IQRA NATIONAL UNIVERSITY PESHAWER

ASSIGNMENT #01
INTRODUCTION TO EARTHQUAKE ENGINEERING

B-tech(civil)

6th semester

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CLASSIFICATION OF EARTHQUAKES ON THE BASIS OF:

- Cause of Origin
- Depth of Focus
- Intensity & Magnitude of Earthquake

Cause of origin:

Tectonic earthquakes are originated due to relative movements of crystal block on faulting, commonly, earthquakes are of this type.

Non tectonic earthquakes: that owes their origin to causes distinctly different from faulting, such as earthquakes arising due to volcanic eruptions or landslides.

Depth of focus:

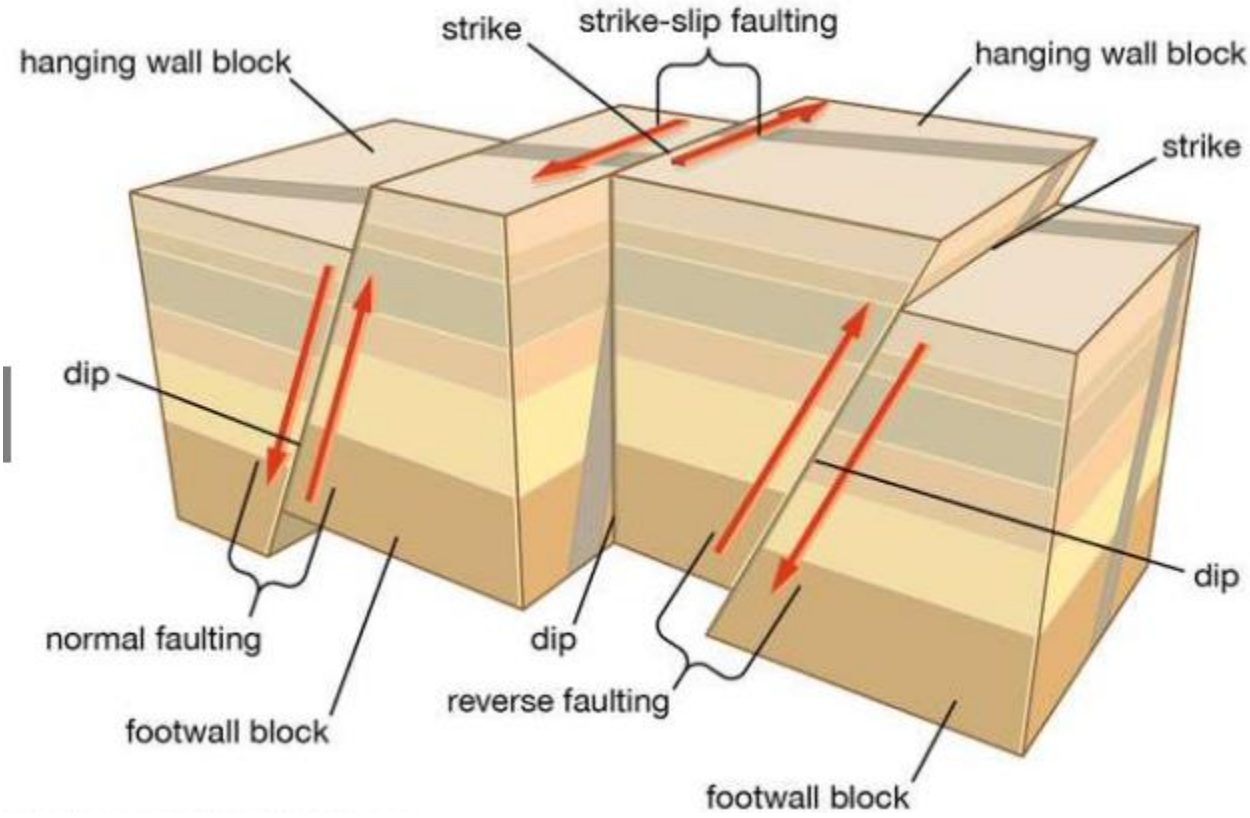
Three classes of earthquakes are recognized on this basis, shallow, intermediate and deep seated. In the shallow earthquakes the depth of focus lies any where up to 50 km below the surface. The intermediate earthquakes originate between 50 and 300 km depth below the surface.

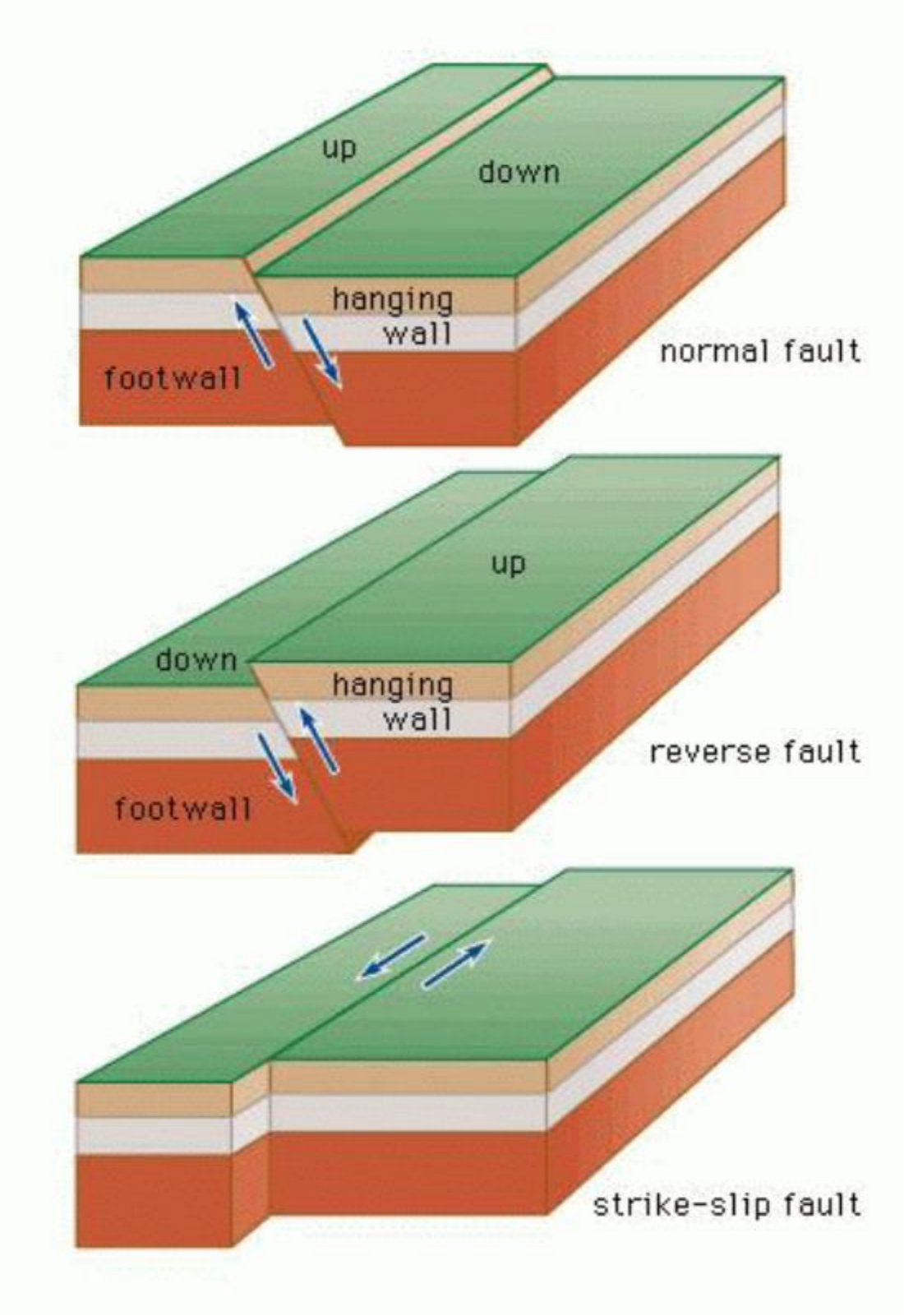
Intensity & Magnitude of Earthquake

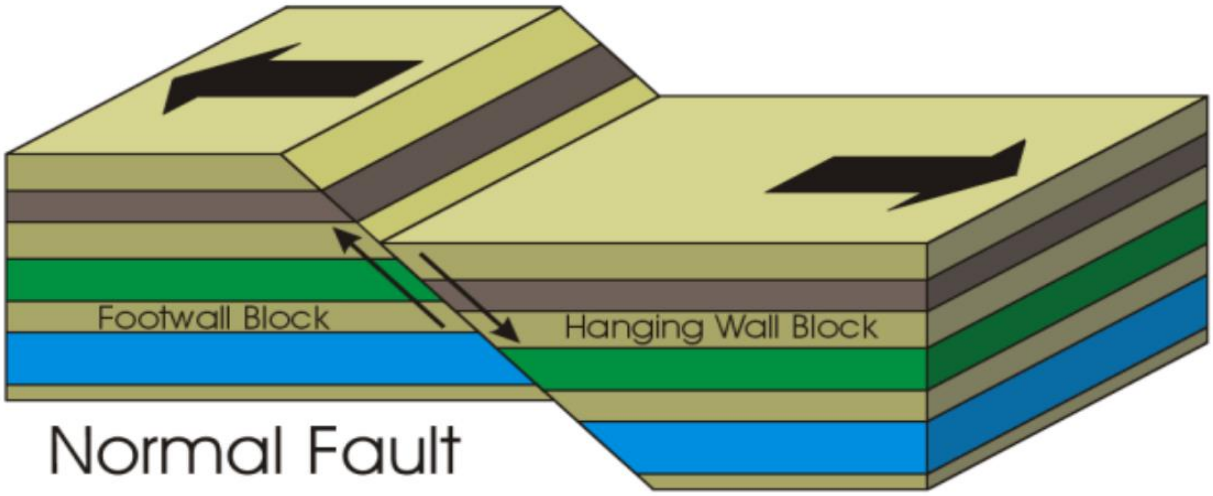
Initially a scale of earthquakes intensity with ten divisions was given by Rossi and ferel. Which was based on the sensation of the people and the damage caused. However it was modified by Mercalli and later by wood and Neumann.

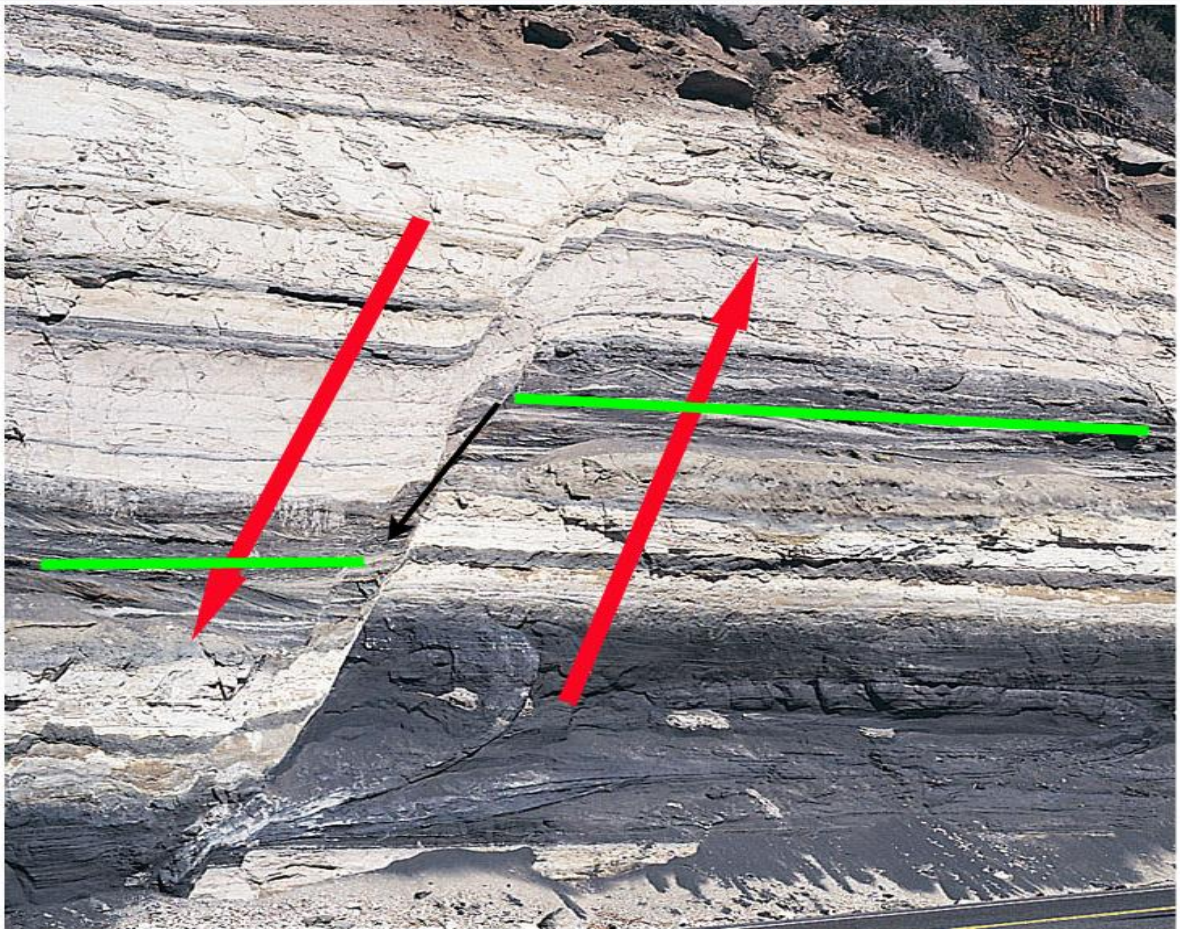
LABELED DIAGRAM SHOWING THE FOLLOWING TERMINOLOGIES

- Dip.
- Strike.
- Normal, Reverse and Strike-Slip Faulting.

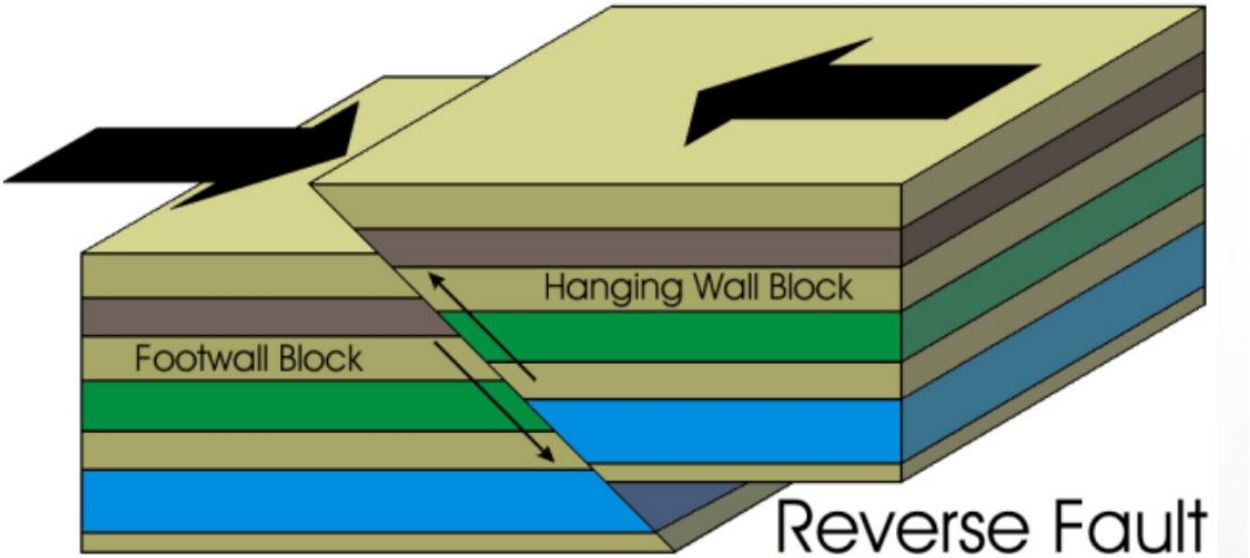


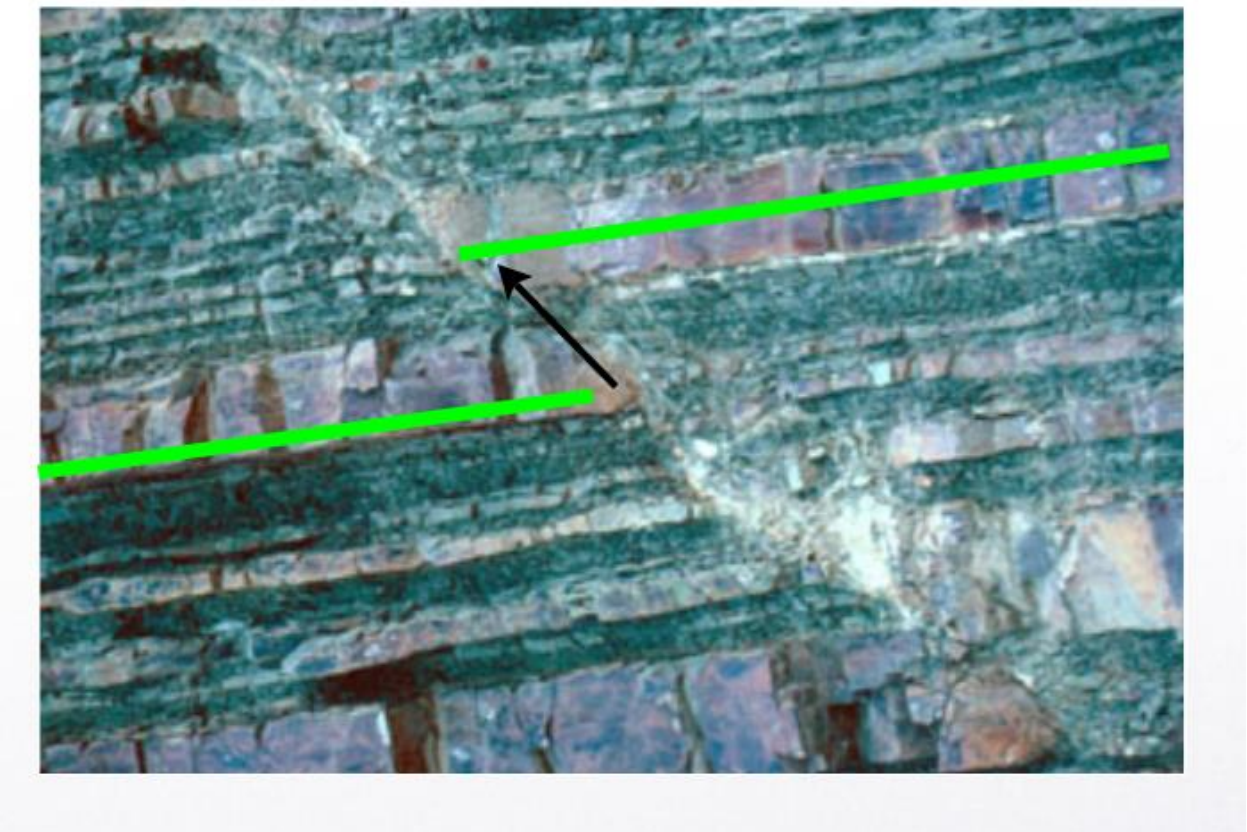

up
down
hanging
wall
footwall
normal fault
up
down
hanging
wall
footwall
reverse fault
strike-slip fault



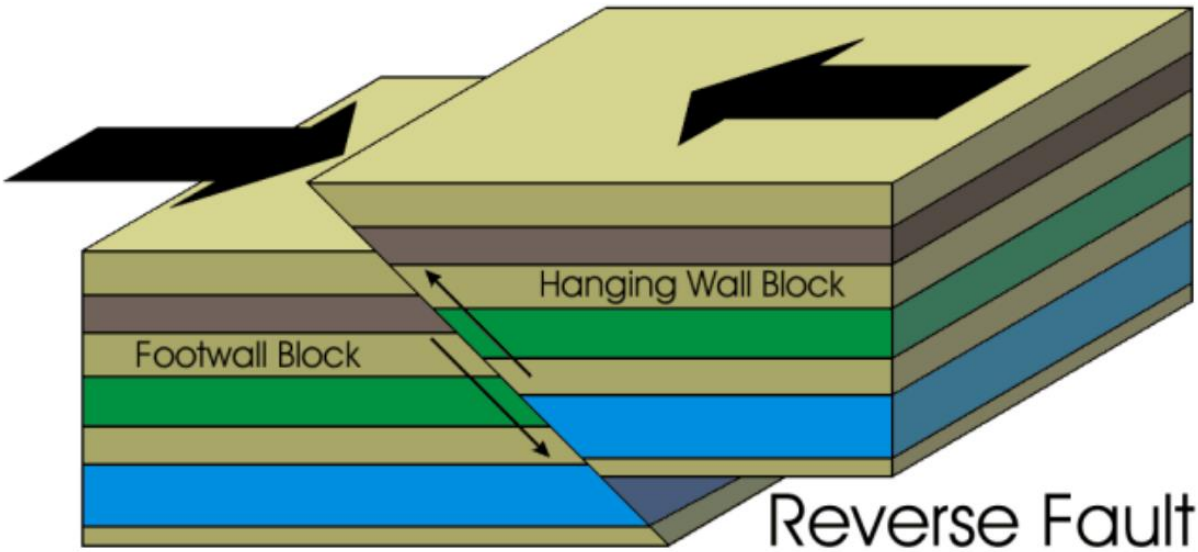


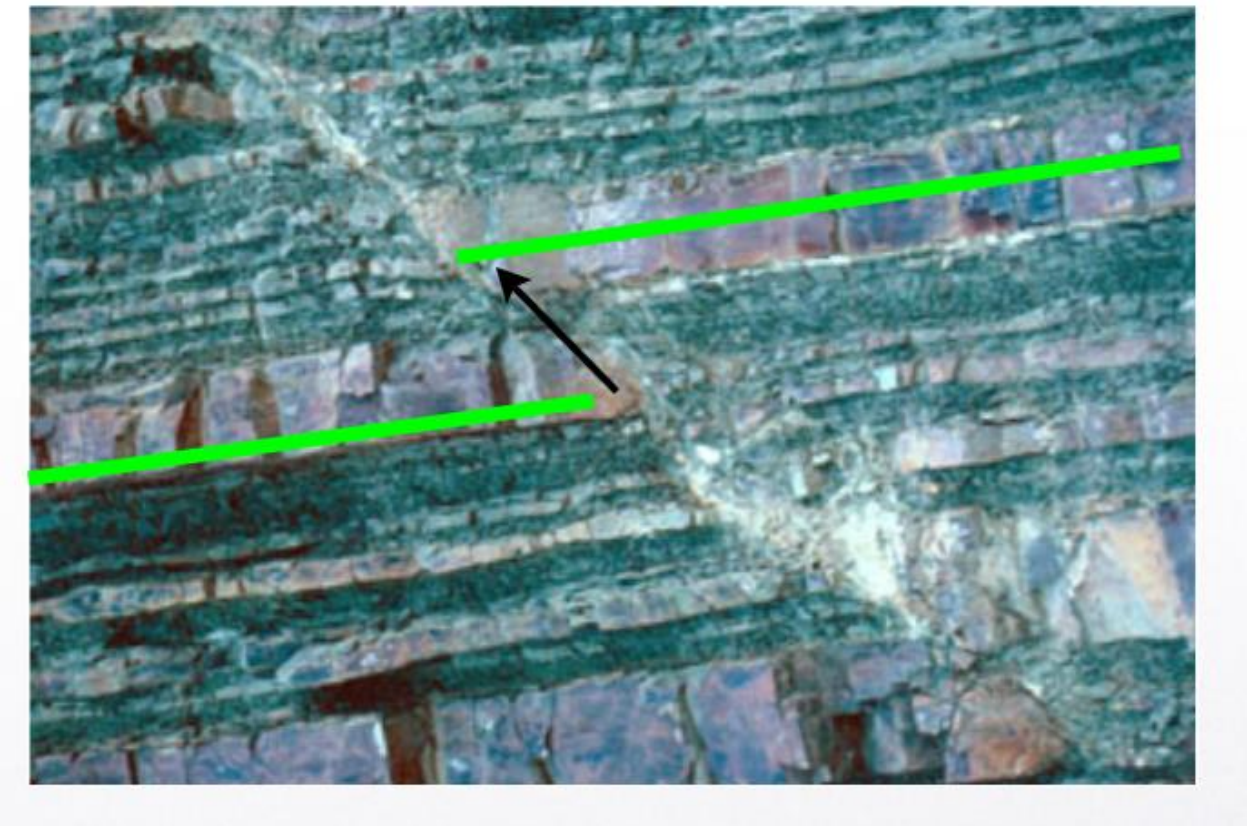
The hanging wall moves down - follow the dark layer



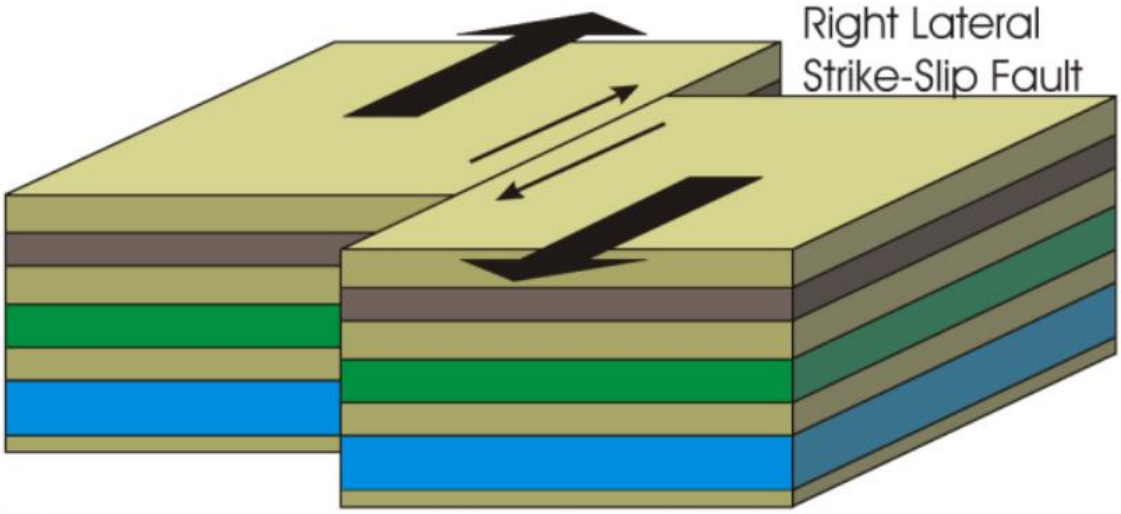


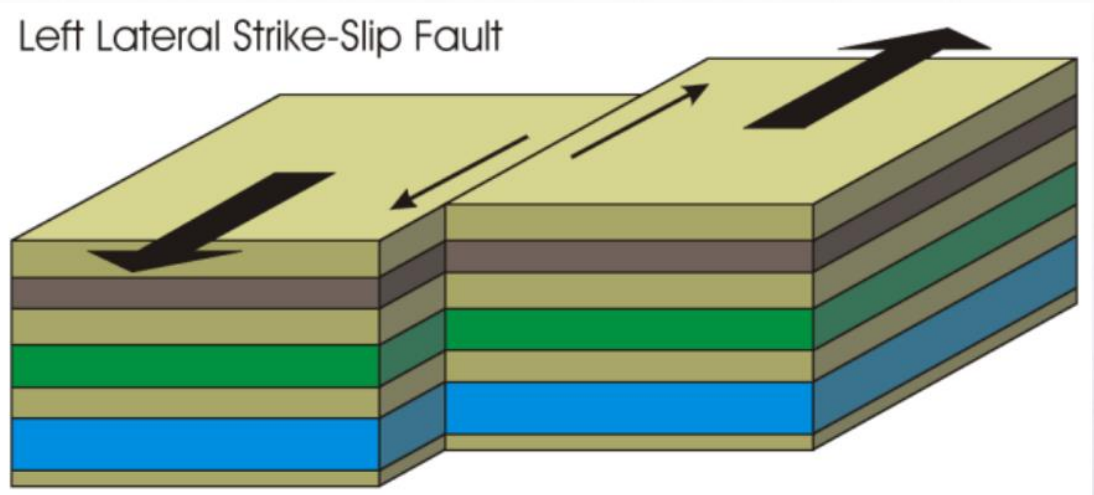
Here the hanging wall moves up - follow the bronze colored layer





Here the hanging wall moves up - follow the bronze colored layer


Right Lateral
Strike-Slip Fault


Left Lateral Strike-Slip Fault