

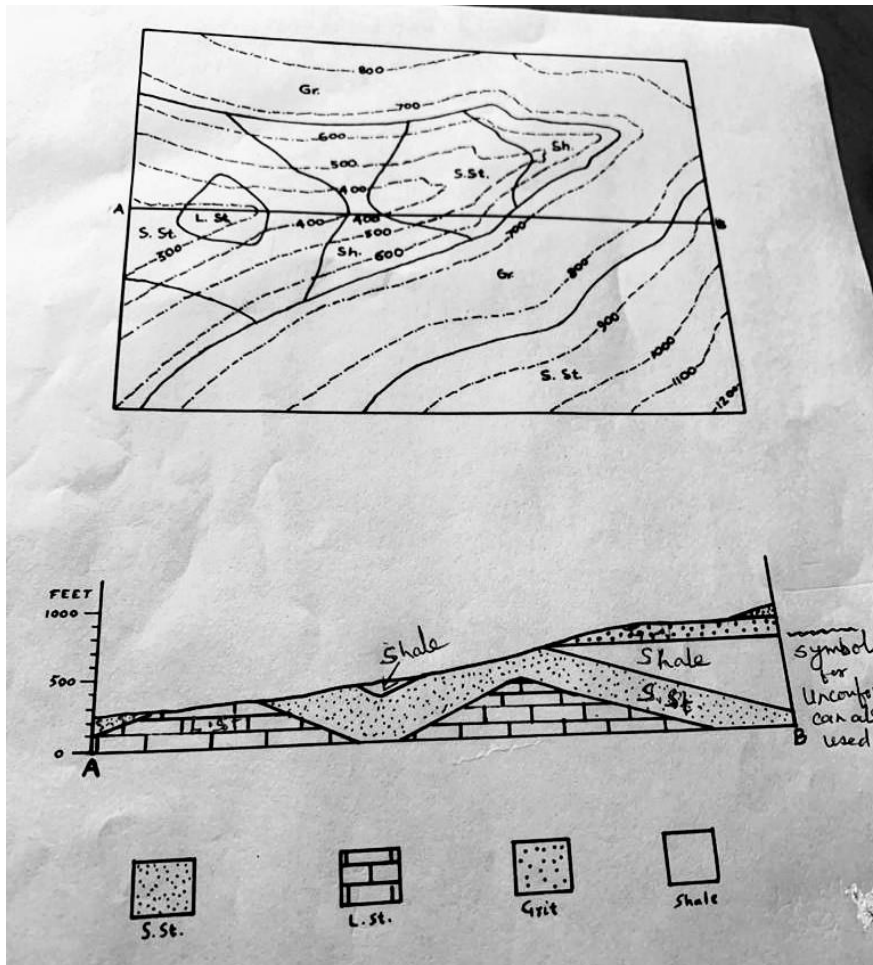
MA SEMESTER II (2019-2021)

Paper – CC9 (Practical Paper)

Prof (Dr) Usha Verma

Geological Map

Geological Section along Line A-B



Interpretation of Geological Map

Present geological map represents an area with rock formation of two distinct geological periods marine conditions. The lower/older series have folded structure while the upper/younger series have horizontal structure.

Series	Rock Beds	Approximate thickness	Structure
Younger/ upper series	Sandstone	Less than 100 ft	Horizontal
	Grit	100 ft	
Unconformity			
Older/ Lower Series	Shale	Not known	Folded
	Sandstone	300 ft	
	Limestone	More than 400 ft	

History of Geological Evolution:

The rocks of the lower series were deposited under the marine condition in some suitable basin of sedimentation. The order of superposition of sediments from lower to upper is Limestone, Sand Stone and Shale. Later, the sediments were converted into rocks by the pressure of overlying grains. After their formation the rock beds came above the sea level by the earth movements. The earth movements were orogenic in nature resulting in the formation of folds. The folded topography underwent changes by the process of erosion. The limbs of the folds were eroded away.

The whole area underwent submergence. It received fresh sedimentation. The new sediments were laid down in the order of Grit and Sand Stone over the erosional surface which is marked by unconformity on the geological map. After deposition of sediments the area again experienced earth movements. It again came above the sea level. The rocks of upper series remained horizontal. The whole area experienced new cycle of erosion. Due to the action of river

the area experienced the erosion. The river flows from north east to mid west. The highest part of the area is in the south eastern corner where the contour line shows area above 1000-1200 feet elevation.

Geological Structure:

It represents the rock formation of two distinct geological periods separated by a marked unconformity. The lower series is folded in structure while the upper series is horizontal. It represents symmetrical folding. The rock beds of lower series comprises of Limestone (bottom) upward by Sandstone and Shale. The upper series has two rock beds namely Grit and Sandstone. They have horizontal alignment. Grit has been deposited over the denuded surface of Shale. In the given map there are two anticlinal structure and one syncline in the lower series. The upper series rests over the lower series. It is found in the eastern part of the region.