EMERALD 33AX – RUN LINER Procedure

Hold a PTW, JSA and equipment inspection with crew when they arrive on location. Update the JSA throughout the day as work activities change during SAFE STOPS.

******DOUBLE CHECK TUBING LANDING DETAIL IN WELL FILE******
1 - Wireline set plug in on/off. Bled the casing and tubing to 0 psi.
2 - Check w/ WAGGERS that offset injectors on water only, no CO2 injection at least one week prior to moving onto the well.

1. Prep location. Have Vetco perform pre-rig wellhead work if necessary**. Verify that WL has set a plug in profile.** Notify COGCC Field Inspector (Chuck.Browning@state.co.us) of intent to perform MIT 10 days before test.

2. MIRU workover rig. Verify that the tubing and casing were pre-tested to 1200 psi for 15 min. Perforate tubing and kill well as required.

   Well has had well control issues in the past, high H2S

3. N/D injection wellhead, N/U 7-1/6" 5K Class II modified BOP, test BOPE and circulating manifold.

4. MIRU wireline, RIH to pull plug, kill well as required.

5. Milled 7" casing from 37'-43' and cleaned up enough to fish 7" model "D" packer.

6. RIH and catch tubing and jar the seal assembly in the packer free. POOH with seal assembly.

7. RIH with a packer plucker and mill over packer @ 5640'. POOH w/ packer and tailpipe.

8. P/U & TIH w/ 7" clean out assembly (6 1/8" bit & string mill) on work string to 6394' (PBTD). Circulate clean and TOH. L/D BHA.

9. Using a retrievable 7" packer, test csg to determine if csg work needs to be done.

   If needed or if downhole conditions become abnormal or necessary for diagnostics, RU wireline & run casing caliper log. (Provide 2 copies to Diane Petersen for COGCC & BLM), RD Wireline. Consult with engineers if CCL is necessary.

10. Due to wall loss at 37' being greater than 50% run a 5 ½: liner from 5670' to surface.

11. Set a CBP @ 5650' and spot 20' of sand on top.

12. P/U, TIH & set a second barriers for BOPE change. Test to 1200 psi. TOH.

13. N/D 7 1/16" BOPE. N/D 11" x 7 1/16" tubing head.

14. N/U 11" 3K BOPE. Test BOPE shell and connection to 1200 psi.

15. TIH w/ retrieval tools & retrieve second barrier set earlier. TOH.

16. Prepare to run 5 ½", 17#/ft, L-80 liner with turned down collars. R/U casing running crew & equipment. Notify COGCC representative.

17. Run float equipment & 5 ½" 17#/ft L-80 liner from ~5650' to surface.

18. Cement liner in place per proposal (~10% excess). Set liner in slips.

19. N/D 11" BOPE. N/U 11" x 7 1/16" tubing head. N/U 7 1/16" 5K BOPE & test.

20. MIRU wireline. Run CBL/CCL

21. RIH with a 6 1/8" bit and drill out float shoe, cement and CBP to PBTD @ 6394'. POOH.

22. TIH with WL re-entry guide, 2 jt 2-7/8" TK-15 FGW tubing, 5 1/2" Loc-set packer, 2 7/8" TK-15 FGW pup, and extended neck on/off tool. Set 5 1/2" Loc-Set packer @ *5525'*, R/U wireline & install plug in profile, R/D wireline. Release on/off tool and TOH. L/D workstring.

23. TIH with on/off skirt, 1 jnt of 2 7/8" TK-15 FGW tbg, 5 1/2" PS-1X packer & new 2-7/8" FL tubing string to surface. Space out and pump packer fluid (110 gal of CRW132 mixed in annular volume). Engage on/off assembly. Set packer and land tubing. *(Set @ ~5480')*

    Consult with PE for final packer setting depths.

24. N/D BOPE and N/U injection WH.

25. Notify COGCC (Chuck.Browning@state.co.us) and perform MIT test. If necessary this can be done after the rig has moved off location.

    Test casing to 1200 psig for 15 min.

26. RDMO workover rig.

27. R/U Wireline & pull plug in profile. R/D Wireline.