

Upr 43 Pan Am "J" #1

1. Provide notice to COGCC prior to MIRU per Form 6 COA.
2. Call foreman or Lead Operator before rig up to isolate and remove automation and production equipment. Install fence if needed.
3. Notify CDC when rig moves on location to generate work order for flowline removal and one call for line locates.
4. No gyro needed. Gyro ran 10/2012.
5. Place cement services on will call when rig moves on location, providing expected volumes of cement needed. (~100 sx plug #1; ~650 sx plug #2; ~510 sx plug #3)
6. MIRU WO rig. Kill well, as necessary, with water containing biocide. ND wellhead. NU BOP's. Unseat landing joint and lay down.
7. TOOH and stand back tbg.
8. PU and TIH with casing scraper & bit for 4-½" casing. Scrape casing to ~8260'. Circulate hole clean. TOOH and lay down scraper and bit and stand back 7150' of tubing.
9. MIRU wireline services. PU 4-1/2" CIBP and RIH to 8250', set CIBP. POOH.
10. PU cement bailer. RIH to CIBP and dump bail 2 sx of cement on top of CIBP. POOH
11. PU 4-1/2" CIBP and RIH to 7800', set CIBP. POOH.
12. PU cement bailer. RIH to CIBP and dump bail 2 sx of cement on top of CIBP. POOH
13. Pressure test plug to 1500 psi for 15 min.
14. PU CBL. Run CBL from 7800' to surface.
15. Contact APC Engineer with cement depths and change procedure accordingly.
16. PU perf gun loaded with 3' of 3 spf, 0.6" EHD, 7" penetration, 120 phasing. RIH to 7300' and shoot 1' of perfs.
17. PUH to 7075' and shoot remaining 2' of perfs. POOH. RDMO wireline services.
18. PU 4-1/2" CICR and TIH w/ 2-3/8" tbg hydrotesting to 3000psi. Set CICR @ 7100'. Establish circulation through CICR.
19. MIRU cementing services. Mix and Pump 100 sx of 50/50 Poz "G" w/20% silica flour, 3% gel, 0.1% sodium metasilicate and 0.4% FL-52. (yield 1.71 ft³/sx, 13.5 ppg, ~30 bbl slurry) (Open hole calculated at 10" with 20% excess). Underdisplace cement by 3 bbl leaving excess on top of CICR.
20. PUH 8 jts (~252') to 6848' laying down tubing and circulate hole with 120 bbl of at least 9 ppg mud w/ biocide to fill hole and remove any cement. TOOH and stand back 4725' of tbg, lay down remaining tubing.
21. MIRU wireline services. PU perf gun loaded with 3' of 3 spf, 0.6" EHD, 7" penetration, 120 phasing. RIH to 5547' and shoot 1' of perfs.
22. PUH to 4689' and shoot remaining 2' of perfs. POOH. RDMO wireline services.
23. PU 4-1/2" CICR and TIH w/ 2-3/8" tbg. Set CICR @ 4725'. Establish circulation through CICR.
24. MIRU cementing services. Preflush with 5 bbl H₂O, 20 bbl of sodium metasilicate, 5 bbl H₂O.

25. Mix and Pump 650 sx of Class "G" cement with ¼ #/sx cello-flake, 0.4% CD-32 and 0.4% ASA-301 through CICR (yield 1.15 ft³/sx, 15.8 ppg, ~133 bbl slurry) (Open hole calculated at 11.5" with 20% excess). Underdisplace cement by 3 bbl leaving excess on top of CICR.
26. PUH 94 jts (~2961') to 1764' laying down tubing and circulate hole with at least 9 ppg mud to remove any cement. RDMO cementing services. TOOH and stand back 1642' of tbg, lay down remaining tubing.
27. MIRU wireline services. Shoot off casing at 1542'. RDMO wireline services.
28. NDBOP NDTH. Unland casing from slips.
29. NU BOP on casing head. Install 4-1/2" pipe rams.
30. PU casing and conventionally circulate 200 bbl of mud. If circulation cannot be established contact engineer and COGCC for change in procedure.
31. TOOH with 4-1/2" casing and lay down.
32. PU 2-3/8" tbg and TIH into casing stub to 1642'.
33. MIRU cementing services. Mix and pump 510 sx of Type III cement from 1642' to 656' (yield 1.53 ft³/sx, 15.8 ppg, ~139 bbl slurry) (Open hole calculated at 11.5" with 40% excess). Place balanced plug from 1642' – 656'. PUH to 100' and circulate 10 bbl of mud to remove any cement. RDMO cementing services. TOOH and stand back 656' of tubing, lay down remaining tubing. WOC 4 hrs or overnight.
34. TIH and tag cement plug, NOTE: DEPTH OF PLUG IN OPENWELLS. If plug top is above 656' TOOH and lay down tubing.
35. MIRU wireline services. PU 8-5/8" CIBP and RIH to 100'. Set CIBP and POOH. Pressure test CIBP to 1000 psi for 15 minutes. RDMO wireline services.
36. Assuming CIBP tests, RDMO
37. Wellsite supervisor turn all paper copies of cementing reports/invoices and logs in to Sabrina Frantz. NOTE: During the job, wellsite supervisor should instruct the logging and cementing contractors to e-mail all logs, job reports/invoices to Sabrina Frantz.
38. Have excavation contractor notify One-Call to clear for digging around wellhead and flowline removal.
39. Check top of cement inside 8-5/8" surface casing., place redi-mix cementer on will call. (6.5 bbl)
40. Excavate hole around surface casing of sufficient size and depth to allow welder to cut off 8-5/8" surface casing and at least 5' below ground level.
41. Have welder cut off 8-5/8" surface casing at least 5' below ground level.
42. MIRU ready cement mixer. Use 4,500 psi compressive strength redi-mix cement (sand and cement only, no gravel) to finish filling surface casing and production casing to top of cut off.
43. Have welder spot weld steel marker plate on top of surface casing. (Note: marker shall be labeled with well name and number, legal location (¼ ¼ description) and API number.
44. Properly abandon flowlines as per Rule 1103.
45. Have excavation contractor back fill hole with native material. Clean up location and have leveled to plant any vegetation required.
46. Submit Form 6 to COGCC. Provide "As Plugged" wellbore diagram identifying the specific plugging completed.

1977 JS/CD well that is up for safety prep. Additional cement coverage will be needed with additional fox hills coverage potentially needed. Two offset HZ's are Codell's with the closes being 129'. Current production at 30 Mscfd and 0.7 BOPD. Due to age of well, prep work needed, and location of offset I believe P&A is the best option.