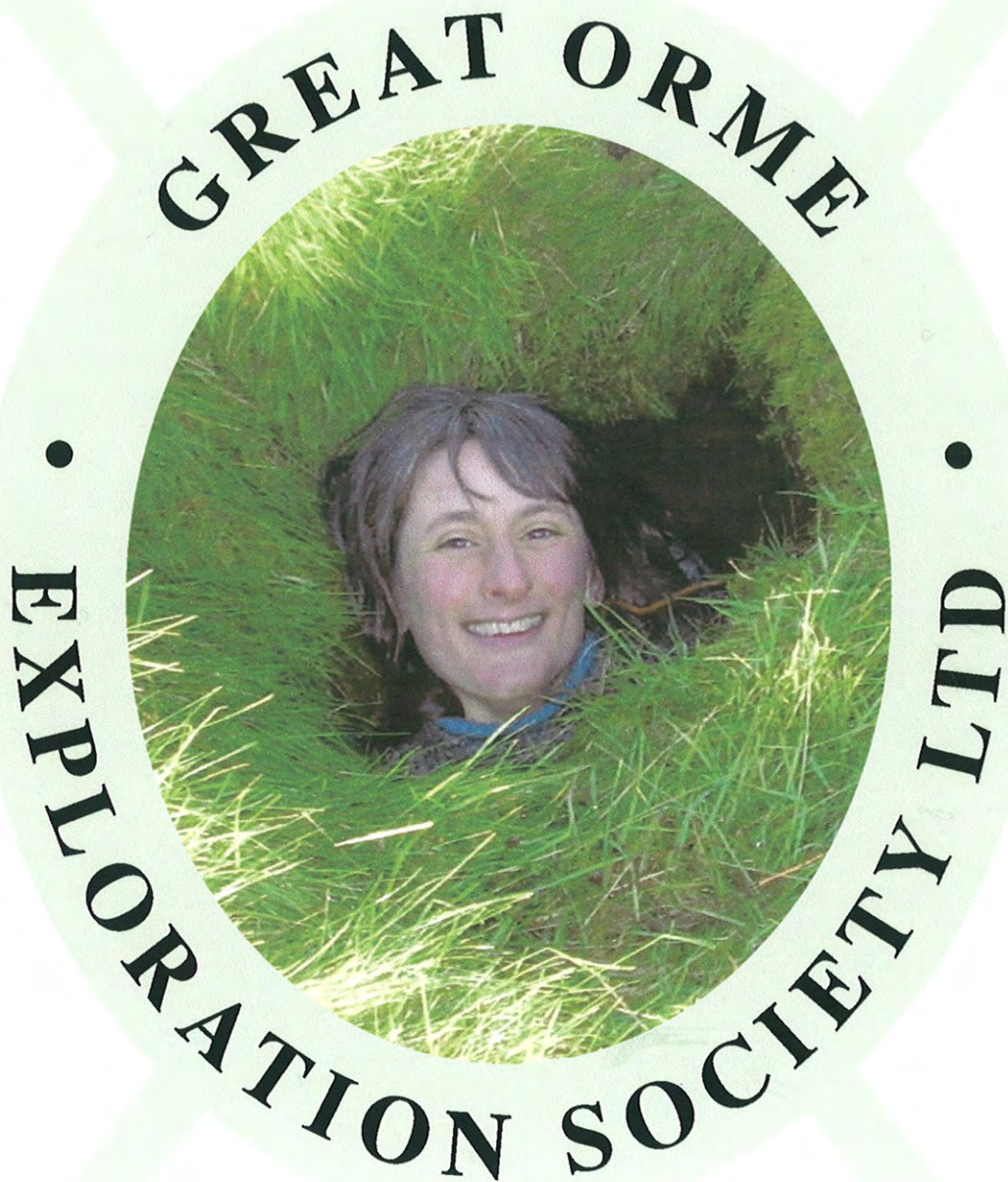


JOURNAL OF THE



Issue No. 1, 2008

COVER PHOTO

Ali Davies entering the small entrance hole that she found one morning whilst walking the dog. See article on page 15

ANNUAL GENERAL MEETING

As a result of the AGM, held on 29th March, GOES now has a new committee. A warm welcome goes to Dave Wrennall, our new Chairman and to Brian Edwards, our new Vice Chairman. Gareth Davies remains Secretary and equipment officer, and Steve Lea became Treasurer.

David Broomhead remains Public Relations officer, Tom Parry remains Archives Officer, and Ali Davies is back as your Journal Editor.... and will be waiting eagerly for all your articles!

Many thanks to all outgoing committee members for the hard work you put in over the past couple of years, and to Great Orme Mines for allowing us to hold our meeting in your building.

EDITORS NEWS

GOES has been very quiet over the past year or two. Several members have suffered injuries or illness preventing them from taking on their usual active roles.

Now that everyone is on the mend, GOES is ready for action again. There have been regular Sunday morning trips taking place this year, and we have a visitor trip arranged for June 15th. Summer walks also resumed on 29th May (see page 7 for the full list).

All we need now is a flood of articles so that you can continue to receive a regular journal. Please put pen to paper on any GOES related subject and either post it to Ali Davies, Hen Blas, 2 Plas Road, Llandudno, LL30 2LU or email to ali@themappingcompany.co.uk I will look forward to hearing from you.

I have also taken over the task of keeping the GOES web site up to date... which I am trying hard to do, at the same time as learning how to use the programme that controls it. Please let me know if you see any errors or broken links on the site, and I will do my best to rectify them.

Ali Davies

CONTENTS

Cwmorthin Slate Mine.....	2
Summer Walks 2008.....	7
Cwmorthin/Oakeley, All the way through and back.....	8
La Société pour l'Exploration du Grand Orme.....	10
Roman Revelations – The Time Tunnel.....	11
Roman Revelations – Solving a mystery.....	13
Duncan James' plans – Gallery A & B.....	14
Roman Revelations – My Eureka Moment.....	15
The Orme is Breathing.....	15
Survey of the New Passages.....	16
Stonehenge Mystery.....	18
The Caving Code.....	19
GOES Committee Members.....	19

CWMORTHIN SLATE MINE

When I began this article little did I realize how it would evolve; as our journey, the complex workings and an intriguing history all gradually became interwoven. Each part of the mine prompted me to reveal more from its past and revived memories of my own previous adventures there. I am indebted to **Graham Isherwood's comprehensive 1982 manuscript 'Cwmorthin Slate Quarry'**. From it I have learnt so much. (All text in **bold** refers to this manuscript).

Follow in our footsteps and read with care; hopefully you will discover as much as I have.

It was somewhere to kick start the GOES year, an amazing mine near Blaenau Ffestiniog which I had often explored in the 1980's both with friends and Centre groups. Although many people had expressed an interest in visiting a new venue, it was only a small party that arrived at the car park above Tan-y-Grisiau on the 7th of January 2007; Gaz, Erik, Brian and myself. Oh, did I mention that at one time it was nicknamed 'The Slaughterhouse' on account of its many fatalities? It will be brilliant, let's go!

A ten minutes walk up a rough track, between cascading stream and monstrous slate tips led to the quiet waters of Llyn Cwmorthin, itself part filled with fingers of tipped slate. As expected, at the Lake Entrance (Floor 1), we found a locked gate. Numerous attempts had been made the previous evening and during the morning to contact the 'trustees' for the number combination, but to no avail. However, I was certain that I knew of another way in. Higher up, tucked away in a hollow within the hills of slate was the Level 2 adit; it had previously been a smoke flue for some coal fired boilers that powered an internal incline. As we entered its fine brick lined portal, we could still smell the fumes.

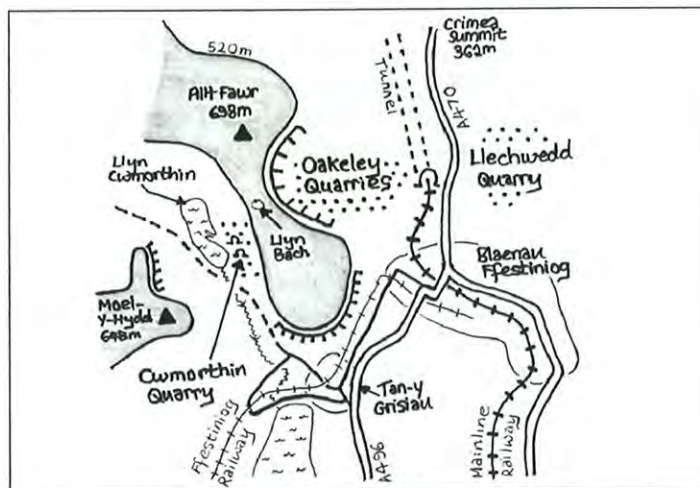
The history of Cwmorthin mirrors the fortunes of much of the Welsh slate industry, but it also has more personal and intriguing stories to tell of disputes, collapses and takeovers. These together with the grandeur of the place make it one of the most significant and fascinating of all the slate mines.

There are two main veins of slate the 'Back' or 'North Vein' and a lower 'Old' or 'South Vein' both outcropped, dipping to the north at an angle of 20 to 45 degrees. Surface quarrying began here in 1810 by the Casson family, close to the Cwmorthin Isaf farmstead. After twenty years, work ceased, only to be followed by numerous leases and sporadic periods of activity. In 1861 the Cwmorthin Slate Company was formed with freehold of the estate and development began in earnest: - increased mechanisation, dressing mills alongside the stream, tramways and inclines to the Ffestiniog railway and a wharf leased at Porthmadog. Production increased from 350 tons in 1862 to 12,500 tons by 1876 as the slate seams were followed underground. The original farm buildings were surrounded and eventually covered over by the huge quantity of waste produced.

The smoke flue, which would lead us into the Old Vein soon appeared to be totally blocked, but by carefully squeezing up and over a collapse the level was regained.

Here we encountered welly deep water which gradually lowered as the first workings were reached. Scrambling down a rubble filled chamber, and perhaps another, led us to a big drop and the search for an alternative route. The only way on appeared to be a worrying slither between some huge fallen slabs and others clearly still detaching from the roof. We all entered this tunnel of impending doom with reservations. It was definitely not a route I would have taken school children in the past; obviously there must have been a major collapse since the 80's. Safely through, an ash slope in the next chamber led down to a major network of tunnels chambers and inclines. Perhaps a good time to reflect on one of the Cwmorthin stories

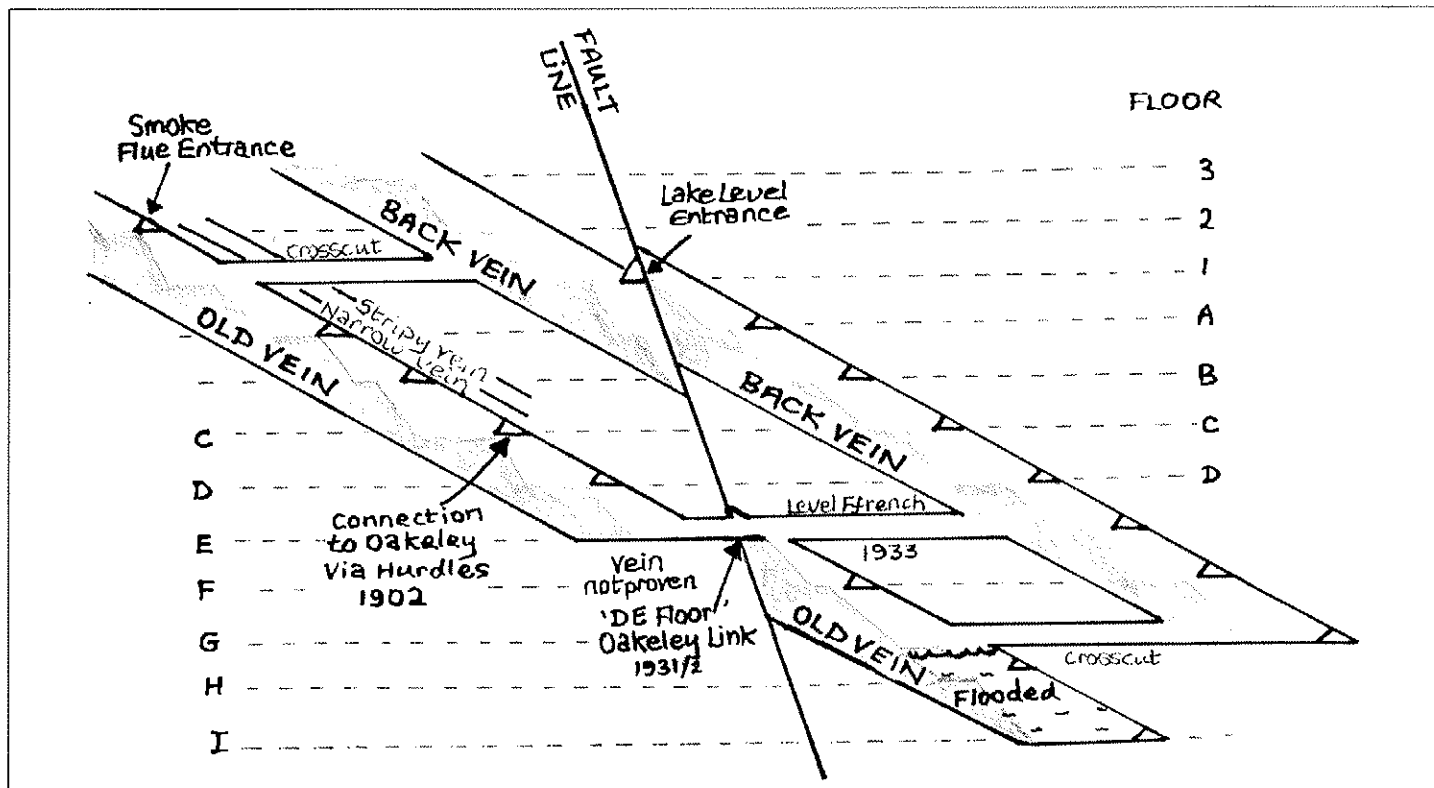
In 1874 the Metalliferous Mines Act was passed by Parliament, seeking to regulate the conditions in the country's mines, requiring mining companies to report fatal accidents, increase safeguards, supply details of the men and boys employed, output, etc. Slate mining companies insisted that as they worked underground quarries, the legislation did not apply to them. In 1875 after failing to report a fatal accident the Mines Inspectorate took the Cwmorthin Company to court. The judgement in this test case was that as the workings were approached by underground levels, the quarry was a mine within the meaning of the Act. The governments concern was well founded, between 1875 and 1893 there were a further 21 deaths recorded at Cwmorthin quarry out of a workforce of about 550. In the Oakeley quarry over the same period there were 61 deaths in a workforce of 1,650.



Cwmorthin Quarry location

The geology of Cwmorthin is complicated by the presence of a drop fault running from west to east through the workings at a steeper angle than the dip of the veins. In the western workings its effect is negligible but to the east it becomes increasingly important, effectively splitting the veins in two, north and south of the fault. Two other bands of slate close to the Old Vein also proved workable, the Stripy and the Narrow Veins. This was the section we were in now. It was complex, difficult to map and especially unstable.

My preferred route around Cwmorthin would have been clockwise after entering through the Lake Entrance. It's logical and simple. Turn left into the Back Vein and drop down to floor E* to arrive at this much more complicated area later. I would often check out the crucial link from that side so that it wouldn't present a problem at the end of the



Cwmorthin Quarry simplified cross section

trip. As I expected, the area proved extremely confusing and my memory sadly inadequate, after fifteen minutes we still hadn't found the way to the Lake Entrance. It was then that we stumbled on 'The Squeeze' a short crawl leading into workings I knew well, and so we started an anticlockwise circuit.

(* floors were numbered (1-8) from the level of the lake upwards and lettered alphabetically downwards (A-G), a fairly common convention).

Above us now lay the huge bulk of Allt Fawr and its southern ridge, a natural boundary between Cwmorthin and rival slate quarries on the Oakeley Estate west of the Crimea Pass. Their development and history is inextricably linked to that of Cwmorthin and provides many stories.

Holland's Quarry, taken over by the Welsh Slate Company in 1825, was the nearest. On top of the ridge Llyn Bach was enlarged as a mutual water source on their shared boundary. By 1876 the New Cwmorthin Company (which followed a liquidation of the previous) found itself in trouble with one boundary underground and another above. Initially this was rectified by 'agreements' to extract slate from each others property, but subsequent plans would often refer to 'encroachments' and 'trespass chambers'.

In 1884 there was a disaster when Cwmorthin's Back Vein collapsed both above and below ground. Cracks appeared on the ridge and Llyn Bach was drained! Production fell to 6,900 tons by 1886 with half the workings effectively closed. To increase output it was necessary to go deeper below lake level, this together with the added investment required in pumping and winding equipment took the company into liquidation by 1888.

Salvation came from an unlikely quarter and provides us with an amusing anecdote; although at the time it was a

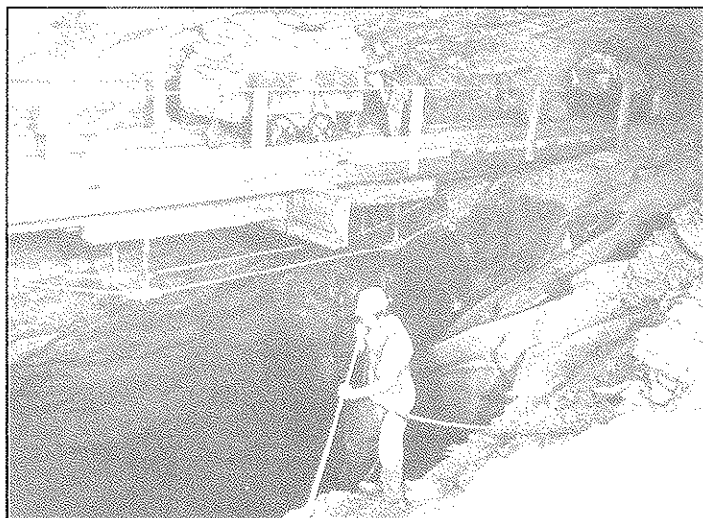
huge scandal. Two years before the Cwmorthin collapse, their neighbour the Welsh Slate Company had had its own catastrophe. Whilst attempting to maximise output and minimise costs it had largely ruined its workings. Rockfalls and collapsing bridges were common and it was already looking for another quarry to lease when the so called 'Great Fall' occurred, with an estimated 6,250,000 tons of rock affected. The ensuing legal battle with the Oakeley Estate as to liability was long and acrimonious. The Welsh Slate Company lost, but managed to surrender its lease instead of paying compensation. This left it with its profits and a fair proportion of its capital intact, which it used to purchase the Cwmorthin freehold for £83,000 setting up the New Welsh Slate Company in 1889.

This 'escape' to work the quarry next door was bound to be a recipe for friction; especially when it tried to lure its previous workforce away from the Oakeley Slate Quarry Company that had been set up to succeed it in 1884. A company already struggling incurring huge expenses attempting to minimise the impact of the fall and renovate neglected machinery, a legacy of the former incumbents.

The New Welsh Slate Company extended the Cwmorthin workings to five floors below lake level, (Floor E) but by 1896 it was in difficulty and began to work on cooperative lines. (1/10th of any profits divided up between workmen holding £5 in shares, and a further 1/10th divided up amongst those having £100 in shares). By 1900 the slate boom was over and despite good slate the company was unable to compete with the bigger quarries and went into liquidation. The site languished and failed to reach its reserve price of £12,000 at auction.

At this stage the Oakeley Slate Company stepped in, to safeguard its western boundary. They feared a repeat of the Great Fall due to continued poor practice, perhaps even the waters of Llyn Cwmorthin being let in. In a move that

must have given great satisfaction, bearing in mind the 'escape' some ten years before, it purchased the Cwmorthin Estate in 1900 for just £10,000. In doing so it protected a reserve of slate below the Cwmorthin workings until such time as the Oakeley workings could reach it.



Typical bridge and slate wagon (Llechwedd 1890's)

We were now cruising through the Old Vein system, passing a steep calcite streaked wall on the right with its rusting wire ladder, to reach a large cavern with its flight of '101' slate steps. These led down to Floor C, along which we found 'Two Block Chamber' though in truth there now seemed more, which was rather worrying! Around a corner were the enigmatic hurdles, a series of horizontal metal bars set across a passageway, too low to duck under easily, too high to climb over without an effort. This had once been a reservoir with a walkway being maintained across the bars; its water being used to cool an air compressor. Thankfully we were soon at the dam wall. In the 80's we used to take pleasure in blocking the small hole at its base to provide a more challenging watery experience for the next explorers!

We were now on Oakeley Floor 1. The level had been extended and the hurdle 'crosscut' added to facilitate access following the takeover. Close by an abrupt descent starting with several short ladders leads to 'Bill and Ben' the impressive twin boilers situated on Cwmorthin's D floor. These boilers act as a good landmark and focal point for further exploration.

After acquiring the Cwmorthin Estate the Oakeley Slate Company and the industry in general continued to struggle. Some mills closed, the lake mill was actually dismantled. In 1902 against the advice of its consulting engineer, the Oakeley Company stripped the Cwmorthin underground workings of their machinery and track before allowing them to flood. On the Back Vein this meant everything below lake level. On the Old Vein all was inundated below Floor C, the hurdle passage allowing additional water to drain out via Floor 1 into the Oakeley Quarry.

Following World War One an inspection was made as to the practicality of reopening Cwmorthin. Much of the upper workings were found to be unstable after locals had been robbing the slate. Even so, some untopping was attempted. In 1925 tramways, inclines and the lower mills were restored and a new magazine constructed. But it was soon apparent that the upper workings had been more

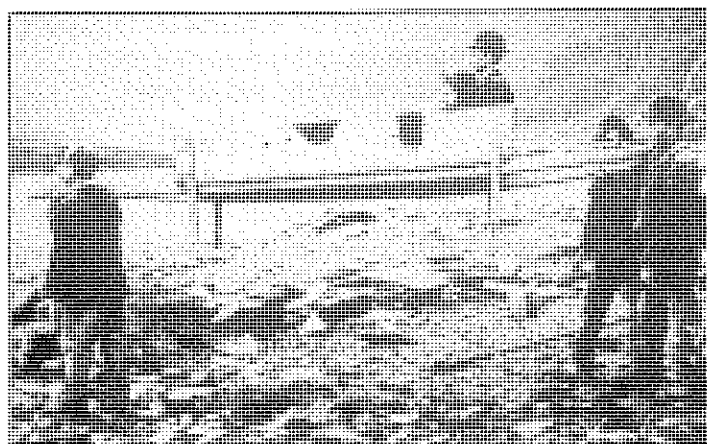
thoroughly exhausted of workable rock than anticipated. Attention refocused, with some success, on deeper workings just above the water level.

By the 1930's the value of Cwmorthin slate had been proved. But costs were high and power inadequate. A decision was made to dewater Cwmorthin by driving Oakeley's Floor D through to connect up with Cwmorthin's Floor E. Slate could then be economically removed from the Oakeley side with its superior transport network, compressed air and electrical supplies.

In the Old Vein only Floors D and E were flooded. To reach the latter Oakeley Floor D needed to be extended by 373ft. The miners used a small diameter bore hole to check for water before safely opening the level; it was reached on the 6th of January 1932, water levels subsequently receding at 2.75 inches an hour. The cost was £528.

'Lefal Cwmorthin' or DE floor as it has come to be known is well proportioned and looks important with its leat still quietly draining water towards Oakeley. As we amble down it, I reminisce about trips that I made previously along this level to reach sections of Oakeley that were then open to the public. We would stand quietly in the bottom of illuminated chambers, blue, green and red, listening to the tourists chatting high above. On one visit I actually managed to find my way out into daylight on an active quarry face, but didn't stay too long in case the next detonation was due! A collapse further along DE has made visiting those Oakeley workings more difficult, but there is a circuitous alternative route one level down and also rumours of a recent dig through the blockage. We all agreed that GOES needed to organize a visit to explore the area in the future.

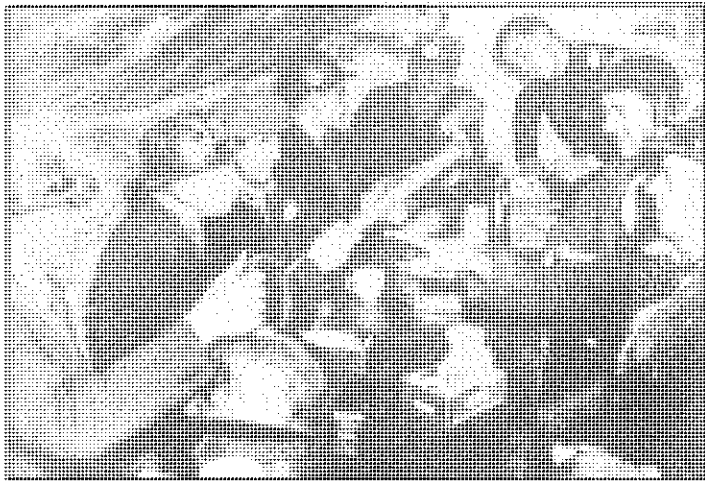
It was the flooded Back Vein that was more worrying and problematic for the Oakeley Company. Firstly, five floors were flooded to a depth of 240ft, and secondly, Oakeley had no corresponding workings on DE floor within the Back Vein. A new level had to be driven from the nearest crosscut, well to the east. Progress was slow, having regard to the pressure of water likely to be encountered, and due to an unexpected hardness of rock. The contractor Messrs Isler started work in March 1932 and broke through on April 21st 1933. An estimated 43,000,000 gallons drained out of the borehole in 4 weeks. After that the tunnel known as 'Lefal Ffrench' after Isler, was completed and the remaining water pumped out.



Cwmorthin Quarry stretcher, 1895

Time for a delightful circuit of the so called 'Battleship Series' on Floor G, developed in the Old Vein north of the fault, following the successful dewatering. We're quickly through a crosscut to the internal incline head, and then down a nearby chamber using its zigzag walkway to re-emerge alongside the incline, at steps on a smooth slab. Most of the rungs have gone, only the pegs remain, all very amusing. At the bottom, on Floor G, we stand gazing at an expanse of deep still water into which the incline can be seen continuing to the flooded H and I levels.

Today Floor G acts as the main drainage level for this section of the Old Vein, water finding its way out through 'Lefal Dwr' the lowest adit in the Oakeley Quarry (although the water occasionally drops to expose Floor H when McAlpine pumps out water, to test the rock at depth). Water from the Back Vein, further west, also now drains out through this level, via a crosscut following a spectacular cascade from E to G Floor through a roofing passage.



Caban Oakeley, 1954

Around the corner we discover the large caban, still impressive even without a roof. Inside on the walls, sadly obscured now by some modern graffiti, are pages from old newspapers. A picture and details about the sinking of the German pocket battleship the Admiral Graf Spee on the River Plate (17th Dec 1939) can still be deciphered. There's also a fine sketch of Winston Churchill complete with cigar, etched into the plasterwork. Up the corridor, along which flows the Back Vein water, we reach the edge of some monstrous chambers. More entertainment ensues, throwing stones into the watery abyss on Floor H, and marvelling at the scary catwalks pinned impressively onto the vertical walls above the drop.

Returning to the caban, a prospecting tunnel is found leading off southwards. This was driven to look for good slate in the Old Vein north of the fault. It proved unsuccessful, and numerous left or right decisions need to be made to avoid the dead-ends; hopefully you find the roofing passage that takes you with some scrambling back up to Floor DE again. Whilst walking back along to the twin boilers, a rough partially submerged tunnel can be seen on the right, leading into the Old Vein, the source of the water flowing in the leat and the actual breakthrough point of the 1932 dewatering.

Time was by now getting on and it was suggested that we simply retrace our steps to get out; apparently the team wasn't keen on the knee deep water I had mentioned if we continued with the circuit. However, my enthusiasm triumphed and they reluctantly accepted their fate. Passing the incline head and the zigzag path we soon reached a chamber containing an assortment of rusting machinery. From there a pipe leads along a crosscut passage northwards before swinging west. After a good walk, the pipe eventually drops through a small hole in the floor and the level emerges a few metres above the foot of a chamber. We had just travelled along 'Leval Ffrench' into the Back Vein and this was the breakthrough point.

It was a great place to have fun whilst doing a clockwise circuit of Cwmorthin with Centre groups. I would invariably have advised the team to follow the pipe, and after several of them had been laboriously pushed up through the tight hole, I would nonchalantly walk round to check on how they were doing!

We continue along E Floor passing through a series of large chambers until the noise of water falling down a hole in the floor, attracts our attention. This is the source of the stream we had seen previously in the 'Battleship Series' on G Floor. Beyond, the passage gets progressively wetter. A few interesting trucks are a distraction, but a cold wade is inevitable. Ahead things become increasingly aquatic, one isolated section running down to G Floor is completely flooded. Thankfully our ordeal is short, and we reach dry ground at the main Back Vein incline which runs up to Floor 1 (Lake Level).

Invigorated by the chill and elated at our escape we stride up the incline. Workings at each floor are reached by passages to the east and by tunnels running back across the top of the incline accessing chambers to the west. On Floor D, I took the opportunity of emptying my wellies of their water, pouring it through a small hole in one such tunnel directly on to an unsuspecting Gaz on the incline. What fun!

On Floor C we leave the incline and head west for a bit more excitement. We arrive at a huge double chamber, the floor of our level having been partially removed by the advance of lower workings. We can continue, but only by walking across an old wooden bridge angled across the chasm. You need to walk above the obscured main beam as the cross pieces are thinner and loose. Thankfully we all complete the challenge.

Doing something risky just for kicks adds to the adventure, our nervous laughter, quiet concentration and final relief all combining in a memorable mix of emotion. But 'The Slaughterhouse' is a mine with a grim accident and mortality rate and perhaps it might be pertinent to reflect on just why so many died here.

The fatal accidents recorded by the 1895 Inquiry were as follows:

1875: Labourer fell over a precipice.

1875: Chain broke loose; wagon ran down incline hitting man at the bottom.

1876: Labourer found dead by a wagon; presumably hit by stone from roof.

1876: Labourer fell over forebreast whilst pushing wagon on tramway.

1877: Carpenter fell off whilst building a bridge.

1878: Miner was descending a chain when it broke.

1880: Miner killed by roof fall.

1880: Miner killed by part of a roof he had intended to remove.

1881: Miner killed by a roof fall.

1881: Rockman fell off unfenced bridge whilst going to work.

1884: Miner crushed by a slab he was prising off.

1884: Rockman killed by a fall from the forebreast.

1884: Miner/repairman slipped and fell off bridge he was working on.

1885: Rockman hit by fall from roof.

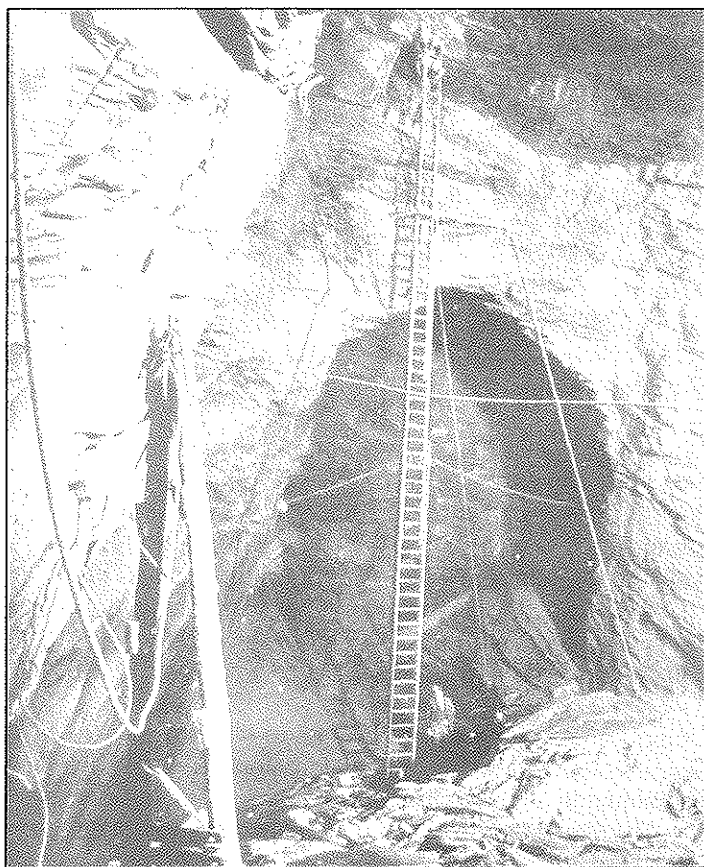
1885:1886:1888: Labourers and rockmen hit by crane handles flying loose.

1886: Labourer clearing a fall crushed when rock rolled on to him.

1888: A rock being broken up fell on a miner.

1891: Labourer riding wagon up an incline struck head on roof.

1892: Miner killed by roof fall.

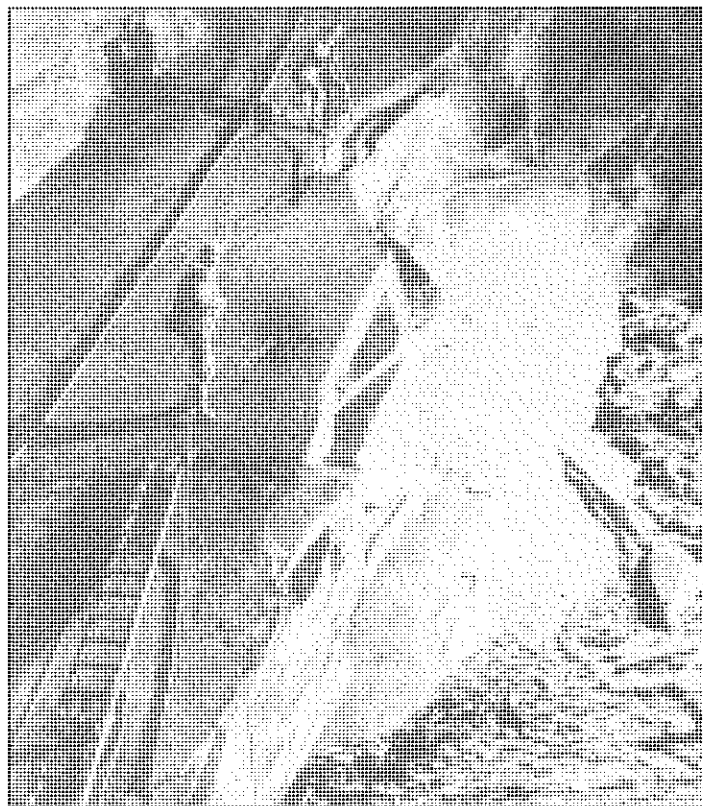


50ft ladders in Oakeley Quarry

Hidden joints 'bevels' were often referred to as leading to accidents, but only about half the fatalities were caused by rockfalls. The hiring of inexperienced men and managers turning a 'blind eye' to bad practice probably contributed to many of the others.

Quickly up some fine stone steps within a roofing passage and we emerge at an expansive Floor B. At the far side, we reach the slab face and its amazing series of wooden steps

set on metal pegs, a picture of which justifiably adorns the front cover of Isherwood's manuscript. The handrails may have deteriorated but most of the steps remain and they guide us to a lofty viewpoint high up in the chamber. What a stunning position, one which takes your breath away. From here an obscure hole takes us immediately through into a tunnel on Floor 1. In the far distance down the corridor to the right we can just glimpse daylight shining through the locked gate at the Lake Entrance. By now we wanted to get out, but we still needed to find the so far elusive connection between Floor 1 and the Old Vein if we were to successfully retrace our steps and exit along the Smoke Flue Entrance.



Working face in Oakeley Quarry

After looking at the assortment of rusting machines parts and largely rotting rubbish that seems to have been 'stored' at the top of the Back Vein incline we take the long cross cut corridor towards the Old Vein. En route we pass two chambers in the Stripy Vein which I can recall being worked in the 80's by several men using an old cut down Landrover to transport the slate.

A little further and we reach the Narrow Vein workings, and at the back of the first chamber on the right a familiar step through into the Old Vein. Directly ahead lies the winding house at the top of the Old Vein incline, its coal fired boilers were once the source of the problematic fumes. Unfortunately the original link through into the Floor 2 smoke flue was now blocked, a more devious route was required. My memory of the area wasn't brilliant but it seemed logical to set off down the incline. The first feature we encountered was surprise, surprise... 'The Squeeze'. Our circuit was complete! With much laughter and renewed enthusiasm we were quickly reacquainted with our route in, the ash slope, the worrying slither between the huge detached flakes and then the rubble tips leading to the adit. We were out!!

David Wrennall, 2008

SUMMER WALKS 2008

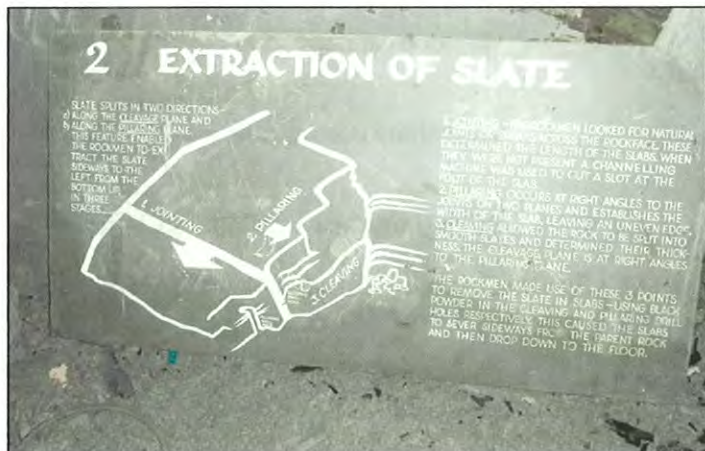
All walks start at 7pm and are usually gentle strolls which last approximately 2 hours. Sturdy footwear is recommended. Below is a list of the proposed walks, but all are subject to confirmation. Please check the community news section in the North Wales Weekly News, which will provide full details of the walk taking place and the arranged meeting place. If the weather is poor, it is very likely that the walk will be postponed until a later date. If you have any queries, please contact Ali Davies on 01492 877960 (day time)

Date:	Walk:	Meeting place:
29th May	Pen Dinas hill fort, taking in the rocking stone, stone cannon and views over Llandudno.	Ski slope car park
5th June	Beach Adit mine entrance. Bring a torch.	The arcades at the pier entrance
12th June	Circular walk along the top of Craig Rofft to the disused quarry and back over Mynydd Isaf.	Ski slope car park
19th June	Along West Shore beach, up onto Marine Drive (steep hill) and returning via the cliff path.	West Shore boating lake
26th June	Complete circuit of Parc Wall.	Parking area above St Tudnos Church
3rd July	Walk down to the gunsites and back up (steep hill) taking in the site of the Country Park reptile survey.	Concrete road car park (toll payable on Marine Drive)
10th July	Walk up to Nant y Gamar (steep hill). Stunning views over Llandudno.	Junction of Nant-y-Gamar, Bodafon and Tan-y-Bryn Roads
17th July	War time remains, swallet hole and disused quarry at the far end of the Orme.	Concrete road car park (toll payable on Marine Drive)
24th July	Cadair Ifan Goch.	Initially at the Maenan Abbey hotel
31st July	Bryn Euryn hill fort at Rhôs on Sea.	Parking off Tan-y-Bryn Road (SH834802)
7th August	Ffynnon Galchog and Pen Trwyn area.	Ski slope car park
14th August	Compare an old photograph of Cilfin with the modern day reality.	Parking area above St Tudnos Church
21st August	Walk along Marine Drive to Pigeons Cave, going past Rock Studio.	Pay and Display car park at pier entrance (past the Grand Hotel)
28th August	Along Invalids Walk, up the Zig Zag path (steep hill) over to 5 Entrances cave and back via Haulfre Gardens	West Shore toll house



Summer walk to Conwy Morfa, 2006

On the 29th of April 2007 a large team assembled at the Cwmorthin gate keen to attempt the through trip into the Oakeley workings. With the right combination to the lock we were quickly in and making our way towards the Old Vein. Knowing the way, we were soon through 'The Squeeze', scaling the hurdles and dropping down to the twin boilers on DE Floor. This was where Steve Lea decided that the through trip wasn't for him, he would stay put and wait for our return, an hour or so perhaps. The rest of us walked along the corridor eventually reaching the expected blockage.



Informative slate tablet

We quickly discovered it was possible to get through into the corridor beyond by climbing up some extremely precarious blocks and then cautiously slithering down several huge slabs. These lay immediately below the roof from which they had fallen, within touching distance, other flakes were clearly in the process of detaching. Not a place to linger; everyone went rather quiet. After that it was easy going and the mood lightened considerably.

I occasionally consulted an old makeshift survey as we encountered the various tunnels and chambers. In one chamber there was an impressive stone caban, in another an elevated stone walkway with an iron banister. It was this that led upwards to eventually emerge at the base of an immense rubble filled chamber. In one corner were the remnants of some large lights... this was obviously one of the



Ready for action at the Lake Level entrance

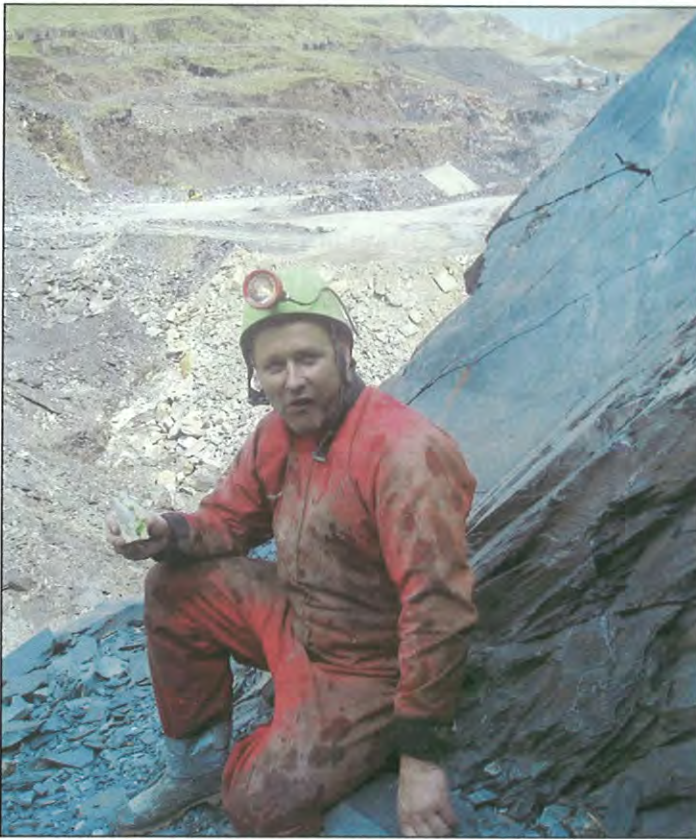
impressively illuminated areas I had so often visited in the 1980's.

Our way on was up the monstrous slate tip. (I had heard the tourist voices all those years ago, and besides, an article I had recently read described "a desperate ascent up a mountain of treacherous quarry waste"). I was probably half way up before the others convinced themselves that it was worth following. By this time the enormity of the climb was dawning on me, the lights below were mere dots and my light failed to reveal any end to the rubble slope above. Distant avalanches and terse comments abounded as the others started slogging up behind me. Thankfully after several more minutes of careful footwork I reached a rope that guided me up to a section of sturdy wooden steps and the top.



How many dummies can you see?

There was a wire mesh frame designed to let the paying public gaze into the then illuminated depths of the cavern I had just ascended without the risk of them falling down it, a broken door led through into the tourist section proper. I was probably a full ten minutes ahead of the team and did a whistle stop tour of the area. What a fabulous place, despite the vandalism and general mess there was an amazing assortment of interesting artefacts. Off the main corridor, in the various chambers, manikins had been set up showing just how the slate was won from the mountain: - well dressed 'miners' using rock drills, operating winches and pushing wagons. Amusingly several were decapitated, their heads awaiting discovery strategically placed on nearby ledges; gazing eerily back at you. There were beautifully engraved slate tablets describing the nature of the rock and how it was extracted with colourful writing and diagrams, sadly all broken. The emergency telephone had its door hanging off, the phone line cut.



Gaz at Oakeley Quarry exit (A470 top right)

Another door led into the 'office' furnished with tables, chairs and cabinets. A row of light switches along one wall presumably controlled the mine's illumination. There were boxes of spare parts, limbs, faces and old clothing for the dummies and lots of extra light bulbs. Hopefully the place had been kept tidier in the past, the floor now being covered in assorted rubbish, with unwashed drinking mugs and a miscellany of broken bits and pieces strewn across the work surfaces.

But it was beyond the office that my attention fell. Here a small portal led through into the back of a huge slate cavern with a large opening at the far end, through which shone daylight. A bird squawked, disturbed from its solitude, announcing my arrival on the Crimean side of the mountain.

Returning to the wire mesh I greeted the others and introduced them to all the delights on show. We were all pleased to have reached our goal, the through trip being one of North Wales' legendary mine journeys. Everything was enthralling and there was much merriment amongst the group at each new surprise. The various body parts provided plenty of scope for comedy! Another exit was discovered onto the Oakeley Quarry face. Here it was possible to stand briefly in the sun, gazing out across the huge excavation encircled by glorious mountains, with the Crimea road climbing through them; our eventual route home.

But for now it was time to turn our backs on the daylight, return to the dark tunnels and retrace our path through the labyrinth. The mood changed as we tackled the huge slate tip once more, but we all survived. As we approached the unstable collapse on DE Floor the team opted to use the alternative route; dropping down some in-situ ropes in a side chamber, to climb back up in another chamber once the danger had been bypassed.

This was all a bit technical and time consuming so I decided that facing the hazards of the collapsed section would be preferable.

Of course I arrived at the twin boilers first, to find a very thankful Steve Lea. We had been away almost two hours! After entertaining himself with a few short ambles and the odd rummage, time had really dragged. With an occasional cigarette and his own thoughts for company, he found himself increasingly staring at a gear sack we had left, it offered reassurance and the promise of eventual deliverance. We would be coming back, it wasn't a bad dream!

Eventually we were all together again making our way into the Back Vein through the 'Lefal Ffrench' dewatering tunnel of 1933. At the foot of the Back Vein incline a few of us braved additional wading to view a stunning array of slate wagons and a crane in the chambers beyond. Some reached the Lake Level adit straight up the incline, others visited the unnerving bridge with its loose boards and climbed the amazing steps, but we were all soon at the gate, which successfully opened, allowed us to pour out into the brilliance and warmth of the sunshine again. We all felt well pleased with our endeavours, as we sat chatting, catching the rays and smiling for the photographs.

Then there was a mention of beer. The Gwydyr in Dolwyddelen anyone?

The Team: Dave Flowers, Brian Edwards, Charlie Davies, Gaz Davies, John Carpenter, Steve Lea, Ben Atkinson, Erik Sellors, Paul Fox and Dave Wrennall

David Wrennall, 2008



The team (minus Dave Wrennall) basking in the sun after a successful trip

*It's that vest again!
JC airs his views*



In July 2007 I was on a rock climbing holiday in France. Whilst on an approach walk through woodland to the base of a cliff I came across an intriguing information board next to one of the trees. It read; Orme Champetre. *Ulmus minor*.



A small amount of research on my return to the UK revealed what probably most of you already know, Orme is the French word for Elm. *Ulmus minor* being an unusual Lock Elm.

Although the two 'Orme' words have totally different origins it is amusing to speculate on a connection, and just how La Société pour l'Exploration du Grand Orme might function.

Llandudno's Orme is said to be derived from the Norse, 'Heva Horma', a serpent. Apparently the early Vikings likened the shape of the Orme looming out of the mist to a huge sea serpent, and were suitably frightened and impressed (the same explanation is offered for Worms Head on the Gower).

A lesser school of thought suggests that it is named after a Norse chieftain and quote Ormskirk in Lancashire as a further example.

The French Orme might suggest the Norse chieftain got about a bit, with the French noticing his boats being stocked up with all their Elm whilst they hid trying to avoid all that rape and pillage. Or perhaps some French Elm once appeared Medussa like on some Gallic headland?

Whatever the explanation how might we expect the La Société pour l'Exploration du Grand Orme to work? According to my beginners guide to trees Elm with its fine grain provides a hard and tough wood, very durable in wet conditions. Although the wood has a tendency to warp, it does not split or splinter easily. Uses include the gunwales and the keels of ships, (surely fits in with my French theory) and we should have plenty of scope to study these, coffins, (St Tudno's graveyard?) ammunition boxes and wheelbarrows (both used in abundance in the mines). It is the only wood suitable for the stock or hub of cartwheels and was often used for other wagons parts and farm implements (lots of historical links here).

Elm pipes have also been used to transport water, and pumps have even been engineered from hollowed out trunks (let's find some!).

I'm a little surprised to discover that a mature Elm might develop the dangerous habit of dropping a massive bough, without warning, even on a still summer day. This is certainly a characteristic of the GOES club itself; as members detach themselves for one reason or another, and fall away. The Elm survives, but only so long as not too many boughs break off!

It's also common knowledge that Elms are prone to become diseased, rapidly deteriorating in health and vigour. Their skeletal structure might keep standing for many years but it has ceased to function. It simply remains as a reminder of once glorious days and happier memories.

My chance encounter within a French wood led me to discover a connection between our club (which I love) and the magnificent Elm. I find the associated humour uplifting, but perhaps it is the nature of the Elm itself which is more relevant, giving us a timely insight and a better appreciation of the true status of our club and its possible fate.

Surely our intimate knowledge of the Orme, particularly its underground complexities can't be lost, can it? In the future might our explorations eventually become the stuff of legend and exist only in local folklore? Let's make sure this doesn't happen. The remaining few need to keep active, seek out new members and make sure that events and discoveries are well documented. That new shoot at the base of the trunk can become a whole new tree.

David Wrennall, 2008

First Acquaintance.....

- On November 18th 2007, whilst Gaz Davies and Steve Lea were showing a small group around Romans, I took the opportunity to investigate the 'Duncan James' section of the mine. My initial interest lay with evaluating possibilities for eventually connecting with the 135m level off Treweeks shaft or the D Day Rift area above, at 144m.

I had only had a couple of fleeting visits to the area in the past and got quite excited when I encountered a smooth flowstone squeeze at the end of the approach tunnel. Darkness in a widening beyond encouraged me to breathe out and push through. I anticipated new territory, but eventually stood up next to a modern aluminium ladder! Apparently the flowstone was once the only way in and out, but an easier route can now be found just a few feet away.



Duncan James's campsite

After poking about in numerous alcoves, I eventually decided to climb the ladder and look at the higher level passageways. Rummaging through the various tunnels I inevitably dropped into the Duncan James campsite; apparently he had slept here whilst studying the Bronze Age workings in the late 70s. Pots and pans are still in place, the corridor itself being sectioned off with orange tape and various spots along it numbered with small plaques. Despite having been a member of GOES for some eight years I had never been shown the camp before and I was rather pleased to have found it for myself. A very rough calculation, using compass and body lengths, suggested the campsite corridor lay above the approach tunnel and ran in the same N-S orientation.

Close to the end of the passage I discovered a tight porthole squeeze leading left through into a neat round cavity. It proved quite an effort. When I was through, I found that there was a much easier slot slightly lower down which would have saved me the struggle. In the cavity, just below the roof I was drawn to a niche full of infill, perhaps it had the potential to lead somewhere. I had no tools so began to scrape out rubble using my gloved hands.

At about this time Gaz and friend arrived. The tour was over and they had come to see how I was getting on. After listening to various anecdotes about Duncan James,

I introduced Gaz to the cavity and to the infill. He expressed an interest and recalled having looked at it years ago. As they started off back for Roman Shaft I suggested that I would have ten minutes digging before catching them up.

The topmost layer had a lot of clay in it. This could have perhaps been a natural accretion from the surrounding rock or, perhaps, it could have been added in a deliberate attempt to seal off a section of tunnel beyond. My imagination was fired. When further excavations started to reveal a definite space between a roof and the infill I renewed my efforts. A few more minutes, several more armfuls of rubble dragged back.



Gaz enters the Time Tunnel

Stretching ever further to break up the fill with a makeshift stone dagger and clawing back each hard won pile of debris was gradually revealing ever more of the tunnel, but as my excavation lengthened so too did the time needed to haul back each pile of loosened stones, each foray requiring a greater and greater effort.

Time and energy had both run out. I gazed along the constricted passageway that I had unearthed. There was perhaps 4m of tunnel, a tight squeeze, but increasingly feasible. In the distance a dripping wall within the gloom of an unknown chamber. I was thrilled at the thought of undiscovered Bronze Age workings and artefacts and was giddy with delight as I sped back to find the others and relay my news.

Back to the future.....

During the week Steve Lea e-mailed me an article about Duncan James and his studies proving the existence of Bronze Age workings on the Great Orme. His detailed sketches didn't make too much sense until I was struck by two facts. Firstly James' plans had north to the left whilst Andy Lewis' surveys had north to the right. Secondly, Andy hadn't surveyed any of the passageways above the aluminium ladder. James' drawings were now clear. Gallery A was the approach tunnel from the plank walk above Wagongate, prior to the calcite squeeze.

Gallery B was the upper passage, containing the campsite and my discovery.

The following Sunday I was back, accompanied by Gaz, Charlie and Ben. I took with me a garden rake; it made easy work of extracting material from the depths of the tunnel. We were soon in a position to push through. Bulldozing the last rocks out of the way I squirmed into the unknown, emerging on a ledge above the floor of a large square cut 19th century passage. Standing up in the passageway I immediately found myself gazing over the edge of a shaft with a small waterfall dropping into its depths. Further investigation revealed a bolt and, after quizzing Gaz, it was confirmed that we were at the top of the 'blind' winze above Gallery A.

So we had found no new workings. Our endeavours had simply created an alternative route and confirmed what I had previously calculated, namely, that Gallery B lies directly above Gallery A; both passages probably working the same lode.

Ben gets messy.....

The running water I had first observed whilst digging out the tunnel was cascading in through some heavily calcified rocks. Ben had turned his attention to extracting a few of those jammed under a sloping roof and as usual, he wore no gloves, grappling with each rough rock, scraping out infill and throwing handfuls of mud with his bare fingers. My ice axe proved useful for levering out the more stubborn material although the larger encrusted boulders were beyond moving. Behind them, however, Ben was starting to disappear into an alcove of his own making. The mixture of water and dirt was starting to make digging increasingly muddy. Ben lay in the grot, reaching ever further, with only the bottom of his filthy sodden boiler suit and grubby boots eventually visible.



Ben gets messy

As the rocks kept coming, a muffled voice suggested the excavation was looking promising. Impressed by his tenacity and amused by his appalling condition I took some photographs!

A gap was apparently developing between the sloping roof and the infill. Gaz suggested I go down to the Wagongate area to see if I might make contact with Ben from the other side. So I'm through 'my' tunnel again, past the campsite

and down the ladder before making my way back along Gallery A. Here I was able to communicate with Gaz via the winze. Ben was certain a big chamber lay ahead of him. I visited all the possible sites for a link up but couldn't see or hear anything of Ben. Returning to the winze I heard Gaz laughing as he relayed the astonishing news that Ben had emerged to be confronted by a display of maps!

These were clearly the Andy Lewis plans, arranged on a flat rock within a large chamber close to Roman Shaft. Well that was a surprise. I quickly made my way there to find Gaz already waiting, after having acquainted himself with the new shortcut.

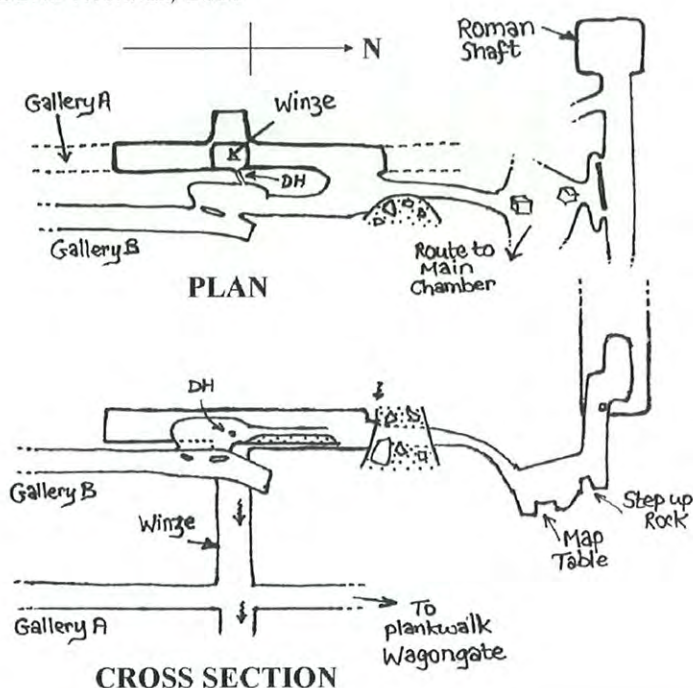
Ben, who was cold, had already set off for surface accompanied by Charlie.

Gaz and I spent a few minutes reflecting on the outcome of our exploits. No new ground but two interesting connections, improving our knowledge and appreciation of the mine's layout. Any future mapping of Gallery B would be easier and more accurate.

And where's that water coming from that fell onto poor Ben. Surely that might be worth further investigation?

Well satisfied with events, we scrambled up towards the shaft to await our turn to climb the rope.

David Wrennall, 2008



The Time Team (Dave, Gaz, Charlie & Ben)

- On May 18th 2008 I returned to Romans with Brian Edwards. Obviously I wanted to show him what we had found, but I also intended to investigate a story relating to John Carpenter (JC). Apparently he once crawled through a passage at the far end of Gallery A and eventually made voice contact with Gaz and Dave Flowers who had climbed the winze and Brian at its foot. Could there be a hidden passage between Gallery A and B?

From Gallery A the winze looked solid enough another passage looked unlikely. The best solution was to follow JC's tunnel and see where it led. Brian pointed me in the right direction. At the southern end of Gallery A I entered a tight flat out crawl, some deads above didn't look too healthy. Thankfully the passage widened a little as it turned left. Soon I felt that the tunnel which was gaining height had turned through 180 degrees, back towards the winze! Brian's distant voice was still discernable. I shouted back informing him of my progress. He would go back to the winze. I would keep going and see if we could hear each other.

The passageway continued running in its new direction gaining height gradually. There were various stooping and crawling sections before a final squeeze into a familiar spot. I was at the pots and pans of Duncan James' campsite! Walking to the far end of the corridor I was able to shout through the Time Tunnel and communicate with Brian at the bottom of the winze just as JC had done, though his voice must have been muffled due to the infill that once blocked it. Brian announced that he would come round to meet me.

(Later in the week Brian informed me that he had known all along that JC's crawl had led him to the campsite in Gallery B. He was certain that he had told me, and assumed I knew. I don't recall the conversation and was ignorant of that fact when I started out).

Once we were together again, there was an opportunity for a bit of digging to enlarge an awkward damp section on the usual route into Gallery B and for some photographs. Then we squeezed into the cavity at the start of the Time Tunnel. I sent Brian through first asking him to go to the winze. I knew it wasn't far away but I was surprised when his voice came so clearly from the rock next to me. Closer examination revealed a drill hole (DH on sketch, left) leading to the top of the winze. I could just see a glint from Brian's light flickering through it.

Catching up with Brian again I looked for the hole from the other side. It wasn't easy to find; in a slight corner, hidden by dirt and a sliver of rusting metal that had been inserted into it, probably once some sort of hanger.

So we had solved a GOES mystery. JC's route was obviously the alternative way into Gallery B that I had been told about numerous times over the years but hadn't been shown. At the far end of Gallery B his voice would easily have been heard in the winze through the hidden drill hole. As Gaz said at the time 'His voice seemed to be coming out of the rock!'

The damp section of Ben's crawl is best done quickly, the rest is dry. The drop down to the maps is steep; head first is amusing, turning round to land feet first is wiser. Soon we were up Romans to be greeted by Steve Lea. At the Kings Head it was 'Explorer' beer. How very apt.

David Wrennall, 2008

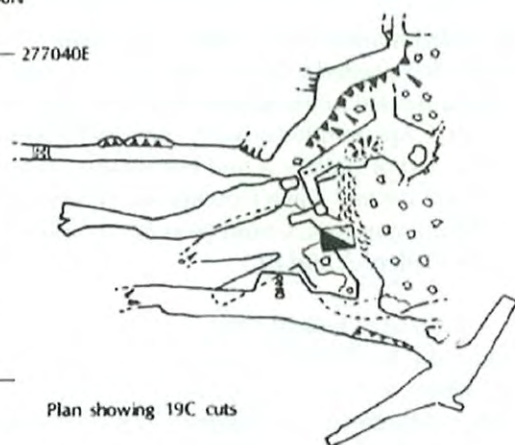
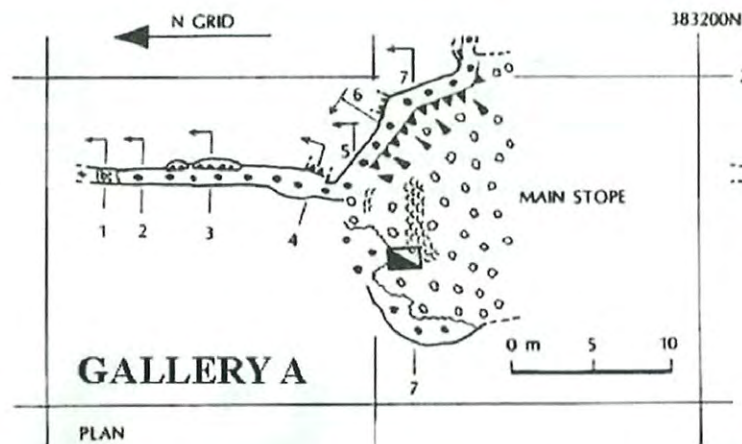


Feet first is best!



Brian explores Gallery B

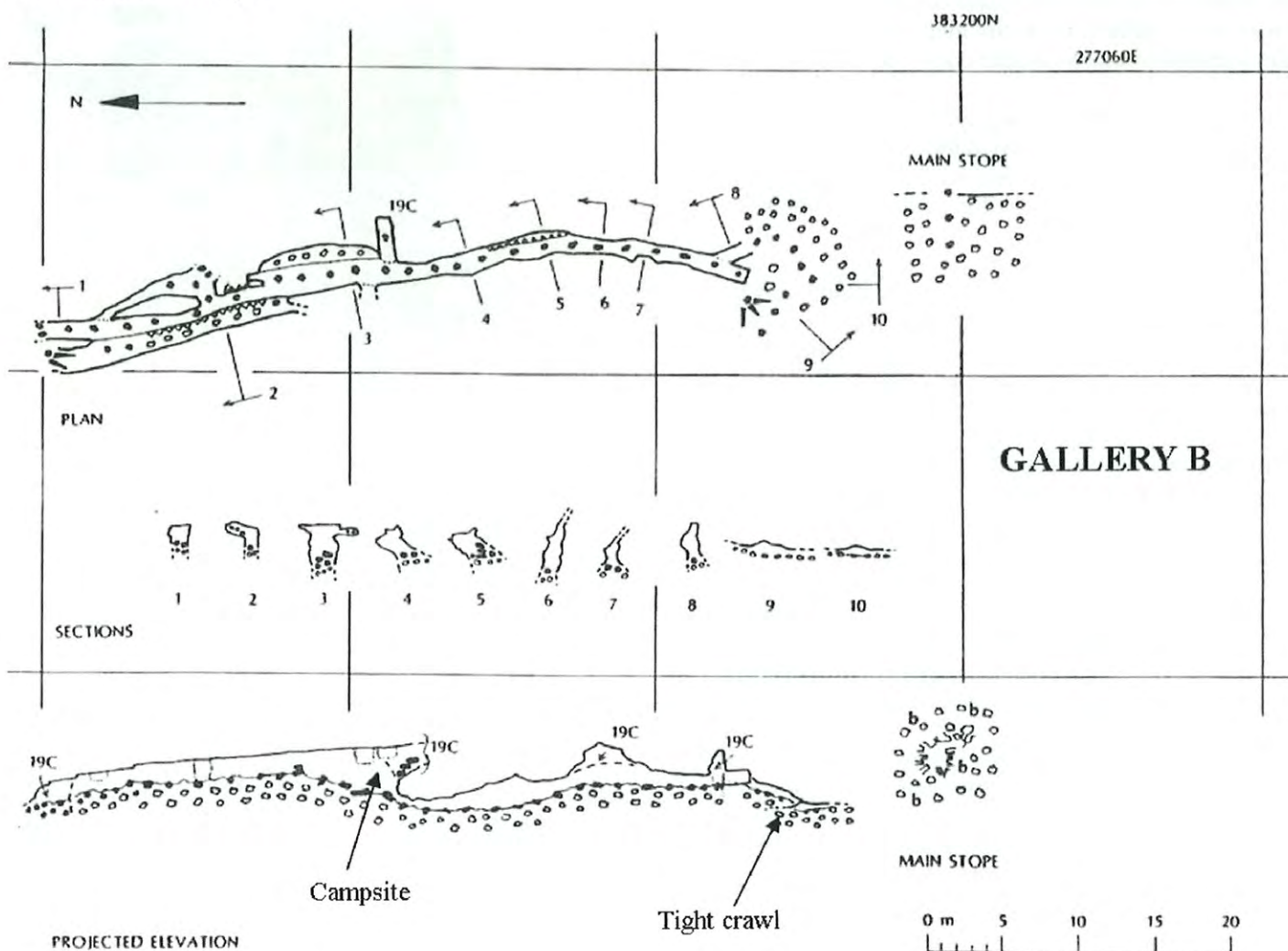
DUNCAN JAMES' PLANS - GALLERY A & B



Maul stone in Gallery B

1m wide gallery A, which can be traced for about 16m. This gallery is filled, to within a couple of metres of the horizontal bedded roof, by pack which obscures the full depth of the cut, but which is likely to have been some 10m below the roof level at the furthest point of the gallery.

A similar gallery B can be traced for some 47m exploiting another of the main lodes (Fig 3). This must have been driven off another major inclined stope, parallel to that connecting with gallery A, but for which the direct evidence is less impressive.



ROMAN REVELATIONS - MY EUREKA MOMENT

- * During the following week I had the opportunity to re-read an article by Duncan James entitled Prehistoric Copper Mining on the Great Orme's Head. I was struck by two things.

Firstly, Gallery A was described as being 16m long whilst Gallery B was much bigger at 47m! The campsite corridor alone couldn't account for this length.

Secondly, looking at the diagrams of Gallery B I became aware of the cross sectional profiles. Those of points 9 and 10 were very low and wide, much like the low crawl I had squeezed through when starting JC's route. By point 8 the passage has become higher and turned through 180 degrees, exactly what his tunnel had done.

Eureka! It suddenly dawned on me that the tight crawl was, in fact, the beginning of Gallery B. Halfway along the gallery I had emerged through a squeeze at floor level into the larger cavern area immediately next to the pots and pans of the campsite (Point 3). That measurement of 47m now made sense.

I e-mailed various members of the club about my discovery, adding a comment that 'no doubt people will tell me they knew this all along'. Tom Parry was the first to reply, congratulating me on my personal enlightenment. He graciously added that he wouldn't dream of telling me that he knew about it all along, and anyway, it was such a long time since he had been underground that he was no longer sure!

It is all too easy to lose specific knowledge about aspects of the Orme underground. Information about places and events can get corrupted, as in Chinese whispers. Important facts can get forgotten about altogether as individuals lose interest and new members come to the fore. Keeping reliable documentation is essential, articles, surveys, sketches and photographs all have their part to play, but good dialogue, and keeping in touch with that reservoir of 'old heads' is also vital if we are to avoid the need to keep rediscovering the already discovered.

David Wrennall, 2008

THE ORME IS BREATHING

It was a lovely crisp and frosty morning on February 7th 2007, and I was on my early morning walk with the dog. As I approached Romans I saw what at first appeared to be a plume of smoke rising out of the ground just off the path. Wondering what on earth could be on fire at that time of day, I went over to investigate.

There was a hole about a foot or so wide with a steady, steamy, stream of warm air pouring out of it. It was draughting so much that it was blowing particles of frost off the surrounding blades of grass, making it float about in the air like snowflakes.



Wilma at the entrance on the day it was discovered

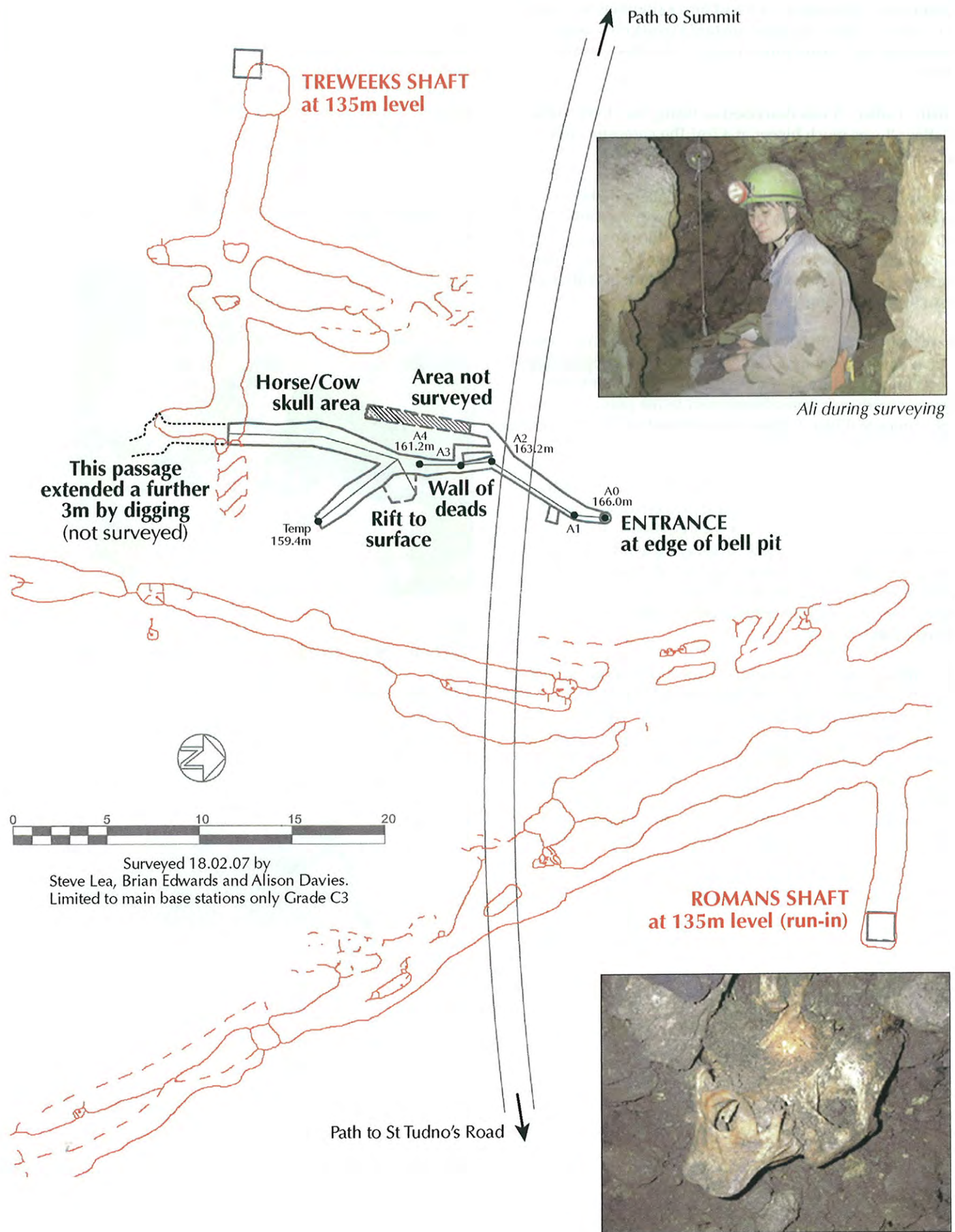
The hole was too small to look into properly, so I stuck my camera in as far as I could reach and took a few pictures. It was really hard to tell scale from them, but it looked like it was a good size passage, and going by the amount of air flowing out I suspected there was rather a large cavity beneath my feet.



Inviting dark passages leading into the unknown

Full of excitement, I contacted other GOES members as soon as I got home, and on 10th February Me, Tony Davies, Steve Lea and Tom Parry turned up to investigate further.

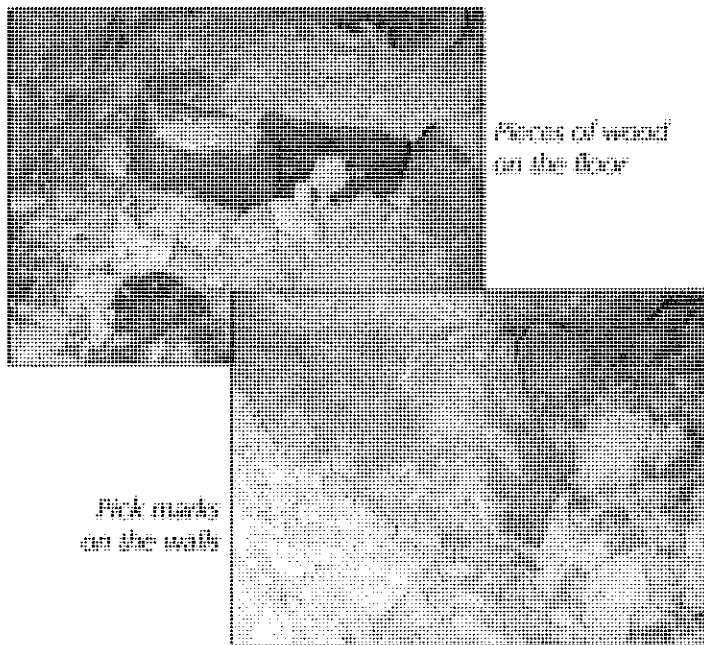
SURVEY OF NEW PASSAGES SHOWING PROXIMITY TO ROMANS AND TREWEEKS



After very little effort to kick some soil back into the hole, so as to widen the entrance a touch, I was able to slide into the new workings. No one else went in, and the feeling of being in a brand new place, all alone, certainly had the adrenaline pumping. I didn't even have on my caving clothing, as I really hadn't expected to find myself underground.

The hole opened out immediately into a chamber, and off this chamber there were a couple of small passages. It appeared there had been a few small collapses in this area in the past, which could possibly be dug out in the future to reveal further passages? Of the two I went down, I got the impression one was heading towards Treweeks, and the other, which had a small wall of deads and a piece of wood, was heading towards the water board building.

All passages sloped down hill from the entrance. It's wasn't vast in there, I guessed about the same size as the Parc Wall trial, but it had definitely been mined in the past. There were pick marks in the walls, but there didn't appear to be any evidence of animals or recent human activity anywhere, and I couldn't see any drill marks. There was copper staining in places. My adrenaline was pumping so much that I didn't think to try and feel for draughts coming from the passages. I did manage to take more photos though.



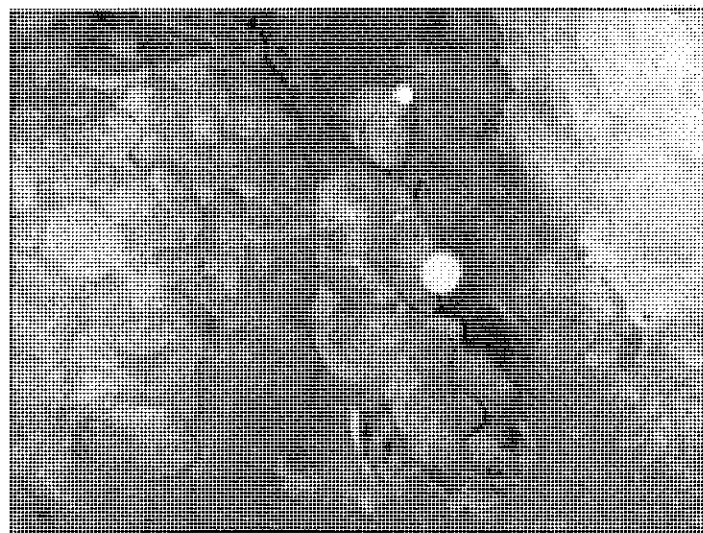
I was very conscious that I was alone, and everyone on the surface would be wondering what progress I was making. I was also just in my normal everyday clothing with a small torch, so I made my way back to the surface to eagerly tell everyone all about it. With more people, and proper gear I felt we could certainly find much more down there. We temporarily blocked the entrance with stones, and Tom arranged to tell Sally, the Orme Warden, about it.

The following week more curious GOES members arrived. More exploring was done, and a simple survey was carried out. Steve later overlaid this new information onto existing surveys done by Andy Lewis of the Romans and Treweeks mines. The new passages surely had to link into these workings. While doing a small dig in the area of the skull, a strong draught could be felt rushing up from cracks between the rocks in the floor.

Over the next couple of weeks more exploration was done, and more digging in the area of the skull, forever heading downwards and following the draught. Unfortunately during this dig, the skull got damaged and buried under rubble.

On March 4th a team set about trying to find the connection. Dave Wrennall and Ben Atkinson went into Treweeks to the D-Day rift, at the 144m level. They went armed with a smoke bomb! Meanwhile several people stayed in the new workings. I stayed with Brian near the skull, and cigarette smoke could be smelled drifting in on the draught. There was no sign of smoke in the air though. Probably half an hour or so later Steve shouted through to us. There was a sense of urgency in his voice as he shouted "Get out, NOW"

Brian and I exited as rapidly as we could, and as soon as we reached the main chamber we were greeted with air full of fog, which was getting rapidly thicker, threatening to cut off all visibility. By this time most people were back in fresh air. I was the last one in the queue, so it was with huge relief when I managed to return to daylight before the passages became completely filled with the dense white smoke. Another minute, and I would never have known which way the exit was.



Gaz at the wall of deads

It was uncertain just where the smoke entered the new passages as there was just too much of it, and too fast.

Very little was done then until April 6th when Gaz and Dave ventured down to the lowest, most southerly passage and carried out a dig there. It was a tight, low crawl, and they used a sledge attached to ropes to remove the spoil they dug out. This passage was extended a further 3 metres as a result, and it looks as though it still goes... but where to?

GOES applied for permission from CCW to add a permanent capped entrance to the site in December 2007, which was granted. So by the first week of March 2008, after a couple of weeks of fitting pipework and concrete, all was finished. We now have a secure, padlocked, entrance which I am sure will be entered again sometime in the future in our search for that elusive connection.

Ali Davies, 2008

STONEHENGE MYSTERY

The Timewatch Team at the BBC set about a two week archaeological dig at Stonehenge on 31st March 2008. The historic excavation (which is now complete) aimed to solve one of the greatest of archaeological mysteries - just what was Stonehenge built for? The Timewatch programme returns in the autumn with the answers.

But in the meantime, the BBC History website showed a daily coverage of the progress being made by the team, which was led by Professors Tim Darvill and Geoff Wainwright. These world-renowned archaeologists believed they had cracked the conundrum of Stonehenge's original purpose. Their aim was to unearth evidence for their new theory - that Stonehenge was built to heal the sick.

I had begun watching the videos with great interest, but was really surprised at what I saw on the video for Day 2. A ceremony was taking place by a group of Druids. They were blessing the site and asking the spirits to reveal all its mysteries. My attention at this stage wandered, and I was drawn to the background, and the stones themselves. On one of which seemed to be a large face carved into the rock, and appeared in several shots throughout the video.

I did a screen shot of the image of the video and forwarded it to various GOES members for their impressions. There was a lot of interest, but it was also pointed out to me that Day 2 was in fact April Fools day, and it was very likely that I had been had!

Determined to find out the answer, I emailed the team at the BBC and asked them if it was a huge joke, or whether it was something the archaeologists ought to be investigating. I eagerly awaited a reply.

It was a long time coming. The dig was over and I had seen the face again on the Day 12 video. I had just about given up hope of hearing from them when on 21st April this is the answer I was given:

I've looked at the footage - you're right, it does look like a face! All I can say is that it's certainly not an April Fool! We did miss a good opportunity there though didn't we? Up close it doesn't appear to be a carving either, but just in case I'll pass it on to the archaeology team. Well spotted though!

Simon Mackie, BBC Timewatch Website

After replying to this, I then received another e-mail:

Glad you brought it to our attention - we've had a laugh in the office. Also - Professor Wainwright has emailed me back. He says they had noticed it too, while digging, and that it depends on the angle of the light...

"Tim and I used to watch it appear and disappear every day!"

So, you're in good company.

Simon Mackie, BBC Timewatch Website

I don't know how much longer this link will work for, but here is the web address where all the videos, and the full story, can be found:

<http://www.bbc.co.uk/history/programmes/stonehenge/>

Spooky eh? I wonder whether they will mention this on the TV when the programme comes out in the autumn.

Ali Davies, 2008



Day 2: Druids 'bless' the excavation area