



Well Information

Location.....Woodville, Texas
Well NameETOCT.Hole
Total Depth Drilled7300 ft.

Casing: 9/58" and 7/78"

Mud System: NFS-Super System (Water Base)

Well Recap

Drilled a 12/25" surface hole to 1750' with conventional gel/water mud. Set the surface casing 9/58" casing and tested the casing.

- Cleaned the mud tanks and filled with fresh water and began additions of NFS-Super System.
- Added 10 ppb of NFS-Viscapsule, 1 % by volume NFS-Shalecapsule, followed by 1% by volume NFS-Torqcapsule.
- Maintained a 31-34 funnel viscosity and drilled cement with the new mud system. Drilled approximately 120' cement without any contamination.
- Began drilling the 8-1/4" hole with NFS-Super System from 1750' to 2000'. Maintained chemical addition except for NFS-Shalecapsule; at this point mud viscosity was too high. Water was added to the system and the desander/desilter was started.
- Drilling stopped and pulled the bit to casing and began to circulate and conditioned mud. Added large volume of water and additions of NFS-Viscapsule, NFS-Shalecapsule and NFS-Torqcapsule; time to condition mud was approximately 4 hours.
- Mud was conditioned and resumed drilling operation. Drilling continued at the fast rate of penetration. (drilled 1200' in approximately 12 hours)
- Drilled the 8 3/4" to 6500' and increased mud density to 9.6 ppg from 9.1 ppg using barite. Chemical addition continued to maintain a <6 cc filtrate.
- Drilling continued to 7300' total depth. Circulated bottoms up, made a short trip, back to bottom with no fill.
- Pulled the bit out of hole and ran successful logs to bottom, no fill. Ran the casing bottom, no fill.

Conclusion

NFS-Super System was used successfully to drill this 7300' well in record time. Total drilling days were reduced by two days, a gage hole was drilled and logged the well successfully. Surface hole from 1750' to approximately 6500' had lots of reactive shale and clay, which was encapsulated with the NFS-Super System. While drilling cement, no contamination was observed; in addition the shale shakers handled the flow rate without any gumbo sticking to the screens.

Important information to apply for future wells:

- A: Run MBT every 1000-1500' of new hole drilled. Maintain a MBT of <10
- B: Run good stream of water at shaker while your drilling, any other water base muds, 15% to 20% dilution
- C: Run shaker screens of 150 to 210 mesh, plus run desander/desilter as long as possible