Plymouth Caving Group

Newsletter and Journal
May 2017



The main shaft in the stope on the Great Main Lode, Wheal Fanny

Issue Number 164

Editorial

Well it happened. At our February AGM I was once more elected as Editor. I didn't mind since I had received a number of articles and completed the January Newsletter. However, once re-elected, the articles dried up so this Newsletter is, I'm afraid, back to the old style with a mish mash of articles. As well as a brief update on the outcome of the AGM I raided Facebook for a series of photographs on a Wheal Fanny trip. Dave Warne has contributed a great article on Excelsior Tunnel including the Project Orpheus saga.

A lot seems to be happening so get your keyboards tapping and provide further articles. Otherwise this will be the last Newsletter for a while.

Anyway, do continue to enjoy your trips underground.

David Jean

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AGM Report

The following elections were made

Chairman; Dave Warne nominated by Dave Jean and Laura Milroy.
Secretary; Lydia Brooker nominated by Keith Coventry and seconded by Dave Jean.
Treasurer and membership secretary; Dave Jean nominated by Dave Warne and seconded by Dan Church.

Other Committee Posts

Tackle Warden - Alex Heath nominated by Dave Jean and seconded by Dan Church.
Meets secretary - Bernard Page nominated by Laura Milroy and seconded by Dave Warne.
Away meets – Alex Noot nominated by Keith Coventry and seconded by Alex Heath.
Conservation officer – Tara Beacroft nominated by Rupert Goddard and seconded by David Edgerton.
Librarian – Alex Heath nominated by Dan Church and seconded by Dave Warne.
Editor – Dave Jean nominated by Keith Coventry and seconded by Dave Warne. (Keith Coventry to assist)
Web master – Keith Coventry nominated by Dave Warne and Alex Noot.

Honorary Club President - Dave Jean (sitting post) nominated by Keith Coventry and seconded by Dan Church.
Laura Milroy, Richard Vooght and Nick Farrell were also voted onto the committee

Pictorial View of Wheal Fanny



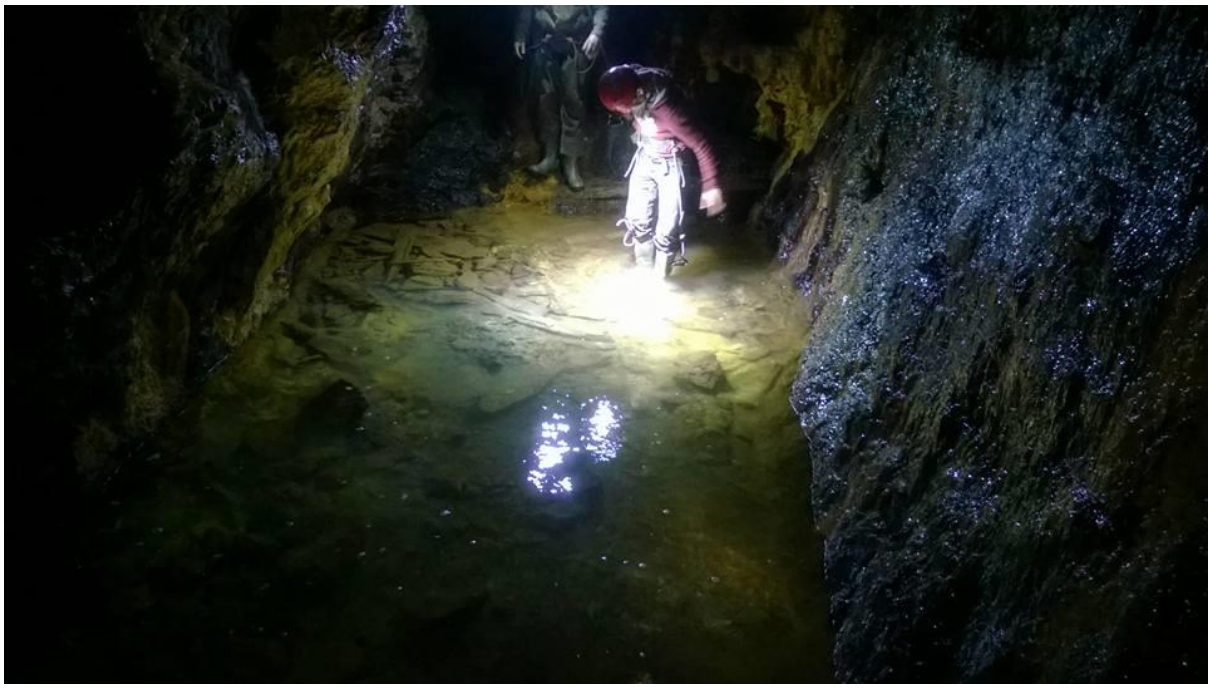
Back in February Tara, Alex H and Richard decided to have a different sort of trip into Wheal Fanny. Instead of SRT they had decided to do this the old fashioned way using ladders. There follows a photographic record of this trip.



Access is through Eastern Shaft. The Wheal Fanny adit is short and drops into a small shaft about 10 feet deep and then continues for about 6 feet before striking the lode. This is the Great Lode, a rich vein of copper that traverses the Devon Great Consuls site, accessed by a number of mines along its length of which Wheal Fanny is just one. Here the lode is quite shallow. The adit emerges onto the hanging wall of the lode where it is about 10 feet wide. From here it possible to drop down onto a series of wooden floors some of which have already collapsed. Eventually, no doubt, they will all go.

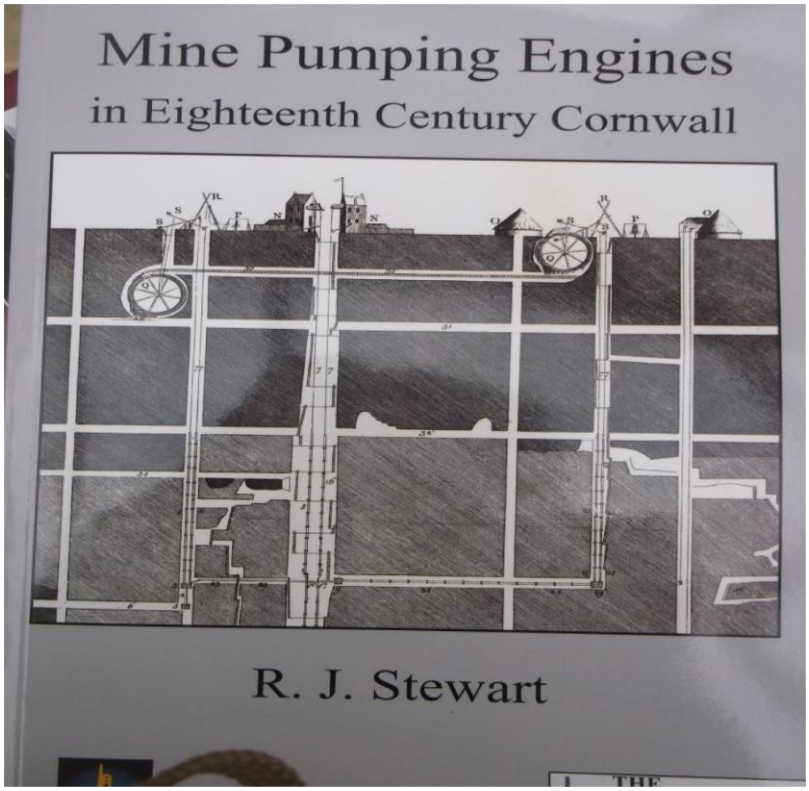
The timbering that still exists in the mine is still pretty impressive with massive trees being imported from Scandinavia to criss cross the stope. The stope at Wheal Fanny that can still be accessed is up to 25 feet wide, over 100 feet in height and 900 feet long with up to 7 successive platforms. It is an awesome place.





Book Review

Just published by the Trevithick Society is the latest book by our very own Rick Stewart, Mine Pumping Engines in Eighteenth Century Cornwall.



By the eighteenth century the mines were getting ever deeper and needed to be drained of water by pumping and this excellent book looks at the solutions to the drainage problem. The use of Newcomen's atmospheric engine is explored in some detail before the book moves on to the examination of the work of Boulton and Watt in the county. This book comes highly recommended to those interested in engineering activities in the mines. It is available to members direct from Rick at a discount on the published price.

Excelsior Tunnel

After meeting up at a carpark, we squashed into three vehicles and made our way over the hill and down into a valley to park up at an entrance to a forestry track. Unfortunately, the entrance to the tunnel was a fair walk back up the hill, but on the plus side it was all downhill on the way back.

The entrance to the tunnel that was constructed back in the 1880's was to drain the mines of the near by Kit Hill. The portal being stone lined for the first 10 to 15 fathoms until an old internal gate was reached. One can't help but to be impressed by the grand scale of the tunnel, which measures around 8 by 8 feet, and being driven straight as a die. The floor of the adit having a drainage channel on the left hand side with a constant stream of water draining away to the entrance. To the

right, there remain the impressions of sleepers from the tramway that ran throughout the length of the tunnel.

The tunnel was driven through several areas of fractured ground and kaolinized faults, the first of these encountered a short way in where a scaffold frame with corroded corrugated steel sheets serve to divert the water that percolates through the rock away from the people that once worked within the tunnel.

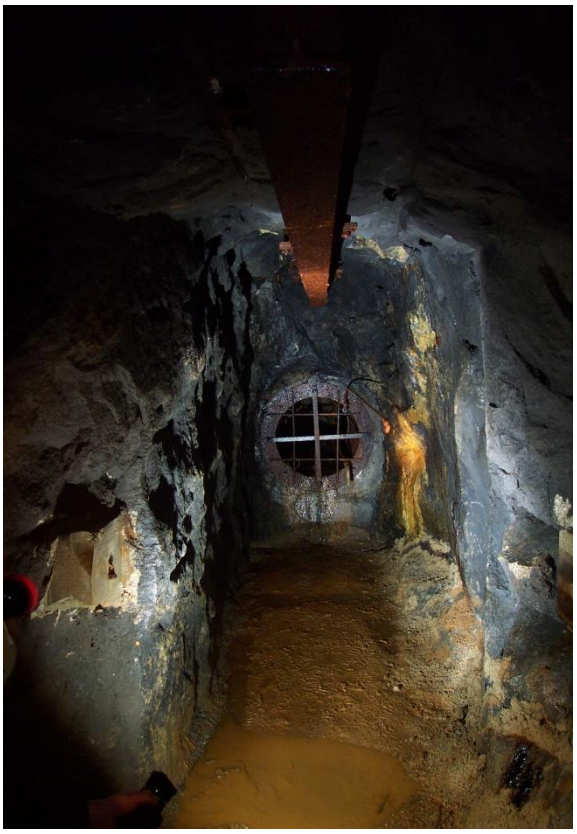


A short distance further in, we encountered the first area where the failing roof had to be supporter with a timber frame made up of trestles constructed of railway sleepers, now with the rot well set into the creosote pickled wood. These sleepers being pinned together with heavy duty steel staples once formed a very substantial structure, now succumbing to the effects of the acidic mineral laden water and humid atmosphere present within the tunnel.



It is not known whether these sleepers date from the original working, or the late fifty's early 60's when this tunnel gained notoriety with the sinister presence of the Atomic Weapons Research Establishment taking over the tunnel for experimental purposes. As for a short way further in, the tunnel started to reveal its secrets from this latter period of reuse, for in the left hand wall was encountered the first of several short crosscuts which led into a perfectly round sphere cut within the granite. The entrance to these spheres being lined with a short steel tube with some small capillary pipes running through them. The cross cut level having a lifting beam affixed to the roof, and the remains of wooden blocks mounted on the tunnel walls opposite the spheres. For this tunnel was used for an experiment known as Operation Orpheus which ran alongside an American operation known as Operation Cowboy. These experiments were connected with the then cold war atomic testing and the distrust between the western Powers and Soviet Union. It was thought that setting off an explosive charge within a void would substantially attenuate the seismic signature of the explosion. There was a suspicion at the time that atomic charges were used in the experiments but subsequently found to be untrue.

There are a total of five spheres, some of which have bars fixed across their portals, however there are two that are open, one is full of standing water, the other is dry and access can be gained. The steel tubes have tapped holes and one can only speculate as to whether there was bolt on hatches, and if the lifting beams were to aid the positioning of these said hatches as they would have had to have been substantial to contain any blast within. The spheres are roughly 6 feet in diameter, and when backlit make for some good photographs.



Also found in the tunnel wall is what appears to be core holes filled with a fine cementitious grout with coaxial wires embedded. These are the remains of the seismic sensors used in monitoring the explosions.



Half way along the tunnel, there is another area of the roof that has been supported with sleeper trestles, these have collapsed revealing a large kaolinized domed void that the timer was meant to support. Beyond this fall the water is backed up to just above wellie depth, and to proceed leads to wet feet. Near the end of the tunnel, there is another substantial roof support, after which the size of the tunnel is reduced for a short distance before turning left and ending in a blind heading.

This latter part of the tunnel was excavated by a Captain George Moor in a very small scale reworking in the 1930's, this was very short lived and the only other exploitation was reworking of the dumps.

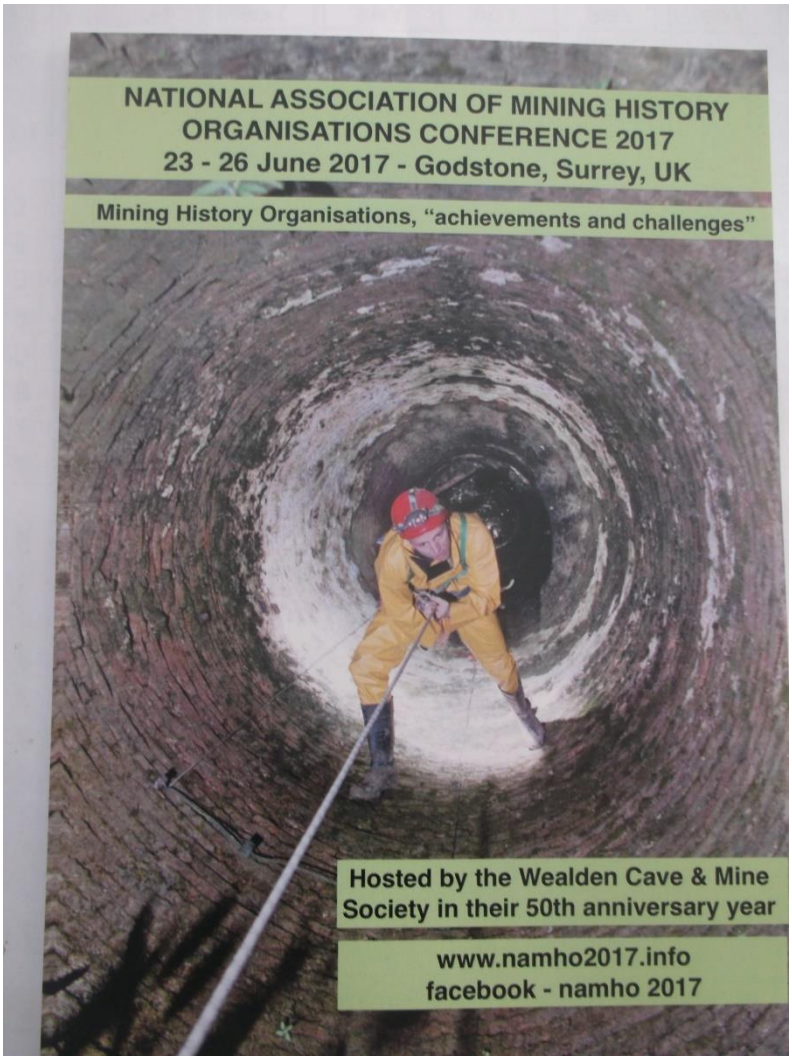
NAMHO

This year the NAMHO Conference will take place over the weekend of 23-26th June at Godstone in Surrey. A number of events will be taking place over the weekend both below and above ground. This year the conference is being hosted by the Wealden Cave and Mine Society which is celebrating its 50th anniversary.

It is hard to think that just ten years ago the PCG co-hosted the 2007 conference in the Tamar Valley. An event to remember which was not without the occasional

mishap. The underground trips in particular were heavily subscribed and there was a lot of good feedback.

Further information on the 2017 event can be found at www,namho2017.info.



BCA Party Weekend



This year the party weekend will take place at the Rotary Centre, Castleton and will be followed by the BCA AGM on Sunday.

Club Information

A couple of parts of the PCG are housed at the Pengelly Centre in Buckfastleigh. Many of us are also members of the Pengelly Trust and the Trust has kindly donated space at the centre to house the PCG Library and Tackle Store. Both are administered by Alex Heath who has recently completed a lot of work in the tackle store as shown by these two pictures.





Alex constructed the cash box for collecting tackle fees as well as signing tackle in and out. Contact Alex if you require access to the store or require any tackle.

The club often makes use of the Pengelly Centre, sometimes staying there and sometimes for club events. One such event held recently was an underground treasure hunt where teams followed clues to win the treasure which in the end everyone shared and it tasted good. Thanks must go to Alex for organising this and, following its success, he is planning the next one which will be even bigger using multiple sites.



The teams ready to go. Richard was delayed but joined us just as everyone left.