

# **Cementing:**

## **Best Practices**

## **Tender Tips**

## **Data Capture**

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# Prepare the Hole

- ✓ Wiper Trip
  - ✓ Ream as necessary
- ✓ Hole Cleaning
  - ✓ Condition hole until shakers are as clean as practically possible
  - ✓ Establish Maximum pump rates for cement job
- ✓ Mud
  - ✓ Tight Fluid loss (thin, easy filter cake to remove)
  - ✓ Reduce YP & Viss to as low as practically possible
- ✓ Pipe Movement
  - ✓ Rotation or Reciprocation
- ✓ Centralization
  - ✓ Shoot for a minimum of 70% Standoff



# Spacers & Flushes

- ✓ Annular Velocity
  - ✓ 60-80 m/min for Turbulent Flow – If Practical
  - ✓ 20-30 m/min for Plug Flow
- ✓ Contact Time
  - ✓ 10 minutes or 150-300m of annular height – If Practical
- ✓ Weighted vs Un-weighted (Heavy displaces Light)
  - ✓ 50-150 kg/m<sup>3</sup> higher than drilling fluid (10% step increases)
- ✓ Non-bentonitic Preflush – Polymer (Thick displaces Thin)
  - ✓ YP minimum 2 Pa (4 lb/100ft<sup>2</sup>) above drilling fluid
- ✓ Scavenger Cement



# Cement Properties

- ✓ Silica

  - ✓ 35-40% BWOC

- ✓ Free Water = 0

- ✓ Fluid Loss < 50 cc/30 min

- ✓ Post Expansion

- ✓ Ductility

  - ✓ Increased by adding latexes, beads, foam (N2)

- ✓ Transition Time (SGS)

  - ✓ 100-500 lb/100ft<sup>2</sup> < 15-20 minutes




# Tender Tips

## ✓ Be Specific!!!!!!!

- ✓ Ask for an exact volume of Cement & Preflush ( $m^3$ )
- ✓ Set the Cementing parameters
  - ✓ 40% Silica in blend
  - ✓ Fluid loss between 30-40 cc/30min, Free Water = 0
  - ✓ TT between 3.5-4.0 hours
  - ✓ Density range 1750-1850  $kg/m^3$
- ✓ Ask for recent lab data to support above parameters
- ✓ Specify BHST's, Mud Properties,
- ✓ Give the mileage (eg. Use 200km)

## ✓ Request more than 1 program

- ✓ Program 1 = set parameters above
  - ✓ Program 2 = area expertise (what's everyone else using)
  - ✓ Possible 3 = "best solution" for issues (losses, gas migration, etc)
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# Cementing info Download into Rig's Data Capture System

- ✓ Cement & Drilling Parameters together
- ✓ Can watch a cement job real-time
- ✓ Data stored in YOUR database, not service companies
- ✓ Info there for morning meetings
- ✓ Post-job review simple & quick
- ✓ Easier to solve job problem causes
- ✓ Defined data output timing
- ✓ Halliburton, Schlumberger, BJ successes with RigWatch, Pason, & (\*\*Rig Manager this summer\*\*)
- ✓ DEMAND IT!!!!



# Thank You For Your Attention

## Questions?

