

Drilling mud :-

- A mixture of fluid that is used during drilling operation
- Depending upon the continuous phase, it may be classified as-
 - a) Water-base mud
 - b) Oil-base mud
- Sometimes foam & gas can be also used as drilling fluid.

Functions :-

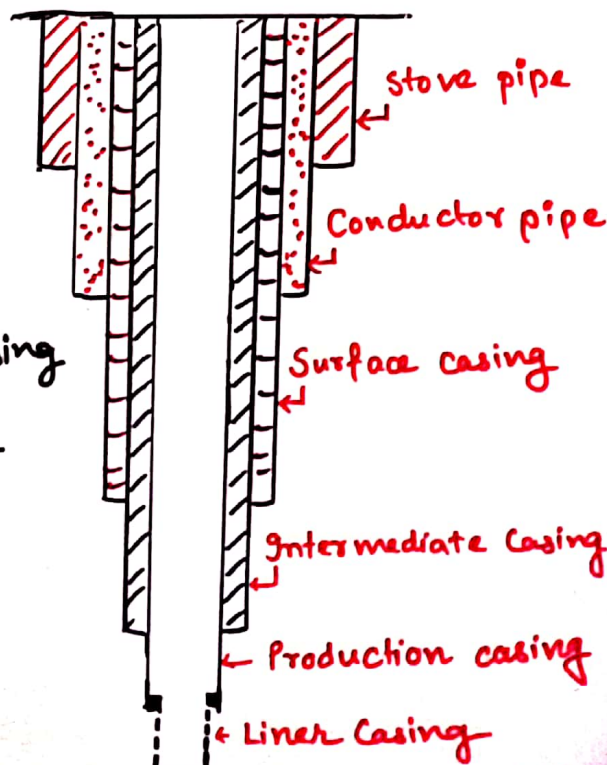
- Cool the drill bit and lubricate its teeth.
- Cool & lubricate the drill string
- Maintain hydrostatic-pressure in the well-bore.
- Carry cuttings out of the hole.
- Stabilize the well bore by forming mud-cake.

Casing :-

- A large diameter pipe that is assembled & inserted into a recently drill section of a borehole.

Diff^{nt} types →

- ① Stove pipe
- ② Conductor Casing
- ③ Surface Casing
- ④ Intermediate Casing
- ⑤ Production Casing
- ⑥ Liner Casing
(Does not reach the surface)



Functions of casing:-

1. Keep the hole open & provide a support for weak or fractured formation.
2. Isolate porous media with different fluid press^r regimes.
3. Prevent Contamination of near-surface fresh-water zone.
4. Provide a passage for hydrocarbon fluid.
5. Provide a suitable connection for the well head equipment (e.g. BOP, Christmas tree)
6. Provide a hole of known diameter & depth to facilitate the running of testing & completion equipments.

Well Kick:-

- Unwanted flow of formation fluid into the wellbore during drilling.
- If kick is not controlled, it can cause a blow-out of the well.

Lost Circulation:-

- Sudden loss of drilling mud during drilling.
- Lost circulation happens in a zone having weak formⁿ.

BOP:-

- Blow-out Preventer
- Installed at surface casing
- Used to control kick, hence blow-out.
- Basically of two types - Annular & Ram

