PK Farms 1
Run CBL Prep Procedure (most likely needs squeezes performed)

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 the Automation Removal Group at least 24 hr prior to rig move. Request they catch and remove plunger, isolate production equipment and remove any automation prior to rig MIRU.

2. MIRU slickline services. Pull bumper spring and tag bottom. Prepare location for base beam equipped rig. Install perimeter fence as needed.

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

4. MIRU WO rig. Kill well as necessary w/ water containing biocide. ND WH, NU BOP.

5. Unseat and LD landing joint. PU w/ 2-7/8" tbg (6.5#, J-55) to break any sand bridges. Do not exceed the safety tensile load of 65,000 lbs (65% of upset yield strength). **Unable to PU w/ tbg, RIH w/ freepoint tool and find 2-7/8" tbg 100% free @ 5000'**

6. ****Reports show that 2-7/8" tbg was cemented into 5" csg w/ 100 sx to isolate csg leak @ ~7376'. CBL run inside 2-7/8" tbg on 11/17/15 confirmed cement from EOT @ 7730' to ~5575'. Following steps are the updated plans.****

7. Spot 6000' of 2-3/8" tbg for workover and production.

8. RIH w/ chemical cutter inside 2-7/8" tbg to 100% free pipe @ 5000' and cut tbg. POOH w/ WL and circulate to remove any gas.

9. TOOH and LD 2-7/8" tbg.

10. PU bit and scraper for 5", 18#, P-110 csg on 2-3/8" tbg. TIH to +/- 5000' (+/- 158 jts) ensuring to work tight spot @ 3940'. TOOH, SB 2-3/8" tbg and LD bit and scraper.

11. RIH w/ 10000 psi rated from above and below RBP (5" 18# csg) on 2-3/8" tbg to ~5000' above 2-7/8" tbg stub. Set RBP and circulate to load hole and remove gas for CBL. Dump 2 sx sand on RBP.

12. Test RBP and csg to 1000 psi for 15 min. If test passes, proceed.

13. TOOH, SB 2-3/8" tbg.

14. MIRU WL. RIH w/ CBL, CCL to 5000', log well to surface. Send CBL to engineering before proceeding to further steps.

15. **Assuming SX and Fox Hills cement squeezes are required. CBL will determine if changes need to be made to following steps.**

16. PU and RIH with two perf guns and CCL inside 5" csg (3-3/8", 2 spf, 0.59" EHD, 4.725" penetration, 2' net, 4 total holes). Shoot 1' of bottom squeeze holes at 4540'. PUH to 4340' and shoot 1' of top squeeze holes. POOH, RDMO WL.

17. RIH with 5" CICR (5" 18#) on 2-3/8" tbg and set at +/- 4370'. Establish circulation with fresh water and biocide. If unable to circulate, contact Evans Engineering.

18. MIRU cement company. Pump 5 bbls fresh water, 20 bbls sodium metasilicate, and 5 bbls fresh water followed by 165 sx of 0:1:0 G w/ 0.5% CFR-2, 0.2% FMC, 0.5% LWA, and 0.25 pps polyflake mixed at 15.8 ppg and 1.15 cf/sk into squeeze holes (cement from 100' below top of Sussex to 100' above top of Sussex, 13" avg open hole from caliper, 20% excess). Under displace by 3 bbls, sting out of CICR and dump remaining cement on CICR.

19. PUH to 4000' and circulate fresh water with biocide to clear tbg.

20. TOOH, SB 2-3/8" tbg.

21. MIRU WL. PU and RIH with two perf guns and CCL inside 5" csg (3-3/8", 2 spf, 0.59" EHD, 4.725" penetration, 2' net, 4 total holes). Shoot 1' of bottom squeeze holes at 1450'. PUH to 1050' and shoot 1' of top squeeze holes. POOH, RDMO WL.

22. RIH with 5" CICR (5" 18#) on 2-3/8" tbg and set at +/- 1080'. Establish circulation with fresh water and biocide. If unable to circulate, contact Evans Engineering.

23. MIRU cement company. Pump 285 sx of Type III w/ 0.3% CFL-3, 0.3% CFR-2, and 0.25 pps polyflake mixed at 14.8 ppg and 1.33 cf/sk into squeeze holes (cement from 50' below Fox Hills marker base to 50' below DV tool cement, assume 13" avg open hole from SX caliper, 20% excess). Under displace by 3 bbls, sting out of CICR and dump remaining cement on CICR.

24. PUH to 500' and circulate fresh water with biocide to clear tbg.

25. TOOH, SB 2-3/8" tbg. WOC per vendor recommendation.

26. PU and TIH w/ 3-7/8" blade bit and 2-3/8" tbg to cement top @ +/- 910'. Drill out cement and CICR and pressure test top sqz holes @ 1050' to 500 psi. If pressure test fails, contact Engineering, otherwise proceed.

27. Continue to drill out CICR and cement down to 1450'. Pressure test lower squeeze holes at 1450' to 500 psi. If pressure test fails contact engineering, otherwise proceed to next step.

28. If bit still has life, continue down to SX cement top @ +/- 4200'. Drill out cement and CICR and pressure test top sqz holes @ 4340' to 500 psi. If pressure test fails, contact Engineering, otherwise proceed.

29. Continue to drill out CICR and cement down to 4540'. Pressure test lower squeeze holes at 4540' to 500 psi. If pressure test fails contact engineering, otherwise proceed to next step.

30. MIRU wireline. Run CBL from 5000' to surface to confirm placement of new cement. Send log to engineering. If positive results are seen continue to next step. RDMO wireline.

31. RIH w/ 2-3/8" tubing with retrieving head to RBP set at 5000', circulate sand off, latch on and release, allow elements to relax and POOH.

32. PU and RIH w/ 1.66" NC, 2750' (+/- 87 jts) of 1.66" tail pipe, crossover, 650' (+/- 20 jts) of 2-3/8" tbg, Arrowset production packer, and +/- 4300' of 2-3/8" 6.4# J-55 back to surface. Land packer at +/- 4300' and EOT @ +/- 7700' (1 jt above top JS perf).

33. ND BOP. NU WH.

34. Install 5,000 psi tubing head adaptor and 5,000 psi master valve. Make sure all wellhead valves are rated to 5,000 psi.

35. Install 2-3/8” pup joint above the master valve. Pressure test the tubing head from below the tubing head through the master valve to 5,000 psi using hydrotester. If wellhead does not pressure test, replace wellhead/ wellhead valves as necessary with 5,000 psi rated equipment.

36. NU WH. RDMO WO rig. Return well to production team.