

Field Meeting Report: The Carboniferous of South Wales, led by Sue Gibson 18th September 1988

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HENTHORN, D. (1989). Field Meeting Report: The Carboniferous of South Wales, led by Sue Gibson 18th September 1988. *Proceedings of the Shropshire Geological Society*, 8, 22–24. The purpose of the field meeting was to examine the Carboniferous outcrop across South Wales.

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INTRODUCTION

Those members of the Society who braved a grey Shropshire morning found themselves in sunny South Wales where they were joined by members of the Black Country Geological Society and one car from the East Midlands Geological Society.

The purpose of the excursion was to examine the full succession of the Carboniferous.

ITINERARY

LOCALITY 1: Porth yr Ogof [SN 928 124]

The first site to be visited was close to the Devonian unconformity. Here, the River Mellte, has exploited bedding planes between the lower, darker limestone and upper, more massive limestone, to the extent that, looking into pots on either side of the path, the river can be seen flowing at several levels.

Several hundred metres further on, and stratigraphically higher, the various sub-terranean streams resurge and re-emerge via small falls and siphons.

A pleasant mid-morning stroll along the riverbank led to the Clungwyn Waterfall (Figure 1).

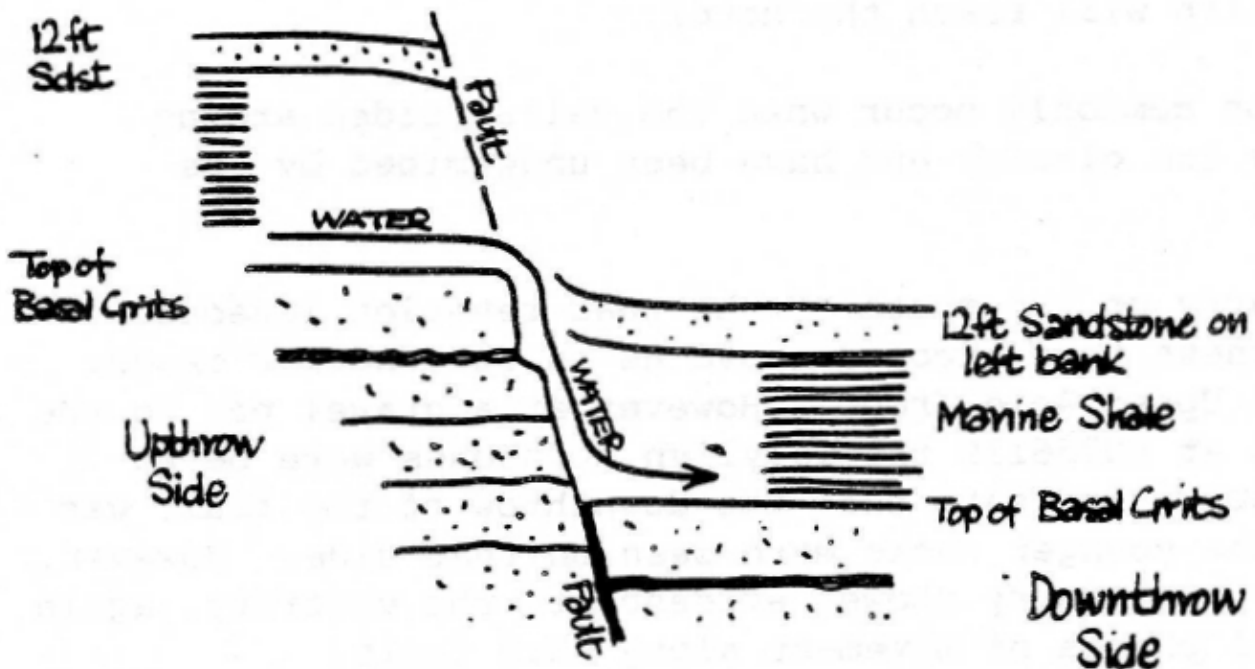


DIAGRAM of WATERFALL (AFTER OWEN)

Figure 1: Generalised cross section at Clungwyn Waterfall.

Above the waterfall, the basal Millstone Grit can be seen in the river bed with shales and the '12 feet' sandstone visible in the east bank.

Below the waterfall, the same sequence is seen (this time in the west bank). The waterfall itself is due to a fault with a 10 m throw. Classic fault features are associated with this fault and fault breccia, slickensides, together with some mineralisation, were closely examined.

LOCALITY 2: Dinas Rock [SN 912 078]

Returning to the cars, the company repaired to Pontneddfechan for lunch, recommencing their geological study to the east of the village at Dinas Rock. Although only about 10 km from the essentially flat-lying beds of Clungwyn Waterfall, the Carboniferous Limestone bedding planes exposed in a disused quarry dip at some 70° towards the north. Close to this quarry in the River Sychryd, the Carboniferous Limestone is seen folded into a tight anticline (Figure 2).

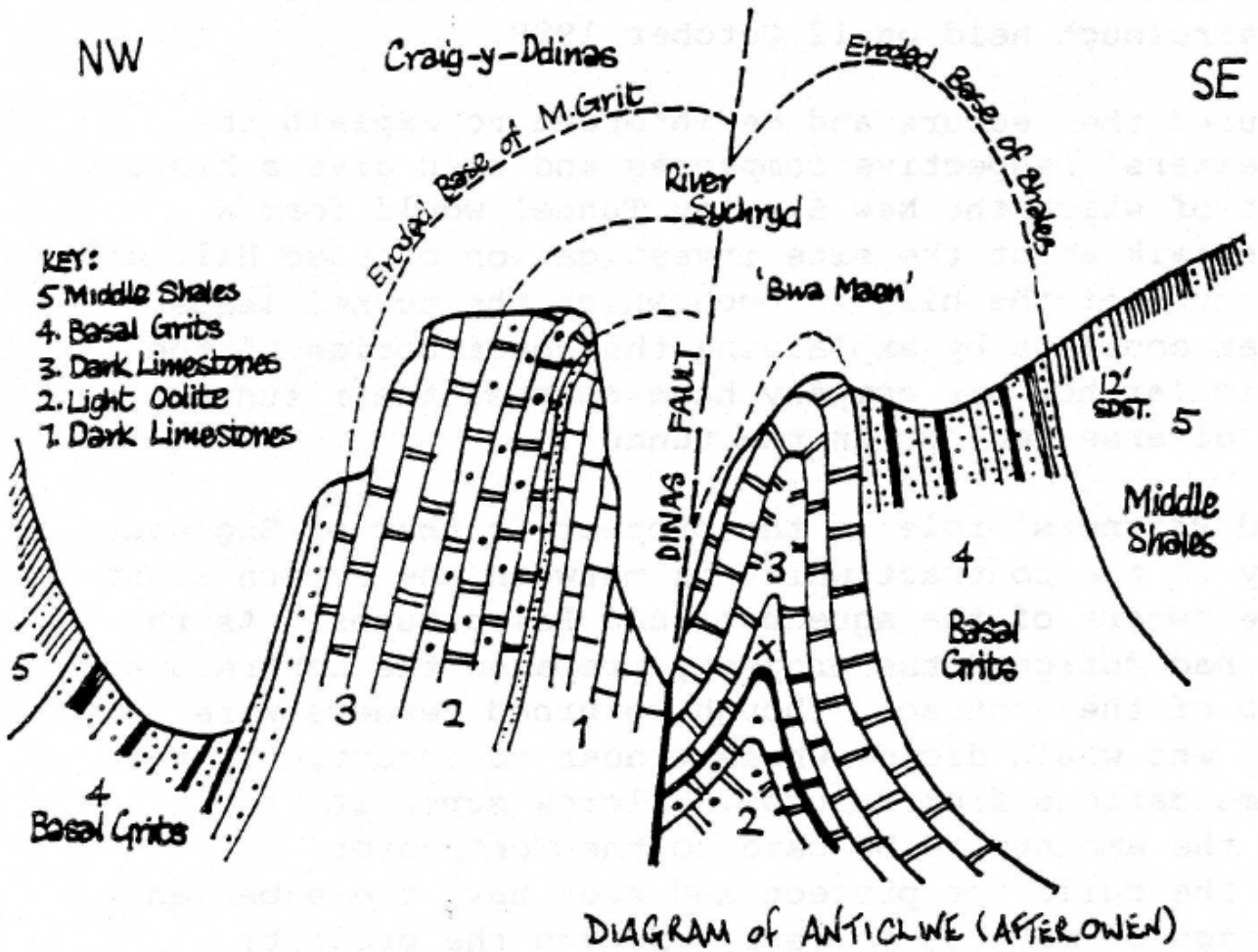


Figure 2: Generalised cross section through anticline at Dinas Rock.

This structure is attributable to the Dinas fault which is part of the Hercynian Vale of Neath disturbance.

LOCALITY 3: Dinas Mine [SN 917 080]

A steep climb up to the Dinas silica mine took us away from the disturbance to another outcrop of the basal grit which had previously been seen in the morning. At this site, the lithology is of sufficient purity that until the early part of the 20th

Century, the grits were mined for the production of refractory bricks.

Leaving the silica mine, we headed south to the Hirwaen area from where, after passing both open-cast and deep mines on the road side, a splendid overview of the Vale of Neath and its associated geology was possible.

The day concluded at the head of the Rhondda Valley in the Pennant Sandstone, a cross-bedded arkose, from which carbonaceous fossils were

collected. Here thanks were expressed to the Field Secretary, Ms Susan Gibson, for leading this field excursion.

Disclaimer - The information contained in this account has been prepared from notes taken during the field meeting. Its sole aim is to provide a record of what was seen and provide an insight into the Carboniferous of South Wales. It should not be used for any other purpose or construed as permission or an invitation to visit the sites or localities mentioned.

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ISSN 1750-855x