

NEWSLETTER NO. 28    PRESIDENT - *Sir Kingsley Dunham F.R.S.*

OCTOBER 1993

In this issue we are fortunate to be able once more to include what amount to eye-witness accounts of mineral mining and processing in the North Pennines. Unlike company records which find their way into the safety of County Record Offices, accounts such as we include in this newsletter are liable to be lost forever unless organisations such as ours do something to record them. Many of us know old miners and some who are still in the industry and we should be recording their experiences as a matter of urgency. Members could take notes, tape record, video or try to persuade their mining friends to write their own experiences in whatever form they wish for inclusion in our archive. This is an important part of our brief and of course I would welcome material for the newsletter or journal should the donors be agreeable.

#### CHRISTMAS SHOPPING AT KILLHOPE!

Kath Brown and Maureen Murray, the new visitor centre and shop managers, would like to remind Friends that Killhope will be open each Sunday in November and on these days Friends will be able to avail themselves of a 10% discount on all shop goods, except publications. So do come, browse around the shop for the more unusual present, treat yourself to a selection of hot and cold refreshments in Janet's cafe and support Killhope's efforts to extend the use of the site in the winter.

#### TWO NEW BOOKS AT KILLHOPE - Christmas gifts?

Any lead mining buff would be delighted to find either (or both) of the following titles in his or her Christmas stocking : Adam Brunskill, which many would claim to be the definitive novel on lead mining has been reprinted in hardback at £15.99 and Helen Cannam's "Stranger in the land" is available in paperback at £4.50. As you may know Helen is a Friend of Killhope and this book is the sequel to "The Last Ballad." The new book is about lead miners who went to the east Durham coalfield during the strike of the 1830's. Newsletter No. 23 of May 1992 (p6-8) gives a flavour of those times. These books may be ordered by post. Please contact Killhope for details (telephone 0388 537505.)

The Friends' Eric Ryan Memorial publication, Men Mines and Minerals of the North Pennines is still available at Killhope or local bookshops at £7.50 or by post from the Editor or Treasurer plus £1 postage and packing.

JOURNAL

I have a certain amount of material suitable for the proposed journal and I have been promised further items which together should amount to just about enough for the first edition. More items are nevertheless welcome. Hopefully the long dark winter evenings which are almost upon us will afford me the time to begin work on this new publication.

PAM & IAN FORBES

Many Weardale members will know of the road accident which hospitalised our Projects Officer and his wife Pam at the end of September. Ian has now been discharged and is beginning to recuperate at home. At the time of writing Pam unfortunately is detained awaiting surgery but is otherwise beginning to recover from various fractures, severe bruising, etc. I am sure we all wish them both a full and speedy recovery.

SUBSCRIPTIONS

As this is the last newsletter of the year I have to remind members that subscriptions for 1994 become due on 1st January. You will see from the enclosed form that our Treasurer, Bill Grigg, has arranged that subscriptions can now be paid by standing order if you so desire. Prompt payment simplifies the running of the Friends of Killhope and saves us money! The new rates are:-

Family membership - £9, Individual member - £6.50,  
Senior/student member - £4.

For various reasons this edition will go out later than planned so it may be appropriate to wish all Friends a HAPPY CHRISTMAS AND A PEACEFUL NEW YEAR!

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DATES FOR YOUR DIARY

Wednesday 10th November at 7.30 p.m. at Stanhope Old Hall  
Memories of 40 years on the Weardale Line - an illustrated talk by Ken Fairless. This is a chance to hear the sequel of Ken's adventures as a washer lad and with the Bonny Moor Hen. Don't miss it!

Wednesday 8th December at 7.30 p.m. at Stanhope Old Hall  
Living under the Moormaster - Weardale 1600-1700 by Alan Blackburn. Alan has a great deal of new material on this hither-to little researched area - another rare opportunity for Friends.

N.B. In line with our long established principle of moving our lecture venues around our area we are trying Stanhope Old Hall at the west end of Stanhope for the above talks. Coffee and drinks are available as well as excellent bar meals but members must make their own prior arrangements for food. We are indebted to Bill Grigg for the above arrangements.

SANDY JONES

Sandy died last week. Longstanding Friends will remember her as an Information Assistant at Killhope in the early days and will recall her vitality, her ready smile and her warmth with visitors particularly with children.

Latterly she worked for the North Pennines Heritage Trust where her qualities of dependability and steady reliability shone through many difficult times.

Through her periods of illness Sandy's utterly positive and life affirming attitude was an inspiration to everyone who had anything to do with her.

We send our deepest sympathy to Jez and to Sandy's family.

ERRATA

Several readers have commented on my statement in the last newsletter (p.13) that a number of people left for New Zealand on the train from Wearhead Station on 14th October 1879.

As has been pointed out to me they would have had a long wait even by today's standard for the 8.50 train - the railway to Wearhead wasn't opened until 1895!

The mistake is entirely my own and I hang my head in shame.

Of course, the station they travelled from was the railway terminus at Stanhope - 10 miles down the dale.

More seriously I apologise to Peter Andrews for calling him Peter Benton in the Project Officer's report. Sorry Peter!

Ian Forbes

REPORT FROM DURHAM COUNTY COUNCIL

David Miller

After a flurry of national awards last autumn and winter, the task of living up to its reputation has been a challenge at Killhope this summer. Certainly the standards of visitor care are as high as ever from Ian's dedicated staff.

A very wet and gloomy summer has not encouraged visitors but it is hoped that the figure at the end of the year should come near last year's total.

On site there has been a variety of improvements. Mains electricity has now been brought to the site and will be connected up soon, which should be a great help in managing the Centre. The old generators will stay as back-up. The staff will now be relieved of the task of keeping them running. Inside the visitor centre building, the upper room has now been equipped and is very attractive for conferences, meetings and other events. Friends, of course, will be welcome to make this their home and lockable cupboards are available now for the Friends Library. The shop downstairs has also been improved with new lighting to encourage a little more expenditure from our visitors.

Another recent improvement has been the provision of new display boards to assist visitors in orientating themselves before stepping on site.

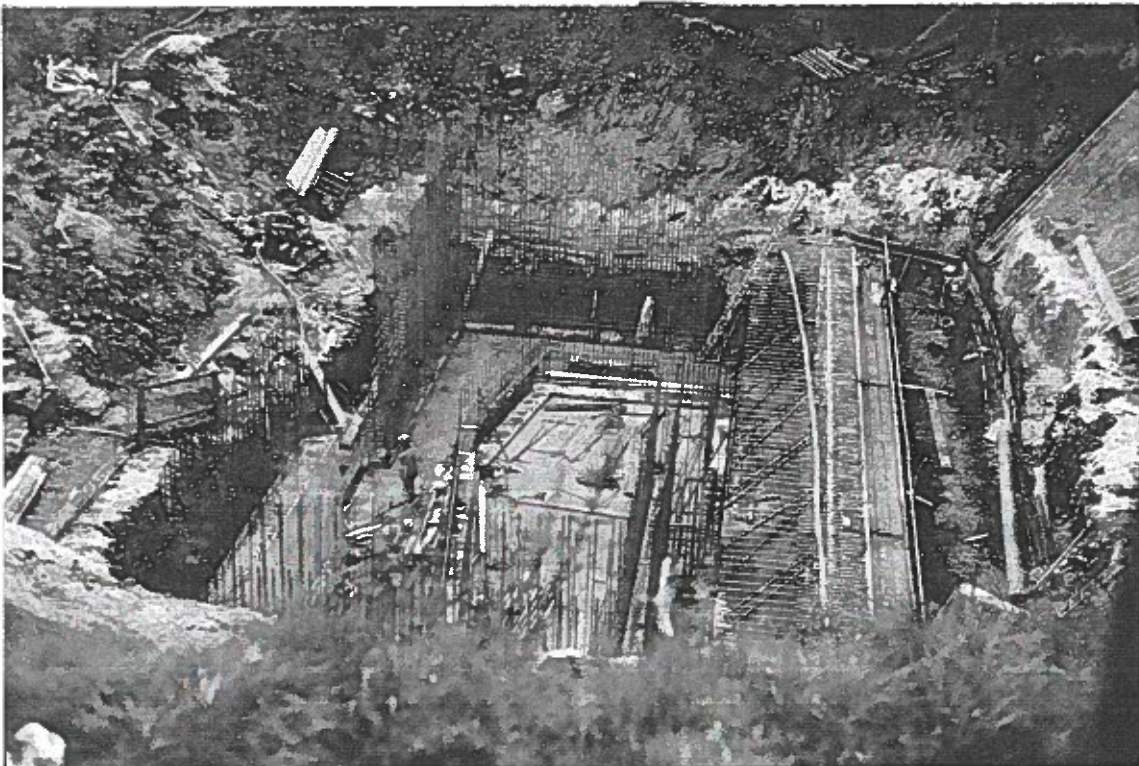
The main change, however, is the commencement of construction of the visitor mine. The large concrete chamber is fairly close to completion and linkages to the original tunnels about to be made. Willie Drea, Lesley Hehir, Roger Wright and Ian Forbes have been working hard to design the interior to make the visitor experience as realistic as possible. Willie, Lesley and Roger (separately and by coincidence) visited the Lascaux Caves in France on their holidays to see how the facsimile of the caves and the paintings were achieved. They were very impressed with the quality of the construction and finishes achieved.

Work has been hampered at Killhope by considerable quantities of rain but hopefully will be finished in November leaving the spring and summer to create the underground mining experience. It will need to be very good if it is to convince Killhope's many enthusiastic and knowledgeable visitors - and Friends of Killhope too!

#### PARK LEVEL MINE

Bryan Chambers

The photograph below shows the position of the Park Level mine project as at the middle of September. An impression of the size of the concrete box which will house the "exhibition" area can be gained from the figures left of centre. The outline of the box can be clearly seen. The waterwheel will be located just to the right of the two workmen. This picture is taken looking roughly east along the line of Park Level.



Photograph - B. Chambers

Bryan ChambersPROJECT OFFICER'S REPORT

As you will have read elsewhere our Project Officer is indisposed at the moment and I have agreed to "ghost write" this as a stop gap measure. I apologise in advance for any omissions and inaccuracies which creep in. Ian will correct these in the next edition.

The Annual General Meeting was held for the first time at Killhope where there was more space for the increased number of members who attended this year. Sir Kingsley Dunham briskly and efficiently chaired the meeting and the following Officers and Committee members were elected. Mr. R. Turner, Chairman; Mrs. D. Chambers, Secretary; Mr. I. Forbes, Project Officer; Mr. B. Chambers, Newsletter Editor; Mr. W. Grigg, Treasurer; Mr. R.G. Graham and Mr. J. Picken Committee Members.

A modest increase in subscriptions from January 1994 was agreed in order to maintain some parity with higher admission charges at Killhope and to meet the rising administration costs of our organisation. The new charges are outlined elsewhere.

Although Killhope is "dry" so far as alcoholic drink is concerned (though of course not in any other sense) many Friends found Janet's buffet lunch following the A.G.M. to be absolutely superb. Afterwards as part of our new format most of those present at the meeting enjoyed an excellent walk up the Killhope valley to visit various sites of interest including the "Graham House." Ian Forbes led the walk while Trevor Bridges contributed a geological interlude. In the best Killhope tradition we had weather from all the seasons - rain, hail, squalls and even some sun. The new arrangements for A.G.M. day were a considerable success and the Saturday date allowed a number of Friends to attend who were unable to travel mid-week.

The next day saw Peter Nattrass promoting the 8th Annual Killhope Quoits Championship. Peter gave me the following details: Joe Bean of Hunstanworth was the winner with our genial promoter runner up. We had competitors from 9 years old to 86 years young and from as far away as Edinburgh. In one semi-final the total of the ages of the players was 167 years, so congratulations to Ken and Jack! Peter tells me that the event was notable for another "first" - apparently our Project Officer who has loyally supported the competition every year since its inception actually won his first game! I'm sure there is a moral there somewhere!

A full report of the Second Mineralogical Exhibition held in September appears elsewhere.

Brains Trust

Friends will recall the Brains Trust usually held after the A.G.M. had to be postponed this year and we had hoped to hold this in the autumn. For various reasons the event has been put back provisionally until the 1st or 2nd weekend in March. Details will appear in the next newsletter.

## GRAND MINERALOGICAL EXHIBITION 1993.

This event took place on the 4th and 5th September 1993 at the Killhope Lead Mining Centre. As we hoped there were many more entrants this year and the tables were covered in magnificent specimens, many of which would have graced a museum. Once again the judge was Mr Brian Young of the British Geological Survey and nobody envied him the job. It was very difficult to choose between specimens in many of the classes. In several cases it was the quality of the labels which was the deciding factor. More about this later. The overall winner was Mr J W Craggs and he was presented with the Blue Circle Cement Cup. Second was last years winner- Mr M Wall. There was a tie for third place- Mr R Thomas and myself.

Dealing with the Categories in turn:-

### 1. Spar Boxes.

There were three entrants and the winner was a recently made model of an underground scene using fluorite from 18 different localities. Brian said he was delighted to see old traditions continuing and I agree entirely.

### 2. Fluorite.

This attracted 13 specimens, none of which would have disgraced a museum. Several old time localities like Boltsburn Mine were represented as well as more recent material. The winner was a specimen from Cambokeels mine about 23cms across covered with fluorite cubes to 1cm.

### 3. Groups of Three Fluorites.

Many of the specimens in this class would not have looked out of place in the previous section. The groups were very varied which made them more interesting. Some were just single crystals while others were complex groups. Many different localities were represented. The winning group consisted of 2 specimens from Cambokeels Mine and 1 from Rogerley.

### 4. Calcite.

Again 13 entries and a wide range of crystal types. The winner was a large group of nailhead type crystals attractively sprinkled with small crystals of pyrite. The specimen coming second was much smaller but in many ways was more interesting. It appeared to consist of small crystals of calcite replacing long needles of some other mineral which has now completely disappeared.

### 5. Galena.

There were 14 specimens entered in this category, mostly fairly small. Unfortunately many of the specimens were not labelled. The winner was a nice specimen from Smallcleugh Mine consisting of 2cm cubes in association with ankerite.

### 6. Sphalerite.

A slightly smaller number of entries at 11, but as with last year the quality was high and included some very unusual pieces. The winner was a 15cm specimen of very lustrous crystals from Hagg's Mine. In this category I very much liked a botryoidal growth of sphalerite on fluorite from Blackdene Mine.

### 7. Baryte.

This section attracted a smaller entry of 5. Outstanding was a magnificent group of baryte blades 25cm across with individual crystals to 6cm. Unfortunately it was not labelled, though I suspect it came from Hilton Mine. Probably because of the lack of a label it took second place to a very rare old time single crystal of baryte, 10cm high from Silverband Mine.

### 8. Quartz.

A better entry of 9 specimens in this class, some of which were quite eye catching. The winner was a brilliant group of crystals 10cms high that could nearly have passed for diamonds.

### 9. Any North Pennine Mineral.

This section attracted the largest entry with 17 specimens. I thought I was in with a good chance of winning with a splendid specimen of the rare mineral alstonite from Brownley Hill Mine. In the event this was beaten into second place by a group of pyrrhotine crystals 8cm high from Cambokeels Mine. Pyrrhotine is a common mineral but crystals are very rare. This specimen was world class. Third was a specimen of pectolite from Force Garth Quarry which had the best label in the whole exhibition.

### 10. Collection of Mineral Specimens.

Most of the entries were from the North Pennines but someone read the rules properly and realised that this category could include specimens from anywhere. He won with a collection of fine material from around the world but including a Frazers Hush fluorite. Second was a collection of North Pennine carbonates including some rarities. Third was a collection of lustrous clear fluorite fragments from Boltsburn Mine. Also in this category was a collection of polished Cheviot agates so you can see how varied the entries were.

### 11. Decorative Use of Rocks or Minerals.

This was won by a model of the Killhope Mine Shop which was magnificent in it's detail. Second was a group of carved green fluorite segments and third a sort of inside out spar box of fluorite crystals.

### 12. North Pennine Fossil.

There were 11 entries. Frosterley Marble was very popular and a piece off this won the category. Some of the marble was river polished which is always interesting to see.

### 13. Young Exhibitors.

A lot more specimens this year with 8 entries. The winner was J Shrimpton with galena from the Killhope dressing floor. Second was D Blackett and third N Shrimpton.

### 14 & 15. Mining Ephemera.

These categories brought out a lot of old mining photographs and plans which were great to see. Even better was listening to some of the old miners who visited the exhibition talking about the photographs and the memories they prompted. The winner was a photograph taken underground in Stotsfield Burn Mine with full information on the people and the equipment in use.

In addition to the competition exhibits there were three special displays. Brian Young demonstrated the more serious side of mineralogy with a display showing copies of a number of papers on North Pennine mineralogy published in scientific journals. With each paper were specimens of the minerals the paper was about. Steve McLean from Sunderland Museum brought along a collection of magnificent fluorite and quartz specimens from the Museum's collections. Finally I put on a display of specimens from the South Pennine Orefield (mainly Derbyshire) so that people could see how these compared with North Pennine material.

As last year, the exhibits were guarded at all times by Friends. The public were only allowed to look at the specimens, not touch them. Bill Grigg, accompanied by his dog, slept on the premises overnight. The Killhope ghost did not trouble them, but he remarked the toilets were a long way away!

To finish my report I have a few comments on presentation and labelling which may help exhibitors in future. Specimens should always be clean and free from dust and dirt. The label should name the mineral or minerals on the specimen and give enough locality information to identify the source of the specimen. In my collection I include information on who collected the specimen and when it was found. In a competition I miss out this information to avoid prejudicing the judge. Other information that can be included is chemical names and formulae, but this is not important. In my collection I always include an OS map reference, just in case I have got the name of the locality wrong. This is not important in an exhibition. Labels do not have to be typed and often neat hand printing looks better. Below I show examples of how I prepare labels.

<u>SPHALERITE</u>	or	<u>SPHALERITE</u>
SMALLCLEUGH MINE	better	2ND SUN VEIN
NENTHEAD	still	SMALLCLEUGH MINE
		NENTHEAD

or better still!

SPHALERITE  
2ND SUN VEIN  
SMALLCLEUGH MINE  
NENTHEAD  
OS. NY788430

Trevor Bridges.

Editor's Note: Blue Circle Cement of Eastgate again gave valuable sponsorship to this very successful Friends' event providing the Blue Circle Cement Cup for perpetual competition. Our thanks to them.

Newsletter No. 15 dated May 1989 carried an appeal for information on horses used in mines. Now at last, thanks to Mr. Reuben Bayles we can print something on the subject. Hopefully this touching account in the form of a letter will encourage further work on this interesting aspect of lead mining. I take responsibility for the title - Editor.

IN MEMORY OF JESS - a Pennine mine pony. Personal recollections of the period when ponies were used for hauling ore in the Cow Green Mine in Upper Teesdale.

Reuben Bayles

When I first went to the mine in the Spring of 1940 there were no ponies in use, as the drifts were not far in extent from the main shaft so younger men were employed as trammers pushing a single tub at a time from the stopes to the shaft. Some two or three years later as the ore nearer to the main shaft had been exhausted the haulage of ore became more of a problem because of distance so ponies were introduced at this time.

This was done at three levels: from a drift on the surface near the shaft top into the hillside called the horse level. The ore from this level was raised from the shaft top the 20ft. or so on the main cages to the bank top from which the ore was emptied into the washing plant. The level was on the north side of the mine only.

There were also two levels down the mine in which ponies were used at 106ft and 191ft. The ponies were lowered or raised on the cages before and after the workers. Both levels went north and south of the shaft. They were able to haul three or four tubs at a time dependant on distance and gradient of the drifts.

The ponies had a feed of corn, oats and hay during the meal times of the drivers. When working in a wet area the pony's back was often covered with a waterproof sheet. I do remember one or two had to be destroyed through having a leg broken.

At the end of the shift they were raised on the cage and brought into the stable, fed, watered and bedded up for the night. Also they were fed and watered before work started the next day and with there being a five day week in operation they had two days rest at the weekend.

They sometimes had to be laid off for a time with a sore shoulder or if for some reason they were lame.

Should they have to be reshod, they were taken the ten miles to the blacksmith, sometimes two or three at a time. (The blacksmith was the late Mr. Norman Collinson who was the Middleton Co-operative Store smith. Mr. Collinson's widow still lives in Middleton.)

During the summer holiday they were taken into pasture by one of the local farmers giving them a welcome break from the hard work of the mine.

Around 1950-1951 the distance of the workings from the shaft became greater and battery locos replaced the ponies.

We had moved onto a farm in 1946 and we had to take the milk a quarter of a mile to the road to the milk lorry so in February 1951 I bought my pony, who was called Jess, from the mine for £17.50. She stood about ten and a half hands high and must have been at least 8 to 10 years old when we bought her. Jess was dark roan though this got progressively lighter with age. She was used to take the milk to the road for a couple of years until the milk was collected from the farm by lorry.

After I finished at the mine and was farming full-time, I had my pony living in luxury in retirement until we had to have her put to sleep on 12th November 1973 - aged 32 or 33 years. It was a sad day for us all but I was glad to have been able to give my equinal mining companion some recompense for earlier services rendered.

Footnote: Mr. Bayles recalls the mine was re-opened about 1936 and when the shaft was sunk the mine was known locally as Low Level.



Jess - photographed about 1953, wearing her mining headgear which she seldom wore after her retirement in 1951.  
(Photograph - J.R. Bayles)

MINE VENTILATIONHarold L. Beadle

There were many problems to be faced in lead mining. One of the most difficult was ventilation for it was impossible to drive a level very far before there had to be some means of introducing fresh air to the forehead. Atmospheric conditions were a help, in particular the direction of the wind in relation to the level mouth, but as can be seen, these could not be relied upon.

The most efficient way to ventilate any mine was to sink shafts to connect with the level below, or to put up rises to the surface at intervals and it is possible to trace such practices at many of the old mines. A typical example of how it was done can be seen by surveying the course of Langdon Mine Old Level which was driven a considerable distance from the side of the beck lower down the valley in order to work the veins at Langdon Head. In addition, two veins at Langdon Head; Botany Bay and Westgarth, which cross at right angles to the level, were worked for a good distance to the east and are shown on the plan to have been ventilated by rises. (1) The mining here is comparatively shallow, however, an example of what happened at a deeper mine can be seen by following the course of Sharnberry Veins on the surface and discover the rises at intervals.

Another method was the use of hand driven fans, though these seem to have been rare. However, a photograph does exist of Tom Allinson of Eggleston with a fan giving a demonstration of how it was used at Coldberry Mine. A photograph which was taken at the time of the demolition of most of the extensive mining remains in the 1920's. These, according to Allinson who called it a "Blatter," as did other miners of his generation, were operated by boys who stood all day turning the handle to produce air at a low pressure which was conveyed along the level in a square shaped wooden conduit the remains of which at one time could be seen lying about the mines. The last one I remember seeing was on a conducted tour of Smallcleugh Mine at Nenthead led by Eric Richardson in April 1971, which protruded from a heap of deads in one of the worked out flats for which the mine was famous. (2)

Then there was the Water Blast Ventilation which was very much used from an early date. Water Blast Shafts are most often seen on mine plans a short distance ahead of the level mouth. Once they were installed they cost nothing to operate and were most efficient having regard to the simplicity of their construction and operation. What is a Water Blast? In the Hidden Side of Swaledale published in 1988, according to John Hardy, who seems to have relied on a tale told by an elderly miner, the Water Blast got its name from an accident in the eighteenth century when miners driving on a vein blasted through into underground water and there was the loss of 24 lives. In our Newsletter No. 27, Brian Short states, "Water Blast A shaft down which water was allowed to fall, carrying air with it to ventilate the mine."

← Shaft →

Bottom Section of Water

Blast in Shaft for Rise

Not to Scale

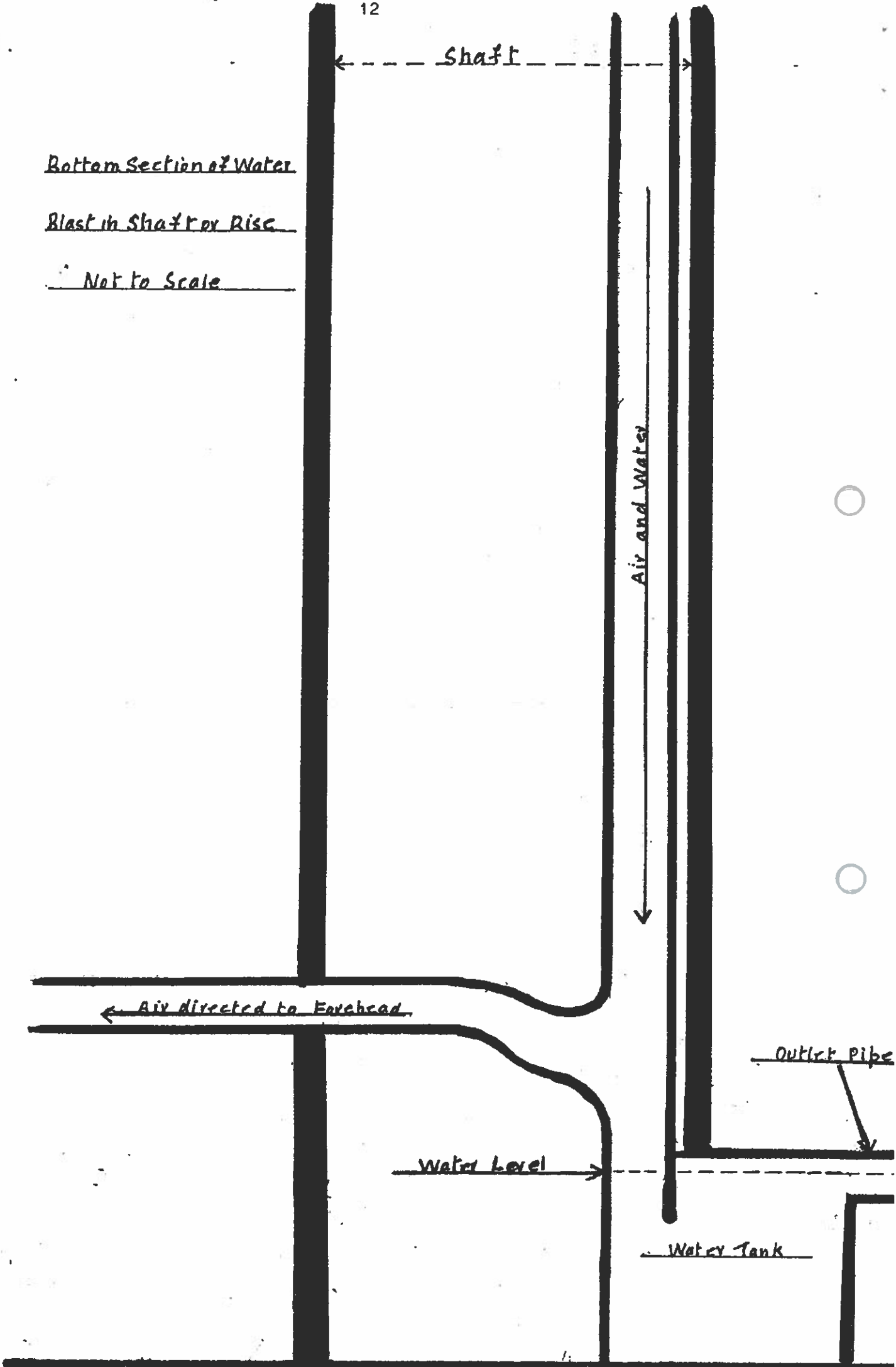
Air and Water

← Air directed to Forehead

Outlet Pipe

Water Level

Water Tank



Included with this article is a drawing which is my interpretation of a Water Blast and its operation. A controlled amount of water was allowed to run into the top of a tube or wooden conduit which very soon became a dribble dragging the air with it. To assist in sufficient air being introduced to create the necessary pressure the tube or conduit had a series of holes in it through which could be drawn additional air. At the bottom the water was collected in a tank and discharged into the level whilst the air was trapped and forced along the conduit to the forehead which got further and further away. Without doubt there would be small variations. It has even been suggested that a tub (barrel) could be used or adapted but in my opinion it would have great limitations compared with a well designed appliance. However, the principle in any such appliance must have remained the same. That is, some means of introducing water and air into a tube at the top and some means of trapping the air and discharging the water at the bottom. It also seems reasonable to assume that the greater the height of the appliance the greater would be the air pressure generated.

Two examples of its use have been discovered at Ashgill Head Mine at the head of Harwood in Teesdale. The evidence of the earliest which was used in connection with South Langtae Head Low Level is somewhat scanty. However, the small sike running down towards the level is still known as Blast Sike and does in fact still appear as such on the 1953 edition of the 6" O.S. Sheet NY 83 NW.

Ashgill Head Low Level, the portal of which can be seen from the main road from Harwood to Alston, was one of the long straight levels begun by the London Lead Company in the early part of the nineteenth century to explore the veins at depth. A good deal of mining had already been done high up on the fell and in particular in the valley of South Langtae Sike with a fair amount of success. This seems to have encouraged the company to investigate the lower strata by commencing a level at 1800 feet O.D. which, after it was driven some 550 fathoms reached its objective which was what became known as North Langtae Head - Ashgill Head Vein and would command something like 300 feet of workable ground above the level at the forehead.

After driving for some 70 fathoms the level crossed at an angle South Langtae Head Vein. It was at this point that a rise was put up to the surface on the right hand side of the level in which was installed a Water Blast which would have a head of at least 70 feet. (3) 480 fathoms is a long way and one is left to wonder if the Water Blast was adequate for all that distance. The only confirmation of this will be in the Report Book kept by the agent responsible for the mine if it has in fact survived. However, the adequate ventilation of a similar level or mine in another dale is not without confirmation. This form of ventilation was in use as early as the 1730's in the Blakett mines and was described as the most powerful form of artificial ventilation used in the eighteenth century and that the stream of air from the end of a pipe 400 fathoms away was "so strong as to nearly blow out a candle." (4)

Notes and references:

- (1) The shaft heaps by which the course of the level can be traced have been mistaken by many as being bell pits. Refer to Langdon Mine Old Level Plan in Mining and Smelting in Teesdale, C.I.A.S. Research Report No. 3, 1980.
- (2) The photograph shows that the fan was geared to ensure that slow turning of the handle would produce a high speed fan.
- (3) General Plan of Ashgill Head Mine and Mineral Ground leased by the Gov'r and Company of the Marquis of Cleveland. Joe Millican.
- (4) The Lead Miners of the Northern Pennines. C.J. Hunt (1970) pp 27 & 28.

1st July 1993

READER'S LETTERS

In reply to Readers Letters, Newsletter No. 27, Brian Short writes:-

"Submitting articles to publications such as Friends of Killhope Newsletters can be a way of putting yourself up as a target. Sooner or later the inevitable happens and someone takes a shot at you, the shot in this case being the quibble with the definition of the word RIDER in my glossary, namely, "A mass of rock dividing a vein." For the benefit of the letter writer and anyone else interested, I have given a fuller definition:-

- RIDER
- (1) Ribs of rock within a vein. (Shropshire)
  - (2) A small fault. (Staffordshire)
  - (3) A thin seam of coal overlying a thick seam. (South Wales Coalfield)
  - (4) A crush fracture in a coal seam. (Northumberland and Durham)
  - (5) Lumps of gypsum connected up by strings of gypsum in marl. (Nottinghamshire)
  - (6) Calcite. (Yorkshire Lead Mines)

In 1827 Woodward, in A Catalogue of Additional Fossils wrote, "There is frequently found a great quantity of common spar, in the veins with the calcium, in some, in form of "Riders," in others in form of "Rib."

In 1729, in the Natural History of Fossils, he referred to "Lead ore with a thin rider of stone in it."

In 1747 Hoosons Dictionary gave us, Rider:- A stone running in the vein, by which the body of the vein is divided into two parts, running on both sides of it.

I would say, after reading the above, that my definition is near enough as a general description, bearing in mind that, like many other words, the meaning can vary, depending in which part of the country you live."

BREWERY SHAFT (Part 2)Brian Short

This article comes as a follow up to part one, which is lost somewhere in the mists of time, or to be more precise, Newsletter No. 15. At that time I did not think there would be a part two, but the great day has been and gone, and I would like to give my account of it. They say you should write things down as an aid to memory but this is a day which will never be forgotten, such was the experience.

Some weeks ago, Les Blackett (who else?) came to me and suggested that I make no plans for August Bank Holiday weekend. On asking why, he informed me that NORPEX would be setting up the winch for a descent on the Brewery Shaft. Well I thought that was a good enough reason to cancel just about anything, especially when I remembered missing the trip 2 years ago because of work commitments. Here is my account of the trip.

Sunday 29.8.93.

I left home at 11 a.m. bound for Nenthead to meet up over there with Les and two other friends who were also making the trip. I was the first to arrive and found no sign whatsoever of the winch or the operators in the Brewery Field. However, after 10 anxious minutes the others turned up and informed me that the winch was still at its home in Blagill. A quick trip down there to offer any assistance (not needed) and we were back at the scene of the forthcoming event, well almost, because while the Landrover was being manouvered into place to pull the winch into the field, it suffered a terminal attack on its reverse gear. We considered this to be just a mini setback, however, and after much to-ing and fro-ing and lots of cajoling, the winch was finally in place adjacent to the shaft collar. These days the shaft is covered by large concrete sleepers which take four men to lift out of the way. Fortunately only one was to be removed, but when I saw the gaping hole we had just uncovered, the butterflies which attacked my stomach almost persuaded me to go back home and dig the garden. The fear subsided as John Crompton said "Who is to be first then?" and I quickly replied "Les!", who had also been attacked by the same butterflies earlier. Les said nothing in reply, probably in the hope that we would think he was brave and confident but I could tell by the knocking of his knees that he wasn't. Soon he was clipped into the safety harness and positioned on the seat for the descent. At this point I must say I expected the seat to be a little more elaborate than what it was, a flat piece of aluminium attached to the rope with four chains, but I must also add that the operators, Ian the winch driver and John and Dave, his assistants at the shaft top, did everything with the utmost safety and professionalism.

Back to the story; The final act for Les was a radio check with Ian and then down he went into the darkness. Five minute later came the immortal words, "I'm at the bottom." I had thoughts of Eagles and Neil Armstrong. Well, this trip was as big to us as that trip was to them, wasn't it? With Les safely off the seat a slight adjustment of the shearlegs was made to stop the winch rope from rubbing on the side of the entrance hole. Melvin Lonsdale was next to go. As he positioned himself on the seat I noticed that the smile on his face matched the plastic coat he was wearing. Strangely my confidence grew with the knowledge that we were all a little apprehensive. With Melvin off and the seat on its way back up, Tony Tallentire's voice came through the cloud of nerve calming cigarette smoke, "I'll go next if you like Brian ....."

Outwardly I replied "If you don't mind, I'll get down for some photographs now," inwardly swatting butterflies by the score. There it was, the empty seat waiting for its next occupant, me. With nerves jangling and making sure that the safety harness was clipped on I positioned myself on the seat. Down through the hole I went into the murky depths, not looking up or down, just straight ahead at the shaft sides spinning before me as the rope tried to unwind itself, a natural occurrence with a normal wire rope. I remembered John telling us we could stop ourselves from spinning if we touched the sides of the shaft with our feet, but as I may have guessed, my legs were two inches too short so I kept closing my eyes in an attempt to stop myself from becoming dizzy.

The water pipes are in position all the way down the shaft and there is a pneumatic winch, dating from the early years of the 20th century, in an alcove some 40 to 50 feet down. The only obstacle you could possibly come into contact with is the pipe which runs across the shaft at the Rampgill horse level to join the others on the far side before going down the shaft to power the large Pelton wheel. There are, here and there, the remains of the wooden staging which eventually collapsed in the early 1960s, whilst the scrap men were robbing the machinery below. What a pity it remained in position so long as to allow that to happen.

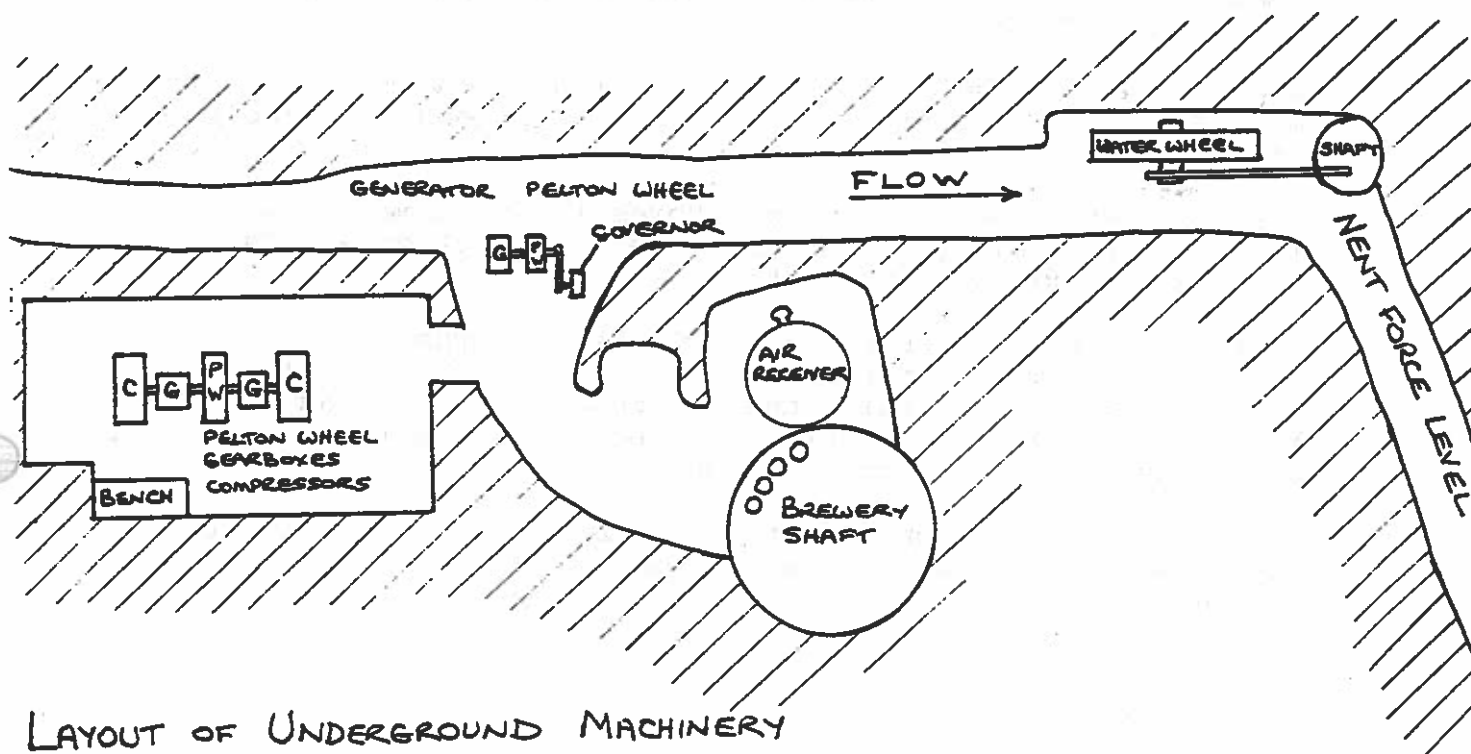
As expected, further down the shaft the number of water drips increased and also the chances of getting one down the back of your neck or in your eye everytime you look up. Eventually a comforting voice came over the radio telling me that I should be near the bottom and sure enough there it was, two feet below me. The bottom of the shaft now being the top of the 12ft. high pile of debris on the floor. All I had to do then was unfasten the safety harness, slip off the seat and clamber down through the pile of broken timber, twisted steel and cables and there I was, 310 feet down at the bottom of the Brewery Shaft. MADE IT!

The air receiver, 15ft high and 4ft. diameter is intact, complete with valve assembly for taking off the compressed air to wherever it was needed. Next to the receiver are the two halves of the Pelton Wheel cover, no doubt carried there by the scrap men to make up the next load. Several feet away on the left is the opening into the main chambers, measuring some 30ft by 20ft with a vaulted roof 15ft. high. Originally in here there were two piston-type compressors driven, through reduction gearboxes, by the large Pelton Wheel, some 3ft. diameter. All that remains now is the wheel itself with its adjustable stainless steel water feed valve, (although the brass bearings have gone) and the empty casing of one of the gearboxes and a compressor flywheel still attached to its crankshaft. A full 5 gallon drum of oil stands nearby and in one corner the workbench, littered with nuts and bolts, pieces of rubber for gaskets and general rubbish. On the floor are small pieces of broken machinery, valves, etc. The floor is dry.

Back out through the doorway and to the left is the other smaller 1ft. diameter Pelton Wheel with its governor assembly. This is in fact a twin wheel set-up, originally driving the electric generator which provided the lighting both in the immediate area and also the nearby offices. If I have been correctly informed, this generator supplied the power to the street lights in part of Nenthead, the first village to have such an amenity. The rotor has gone but the stator is still lying on the machine bed, close to its original position. Some yards along the level with its concrete water channel is the all-steel waterwheel. This is about 15ft. diameter and was used for pumping water from the nearby shaft up into the Nent Force Level. The gearing, crank and pumping beam are lying by the wheel, the timber supports having collapsed long ago.

Getting to the wheel entails wading through water 2ft. deep and at this point John Crompton's ears must have been positively on fire when I remembered his words before descending "To get there means to get wet as it is above wader depth." Now Melvin and myself had brought both waders and wellingtons and we decided that it would be easier walking around down there with full wellies than with full waders. As it turned out, waders would have kept us dry, like Les and Tony were and the water down there was the coldest minewater I have ever had the displeasure to be in.

All too soon, after exploring and taking photographs, it was time to go back to the surface and one by one we were winched up there, back to daylight and fully satisfied with our trip. Two others who turned up on the day had shared our experience and after they were brought to the surface the concrete sleeper was replaced and the winch safely locked up for the night. It had been Tony's first time underground and by the way he reacted, his first of many. After changing into dry clothes and discussing what we had seen it was time to say goodbye and head home for a well-earned meal. The time was 7.50 p.m. After a bath and an hour watching television, an unforgettable day came to a close. Another ambition fulfilled!



LAYOUT OF UNDERGROUND MACHINERY  
(PIPEWORK OMITTED)

B. SHORT

SPAR BOXESIan Forbes

Spar boxes, for those who have never seen one, are collections of mineral crystals fixed into a wooden case with a glass front. The effect is of a kind of grotto, and very often the display was enhanced by the builder with mirrors and/or candles to give a display of colour, depth and glittering light. It was wonderful to see a modern spar box at the Grand Mineralogical Exhibition this year, for the maker had not slavishly copied the old style, but had brought the tradition right up to date with figures of modern miners filling Hudson tubs drawn by a battery loco.

But how old is the tradition of spar box making, and how widespread?

Surprisingly little has been written about this craft which was - at least in our area - relatively common.

My impression is that spar boxes are to be found only in our area - in Weardale, Teesdale, Alston Moor, and the Allendales, with an "outlier" in the ironstone mining area of West Cumbria. There seem to be no spar boxes from any other mining area in Britain.

And what about their date? Again, I have an impression that most are late Victorian, but I don't know when the tradition started.

The earliest reference to spar boxes I have come across so far is from the Catalogue of a wonderful "Exhibition and Bazaar" held at Stanhope in April 1868.

Among the many superb entries - cases of birds, fossils, the "shirt of Commodore Nutt, brother-in-law to General Tom Thumb," engravings, paintings, a "wooden spade found in Old Mine in Wellhope" - are two "Spar Boxes" as well as a "Cabinet of Minerals" and a "Case of Minerals."

Can anyone either contradict my assumptions or shed further light on the subject of spar boxes?

It is always a pleasure to see Willie Watson at Killhope - he brings with him a breath of pure Alston Moor air and very often a story or two or a piece of paper with facts and figures or a tale of the mines.

For Willie is an enthusiast for the history of mining in his area and is always eager to share information.

When he brought along a drawing of Rotherhope Fell Mine plant on three large pieces of paper and rolled them out in front of me, I realised that this was something special.

As Willie himself says, probably no-one else today could have done this drawing. As a youngster living in the south Tyne valley he was familiar with the Rotherhope plant and the people who worked there. The mill was a sister one to the better-known plant in the middle of Nenthead - both being erected by the Vieille Montagne Company in the early years of this century.

Willie is very proud of Rotherhope Mine and its plant and delights in telling how ore from Nentsberry Haggs Mine was brought here rather than to the nearer Nenthead Mill - Rotherhope had the crucial advantage of cheap water power.

So, it is a pleasure to place on record in the Friends' newsletter this unique drawing of one of the most important 20th century north Pennine mining sites and thus capture it for posterity.

Willie has drawn the scene from memory and chose to record the year 1928 when he was 11 years old.

Ian Forbes

ROTHERHOPE (or Rodderup) FELL MINE  
& DRESSING PLANT

Willie Watson

1. Here the road was washed out in the mid 1920s.
- 1a. Point on turbine water course - see general notes below.
2. Outlet for water from New Mill 1912.
- 2a. Here water from the mill Pelton and Turbine water wheels enters the No. 2 outlet arch (inside building.)
3. Cutting heap from New Mill 1912.
4. Sand heap from Old Mill pre 1912.
5. Road to the mine.
6. Miners path short cut from the Garrigill-Leadgate road.
7. Man riding on braked tub; horse being led behind.
8. Weighing cabin.
9. Rail to the ore shed.

10. Building left over from the Old Mill.
11. Water wheel pre 1912.
12. Cart.
13. Building containing water wheel, turbine and Pelton wheel.
14. Sawmill.
15. New engine house and crude oil tank 1927/28.
16. New Mill.
- 16a. Gantry on side of mill.
- 16b. Slime pits.
17. Ore shed.
18. Wood for sawmill and sawn wood.
19. Stones from picking tables.
20. Tub coming out from picking tables.
21. Hoist.
22. Tipping cage at end of mill.
23. Cutting hopper and elevator at the back of mill.
24. Pelton water course.
25. Turbine water course.
26. Inner Gill.
27. Railway from Haggs bouse heap to hoist at mill.
28. W.C.
29. Timber trolley.
30. Horse pulling load from mine to mill.
31. Road from Green Castle High Shop Middle Level to Rotherhope Mine.
- 32/34. Not allocated.
35. Mine shop.
36. Mine entrance with date of 1838 above keystone.
37. Fitters house.
38. Blacksmiths shop
39. Garden.

40. Office.
41. Joiners shop.
42. Storehouse.
43. Haggs Bouse.
- 44/45. Not allocated.
46. Two ton motor wagon with solid tyres unloading bouse from Haggs Mine which was over 5 miles from Rotherhope Mine.
47. "Swing bridge" (wire rope bridge.)
48. Rail and sleepers for use in the mine.
49. Newly sharpened drills.
50. Compressed air pipes for use in mine.
51. Concrete blocks for arching in mine.
52. Not allocated.
53. Tub for taking Haggs bouse from heap to mill.
54. Retaining wall.
55. Stone steps.

#### General notes

Rotherhope mill was similar to that at Nenthead but smaller (Rotherhope - 50 tons per 9 hours shift, Nenthead - 200 tons per 12 hour shift.) Nenthead mill worked at almost full capacity from 1909 to 1920 and then was idle in the 1920s and 1930s. It was taken over and worked by the government during the Second World War. Rotherhope Mill worked full time almost at full capacity from being built; and from the mid 1920s to its close down in 1930, worked three shifts going day and night and only stopped from mid-day on Saturday to mid-night on Sunday. Rotherhope bouse and some Haggs Mine bouse was dressed during the day and Haggs bouse on the night shaft. The mill re-opened in 1935.

From 1909 to 1918, 60% of all zinc produced in the United Kingdom went from Nenthead though only 40% was mined the rest coming from old mine heaps from West Allen and Nenthead.

Tyne Bottom Mine was the only mine in the Alston mining field to produce nickel and cobalt ores. Rotherhope Mine was very rich at depth producing a third of the total lead ore from below the Great Limestone. Zinc in Rotherhope mine was almost nil.

Rotherhope dressing mill was built in 1912. The building marked Vanners (No. 16) which housed Wilfly and circular tables and the sawmill (No. 14) were added at a later date.

The most troublesome spots were at No. 1a on the turbine water course (behind New Mill) and at the hydro-compressor water tower for the Pelton wheel about one mile higher up on the fell where the grates got blocked with snow and ice. Water was the only power at Rotherhope Mine and Mill until 1927/8 when a coal oil engine was installed in a new building (No.15.)

In the late 1920's stone (No. 19) from the picking tables was led with an old wagon from the 1914/18 war to repair the road from Leadgate to Garrigill. Some of this stone also went to Carlisle airport.

Sometime about 1928/9 some cuttings were let off down Blackburn which caused trouble with the farmers and the mining company had to put right the damage to the river bank.

Kearton bridge was used when taking out the timber from Blackburn Banks Plantation during the 1914/18 war. Permission to use the bridge would have been required from the mining company.

In their hey days of the 1920s Rotherhope Fell and Hags Mine were the only mines the Vieille Montagne company had working on Alston Moor. The number of men working at Rotherhope must have been somewhere between 130 and 160. I can name 44 in Garrigill Parish alone and another 18 from Leadgate - then there were also the Alston and Nenthead men.

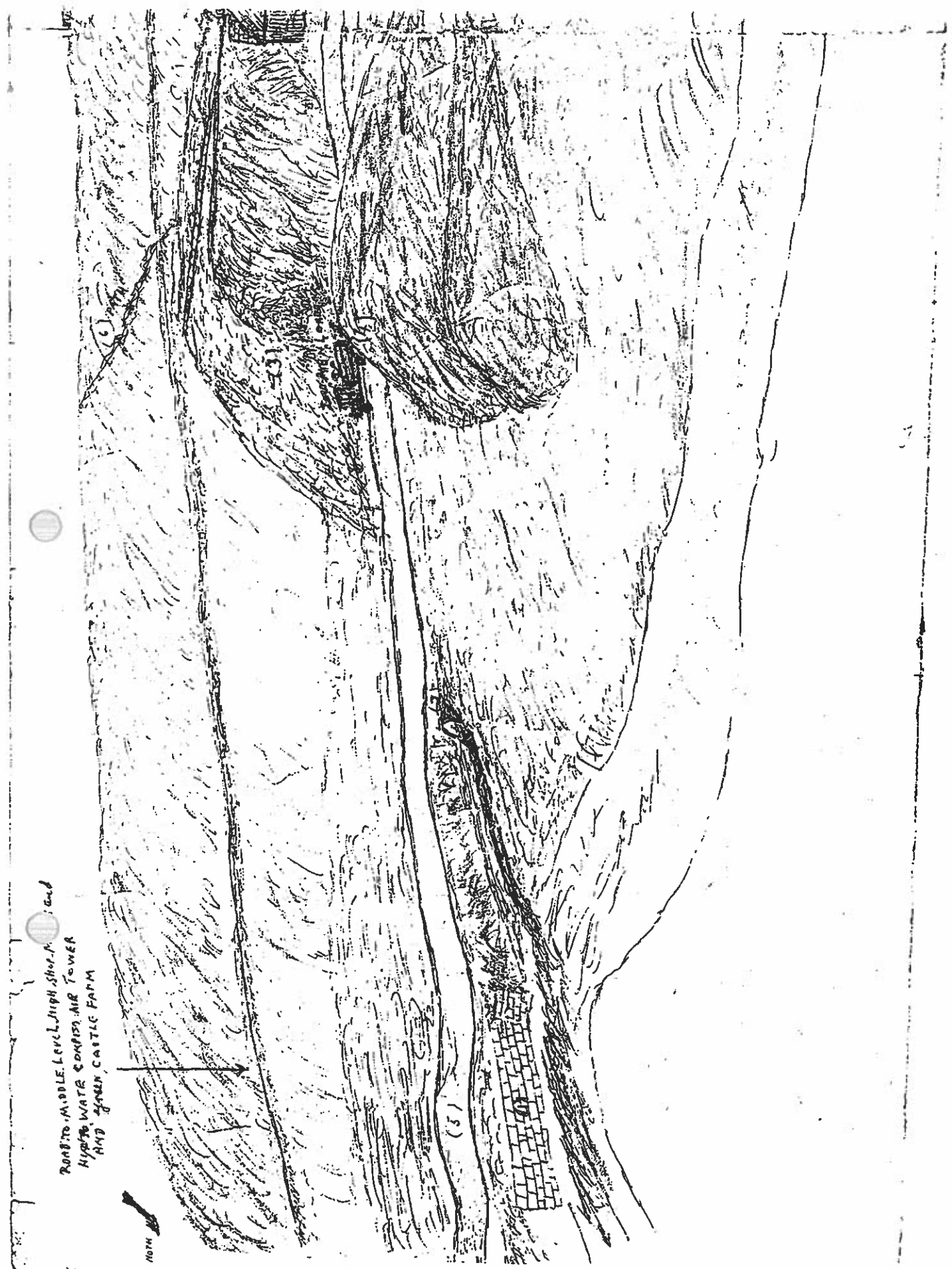
Arthur Martindale was "No. 1 Boss" at Rotherhope Fell mine and was known by the workers as "Chappie." Joseph Stephenson was "No. 1 Mill Boss" as far back as I can remember.

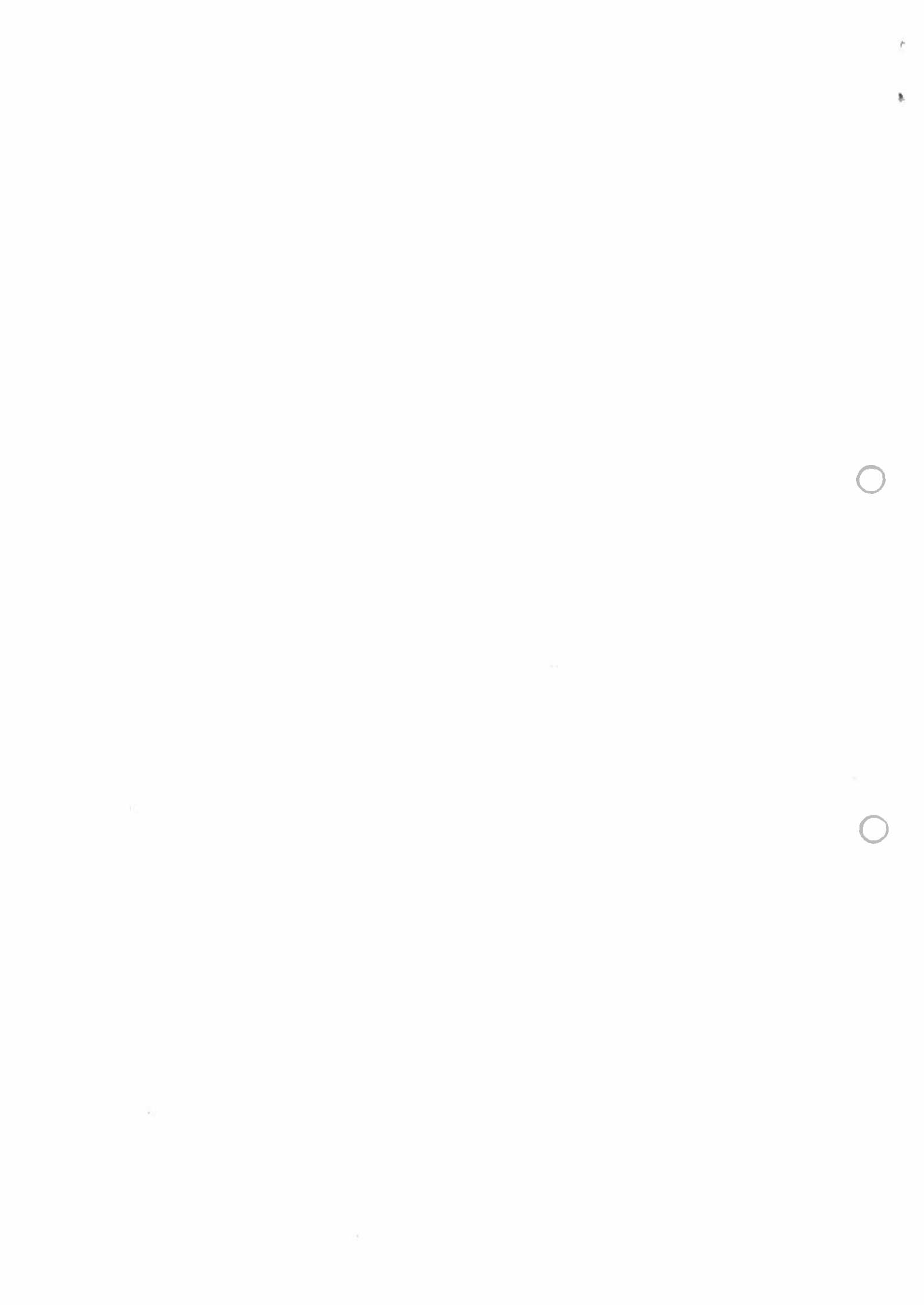
Editor's Note: Mr. Watson's original drawing was on 3 sheets of A3 paper which we have had to reduce to our newsletter size of A4. By placing these at the end of this edition readers can easily detach and get the full impression of the site by laying out on a table. This is the best solution we could devise in the circumstances and our thanks go to Steve Eva for his help with this problem.

1928

ROAD TO MIDDLE LEVEL HIGH SCHOOL; and  
HYDRO WATER COMPRESS AIR TOWER  
AND GREEN CASTLE FARM

NOTE

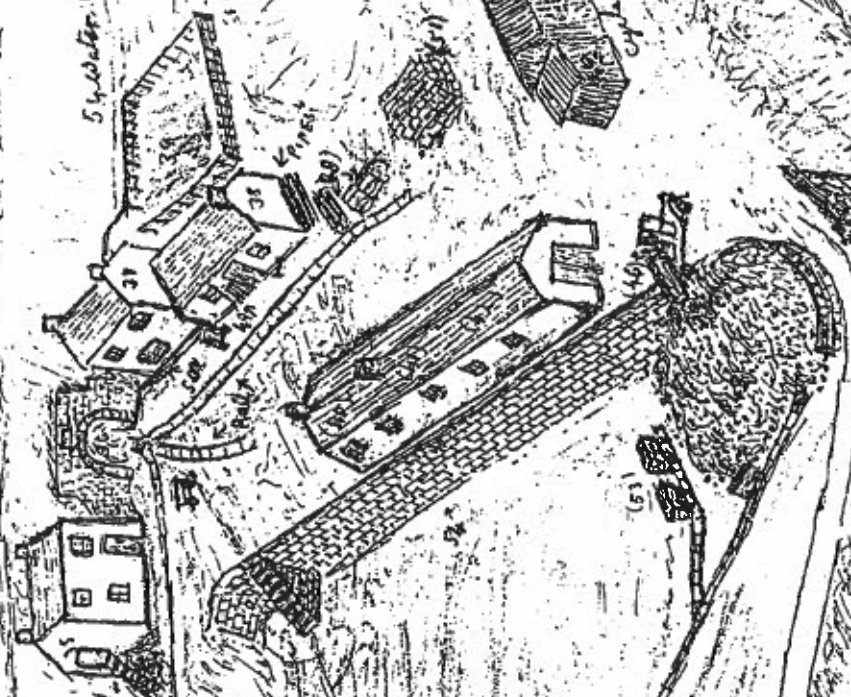








54 Water Course for the old mill  
June 1912



Blackburn

