

EXPLORING UNDERGROUND HISTORY THE EASY WAY: Using modern  
methods to find ancient engine\*

by Harry Parker

Enthusiasts studying an old Derbyshire industry have called in the latest in modern technology to assist in their researches.

Members of the Bakewell-based Peak District Mines Historical Society were seeking to solve an ancient mystery at the long-abandoned Yatestoop lead mine near Winster where the 600-foot-plus shaft is believed to contain a fascinating industrial archaeological "treasure".

Yatestoop mine was the first in Derbyshire to have a "fire engine" - as the early steam engines were known - installed in 1782. It was a Newcomen atmospheric engine and was first erected on the surface. But later, in a bid to improve its efficiency, Ashover engineer Francis Thompson had it moved 510 feet below ground in a specially excavated chamber alongside the shaft.

The engine had a 64½ inch cylinder and a 20 feet diameter haystack boiler, so called because of its shape.

Although the move underground is documented, no record exists of the engine's removal so the PDMHS decided to investigate the shaft to see if the engine could be found.

The society has previously rescued a rare hydraulic engine from 360 feet below ground at the Wills mine near Winster and this is now on show in their lead mining museum at Matlock Bath. It was hoped that the Yatestoop engine would be an even more valuable exhibit if it could be located and raised.

The condition of the Yatestoop shaft, which had been sealed for many years by huge stone blocks, was an unknown quantity - the ginging (stonewalling round the shaft where it passes through loose ground near the surface) was suspect and there were rumours of bad air which could kill the unwary explorer. So it was decided to seek the aid of modern technology to make the first moves.

Telespection Ltd., a Ripley firm specialising in remote inspection by miniature TV cameras, offered its services and supplied a field unit manned by its managing director, Maurice Elliott, and head of civil operations, Mike Hutchinson.

The unit consists of a van fitted out as a mobile TV control centre with its own generator, monitors video-recorder winch for lowering the camera and hundreds of yards of cables.

The camera has its own built-in lighting unit and can be focused by remote control. The winch operator on the surface adjusts the camera angles on instruction from the controller watching the monitor in the van.

The van was packed to capacity with the PDHMS team watching the monitor as the camera started its slow descent, studying the condition of the shaft walls and the state of the ginging. Soon the camera revealed torrents of water issuing from the shaft sides and pouring down in a never-ending stream - a deluge that would have had to be endured under conventional methods of exploration, either by winch or electron ladders.

The condition of the shaft was surprisingly good after so many years but at 312 feet the camera revealed a blockage of fallen rock, which, if solid, would mean an excavation of some 198 feet to where the engine was located.

So the question remains unanswered. Does a priceless historical treasure still lie some 500 feet below the green fields of Derbyshire? Maurice Elliott said: "I am sorry we didn't find it but trying was a fascinating experience. This is the first lead-mine shaft we have tackled. We often investigate wells but this was much more exciting".

The general opinion of the PDMHS team was that sitting watching a TV camera doing the dirty work of descending an unknown shaft beats swinging on a ladder under a waterfall anytime.

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\* Reproduced from Sheffield Morning Telegraph, Wednesday, May 16, 1979 (with permission).

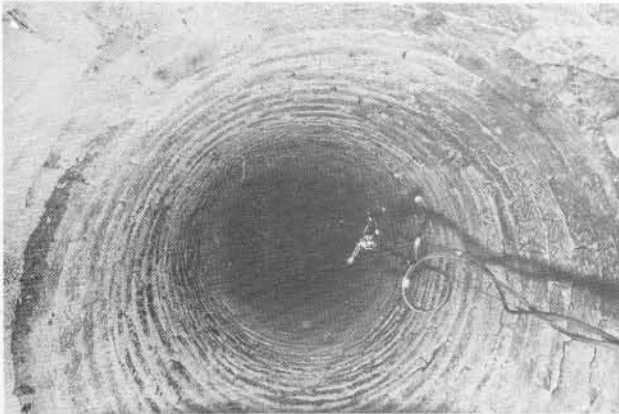
CLOSED CIRCUIT TELEVISION INSPECTION OF YATESTOOP MINE



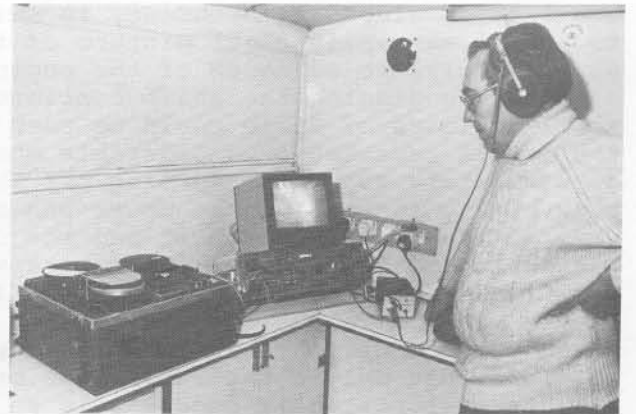
Lowering the lights and camera.



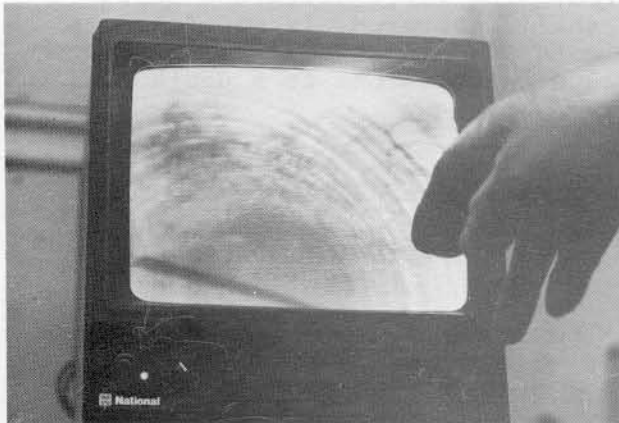
Camera and lights assembly.



The assembly in the shaft.



T. V. monitor and recorder.



The shaft seen on the monitor.



Dressed gritstone ginging on the monitor.

Photos by Harry Parker.