

This is the issue that includes the Subscription reminder. Unfortunately, this year we have had to put them up. This move was unavoidable and was kept to the absolute minimum that would still enable us to provide you with a high standard that represents very good value for money. None of us likes parting with money, but in this case it is well worth it. The only snag is I have to pay too! The renewal form should be clipped to the front, and you have passed it by now if you're reading this.

After filling it in, please return it, together with a cheque/P.O. for the correct amount to Geoff. Not to me or John Mc or Dick - just Geoff. If anyone sends theirs to me after this, I'll publish their names in the next issue, so there!

By the way, if you've changed your address and not let us know then tell us - else we send out ~~bumph~~ that does nothing but circulate round the Royal Mail system for a few months before finally returning to "from where it was sent".

Just in case the Newsletter is late again, on behalf of John Mc I'll apologise. If it's not, then this apology will do for next time.

"What?" you may be wondering, has all this got to do with our Little Johnnie. Well, nowt at all really, I just thought it was time someone else got the blame instead, and seeing as how he has got no chance of his protests being published, he ain't in any position to deny it. I've just been accused of being evil. Misunderstood, yes; evil, never. Well not too often.

Future Meetings

Only one left now on this years programme:- the Annual General Meeting at Sicklinghall at 2pm on 17th February, 1985.

Don't let the Committee feel like lepers - turn up and support us and let's hear your views.

Dare I make any comment? Course I dare "'cos I'm a man". (This subject is now closed).

At last it's here! I suppose it's only fitting that the first meet of the year should be reported in the last edition of the year. Was beginning to think that Bob was saving it up for next year.

Tamar Valley Meet - Easter 1984.

After three successive Easter meets in West Cornwall, there was a change of venue this year to the Tamar Valley mining field. However, there was no change in the customary good weather; if anything it was even better than usual, with cloudless skies all week and summer temperatures. This seemed to tempt a large number of members along despite the distance.

As usual, the first day's activities were not too arduous as most people were still travel weary. A fairly large group met at the campsite and proceeded to the site of Gunnislake Clitters Mine, which was worked mainly for copper, arsenic and tin until the late 1920's. First the pumping engine house at the still open 276 fathom Skinners Shaft was examined, before the party descended through the woods to the river bank where extensive dumps of calcined waste were discovered together with another engine house, which was used to pump water from the River Tamar to the dressing floors halfway up the hillside. Ochrous water gushing out of the base of an earth wall was all that was to be seen of the deep adit. During the ascent of the hillside, the party found foundations of the 1920's mill buildings and a short adit (blocked by a fall) which was thought to be an ore tramway level as it emerged just above the mill.

After overwhelming the local pub with orders for lunch, the group proceeded back to the Devon side of the river and to some dumps and a lone stack, which are the only remaining surface features of the South Tamar Consols silver-lead mine. The mine, although still rich, was abandoned in 1856 when it was flooded by an inrush of water from the Tamar where stopping under the river was carried out in unstable ground. Fortunately no lives were lost as the disaster occurred on a Sunday when the mine was deserted. A few members explored the adit level, but most remained at surface and sunbathed.

On the way back to the campsite, most of the party took a short diversion to see the well preserved stack of Lockeridge Mine. Exploration of the surrounding area revealed old shaft and a stope to surface. The mine was a small one producing silver and lead.

On Saturday a party of 18 members assembled at Devon Great Consols for an underground exploration of parts of the Wheal Fanny and Wheal Anna Maria sections of the mine. This was rather a large party considering that they all had to negotiate three ladder pitches to reach the 15 fathom level of Wheal Fanny via a short level and a short winze which gave access to the stopes in the celebrated Devon Great Consols Main Lode. Only 3 members of the party had been into the working previously, and two of those (including the meet leader) were last seen having spent nearly two hours belaying the others. This resulted in some confusion for some

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members who were unable to find the way on. However, eventually all was sorted out and a few hours were spent exploring the enormous stopes with their massive timbering, as far as the now capped Engine Shaft of Wheal Anna Maria. Although the party was underground for several hours, only about half a mile of the mines ~~44~~ miles of levels were explored, which gives one an idea of the former size of what was the richest copper mine in Europe in its day.

On Sunday morning, in very hot sunshine, a huge party set out on foot, through a dense wood bordering the River Tavy to find and explore two small copper mines (Tavy Consols & Little Duke). After admiring some spectacular views of the Tavy Valley, the meet leader somehow managed to take the wrong track (it must have been due to the heat). Some dense undergrowth had to be negotiated in order to rectify the situation, and it was at this point that the vast majority decided to give up and return to the cars and make wax models of the leader to stick pins in, as part of an ancient Satanic ceremony. (not Satanic, Lancastrian.Ed) Quite oblivious to this devilish rite being performed only a mile away, the faithful few, who had placed their trust in the meet leader, were rewarded with two (albeit short) underground trips. On returning to the cars, the remnants of the fiendish ceremony, which had recently taken place, were plain to see: A noose for the use of the meet leader was hanging from a gibbet (well a sign post actually.)

Those who had not departed to the pub, then visited the very interesting surface remains of Gawton Copper and Arsenic mine. These included arsenic flues and stack, a well preserved engine house and two adjacent crushing houses, and the almost demolished pumping engine house at Kings Shaft next to the river.

On Monday, those members not departing for home, assembled on the banks of the Tamar to explore the workings on the Marquis Lodes of Bedford United copper mine. Deep adit level is blocked close to its portal, so access was gained via a stope to surface in the steep hillside above the adit. Using electron ladder to descend into the stope, a winze to the flooded adit level was encountered. This was crossed via an unstable wooden plank leading to a steep slippery slope up to a level. The first group of 6 explored the whole of the level before returning to the second group who had rigged a ladder to descend a short winze. At the bottom of the winze a short level led to yet another deeper winze (45'). Again electron ladder was used to descend to what proved to be adit level. Progress along the adit to the east (into the hillside) was straightforward with many interesting relics to be seen, including ore shutes and a launder fixed to the wall of the adit. A short cross cut gave access to Engine Shaft which was in an exceptionally good state of preservation, with the skip road, timberwork and rising main still in position. Several sections of pipework, which had been removed from the shaft, but never raised to surface, were lying on the floor of the chamber adjoining the shaft. One section of the main had been used to supply water to a reservoir tank still in place in the shaft and this in turn supplied the launder previously described. It was surmised that the launder had provided a water supply to an underground water wheel, probably in the flooded section of the adit. Beyond the shaft, the adit was fairly wet with deep ochre.

Returning to surface, the party bathed in the river to clean off the ochre and get freshened up. A full seven hours had been spent underground, in a most enjoyable and interesting trip.

Tuesday was a day off for relaxation in the sun, but not for our hardworking Secretary, who gave a lecture to the Carn Brae Mining Society at the Camborne School of Mines.

On Wednesday, the rival attraction of the hot sunny weather meant that only a small party braved the cold water of the South Devon United adit. To those of us who did enter, the sun seemed even more attractive when we encountered rotting sheep carcasses at the bottom of a shaft. However, once this obstacle had been passed, a series of fairly large stopes was encountered. Access to higher levels did seem possible, but was not attempted due to the unstable nature of the stopes.

Back in the sunshine over a pint in the local pub garden, it was decided to spend the afternoon taking a look at some of the engine houses on the Cornish side of the Tamar. First to be visited was the pumping house of Hingston Down Consols, a large copper producer. It was unusual in that it was rotary, connecting to the shaft collar via flat rods. Next the well preserved engine houses at Prince of Wales Mine were examined together with the portal of the recently driven trial adit. At Cotehele Consols in the Danescombe Valley, a fine engine house has been tastefully converted into a holiday dwelling and thus preserved. Ascending the hill from Calstock, the engine houses of Calstock Consols could be seen across a field. Nearby are the water tower and engine shed of the long disused East Cornwall Mineral Railway.

Thursday was the last official day of the meet, and the survivors met at Kit Hill to view the mining remains. There were many signs of recent activity including the capping of open

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shafts and stopes with the ubiquitous Clwyd Caps, but the most distressing discovery was that the engine house at South Kit Hill Mine had been demolished.

In the afternoon, an unsuccessful attempt was made to find the adit of Wheal Florence north of Callington, after which it was decided to round off the underground visits with a leisurely trip into the adit of Gunnislake Old Mine. Beyond the Killas-Granite boundary, there is a stope, a flooded winze and a blockage of the level at a brick arched section. The party spent the remainder of the afternoon at Cotehele Quay which has been preserved in very much the condition it was in last century.

On Friday morning with the sun still beating down, everyone went their separate ways at the end of a most enjoyable week.

Bob Burns.

By far the most popular item sent recently is the news about the re-working of Parys Mountain. I think the only papers not to have carried the story must have been the "Sun" and the "Daily Star". Maybe our members don't buy these two, but then again I suppose the articles do contain big words. The Financial Times appears to be the first to print the story on 2.10.84 under the title of New Moves at Old Welsh Mine

An attempt to revive the old Parys Mountain copper-lead-zinc-gold mine in Anglesey, North Wales, is to be made by the Canadian Imperial Metals Corporation natural resource group.

Imperial Metals has reached agreement for an option on the property with the vendors, Intermine Joint Venture and the Marquis of Anglesey and Sir Arundel Neeve jointly, and hopes to develop a 250,000 tons of ore per year mine and mill complex.

The option commits Imperial Metals to a minimum spending of £230,000 by August 1985, the right to spend a further £4.5m by August 1988 and a total of 15 years in which to reach production.

Attainment of commercial production at an annual rate of 100,000 tons of ore would complete the option and give Imperial Metals a 100% working interest in the property subject to net profit interests totalling 21% for the vendors.

Mining of the Parys Mountain area near Holyhead, dates back to Roman times and the property was last worked in 1920. Imperial Metals believes that it contains some 3m tons of copper-lead-zinc ore with good precious metal values and is almost ready for shaft sinking and development.

Dr. Hugh Morris, chairman of Imperial Metals, said that the property was an attractive exploration target. He pointed out that drilling by Cominco in the late '70's had discovered "significant" reserves of ore at depth and he considered that there was a good potential for further large reserves.

Damian McCurdy.

Family History Studies

1) "I am at present researching my family name STOBART, STOBART, or STOBERT (Stobert being the most recent spelling) which had led me to a small settlement called Standingstones, Broughton Moor, Cockermouth, Cumbria. My family are shown as being miners on the census returns for 1871-1881 in the Standingstones community.

Only one coal mine is shown on the O.S. Map for that period, this being the Broughton Moor Colliery (Nelson Pit) although I believe several others did exist in the vicinity, these being Smeaton Moor Mine; Robin Hood; and Gil head.

I am looking for records of my relatives regarding service, wages etc., and I would be pleased if you could assist me."

Please contact:- Mrs. J. Crankshaw, 79 Evesham Road, Albrington, Middleton, Manchester M24 1QL. Tel 061 653 8525.

2) " I am currently researching my family history and have discovered an ancestor, John MAYER, who was a "Leadminer of Healeyfield", when he was married in 1800.

Healeyfield is a rural area 1 mile S.W. of Consett in Co. Durham. I was fortunate enough to find the slab over the main shaft on a recent holiday (O.S. ref NZ068487) on a farm known as Dean Howl. A second entrance is on the River Derwent (O.S. ref NZ062497). There is, I believe, a 3rd entrance. I have also found the remains of the washing and crushing plant (O.S. ref NZ072488), and the Smelt Mill (O.S. ref NZ078484). A visit to Beamish produced a photograph of each of these places taken around 1890.

I am particularly interested in establishing the location of "Sheraton" (a nearby mining village) names of miners, owners etc., and above all the birthplace/birthdate of my ancestor, cont'd.....

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JOHN MAYER.

Any information, drawings, maps that you may possess would be much appreciated, naturally I would be willing to pay for any postage, copying costs incurred".

Please contact:- John Ambler, 1 Westgrove Gardens, Bridge Road, Emsworth, Hants.PO10 7DR.

If you can help either of these people, then as well as contacting them, let us know too.

Vandalism to Shaft Caps.

During the last five years Derbyshire County Council and other organisations such as PDMHS have capped some 2000 old lead mining shafts, in order to improve public safety. This has throughout been done in close consultation with local caving and mining history groups, and in almost every case, in such a way as to allow access for exploration. This, in many cases, has allowed them to gain approval for access from landowners as a quid pro quo for actually making the shafts safe. In all it has been a highly beneficial policy for all.

Recently, however, there have been several instances of thoughtless (?) behaviour which threatens to destroy a great deal of goodwill: covers have been tipped down shafts, sleepers have not been properly replaced, and recently a steel grid has had a large hole cut in it - this last for no purpose whatsoever, since the grid was made to lift up. The safety and legal implications of this need little imagination.

We are fortunate in Derbyshire to have access with the consent of landowners to many hundreds of mines and caves. May we ask cavers and mine explores everywhere to take utmost care to replace shaft caps carefully, and to conserve our current excellent relationships. And please spread the word to others who may not read the usual publications.

On the credit side. Two chimneys at Hurst Mines, on Cat Shaft and Browns Shaft, are now scheduled as Ancient Monuments.

Those who have been following the do or die adventures of Dave during his Copper Belt phase, can now continue with this months nail-biting eddeavours. Does he wear his under-pants on top of his trousers, like Batman? (Hopefully we will never know).

Read on dear stalwart.....

Part 3 - The last year (or so)

Sooner or later in life one realises that it's often not "what you know" that counts, but "who you know". This Lashing Shift was just too much and I had to get off it if I wanted to stay sane (did I succeed?). How could I do it? Fortunately, ex wife taught primary school with the wife of the Assistant Mine Superintendent, Mr G.R. who was a fairly amenable Englishman in his late forties. I recalled that he continually smoked a vast collection of Captain Peterson Pipes (one at a time;) and when I had broken one of mine falling off my motor bike (350 AJS) he very kindly gave me one of his - which I still have.

A word on the subject of Punishment Shifts, causes and effects in the right ear resulted very quickly in a transfer back to production at Mufulira West, under Mine Captain M - a tubby jovial Scotsman whom I knew vaguely. "M" and the "Yarp" of Part 2, had just swapped sections, the result being that I got my old section back, drainage crosscuts and all! My mate J.B. was still on 1650 trammng. so it really was like coming home. Mine Captain M was a grand bloke to work for and we all did our best. The other shiftbosses seemed to have an uncanny respect for me after I had "got away with it", and we were all genuinely disappointed when the Africans struck again.

The procedure was virtually the same as before, but this time everyone worked the first half of the shift, returning to surface to gamble away the last three hours or so together.

It was about this time that I won my permanently bloodshot eye. One of the things you have to do during a production stoppage is to empty all the ore and waste passes. If you have no-one to do it for you, you have to do it yourself and we did, - having great fun trammng the "stuff" from the intermediate passes and boxes to the main tips in 10T Granbys with 110v DC. GEC Trolley Loco's. We would take it in turns to drive, bringing 10 loaded cars down to the tips and pushing the empties back in standard fashion. The African "whistle boys" normally stood in the first car on the return journey to warn of danger on their pea whistles. "Come on" was "Pheeiw pheeiw", "slow down" was "pip,pip,pip", with "stop" one long clear blast. The Africans with their musical and rhythmic talents could make their whistles talk, and it seemed tame when we did it. But I digress....

On the 2150' level at Muf West, was the Tray Car Haulage where the ore from the main

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passes was pulled into 40T cars and trammed along the shaft crosscut to two gyratory crushers prior to skip winding. The 1650' orepass hung up about halfway down. We tried everything to shift it, short of climbing up from the bottom, but it was no use. Someone decided that we must put a drifter hole into the pass above the hangup from the nearest accessible point. If the drilling didn't loosen it, we would charge and fire the back end of the hole. This is eventually what had to be done. Unfortunately, I miscalculated the length of Medium Igniter Chord (6ft/min) I had on, and thought I had a "miss". After allowing extra time I returned to the top of the hole to be greeted with the shot getting away 70' or so down the hole. The 5lb. charge blew a lot of dust up the hole, most of which seemed to get into my right eye! I didn't stay too long at Muf West after that because I'd "done my time" on back shift - a significant milestone for all young graduates.

At that time, Mufulira was mechanising fast. In 18 months the number of loading shovels (rubber tyred) underground had risen from 4 or 5 to almost 100. This was due to the success of the S.L.C. (Sub Level Cave) and Cascade Stopes, which were all mechanised. It was suddenly realised that the tyre costs were horrendous - they had to be with an average tyre life of about 300 working hours! The powers that were decided to commission a study on this blatant wastage and I was asked to represent the Mining interest on the team. By this time, however, we had decided to return to the U.K. for several reasons, but the last three months in Mufulira were probably the pleasantest of all, workwise. This was no doubt assisted by a feeling of euphoria, which was short lived on my return home because I couldn't get a job - but that's another story!

End of Part 3.

I've had another of those letters. At least this one started Dear Harry, and not Dear Sir, or even what must be the ultimate in insults, Dear sir or Madam.

Every now and again I get accused of printing misinformation in the Newsletter. Usually the letter is a variation on the theme of "I've been researching the sanitation habits of the Cleckheaton Crummet Miners, man and boy, for the 1st 95 years, so I like to consider myself a bit of an authority on this particular subject".

Herein lies the vital clue. If it were possible for me to do years of research on every article submitted to the Newsletter, I would be the Ultimate Authority on all things Mining. As it's not & I aren't, all I can ask is for you to bear with me, and keep pointing out any inaccuracies you spot. That way we all learn, and it stops the Newsletter becoming too dull and stagnant.

"What's he on about now?"

"Haven't a clue, you know how he rambles".

Well, I've just been taken to task by Les Tyson over David Heaton's handout details published in our last issue.

Les informs me that "The old powder house was not built in 1725. At that time the Bathursts didn't own this piece of land. No exact date is known, but due to its shape it is reasonable to conjecture that it was built around the same time as the Octagon Mill, which was begun in 1801 not 1700. Easterly Hall who built the mill only took the lease in 1800 when the Bathursts sold out due to the fact that they had made a real mess of running the mines

John Bathurst did not buy the manor of New Forest, it came with his wife as part of her dowry.

The New Mill was begun about 1824 not 1803."

Who's got a copy of R.T. Clough's "Lead Smelting Mills of the Yorkshire Dales"?

Then turn to page 135 where it says that the Octagon Mill was built about 1700. It would seem that this now needs altering.

After now having dabbled a toe and found the water on the warm side and the mud of unknown depth, I feel a compelling urge to leave this subject for someone else to pursue (Ed.)

Bob Burns take note - this is how quickly a proper Meet Leader sends in his report.

Cwm Pennant Meet Report - 29/30th September, 1984.

12 members and friends assembled at Dolbenmaen on a fine Saturday morning. It had been decided to visit Gilfach and Cwm Cipwrth mines on this day and permission had been obtained from the landowner. In preparing for the meet various references had been consulted and it was surprising to find the different locations for the mines in different publications.

These are as follows:-

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Mines Mills and Furnaces (MMF); British Mining No 4 (BM4); The Metalliferous Mines of Wales (MMW); The Old Copper Mines of Snowdonia (OCMS)

	Gilfach	Dinas	Cwm Cipwrth
MMF	SH525478	-	-
BM4	SH525466	SH530478	SH526477
MMW	SH525478		
	SH531418		
OCMS	SH531477	SH531484	SH526478

MMF states that ore from the Gilfach mine was crushed in Cwm Pennant at SH531418. Clearly this location is incorrect and has perhaps led to the incorrect reference in MMW, both of which are published by the National Museum of Wales. It is my personal view, backed up by evidence on the ground that the references given in OCMS are the correct ones.

In the morning we set off for Cwm Cipwrth armed with a bow saw and an axe. On a previous visit to the mine I had noticed that the wheelpit could be in serious danger of collapse if trees which were growing out of the masonry were not removed before the onset of winter. Again permission had been obtained from the landowner for the tree felling, and the three trees and a large amount of ivy etc. was removed leaving the site looking better than it has for at least 30 years. A job well done and thanks to all who helped. In the afternoon we examined the various levels of Gilfach.

Sunday was another fine day although only 9 members and friends were present. The party first visited the Prince of Wales slate quarry which has many well preserved features. We then walked round the head of the valley to Cwmdwyfor which exhibits buildings of a scale which can never have been justified by the amount of mining activity which appears to have taken place. We then returned via the superb incline and tramway from the mine. Another good day with some of the finest views in Wales.

Thanks to all who attended, especially the work party.

Damian McGurdy.

Book Reviews

1) Mining in the Elland Flags; a forgotten Yorkshire Industry. by C.G. Godwin. British Geological Survey Report Vol 16 No 4 published 1984 by H.M.S.O., price £3.25 (+ 50p if obtained from Geological Museum, Exhibition Rd, London SW7 2DR.)

This is a most interesting publication, A4 size (limp covers) of 17 pages (but of very small print). Also included are 4 text figures and 15 photos some taken underground. As well as a brief geology of these little known mines, there is also a general history of working methods and conditions and detailed cases illustrating problems resulting from the mine-workings. The appendices are most comprehensive, App 2 for example, lists (with grid refs, name of owner and dates of operation) 58 mines known to have worked prior to 1897, and App 3 gives a similar list of 119 known to have worked since 1897. Although a little expensive, it is well worth having.

I.J.Brown.

2) Bronze Age Metalwork in Southern Britain by Susan M Pearce, published in the Shire Archaeology Series by Shire Publications Ltd, Aylesbury, Bucks. Price £1.95. 1984. An A5 paperback, 64 pp, 23 illustrations.

This book discusses the metalware of copper, tin, bronze and gold produced during the Bronze Age between about 2600 and 600BC. Brief mention is made of the sources of the ore & the means of preparing the metal, the brevity being something of a disappointment but understandable, when the paucity of direct evidence is considered. The illustrations of the artifacts and the drawings of the sites where they were obtained are excellent. There is also an interesting diagram illustrating a clay bowl furnace as used during this period.

Although no doubt an interesting book for someone interested in the artifacts, this is not really a book for the mining or processing specialist.

I.J.Brown.

3) National Parks Today - is a new publication available only to interested organisations and published by the Countryside Commission. Each issue covers the activities of all the National Parks and a surprising number of reports are given of projects involving mines and quarries. The Summer 1984 issue (No 6) contains, for example, details of a limekiln preservation project in the Peak Park; potential waste disposal sites in old quarries in the Yorks.Dales; repairs to Brittonia Crushing Mill (copper mine) in Snowdonia and an oral history project covering Great Rock Mine (Silica Sandstone) in the Brecon Beacons.

I.J.Brown.

Book Review - cont'd....

4) The Mine Explorer - Journal of Cumbria Amenity Trust. Price £2.25 inc p & p from Maureen Stone, Old Stainton Hall, Stainton, Barrow-in-Furness, Cumbria.

A very interesting journal dealing with the mines of the Lake District and exploration work carried out by CAT members. The articles are short, concise and centred on present day exploration work with relevance to archive material and existing plans. It is obvious that much work has been done in the area and the rewards are beginning to show. The first edition rapidly sold out and the second edition is now on sale from the above address. My only adverse comment is that the quality of print could have been better and the front cover thicker. I look forward to reading Journal No 2 now in preparation.

R.E. Hewer.

You might think it's rubbish, but you can't say it's not varied. To continue the international flavour this next article was sent by John Hunter. Those into pumping engines read on:-

For the benefit of the steam buffs in the Society, I thought I would write a short note describing (what appears to me) to be a rather unusual pumping engine I saw on a recent visit to an old iron mining district in Upper Peninsula, Michigan, U.S.A. Let me first set the scene: apart from the famous White Pine Copper Mines, the area is also well known for being part of one of the worlds classic L.proterozoic 'banded iron formation' provinces that runs along the southern shore of L. Superior. Iron ore was first reported there near Negaunee in 1844 but little development took place because of the remoteness and inaccessibility of the terrain. With the expansion of the railroads westwards in the 1860's after the civil war the demand for iron improved, although Bessemer steel rails were supplied from England. By 1872 the Wisconsin-based Milwaukee Iron Company began sending parties to explore the Menominee Range in Michigan where ferruginous outcrops had been noted. The Company leased land from the Portage Lake and Lake Superior Ship Canal Company in 1873 and began sinking trial pits near what is now the town of Iron Mountain.

After a change of name to the Menominee Mining Co., the partners developed three small direct-shipping ore operations at Breen, Breitung and Quinnesec. Output improved in 1877 with the completion of a branch railway line, the low phosphorous ore being sent straight to the new Bessemer steel mills in the east. Two years later the Menominee Mining Co. was producing more ore than any other company in the lake Superior district and realising net profits approaching \$1M/year. To add to their success, the Chapin lode was discovered in the same year. It was soon to become one of the largest, but also one of the wettest mines in the Menominee range as much of the ore lay under a swamp. Mining began from 8 shallow shafts along a strike length of 6000ft. Problems experienced due to the tendency of the ore to soften on exposure were exacerbated by the heavy water flow and caused the miners to change from their traditional room and pillar methods to stope and fill extraction below the 5th level. Ground surface subsidence had begun by 1885 even though some 5 million feet of lumber was being consumed per year with a workforce of 400 miners engaged in full time timbering. In 1886 the mine was sold to the newly created Chapin Mining co. who decided to sink a deep shaft in the middle of the swamp and order a steam driven pump to replace the water-powered air compressors which supplied most of the energy for the operations.

Sinking of the 'D' shaft began in 1887 with the aid of ground freezing, possibly the first application of this technique in the U.S. The engine was ordered from E.P. Allis & Co. of Milwaukee (later Allis Chalmers) in 1889. Designed by Edwin Reynolds and officially described as a 'steeple compoud condensing engine', it was known locally as a 'Cornish engine' from its supposed resemblance to machines commonly seen in S.W. England. It stood 54ft high and consisted of a 50in. high pressure cylinder mounted vertically on top of a 100 in. low pressure cylinder whose connecting rods were attached directly below to the end of the floor-level pivoting balance bob. The 120 ton bob was more diamond-shaped than beam-like with the lower 'elbow' cranked to a 40ft. diameter, 160 ton flywheel. The other end of the bob was connected to the pump rods operating 28 in. diameter pumps placed 190ft. apart in the shaft. Each 10ft. stroke would lift 319 gals., and at 10 strokes/min the nominal capacity of the engine was $4\frac{1}{2}$ million gals/day. Unfortunately the shaft was unable to supply sufficient water to allow the engine to work efficiently and it was dismantled in 1898 to allow the recovery of the ore pillar supporting it.

By this time the Chapin mine had been sold to M.A. Hanna & Co. and then, in conjunction with the adjacent Luddington and Hamilton mines, sold again to National Steel. In 1901, the Chapin mine became the property of the newly-formed U.S. Steel Corporation when J.P. Morgan acquired National Steel. Six years later the massive engine was reassembled at the new Luddington 'C' shaft where it easily coped with the 3000gpm flow from a depth of 1500ft. By

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1914, however, the steam power was replaced by centrifugal pumps which operated until the mines finally closed in 1932. It is doubtful whether the various mine owners ever had their money's worth from the \$82,500 engine (\$250,000 with pumps) but having extracted some 27.5 million tons of ore during the life of the mine, they could easily have afforded it.

Today the engine still stands, in excellent condition, although most of the non-ferrous metal components are gone. A local preservation fund financed the construction of a smart sheet-steel building in 1983 and it is hoped to restore the engine to full working order. As for my interest in all this; well I am an ex-employee of the mine's last owner, U.S. Steel (although not in the U.S.), and my present employer is involved in uranium exploration in the same area. Curiously enough, several of the iron mine dumps contain scattered fragments of accessory pitchblende in the hematite ore.

Most of this information was extracted from a locally produced booklet describing the history of the area written by W.J. Cummings.

J. Hunter.

Whilst the next sounds of foreign parts, it's not really - unless you originate from South of Watford. Neither is it from a copy of the Hebrew Times found among the Dead Sea Scrolls.

Walls of Jericho, Egypt, near Bradford

Permission has recently been given to demolish these walls, a "listed building" constructed during stone mining. Brief details are given below.

The existing road between Thornton & Wilsden passes between two dry stone walls up to 11 metres in height and which were built in the early part of the 19thC to retain quarry waste in what was then an active quarry. Although the road is unclassified, it forms a useful cross-country link between the two communities and the retaining walls occupy an 80 metre length on both sides of the road.

The stone in the walls is of varying quality and size and much of it has become severely weathered over the passing years. Bulges have appeared in the walls and survey work has revealed that the walls are still moving towards each other. It has been concluded that any part of the walls could collapse without warning at any time and the road was consequently closed on 2nd April, 1982. The walls are, however, "Listed Buildings" within the meaning of Section 54 of the Town & Country Planning Act 1971 and Listed Building Consent for their "demolition" has now been granted by the Secretary of State as a consequence of the Public Enquiry held in Bradford on 24th January, 1984. In arriving at his decision, the Sec. of State accepted that the walls were dangerous in their existing state and that they would be uneconomic to repair or rebuild. He concluded that the only possible course of action was to by-pass the length of road containing the walls, and that the cutting formed by the walls should be filled in.

I.J. Brown.

Greenhow Mining Group

The Greenhow Mining Group was formed out of a small group of members who have met regularly over the past two years on Greenhow Hill. We formed the G.M.G. as we felt that the local people would be much more forthcoming with a group that is dedicated to study the local mines and history, rather than just a few individuals.

At the moment the group is collecting all the available information on Greenhow i.e. maps, plans, photographs etc. We are also trying to arrange access to various mines on Greenhow and in Nidderdale. This leads nicely into.....

Access. We are on friendly terms and have reasonable access arrangements with a number of the farmers and gamekeepers at Appletreewick, Craven Moor, Greenhow, Merryfield, Nidderdale etc. We are also trying to arrange access with others. Therefore, if you wish to visit any mine in these areas, we would appreciate it if you would contact us first, so as not to jeopardise any arrangements that we have, or are trying to get.

I can be contacted at:- Mon - Fri (Daytime) Tel. Wetherby (0937) 61961 ext 236
Mon - Thurs (Evenings after 9.00pm) Tel. Leeds (0532) 401542.
Malcolm Street.

The Workhouse or 'Union' & Friendly Societies

An ever present shadow on the working miner was the fear of the workhouse or 'Union' upon losing his job through sickness or injury, and the separation from his wife and family.

Life in the 19th Workhouse or 'Union' as it was commonly known, was stark indeed; the working day commenced at 6am from Lady Day to Michaelmas, and continued until 6pm - meal times and time for "reasonable recreation" being excepted. Any refusal or neglect of work -

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however trivial, leaving the house without permission, disobedience or disorder, attracted punishment by what was termed 'alteration of diet' - literally bread and water or confinement to the house for an indefinite period - subject to the discretion of the Governor.

Moreover, the Governor was empowered to see that no waste of fire or provisions took place (these were just sufficient to sustain life), all candles were put out by 8pm (Michaelmas to Lady Day) and by 9pm at other times. Intoxicating liquor was strictly forbidden.

Once at the dreaded workhouse gates, families were split up, males entered by one gate, and females another.... only those of most 'tenderest years' being excepted. Old farm labourers, who had given their lives to agriculture, were upon reaching retirement summarily evicted from their tied-cottage home - the husband kissing his wife farewell at the gate.

In the 'Union' inmates were accommodated in large, poorly lit, and barn-like dormitories with long, narrow windows through which day light barely penetrated, the only source of heat being provided by a small fire at one end of the room. At first - prior to 1860 - inmates slept on straw scattered on the floor, with only a single blanket for cover; later (after 1860) straw palliasses were introduced and two blankets were given out.... by generosity of the Governor. 'Breakfast', even in the depths of winter, consisted of a crust of bread with 'dripping' and a plate of weak porridge, and a tin of weak tea. Inmates unfortunate enough to become sick had to wait the monthly visit of the local doctor; whilst those who had contracted an infectious disease - diphtheria, smallpox, cholera, and scarlet fever etc. were immediately carted off to the Isolation Hospital where conditions were so bad that large numbers never returned.

From 1870 and the collapse of the copper market, mine after mine closed down; whole villages and parishes were rendered destitute; notices "Mine closed last week" were everywhere to be seen; in the chapels pastors' reports ended with phrases - "one of the most trying years the Circuit has known", "The unparalleled mining depression", "further collapse of mines", "The ... family have been evicted from their home". Such were the numbers who were claiming parish relief at this time that disputes arose over payment of rates - cases occasionally going to the High Court. The Western Morning News of 21/11/1874 reported "The Court of Queen's Bench yesterday affirmed in a case brought before them in which the Liskeard Union Assessment Committee had rated the surface works of South Caradon mine, that such buildings were liable to be rated for the relief of the poor."

Until 1837, the administration of poor relief was through the parish. Each parish annually elected two overseers of the poor, and they were responsible for raising the rate on the property in each parish and expending it for the relief of those unable to support themselves; the aged, the sick, the orphans, unmarried mothers and able bodied adults unable to find work.

Overseers were supervised by Churchwardens, the Annual Vestry Meeting and the local Justice of the Peace. This was the Old Poor Law to distinguish it from the system of Poor Law Unions introduced in 1837.

The constant dread of the 'Workhouse'; the inability to support one's family in the event of sickness; the insecurity and unpredictability of occupations (e.g. mining) led to the formation of Friendly or 'Self-Help' Societies, such as the Caradon Miners & Mechanics Friendly Society. This Society was formed at the Sportsmans Arms, St.Cleer on 24/6/1842, with the object of raising subscriptions amongst its members by voluntary donations and subs, to provide a stock or fund for the mutual relief of its sick members. The constitution was typical of many formed in the period (1840-60): "We, the undersigned, do unanimously agree to establish a society for the mutual benefit and support of each other, under the calamities which Almighty God in His wisdom may chose to inflict upon us." The rules further provided inter alia for a monthly subscription of 1/6d per member; sick benefit of 3/6d per week; that on death of a member, other members were to pay 1/- each to the deceased's dependants. Membership was only open to men above 35 years, provided they were not troubled by asthma, rupture, consumption or any internal disease or external wounds. Bailiffs, bailiffs' followers, and members of the armed forces were excluded from membership.

A little later, "Useful Knowledge Societies" were set up under bands of trustees, followed in their turn by Miners & Mechanics Institutes. One of the former established St. Agatha's Reading Room, St.Cleer in 1852, where its objects included "the instruction of members in the first principles of the arts connected with their callings, and other branches of useful knowledge." It was felt that voluntary organisations of operatives, offered greater scope for their employment, and 'would save them from the spectre of the workhouse'.

The need for a friendly or 'Self-Help' Society in the Caradon area was amply demonstrated:- 'Sacred to the memory of William Tonkin, Miner, who was killed in Craddock Moor Mine 24/3/1858 aged 43 years; leaving a widow & 7 children'(St.Cleer Parish registers). One can imagine how his widow felt at the daunting prospect of having to 'go on the Parish' to feed, clothe, and educate her 7 children.

H.R. Shambrook.

IMPORTANT NOTICE

Anyone remembering what I said in the opening paragraphs of this Newsletter had better forget it and start again, 'cos you must have misunderstood, & I never wrote what you haven't read!

Subscriptions will remain the same as last year.

The Committee have decided that, because this year we have managed to accrue certain monies, a veritable cash mountain even - well nearly! - alright then, a cash foothill!, there will be no alteration.

On top of this, as a result of much hard work by members of your committee, we have accumulated financial reserves from the NAMHO Conference; sales of "Life & Work of the Northern Lead Miner" and from After-Sales of the Society Publications. It has been decided that some of these reserves will be used to finance a third issue of British Mining in 1985, which members will receive in due course.

This is a one-off bonus issue, which we could not repeat at our present subscription. However, it has been suggested that if there was a substantial increase in subscription, at least £3.00 per year on top of any other increases caused by inflation, and if enough material comes in to the Editor, we could produce 3 issues of British Mining every year.

Because of the large increase in subs that this would entail we would like to hear the views of all members on this idea, so would you all please answer the question on the Renewal Form to let us know. We would only go ahead if there was a very large majority in favour.

NAMHO News.

1) Following a rumour that the owner of the Warton Crag Mines, Arnside, Cumbria, intended to block up all access points, a "caretaker" arrangement has been negotiated by CAT. Will anyone wishing to visit the mines please contact Mr. Holland.

2) Greenside Mine - Glencoyne Level is now fitted with a locked gate. Permission should be sought from the Lake District Special Planning Board, Bushier Walk, Kendal, Cumbria.

Mining Facsimiles

Enclosed with this Newsletter is advertising bumph for the latest venture of "Bird Enterprises": If the address sounds familiar, you now know why.

Following on from the Collins book, will be the Geological Survey's "Special Reports on the Mineral Resources of Great Britain" which were first published earlier this century. These excellent publications, although needing updating and revision, nonetheless provide the groundwork to further research in the old mining areas.

They will be reprinted in uniform style to allow for hardback binding by the individual, if required. Only those volumes dealing with lead, silver-lead, zinc and copper ores will be issued although certain selected iron ore volumes may be considered later.

Members are asked to inform the publisher - either separately or with their Collins order! if they are interested in this series.

Please write on each order from the immortal words "Don't forget the free copy for the library, Dick"!

I hear that Congratulations are in order for the Goodchild family. They've just produced a new member: a baby boy. "Has he paid his Subs. yet Pete?"

Meets for 1985

If you want any Meets for next year, hurry up and volunteer to lead one/some. All offers as soon as possible to John Mc, so that they can be printed on the Membership card. His address is:- J.H. McNeil, 166 Irlam Rd, Flixton, Urmston, Manchester M31 3NB.

A.G.M. - our next meeting to be held on Sun. 17th February, 1985 at 2pm at Sicklinghall Village Hall, Sicklinghall, Nr. Wetherby, Yorks.

Please send articles for the next edition (Feb) as soon as possible to H.Houghton, 29 Parkside Road, Meanwood, Leeds LS6 4LY. Tel (0532) 758505.