

# THE TREVITHICK SOCIETY

NEWSLETTER No. 29

May 1980

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

## JOINT MEETING WITH CARN BREA MINING SOCIETY

Two joint meetings have been arranged.

**LECTURE** Friday 13th June 1980 at 7.00 p.m. at Camborne School of Mines by Professor Robert R. Pennington of Birmingham University on *The More Interesting Vice-Wardens & Some of The Lawyers and Litemants Who Appeared Before the Stannary Court During the 18th and 19th Centuries.*

**FIELD TRIP** Sunday 29th June 1980 Mr. Bryan Earl will conduct a party over the mines of the St. Just District of which he has an expert knowledge. Please send self addressed stamped envelope, for further details, not later than 7th June, to:  
D. Ingham, Esq.,  
25 Barripper Road,  
Camborne.

## 1980 A. G. M.

The Societys 1980 A. G. M. will be held on Saturday 20th September. The venue, which will be in Cornwall has yet to be decided.

## LISKEARD AND CARADON RAILWAY WALK - SUNDAY 25th MAY

The Railway & Canal Historical Society have arranged a walk over parts of the Liskeard & Caradon Railway, led by Michael Messenger, on Sunday, 25th May. It will be in two parts; around Caradon Hill in the morning, and northwards to Cheesewring Quarry and Kilmar Tor in the afternoon.

No booking is necessary - simply meet by the Cheesewring Inn, Minions (grid ref: SX 261711) at 10 a.m. or 2 p.m. with sensible footwear. The lunch stop will be at the Cheesewring Inn where bar snacks are available. It would assist catering if members could advise Michael Messenger, 31 Cefn Craig, Rhiwbina, Cardiff CF4 6SW, by 18th May if they are likely to avail themselves of the Inn for lunch so that the proprietor can be given some idea of demand.

## NEW SECRETARY APPOINTED

At the last meeting of the Council of the Society a new secretary was co-opted. He is:  
Mr. Lesley Wallace,  
Trelyn, 19 Trefusis Road,  
Redruth.





These Photographs of Levant Mine were taken in 1926 by our member Mr. P. S. Kemsley M. B. E. of 218 Manchester Road, Burnley, Lancs. who has now kindly donated them to the Society.

#### INDUSTRIAL ARCHAEOLOGY IN CORNWALL

A conference under the above title was held at the Fowey Hotel on 2nd and 3rd of February 1980. About 25 persons (many of them Trevithick Society Members) attended the conference organised jointly with the University of Exeter, Department of Extra Mural Studies under the joint chairmanship of Professor W. Minchinton and Mrs. V. Chesher. The topics included a general discussion of the definition and scope of Industrial Archaeology, pre-1800 distribution of steam engines in Cornwall Luxvlyan Valley, electricity in Cornwall, and an early example of industrial archaeological films on the making of lobster pots at Porthgwalla. Finally there was a discussion on future of the industrial archaeology in Cornwall. It was decided that a second conference would be held at the same time of the year in 1981.

The final discussion on the future of industrial archaeology in Cornwall centered on the work which was thought to be required and how this could best be covered. Discussion centered around the Trevithick Society, the Institute of Cornish Studies, and the Cornwall Committee for Rescue Archaeology. It was felt that some of the tasks of recording and preservation were getting to the stage of being beyond the scope of voluntary societies. It was realised that the appointment of further staff paid by public funds would be difficult at the present time, but it was pointed out that in other counties industrial archaeologists have been appointed by the local county council. It was felt that traditional archaeology perhaps took a greater share of the available funds than might objectively be felt to be appropriate. It was to be regretted that many people were not aware of the work of the Institute of Cornish Studies in maintaining a register of those conducting research in various fields of interest.

Paul Stephens

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#### The 'Black Jacks' by C. C. Short

The 1824-5 repeals of the Combination Acts of the turn of the century was the occasion for the rise of the coal miners' trades unions (1). It is a feature of differing form of both society and employment in the south west of England that the hard rock (metal) miners of Cornwall did not share their collier cousins' enthusiasm for unionism (2).

However an often over-looked relationship between the two groups is the active recruitment of Cornishmen as strike-breakers on the occasions of northern coal (and other) strikes, Cornishmen who may well be termed 'Black-Jacks' (3). These present notes give a few brief pointers to that activity. At some stage in the future the fuller story, in its economic and social context may well be told, but at present many more facts are to be discovered. (Any additional knowledge would be welcomed by the author.)

The earliest reference to imported labour in the coal fields so far found is in 1832 in Northumberland (4) - but no sure reference occurs here to 'Black Jacks'. (The other major area providing regular strike-breakers was Staffordshire. In this case the men were colliers. On at least one occasion Deryshire colliers were also used, in Northumberland and Durham; yet Staffordshire men also 'blacklegged' in Derbyshire.)

Twelve years later in the same area the first specific reference is made to Cornishmen. Mass importation of labour had been resorted to by the coal owners in the face of a determined strike. The colliers had come out in May 1844. The union membership was some 20,000 and 126 pits were idle. After 57 days only some 125 had returned to work, East Anglian agricultural labourers were amongst those recruited, often by less than honest recruiting agents, sent 'down country' specifically for this purpose.

Some 32 Cornishmen were engaged by Radcliffe Colliery at 4/- per day, but seemingly without being told in advance of their blacklegging activities. When they were only paid 2/6 to 3/- per day they too struck, but soon resumed at the original rate. However the problems of hewing

rather than mining took their toll and their output fell to only 4 tubs per man-day. After a month the rate was reduced to 4d per tub - whereupon all but four ran away. A reward of £50 was issued for their capture and all were recovered in Newcastle and North Shields. A special court at Alnwick in July found them not guilty, mercifully. (Here the court date and the period of working suggest that these men were early imports to the area.) The presence of the Cornish does not seem to have had a major impact on the strike however. (5)

In 1847 the Lancashire Colliers Union had emerged strong from a strike. In agitation, after the strike was over, some Cornish lead miners (sic) were warned that 2 or 3 of their number who had come to the county had almost been killed by "... the buzzard falling on them." The reference is unclear but evidently represents intimidation directed against 'Black Jacks'. There is ample evidence that such intimidation - and violence - was often directed towards any who stood in the unions' way (6). There was a sense in which it is understandable - the colliers lived in tied homes and the coal owners had no compunction in turning them and their families out when they struck, in order to house the blacklegs.

Just this occurred in 1866 in the Manchester area (7). Andrew Knowles and Son employed some 3000 men over a wide area to the west of the city. Knowles was strongly anti-union and on hearing of a Miners National Association rally, questioned all his employees over their membership: all who affirmed it or declined to answer were dismissed. Knowles refused conciliation with the Association; they declared a strike in the autumn. Knowles retaliated with a lock out. By the start of 1867 some 1450 men in the Farnworth and Kearsley district alone were locked out.

Meanwhile in December, Knowles employed two men to recruit strike-breakers. Paul Roper was paid £1 per man to recruit 300 from Staffordshire and Colonel Goodier the same for 200 from Cornwall. (Roper and Goodier appear to have been general agents; they also supplied men for other strikes (8).) To accommodate these men Knowles turned out the striking colliers from (his) houses. Some 27 families were evicted in Clifton and some 80 in both Pendlebury and Little Lever. In addition some single houses were converted to doubles. Even so the majority of strike breakers lived in store rooms or specially converted sheds.

The Association tried to fight back by sending representatives to Staffordshire with counter-propaganda. This ploy seems to have had little success, but this is the first of several attempts to play countermeasures against the coal owners' efforts rather than use mere intimidation. Not that this ceased of course - at least one Staffordshire man was killed in a fight and police escorts had to be provided and special constables sworn in. (8)

The strike was in the end defeated. The great strength of Knowles & Son proved unassailable and in May 1867 the strikers were petitioning to be allowed back to work (8). What happened to the blacklegs is unclear. Many it seems returned to their home areas - after having been evicted in favour of 'proper' colliers - but some remained: the names Pardow and Tranter still appear locally in 1869 (8).

Earlier in 1866 an interesting use of blacklegs had occurred in Cornwall. The Miners' Mutual Benefit Association was formed in the east of the county and sought to regulate both tut and tribute. The adventurers refused and the Association called a strike. At the time however rates in West Cornwall were even lower and 'Black Jacks' (in the fullest sense!) from the west broke the eastern strike (9).

The era was of course one of depression in the county. Such eras were always accompanied by emigration. For this reason references such as that of the Glasgow Herald (10) to Cornishmen in the north Lanarkshire coal pits in 1867 must not necessarily be taken to imply 'Black Jacks'.

As the coal mining union histories make clear (of (1)) the early history of colliers union is a history of many different - and sometimes highly ephemeral - unions, and sometimes the 'Black Jacks' played an important role in their downfall. The next union to attract attention carries this 'distinction': the Amalgamated Association of Miners (11). Formed in 1869 this union started a recruiting drive in 1873 in north Lancs., including the Burnley area, where wages were traditionally low. In July or soon after the Executors of J. Hargreaves dismissed all union men - and soon all 1500 employees were in the (the union) and out (of work).

Thus in August some 16 canvassers were sent by the Executors to Cornwall to recruit 'Black Jacks'. The ploy was eminently successful: the pages of the Royal Cornwall Gazette show the result (12). On 20 September some 50 families, among them labourers, shoemakers and tailors are reported as moving to Burnley and earning 10/- to 12/- per day. The issue of 27 September refers to the places of 'strike hands' at Burnley being rapidly filled. Some 160 men had left the previous week end for north Lancs., and placards at Liskeard sought some 1000 men as well as offering women and families employment. The same figure of 1000 is also quoted as needed at Burnley in the issue of 11 October although a sour note does enter: after 1 week at the stipulated wage men had to resort to 'piecework'.

Certainly by November the employers at Burnley regarded the fight as won (13). They had a full complement of men and output was only 1-2% down on the pre-strike figure. The Association reaction was positive: they paid the Cornish to go home. The RCC notes Cornish miners dissatisfied with Barnsley (sic), on 24 November and willing to go home". . . if the fare was paid." As there seems to have been no dispute at Barnsley at this time which involved 'Black Jacks' it seems fair to conclude the reference is to Burnley. The local newspapers bear this out. Certainly in December the Cornish in the town were offered fair treatment.

The Association moves had their effect. Some 2 (of 11) Hargreaves pits had to close and the others were undermanned; output fell. The Executors decided to persecute the leading official of the Association. The case was dismissed, but the cost of the proceedings, with the 'go home' payments, plus the strike pay was crippling. In April 1874 strike-pay was reduced by one third and in May the strike was over: the colliers were returning, handing in their union cards and signing 2 year contracts. The Amalgamated Association was virtually dead.

Before this end however the RCG reported on 11 April 1874 the attempt of the Association to establish Devon and Cornwall branches (12). The aim was to try to end labour importation; the move never seems to have got off the ground.

What happened to the Cornishmen is not totally clear. Certainly some had been settled in 'Little Cornwall' just off Accrington Road (14) in houses apparently specially built, but now demolished. Cornish names persisted here for a long time and the local Methodist Church was originally a Bible Christian foundation. (This Methodist breakaway group was a particularly west country phenomenon, later becoming a component of the United Methodists. It may be that many former United Meth. chapels in the mining areas owing their origins to a Bible Christian foundation, reflect west country importation or emigration, perhaps even 'Black Jacks'. The theses is untested though.)

The Burnley newspapers reflect little disorder at the time of the strike - indeed they make no record of the arrival of any Cornishmen. There are hints of some Cornishmen aligning themselves with the strikes, and of many soon quitting mining altogether. Thus one man arriving in this period is recorded as a copper miner for the birth of his children at Tavistock in 1871 and 1875, but as an outdoor labourer for the birth of a child at Burnley in 1878. One of these children became a farmer and another a cotton weaver (15).

One final reference to 'Black Jacks' occurs in 1876, although in this case outside the coal industry. Labour relations in the North Wales slate quarrying industry were poor (16). In 1876 the rigorous defence of Quarry in Bettws Garmon (17). The men walked out - and were sacked. To replace them Cornish blacklegs were introduced.

It seems likely that these men were slate quarrymen from the Delabole area, although the underground form of north Wales quarrying may have encouraged the employment of metal miners. Certainly the period was one of economic crisis in the mining industry. The result however at Hafod y Wenn was violent. The Welsh were furious over the blacklegs. Some 500 - 1000 men converged on the quarry and, marching in, scattered the Cornish and assaulted the officials. What finally happened to the Cornishmen is unclear.

A not insignificant entry appears in the same year in the RCG issue of 19 August (12). The Cleveland Ironstone Mines were seeking labour - and " . . . no strike or wages difficulty exists."

#### REFERENCES

- (1) See for instance . . . .  
 Annot R P "The Miners" (all references are to this work)  
 Annot R P "A History of the Scottish Miners"  
 Challinor R "The Lancashire and Cheshire Miners"  
 Challinor R & Ripley B "The Miners Association - A Trade Union in the Age of the Chartist"  
 Williams J E "The Derbyshire Miners"
- (2) See for instance . . . .  
 Jenkin A K H "The Cornish Miner" p. 332,  
 . . . but note also the strikes recorded in . . . .  
 Barton D B "A History of Tin Mining & Smelting in Cornwall" p. 148.
- (3) It was the Western Morning News in 1975 who coined the term, over a note on my interest in strike breaking Cornishmen.
- (4) Annot op cit.
- (5) Challinor & Ripley op cit p. 132.
- (6) ibid p. 191; cf also the broadsheet song "The Dirty Blackleg Miner" which in several versions is very violent.
- (7) Challinor op cit.
- (8) Smethurst J B "Strikes and Strike Breakers in Worsley Coal Field"  
 Eccles & District Historical Society 1967.
- (9) Halliday F E "History of Cornwall" p. 297; this is probably the event referred to by Barton (op cit) p. 148, note 5.
- (10) Jenkin op cit p. 341.
- (11) Challinor op cit chap. 7.
- (12) Royal Cornwall Gazette extracted by P. Stephens, Trevithick Society Newsletters nos. 3 & 5.
- (13) Challinor op cit.
- (14) Jenkin op cit p. 341.
- (15) Private communication.
- (16) See for instance . . . .  
 Lindsay J "A History of the North Wales Slate Industry" p. 204 ff.
- (17) Samuel R (ed) "Miners, Quarrymen & Saltworkers" Part 2, Y chwarchwyr: the slate quarrymen of north Wales p. 106.

CORNISH INDUSTRY 100 YEARS AGO - ROYAL CORNWALL GAZETTE

- 4/1/1878 - Polgooth Mine - for sale by auction including 36" cylinder rotary steam engine with two fly wheels.
- Wheal Bassett Mining Company - for sale on the 16th instant 60" pumping engine, 36" stamping engine and 24" winding engine.
  - Review of events in 1877 including summary of mining operations.
  - Fatal Mine Accident; inquest on Miner Killed at Trencrom Mine.
  - South Caradon; a dividend declared of £2. 00 per share.
  - West Tolgus - a dividend declared of £1. 10. 0 per share.
  - West Seton; loss of £400 on four months working.
  - West Poldice - loss of £140 on four month working.
  - South Condurrow; over the last 12 months had sold tin realising £27,846, leaving a profit of £7,682.
- 11/1/1878 - Smelters currently paying £39. 40 per ton for black tin.
- 18/1/1878 - Ambrose Lake Tin and Copper Mining Company Limited - Notice of sale to be held at the mine, at St. Neot, including 40" pumping engine, 10' stroke with 10 ton boiler, and 18 head stamps.
- To be let by tender - old established Coal and Manure Wharf at Porth.
  - New Consols Silver and Arsenic Works Limited to be wound up.
- 25/1/1878 - To let - all the owners absolute interest in possession of 7/16ths of the Garrancarrow China Clay Works. Held for 21 years from Christmas last.
- West Chiverton Dividend of £1,500 declared.
- 1/2/1878 - St. Aubyn United working on new shaft, two engines now working in the Parish of Gwennap.
- South Frances - 4 monthly meeting showed a loss of £165 on the previous 4 months.
  - Wheal Kitty, 5 monthly meeting showing a loss of £25.
- 8/2/1878 - F. Bartle & Co, Basset Foundry, - patentees of new pulveriser for reducing burning house and stamps roughs.
- South Crofty - total debit balance of £1,794.
  - Total sales of black tin sold from the following mines in January 1878 was 886 tons 19 cwt - Wheal Agar, Wheal Bassett, West Basset, Botallack, Carn Brea, Wheal Comford, South Condarrow, Cook's Kitchen, Dolcoath, West Wheal Frances, West Godolphin, Wheal Grenville, Wheal Jane, Wheal Kitty, Penhalls, Penstruthal, East Pool, Wheal Sisters, West Seton, Tincroft, Wheal Uny.
  - West Vor has been set to work within the past few days.
- 15/2/1878 - An account of a ramble over Tregonning Hill including details of the Tregonning Hill Brick and Clay Works.
- 22/2/1878 - Corn Mill, known as Tregos or Pendeen Mills, to let by tender.
- Looe Gas Company; dividend of 5%, leaving a balance to profit account of £150.
  - Good quality Cornish Black tin bringing about £37 per ton.
  - Wheal Prussia raising about 10 tons of tin per month.
  - Three monthly meeting at Botallack showed a loss of £468 on 3 months working.
- 1/3/1878 - Alviggan and Burngullow Tin Mining Co Limited - notice of winding up.
- Brick making from China Clay about to be commenced near the site of the now, abandoned New Pembroke Mines. The Kilns are to be connected with Par Dock by a
  - A splendid lode of blende had been found at Treamble Perran Mine and also a fair lode of lead.
  - At Retallack quarterly meeting a loss was declared of £468.
  - Blue Hills declared a loss of £561.
  - Wheal Uny declared a loss of £1,037.
  - West Tolgus declared a profit of £782 on two months working.
  - Letter giving details of average wages of miners as being £3. 15. 6 per four weeks.
  - Captain Bailey of Creege Brawse fined £1 for neglecting to make a return of the weight and quantity of the dressed and raw material on his mine and the number of hands employed.



- 8/3/1878 - Sale of machinery and materials at Wheal Unity Wood - including 70" cylinder pumping engine (stroke 10' by 9'), two good 11 ton boilers.
- Notice of winding up in the Court of the Vice Warden of the Stannaries of the New Wheal Towan Mining Company.
  - A Bill with the object of obtaining powers to abandon the Cornwall Mineral and Bodmin and Wadebridge Railways already sanctioned by Parliament was brought before the Chairman of the Ways and Means Committee in the House of Commons and was allowed to pass.
  - Carn Brea Mine - balance against the Adventurers of £26,981 but the mine was now in a position to pay off this balance with tin at £40 to £48 per ton.
  - Killifreth Mine Report; there has been a heavy relinquishment of shares but the remainder were prepared to carry on.
  - West Basset - balance against the mine of £24,621.
  - Herodsfoot Mine - the accounts for 20 weeks showed a profit of £14.
  - Lean's Engine Reporter reported as follows:- Dolcoath 85" - 57.7 m, Mellanear - Gundryes 80" - 63.9 m, West Basset, Thomas's 60" - 50.3 m, West Wheal Frances 58" - 50.8 m, West Wheal Seton Harvey's 85" - 63.4 m, West Wheal Seton Rules 70" - 65.8m.
  - The Court of Stannaries dismissed a Petition to wind up New Consols Mine by the creditors.
  - East Pool - Three monthly meeting showed a profit of £727 on three months working.
  - West Tolgus - Profit on 2 months of £782.
  - Wheal Jane - 4 monthly meeting showed a loss of £1.10 shillings, and the present debit balance amounted to £971 besides the bank debt.
  - Carn Brea - 3 monthly meeting showed a profit of £104.
  - Tincroft - 3 monthly meeting showed a loss of £233 and a debit balance of £15,515.
  - Suggestion of the formation of a Mines Club for Cornwall.
- 15/3/1878 - Court of the Stannaries - Report on various liquidations in West Wheal Jewel, Cathedral Mine, New Consols, Ambrose Lake, and East Rocks Haematite Iron Mine.
- 22/3/1878 - By Direction of the Vice-Warden a call of £1 per share to be made at the Ambrose Lake Tin and Copper Mining Company Limited and a call of £1.16.8d. per share on the South Great Work Mining Company.
- Wheal Basset - loss on the last quarter's working of £1,138, raising the debit balance to £7,927.
  - Wheal Grenville - loss on the last quarter of £2,186.
  - South Caradon - A dividend of £1 per share was declared.
- 29/3/1878 - Mellanear - At a meeting in London 6 months working showed a profit of £1,485.
- Wheal Russel - 4 monthly meeting showed a balance against the mine of £305.
  - At the meeting of the Miners Institute of Cornwall, Captain W. Teague read a paper on tin dressing. He commented that over 30% might be saved by adopting stone breakers for breaking hard rock instead of spalling by the usual method.
  - Alleged arsenical poisoning by East Pool Mine was brought before the Cornwall Lent Assizes. The Jury gave a verdict for the Defendant.
  - Among the passengers who embarked at Plymouth in the Hamburg - America Packet Company's Steamship were Captain James from Redruth and eighteen young miners en route to work in a tin mine in Bohemia.
- 5/4/1878 - Auction of mining machinery at Padstow Consols silver lead mine, including 12 horse-power portable engine.
- To be sold - by direction of the Vice Warden of the Stannaries, machinery at Charlotte United Mine Limited, including 36" pumping engine and 22" winding and stamping engine.
  - Cooks Kitchen - total debit balance of £2,885.
  - New Cooks Kitchen - loss of £588 on 16 weeks working.
  - West Frances - 4 monthly meeting which showed a loss of £320.
  - A correspondent wrote "I have just returned from a pedestrian tour through the Retew Valley where I have made an inspection of the Iron and clay setts; there are several promising lodes which will probably be worked when the iron trade revives, but as they are not free from silica I feel that they will not at present pay for the carriage to any existing railway station. Of the clay there is an almost inexhaustable

- quantity on both sides of the Valley. The great Treviscoe Sett which has been acquired by Mr. George Lemon M. P. extends from the Valley to the Newquay and Cornwall Branch of the Cornwall Minerals Railway."
- Cornwall Railway Company - half yearly meeting to consider entering into an agreement with the Great Western Railway.
  - 12/4/1878 - Notice of winding up of Alvigan and Burngullow Tin Mining Company Limited.
    - Wheal Peevor had entered the dividend list with a profit of about £1,000.
    - Mellanear still holds its own with about 110 men underground.
  - 19/4/1878 - Wheal Eliza, 6 months accounts enables a dividend of £2 per share to be declared.
  - 19/4/1878 - Serious boiler explosion at West Tolgus killing the engine man, Mr. Harris.
    - Cargoll reported to be looking promising and the productive Caunter Load expected to be reached in the 44 fathom level in about 4 weeks.
  - 26/4/1878 - Newquay Gas Company - managed by Mr. Duffy. The plant is now completed and lines being laid through the main street. The price of supply will be 6/3d per 1,000 cubic feet. Three public lamps will be provided at the Company's own expense.
    - South Condurrow Adventurers meeting in London received accounts for 16 weeks showing a profit of £2,534. Costs amounted to £6,850. Tin sold (237 tons) realised £9,191 and copper ores £160. With the balance of £2,118 carried forward from the previous meeting the amount for distribution amounted to £4,653. A dividend of 8/- per share was declared and Captain Rich (The Manager) reported that the amount received for tin had fallen £3.4s. during the previous quarter. The highest dividend previously paid was 7/6d per share in October 1872 when the price of tin was then £86 per ton.
    - West Seton Meeting for 16 weeks showed a total expenditure of £6,581 against credits showing a profit on the working of £622. The tin floors had been lengthened since the previous meeting and three new buddles and a pulverisor had been put in at a cost of £100. There were 393 hands engaged on the mine. A dividend of 15 shillings per share (£450) was declared. "West Seton at the present time is not generally considered to be one of our eminent Cornish mines".
    - Holman and Sons of St. Just said to be about to erect a set of pneumatic stamps at Botallack.
  - 3/5/1878 - Report - Page 1 - as to death of Thomas Ellis and continuation of the business of Ellis and Company, Brewers and Maltsters at Hayle.
    - Report from correspondent in St. Day on the proposed reworking of Cathedral Mine by a portion of the former Company with a capital of £8,000.
    - Captain John Mayne had been successful in securing a good company to rework South Ale and Cakes with a subscribed capital of £12,000. It was proposed to build a house for a 60 or 70 inch cylinder engine.
    - The West Poldice Adventurers were to meet to consider a reworking.
    - "A great deal is being said and written about the introduction of the five weeks month at the Devon Great Consols and under the circumstances it is not entirely necessary to go into the subject at length. All sensible and just persons must acknowledge the present four weeks month to be the fair and proper division of time, and we think that this system is now too firmly fixed in Cornish Mining ever to be thrown out again by that most unreasonable and obnoxious system of the five weeks month. We do not say this however with the idea of supporting strikes and strikers, for to strikes we trace a very large share of the causes of the existing depression in trade and the sooner strikes are abolished the better it will be for both employers and employed."
  - 10/5/1878 - For sale by tender, by the Official Liquidator the plant, machinery, materials and effects at Ambrose Lake Tin and Copper Mining Company Limited including 40" pumping engine, 10' stroke, with one boiler, 8 head iron stamps axle, horse whims, etc.
    - Report of meeting (Page 5) convened to consider the proposal to reintroduce the five week month at Devon Great Consols and the strike resulting.
    - A new skip road has recently been installed in the Western downright shaft at Tincroft and had just started operation. The suggestion by Captain Teague to enter into competition with their stamping machinery had been taken up by four of the intending competitors - Mr. Husband's pneumatic stamps, Mr. Sholl (direct acting pneumatic stamps), Mr. Cox (compound compression stamps) and Mr. Willoughby (elephant stamps - so called from the hammer being in the shape of an elephant's trunk.) The experiments were to take place at Tincroft side-by-side with the stamps that had done service there for many years.
    - Report (Page 6) of mining and waste land in Cornwall.

- 17/5/1978 - For sale as a going concern, the North Wood and Hulker Moor Clayworks in the Parish of St. Neot together with 12" horizontal steam engine (nearly new) with 20' boiler, winding cage, railroad iron, etc. The sets are held under leases dated 28th December, 1852 and 1st March, 1876 at rents respectively of £60 and £20 per annum emerging in dues of 2/- and 1/9d per ton respectively. Also for sale were 150 tons of china clay in the dry shed of the works and 300 tons of wet clay in the tanks; also the large clay shed at doublebos station on the Cornwall railway, subject to a ground rent of £2.10 shillings at interest of £4 per year. North Wood is situate 4 miles from Doublebos Station and about the same distance from the Caradon Railway to which a tramway might easily be made. Captain S. Phillips was at the works.
- List of Mines currently working (page 5) showing number of shares and changing price for the year to date, showing a total depreciation value of all shares issued of £153,721.
  - Report of 16 week meeting of Wheal Sisters, Lelant, showing 190 tons of tin sold and a loss of over £1,300. Despite this the shareholders - not more than 12, and in the main tin smelters - did not suggest suspending operations.
  - Report - (Page 7) - On strike at Devon Great Consols. Proposal agreed to be put to miners giving approval to the terms then currently being offered.
- 24/5/1878 - Auction, without reserve, of 24" cylinder winding engine at Wheal Emily Henrietta Mine, near Tuckingmill.
- Report (Page 5) as to Devon Great Consols when it was reported that the miners had rejected the offer of the directors and refused to adopt the 5 weeks month under any guise. The strike has become complete and the mines idle with 700 men out of employment.
  - Botallack 3 monthly meeting showed a loss of £47 on costs of £4,584. The sales included 23 tons of tin and 60 tons of copper.
  - East Caradon - Reports read from Captain Holman of South Caradon and Captain J. Thomas of Dolcoath and considered highly satisfactory. It was resolved that the sinking of Williams shaft should be continued.
  - Report (Page 7) of cross examinations in bankruptcy proceedings of David Cock, of Roche, China Clay merchant and dealer.
- 31/5/1878 - Sale of machinery at Old Treburgett Mine, St. Teath, including 50" pumping engine, 3 x 10 ton boilers, 22" drawing engine with crusher and jiggling gear attached, water wheels, whims, tram wagons with rails, dressing floors, capstan and rope shears (60ft. high) and wire and other rope and chain.
- Reports of petitions for winding up of the following companies:- New Rosewarne Mining Company, South Wheal Margaret Mining Company and New Wheal Hendra Mining Company.
  - West Basset - 3 monthly meeting with Mr. J. C. Daubuz in the chair. 35 fathoms of slip road have been put in Grenville shaft. Cost of working have been reduced by £350 per month over the last quarter and at the same time returns of tin have increased. Balance against the adventures of £7,439 in total. There was a loss on the quarter of £362. Call of 6/8d was made per 1/6000th shares.
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  - Cawton Copper Mine - 4 monthly meeting held in London showing balance against the mine of £232. Captain Rowe reported that exduration should continue. There was no call.
  - Comment (Page 5) by Mr. Edward Skewes on the 5 weeks month.
  - Report (7) of Winding up proceedings of New Wheal Towan Mining Company.
- 7/6/1878 - Alviggan and Burngullow Tin Mining Company Limited, St. Stephens - in-Branwell and St. Newan, for sale including 32" cylinder engine with 20' fly wheel, horse whim, hand pump, fiat rods.
- Details of Mr. Thomas Tregonning's new patent pulveriser is given (Page 5).
  - Trumpet Consols has been "knocked" and the materials sold.
  - "Rumour says that 30 underground men were discharged from West Godolphin Mine last week".



- Further proposals to send the Devon Great Consols strike were rejected by the mens committees. Editorial comment that time was slipping away, and the Duke of Bedford would be able to forfeit the leases for not working the mines according to the covenants and it was considered reasonable that not much concession should be expected from His Grace. Suggested that the shareholders were loosing heart.
  - Mineral statistics for the year ended 31st December, 1877:-  
17,402 were employed in Cornwall of whom 9,027 were employed underground and the balance of 8,375 above ground. (Ages given.) A decrease in the total figures of 1,257 over the previous year. Details given of production of the various minerals. Production of black tin produced by the mines in 1877 was 13,341 tons.  
There were 30 deaths by accident during the year; 13 from falls on ground, 9 from shaft accidents, and 6 from other causes. For the number of persons employed the number of deaths by accident per 1,000 persons employed was 1.74, an increase from 1.50 in the previous year.
  - Reports on specific accidents at South Wheal Crofty, Mellanear Mine, Phoenix Mine, and Killifreth Mine.
  - Reports as to inspection of abandoned shafts and prosecutions resulting.
  - Charlotte United Mines (Page 7) - report showing that memorandum and articles of association were registered on the 2nd March, 1878 with the object being to purchase East and New Wheal Charlotte Mines, in St. Agnes, from Mr. E. Tregallas for the sum of £7,000 - £2,000 of which was to be payable in cash. Nominal capital was £30,000 divided into 6,000 £5 shares. Only 732 shares were allotted to the public.
  - Report on West Jewell Tin Mining Company Limited showing Company registration on the 11th April, 1870. 5,000 fully paid by shares had been allotted to the Vendor. Details of other shareholders.
- 14/6/1878 - Report of decision to sink a new engine shaft at West Peevor of 14' by 8' in size.
- Report (Page 5) on the Devon Great Consols dispute.
  - Report of action of Right -v- Jones being to recover commission on the sale of Cornish Clayworks. Relating to the Tamar Firebrick and Clay Company which went into liquidation in 1874. The Company had been formed to work property on Hingston Downs, being largely the manufacture of large earthenware vessels for use in chemical works. In April, 1876 the property was put up for sale by public auction but attracted no bids. Subsequent agreement for sale on commission basis, and a Mr. Lee was introduced. Ultimately the property was purchased by the person who Mr. Lee represented and the Plaintiff claimed commission on £5,700, as to 5% on the purchase money up to £5,000 and 10% on the balance. Jury found for the Plaintiff.
- 21/6/1878 - Wheal Grenville - 3 new buddles and other dressing plant have been put in and the Caliner and flues were finished with the stack in a forward state. 160 men were employed, with 85 boys and girls making a total of 245. A call of 5/- per share was made.
- Trial of Sholl's single head rotary pneumatic stamps at Botallack with satisfactory results. The machine ran 5½ tons of hard stuff through No. 36 grates in considerable less than 5 hours at a maximum speed of 140 blows per minute with a 5" belt.
  - Miners at Devon Great Consols had returned to work after a 2 month strike on the desired 4 weeks month but at reduced wages.
- 28/6/1878 - West Godolphin - 6/- per share call made after accounts showed a balance against the mine of £1,095.
- North Treskerby - call at 10/- per share made. Debit balance of £2,459.
  - Phoenix - About 80 hands being discharged.

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#### New Books

#### STANNARY TALES - The Shady Side of Mining, by Justin Brooke

The first book of Trevithick Society Council Member, Justin Brooke, has now been published by Twelveheads Press. It is a first class piece of research into the records of the old Stannary Courts and covers some 90 mines from Dartmoor to Lands End, giving details that have not been published before. In many ways it is about people, honest and crooked, workers and managers, and will be enjoyed by members interested in mining, history or simply how our forebears lived and wrested a living from the ground, and from each other.

The book runs to 92 pages with 10 illustrations and is fully indexed with separate lists of mines and, of special interest to genealogists and family history 'buffs', more than 250 surnames. The hardback costs £4.50 and the paperback £3.00 and it is available from bookshops in Cornwall or direct from the publishers, Twelveheads Press, Chy Mengleth, Twelveheads, Truro, Cornwall TR4 8SN. If ordering from the publishers please add 10% towards postage and packing.

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Available from Peter J. Naylor, Old Noak's Ark Inn, Wirksworth Moor, Bolehill, Derbyshire:-

A print depicting the unique water pressure engine designed by Trevithick and built at Coalbrookdale in 1819, recently restored and now on display at the Peak District Mining Museum. Price 25p. each plus p & p.

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From Justin Brook, Chymorvah Vean, Marazion:-

Might I suggest that the Trevithick Society Newsletter puts out a list, say once a year, of members engaged in research or study of the various aspects in which we are interested, together with addresses and telephone numbers? This will enable us to keep in touch, avoid duplication of effort, and pass on information we come across which we know will be of use elsewhere. I, for one, am continually coming across things which are of interest to others, particularly on early references to steam-engines in Cornwall and on people connected with industries ancillary to mining.

If this suggestion provokes a sufficient response from members this can be included in the Newsletter as a regular feature. Ed.

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In order to distribute the Newsletter to members at the beginning of the month in which it is due the following table has been agreed with the printers.

20th December last date for submission of material for February Newsletter.  
20th March last date for submission of material for May Newsletter.  
20th June last date for submission of material for August Newsletter.  
20th September last date for submission of material for November Newsletter.

#### BOOK REVIEW

The following book review appeared in the March 1980 edition of Mining Magazine.

Cornish Explosives by Bryan Earl. Published by the Trevithick Society, 1978., pp 318, diagr, illustr., £8.50 + postage. (Obtainable from Publications Secretary, Trevenson House, Pool, Redruth, Cornwall, England.)

The author presents a well researched history of the explosive and safety fuse manufacturing industries in Cornwall. These activities commenced in 1809, reached a zenith during the last two decades of the nineteenth century, saw a brief boom during the first world war and gradually declined, to die in the mid-1960's.

The invention of safety fuse by Bickford in 1831 is surely one of the great milestones in the history of explosives and indeed was a major contribution to safety and efficiency in mining all over the world. The story of the famous Bickford-Smith works at Tuckingmill, between Camborne and Redruth, and the rival factories which spring up, is described in great detail.

The early and dangerous days of guncotton and nitro-glycerine-based explosives make interesting although alarming reading and the account of the coming of safer forms, such as dynamite, gives full credit to some little known Cornish pioneers. The manufacture of nitro-glycerine explosives by the National Explosives Company, a company founded to break the monopoly held at that time by Nobel, and the building of the great factory among the sand dunes near Hayle, is told in detail. After concentrating on the manufacture of cordite and military explosives during world war one, with a work force peaking to over 1,800, the end of hostilities sadly brought closure and demolition.

The last company to survive, Burrowite Explosives Ltd., had some success with quarrying explosives but eventually had to close in 1965, bringing to an end 156 years of explosives making in Cornwall.

The book may, perhaps, be mildly criticised for an occasional repetition, especially in the earlier chapters. However the amount of research carried out was formidable - of interest to readers of this publication is the frequent reference to early numbers of the Mining Journal.

### THE EARLY HISTORY OF FLOATATION

The following is a list of references for the article The Early History of Floatation which appeared in the November Newsletter (27).

- E. Cartmell - Chemistry for Engineers, Butterworths 1959.
- J. H. Collins - Observations on the West of England Mining Region, Trans. Royal Geological Soc. of Cornwall 1912.
- H. G. Dines - The Metaliferous Mining Region of S. W. England, H. M. S. O. 1956.
- G. W. Hall - Gold Mining in Merioneth, Griffin Publications.
- H. Harries - Industrial Archaeology of Dartmoor, David & Charles.
- E. J. Pryor - Mineral Processing, Applied Science publications 1974.
- P. Rabone - Floatation Plant Practice, Mining Publications, 1939.
- A. F. Taggart - Manual of Floatation Processes John Wiley & Sons, 1921.

In addition to this I used various Articles from magazines & papers of the period, including one from the Mining World (May 11, 1907), which was kindly sent to me by Dr. Edmonds about a year ago. I would be very interested in any information anybody had concerning detail of plant construction not only of early types of plant, but of latter types as installed in Wheal Reeth, at mines in Cornwall.

S. P. J. Cullimore

From Mr. David E. Bick, Pound House, Newent, Glos. GL18 1PS.

I have followed with interest references to the Elmore process, more especially since I am compiling a history of copper mining in Snowdonia where it was employed at Sygun, near Beddgelert.

I note that according to Mr. Edmonds the Tywarnhaile plant constituted the second Elmore application. However, it is worth recording that both this plant and the one at Sygun were jointly described in a little known article in The Mineral Industry, 1902 - 3, where considerable details are given. An identical plant was also working at St. Davids Gold Mine, Dolgellau, and it can be inferred that the Sygun plant was the first of the three in production.

Sygun is worth a visit, various foundations, walls and terraces still being in evidence as a memory to the Elmore's invention. If any member has further details of the mine or plant I should be grateful to hear.

Perhaps I could take this opportunity of mentioning that the second field meeting of the Welsh Mines Society will take place at Cwmystwyth Mine, near Devils Bridge, Cardiganshire at 12 noon, 22nd June, and all interested are welcome. We will be shown various sites of prehistoric workings by Mr. Simon Hughes, an authority on the subject.

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Notes relating the two English silver mining companies which operated in Guanajuato between the years 1824 - 1850.

The Anglo-Mexican Mining Company and the United Mexican Mining Company were established in the early 1820's to rehabilitate the silver mines of Guanajuato after a devastating war which had lasted eleven years and which resulted in Mexico's independence from Spain. The Mexican mine owners lacked sufficient capital to restore the neglected mines, their workings now full of water, the offices and machinery in a bad state of repair or destroyed in the fighting which was particularly fierce in and around Guanajuato.

The famous mines of Guanajuato - Valenciana, La Cata, Rayas and Mellado - had produced enormous quantities of silver during the last years of the eighteenth century and early years of the nineteenth which amounted to 342,000,000\*pesos. The whole economy of Mexico was dependent upon the industry. Agriculture had developed around mining areas for the purpose of providing food to the towns, for supplying the animals used to haul the ore and surplus water to the surface, as well as their feedstuffs, and there was a brisk trade in supplying other necessities. Lucas Alaman, Minister of Foreign Affairs, who himself owned an interest in the La Cata mine at Guanajuato, appreciated that new capital was necessary to revive the silver mines, and that this capital must come from abroad since the Spanish had taken their considerable wealth in their flight from the country and Mexico was without the means to undertake the rehabilitation of these once fantastically rich mines. As a result of his approaches to various merchant houses in London the United Mexican Mining Company was formed and shortly after, the Anglo-Mexican Mining Company. Early in 1825 work began on the principal mines of Guanajuato.

In London there was a fever of share buying in mining investments. The wealth of silver which the mines of Guanajuato had produced in the recent past was well known through the works of Baron von Humboldt, and the prospectuses gave a glowing picture of the returns which might be expected when the water had been extracted from the flooded workings. The extraction of the water was considered to be the only obstacle to rehabilitation, and this it was thought, could easily be dealt with by means of steam-driven pumping equipment which was known to work effectively in England.

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When the directors of the Anglo-Mexican Mining Company were established in Guanajuato they quickly reached the conclusion that the system by which Mexican labour operated was unsatisfactory because of the difficulty of controlling the mine workers. They decided to bring Cornish miners in so that by this means the Cornish tutwork system could be introduced. The directors also introduced Cornish methods of reducing the ore and the process was set up in one of the haciendas de beneficio using European machinery - Freiberg revolving barrels. Presumably Cornish experts came to Guanajuato to supervise the work and explain the methods to Mexicans. Unfortunately, those who went to Mexico as a result of these projects did not take kindly to Guanajuato, nor did they appear to have much liking for the Mexicans. The attempted introduction of the tutwork system met with determined resistance on the part of the Mexican workers, and the Cornish method of reducing ore was unsuccessful because the vast quantities of material that had to be dealt with as a result of the low silver content of the ores made it impossible for the machinery to be applied. The Cornish miners and specialists returned to England.

The English companies were eventually forced to relinquish their interests in the mines of Guanajuato without having gained much profit from the venture because the shareholders in London refused to continue to invest in an enterprise which, after several years of effort, showed no signs of yielding the enormous amounts of silver which they had been led to expect. The efforts of the Cornish did in fact bring the mines back to a useful state of production and many of them continue today, but the reputation which the mines obtained for production later in the century was based on the finding and exploitation of new veins subsequent to the departure of the English companies.

The directors, the managers and staff left Guanajuato and returned to England and unlike those who went to Pachuca and the Real del Monte, left no trace of their life there except for some impressive walls at the mine of Las Rayas and the chimneys for the steam pump at Valenciana. Rickard, an American mining expert, who visited Guanajuato in 1907 mentions traces of an English garden in one of the residences there. One of the directors, Francis Glennie, did stay behind to work for a Mexican mine owner, the Conde de Perez Galvez, and today his descendants live in Mexico City. It seems strange that no details are known of the other men who were instrumental in reviving the silver mines of Guanajuato, and it would be interesting to hear from any readers of these notes who may know of family connections with that area.

Mrs. M. E. Rankine,  
1 Kimbers Meadow,  
Petersfield, Hampshire.

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From J. Hadley, Esq., 7 Post Street, Godmanchester, Huntingdon, Cambs.

I have in my possession copies of the Journal Nos. 1 - 6 and Newsletters Nos. 8 - 27 inclusive. I would like to put these at the disposal of someone and I would be prepared to part with the whole lot for £5.00 plus £1.00 postage.