

NOTES...2010 .jw: This article was published in "*Mine Explorer 3*" in 1989 (*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 3 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 COPPERMINES RE-DISCOVERED

By Peter Fleming

PART III

INTRODUCTION

The following record of explorations should be read in conjunction with the three plans and two cross-sections which appeared in Part II of this series

THE EXPLORATION

We had no reason to suspect that there was a mine driven from the shores of Levers Water other than the obvious workings we had already explored, so it came as a surprise on the 17th November 1984, when Levers Water Mine was re-discovered, almost by chance. A team of Cumbria Amenity Trust members were doing some research below the funnel within the fenced off area close to the tarn. One of the group remained above to keep an eye on the abseil rope. To pass the time he began to enlarge a hole which had appeared only recently in the clay bank on the right hand side, looking down. Before long he could shine a light into it and see a tunnel leading off but full of water. This spurred him to greater efforts and soon a copious flow of water was pouring down the funnel, washing everything loose before it and falling in a great cascade down the 60 m pitch; much to the consternation of those below. The noise created by this 'mini-Niagara' made communication difficult. After about an hour, with no sign of the water diminishing, the companion, who had set it off re-belayed the ropes to a new hanger to allow those below to prusik out without getting soaked. Soon all four of us were watching the torrent racing over the edge of the funnel. By this time there were anxious thoughts about Levers Water itself. Had they breached it in some way? What would the North West Water Authority say? Would Coniston village be awash? No one dared to go and look. It was two hours before the water began to subside and it was obvious we had un-watered something which was extensive.

We enlarged the entrance and scrambled in. The water was now only a foot deep. The tunnel ran due south and after 32m entered a worked out vein overhead with a sump to the right. Climbing the stope it became more interesting. First there were straw stalactites of iron oxide up to 1m long and only 10mm thick and also stalagmites. Then a whole wall of colour, ranging from all shades of bright blue through to green and white. This was formed by copper carbonate, leached from the vein above by water percolating from the surface and resulting in this secondary mineralisation.

Continuing along the main tunnel a right hand branch below mores stopes led us to another colourful spectacle. The floor on the continuation of this tunnel was the most beautiful pale blue, shimmering below 10cms of water. We could see about 13m along this 'blue passage' as we called it, but we decided not to disturb it until it had been recorded on film. However we were very curious to know

where it went. We followed the main tunnel again for another 41m to another right hand branch, where the mud on the floor was covered with miners clog marks. 19m further was a hole in the floor to the right containing the remains of a ladder and nearby lay old detonator boxes, fusewire and an old wooden pricker. Moving left brought us into a small stope with a 5 m ladder against its side. It was in sound condition and safe to climb. Carved on its side was the legend "C.M.Co." (Coniston Mining Company). Nearby were blue and white stalactites and associated stalagmites, also a bat in hibernation and there were tallow candles everywhere the place was wick with them!

We were by now surprised at the importance of our discovery, which was not shown on the old Coniston mine plan we had at that time and therefore not expected - and we had not seen all of it! At the opposite end of the stope from the ladder a collapsed floor revealed a gaping hole of great depth. Stones thrown into it took an incredible 23secs to come to rest. It was later proved that they rolled part of the way giving no true idea of depth.

We made our way out to surface where it was dark by now and decided to come back as soon as possible to survey (see plan 4) and photograph the mine and at least finish exploring the easy parts. Eventually we found that Levers Water Mine was first driven in 1840 and started from a cutting within a few feet of the tarn, the collapsed remains of this being still visible.

The Coniston Mining Company was operating over the period from 1870 to 1891, which indicated that the ladder must be at least 98 years old (at the time of writing). In addition we had noticed some old sacks which had been used for carrying out ore when the mine was last worked in a small way around 1908 and since then no-one had entered this part of the workings.

We returned the following Saturday to carry out a survey and make a photographic record. The blue passage was entered, 13m along it turned right and soon came to a four way junction. The right branch was partially stoped away with a timber platform overhead, staked with waste rock. This tunnel was blind after 8m. The left hand branch ended after 13m in an alcove filled with a blue pool and flowing into it from the walls was a static cascade of intense blue and green copper carbonates. It was a most beautiful sight - an Aladdin's cave of colour. It is hoped that this will remain undisturbed. There is no reason why it should not. It was named the "Blue Lagoon".

Returning to the junction and turning left, we came to another offset four way junction. Parts of the floor were false and gaps in the floor gave glimpses into a deep stope below. Straight ahead the tunnel was partially backfilled. To the left, passing over a manway with a ladder below, the end of the tunnel was reached after 14m. Another bat was found hibernating here. Back at the junction and turning right, the floor had collapsed after 11m, leaving a deep stope curving away out of sight. It was suspected at this time that this would connect with the Brow Stope at the surface, providing access for the bats. This was later proved to be correct (See plan No. 3 and section No. 3).

On the 15th December 1984 an attempt was made to descend the deep stope near the C.M.Co. ladder. This soon proved to be fraught with problems. The stope was made up of steeply inclined rubble slopes with vertical pitches in between. It was impossible to avoid triggering off avalanches, which shot over the vertical sections with a great roar to disappear into the depths below. At the bottom of the first slope a wide stress fracture could be entered which served as a take-off

point for the vertical 20m pitch which followed. At the base of this a short tunnel could be entered to escape the bombardment of rock while other members descended. Then followed another long steep rubble slope. Bolts and hangers were fitted in the walls and the next vertical pitch was descended. Further progress was terminated due to objective dangers, but a total vertical descent of approximately 65 m had been made from Levers Water mine. We christened this dangerous place "The Avalanche Stope". Whilst these deep explorations were taking place another team were busy with a video camera and floodlights recording the interesting and colourful ramifications of Levers Water Mine.

Twelve months were to elapse before a solitary member reached the bottom from the previous low point in Avalanche Stope on the 22nd December 1985. This descent started with an alarming incident. The leader had just reached the bottom and was followed down by another member to the fracture 20m up. When the third man started down the first slope a large area of it started to move down. Soon a considerable avalanche of rock, rubble and old timber was heading straight for him. Those members above were powerless to assist and watched in horror, believing that if the rope was not severed he might escape with cuts and bruises. Somehow he had penduled to the one side and escaped the worst zone of danger and when the noise of the rockfall subsided we were relieved to find him unharmed. Below, the avalanche poured over the head of the member crouched in the fracture, whilst the man at the bottom ducked into the short tunnel only to see to his horror the opening start to fill up with rocks from above which eventually subsided. Despite this close call and requests to abort the descent, they decided to carry on down and with some assistance from the others at the previous low point; one member reached the bottom which was choked with rubble giving no access into other workings. It is difficult to estimate the total vertical distance descended but it would be in excess of 100m from Levers Water Mine. It seems very likely that it formerly connected with the main haulage way on Grey Crag Level some 125m below otherwise the stope would have filled with water. Two thirds of the way down, what appeared to be a level floor went off to the north and could be connected to another part of the mine, but this was never investigated.

Brow Stope has already been mentioned in passing. This is the fenced off hole on the brow of the hill below Raven Tor (see surface plan in part II of this series). Prior to the 19th August 1984, no attempt had been made to descend this hole, which was known to be very deep. The hole marks the point where a rich copper vein came to surface and depending on which mine plan is studied or how they are interpreted, it could be one of the Paddy End Old Veins or the New Veins. The small hole at the surface belies the extent of the underground workings we had yet to explore. The first descent was successful in reaching the bottom at approximately 85m, the landing point being on a huge pile of collapsed rubble 38m long and 10m high. The descent involved three vertical pitches and two steep slopes (see section No. 3). To the south east, at the base of the rubble, it was possible to enter a short blind tunnel, later identified as the end of a drive on Middle Level containing a shaft and the turquoise pool we were to discover later on 24th March 1985, an account of which is recorded in part II. Another piece of the Coppermines jigsaw was slotted together when we realised that the 4th May Junction on Middle Level was directly below the base of the Brow Stope. At the north western end of the stope an old ladder stuck out of jumble of fallen blocks with a heavy chain overhead and in the corner nearby was what appeared to be a blocked ore pass. Owing to the discovery of Levers Water Mine shortly after this, Brow Stope was not entered again until 3rd February 1985, when an alternative line of descent was discovered. Starting behind the detached pinnacle

at the base of the entry pitch, a descent led into a very shattered zone where it was possible to free climb down a narrow fissure which became tight at the bottom. This brought us into an open area, where high up above, the stemples could be seen that once supported the floor of a tunnel, which at the time, we did not realise was tunnel L6 in Levers Water Mine (see Levers Water Mine plan No. 4). The next section involved a 10m abseil into a sloping passage followed by an acute pendule into a tunnel directly underneath containing a wheelbarrow and numerous hand drills. Then came another 10m abseil to the base of a rubble slope. This slope was descended to the bottom of a long ladder going up through two false floors, but this was not safe to climb. Continuing the descent, an 11 m abseil and a short scramble brought us to a tunnel running into a collapse beneath a false floor to the south east where two old ladders were stowed. We thought perhaps the tunnel might be part of the Top Level system, but later, from measurements taken we realised that it was too low to be part of that horizon. At the north western end of the tunnel, where the stope bends 80° to the left, a 7m ore chute, followed by a 14m abseil landed us at the bottom of Brow Stope again. The two routes described to descend the Brow Stope have been linked two thirds of the way down by a series of traverses.

It was not until 26th May 1985 that the connections between Brow Stope and Levers Water mine were proved, when we abseiled from tunnel L5 down to the ladderway and discovered it was the same ladder that had been reached from below on the 3rd February 1985; as noted in the previous paragraph.

The description of the Grey Crag / Hospital Level system in part II, refers to the theory that part of the floor was false. This was put to the test in February 1986, when the project commenced. A lot of rubble and timber were either removed or shored up in order to make the area safe to work in. The following Sunday, 16th February, further clearance work was done which revealed an iron trap door, solidly rusted shut. The water draining along the level disappeared down around the door and a light shone around the gap revealed a ladder going down into the depths. It was an intriguing discovery but another week elapsed before it was possible to gain entry with the assistance of oxy-acetylene cutting gear. A rope was lowered and three members abseiled through the cascade of water into the large stope below. It was thought it could be the same stope as the one in Paddy End shaft below Grey Crag Level not far away, but no connection was found. The bottom was reached after 55m and was piled high with rubble. Once again we had been denied access to Deep Level, but high in the stope, to the north, was what appeared to be a sub-level which would correspond to the one shown on the old plans. The most interesting discovery was a complete ore wagon partially buried in the rubble above the base of the stope, the first to be found in the Coniston Mines. It was of an all steel construction and appeared to be an end tipper. There was no way it could have come from Grey Crag Level so we assumed it must have come from the sub-level. To date this stope has not been re-visited and no attempt has been made to reach the sub-level.

Apart from a couple of attempts to gain access to the 'missing' parts of Middle Level, little else was done in 1986 until the 26th December when a C.A.T. meet was arranged to closely examine the Simon's Nick area at the surface. It had long been suspected that the 'Nick' had a false floor as it holds no water, but despite much hard work we were unable to prove it'. However we did find the remains of a jackroll windlass, again the first at Coniston. By now it was snowing and a bitter wind sprang up which caused most members to depart for the warmth of their homes but four stalwarts decided to have a look into the narrow section of the Open Stopes, the north west continuation of Simon's Nick.

It was also assumed that it would be sealed at the bottom and lead nowhere but how wrong this assumption proved to be. We were on the verge of a major discovery in the Coniston mine saga which created an resurgence of interest in the mines and took up a lot of our free time in the early part of 1987.

We descended a rubble slope to a false floor and 2½m below this was another floor, in a dark corner underneath, a gap or manway led down a steep, rocky slope. At the bottom was a shaft with the remains of a ladder in it. We were surprised by the discovery and no-one seemed to know why we had taken so long to go down there.

We had not brought very much gear, not having planned to go underground but we did manage to rig up enough rope to abseil down this shaft which passed some shaky looking false floors and landed us at 14m next to a jackroll, still in position over a flooded sump (see plan No. 5, ref No. 5 and also section 5b). Going down the inclined floor of the stope to the northwest via steps carved in the rock, we reached a tunnel. Overhead a colourful display of blue and green copper staining covered the walls, its origin a beautiful blue pool held in an alcove above. The tunnel had a false floor with a flooded sump beneath. Further ahead a 'T' junction was reached at a 'crosscut'. An iron 'pricker' was found here and nearby lay the decomposed remains of a small dog. A few metres to the southwest a stope ran SSE of which the bottom could not be seen. A few cross timbers (stemples) spanned the void and the vein could be seen in the roof about 15 m overhead. The tunnel continued south west to a blocked stope, which draughted. Going in the opposite direction to the north east, the tunnel ended at another stope with a steep slope of loose rock going down to the left (North West) and rising up to the right. Near the bottom there appeared to be a tunnel leading off. Owing to lack of time we did not pursue our explorations any further that day and prusiked out to surface well pleased with our new discoveries, which we believed were part of the Belman Hole Vein above Top Level. The most interesting features of the day were the two jackrolls, one still in situ. We therefore declared this to be 'The Day of the Jackroll'! An interesting coincidence lies in the fact that the four members who made these discoveries were the same four who discovered Levers Water Mine two years previously.

Two days later a team of six returned to investigate the stopes. It was a wet day and water cascaded down the shaft. A dig was started at the blocked stope at the south west end of the crosscut. We later found that this resulted in the bottom of the 'crater' subsiding at the surface, some 14m above. The rubble slope at the north east end of the crosscut was descended and found to be blocked at the bottom with loose stones.

We then decided to abseil down the stope with the stemples in and 22m down we landed on the 4 way junction on Top Level, where tunnel T4 and T5 intersect (see plan No. 2). Having found this new connection with Top Level it was easy then to reach the major blockage on the main haulage level (Tunnel T1), which we now guessed coincided with the choke of stones at the bottom of our newly discovered stope at the North West end of the Belman Hole Crosscut. We put our theory to the test by sending members to both sites and found we could communicate quite clearly through the collapse.

This was an important discovery, we now knew there was not a lot between us and a way into the extensive workings on the inner reaches of Top Level, which had evaded us for so long, but of which we were fully aware of from old mine plans. Before we left the workings that day in order to draw up plans for a dig

into the Top Level extension, one member gained entry, with some difficulty, into the tunnel previously mentioned, in the same stope above the dig site (see cross section No. 5). It was guarded by a loose wall of waste rock which was removed. The tunnel was partially choked but at the end, about 7m along, a colourful square cut shaft rose up about 10m through solid rock with water trickling down. It could not be climbed without the aid of a 'maypole', but there appeared to be a tunnel running off at the top in a North West direction which would take it off beneath Levers Water! This was an exciting revelation, were we on the verge of discovering the legendary oak plugs sealing the bottom of the tarn (see reference to this in Part II)? We left the mine that day with the prospect of exciting discoveries ahead.

On the 11th January 1987 eight members of C.A.T. returned laden with timber and other equipment to commence the dig at the bottom of the rubble slope and to pin back the slope itself into a series of steps upon which the loose rock from below, could be stacked. As the dig got deeper the hanging wall of rock was held back with stemples and boards. Good progress was made - 3 m of rock were removed that day. Whilst this was going on, some of the team discovered that the stope with the 22m abseil connection with 4 way junction was in fact a stope common to the Arête Chamber system and a connecting passage some 4m higher could be seen on the other side. Entry by this new connection was affected with some difficulty on our next visit on the 25th January 1987, by abseil first from the Arête Chamber side then a prusik up to the crosscut on the other side. Seven days later three members fitted five new cross stemples in addition to the original four which spanned the gap which made it possible to stride across the void clipped into a safety rope with no need to abseil or prusik. This is now known as MAGs Catwalk, from the initials of the three members who placed them in position (see ref. No. 3, Plan 5). This route was immediately adopted as being the quickest and safest way into the Belman Hole workings and the Top Level system.

On the 25th January, a Land Rover loaded with timber was driven up to Levers Water and the timber laboriously manhandled down to the dig site, where work commenced once again. In the meantime a 'maypole' was erected in the 10m shaft above the dig and a tunnel was reached. An old wheelbarrow and rubble held back the water which was waded through for 20m and there a wooden barrier completely sealed the tunnel which was heading below Levers Water. We had found the legendary oak plug sealing the bottom of Levers Water!

We treated the old barrier with great respect and thought smugly of relating this to those people who, doubting its existence, had laughed at the idea of Levers Water being sealed by an oak plug. We have no idea how long the 5ft. by 4ft. barrier has been there, the earliest reference to the level of Levers Water being raised by a dam can be found in Alfred Fell's book "The Early Iron Industry of Furness", page 196, where he refers to "making of dams at levers Water and Low Water and timbering of floodgates and sodwork", etc., in 1713. It is unlikely that the oak plug is this old, however, but it must be well over 100 years since it was fitted. The large spanner used to tighten the nuts in the plug was still leaning against it. We gave this level the appropriate name 'Woodend's Level' as it almost corresponds with one bearing this name shown on old plans.

Above the wheelbarrow yet another shaft containing a ladderway rose up a further 13m. This was ascended 5 weeks later on the 2nd and 3rd of May. At the top a short tunnel ran into boulder clay, which we estimate must have come to surface on the shores of the tarn, close to the Levers Water mine portal. This

must have provided access to the men who installed the barrier. In the short tunnel we found two 18in. chisels with square tops and a clog.

The team returned down the shaft to join the others at the dig, which was now almost 6m deep. Time was getting on and some members left but we knew a breakthrough was imminent and despite having run short of timber we succeeded in uncovering the roof of the tunnel. Very soon entry was gained to the Top Level Extension (a long held ambition realised). Apart from a minor blockage 40m further on it was discovered, after a hurried examination of the workings, that the whole of Top Level was open right to the end - over 500m from the dig. In addition, there were other side passages and stopes, many interesting artefacts but detailed exploration was left for another day. It was 9.30 p.m. before we reached the surface to a bitter, starlit January night on the shores of Levers Water where our harnesses and clothing froze instantly, making it difficult to remove them or open carabiners.

The 18th February 1987 was earmarked for the first detailed exploration of our major new discovery (refer to plan No.'s 3 and 5). Seventeen members entered Top Level Extension via the new approach from Arête Chamber across MAGs Catwalk. Some ascended the colourful maypole pitch to see the oak barrier at the end of Woodend's Level. The remainder, including a group with a video camera and lighting to record the event, carried on into the new workings. A bat was noticed shortly before reaching the minor collapse which originates from an area of decomposed shaley rock (this was later cleared by a small work party on 8th October 1987). At this point the tunnel turns south west and runs through solid rock for over 100 m and at the end a pile of rubbish almost blocked access to a stope. We found two ore wagons here, partially buried. One was in good condition but in danger of falling through the floor on which it was standing, the rails and floor to the left of it had already collapsed.

The continuation of the tunnel was reached after placing a safety line across the hole. In an alcove were the remains of a clay pipe, a water flask and a wooden box. 25m along the tunnel a side passage was entered from the left and on the floor at this point was a dismantled jackroll. This was later assembled in a wider part of the workings for the benefit of photographers as a permanent exhibit. The side passage had a shaft in the floor, presumably where the jackroll was mounted and used. Also nearby was a sheaved winding wheel and an old clog. Following the side passage we came to a highly stressed zone where the wall to the right was breaking away leaving a jagged opening, this gave a view into a large deep stope. The floor of the passage had cracks running along it and towards the end round a 90° bend more cracks were opening up in the roof and the walls. A deep and narrow stope marked the end of the passage, which we named "Earthquake Passage".

Returning to Top Level, the main tunnel soon reaches another junction from the right here the entrance to a side passage has been partially backfilled. However this can be limbed over into the passage itself, which extends for 40m and contains numerous small artifacts. At the entrance to this passage, a stope runs off to the north east and in it a climbing chain hangs from a working platform high in the roof. It probably marks one of the last working areas in this part of the mine. It was ascended on the 3rd May 1987 and eventually drops down to water at about 18m. This working is an anomaly as the vein runs NE - SW which is at variance by 180° with most other veins in the Coniston mines. We called it the 'Chain Stope' and it stops just a few metres short of intersecting the ore wagon stope.

Not far beyond the backfilled junction, the main passage widens out and this is where the jackroll was re-assembled. To the right is another side passage which displays an interesting vein of erythrite or cobalt bloom. It is recorded that in 1885 Cobalt was mined at Coniston and perhaps this was the place.

Top Level then continues for a further 360 m in a south west then a west south west direction only with short side passages here and there. It ends deep beneath Raven Tor and Brim Fell with no sign of ore. Towards the end are long lengths of square section wooden ventilation trunking still in position on the walls and where it crossed the tunnel roof at bends, short cast iron connections were made. In the absence of evidence of to show what provided the forced draught, there being no running water anywhere near this part of the workings to provide a waterblast, it could be assumed it was a hand operated fan. Other minor artifacts were found here including shovels, clogs, water flasks and tallow candles. Various types of rails and chairs are still in situ along the floor of the tunnel with points here and there.

Having explored all the easy workings we turned our attention to the shaft in Earthquake Passage and the stope at the end which we believed to be Avalanche Stope coming down from Levers Water Mine. Holes were drilled; bolts and hangers fitted allowing one member to abseil 26m. Time was running out so the next pitch was not descended, leaving the probe inconclusive. Meanwhile the shaft had been descended and found to be 23m deep to a rubble pile in a tunnel which ran to the east for a short distance, containing the remains of another jackroll. This tunnel is part of the Middle Level system and ends at a collapse we later identified as the four way junction below the Brow Stope, which we had already been on the far side of.

At the bottom of the shaft, the remains of a partition or hopper are still in situ but the continuation of the tunnel in the other direction had been backfilled. A way through was cleared seven weeks later on the 26th April giving a flat out crawl into the bottom of the stope we had seen through the jagged opening in the side of Earthquake Passage high above. The stope was piled high with collapsed blocks and pinnacles of rock and it is possible to free climb up to the passage. We called this the Shattered Stope.

The day ended with an alarming incident. One member had been clearing loose rocks from the bottom of the hole beneath the ore wagon where there appeared to be a collapsed shaft. Suddenly there was a loud rumble as the loose rock on which he was standing subsided and buried him, leaving only his helmet showing in the rubble. Things looked fairly grim and at first there was no response to anxious shouts. A rope was lowered and soon he responded to questions. He was alright except for some minor cuts and bruises, a broken lamp and a lost wrist watch. He got his arms free and had to cut away some trapped gear with his pen-knife. Eventually he was hauled out through a small hole with the rope, but it was a lucky escape. The discovery of the Top Level Extension has added greatly to our knowledge of Coniston Coppermines and opened up so far a further 1000m of tunnels and a large selection of artefacts which should be left in situ for other people to see.

The ore wagon on the brink of the hole is worthy of description. It is similar to the one previously discovered in the stope below Grey Crag Level. It still stands on its rails on a section of false floor. It has a steel riveted body 2'6" high and 5' long with tapered sides and a door at one end, hinged at the top. It has handles

for pushing and pulling and close to its centre of gravity a square iron axle carrying two cast iron spoked wheels is fastened to the tub. Two radius arms, pivoting on this axle are connected to a floating axle under the closed end of the tub, an iron rod runs from the centre of the fixed axle and passes through a hole in the middle of the floating axle and then projects beyond the end of the tub. A ring suspended from a chain is looped over the end of the rod. When the ring is removed it is a simple matter to lift and tip the tub and its contents, which will empty out of the door end. It was decided to mount a rescue operation to clear the rubble from around it and renew the floor on which it is stood so that it could be shown to advantage as a permanent in situ exhibit. The work was started on the 25th March 1987 when the wagon was pulled clear into the side passage whilst a new timber floor was fitted and rails re-laid. The wagon was then replaced in its original position where it now proudly displays itself. Nearby in the same stope is another, more battered wagon, with a wooden chassis. It is probably an older one.

Between the two wagons is another deep hole and this was descended through unstable ground to the sealed bottom at 15m. It was believed to connect with the North West branch of Middle Level that leaves the four way junction beneath the Brow Stope. It was descended on the 29th March 1987.

C.A.T. returned to the Top Level Extension on the 19th July 1987 to descend the deep stope at the end of Earthquake Passage using a 100m rope. A steep rubble covered slope was reached after 45m. The slope led down to another short pitch and overhead at this point were some very unstable looking blocks resting on rotten timbers. We decided the chances of them falling in the next couple of hours were slim so we abseiled down to the next steep slope which could be scrambled down to the lowest point, estimated to be some 85m vertically below Top Level, equal to the distance down to Grey Crag Level. At the lowest point of this stope it began to turn to the north but progress was stopped by a 5m muddy blockage which could not be climbed. Stones thrown over the top could be heard to roll into water and it is very likely that this is the inaccessible part of Grey Crag Level. It was annoying, not being able to prove it but we were short of three or four climbing stemples to wedge across the stope. This was obviously not the so-called Avalanche Stope from Levers Water mine but a completely different one. From where the upper reaches originated, we did not know but there must have been access from somewhere, as yet undiscovered. What was obvious was the fact that there are three deep and very large stopes running parallel with very thin walls in between, namely Brow Stope, Avalanche Stope and now this one, the Shattered Stope. No wonder the tunnels and walls have stress fractures in them.

Reports of our recent discoveries in the Coniston Mines had been appearing in the local papers and creating much interest. The story of the legendary oak plugs sealing the tunnel beneath Levers Water triggered off an alarm at the North West Water Authority, who are responsible for the maintenance of Levers Water as a reservoir and they wanted to know more. It was arranged to escort two of their more intrepid engineers into the workings to examine the barrier. This was fixed for the 21st October 1987 when two Land Rovers took us up to the dam. A man remained with the vehicles and another stationed himself at the crater entrance to maintain radio contact with the others and their headquarters. The two engineers we took were well, if over equipped with gas detectors and self rescue resuscitators. The vertical shaft up to Woodend's Level was scaled using electron ladder and a safety line. All went smoothly, the engineers examined and photographed the barrier and eventually decided that

no action be taken, mainly due to the inaccessibility and to leave well alone despite the fact that it has held back the waters of the tarn for over a hundred years.

Some of our members had recently been beavering away at the major collapse at the 4 way junction on Middle Level under Brow Stope. Tons of rock had been removed and stacked in the two tunnels we now had access to and it was possible to communicate through the blockage. To clear this junction would open an important link between the two areas of the mine, i.e. Brow Stope and Windy Stope and also a new section of Middle Level. It was decided to descend Brow Stope to see what impression the dig had made on the rubble pile at the bottom and this was done on 29th November 1987. On our arrival there we were surprised to see little change although it was possible that a ruckle of boulders were jammed across the walls and holding up the pile above. We were saddened and annoyed to find rubbish in the form of empty tins, wrappers and plastic bags left behind recently by an unknown group of mine explorers. More conservation minded, our members later removed the unsightly litter. Two members decided to prusik out to the surface, enter Top Level Extension then descend the Shattered Stope to the 4 way junction to try and make voice contact from below with those remaining in Brow Stope. To reach the place would however take some time.

You will recall the mention of a blocked ore pass in the north west corner of Brow Stope on the occasion of our first descent on the 19th August 1984 and since then the discovery of the Top Level Extension and the surveys made left us in no doubt that this ore pass and the choked shaft below the ore wagon in Top Level was in fact the same place. The member who was rescued after being buried whilst trying to clear this shaft from above had a close look at it again and on shining a light into the blockage was amazed to see his wrist watch lying in the rubble. So here was the proof and it spurred him into action to clear the blockage, which was no problem from below and soon he could see into the Wagon Stope above. By this time the two who had prusiked out had reached the Ore Wagon Stope and were surprised to hear a familiar voice calling out to them from below. They quickly realised the significance of this and immediately began to assist in the work from above and after another hour it was reasonably safe to pass through the new connection. This link provides yet another route into the workings which connect Levers Water Mine, Brow Stope and Top Level Extension and also provides an escape route from all three.

Nine members of C.A.T. returned to this connection on 26th December 1987 to stabilise it. Brow Stope was now accessible via the Top Level Extension without the need to abseil. It was therefore important to make it safe as it would no doubt receive a fair amount of use. The following information is extracted from a meets report in the C.A.T. newsletter No.19 and refers to exploration undertaken on the same day.

A few members went to examine Earthquake Passage and the Shattered Stope with the twin objectives of seeing if there had been any more movement in the passage and of trying to locate the head of a timbered shaft seen from below on a previous visit. The floor of the passage had indeed moved and seems to be slipping into the Shattered Stope. In order to indicate future movements a stone was left wedged in an apparently widening crack in the floor near to the end of the passage. The Shattered Stope was examined and a bat was seen, hanging on the wall close to the passage leading to the 4

way dig. The wall of the stope was followed from here towards its junction with Earthquake Passage and a crawl beneath huge jagged blocks led to a squeeze into a narrow part of the stope where the floor sloped downwards. This was followed and led to a debris strewn floor on the Middle Level Horizon. At the bottom of the slope was what appeared to be a shaft head. About 26 metres above, in the roof of the stope, is some timberwork which seems to match up with this. Stones dropped down caused much rumbling of falling material and spontaneous runs also occurred. There seems to be two holes, the nearer dropping straight down into a narrowing stope, whilst the other, about 2m further on drops down beside a masonry wall about 13m high before sloping steeply down in the direction of the descent from the junction with Earthquake Passage. There was neither time nor inclination to proceed further, but before leaving we sent a member to shine a light down at the Earthquake Passage junction. This was seen to be about 23m above and 10m further along the stope.

During the previous month a small group of members had been carrying out exploratory probes into other areas of Paddy End Mines. Two of these probes were into the South Vein Stope from Middle Level. These took place on the 26th November, 1987 and 20th December, 1987. This deep stope was previously descended on 11th November, 1984, as recorded in Part II. On that occasion little was seen due to atmospheric conditions. This descent ended at the Pudding Stone Level on Grey Crag Level Horizon. This new attempt was made to try and reach Deep Level 125m below and at the same time, look for any intermediate levels. The descent began at the junction of Tunnel M2 on Middle Level where it enters the South Vein. At 45m a re-belay was made and a further 17m landed them on a section of false floor with loose ground at both ends. A bolt and anchor were put in here as a safeguard should the false floor collapse. This was part of the Grey Crag horizon. In order to reach the continuation it was necessary to traverse a gap in the floor by prusiking up a short way, penduling across to another re-belay and abseiling down again. The re-belay bolt was situated in solid chalcopyrite. The gap was descended to a steeply sloping floor of fine, loose material 13m below which was probably used as an ore chute. This was followed to its conclusion 17m further down to where the stope fell away into the depths. The upper end of the stope gave access to the Pudding Stone Level along the South Vein and extended 20m to a forehead. It lies in the stope for the first few metres but then continues with a solid rock ceiling. The vein seems to have been abandoned as being barren and there were no artifacts or rails, a greeny blue pool being the only item of interest.

An attempt was made to traverse in the opposite direction and re-belay in order to continue down to Deep Level but it was not easy to organise a hang avoiding loose ground and in order to do so it was necessary to pendule several metres. The shape of the stope was such that the rope dragged over rough surfaces above continually risking damage, so the attempt was abandoned.

Whilst prusiking, an opportunity was taken to examine the stope whose full extent could be seen in both directions. Little of interest could be seen to the North West but at the south east end it rose to a niche under an overhang. Above this rose a steep rubble slope to what could have been a level. If it is a level it is possible that it could lead through the roof of the large stope above Grey Crag Level, which contains the long iron chain and the wooden platforms on top. Those horizons are similar. Above the slope were sections of a wooden

ladder rising close to the headwall which seemed to penetrate the ceiling forming the floor of Middle Level. This area calls for further exploration.

On the 7th December 1987 two of the members involved in the South Vein explorations decided to investigate the Lake Stope and they abseiled 20m from Top Level to the water's edge. This lake slowly dries up during periods of drought by soaking away through the muddy rubble bed. It is my theory that it drains down into the elusive Middle Level crosscut which must lie only a few metres below. To support this theory a run of ladders descends in a recess to this point, having come all the way down via Top Level from Arête Chamber, where access to or from the surface would be made. The slope of rubble and mud rising from the lake to the North West can be climbed past a spectacular, green, malachite stained wall until loose hanging rock bars the way after 25m. This stope runs very close and parallel to the Windy Stope and the dividing wall must be quite thin.

After the major discoveries of 1987 which generated much activity 1988 was a quiet year. On January 17th a further two-pronged dig was launched at the 4 way junction on Middle Level beneath the rubble pile under the Brow Stope. As on previous occasions many tons of rubble were removed and it was possible to communicate through the blockage but due to the massive pile overhead no breakthrough was made. At the end of the day an inspection of Brow Stope via the new connection from Top Level Extension was made and we expected to find a sizeable depression after our efforts, but again there was no trace. A few weeks later, however, a large crater appeared and a jam of rocks must have been holding it up as previously suggested. This site awaits further attention.

Apart from club meets, when we visited familiar areas of the mines no new development work was carried out until 27th November, 1988 when it was decided to return to the Belman Hole Crosscut (see plan No. 5 and also the cross sections). The stope, rising from the north end of the crosscut in a south easterly direction had never been examined.

An initial steep pitch of rubble was climbed into a narrow section of stope and following this for 10m brought us to a wider area with working platforms high above. The remains of an old ladderway led up to the north of them and continuing south east a rock tunnel was cut through a section of barren vein. The walls were very colourful with the usual copper deposits but spanning the tunnel floor was a shaft which we had not expected to find. First we put in a safety line across shaft and stepped cautiously from one stemple to another. The far side was even more colourful with beautiful blue stalactites of copper carbonate and we were no doubt the first people to set eyes on them. The tunnel then ran into a very high stope with a steep rubble pile running up to an even steeper, unclimbable wall. The top of these workings must come very close to the surface to the north west of Simon's Nick. Indeed the vein can be traced on the surface where it has been 'tried' along its length. We rigged an abseil rope down the shaft and after 10m it was necessary to install a deviation to avoid loose jammed blocks. After a further 10m the bottom was reached and we were on familiar ground. It was no surprise to find ourselves on Top Level in Tunnel T3 next to the Boxing Day Dig. We had decided some years previously that the stope was blind and this assumption had just been proved incorrect.

Whilst this descent was in progress the rest of the team had retrieved the maypole from nearby Woodend's Shaft where it had been for almost two years and re-erected it alongside the ladder mentioned above. This enabled them to

reach a short tunnel with a rise at the end, terminating in a small overhead stope where an ore pass dropped down to the lower tunnel and then entered an ore chute down to Top Level.

As the maypole recovery was taking place, one of them noticed what appeared to be the apex of a tunnel roof buried in the debris at the base of the shaft and this was excavated on the 15th January 1989. The material removed was light coloured fine slurry, with no solids in it which must have been tipped down the shaft, but how and why and from where it originated is a mystery. A tunnel was revealed which was approximately 18m long running in a north westerly direction to a blind end.

With the biennial conference of N.A.M.H.O. due to be held in July 1989 and one of the proposed field trips involving a guided tour of Levers Water Mine, abseiling down the Brow Stope, followed by a tour of the Top Level Extension via the new connection then out to surface via Arête Chamber and the Crater. Some preparatory work had been carried out for this but in order to reduce the level of water in Levers Water Mine a large quantity of rubble will need to be removed and a drain laid. All this material will have to be tipped down the Funnel (see cross section No.2) with the possible result of sealing off hitherto unexplored areas below. With this in mind it was decided to have a look down there before work commenced and so on the 16th April 1989, five members of C.A.T. set off on this project. They did not get very far as it must be borne in mind that the Funnel has been eroding away and getting larger over a very long period. Many hundreds of tons of rock and clay have gone down the hole already.

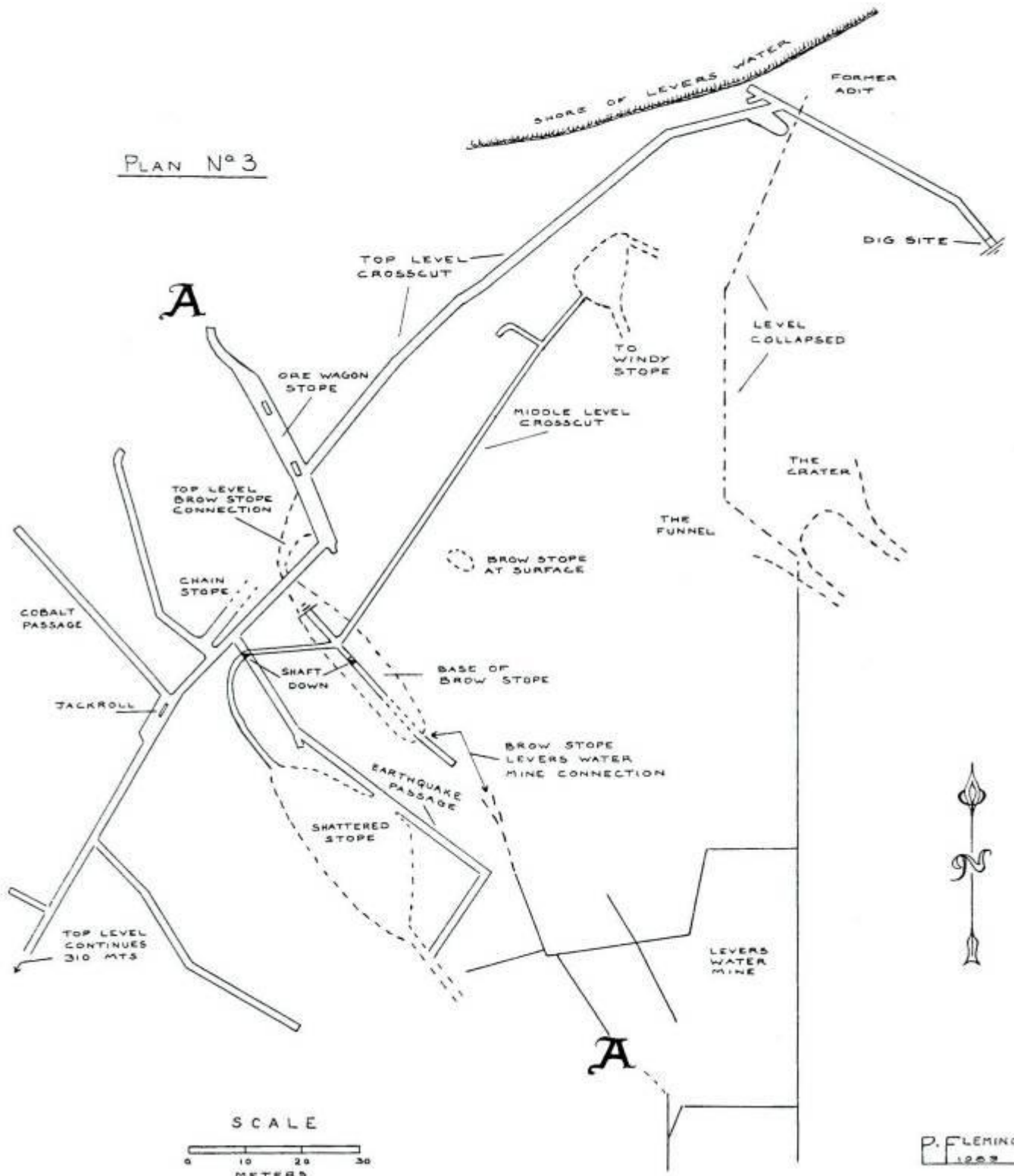
From the bottom of the first pitch, which was familiar ground to us we prepared to abseil down to the North West. Great care was necessary because of the loose, unstable nature of the stope, jammed with poised jagged rocks. Any horizontal progress was barred by collapses and loose material. Carrying on down after two re-belays we reached a very shattered opening where it proved difficult to get bolts into the hard rock. The next pitch was a good clean one 30m to the top of a large rubble pile. From here the bottom of the stope was visible 10m below. We had been there many times before but two members went to complete this particular line. On the other side of the rubble pile, to the North West we descended about 20m in the same stope. A line of heavy cross stemples was reached at 15m and these probably mark the point where a branch of Middle Level formerly ran through the stope. Good specimens of chalcopyrite were found here. We prusiked up to the surface again relieved to have escaped unscathed from this very dangerous area and it is unlikely that this descent line will be repeated, however it had been checked out to our satisfaction.

Coniston Copper Mines

PADDY END WORKINGS

TOP LEVEL EXTENSION SHOWING ADJACENT WORKINGS
ON MIDDLE LEVEL & LEVERS WATER MINE

PLAN N° 3



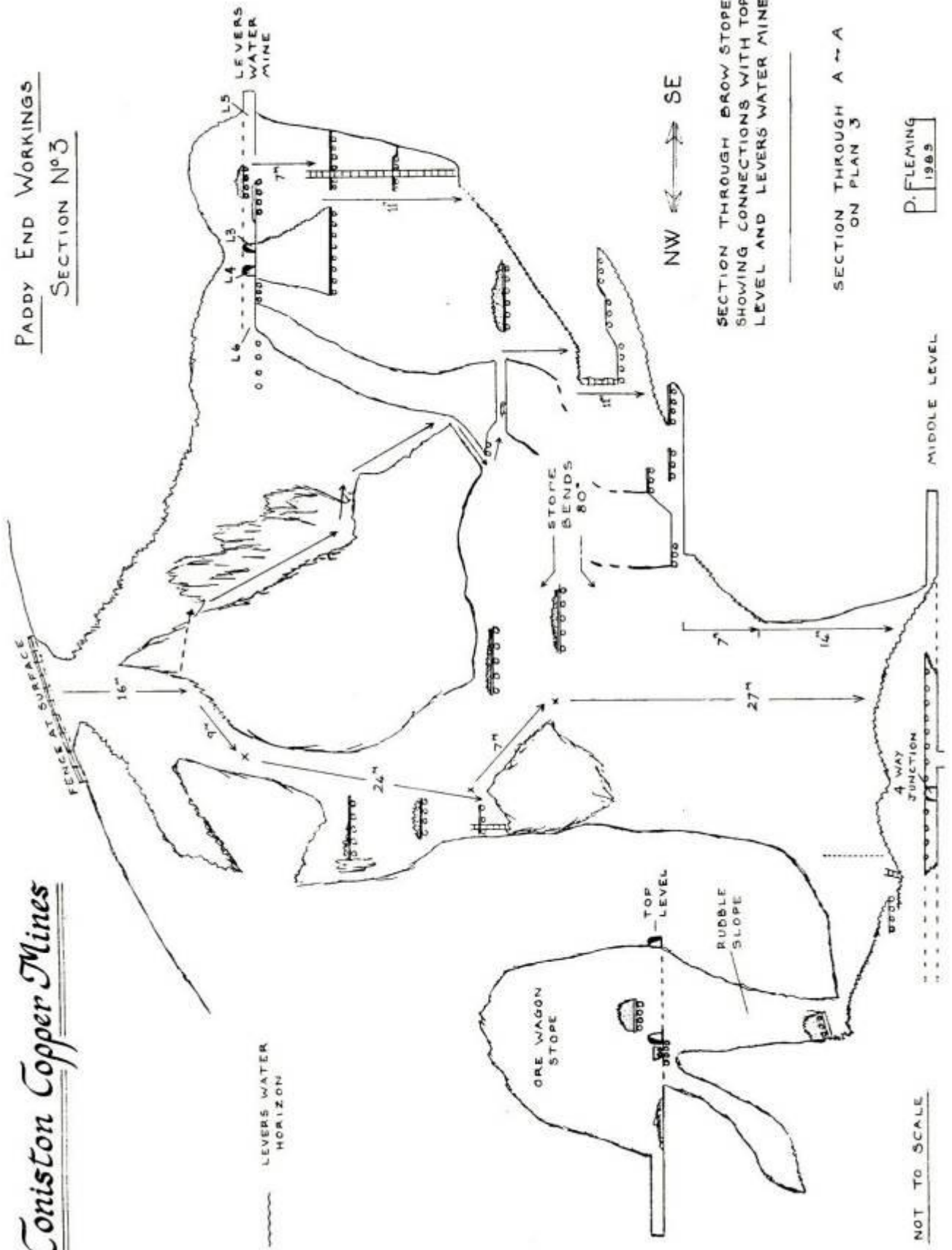
SCALE



P. FLEMING
1903

Coniston Copper Mines

PADDY END WORKINGS SECTION N°3



SECTION THROUGH BROW STOPE
SHOWING CONNECTIONS WITH TOP
LEVEL AND LEVERS WATER MINE

SECTION THROUGH A-A
ON PLAN 3

D. FLEMING
1965

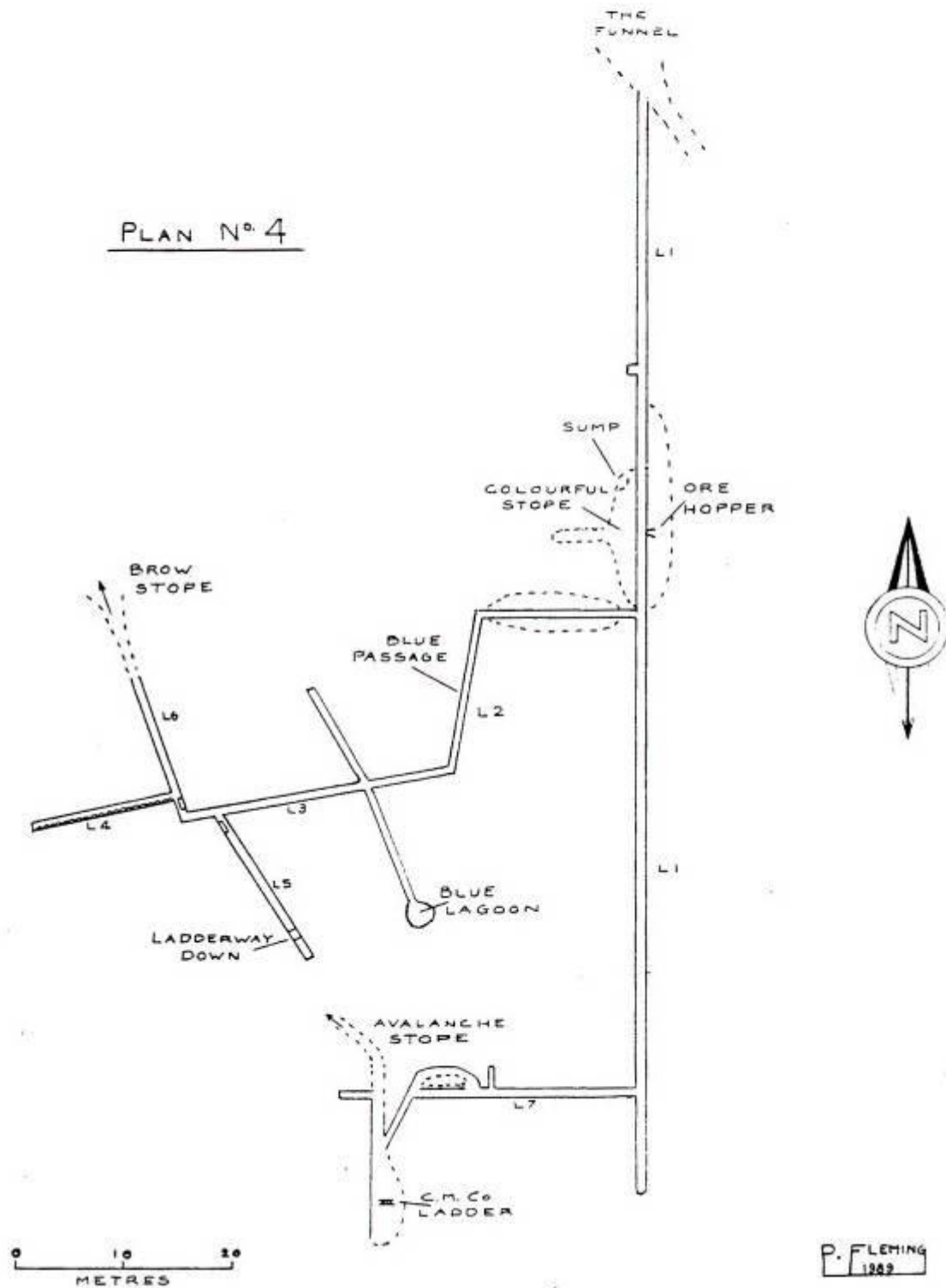
NOT TO SCALE

Coniston Copper Mines

PADDY END WORKINGS

LEVERS WATER MINE

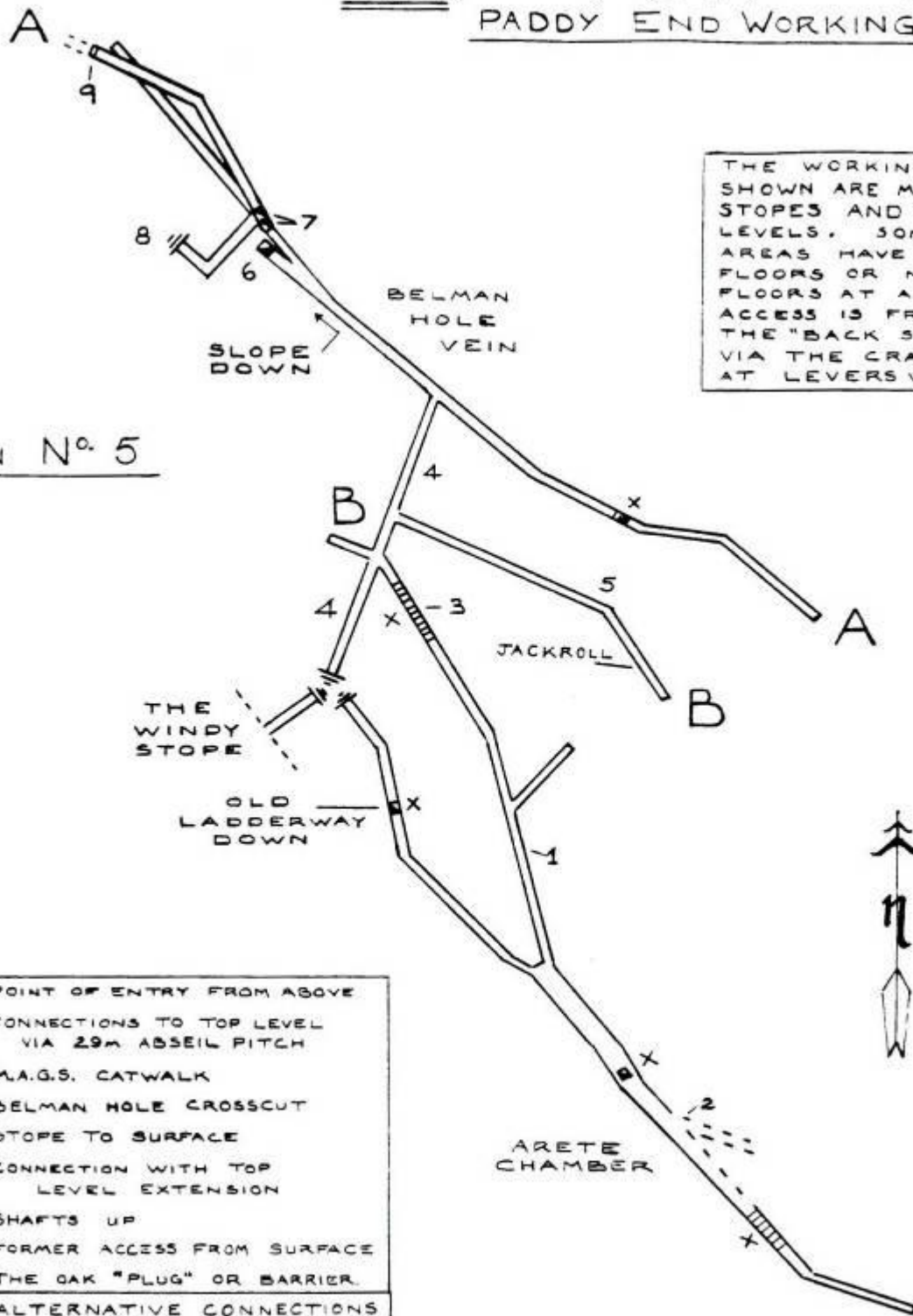
PLAN N° 4



P. FLEMING
1989

Coniston Copper Mines

PADDY END WORKINGS



THE WORKINGS SHOWN ARE MAINLY STOPEs AND NOT LEVELS. SOME AREAS HAVE FALSE FLOORS OR NO FLOORS AT ALL. ACCESS IS FROM THE "BACK STRINGS" VIA THE CRATER AT LEVERS WATER.

PLAN No 5

- | |
|--|
| 1. POINT OF ENTRY FROM ABOVE |
| 2. CONNECTIONS TO TOP LEVEL VIA 29M ABSEIL PITCH |
| 3. M.A.G.S. CATWALK |
| 4. BELMAN HOLE CROSSCUT |
| 5. STOPE TO SURFACE |
| 6. CONNECTION WITH TOP LEVEL EXTENSION |
| 7. SHAFTS UP |
| 8. FORMER ACCESS FROM SURFACE |
| 9. THE OAK "PLUG" OR BARRIER |
| X. ALTERNATIVE CONNECTIONS WITH TOP LEVEL |

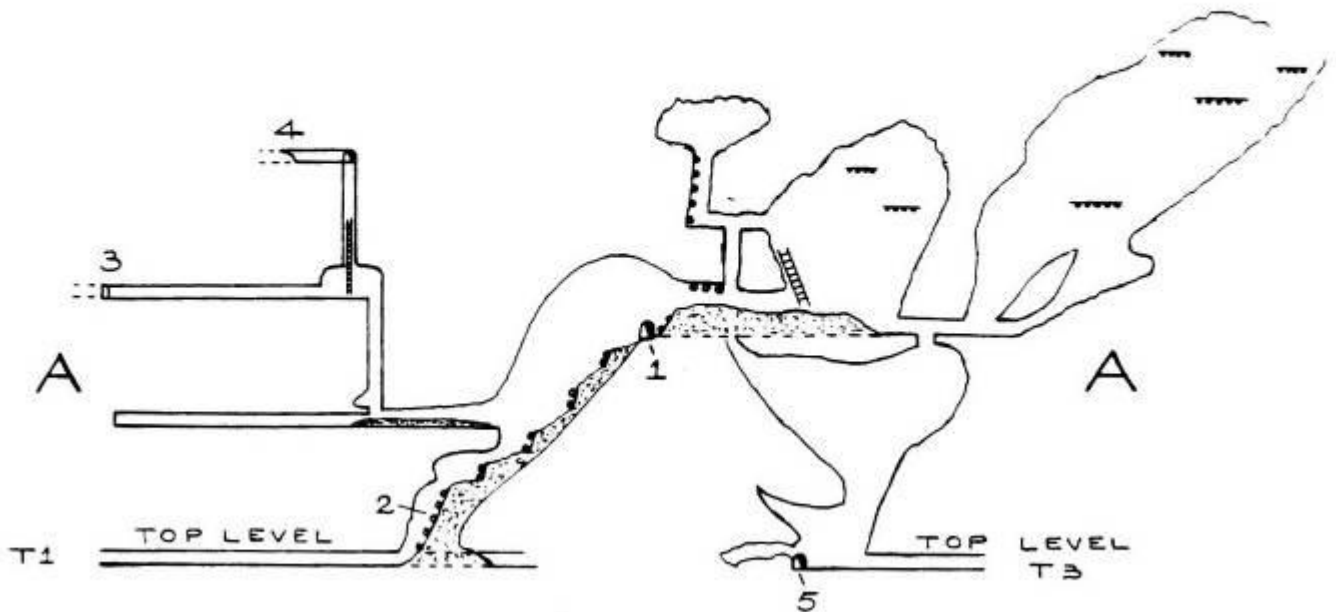
METRES



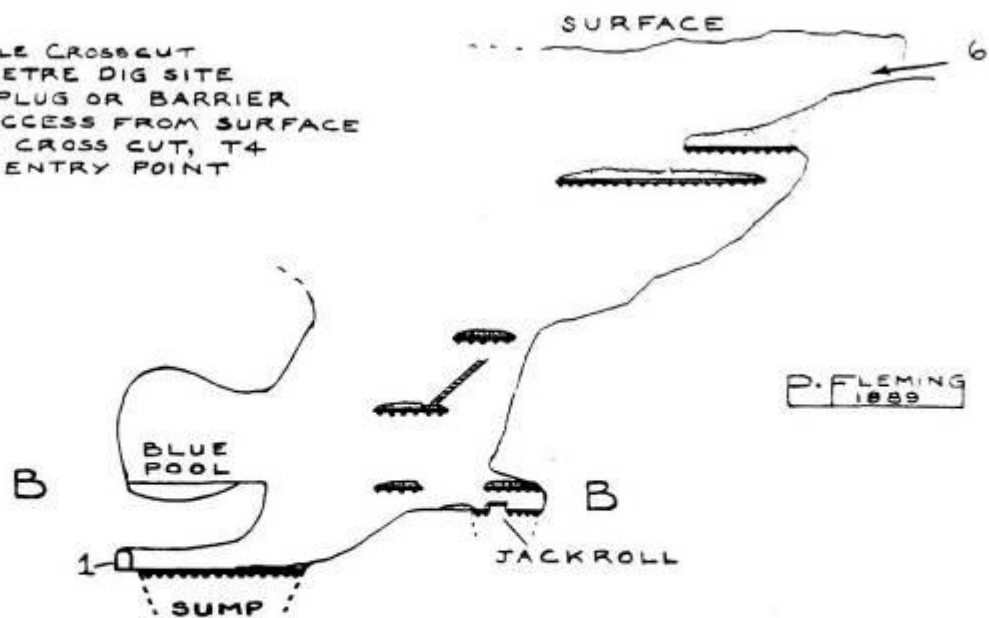
D. FLEMING.
1989

Coniston Copper Mines

SECTIONS THROUGH WORKINGS ON PLAN N°5



1. BELMAN HOLE CROSSCUT
2. THE SIX METRE DIG SITE
3. THE OAK PLUG OR BARRIER
4. FORMER ACCESS FROM SURFACE
5. TOP LEVEL CROSS CUT, T4
6. ORIGINAL ENTRY POINT



D. FLEMING
1899

METRES
0 5 10 15 20

← NW — SE →



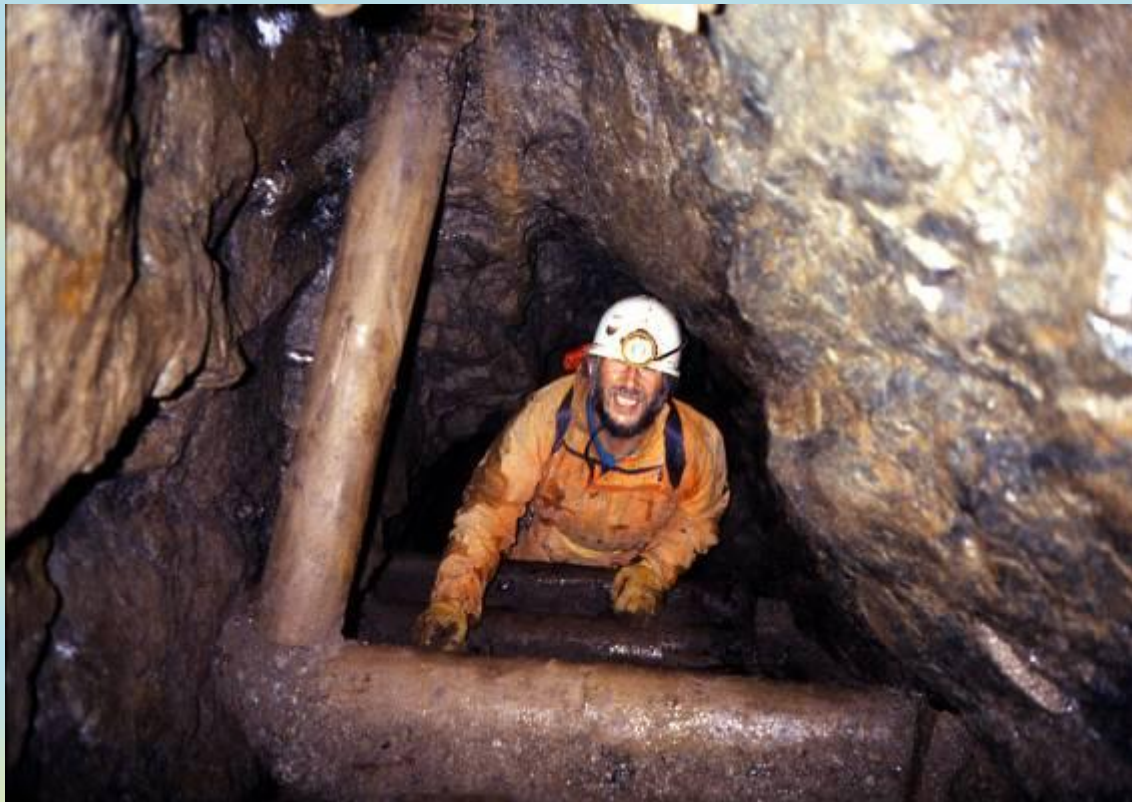
Two of the original team who constructed "MAGS" Catwalk. For many years there was no permanent safety line in place. Plan No5.



The discovery of this colourful post mine mineralization was made on the Belman Hole Vein. Plan No5.



After using a “maypole” to reach a tunnel 20 metres up, the legendary “Oak Plug” was discovered in 1987. Section Through Plan No5.



At the 6 metre dig site which broke through in 1987 to reveal the extensive Top Level Extension (T.L.E.). Plan No3.



Above: As it was discovered. A large pile of rubble containing an end tipping ore wagon and rails...T.L.E.
Below: The ore wagon back on its rails after restoration. Plan No5.





A highly stressed tunnel exhibiting large cracks and fractures in the walls and floor was aptly named "Earthquake Passage." T.L.E. Plan No5.



This small surface hole where a vein outcrops opens up to the extensive "Brow Stope" workings and was first descended in 1984.
Section No3.



On the descent of Brow Stope a pendulum across into a tunnel reveals a complete wheelbarrow. Section No3.





In 1984 Levers Water Mine was discovered by chance and once entered turned out to have some of the most colourful post mine mineralization which included "The Blue Lagoon." Plan No4.