

## HSR-Acker 1-36: Remedial Cement – Annular Fill

- 1 ND BOP. Unland production casing (4-1/2", 11.6#, I-70), ND surface casing head and NU double entry flange. 1992 vintage casing, don't pull with more than 100,000lbs (50% of virgin joint strength).
- 2 Spot concentrated mud flush (Alcomer 74L – liquid mud thinner in 5 gallon bucket) from Imperial.
- 3 Spot 49 jnts of TBG (1-1/4", 2.33#, J-55, U). Run in annulus with pup jnt with CutRight, burn shoe or mule shoe on 1-1/4" tbg to 1500' or as deep as possible while circulating. Use mud flush sweeps intermittently or as necessary. If TBG hits tight spots work it for a bit while circulating to break the bridge as best possible. Call engineering if there is difficulty making depth or if a power swivel is necessary to break bridging.
- 4 Once EOT of 1-1/4" is at 1500' circulate another 4 hours minimum using at least 1 mud flush sweep.
- 5 Order and pump 15 bbls of 10# mud from Imperial. Displace with 1 bbl of fresh fresh water to prevent unbalanced flow back. Note: Don't put mud in tanks contaminated with mud flush.
- 6 Pull 1-1/4" TBG up annulus so EOT at +/- 1,310'.
- 7 MIRU cementing services.
- 8 Mix & pump as follows: 5 bbls fresh water, 10 bbls Sodium Metasilcate (SMS), 10 bbl fresh water spacer, 325 sks Type III cement, ¼#/sk Cello Flake, mixed at 14.8 ppg and yield of 1.33 cuft/sk (CaCl<sub>2</sub> amounts as determined by cementing service company for a 3 hour pumping time at 80° F) for a total of 77.0 bbl of cement. Design is for coverage from 1310' to 432' in 9.5" Borehole (has no caliper log) and 102' in 8.1" with a 20% excess (has caliper log). See Calculation if necessary.
- 9 POOH with 1-1/4" tbg to +/- 230 and circulate until clean.
- 10 POOH and SB tbg. ND double entry flange and Re-Land the 4-1/2" production casing immediately.
- 11 NU tubing head, be sure it is a 5,000 psi rated unit. NU BOP.
- 12 Shut in and WOC for 24 hrs minimum.
- 13 MIRU Wireline services. PU and RIH w/ CCL-CBL-VDL tools and log from 1500' to surface. NOTE: IF TOC IS BELOW 430' OR POOR BOND, CONTACT EVANS ENGINEERING. Email logs to Jacob.Barker@Anadarko.com. Email copies of logs, summaries and invoices to rscDJVendors@Anadarko.com within 24hrs.
- 14 POOH, RDMO Wireline service company.