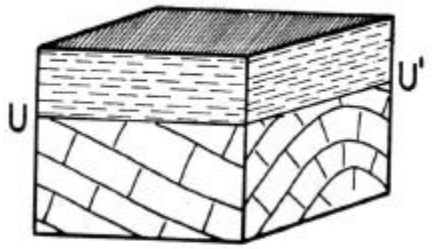
Unconformity
(horizontal beds with inclined beds)

Unconformities are ancient surfaces of erosion and/or non-deposition that indicate a **gap** or **hiatus** in the stratigraphic record.

The main three types of **unconformities** are**:**

- **Angular unconformities**

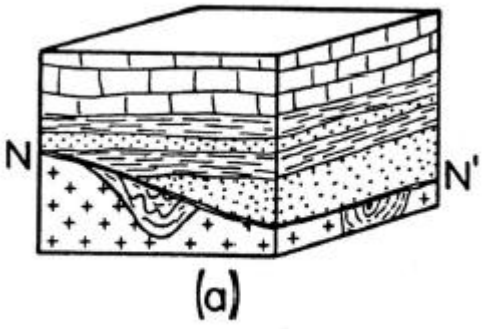
An *angular unconformity* is seen in the angular discordance between older, generally tilted or more strongly deformed strata below, and younger, horizontal or less strongly deformed strata above (Fig. 1).



Angular unconformity U-U'

- **Nonconformities**

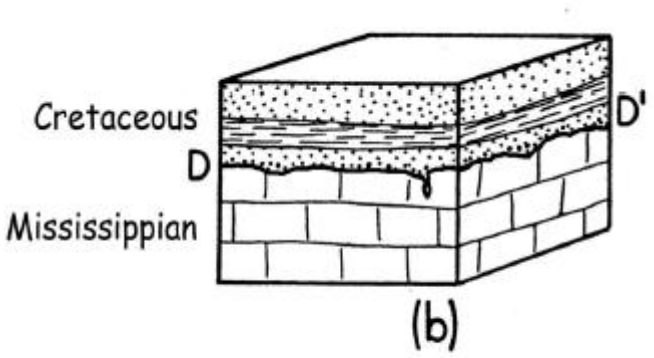
The term nonconformity is used to describe the contact between younger sedimentary strata deposited upon an eroded surface of older crystalline (igneous or metamorphic) rocks (Fig. 2a) in which distinct layers cannot easily be recognized.



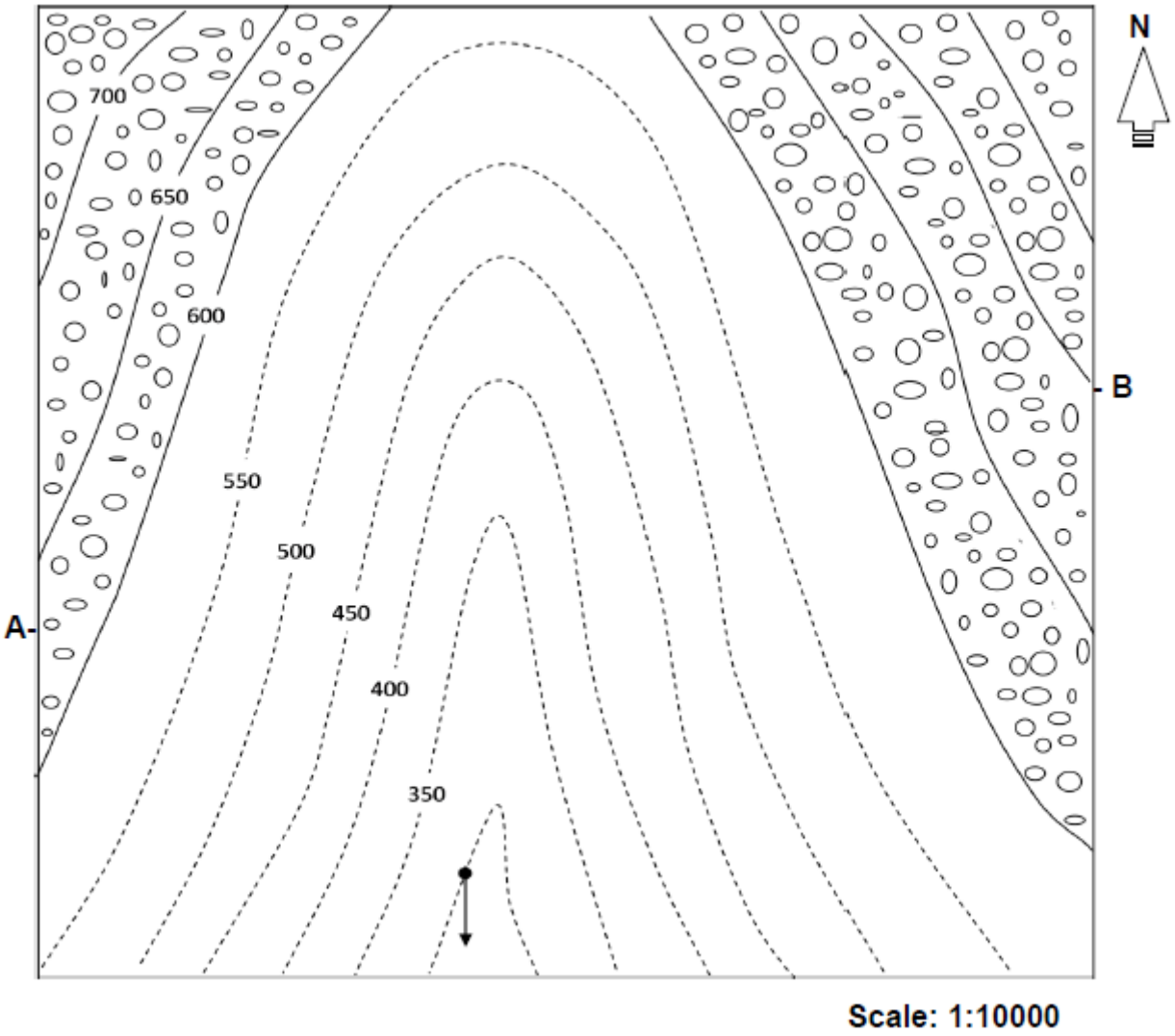
Nonconformity N-N'

- **Disconformities**

A *disconformity* is a contact between parallel strata whose ages are significantly separated (Fig. 2b).



Disconformity D-D[1]



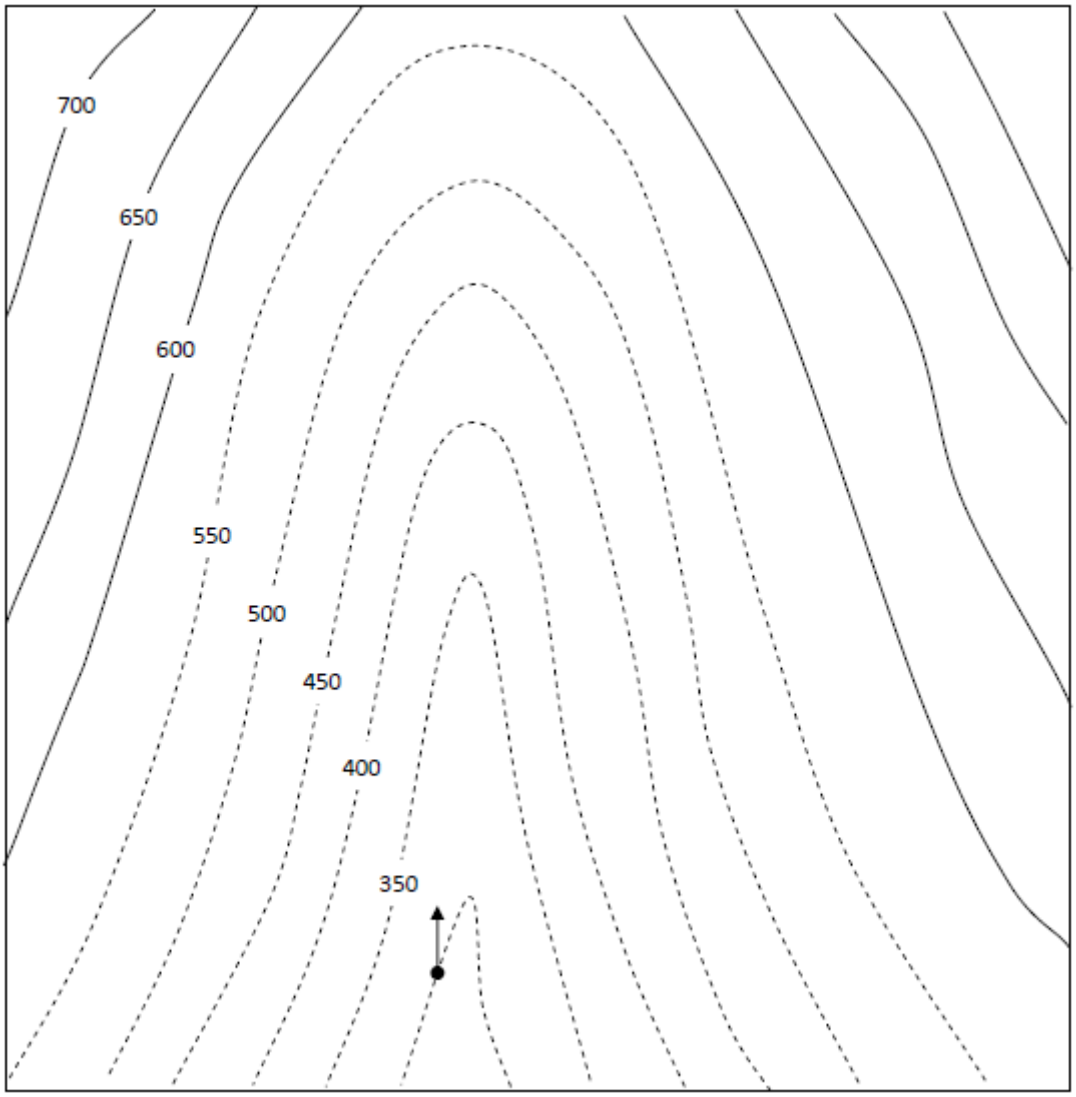
Scale: 1:10000

In this map the upper boundary of siltstone bed (150 m thick) crops out at point **S**. This bed overlies a sandstone bed and underlies a shale bed (100 m thick), and the shale bed underlies a bed of limestone in the area. Theses inclined beds themselves are covered by horizontal bed of conglomerate making an unconformity in the area.

NOTE: The dip direction is indicated on the map and the dip amount (dip angle) of the beds is 18.43^{o} .

Requirements:

1) Draw the outcrops of the beds on the map.
2) Determine the attitude of the beds.
3) Draw the drainage line.
4) What is the type of unconformity ?
5) Construct on the grid the geological cross section along line A-B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