

MEMOIRS 1966



Richardson, D.T. 1966
“Analysis of Water Samples from the Greenhow Area, Yorkshire”
Memoirs, NCMRS, p.55

Published by the

THE NORTHERN CAVERN & MINE RESEARCH SOCIETY
SKIPTON U.K.

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ANALYSES OF WATER SAMPLES FROM THE GREENHOW AREA, YORKSHIRE

D.T. Richardson, A.R.I.C.

SOURCE	DATE	HARDNESS			Ca Salts	Mg Salts	Free CO ₂	p.H
		Total	Alk.	Non-Alk.				
Blackhill Level SE 07936320	19. 6.65	194.0	166.0	28.0	147.0	47.0	4.5	7.5
	25. 6.65	121.0	92.0	29.0	99.0	22.0	6.2	7.3
	30. 7.65	103.0	83.0	20.0	89.0	14.0	-	-
Wright Vein SE 06082625	19. 6.65	220.0	195.0	25.0	186.0	34.0	-	8.1
	30. 7.65	62.0	49.0	13.0	52.0	10.0	-	-
Nape Well SE 06906165	19. 6.65	234.0	204.0	30.0	183.0	51.0	34.1	7.2
	25. 6.65	233.0	204.0	29.0	183.0	50.0	17.6	7.3
	30. 7.65	137.0	101.0	36.0	120.0	17.0	-	-
	11. 3.66	163.0	146.0	17.0	158.0	5.0	-	7.3
Gillfield Level								
“ Clay’s District	14.11.66	168.0	126.0	42.0	152.0	16.0	-	7.8
“ New District	14.11.66	208.0	175.0	33.0	192.0	16.0	-	7.8
Both roof drips SE 067621								
Stump Cross Caverns Roof drip near Miners Initials before Heart- beat. SE098636	27. 2.66	74.0	67.0	7.0	72.0	2.0	-	7.6
Ditto	13. 3.66	100.0	56.0	44.0	97.0	3.0	-	7.4
Drips from broken cur- tain beyond Heartbeat	27. 2.66	146.0	113.0	33.0	142.0	4.0	-	7.6
Ditto	13. 3.66	146.0	112.0	34.0	143.0	3.0	-	7.4
RESULTS IN MILLIGRAMMES CaCO ₃ per litre.								

Blackhill Level, Wright Vein and Nape Well.

What is perhaps most interesting is the great variation in magnesium content which these sources show amongst themselves over the period 19th June - 30th July, 1965. In each case the magnesium content of the waters on the 30th July, 1965, was one third that of what it was on the 19th June of the same year, yet in the case of Blackhill Vein and Napewell there was not as significant a reduction in overall Total Hardness. The sample taken from Nape Well in March 1966 showed an even more striking reduction in Magnesium Salts.

Considering the Wright Vein water on its own, the second sample shows approximately one third of the amount of total salts as well as Magnesium Salts.

The exact significance of these results is not fully understood.

Gillfield Level

Both waters were entering the level in the form of roof drips from fissures. The waters show similarities and the differences which occur may well be due to variations in the strata traversed.

Stump Cross Caverns

It is interesting to note the water falling from the broken Stalagmite curtain has a constant composition whereas the roof drips from just beyond the Heartbeat vary greatly in composition.

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