THE TREVITHICK SOCIETY

NEWSLETTER No. 27 NOVEMBER 1979

Edited by Colin Yelland, 'Trereife', 45 Chough Crescent, St. Austell

The power house and Mill at Falmouth Consolidated Mines Ltd. See the article on The Early History of Flotation. The photograph is from the collection of Mr. J. H. Trounson.

SOCIETY NEWS

At the September meeting the Council considered the Society's financial possition and received a report from the Treasurer concerning the stock position and debts due to the Society. It appeared that the accounts would not be prepared by the time of the A. G. M. due to the need to make extensive checks into the stock position and the Council agreed that with the sanction of the A. G. M. the accounts should on this occasion be made up to the 31st December, 1978 and a report be made on the balances as the 31st August, 1979.

It was also agreed that a combined journal be issued for 1979/80, partly due to the fact that one of the proposed articles would be so long as to unbalance a normal length issue.

Discussion ensued as to the best way by which the Society's Publications could be sold and it was agreed that other local book distributors should be approached. It was regretted that Mr. Trounsen's book of photographs would be delayed at the Publishers request until Spring 1980.

The President, Mr. Hodge, is gave notice that after er 22 years he wished to resign from the Council and the thanks of the Council on behalf of the Society were expressed to him, Mr. Ramon Thomas also said that he would eventually have to resign as Membership Secretary following the closing of Holmans Museum.

The Council spent a considerable time discussing the proposals of CompAir to close the Museum and the discussions with Kerrier District Council. Tolgus Tin, and Wendron Forge. The Chairman reported that CompAir had offered the building and its contents to the Society for the sum of £40, 000. 00.

At an emergency meeting of the Council following the A. G. M. on the 22nd September the Council heard from the Chairman that CompAir had sold the exhibits belonging to the Company to Wendron Forge and that our Society's exhibits must be removed very shortly. Mr. Young had kindly offered, without prejudice to any final decision on the future of the Society's property, to remove it

to Wendron Forge for storage without cost to the Society. He was anxious that in the longer term the Society should consider allowing him to exhibit the Society's items on loan and offered to grant free entrance to the members of the Society in this event. Several members of Council who had visited Wendron Forge this year reported that Mr. Young had transformed his displays over the last winter and that his layout wasnow very impressive. The Council therefore accepted Mr. Young's offer of storage and agreed to hold its next meeting at Wendron Forge to discuss the matter further.

At that meeting it was unanimously agreed that Mr. Young's offer to accommodate the Society's exhibits be accepted in principal and a sub-committee was appointed to discuss (before the next Council meeting) what matters should be included in any agreement between the Society and Wendron Forge. These related to ensuring adequate security, cataloguing, and other matters.

The Council elected Mr. Rodney Law as its Chairman for the ensuing year.

It was reported by Mr. Stephens that the Pen-y-Daren Locomotive replica was apparently now actually in the course of construction by the Welsh Maritime and Industrial Museum at Cardiff.

FIELD TRIP

Again blessed by a autumn day about 30 members of the Society met at Slip Quarry, Nanpean, by courtsey of the Goonvean and Rostowrack China Clay Company. Originally forming three smaller pits worked from before 1840, members were able to see the wire haulage system which is the last remaining. The differences in grades of china stone were explained and also the changes in the scale of production. From a two square mile area originally supporting something over thirty individual quarries Goonvean and Rostowrack was now the only producer of china stone from two quarries. Production from this quarry was in the order of 12,000 tons, whereas total production of china stone had been estimated at 750,000 tons and the highest annual production shortly before the First World War amounted to 70,000 tons per annum. It was explained to members that the Pottery Industry in Stoke-on-Trent had until 1973 been taking some 30,000 tons per annum of china stone products for use in the ceramic and abrasive industries. English China Clays had two thirds of this market with a de-fluorinated variety but this stopped production in 1973 and other imported products subsequently took advantage of this market as Goonvean and Rostowrack were unable to expand production to meet the short fall resulting.

A short walk led to the last remaining set of mica drags in operation, consisting of a run of four levels worked on a three shift system and taking between 800 and 1200 gallons per minute. It was envisaged that these would be phased out fairly shortly. The six granite settling tanks nearby have now been replaced by one circular concrete tank with a capacity of 140,000 gallons.

The other china stone quarry of the company - Prosper - was then visited and members were able to walk down to the bottom of the quarry to see the extent and method of working.

Lastly, a visit was paid to the last working coal fired pan kiln, at Carbis, where the automatic under-fed (Leicestershire) coal fired boilers were inspected. This modern inovation had been joined by a filter press to remove some of the water content. Adjacent to the pan kiln are the remains of the Carbis Brick Works consisting of five bee-hive ovens and stack.

The afternoons Field Trip, organised by John Stengelhofen, was judged by all to be a great success and an opportunity to view processes which might well not be seen for very much longer.

MINUTES

Minutes of the A. G. M. of the Trevithick Society held at Wheal Martyn Museum on Saturday September 22nd 1979 at 6 p. m.

Apologies:- The President, Messrs. Earl, Trounson, Yelland and Mr. & Mrs. Smyth.

Minutes:- The minutes of the A. G. M. held on 16th September 1979 were approved. (resolution proposed by D. Harris seconded by F. Michell)

Matters Arising: None

Reports: Hon. Secretary:-

I was privileged to be elected your secretary last September at the end of a week in which the Society had organised a very successful conference for the Association for Industrial Archaeology.

I regret I have found that to carry out the duties of secretary in a manner that would satisfy me and enable the Society to progress demands more time than I can give and I have given notice to our Council that I will relinguish the post at this A. G. M.

The report that I present now reflects my own views as secretary.

I believe it is fair to say that the organisation of the A. I. A. Conference had made it impossible to carry out the Society's normal activities effectively last year. This year an effort has been made to get back to normal projects which had been under consideration for some time.

A programme of talks etc. held in the winter was reasonably well attended but a field day had to be abandoned because of lack of support.

The Society has, at last, published Bryan Earls book on the explosives industry in Cornwall - this will surely be the definitive work on the subject.

Publication of a selection of Jack Trounsons's collection of photographs had been arranged with Moorland Publishing Co. Ltd. but this has unfortunately been postponed because of economic factors.

It is my belief that the difficulties facing the society can be overcome, indeed steps have been taken to deal with some of them, but success can only be achieved if the members in Cornwall will play a more active part. It may be that the need for action in connection with Holman's Museum will be beneficial in stimulating this.

It is inevitable that a society in which a high proportion of the members live outside the county must put a major effort into production of a Journal. Our editor is to be congratulated on its high standard of contents and appearance. However I believe that without an active programme of preservation and recording the local membership will lose interest.

Hon. Treasurer:-

The Treasurer reported the balance in the Societys accounts at 31st August.

He reported that he had found numerous discrepancies between figures given for stock, debts owing to the Society etc. in previous balance sheet and the true position and said he was preparing an accurate statement which he proposed to publish in the February Newsletter. The meeting approved this proposal.

In view of the financial position it was considered advisable to produce a combined 1979-80 Journal. This would have the advantage of enabling a very long article to be printed without overwhelming the Journal.

After discussion it was proposed by Mr. D. Harris and seconded by Mr. Messenger that a combined 1979-80 Journal be issued at the start of 1980. This was carried.

At the conclusion of the Treasurers report the Chairman stated the Council recommended the subscription be increased by £1. This was approved by the meeting.

Chairmans Report:-

The Chairman referred to the death earlier in the year of Mr. T. Harris of Camborne and the valuable contribution he had made to the Society and to his writings.

He reported on the state of the engines as reported by J. Trounson - Robinsons Engine well greased etc. Levant Whim the roof being repaired by the National Trust.

He felt that over the years the proportion of the members living in Cornwall had decreased and interests changed. The Council were approaching a commercial bookseller to try to increase sales to non members.

Since the Society had handed over the engines to the National Trust he felt it had lacked a raison d'etre.

Holmans Museum - this had now been closed and the curator dismissed. As it was known Kerrier District Council were interested in establishing a Museum the Society had suggested to Kerrier that the Holmans Museum could be used as a ready made nucleus for this. Negotiation for purchase of the building by Kerrier had been unsuccessful. Since then Wendron Forge had purchased the exhibits belonging to CompAir leaving the problem of finding a home for those belonging to the Society. He advised this be left to the Society Council.

Elections:- Hon. Sec. - left to Council.

Treasurer - Chairman proposed reelection of M. Trinnick, seconded D. Harris - carried.

The members of Council retiring by rotation - D. S. Jenkin, M. J. Messenger, D. Harris, D. Hill, D. Nance and F. L. Booker - were reelected with the exception of Mr. Booker who did not wish to be nominated for a further term.

Mr. F. Michell resigned as he is shortly moving to Lancashire.

D. Harris proposed and J. Stenglehofen seconded the election of M. Tarrant - carried.

F. L. Booker proposed and J. Stenglehofen seconded the election of Mrs. Smyth of Callington - carried.

M. Messenger raised the question of R. Thomas's position as Membership Secretary. Mr. Thomas stated he wished to resign because he had not got facilities for storage. M. Messenger proposed the Societys tanks be expressed to Mr. Thomas for the work he had done for the Society. This was seconded by F. H. Blamey and carried unanmously.

The President - the Chairman reported that J. Hodge was returing from the Council of the Society as he wished to be free to devote more time to other interests. The societys debt to J. Hodge was expressed by several members.

Any other Business: None

Date of next meeting: 20th September 1980.

Our Council Member Paul Stephens (Prospect Villa, Greenbank Road, Devoran Near Truro) writes as follows:-

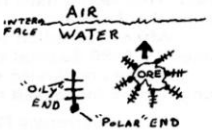
"At the AGM the retiring Secretary, Alan Pearson, suggested that the success of the Society in the future lay with an attempt to make sure that members living in Cornwall were able to meet on a more regular basis, both to get to know each other better and to spark off ideas and lines of research preservation, and recording work. I whole-heartedly agree with his suggestions and propose suggesting to Council that greater emphasis be placed on local meetings. Would members with any suggestions as to topics that could be covered by lecturers, field trips, or survey and recording work please contact me so that a list of possibilities can be compiled."

3

THE EARLY HISTORY OF FLOTATION

Up until the turn of the century almost all ores were recovered by means of hydrolic seperation. This process, while very sucessful with ores of high specific gravity eg. cassiterite, was not so effective with ores of a lower specific gravity eg. chalcopyrite or those of a friable nature due to the fineness to which they tend to be crushed. Thus only ores of a high grade could be economicly mined. However, in the early years of this century a process was being developed which would revolutionise the recovery of certain sorts of ore, particully sulphide ores, which, today are exclusively recovered by this, the flotatuoni process. This artical deals princibly with the Elmore process as it was the first to find commercial application, and some of the earliest plants to be used were installed in Cornwall.

The principle by which flotation works is quite easy to understand, & is crucial to the understanding of the development & operation of flotation machines. The key to the process is a substance called a colector. This is a molecule with two different ends,



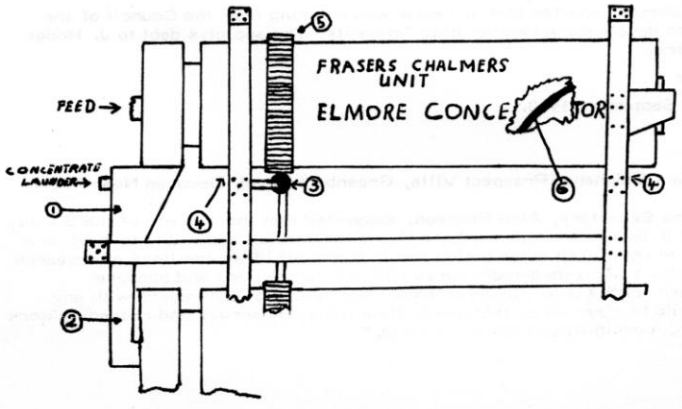
one of which is polar, this end attaches itself to the ore, the other "oily" end end consists of a hydro-carbon chain. This is water repellent & when the polar ends of the molecule attach themselves to the ore particles, these ends form a water repellent oily coating. This coating prevents the ore particle from being wetted by the water & thus the coated particles tend to be attracted to any air/water interface, thus the coated particles attach themselves to bubbles in the water, which float to the surface & can be removed by mechanical scrapers.

Quite when the first experiments with the flotation process were carried out is unknown, but various observations such as the affinity of sulphide minerals for the indiarubber belts of frue vanners had been made in 1860 & a patant was taken out by a Mr. Haynes for using an oil/water interface to seperate particles of ore clinging to it. The first practical application of this was in 1877 when the Bessel brothers used oil to float off Bavarian graphite, bubbles being produced by either boiling or generation of co. In 1886 some reagents were patented following the washing of clothes containing ore.

The first attempt to produce a plant which would have a wide application was made at the Glasdir copper mine in Merioneth by Alexander & Francis Elmore. Alexander, who died in 1944, attributed the invention to his brother. The Glasdir copper mine was active as early as 1850 & was worked with only short periods of suspention until 1914. The ore body was not of the type familiar in Cornish mines, but was a large body of low grade ore 500' long by 30' - 50' wide containing pyrite & chalcopyrite Early attempts to treat the ore met with great difficulty both with recovering the ore & producing a high grade concentrate with the then available dressing techniques. In 1892 the mine was sold to Samuel Crowder who appointed George Robson manager. Robson realised that, due to the fineness of the particles & its low grade, the ore was not amenable to gravity techniques. Having observed the affinity of sulphide ores for oil he constructed a machine to utilise this, however, it failed to seperate the ore successfully.

In 1896 the mine was sold to William Elmore. The Elmores also abserved the adhesion of the sulphides to oil & grease in the mill &, acting on this in that year designed, built, & patented the would's first effective flotation method known as the Elmore bulk oil process (Pat no's 21, 948 & 6, 519). The separator consisted of three cylinders 10' 6" long by 3' diameter with a 6" spiral blade rivited to the inside. The cylinders were placed vertically one above the other in an iron frame; the number of units could be increased by adding more banks of cylinders londitudinally. The cylinders were driven by a worm drive onto an annular ring & were supported on 4 rollers.

ELMORE BULK OIL PROCESS

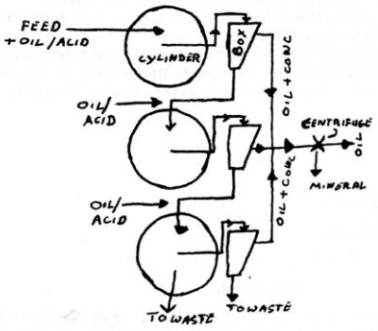


I) Seperating box
2) Tailing pipe to next unit.
3) Worm drive.
4) Rollers.
5) Annular drive ring
6) Spiral mixing blade.

S.H.C. Williams 1979

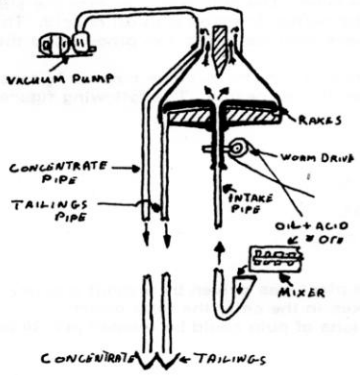
4

The feed consisted of crushed mineral suspended in water together with due amounts of oil & sulphuric acid was fed into the upper cylinder, where the contents were mixed by revolving the cylinder at 6 r.p.m. When this was completed the mixture was discharged into a wedge-shaped box. The top layer containing oil & ore was drawn off while the bottom layer was mixed with more oil & acid. This process is reeated twice more (see below) the water layer in the third seperating box being run to waste.



The mixture of oil & concentrate thus obtained was run into a centrifuge, mixed with water, rotated at 1000 r.p.m. so that the oil moved to the center & the heavy mineral to the outside of the drum. The process was repeated until enough oil was removed to sell the concentrate to the smelter. The process was found to be very successful in seperating most sulphides, the plant at Glasdir treated 5000 tons of ore carring 1.5% Cu & recovered 80% of the Cu producing a 10% concentrate at a cost of S 1.44 per ton. The consumption of oil was, however quite high & this type of Elmore plant was probably only used at Glasdir.

The second process devised by the Elmores found wide commercial application, & was used in Cornwall to treat copper ores; indeed the cell still finds a limited use in coal flotation. The process was developed at the London testing works of Ore Concentration (1905) Co. Ltd. Elmore took out a patent in 1904 (Pat No 17,816) for a process using a small quantity of oil & "a vacuum or partial vacuum (so that) air disolved in the milling water is liberated." In order to carry out reasearch & development in 1905 a full scale mill was set up in the testing works which consisted of a stone breaker, huntinton mill, automitic sampling appliances, & a full sized vacuum concentrator. a wide variety of ores were found to be recoverable during these tests, including chalcopyrite, galena, zinc blende, antimony sulphide, molybdenum sulphide, cinnabar, & iron pyrites carrying gold values. Native gold, copper, & silver were also treatible when finely devided, recoveries in all cases were said to be high (see plant details).



The machine consisted of a conical pressure vessel 5" in diameter which was fed from a mixing cylinder with a suspention of ore in water into which small quantities of oil & sulphuric acid had been mixed. In the top of the vessel a partial vacuum had been created, which caused air disolved in the water to form bubbles to which the ore adhered. The froth was continually led off at the top, while the tailings were discharged from the bottom, both were discharged through barometric columns to seal off the vacuum. The contents were stirred by rakes inside the vessel.

By may 1907 about 70 machines were in use or under construction not only for use in this country but for the copper mines in Scandinavia & other mines abroad.

Four plants of this type are known to have been installed in the South West, in Cornwall at Falmouth Consols, Tywarnhayle, & Dolcoath & also at Ramsley mine in Devon, as follows:

FALMOUTH CONSOLS

This extensive set in the Bissoe area consisted of Wheal Jane, West Wheal Jane, Wheal Widden, Wheal Hope, Falmouth & Sperries mine, & Nangiles mine. Comprising of no less than 948 acres in all, it was opened in 1905 due to the high price of tim. The dressing floors were constructed in the valley floor on the site now occupied by Hydraulic tin, & an Elmore vacuum plant was incorporated in order to remove the large amount of sulphides present in the ore. The shares were for a while, market favourites under the name "Falcons". In 1913 360 men were employed; the price of tin was however falling, &, in November 270 men were discharged & at the outbreak of war in 1914 the mine was closed. The principal workings were in the Wheal Jane section where a few men worked on tribute until 1919.

From 1905-15 860 tons of tin & 160 tons of Arsenic
& 1916-19 55½ tons of tin were produced.

The surface remains have been removed by the present workings of Hydraulic tin & Wheal Jane.

5

TYWARNHAYLE

The sett is on the north-east side of the Porth Towan valley (grid ref. SW/702472). In the late 1700's the mine was being worked by about 30 people under the name Tywarnhayle producing copper & small amount of tin, in 1809 the name was changed to United Hills partly in order to help premote the shares of the mines, but in 1816 the mine closed after making a substantial loss. In 1826 the mine was restarted on a more considerable scale employing 350-400 people, in 1848 the name reverted to Tywarnhale a production continued until Aproximately 1860 when the mine closed due to the depression in the price of copper of which the mine produced considerable quantities.

Work was recomenced in 1906 & an electrically operated dressing plant was installed with an Elmore vacuum separator to recover chalcopyrite & zinc blende from the dumps & the deads in the stopes. This is believed to be the first attempt at flotation in Cornwall. The plant was operational in early 1907, & the following figures were obtained.

Average pulp assay - 0*412% Cu
Average tailings assay - 0*128% Cu
Average concentrate assay - 8*176% Cu

Therefore approximately 70% of the copper present was recovered.

In order to provide further ore reserves it was decided to lower the water, level & in 1907 a centrifugal electric pump was installed to drain the mine, this was the first use of electric pumps in Cornwall. The water was lowered to the 40 ftm level but due to the influx of water from the neighbouring mines the scheme failed & the mine was abandoned.

Tywarnhayle has the only known remains of an Elmore plant in the south-west, half-way up the hill side, close to Moncton's shaft at the grid reference are some concrete foundations which were part of the plant & a little further up is the base of a stack which belonged to the generator.

DOLCOATH

This famous mine in the Camborne area erected an Elmore vacuum plant in order to treat the finely divided copper pyrites from the western section of the mine. The pulp was run from the stamps into a conical settling tank & the thickened pulp run out of the bottom & mixed with oil & acid. This mixture was then fed into the separator, the concentrates were then run off in two pipes while the tailings went to the tin plant.

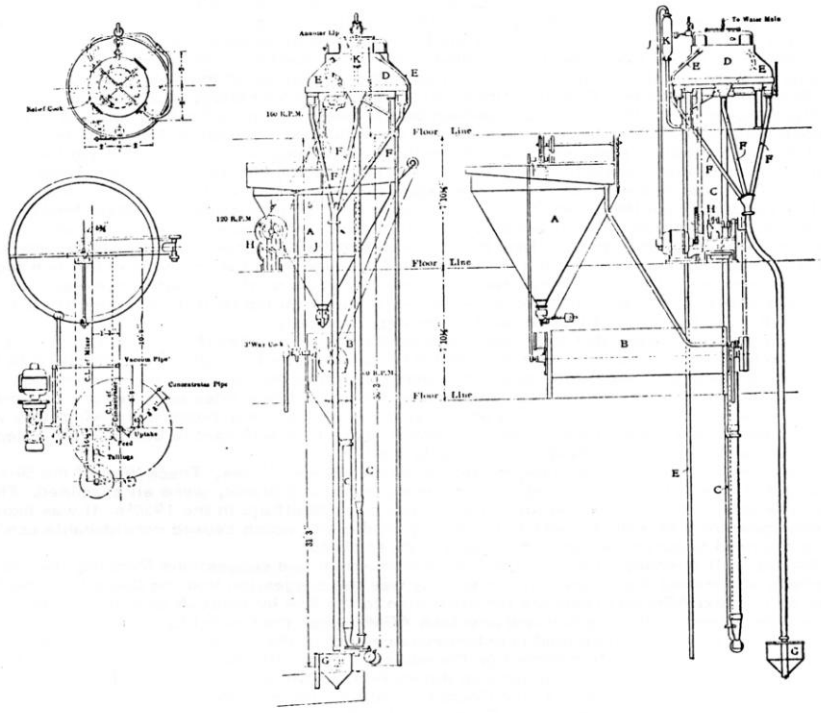
The plant was installed in 1907, during an experimential run the machine treated 1½ tons of dry pulp per hour & used 3*7 lb of acid & 13 lb of oil per ton of ore treated. The following figures about the recovery of ore were obtained.

Average pulp assay - 2*41% Cu
Average tailings assay - 0*23% Cu
Average concentrate assay - 17*4% Cu

This gives a recovery of 92-6% of the copper present. The plant was driven by a small electric motor which operated the vacuum pump, the mixer & the rakes in the cell, the total power consumption was the region of 2-2½ H. P. Between 20 & 40 tons of pulp could be treated per 24 hours.

6

THE DOLCOATH ELMORE VACUUM PLANT



Drawings of Elmore vacuum installation at Dolcaoth; Plan & Elevation.
(From a pamphlet issued by the inventor.)

Key

A)	Conical thickening tank.	F)	Tailings outlet pipe.
B)	Mixer.	G)	Collecting box (to tin floors).
C)	Intake tube.	H)	Vacuum pump.
D)	Vacuum seperator.	J)	Pipe (from pump to seperator.
E)	Concentrate outlet pipes	K)	Overflow vessel.

In the first 6 months of 1909 the plant recovered £543 worth of ore, &, from its erection till 30/6/1909 £1, 505 16s 5d worth of copper & £309-0-6d worth of mandic & blende were recovered.

RAMSLEY MINE

This mine is situated on the northern edge of Dartmoor near South Zeal at SX650 930. It was reopened in 1900 after a break of 20 years, in 1907 an Elmore plant was installed to treat the copper ore which was the mine's main product. Between 1901 & 1909 when the mine shut 3, 752 tons of copper were produced. Although substantial remains exist on the site the dressing floors have been destroyed The mine is said to have received slight attention in 1951.

The next type of flotation machine to be used in Cornwall was of the sub-aeration type, in which air is induced into the bottom of the cell by means of an impeller by a low pressure air line, or a combination of the two. These machines were developed by Minerals Separation Ltd & T. J. Hoover, the original patents being taken out in 1909. Together with this Minerals Seperation developed more sophisticated reagents to aid flotation. These machines worked on the principle which nearly all machines work today ie: the froth was generated by air being forced into the pulp. The construction of this type of machine led to the development of modern flotation practice.

S. P. J. Cullimore 1979

7

AIA NEWS

The Conference of the AIA was held between the 14th and 16th of September at the former Maw's Tile Works at Jackfield in the Ironbridge Gorge to help celebrate the 200th Anniversary of the Ironbridge. With the Blists Hill Museum, Coalport China Works, Museum of Iron, Abraham Darby Furnace, Elton Collection of Industrial Art and the Wharfage Interpretation Centre all being available to delegates there was plenty to see even without the Pre-Conference excursions arranged by the local conference organisers. About 180 delegates attended, with a fair number from our Society.

The Lectures were, as one would expect, related to the industries of the area and the County of Shropshire. Speakers such as Mr. Barrie Trinder on "Industrial Archaeology of Shropshire" and Mr. Dennis Blake-Roberts and Mr. Roger Edmundson on the Coalport China Factory were of obvious interest to those visiting the area. In addition members contributions lived up to their past record as throwing up items of interest that one might not otherwise have an opportunity to hear - and this year they included a film on Coricle Making, the Project to Restore Gunton Mill (a thatched building), the site of origin of Mill Wheel Stones near Paris, the Edgehill Railway Cutting Excavations, and (perhaps the most unlikely) a Dutch-man (Mr. Van Ouden) speaking in English on the Iron and Steel Industry of Sweden to continue the tradition of an international contribution. With separate exhibition and conference rooms - incidentially the first time that the AIA had held its meeting in an old industrial building! - The Conference facilities (which included a bar) proved most convenient and left one feeling that despite the programme of events almost the most important feature of the Conference was the opportunity to again meet old friends from other societies in different parts of the country to swap experiences and discuss the state of Industrial Archaeology generally.

The Field Trips on the Saturday afternoon included the Severn Valley Railway and a visit to the Snail-Beach Lead Mine where the intrepid contingent from Lancashire (perhaps mistaking the Adit for a Cotton Mill Engine Room Entrance) instigated an underground trip led by one of the conferences practical coal mining experts. Thankfully the un-intrepid writer of these lines survived the experience which was in fact extremely interesting for its opportunity to see the great Stope - crossing it by way of a disconcertingly ancient, debris encrusted, wooden bridge. This was said to be clear for a depth of 700 feet. The Lead and Barytites loads were clearly visible.

The surface remains including Engine House, Octagonal Stack, Flues, Track Way of the Snail-Beach Railway (still in existance and living in Kent) and Locomotive Sheds, were all examined. The Locomotives were apparently only cut up for scrap by Wards of Sheffield in the 1950's. It was explained that there were apparently three claimants to ownership of the site which caused considerable confusion and sometimes the need to purchase the same property three times!

The AGM was well attended with very considerable comment and suggestions from the floor of the meeting. Perhaps of greatest importance to our society was the suggestion that the Council of the AIA should report by the next AGM on proposals for affiliation to the AIA by local IA Societies. This had previously been discussed by the Council and previous AGM's when the Council's view had been that the affiliation of local societies could lead to unfortunate results in the use of block votes. If any members of our society would like to comment on the advisability or otherwise of the principal of affiliation, or indeed any practical suggestions on the method, implimentation, and operation of such a scheme which could then be passed on to the Council of AIA would they please write in the first instance to:- Paul Stephens, Prospect Villa, Greenbank Road, Devoran, Near Truro, Cornwall.

Paul Stephens

FROM THE SCIENCE MUSEUM, South Kensignton

An interesting memoir of the character of Arthur Woolf by Francis Trevithick has recently come to light in a mid-19th century letter book at the Science Museum. The book is a compilation of correspondence conducted by Bennet Woodcroft, Superintendent of Patent Specifications and of the Patent Museum which flourished at South Kensington in the years immediately preceding the establishment of the Science Museum in 1844 although separate premises were not provided until 1909. Trevithick's letter to Woodcroft, written from Penzance and dated 13th June 1861 runs as follows:-

"Dear Sir,

You will think your note is to remain unanswered.

Many knew Arthur Woolf by name, but few could give facts. As far as I can learn, he was born at Redruth in Cornwall, and was a carpenter in the mines. About 1805 he was engineer at Mieux's Brewery in London.

My father met him in London and advised him to return to Cornwall. About the year 1814 he became the engineer of sundry Cornish mines. About 1830 he was Engineer in Chief of the Hayle Foundry Engine Works, and I was his pupil. He thus can stand as the first resident Cornish engineer.

About that time his luck went against him and some 15 years ago he died in Jersey in impoverished circumstances. He was a brother to the Martin Woolf who made himself known at The Nore.

His high pressure claims are looked on by some as a mere repetition of what his friend Trevithick had done before, and probably was the cause of ill feelings to them. His double-cylinder engine is scarcely an improvement on what his friend Hornblower had before done. He was considered a clever man but rough and apt to be rude, and unscrupulous in making the most of the ideas of others.

He told my mother that her son was a steady promising boy and that his companion John Brunton (son of the Brunton the Engineer) was a good-for-nothing. At the same time he told my uncle in whose works we were employed the same story except that I was the bad boy and Brunton the good boy. My uncle heard both the stories and Woolf from that day lost ground, until he was obliged to leave England. I have refrained from writing before in the hope of fixing the dates, but I have just found a relative of Woolf's who is very likely to give you good information and reliable, Mr. Lewellin Newton of Camborne.

I have not told him of you or of my note. But you can write to him for facts. I have given you the loose points to draw your attention to them.

My dear Sir,

Yours sincerely,
F. Trevithick".

As well as writing to correspondents all over Europe and America for biographical details of the early engineers, Woodcroft was quick to follow up the leads provided by such letters. Within a few days of receiving Trevithick's letter, he had sent his curator Francis Pettit Smith to the Channel Islands, and a transcription of Woolf's entry in the Cemetery Register at St. Peter Port resulted shortly afterwards.

To Woodcroft is due credit for his vigorous pursuit of industrial archaeology in an era long before the term had been coined.

THE LLANDUDNO COPPER MINES

This sixty page A4 sized publication written by Mr. C. J. Williams and published by the Northern Mine Research Society of 186 Station Road, Billingham, County Cleveland continues that society's series of monongraphs. Chronicleing the story of these mines from their believed Roman origins through the commencement of serious mining at depth in the 1690's to their final closure in the 1850's, it will be of interest to those with local connections or an interest in the copper industry in Cornwall for purposes of comparison.

For this Reviewer one of the interesting items is an example of industrial verse published in 1842 to celebrate the completion of the Penmorfa Level which drained flooded workings in the new mine and which required great accuracy in drilling as it was planned to release a body of water nearly 200 feet deep.

The volume contains a good variety of plans, both in their original state and re-drawn for greater clarity when required. The other illustrations by way of photographs and sketches do not seem to be of the same high standard however and although the work has clearly been researched at length, and a wide variety of records consulted and quoted, it seems a pity that a better quality of paper has not been used. The availability of this research is probably sufficiently valuable to overcome such quibbles in its production, and the form of stapled binding and unjustified type-setting probably enables the society to assure a low unit cost. However, it is hoped that in the future the society will be able to consider up-grading the standard of its production.

The story itself is of considerable interest in showing the fairly typical problems in the 19th Century Development of Mineral Deposits. Certainly any Mine which can boast a "Tom and Jerry Engine" has to be worth exploring! Members of our society will be interested in the reference to Captain Francis and the influence of Cornish miners (page 13) as evidenced by Vivian's and Treweek's Shaft's. Also of relevance will be the Sandy Carne and Vivian 18" pumping and winding engine erected at the Old Mine in 1835.

DOMESTIC ARCHAEOLOGY

One of the latest volumes from the Institute of Cornish Studies (published jointly with the Cornwall Committee for Rescue Archaeology) and entitled 'Some Aspects of the Domestic Archaeology of Cornwall' represents a survey of various types of structures which fall very much within the range of industrial archaeology; - including stone cider mills and presses, culven-houses, lime kilns, farm round-houses and ice-houses. Arranged in sections, this volume is not the history of each individual site, but rather it sets out to explain the historical context and development of the particular type of domestic archaeology being studied (with methods of use and documentary references) before subsequently containing a series of maps of distribution and a very full index with full grid reference and sources of information. There is a bibliography for further research.

The authors, Rosemary Robertson and Geoffrey Gilbert, are to be congratulated, as are the publishers, for attempting a task that needed doing in a way that will be useful to many researchers. Quite frankly it is a task that our Society could and perhaps should have been able to tackle itself, although it is always easy in a voluntary society to find reason why members working days preclude such a task. Would it not be possible for a group of members to tackle a task such as this on different topics? Why not a volume containing details of plans (extracted from the ordance survey if necessary) of, for instance foundaries (Oatey and Martyn in Wadebridge and Dingey's in Truro) gas works the Buildings at Falmouth still substantialy remain) electricity power plants and associated instalations, boat yards, malt houses, tanneries, - the list is almost endless. If any members would be interest in gathering as a task force to try to prepare or at least stimulate preparation of such a volume and would like to contact me at home - Prospect Villa, Greenbank Road, Devoran near Truro - perhaps we can see whether our Society can be stimulated by the success of others.

P. Stephens

9

STATIONARY STEAM ENGINES IN GREAT BRITAIN - CHECK LIST

Members may be interested to know that Colin Bowden of 16 Church Manor, Bishop's Stortford Hertfordshire has compiled a 19 page Gazetteer (in regional sections) of all known stationary steam engines in Great Britain. This volume can be obtained from Mr. Bowden at a cost of £1. 40 plus postage.

THE LEAD SMELTING MILLS OF THE YORKSHIRE DALES AND NORTHERN PENNINES

This work, first published privately by the author, Mr. R. T. Clough, in 1962 has been reproduced in facsimile as a limited edition. There is additional text from the original edition to cover the Northern Pennines and there are 140 additional unpublished photographs. At a price of £25. 00 from Mr. Clough at Stoneleigh, Utley, Keighley, West Yorkshire, the work is not cheap, but would certainly be of interest to members of our Society interested in the smelting of tin.

SAVE ENGINEERING RECORDS

A pamphlet under the above title has been issued by the Institution of Civil Engineers to try to secure the preservation by Civil Engineers of records relating to their work. Any members knowing of Civil Engineering Records in Cornwall might like to draw the attention of the holders of the records to the recommendation of the Institution.

CORNWALL RECORD OFFICE: A BRIEF INTRODUCTION TO SOURCES (1979)

30 - page pamphlet giving information on documents at the Cornwall Record Office, including sections on local government, religion, probate, family and estate records, maps and plans, industry, trade and communications, census returns and printed sources, with a short bibliography and index.

Available from the County Archivist, Cornwall Record Office, County Hall, Truro, Cornwall.

Price 50p. (65p. by post).

CORNISH INDUSTRY " 100 YEARS AGO" - ROYAL CORNWALL GAZETTE

2/3/1877	-	To be sold; pursuant to an order of the High Court of Justice in the case of Johns -v- Browne, the Bell Inn at Helston with Stables and Piggery behind, now in the occupation of Mr. Henry Guest, and the brewery and stables in the yard behind the same but now in the occupation of Mr. William Sleeman.
	-	To be sold; the property of the late John Powell, a malt house in new street Penryn occupied by Mr. J. R. Rowe as an annual tenant at a nominal rent of £25 per annum together with the adjoining house on the corner of New Street and Commercial road. (held on a lease determinable on two lives now aged 52 and 53)
	-	Sale of materials at Crenver and Wheal Abraham United Mines, Crowan, including Steel Wire Rope, 30' Water Wheel, 11' Water Wheel, 50lbs Tonite and 60lbs Lithofracteur
	-	Sale of materials at Burra Burra Mine, near Chacewater, including a 45" pumping engine.
	-	Proposal to work Tolvaddon, between Goldsithney and Marazion, by Taylor & Sons, having been first discovered by Mr. Adsolom Bennetts of Marazion in February 1856, but abandoned due to disputes with the lords after being sunk to 60 fathoms. The lode is now 10' wide producing some rich copper ore.
9/3/1877	-	For sale; coal, corn, and manure business with extensive offices yards and warehouses with steam engine and mill room in Penzance and dwellinghouse known as 5 Trewartha Terrace. This business of the late Steven Hill which is to be let for 7, 14 or 21 years was known as the Mounts Bay Stores opposite the Railway Station.
	-	Helston Bank failure - "whenever shall we hear the last of this poor bank? I wonder people don't let things drop. Messrs Ellis, Brewers, of Hayle say that their names have been mixed up with the monies of the said bank in the manner calculated to injure them with the public. One would think that they need not grumble about being mixed with gold."
16/3/1877	-	Proposal to manufacture bricks out of river silt at Truro by Mr. Rudeford who has had one made, burn't and tested. It is said they could be sold at a low price.
	-	Wheal Peevor - in fork to the bottom (70 fathoms) in only 19 days with the 60" pumping engine going continuously at 10 strokes per minute.
23/3/1877	-	Perran Iron Mines to be re-worked forthwith. Mr. C. E. Henderson of Truro is to be the managing director.
	-	Three masted brigantine "KOH-i-NOOR" launched from the yard of Messrs. Slade & Sons. She is of 400 tons, with a keel length of 112'
30/3/1877	-	For sale; 8 horse power locomotive steam engine and tender with 24 goods trucks, passenger car, lighter, all the property of the St. Austell Pentewan Railway & Dock Company. To be auctioned without reserve after siezure ub under distress for rent.

6/4/1877 - For sale, The Park of Mines Consolidated Mining Company Limited, near St. Columb, with machinery including two double cylinder engines of 3' stroke, two sets of three head husbands pneumatic stamps, two Harvey & Co. boilers, tram iron roads, stand and iron and wood wagons, iron 4' water pipes, 11 buddles, 58 dead frames, and water wheel. Lease for 21 years from 1st January 1866, 8th of August 1874 and 14th December 1874 at 1/18 dues. 521 tons of black tin were raised in the previous three years.

13/4/1877 - Wheal Grenville - foundations cut for new engine house and the shaft is being sunk below the 60 fathom level. The Western shaft is nearly drained, while at north shaft the water is below the 130 fathom level.

- Wheal Newton - divided into 25,000 shares on which £1 each was paid on a limited liability basis. A dividend of 10% has been decleared after a profit of £309 on the quarter.

20/4/1877 - For Sale - machinery at West Wheal Gorland Mining Company, Gwennap, including a 24" rotary engine, 16 head stamps axle, 56 fathoms flat rods, 3 horse whims, iron tram, and account house furniture.

- St. Blazey Minerals Company - cost of raising iron ore to surface 2/6d per ton, royalty 6d. cartage to ZPr Harbour 1/-3d, Quay dues 7½d. The lode in the 15 fathom level is 4ft wide yielding 12 tons ore per fathom. 1000 tons of ore currently at Par Harbour.

27/4/1877 - Wheal Par Gwinear, on the south east of Wheal Jennings has not resumed working since being flooded at the beginning of the year.

- Relistian Consols - 16 heads of stamps at work and the 24 fathom level being worked to get under the tin level. Said to be the mine for whose ore Angarrack Smelting works was constructed.

- Wheal Veor, known as Poldown, - 60" engine purchased by West Godolphin Adventurers now being removed. It will be re-erected on Wilson shaft.

- Wheal Peevor - shaft being sunk from the 70 to 80 fathom level by 12 men

- Wheal Whisper - yielding half ton of tin per fathom

- McKean's rock drillsgiving satisfaction at West Maria and Fortescue Consols and proposed to be used at South Roskear.

- Account of dispute as to rent between Newquay and Cornwall Railway Company and Cornwall Minerals Railway Company

5/5/1877 - Buller Mine - the grant was formerly held by a London Company, but nothing was done. The sett was about ¾ of a mile long by a ¼ mile wide and working commenced in 1848 under the supervision of Richard and Steven Davy of Redruth. A yield of 20 tons of rich ore per fathom was discovered at only 20 fathoms below adit. £1,228 subscribed in 256 £5 shares which rose in value to £1,000 each. Over nine years there were £214,080 in dividends. In 1856 7,482 tons of ore brought £39,761., over 57½% of which was distributed as profits.

- West Godolphin - the engine house has been commenced and an additional 8 heads of stamps being erected.

- Extended note in mining intelligence (page 5) on Relistian Consols. Watts engine did a duty of 20,000000. Notes also an Weeth Mineand Drewollas mine.

- Account of Weir - v - Barnett being an issue of miss-representation in the prospectus of Knightor, Treverbyn and Resugga Haematite Iron Ore Mining Company. (incorporated May 1872 and in Liquidation by early 1875)

11/5/1877 - Sale of machinery at South Great Work - including 40" pumping engine of 8 ft stroke and 1 x 11 ton boiler, 16" stamping engine, fly wheel, crank, and 1 x 9 ton boiler, 30' water wheel, 10" capstan rope, 2 horse whims, balance bob, etc.

18/5/1877 - Sale of materials at Great Wheal Veor United Mines - including 25" Whim engine cage and 12 ton boiler, 18" horizontal engine with 12 ton boiler, 2 head pneumatic stamps, 3 arm capstan, balance bob, calciner, frames etc.

- For Sale - the Charlestown Iron Works, by proprietors James Thomas and Co, which was established by their predecessor upwards of 40 years ago - comprising foundry hammer mills, fitting, plateing, smiths, moulding, pattern makers, and other shops, 2 steam engines, 2 powerful water wheels and machinery consisting of blast fan, several large compound self acting and other lathes, drilling, planting, screwing, borring and other machines, tilt hammers, 18" horizontal engine. Also Coal House, coal depot; stables coach house, boiler wagons, and 3½ acres of rich meadow land adjoining. Held on 99 year lease on lives now aged 60, 53 and 52.

- For Sale at Dingey's foundry, Truro, good 50" pumping engine and 12 ton

boiler, and new 20" plunger lift.

- Death announced of John Darlington of the Minerva Mines, near at the age of 78 after 25 years of service to these mines

18/5/1877 - Clay Pits sold - East Carhidden, for £1000, to Mr. Moxham of Swansea and Menyridden, for £200, to Mr. Jones also of Swansea. Already held by Welshmen and £14,000 had been spent on them.

- West Chiverton sustained a loss of £1375 due to the insolvency of the Barry Port Smelting Company and passed its dividend.

- Account of History of West Wheal Gorland Mining Company then involved in the court of stanaries - page 6.

1/6/1877 - For Sale - freehold mansion house and 2 shops at higher market street Penryn with walled curtailage and garden at rear extending to the mill stream (263ft by 43ft) lately occupied by the late Mr. Sampson Stephens Mr. J. E. E. H. Stephens and Mr. Richard Tyler with the 3 shops and dwelling houses adjoining, together with the brewery, bonded stores, sheds, stables, yards and garden behind the same lately in the several occupations of Messrs Wall, Tallack, Ackerly, and Stephens.

- Wheal Prussia - the lode in the 30 end west is 6ft wide and work £40 per fathom. The mine has no engine but is paying dividends. It is principally owned by Captain Tregay

- Wheal Comford has been worked for years by Mr. Peters of Redruth. Recently rich copper ore has been discovered.

- West Chiverton hit by loss of £1600 in failure of the South Wales Smelting Company

- South Carn Brea Mine is to be suspended.
Creegbrawse Mine sold with account house, furniture, stock, etc for a £5 note.

8/6/1877 - Great Wheal Fortune - materials for sale including a 33" engine with 2 bobs, large fly wheel and 11 ton boiler, 2 x16 heads stamps and 2 balance bobs.

- For Sale - machinery and plant of the Chacewater Saw Mills in the ownership of T. P. P. Bullen & Co (includes a list of machinery) due to decease of managing partner. Included were a dwelling house, 2 gardens, and orchards, sawing mills, drying stoves, stables, offices, etc. The machinery was water powered.

- Goole Pellas (formerly Rosewall Hill) erecting addition all 16 heads stamps. The proprietor is Mr. Brown who suffers the monthly loss of £200 cheerfully.

- Polrose, originally in 648 shares, being developed. The sett was granted by Lord Churston who has given up all dues until the mine is in a paying state. 80 head of stamps being erected to crush tin stuff from a lode over 30ft wide. Mr. Roach is the Purse and manager.

- At New Godolphin mine a few men are clearing the adit level West of Footway or Wheal Doem shaft - from where hundreds of pounds worth of tin have been raised.

- Account (page 6) of proposal for narrow gauge railway linking Tavistock and Calstock.

- Perran Iron Mines have just been resusitated and about 50 men are at work

8/6/1877 - Report of funeral of Captain Googh who held the management of Wheal Daniel Creegbrawse and Killifreth. He had spent many years in the management of South American Mines and had been instrumental in the promotion of several mining ventures in the Chacewater district and had a large mercantile business at Falmouth.

- Report of operation of boreing machine at West Maria and Fortescue Consols.

15/6/1877 - Auction of machinery at Wheal Cock on Basset and Grylls' Mine, Wendron, including 22" double acting engine with boiler, fly wheel, and cage with crank attached for drawing water, 3 bobs, plunger poles, horse Whims and chain, Kibbles, 60 fathoms flat rods etc. Apply to Captain Paul Prisk on the Mine.

- Great Wheal Fortune Mine, Breage -machinery for sale; including 33" engine with 2 bobs, fly wheel, and 11 ton boiler suitable for pumping or stamping, 2 x 16 head stamps with axles, 2 balance bobs, and frames, etc.

- For Sale - a few hogs heads of good cider - offered by John Gill, Great Treworgie, Probus.

- To Let by tender for 7 or 14 years, Hicks's mill, Gwennap then in the occupation of Mr. N. Veran with 9 acres of grazing and arable land, dwellinghouse, gardens stables, cart house, etc. Apply to the proprietor Mrs. R. Blackmore, Hescot, Hartland, North Devon.

- Wheal Coates - only partially worked, the shaft being sunk only and a few men being engaged. Captain Martin in charge.

- St. Agnes Consols - report of a collapse after several changes in the executive. It began to work about 1863 and has recently been solely carried on by Mr. Reynolds of London. First started as a cost book company under the name of West Wheal Kittyit has however turned out to be a poor mine.

- Reports of loss per annum to various towns as a result of recent mine closures:-

St. Just	....	£4,500 P.M.
St. Ives	....	£4,300 "
Helston	....	£12,000 "
Camborne	....	£13,000 "
Redruth	....	£12,000 "
St. Austell	....	£4,000 "
Liskeard	....	£3,500 "
Callington	....	£2,500 "
Gunnislake	....	£2,000 "
		£57,800

There was therefore a total loss of £693,600 per annum.

- Report of Inspector of Mines for the year ended 31st December 1876:-
Persons employed - underground
Boys of 12 to 13 - 29
Males of 13 to 16 - 586
Males above 16-8, 966
above ground -
Boys of 8 to 13 - 649
girls of 8 to 13 - 191
Males of 13 to 18 - 1,715
female 13 to 18 - 865
females above 18 - 1,699
males above 18 - 3,732
Total number employed 18,632 (Devon 2,302)

- Total minerals produced as follows (Cornwall)
arsenic at mines - 2420 tons
arsenical pyrites - 7326 tons
copper ore - 44, 071 tons
fire clay and brick earth - 40 tons
iron ore - 13,030 tons
iron pyrites - 603 tons
lead ore, dressed - 2,595 tons
manganese - 21 tons
silver precipitate - 1 ton
tin ore - dressed (black tin) - 11,961 tons
tin ore (undressed) (estimated to contain 595 tons of black tin) - 13,455 tons
wolfram - 10 tons
zinc ore - 4,292 tons

- Fatal accidents as follows:-
1873 - 59
1874 - 44
1875 - 44
1876 - 19
There were 193 mines at work in Cornwall and 56 in Devon.

22/6/1877 - To Let - New Inn, at Portloe - apply to Messrs S. G. Moyle and Sons, Brewers, of Chacewater

- West Basset - Captain Evans, the Purser, chaired the meeting for the 3 months ending 21st April. Costs of labour £7,018, Merchants bills £679, coal £414, making a total of £10,759. Copper ore sold realised £345, 138 tons of tin had been sold making £5,336, balance due from the last account £2,577 and the balance due from the adventures was now £5,077. The loss on the quarters working was £2,500. A call of 6s. 8d. per share was made. The numbers of workers had been reduced by 70.

- Report of accident at Harvey and Co's moulding factory when 5 tons of molten iron fell on the floor of the works. There were no injuries.

- Report from the newspapers corresponde nt in Newquay that "on the best authority" blast furnaces will shortly be erected near the great perran iron mines. Limestone would be obtained from Plymouth at a nominal price. Mr. Roebuck was behind the scheme with Mr. James Henderson engineer, of Truro It was intended that a short line leading from the mine to Holywell bay would be constructed under a board of trade order by Mr. Roebuck for the exportation of iron and that a line would be laid down to Truro. "If Mr. Roebuck's schemes in Cornwall have not hitherto met with that success of which they are worthy he has certainly obtained for himself a widespread popularity, and Cornwall will, I am sure, appreciate to the full the efforts which have and are now being made by him."

- Report - page 7 - of fatal mine accident at Combellack Mine near Helston. A Kibble fell down the shaft in which they were working. The mine joins The Lovell mine, but which has a distinct body of share holders. A witness stated that he was working at 42 fathoms in the engine shaft at the time of the accident when he was working with one of the deceased. Captain John Nancarrow was manager of the mine.

- Cornwall Minerals Railway - meeting of the proprietors of the company at Westminster Palace Hotel, London.

29/6/1877 - East Wheal Basset - materials for sale by order of the stanaries court, including 60" pumping engine with 2 boilers of 10 tons each, 36" cylinder stamping engine with 9ft stroke and 1 boiler, 2 x 16 head iron axles with frames, 24" cylinder winding engine 8ft stroke with 10 ton boiler fly wheel, and cage, and copper ore crusher, including all the account house furniture,

- Crenver and Wheal Abraham United Mines - to be sold by tender, either in one lot or separately, all the pumping, whim, and other engines, boilers calcines, pneumatic stamps crusher and other machines.

- Letter - page 6 - state of Mine Clubs

- Report on jigging machines - page 7, including Hants colon's (first worked at Cornwall in the Restronguet stream works, Devoran, in 1872) Green's & Southeys.

- West Basset - suddenley found to be £25,000 in debt to it's bankers. The debt had been systematically concealed from the share holders despite the fact that £1,200 per annum was being paid by way of bank interest. "The whole thing is monstrous, and will destroy all confidence in Cornish Mining property on the part of outside capitalists unless some prompt steps are taken to compel pursers to lay a statement of the assets and liabilities of a mine before the shareholders at every meeting."

- The Barrow drill at Dolcoath said to have been proved to do 3 times the work of a pare of men. but that the diamond drill was said to perform 3 times as muct much as a Barrow drill.

- Wheal Prussia - rating held at Penandrea mine; the accounts showed 21 tons of tin to have been sold for £963. Labour costs and Merchant's bills amounted to £580, lord's dues £55, leaving a balance in favour of the adventurers of £349 out of which a dividend of 1/- per 1/6,000th share was paid and a balance of £49 carried forward.

- Wheal Grambler - a call of 2/-6d per share to be made through the Vice-warden's court

- North Jane - to be wound up owing to the continued very low price of tin. Mr. Thorman Woodward of Truro has been appointed liquidator.

- Wheal Jane - meeting held in London under the presidents of Mr. John Hocking, Junior. The Purser, Captain Southey, reported that a profit of £133 had been shown on the four months working. Labour costs for the four months ending March amounted to £1,567, Merchant's bills £414, which with Lords dues raised the total to £2,107. Tin, lead, and arsenic sold for the four months ending June realised £2,240. The liabilities of the mine amounted to £8,650 of which £6,266 was due to bankers and there was tin ore in stock estimated at £7,267. The balance against the adventurers is reduced to £645.

6/7/1877 - Treleigh wood - a call of 5/- a share made, but since then the lode in the 34 West has much improved and is worth £20 per fathom.

- West Maria and Fortescue mine to be abandoned. Balance of £3,073 against the adventurers.

- Report on action of the British dynamite company -v- Krebs relating to a patent suit involving dynamite and lithofracture.

13/7/1877 – Wheal Alice, Lelant, - for sale by auction, 8 stands for flat rods, 55 fathoms of 2¼" round iron flat rods (11 pieces), horse whim with 10ft cage, 60 fathoms of chain, 42ft shears, whim kibbles, grinding stone, overshot water wheel, stamps heads, 2 round buddles, hand frame, and flooring.

– New Chiverton Mine, Perranzabuloe, for sale including 40" pumping engine with 10 ton boiler, 4 horse power engine with crusher, 8 arm capstan, 120 fathoms iron stave ladders, 2 horse whims, several whim and other Kibbles dressing floors, 2 jigging machines.

– Stamps erected at a cost of between £5 - £6,000 had been lying idle for the last four months at Wheal Agar.

– Ding Dong - sold as a going concern for £1200 to the Messrs Boiltho who intended to keep the mine at work for at least six months. Proposed to form a company in 1,000 shares and to make a call of £2 per share.

– West Basset - said to be 200 share holders - 6000 shares but nearly 4000 are held by only 12 share holders. 1 holds nearly 1,100 shares.

– Cathedral Mine - portable engines sold to Messrs Clyma and Sons Redruth for £52

– A petition to the House of Lords in favour of the closing of public houses in England on Sundays signed by 1,216 persons above the age of 16 residing in Hayle has been presented to Lord Eliot and a similar petition has been presented to the House of Commons by Sir John St. Aubyn, Bart

20/7/1877 – West Godolphin Mine - balance in favour of the mine of £1362. An engine with 3 boilers had been purchased for a £1,000. Four months working showed a profit of £716.

– Rumoured that Unity Wood was about to be wound up, and fears that West Poldice would share the same fate unless Unity Wood engine kept working.

– Cathedral Mine - said to be 10,000 share holders.
£3,000 said to be owing to the late Mr. Mathew Green (obituary in previous issue) and the mine also owed £12,000. Captain Mitchell read a glowing report.

– Report on China Clay trade - page 5

– Captain Peter Tenby of St. Neot - formerly the manager of Ambrose Lake, Wheal Vincent, Tregeagle and other mines proposes to smelt the refuse or leavings for lead at Silver Hill Mine, about a mile from Lostwithiel. A 12 horse powered horizontal engine is to be installed and the house is being constructed. Flues will be built for the deposition of arsenic. The mine had been abandoned only a few years previously.

– The Restormel Iron Mine employee only a few hands at present, and the iron is of an inferior quality and soft. These are several lodes in the sett and operations were commenced on a very promising copper load.

– Wheal Eliza, St. Austell, - 40 tons of tin being sent away per month. Captain Williams in charge and making monthly returns of 4 tons of tin. He also works Crinnis Mine where there are 24 men employed under ground. Captain Williams also contemplates to re-work another mine in the area.

– Polscabla Downs in the same St. Austell district worked under the direction of Mr. Loveland, Purser, and Captain Robert Martin and is selling large quanities of tin, being worked as an open quarry from which the debris is tramped to the various water stamps by horse power. Only a few years previously this private company operated 140 heads of stamps.

27/7/1877 – Advertisement by Mr. T.E. Goldworthy for his ginger beer, produced at Carharrack.

– Report of annual seaside treat of the workers of Tuckingmill foundry and Roseworthy hammer mills (about a 100 in number) on the Lizard. Captain Roger Vivian, the manager of the foundry, accompanied the party.

– Wheal Sisters - under supervision of Captain Rosewarne Simmons and Carnow. Sending away 30 tons of tin per month. The mine was not meeting costs and required 3 pumping engines and several other winding and stamping engines. Trencrom was also being worked on a smaller scale. At South Providence the engine continued to work but only two men were employed underground. Goole Pellas was reported to be shallow with soft ground and tin easy to obtain. At St. Ives Consols the burrows were being stamped and the floor was being stripped by the men at a high tribute.

– Report - page 7 - of charge of manslaughter being brought against Captain John Nancarrow of Combellack mine near Helston. A verdict of not guilty was returned.

MEMBERS QUERIES

From Justin Brooke:-

Information is sought on Jehu Hitchins, Junior (1799-1881). Born in Tavistock, sone of Jehu Hitchins senior, mineral agent to the Duke of Bedford, and elder brother of Josiah Hugo Hitchins, who discovered Devon Great Consols. Replies to Justin Brooke, Chymorvah Vean, Marazion, Cornwall. Tel. 0736 710 468

BENNET JOHNS of Wendron. Information on all 19th century holders of this name, which was a common one, to Justin Brooke, please (address as above)

From David Henslock, 62 Crescent Avenue, Coventry CV3 1HE:-

On holiday recently in the Republic of Ireland, I passed through the village of BONMAHON in Co. Waterford and on the top of the cliffs I was surprised to see a 'Cornish type' ruined engine house. Unfortunately I had no camera with me to record it, but on my return to Lismore I entered the public library to enlist the help of the librarian, (Mr. Matt. Goffe) who found for me several references to the mining operations in that village.

Several of the photographs in various guide books of the area at about the turn of the century identified various worthy gents as 'Captain Jack prospector' etc. and the mines as yielding copper, tin, lead and silver, also the depth of the shaft was given in fathoms.

The slight evidence I managed to unearth, and the memories of some of the local people makes me wonder if the mines were sunk and operated by Cornish experts, and if some record exists somewhere of perhaps an engine or boiler supplied to this area. The vast amount of information available to any query in the Newsletter makes me wonder, if a short article on this branch (if indeed it exists) of the use of Cornish expertise 'across the water' could be prepared by one of the Society Researchers.

SUBSCRIPTIONS

Would members please note that subscriptions are to be increased from £2.00 to £3.00 with effect from 1st January 1980.

Please ensure that your standing order is increased to £3.00 as soon as possible in order to avoid unnecessary administration.

INDUSTRIAL ARCHAEOLOGY IN CORNWALL

A weekend at Fowey Hall is being arranged to assess what has been achieved and what are the priorities in the study of Industrial Archaeology in Cornwall.

Those interested in attending the weekend, to be held on February 23rd are asked to write to Professor Walter Minchinton, Dept. of Economic History, University of Exeter.