

## KIEFER GEORGE W UNIT B2 Cement Job Below Surface & Replace WH

- 1 WELL NEEDS TO HAVE A GYRO RAN
- 2 Level location for base beam equipped rig.
- 3 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 a bleed off the pressure before the rig gets on location.
- 4 Check and report surface casing pressure. If surface casing is not accessible at ground level, re-plumb so valve is at ground level.
- 5 Spot a minimum of **145** jts of 2-3/8", 4.7#, J-55, EUE tbg to set RBP and 160 jts 1-1/4", 2-33#/ft, J-55, 10rd IJ for annular cement job.
- 6 MIRU Cable to run gyro. RIH to retrieve production equipment. RIH and tag for fill. Note tagged depth in OpenWells. (Last cleanout depth was **8017'** on **3/27/2006**) Run gyro from SN (**7915'**) to surface with stops every 100'. Forward gyro survey to Sabrina Frantz and invoices to Matt Agee.
- 7 MIRU WO rig. Kill well, as necessary, with freshwater and biocide. ND wellhead. NU BOP.
- 8 PUH with tubing string to break any possible sand bridges, unseat landing joint and lay down. Do not exceed a tensile stress of **17,088** lbs.
- 9 MIRU "EMI". TOOH with 1-1/4" tubing. EMI tubing while TOOH. Lay down 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.
- 10 TIH with 2-3/8" tbg and 4.5" RBP (4.5" csg 10.5# J-55). Set RBP @ +/-**4600'**. Pressure test the RBP and casing to **2000** psi. Circulate 2 sx of sand on top of RBP and trip out of the hole.
- 11 Bleed off pressure, open pipe rams, stack out tbg on RBP. Release pup joint so that top of tbg is below BOP.
- 12 ND BOP.
- 13 ND existing tbg head off of 4-1/2" csg and install new WHI 5000 psi flanged tubing head complete w/ 5000 psi rated casing valves. Install 7-1/16", 5000 psi tbg head adaptor w/ new 5000 psi master valve w/ 2-3/8" 8rd threaded connection.
- 14 Pressure test casing and tubing head to **2000** psi using hydrotester for 15 min
- 15 If pressure test unsuccessful, call Evans office for alternate procedures.
- 16 MIRU Wireline. PU and RIH with CCL-GR-CBL-VDL. Run from 4600' to surface. RDMO wireline. If TOC is not ~4030' contact engineer so that cement volumes can be recalculated.
- 17 ND wellhead. Un-land 4 1/2" casing string. NU double entry flange.
- 18 PU 1-1/4" 2.3#/ft J-55 10rd IJ tubing, and TIH outside 4-1/2" casing and open hole to **3980'**. Circulate with freshwater and biocide to clean up annulus while TIH.
- 19 Rig up cement truck and pump **400** Bbls of drilling mud followed with freshwater spacer and cement job consisting of **20** Bbls Sodium Metasilicate and then **1600** sx 15.8 ppg neat Class G cement with 1/4 #/sx cello-flake. The cement to be retarded for 125 degree Fahrenheit for six hour pump time. (Attempt to cement from **4031** to **1022**).
- 20 TOH with **52** stands and stand back in derrick to end of tubing at **+807'** and reverse

- circulate 2 times the tubing volume or until the water cleans up
- 21 Trip out of the hole with tubing and shut in overnight.
  - 22 Rig down cementing company.
  - 23 MIRU wireline services.
  - 24 PU and RIH with CCL-GR-CBL-VDL. Run from **4100'** to **1022'**, or the top of cement. RDMO wireline. If the cement is not above **1022'** then contact Engineer.
  - 25 ND TBG head adapter and master valve. NU BOP
  - 26 PU and TIH with 2-3/8" tbg and retrieving head. Circulate sand off RBP at @ **+/-4600'**. TOOH laying down tubing.
  - 27 Bail if the need be.
  - 28 PU and RIH w/ 1.25" NC, 1.25" SN, and 1.25" 4.7#, J-55 tubing. Land tubing at +/- **7930'** or 1 joint above the top **J-sand** perforation (**7962-7998**).
  - 29 Broach tubing to seating nipple.
  - 30 ND BOPE. NU WH. Ensure all valves on TBG head are rated to 5000 psi and ensure new TBG head has a new R-46 ring gasket installed. Install a 2' double XX nipple above the master valve.
  - 31 MIRU hydrotester and test through master valve to 5000 psi for 15 min.
  - 32 RDMO hydrotester.
  - 33 RDMO WO Rig
  - 34 Broach tubing to seating nipple. RDMO WO Rig.
  - 35 Clean location and swab well back to production, if necessary. Notify Foreman/Field Coordinator of finished work and turn well over to production team.
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