MSG 12

MSG12
THE TWELFTH JOURNAL OF THE MOLDYWARPS SPELEOLOGICAL GROUP

NOVEMBER 2008

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Front cover: Cartoon by John Longstaff (Cluff)
Back cover: Photo of Smeltmill Beck Cave by John Dale

Editors: Tony Harrison and Peter Ryder

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EDITORIAL

The Moldywarps Speleological Group fails to fulfil most of the important requirements of a society or club: it has no written constitution, no elected committee, no AGM, no headquarters, no subscriptions, and no written programme of events; indeed not even a formal list of members. Nevertheless it continues to pursue its prime objective – the exploration of new caves, mainly in the Northern Dales – with vigour, and it has always been assiduous in recording its finds.

MSG was formed in 1966, and in 1967 issued its first journal, MSG1. No trace of this survives and its rediscovery would rank on a par with that of the tomb of Tutankhamun. Over the years from 1968 to 1979 nine more journals (MSG2 – MSG10 inclusive) followed in relatively rapid succession, but nevertheless at a slowly declining rate. Then a pause, until 1987, when the fat, fact-filled MSG11 hit the streets.

Those readers familiar with the concept of time will realise that a further significant pause has since followed. Is this because members have got married or become old, and now merely sit by the fire reminiscing by the light of old carbide lamps? This may be part of the explanation, but it could also be that the pace of exploration is now so fast that no-one can find the time to write up their experiences. The need to rectify this situation has recently become very apparent, and so those of us who still venture underground have emerged into the sunshine, stripped off our furries and wet suits, and picked up our pens. The results of our literary, photographic and cartographic endeavours are displayed below.

For the record, the sum total of new or extended (i.e. previously unrecorded or unknown) caves described in the following pages is about 50. In most, to be fair, we hit a blank wall or an impenetrable fissure in less than 20 metres or so, but around 30 have been deemed long or deep enough to have surveys made, all of which are reproduced below. At the time of writing only those of the Devis Hole Mine Caves, Moking Hurth and Hartleycleugh Quarry Cave have been published elsewhere.

WENSLEYDALE

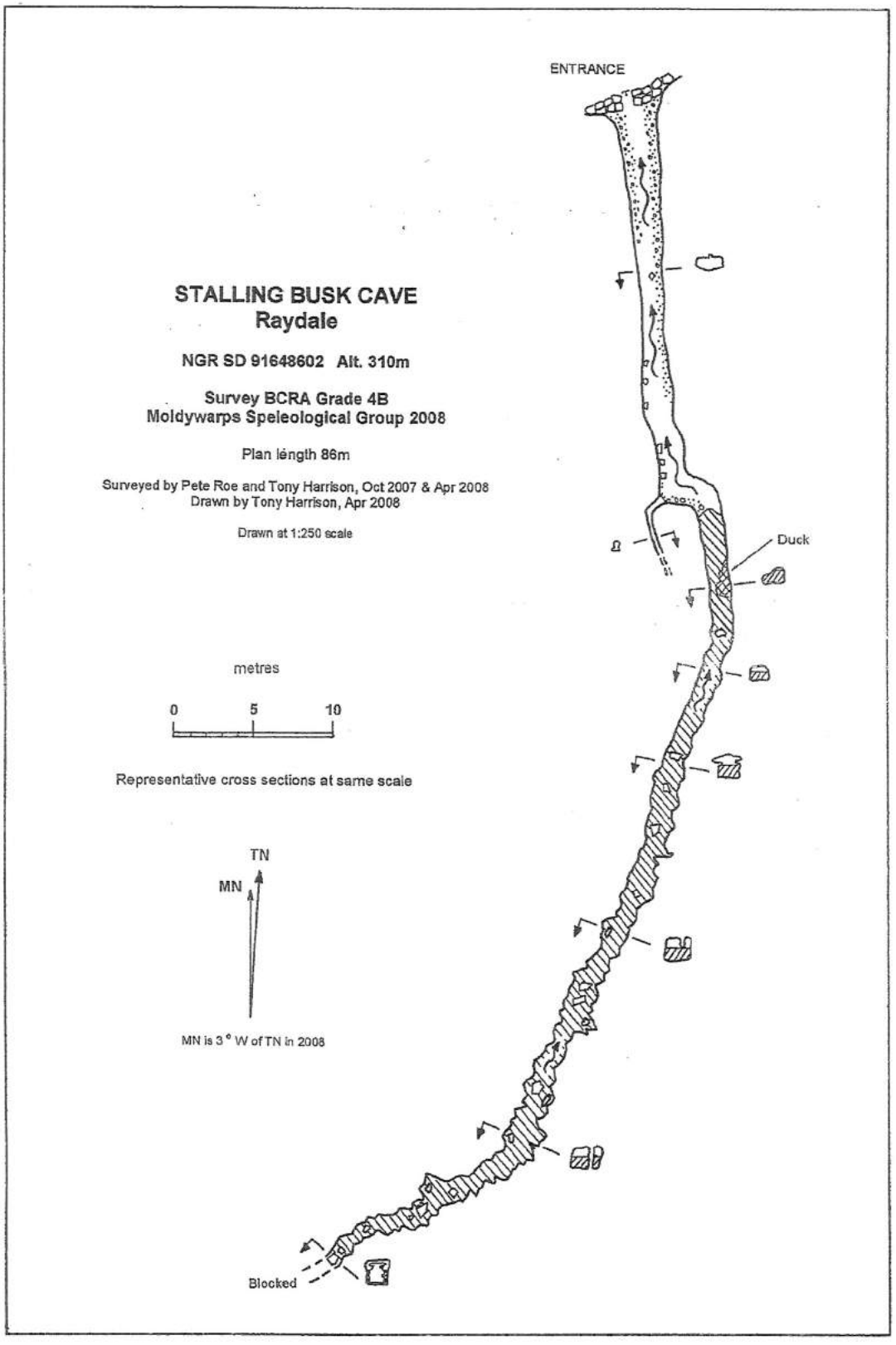
Recent Rambles and Wriggles

Wensleydale always seems to be the "forgotten dale" when it comes to speleology, failing to generate the interest by cavers that is enjoyed by either Swaledale to the north or the upper valleys of the Ribble and the Wharfe further south. There is no apparent geological reason for this, as the Main Limestone is as extensive and exposed in Wensleydale as in Swaledale, and the other limestone strata below it (in descending order: the Underset, Three Yard, Five Yard, Simonstone, Hardraw Scar, Gayle and Hawes Limestones) are equally well capable of evolving cave passages, if not very deep shafts. Having said that, Wensleydale does have a few significant caves, Thackthwaite Beck, Keldhelds, Fossdale Beck, and Whirley Gill Pot (which admittedly drains into Swaledale) being the ones of most note. All of these, incidentally, are in the Main Lime, except for Thackthwaite Beck which is in the Underset.

Current Moldywarpers have not ignored the dale in their recent attempts to find caverns measureless to man, as is evidenced by a glance at the "guidebook-style" list of new caves towards the end of this journal. Several shafts and holes have been probed, but all ground to a halt in a very short distance. There have been three exceptions, however: two in the lower limestones of the Hardraw Scar and the Gayle strata and one in the Main Limestone. These are Stalling Busk Cave, Park Scar Cave and Shivery Gill Pot respectively.

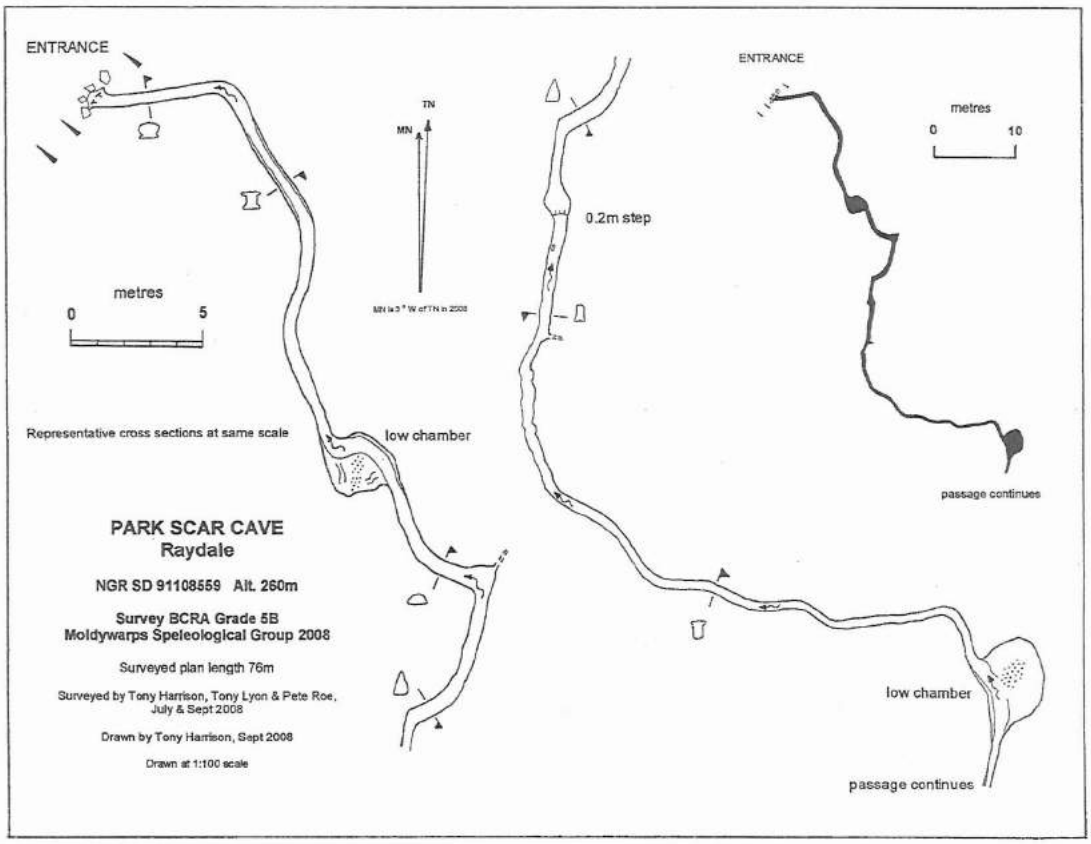
Stalling Busk Cave

This little gem was pointed out to Moldywarpers by Roger Davies of YURT in 1993 and first explored by Pete Ryder and Richard Gibson. Its entrance is an apparent culvert, from which a stream emerges, in a wall just below Stalling Busk village on the side of the lane leading down to the old church. Once through the wall a sizable, crawling height passage opens out for 20m or so until the stream deepens and the water appears to sump. Not so – a small airspace shows that this is just a duck, which was passed by Richard on the first visit. Beyond, a low canal stretches into the distance and this was followed by Richard for several metres before discretion got the better of him and he returned through the duck to Pete. No further visit was made until 2007, when Pete remembered this unfinished piece of work and persuaded Tony Harrison and Pete Roe to revisit it. They went, armed with tape measure, compass and clino, on a raw November day, and emerged on the far side of the duck so cold that all thoughts of surveying were dispelled and exploration only was the order of the day. The canal was found to continue as a crawl, over occasional boulders which had fallen out of the roof, with little change in character until one boulder was sufficiently large to block the way. Surveying was completed in the warmer weather of the spring of 2008, when the total length of the cave was found to be 86m.


ENTRANCE
STALLING BUSK CAVE
Raydale
NGR SD 91648602 Alt. 310m
Survey BCRA Grade 4B
Moldywarps Speleological Group 2008
Plan length 86m
Surveyed by Pete Roe and Tony Harrison, Oct 2007 & Apr 2008
Drawn by Tony Harrison, Apr 2008
Drawn at 1:250 scale
Duck
metres
0
5
10
Representative cross sections at same scale
TN
MN
MN is 3 ° W of TN in 2008
Blocked

Park Scar Cave

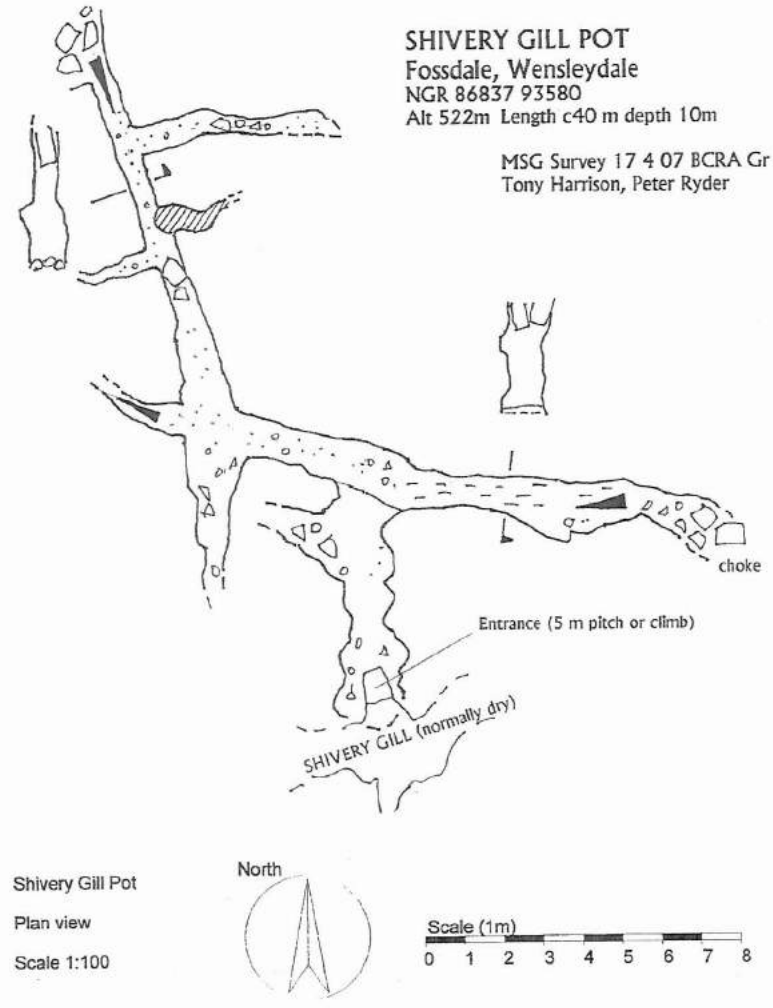
This is another little, unique "classic" in a most "un-cave-like" place – a rather boggy patch with a few stones sticking out, at the bottom of a hay meadow close to Cragdale Water below Stalling Busk. The location, in the Gayle Limestone bed, was pointed out to Pete Ryder by Roger Davies of YURT back in 1993 or thereabouts. Richard Gibson and Roger "Sledgehammer" Atkins excavated the entrance and squeezed along a body-sized tube, with a steady stream of water flowing across the floor, for about 30m before finding a place to turn round and exit. The cave was then forgotten until the day after the Moldywarps Dinner in April 2008 when Pete Ryder, Tony Harrison, and Richard Gibson went for a walk and rediscovered the entrance, again with the minimal amount of digging. A few weeks later Tony was back alone with caving gear and re-covered the ground explored by Richard and Roger. Later still he persuaded Pete Roe to join him and they surveyed the cave for 50m, all of which is a linear, pleasant, nicely sculpted (but flat-out) stream passage. Tony returned a few months later with Tony Lyon and surveyed a further 25m with no change in character of the cave, which is where the issue stands at the time of writing – the end of the explored section being wide open for further exploration (for a slight, wet-suited caver)! Surprisingly the stream proved to be vigorous even in relative drought conditions and is heading south towards the Park Scar waterfall. We therefore surmise that the sink for the cave is in the Cragdale Water streambed, probably quite close to the bottom of the fall.



Shivery Gill Pot

This hole, a continuation of the line of caves known as Sod Hole Gill Caves on the east side of the Buttertubs-Simonstone road (most of them explored by the NPC in 1958), was spotted by Pete Ryder when out for a ramble. The entrance is an obvious hole in the often dry streambed of Shivery Gill, which proved to be wide open when a short ladder was subsequently dropped down. A short crawl from the bottom of the entrance shaft soon reaches a dry, standing-height passage which deserves a little respect as it is roofed entirely by jammed boulders. Similar features unfortunately soon prevented progress at either end of the passage. A total length of about 40m was surveyed for the cave.

Rediscoveries

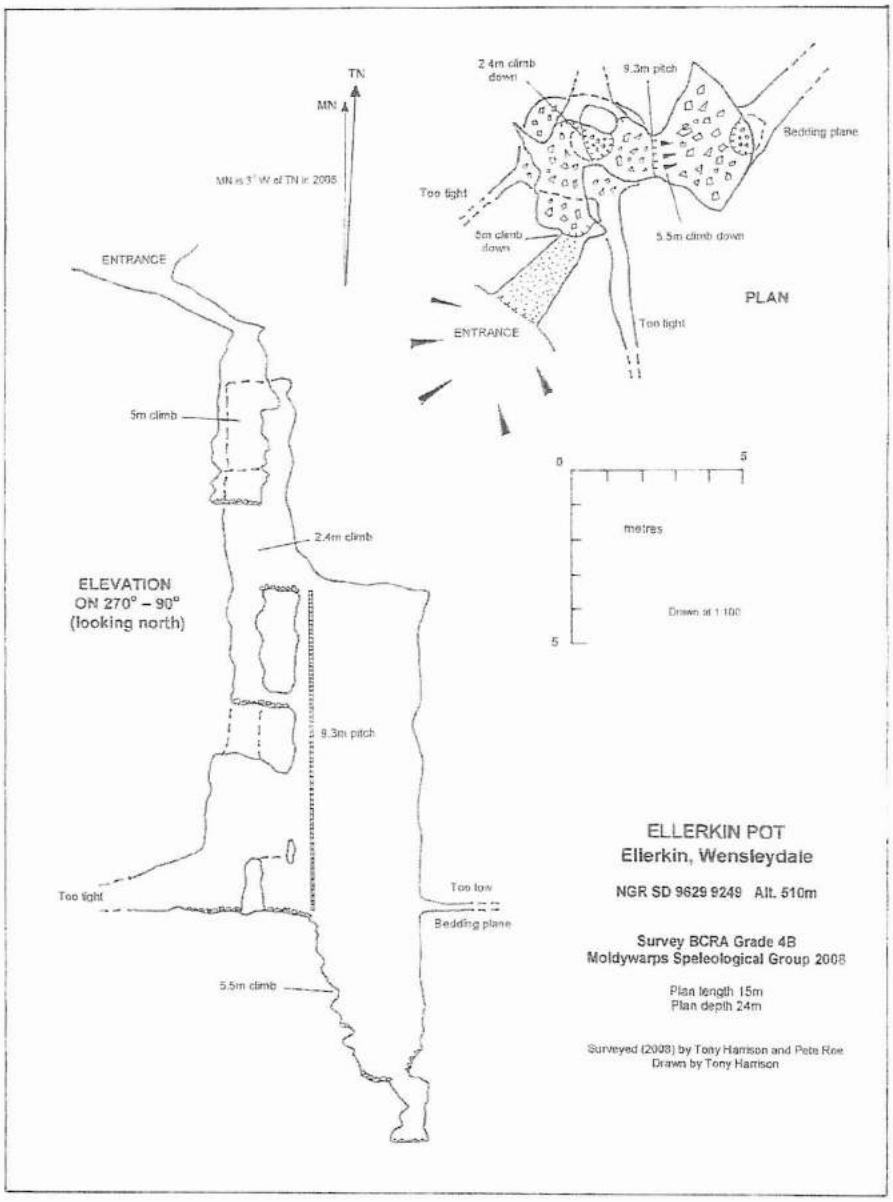


Shivery Gill Pot
Plan view
Scale 1:100

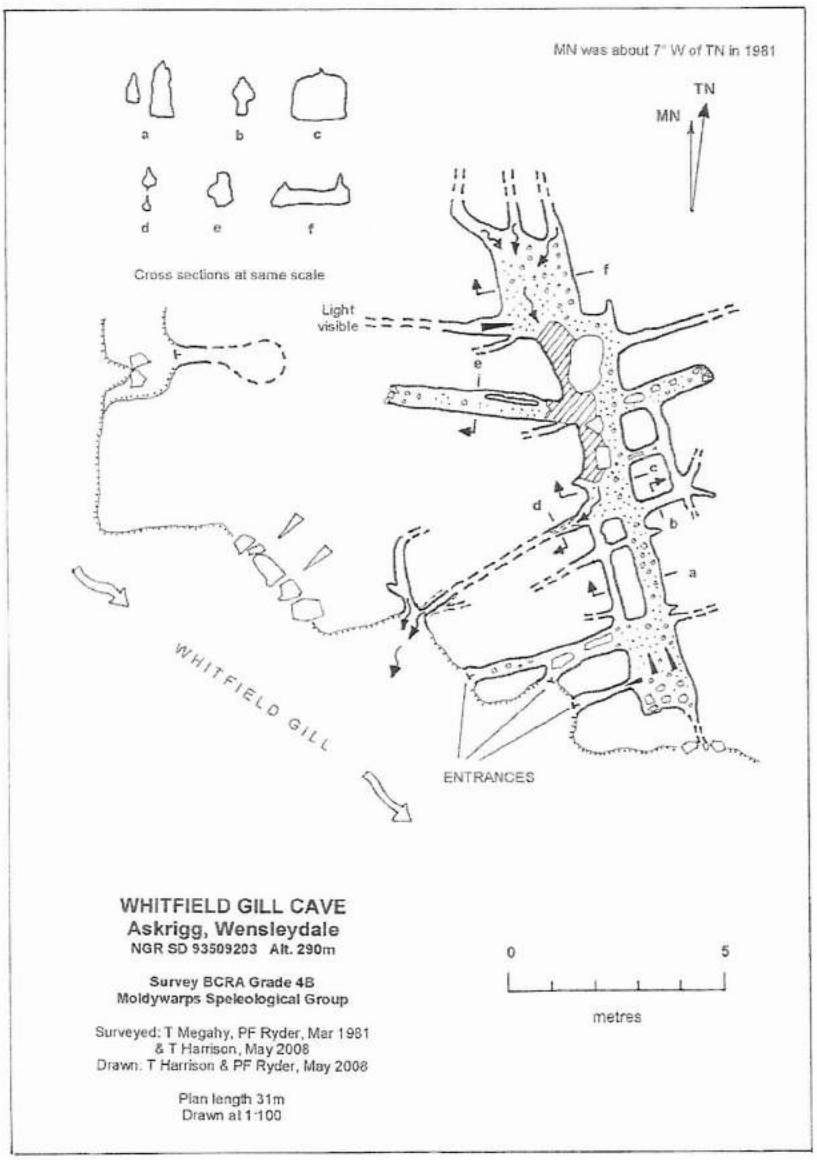
In February 2008, one of the keepers of the Gunnerside Estate was walking with his dog across the moorland above Ellerkin Scar when the animal, a Jack Russell, suddenly disappeared down a rabbit hole at the bottom of a rocky shakehole. The keeper called and whistled, to no avail. He then dug, with a similar result. Eventually he hit on the solution – call Superman! Pete Roe arrived soon after he got the phone call to find that a low, sloping passage heading north from the bottom of the shakehole had been unearthed. A short crawl reached a climbable, rock-strewn shaft of 5m or so, the floor of which passed through an easy squeeze to another shaft. No sign of the dog, but the need for a ladder. Pete always has vital equipment like this handy in the back of his Land Rover and so was soon on his way down the shaft, also strewn with loose rock, and which proved to be "double", that is, there were two shafts parallel to each other with connections from one to the other. Despite calls there was still no sign of the Jack Russell, but when he landed at the bottom of the shaft Pete felt a damp

and grateful lick on the back of his thighs (always one of Pete's preferred daily highlights).

The animal was duly restored to its grateful owner and two weeks later Pete was back with Tony Harrison to survey and fully explore the hole. No more passage was found but the cave did turn out to be respectable 24m deep. Tony then dutifully drew up the survey, calling it "Jack Russell Hole", and was just about to run copies off on his photocopier when intuition caused him to check the 1988 edition of "Northern Caves". And there it was, with a wildly erroneous grid reference and slightly erroneous pitch lengths, but there was no doubt about it, the dog had rediscovered Ellerkin Pot. This was first explored by YURT in 1984 but to our knowledge never surveyed and probably never re-descended until 2008.



The other recent Wensleydale "rediscovery", also graced by a survey within these pages, is Whitfield Gill Cave above Askrigg. This was first explored by the Yoredale Limestone Group in 1969 and subsequently re-examined and surveyed by MSG (Pete Ryder and Tom Megahy) in 1981. The survey was never quite finished and so didn't appear in MSG11 as it should have done. It appears herein, however, after a little further work and marginal extensions in the spring of 2008 by Tony Harrison.



Other odds and ends

The above descriptions apart, Wensleydale has failed to reveal any vast new caves in recent years, although a glance at the "guidebook-speak" list of new caves at the back of this journal will reveal a few short finds. Most were by Tony Harrison pottering from his doorstep in Burtersett.

SWALEDALE

DAWDLING DOWN DEVIS

Tony Harrison writes:

Devis Hole Mine has been a playground for MSG for many years, since 1972 in fact when the Earby Mine Research Group (EMRG) and MSG dug the present entrance shaft and tunnelled through the subsequent roof collapse. EMRG concentrated on the mine artefacts and levels, while MSG had free rein to explore the natural caverns which had been interacted by the "old man's" levels. These explorations produced about 2.1 km of natural passage in the Central Maze and Occidental Series areas, which are fully described in earlier editions of this journal and in a paper published by Pete Ryder in 1975 (*Trans. British Cave Research Assoc.*, Vol.2, No.4, pp.177-192, Dec.1975).

Interest in the mine then lessened slightly until the late 1990s when the then active Moldywarpers, primarily Pete Roe and Ernie Shield, decided to have another attempt at breaking through collapses in either Cranehow Bottom Level or Robinson's Level to reach the further reaches of the mine where more natural phreatic caverns were known to exist from old miners' records. Attention focussed first on Cranehow where the dig soon expanded into a major engineering operation. Pete and Ernie stuck at it for several years, burning off numerous partners in the process. I joined the enterprise in August 2001 when it had developed into a slick professional project. Essentially the dig was through a wet, concrete-like slurry of rocks and mud, interspersed with cascading water and the odd boulder, some the size of small fridges. The process was, on paper, relatively simple. Spiles of wooden stakes or (better) iron rails were driven into the slurry at roof height to stabilize the fall, which was then excavated at floor level sufficiently deep to insert a 4 x 2 inch wooden base plate, some 4 feet long. Hydraulic jacks were then used to maneouvre a roof beam (4 x 4 inch, also 4 feet long) up into position, allowing two similarly sized wooden struts to be inserted at the passage sides to hold the roof beam in place. Boulders sometimes required splitting by chemical means before removal. Despite our best efforts, slurry continued to run down from above almost constantly, and for every cubic metre of passage gained, I estimate that 4 or 5 m^3 of spoil had to be removed. Storage space for this material was soon at a premium, drag trays being pulled 50 or 100m back along the level before a dumping point could be found. Ernie and I - both had retired in the early 2000s and hence had time on our hands and instructions to get out from under the feet of our spouses - regularly spent 4 hours or so every Tuesday afternoon down there for a year or more. On some days we moved forward 9 inches or so, on others a rumbling run-in would force us back a similar or longer distance. Gradually however we moved forward, from a 53 feet long dig in January 2002 to 65 feet in October 2003.

In the middle of this period, Pete Roe had other thoughts and went to look again at the collapse in the nearby, and roughly parallel, Robinson's Level, already partially excavated by Dave Carlisle of EMRG some years earlier. After only 3 weekends or so of rather damp digging, Pete broke through to the level beyond, finding iron rails still in place on the floor and an inviting black space beckoning him forward. Over the next few weeks there was a relative bonanza of enthusiastic exploration. The level at the other side of the dig soon ended in a forehead, but just prior to this point a miners' sump (vertical shaft down) gave access to a warren of passages known as Horne's Workings and on through to the continuation of Cranehow Bottom Level. This continued for the best part of another

500m, through various "delicate" sections, until a further inevitable collapse. But well before this area the speleologists amongst us had a field day. The first discovery was of a natural maze since called the South Cave Series (and subsequently measured up at 1.1km in length) which eventually broke through into another miners' level, thought initially to be an extension of Cranehow until an accurate survey proved it to be Wyvill's Level which was originally accessed by a vertical shaft from the surface (a miners' "horse whim"). Back near Cranehow another natural series of passages was found, the West Cave Series, with about 360m of phreatic tubes, all of crawling height.

After the initial excitement of the Robinson's Level breakthrough had died down, the need to inform higher management was recognised, and so Pete Ryder was contacted. He kindly agreed to don his historic wet suit again and paid a State Visit to the mine with Robin Sermon and Pete Roe in late 2002. As always the event was carefully recorded in his diary and it is appropriate to reproduce this record here:

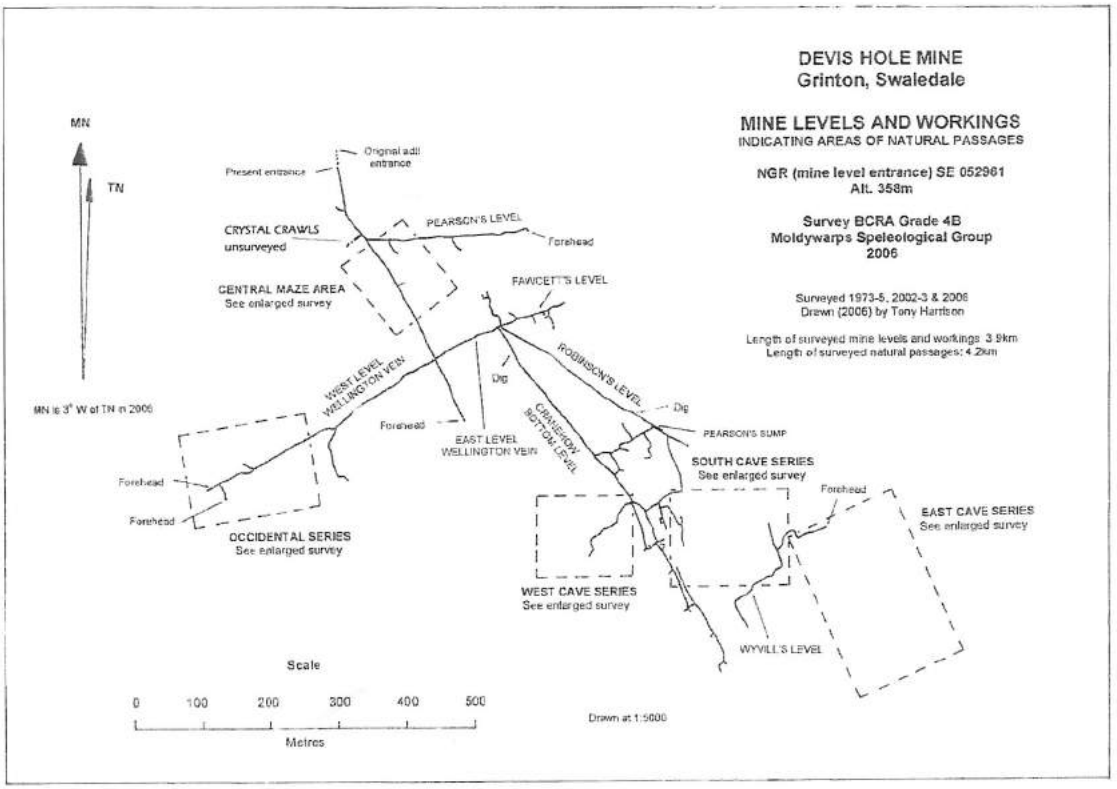
> Tuesday 19 Nov 2002: a four hour trip into Devis Hole, a lead mine near Grinton that intersects much natural passage. It was a place we became very familiar with in the 1970s, surveying both mined and natural passages as far as they were accessible; the high spot was a labyrinth of natural passages, the "Central Maze" in which we plotted a mile of passages, mostly hands-and-knees crawls, crammed into an area 400 by 180 feet. At the time we were aware that roof falls at the end of some of the major mined galleries sealed access to much more that lay beyond, where a combination of mine and natural cave had formerly linked up mines in Wensleydale, three or four miles away. We theorised that further mazes of natural passages might exist, miles or even tens of miles in length, beneath the watershed between the two valleys.
>
> Years went past. With the carrot of further natural caverns, a varied body of cavers, headed up by Pete Roe and Ernie Shield, started digging at one of the terminal collapses; old records suggested this was the way to a great deal of interest. This turned out to be a Big Job; none of the usual Moldywarp pull-away-a-couple-of-boulders projects. Proper timbering and shoring, endless bucket loads, regular collapses and debris flows that filled up what one had dug out the previous week. Success always hovered a week or a fortnight away – "it's getting looser now", "there's less water"; Ernie remained optimistic. I only put in a couple of minor sessions, but at one of them did manage to get a glimpse at the forefront of the dig, up between boulders into a towering rise or stope with water drizzling down and miner's pack walling soaring up into infinity. Were we on the point of breaking through? However, within a few days the whole place had collapsed, or "run in "; the timbered dig tunnel stayed intact, but half filled with mud and sludge. Beneath the debris the tunnelling went on, lost ground was regained, but there were no more glimpses.
>
> The saga lasted four or five years. To date the dig is still the dig, but two or three weeks ago Pete Roe, wandering off whilst Ernie laboured, had a look at another collapse in a nearby branch level. This one we had never really tried; the inevitable of course happened. Three visits and it succumbed very rapidly, opening access to a warren of passages that, of course, by-passed the dig and gave access to the regions beyond, for so long the kingdom of fevered Moldywarp dreams. Ernie, booked up for three months in Australia, could fit in only one visit before his departure from these shores. Pete however has been largely resident underground here since the breakthrough. This was where we went yesterday. Robin and I met Pete (who when on the surface is busy repairing the stream conduit beside Grinton Smelt Mill) and quit the surface fog for the four or five hours underground.
>
> The entrance to the place is much the same, lift a few boards and there is the timbered shaft that drops down to a wriggle into the initial section of the mine level, silted up so as to reduce it to a

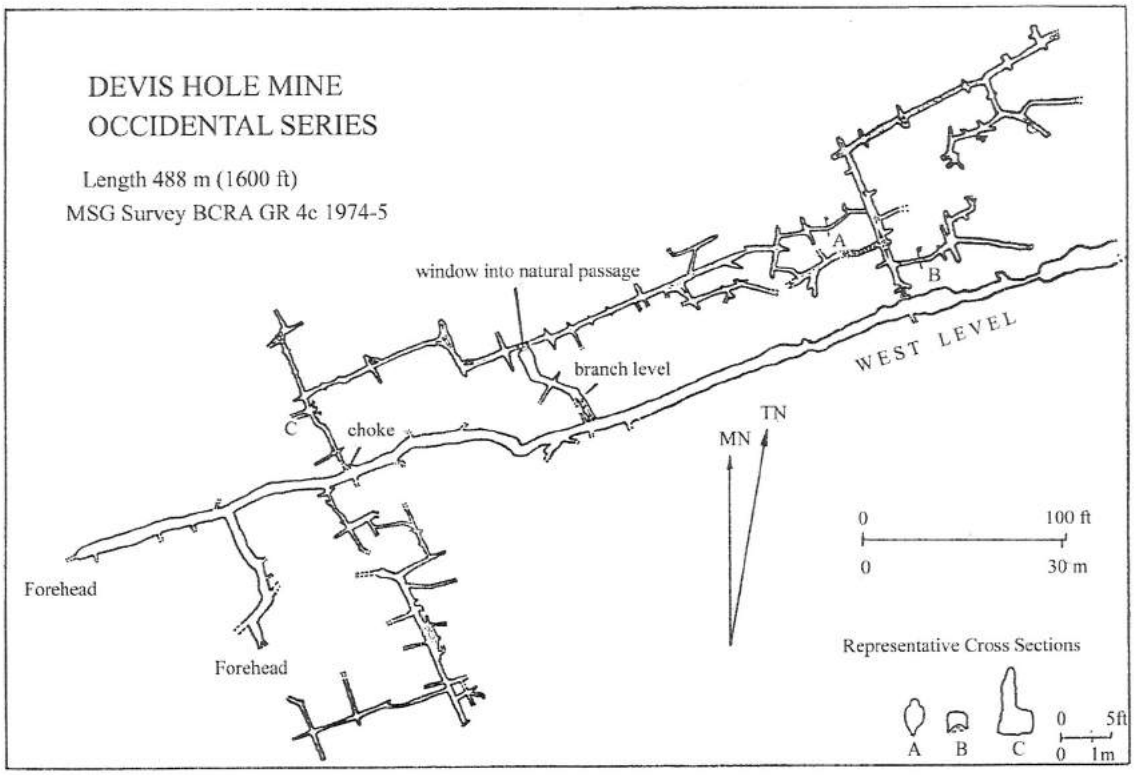
crawl in silt and puddles. After ten or twenty metres is a narrower section between drystone walls, neatly slabbed over. This is the site of the notorious "Devis drum". When the mine was first reopened in the late 1960s, a roof fall was dug through here, and stabilised by putting a couple of oil drums through (with their bottoms cut out of course), packed round with timbers. They were a pretty tight fit, especially for larger people; a pool would accumulate in them, its surface rippled by the cold draught that blew from the passages beyond, proof that somewhere beyond there were still connections to the surface.

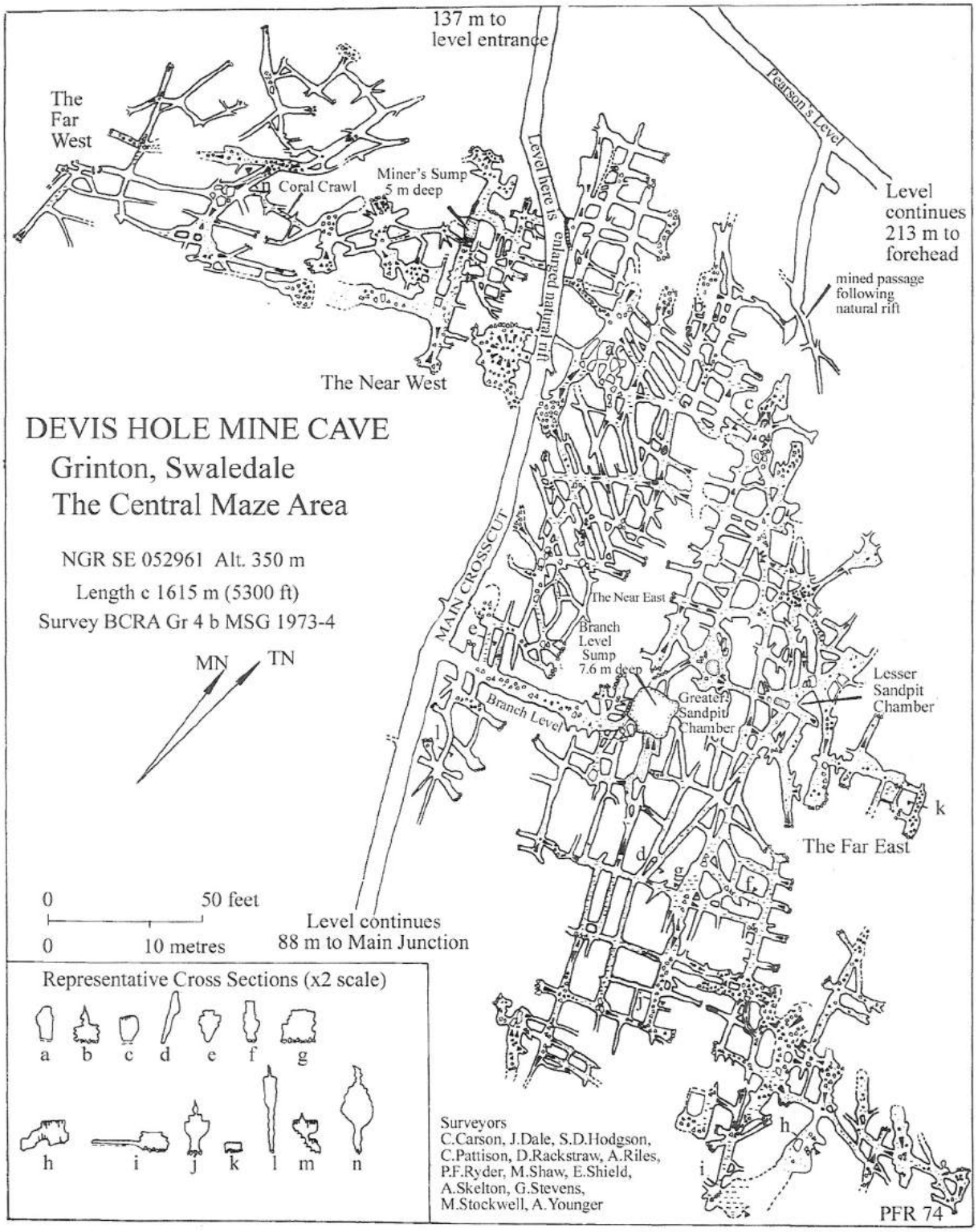
Beyond the floor drops away and the passage becomes easy walking, splashing through shallow water alternating with clambering over the odd pile of muddy boulders, and carefully rounding rotten timbers that are temporarily countering the influence of gravity on more muddy boulders overhead. These seemed more frequent than I remembered; some had apparently only fallen within the last three or four years. We plodged on, past the side passages leading into the Central Maze, and past another horrendous dangling slab that was exactly as it had been thirty years ago. Left at the T-junction, and on to where the stream from the dig was met, sinking into a hole in the floor. Soon this flowed from the dig passage on the right, but this time we went straight on for a few metres, then took a second right, along a level with three sumps (in the mining sense, shafts dropping to regions below). The first a few metres away to the left, the next two rather more immediate (with only a narrow ledge to walk along) on the right. Then came the old terminal fall, mostly in gravel and small debris washed down from above. Dave Carlisle had been busy here, in his usual professional manner, shoring and timbering. A short crawl, a hole up into a little chamber, a flight of timbered steps (!) down, another crawl beneath a spatter of water from above, and we emerged into level that, prior to two or three weeks before, had not been seen by man for around 110 years. For a start, the old railway lines were still in; during the First World War virtually all Dales mines had been combed by scrap dealers for old rails and other ironwork. The roof fall must have taken place before their depredations, but after the mine was more or less abandoned.

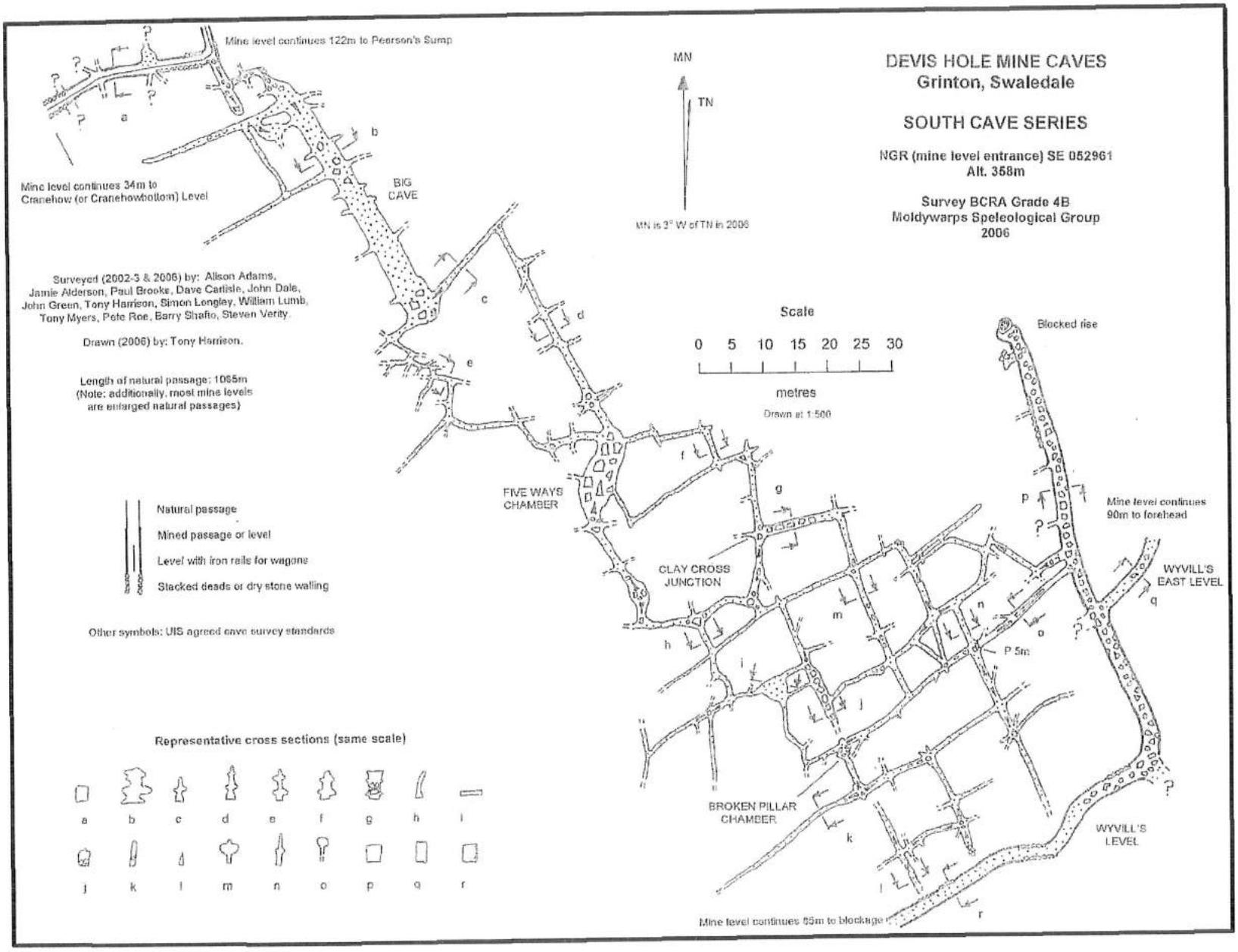
So the mine beyond is very much, to use a hackneyed term, a "time capsule" of the 1890s. Conservation is immediately on the agenda, as everywhere the clay floors are marked by the miners' clogs. The solution is to walk carefully either upon, or outside of, the railway lines. This is not always easy, especially in the 1.2 metre high "dirt levels" which demand a painful back-breaking crouch.

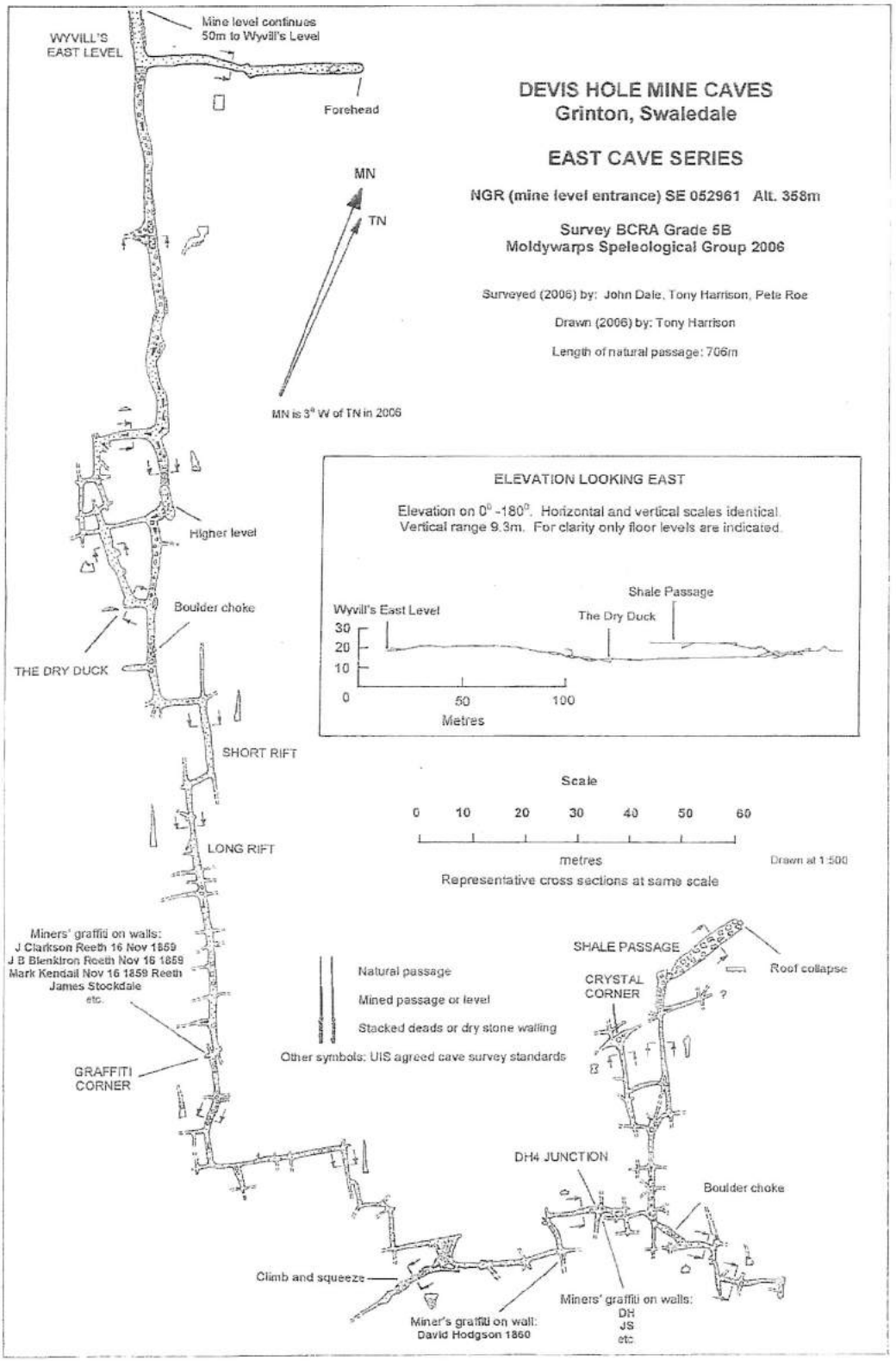
Thirty metres or so beyond the fall is a fourth sump, and this one we go down; the level above soon ends in a forehead (a blank rock wall, the end of the drive). The sump again takes the form of a squarish shaft, maybe two metres across, off-set a little to the right so that one can walk carefully past it on a ledge perhaps 0.5m wide. A ladder and lifelining system had been installed. Pete still had some concerns about loose rock, and hung on to the ladder just below the edge, gardening mud and boulders into the depths, then installing a couple of chockstones to, hopefully, keep the remainder in place. The pitch is around 12 metres, into a chamber; the sump continues for another 4m or so, to deep water; one steps off onto a single horizontal rail, and balances briefly to step across to welcome horizontal ground again and what old mine plans show as Horn's workings. Horn and his compatriots certainly never tidied up after them; one is confronted immediately by mining relics, everywhere. Did they plan to leave all this stuff? Or did the level fall in, between shifts, and, since the industry was in steep decline, they never bothered to clear it out again? More worryingly, were they still here? Right beside the sump was a truck, now just the substructure and wheels beneath a tangle of decayed wood. Nearby lay buckets, ropes, detonator boxes, bottles, remains of winding jacks (windlasses), and everywhere, decaying timbers. Dry rot and other fungi thrive, creating fuzzy dark red forests on walls and ceilings, and white mycelia that sprawl across the walls. Although the place is still thankfully well ventilated, their scent is forever on the air.


DEVIS HOLE MINE
Grinton, Swaledale
MINE LEVELS AND WORKINGS
INDICATING AREAS OF NATURAL PASSAGES
NGR (mine level entrance) SE 052961
Alt. 358m
Survey BCRA Grade 4B
Moldywarps Speleological Group
2006
Surveyed 1973-5, 2002-3 & 2006
Drawn (2006) by Tony Harrison
Length of surveyed mine levels and workings 3.9km
Length of surveyed natural passages: 4.2km
MN
TN
MN is 3° W of TN in 2006
Present entrance
Original adit entrance
CRYSTAL CRAWLS
unsurveyed
PEARSON'S LEVEL
Forehead
CENTRAL MAZE AREA
See enlarged survey
FAWCETT'S LEVEL
WEST LEVEL WELLINGTON VEIN
Dig
ROBINSON'S LEVEL
Forehead
EAST LEVEL WELLINGTON VEIN
CRAVENDW BOTTOM LEVEL
PEARSON'S SUMP
SOUTH CAVE SERIES
See enlarged survey
Forehead
Forehead
OCCIDENTAL SERIES
See enlarged survey
EAST CAVE SERIES
See enlarged survey
WEST CAVE SERIES
See enlarged survey
WYVILL'S LEVEL
Scale
0 100 200 300 400 500
Metres
Drawn at 1:5000


DEVIS HOLE MINE
OCCIDENTAL SERIES
Length 488 m (1600 ft)
MSG Survey BCRA GR 4c 1974-5
window into natural passage
branch level
WEST LEVEL
choke
C
A
B
TN
MN
Forehead
Forehead
0 100 ft
0 30 m
Representative Cross Sections
A B C
0 5ft
0 1m


137 m to level entrance
The Far West
Coral Crawl
Miner's Sump 5 m deep
Level here is enlarged natural rift
Pearson's Level
Level continues 213 m to forehead
mined passage following natural rift
The Near West
DEVIS HOLE MINE CAVE
Grinton, Swaledale
The Central Maze Area
NGR SE 052961 Alt. 350 m
Length c 1615 m (5300 ft)
Survey BCRA Gr 4 b MSG 1973-4
MN
TN
MAIN CROSSCUT
The Near East
Branch Level Sump 7.6 m deep
Branch Level
Greater Sandpit Chamber
Lesser Sandpit Chamber
The Far East
0
50 feet
0
10 metres
Level continues 88 m to Main Junction
Representative Cross Sections (x2 scale)
a b c d e f g
h i j k l m n
Surveyors
C.Carson, J.Dale, S.D.Hodgson, C.Pattison, D.Rackstraw, A.Riles, P.F.Ryder, M.Shaw, E.Shield, A.Skelton, G.Stevens, M.Stockwell, A.Younger
PFR 74


DEVIS HOLE MINE CAVES
Grinton, Swaledale
SOUTH CAVE SERIES
NGR (mine level entrance) SE 052961
Alt. 358m
Survey BCRA Grade 4B
Moldywarps Speleological Group
2006
MN
TN
MN is 3° W of TN in 2006
Scale
0 5 10 15 20 25 30
metres
Drawn at 1:500
Mine level continues 122m to Pearson's Sump
Mine level continues 34m to Cranehow (or Cranehowbottom) Level
BIG CAVE
FIVE WAYS CHAMBER
CLAY CROSS JUNCTION
BROKEN PILLAR CHAMBER
Blocked rise
Mine level continues 90m to forehead
WYVILL'S EAST LEVEL
WYVILL'S LEVEL
P 5m
Mine level continues 65m to blockage
Surveyed (2002-3 & 2006) by: Alison Adams, Jamie Alderson, Paul Brooke, Dave Carlisle, John Dale, John Green, Tony Harrison, Simon Longley, William Lumb, Tony Myers, Pete Roe, Barry Shafto, Steven Verity.
Drawn (2006) by: Tony Harrison.
Length of natural passage: 1065m
(Note: additionally, most mine levels are enlarged natural passages)
Natural passage
Mined passage or level
Level with iron rails for wagons
Stacked deads or dry stone walling
Other symbols: UIS agreed cave survey standards
Representative cross sections (same scale)
a b c d e f g h i
j k l m n o p q r


DEVIS HOLE MINE CAVES
Grinton, Swaledale
EAST CAVE SERIES
NGR (mine level entrance) SE 052961 Alt. 358m
Survey BCRA Grade 5B
Moldywarps Speleological Group 2006
Surveyed (2006) by: John Dale, Tony Harrison, Pete Roe
Drawn (2006) by: Tony Harrison
Length of natural passage: 706m
WYVILL'S EAST LEVEL
Mine level continues 50m to Wyvill's Level
Forehead
MN
TN
MN is 3° W of TN in 2006
ELEVATION LOOKING EAST
Elevation on 0°-180°. Horizontal and vertical scales identical.
Vertical range 9.3m. For clarity only floor levels are indicated.
Wyvill's East Level
The Dry Duck
Shale Passage
30
20
10
0
50
100
Metres
Higher level
Boulder choke
THE DRY DUCK
SHORT RIFT
LONG RIFT
Scale
0 10 20 30 40 50 60
metres
Drawn at 1:500
Representative cross sections at same scale
Miners' graffiti on walls:
J Clarkson Reeth 16 Nov 1859
J B Blenkiron Reeth Nov 16 1859
Mark Kendall Nov 16 1859 Reeth
James Stockdale
etc.
GRAFFITI CORNER
Natural passage
Mined passage or level
Stacked deads or dry stone walling
Other symbols: UIS agreed cave survey standards
SHALE PASSAGE
Roof collapse
CRYSTAL CORNER
DH4 JUNCTION
Boulder choke
Climb and squeeze
Miner's graffiti on wall:
David Hodgson 1860
Miners' graffiti on walls:
DH
JS
etc

DEVIS HOLE MINE CAVES
Grinton, Swaledale

WEST CAVE SERIES

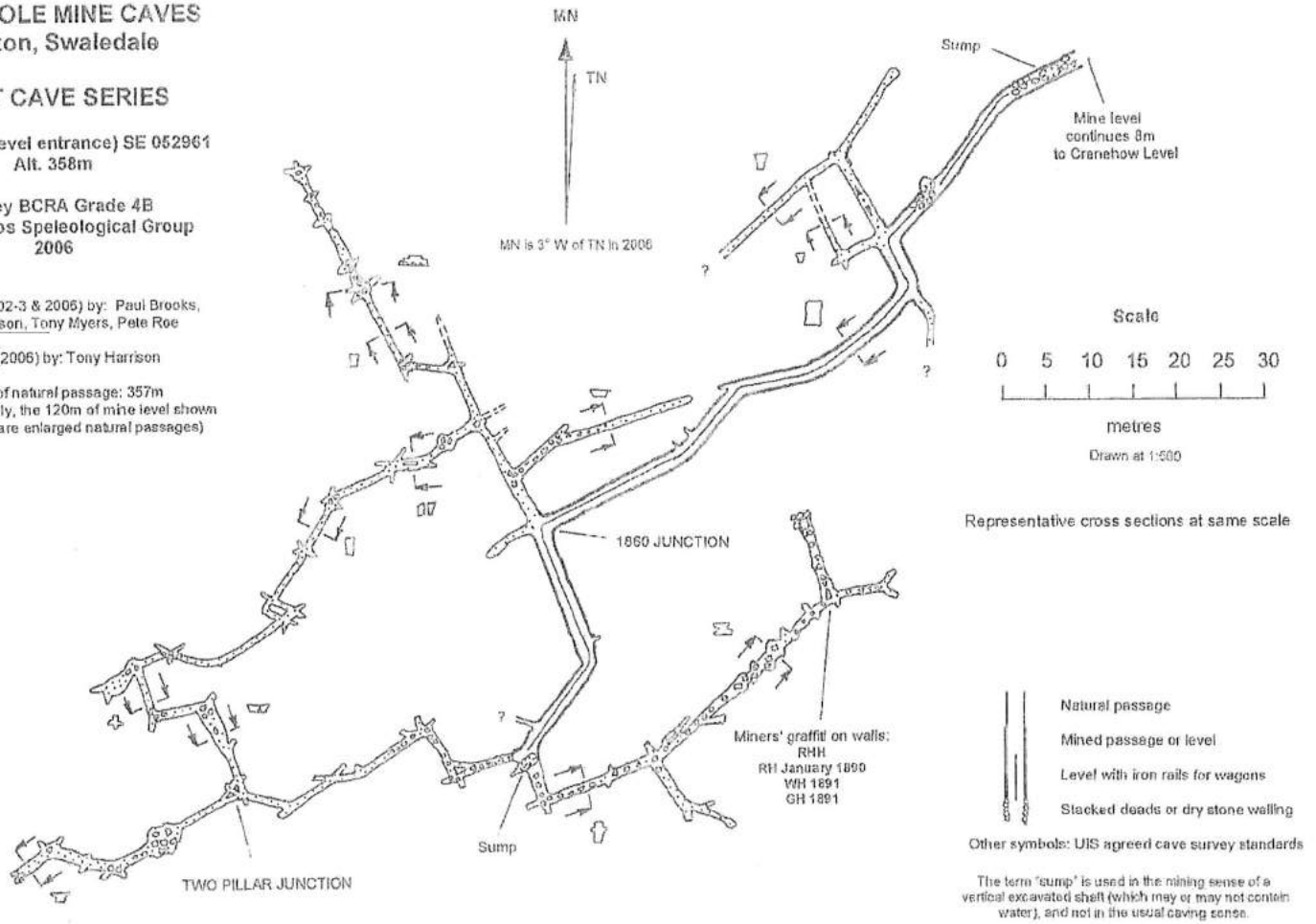
NGR (mine level entrance) SE 052961
Alt. 358m

Survey BCRA Grade 4B
Moldywarps Speleological Group
2006

Surveyed (2002-3 & 2006) by: Paul Brooks, Tony Harrison, Tony Myers, Pete Roe

Drawn (2006) by: Tony Harrison

Length of natural passage: 357m
(Note: additionally, the 120m of mine level shown in this survey are enlarged natural passages)



Scale

0 5 10 15 20 25 30

metres

Drawn at 1:500

Representative cross sections at same scale

Natural passage

Mined passage or level

Level with iron rails for wagons

Stacked deads or dry stone walling

Other symbols: UIS agreed cave survey standards

The term 'sump' is used in the mining sense of a vertical excavated shaft (which may or may not contain water), and not in the usual caving sense.

We now wind our way through dirt levels, with only the odd place where one can rise from a back-breaking crouch. On the walls are miners' graffiti, duly photographed – a star-like dial mark (used in their surveying), tally marks, and initials. In places Pete has found dated initials, almost all from the early 1870s. It gradually becomes apparent that more and more of the passage walls are natural, water-worn limestone, and that we are coming to an area riddled with cave passages; at one corner a scramble over stacked miners' deads leads to a wider passage, and the floor suddenly drops, and we are in totally natural cavern, a beautiful scalloped phreatic gallery four or five metres high. There are no calcite formations – we are deep under the impermeable sandstone cap of the moor tops between the two dales – but the rock architecture is superb. We follow the cave, taking lots of photographs, for a hundred metres or so, all walking sized. There are lots of narrow joints and some larger side passages, a few linking up with each other. Pete and colleagues have surveyed the main passage for several hundred metres, until it leads once more into mine passages, but many of the side branches remain to be explored.

Then it is back into the dirt levels, with more relics to photograph, to the base of a rise (a shaft extending upwards) from which a ladder dangles. Pete climbed half way up for photographs. This ascends around 10 metres, to give access to Crina or Cranehow Bottom level, beyond the dig. It took a couple of sessions of bolting to scale it; at the top, back towards the scene of the last five years' labours, they had another fall to dig through and then a wade through waist-deep mud, before the final collapse. With only the old mine plans to go on, it is difficult to say how far the dig still had to go – "somewhere between two and twenty metres". It will be worth having people on both sides, to see if a verbal contact can be established; however, even if the dig is opened up, it will hardly prove an easier means of access than the present route.

From the base of the rise, the workings on Cranehow Vein are currently accessible for a couple of hundred metres, to a blockage of miners' deads, blowing a strong draught. Pete has hopes of getting through this in the near future, and considers that it is here that the main natural caverns referred to in the old accounts lie.

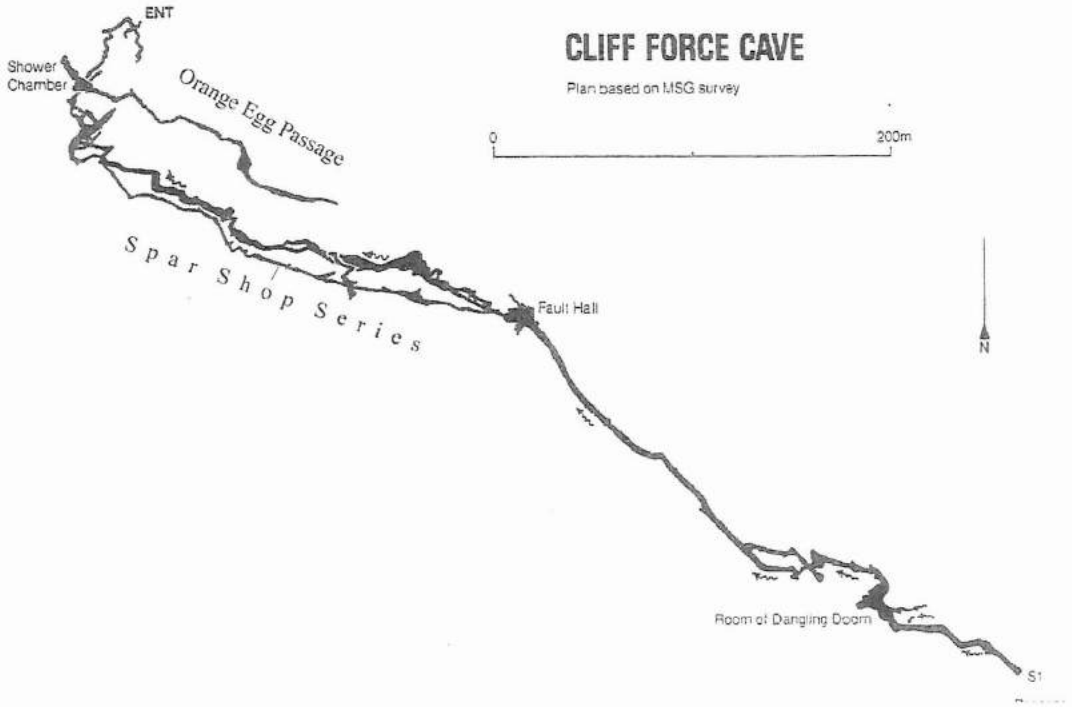
After the State Visit, exploration and survey work continued. However it was early 2006 before another natural section was found, this one to the east of Wyvill's Level, by John Dale who dug through a low pile of miners' "deads" at a corner of a passage. Surveying the "new" levels and natural passages was eventually completed in 2007; all 4 sheets of the new survey (and also Pete Ryder's earlier surveys of the Central Maze and Occidental series, for completeness) are reproduced here. (These surveys have in fact already seen the dim light of academic publicity, having been published by BRCA in 2006 – see Harrison, T, *Cave and Karst Science*, Vol. 33, No. 2, 2006, pp 65-72).

Meanwhile, Ernie, the bit well and truly between his teeth and his reasoning slightly unhinged, continued to plug away at the Cranehow Bottom dig, supported by the writer. A breakthrough was finally achieved in 2004 after 79 feet (24m) of tunnelling in total, thus providing a second entrance to the further reaches of the system, and a monument to Pete and Ernie's engineering skills.

Footnote: The new finds and further reaches of Devis Hole Mine, and the delicate miners' artefacts within them, are protected by a locked gate. The key can be obtained from members of MSG on request.

OTHER EXPLORATIONS

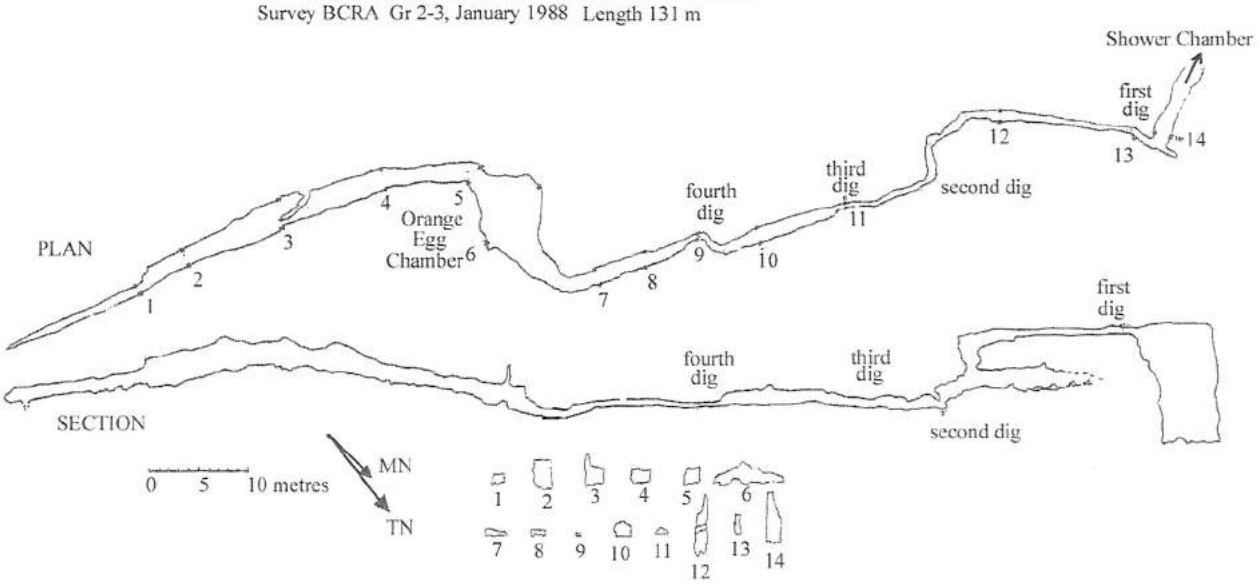
Probably the most committing caving carried out in Swaledale in recent years has been Pete Roe's and Martin Holroyd's assaults on the Cliff Force Cave sumps. Neither has been persuaded to put pen to paper for this publication, but it appears that the push through Sump 2 was the most hair-raising part of the enterprise, the exit being up a boulder choke which was excavated from the bottom. Beyond that Pete and Martin pushed through Sumps 3 and 4, and some way along Sump 5, where at the moment the matter rests. Their explorations have not yet been surveyed but they appear to have added about 200m to the length of the cave. At around the same time, in 1988, Pete and his brother also extended Cliff Force Cave above the water level, by digging through the choke at the end of the chamber above the original "breakthrough dig", and so finding and exploring Orange Egg Passage. Pete's survey of this extension, of about 130m, appears herein.

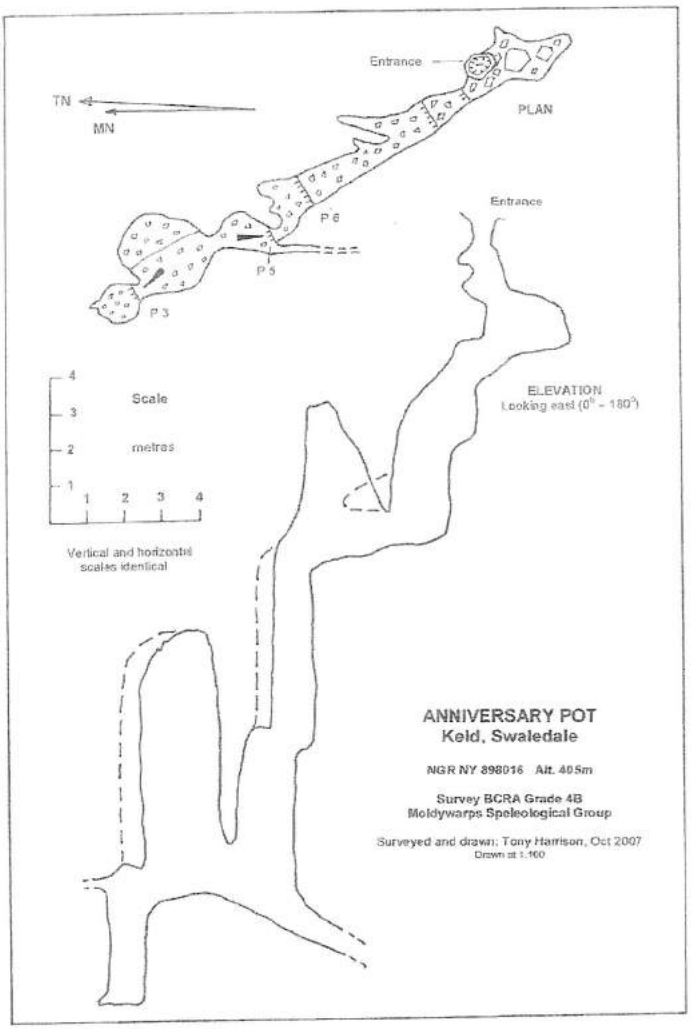


Many other digs, mostly less successful than that mentioned above, have taken place in Swaledale since MSG11 was published. Two of them took several weeks and a lot of effort, and may still go in time although both have temporarily been laid to rest. These are Anniversary Pot and Snowden Gill Cave. Anniversary Pot, above Kisdon Force near Keld, is recorded in the last edition of "Northern Caves", as being 12m deep. The MSG dig of 2005 broke through an eyehole into a 6m shaft which opened up onto a parallel 5m shaft and then a further 3m drop before grinding to a halt in a rubble strewn floor. The pot is now about 21m deep and the thickness of the Main Lime here suggests that a lot more remains to be explored.

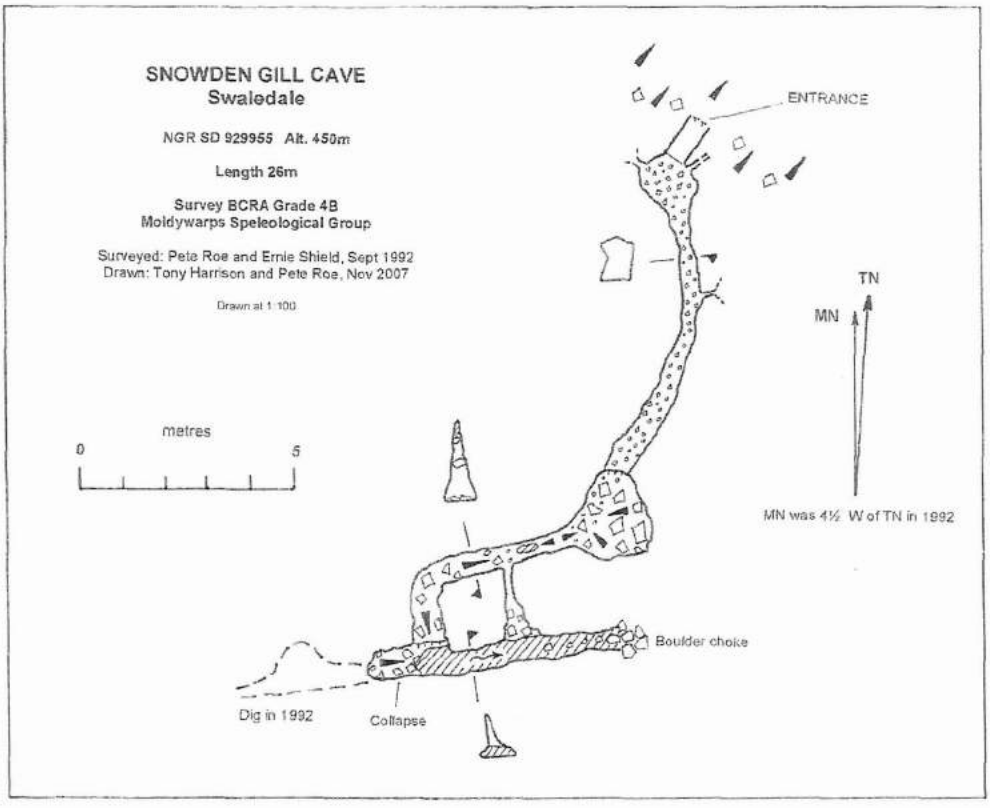
CLIFF FORCE CAVE: ORANGE EGG PASSAGE

Survey by P.Roe, R.Roe, J.Rand, G.Wolstencroft, M.Forest
Survey BCRA Gr 2-3, January 1988 Length 131 m

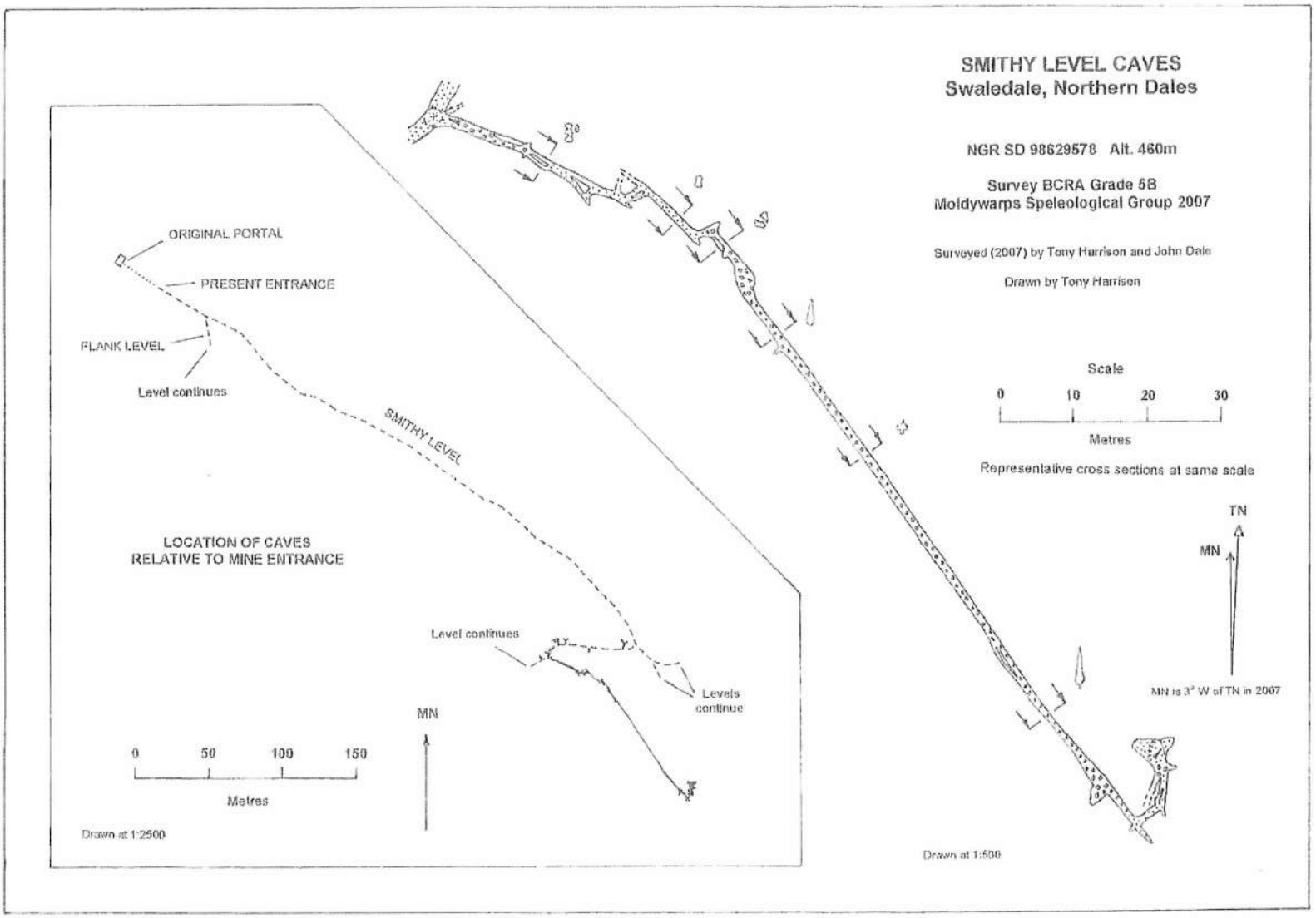




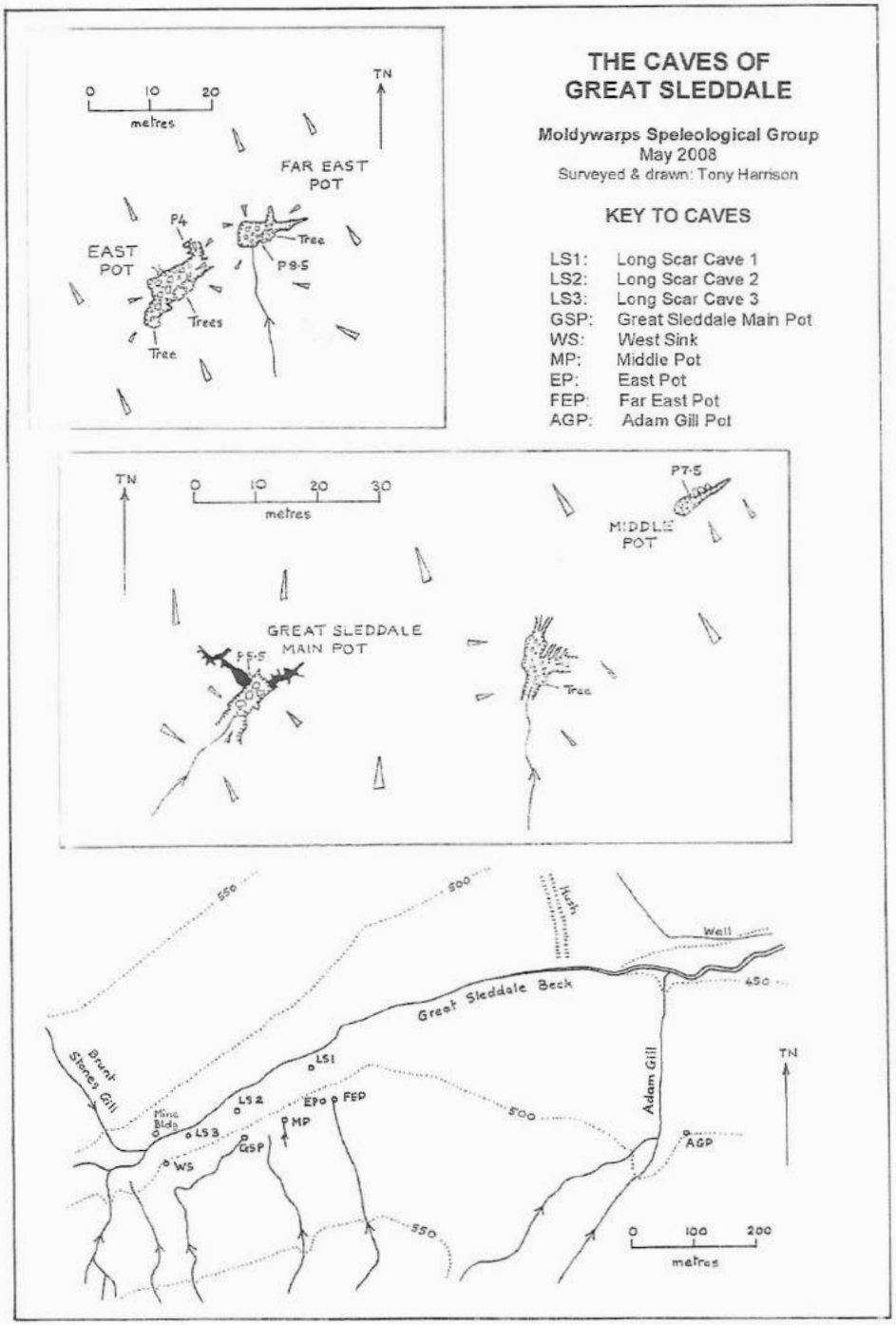
Snowden Gill Cave is a large resurgence near the foot of Oxnop Pass and received the attentions of MSG in about 1991-2. A dig was started a little to the side of the boulders where the stream emerges and despite swallowing a massive amount of scaffolding and reaching the main streamway again after burrowing along to its left, progress has been limited to about 26m.



Another find (or more strictly, re-discovery, as "the old man" was here first, as so often in Swaledale) is the natural cave in Smithy Level, Whitaside Mine. This was dug out in the 1980s by the Earby Mine Research Group who noted natural passage down a side level to the right some way into the mine. A fresh look at this in 2007 by John Dale and Tony Harrison confirmed the presence of an attractive stretch of phreatic passage, surveyed at around 170m in length, with other bits and pieces nearby adding a further 30m (but without any more significant length of natural cave).


SMITHY LEVEL CAVES
Swaledale, Northern Dales
NGR SD 98629578 Alt. 460m
Survey BCRA Grade 5B
Moldywarps Speleological Group 2007
Surveyed (2007) by Tony Harrison and John Dale
Drawn by Tony Harrison
Scale
0 10 20 30
Metres
Representative cross sections at same scale
TN
MN
MN is 3° W of TN in 2007
Drawn at 1:500
ORIGINAL PORTAL
PRESENT ENTRANCE
FLANK LEVEL
Level continues
SMITHY LEVEL
LOCATION OF CAVES
RELATIVE TO MINE ENTRANCE
Level continues
Levels continue
MN
0 50 100 150
Metres
Drawn at 1:2500

At around the same time Tony had another look at the Great Sleddale Pots in the isolated block of Main Limestone right at the head of Swaledale, a considerable walk from the nearest road. He opened up a couple of short rifts in or near the open pots adjacent to the main Great Sleddale Pot, but both proved to be going nowhere. His most interesting find was the rediscovery of the nearby Adam Gill Pot, first noted by Moldwarpers staggering back late at night across the moor from Great Sleddale Pot way back in the 1970s. This unobtrusive little slot drops 5m to a constriction but then appears to open out in a bottle shape to a wide flat floor visible about 7m further down. Tony is still trying to persuade someone a little slimmer than him to have another look at this possibility.



ARKENGARTHDALE

FLOODS, FORDS AND FIESTAS: THE SAGA OF PUNCHARD GILL

Two of the more interesting of the Moldywarp discoveries over the period since the last journal was issued have been in Great Punchard Gill. The breakthroughs in two caves there were made in the early 1990s and have already been described in print by one of the pioneers at that time, Pete Ryder, in his classic tale of derring-do (all true, honest) published recently under the title "Memoirs of a Moldywarp: Episodes of Underground Exploration" (Broomlee Publications, 2008, available from Pete at the bargain price of £8.75 plus £1.25 p & p; email: pfryder@broomlee.demon.co.uk). There is no better way to describe the early days in Great Punchard Gill than to reproduce here (by kind permission of the author) the appropriate chapter from "Memoirs". So here it is:

> In December 1991 Ernie Shield and myself sat in his car and gazed at the ford in front of us; Little Punchard Gill, lying between us and civilisation, was no longer little, but swollen to an angry torrent surging down its steep valley in full spate. Behind us lay an abandoned caving trip, as fast-rising water had chased us out of the newly-discovered Fox Level Cave. A warm wind had cleared the first snow cover of the winter within a few hours, and as the landscape changed from white to dirty green, the streams had been transformed into writhing serpents of brown water capped by white horses of foam. In the morning Little Punchard - dry in the summer - had been running strongly, but quite fordable. Now it was a different matter. We looked at each other. 'In Africa we had a phrase for times like this' said Ernie (who has lived in Africa, and I think finds English roads boring); he proceeded to quote it, then drove straight into the maelstrom. It was a remarkable display of self-control and determination. I was most impressed, especially as the stream came over the bonnet and up the windscreen in front of my eyes.
>
> Sadly, the Ford Fiesta was not designed for sub-aqueous progress, and only made it half way. Hanging onto each other, we waded to the bank, then dripped and shivered for three miles down to Whaw to find a friendly farmer who came and towed the car from the by-now abating torrent, and assisted in a three-mile bump start before the diesel engine could be coaxed back into life.
>
> Cavers probably become more familiar with water, both above and below the surface, than does the average member of the public. This is hardly surprising, as water is the main agent involved in the formation of caves, a powerful and sometimes unpredictable agent. Familiarity should never be allowed to become contempt, as we found out that day.
>
> The two Punchard Gills are headwaters of the largest tributary of the Swale, the stream variously known as the River Arkle or Arkle Beck, flowing down Arkengarthdale. Reeth, the largest village in Swaledale, is sited on the spur of land in the angle between the two valleys. Arkengarthdale is not long, but has some memorable characteristics. One is the great rampart of Fremington Edge, a limestone scar that marches for three or four miles along the northern horizion, and the other is the general havoc wrought by the old lead miners in the mid-section of the valley around Langthwaite. However, one generation's industrial wasteland is the next's unique historic landscape, and industrial archaeologists run amok with happy smiles on their faces. This is one of the best places in the North of England to examine hushes, the gullies cut to expose lead veins, using water power provided via an elaborate system of water channels and dams; there are disused levels, shafts and mine buildings in plentiful supply, although structures such as the great octagonal smelting mill near Eskeleth Bridge were demolished only a few years before they would surely have been scheduled as ancient monuments.

It is this middle section of the valley that is most deeply scarred by mining; above the hamlet of Whaw, Arkengarthdale divides into a series of tributary valleys where, beyond a scatter of farms around the Tan Hill road, man's influence on the bleak landscape is much less pronounced, with only a scatter of old lead mines, and a few small quarries with ruined lime kilns. One of these headwaters, on the south, is Punchard Gill, which, a kilometre upstream of the road, divides into two separate feeders, Great and Little Punchard. Both of these remote valleys cut the Great Limestone, the principal cave-bearing stratum in the area, and had attracted Moldywarp attention from the earliest years of the Group.

In Little Punchard, the narrower and more deeply-incised of the twin valleys, the limestone was exposed in quite a spectacular gorge, where on some occasions we found part or all of the stream sinking, apparently feeding a powerful spring about 1 km to the north, in the shallower valley of Great Punchard Gill, where the limestone showed through in only a few small scars and old quarries. We sensed the possibility of a reasonable cave system, and mounted a series of assaults in the early months of 1969; the group logbook tells of the discovery of promising holes, and then their loss beneath vast snow drifts. Eventually, scrambling around in the Little Punchard gorge, we found two or three small caves (the largest the 15m deep Silver Birch Pot) but none give any real promise of leading down to the waterway which we realised must lie beneath. Frustration grew, and eventually we turned our interests elsewhere, vowing to return later...

We did return, and it was quite some time later. On the afternoon before the group's 25th Anniversary Dinner, in October 1991, Punchard was chosen as one of the venues of no less than four prospecting trips, so great were the numbers of assembled active or semi-retired Moldywarps. The choice of Punchard was made partly 'for old time's sake'; a lot can change in twenty years, choked shafts fall open, or new sinkholes start operating. The hope was that at least one of these trips would give us a find we could link to our anniversary.

In those twenty two years there had been quite a number of changes in the Moldywarps. For one of our first annual dinners we had tried to book a meal at the Punchbowl Hotel, Low Row, but had been turned down when they learned who we were - for some strange reason, cavers and potholers did not have a very good reputation when it came to dinners in hotels. But now, under landlord Pete Roe, a Moldywarp himself, the Punchbowl became, for a few short years, a splendid centre for caving and outdoor activities in general, and was the obvious venue for our dinner.

However, when we got to Punchard, everything seemed much the same. Punchard Gill was still sinking in its bed in the limestone gorge and the rising in Great Punchard, apparently welling up from tiny submerged fissures, still looked rather daunting. However, a small tube was found in an old quarry on the north bank of the stream nearby, and thought promising enough for a return to be made.

The dinner was a great success; on the following day, on a gentle post-prandial foray, the choked tube in the Great Punchard quarry was probed again. The rock jammed in it proved less portable than we had hoped - but members of the party, notably Robin Sermon and Pete Grant (who had been absent from the winter assaults on the area all those years before) turned their attention to the rising, and by pulling out loose rocks managed to drop the water level half a metre or so, revealing that the water emerged from a stream passage in solid rock, blocked by one large boulder; this looked much more promising.

The next few weeks saw a second speleological assault on Punchard, led by Petes Roe and Grant and the Punchbowl fraternity; old friends like Dave Carlisle were brought into the fray as well. And this time the work paid dividends. The more intrepid members of the team managed to force a way into the rising, via a low duck, into a wet low crawl that opened up into larger

passages; all too soon a boulder choke was met, but there was one branch passage that ran back towards the surface, ending in a tiny rift just big enough to thrust an arm through. The surface party spotted a hand waving from a rock face, and, after returning the greeting, enthusiastically enlarged the hole so that arm could follow hand, and caver could follow arm; thus a new and far less aqueous entrance was opened up.

This scenario, of a spacious passage a few metres above a smaller wetter one, is quite common. Ice Ages seem to be the explanation. One comes along, and passing ice smears the landscape with boulder clay, thoroughly clogging up open cave entrances. However, the underground streams cut down to lower levels, and find a new exit. Geologically speaking, the Ice Age was only a week or two ago, and so the stream has not yet had time to enlarge its new and 'immature' lower-level point of emergence. If one can locate the pre-glacial route of the stream - as in this case, by inserting a small and waterproof caver up the present immature post-glacial streamway, then the older and more commodious passage can sometimes be unplugged.

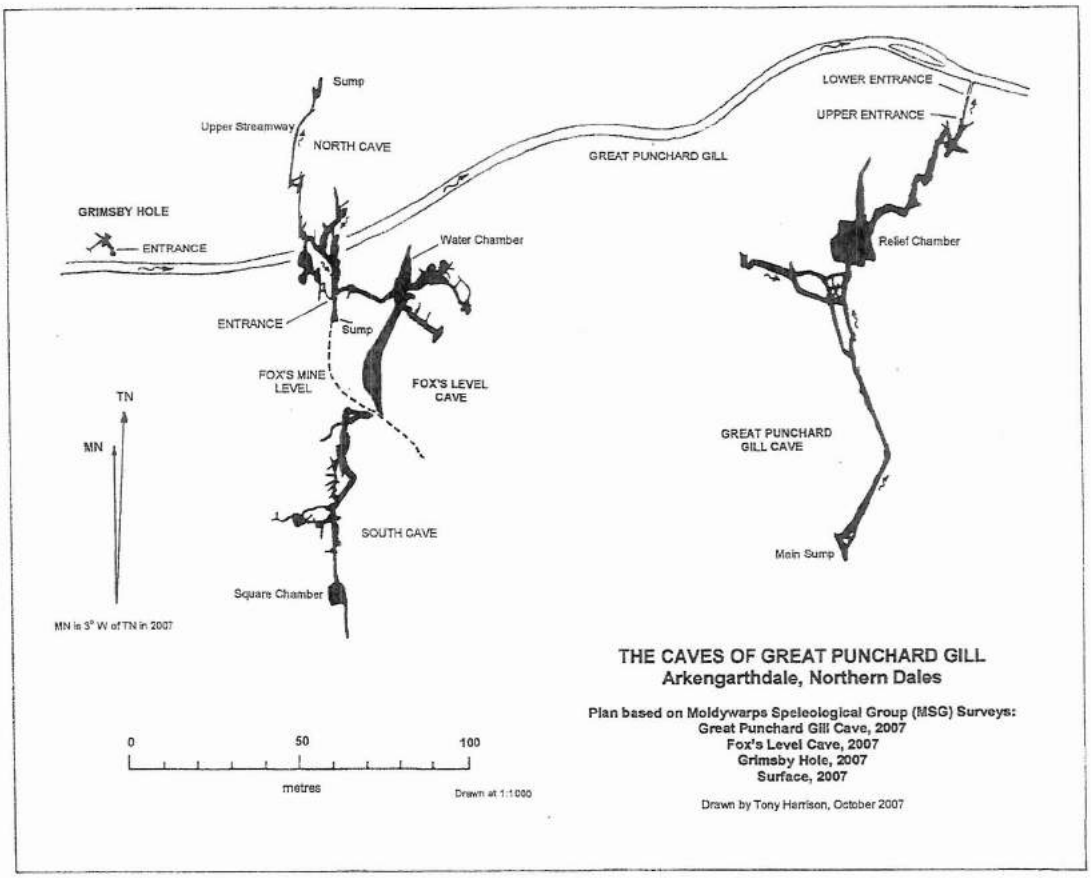
Meanwhile, a couple of hundred metres up the valley, Dave Carlisle and friends had re-opened an old lead mine, Fox Level; one of Dave's friends had talked to an old miner some years before, and recalled him saying that this level (little more than a trial) had intersected a natural cave. For once an oral tradition proved completely accurate - 45 metres from the entrance, the mined passage cut a natural one; there was one cave passage high up on the right (some old rails provided convenient footholds for the climb) and another at floor level on the left. So we had two 'new' caves systems on our hands, both looking very promising.

The floor-level passage was a low crawl, leading into a wider but only slightly higher passage, with some small stalactites; this ended in a choke, but Pete Roe and Jim Davis dug through this and dropped down into what we called the Water Chamber where the cave really began to look as if would go places; several passages radiated off, one leading to a streamway. You could even stand up in places! The high-level passage on the right of the level wound its way through some fine formations, to end in a short mined-out section and a choke.

It was during the exploration and survey of the Water Chamber area, just before Christmas, that Ernie and I had our experience of flooding above and below ground. Grovelling into the dug-out entrance to Fox Level beneath a cascade of icy meltwater, we did keep a careful eye on the water levels, and as soon as we noticed the stream rising, beat a retreat. Discretion is always the better part of valour in such circumstances; in retrospect, discretion might have been in order an hour or so later on the surface, at the Little Punchard ford.

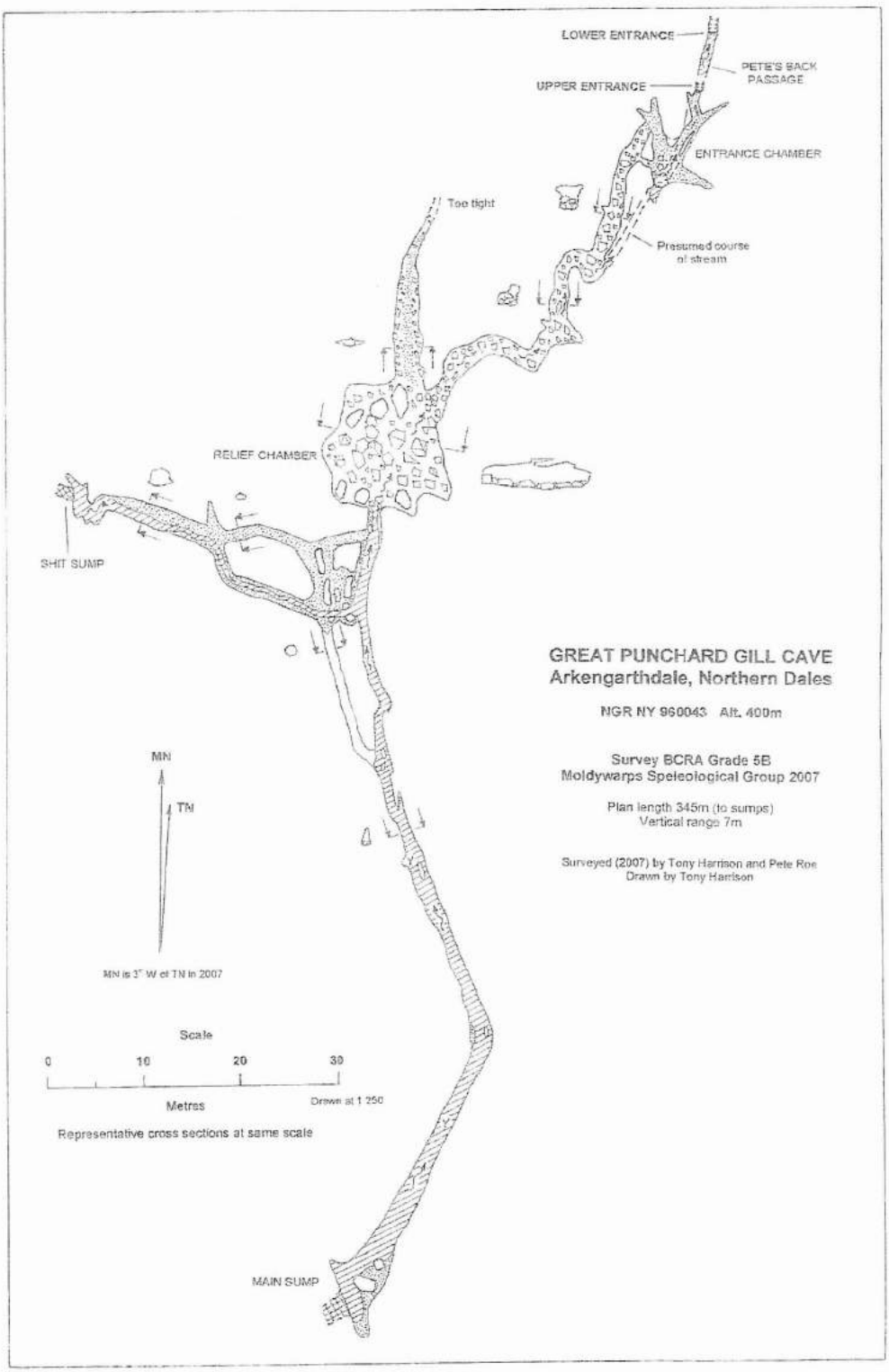
Ernie, undeterred, was back with Pete Roe, on St Valentine's Day. This time they attacked the boulder choke in the Resurgence Cave, and broke through into a series of passages which Rich Gibson and I surveyed a fortnight later. The first section was distinctly bouldery - in fact there were a series of chambers where very little solid rock was visible, and one felt like the proverbial fly crawling round inside a coal scuttle. Thing got a little better when one emerged into a broad chamber, with a flat roof, beneath which a whole bed of limestone had dropped and broken up, one scrambled across a surface split by deep rifts and crevices, with the stream rushing along below. After another clamber over a big boulder, the cave, which presumably crosses a fault-line at this point, suddenly and abruptly changes in character. The passage becomes much smaller - walking alternating with hand-and-knees crawling - in solid rock, with an arched roof, and occasional displays of spectacular formations. After 90 m or so this attractive going ended suddenly in a deep sump (which Pete Roe has since dived, but not made very much progress); on the right were several side passages, mostly easy but dirty crawls, except for one inlet which horrible liquid mud that got deeper and deeper. Pete pushed this through some horrendous ducks to a sump, and bestowed a series of names on the passage and its various features which, although both imaginative and accurate, are perhaps best left unprinted in an account aimed at genteel readers.

So Great Punchard Gill yielded not one but two caves, each in excess of the magic thousand feet (c330m) in length. We had expected, or at least hoped for, a simple stream system taking the water from Little Punchard down to the Great Punchard resurgence. Experience shows, again and again, that one does not find the sort of cave that one expects to! The real situation was far more complex, and one that we still do not fully understand. There were two caves, and two different streams. The main stream in the Resurgence Cave is probably the flow from the Little Punchard sink; that in Fox Level probably provides the stream that flows to the horrible muddy inlet in the Resurgence Cave. But where is the Fox Level stream coming from in the first place? Possibly from Great Punchard Gill itself, or perhaps from the hillside to the north. At one point in the complex and low streamways beyond Water Chamber we found chambers with walls and floors of limestone but roofs of boulder clay, probably the boulder clay that lay in the base of the Great Punchard valley. What may have happened here is that the roof of the original cave was broken through, or scraped off, by glacial action; later, when the ice melted, the passage was plugged with boulder clay. Eventually the underground stream re-established itself, re-opening its old passages, but has not yet having removed enough boulder clay to lay them open to the surface again. We found the same phenomenon in a cave in West Allendale (Northumberland) where a chamber we called 'The Claydome' had a hemispherical roof completely of clay; survey showed that at this point the cave was crossing beneath a small surface valley floored by boulder clay.



Discoveries such as the 1991 finds in Punchard Gill will continue to be made throughout the Pennines; virtually every valley that cuts a limestone bed has similar sinkholes and risings. In the early days of the Moldywarps we were still able to come across such places that sported open cave entrances, at least in the more remote valleys. But now cavers have trodden most of

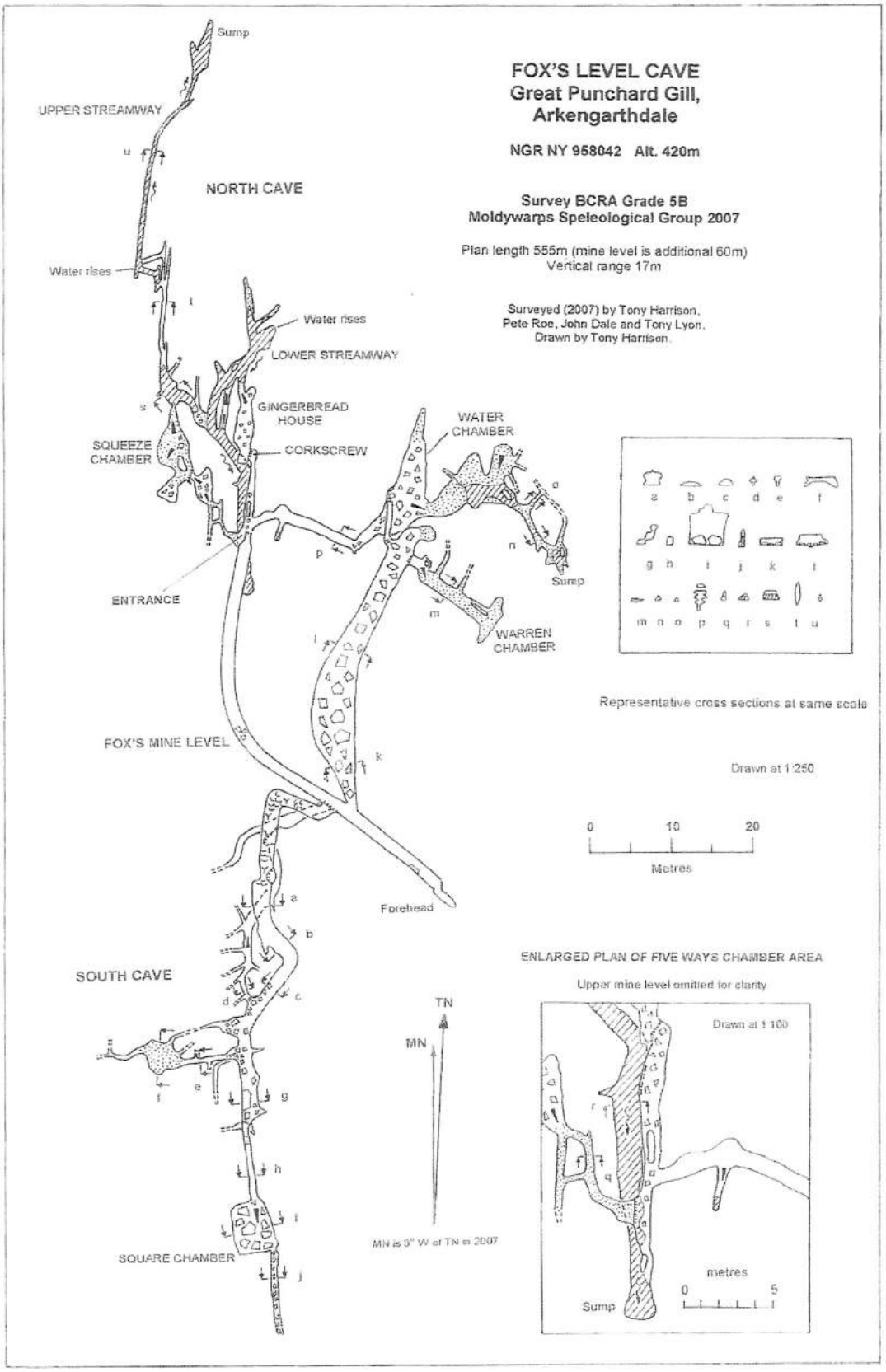
the Dales limestones, and unexplored open caves are becoming hard to find; however, there are many places, like Punchard, where a little judicious digging (with, of course, the permission of local landowners and gamekeepers, who can often be persuaded to view well-behaved cavers with amused toleration) will open the door.

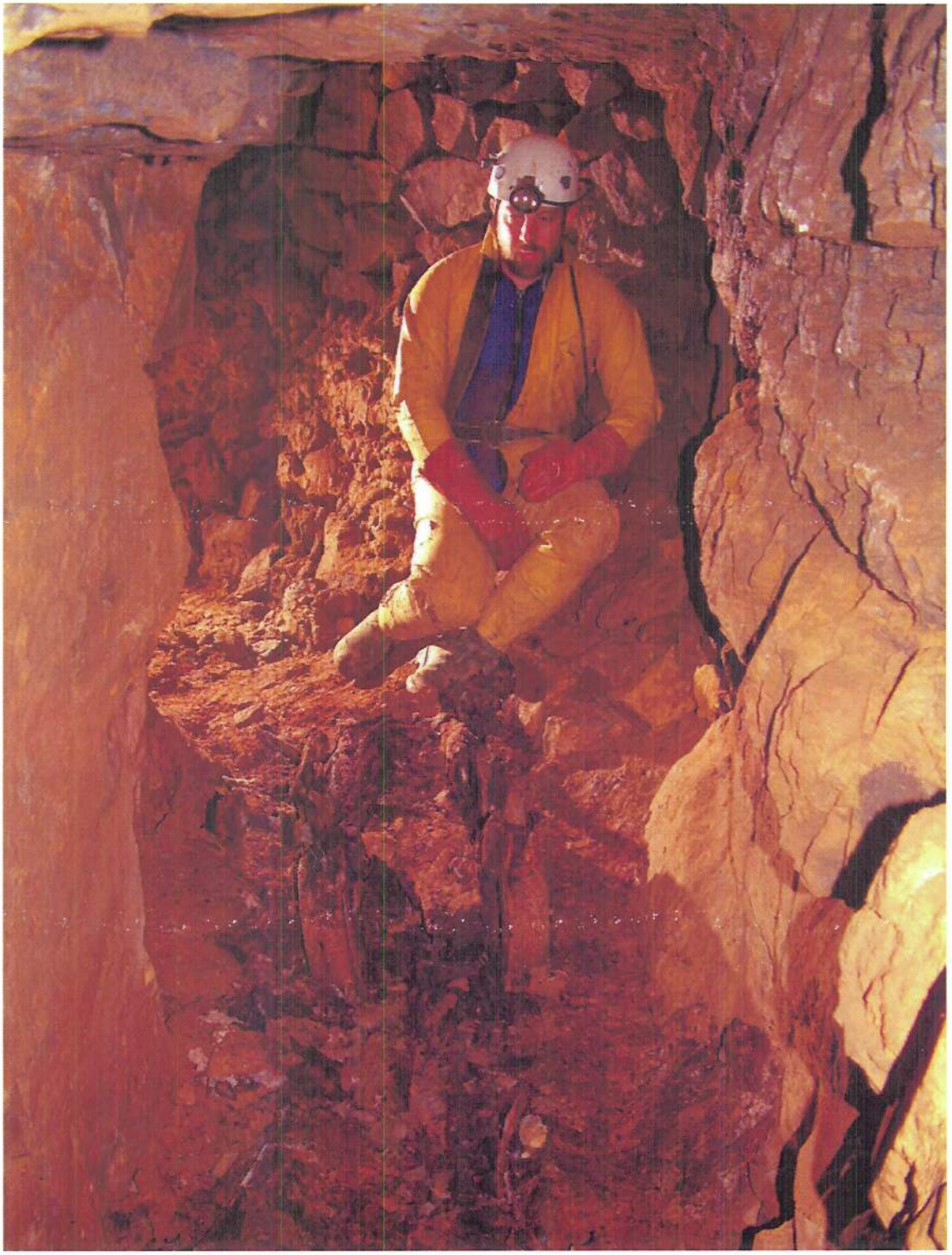


Postscript by Tony Harrison

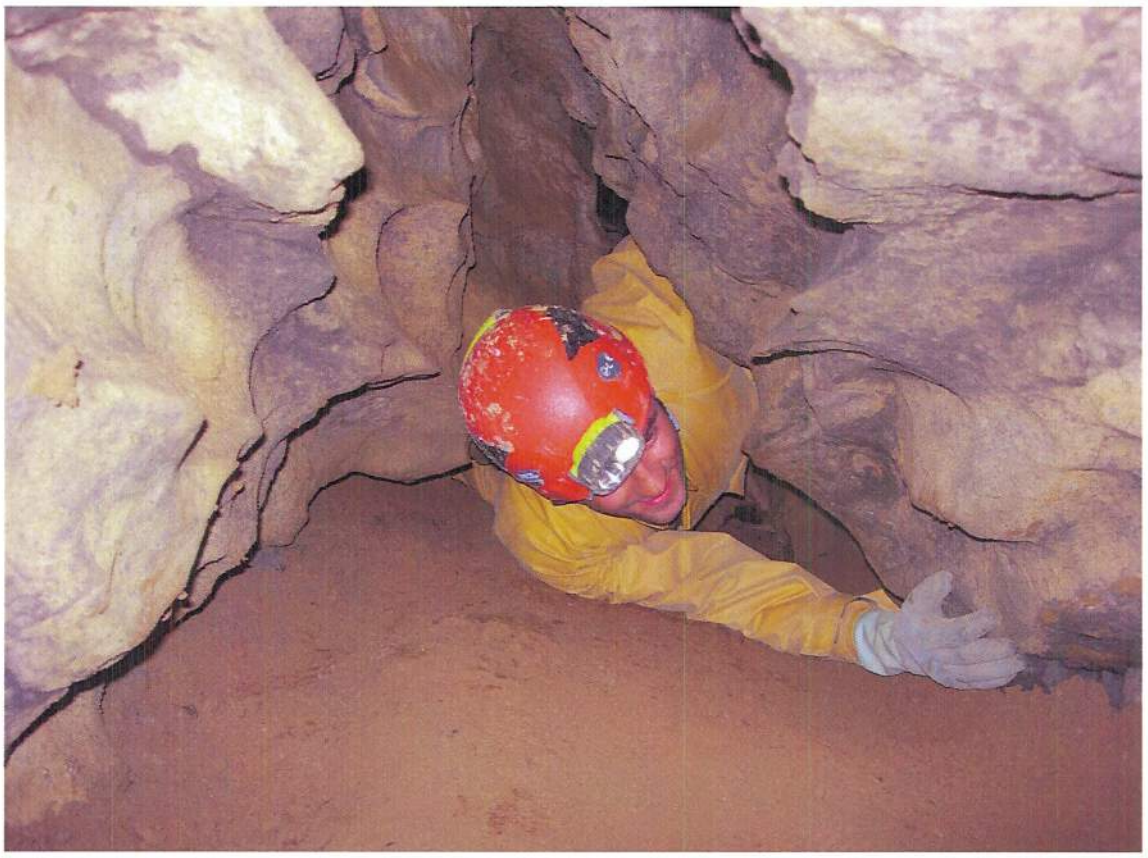
Both Fox Level (or Fox's Level as the OS map has it) and Great Punchard Gill Cave were partially surveyed at the time of the initial exploration in 1991, but interest then shifted elsewhere. It was only in 2007 that Pete Ryder remembered that the surveys were incomplete and decided to do something about it. He called in one of the new (and still naive) MSG foot soldiers, Tony Harrison, and gave him clear instructions to complete the work. Tony dug out the Great Punchard Gill Cave upper entrance, which had collapsed over the intervening years, and spent a frustrating day by himself trying to hold one end of the tape measure and squint down the clinometer at the same time. He then called in reinforcements in the shape of Pete Roe.

Tony and Pete, not realizing that Pete Ryder's initial surveys were still available, resurveyed both caves from scratch and in the process added some more passage in both locations. In Great Punchard Gill Cave a "new" side passage from Relief Chamber was pushed for about 20m before becoming too tight. In Fox's Level, in the far reaches of the low streamway in North Cave beyond Squeeze Chamber they found a more significant 60m or so of new and very aqueous passage requiring flat out crawling in a low canal. More sumps and risings were also found, adding to the mystery of the subterranean water courses in this gill. The highest rising in Fox's Level appears to be at the south end of the Upper Streamway to the north of Squeeze Chamber, and this flows north for 35m or so before disappearing in a sump. The water then appears to swing round by 180° and rises again in the Lower Streamway before sinking once more in the sump south of Five Ways Chamber (see survey). We presume the water rises again at the Main Sump at the south end of Great Punchard Gill Cave, which is around 170m away (in a straight line) and at about the same level (see line survey of the Great Punchard Gill Caves). Does the flow from the Little Punchard Gill sink also join the Fox's Level stream somewhere in this section before flowing out of Great Punchard Gill Cave, as Pete Ryder suggests above? Dye testing will probably be necessary to expand our knowledge of the hydrological complexities of Great Punchard Gill and its neighbouring valley.

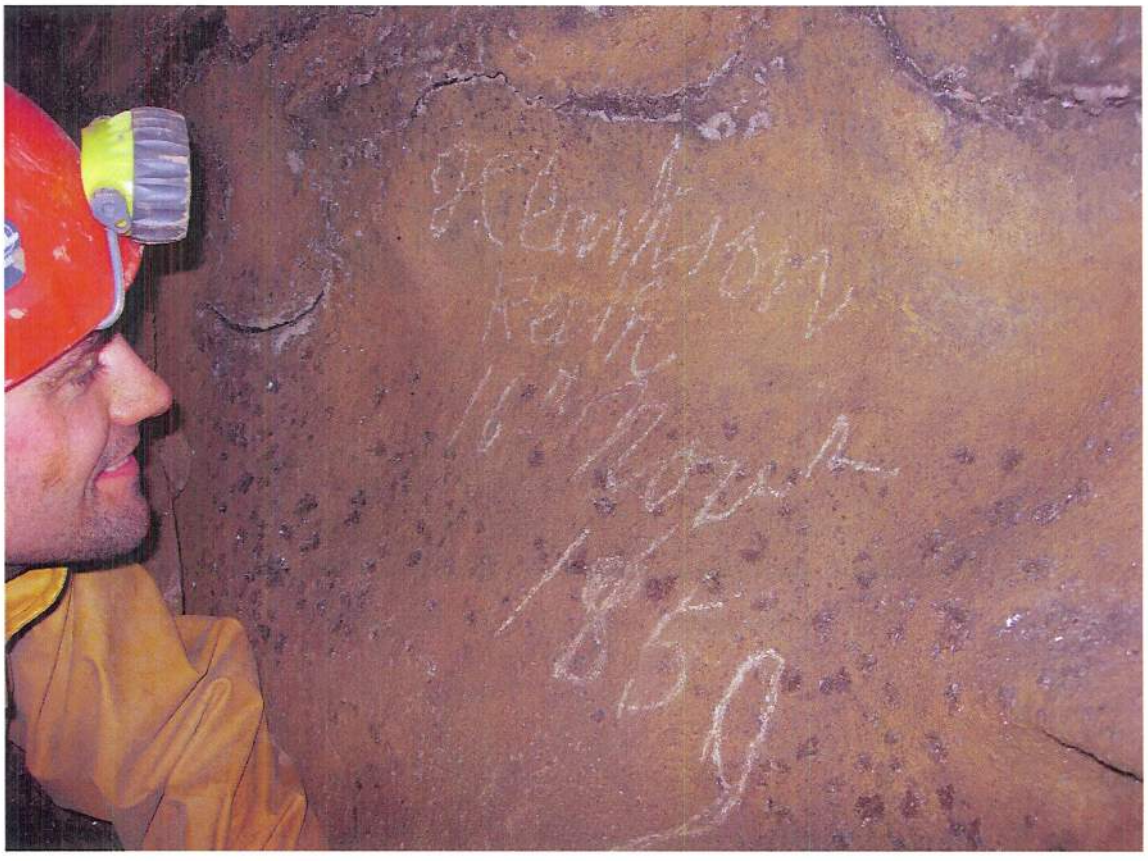

FOX'S LEVEL CAVE
Great Punchard Gill,
Arkengarthdale
NGR NY 958042 Alt. 420m
Survey BCRA Grade 5B
Moldywarps Speleological Group 2007
Plan length 555m (mine level is additional 60m)
Vertical range 17m
Surveyed (2007) by Tony Harrison, Pete Roe, John Dale and Tony Lyon.
Drawn by Tony Harrison.
Sump
UPPER STREAMWAY
NORTH CAVE
Water rises
Water rises
LOWER STREAMWAY
GINGERBREAD HOUSE
CORKSCREW
SQUEEZE CHAMBER
WATER CHAMBER
Sump
ENTRANCE
WARREN CHAMBER
FOX'S MINE LEVEL
Forehead
SOUTH CAVE
SQUARE CHAMBER
TN
MN
MN is 3° W of TN in 2007
Representative cross sections at same scale
Drawn at 1:250
0
10
20
Metres
ENLARGED PLAN OF FIVE WAYS CHAMBER AREA
Upper mine level omitted for clarity
Drawn at 1:100
metres
0
5
Sump



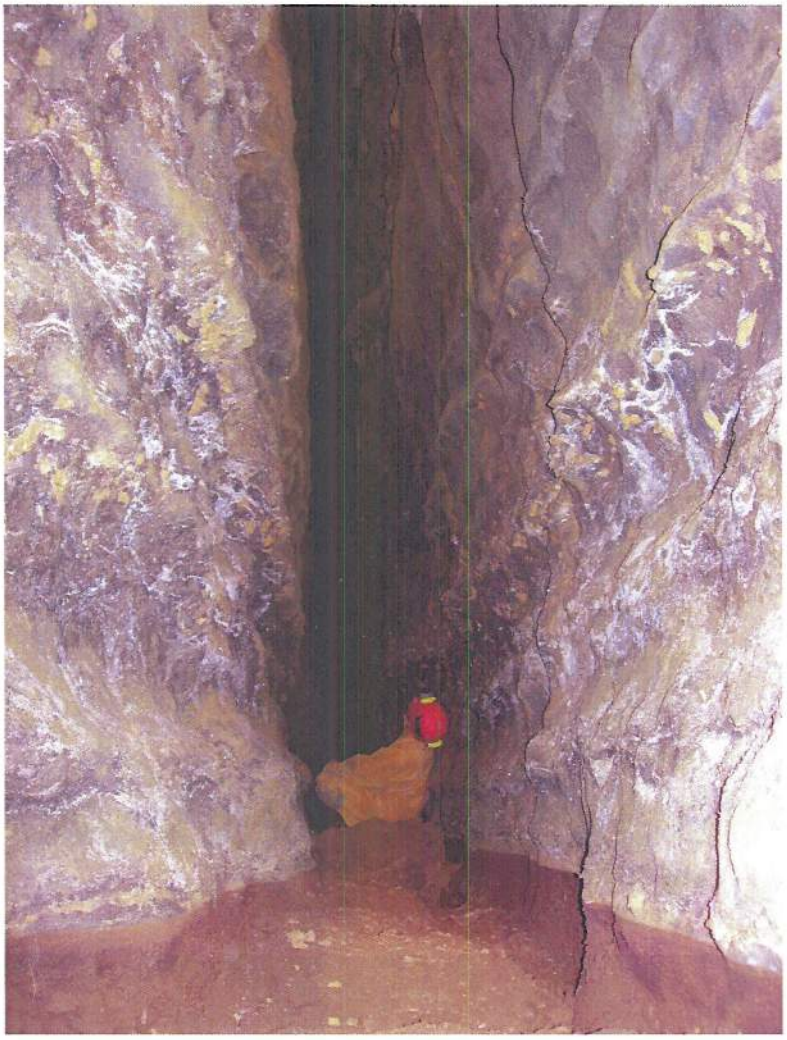
Old miner's truck, Devis Hole Mine
photo Pete Ryder



East Cave Series, Devis Hole
photo John Dale

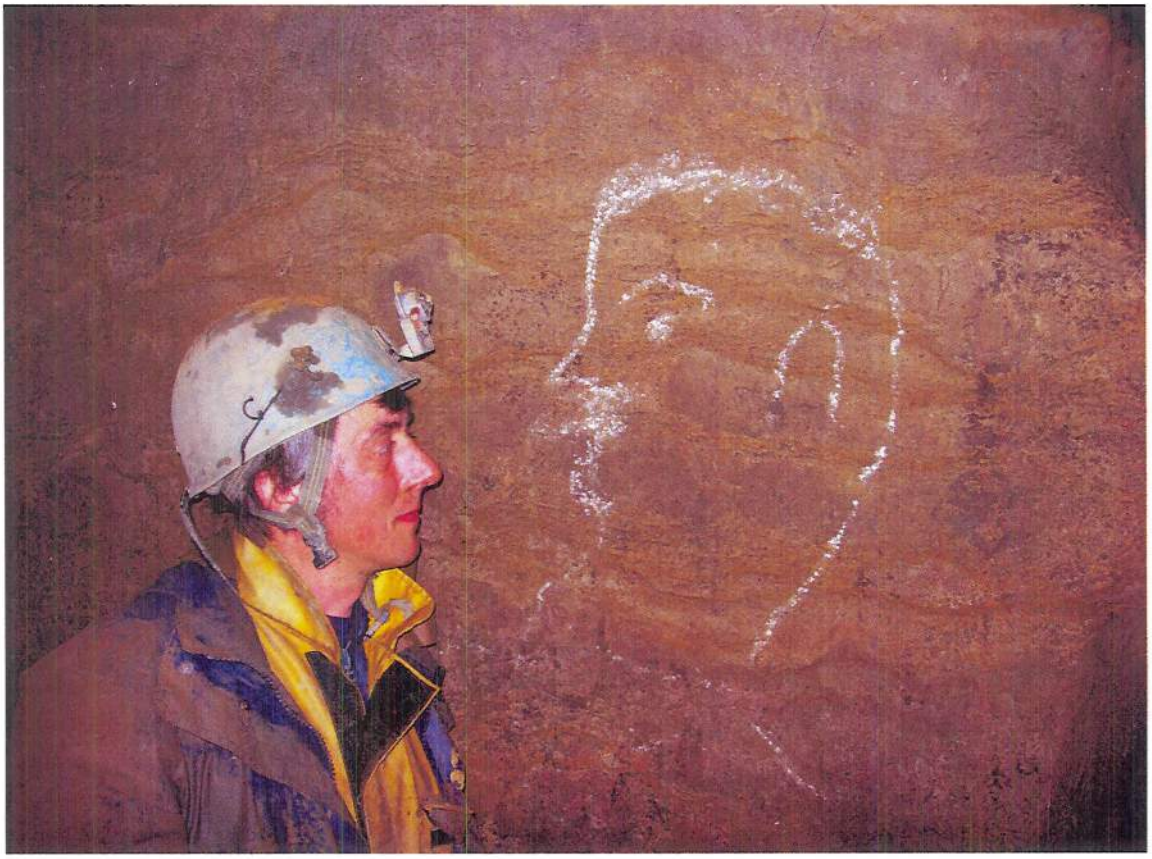


Graffiti Corner East Cave Series, Devis Hole
photo John Dale

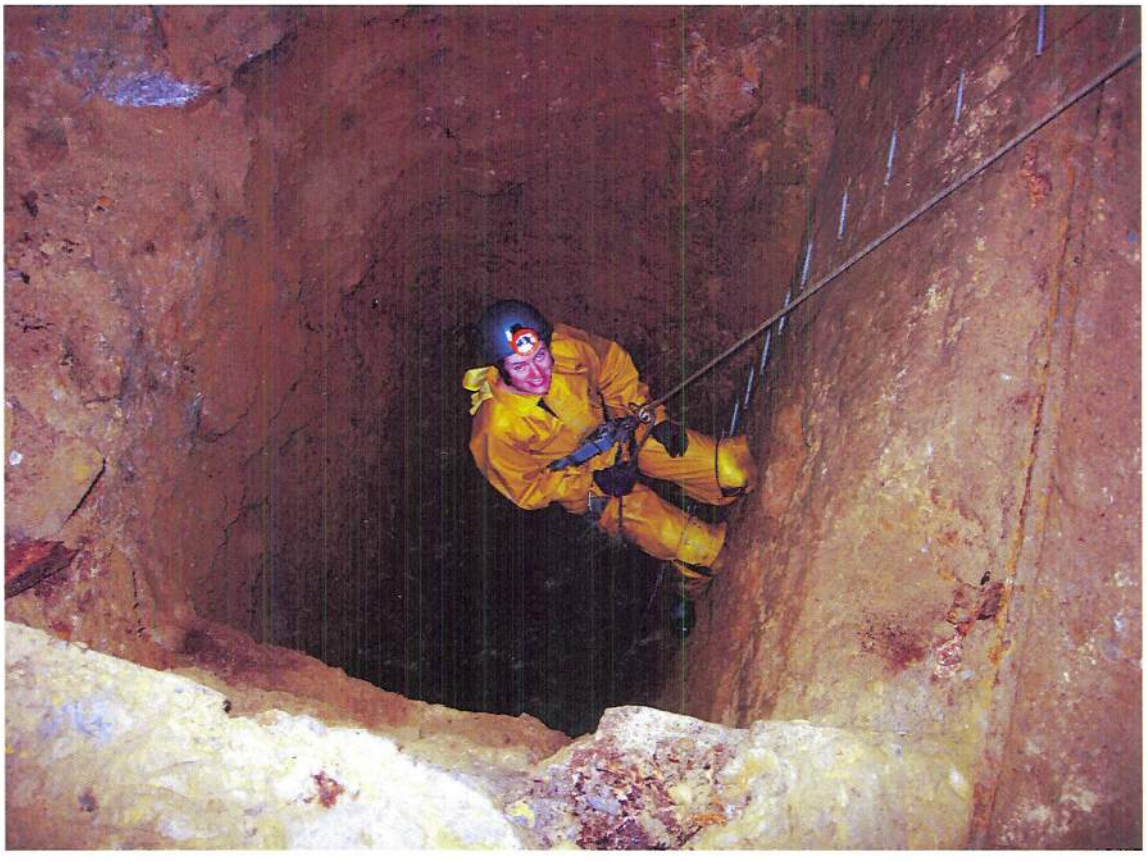


The Short Rift,
East Cave Series,
Devis Hole
photo John Dale

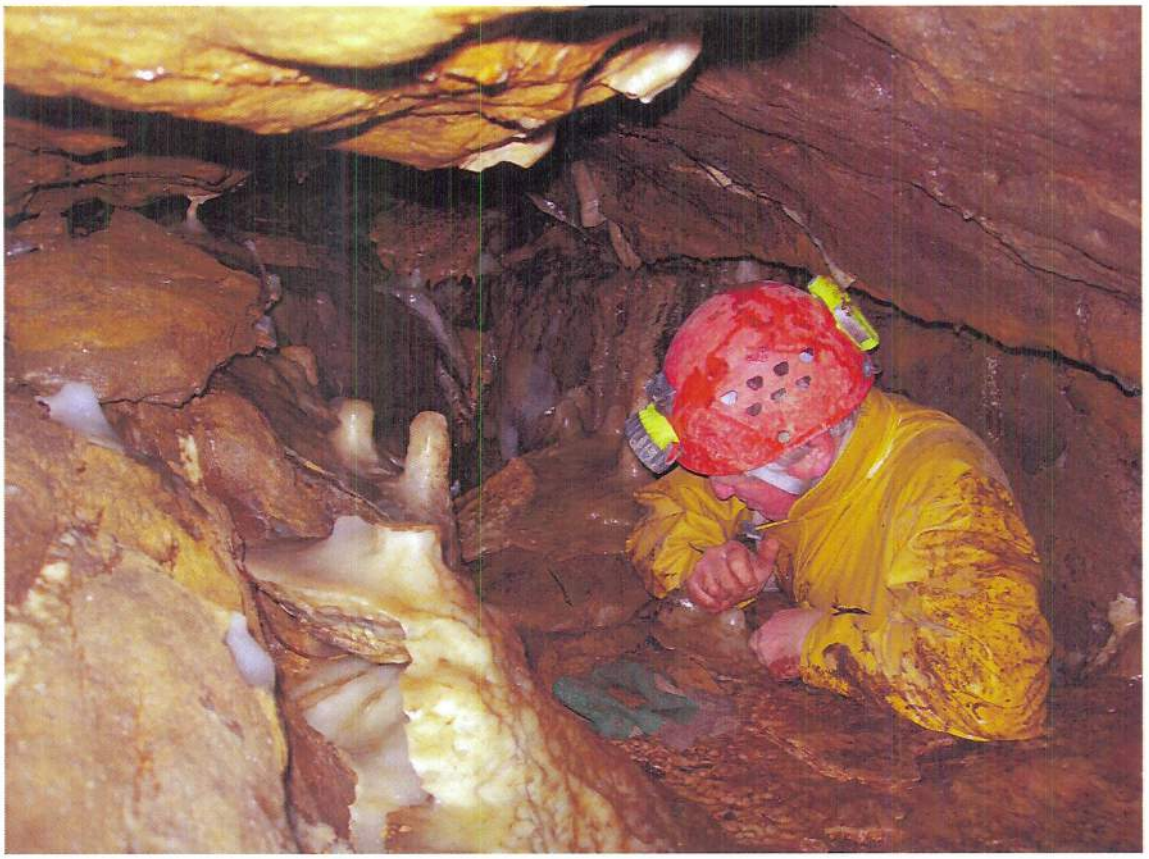
Pete Roe (left) and
miner's graffiti,
Faggergill Mine
photo John Dale



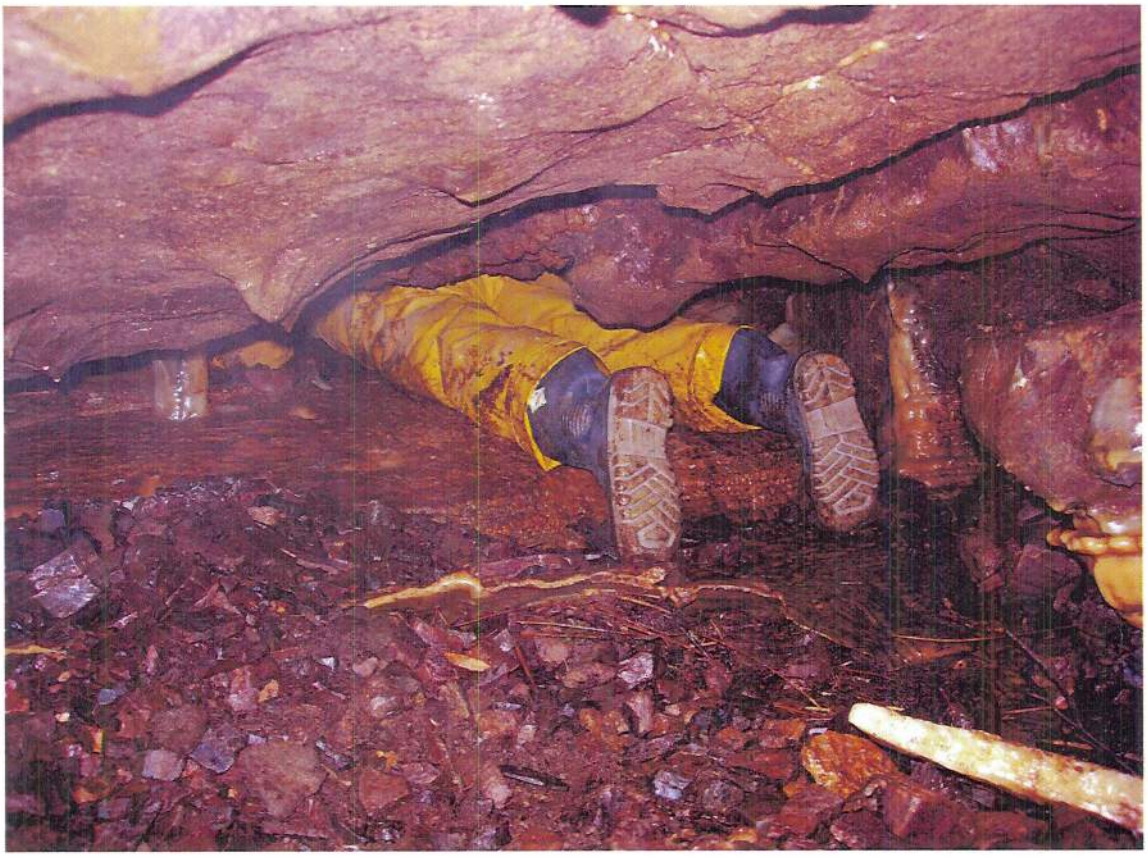
In the South Cave Series, Devis Hole
photo John Dale



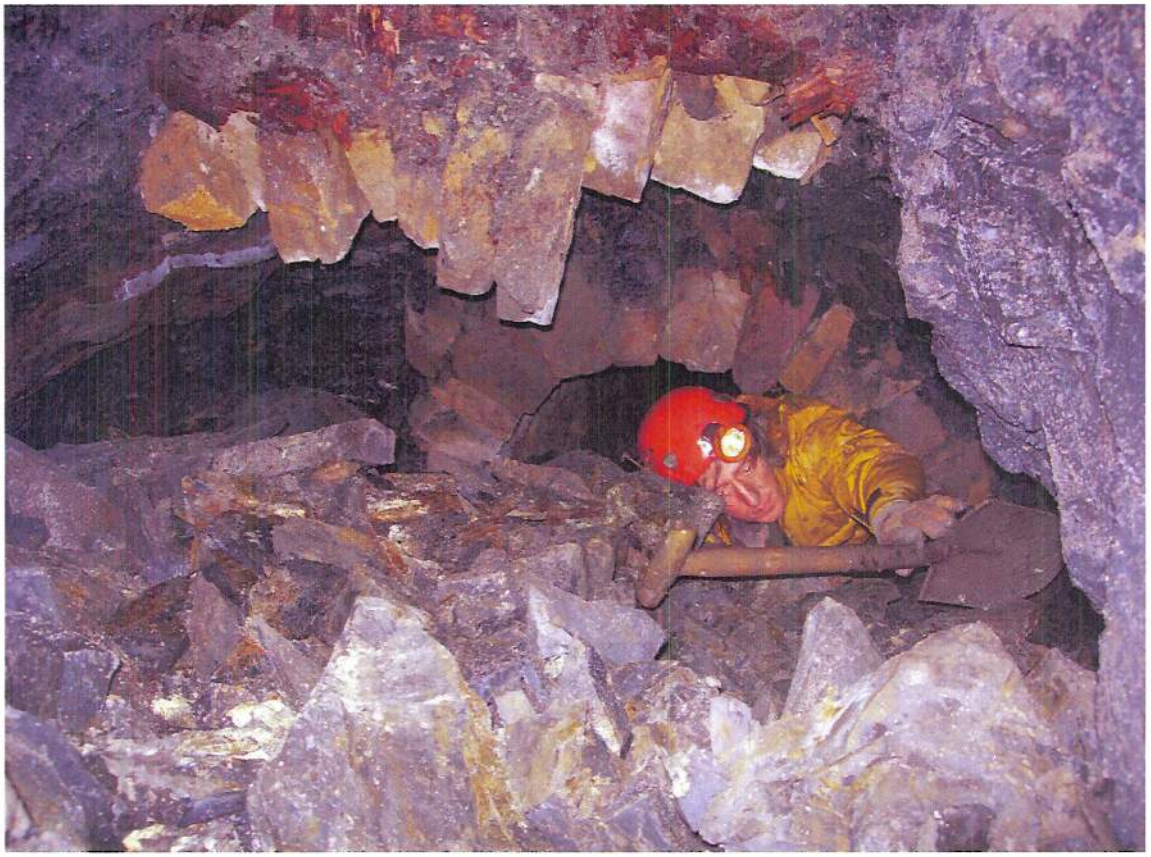
Pearson's Sump, Devis Hole
photo John Dale



The Pensioner's Pause squeeze in Lost Pool Sink
photo John Dale

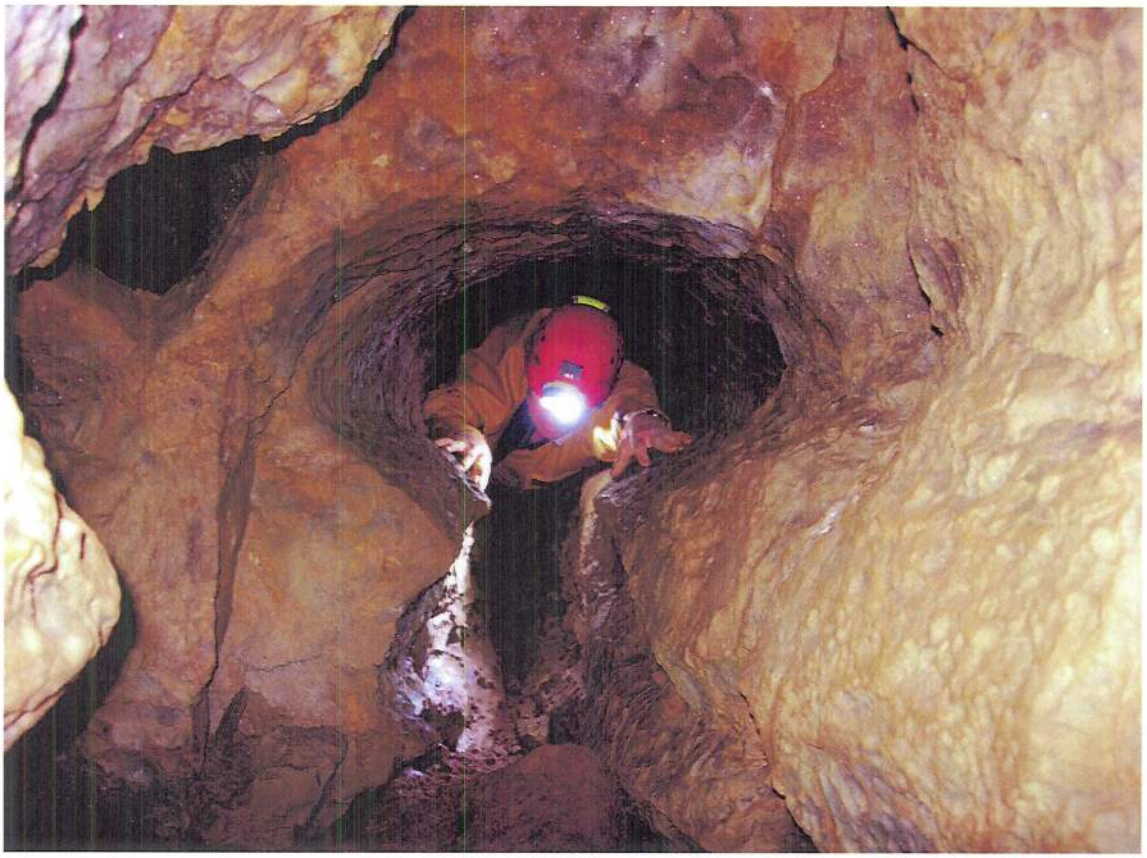


A low crawl in Lost Pool Sink
photo John Dale



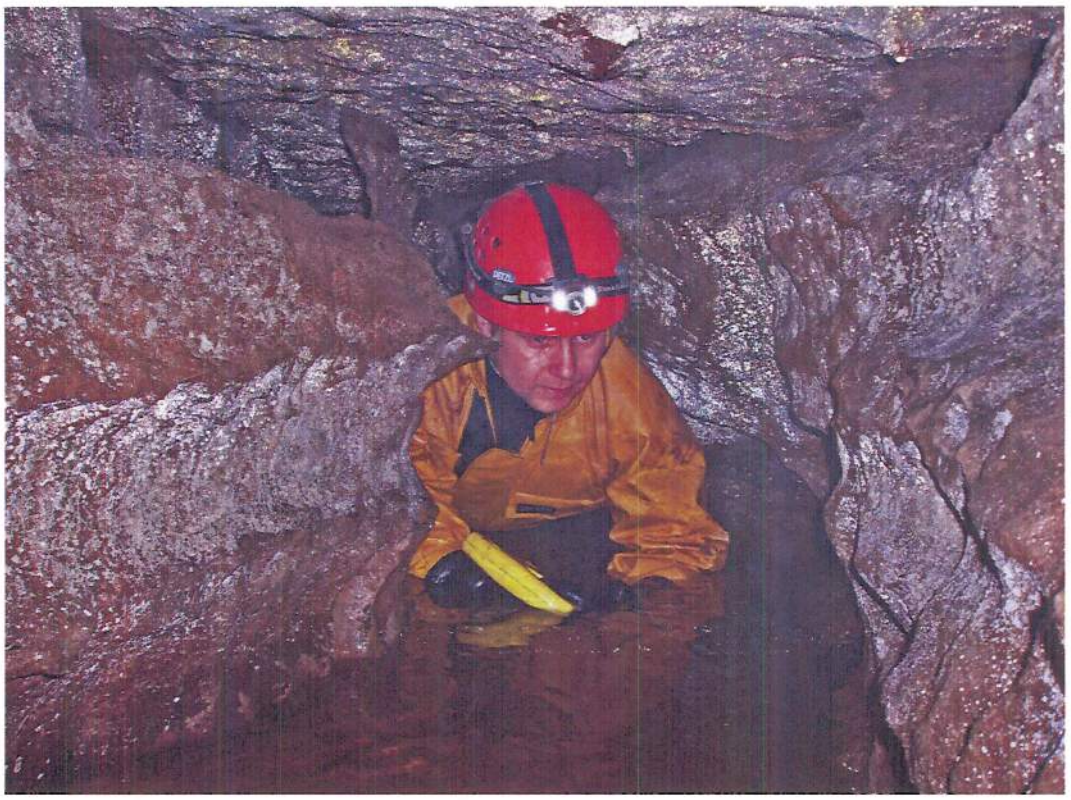
Victoria Level, Melbecks Moor
photo John Dale

Shingle Shuffle in Lost Pool Sink
photo John Dale

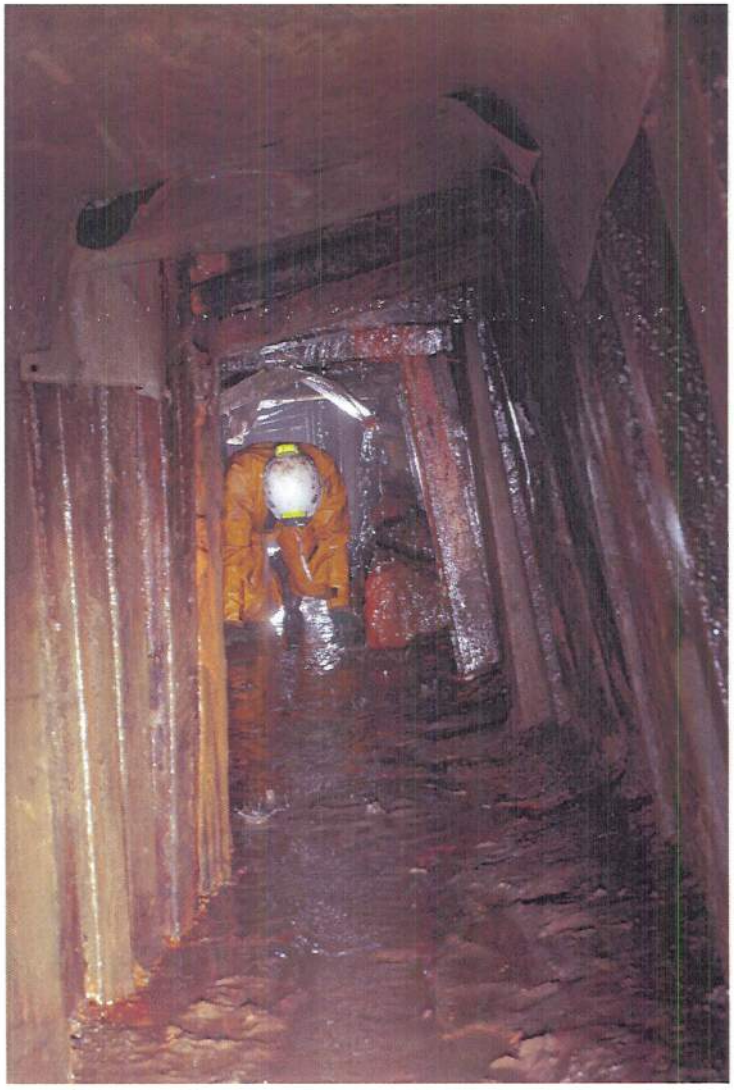


Natural Phreatic Cave in Smithy Level, Whitaside Mine.
photo John Dale

The Streamway in Cliff Force Cave
photo John Dale



A wide section in Park Scar Cave.
photo Tony Harrison

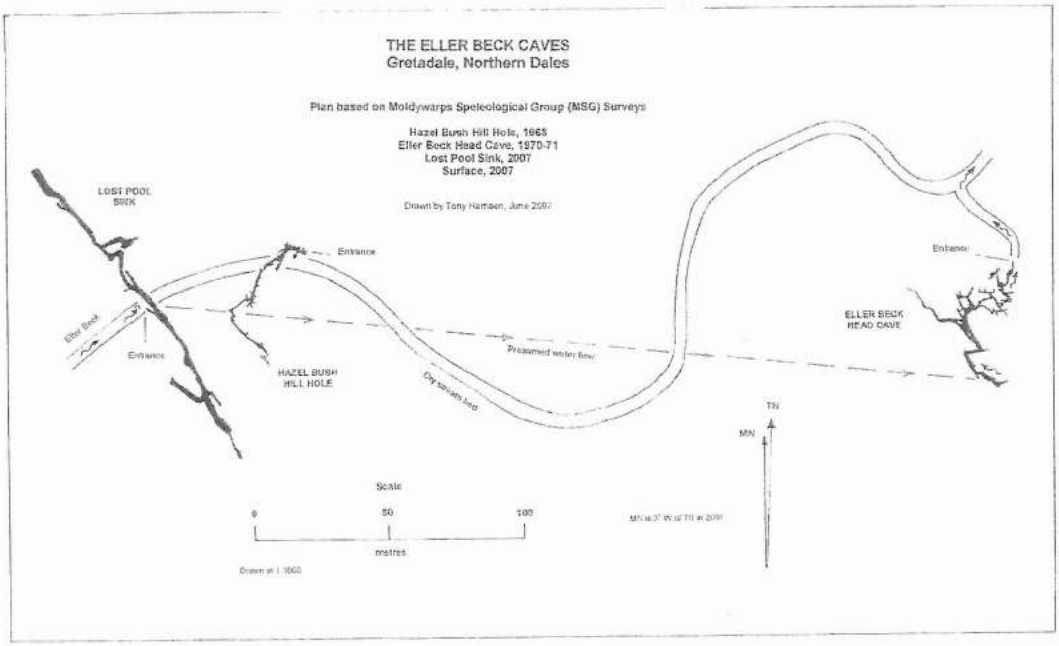


The Cranehow Bottom Level dig in Devis Hole.
photo Mike Clayton

GRETADALE

MUCH EFFORT, LITTLE LENGTH

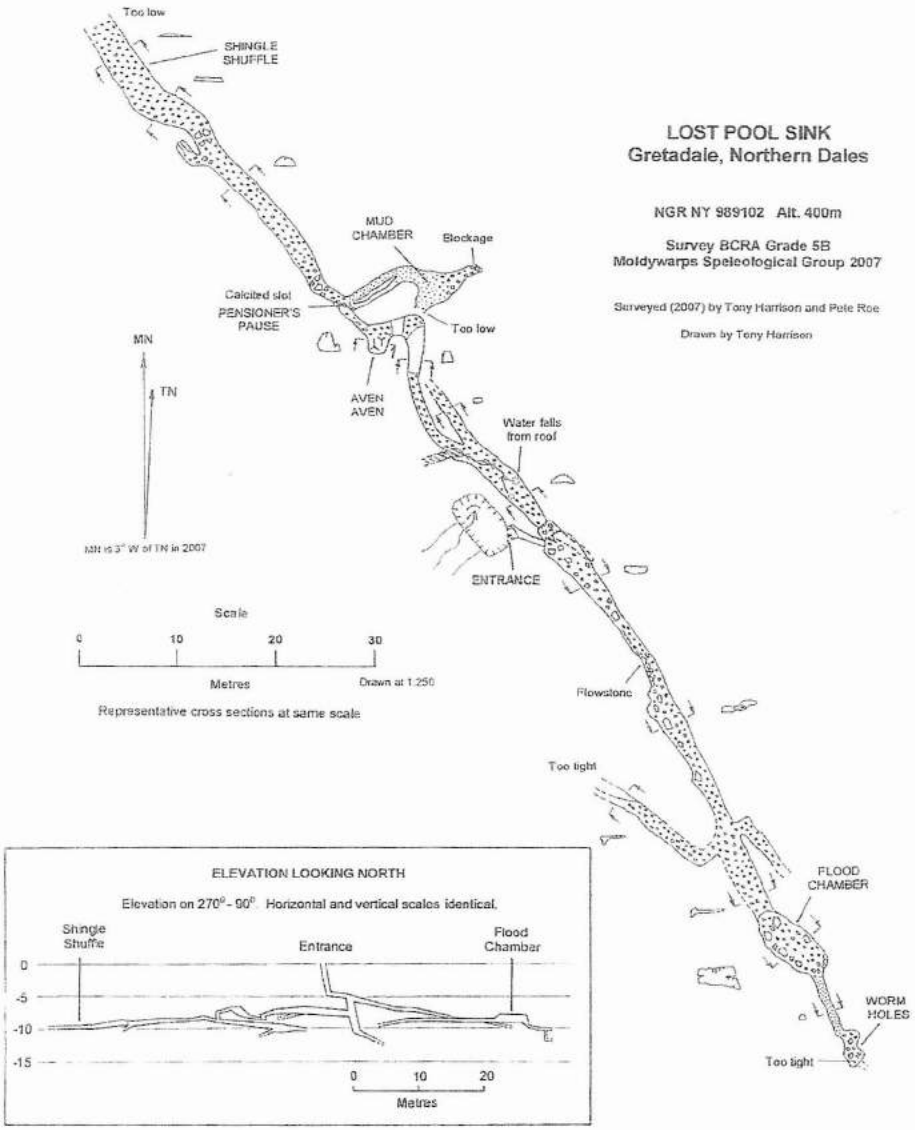
Every now and then a caver makes an area his own. This certainly applies to Tony Myers, the area being Stang Forest and Gilmonby and Scargill Moors. On many Sundays Tony will be found out there, probing down sinks, poking up resurgences and shifting rocks from the tops of pots. As always in Moldwarps country, most efforts have come to nothing. Occasionally Tony gets very excited about a find, and all he needs to break into miles of new passage, he says, is a bit of help with a dig. Tony Harrison has been given dozens of grid references by Tony M, and usually plods round a few months later with a tape measure and a plentiful dollop of pessimism. Seven of Tony's finds (and one of Tony H's) are listed in the cave descriptions section later in this journal and most grind to a halt very quickly indeed. Two of the finds, however, have received sufficient approval to have their vital statistics carefully noted (see surveys of Razor Pot and Cattle Grid Pot reproduced in this journal), and one has been sufficiently exciting to draw the massed hordes of currently active Moldywarpers to its portals. This is Lost Pool Sink.



Lost Pool Sink is just upstream of Hazel Bush Hill Hole and is part of the infamous Eller Beck Head Cave hydraulic system. (The traumas of this cave are recorded in MSG 5, published in the early 1970s and now unlikely to be available to the casual reader, which is just as well because reading about its exploration will probably give rise to severe nightmares and a strong desire to give up caving). In 2003 Tony Myers had another look at the upper reaches of Eller Beck and in the spot above Hazel Bush Hill Hole where the stream normally sinks in a large pool he found nothing. That is, the pool had disappeared and the stream was now sinking among boulders at the bottom of a bare, rocky stretch of river bed. It took Tony and Pete Roe only two or three visits to excavate an opening into a

rift at the side of the hole which in a few metres dropped into a wide passage. Lost Pool Sink was on the agenda!

The cave comprises mainly fossil passages heading north and south from the entrance rift. Both directions require continuous crawling. To the south the well decorated passage, which can flood in wet weather, reaches a chamber and then closes down in tight holes. To the north, a crawl under the cascading water of the incoming beck again reaches a well decorated section and eventually a calcited slot in the floor, Pensioner's Pause, (a difficult problem for the stouter among us) beyond which a low bedding plane eventually gets too tight. The water entering the cave near the entrance soon sinks at the bottom of a short shaft; a number of digging sessions here have failed to move us much further on. When surveyed Lost Pool Sink turned out to be 214m long, quite respectable for a Gretadale cave, but all parts of the cave are a good 300m or more from the rising in Eller Beck Head Cave, meaning that there's a lot more cave still to find in this valley!



TEESDALE

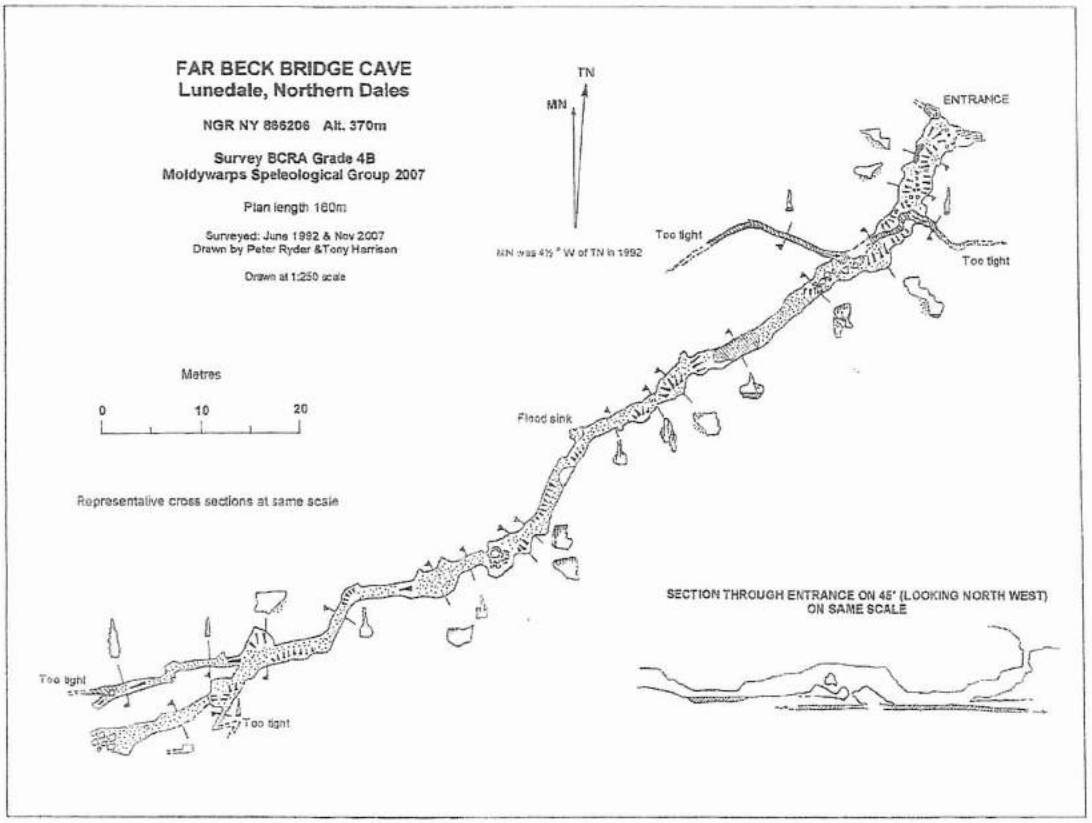
FAR BECK BRIDGE CAVE

Teesdale has largely escaped the predations of the Moldywarps over the last 20 years or so, but one notable discovery was made back in 1991: Far Beck Bridge Cave in Lunedale, a southern tributary of the Tees. Yet again, to ensure we record herein a correct and explicit account by the original explorer, we turn to the hallowed pages of the recently published "Memoirs" saga by Pete Ryder and reproduce the appropriate section from Chapter 12:

> For the next instalment of the Lunehead story one must fast forward..... to December 1991. I had moved north to Northumberland; in the course of work I was driving over the Brough to Middleton road one very wet day when every stream was a raging torrent; a good day for a caver to observe things on the surface, a very bad day to go underground. Even driving conditions were dodgy; just upstream of Far Beck Bridge, near Grains o'the Beck, the whole road was awash; glancing over a wall, I could see a torrent of water boiling up from a pool below a small cliff. Interesting.
>
> A month later I was back with Richard Gibson. Where there had been a pool there was now just a hollow, but with tantalising black spaces between the boulders at the foot of the little cliff face. We asked the farmer if we 'could move a few stones'. No problem. So we moved quite a lot, enough to hear running water below, and little pebbles rolling away and dropping into an echoing space. 'Well worth a return visit' says the log book. Was this the stream we had seen in the Mine Caverns? The farmer pointed out a rising to us, on the south bank of Lune Head beck about 250 m further downstream; he said it became very large in west weather.
>
> In February we were back, this time with Roger and John Atkins, part of the sub-branch of the Moldywarps Richard had gathered around himself when resident in Somerset. Roger wielded a sledgehammer with great effect, but one big boulder proved very annoying – every time a piece broke off it, it just slipped deeper into the rift we were opening up. It was raining. I departed, cold and wet, at six o'clock, but the others stayed a little longer – enough for the reluctant rock to finally drop, and open up an inviting black hole. Far Beck Bridge Cave was open; they explored 30 m or so of passage, then retreated to the phone...
>
> Next day we were back, with Tony Marsden from Weardale lured along as well. The cave did not disappoint us; the entrance dropped straight into walking-sized passage. It was very muddy – testimony to the periodic fierce flooding – and we soon met the stream, flowing off into a tiny rift. No wonder it backed up in flood. Upstream after a few metres the stream emerged from a narrow rift (Richard's sort of passage) but the main passage continued, walking and stooping-sized, up and down mudbanks and with forests of mud-coated stalactites. After c 100 m of easy progress, we came to a junction. To the right was a slot down to a sump, which seemed too tight. To the left a chamber that closed to a narrow rift with a very tight corner in it. Another Gibson job gave the series beyond its name, 'Round the Bend with Richard'. There was a big aven with what looked like passages opening higher up, and a junction with a very tight stream passage. Back at the junction, a steep mud slope led up to a boulder choke, which we dug, and Tony squeezed up, passing the mud-line that marks the usual flood level in the cave, into a chamber with some beautiful, clean formations.
>
> So we had a new cave at least 160 m long, but a route upstream into the Mine Caverns was proving elusive. In June I was back along with daughter Megan and Robin Sermon, to survey the cave and let Robin try his climbing skills on the aven. We called at the farm and as before got permission to visit. However, the trip had an unhappy conclusion; whilst on the last couple

of survey legs, working back to the entrance, I heard shouting from outside. It was the police. The local quarry manager had called them (the same chap who had denied the existence of the Mine Caverns to us in the 1970s), telling them that one needed the permission of the owners of the mineral rights to go underground - complete rubbish, but the constable had believed him. I finished the last leg of the survey. The policeman was unpleasant and made all sorts of threats, so we left quietly to let things cool down.

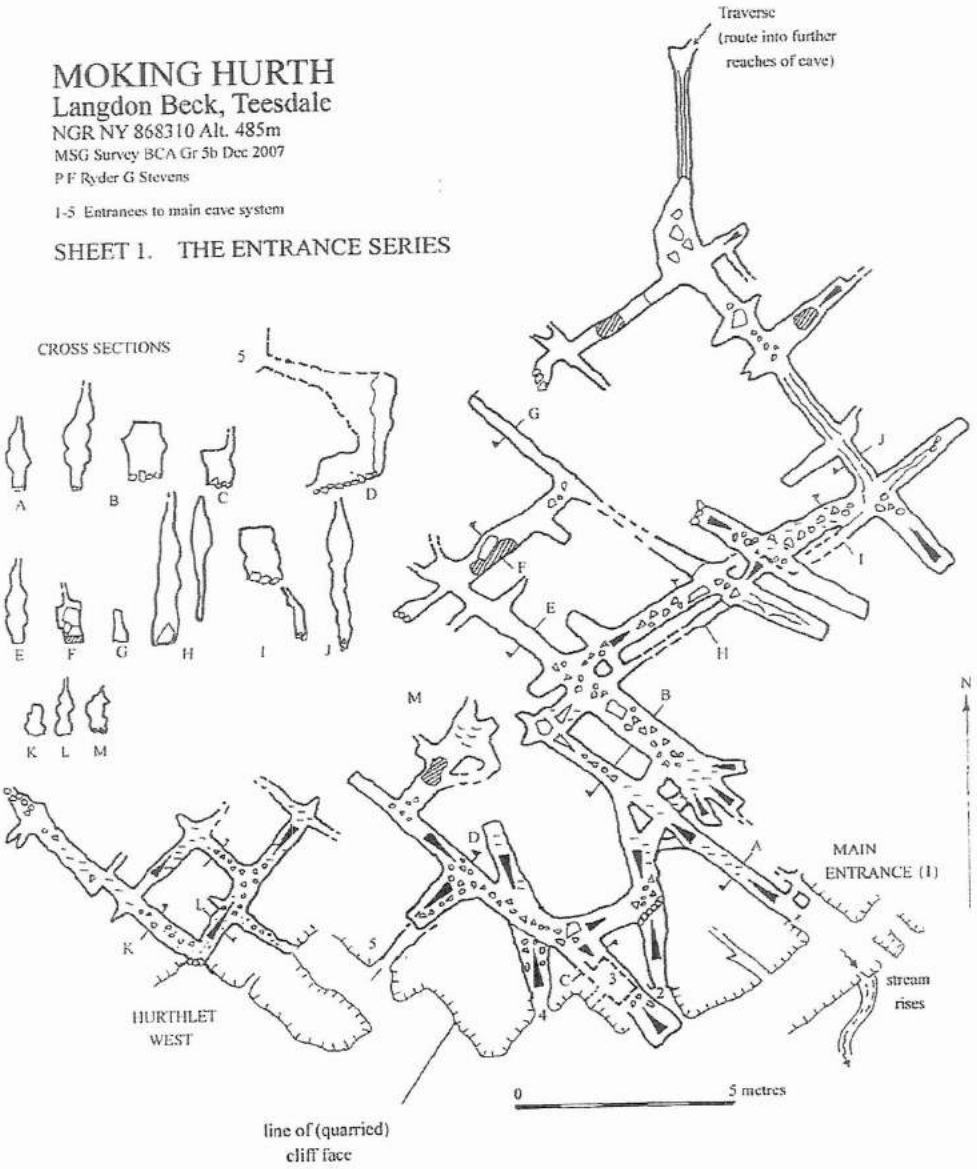
Much more recently, Tony Harrison and John Dale have been back, but made no further progress. We had got our wires crossed, so they surveyed the whole cave again....satisfying in a way, because the two surveys matched exactly, allowing a degree of communal smugness.



Pete Ryder's last sentence above, from "Memoirs", is a slight simplification. Although John and Tony surveyed the bulk of the cave originally explored back in 1991, they failed to fit their slim and trim bodies into the passage called "Round the Bend with Richard". This tight and awkward dog-leg in the far end of the cave remains, to date, entered by only one individual, the even slimmer and trimmer Richard Gibson. (Richard, come back - your club needs you!) They did however push a little bit further up the low stream passage than the original explorers (see survey) and concluded that with a little aquatic digging this would probably go much further.

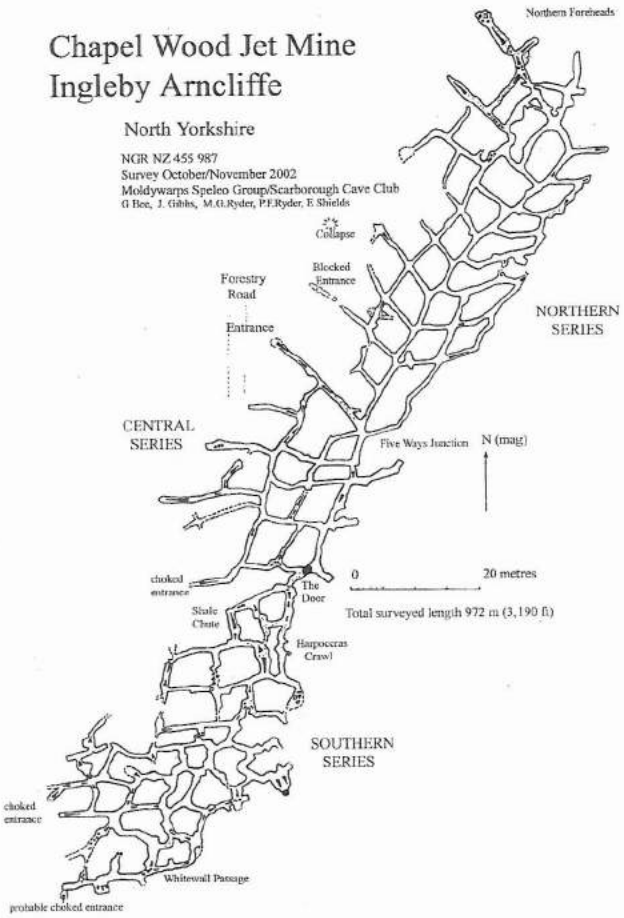
MOKING HURTH

The only other recent forays by Moldywarpers into the hidden regions of Teesdale are a number of visits by Pete Ryder and Graham Stevens to resurvey the entrance series of Moking Hurth in late 2007. Back in about 1970 Pete put together the original part-surveys of the system, by the Northern Pennine Club and the Upper Teesdale Caving Club in 1953-5 and later by MSG, into a single plan of the system and was not too happy with the result, particularly its depiction of the entrance series. Thirty seven years later he returned with Graham to correct the deficiencies. The result, reproduced here (and also in a recent issue of "Descent"), shows that there are 5 (not 4) entrances to the main cave and that there is separate small cave to the west, entitled Hurthlet West by Pete and Graham.



OTHER NORTHERN REGIONS

Over recent years (since the last journal), MSG members' activities in the way of original exploration in the north of England outside the heartlands covered above are relatively sparse. The most significant is perhaps the extension of Hartleycleugh Cave in West Allendale (a tributary valley of the South Tyne) by Pete Ryder and various friends in 1987. This has pushed the total length of the cave to over 380m, and is well described in the last chapter of Pete's "Memoirs" (mentioned earlier). There have been other minor discoveries in the Weardale/Alston area, all of which are listed in the "Descriptions" chapter below.



A couple of other discoveries need a brief mention here, both of which having resulted in mine surveys. The first is of one of the Threlkeld Side mines north of the Vale of Eden which was explored at the suggestion of a friend in the British Geological Survey who vaguely remembered geology student colleagues talking in the 1960s of large, natural caverns intersecting the mine levels hereabouts. Either memories are faulty or students un-naturally boastful, because the writer failed to find any significant length of natural passage in the two mines indicated by BGS, but he did turn up a very few metres of unstable natural cavern which have been duly recorded. The second survey is more interesting and is of a jet mine on the western slopes of the North Yorkshire Moors. The entrance to this was pointed out to Ernie Shield by one of the National Park officers, and the mine was subsequently explored and surveyed by Ernie, Pete Ryder, other MSG stalwarts and a member of Scarborough Cave Club. The nature of the passages suggests that the mine was in fact two sets of workings, each probably operated by a local, small, family business.

DESCRIPTIONS OF NEW OR EXTENDED CAVES

In addition to major finds, most of which are described above, MSG members have continued over recent years to poke down any hole they have found during rambles in the Northern Dales. Those that proved not just to be septic tank inlets or badger holes were pursued to the bitter end, which was usually very close to the entrance. Nevertheless some provided a considerable length or depth of new cave, and all were measured up, recorded, and (in the case of the longer or deeper ones) surveyed. So that these finds do not slip back again into obscurity, they have been written up in guidebook-speak and are reproduced below. It so happens that the last MSG journal (Oct 1987) was issued at just about the same time as the last publication of the North East volume of "Northern Caves" (in 1988), which means that none of our finds since MSG11 as described below have yet appeared in a guide book. Hopefully the following record will also appear in the next version of "Northern Caves", assuming that the re-issue of this excellent publication does eventually happen.

THE NORTH-EAST COVERDALE AND BISHOPDALE

WEST BURTON CAVE **NGR SE 019867** **Grade I**
Alt 170m **Length 10m**
HwL. Short "walk-through" cave in cliff on E side of beck just N of footbridge. Remnant of vadose passage now eroded by Walden Beck.

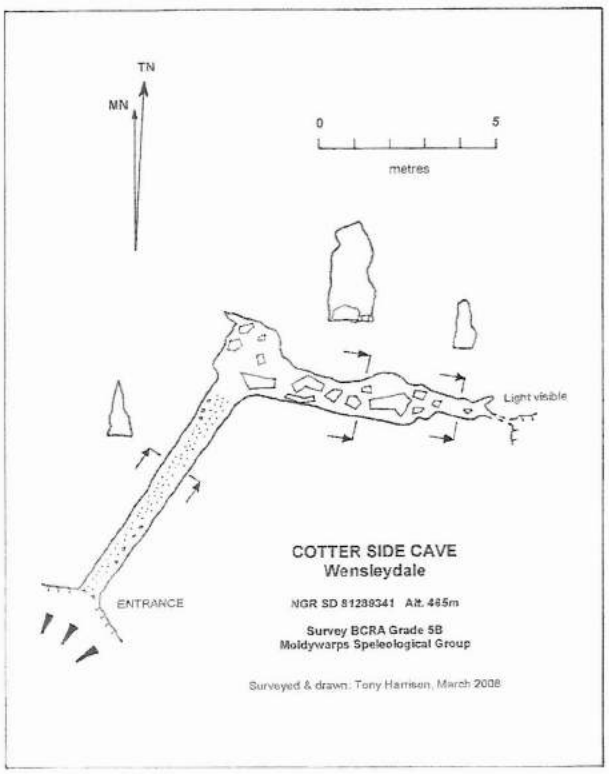
THE NORTH-EAST WENSLEYDALE

ASH TREE HOLE **NGR SD 837946** **Grade I**
Alt 480m **Length 8m** **Depth 4m**
Explored 2007, MSG.
ML. Small passage below ash tree in shakehole just E of bridle track above Cotterdale Forest drops into chamber with bedding plane becoming too tight.

BEARSETT RISING **NGR SD 857917** **Grade I**
Alt 260m **Length 6m**
HScL. Significant stream (Broad Carr Sike) emerges from hole at top of waterfall in small wood. Immediately under dripline stream forks into two low canals, both of which become too tight very quickly.

COTTER SIDE CAVE **NGR SD 81289341** **Grade I**
Alt 465m **Length 16m**
ML. Obvious entrance is near E end of low cliff below The High Way. Easy crawl, past bend to right after 8m, closes down where light is visible through small hole ahead.

CRAGDALE HEAD CAVE **NGR SD 919819**
Alt 510m
Explored 1960s? ULSA.
UnL. Main tributary of Middle Tongue Gill rises from two boulder ruckles at foot of small cliff. Under W end of cliff is old shored shaft with 3m drop to pool and duck. No further details known at time of writing.



Ellerkin Pot was surveyed in 2008 and as a result the description needs minor modification to the following (including correction of erroneous NGR):

ELLERKIN POT NGR SD 96299249 Grade III

Alt 510m Length 15m
Depth 24m
Explored 1984, YURT.
ML. In small shakehole at lowest point of large depression behind Ellerkin Scar. Short crawl leads to first drop of 5m onto ledge, followed by further short crawl to top of second drop of 2.4m. From foot of drop is choice of routes; 15m pitch choked at the bottom or exposed climb down separate fissure, rejoining main shaft 5.5m above the floor, which can be reached by a climb.
Exposed climb is best with ladder due to lack of holds; easiest and safest to ladder the whole pot.
Tackle – 30m ladder; sake and sling belay; 40m lifeline.

HARDRAW SCAR CAVES NGR SD 869916 Grade I
Alt 280m
Explored 1996, MSG.
HScL. Small slip caves. Take path to Hardraw Scar waterfall on E bank of stream, which turns and ascends steeply up bank close to waterfall; where path climbs towards cliff top, take left fork.
1. **Length 5m.** Obvious small entrance beside path. Cave turns left and ends too tight.
2. **Length 4m.** Directly above Cave 1, on ledge, on same line of rift. At floor level narrow crawl blocked by fungi; higher level of rift can be followed to within a metre or so of chamber in Cave 3.
3. **Length 6m.** A little further along cliff face from Cave 2 in bay with obvious large entrance. Up earth slope is chamber with daylight visible to right through narrow rift linking to Cave 2.
4. **Length 5m.** Just S of Cave 2 in detached mass of limestone. Narrow rift.
5. **Length 5m.** About 150m W of Cave 3 at foot of cliff above path. Rift ends in blank wall.

HARKER'S LEVEL CAVES NGR SE 03449408 Grade II
Alt 360m Lengths up to 5m Vertical ranges up to 10m
Discovered by lead miners 1880s.
ML. A number of natural rifts and avens intersected by, or close to the entrance of, Harker's Level mine at Cat Scar. On left 14m along level from entrance is short rift with high aven, blocked at top. 11m further, on right, is longer, descending rift becoming too tight. 350m along level from entrance, on right, is descending rift, also becoming too tight, with high aven on left of rift. On surface, 8m above and to left of entrance in grassy gully, is hole to constricted dig. 3m higher still is similar hole to shaft blocked after only 2m.

LITTLE MOSS POT NGR SD 87549275 Grade II
Alt 520m Depth 7m
Explored 2007, MSG.
ML. Entrance in large shakehole 100m N of shooting track and NNE of twin cairns on High Clint. Narrow rift is blocked at foot.
Tackle – 7m ladder and 1m belay.
Other rifts in nearby shakeholes to NW are similarly blind or become too tight.

PARK SCAR CAVE **NGR SD 91108559** **Grade III**
Alt 260m **Length 76m**
Explored 1993, MSG; extended 2008, MSG.
HwL. Stream resurges from low entrance under rock shelf in field 3m S of third wall from Busk Lane; entrance may be covered with rocks (replace after visit). Damp crawl in attractive, low, vadose passage reaches small low chamber in 20m and low cascade (with space to turn round) in similar distance. Narrowing streamway has been followed for further 25m and continues beyond.

PROSPECT VIEW CAVE **NGR SD 89028934** **Grade I**
Alt. 280m **Length 4m**
Explored 2008, MSG.
HScL. Entrance where stream rises from low cliff in field just W of Burtersett hamlet. Damp crawl becomes too low about 11m from known sink in cellar of nearby end-terrace house. Stream rises at other side of cellar; the house was built in about 1865 presumably deliberately on top of this unfailing supply of water.

SHAW SIDE SINK **NGR SD 92298448** **Grade II**
Alt 415m **Length 3.5m** **Depth 4m**
Explored 2007, MSG.
MdL. At small stream sink on N side of footpath, climb down through hole (rope or ladder useful) enters small chamber with no accessible way on.

SHIVERY GILL POT **NGR SD 86859358** **Grade II**
Alt 520m **Length 44m** **Depth 9m**
Explored 2007, MSG.
WARNING – The cave may be inaccessible in wet weather.
ML. Follow Shivery Gill for 300m above Buttertubs road. Entrance is shaft in active streamway, just S of Sod Hole Gill Cave No. 7. Clamber down to head of 4m shaft, descended by free-climbing or ladder to chamber. At far end further short descent leads to rift, roofed throughout by jammed boulders (care!). Right is crawl over boulders to choke; left is tall rift to similar choke with short passages to left and right becoming too tight.

STALLING BUSK CAVE **NGR SD 91658600** **Grade III**
Alt 310m **Length 86m**
Explored 1993, MSG; extended 2007, MSG.
WARNING – Water entering cave from impassable inlet on right 25m from entrance is probable septic tank overflow.
HScL. Track from Stalling Busk hamlet crosses, in 100m, stream which emerges from low culvert in wall on E side. Crawl through culvert reaches bedding plane which continues for 30m, past small inlet on right, to deeper water and duck, which usually has 2cm air space and is 1m long. Beyond is canal negotiated mainly by crawling until a boulder prevents further progress.

An entrance to the following cave is now open again, so the initial part of the description needs changing as follows:
THACKTHWAITE BECK CAVE **NGR SD 987911** **Grade III**
Alt 380m **Length 800m**
Explored 1960, NPC.
UnL. Fine linear stream cave with large chambers. Original entrance, now blocked, was via sharp, wet crawl on left side of fence above resurgence below Blue Scar, and soon entered main passage. Present entrance is hole under boulders on right side of fence at foot of cliff, and enters main passage directly. (Replace boulders after visit).
Dry going for a short way ..... *[continue as in 1988 description].*

Proposed addition to following cave description in 1988 edition; add this final sentence:
WEST SIDE POT **NGR SD 887933**
Water has been tested to Cliff Force Cave.

WETHER FELL SIDE POT **NGR SD 87268713** **Grade II**
Alt 580m **Depth 6m**
ML. Fluted shaft in short cliff on side of large shakehole is blind at foot.

Tackle – 6m ladder.

Whitfield Gill Cave (North) has been surveyed and marginally extended; as a result the 1988 description needs changing to:

WHITFIELD GILL CAVES **Grade II**
Alt. 290m
SiL. On opposite banks of Whitfield Gill 150m upstream of a small footbridge.
1. NGR SD 93509203. Length 31m
Explored 1968, Yoredale Limestone Group.
On N bank of stream. Three entrances all link to low chamber with impassable inlets.
2. NGR SD 93359200. Length 8m
On S bank of stream. Tubular crawl to choke.

THE NORTH-EAST SWALEDALE AND ARKENGARTHDALE

ADAM GILL POT **NGR SD 83499889** **Grade II**
Alt. 495m **Depth 6m**
Explored 2008, MSG.
ML. Inconspicuous hole on side of grassy shakehole 60m E of Adam Gill. Vertical shaft narrows after 5m but can be seen to widen lower down reaching floor in a further 7m, and offering an opportunity to a slim caver.
Tackle – ladder and stake.

The 1988 description of this cave has been entirely rewritten following an extension.
ANNIVERSARY POT **NGR NY 898016** **Grade II**
Alt 405m **Length 15m** **Depth 21m**
Explored 1987, MSG/Haymarket Caving Club; extended, 2005, MSG.
ML. In shakehole 40m N of gate in second wall from barn. Short drop into chamber with rift leading off via two short climbable descents to 6m vertical pitch alongside packed fill, also climbable. Subsequent 5m descent is best laddered and reaches large aven beyond which is short climb down to foot of blind shaft.
Tackle – 5m ladder; sling.

Following the stabilisation of the entrance, the discovery of a new extension (Orange Egg Passage), and the diving of more sumps, the Cliff Force Cave description requires changing to the following.
CLIFF FORCE CAVE **NGR SD 875960** **Grade III**
Alt 445m **Length 2.3km**
Entrance series explored 1962, NPC; main exploration 1976/77, MSG; extended 1980, CPC; 1988, MSG.
WARNING – Crawl into Fault Hall rapidly becomes impassable in flood and most of the cave downstream of Fault Hall appears to be affected by floodwater ponded up in severe conditions. Some areas are unstable, notably Shower Chamber and the vicinity of The Room of Dangling Doom.
ML. Entrance shaft at foot of cliff above rising opposite The Buttertubs.
Entrance Series
Easy, narrow climb down shaft into bouldery chamber. Left passage is muddy crawl to choked aven; ahead is crawl which becomes too low and main route is walking passage to right. Beyond jammed boulder a crawl lowers to an impassably tight sump; left above boulder is Overflow Passage, mostly muddy crawling for 30m before opening into small chamber with boulder floor. Straight ahead is crawl to climb up through ruckle into High Level Series.
Main way is 2m climb down to left, then skirting base of boulder fall a larger passage is reached. This ends at a drop into the Ducking Pond – duck under or scramble over rock bridge to regain higher passage above mud wall. Two routes lead into bedding chamber and at junctions ahead keep right through complex area until main streamway is reached.
High Level Series
Right at top of ruckle climb is passage into Shower Chamber. Left is high, rectangular passage which leads to junction with tall rift closing down to left. Right is passage up and over boulders and down to crawl which continues to Orange Egg Chamber. Beyond is higher passage to another chamber and eventual choke.
Main Streamway

Roomy, muddy passage with boulder obstacles and occasional oxbows lowers to crawl after ending at boulders. Just before these is hole in roof on left into short crawl emerging at the bottom of the impressive Fault Hall, about 9m high with stream cascading down boulders. Attractive canal passage upstream to duck after 180m, by-passed 30m back via passage on left. More canal passage to wide, low collapse chamber, The Room of Dangling Doom. At far side are two low level streamways, both becoming too tight. Hole at roof level between slabs enters dry crawl over blocks rejoining stream after 60m. Small streamway to 26m Sump 1 with squeeze between blocks in middle. (Sump may be duck in dry conditions but is serious and should be treated as sump). Small shattered passage beyond continues for 245m, partly in stream, to sump 2 which is 35-40m long, exiting through vertical boulder choke.. Beyond, 10m wet passage reaches 8m Sump 3, emerging in shale breakdown chamber. 30m further is Sump 4, 20-40m long dependent on water conditions. Rift passage beyond extends for 40m to Sump 5, which has been dived for 60-70m past three air bells. Water comes from Sargill Head area.

Spar Shop Series

About 80m upstream of entry into Main Streamway on right of passage is 7m climb up right into dry high level series. Rifts in downstream direction end too tight close to aven above entry to streamway; in upstream direction is varied going with some tight sections. Follow high level beyond the Spar Shop (a small chamber) to lower crawl ending in 6m pitch, requiring tackle, into Fault Hall.

The following cave description is a complete rewriting of that in the 1988 guide following extensive further discoveries.

DEVIS HOLE MINE CAVES NGR SE 05159601 Grade III

Alt 355m Length of natural cave passages 4.3km (additionally, most of the currently accessible 3.9km of mine levels/workings are enlarged natural passages)

Discovered by 19th C lead miners; rediscovered and extended 1973/5, 2002/3 & 2006, EMRG and MSG.

WARNING – Some parts of the mine workings are dangerously unstable.

ML. Follow Cogden Gill above old lead smelting mill to where valley forks above mine tips. Entrance a few metres up W branch is timbered shaft dropping into entrance level. There are six significant areas of natural caves, all accessed from the entrance level.

Crystal Crawls

20m before junction with Pearson's Level on right (W) are two rifts, the first leads into an estimated 100m of tight passages with good formations – care! Second is 6 m crawl to choke

Central Maze

After 15m of crawling along silted level and through shored up roof fall, walking size level reaches Pearson's Level going off left after 120m. Straight on, the level intersects the Central Maze in 45m. This has several entrances and is a remarkable phreatic maze with about 1.6km of natural passages, sometimes fairly roomy, crammed into an area little more than 120m by 45m.

Northern and Southern Occidental Series

Continuing along entrance level beyond Central Maze, a four-way junction is reached in 120m. Straight on the level continues for 93m to a forehead. To right (W), Wellington Level (following line of natural passage and in many places entirely natural) reaches short South West Level (mostly natural) on left; ahead a series of roof falls is encountered (care essential here) which leads to short branch level on right entering Northern Occidental series, 160m of natural passages, mostly crawling, with some good calcite formations. A short distance further along Wellington Level, on left, is entrance to Southern Occidental Series, 160m of natural passages, generally narrow and with some squeezes. Wellington Level continues W to a fork, each branch soon ending in a forehead.

South Cave Series

E along Wellington Level from four-way junction leads to level heading off to right along Cranehowbottom Vein and a few metres later to another level on right along Robinson's Vein. Straight on, Fawcett's Level eventually ends in forehead with side passages to natural caverns and other foreheads. Cranehowbottom Level continues for 350m, initially through 30m shored dig under roof collapse and then past shaft in floor on right, to vertical 12m shaft ("sump" in miners' terminology) dropping to lower workings. Robinson's Vein proceeds past three shafts in floor to dig up and down through roof collapse, and gate, to Pearson's Sump, a 20m shaft also dropping to lower mine workings, and a forehead shortly thereafter.. Mine levels 14m down shaft lead off to S and to W. That to W, Coates Crossing, shortly reaches passages to left into Horn's Workings, a complex, dangerously unstable, area of workings with many small, natural passages. 125m along level from Pearson's Sump to S, an opening to left gives access to South Cave Series. This is another complex phreatic maze with 1.1km of natural passages. In its SW corner the maze breaks into Wyvill's Level, another 19th C miners' passage originally accessed from a vertical shaft ("whim") from the surface, now blocked. The South Cave Series, like the Central Maze, is too complex to describe in a short

account, and reference should be made to survey when exploring. Some of the rifts in the Series are up to 5m high and occasionally 2-3m wide; passage size generally declines in the southern sections of the system.

East Cave Series

Wyvill's Level, reached from South Cave Series as described above, runs 40m N to forehead and the blocked whim shaft, and 170m roughly SW to a blockage. 11m S of exit from South Cave Series is Wyvill's East Level on the left which runs approximately E through a dangerous roof collapse (extreme care!) to a forehead in 100m. At bend 43m before forehead crawl over deads leads to East Cave Series. This is primarily a single passage cavern going initially S for about 50m to a dried mud slope which descends to the Short and Long Rifts, parallel passages connected by a short cross joint. S of Long Rift, past a bend where walls are covered with miners' graffiti (Graffiti Corner), the series reduces to narrow, generally crawling, passage with number of side passages, most of which rapidly become too tight. One passage to left rises to top of Main Limestone and collapse caused by shale layer above. Consult survey for detailed description of passages which total 710m in length.

West Cave Series

Mine level leading first S then W from Pearson's Sump, past entrance to South Cave Series, reaches lower Cranehowbottom Vein at T-junction. Passage S from here goes into complex area of mine workings. Going N leads in a few metres to a rise (vertical shaft) up to the upper Cranehowbottom Level, while level going W at bottom of rise ends at a sump in about 120m. Two natural passages start here; that to left over sump is about 50m with side passages, past miners' inscriptions on wall. That to right leads in a clockwise circle, with some short side passages, eventually leading back to mine level 32m before sump. West Cave Series is almost entirely crawling in largely square-shaped passages, totalling 360m in length.

Permission – Head Keeper, Grinton Estate, Grinton. Access to lower (southern) parts of mine is controlled by locked gate to prevent further damage to historic miners' artefacts; key can be borrowed from MSG on request.

DINNER CAVE **NGR NY 95920360** **Grade I**
Alt 470m **Length 8m**

Explored 2008, MSG.

ML. On W side of gorge, almost directly opposite Balcony Pot. Rift at bottom of cliff becomes too tight before apparently widening. Draughts strongly at times.

EAST STONESDALE CAVE **NGR NY 89710127** **Grade I**
Alt 340m **Length 8m**

ML. Large opening at foot of small cliff below yew trees above E bank of East Gill. Crawl over soil infill becomes too low.

FOX'S LEVEL CAVE **NGR NY 95860429** **Grade III**
Alt 420m **Plan length: cave 555m, mine 60m** **Vertical range 17m**

Discovered about 1860, lead miners; rediscovered and extended 1990-1, MSG; further extended 2007, MSG.

WARNING – Streamways sump in several places in wet weather.

ML. An intriguing and complex system intersected by a mine level. Current mine level entrance, 9m beyond original portal, is slide down oil drum on S bank of gill. Level is 60m to forehead and intersects cave passage after 40m. Hole up on right and slot below it are entrances to South Cave; low on left is entrance to North Cave.

South Cave high entrance gives access to dry, level passage with two holes in floor in a few metres. Passage, well decorated in places and negotiated mainly by crawling, ends in blockages after 50m, where climb on right gives access to roof tube soon emerging at top of Square Chamber. At bottom of Square Chamber on far left side, low passage allows a little more progress up into final boulder choke. On right 7m before climb up to roof tube is keyhole passage to small, mud-filled chamber. From slot entrance to South Cave in mine level, crawl leads to bottoms of the two holes in higher passage and continues to climb up into the higher passage just before keyhole passage junction.

North Cave is initially gently descending, rectangular passage for 40m ending in small, low cavern. Short clamber up and down on right just before end gives access to low, muddy passage ending in high cross rift, Warren Chamber. Opposite clamber, on left, is hole down and along narrow crawl to 3m drop into Water Chamber. Down slope on opposite side of chamber from entry point is crawl through pools of water, passing two small chambers and oxbow on left, to static sump in 18m.

Passage on right when entering Water Chamber reaches, in 25m, Five Ways Junction, a T junction intersected by the Lower Streamway under low shelf on left. Low downstream passage soon sumps. Crawl

upstream, after passing dry oxbow and hole into chamber with breccia walls (the Gingerbread House), both on right, reaches rising sump in 32m, with short passage just beyond. Dry passage on left near oxbow soon drops into water and continues, past hole on left into Squeeze Chamber, to high, dry rift. Drop on left at end of rift reaches the Upper Streamway and a rising sump. Stream flows north for 40m before sumping again. Dry passage to right at Five Ways Junction reaches short climb, the Corkscrew, up into chamber, the Gingerbread House. At far end is drop into Lower Streamway. Above stream entry point at Five Ways Junction are higher level passages reaching two entrances, both tight, to sandy-floored Squeeze Chamber. At far end of chamber, small hole drops into water filled passage between Lower and Upper Streamways.

GREAT PUNCHARD GILL CAVE **NGR NY 96050436** **Grade III**
Alt 400m **Length 345m (to sumps)** **Vertical range 7m**
Explored 1990-1, MSG.
WARNING – Beware of loose boulders between Entrance Chamber and Relief Chamber.
ML. Resurgence cave on S bank of gill immediately opposite double limekiln. There are two entrances. Lower entrance, the active resurgence (not recommended), is tight, wet crawl in Pete's Back Passage for 20m to where stream emerges from impassable bedding and it is possible to climb up into Entrance Chamber. Higher entrance (may require digging out), 6m up bank from resurgence, is crawl down and along rift into Entrance Chamber with hole to stream at far end. Crawl to right of entry point to chamber leads to passage on left through boulders to reach stream in 25m. Crawl continues over stream and through boulders and small chambers for a further 40m to short climb up into large chamber, Relief Chamber. This chamber, floored by boulders and with rock pillars supporting flat roof, is roughly circular and about 12m in diameter.
To right on entering Relief Chamber is low, mud-floored passage becoming too tight in 20m. At far side of chamber from entry point is drop down between boulders to reach stream-way again. Upstream, after passing entries to oxbows on right, passage divides after 12m; main stream emerges from left and minor stream from right. Minor stream passage continues in increasingly glutinous mud, past exit from oxbows on right, for 30m to sump, Shit Sump. This has been dived and is about 2m long. (Do not attempt to free-dive as sump is much more mud than water). Beyond is about 30m of low muddy passage, with oxbow on left, reaching a further sump.
Main stream, initially through deep water and past oxbow on right linking back to Shit Sump stream-way, continues for 80m along attractive, stooping-height, stream passage to short cross-rift and Main Sump. This has been dived to about 4m depth and then along continuing flooded passage for about 40m to air bell. Sump continues beyond this point.

GREAT SLEDDALE POTS
ML. Several impressive surface shafts on S bank of Great Sleddale Beck, only one with significant underground development.

Main Pot **NGR SD 82779888** **Grade II**
Alt. 510m **Length 15m** **Depth 25m**
Main Pot is where stream sinks above Long Scar. Large open shaft, easily scrambled down, to short passage ending in aven. Climb down behind boulders against left wall of shaft leads to head of underground pitch, followed by descending stream passage becoming too low.
Tackle - 9m ladder.

West Sink **NGR SD 82659885** **Grade II**
Alt. 515m **Length 4m** **Depth 4m**
Hole in clints at foot of shallow gully 120m W of Main Pot drops into chamber with no accessible way on.
Tackle – 4m ladder.

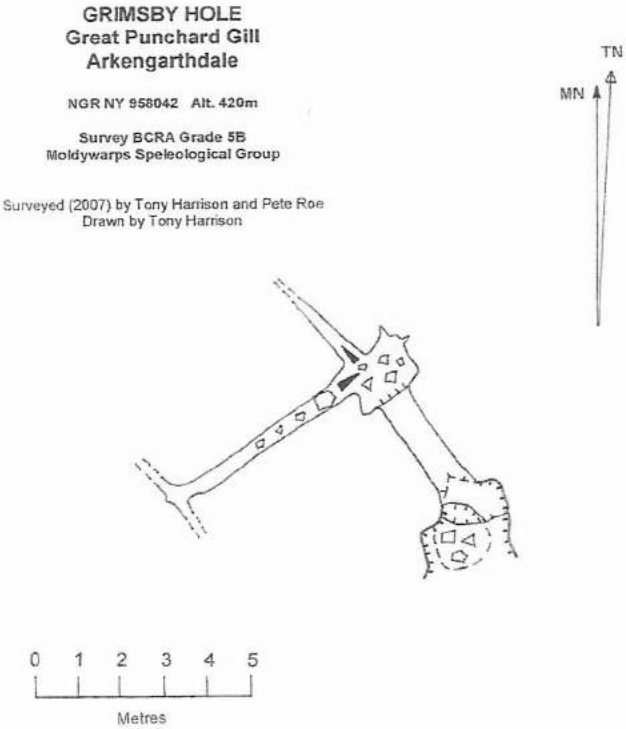
Middle Pot **NGR SD 82849892** **Grade II**
Alt. 510m **Depth 7.5m**
100m NE of Main Pot, past rocky depression in which small stream sinks, is long, narrow rift, blocked at bottom.
Tackle – 8m ladder.

East Pot **NGR SD 82909895** **Grade II**
Alt. 505m **Depth 4m**
50m NE of Middle Pot is large shaft, with trees on rim, easily climbed on E side and blocked at foot. At surface level in NE corner is hole which becomes too narrow in a few metres.

Tackle – 4m ladder.

Far East Pot **NGR SD 82929895** **Grade II**
Alt. 505m **Depth 8.5m**
Just NE of East Pot is another tree-rimmed shaft, blind at foot.
Tackle – 9m ladder.

GRIMSBY HOLE **NGR NY 958042** **Grade II**
Alt 420m **Length 11m** **Depth 7m**
Explored 1990, MSG.
ML. 60m upstream from Fox's Level Cave on N bank of gill. Hole at foot of small cliff leads to 3m drop into small chamber. Descending rift at foot becomes too tight. Passage up on left reaches cross rift in 5m where running water can be heard; both side passages are too tight. Dig under drip line is blocked with boulders.



KISDON SCAR CAVE
NGR SD 918984
Grade I
Alt 420m
Length 4m
ML. Hole near top of rocky gully at W end of scar enters roomy but short chamber with no way on.

LOW KISDON SCAR CAVE
NGR SD 917983
Grade I
Alt 360m
Length 4m
ML. Rift 2m up from foot of scar at W end drops only short distance before coming too tight.

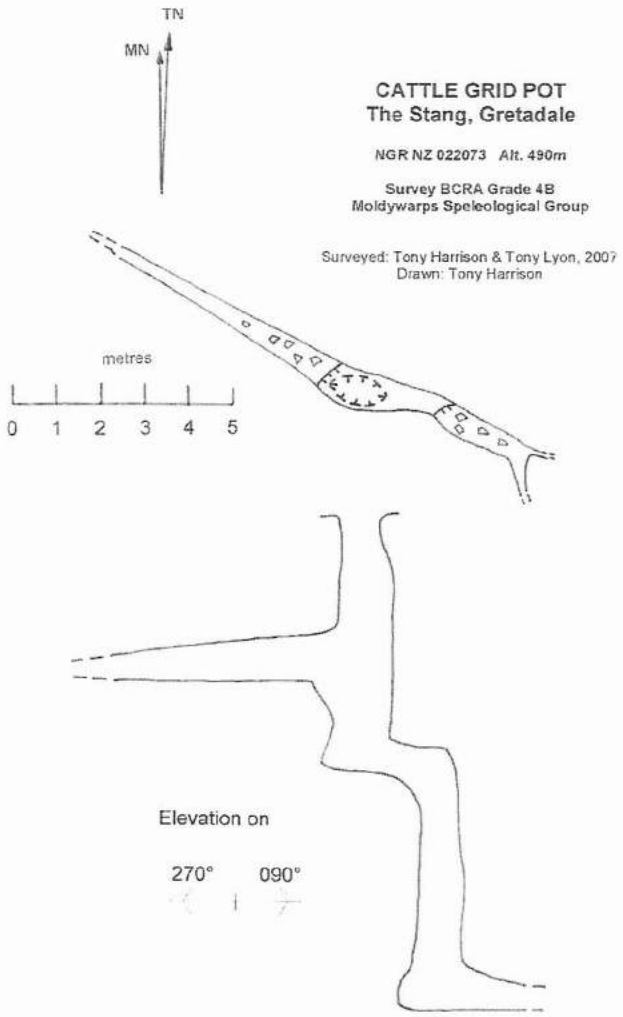
RAY GILL CAVE **NGR NY 975002** **Grade I**
Alt 420m **Length 7m**
Explored 2007, MSG.
UnL. Excavated entrance is 10m from Ray Gill resurgence on W bank. Crawl through boulders leads to ongoing dig.

SMITHY LEVEL CAVES **NGR SD 98629578** **Grade II**
Alt 460m **Length 200m** **Depth 6m**
Discovered by lead miners mid 19th century; rediscovered and explored EMRG 1980s, MSG 2007.
ML. Phreatic caves intersected by one of the levels of Whitaside Mine. Present entrance is excavated shaft 30m SE of ruined building at portal of Smithy Level, where drop of 2m gains arched level which divides after 40m. Passage to left continues for 300m when arching ends and level becomes enlarged natural passage. After a further 70m level splits. Right branch continues past several small, intersecting, natural passages, all which close down or become too tight after a few metres, for 70m to shaft (miners' "sump") in floor. Just before shaft is natural cave off to left. This comprises 170m of beautifully shaped phreatic passage with short ox-bows, largely floored by dried mud. Passage ends in short shaft probably partially excavated by miners.

SNOWDEN GILL CAVE **NGR SD 92979551** **Grade II**
Alt 445m **Length 26m**
Explored 1991-2, MSG.
ML. Entrance is down short concrete pipe at top of boulder slope from which Snowden Gill resurges. Crawl enters small unstable chamber. Continuing passage drops into stream; left is damp crawl to boulder choke, right was short crawl to 1991 dig which has now (2007) collapsed.

THE NORTH-EAST GRETADALE

CATTLE GRID POT **NGR NZ 022073** **Grade I**
Alt 490m **Length 12m**
Depth 10m
Explored 2002, MSG.
ML. Small hole in forest, 20m E of cattle grid, on S side of small shakehole. Climbable rift drops 4m; passage heading W after 2m becomes too tight in 6.5m. Slope at bottom of climb reaches constricted climb down of 5.5m to small chamber with rifts leading off becoming too tight.



BAD BEND POT **NGR NZ 020074** **Grade I**
Alt 490m
Depth 7m
Explored 2002, MSG
ML. Small hole 10m N of forest edge is entrance to 7m deep rift with passages at foot becoming too tight. Currently inaccessible due to forest felling operations.

DOORGILL HEAD CAVE **NGR NZ 015078** **Grade I**
Alt 480m
Depth 4m
Explored 2006, MSG.
ML. In open shakehole on W side of stream about 50m from edge of forest. Climb down hole in grassy bank reaches rift which immediately becomes too tight.

The cave description in the 1988 volume has been updated following the excavation of a "direct" entrance, as follows.

DRAUGHTING HOLE **NGR NZ 00700905** **Grade II**
Alt 450m **Length 18m** **Depth 11m**
Explored 1968, MSG.
ML. On wide bench NW of Jinglepot Hole and N of Seavy Sike Pots, in corner of large shakehole is 6.5m drop through rocks and down narrow rift. (Original entrance was squeeze under loose rocks to top of rift, not now necessary). At foot, side passages on right and left become too tight. Main rift descends to hollow and then ascends to wedged block; rift beyond closes down.
Tackle – 7m ladder; stake and sling.

GREEN GUTTER HOLE **NGR NZ 014082** **Grade I**
Alt 480m **Depth 3m**
Explored 2007, MSG.
ML. At junction of firebreaks in Stang Forest is 3m deep hole where water sinks. At bottom is rift too tight to descend but which widens after about 0.5m and appears to drop for further estimated 7m to large passage.

The description of the next cave has been rewritten below following a change in stream flow in the area (caused by the opening up of Lost Pool Sink)
HAZEL BUSH HILL HOLE **NGR NY 990102** **Grade II**
Alt 400m **Length 82m** **Depth 12m**
Explored 1968, MSG.
GL. In gorge above Eller Beck Head are two holes behind some large boulders on N side of usually dry stream bed. Climb down either hole to junction. Continuing passage is mostly crawling, passing oxbow on left, to climbable descents of 3m and 2.7m below which water sinks and the passage beyond closes to a choked fissure.

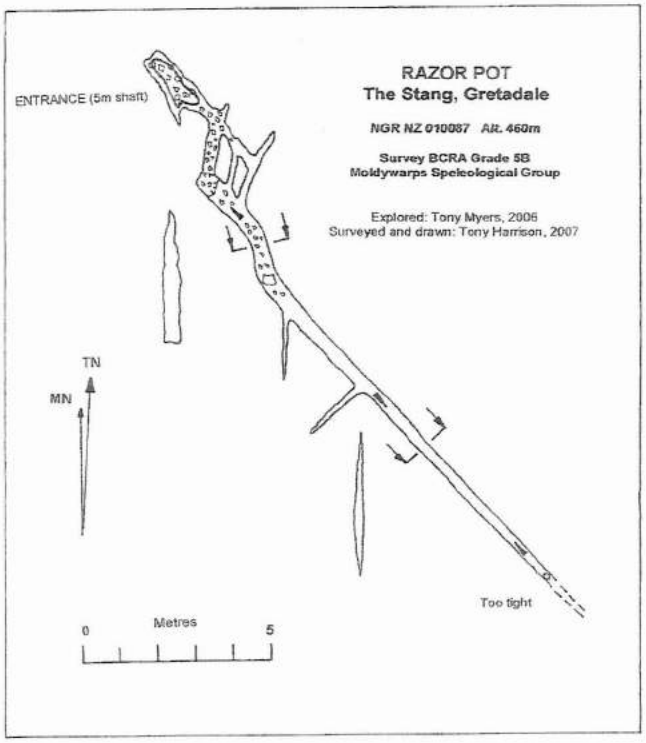
JINGLEPOT POT **NGR NZ 009086** **Grade I**
Alt 470m **Depth 7m**
Explored MSG, 2006
ML. In small, grassy shakehole 15m SE of Jinglepot Hole, beyond fence. Climbable, vertical rift is blocked at bottom.

LOST POOL SINK **NGR NY 989102** **Grade III**
Alt 400m **Length 214m** **Depth 12m**
Explored 2003-4, MSG.
Warning – Several parts of the cave flood to the roof in wet conditions.
GL. In stream bed 50m above Hazel Hill Hole is rocky crater in which Eller Beck normally sinks. Entrance is rift on SE side. Climb down and along into roomy passage. To left is 3m climb down hole into which water often falls, draining through boulders in floor. Across hole, crawl leads damply to passage junction. Right branch soon closes down, but left leads, past low tube on left into which water flows, to flat-out rising crawl, short squeeze, and decorated chamber, Aven Aven. Just beyond, Pensioner's Pause, a tight calcited slot difficult for the larger caver, drops 2m to lower passage. Right is Mud Chamber, ending in calcite blockage and with low sink in muddy tube. Left is crawl to Shingle Shuffle, a low passage becoming too tight. On left at start of Shingle Shuffle is drop to another passage, also soon blocked.

To right at end of entrance rift, passage heads SE over cobbles and through boulders, past flowstone on right, to low junction. Crawl to left immediately becomes too low; that to right closes down in rift. Crawl straight on enters Flood Chamber where it is possible to stand. At far end is constricted crawl to the Worm Holes, two tight drops each of 2-3m. The low passage at foot of the second quickly becomes too tight.

MISSED POT **NGR NZ 00650898** **Grade II**
Alt 450m **Depth 7m**
Explored 2008, MSG.
ML. Open shaft between two eye-holes in shakehole 80m SW of Draughting Hole becomes too tight. Climbable with care; ladder preferable.
Low horizontal passage on W side of shakehole is blocked after 4m.
Tackle – 7m ladder and stake.

RAZOR POT **NGR NZ 010087**
Grade II
Alt 460m **Length 20m**
Depth 9m
Explored 2006, MSG
ML. Entrance in shakehole on W side of fire-break about 200m from edge of forest. Short, low crawl round bend from foot of climbable 5m rift leads to narrow, tall rift which becomes too tight after 16m. Holes in floor of rift also become too tight or are blocked with debris.



THE NORTH-EAST TEESDALE

FAR BECK BRIDGE CAVE **NGR NY 866206** **Grade II**
Alt 370m **Length 160m**
Explored 1992, MSG.
WARNING- After heavy rain can fill completely and entrance becomes a powerful flood rising.
GL. At foot of slope 10m from road is hole covered by stone slabs. 2m climb enters roomy, mud floored passage heading SW. Small stream is reached and passed, entering from narrow passage on right and exiting low on left; both stream passages become too tight. Main passage continues past fine, gloomy formations to junction. Straight on leads to sump which is too narrow to pass. Left is small chamber with muddy climb up on right into low, square passage which reaches dangerous boulder choke. Straight ahead is narrow, high passage to acute bend too tight for normal sized cavers.

A resurvey of Moking Hurth entrance series in late 2007 to a high standard requires the 1988 description to be modified to:
MOKING HURTH **NGR NY 868310** **Grade II**
[Backhouse Cave]
Alt. 485m **Length 300m**
Extended 1970, MSG.
GL. In prominent cliff above ruined limekiln are five entrances to main cave, a series of phreatic cross rifts, some tight. From E entrance turn right into streamway; water sinks to reappear below entrances. Upstream is high, narrow rift with some climbs and traversing. Immediately after crossing first slightly awkward section of traversing (about 4.5m above the stream), on left is entrance to Mud Tube series, narrow crawls. Main passage becomes easy walking and ends where daylight is visible from impassable fissure high on left – this connects with large shakehole beside Moking Pot entrance. Straight ahead, stream issues from a very tight, wet crawl, which is the connection with Moking Pot, passable by thin cavers only.
Hurthlet West. 12m W of main entrance is entrance to unconnected cave of same cross rift character, 6m in length.
Hurthlet East. A little to E of main cave c 15m of rifts, ending too tight.
Permission – Underhurth, Forest in Teesdale.

ROUGH SIKE CAVE **NGR NY 757327** **Grade I**
Alt 560 m **Length 30 m**
Explored 1997, MSG.
On shelf on E side of small gorge on Rough Sike, in line with Moor House 100m to east. Crawl to right to standing chamber and choke, to left past short branch, ends too low.

THE NORTH-EAST WEARDALE

ALTAR CAVE **NGR NY 995352** **Grade II**
Alt 290m **Length 70m**
Explored 1989, Tony Marsden/MSG.
GL. On N side valley in third field up from Bollihope Shield Farm, rising by trees; a Roman altar was found here in 1747, celebrating the capture of a giant wild boar. Squeeze through loose slabs into winding wet crawl with odd little chambers, ending tight.

BOLLIHOPE SHIELD CAVE **NGR NY 998348** **Grade IV**
Alt 260m **Length 60 m**
Explored 1989, Tony Marsden/MSG.
GL. On S bank of Bollihope Burn below track to Bollihope Shield Farm and 50 m below Bollihope Freehold Cross Level (which has dangerous deep mud and some short lengths of natural passage). Excavated hole through boulders into low bedding with collapse chambers, complex, painful and constricted becoming extremely low.

ELPHA GREEN CAVES **NGR NY 846485** **Grade II**
Alt. 335m
Main Cave **Length 260m**
Main entrance, on N bank of stream just over wall from E end of quarry opens into chamber. Left is passage leading to tight entrance in quarry wall. Right leads to third entrance, but immediately left leads through crawl to small even; tight crawl to right to Ben's Entrance on stream bank, then long tubular crawl, with squeeze, to junction with stream passage... *(continue as guidebook)*

HARNISHA BURN EAST SINK **NGR NY 986346** **Grade II**
Alt. 310 m **Length 12m** **Depth 8m**
GL. Explored 1988, MSG.
On E side of burn at foot of waterfall below Harnisha Burn Pot, obvious sink. Squeeze onto 5 m drop where rope or ladder is a help; at foot divides into impassable rifts.

HARTLEYCLEUGH CAVE **NGR NY 804486** **Grade III**
Alt 373m **Length 383m**
GL. Extended 1987, MSG & Haymarket Caving Club.
On N bank of Hartley Cleugh at E end of old quarry, the awkward Boot Trapper Passage leads to a T-junction with the streamway; downstream (left) becomes too narrow after c 70 m, upstream (right) easier going to crawl and Claydome Chamber roofed by boulder clay, after which Quaaaack, a long duck, leads to further crawls and loose boulder choke – bypassed by the tight Haymarket Flyover on the left - where Elaine's Squeeze gives access to a pleasant walking streamway lowering to a sump, with a side passage on the right ending in an odd 2 m deep pot.

LOW BISHOPLEY CAVES **NGR NY 023361** **Grade I/II**
Alt. 250 m
Explored 1996, MSG.
GL. Take Bollihope road from Frosterley; just after Frosterley waste disposal site, before junction there is a gate on the left. Descend into old quarry and keep right.

1. **Length 13m**
   Obvious walk-in entrance with small stream emerging. Easy passage to sharp left bend and boulder choke, tight tube on right; must come close to 2.
2. **Length 25 m**
   Large entrance a little further up bank. Walking passage with rift in floor; apparent choke easily passed to tall rift passage with showerbath (stream sinks and emerges in 1); beyond short crawl to choke.
3. **Length 16m**
   Obvious small hole 8 m up at S. end of quarry. Sandy crawl to junction; right too low, left crawl to dig.
4. **Length 20m**
   In Bishopley Crag Quarry on opposite side of road; obvious entrance in cliff below road. Roomy entrance lower to crawl over sandy fill riddled with rabbit burrows; roof lifts but then ends in collapse.

LITTLE GILL CAVES

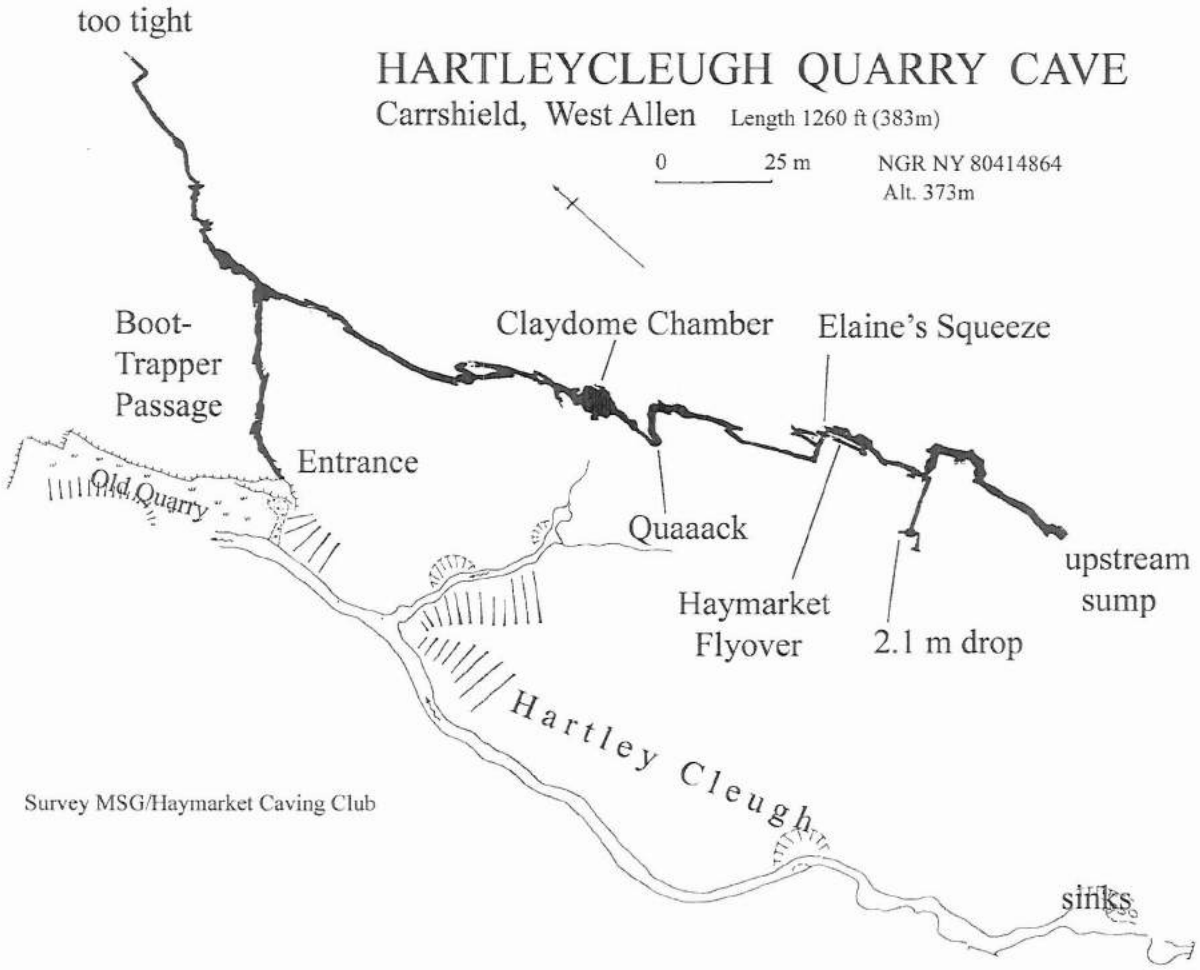
Amend description of Cave 4 to the following:

4 (Gorge Top Cave) **NGR 779391** **Grade I**

Alt 550m **Length 50m**

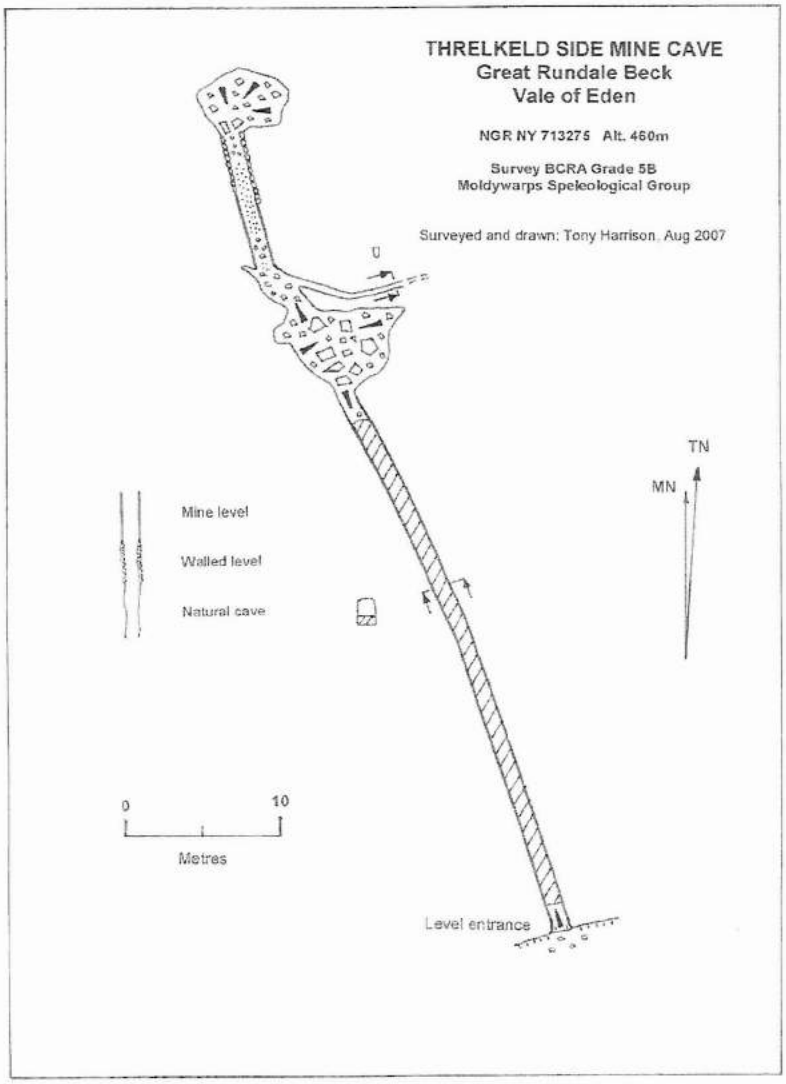
Extended MSG, 1991.

On E side of gill at head of gorge. Flood sink, drop through boulders into low chamber, scramble under hanging boulders into chamber and winding rift passage descends to 2 m pot and choke.



THE NORTH-WEST VALE OF EDEN

THRELKELD SIDE MINE CAVE NGR NY 713275 Grade I
Alt 460m Length of natural cave 20m
Discovered by lead miners; re-explored 2007, MSG.
Melmerby Scar Limestone. Small natural cave intersected by mine level. Level entrance is at foot of small cliff above bend in Great Rundale Beck bridle track. After 35m level reaches largely natural boulder-filled cavern. At far side a short drop enters second small cavern with rising natural tube on right, becoming too tight in 10m. Straight ahead walled level continues for 10m to crawl into final natural collapse chamber with no safe way on.
Nearby mine level 150m to W (NGR NY 712275) is longer (c. 400m to sumped section) but does not appear to have intersected any natural passage.



THE ALTERNATIVE PENNINE UNDERGROUND

It is arguable that the golden days of MSG are not those of the Sixties and Seventies but those of more recent times. MSG was always about having "fun" which was conveniently hidden under the thin veil of underground "scientific research" - in order to prevent our better halves from figuring out what we were getting up to. As one caver famously said to me: "I hope my wife never manages to figure out the difference between glacial mud and compost - she thinks I get this dirty in the allotment".

In respect of "fun", the recent exploration by MSG members of abandoned Northern Pennine mine workings has some distinct advantages over caves:
1. There is no "guidebook".
Until it was pointed out to me by "someone in the know" I was blissfully unaware that not ten feet away from one of the family's favourite picnic spots was a very well hidden mine entrance that provides over five hours worth of entertainment.
2. Access issues provide extra spice.
It is quite possible to choose venues that are either in villages unused to underground antics (grade 1) or that are subject to Ministry of Defence regulations (grade 5). Both of these options offer significantly greater excitement than a simple "pirate" trip into Easegill.
3. They offer post "credit crunch" value.
It is possible to get at least eight hours underground from a gallon of diesel, and you can't spend cash in Inglesport because it's fifty miles away. When you factor in a set of rechargeable batteries and a LED headset, it is possible to have an underground "inflation rate" running at minus twenty five percent.
4. You get a new set of friends.
Most cavers are quite sane. This is in stark contrast to anyone interested in old mine workings who often carries the demeanour of Captain Ahab and will only talk to you if it appears that you have the skills of an expert harpooner and the intellect of a gnat.
5. There are new "learning opportunities".
While being arrested by military police can provide some amusement, it is also possible to fall though "false" floors, drown in hidden flooded shafts, stumble over hundred-year old explosives, be poisoned by radon or get gassed by "Black Damp".

What follows are small extracts of "Underground Adventures" somewhat similar to those detailed in Gemmell and Myers' classic 1952 publication describing potholing beneath the Northern Pennines.

On one occasion MSG members noted a newspaper wrapped up like a "fish and chips" parcel in a remote part of a lead mine. The parcel was carefully teased open, under the close illumination of a carbide lamp, to reveal nine sticks of dynamite, a box of mercury fulmanate detonators and a single tallow candle. The date on the "Darlington and Stockton Times" was the 11th of March 1893. On another occasion, MSG members were sat at a junction at one of the extremities of a Victorian mine. Ten minutes digging later, the discovery of a lifetime was revealed as a natural passage disappeared off into the distance. This cumulated in a small chamber where amazingly, six miners from the 1850's and 60's had undergone the same experience. Here they had rested and left their mark in the form

of foot high inscriptions with their names, residences and a date of November 16th 1859. Six pairs of footprints led onwards into the unknown. At one point a quite serious squeeze was passed, beyond this was a single set of corduroy knee-prints attributable to one James Stockdale. James, which the local church records show was a child at the time, had obviously been "encouraged" to check for lead ore well beyond the limits of the accompanying adults' capabilities. Even to this day, more men have been to the moon.

There are mines that lie within in the boundaries of Northern Pennine Ministry of Defence firing ranges. It is still quite possible to get permission to walk the surface features when the MOD are not discharging ordinance (see the various notices at entry points to the ranges). However, it is now quite impossible to enter the underground workings as these are out of bounds. Many years ago there was one particularly "interesting" and very deep shaft inside one of these mines that was highly amenable to boulder trundling. At one point, this all got a bit silly when a humungous rock "fell" down the shaft (estimated at 200 feet deep), resulting in a sudden roar of water from the depths and the comment "I think we might have.... er....broken something". There is also the story of a couple of MSG cavers who, on exiting from a mine, had to "sit it out" in the twilight of an entrance while the members of an army platoon had lunch in the sun just outside. I do hope they have better luck finding Osama Bin Laden. Upon exiting and checking out the other mines across the valley the cavers then came across another mine team and a "wild west" style stand off took place. Both parties attempted a complex bluff and counter bluff to explain their presence until it became obvious that all concerned had been hiding in various entrances away from the attentions of the same group of army personnel.

The effects of mine gases are generally unknown to cavers and can come as quite a surprise. In one mine there is a very nice cast iron wheel and its position represents both an interesting and important "Black Damp" site. On arriving at the wheel, five hundred feet in-bye, the only hint that anything is wrong is a slight "musty" smell. Shortly afterwards, breathing becomes laboured and in the time required to set up for a photograph a moderate amount of panic can be achieved. Beyond the wheel, the atmosphere is lethally deficient in oxygen and the 10 x 10 feet passage that disappears into the distance can only be explored with the use of breathing apparatus.

At another important site in Teesdale it is possible to study the effects of anoxic passages on unsuspecting cavers. Here, on asking whether a caver noticed anything unusual, an intimate description of the mine geomorphology was embarked upon. This was despite a very red face, laboured breathing and profuse sweating – all three effects being erroneously attributable to "unfitness" and "old age".

In another mine the effects of carbon dioxide could be studied. This is a most lethal mine gas and even moderately raised levels can result in unconsciousness and subsequent death. Being a relatively recent mine this site contains a number of very old fire extinguishers. On hearing the words "I wonder if it's full" followed by a rather impressive explosion, I turned round to see a colleague furiously attempting to shut a now fully open and very stuck delivery valve. The difference between naturally occurring carbon dioxide and that from fire extinguishers is that the latter makes for very pretty photographs before death ensues.

Cavers contemplating venturing into abandoned mineral mines also need to be aware that pitches take on a new and interesting challenge. Red bolts, eco hangers, rebelays and

clean-washed shafts are replaced with fence posts, scaffold poles, hundred-year-old staging and unstable walls. Underground pitches into abandoned stopes can be enormous and there is certainly less "traffic" compared to Gaping Ghyll. In one mine, simply leaning on the wall resulted in a rock fall into a seventy-foot shaft that a colleague was prussiking up at the time. In another, a two hundred foot shaft has a tight constriction taking heavy water and above is a huge expanse of boulders stacked up on wooden staging that you can push your finger through. If you think "Titan" is scary, try abseiling down past hundreds of feet of collapsing wooden ladders dating back over a hundred years.

At the very extreme of mine exploration are the divers. As if cave diving was not dangerous enough, the engine shaft at Coniston Copper Mine has been dived using Trimix down through rotting ladders and collapsing staging in almost zero visibility to an outrageous depth of minus 170 metres.

Despite these acute dangers the Alternative Pennine Underground can offer significant interest to the experienced caver willing to learn new tricks. One particular mine contains one of the best collection of cave pearls in the country. Through trips comparable to Top Sinks – Pippikin are possible. Indeed, in one particular case the entrance and exit to an eight hour long through trip are within spitting distance of a very pleasant car parking spot. And lastly, there is the aspect of industrial archaeology that adds significant interest and provides a useful excuse equivalent to that of carrying out "scientific research" in caving circles.

Disclaimer.
None of this ever happened; the above is a work of fiction and any similarities to any persons either living or dead is purely coincidental. Abandoned mines, like caves, are Very Dangerous Places. Abandon hope all ye that enter therein.

Anon

MSG SURVEYS OF NORTHERN CAVES

Cavers go caving for one of two basic reasons - for enjoyment and sport, or to fulfil a scientific purpose such as the study of some aspect of geology, biology, hydrology, etc. None of these scientific disciplines could be satisfactorily pursued without the cave survey, the bedrock of all cave sciences. MSG has always been deeply aware of its responsibility to record and survey its finds, and the MSG journals over the years are peppered with high quality surveys from numerous speleologically important areas, but primarily the Pennine Northern Dales. This journal is no exception.

The last journal produced by MSG (MSG11 in October 1987) contained a list of all surveys published by members since the inception of the Group in 1966 until that time, and in view of the difficulty that present day cavers may have in obtaining copies of MSG11, an up-to-date list of MSG cave surveys for caves in England (mostly in the Northern Dales or North Yorks Moors) is given below. Note that in addition to these surveys, MSG has also produced 33 surveys of Scottish caves, 18 of Irish caves and one of a group of caves in Wales, all of which are listed in MSG11.

The list below records not only the location and length of the cave (and the depth if relevant), but also the date of the survey and the MSG journal in which it appeared or, if published elsewhere, the relevant publication (details of which are given at the end of the list). Only the latest or most detailed version of each individual survey is listed.

Cave Name	NGR	Length (m)	Depth (m)	Date of survey	BCRA grade	Journal
WENSLEYDALE						
Cotterdale House Cave	SD831956	70		1974	4b	MSG7
Cotter Side Cave	SD 813934	16		2008	5b	MSG12
Ellerkin Pot	SD 963925	15	24	2008	4b	MSG12
Fossdale Beck Cave	SD864956	381		1972	4-5b	MSG6
(West Aven extension		21		1976	4	MSG8)
Grange Gill Cave	SD24913	37		1973	2-4b	MSG6
Hearne Beck Cave	SD851948	122		1976	4c	MSG9
Keldheads Cave	SE 076916	610		1974	4-5b/c	MSG7
Maze Holes	SD899915	46	9	1972	5b	MSG6
Park Scar Cave	SD911856	76		2008	5b	MSG12
Rowantree Scar Cave	SE023928	9		1979	3	MSG10
Shivery Gill Pot	SD868936	40	10	2007	5a	MSG12
Stalling Busk Cave	SD916860	86		2008	4b	MSG12
Whitfield Gill Cave	SD935920	31		2008	4b	MSG12
SWALEDALE						
Anniversary Pot	NY898016	15	21	2007	4b	MSG12
Aygill Cave	NY887003	67		1975	4b	MSG8
Blind Gill Hole	NY935019	28		1968	5B	MSG3
Blind Gill Level	NY935018			1971	4	MSG5
Cliff Beck Head (incl The Buttertubs)	SD874963	134		1971	4-5b	MSG7
Cliff Force Cave	SD875960	1545		1977	4-5b	MSG9, CPC6a
(Orange Egg ext'n		131		1988	2-3	MSG12)

(Outline plan with Spar Shop & Orange Egg extensions		2100		2007		MSG12)
Damocles Hole	NZ010048	37	11	1969	5b	MSG3
Devis Hole Mine Cave – Mine Levels and workings	SE052961	3800		2006	4b	MSG12, C&KS33
(Central Maze Area		1615		1974	4b	MSG7, BCRA2)
(Occidental Series		488		1974-5	4c	MSG7, BCRA2)
(South Cave Series		1085		2006	4b	MSG12, C&KS33)
(West Cave Series		357		2006	4b	MSG12, C&KS33)
(East Cave Series		706		2006	5b	MSG12, C&KS33)
East Gill Cave 1	NY897020	152		1978	4c	MSG10
East Gill Cave 2 and 3	NY897020	158		1975	4-5b	MSG8
East Gill Cave 6	NY897019		29	1978	4b	MSG10
Eweleap West Cave (incl Foxglove Pot)	NY939024	52		1971	3-5b	MSG5
Friarfold Hush Cave	NY943024	23		1969	4c	MSG3
Fox's Level Cave	NY958042	555	17	2007	5b	MSG12
Grainy Gill Cave	SD871971	70		1978	4-5b	MSG10
Outline plan – the Caves of Great Punchard Gill				2007		MSG12
Great Punchard Gill Cave	NY960043	345	7	2007	5b	MSG12
Outline plan – the Caves of Great Sleddale				2008		MSG12
Great Sleddale Pot	SD827988		25	1970	5c	MSG4
Grimsby Hole	NY958042	11	7	2007	5b	MSG12
Hard Level Gill Caves	NY968007	213		1970	4-5c	MSG3
Horrocks Cross Cave	NZ009041	18	18	1969	3b	MSG3
Horrocks Cross Pot	NZ009041	46	8	1979	4b	Unpublished
Horse Level Cave	NY990071	53		1971	4c	MSG8
Kisdon Cave	NY899012	229		1970	4-5c/d	MSG4
Long Scar Caves	SD 82-990	38		1975	3b	MSG8
Lovergill Resurgence Cave	SD881962	91		1971-80	4b	MSG11
Lovergill Sink Cave	SD882961	244		1971-80	5b	CPC6a, MSG11
New Level Cave	NY992074	133		1970	4b	MSG4
Richmond Copper Mine	NZ164006	1228		1975	4c	MSG8
Rowantree Mea Cave	SD866978	57		1978	5b	MSG10
Scatter Scar Cave	NZ 20032	34		1969	3b	MSG3
Silver Birch Pot	NY959035	27		1969	4b	MSG3
Smithy Level Caves	SD986957	200		2007	5b	MSG12
Snowden Gill Cave	SD929955	26		2007	4b	MSG12
Swaleside Cave	NY895011	46		1978	4b	MSG10
Swinnergill Caves	NY911014	209		1973	5b	MSG7
Whitcliffe Scar Caves	NZ131020	145		1974	5b	MSG8
Windegg Mine Caverns	NZ012052	1143		1971	4c	MSG5, BCRA2
GRETADALE						
Cattle Grid Pot	NZ022073	12	10	2007	4b	MSG12
Outline plan – the Eller				2007		MSG12

Beck Caves						
Eller Beck Head	NY993103	198		1971	4b	MSG5
God's Bridge River Cave	NY957127	579		1968	3-5	MSG2
Hazel Bush Hill Hole	NY990103	79		1968	4b	MSG2
Lost Pool Sink	NY989102	214	12	2007	5b	MSG12
Razor Pot	NZ010087	20	9	2007	5b	MSG12
Trough Scars Cave 1	NY965115	61		1979	5b	MSG11
TEESDALE						
Cruckle Pot	NY856203	18		1968	5b	MSG5
Far Beck Bridge Cave	NY866206	160		2007	4b	MSG12
Flushiemere Mine (incl Bropery Gill Level)	NY909318	2740		1978	2-3b	MSG9
Hell Hole (mine)	NZ163167	79		1968	3	MSG2
Jack Scar Cave	NY949273	137		1971	4b	MSG5
Moking Hurth & Pot	NY868311	549		1970	3-4	MSG4
Moking Hurth (Entrance Series)	NY868311			2007	5b	MSG12
Newberry Scar Pots	NY938301	34		1975	3-4b	MSG8
Scar End Cave	NY937304	21		1976	4c	MSG8
Stonygill Head Cave	NY932267	23		1970	3b	MSG4
Yad Moss Cave	NY793358	189		1975	4b	MSG8
VALE OF EDEN						
Angel's Drainpipe	NY773074	427		1982	4b	MSG11
Cross Pot	NY818177	91		1974	2-3b	MSG11
Fells End Pot	NY008040		38	1970	3b	MSG4
Jingling Sike Cave	SD787966	305		1979	4b	MSG10
Lunehead Mine Caverns (incl mine workings)	NY846205	754 (plus 3170 mine workings)		1976	4-5c	MSG8
Mousegill Cave	NY853119	122		1981-2	4	MSG11
Scroggy Bank Cave	NY856131	18		1968	5	MSG2
Silverband Pot	NY704322	213		1977	4-5b	MSG9
Silver Jubilee Pot	NY710316	76		1977	5b	MSG9
Smeltmill Beck Cave	NY848146	1829		1973	4-5c	MSG7
Stenkrith Caves (covers Devil's Grinding Mill and Millrace Cave)	NY773076	332		1975	4-5b	MSG8
Swindalehead Cave	NY816188	122		1968	4	MSG2
Threlkeld Side Mine Cave	NY713275	20		2007	5b	MSG12
Windmore End Cave	NY828165	283		1971	4b	MSG5
WEARDALE						
Bollihope Burn Cave 2	NY979349	17		1975	4	MSG8
Crawleyside Cave	NY992398	30		1975	3-5	MSG8
Dene Quarry Cave	NY988411	37		1979	2-3	MSG10
Elph Cleugh Cave	MNY889342	245		1973	4b	MSG6
Harehope Quarry Cave	NZ036362	107				MSG3
Hartleycleugh Quarry Cave	NY804486	383		1987	4b	MSG12
Jacob's Well Cave	NZ035361	305		1969	4	MSG3
Lynkirk Cave	NZ006392	110		1969	4c	MSG3
Sowan Burn Cave (Cross Rift Series only)	NY998380	91		1968	4	MSG2
Swinhope Burn Cave	NY887342	21		1972	3	MSG6
Swinhope Burn Pot	NY888343	21		1976	5b	MSG8
ALSTON AREA						
Ayleburn Mine Cave	NY724497	1463		1969		Unpub'd
(Gutgrinder Inlet		130		1977	3-4b	MSG9)

Ayleburn Caves & Pot (Ayleburn Pot is OUCC/ULSA survey)	NY730499	288		1977	4-5b	MSG9
Clargillside Caves	NY772367	46		1975	3b	MSG8
Elpha Green Caves	NY846486	235		1971	4b	MSG5
Hudgill Burn Mine Cavern (copy of old mine plan)		293				MSG9
Hunter's Hole	NY659415	37		1969	4c	MSG3
Little Gill Hole	NY779391	30		1969	2-4C	MSG3
Priorsdale Cave	NY779411	311		1971	3-5b	MSG3
Tutman's Hole (DUSA survey of DUSA extension)	NY680460	305		1975	4b	MSG8
NORTHUMBERLAND						
Cateran Hole	NU102237	37		1986	3b	MSG11
The Wanny Byre	NY934835	46		1986	3b	MSG11
Ward's Hill Quarry Caves	NU079965	107		1977	4c	MSG9
NORTH YORK MOORS						
Aislaby Jet Mine	NZ850087	140		1971	4b	MSG8
Ampleforth Cave	SE593791	7		1975	5b	BCRA3
Antofts Windypit	SE582829	252		1981	4-5b	CS9
Ashberry Windypit	SE570850	320	27	1972	3-5b	MSG6
Birk Bank Fissures	SE555868	43		1981	5b	WP44
Blood Windypit	SE566799	61		1972	3-4	MSG6
Boltby Quarry Caves	SE507863	56		1976		C&H
Bucklands Windypit	SE588828	367		1981	4-5b	CS9
Chapel Wood Jet Mine (survey with Scarborough Cave Club)	NZ455987	972		2002		MSG12
The Elephant Hole (Whinstone mine, Great Ayton)	NZ575117	162	12	1974	5b	MSG7
Fadmoor Caves	SE897647	47		1971	4b	MSG5
Gowerdale Windypits	SE518889	88		1975	5b-c	BCRA3
Kettleness Alum Mines	NZ832160	110		1975	5b-c	MSG8
Kirkdale Cave	SE677860	174		1972	4b	MSG6
Lease Rigg Whinstone Mine	NZ841028	692		1975	5c	MSG8
Monk's Wood Cave	SE597791	34		1975	5b-c	BCRA3
Motts Hole	SE526886	70		1975	5c	BCRA3
Noddle End Windypit	SE526886	175		1975	5c	BCRA3
Sil Howe Whinstone Mine	NZ841028	3354		1974	4b	MSG7
Slip Gill Windypit	SE575836	170		1981	5b	CS9
Whitestone Cliff Foot Caves	SE507836	78		1975	4-5b	BCRA3
MAGNESIAN LIMESTONE						
Bluebell Wood Cave (Newton Aycliffe, Co Durham)	NZ266258	40		1970	4b	MSG4
Creswell Caves (near Worksop, Derbyshire/Notts border)	SK53-74-	560		1973	4-5b	MSG7
Herne Hill Cave	SK533922	168		1979	5b	MSG10,

Herne Hill Cave II (Maltby, S Yorkshire)	SK533922	64		1980	5c	C&C11
Nearcliff Wood Rift (Conisbrough, S Yorkshire)	SK527795	73		1974	3b	MSG7
Pleasley Vale Railway Cutting Pot (Mansfield, Notts)	SK520649	91		1979	5b	MSG10
Ryhope Caves (Co Durham)	NZ400537	73		1972	4b	MSG6
DERBYSHIRE						
Brightgate Cave	SK265599	329		1978	5c	BCRA6
Old Ash Mine	SK268604			1982-3	5b	MSG11
Old Ash Cavern (MSG/YSS/ACC survey)		122		1983	5	MSG11
ISLE OF PORTLAND						
Sandy Hole	SY680712	402		1981	4-5b	CS10
West Cliff Rifts	SY679712	207		1983	4-5b	C&C22
MISCELLANEOUS AREAS						
Fairy Holes, Saddleworth	SE015047	46		1975	5b	MSG8
Diggle Wigglepit, Saddleworth	SE017076	46		1975	3-5b	MSG8

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