surveying in the Tyndrum area in 1985 and since then have carried out exploratory drilling which has persuaded them to go ahead with further exploration.

The first phase will involve sinking shafts around 1000 metres into the southern slopes of the 2878-foot-high Beinn Chuirn, and removing by blasting and drilling around 15,000 tons of rock from gold-bearing seams to be stockpiled on the site.

The firm have spent around £1 million in their exploration and drilling, and this amount will increase greatly should they receive planning permission for their proposed first phase.

Exploration for valuable metals has been going on in the area, near which lead was once mined commercially, since 1985.

Other parts of Perthshire where prospecting work has been carried out recently include the east end of Loch Tay and on Auchnafree Estate in the Sma'Glen, north of Crieff.

Lead was mined in the Tyndrum area from around 1750, with the last mine there closing around 1928.

The Marquises of Breadalbane in the 19th century were responsible for many of the attempts at mining for gold, copper and lead on their land.

There was a small gold mine at Corribuie on Loch Tay as well as copper mines on the south shore, and gold was also found at Lochearnhead.

In 1828 the biggest nugget ever found locally- weighing 55 grammes - was discovered in Glen Quaich. It is now in the British Museum."

Mike also sent this cutting, but so far I can't find Glenesk or the area mentioned,- that's the trouble with local rags.

"Make for Tarfside (Glenesk), then follow the Aboyne track up the valley of the Tarf.

There is an old saying in the glen that a lucky lad could fill his pockets with gold and silver at Gracie's Linn.

The richness of Glenesk's mineralogy has been known for centuries, and the glen's first settlers may have come primarily in search of precious metals. It was towards the end of the 16th century, however, that mining was tackled on a larger scale.

At the request of Sir David Lindsay of Edzell Castle, a German mining expert came over from the Continent, and smelting-houses were erected at various parts of the glen. Besides silver mines, the main projects included a copper mine at Dalbrack, iron mines at Dalbog and Invermark's Gilfummin, "the ridge of echoes." Craig Soales, the stony hill that rises behind the Glenesk Folk Museum at The Retreat, is the most interesting silver mine.

After Sir David Lindsay's day, Glenesk's mines were worked for another hundred years, so some return must have been forthcoming. Yet, when all is said and done, nobody seems to have made a fortune from this Scottish Eldorado."

The Sierra Murphy Gold Rush

In 1849 they stampeded into California. 47 years later the Klondike was the place.

The Great Gold rush of 1989 Ireland. More precisely in the Sheffrey Mountains of County Mayo.

Glencor Explorations of Dublin hope to extract £300 million worth of Gold, though locals seem rather sceptical, being more concerned about pollution affecting the Salmon fishing.

Meanwhile, back to reality.

Geevor Tin Mine, Cornwall.

Mining has started again at Geevor since being stopped in April 1986 following the collapse in the tin price and the rejection of two applications for aid from the Department of Trade and Industry. Mr. Clive Smith acquired a 26.7% shareholding in the Company and appointed Mr. Eric Grayson as Chairman. Mr. Eric Grayson bought a 9% shareholding and took over as chairman of Geevor in October 1987. He says that a compromise solution to the immediate problems will be to mine the existing 150 miles of tunnels but do no development work. About 500,000 tonnes of tin ore could be mined in this way at a rate of 100,000 tonnes per year. 90 jobs will be provided including 56 underground, compared with 380 previously.

Wheal Jane & South Crofty.

These two mines, which are owned by the RTZ subsidiary, Carnon Consolidated, are to be sold for an undisclosed sum to the management, which will acquire 80% of the Company in the deal. RTZ will provide an interest free loan of £10 million. The Government will also provide a £10 million interest free loan in addition to the £15 million loaned earlier during 1986. The workforce will be cut from 720 to 500 and will enable the main elements of the modernisation programme, started in 1986, to be completed. Development work at Wheal Jane, which will provide five years supply of ore, has nearly been completed. The money from RTZ and the Government will be used mainly at South Crofty, which has a richer ore body. Mr. Brian Calver, who is heading up the management buy-out, reckons that if the tin price stays at its present level the money will run out in about 3 years.

Wanlockhead - The Dod Level Dig.

In 1980 a small group started looking for a winding engine. In 1983 we found it, along with a big pump engine. A further year was taken to completely survey the engines, videoring and photographing; the end product was a superb working model of the pump engine set in surroundings as it may have looked in c. 1850.

In September 1984 our 81st trip to Wanlockhead found us starting a dig on what became known as the Dod Level Dig. On the 12 March, 1988 the dig came to an end with all the equipment being brought out. It had taken 3 years, 67 trips and about 1,260 man hours to dig 60' through a massive collapsed stope to find a blocked shaft!! Well perhaps statistics do not really tell you a lot. Oh yes - and about 45 tons + of muck.

So why did we start?: with the success in the South Glencrieff mine, it had to be the lure of another engine. In about 1880 on the North Straightsteps vein, an engine, designed by T.B. Stewart, the Mine Manager, was working to keep that mine dry; it was out of use by 1900, but no record of its recovery could be found. When Geoff Downs-Rose and friends entered the Bay Mine in 1960 any way into North Straightsteps was blocked. By the late 1970's the main entrance to Bay had collapsed with considerable discharge of water welling up out of the collapse.

The engine, like the South Glencrieff engines, were water powered: the water coming from the Mossy Burn Dam and all the way round the head of the village to the water cross cut on the Dod.

An old working, dating from about 1732, had been widened and graded to allow water to flow in glazed pipes from a cistern just outside the level mouth. This cistern was quite interesting having about one foot below the take off pipe to collect the heavier particles in the water. (This appears, at present, to be the only form of filtration of the water to the pump). The cistern also had an overflow which appears to go in the direction of the Bay Mine. (I will come back to this point and its significance later).

We were encouraged when it only took us about 1½ hours work to enter the cross cut, and were rewarded with a good passage 300' long ending in a collapse. From the mine plans all we expected was a clear passage to the shaft. This collapse came as a bit of a surprise, on reflection (isn't hindsight a wonderful thing!). The size of the timbers and the fact that they were oak should have told us something. However, we chose to believe that, at worst, it would be a collapsed shaft, say a dig of 12' to 16' at most.

We had done some fore-poling in the adit of South Glencrieff, up to our waists in water, so at least this was an improvement - it was dry, room enough for dinner and two small side passages with enough nooks and crannies to dump the muck. By trip 85, on the 10 February 1985, we were encouraged by being able to see some 15' ahead through a small hole with what looked like good timbers in place. By now we were getting better at fore-poling. We were using fairly traditional methods. Timber was used throughout with the help of a Dowty prop to jack things up when we let things drop!

On trip 93 I record "may have a stope under our feet" - the jack would go down when jacked up, so we had to go for 4-piece sets. This slowed things up very much. By trip 97, in July 1985, we had filled all side passages etc. and had started dumping muck in the floor of the level about 280' back from the dig. On trip 102, in October of that year, we had found a clay pipe and rodded it for 54' and the floor really was getting soft! But, by now we were committed (or should have been!) It was surprising that by now there was very little, if any, timber in the level. We had a good wall on the right, but, in general, the left hand wall was very broken and gave a good deal of trouble. The muck was being hauled out by sledge! Until March 1986 it was wood, but on trip 121 we

changed to a steel one, this speeded things up a lot but held a good 1½ cwt, just about a wheelbarrow full. This was used until trip 144, on 24 October, 1987, when we put a small rail line in. This really was not used fully, as on trip 146, on the 21 November, 1987, we broke through, and what timing - Geoff Downs-Rose was 65. I was really pleased that we could give him such a nice birthday present. On the 31 November, we finally made all safe and explored 15' of passage with a brick cistern placed directly over a shaft of 28' deep to a blockage and a shaft up with a windlass above it.

The cistern was about 6' tall with the water pipe entering it at the bottom, and no valve gear - hence the overflow on the cistern outside. I suspect the "on/off" valve will be in the engine itself, so the system can fill with water, with the cisterns and pipes acting as extra reservoirs.

The Windlass has been recovered, along with 200' of chain, but alas, no way on from the top of the shaft up. The shaft going down is well and truly blocked with the feed pipe going into another collapsed stope. Whilst doing a trial dig we got the whole stope moving from the bottom of the shaft to above the heads of those people in the timbered section! So one can assume we have a 50' or 60' stope.

It has been a hard 3 years, with all sorts of bits being found in the dig itself. It has added to the knowledge of the mine considerably and we have learned some valuable skills.

Geoff has an M.S.C. scheme to clear Bay Mine adit, so when this is opened we start again - from the bottom.

I would like to record my thanks to all who have helped in this dig; to the Wanlockhead Museum Trust, who has borne the majority of the cost; to the Munro Grant of Edinburgh University for a grant of £200, with which we bought a ladder to get up the shaft. (It would have been a sod of a job without it!).

Inevitably the team changes over the years, but it is with some sadness that we say goodbye to Jess Cooper. He now lives in Alston and has become a real miner - I wish both Jess and Sandy good luck in the future. Phil Allen has also moved to pastures new, his contribution was not just underground, but above ground with his programme on Radio Solway - thanks Phil for your enthusiasm in your broadcasts, I feel the Museum has gained a good deal, I know I have - good luck in Harris. Yes folks, Harris, you English may try and find it on a map! Finally, we lose Rob Fuchs to Aberdeen in April. Thanks Rob for all your help and support. By the way, do you still have my blue waters? May I wish you, Pauline, Thomas and Catherine all the best in the future.

Jerry Landless

Information wanted

Mr. Heinz Joseph Fuchs writes that he is interested in the copper mines of the Rheinbreitbach area, which is on the Rhine, 25 Km south of Bonn. Two English companies ran the mine between 1876 and 1886, the first was the St Josephsberg Copper and Lead Mining Company Ltd (1870-76) and the second was the Virneberg Copper Mining Company (1876-86). Richard Kent Roskilley was Director (Manager?) of the latter and its President (Chairman?) was Sir Alderman Hadley. The offices were in Knightsrider St./Doctor's Common and at Queen Victoria Street, in London. There were two mines near Bad Honnef and another, between Rheinbreitbach and Bruchhausen, run by Menzenberg Ltd.

I believe that reports may have been published in the Mining Journal and will be pleased to hear from anyone with knowledge of them, especially of the St Josephsberg/Virneberg Mine.

Please contact:- Mr. H.J. Fuchs, Hauptstr.33, 5342 Rheinbreitbach, West Germany.

1989 NANHO Conference- Advance Notice.

To be held from Friday 14th to Monday 17th July, 1989 at The Charlotte Mason College of Education, Ambleside, Cumbria.

There will be a combination of Lectures and Field Trips throughout the four days.

For final details, cost and booking forms please contact the Conference Secretary:- Chris Lane, Blencathra, Wansfell Bank, Ambleside, LA22 0AX

Cononley Update

As result of representations by this Society and others, Cononley lead mine was listed and the application for planning permission to allow removal of the dumps was rejected. In December, members of Earby Mines Research Group, the Agent of the

Chatsworth Estate and myself met on site to discuss an application for listed building consent to backfill the Incline portal. This too has since been refused. At that meeting, the agent broached the question of the site's future and stated that it should be more accessible to the public. He also proposed leasing it to the EMRG and has now produced the heads of lease which, to say the least, are onerous. Nevertheless, it is early days and the Craven District and North Yorkshire Council's have expressed interest in the site and would be able to provide expertise and a focus for fund raising etc. It is proposed to hold a meeting soon, at which the method of management and a work schedule will be established. Because of my involvement with the site, this project is likely to absorb a great deal of my time during the next year.

Mike Gill

Please note: Mike's Tel. No. is (0535) 35388, not as our typewriter interpreted in the last Newsletter.

Items from a Notebook

Carmarthen Lead Smeltnill. Located on low lying ground, adjacent to the old priory, just upstream from the Towy bridge in Carmarthen, this smeltnill was erected by John Campbell (later Lord Cawdor). The site of the mill was leased from a Mr Williams at a rent of £34 per annum under the terms of an agreement dated 30th June 1781, which superseded one of earlier date.

Whilst the primary purpose of the mill was to treat ores from mines on Campbell's estates at Rhandirawyn in the upper Towy valley, ores from other mines may have been smelted. Certainly in mid 1785 the lessees of the Llanfyrnach Mine, in Pembrokeshire, made various payments to the smelters there, probably in respect of expenses in trying the ore from that mine.

Detailed accounts for the mill are available for the year 1797. Four smelters were employed; three part-time (25 weeks being the longest period), with a fourth full-time but spending only 21 weeks on smelting, the remaining time being employed on smith's work and labouring. Some idea of production can be gathered from the carriage details; with a total 90 tons of lead leaving, and 513 tons of ore and over 57 ways of coal arriving at, the mill during the year. Two yards and a storehouse being rented on the quay for that purpose. Repair work on the furnaces took up a substantial part of expenses, £41 out of £268; with a mason being employed 18 days on the work.

The furnaces, four in total including a slag hearth, chimneys and associated buildings were in poor repair by September 1810; by which time smelting had ceased and the mill was vacant. At that time a Mr Salisbury proposed taking a sub-lease of the property and purchase Lord Cawdor's ore for smelting. Nothing appears to have come of this proposal, but in the following year estimates were obtained for repairs to the mill (£800). Subsequently it was suggested that only one furnace be repaired, an indication perhaps of reduced throughput; this produced a protest that time spent on routine maintenance would prevent continuous operations and a revised estimate was supplied for repair to two furnaces (£500) as an alternative.

As it was the mill was not repaired and the smelting operations were transferred to Llanelli, later coming under the control of the Nevills.

(Carms. Record Office, Cawdor 2/39)

Mining at Bere Ferrers, South Devon. Extensive silver-lead working has been carried out in the western part of this parish -- and if there is anyone having a detailed interest in those mines, please contact me re. the medieval period and the connection with Combe Martin -- but there are other, smaller, mines in the south-eastern part. Dines, 1956, p.702, referred to one of these, in Whittacliffe Wood, as Maristow Mine; a plan of which, dated 1822, was in the Maristow Estate Office. A lease of the minerals under that wood was granted in March 1821, by the landowner Sir Manasseh Masseh Lopes, to Thomas Dawe and others, a copy of which is amongst the Crosswood Papers (Lord Lisburne) in the National Library of Wales.

It is not, however, immediately apparent what connection, if any, there was between the mine and Lord Lisburne or the Crosswood estate.

(Crosswood II 703)

Peter F. Cloughton.

Book Reviews.

I know you think you've already seen a review for this book in the last Newsletter: you were mistaken, that was from the Publishers blurb, this is from someone who has actually read the book. Well, looked at the pictures at least.

Wythburn Mine (and the lead miners of Helvellyn) by Alen McFadzean.

Price £4.40 incl. p + p. Available from Red Earth Publications, 7 Silver Street, Marton, Ulverston, Cumbria.

This is my kind of book! A book you pick up and cannot put down! I was particularly pleased with a style which combines technical, historical and social economics without prejudice to the text. The book initially investigates the movement of the local population in association with the rise of mining in the area around Helvellyn. Attention then turns to the early years of mining at Wythburn and the development of the lodes by successive companies. The trials and tribulations - success and failure of the lodes in depth and the tantalising thought of the fabulously rich Glenridding Mine just over the fell. The writer really puts the reader on the site, one feels the frustration for the miners. To complete the story the writer has revealed new information regarding the closure of the mine in relation to the acquisition of Thirlmere and the raising of its water level, in the course of which several hamlets were drowned. Details include the driving of the aqueduct tunnels and ex miners employed.

I was disappointed that Alen did not include the recent exploration work carried out by CAT in the upper levels, this alone would have made your hair stand on end and would have been well worth reading. I also would have liked to have seen tabulated production and employment figures.

The quality of the printing and photographs could have been better, however, considering the price, the book is excellent value of money.

Richard E.Hewer.

The Lead Mines of the Alyn Valley. by C.J.Williams.

40pp. £2.50 (£3 by post) Available from Clwyd Record Office, Hawarden, or Peak District Mining Museum, Matlock Bath, Derbyshire.

This attractively bound booklet is a reprint from an article published by Flintshire Historical Society in 1980, but with minor additions. It should deservedly thus reach a much wider readership.

The Alyn Valley has been the scene of a great deal of mining activity, involving famous names such as John Wilkinson and John Taylor, and famous mines such as Llyn-y-Pandy, and later the consolidated Mold Mines, and this century the Halkyn Deep Level and the Milwr sea level tunnel to the Halkyn Mines. Steam enthusiasts will find six pirated engines under Wilkinson, and a further seven engines under Taylor. Water power was also much used, the concentration necessary to cope with some of the wettest mines in the kingdom. Smelting only receives a brief mention, though a fine illustration on the cover shows both mining and smelting works.

This is a well researched and readable account as befits a professional archivist, and is illustrated with some well chosen photographs, and useful maps: one of the latter for Pen-y-fryn Mine shows an astonishing use of water power. Mining has given many words to the language - the Alyn Valley donates "Loggerheads".

Worth reading about.

Lynn Villies.

Rich Seams by K. Wood

Published by the Manchester Geological and Mining Society branch of the Institution of Mining Engineers, Anderton House, Lowton, Warrington. 1987. Price £5. Hardback 185pp. 14 illustrations, half of which are portraits of eminent members of the Society.

This, very handsomely produced, book has been published to commemorate the 150th Anniversary of the Manchester Geological and Mining Society 1833-1988. Its low price has been made possible by donations from industry.

The first 60 pages cover the history of the Society. Until 1904, and its federation with the other Mining Institutes, it was geologically inclined, but with many members having strong mining interests. From 1904 until the present it has been an impressive mining institution, more recently as a branch of the National Institution of Mining Engineers.

The second part deals with important members: Dickinson, the Inspector of Mines; Boyd Dawkins, the eminent professor with pit disasters, legislation, mechanisation,

safety lamps and mining education, all centred on the coalfields around Manchester itself. There are occasional excursions into Yorkshire, a few into the local salt districts and a most interesting description of the locating of the Kent Coalfield!

The final section reproduces four typical papers from the Society's 'transactions'; one of 1840 and others of 1861, 1905 and 1955.

Throughout there is a touch of sadness, for the great days of mining in the Manchester area are now gone; the University and College courses are finished, nearly all the mines are closed. Membership is down to double figures as it was in the earliest days. It is a book well worth having for not only is it a history of a society, but a text book as well - and at the price a bargain not to be missed by anyone with an interest in the story of Coal.

LJB.

Coniston Copper: A History, by Eric Holland.

Published by Ciceron Press, Milnthorpe, Cumbria. Available direct from E.G.Holland, Old Stainton Hall, Stainton, Barrow in Furness, Cumbria. Hardbound £14.95 + £1.60 p & p and get a couple of prints of mining scenes free. 312pp with 104 figures (inc. photos) and an index.

For those who already own Eric's pocket guide to the Coniston mining area, this is the invaluable second part. It covers the history, from the Society of Mines Royal, in the 16th, Taylor and John Barratt, in the last, to the French owned Coniston Electrolytic Copper Company. There is even a section covering the recent wrangles over planning permission to develop the site as a Residential Study Centre.

Like the guide, the history results from many years research and includes fascinating bits of anecdotal evidence from locals, including the late Bill Shaw. Eric's style of writing has been greatly influenced by the likes of W.G. Collingwood and, in places, may be a touch romantic and unquestioning for the academic. Most mining enthusiasts will, however, be well pleased with this new addition to our shelves.

Mike Gill.

A History of the Laws and Customs of the Derbyshire Lead Mines, by J.H.Riewarts

38pp. No note of the name of the Publisher or ISBN number. Price ?

In the acknowledgments there is a clear warning for would-be book reviewers. Mr. Riewarts names the people who critically read, commented on and put forward suggestions and additions to the draft book. Quite a list! However, with timidity I press on.

This small book has been written to commemorate the 700th Anniversary of the Inquisition or Quo Warranto held at Ashbourne in 1288. If you don't know what that was all about this book does a very good job in explaining it. The 17 pages written by the author give an excellent background and insight into Derbyshire mining customs, law and the early development of lead mining in Derbyshire up to 1288. Interesting arguments both for and against various theories are presented concisely and clearly. The narrative then continues to describe the expansion of the Laws and Customs up to the present time. The various mining terms are well explained and make the book easy to read.

There are 8 photographic reproductions of good quality and after the narrative there is a reproduction of the "Rhymed Chronicle" by Edward Manlove dated 1653.

My one small criticism is the type of paper used, which is a most unusual texture of coated paper.

To sum up:- A very well written and produced book which should be on the bookshelf of every mining historian.

D.J.McCurdy.

On occasion this erudite rag has been known to provide sustenance for thought, and to provoke enlivened debate.

Basset Mines - Davey compound pumping engine

One of my Trevithick Society colleagues has sent me a copy of the note on the Basset Mines double cylinder inverted compound pumping engine in Cornwall, published in the February 1988 NMRS newsletter, and has suggested that I comment.

The writer, Mr. Chapman, has put his finger on a very interesting point when he doubts that the engine was built by Hathorn Davey, but then goes off the rails. I am always careful when describing this engine to say that it was designed by the celebrated Leeds engineer, Henry Davey, founder of the firm. As such it incorporated his patent differential valve gear, or at least an adaption of it; and as is well known it

also utilised the almost new 80-inch cylinder and related components from the former pumping engine on Marriott's Shaft which had been fire damaged.

However his suggestion that the 40-inch cylinder might have been secondhand from a whim is poppycock! The high-pressure cylinder on the Basset compound had to withstand a steam pressure of 150 psi, THREE TIMES the highest pressure ever used with a beam engine in Cornwall! Moreover, no beam whim was ever built with a cylinder of such a size. The relatively few rotative beam engines in Cornwall with cylinder in excess of 36 inches were invariably used for stamping; there would be no call for an engine of such power for hoisting because the loads and shaft speeds of the day were not great enough.

His supposition that because Cornish engines had been casting beams (or bobs) for almost a century they would have been in a strong position to build the beam for the Basset compound is similarly erroneous. The compound used a built-up wrought iron plate beam (which subsequently gave trouble) of which the Cornish had practically no experience at that time. The riveted plate beam of the Great Spring 70-inch engines at the Severn Tunnel (built by Harvey & Co in 1885-6) were designed at Swindon; and the Rio Tinto 70 was built subsequently.

The Trevithick Society holds an arrangement drawing of the Basset compound, unfortunately without date or authorship, which gives the cylinder sizes as 42 in (9ft stroke) and 80 in (10 st stroke), as if the original intention had been to have a 42 rather than 40 in high-pressure cylinder. Compare these cylinder proportions with the two similar engines designed by Henry Davey for Waihi gold mine in New Zealand a few years later: 'B' engine, 35 in by 6 ft 6 in stroke (hp) and 70 in by 8 ft stroke (lp); 'C' engine 60 in by 6 ft stroke (hp) and 110 in by 12 ft stroke (lp).

One does not need to be a mathematician to see that the hp-lp cylinder volume ratio was much reduced in the Waihi engines, and this was probably because at Basset Mr. Davey found (as Cornish engineers had before him) that to work an engine connected to Cornish pitwork at very short cut-off was to court disaster! Incidentally the Waihi engines, like Basset, proved very heavy on fuel and in 1910 were replaced.

Another point of interest is that Marriott's shaft and enginehouse at Basset were designed to accommodate two similar compound pumping engines, to take the shaft down 500 fathoms. Had the engineers ever tried to install the second one they would have had a shock, because due to some error, the bedplate of the low pressure cylinder encroached about 9 inches the wrong side of the centreline of the shaft and house!

Kenneth Brown, member of Council,
Trevithick Society, 4 March, 1988.

Thanks, also, to Kenneth Brown for the following information:-

Pibble Mine

"the place was called Creetown Copper & Lead Mining Company and the engine was built by Hodge's St. Austell Foundry in 1852 (put to work June 1853).

Amazing what one can find in "Mining Journal" when looking for something else!"

SRT Training Session.

The Cumbria Amenity Trust is organising a SRT Training Session between 8/10th July, 1988. The session will be based in Coniston and the aim is for individuals to improve their basic SRT techniques. It will be assumed that participants have already had some basic experience of the technique.

Following a session on a climbing wall, the techniques will be put to the test on an underground visit to one of the Coniston Copper Mines.

Accommodation is available at the Barrow Mountaineering Club hut or at the adjacent Youth Hostel, or the Coniston Camp site.

Contact Dave Blundell, 7 Rawes Garth, Staveley, Kendal, Cumbria, LA8 9QH.

More on Caphouse

The Caphouse Museum, near Wakefield, has recently received a couple of relics from the NCB.

The first, a 30-year old item of American mining equipment - a duck-bill loader, is a US version of a shaker-shovel loader used for loading coal and rock from underground headings for roadways. It was recovered from Ledston Luck - in perfect working order - just before the pit closed a year ago.

The conveyor part of the loader, last used in the 1950's, had a shaking motion which moved material backwards for loading into mine cars or on to conveyors. It had been abandoned in an old roadway about a mile inbye. A 15-metre section of the 100 metre long conveyor brought out weighed over 10 tonnes.

The NCB would not normally bother to remove useless equipment - but as they were closing the pit it was decided to recover this, which is believed to be the last in the country.

The second, a Kibble, which was used for winding men up and down the shaft during rescue attempts at the Oaks Colliery explosion at Barnsley in December 1866, was unearthed during excavation work for a new pit canteen. The kibble is big enough to carry up to 4 men.

Upon reading the following article in the Newsletter of the North Pennine Heritage Trust, I remembered that we had published a couple of articles in years past on the subject of flora on mine tips. This should compliment them. Ta, in advance to NPHT for letting me use the following:-

Surface Surveys.

Surface survey work this summer has so far concentrated on two areas; the Nenthead Stamps and Smelter area, and Killhope Lead Mining Centre. Work has concentrated on the effect of lead pollution on the flora, and it will be interesting to correlate the differences between the sites. Species prevalent at the Nenthead site include Spring Sandwort, Common Scurvy Grass, Alpine Scurvy Grass, Alpine Penny Cress, Wild Thyme, Moonwort, Yellow Corydalis, Tufted Hair Grass, Red Fescue, Eyebright and Yorkshire Rog. These are amongst the commoner species on the site, or if not common, are indicator species of pollution by heavy metals. To be more precise, the first six species are indicative of lead pollution, and all, apart from wild thyme, are unlikely to be found locally away from lead pollution sites. Moonwort (*Batrychia lunaria*) is particularly unusual, only two examples being found, but Spring Sandwort, Common Scurvy Grass and Alpine Scurvy Grass, Alpine Penny Cress and also Precumbent Pearlwort are all frequently found on the area surrounding the Stamps. Wild Thyme is to be found immediately above the site, along with Wild Pansies, Harebells and Eyebright; there is one example of Yellow Corydalis, which has possibly been introduced to the site by tipping, and although there are a further dozen grass species present, the three grasses mentioned appear to be the most frequent. The site is notable for the complete lack of sedges, and the presence of only one rush, that being *Juncus effusus*, the Soft Rush, although the surrounding area abounds in these species.

Killhope also is an interesting site, containing Common and Alpine Scurvy Grass, Procumbent Pearlwort, Alpine Penny Cress, Spring Sandwort, Moonwort and Wild Thyme. Eyebright, although common, is not so frequent. Soft Rush and Jointed Rush are both common in wetter areas on the site, and *Carex nigra*, the Common Sedge, is to be found on the washing floor. The predominant grass species are the same as at Nenthead Stamps area, but the area surrounding the site has an abundance of species. Within 1/4 mile of the washing floor, over 100 herb species are to be found, at least ten sedge mosses and horsetails. It becomes fairly obvious that the effect of the smelter has had a fairly dramatic effect over the Nenthead site. It is also interesting that lead production ended in the 1920's, although as late as the 1960's the site was disturbed by such characters as Monty Banks. The Heavy Metal Species are far less common at Killhope, and the conservation and restoration programme would appear to have done a great deal to lessen the effect of lead pollution, although there are a great many factors to be more closely looked at yet.

Plans for the future depend largely upon financial support. If this can be found, there are several schemes which can be undertaken. As a priority, I would like to undertake a botanical survey of all mining and processing sites in the North Pennines, looking at both the sites, and also all land within half a mile of the sites, so that the effect of the heavy metal pollution can be assessed. It will also be interesting to assess the effect of hushing, although I see this as fairly low priority. It would also be fairly interesting to do a more general grassland survey, with particular reference to hay meadows, but as several other bodies are at present engaged in this type of survey, it might prove more profitable to concentrate on mining and processing areas. I would envisage the work taking place over the next three years, the team comprising two all round naturalists and two botanists, with as much back-up as can be mustered, with

field work commencing in May 1988, lasting until late September, and written and research work taking place during the winter months.

Peter Buchanan.

Alderley Edge Meet Report - 17 April, 1988.

On a pleasant, sunny morning 23 members assembled at the Wizard car park, Alderley Edge. At the Wood Mine a through trip of the mine was made more interesting by a detailed description of the geology by Nigel Dibben of the Derbyshire Caving Club, who hold the lease on all the Alderley Mines from the National Trust.

After lunch, we walked over to Engine Vein Mine and after viewing the headframe on the now completed 155 ft deep Bear Pit Shaft dig and the new shaft being started at the eastern end of Engine Vein, we entered the underground workings. Here the party was split into two groups and after making the sporting descent of Blue Shaft (an inclined underground manway) a descent by electron was made down the last 30 ft of the Bear Pit Shaft into the Hough level. A tight crawl on sand saw the party emerging into the Brynlow part of the Hough Level and visits were made to the only wooden ore chute so far found at Alderley, and as far as the water on Brynlow itself.

By this time the second party had caught up, which led to some confusion, but eventually everyone got to see the bottom workings, and after gathering up the various members wandering around the mine, an exit was made back up into the sunshine.

By this time the party was somewhat depleted, but the last enthusiasts were taken down to visit the Hough Level entrance and a walk up to Square Shaft past the newly acquired Rushton Hornsby diesel loco brought to an end the days activities.

I would like to thank Ken Makin for his very welcome assistance in lifelining and controlling the party on the descent of Bear Pit, and a big thank you to Nigel Dibben of the D.C.C.

Les Tyson.

N.B. Les' new address:- Flat 2C, Hillcrest, Woodville Road, Bowdon, Cheshire.WA14 2AW.

North Pennines Forum

Many people are researching the history of mining in the North Pennines who either owe no affinity to any established mining history group or who have no opportunity to make their research available to a wider audience.

It is proposed to hold some kind of forum to draw together like-minded people, which would be an association of kindred spirits and might start by meeting once a year.

If you are interested please write or telephone:- Arthur Roberts, West Nettlepot, Lunedale, Middleton in Teesdale, Barnard Castle, Co.Durham DL12 0NX. tel.0833 40496; or Peter Jackson, 41 Cranswick Close, Billingham, Cleveland TS23 3NH. tel.0642 564100.

You will see by this Newsletter that we are now entering the 21st century. We have encountered a few snags with doing this edition on the computer, but, hopefully, you wont be able to tell what these were. I don't intend to enter the realms of Desk Top Publishing, so you wont be suddenly confronted with a fancy type or layout.

It was hoped to include a Members List with this production, but this doesn't seem to be possible just now, hopefully we will be in a position to include one soon.

I keep getting complaints from various quarters on two counts:-

- a) that they don't get a reply to their letters.
- b) that people write with queries but don't include a S.A.E.

One answers the other: No S.A.E. = No Reply, or at best not before the next N/L if it's me you're writing to.

Contributions for next Newsletter (September) to me, Harry Houghton, 29 Parkside Road, Meanwood, Leeds LS6 4LY. as soon as possible.