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# Field Excursion to the Church Stretton area, led by John Pauley

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JONES, D.M. (1984). Field Excursion to the Church Stretton area, led by John Pauley. *Proceedings of the Shropshire Geological Society*, **4**, 18-21. John Pauley's trip around the Precambrian of the Church Stretton area visited Caer Caradoc, the Cwms, Ashes Hollow and the Stanbatch Conglomerate on the top of the Longmynd.

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Report of the excursion on 15th April 1984 led by John Pauley.

The late start to the year's field programme saw John Pauley's trip around the Precambrian of the Church Stretton area intermittently rained upon, with a special treat of hail in the afternoon, but the sun did shine at times. A group of some two dozen "geologists" plus assorted children and dogs, were ably led by John through Caer Caradoc, the Cwms, Ashes Hollow and, lastly, to the Stanbatch Conglomerate on the top of the Longmynd. The following notes are reproduced from John's notes with his kind permission.

The Longmyndian is a sedimentary sequence, 6000 m thick, of late Precambrian age (Fig. 1). The sequence is folded into a syncline with axis trending SSW-NNE and with steeply dipping limbs. The western limb is inverted (Fig. 3). The sediments are confined between two major fault zones: the Pontesford-Linley Fault in the west and the Church Stretton Fault in the east. Precambrian volcanics, the Uriconian, outcrop within the fault zones and to the east of the Church Stretton fault.

## ITINERARY *(Fig. 2)*

### Locality 1 – Caer Caradoc and the Cwms

*1. Longmyndian sediments and the Longmyndian/Uriconian contact*

The basal Longmyndian is mostly presumed to rest unconformably on the Uriconian Ragleth Tuffs. However, Whittard, in 1935, proposed a conformable succession from the Ragleth Tuffs through the "Helmeth Grit" into the Stretton Shale Formation of the Longmyndian. This sequence is poorly exposed on the SW slopes and at the base of Caer Caradoc.

*2. Cambrian and Ordovician sediments at the Cwms*

In the valley between Caer Caradoc and Hope Bowdler Hill (called the Cwms), possible, but unproved sediments of the Wentnor Group of the Longmyndian are overlain unconformably by the Wrekin Quartzite and the succeeding Comley Sandstone. The basal Ordovician (the Hoar Edge Grit of Caradoc age; rests unconformably on the Cambrian. Exposures are poor, but the Wrekin Quartzite and Hoar Edge Grit can be recognised as topographic ridges running approximately N-S.

*3. Caer Caradoc*

The structure viewed from the Cwms (drawn from memory, so not very accurate!) follows.

Caer Caradoc is composed of andesites and rhyolites with a central intrusion of dolerite. Tuffs occupy the SW slopes of the hill. The relationships are complicated by much faulting and thrusting.

### Locality 2 – Longmyndian sediments, Ashes Hollow

As Ashes Hollow is ascended, a sequence through the lower part of the Stretton Group is exposed - the Stretton Shale Formation, Burway Formation and Synalds Formation.

Stretton Shale Formation:-

This consists of thinly laminated shales and is inferred to be of deep water origin from its association with the overlying Burway Formation.

Burway Formation:-

At the base is a bed of siliceous tuff (the Buxton Rock). The majority of the Burway Formation consists of turbidites; beds of sandstone and siltstone with thin shale interbeds. The sedimentary structures are difficult to see in the field, but polished slabs show features

characteristic of turbidites. Turbidites are deposited in deep sea environments. The Burway Formation changes in character up the succession which reflects a gradual shallowing of the water. A subtidal environment is reached beneath the Cardingmill Grit with interlaminated muds and silts being developed.

The Cardingmill Grit

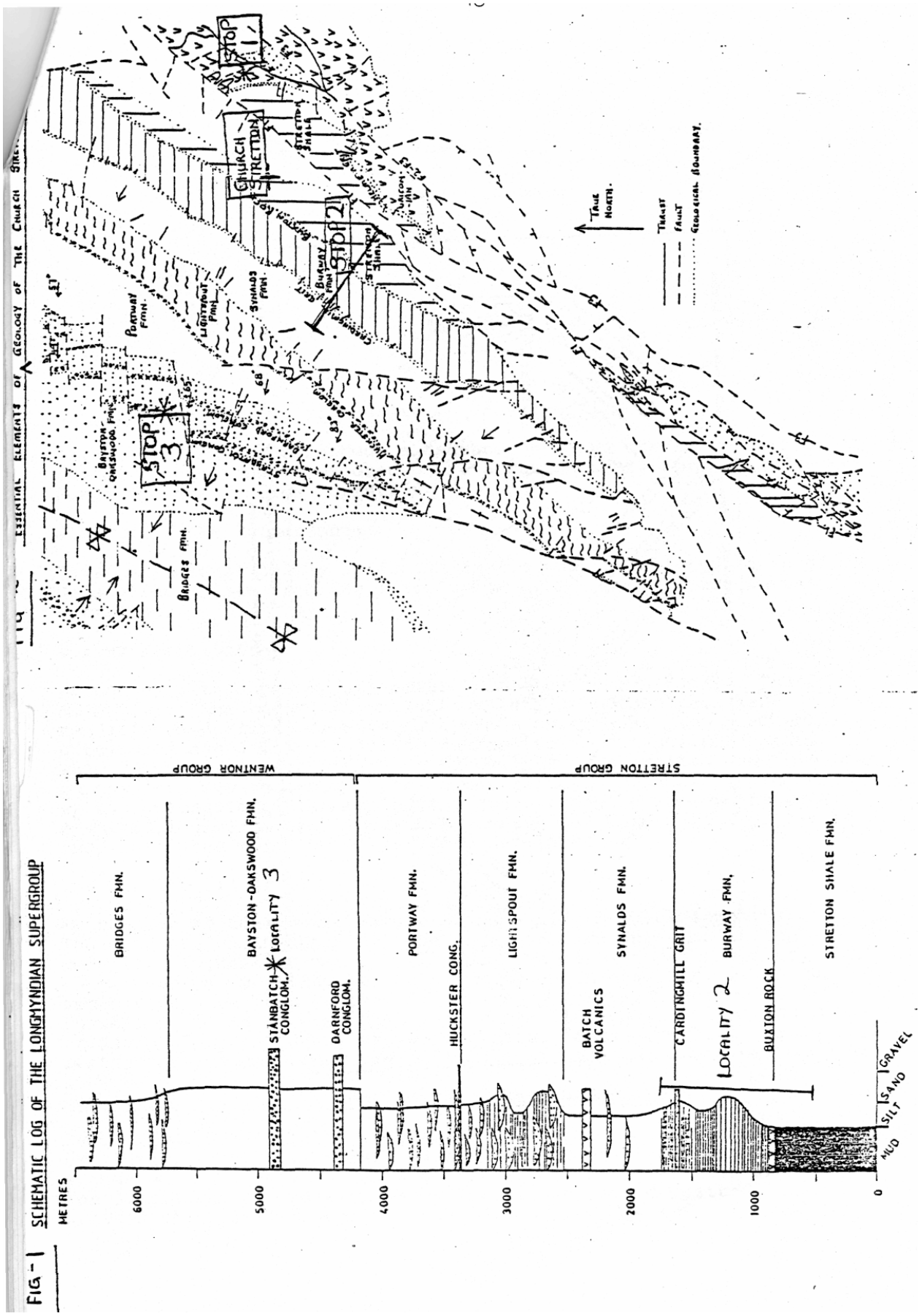
At the top of the Burway Formation is a 0.30 m thick sandstone. The currents which deposited the sandstone are opposite to the majority of observed current flow for the rest of the Longmynd. The source for the majority of the Longmynd sediments, i.e. land area appears to have been in the SE. Currents for the Cardingmill Grit therefore flowed towards the land or parallel to it. This and the presence of cross bedding and wave ripples seems to indicate a shallow marine environment under the influence of tidal or longshore currents.

**Locality 3 – Stanbatch Conglomerate, Ratlinghope Road**

The conglomerate contains pebbles of volcanics similar to the Uriconian. The conglomerate is one of many developed in the sandstones of the Bayston-Oakswood Formation of the Wentnor Group. The conglomerates and associated sandstones were deposited in a braided river environment.

L. Dolamore



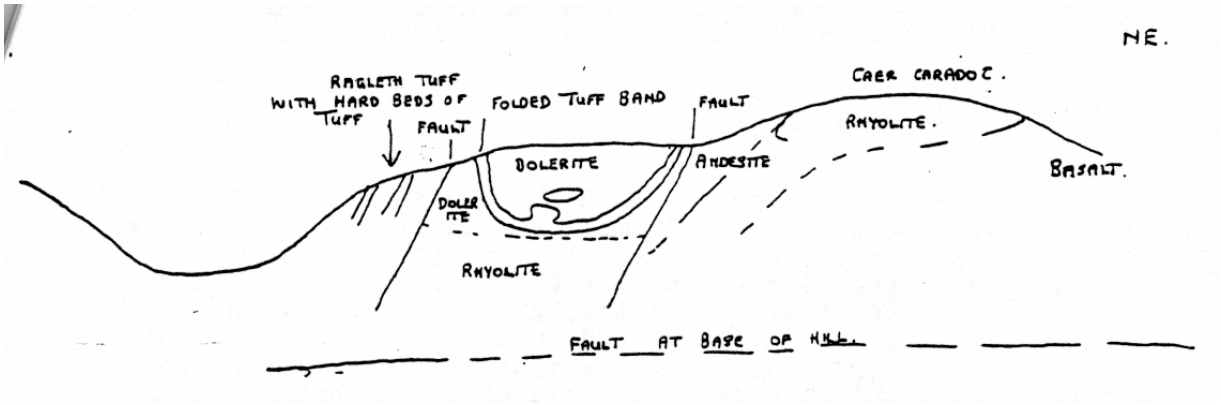
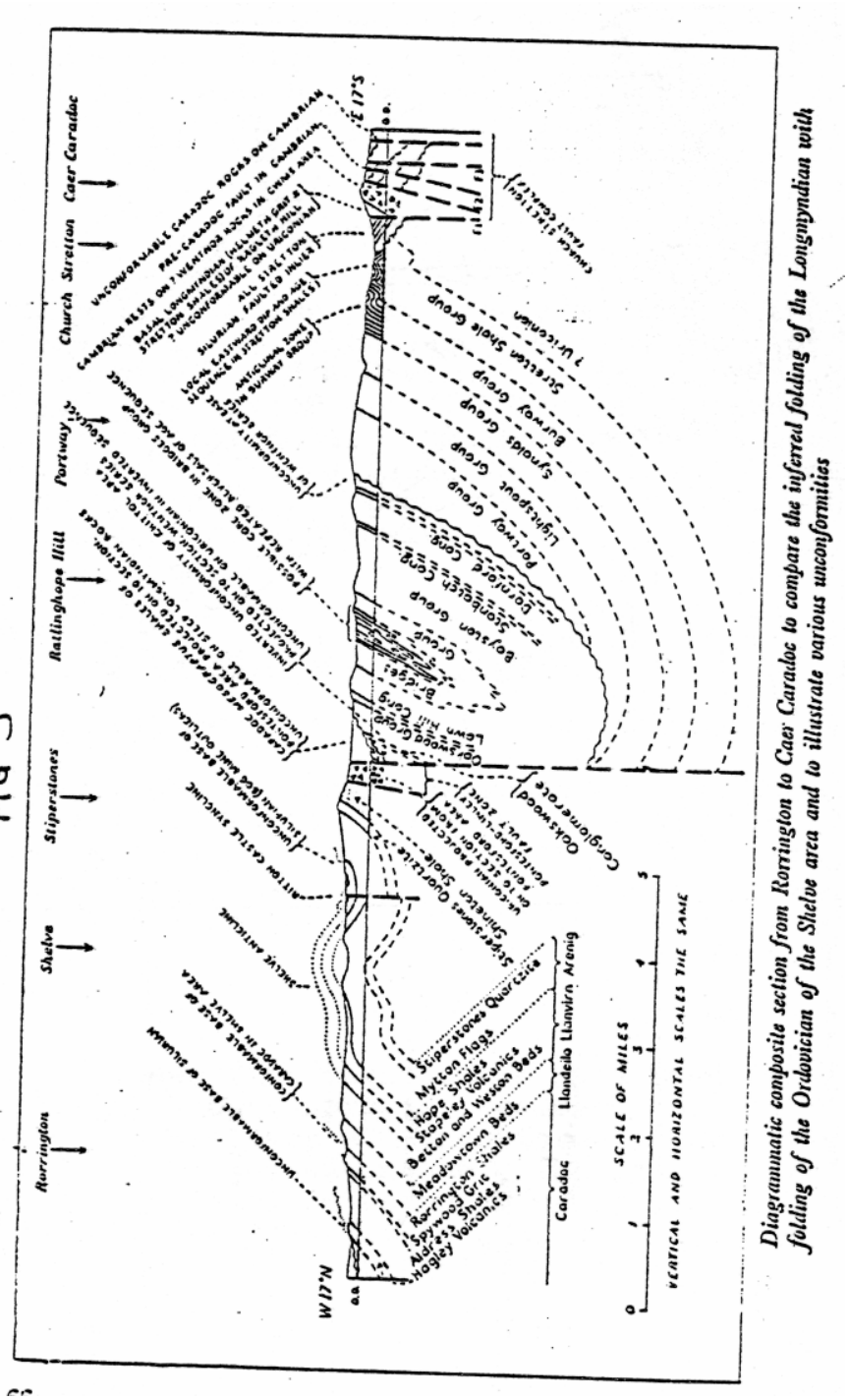



FIG 3




*Diagrammatic composite section from Norrington to Caer Caradoc to compare the inferred folding of the Longmyndian with folding of the Ordovician of the Shelve area and to illustrate various unconformities*