PLYMOUTH CAVING GROUP

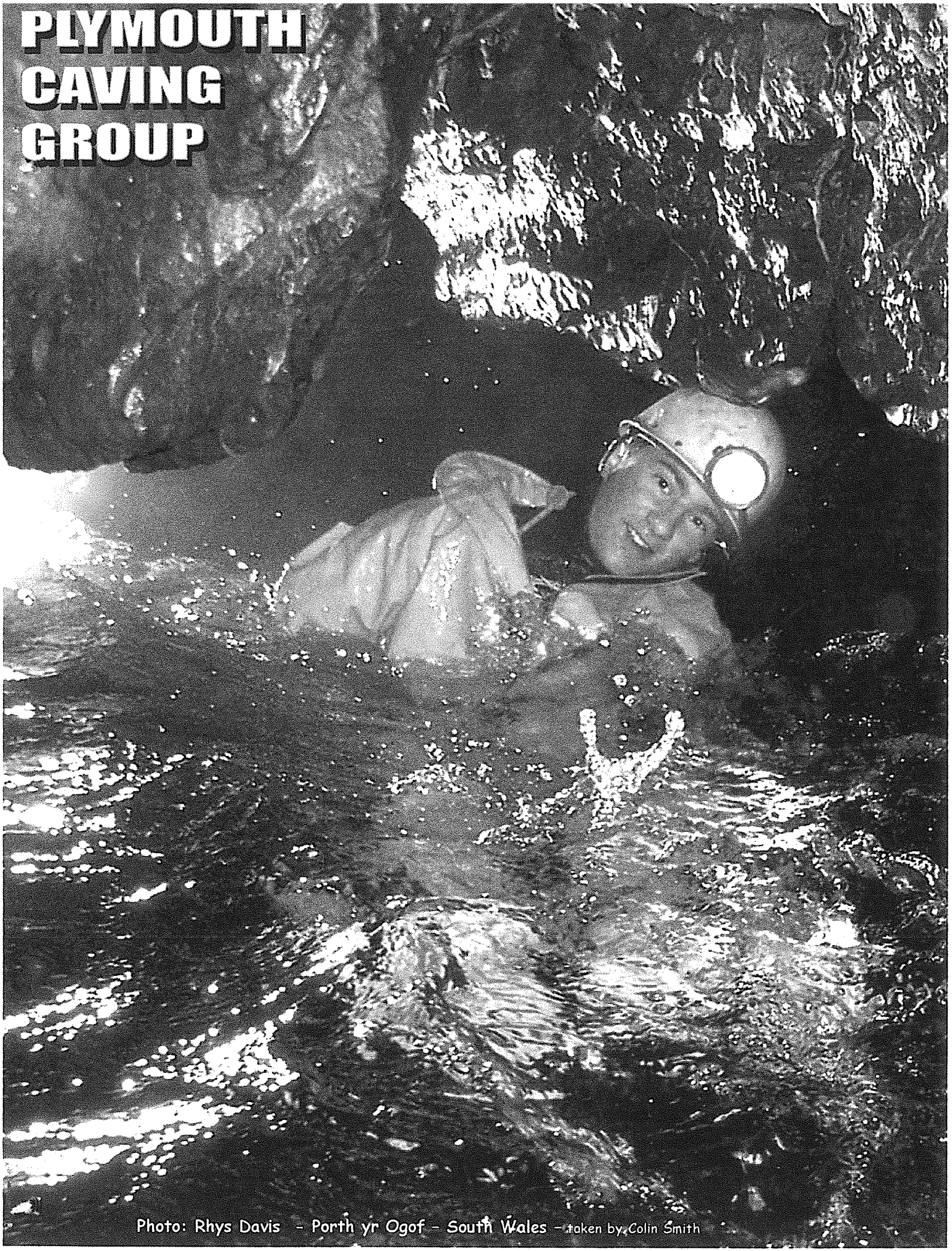


Photo: Rhys Davis - Porth yr Ogof - South Wales - taken by Colin Smith

Newsletter & Journal No. 145 September 2004

Plymouth Caving Group

Newsletter No. 145 – September 2004

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Alternatively any club member can be contacted through the PCG web site under 'Contacts'

The address for the PCG web site is as follows - http://plymouthcavinggroup.org.uk

Editorial

May I take this opportunity to apologise on behalf of the club for the lack of newsletters this year. This has occurred due to the editor's family commitments. At the last meeting it was decided to accept the editor's resignation and Tom Thomson along with myself were asked to take over the role as editors until February 2005 the date of the next AGM.

Hopefully this newsletter will reach you all by the end of September, and a Christmas bumper edition will be available during December this year. If any member has any articles for publication then please email them to me at: - caving-enquiries@blueyonder.co.uk & to Colin at: - webmaster@plymouthcavinggroup.org.uk

This year has seen an increase of new members joining the club, and many underground trips have taken place including trips to Yorkshire, Cornwall and Wales. If any members would like to organise a trip, then this can be done by contacting the Meet Secretary through the clubs' website.

If members would kike their copy of the
NEWSLETTER
Delivered by email, then let me know at
caving-enquiries@blueyonder.co.uk
The advantage will be illustrations in colour, sharp print, not photocopied
And hot off the press

Plymouth Caving Group meet at the Thistle Park Tavern, Coxside, normally on the first Thursday of each month for a committee meeting at 8.00pm. This is open to all and potential members.

Trips to local caves and mines are held on alternative Tuesday evenings, although there are a number of digging projects that are done on the other Tuesday evenings. All members are welcome to try their hand at digging. Please see the website for the 'Diary of Events' or contact the Meet Secretary through the PCG website. Weekend trips are organised during each year, these have included Gaping Gill, Yorkshire; St Just, Cornwall; Mendips, Somerset; and caves in Wales.

The club hold an extensive library of books relating to caving, mining, mine and cave surveys, exchange newsletters, and journals. We also hold much equipment, which can be hired out at a small fee. This includes SRT kits, caving suits, lamps, helmets, rope, electron ladders, and much more. Contact Darren Hitchcock the Tackle Warden through the clubs' website for hire.

Chris Kelland

Plymouth Caving Group
Minutes of Annual General Meeting, – Thursday 5th February 2004
Held at 97 Mount Gould Road, Lipson, Plymouth. PL4 7PX

The meeting started at 8.00 pm.

Present:

Alasdair Neill (AN)	Chairman & Librarian & Recorder.
Chris Kelland (CK)	Secretary, DCUC Rep' & DCRO Rep'
Patrick Hanlan (PH)	Treasurer
Rupert Goddard (RG)	Conservation Officer
Dave Jean (DJ)	Editor
Colin Smith (CS)	Tackle Warden, Membership Secretary & Web Maintainer
Dave Warne (DW)	Meet Secretary
Carl Gibbs (CG)	
James Hanlan (JH)	
Darren Hitchcock (DH)	
Graham Hart (GH)	
Paul Newman (PN)	
Adrian Parsons (AP)	
Osama Gobara (OG)	

Apologies:

Dave Wills (Devon Bat Group), Richard Vooght, Matthew Hall, Tom Ford, Rhys Davies, Paul Finch, Annabelle Ozanne, Roger King (Rescue Warden – DCRO), Hugh Browning (Rescue Warden – DCRO) & Trish Browning.

1. Chairman's welcome, introduction and procedures.
2. CK proposed David Jean as Chairman for the Annual General Meeting, DJ accepted, seconded PN.
3. AN proposed that the minutes of last years' AGM were read, and adopted as a true account of that meeting. Seconded RG. The minutes were read and adopted as a true account by all members present.

4. **Matters Arising:** - No matters arising.

5. **Chairman's Report:**
   - The past year has seen the club continue to thrive, with most trips being attended and the membership remaining at a healthy level in spite of the substantial increase in subs, which is entirely due to the Insurance costs. We have been caving as a club in Wales, Mendips, and there have been several weekend trips to Cornwall in addition to the usual Tuesday evening trips. Last summer saw an increased attendance in Spain, and we should be seeing some new faces from the club there at Easter. The introduction of low-cost flights from Exeter and Bristol suddenly makes northern Spain much more attractive for impromptu trips.
   - Digging activity has continued regularly, in particular at one site, which is showing signs of an imminent breakthrough. We have also recently had some luck in finding potential leads for exploration at a number of local mines.
   - We now have a resumption of diving activity by a number of club members, after a lull of some years.
   - I would like to see more away trips this year, although, some members find these difficult to support due to family commitments.
   - During the year our lottery grant application was successful, enabling the club to update its equipment, particularly that available to novices.
   - Returning to insurance, we were lucky in having DCA (Derbyshire Caving Association) insurance, which is substantially cheaper per head than the scheme which eventually replaced the BCRA (British Cave Research Association) insurance. This is likely to cease this year, so we will have to go to the alternative.

- On a negative side, Devon & Cornwall Underground Council (DCUC) is struggling due to the difficulty in finding people to take on the necessary posts. DCUC's role is to represent all cavers and mine explorers in the region, particularly regarding access. Without DCUC's work in the past, access would probably not be possible to Bakers Pit, Pridhamsleigh, Penrecca, Bunkers, White Cleave, Radford, Devon Great Consols, Bedford United, and potentially too many mines in the Camborne Redruth area such as Wheal Uny, which would otherwise have been totally plugged. In future the cost of extending insurance cover to landowners means that DCUC will be the only body who can viably take on access agreements, and is the route to obtaining funding nationally. In the past posts within the DCUC have largely come from the PCG and DSS; most of the PCG and DSS committee have several posts on several caving bodies, but it is in every members' interest to support DCUC. A little bit of input from everyone will help ensure a long term future for caving in the region.
- The club have had input into the Tamar Area of Outstanding Natural Beauty Service, who are seeking a £5.2 million for regeneration work on mining areas, under the title of the Tamar Mines Heritage Project. We have been told our input will be sought for any work relating to underground workings in the area. We may soon be making a presentation regarding what we do in the area.
- Last year was the clubs' 40th anniversary, which we celebrated in fine style at the Christmas dinner.

6. **Secretary's Report:**
   - Firstly I must say "that it has been a pleasure working alongside the other officers of the Club during the past year." I know that I complain about members who do not acknowledge receipt of my request for whatever reasons, but on the whole I feel that the PCG have come a long way from a few years ago. This is due to the Hon. Chairman, who, I feel deserves the credit for holding the club together at that particular time.
   - Also it is about time that the Hon. Treasurer received acknowledgement for his commitment and relentless work in keeping the clubs' financial matters in order. Especially, for the handling of the Lottery Grant Aid, which saw the club receive a substantial sum of monies to purchase new equipment?
   - The Editor, Tackle Warden, and Membership Secretary also deserve acknowledgement from the club, for their relentless work involving their respective positions.
   - The position of the Club has now been strengthened by the Chairman and Secretary working together for the benefit of the PCG. Over the last year, a number of new contacts have been made through both officers regarding underground access.
   - The Chairman and the Secretary have attended a number of meetings with the Tamar Valley Regeneration Project, which are good public relations for the Club and its members. Mr. Tim Selman of the West Devon Borough Council stated that he will keep the club informed of any projects within the Tamar Valley, regarding any work on the remains of mining sites where access is required.
   - Insurance has once again gone up about 100% that makes it around 250% in the last two years. The club is now bound by the Insurers terms and conditions, which have changed again this year. This year the club can no longer take on any temporary members, and have to keep a currant up-to-date record of paid-up members, otherwise this could affect any potential claims. The club need to come to some sort of agreement regarding 'New Members' who wish to try out caving before they commit themselves to the club.

7. **Treasurers Report:**
   - Notable figures for 2003 are the Lottery Grant of £2,057, which is unlikely to be repeated in the next few years and the dramatic increase in Insurance fees (paid in 2004), which will represent an increase of £200. You will be aware that this insurance has been factored into the new subscriptions for 2004.
   - From figures below it looks as though we are in a healthy financial position. But as it is my job to be pessimistic, I'll point out that our estimated subscriptions income for the year so far is less than £500, out of which, we will be paying insurance of £357. This leaves us with a pretty thin operating surplus of about £150, from which to pay all expenses, and to replace worn out and damaged equipment.
   - The fund raising event in 2002 provided more than £200 from a pleasant stroll in mining country, and maybe members would like to consider running something similar this year. With total support from club members, and a 'no mercy' approach to sponsors, I think a target figure of £500 is easily attainable.

- Don't forget that small and large watertight drums are available from the Treasurer for £2 and £3 each. These are a bargain against suppliers, and all monies received will go into club funds.
- **Accounts for year ending 31st December 2003: -**
  Current balances at the date of the AGM, allowing for un-presented cheques, and for deposits not yet credited are: -
  Main Account £958.42. **Deposit Account £494.71**
- **Income & Expenditure Breakdown for 2003: -**

Income:	**2002**		**2003**
	317.70	Subscriptions	479.50
	20.61	Bank Interest	12.09
	90.80	Tackle Fees	147.00
	22.00	Temp' Membership	53.00
	235.00	Sponsored Walk	-
		Lottery Grant	2,057.00
		Misc' Income	154.00
	£686.11		**£2,902.59**

Expenditure:	**2002**		**2003**
	158.70	Insurance	-
	92.00	Subs' Paid	43.00
	45.00	Stamps / Newsletters	-
	267.12	Equipment Purchases	2,508.17
	34.51	Misc' Expenses	6.00
	£597.33		**£2,557.17**

- **Surplus for the Year: 2002 £88.78** **2003 £345.42**
- **Christmas Account**

Payments:		**Receipts:**	
Bunkhouse	112.50	13 x 18.75	243.75
Meal	357.00	15 x 12.50	187.50
Toys	30.00	1 x 9.50	9.50
	£499.50	Raffle proceeds	31.00
		Donations (change)	1.55
			£473.30

Shortfall: £26.20. **Andy's meal:** £12.50 **Reparations:** £25.00 = £37.50

- **Equipment Purchase Account**

Bolts	£11.25
Purchased from Bernie's	£1,954.42
Rock Drill	£350.00
Purchased from H & W Knight	£192.50
	£2,508.17
Lottery Grant	**£2,057.00**
Funded by the Club	**£451.17**

8. **Conservation Officers Report:**
   - Although I do not feel I have done too much under this post, I have enjoyed it and am slowly developing what I do as I find time. Since taking up the post I have encouraged club members to keep a look out for bats. I have kept a log of bats we have seen on all underground trips. Please continue to inform me of any sightings. If I am not there, I will not know that any have been seen. Preferably, please report your sitings by email.
   - Since starting the bat counts, I have made contact with the Nature Conservation Officer of Plymouth city Council. I was due to go underground with him before I became ill. He is very interested in my records of bat sitings in Plymouth as the City Council does not have such records.

- During the summer, Chris and I took part in the National Bat Monitoring Programme (NBMP) Summer Bat Count. We counted bats returning from their nightly feed to Marquis Lode of Bedford United Mine at 3:30 am. We returned a few days later with Dave Wills of Devon Bat Group to count the numbers of bats exiting the mine to feed. We were impressed at the numbers of bats seen.
- In the autumn we were invited by Inspector Nevin Hunter of Devon and Cornwall Police to submit our views of what are important issues that the Police should concentrate on regarding Countryside Law. I selected from their list issues including Damage to SSSI's (both natural and geological designations) and Protection of Bats and their habitats.
- Before Christmas, I was asked by the NBMP to submit my request for next summers survey form. Greater Horseshoe Bats were not mentioned on the form so I made enquiries. They got in touch with Devon Bat Group asking if they had undertaking any surveys of Bedford United. Dave responded that none had been made by the group and that it was unlikely that a full hibernation survey could be made due to the levels of stability within the mine.
- I feel that this is excellent publicity for the club with national bodies. With this in mind I would request that when under ground all members take care not to cause any damage to features and wildlife and that nothing (except rubbish and ideas for trip write ups!) is removed from the cave or mine (especially if the site has any protective designation).
- I would be happy to continue this role next year. If re-elected, I will continue to keep records of bat sitings and share relevant records with interested parties (PCC, Devon Bat Group). I am also investigating the requirements for becoming a licensed bat handler.
- As I am secretary for Devon Cave Rescue Organisation, I would be happy to take on the role of DCRO Rep for PCG should the vacancy arise?
- I am prepared to assist with some PCG input to DCUC but will not forward my name for a post due to other commitments.

9. **Editors Report:**
   - Normally the Plymouth Caving Group produces three Newsletters and Journals in a year, in April, July or September and December. In 2003, having produces the April edition I let it be known to the committee that I would have to stand down due to my other commitments. A volunteer was found to produce the other Newsletters but they failed to materialise. Subsequently I came back to produce the December edition which, in celebration of the Group's fortieth anniversary, had a colour cover thanks to Colin Smith. Therefore in 2003 the Plymouth Caving Group produced only two Newsletters.
   - If the club is able to find someone more committed to producing its Newsletters in 2004, with the necessary time to devote to it, I would be more than happy to stand down as Editor since although I can, at present, see my way clear for an April edition, I cannot commit myself to the others later in the year.

10. **Tackle Wardens Report:**
   - New Equipment - Lottery Grant
   - A Large amount of caving gear, including 4 SRT kits, 200m SRT rope and a 24V Bosh SDS drill, has been bought this in the last year with the money from the grant. All of the new equipment has been added to the attached Tackle Inventory.
   - Other than a couple of little problems with the reflectors on the new lamps it all looks good.
   - Retirements, Loses and Disposals – Lights.
   - In the last year prior to the arrival of the six new lights, the effort required to keep the old lights going has been considerable, with quite a few incidents were lights have failed on trips.
   - Five retired from the inventory at the end of 2003, i.e. PCG 3, 5, 7 & 9 and PAT (light donated by Patrick when he bought himself a new light).
   - This leave 13 'working' lights, 6 new and 7 old. Three of the old lights are very marginal and I suggest they be retired now as well, this would leave10 lights, a reasonable number which is still a challenge to keep them all charged and ready to use.
   - Bags - One Green/Orange tackle bag retired, worn out.
   - Bolts - Three Lost - Five Sold to Dave Wills.

- Recommendations – Ropes - All of the oldest ropes should be retired i.e. PCG 4, 6 & 8 were purchased in 1991. PCG 12 was purchased in 1992. - Length 92m. The next batch of 5 ropes was purchased in 1995. - Length 111m. Total Length 203m.
- If we replace all ropes nine years and more old will have to buy about 225m (allowing for 10% shrinkage), cost approx. £225.
- If this recommendation is not taken then at the very least the ropes should be re-tested now. Unfortunately this will require between 2.5 and 3m to be cut of each rope to be tested and the ropes in question are already quite short.

11. **Membership Secretary's Report:**
- **Membership Numbers** – The last year has seen the number of new and old rejoinders continue to grow with the present membership standing at about 40, and the new membership year has in reality, only just got underway.
- We have lost some of the new people who joined in the last two years, but the replacement rate is still greater that this loss, lets hope this continues in the next year.
- **Junior Members** - There are not enough (in fact no) trips planed with junior members in mind.
- It seems to be generally accepted that the active caving community as a whole is in decline and the average age of caving club membership is worryingly high as young people are not being recruited or allowed for.
- we must actively encouraging younger people to become involved in caving and have trips planned that our junior members will be encouraged to attend, if we don't then I believe caving we continue to decline to a point were it will become unviable as a sport.
- Junior Members Fees - In light of the above, if nothing changes the junior members fees should be greatly reduced to reflect the level of access they get to trips, as they are subsidizing the club and reaping very little of the benefit. Perhaps the junior membership should be set to a percentage of the trips they are encouraged attend per a year.
- Membership List – Is available form the Meet Secretary.

13. **Meet Secretary:**
- This year has seen a good turn out to the Tuesday evening trips that have been arranged. This has led to alternative trip being laid on during those evenings designated as digs, to accommodate the numbers turning up.
- There has been a number of digs ongoing over the past year. The major one has been trying to pass a collapsed stope in an old mine working, which has seen many trips on a Tuesday night. This has been quite an arduous project receiving many trips with the continuation of the level and possible way through in sight.
- There has also been a dig in another local mine adit to clear away a fall. This has now been cleared and a survey undertaken.
- We have also undertaken a dig in the floor of Hexton Quarry tunnel. This project has seen the use of an electric pump to drop the water level with the hope of finding a possible chamber further in.
- There is also a small dig ongoing in Radford.
- The club has also had weekend trips away to South Wales, St Just, and the Mendips. Unfortunately one trip to the Mendips had to be cancelled due to lack of response, with only two members interested.
- There have been a number of trips organised by the Devon Mineral & Mining Club, opened up to members of the PCG, throughout the year.
- We have had exchange trips with members of the Tamar Mining Group (Tamar Moles), with more in the pipeline.
- One Tuesday night saw SRT training at Chudleigh Rock Centre.
- This years Christmas party was held at the Plume of Feathers, Princetown. This proved to be very popular event.
- PCG members enjoyed a good social evening at Carnglaze Caverns, where tribute band Pink Fraud held a concert.

The second adit level explored that evening was much bigger than the first. Once the grille had been opened and the bat check over with (no sign of bats or their droppings was found on this level), we finish off the survey that was started on the previous Sunday afternoon.
Patrick and Matt had a thorough look through the adit level, and assessed the area where a fall has taken place, an area was found that has potential for a dig at some point, with the permission of the landowners.
During the two visits 184.2 metres were surveyed, with 44 photographs taken through the level. In due course a report will be sent to the landowners, along with a copy of the photographs from both adits. The relevant authorities have been informed regarding the bat droppings from the first adit.
Once our visit to these two mines were completed, we all hastily changed and made our way to a local pub where we met up with the two other PCG groups who'd visited different caves that evening.

AS VIEWED FROM THE CHEAP SEATS – A NOVICE'S TALE.

We all met at Bretonside as usual, and then split into two groups with Patrick, Hugh, Trish, Darren, Matt, Rhys, Lionel, Selina and I headed off for Wheal Fanny Mine, which is part of Devon Great Consols. Big Dave and others? headed off too? (I will clearly have to pay more attention)

We arrived at the Mine about 8pm and were met by Manic Miner who had arrived there earlier to rig up the ladders and ropes. We spent quite a bit of time kitting up. The PCG club suit I was using fitted well and was comfortable. I had trouble with the harness and with help eventually got it right. At around 8.30pm, all entered the mine and I had my first view of what was expected and how we were going to descend. This is only my second trip underground (Radford Cave being the other one), so this was more experience for me. I had not abseiled for over 20 years and with the help of Hugh, fitted the rope into the descender and, after we were both happy, started to descend the first pitch of about 15 feet. (Thanks for the help, Hugh). Just like riding a bike it came back to me, so, slow and steady to the bottom. Don't know the jargon for all this rock formation thingy stuff, not yet. Was informed by Dangerous Darren that this was a copper and arsenic mine. Looking around the walls of the stope I could see some very nice copper and deep bronze coloured sheets. Sightseeing bit over with, it was time for the second pitch of about 30 feet. Again, the Manic Miner checked my descender and I was then allowed down. After passing through a sort of hatch in the floor it became a free descent to the bottom. First time that I have abseiled without having feet against something solid, it was a good feeling though. Time for a bit more sightseeing. Was amazed, upon looking up, that the level I had just descended from was actually a false floor made up of rafters and planks, hence the hatch effect. The third pitch, with checks by Darren, of about 25 feet was soon done and I was now standing on solid rock. My 'other half', Selina, and I then went exploring (no, not each other) and were told about another pitch, going the other way. It was about 60 feet and we were surprised to see the old wooden ladder, or, what was left of it, still in situ. As time was getting on, word was passed around that we were exiting and so we made our way back to the first ascent. Selina went up the ladder first, followed by me. This was achieved without too much problem as the ladder was against the wall. The second ascent was the thirty-foot pitch with the ladder just dangling in mid-air. Selina went up this first and had a few problems about three-quarters of the way up. On my ascent I also had problems about three-quarters of the way up. It turns out later that Selina's arms had given up whereas my handgrip had given out on me. All others except Lionel and Matt had used SRT for their ascent and I saw how easy it looked. After making up the ladder of the third ascent, we all exited the Mine and, after changing, left the site about 10.30pm to make our way to a local beer house?(Have got to pay more attention).

On a personal note I have learned a few more things and gained more experience. By far the biggest thing I have learned is I do not like ladders and will want to learn SRT as soon as possible. Sign me up please Dangerous.

Thanks to Hugh, Dangerous Darren and the Manic Miner for help with the descending and ascending and for checking that I was properly secured.

Andy Shellis (I hate electron ladders)

P.S. I have since found out that Big Dave's group, Dave W, Ali, Colin and Neil, were going to a secret dig. (Not that secret as the Manic Miner knew where they were going!!). Also found out that the beer house was the Chip Shop Inn. Nuff said.

MATIENZO 2002 - 2003

The summer of 2002 in Northern Spain was notable for rain, the tail end of the storms which were seen all over Europe. This resulted in some of the objectives for the expedition being shelved, with attention being largely concentrated on caves with no active areas. The worst came towards the end of the expedition, after most people had left, with the bottom end of the valley under water and many normally dry caves discharging huge volumes of water. I went out for three weeks. This trip was quite international, with Danish or Spanish being the going lingo on many of the trips I went on.
The Cawthorne's were there before I arrived, and had a rather unfortunate incident with the wildlife in Cueva de Cuatribu (13), the cave on Mullir we had visited at Easter.
At Easter 2003 the usual crew from the North stopped off for a night in Plymouth before catching the Santander ferry for a stay of 10 days in Matienzo. About 21 cavers were present, exploring over 1.2 km of passage. We were joined on some trips by members of the International Society for Speleological Art, (ISSA alias the Painters and Decorators), who spent their first trip outside the UK based at Bar Tomas at Ogarrio. They are planning an exhibition in the area at Easter 2004.
Summer 2003 was a brilliant trip, the large numbers including over 40 cavers including the Catalans and Danes. PCG and former PCG members there included Ali, Hugh, Trish, the Cawthorne's, Keef and Zoe, and also Imogen (an ex DSS member who caved with us in the Berger and came along with a SUSS group). Perhaps the only down-side was the heat, for some days the only comfortable place to be was underground or in the river at Riba. Draughts in the caves were as a result much stronger than usual, and led us to some new discoveries. The expedition hosted a fiesta for the villagers on the campsite, the "Full Monty" put on by the Catalans being particularly memorable...

25 Sima-Cueva del Risco.
20th August 2002. Pedro, Dave, Ali. Risco is an 8km long system largely explored in the earliest years of the Matienzo expeditions. The entrance is an 8m pitch, Torca del Sedo, in a clump of trees behind some houses and below the wet weather waterfall of El Risco. Following the impressive main passage, we went upstream to Pinto Gallery. Following this upstream, in roomy passage with some interesting cascades, ends at a number of branches. One branch ends close to surface, where there was probably an entrance in ancient times. In an unsurveyed side passage, we looked at and recorded using low angle lit digital photography, a series of scratchings which may be Bronze Age.

42 Cueve de los Cefrales.
30th July 2002. Torben, Louise and Ali. We returned to the dig started at Easter, in the hope of a connection to Hidden Hole. Unfortunately the dig has progressed to an area where it is totally choked by damp sticky clay, making digging very difficult and also resulting after some time in bad air conditions. The dig seems worth persevering with, due to its closeness to surveyed passage in Hidden Hole.

3rd August 2002. Ian Chandler, Ali. The dig was returned to, and it was planned to attempt to communicate with Torben and Bin Ladden in Hidden Hole. This time, being a hot day (rare this summer), there was a draft in the dig, so there was no problem with bad air, but the sticky clay meaning little was achieved. We had hoped that communication would be achieved by banging on the rock. Ian and myself went to two different locations, but at the appointed time all our banging resulted in no response whatever. Once everyone was out from underground, it transpired the Danes had totally forgotten about the pre – arranged plan and were elsewhere in the cave.

5th August 2002. Area above Arenal. Ian Chandler, Pete Smith, Ali. The head of the Vega valley is largely wooded, and contains relatively few known caves. We went up to look at a shaft located by Stumpy one Easter. A long slog up through the woods was enlivened by the calls of a wild boar somewhere close. 1305 is a shaft which Stump had not managed to get to the bottom of. I descended the entrance, which dropped into a long rift, the bottom choked with leaves and bones. At one end a further pitch was discovered, but not descended due to the rapidly deteriorating weather. Another interesting site from some years ago was 1312, an open rift which this time was totally blocked by a very smelly dead cow. On the way back we got a lift from a local farmer, who suggested a name Torca del Rayo for 1305.

7th August 2002. Ali, Paul Stacey, Paloma. At the start of the previous dig, a small alcove on the right had been noted, which appeared to draught. This appeared to close down, but probing under the right hand wall located a parallel passage. This is just too low to proceed far, and again the problem of bad air prevented much progress.

29th July 2003. Ali, Keef, Zoe. The dig started on the previous trip was continued, there now appears to be a very faint draught so there were no problems with the air.
A further trip by Hugh and Trish opened up the access to the dig, which should make future progress easier.

48 Cueva – Cubio de la Reñada.
6th August 2002. Andy Quin, Slug, Pedro, Ali.
Recently a lot of time has been put into checking out areas in this superb cave, where leads may have been missed in the original explorations in the 1970's. One such area is Castle Hall, a high chamber where you climb down onto a boulder slope from Crowbar Passage. Climbing down through boulders, a previous trip had located a passage containing fine calcite rafts. This ended at a number of deep pools. This time we managed to find ways of crossing the pools avoiding swimming, but all passages apart from some narrow inlets, ended in deep sumps. This area we named the Moat of Doom.
It seems there is probably a major network of underwater passage in this cave, which with a few exceptions remains totally unexplored.
The Moat of Doom amounted to 117m of surveyed passage, bringing the total of the South Vega system to 26,287m.

77 Cueva de Rascavieja
2nd August 2002. Jenny, Carol, Helen, Pedro, Pete, Ali. This is a roomy cave, at the foot of the cliffs high above Agua. A slog up the hill in the blistering heat was followed by a while spent cooling off in the cool draught coming out of the entrance. At the end the cave splits into two routes. To the right, a tight drop leads into a series of crawls carrying the main draught. To the left, a lower passage ends at a crawl that Pete had pushed a few years before. A partly excavated route up through a choke ends up in a roomy chamber. Here they had found some bones. Pedro identified these as probably Wolf. Looking around in the roof, about 20m above, there appeared to be one possible passage leading off an alcove. To me, it seems this is the only logical way a wolf could have found its way into the chamber – although there is evidence of bears having gone a long way along the main passage. Behind the skeleton, I managed to detect a draught behind a boulder, followed to where it emerged from a too – tight slot under a large slipped boulder.
The area of Enaso above does not seemed to have been looked at, according to Bob Cawthorne because the going is very difficult; perhaps somewhere the entrance used by the wolf is sat there waiting to be found…

6th August 2002. Hugh, Trish, Santi, Ali. We took in bolting kit and Hugh started a bolt route to try to reach the possible passage over the Wolf. Unfortunately the decidedly dodgy nature of the rock resulted in not much progress being made. Beyond the Wolf, the draughting slot was opened up, but the draft came from an inpenetrable choke beyond.

258 Toad in the Hole.
31st July 2002. Torben, Bin Laden, Louise, Ali. In the past, this cave has always been tackled with ladders. This is convenient when a lot is being done in the cave, but requires a lot of tackle. We therefore decided to rig the cave for SRT, which should enable relatively light-weight trips to be undertaken. We rigged all the pitches as far as Misty Junction, this point can now be reached with a single bag of rope.

1st August 2002. Torben, Louise, Bin Laden, Ali. We went to the First Return, looked at a few years ago. The first chamber found on the previous exploration contained a rift leading into a chamber, needing tackle for further progress. This unfortunately proved much deeper than we had enough tackle for.

8th August 2002. Paul, Slug, Santi, Ali. We re-rigged the 5th pitch (an upward pitch of about 5m) and surveyed some passage in the Lost Series, leading to some high avens. Then we carried on to the First Return, where Slug descended the pitch which was choked with mud at the bottom. This was about 40m deep. There may be a way on over the top.

9th and 10th August 2002. Las Calzadillas. This is the area overlooking the head of La Vega, on the road from Arredondo to Entrambasaguas. Two sites, **1209** and **1429** had been seen here before, which being over the further reaches of Toad seemed going back too. One was a climb down over broken bottles and other rubbish into a chamber, from which a descending, draughting, slot was pushed until it became too narrow. The other was a 3m shaft from which a slot was dug out into a chamber with a too tight window into a small shaft.

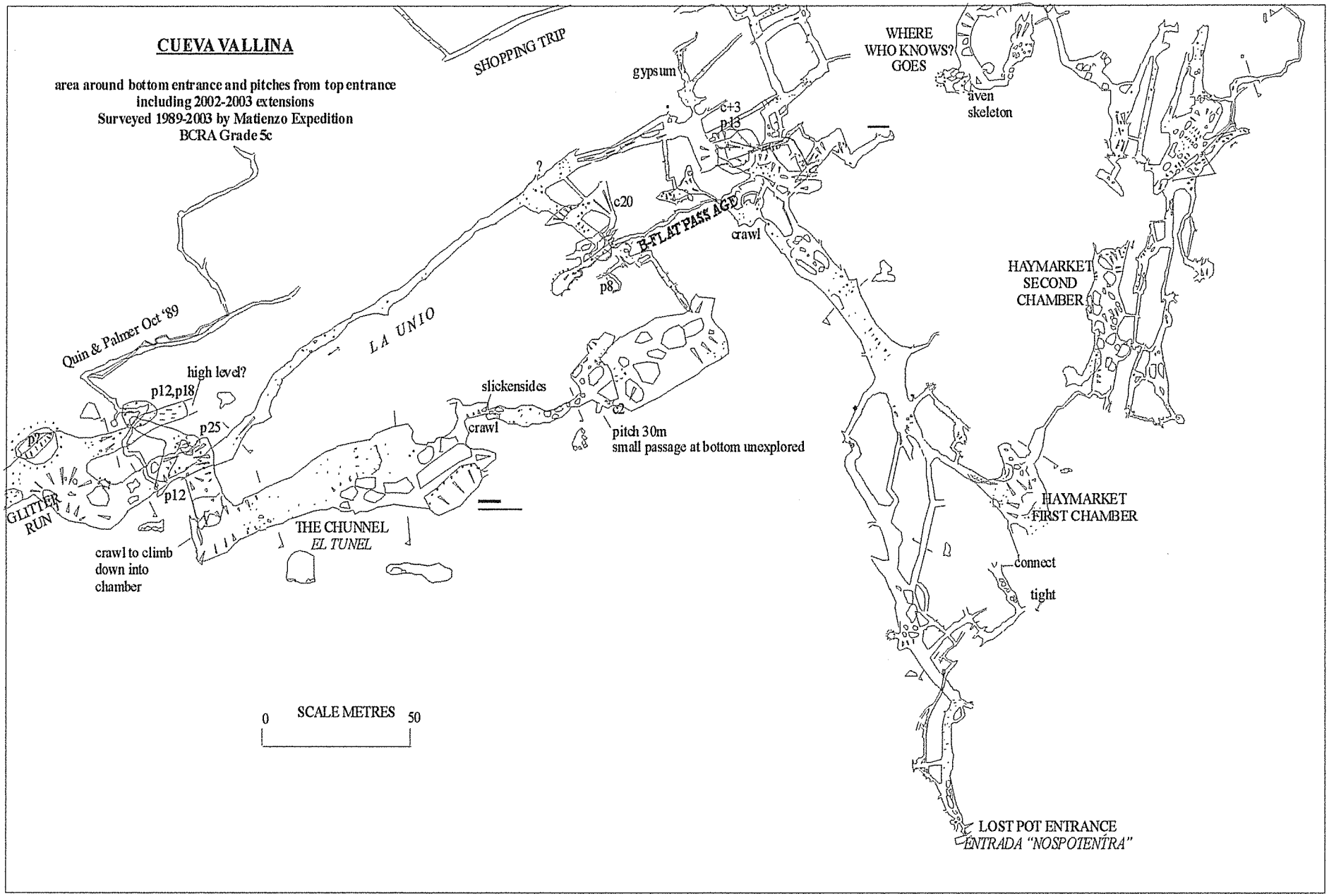
16th August 2002. Heski, Ali.
The cave was de-rigged.

733 Cueva Vallina
11th August 2002. Pete Eagen, Helen, Santi, Marcus. On the original exploration of Valline in 1989, Pete and other members of the Haymarket Caving Club and pushed a narrow canyon passage a long distance, eventually joining a larger passage at a draughting choke and a bronze age pot. This was later dug open to become the bottom (Lost Pot) entrance. This was connected to the main cave by easy large passage. This passage (Haymarket) was subsequently left, Pete being unable to find the way back into it. This had now been located. From the Lost Pot, a right turn along easy passage passes through a chamber, then a drop through a false floor, where the original explorers had had to push a large "lid" of stal aside from below to get through. This was followed by an interesting flat out squeeze at the top of a narrow rift, followed by a second chamber. Santi was unable to get through the squeeze, so we returned to the main route into the cave and went to have a look at the Who Knows? Area. Here the original explorers had passed through some large chambers, ending at a junction with a low crawl to the left and a slope down to the right. We first went right; a chamber was followed by a slope up to a series of choked avens, with a strong draft evident. At the foot of the slope, a narrow slot on the left popped up into a parallel passage. We almost immediately found evidence that this was part of the Secret Series, explored this Easter off the third chamber off Haymarket. We had thus made another way into Haymarket. Back at the junction, the crawl on the left was also explored and also was found to connect to the Secret Series.

15th August 2002. Pete, Ali.
We went in through Lost Sock, the route from Who Knows? into the third chamber in Haymarket. Between this chamber and the second chamber an alternative route had been found at Easter. We tidied up the survey for this area, and then followed another route which Snablet had found, and pushed this round into a low chamber making another loop. A lower passage near the third chamber led over a false floor, to some tight crawls ending at a small chamber with a climb up into a choke.

19th August 2002. Dave, Ali.
Going into Haymarket, we completed the survey of the area around the third chamber. In the second chamber, a shelf on the left was found leading into a passage, where the draught was lost in a forest of stal in a small chamber. We went out through Lost Sock, making a nice round trip.

21st August 2002. Pete, Dave, Ali.
The aim was to tie up loose bits around the entrance and in Haymarket; we managed to find about 335m of passage without getting back to the latter. All this was within about 10 minutes of the entrance of this cave, which ended up just short of 29 km long. About 1.2km of new passage had been found in the cave this summer.
First we went to a passage just inside the entrance. This was narrow and ended up passing over the main passage and rejoining it near where Haymarket leads off. Next was a wide sandy crawl, just before the junction where the original entrance series comes in down a 13m pitch. A couple of links to the junction chamber were found, beyond which was a climb up into a chamber, and below this a narrow decorated passage, B-Flat passage, ending at a squeeze into an aven. Just before the squeeze, a climb up reached larger passage which is believed to connect to the route from the top entrance.


CUEVA VALLINA
area around bottom entrance and pitches from top entrance
including 2002-2003 extensions
Surveyed 1989-2003 by Matienzo Expedition
BCRA Grade 5c
SHOPPING TRIP
gypsum
WHERE
WHO KNOWS?
GOES
aven
skeleton
c+3
p13
c20
B-FLAT PASSAGE
crawl
p8
HAYMARKET
SECOND
CHAMBER
Quin & Palmer Oct '89
LA UNIO
high level?
p12,p18
p25
p12
slickensides
crawl
c2
pitch 30m
small passage at bottom unexplored
GLITTER
RUN
THE CHUNNEL
EL TUNEL
crawl to climb
down into
chamber
HAYMARKET
FIRST CHAMBER
connect
tight
0
SCALE METRES
50
LOST POT ENTRANCE
ENTRADA "NOSPOTENTRA"

16th April 2003. Ali, 3 Daves, Pete E. Leaving the main route in the Maze at the Dragon, we headed to the connection found last year to the Haymarket Third Chamber. A pitch in the connection area was descended but proved blind, but with a vocal connection to draughting rifts off the choke. This area is complex, but most passages end in major chokes. From here we carried on through Haymarket, a mainly small series of passages which Pete and his mates had explored in 1989 starting at the Hole in the Wall and ending up rejoining known passage near the bottom entrance. After about 100m we split into two groups to explore leads left from the original exploration. The first was after about 100m, where a climb up into some chambers didn't go. Just beyond, an obvious inlet split up into small passages, heading towards surface and containing fragments of tile. The next two passages Pete explored, but ended in stal chokes; we crawled up a sandy passage on the right which eventually rejoined the main passage, by now carrying a small stream, at an awkward climb down. Some further roof passages were explored at a point where slippery cascades dropped into some deep pools. The stream continues ending at a sump, but a way off on the right (which we missed and carried on to the sump) leads back to the main route through the cave at The Canyon. Retracing our steps, we carried on along this link, which can only be described as a right b*****. A generally high but narrow rift contains some levels which are just about wide enough to traverse, but one is never sure if you are at the best level, and changing levels often proves to be a mistake and very difficult to reverse. This route is definitely a collectors' piece, for anyone who has a dislike for stomping along big sandy passages which form the alternative route. In all we had surveyed 154m of new passage.

17th April 2003. Ali, Pete, Angus. The previous day we had noticed that a rope was hanging down the last pitch descending from the top entrance, the route by which the first explorations were made in 1989. This was a good opportunity to see if we could find the connection to B-Flat passage. This was soon located, a passage on the left led to a junction where going left and down a handline climb soon led to our last survey point in a climb above B-Flat. To the right a series of passages and chambers were explored to chokes and an undescended pitch. A number of climbs and side passages were noted around the top of the pitch.

18th April 2003. Ali, Torben, Louisa, Kristine, Jonas, Angus, Pete. The various passages noted the previous day were surveyed, photographed, climbed into, etc, etc. Some superb gypsum formations. 187m surveyed.

1st August 2003. Ali, Zoë, Keef. We went in by the top entrance, which I had not been in since 1989, and hoped to find the pitches still rigged so we could do a through trip to the bottom entrance. We found the top pitch derigged, so rigged it using the only rope we had brought, left our SRT kit there, only to find the other pitches rigged. However there was plenty to look at between the first and second pitches. The entrance is a wide chamber, ending at a short crawl (which can sump in wet weather) followed by the first (10m) pitch. This drops into passages generally 10-15m in diameter. After 200m the passage considerably enlarges, and the way on is to climb up to a large ledge 20m up on the right hand wall. 300m further, the second pitch is reached, just before which a large passage goes off on the right. This we followed into The Chunnel, a superb sandy passage, beyond which some crawls ended at a pitch. This was the end of the existing survey. Climbs through boulders on the left led into an area where a large space was evident overhead, but could not be reached. Going back to the pitch, a climb up a slot, with a good draught, gained the chamber, which was about 50m long by 20m wide. At the far end were some excellent gypsum formations. Unfortunately we could find no way on. On plotting the survey, this proved to be heading towards the surface.
Back at the start of the Chunnel, Keef explored a crawl which ended at a drop into a chamber – a return with tackle was called for.

5th August 2003. Pete, Helen, Santi, Hugh, Trish, Ali. We did the through trip from top to bottom entrances, putting in belays for a pull-through on the top pitch. The pitch at the end of the crawl from the previous trip was dropped, into a chamber about 10m square, with only a choked rift going off. A way of avoiding the pitch was used to get back up. At the bottom of the pitches, Hugh and Trish made their way out while the rest of us carried a short distance further into the cave. A previously un-entered passage opposite the Hole in the Wall was explored, with some nice formations but which choked after about 40m.

8th August 2003. Ali, Heski, Santi. We went to check out various leads around the Canyon. First we went to where the Clapham Bypass connects into the start of really large passage. The way on into the cave is left; to the right, passing some nice stal enters some chambers with a question mark on the survey. The question mark

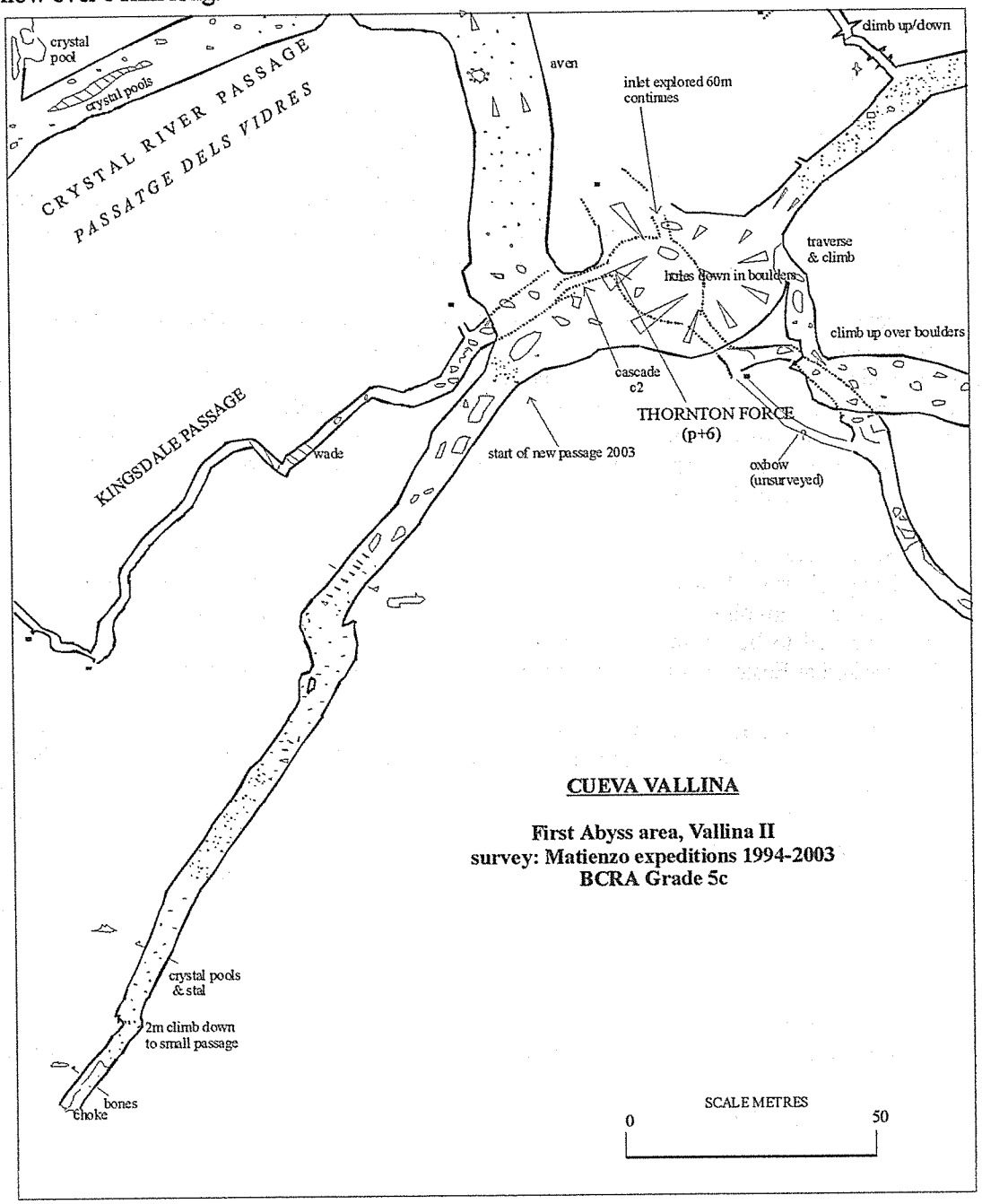
proved to be a squeeze through stal dropping into further chambers. Here, two routes carrying draught were found. One ended at a stal choke, the other was a slot we hammered open into a chamber where the draught or a stream could be heard beyond another impenetrable stal choke. Going back to the main route, the original explorers followed a route shown on the survey as a simple passage, while the more usual route is the easier Clapham Bypass. We followed the original route, which proved to be a bewildering maze with plenty of potential. This area we left, a thorough survey of this area being required.
Back towards the Canyon, a draughting muddy slot was dug open. This passed under some tall avens, and then narrowed to an inlet passage which eventually split and got too tight. A number of other passages in this area were also surveyed. The Canyon is an awkward rift crossing the main route, where a handline aids the descent and re-ascent on the far side. At the bottom a small stream is impenetrable, but Heski found a way into it beyond and followed it downstream to a sump. Carrying back towards the entrance, we noted a 3-5m wide and high passage going off on the right, which we had not noticed before, and seemed to have been totally missed by the original explorers. This was probably because it was up a slope at a point where you are watching your footing on the floor. Exploration fever was quickly got up as a strong draught was noticed as soon as we got into the passage. The passage turned left and ended in some mud chokes. Having lost the draught, we soon relocated it coming from a boulder at the left hand bend. This entered a narrow stream passage, where Heski followed a crawl to where it was partly choked with cobbles. I found the draught in a high level, and followed a comfortable hands and knees crawl. Past a 3m climb down into a stream, the passage was followed to some tight bends. It continued beyond, but we decided to leave it until we had plotted the survey to see if it was likely to connect to known passage.

10th August 2003. Helen, Jenny, Ali. In the Maze area, not far from the Hole in the Wall, is an area which Pete said was very complex, with just one route surveyed through in 1989, and the only subsequent extension being a passage explored by the Catalans a year or so later, which they called L'Empedrat. We started off with the first passage on the left, which, keeping left on any junction, ended at a squeeze, which we assumed was the way to the Catalan's extension. Returning back, a number of choked passages were passed until we ended back on the 1989 route. The next passage was quite wide but choked apart from a crawl on the right. This led to a junction where a strong draught was picked up. Turning left led through a low crawl to a T-junction into higher passage. This soon enlarged to a passage in shattered rock, an awkward grovel under an arch, a crawl over a rubble pile and into large passage. This was again in shattered rock, so we called it Shatter Passage. We soon came across a carbide mark, the Catalans having got here by a different route. The passage turned right into a large chamber which appeared to have lots of ways off. We carried on a short distance then left the passage going, intending to see what the Catalans had explored. They told us they thought the passage had little chance of further extensions, but as the area seems more complex than shown on their survey, and with the strong draught, we thought a further visit well worthwhile.

11th August 2003. Vallina II. Ali, Santi, Nigel Dibben. The far reaches of Vallina were largely explored in the 1994-1995, since when relatively little exploration has been done. The redrawing of the survey has highlighted plenty of leads remaining. The trip into Valline II is one of the best in the area. Passing through the main cave, the stomp through generally easy and often large passage is followed by the Double Dutch pitches, which we left rigged for Martin Holroyd who was arriving later to continue his dives in the downstream Rio Rioja sumps from last year. The Rio Rioja is a fine streamway followed downstream for about 700m to the downstream sumps, just before which a choke is passed to enter Vallina II. After a few chambers are passed through, a climb down drops into the Rio Grande, the main stream taking drainage from the west. This is a stomp for 700m up passage which really couldn't be easier. Passing through the Nipple Freezer, which requires no explanation, an inlet enters Simeon's Loop, which in theory is the easiest route to the higher levels beyond. Unfortunately I had not been through this complex area for a long time, and didn't find the best way through, but this really was just a minor inconvenience. The stream climbs up into larger passage with a connection into the Rio Grande, then a climb up into the higher levels. A large bouldery passage with stunning formations ends overlooking the First Abyss, a huge pit. Following fixed ropes round the walls leads to the foot of a huge slope, the top of which has never been reached. After problems finding the route on this slope, we found the window that enters Crystal River Passage. Almost immediately we reached our goal, a junction where the passage on the left was left having been entered by only one person for about 30m in 1994. This started out about 10m wide and 4m high. In places it lowered to a crawl, but remaining wide, with stunning formations. We pushed on, in places crawling over crystal floor where it was difficult to pick a route to avoid any damage. After about 200m the passage choked, but could

perhaps be pushed further with a bar. It heads south west, well away from other passages. Returning to Crystal River Passage, we carried on with the aim of rejoining the main stream. Crystal River Passage is named after (you guessed it!) an amazing floor feature for some of its length. After 400m the river is regained, a bold step across onto a ledge on the far side, 10m above the stream, then a climb down. The stream passage is followed downstream for about 500m, being quite awkward in places. Then we reached a climb down over a deep pool, followed by the short Thornton Force Pitch. These had been left rigged, but unfortunately the ropes had been trashed by flooding. We therefore had to reverse the last km of fairly awkward caving. From here we retraced our steps, eventually exiting after 10 hours underground. On another trip we could take a bolting kit and gear so Thornton Force could be rigged for a pull-through, making a superb round trip in this part of the cave.

13th August 2003. Ali, Hugh, Trish. We returned to Shatter Passage, and surveyed another 200m including some quite passage, without reaching the end and leaving lots of side passages. Returning to the chamber, some draughting sandy crawls were looked at, which may continue further.
Vallina is now over 31km long.



1128 Torca de la Vacunación

30th July 2003. Ali, Keef, Jane. This cave had been explored to a depth of 130m in 1999. At 50m depth a traverse over the top of a pitch led to an awkward rift and ended at the top of an undescended pitch. This was descended into a chamber, with a further drop in the floor which would require opening up to descend.

3rd August 2003 Ali, Keef, Pete. The drop in the floor was hammered open, being 6m deep with no way on. We then rigged the cave to the bottom, taking a length of hose with the intention of syphoning off a strongly draughting duck. Unfortunately the pipe proved to be too short; the head it gave produced just a trickle of water once primed. The nature of the site gave little inclination to push the passage without removing most of the water from it.

We managed to dig into some rifts near the downstream end of the cave, which didn't go. We then exited, derigging the cave being hard work particularly through the constricted and loose entrance pitches.

This cave is in a good position above the far end of Vallina, so if extended may connect to any one of the large avens or inlet passages in that cave. It contains a strong inward draught, but this year we noticed much of the draught seemed to be lost before the bottom of the cave was reached.

1471 Torca de Papa Noel

20th April 2003. Angus, Ali, Dave, Tufty, Andy Morse. We rigged the cave down to Plaza de Concorde, and then waited around for Pete, Torben, Louise and Jonas who had descended the Teamwork Pot route to an undescended pitch which was thought likely to connect into the chamber. We first descended to the area above Belcher's Slab, where exploring amongst the huge boulders we thought we could hear the others. After a while having heard nothing, we returned to higher up the chamber, we eventually made contact. A 30m pitch provided the connection, and we were able to do an excellent exchange trip.

21st April 2003. Pete, Ali, Dave. We took photos of the Teamwork Pot area, and then explored a passage previously explored over fine false floors to a short undescended pitch. The pitch proved to be 6m into a chamber, beyond which an awkward 3m climb led into continuing passage. A steep rubble slope up in soup-plate beds led to a very pretty area, and ended at a pitch estimated at 30m, guarded by a very long straw. Having no tackle to descend this, we returned to the top of the pitch explored the previous day, where there appeared to be a passage over the top. This was gained by Pete, who explored as far as a short drop which he thought might connect into the roof of Plaza de Concorde. We then derigged the cave.

9th August 2003. Santi, Pete, Ali, Torben. The cave was rigged down the Teamwork Pot route to the traverse looked at Easter. The pitch proved blind, beyond it opened into a chamber, presumably Plaza de Concorde again. Subsequent trips saw the Tumbling Dice pitch, which I had partly descended, bottomed and connected into Reñada. The pitch proved to be 138m deep. Pete had a further look in the boulders in the area of Plaza de Concorde we had looked at Easter, with one of the Catalans, and digging down through boulders into previously trod passage.

12th August 2003. Pete, Pedro, Santi, Ali. We went in through Coteron to see if we could find the point reached by Pete. Coteron is a fine cave, huge passage with a couple of pitches dropping into horizontal levels and routes connecting down into Reñada. At the end of the Reñada Arm, a passage on the right entered a bouldery area where we found the point Pete had entered, and went up through the connection into Papa Noel. After that we went along Between Worlds Passage, to prove the point where a connection had been made from 1338. Just beyond this is the Edge of the Universe, where a 69m pitch is the connection with Reñada.

After I left, Hugh and Trish and the Danes and others used Coteron as a route to further explore the far end of Papa Noel. The connections have pushed the combined caves to over 29km in length.

1655 Pants

15th March 2003. Phil Pappard, Pete Eagen, Andy Pringle. Pants is a strongly draughting dig, which is rather unstable. This has required much work pinning boulders in with re-bar and expanding foam. On this trip we capped through the constriction at the end, and entered a bouldery area where the draught seems to come down from above. Further shoring is required.

1792 and 1793, Riaño area
4th August 2002. Harry Long, Juan, Gavin, Ali. Harry has been looking in this area, which may lead into a postulated high level system above Uzueka. Two sites were looked at, 1792 was a low drafting entrance which was dug into for a few metres and continues too low. 1793 was a shaft covered with large boulders, under a rock face. Various rope tricks were resorted to in order to remove and replace the rocks, rather than drop them down the shaft, which proved to be blind.

1887
22nd April 2003. Pete, Angus. This cave had been dug into the previous day by the Cawthorne's. A series of crawls with much evidence of animal occupation. We managed to push along several crawls following the draught, but much digging would be required to get further.
We then went into **Jenny's Cave (1514)**, just over the fence, which is a nice little through trip in walking-size passage. A slightly draughting choke was dug through, into a short parallel rift.

1896-1900
23rd April 2003. Lank, Harry, Pete, Ali. These were a number of short caves which appear to act as flood resurgences. Several draught, and would be worth some effort. Up the hill, 1863 was a shaft with a tight entrance, which Pete managed to squeeze down but it choked in a small chamber.

Muela/Mullir.
2nd August 2002. Juan Penny and Jenny Corin, Angus, Torben, Louise, Bin Laden, Ali. We went into the dry valley leading up to the huge enclosed depression of Hoya del Yusa. Information regarding number of sites explored by a Spanish group had been obtained from their website. We went up to check the locations of these and of sites in the area looked at many years ago by the British. One of these caves had been one of the first deep caves in the area looked at by the British in the early 1970's, with a 110m entrance pitch. The Spanish apparently found a way off the entrance shaft. This seems a site worth returning to, and was in part resurveyed by Sheffield University cavers in August 2003. Various other new holes, most of which had been covered with rocks, were discovered, also worth a return visit.

Alisas.
18th August 2002. Juan, Jenny, Penny, Dave Bell, Ali.
We walked round from Puerto de Alisas to 1305, rather than walk up from the valley bottom. On the way we found 1817, a strongly draughting entrance onto a drop estimated at 20m, but which later on proved too tight to descend, then spent a long tome trying to find a way through an area of wooded pinnacle karst. Ali and Jenny descended the second pitch in 1305, but this just pinched and choked at the bottom. On the way back we found an entrance into a roomy chamber, 1819, with no way on.

14th August 2002. Pete, Helen, Santi, Jane Chilton, Juan Corin, Ali.
The road from Arredondo to Entambasguas is currently being improved, and road widening had revealed a fair sized drafting entrance. A large passage unfortunately soon choked, with a complex of small passage leading off to the left. While this was being explored I had a look on the hillside above, and found a small cave about 30m long.

Cobadal Area.
31st July 2003. Ali, Phil, Heski. Cobadal is an area to the north west of Matienzo, in which no cave of any real extent has yet been entered, but contains some strongly draughting digs. It is likely some of the Matienzo systems extend into this area.
552 is a cave 40m long to an unstable choke, which requires stabilisation.
553 (Sumidero de Cobadal) is a stream sink which degenerates into too tight rifts, When originally explored no draught was detected, but this time a draught was detected and followed to a slot which could be opened up. Adjoining this is a collapsed cliff feature where various points issued strong draughts from amongst the collapse. Above this Heski found a strongly draughting slot. This was opened up, and on a subsequent trip descended but unfortunately closed down again. The farmer told us that in flood a lake built up behind the sink, reaching part way up trees in the field behind, then suddenly drained away again.

7th August 2003. Heski, Phil, Juan, Pedro, Steve O, Niki, Ali. The dig in 553 was continued. We then carried on along the edge of the fields and the hillside, and located an entrance where the farmer was storing peppers in the cool draught from the cave. **1931 Green Pepper Cave** was a resurgence cave, choked about 5m in. I pushed a window at an upper level, where a continuation could be seen beyond, while Phil went for a boulder at a lower level, where, with the aid of a drill he managed to beat me by entering the passage beyond. The large cast then photographed, videoed, surveyed, or just did their first ever caving trip. The cave may be considered done to death, ending at a stal choke after 28m.

Other sites. 19th April 2003. Ali, Pete, Angus. 6 sites located, in deep mist, in South Vega between Papa Noel and the Vaccinator. These were found following a series of new tracks constructed by the local farmers, helping access to the higher ground but very unsightly!

Alasdair Neill.

ADDITIONS TO THE LIBRARY

BRISTOL EXPLORATION CLUB Belfry Bulletin 516
CARN BREA MINING SOCIETY Newsletter 51 (2003)
CERBERUS SPELAEOLOGICAL SOCIETY Journal Vol. 26 Nos3&4
CHELSEA SPELAEOLOGICAL SOCIETY Newsletter 45(2003).12 46(2004).1-3, 7
CORNWALL COUNTY COUNCIL Archaeology Alive No 11 2002-2003
CRAVEN POTHOLE CLUB Record 73-74 (2004)
DEVON MINERAL & MINING CLUB Journal 4.1,2 (2003)
DEVON SPELAEOLOGICAL SOCIETY Index to Journals 131-158
KENT UNDERGROUND RESEARCH GROUP Newsletter 79, 2003
MENDIP CAVING GROUP: News 310,316-318 AGM2003.
MINING & CONSTRUCTION /1/2000
MINING MAGAZINE /1/00 /8/03 /9/03 /11/03 /12/03 /6-9/04.
PCG Newsletter & Journal 144
SHROPSHIRE CAVING & MINING CLUB Below! 2004.1
SOUTH WALES CAVING CLUB Newsletter 123 (2003)
SOCIETA SPELEOLOGICA ITALIANA 48, 49 (2003)
TAMAR VALLEY AONB Tamar Valley News 11.
TREVITHICK SOCIETY Journal 30, 2003. Newsletter 124
UNIVERSITY OF BRISTOL SPELAEOLOGICAL SOCIETY Proceedings 23.1(2004)
WESSEX CAVE CLUB Journal 27.287-289
WESTMINSTER SPELAEOLOGICAL GROUP Newsletter 2003/4 2004/1-3

Carnon Consolidated Ltd, descriptive booklet c1985
TA Morrison Cornwall's Central Mines (2 vols.)

Tracings of Mine Plans:

CORNWALL
St Neot Syndicate 5920

DEVON
Bedford United Phillips' Lode
Wheal Russell R19B
Tamar Silver Lead ME2467

NORTH WALES
Britannia Copper Mine c1910, 1913

Thanks to Dave Warne for donations.

CARN GALVER MINE, ZENNOR, CORNWALL
SHAFT OPENED MAY 2003

BACKGROUND

This shaft was opened on May 22nd by Alan Matthews, whilst extending the car park in front of the Count House for the Climbers Club. The shaft was previously covered with granite boulders, and was not previously known, not being shown on any plans of the mine or other records. The workings were explored and surveyed on 28th May by Kevin Baker (Carn Brea Mining Society) and Alasdair Neill (Plymouth Caving Group and CBMS), supported on surface by John and Jan Atherton (Climbers Club). The shaft was apparently capped the following day.

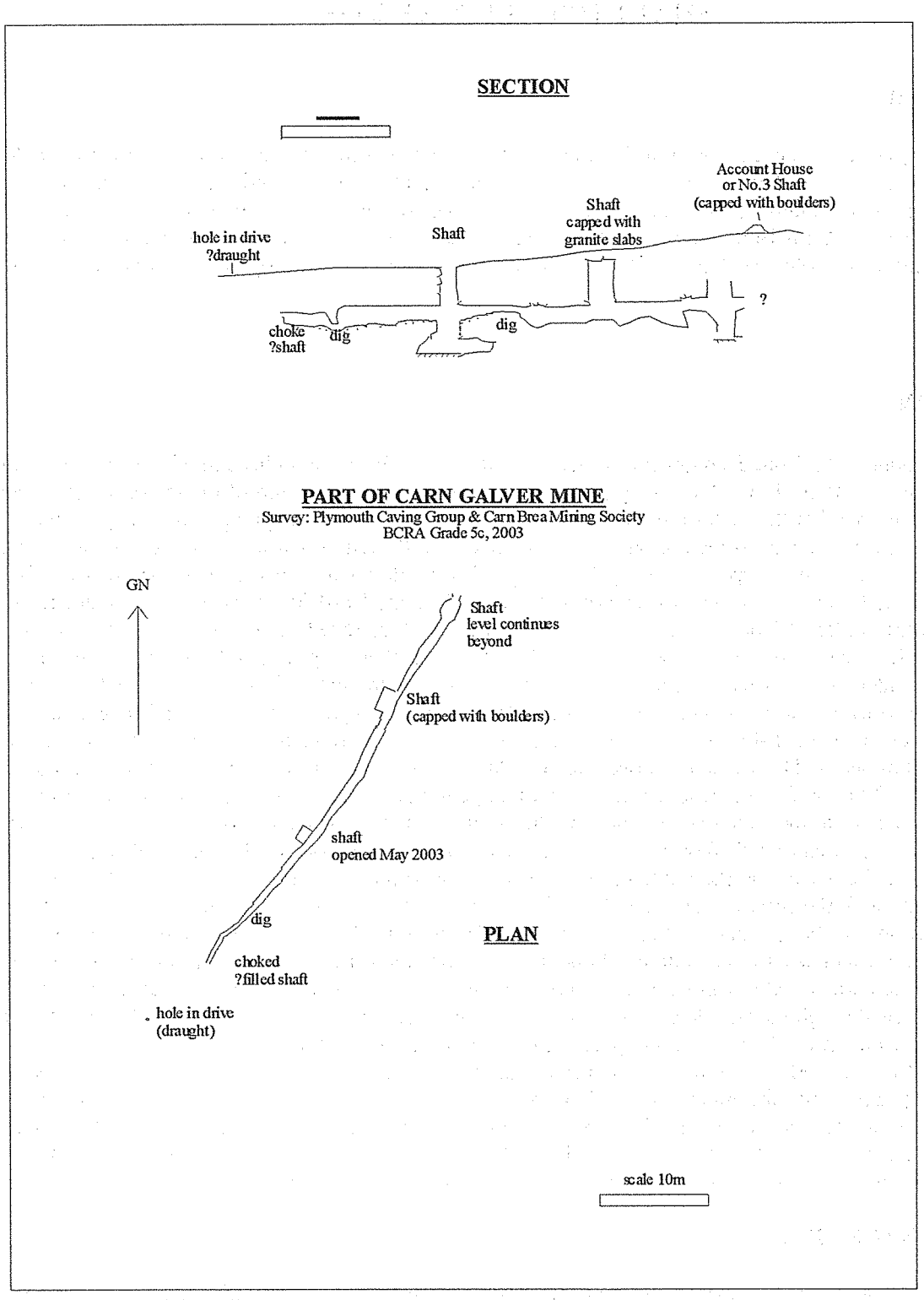
DESCRIPTION

The shaft was found to be 7.6m deep down to water level, the first 2.5m being in head and below that in granite. The shaft measured 1.85 by 1.0m. A plastic pipe of unknown purpose crossed part of the top of the shaft, and a cast iron pipe was found at the bottom, perhaps put in to support the original capping and perhaps dating from while the mine was still active. At the bottom workings could be followed only a short distance, but above this it was possible to traverse into stopes extending both ways. The workings are on the main lode of Carn Galver mine, which is here 0.8m wide at the most and dips at about 77° to the North West. These stopes extended up to near surface, a thin pillar of lode material being left below the surface (head) deposits. To the south west after 9m the stope ended apart from a 10cm square hole at floor level. As there appeared to be a draught here and also it looked like a wider stope existed beyond, some time was spent digging in the floor (deads), which revealed the backfilled stope widened out. Eventually this was made deep enough to squeeze through, but 5m beyond a choke was reached, possibly a filled shaft up to surface. To the north east, a small opening through could be seen over the top of a wall of deads. This carried a noticeable draught. This was dug out sufficiently to pass, beyond which a shaft measuring 2.5m by 2m was reached, capped with large granite blocks. This appears to lie under the (now disused) northern drive to the Count House. Beyond this a further shaft was attained, probably capped at surface, and dropping down to water level. Workings could be seen on the opposite side of the shaft and at a lower level, but these could not be reached in the limited time we had access to the shaft. This shaft may be Account House (No 3) Shaft, although the survey shows it to lie a short distance to the south west. This may indicate a survey error, or it may in fact be a separate shaft. Herring (1987) refers to Account House Shaft having been then recently capped, presumably by the National Trust, but this appears to be an error as it lies on Climbers Club property. This shaft was roughly capped with boulders many years ago, and was further treated about 1980 by cementing up gaps through the boulders. This was perhaps inappropriate, as this was potentially a bat haunt; in such cases any treatment would nowadays require approval from English Nature.
The water level in the workings appears to be backed up behind blockages in both the shallow and deep adit levels. The deep adit while the mine was working drained the workings to about 120m below surface. The shallow adit is at an elevation of about 123m, but at the time of the survey, when the shallow adit portal was discharging a fair flow of water, the water was backed up about 9m above this level. The stream from the shallow adit dries up after periods of dry weather, so it is possible water levels drop significantly at such times.

FUTURE MANAGEMENT.

Although it was felt by the Climbers Club that the existing shaft should be capped without any retention of access, it is hoped that at some stage in the future access may be again be possible to these workings via a different point of entry. This could perhaps be attained through Count House Shaft, the shaft located under the northern drive, or other shafts beyond on National Trust property, in the event of further treatment to these shafts being required. The reasoning behind retention of access and methods of shaft treatment allowing this are fully discussed in CUAAG (2000). In particular, further exploration may reveal potential hazards to surface property, while the workings are of potential historical and geological interest.

Section of Carn Galver Mine



Drawn by Alasdair Neill. 2003.

The Devon Arsenic Manufacturing Company 1894 - 1901
By Elisabeth Stanbrook (Editor of the 'Dartmoor Magazine')

The history of the Wheal Friendship arsenic mines at Mary Tavy is fascinating but sketchy, often with company names being wrongly attributed to phases of workings. The period 1894 – 1902 is rarely commented upon, yet this was the 'heyday' of the unsuccessful Devon Arsenic Manufacturing Company Limited (referred to hereafter as the Company), which centred its activities around Bennett's and Lanyon's Shafts, both on Bennett's lodes.

A few years ago, I was fortunate enough to bid successfully for papers relating to the Company at auction. Although incomplete, these, together with those the late John Robins used for his articles in *Dartmoor Magazine* and the *Okehampton Times*, help to give a wider picture of the arsenic works at the close of the 19th century.

According to Burt, Waite & Burnley in *Devon & Somerset Mines*, the mine had been in the ownership of the Devon Friendship Mining Co 1880-85; Mr. Bowhay 1891; and Mr. Henry Pearce 1892-94. It is in 1894 that my records begin. Henry Pearce was an iron founder in Tavistock, with his son Jonathan. Together they had a small interest in Wheal Friendship and, when approached by Mr. Sharpe, the Secretary of the future London-based Company, they agreed to relinquish their interest to them. Most of the correspondence is between Jonathan Pearce and Mr. Sharpe.

On 14th November 1894, having been in negotiation with Pearce for some time, Sharpe was keen to complete business, saying he had, 'the authority to get the Friendship business into shape and the deposit paid'. However, they still had to raise the capital and form the company.

In the meantime, Mr. William Gill, late Resident Agent at the Bertha Consuls Arsenic Works Ltd, and who had been Chief Agent at Wheal Friendship in 1881, had been asked to make a report on the premises for the intended Company.

Dated 4th December 1894, Mr. Gill's report reads:

... The property comprises about 600 acres of mineral land, on which are the very extensive Burrows containing Arsenical Mundic, Tin, Copper, and as well as the Buildings, Machinery, Calciner, flues, Tin burning Houses, Floors, Flues, Chimney Stack etc.

The buildings alone must have cost a large sum of money. The Arsenical flues are about 500 feet in length, with a good rise all the way from the Calciner to the chimney stack from the calciner. These flues are higher and larger, and are altogether more substantially built than those usually erected, enabling them to be cleared of the Arsenic at less expense and at a greater speed than usual, and together with the chimney stack, about 120 feet high, are well built with brick arches, the materials used being of the best description, and no expense appears to have been spared in the work.

The water power available is of great volume with enormous falls, thus enabling all the work necessary to be done at a cheap rate. This water power, which is so important to the Works, has command of the River Tavy and its tributaries.

The Works are fitted with a modern oxland revolving calciner, which is connected with the flues, and foundations are already built to receive another calciner proposed to be erected for the purpose of making larger returns. When the new Refining Works are completed, large returns of Arsenic can be made. The total outlay for these important additions I estimate not to exceed £1,000.

The tin burning floors and flues are also connected with the Arsenic flues. There are four self-acting jiggers driven by water wheel, raft wheel and Classifiers erected in a well built house with all the latest improvements capable of treating large quantities of Mundic, after it has passed through the rock breakers and crushers, which are all driven by water wheels.

The Arsenical Mundic passes automatically from the stamps to the jiggers, thus saving considerable sums monthly which would otherwise have to be paid in dealing with large quantities.

I may say that I am more or less acquainted with the few Arsenic Works both in Devon and Cornwall. The business itself, I should add, is almost a monopoly and likely to continue so. I have no hesitation, therefore, in saying that this property with the unusually high percentage of Arsenic in the mundic (of which there is practically an unlimited quantity), and taking into consideration also the water power is beyond an ordinary enterprise, and cannot fail to pay remunerative dividends on the outlay to your Company.

I estimate that the following returns can be made:

50 Tons Arsenical Mundic pr day, averaging 15 percent will produce 6 Tons of White Powdered Arsenic, 36 Tons per week or 144 Tons per month which at £11.10.0 per ton equals £1,656.0.0.

Cost of producing and heating 50 Tons of Mundic making Marketable including

Barrels	per months	900.0.0
Other charges	"	150.0.0
		1050.0.0

Computed profit of £606.0.0 per month or £7878 per annum.

I have to add that I have carefully considered the estimate of probable profits of £7878 per Annum and subject to the small outlay for increasing and improving the present plant I consider the estimated profits to be well within the mark.
I see you take the selling price at £11.10.0 pr ton. I am convinced that it will be a long time before Arsenic is again as low as this.

Unfortunately, the oxland calciner and various other mining materials, it later emerged, did not belong to the property!
Having written this report, Gill then applied for the post of Captain/Residential Agent from his home at Holes Hole, Bere Alston.
It was at the end of December 1894 that Sharpe was able to inform Jonathan Pearce and his father that, 'the contract between the British Land & Industrial Company and the Trustees of the Devon Arsenic Manufacturing Company Limited has been signed. Articles of the latter Co. will be registered at Somerset House and prospectus is to be printed asap.' So it would seem that the former company also had an interest in the property, and records indicate they retained some of the workings.
During a gap in the records, Gill became employed, together with Jonathan Pearce, to manage the mine. With great optimism, in May 1895, Gill told Pearce that although a Mr. Mathews had said they could crush 40 tons a day, 'we shall crush 80 tons in 24 hours. I don't believe in putting any machinery to stand idle by night when we have so much stuff in front of the machinery. ...Trusting we shall soon be out to Friendship then we will show them what can be done'.
June saw the first ever Board meeting in London, where a good subscription capital was expected, and 4,000 prospectuses went out shortly afterwards. However, less than a month later, Sharpe was expressing disappointment that there had been a slow uptake in the sale of shares. He also visited the mine where he made Mr. Pearce senior a 'substantial payment', settled Pearce junior's position and pay, and attempted to put in hand the setting up of the refinery.
In August, there is mention of the Count House which was in a dilapidated state. Sharpe advises Pearce, 'would it not be more comfortable for the winter to try & do up the old Count House a little?'. The following month, Pearce is given the go ahead to fit the house out 'nicely'.
Work on the refinery had still not begun and progress generally was very slow, with a seeming reluctance of the part of the Board to put money into the venture reflecting, perhaps, that shares were still not forthcoming. Instead of expanding the mine, 'Capt Daw [who had been Captain of the mine 1882-1884] thinks it best to put the existing plant in good repair and open up the Burrows well. He says why move the big wheel & go into & extend Plant till you know where the Mundic is to come from. ...I feel certain with Capt Daw's help I could get the money next spring to pump the mine – only let us go along on present lines & get up the Refinery ... I hope you have cleared Bowhay out'.
This last sentence reveals that the former Captain, Mr. Bowhay, had been difficult to remove from the mine and consideration was given to whether to issue him with a writ. The implication is that he was selling mundic for his own benefit: 'You must not let Bowhay sell his Mundic at Friendship or Wheal Jewel'.
Holmbush Mine in Cornwall had a sale in September, and Sharpe instructed Pearce to buy the Brunton calciner if it went at the price of old iron. He also authorised the building of a new crusher house, and expressed a need for burning to start as soon as possible.

On 11 October 1895, a rough estimate was made for the cost of building arsenic refining furnaces and condensing chambers with a flue leading from the furnace to the chambers.

Furnaces. Brick. Work & masonry	60. 0.0
Ironwork for Bracing	24. 9.0
	84. 9.0
Condensing Chambers (Brick)	200. 0.0
Flues leading from furnaces	60.18.0
	345. 7.0
Fire Brick in furnace say 10,000	30.0.0
Red do in Chambers do 6,000	150.0.0
do in flues 14,000	35.0.0
	215.0.0

Gill's obsession with crushing the rock was starting to annoy Sharpe. 'You must really take Capt Gill away from the Crusher House and let him devote equal zeal and attention to starting the Burning.' He wanted the old crusher repaired and mundic prepared by picking over the burrows on a larger scale – 'What I want to be able to say is that we are making arsenic.'

Three days later, permission for laying the foundations of the refinery was given.

The Company were trying to acquire materials etc cheaply, and on 25 October 1895, Mr. Sharpe wrote to Jonathon Pearce to say that he or his father ought to visit Mr. Lay at Okel Tor, Cornwall 'and see what there is lying about to sell. Perhaps it would answer our purpose to buy all the old iron as there cannot be a great deal. ...I made a price of £30 for the arsenic mill, but I might make him an offer of £20 firm if he gives the old iron at a price.'

Anxiety was also expressed about the refinery not being built yet and Sharpe gave Pearce permission to start work on it if he could find the masons.

1896 did not start well, with production still not what Sharpe felt it should be. The Brunton calciner had not been acquired from Holmbush Mine, the new crushing machinery was not yet working and repairs were constantly needed, '... get Capt Gill to see to the garden wall & the Smithy roof. That quagmire, through the arch facing the tin floors sadly wants ballasting. These are all little things but they are all first impressions.'

Mid February arrived with things little or no better. 'I shall be glad to hear you are emptying the Chambers. I am most anxious now to make a first sale. I know Capt Gill would keep on burning till doomsday before he began to empty'. Regarding the calciner, 'why can't you see if the oxland now on the works cannot be bought? ...Capt Gill always said it was a Brunton that was wanted to deal with the "Buddles stuff". ...I have always understood that this calciner would be most desirable in every way. Moreover it is on the Works. I have written enclosed letter to owner of it ... It will open the ball with them. Capt Daw said £30 should buy it, but even twice this would surely be cheap'.

At last, the acquisition of a calciner looked promising. On 23 March 1896, the Company entered into an agreement with Mr. G.H. Prout of the Redruth Foundry Co. to sell him the old waterwheel axles at North Taylor's and South Taylor's water wheel pits, and the old iron belonging to the old water wheel at Buller's wheel pit, together with the old iron belonging to the old crusher at Bennetts Crusher House (not including the large gear wheel). He was also to have the iron belonging to the old crusher near the present jigging machinery. In exchange, the Company would get the whole of the calciner plant now lying on the Company's Works and one tooth wheel and filling pieces now lying at the Redruth Foundry Co., and the Company was to pay the Redruth Foundry Co. £37.10.

'Mr. Prout agrees to use his best endeavours to obtain for the Devon Arsenic Works the brasses belonging to the Carriers and other machinery that have been removed from the Devon Friendship Mine without his (Mr. Prout) knowledge since he purchased the Machinery at a Sale by Public Auction'.

This good news was overshadowed by the fact that work *still* had not begun on the refinery. Sharpe made a visit in early March to put four masons to work on it. The same letter revealed that arsenic was selling at £21 a ton, considered to be a good price.

Towards the end of March, Pearce was told, 'crushing is to start at once'.

The Count House remained unfinished; 'I wish you and Mrs. Pearce would put your heads together to see how the Count House bedroom is to be made a sleepable place', retorted Sharpe.

By early 1898, the Company office had moved from London to Glasgow and with this move came a change in Company Secretary, in the form of Mr. James Mackay. Mackay was more pernickety than Sharpe and more abrupt in manner. He was keen to conduct financial restraints, indicating that the mine was not doing well. He refused Pearce and Gill their travelling expenses, demanded to see detailed accounts and insisted that all orders were to be put before the Board first and that estimates were required for all goods to be ordered. In April, perks were cancelled: 'The custom of officials dining together on pay days at the Company's expense must be stopped at once'.

The mine horse was also targeted, with the Board complaining about the cost of its 'oats, beans and forage'. In late April, Pearce was instructed to sell this horse together with the harness and cart, for £35.

Coals were to be purchased as the fires were not to be allowed to go out.

Compensation claims were met with alarm. Local resident Mr. Hills' property had been water damaged in late April, and Pearce was ordered to negotiate compensation. It would seem Mr. Hill wanted more damages than the Company were willing to pay, and Pearce had to negotiate a sum of less than £10, and avoid the expense of legal fees.

Various complaints about the quality of arsenic were being made. There were differing weights of supposedly identical barrels of arsenic, and the colour was not right.

Snippets about suppliers at this time were given. Nobel's Explosives Company supplied gelignite, while the Devonport Gas Company supplied coke.

In mid June 1898, Pearce told Mackay that the cost of manufacturing a ton of arsenic was £12, and Mackay demanded an explanation of this for the Directors.

Both William Gill and Jonathan Pearce were given notice to quit in September 1898 and were replaced by Mr. David Bogie and Capt Bowhay, the latter now apparently back in favour. It seems they managed to convince the Company that they could substantially raise production levels and income if they were put in charge. Pearce remained bitter about how he had been treated by Mackay both during and immediately after his employment with the Company. On 2 June 1899, he wrote to Peter Harrower, one of the Company Directors, saying, 'it is a new experience for me to be treated with such beastly rudeness & discourtesy. Your secretary is very fond of making foolish statements as for example when he accused me of having overdrawn my salary...'.

Pearce also expressed concern that since he had left the Works, things had taken a turn for the worse. '...when you paid a visit to the Works 3 months ago you will recollect how dissatisfied you were with the output. What your New Mgt [Management] who agreed to produce refined arsenic @ 8/10/- [per ton] can now say is beyond comprehension. ...you said you were selling 10 to15 tons crude and the rem^{r} of the output as refined as this is now so small.

The last full month we were with the Company viz Aug 1898 our out-turn of good saleable refined arsenic was over 33 tons, the crude weighing nearly 50 tons. If the statement made on the 21/11/98 is correct that the loss between crude & refined was 35% this quantity compared with your miserable out-turn at present leaves a good deal to be desired from your present Mgt.'

Pearce then turns to the Company's mining practices: 'I understand you are attempting to sink Lanyon's Shaft which Capt G. and I advocated doing 2 years ago, but as you are working in anything but a minerlike way of course the result can only be again disappointing. ...the end foreshadowed in the last Cir issued from the office about 10 days ago viz Liquidation is in the very near future.'

Of the Company's failing status, Pearce concludes his letter saying, 'The falling off has been brought about by sheer ignorance of all mining laws and no amount of mud throwing or blaming the past Mgt Directors, Capt. G. or myself will exonerate the present Dir & Mgt from the blame they have earned.'

The following month, on 28 July, Mr. Mackay sent Mr. Bogie a telegram which was confirmed in a letter of the same day: 'Stop all underground work and barrel available crude in chambers. Directors decided to close down mine.' He went on to explain that the mine could not work at a profit and that Bogie was to stop all underground work and discharge as many of the surface workers as possible. 'Only retain those whose services are necessary for clearing out the chambers and barrelling the arsenic and it might be as well to refine and barrel the balance of crude not fit for sale as such.'

The mine continued to fulfil outstanding orders to companies such as Sacre & Co of Manchester, Messrs Fox Roy & Co, and A.J. Kirkpatrick & Co of Glasgow and this above-ground work continued for some time. But plans to order goods for the Mine, such as the crusher rolls and a classifier were cancelled.

With Bennett's and Lanyon's shafts being under-used, they began to fill with water. Mackay wrote to Bogie in August, 'I learn that water is gaining ground in the 5 fathom level in Lanyon's Shaft. Please connect the

pumping apparatus with the rope from Brentons Wheel, and have pumping operations commenced' – both night and day if possible.
Henderson & Son of Truro were instructed to unwater Bennetts Shaft at the same time. A lot of new material in the form of timber and lime were required by them, and all purchases were to be made through Bogie and paid for by the Company.
Again, Capt Bowhay found his services dispensed with in mid-August, with Mackay instructing Bogie to ensure that Bowhay 'does not interfere in any way with the management of the Works after Saturday first the 19th inst'.
Working Bennett's Shaft had run into problems. Mackay had told Henderson & Son to buy 7-8 tons of iron rods for pumping the shaft and to look out for a second-hand pair of smith's bellows. But in September, Mrs. Adams of Dowerlands Farm, over whose land the pumping rods were to be laid, was objecting to this, and the matter was now in the hands of her solicitor. In October, she was offered a cash settlement but she then expressed concern about the stays for the pumping rods. The mine carpenter had told her 'they will be fixed in such a way as to take up nearly the whole of the ground which would be able to be used for cultivation'. Eventually, in November, the matter was settled with the stays going in the opposite direction. As time was of the essence, any further delays with installing the rods were to be met with the workmen being employed at the crude chambers and repairing the flue.
Messrs Inglis & Co supplied the Works with machinery for separating the arsenic from the quartz.
The output from the mine was still very low and Mackay wrote to Bogie saying, 'the output is not up to what we got under the old management. Do you employ cheap labour to pick the ore?'
Despite closing down mining operations an inspection of the property took place on 30 July 1900 by Mr. Stokes from Martin Mines Inspection, of Bristol. His report was unsatisfactory:

'Explosives are not conveyed and held in the Mine in accordance with the requirements of the Metalliferous Mines Regulation Act, inasmuch as they are taken otherwise than in a secure case or cannister & likewise in quantities, practically storing it in the Mine;
That dangerous parts of the machinery are not securely fenced:- i.e. the entrance to the water wheel, the fly wheel of portable engine at Bennetts Shaft & a flat wheel near road to the crushers. If there are any other parts of machinery requiring fencing you should do so as I cannot undertake to point out or draw attention to them;
That the ladders in Bennetts Shaft down to the 12 fathom level are in a perpendicular condition contrary to the 15th General Rule;
That below the Adit level sollars are not fixed at the distances apart required by that Rule;
That the ladder way below the Adit level is at least in part not cased off from the skip road;
That the entrances to Bennetts Shaft at the 12 fm level & the Adit level are not in order.'

It would appear that the safety concerns of the Inspector were not taken seriously. Just over two months later, the Company received a letter from Mr. Martin of Martin Mines Inspection saying, 'I am given to understand that the Mine Shafts on Black-down Hill (Taylors, close to the Wesleyan Chapel, Black-down) & one on Gibbets Hill, in the parish of Mary Tavy, Devonshire, of which you are in possession, are insecurely fenced, contrary to the requirements of the Metalliferous Mines Regulation Act 1842.' He demanded that all was put in order immediately.
But this, it seems, was ignored. On 28 November, the Company received a letter from the Secretary of the Rural District Council of Tavistock (RDCT): 'I am directed by the District Council to call your attention to a dangerous piece of ground opposite the Wesleyan Chapel at Marytavy. Quite recently some persons driving down the road went into the pit and capsized the trap. I have therefore to request that you will at once take such steps as may be necessary to render the place in question safe for the public.'
Having had no response to this, the secretary wrote again requesting that the work be carried out. There the correspondence ended.
It would seem that at some stage in 1901, operations ceased altogether. However, interest in running the Works as a profitable concern did not stop. From a draft letter of 12 February 1902, it would seem Mr. Sharpe had an interest in the mine again as the letter, signed by William Gill, is a response to his enquiries. From it we can ascertain that Gill was keen to show it in a good light.

'The mining sett is a very large one comprising about 600 acres and has produced minerals to the value of £2,000,000 and paid dividends to the amount of about £500,000.

There are four well defined lodes that are known to pass through the sett, 3 of which have been worked on, and have proved very productive indeed.
The two shafts now available for immediate operation are Bennetts and Lanyon's, both being connected by an adit level and are within 100 fms of each other on the course of Bennetts lode.
Lanyon's Shaft is sunk to a level of 30 fms. The lode in the bottom of this shaft is 8 feet wide and will produce 20 tons of first class arsenic mundic per fathom for the length of the shaft. A level has been driven east of this shaft for 60 fathoms in length, the lode proving to be rich throughout this drivage and this ground is still available to be taken away to a depth unknown.
Bennetts Shaft which has been sunk on the same lode to a depth of 75 fathoms is fitted with Pumping Gear, skip road, ladder, all in perfect working order, with tram rails laid in the level, wagons etc for conveying the ore to shaft. The Pumping Gear is activated by a water wheel connected to the same by alignment of flat rods, and there is also fixed a 25 H.P. Robey Engine with Hauling Gear & Capstan for winding the ore.
At this shaft a level has been driven 15 fathoms below the adit and connected to Lanyon's Shaft where the lode has been very rich for arsenical mundic. Also a level has been driven at the 30 fm level under adit and also about 40 fathoms East towards Lanyon's. There is a splendid mundic lode standing in this end.
The water can be pumped from the Mine the ore ground reached in from 4 to 6 weeks when this is done ground will be available for Mundic which will be produced from 25 tons to 30 tons arsenic per month and this can be considerably increased as more ground is laid open.
The cost for producing this quantity of arsenic is estimated at about two hundred pounds per month, but of course the Works can be carried on at a less cost with a diminution of the output.
The Works are well arranged and provided with crushers, jigging machinery, buddles, tram lines connecting all parts of the Works with each other, with the necessary turntables, weighing machines etc, stamping mill, rock breaker, buddles etc. The calcining plant go well fixed and comprises one large Oxland calciner, 2 Bruntons calciners, with the necessary chambers and flue connected to stack.
There is also a well arranged and extensive Refining-plant with 2 refining furnaces, chambers and flues, all covered with wood sheds and tram lines connected to Grinding & barrelling house, store rooms etc.
All the above machinery is driven by water power of which there is an abundant & never failing supply.
I estimate capital of £3,000 ample (?) to start this undertaking inasmuch of this £3,000 would be clear working capital.
I have no hesitation in saying that this property, with its unique position & advantages fixed as it is with such splendid machinery & fittings, water power, cannot fail to pay good dividends.'

Here my records stop. Failure of the Devon Arsenic Mineral Company Ltd to attain the confidence of the public and secure a healthy number of shares contributed to its downfall, together with its own reluctance to invest in the machinery so badly needed from the start if this enterprise was to have worked. The mine was re-opened by E.H. Bayldon in 1907 but with a decline in the demand for arsenic, production finally ended in July 1925, with the exception of occasional workings of dump material.

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Tuesday Evening Trip – 14th September 2004

First things first, I must thank Dave the Meet Secretary for arranging such a sporting trip. It was arranged to meet in a small parking area 100 metres along from the village church at 5.00pm. On my arrival Hugh and Trish were already there, and shortly afterwards I received a phone call from Dave stating that he was running half an hour late due to a puncture. Hugh, Trish and I kitted ourselves up ready for an underground exploration that none of us had done before.

With all the kit assembled including the drill we set off to our destination on the other side of the river. Once the shaft had been located after playing 'hide and seek' with us, we cleared some of the stinging nettles and set about rigging it ready for the drop into the unknown. With a couple of fence post as anchor points, and the use of a hole in the roof Hugh had rigged it ready to drill out the holes that had been done some years ago. Once the holes had been enlarged, Hugh rigged the shaft ready for descending. With the warning from Colin of 'rope rub' still ringing in our ears we decided to bring in a deviation from the other side of the shaft. Hugh descended the 60 foot shaft first and called up to us that the rope was still too close to the rock shelf in the shaft so I shortened the rope on the deviation by a foot. By this time Lionel had joined the group making five, which was an ideal number for a trip of this magnitude. I descended the shaft next with Dave following, then Trish and last but not least Lionel.

With the group safely down some of us took off our SRT kits and debated who would enter the water first. Hugh led the way with Trish, myself, Dave and Lionel following in that order. After about 20 metres we encountered a flooded winze, which needed caution passing. Continuing along the deep adit level taking note of the enormous stoping above us we came to a cross-cut running approx north to south. We entered the southerly section first where after about 15 metres we came to another flooded winze with a short drive heading west. Lionel noted a small hole above a pile of fallen rock, which he and I entered. This turned out to be another stoped area with large timber work still in place, probably about 30 metres high in places. Lionel and I continued along this stope for about 40 metres climbing up a pile of fallen rock, which didn't have a too steep a gradient, because if it did I certainly wouldn't have climbed it (I was thinking of Bedford United). With this small exploration coming to an end we headed back to where Dave. Hugh and Trish were.

Next we continued to the northerly part of the cross-cut were after about 20 metres the drive ended in solid rock. We returned to the main passage and continued on heading eastwards encountering more overhead stoping, timbering and flooded winzes. Eventually we came to a large area where there had been a considerable collapse of loose rocks. I climbed so far up and decided it was too loose for my liking, but other members of the group climbed up as far as they could safely go. In the bottom corner of this collapsed area we noticed a hole which dropped into the original adit level. This has a potential for a dig if we can hold back the loose shale that has slipped down the stope.

With the time ticking away it was decided to make our way back to the shaft, so we could make the local hostelry. I ascended the shaft first and encountered a little difficulty getting out at the top, which was also encountered by all the party. Dave ascended next with Trish, Hugh and Lionel last as last in last out. With the de-rigging completed we made our way back to the vehicles and on to the local pub. All in all, a 'jolly good show' with at least 300 metres completed, and much more to be explored. Another trip has been planned for sometime in the very near future as there is plenty of potential for a few digs there. Also, it was stated that we will conduct our own centre-line survey and photographic record of this once important mine, which finally closed in the 1920s.

By Tin Miner (I hate caves)

Radford Cave Tuesday10th August 2004.
Simon, Neil and Patrick

Early August, and not many cavers around it would appear. Three keen guys turned up, however, and we were glad to see Simon – a refugee from rugby practice for this evening. As he had not had the pleasure of looking at Radford we headed for an easy evening's caving.
The padlock offered the first difficulty, but we eventually cracked it and headed off for the anti-clockwise circuit. We took it easy, and all went well, until we reached the 'Trumpet.' The bottom scramble up was conquered, but having looked at the reach across, to pull through Simon, he had to admit that he didn't have enough faith in his many times battered fingers to let them take his weight across the abyss.
Neither, Neil, or I fancied catching a falling Simon, so we agreed to go back and take the clockwise direction, and at least show him some more of the cave.
Simon now had the choice of either the slippery slope, or the squeeze up into the gun breach. Being a sensible person (despite playing rugby!) he didn't reckon he'd get up the slippery slope, so elected the gun breach. The spirit was willing, but the body wouldn't accommodate the required contortions. Result – "I think I'm stuck."
After a short sharp panic, he was able to back out of the tight squeeze with minor bruising, and decided that Radford wasn't tailored for him. Neil and I finished the anti-clockwise route, and met Simon back at the cars.
We intended to head for a pint at the Boringdon Arms, but the traffic from a fireworks display put paid to that. So we headed home.

Patrick Hanlan.

Reeds Cave Tuesday17th August 2004.
Hugh, Trish, Tom (the un-stuck) Little (big) Richard and Patrick.

Reeds trips are strictly rationed within a limited season, so this was a rare opportunity to visit a well decorated and protected cave.
It was a welcome surprise to see Hugh and Trish on a caving trip, and I vaguely promised that there'd be no crawling – or at least 'not much.' These things are all relative, after all – what a silly question! It's like asking Ali if a trip will be wet!
The approach to the main chamber produced a certain amount of huffing and puffing, but it was interesting enough to enjoy it. The muddy crawl was not very popular, but we were then into rock and stal, and the return trip could be forgotten about for the moment.
We all did the sights, and checked out the 'Little Man' and generally explored the system. I remembered the rift under the floor which Alasdair had introduced me to and eventually found the entrance. Everyone was invited, but strangely only Hugh and Tom took on the challenge of the blind drop with Hugh wondering out loud about getting out again.
Assisting Tom down the last few feet I grabbed his belt for security, but he said he was ok – so I let go – he floated down the same way as bricks do. Only minor bruises though, and left him still with an appetite for more photographs.
We checked out the end of the rift, and with a bit of a grunt regained floor level. Tom and I looked through to the squeeze just past the muddy crawl, and I got through with Tom pulling my belt. – Thanks Tom.
We all gathered in the main chamber to admire the far corners, and then headed out. For some reason Hugh and Trish did not turn up at pub.

Patrick Hanlan.