

Introduction → The given geological map (scale 1 inch to 1000 feet) has been analysed and interpreted with the help of a geological section drawn along the line AB. (Length:)

General Topography → Topographically the region is a part of a plateau terrain. The maximum elevation of the region lies within the limit of 1200 feet to 1300 feet. While the minimum elevation lies between 300 feet to 400 feet. The relative relief is about 900 feet. There are seven valleys, the network of which is typically rectangular in orientation. A set of features like typical V-shaped valley, escarpment, spurs, saddles and ridges suggests a part of ridge & valley topography.

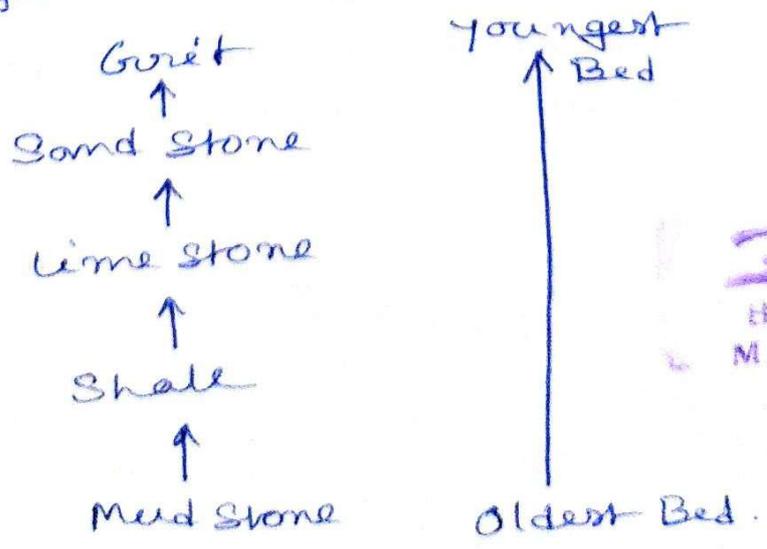
General Geology → Only one series of formation is present. This consists of a set of five sedimentary beds; grit, sandstone, limestone, shale and mudstone.

Structure

The sedimentary beds being of the same series, are conformable to one other and dip uniformly at an angle of _____ from _____ to _____. Hence, an unclinal structure is represented

Succession Or Sequence of Beds

The chronological order of superposition is - mudstone, shale, limestone, sandstone and grit in respective order -




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Geological History

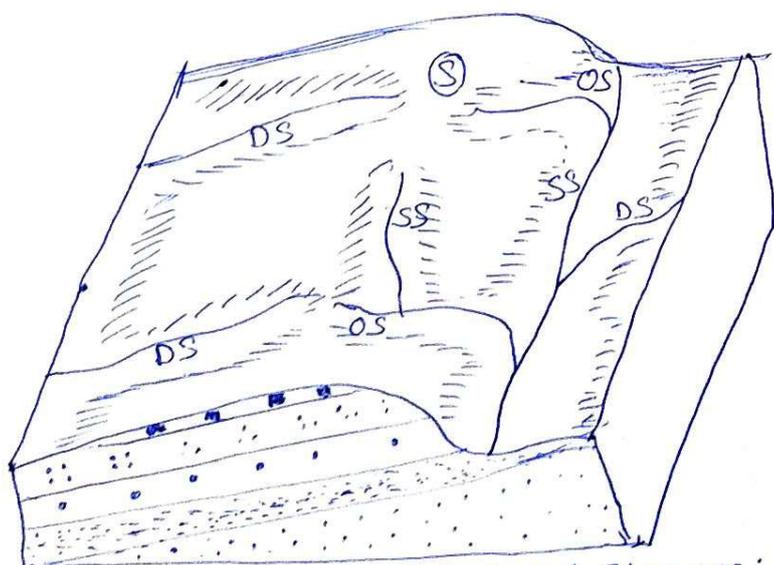
The geological evolution of the region may be traced out in the following sequence of events -

- i) Formation of the sedimentary beds under marine condition in the order of mudstone, shale, limestone, sandstone and grit respectively.
- ii) Upliftment associated with tilting followed by subaerial denudation giving rise to the present topography.

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Topography in Relation to structure

Physiographically, the region represents a ridge and valley topography with rectangular drainage pattern. Of the seven valleys, the two that are parallel and flow westward in the western half form dip valleys. They drain the dip slope. On the eastern side, there is a north-south flowing major valley disposed parallel to the structural strike. This is precisely a strike valley or subsequent valley. Its right bank tributary drains the steeper escarpment slope formed of shale and limestone. It is, therefore, an antidip valley or obsequent valley and is developed by a small headwater



DS - Dip stream; OS - Obsequent stream; SS - Subsequent stream; S - Saddle.

tributary that originates from the flank of the central ridge and represents a segment of strike stream. The watershed of the easterly and westerly drainage is marked by saddles. Steeper escarpment on the east and gentler dip slope on the west. On the underlying uniclinal

structure, these hills represent the Celestas.