CCTV INSPECTION OF YATESTOOP MINE SHAFT

by P.J. Challis

Yatestoop mine shaft (SK 243616) near Upper Town, Birchover, has been inspected by means of closed circuit television to determine if the 1782 Newcomen engine is still *in situ*.

Previous attempts at exploration (Kirkham, 1962) and again within the last two or three years were thwarted by the presence of bad air and the 'dangerous' condition of the shaft. It was therefore decided to examine the shaft from the relative safety of a television camera. Messrs. Telespection Ltd. of Ripley were approached for help and they readily offered their equipment and expertise.

The shaft is capped with large gritstone slabs and is approximately 2 m diameter. The first plumbing indicated a depth of 160 m and would have exposed the engine chamber cut in the shaft side. However, an accurate second plumbing on the day of the television inspection confirmed the earlier reported depth of 103 m, approximately 35 m short of the engine chamber.

The camera was housed in a stainless steel, waterproof tube 5 cm diameter and fitted with four 300 W quartz iodine lamps; two being close to the camera body and two fastened to supports 20 cm apart. A 40° lens was fitted which allowed the observers an almost 'fisheye' view of the shaft. The camera was suspended vertically for the first descent. Remote focussing and lack of almost all tendency to swing enabled the 'armchair' explorers to see an extremely clear picture of the shaft, unfortunately, but hardly surprisingly, no evidence of the engine was seen.

Below the ginging the shaft continued in shale to the blockage where small boulders of shale could be seen in a little standing water, although the camera revealed a considerable quantity of water falling from approximately 45 m. By turning off the lights on entering the water and then slowly increasing the power underwater inspection is possible. There were no levels off the shaft and the original diameter was maintained to the bottom of the shaft. The camera was also lowered in a horizontal position to examine the ginging. At 17 m a course of the dressed gritstone blocks has fallen out and the ginging extends to 25 m in otherwise reasonable condition, but it would appear to be suspended on air. It is possible that only a small blockage occurs above the engine chamber and further exploration is underway in an attempt to reach the shaft from underground.

A second shaft (SK 242614) situated in a hollow, approximately 45 m south of Yatestoop shaft was also explored. The large gritstone slabs covering the shaft were removed and the shaft descended, it was found to be 1 m diameter and 19 m deep, in shale with a small chamber at the bottom with no levels off. The shaft was ginged with gritstone to a depth of 1 m.

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