

# Wardell H 19-33: Remedial Cement – Annular Fill, Replace Wellhead

## 1 Well has Gyro

- 2 Call IOC (970.506.5980) before rig up to isolate production equipment. Catch and remove plunger. Enter plunger into PLUNGER DATABASE. Call 24 hours prior to the rig moving onto location so that any automation equipment can be removed prior to the rig showing up. Install fence if needed. If surface casing is not accessible at ground level, re-pipe so valve is at ground level.
- 3 Check for surface casing pressure, bleed off as necessary. If pressure does not bleed off report findings to Evans engineering office.
- 4 Level location for base beam rig.
- 5 MIRU Cable slickline service company. RIH to retrieve production equipment. RIH and tag for fill, last cleanout **unknown** on **PBMD** is **7626'**. Note tagged depth in OpenWells.
- 6 MIRU Workover (WO) Rig. Control well with biocide treated water. Nipple Down (ND) Wellhead (WH) and Nipple Up (NU) Blow Out Preventer Equipment (BOP). Function test and document BOP.
- 7 Spot **10** jnts of 2-3/8"/4.7#/J-55 tbg for cleanout or replacement. Cleanout to **7,626'**.
- 8 MIRU EMI services. EMI 2-3/8" TBG on TOOH and tally while standing back. Lay down joints with wall loss or penetrations > 35%. Replace bad joints as necessary. Note joint number and depth of bad tubing and create Production Equipment Failure Report in OpenWells. RDMO EMI services.
- 9 PU TIH with 2-3/8" TBG and RBP rated to 10,000 psi (**4-1/2"**, **11.6#**, **M-80**) and set at +/- **7140'** (reference **Superior** Wireline CBL dated **4/7/2011** – collars are at **7,119'** and **7,161'**).
- 10 Circulate out any gas and load hole biocide treated water. Pressure test csg and RBP to **1,000** psi using water w/ biocide for 15 minutes. If pressure holds, MIRU hydrotester. Pressure test to **5,000** psi for 15 minutes. If test fails contact Evans for instructions. Dump 2 sacks of sand onto RBP.
- 11 Unland and TOOH with 2-3/8" and SB.
- 12 ND BOP. Unland 4-1/2" production casing and NU double entry flange. 2011 vintage casing, don't pull with more than **165,000lbs**.
- 13 PU **56** jnts of 1-1/4"/2.33/IJ tbg. Run in annulus with burn shoe or mule shoe on 1-1/4" tbg to **1700'** or as deep as possible while circulating if running into tight spots. Starting at +/- **600'** stop every **4** jnts and circulate for 1 hour while working 1-1/4" tbg and using a power swivel at low to moderate rpm. Record these depths and as many details as possible in Open Wells for post cementing analysis. Contact engineer after cementing to review details of this experimental cleanout. Contact engineering if unable to make depth.
- 14 Once EOT of 1-1/4" is at 1700' circulate for another 4 hours minimum.
- 15 Order and pump **25** bbls of 10# mud from Imperial. Don't displace with any fresh water to prevent unbalanced flow back.
- 16 Pull up annulus with 1-1/4" tbg so EOT at +/- **1,400'**.
- 17 MIRU cementing services.
- 18 Mix & pump as follows: **20** bbls SAP mud flush (mud cake removal chemical solution), **5** bbl fresh water spacer, **20** bbls SMS, **10** bbl fresh water spacer, **260** sks Type III cement,  $\frac{1}{4}$ #/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 **61.6** bbl of cement. Design is for coverage from 1400' to 779' in 9.5" Borehole (has no caliper log) and 115' in 8.1" with a 30% excess. See Calculation if necessary.
- 19 POOH with 1-1/4" tbg to +/- **550** and circulate until clean.
- 20 POOH and SB tbg. ND double entry flange and Re-Land the 4-1/2" production casing.
- 21 PU and NU 5,000 psi rated tubing head. NU BOP.
- 22 Shut in and WOC for 24 hrs minimum.
- 23 MIRU Wireline services. PU and RIH w/ CCL-CBL-VDL tools and log from **1500'** to surface. NOTE: IF TOC IS BELOW 760' OR POOR BOND, CONTACT EVANS ENGINEERING. Email logs to [Jacob.Barker@Anadarko.com](mailto:Jacob.Barker@Anadarko.com). Email copies of logs, summaries and invoices to [rscDJVendors@Anadarko.com](mailto:rscDJVendors@Anadarko.com) within 24hrs.

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- 24 POOH, RDMO Wireline service company.
- 25 PU and TIH with RBP retrieving head and 2-3/8" tbg (4.7#/J-55/8rd EUE). Clean off RBP. Latch onto RBP and release. TOOH with tbg and RBP. SB tbg and laydown RBP.
- 26 PU and TIH with 2-3/8" NC, 2-3/8" XN profile nipple (make sure nipple is properly input into OpenWells), 2-3/8" tbg. Land with EOT at +/- 7460' (1 jnt above top Codell perms),
- 27 RU rig lubricator. Broach tbg to seating nipple. RD rig lubricator.
- 28 PU 7-1/16" x 2-1/16" EUE 5,000 psi tubing head adaptor, a flanged 5,000 psi master valve with EUE companion flange on top, and a 2-1/16 EUE flanged lubricator. ND BOP and NU new 5,000 psi flanged WH assembly with EUE flanged 5,000 psi tubing head adaptor, master valve and lubricator. Make sure all valves are rated to 5,000 psi (2 csg valves, and master valve)
- 29 Install 2-3/8" pup joint above master valve. Pressure test TBG head from below TBG head through master valve w/ hydrotester to 5,000 psi.
- 30 RDMO WO rig. Return well to production team.