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SOME NOTES ON THE SINKING OF BENTLEY COLLIERY

M.C. Gill

In 1893 a bore hole put down by the Vivian Boring Co., proved nine feet of coal at a depth of 1,847 feet at Daw Wood near Doncaster.

In March 1902, Messrs. Barber-Walker and Co. Ltd. took the lease at Bentley with a view to extracting the Barnsley Seam. The Company already had collieries working the Top Hard Coal in Nottinghamshire (the same seam as the Barnsley Seam in Yorkshire). The surface works commenced in 1903 and a start on sinking the No.2 Shaft was made on the 9th October 1905. A block of concrete, 50 feet square and 6 feet thick was used to support the 20 feet diameter shaft eye. To combat quicksands known to exist in the area it was decided to lower steel tubbing, circled by interlocking piles which ran down-the back of a guide ring. There were 72 mild steel piles, each 8 feet in length which were jacked downwards by applying pressure against the bottom ring.

It was expected that sandstone would be found at a depth of 50 feet, however this was not the case and a borehole put down at the latter depth went a further 50 feet, before meeting rock. This fact coupled with the distorted and cracked state of the tubbing decided the engineer to [36] abandon the sinking.

A SECTION SEAMS FOUND IN No.2
SHAFT BENTLEY COLLIERY

SEAM	DEPTHS IN YARDS FROM SURFACE	THICKNESS
SHAFTON	261	4' 0"
SHARLSTON YARD	361	1' 6"
SWINTON POTTERY	438	2' 0"
NEWHILL	458	3' 4"
MELTONFIELD	477	3' 3"
TWO FOOT	491	3' 8"
ABDY	499	3' 0"
HIGH HAZEL	540	1' 9"
KENT'S THICK	564	2' 3"
BARNSLEY	624	9' 3"
DUNSIL	642	5' 1"
SWALLOW WOOD	673	2' 0"
FLOCKTON	765	2' 3"
PARKGATE	840	5' 0"
THORNCLIFFE	863	4' 8"

A new site was chosen 200 yards to the West of the old site. Work commenced on the 3rd of March 1906 on a 23 ft. diameter shaft with a greatly strengthened lining. 96 piles, 18 ft. long and 1 inch thick surrounded the tubbing (1 foot 9 inch deep by 8½ inch wide by 1 inch thick). To prevent, the piles leading inwards a strong cast iron guide ring was kept tight against the sand. Rushes and blowers of sand were common in the sinking, at one point the pit bottom rose 6 feet in 30 minutes. When the shaft was 40 feet deep a 3 inch pipe was lowered 30 feet down a blow hole. Between 50 and 80 feet in depth the influx of water increased from 100 to 400 gallons per minute. The pumps were unable to lift the resulting water and sand, these were replaced by two 'Evans' sinking pumps. On reaching the sandstone on the 6th June 1906 at a depth of 100 feet the influx of water had reached 600 gallons per minute.

The time taken to reach the sandstone was 18½ weeks but when the No.1 Shaft commenced on, the 22nd September 1906 it took only five weeks to reach it.

From the sandstone to the Barnsley Seam both shafts were sunk in the orthodox manner of the day.

By 1908 both shafts were complete and heading out from the pit bottom had been commenced. No.2 Shaft was sunk 31 yards below the Barnsley Seam or 12 yards below the Dunsil Seam.

In 1932 it was decided to increase the reserves of coal by proving the Parkgate and Thorncliffe Seams. No.2 Shaft was sunk a further 216 yards and proved 5 feet of coal in the Parkgate Seam and 4 feet 8 inches in the Thorncliffe Seam. This increased reserves by 12,500 acres from the already proved 6,940 acres on the Barnsley Seam and 6,250 acres of the Dunsil Seam. Since 1942 the Dunsil Seam has been developed in conjunction with the Barnsley and now provides about one third of the total output.

Bibliography.

Sections of Strata of the Yorkshire Coalfield, The Midland Inst. of Mining Engineers 1927.
150 Years in Coal, G.H. Whitelock.
N.C.B. Borehole and Shaft Section Information.