

NOTES...2010 .jw: This article was published in "Mine Explorer 2" in 1986 (*without photos*). It is the Journal of Cumbria Amenity Trust Mining History Society. By kind permission of the author and C.A.T.M.H.S it is reproduced here...Part 2 of 3. *It records the spirit of adventure and discovery of those early visits to the Coniston mine.* Article and Photographs are copyright © of Peter Fleming unless otherwise stated. Slides digitised and added by Jeff Wilkinson with cooperation from the author.

CONISTON COPPER MINES RE-DISCOVERED

By Peter Fleming

PART II

Introductory Notes

ACKNOWLEDGMENT

As in Part I of this series, the names of the participating members have been omitted at the request of the Editor. It will be obvious from the text that a dedicated and very experienced team have been involved in these explorations. Over the years they totalled in number 24 different members of Cumbria Amenity Trust, without their expertise, determination and co-operation this report could never have been compiled. I therefore take this opportunity to extend to them my grateful thanks for making it all possible.

From the beginning I considered it most important to record our investigations in the Coniston Mines for the benefit of future generations of researchers or explorers. Some areas we are finding may not be accessible in a few more years. There are changes taking place regularly in the workings. Though I may not be the best person to record our activities, I appeared to be the only one willing to do so at the outset.

WARNING

With the possible exception of the Hospital/Grey Crag Level, which can be entered easily by a casual and reasonably equipped party, it cannot be stressed strongly enough, that on no account should anyone attempt to reach any other part of the mines which are described in this report, as most areas can only be reached by using advanced single rope techniques by an expert team conversant with the dangers inherent in exploring disused mine workings. No way can the relatively stable world of natural potholes be compared to the Coniston Copper Mines, which can involve vertical descents deeper than Gaping Ghyll through, at times, very unstable ground. Everything we see is man-made, a step back in time, a piece of history and is a monument to the miners of long ago, who sought the earth's rich minerals with nothing more than tallow candles to illuminate their enormous subterranean world which took over three hundred years of very hard work to complete.

The Explorations

Paddy End Mine is the name given to that area of the Copper Mines situated immediately south of Levers water and is comprised of at least six important veins. Many of them are named but confusion arises when studying old plans as they do not all agree and similar names are given to quite different veins. The important ones are in excess of 200 metres deep and in places merge leaving very large subterranean excavations. In all cases the veins are almost vertical and some come to surface close to the shores of Levers water. These are known as the

"back strings" (or the "Old Men's Leads"). The workings here are quite ancient. The well-known Simon's Nick is probably part of Bellman's Hole Vein. The veins are intersected by old haulage levels which formerly came out to surface at various horizons. These are namely Levers Water Level, Top Level, Middle Level, Grey Crag/ Hospital Level and Deep Level. The first four are collapsed at the entrances but Hospital Level has always been open apart from when an occasional local storm has washed rubble into it. Deep Level is no longer accessible along its great length due to several collapses. It is known there are workings up to 40 metres below Deep Level in the Paddy End Mine but they are full of water. The drainage from the whole of these workings runs along Deep Level and out to surface three quarters of a mile away at Bonsor Mine.

Exploration of the Paddy End workings is a difficult and slow operation due to the vertical and complex network of veins and tunnels which have deteriorated over the many years since closure, with collapses and blockages to hinder progress. The account of these explorations should be read in conjunction with the plans and cross-sections that are included. It was not until Cumbria Amenity Trust's prolonged investigations into the Red Dell area of the Bonsor Mine were scaled down, as recorded in Part I of this series, that activity was intensified in the Paddy End side. However, before this in November 1980, a most important discovery was made.

It had long been suggested that it might still be possible to find a route down through the old workings and stopes, starting at Levers water and emerging out to daylight at Hospital Level, some one hundred and forty five metres vertically lower down the fell side. At this point it would be appropriate to describe the Hospital / Grey Crag Level system, which is well known to many people owing to its ease of access. Hospital Level is driven from the surface in solid rock on the true left bank of Levers water Beck. The portal is adjacent to the wooden footbridge below Grey Crag (see surface plan). Directly across the bridge, which incidentally, was built on the 11th July 1976 by Voluntary wardens of the Lake District Special Planning Board, is the collapsed entrance to Grey Crag Level - both these levels meet some distance underground. Following Hospital Level (see Plan No.1) a junction is soon reached, the right hand branch of which ends after one hundred metres in an apparently fruitless attempt to locate a vein. Turning left at the junction the tunnel passes under Levers water Beck, which can be heard quite clearly when in spate. Fifty five metres from the entrance a patch of boulder clay is passed through. The water to this point is knee deep but beyond is dry. The boulder clay also marks the point where the tunnel swings North West along a worked out vein. It is soon obvious that the floor in places is false - a gaping wall to wall hole 55 metres deep turns back the timid. Two planks were laid across the right hand side of it in May 1971 and are still in good condition. A hand line was added more recently. Beyond here a solid section is followed to another collapsed stretch, which over the years has steadily deteriorated and so on 11th March 1984 some work was done here to make it safer to negotiate. Not far beyond here an opening on the right gives a view into Hospital Shaft which is streaked with green copper stains and water invariably cascades down it. The shaft comes to surface near the base of a water fall in Levers water Beck, but it is now covered over.

From evidence remaining on the ground and the illustration in Postlethwaite's book "Mines and Mining in the Lake District", it appears that winding operations in Hospital Shaft were powered by the New Engine Shaft water wheel situated half a kilometre away in the next valley to the east at Red Dell Foot, with

no direct line of sight, one is left to wonder at the problems of communication between the winch operator and the remote shaft top. Perhaps the clue is in the old local name of "Bob Stick Crag" which was given to Kernal Crag for below here a signal wire and a haulage wire would pass. Today the bottom of the shaft is a scene of collapsed rubble in a stope which is common to the base of the holes in the floor of the tunnel which have already been described. There is unfortunately no access to Deep Level.

Continuing along the tunnel a scree slope is climbed to a shattered area coinciding with a geological fault. Behind, to the right, a steep slope leads up to a viewpoint into Hospital Shaft, where a mounted winding wheel can be seen. Following the line of the tunnel again, which lies under the rubble, the fault line is passed through before climbing into a stope which gets bigger by the minute and emerges into one of the largest excavations in Coniston Mines. The highest part of the roof is only visible with powerful lights. Staging can be seen thirty metres overhead. A heavy iron chain hangs down. Somewhere up there it is possible that Middle Level passes through, whilst beneath, to the left about six metres below, Grey Crag level can be seen and entered where it formerly merged with Hospital Level under the pile of rubble. This can be followed back through deep water to the blocked entrance at one hundred and ninety metres. At the north western extremity of the large, stope the rubble pile is descended. Here two tunnels will be seen. The obvious one to the left soon runs through a tight boulder choke which has come from above and may be worth further investigation as it vents strongly and must connect with higher workings. Just beyond the choke the tunnel is clear again. On the right, railway lines project out over a deep stope the floor which carried them having collapsed long ago. This stope on the South Vein disappears from view around the corner. It has been descended to the bottom at 58 metres but this is still short of Deep Level. Further probes down there are planned for the future. The main tunnel carries on in a south westerly direction for a total distance of 460 metres. It was driven in the hope of locating the Brim Fell Vein at depth, which had been worked in a small way from the surface high up on the fell side. This long underground tunnel was to be a costly failure as no worth while ore was to be found. Today it is hardly worth following to its end. The final section has been dammed off with clay and rock to form a reservoir. The purpose of this is not clear. This long tunnel is also known as "Pudding Stone Level".

Returning through the rubble choke the other tunnel, which is a continuation of Grey Crag Level, can be followed North West and soon a circular chamber is entered. This is the site of a former horse gin, where a horse harnessed to a winch walked in a circle, hauling materials up the nearby Paddy End Shaft. The shaft itself, a few metres further on, is heavily timbered over and these are covered by a pile of debris, but at the far side a manhole gives access via a former ladderway. The most interesting feature here is the wooden platform overhead to the right and the wall below it, for it is all covered in a variety of shades of green and light blue copper carbonate, deposited there by the water coming down from the upper reaches of the shaft. It makes a worthwhile subject for flash photography although over the years the colour has faded. It used to be a most striking mixture of blue and green colours.

The upper part of Paddy End Shaft received attention on the 13th November 1977, when an attempt was made to free climb it in the hope of reaching Middle Level 57 metres above. This failed fairly low down but another attempt on the

15th September 1979 using an aluminium extension ladder was more successful. A point 40 metres above Grey Crag Level was reached, where the shaft was sealed over with timbers and rubble, but just out of reach a slot could be peered through into a stope. It is amazing how high one can climb with a ladder only 9 metres long if you keep pulling it up behind you and re-securing it.

The lower section of Paddy end Shaft below the manhole in Grey Crag Level has been descended on numerous occasions. Twenty metres down it opens out into a large stope. The bottom is a chaotic pile of collapsed rubble 23 metres long. The lowest point is beneath a timber platform which is about 62 metres below Grey Crag Level. This is very close to Deep Level horizon.

From the man hole in Grey Crag Level the tunnel runs into a former blockage which was dug through in 1978 by persons unknown, opening up a considerable amount of "new" workings running beneath Levers water. The way through the former blockage is constricted until it is possible to stand up at the bottom of a short rise up through the rubble pile. Cross timbers put in here in recent years now make it easier to scramble up to the top where it is seen to be the base of a high stope. Heavy, smashed timbers and rocks are wedged across it to the north whilst the side above our line of entry is packed tight with fine debris over a height of about 7 metres. It is probably generally safer than its appearance suggests. This area was to be an important feature in future explorations.

Descending the other side of the rubble pile gives access to Grey Crag Level once again by dropping through a hole in the roof timbers on to what is suspected to be a false floor. A short distance ahead where the tunnel widens into another stope it appears to be blocked again by a large collapse but this can be climbed and by-passed on the right into the continuation of the stope. High up to the left it is possible to see some timberwork and walling which suggests there could be a connection with further workings but this has yet to be proved. Buried under the collapse, which is made up of large angular pinnacle-shaped blocks, is a tunnel running off towards Paddy End Old workings.

Following Grey Crag Level north it is evident that scrap men had been denied access due to the blockage and the railway lines are still in place. On first entering this section of Grey Drag Level in 1978, the original miner's clog prints, some obviously those of children, were to be found in abundance and tallow candles still on the tunnel walls in their dobs of clay. It could have been up to eighty years since anyone had been there. A hundred metres beyond the last stope and the tunnel passes under the shores of Levers Water which lies 130 metres overhead. A junction is reached 60 metres further on where a set of points is still in position. The left hand branch receives all the water draining from the extensive workings on the Middle Level and Top Level Horizons high above which are connected to Paddy End old workings via numerous deep stopes descending from the "back strings" at Levers water. Unfortunately Paddy End old workings are no longer accessible from Grey Crag Level due to a collapse at a clay vein 130 metre from the junction. It is however feasible to scramble into a narrow stope on the left at this point. Once in the stope immediately on the right it is possible to gain access to the tunnel again down the other side of the blockage. This was first done on 14th February, 1982, but after another 30 metres an impassable collapse was reached. In the stope itself there is a most unstable needle of rock leaning from one wall.

Returning to the junction and turning left the north cross cut can be followed

without incident or anything of particular note for 160 metres until what is thought to be a continuation of Triddle Vein from the Red Dell workings is reached. This is then followed at 90 degrees to the left for 55 metres before it was determined that no worth while ore was to be found here. Two other short trial tunnels were made at the junction just to make sure before development work here was abandoned for good. At this point it is almost half a mile from the portal at surface. Having now described the Hospital / Grey Crag Level system we shall now refer back to a successful attempt in 1980 to discover a route down to them from above.

As far back as the 1960's a bold attempt was made by one of our members in conjunction with the Red Rose Potholing Club to find a route down through the workings. This was aborted after descending some 90 metres where they ran out of equipment. Due to the objective dangers and near misses they never returned. It was on Saturday 15th November 1980 that six members of Cumbria Amenity Trust, gathered at the fence around the crater above the shores of Levers water on the north western side of Tarn Crag (old local name) well known for the cleft Simon's Nick. (See surface plan). A quick scramble down the 30 metre scree slope brought us to the bottom of the crater (see cross T section No. 1). A tight crawl beneath a low roof followed by an 8 metre rise back into daylight and we were standing at the top of the first vertical short pitch of three metres or so. This was soon followed by a 6 metre pitch. To one side of this an old ladderway below was visible which connected with a branch of Top Level but our route lay in the other direction down a steep loose wall of jammed boulders to the level below. At a later date a better route was adopted which avoided this by going round the corner and down into a parallel tunnel which brought us to the same point. A short scramble and we were in a fairly large worked out chamber, where two veins met leaving a ridge of rock. It became known as "Arête Chamber". Ahead to the right the tunnel continued along a collapsed floor. It was still possible to reach the end of it using the remaining stemples (timbers). A few rusted artifacts were found there. Below this point was another possible route of descent to Top Level. In all there are four ways down to Top Level from Arête Chamber and its associated tunnels. Our route down was to follow the original 1960 attempt, which lay to the left of the arête. The pitch looked very intimidating dropping down into the blackness of the stope. We were using electron ladder on the pitches and it was no easy matter handling the quantity we had in the initial stages of the descent. A good clean pitch brought us to a ledge at 30 metres, about half way down the stope. This was on the Top Level horizon and a low back-filled tunnel was observed in the corner. A little clearance work was carried out here before we continued our descent another 22 metres on to the roof of Middle Level. A 31/2 metre scramble down brought us into a tunnel (M4 - See cross section No.1 and Plan No.2).

The two members in the lead had already rigged the next pitch, which appeared to be a manway with old wooden ladders going down from below the previous pitch. At the bottom they found a blind tunnel with a complete wheel barrow standing in it. The other end of the tunnel ran into an area of collapsed blocks with an opening above which appeared climbable. They returned to Middle Level to join the rest of the team who had by now looked around this interesting area. Going North West along tunnel M4 was a wooden water launder to prevent water running into the workings below. Further on two flooded sumps were crossed before the end was reached - a small stope with wooden staging still in position. Going south east the tunnel merged with another (M3) at a crystal clear, green pool. The left branch ended abruptly on the edge of a very large

stope. Straight ahead about 13 metres away the tunnel continued with another one immediately alongside it. They became known as the twin tunnels of Middle Level and at the time seemed almost impossible to reach. The floor of the stope at that point was 17 metres below. To the right of our vantage point the stope was five metres wide and the wall was coated in bright blue copper carbonate for as high as one could see.

Going the other way, passing the green pool, the tunnel was followed past an opening on the right then at 40 metres another junction on the left soon brought the party to an opening in a small chamber with a false floor concealing the top of Paddy End Shaft. One side of the false floor had collapsed leaving a view into a seemingly bottomless stope except for a pinnacle of rock almost immediately underneath. This point marked the limit of the 1960 explorations. The most notable feature of this area is undoubtedly a pile of azure blue coated rocks standing on the false floor with blue and green stalactites hanging from the roof above. A few iron artifacts are also lying around here. The tunnel M1 was followed to a total collapse after 25 metres which must still be 80 metres or so from the entrance portal at the surface. At the end of tunnel M3 a branch goes off to the South Vein in a south westerly direction. The party returned to the surface for a good night's sleep, leaving the gear in position ready for a return next morning.

On 16th November 1980 return they did, quite confident of a successful outcome. A small party entered the Hospital / Grey Crag system to establish contact with the rest as they descended. There was little idea at that time as to where they would appear in the lower levels. They were soon down to Middle Level again. Two members went down the old ladderway to see the wheelbarrow and climb the opening through the collapsed blocks. This proved rather dangerous but on getting through it was discovered they were in the large stope under the twin tunnels and the rest of the team could be seen stood at the vantage point in Middle level. Eventually all gathered together at the false floor above the pinnacle rock and prepared the pitch to reach it by hanging an electron ladder from a piton hammered into a shot hole in the roof. This pitch was 10 metres and landed us on a flat area next to the pinnacle. It was possible to reach this point by an alternative route from the end of tunnel M5 where an inclined slope led down into a rather unstable worked out area beneath tunnel M1. Turning left here a scramble below the false floor of Blue Rock Chamber brings you to the pinnacle rock. This bypass route was a discovery of the 1960's but was considered unsafe. The cleft down the right hand side of the pinnacle was the obvious line to try. A ten metre scramble down and a three metre pitch at the bottom landed us on a steep slope. Nearby were some large jammed blocks and beyond them the slope continued down covered in rubble to the edge of a sheer drop. The stope in this area is enormous, not just wide but high as well. At a later date it was discovered to go up beyond Top Level which is 50 metres above our heads at this point. Looking the other way from the jammed blocks a slot led through to Paddy End Shaft. This was the same slot that was seen on the high point reached with the aluminium ladder on the 15th September 1979. From the jammed blocks we had the first contact with the back up team in Grey Crag Level below. Descending the rubble covered slope carefully on hand line, we arrived at the edge of what turned out to be the final pitch and lights could be seen at the bottom. Our quest to discover a route through the Paddy End workings from Levers water was almost complete. The remaining ladders were lowered and with a certain degree of excitement the 25 metre pitch was descended to find out where it would finish. It landed on top of the collapse some

20 metres north of Paddy End Shaft in Grey Crag Level at the site of the 1978 dig. The completion of this interesting but hazardous descent through the Paddy End workings was hailed as an important early milestone of our explorations in this part of the mine but it left us in no doubt as to the magnitude of the task ahead. Halfway down the last pitch a big ledge was noticed to one side with a stone wall at the back. This, along with many other features that had been seen, was to be looked at in more detail at some time in the future. With this in mind some of the upper ladders were left in position.

Two weeks later on 30h November 1980 a return was made to Middle Level to investigate the large stope below the twin tunnels. The pitch from the vantage point in tunnel M3 to the chaotic, boulder strewn floor beneath was only seven metres. The stope ran north westerly and soon another step down in the floor was reached and descended after some difficulty in finding a secure belay. The pitch of ten metres brought us directly below the twin tunnels.

It was considered most important that an attempt should be made to reach these twin tunnels as they might be the key to finding our way into the extensive continuation of the Middle Level workings we knew existed from the old mine plans. A lot of discussion and head scratching went on over the problem of reaching them as they were over 17 metres above the floor. Almost three years were to pass before a successful solution was worked out.

Following the stope again we came to a second step in the floor which was quickly descended to another floor. By now we had lost sight of the roof which was beyond the range of our lights. It is difficult to understand whether the floor of this large stope is made up of waste material dumped from higher workings or the result of collapses. Before the end of the stope was reached the floor disappeared again but this time it was a long way down so it was left for future exploration. On the way back to the surface the remaining electron ladders were stripped out.

Research in the Red Dell / Bonsor workings kept us busy during 1981, and so only two recorded visits by a small group into Paddy End workings took place. On one of these all of the pitches on the through route were fitted with bolts and hangers and the first complete descent by abseil took place on the 13th December, when the five members involved, on reaching Hospital Level found themselves sealed in. This was during a very cold spell of weather and on reaching the mouth of the tunnel at surface; they found a two foot thick wall of ice blocking the exit. Unfortunately it was reinforced by some timbers stacked there. It took them half an hour, using only piton hammers, before they were able to chip their way out. By then it was quite late in the evening and anxious relatives were phoning round enquiring as to their whereabouts. Even when they got out their troubles were not over - six inches of snow had fallen and after a hazardous drive home it was getting on for midnight.

On a previous visit in November, the old ladderway from Arête Chamber was descended to Top Level, where they had a good look around, noting the various stopes for future exploration. Returning to Arête Chamber, they abseiled down the original 29 metre pitch. At the bottom they set to work clearing a way through the back-filled tunnel, which was started on the occasion of the first descent (15th November 1980). They eventually broke through into what has become a useful link with the Top Level workings.

It is perhaps time to describe the Top Level system in detail, referring to Plan No. 2. The description will follow the route taken on the 23rd January 1982. A descent was made through the collapsed floor from Arête Chamber which landed at the southern end of tunnel T6. This line of descent is not in favour due to the wear and tear on the ropes from the gritty nature of the stope. Ten metres along the tunnel a shaft drops down. This had been descended for the first time on 11th December 1981 after clearing loose timber and rubble from around its collar. The bottom was reached using electron ladder at about 23 metres. A quick dig revealed a short blind tunnel one way but the other direction yielded a surprise. A three metre scramble down brought the party into another tunnel (M5) at right angles. The floor of this tunnel was a remarkable sight. It was knee-deep in thick bright green mud - liquid malachite. Where it had leached from was not obvious, but it would yield a high percentage of copper if processed. Someone named this tunnel "The Green Ginnel". At the time we did not realise it was part of the Middle Level System. The tunnel ended in the side of an enormous stope. Traces of where the tunnel formerly continued on a false floor across the wall were visible.

Returning up the shaft, Tunnel T6 continued North West until the bottom of the old ladderway from Arête Chamber was passed. Just beyond here a four way junction was reached. The tunnel at right angles (T4) is a cross cut running north east / south west and intersects five veins. Straight ahead our tunnel ran into a floorless stope, which prevented further progress that way. The view down a shaft to the left showed an old ladder going down to the flooded bottom of the stope. This was called "The Lake Stope". However, over the intervening years we have noticed that the "Lake" disappears after a spell of dry weather. It still awaits exploration.

Tunnel T4 ends abruptly at its south west end on the brink of a deep stope which draughted very strongly. It obviously connected directly with the surface but no daylight could be seen. It was to be a long time before we were to prove where this connection was. We named it "The windy Stope" but it could be part of South Vein. Following the tunnel in the other direction a second four way junction is reached with a stope overhead which connects with a tunnel in Arête Chamber. Turning left the forehead of the tunnel is soon reached beyond a sump in the floor. Going right, tunnel T5 runs through a stope and a lot of the floor is false with a drop of some 17 metres underneath. This was descended on the 13th December 1981 and found to be choked at the bottom. The wall to the right at one point must only be two or three metres thick, with tunnel T6 on the other side. The stopes in both tunnels merge high above our heads, and it was possible to see lights over the top from the other side. Bats have been observed hibernating in this area.

Progressing further along T5, a step over a hole in the floor and a short scramble brought us to the North West end of the back-filled tunnel, which leads through to the bottom of the 29 metre pitch and the top of the 23 metre pitch down to Middle Level. Returning to the junction of tunnel T4 and turning right the cross cut soon brought us to a rising stope on the right. At a later date this was climbed and proved to be blind. After another 12 metres, tunnel T4 ended at a collapse. An attempt to clear this was made on the 13th December, 1981. We returned to the surface to the cold of a January night, well pleased with what had been seen and eager to explore the stopes we had peered down into.

The next day, 24th January 1982, found us back in tunnel T4, where it ends at

the windy Stope (see cross section No. 2). A length of electron ladder was secured and lowered into unknown regions. At 22 metres a sandy unstable "egg-timer" hole was reached. To the north a steep slope led up beneath a false floor. The other way, which carried on down looked safer and easier and avoided the hole and so it was followed down another 14 metres to where it was possible to scramble down to the floor of this big stope which was piled high with massive angular blocks. Care had to be taken climbing over or round these blocks, which must have come down from the roof at some time in the past. Some were unstable and had sharp edges. It was probably because of the difficult nature of the terrain that we missed a hidden square inclined "tube" descending through the jumble of blocks. It was not found until 2nd September 1984. We hoped it might take us into the workings which are now inaccessible from Grey Drag Level on the Paddy End Old Vein. There was no water down there so there must have been some connection; but it was left for a future date. On the wall of the stope above, a curtain of malachite gave away the location of the Green Ginnel of Middle Level. The stope ended with no sign of ore in the vein.

We were only beginning to realise the magnitude of the task we had taken on in exploring Paddy End Mines. So far we had done very little more than had been done in the 60's. We were able to plot our progress on old undated mine plans, the exception to this being Middle Level. Our survey did not correspond to anything on the plans. In any case we had only seen a fraction of the total extent of the workings on Top and Middle Level Horizons. As time went on we were able to put together more and more pieces of this huge three dimensional jigsaw and come up with a few surprises.

The next significant discovery was made on Boxing Day 1982 when a team dug through the collapse at the north east end of the Top Level cross cut Tunnel4. Access was gained to a tunnel running south east (T3) with a stope overhead and to the left. The uneven tunnel floor was followed past some short side passages and some fine ochrous formations, until we reached an opening on the right with a view into a stope which descended to a rubble-strewn floor 10 metres below to the right and looked as if it was formerly a manway down to the lower workings. The tunnel then went off to the east for 16 metres where it entered what appeared to be an important level (T1). We soon realised it was the main top haulage level to the surface. Traces could be seen on the floor where railway lines had lain. It was followed south until a side passage to the right was entered. This ended at a stope rising to the left and descending to the right. It was earmarked for future exploration. Returning to the main passage - this brought us to a junction on a bend. A short passage on the right ended at another deep stope and this was descended later that day. Straight ahead the continuation of the main level disappeared under a huge collapse, which had come down from yet another stope to our right. The collapse could be climbed for a considerable distance before being stopped by the steep sides of the stope, which carried on upwards with timbers and staging visible above. We estimated that the surface of the fell could not be far away.

Returning and going north the tunnel (T2) was followed 22 metres to a junction with a short branch passage on the left. Beyond here it was partially back-filled for a further 13 metres and the end reached after 7 metres more. This tunnel is probably driven on the Belman Hole Vein. According to an old plan, somewhere in this area is another tunnel driven from the bed of Levers Water before it was dammed. The entrance was sealed, according to local legend, with 2 oak plugs when the water level was raised. The tunnel was aptly named on the plan as

"Woodend's Level". I wonder if the North West Water Authority is aware of this. Members of Cumbria Amenity Trust have strict instructions to leave anything alone that looks vaguely like an oak plug in any of the tunnels we may find! We retraced our steps to the main haulage level and followed it north past the tunnel we entered by. Sixty eight metres from here a short connecting tunnel on the left ran into the blockage at the junction we had dug our way in from, another 32 metres and the main tunnel ended at a major collapse which judging by the water coming through must coincide with a stope above. It appeared that the miners had long ago had trouble here and had attempted to shore up the roof with timber and railway lines which were still evident. So we were denied further access in this direction in our quest to seek the remaining extensive tunnels and workings on Top Level which run for at least another quarter of a mile beneath Brim Fell.

Nevertheless, we were very pleased to have discovered 220 metres of new workings on Top Level. The Boxing Day dig was declared a success. Tunnel T3 was not shown on the old plans but everything else corresponded fairly well. The scrap men had been thorough on closure and had left very little in the way of artifacts, but had they been beyond the collapse and what still remains on the other side - a row of wagons still on the rails? Who knows? We are still trying to find a way into the Top Level extension. If all else fails no doubt an attempt will be made to dig through the collapse.

Before leaving Top Level that day some members abseiled down the stope previously mentioned off tunnel T1 and landed on a floor 26 metres below. About 8 metres to the south of this point the top of Pinnacle Rock could be seen slightly lower in the continuation of the stope below. The point of landing must be directly over the final pitch of the Levers Water / Grey Crag through route. To the north heavy timbers spanned the stope which carried on beyond the range of our lights but progress was not possible in this direction - most of the floors having collapsed. On the old plans the words "Great Opening" are inscribed across this area. It was certainly one of the largest stopes we had seen. The other stope in the side passage off tunnel T1 was descended on the 29th January 1983 and found to be the continuation of the stope mentioned above, descending from Top Level and also to coincide with the stope with the twin tunnels on Middle Level. The huge ore body that had been removed must have given very profitable returns to the mine operators at the time. It was no doubt Paddy End Old Vein working that we were in.

On the 26th June 1983 the Red Rose Potholing Club became the first group other than CAT members to be shown through the Paddy End workings from Levers water down.

The problem of reaching the twin tunnels of Middle Level was tackled at last on the 25th September 1983, almost three years after we first saw them. The method we used is known as the "maypoling" technique, which consisted of erecting sections of scaffolding poles clamped together to form one pole 15 metres long. The bottom end was firmly wedged under rocks below the vantage point on the highest step in the floor of the stope. The other end was lowered from tunnel M5 with a rope into the left hand of the twin tunnels, which has a fan of malachite below it. The angle of the pole was about 55deg, hanging from the top end was 17 metres of electron ladder, which just reached the floor on the second step of the stope. When a volunteer was called for to climb this free hanging ladder with dubious anchorage, there was no great rush. Someone, with

little apparent sense of self preservation started up - actually he was an engineer and had assessed the stresses, bending moments, tensions at any given point and declared it to be "quite safe" if one was careful getting off at the top. The spectators watched every step. Flashbulbs went off to record the event, progress was swift and the top was soon reached. The maypole sagged as his weight transferred to the floor of the passage. A cheer echoed around the cavern. More flashbulbs. It was not exactly like the first man on the moon but good enough. We had a man actually stood in the twin tunnels of Middle Level. Someone had said it would be impossible to reach them. What lay ahead? The volunteer cautiously set off to find out. It did not take long - six metres and it ended in the blackness of the stope again. It had all been mined away. What an anti-climax. What a shame, for almost 20 metres ahead the tunnel could be seen continuing, but at that point it lay high above the floor of the third step of the stope, a vertical height of approximately 27 metres. There was nothing left to do but descend the ladder and dismantle the maypole. The new extension to Middle Level has hardly ever been talked about since, as it would be extremely difficult to handle or manoeuvre a maypole which would be long enough to reach it. There is still a good possibility that the tunnel can be reached from totally different part of the mine. Before leaving the big stope that day we decided to probe the hole at the end of the third step, which we had noted on the 30th November 1980. Two members abseiled down 36 metres into a tunnel which ran from a collapse to a blind end at ten metres. No bearing was taken but it would most likely be a section of Grey Crag Level on Paddy End Old Vein. They prussiked out and we all returned to the surface.

On the 2nd September 1984, we returned to the back strings at Levers Water to attempt the descent of the fearsome cleft in the ground just west of the crater (see surface plan). We call it "The Funnel" on account of the shape of the large hole surrounding it, which is made up of a great thickness of boulder clay. This hole, more than any other has changed dramatically over the last 30 years. It used to be just a small depression with an elongated slot at the far side. Now it is a yawning chasm which slowly swallowing up the surrounding fellside. In 1985 alone there have been noticeable changes. We had often wondered what would be down there and this was the day we were to begin to find out (see cross section No. 2).

Having made a secure belay, the first of the team of five descended the steep sides, clearing loose rubble on the way and abseiled over the edge to land on a massive pile of jammed blocks. The vertical descent from the belay being only 16 metres. To the north of this point a black hole went down heading under Levers water. Going the other way to the right of the jammed blocks a clear descent line was found, where a direct abseil from a bolt and hanger could be made straight down the continuation of the stope. It proved to be a long way down. A second rope had to be added to the first in mid-flight, the knot proving troublesome to those that followed. The bottom was reached at 54 metres. The descent was clean and sound with solid rock walls. A tunnel was spotted entering the stope a third of the way down on the right, but it would not be easy to reach from the line of descent. At the bottom a boulder slope went steeply down to the North West whilst the other way a high pile of loose rubble reached up beneath a timber platform and blocked the way. This was partially demolished by the first man down awaiting the arrival of the rest of the team. A further bolt was placed and a rope let down the far side of the rubble pile which sloped down to a hole. This was descended through very unstable collapsed material which had to be partially cleared en route. On the way down a half hidden tunnel was noticed

running off either way, but again access would be difficult. It has since been realised that they are in fact part of the Middle Level extension, but so far no attempt has been made to enter them. It would only be achieved with a maypole from below. After 22 metres, the bottom was reached and we found ourselves at the northern end of a very large stope which unknown to us at the time was part of the same one we had abseiled down from the surface and very soon something else dawned on us. We had barely started exploring around when someone said "I've I been here before!" It was the windy Stope which had been entered on the 24th January 1982 from Top Level, tunnel T4. So now we knew where the connection to the surface was. No wonder it was "windy" with the funnel up there to draw the air.

We decided to explore the bottom of the stope more thoroughly than last time and this resulted in the discovery of the square "tube" mentioned previously. Owing to lack of extra rope, this was not descended until the 15th December 1984 and it led into a whale-shaped chamber beneath the floor of the stope above. The roof consisted of large jammed blocks and the end was a blank rock face with a heavy iron chain hanging there. There was no further way down, which was a disappointment as it must have formerly connected with Paddy End Old workings on Grey Crag Level. At this point we were about 120 metres below the surface. It could not be more than another 15 metres down to Grey Crag Level.

Back now to the 2nd September 1984. After exploring around the bottom of the windy Stope we prussiked out up the 22 metre pitch which was the same one we had avoided on the 24th January 1982, whilst abseiling down from tunnel T4 At that time we described it as a sandy, unstable, egg-timer hole. Having reached the bottom of the big pitch once again, we set off down the North West end of the stope passing beneath some loose rubble, which seemed to defy the laws of gravity. The way down was steep and rocky. At the lowest point the floor was choked with clay from the surface and gave the impression it would flood in wet weather. Scrambling up the other side we soon emerged into a chamber. Straight ahead the steep slope ran up to the roof at what appeared to be a blocked ore pass. Overhead, above our point of entry a tunnel was seen with rails sticking out of it. This was most intriguing. What was up there and where did it go? The tunnel was 8 metres above the floor in an undercut wall. There was no way we could reach it that day. About six metres across the wall to the left there appeared to be a narrow stope running south east. The bottom of it being piled with rubble. This could mark the line of another tunnel, which would fit in with the plans.

Six months were to elapse before we returned to this chamber on the 24th March 1985, equipped with scaffolding poles and electron ladder. An 8 metre maypole was erected with ladder attached. The tunnel was soon reached and all six members present gathered there eager to explore. An old oil can lay fused by rust to the floor. After ten metres a short side tunnel went off to the right. The odd broken drill lay about. The railway lines were followed along the main tunnel which ran straight in a south westerly direction. Stress fractures were noticed in the walls. After a further 50 metres we came to a collapse. Despite having little to dig with we started clearing the left hand side and eventually we could see through into a passage. Our smallest member crawled through and was immediately sealed in when the gap ran in. Once again it was cleared and the rest got through into the passage which had very heavy timbers supporting the roof. We guessed there was a large stope overhead. The passage ended very

soon at another collapse but in the floor a square hole gave us a view down into a large chamber. The floor was about ten metres below and half the area we could see consisted of a deep crystal clear pool of turquoise water. When, we wondered, did human eyes last look on this spectacle? The fact that the chamber was not full to the top suggests there is a connection with lower workings on Grey Crag Level, but as we did not have time to descend into the chamber it was not proved. It has been left for future investigation. We returned to the surface and on studying the old mine plans we identified our new tunnel as a cross cut on Middle Level and the blockage we dug through was in fact a four way junction with further workings ahead and to the right. Also, directly below the turquoise chamber, is a branch of Grey Drag Level. It is certainly an area which requires further exploratory work.

To date, the only other occasion the funnel was entered was on the 17th November 1984 when an attempt was made to follow the steeply sloping shelf which runs along its left hand side. It was necessary to clear a lot of rubble to make progress until eventually the shelf ended whilst the stope carried on into the darkness. At a point directly above the tunnel first seen on 2nd September 1984, which enters the stope a third of the way down, two rock pitons were driven into a crack and a member abseiled quickly down to the tunnel. He abseiled too quickly, because on braking at the tunnel mouth one of the pitons came out. It was a heart stopping moment to see if the other piton would hold. There was a long drop to the bottom right through the egg-timer hole. Luck was on his side and the piton held, but it was a close call.

The tunnel was gained but alas turned out to be blocked by a collapse after a few metres. It is possible that the tunnel formerly connected with workings in the Arête Chamber area.

A week previous to this on the 11th November 1984 a group descended the now well established through-route as far as Middle Level and made for the Deep Stope on South Vein at the end of tunnel M2. We knew this went all the way down to Deep Level one hundred and twenty metres below and that it intercepted the branch of Pudding Stone Level where the floors had collapsed. The object was to reach the Pudding Stone / Grey Crag Level via this stope and see if there were any other intermediate tunnels on the way down. Having made secure belays our senior and most experienced SRT exponent set off down and soon disappeared from view. Unfortunately there was a lot of condensation suspended in the air that day, which reduced visibility dramatically and nothing interesting was seen.

By now other members, by abseiling down the normal route had reached the place where in theory he should emerge in the tunnel below. They waited at the edge of the collapsed floor where the rails projected. It soon became evident by voice contact that he was around a corner well along the stope. This called on all his ingenuity to try and pendule across and traverse where possible to his right using anything and everything available - cross timbers, knobs of rock, tallow candles, the lot. When he came in sight he was lassoed cowboy fashion and hauled across a rock face to the safety of the Pudding Stone Level. He was followed by another, younger member, who arrived in a state of shock and was last seen slumped speechless, like a discarded tailors dummy, in a corner. (The Old Uns can't be beat in a difficult situation).

Whilst the de-rigging of the pitches went on, two other members descended Paddy End Shaft through the Manhole and explored around the large stope at the bottom to assess the chances of getting into Deep Level. It did not look very promising.

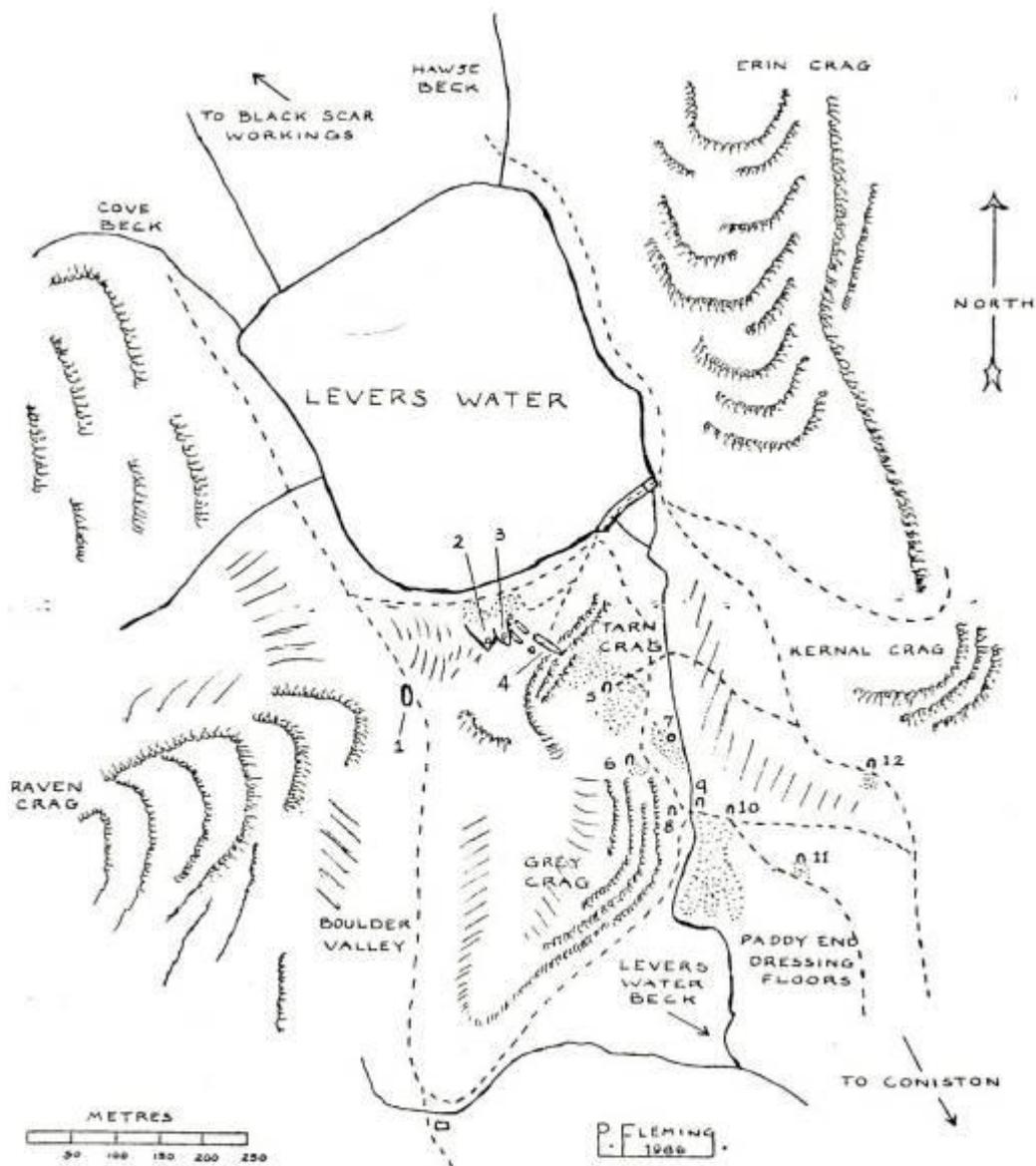
On the 10th March 1985, we returned to Middle Level where, a few metres beyond the Green Pool, it is possible to enter an opening on the right and scramble into a stope (see Section 1 on Plan No. 2) A maypole was erected to reach the higher regions. Some short tunnels were found which entered further stopes, which are still awaiting more thorough exploration. No workings are shown in this area on the old plans.

A month later on the 20th April 1985, on the occasion of a CAT meet, the big ledge halfway down the final pitch of the Paddy End through route was investigated. The stone wall was scaled and the collapse behind it was also climbed but there was no way on through the large roof fall. This working may coincide with the upper part of the stope on Grey Crag Level also containing a large roof fall. A maypoling exercise at the junctions of tunnels T3 and T4 on the 13th July 1985 proved that the overhead stopes here were blind.

In concluding Part II of Coniston Mines Rediscovered, mention must be made of a most important find in November 1984 which will be fully covered in Part III. This was the discovery of Levers Water Mine and its subsequent relationship with Brow Stope which is still being explored. To date no connection has been found to provide a direct link between these workings and those of Paddy End covered in this report, but we know that Top Level intersects Brow Stope and we are actively trying to reach it.

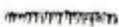
LEVER'S WATER & PADDY END AREA

SHOWING IMPORTANT MINE FEATURES



1. BROW STOPE
2. THE FUNNEL
3. THE CRATER
4. SIMON'S NICK
5. TOP LEVEL
6. MIDDLE LEVEL

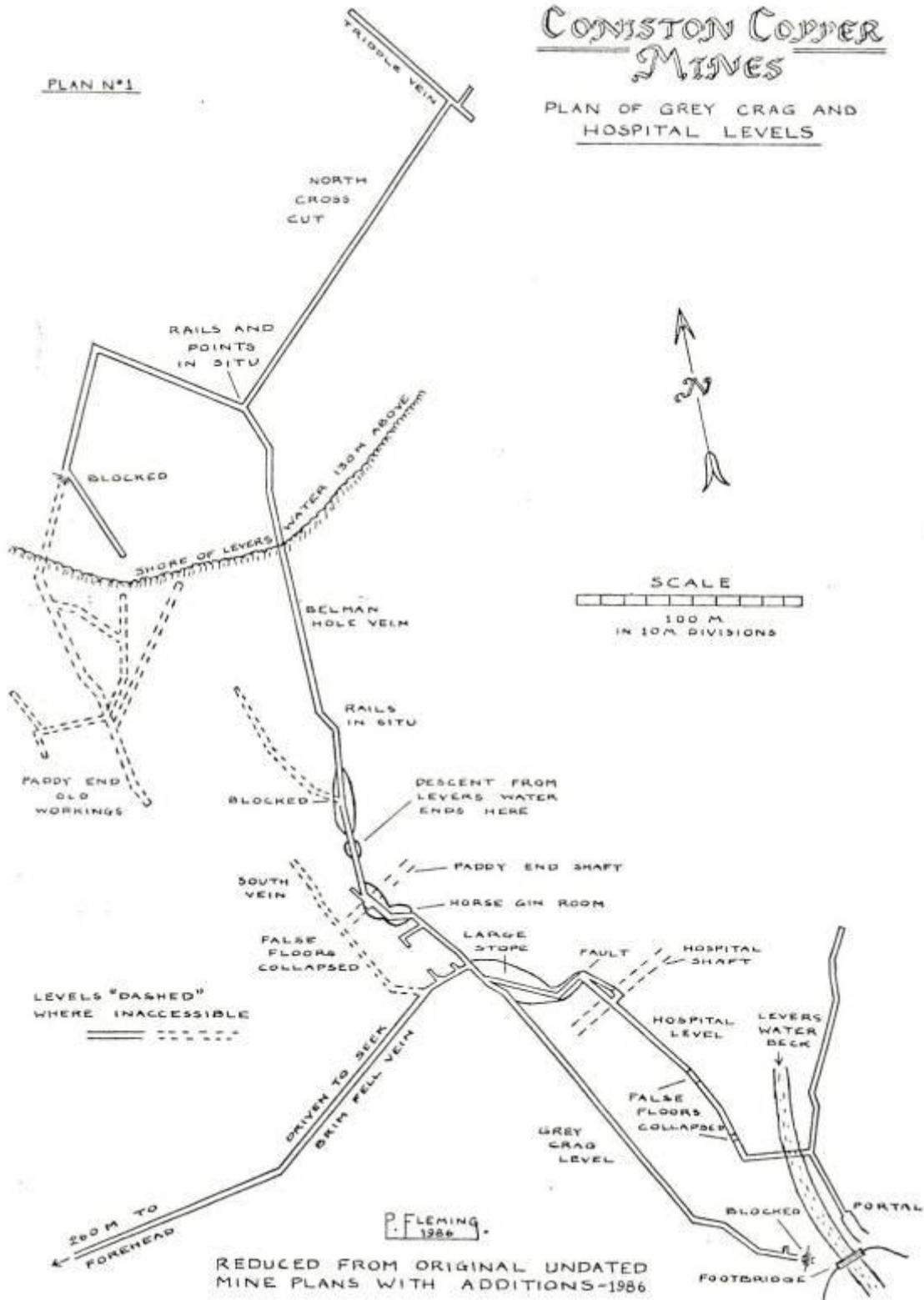
7. HOSPITAL SHAFT & GREY CRAG LEVEL
8. HOSPITAL LEVEL
9. COURTNEY'S CROSS CUT
10. GAUNT'S LEVEL
11. PADDY END DRESSING FLOORS
12. KERNAL LEVEL

- TRACKS -----
- BECKS —————
- CRAGS 
- SPOIL HEAPS 

CONISTON COPPER MINES

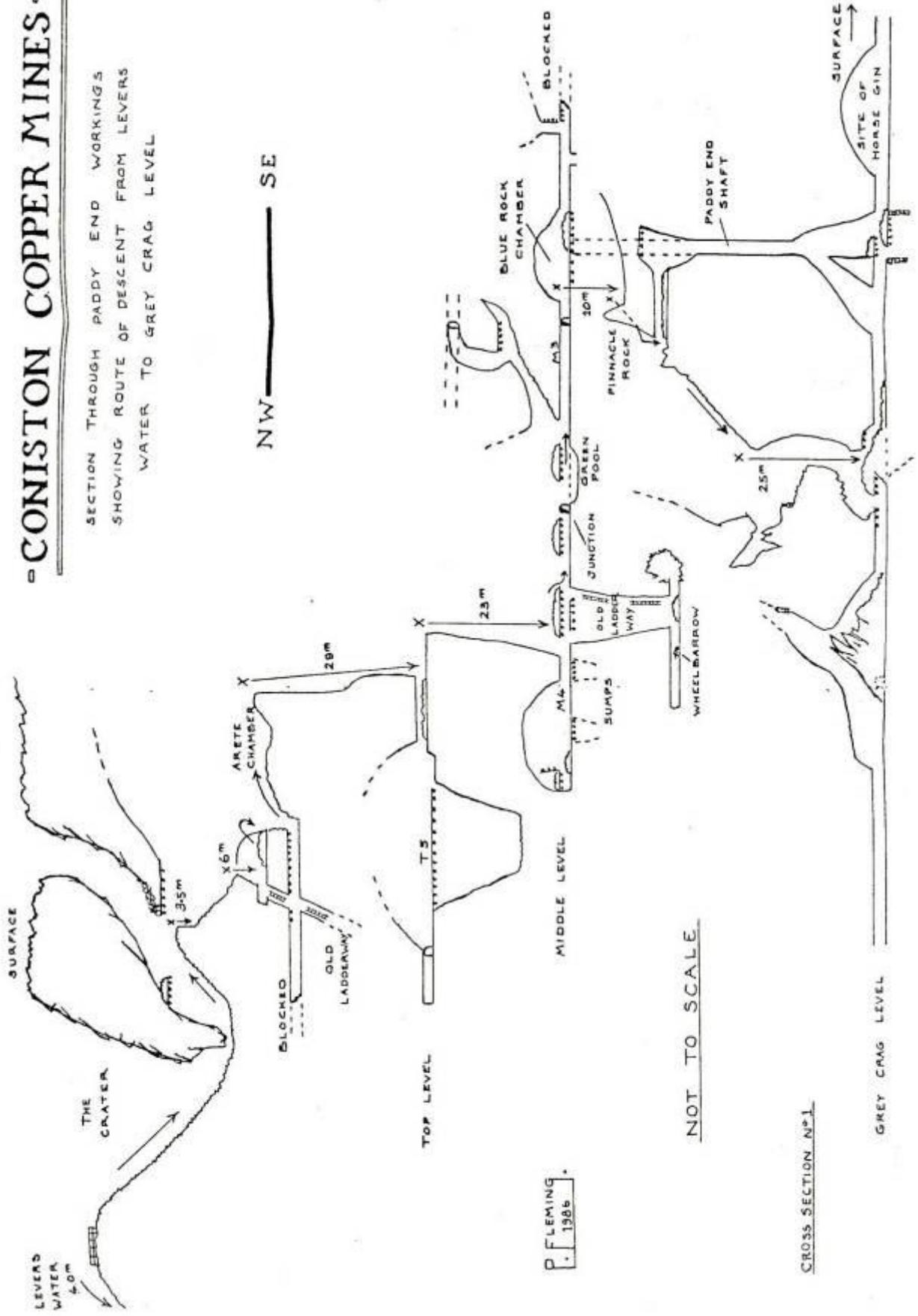
PLAN OF GREY CRAG AND HOSPITAL LEVELS

PLAN N°1



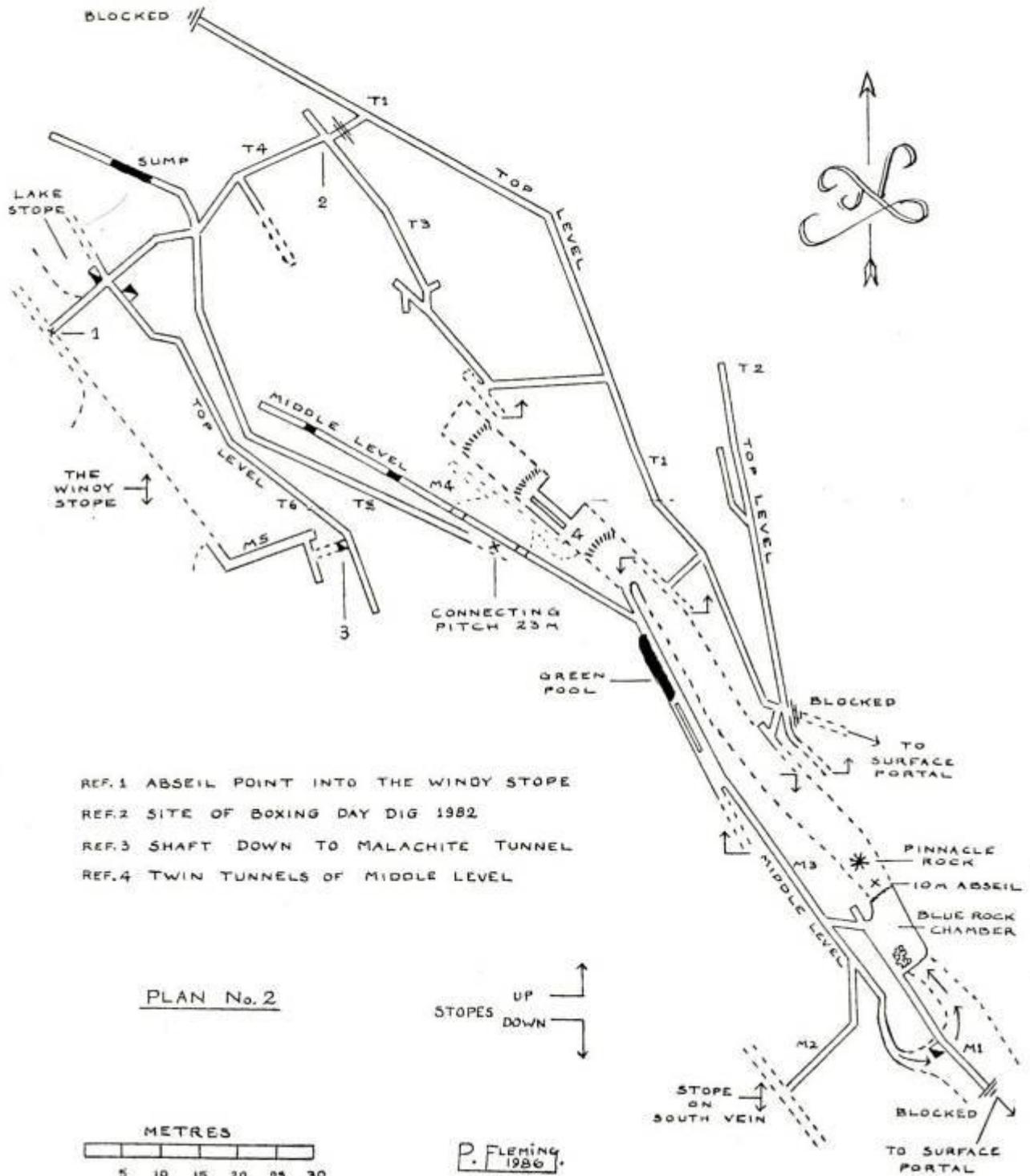
CONISTON COPPER MINES

SECTION THROUGH PADDY END WORKINGS
 SHOWING ROUTE OF DESCENT FROM LEVERS
 WATER TO GREY CRAG LEVEL



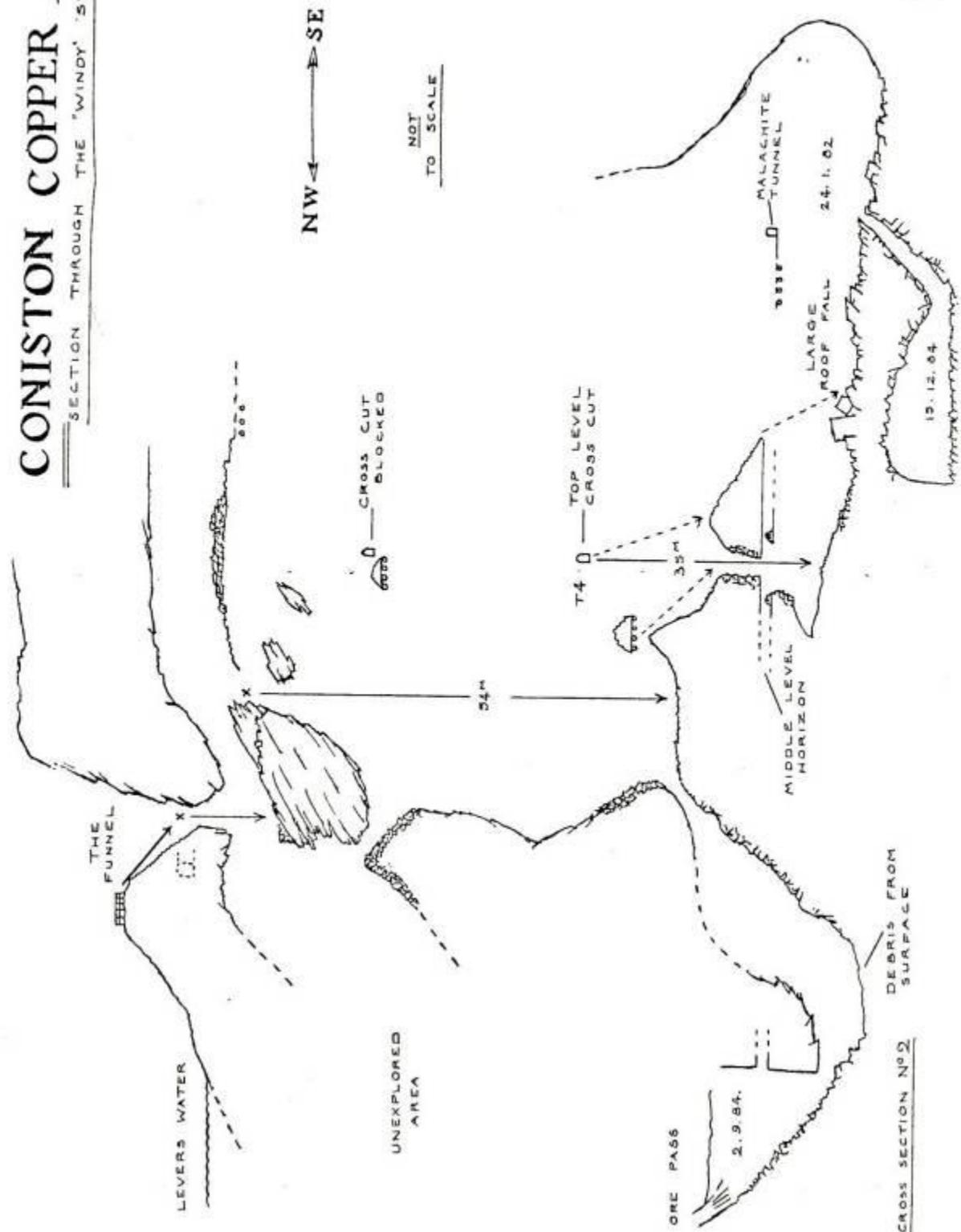
Coniston Copper Mines

PLAN OF THE ACCESSIBLE PARTS OF
TOP LEVEL AND MIDDLE LEVEL



CONISTON COPPER MINES

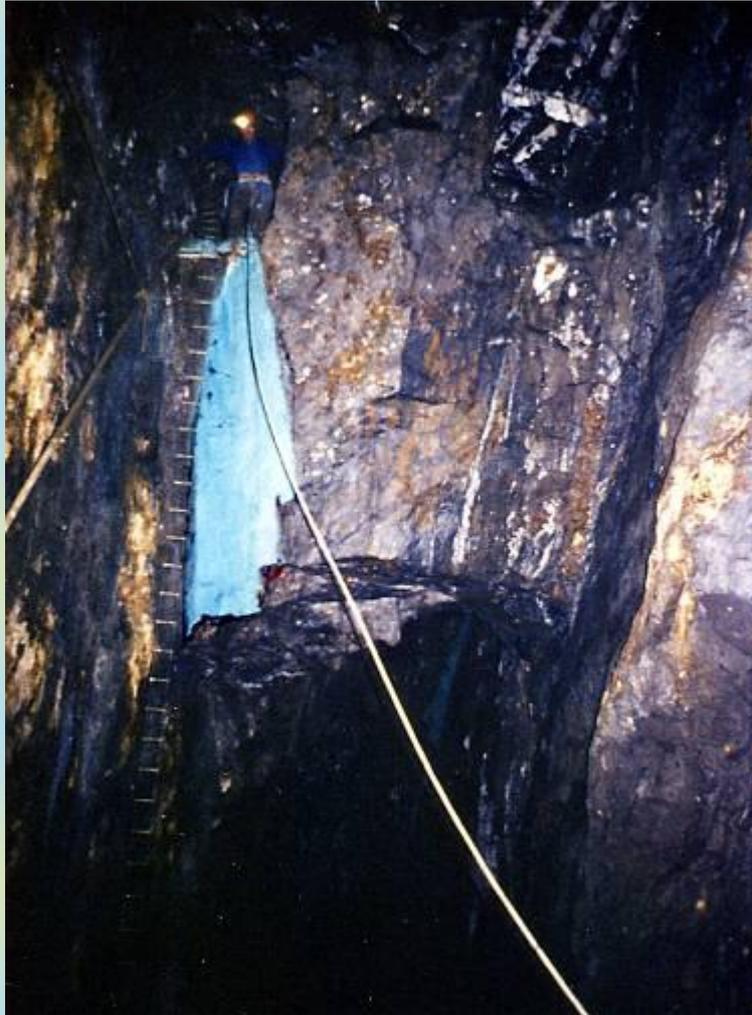
SECTION THROUGH THE 'WINDY' STOPE



P. FLEMING
1986



Reaching the "Twin Tunnels of Middle Level" in 1983 showing the extended scaffold "maypole" and electron ladder. Plan No2 ref.4.



Closer view of reaching the "Twin Tunnels of Middle Level" in 1983.
Plan No2 ref.4.



The 23 metre shaft which led to the discovery of the “Green Ginnel” in 1981. Plan No2 ref.3.



The “Green Ginnel” first discovered in 1981. Plan No2 ref.3 M5.



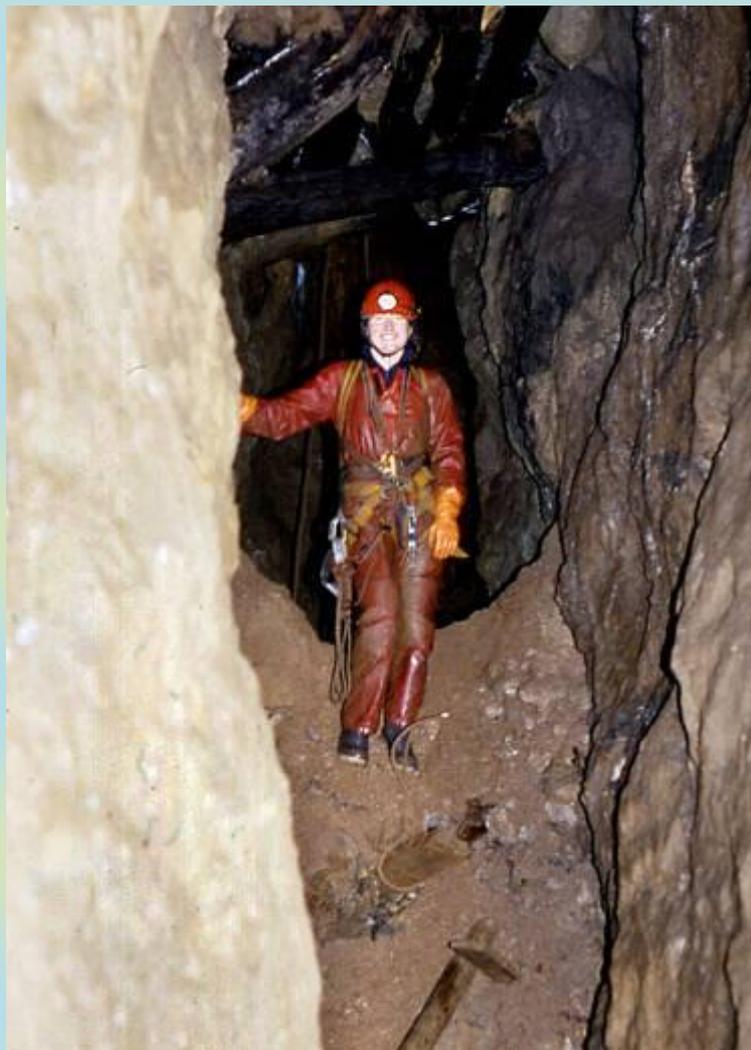
Descending the 23 metre pitch from Top Level to Middle Level on the Through Route from Levers Water to Hospital Level. The trip was first completed in 1980. Cross Section No1.



The “Green Pool” in Middle Level which is passed when completing the Through Route from Levers Water to Hospital Level. Cross Section No1.



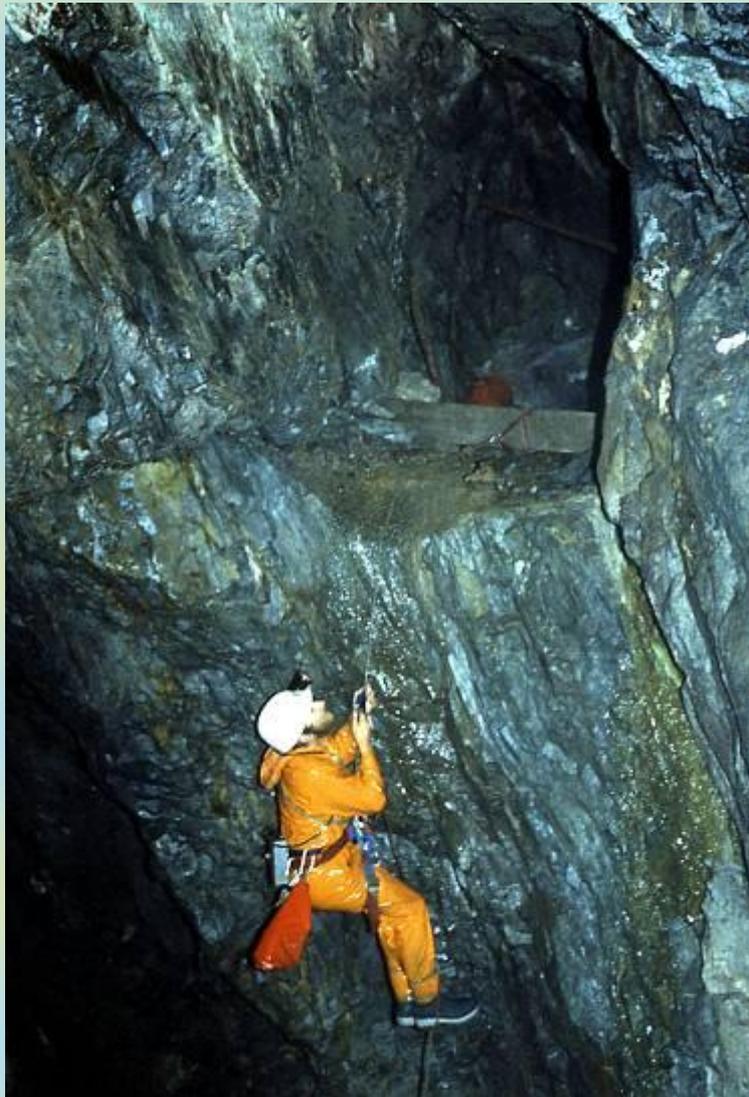
In 1984 it was decided to descend the fearsome cleft known as "The Funnel" which is located within the "Crater." Cross Section No2. Photo© Mike Mitchell.



About to descend to the lowest point of the Funnel. Behind is the "Eggtimer" pitch. Cross Section No2.



Two explorers emerging from the lowest part of Windy Stope into the chamber below Middle Level. Cross Section No2.



Prussiking into the most remote section of Middle Level from Windy Stope. It was first reached by "Maypole" in 1985. Cross Section No2 (2.9.84).