PLUG AND ABANDON PROCEDURE

Tyler Hindman – Production Engineer II
(970) 506-5945 1067 – Office (806) 782-6032 - Cell
Tyler.Hindman@anadarko.com

CARLSON V 11-8 JI

1 Provide 48 hr notice to COGCC prior to rig up per request on approved Form 6 (e.g. call field coordinator, submit Form 42, etc.). Call AUTOMATION REMOVAL GROUP at least 24 hr prior to rig move. Request they isolate production equipment and remove any automation prior to rig MIRU.

2 MIRU slickline services. Pull bumper spring and tag bottom. Since single zone, run pressure survey. RDMO slickline services.

3 Prepare location for base beam equipped rig. Install perimeter fence as needed.

4 Check and record Bradenhead pressure. If Bradenhead valve is not accessible, re-plumb so that valve is above GL.

5 MIRU, kill as necessary using clean fresh water with biocide. ND WH. NU BOP. Function test and document. TOOH tubing string, SB. (Tubing String 254 jts 2-3/8" 4.7 #/ft J55, SN)

6 PU and TIH casing scraper for 4-1/2" 11.6 #/ft casing on tubing to 7800'+/-. TOOH, SB tubing. LD scraper.

7 PU and TIH CIBP for 4-1/2" 11.6#/ft casing on tubing, set at 7750'+/-. PUH 1 jt. Roll hole using water containing biocide.

8 PT CIBP to 1000 psi for 15 min. If fail, discuss with engineering. RDMO hydrotester. TOOH, SB 6500', LD remainder.

9 MIRU WL. PU dump bailer on WL. RIH to CIBP (7750'), dump bail 2 sx class G cement on CIBP. POOH.

10 PU and RIH 2-1' 3-1/8" perf guns with 3spf, 0.5" EHD 120* phasing. Shoot 1' of squeeze holes at 6850' and at 6450'. RD WL.

11 MIRU hydrotester. PU CICR on tubing, hydrotesting string in to 3000 psi. Set retainer at 6500'. Initiate circulation using water containing biocide. Note rate and pressure. RDMO hydrotester.

12 MIRU cementers. Pump 100 SX 50/50 Poz “G” w/20% silica flour, 3% gel, 0.1% sodium metasilicate and 0.4% FL-52 Mixed at 13.5 ppg and 1.71 cuft/sk yield, underdisplace by 3 BBLs, unsting from retainer and dump on CICR. Coverage design 6850' to 6450' using 8" hole size +20%.

13 PUH 6 stands from 6450'. Circulate using water with biocide using 1.5x's hole volume or until clean returns. RD cementers.

14 TOOH, SB 4050' tubing, LD remainder.

15 RU WL. PU and RIH 2-1' 3-1/8" perf guns with 3spf, 0.5" EHD 120* phasing. Shoot 1' of squeeze holes at 5070' and at 4000'. RD WL.

16 PU CICR on production tubing and set at 4050'. Initiate circulation using water containing biocide. Note rate and pressure.

17 RU cementers. Preflush using 5BBL biocide water, 20 BBL sodium metasilicate, 5 BBL biocide water. Pump 460 SX “G” w/0.25 pps cello flake, 0.4% CD-32, 0.4% ASA-301 Mixed at 15.8 ppg and 1.15 cuft/sk, underdisplace by 3BBL, unsting from retainer, dump remainder on CICR. Coverage design 5070'-4000', 9" hole size + 20%.

18 PUH 6 stands from 4000'. Circulate using water containing biocide using 1.5x's hole volume or until clean returns. RD cementers.

19 TOOH, SB 1250' tubing, LD remainder.

20 RU WL. Crack coupling or shoot off casing at 1150'. RD WL. Circulate hole using minimum 1.5x hole volume to 1150' using biocide water to remove any gas.

21 ND BOP, ND TH.

22 NU BOP on casing head, install 4-1/2" pipe rams.

23 TOOH with 4-1/2" casing, LD. Change pipe rams to 2-3/8".

24 TIH into casing stub to 1250' using 2-3/8" tubing.

25 RU cementers. Pump 10bbl SAPP, 20BBL biocide water, Spot 230 SX Type III w/cello flake and CaCl2 as deemed necessary Mixed at 14.8 ppg and 1.33 cuft/sk. Hole size 9"+20% coverage design 1250'-620' open hole, 620'-520' in pipe. TOOH, SB tubing.

26 TIH tubing, tag cement, if lower than 520', contact Evans Engineering, TOOH LD.

27 PU CIBP for 8-5/8" 24#/ft casing set at 80'. RD WL.

28 PT to 1000psi. If pass, RDMO WL and WO rig.

29 Instruct cementing and wireline contractors to e-mail copies of all job logs/job summaries to rscDJVendors@anadarko.com within 24 hrs of completion of the job.

30 Supervisor submit paper copies of all invoices, logs, and reports to Evans Engineering Specialist.

31 Excavation crew to notify One Call to clear excavation area around wellhead and for flowlines.

32 Excavate hole around surface casing enough to allow welder to cut casing minimum 5’ below ground level.

33 Welder cut casing minimum 5' below ground level.

34 Fill casing to surface using 4500 psi compressive strength cement, (NO gravel).

35 Spot weld on steel marker plate. Marker should contain Well name, Well number, legal location (1/4 1/4 descriptor) and API number.

36 Obtain GPS location data as per COGCC Rule 215 and send to rscDJVendors@anadarko.com.

37 Properly abandon flowlines per Rule 1103. File electronic Form 42 once abandonment complete.

38 Back fill hole with fill. Clean location, level.

39 Submit Form 6 to COGCC ensuring to provide 'As performed' WBD identifying operations completed.