KARICH HELEN E UNIT #2 BRADENHEAD PROCEDURE

1. Level location for base beam rig.
2. Call Foreman or Field Coordinator before rig up to catch plunger, isolate production equipment, and ask if replacement parts/equipment are requested. Operations need to hook up the Bradenhead pressure and bleed off the pressure before the rig gets on location.
3. Check and report surface casing pressure. If surface casing is not accessible at ground level, re-plumb so valve is at ground level.
4. Spot a minimum of 25 jts 2-3/8", 4.7#, J-55 EUE TBG for replacement and 100 jts 1-1/4", 2.33#/ft, J-55 10rd IJ for annular cement job.
5. MIRU slickline. Fish production equipment as necessary and tag fill. Note tagged depth in OpenWells. Last tagged/clean out depth was 7420' on 12/18/2012. RDMO slickline.
6. MIRU WO rig. Kill well, as necessary, with biocide treated fresh water. ND WH. NU BOPE.
7. Unseat landing joint and lay down.
8. MIRU EMI services. (LAST EMI DATE: 2/27/2012). TOOH with 2-3/8" TBG. EMI on TOOH. LD joints with wall loss or penetrations > 35%. Replace joints as necessary. **Keep yellow & blue band tubing. Note joint number and depth of tubing leak(s) on PRODUCTION EQUIPMENT FAILURE REPORT IN OPEN WELLS.
9. TIH with 2-3/8" TBG & RBP suitable for 4.5", 11.6#, I-80 casing. Set RBP at 6320'. (Collars at 6308' & 6349').
10. Circulate gas out of well and pressure test RBP & CSG to 2000 psi for 15 min. Dump 2 sxs sand on top of RBP & TOOH while standing back TBG.
11. ND BOPE. ND WH. Unland 4-1/2" casing. NU double entry flange.
12. PU 1-1/4", 2.3#/ft J-55 10rd IJ tubing and TIH outside 4-1/2" casing and open hole & tag top of cement (~2870'). Circulate with biocide treated fresh water on TIH to clean annulus.
13. MIRU cement services. Mix and pump cement job as follows: Freshwater spacer, 20 bbls Sodium Metasilicate, 785 sx 15.8 ppg neat Class G cement with ¼#/sx cello-flake. The cement is to be retarded for 125 degF for a six hour pump time. (NOTE: Design is for 10" OH with 5-1/2" CSG inside from 2150' to 710' at 1.15 cf/sk).
14. TOOH with 36 stands and stand back in derrick to end of tubing at +/- 600' and circulate 2 times the tubing volume to clear tubing of any residual cement.
15. Trip out of the hole with tubing and shut in overnight.
16. Rig down cementing services.
17. Land 4-1/2" CSG. ND double entry flange. NU wellhead. SDFN to WOC.
18. MIRU wireline services.
19. PU and RIH with CCL-GR-CBL-VDL. Run from 3000' to surface, or the top of cement. RDMO wireline. If the cement is not above 720' then contact engineer.
20. PU and TIH with 2-3/8" TBG & retrieving head. Circulate sand off RBP, latch RBP and TOOH standing back TBG & laying down retrieving head and RBP.
21. If clean out is not necessary, skip to the next step. PU and TIH with bailer (hydrostatic or bulldog) and clean out to at top of sand plug at 7420'. TOOH and SB 2-3/8" TBG & LD bailer.
22. PU and TIH with NC, XN profile nipple, and 2-3/8" TBG and land well at 7347', which is approximately 1 joint above the top Codell perf.

Gyro run 8/30/11
APC Herman 37-32HZ PAD. Estimated start date: 29 Nov 13
Nio top: 7070'; TOC: 2870'; NPV: 211M; No known casing issues

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23 RU rig lubricator. Broach tubing to XN nipple. RD rig lubricator.

24 ND BOPE. NU WH. RDMO WO Rig.

25 Clean location and swab if necessary. Notify Foreman or Field Coordinator of completed workover operations and turn well over to production team.

Gyro run 8/30/11
APC Herman 37-32HZ PAD. Estimated start date: 29 Nov 13
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