If the movement of a block is neither parallel to dip nor it is parallel to the strike, it is called diagonal fault (Fig 2.7).

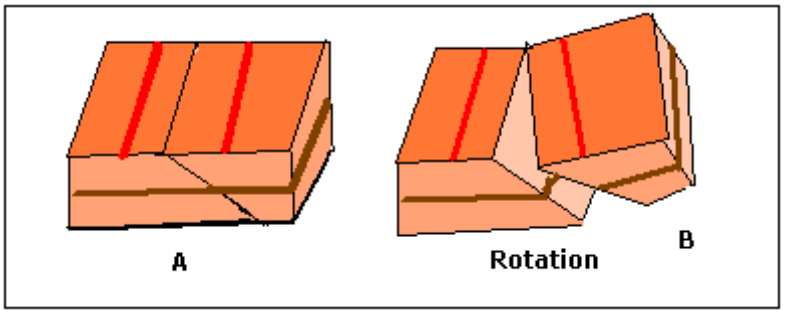
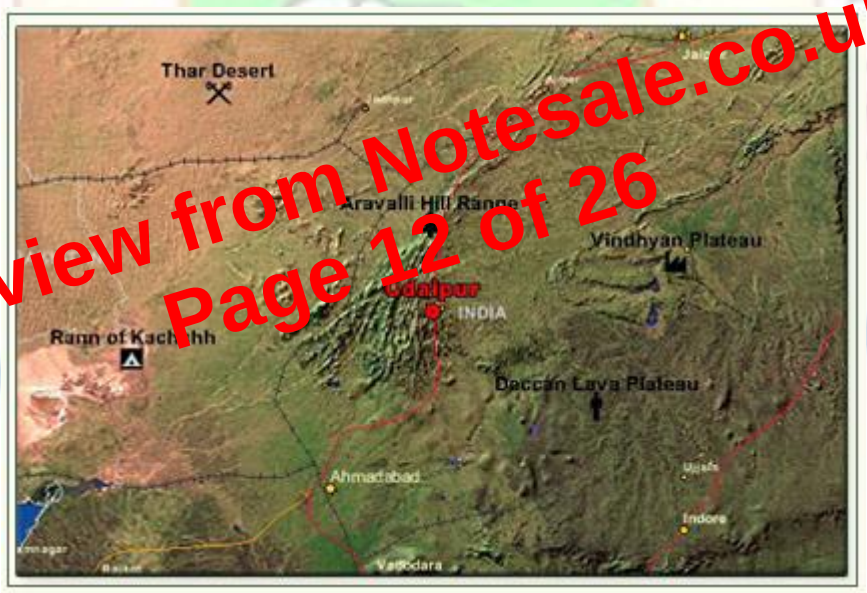


Fig. 2.7 Diagonal fault

Did you know

The rotational Great Boundary Fault in Rajasthan



Great Boundary Fault (GBF)

The GBF is an important dislocation zone in southeastern Rajasthan. The geological and structural setting indicates that the GBF, a reverse fault, is also a fault zone which separates Vindhyan rocks from pre Vindhyan rocks. On the surface the GBF

appears as s curved line. It is a rotational fault. The point around which rotation took place is located nearly 20 km south of Chittaurgarh. These features indicate that the GBF was formed when the Bundelkhand massif, carrying the Vindhyan rocks, collided with the Precambrian terrain of Rajasthan. In this context, we can say that the GBF has a regional significance; it formed when Deccan shield was moving northwards and Himalayas were taking shape. It is likely that this fault Zone is still active.

(Source: http://www.geologydata.info/rajasthan_geology.htm)

2.4 Types of faults based on comparative movements of blocks

The blocks show not only movements in relation to each other and result in formation of the above types of blocks, but their comparative movement is also important in this regard. Sometimes only one block may be displaced, at others both the blocks may show movements. In Fig.2.8 it is clear that in both A and B the blocks are moving upwards, parallel to the dip, but the final results are absolutely different in the two cases. This is because the intensity and amount of movement in the headwall and footwall is different in A and B. Similarly, blocks in all types of the above mentioned movements (dip slip, strike slip and diagonal displacements) can show a variety of combinations.

Translational faults

These faults are formed when the features parallel before faulting remain parallel after displacement of blocks as well. The red line on the two blocks in Fig.2.11.C and D shows this character in both the dip slip and the strike slip cases.

Rotational faults

This type of movement twists the blocks, as a result the two red lines in Fig. 2.11 A and B can be seen coming closer in the background and moving farther in the foreground.

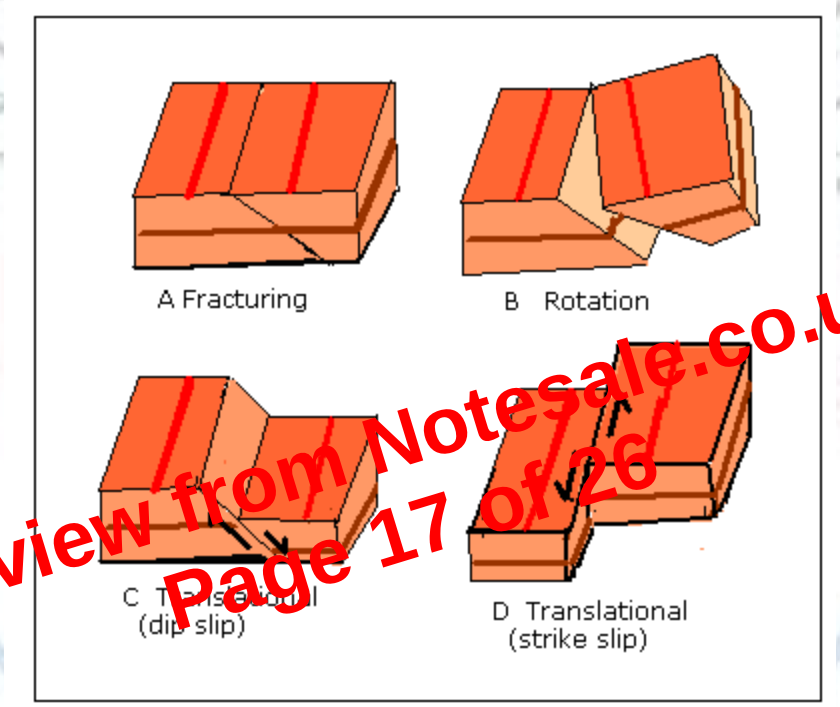


Fig. 2.11 Translational and rotational faults

2.7 Types of faults based on adjacent beds - fault relationship

The relationship between the fault and the regional rock beds gives us a better idea about the forces working there. The faults from this view point are of three types:

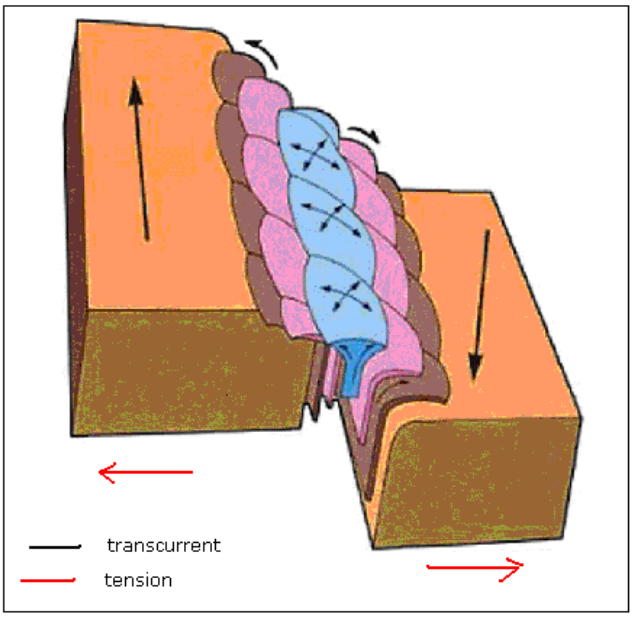


Fig. 2.16 Transpressional faults

(Source: http://science.jrank.org/pages/48219/transtension-transpression.html **)**