

# Mud Motors for HDD

## Typical HDD Motor Setup



## History

- Mud motors began in Soviet Union
- Migrated to International Oilfield
- Adapted to HDD Industry
- Have been used in HDD since the beginning.

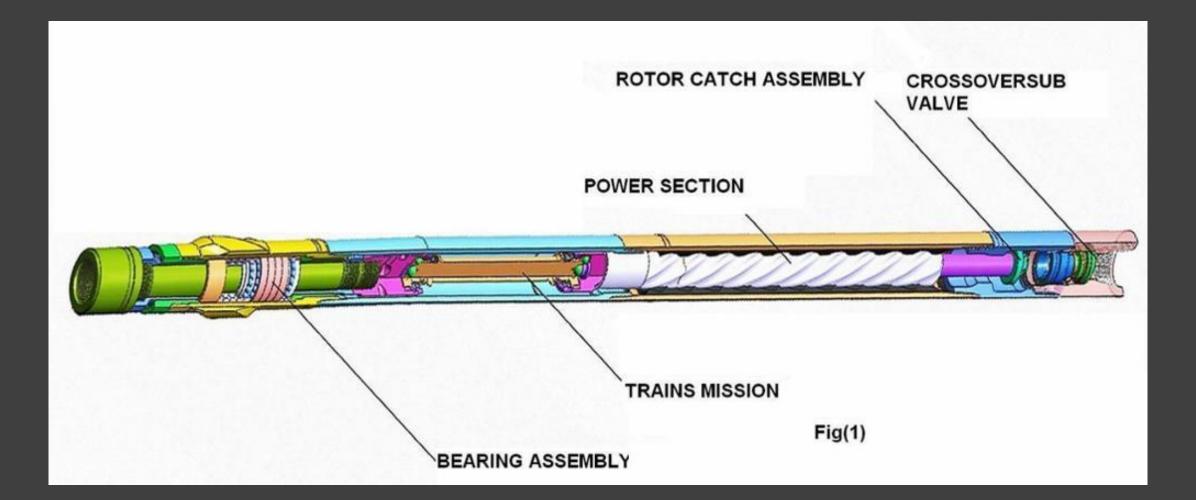


### Why use a Mud Motor?

- Ease of use
- Typically use existing equipment
- Drill virtually any rock
- Makes any drill a rock drill



#### Mud Motor Components

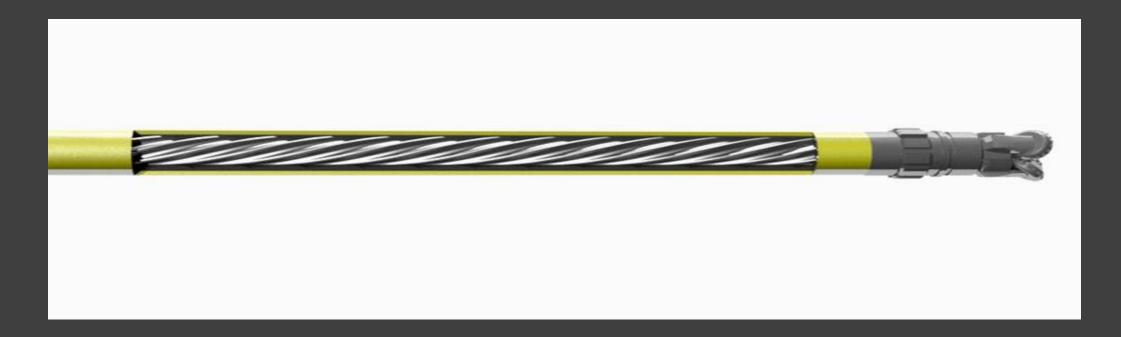


# Features of HDD Mud Motors

- Does not require high PSI
- Typically low flow
- High Torque
- The shorter the better



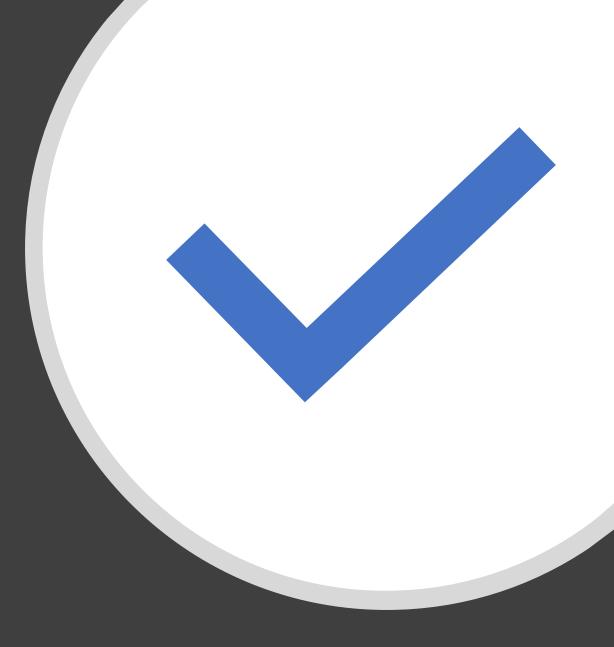
### How it Operates



- Mud flows over the vanes thus rotating the bit
- Typically 2 degree bend to allow steering

### Service

- Typically after each job or 100 hours service the motor
- 500 hours typically total rebuild
- Next generation motors use drilling mud as the lubricant for bearings
- These motors go 250-500 hours before needing service





Q&A