

Pre-Rig Work

1. Ensure the PS-20 location is set up to facilitate Blade's "SS-25A Wellsite Tubulars Handling Protocol."

Well Work Program

1. Move in Ensign rig 334 and rig pump with tank, shaker, and mixer.
2. Spot 500 bbl Baker tanks and load with 8.5 ppg 3% KCl brine.
 - Connect pump to the tubing and take returns through a portable separator.
3. Pump down tubing and circulate 8.5 ppg 3% KCl brine to collect wellbore fluid samples every 50 bbls as per Blade's "Fluid Sampling and Analysis Approach" protocol. (tubing volume + annular volume from the GLM at 7,880 ft)
 - a. As set forth in that protocol, the sampling work will be executed by Texas Oil Tech Laboratories, under Blade's supervision, in part on location and in part in the Texas Oil Tech Laboratories in Houston, TX.
4. Verify the well is dead. If needed, circulate well with 8.5 ppg KCl brine.
5. Install BPV in tubing hanger. ND tree.
 - Note: Follow Blade's "SS-25A Wellsite Tubulars Handling Protocol" for Wellhead Handling Procedures.
6. Install Class III 5M BOPE per Gas Company Standard 224.05 and in accordance with the DOGGR permit. All connections and valves must be flanged and at least 5000 psig rated. Notify DOGGR to inspect the BOPE. Pressure test the BOPE.
7. Unland tubing, RU Baker WL and 5M lubricator, and cut the 3-1/2" tubing at 8,140 ft above XN nipple using a Baker mechanical pipe cutter. RDMO WL.
8. POOH sideways laying down singles.
 - Follow Blade's "SS-25A Wellsite Tubulars Handling Protocol." ("Tubulars Protocol")
 - Blade has provisional authority as granted by the CPUC to conduct a Root Cause Analysis (RCA) on well SS-25. This authority includes overseeing the RCA related work on the SS-25A well. During that work, the Blade Team and those parties under Blade's direction are responsible for directing the work of contractors retained to perform the extraction of Well SS-25A wellhead and tubing and the preservation and protection of associated evidence. The person in charge (PIC) of the extraction activities and the protection of evidence on-site is the Blade Team Lead, Ravi Krishnamurthy. SoCalGas and those parties under SoCalGas' direction are responsible for directing the contractors who will perform the permanent or partial abandonment of SS-25A. Should clarification be required or disagreements arise between Blade and SoCalGas; the CPUC, DOGGR, Blade and SoCalGas (the entities) shall meet and approve forward going steps. If the entities are unable to agree on any activities described for tubulars handling for SS-25A, Blade will document such differences and the designated regulatory agency will act as the arbiter, and make the final decision.

- All well and wellbore equipment shall be considered potential evidence. Therefore, every effort shall be taken to improve the chance for recovery of tubing and downhole equipment and to avoid inadvertent damage to equipment and/or evidence. During extraction of the tubing the threads may be damaged or galled. Every attempt will be made to mitigate any potential thread damage as a result of tubing extraction. Mitigation against this potential damage includes careful attention to tool selection, operational procedures and process. This implies careful service equipment selection and adhering to procedures that emphasize care over speed when removing the tubing.
 - Care should be exercised when running tools through the-casing. It is important to recognize that the collection of logging data may mildly alter the condition of the casing. For example, the multi-finger caliper and the wellbore casing scraper tool and wire scratcher / brushes tool make contact with the ID of the casing. There may be tool marks on the casing as a result of the contact. The operations sequence and pictures of each tool before and after each run can be used to distinguish tool marks from the pre-existing marks.
 - **Note:** When the tubing string was run in Oct 2010, Seal Lube was applied to the threads of the 5-1/2" LTC tubing. From past SoCalGas workover experience, there is a potential for the threads to gall when breaking out the tubing connections.
 - **Note:** When pulling the tubing, there is a potential for the tubing collars to hang up on the Homco casing patch which may require the string to be rotated to roll the collars past the casing patch. This rotation may leave marks on the collars.
9. PU 3 1/2" workstring and RIH w/scraper for 8-5/8" 36# casing to the top of Homco casing patch @ 2,970'. RIH slowly the last 50' before reaching the patch. POOH and lay down scraper.
 10. RIH with Cravens Wire Scratchers on workstring. Ensure the OD of scratcher can easily fit the ID of Homco casing patch from 2,970' – 3,110' (drift ID = 7.400"). Make at least 2 runs across the patch and continue all the way to top of liner at 7,926 ft. POOH and lay down scratcher.
 - **Note:** The 8-5/8" casing below the Homco casing patch will be scratched / brushed, not scraped, due to ID restrictions caused by the patch. When running brushes the rig should make several passes turning one-quarter turn each time to clean the casing.
 11. PU and RIH with positive ID scraper (6-5/8", 27.65#, K-55 pipe) inside 6-5/8" production liner to top of the tubing stub at ~8,140 ft.
 12. PU and RIH with RBP and set in the production liner at 8,130 ft. Place 15 feet of sand on top of RBP.
 13. MIRU Baker WL and 5M lubricator and run the following 8 5/8" casing inspection logs (inspection logs are performed in support of the RCA).
 - Run #1: JB-GR-GR-CCL from 7,926 ft to surface
 - Run #2: ICAL from 7,926 ft to surface
 - Run #3: Baker HRVRT log from 7,926 ft to surface

- Run #4: Versa-Line MID-3 log from 850 ft to surface
14. MIRU Schlumberger WL and 5M lubricator and run the following 8 5/8" casing inspection logs.
 - Run #5: PNX log from 7,926 ft to surface
 - Run #6: IBC-SSCAN log from 8,056 ft to surface (**Note:** the USIT/CBL will be run across both 8 5/8" and the top 130 ft of 6 5/8" production liner).
 - Run #7: UCI-APS-NEXT log from 7,926 ft to surface
 - Run #8: CPET log from 7,926 ft to surface
 15. RDMO WL.
 16. RU the DE filtering system.
 17. RIH with 3-1/2" work string to the TOL and C&C and filter the 3% KCl brine in the well to ≤10 NTU's. POOH.
 18. SD and wait for 24 hrs.
 19. MIRU WL and run the EV downhole camera from surface to TOL at 7,926 ft.
 20. RDMO WL.
 21. PU and RIH with RBP retrieving tool. Circulate on top of RBP at ~8,130 ft inside 6-5/8" liner till returns are clean. Latch on to RBP and POOH and lay down RBP.
 22. PU & MU overshot, bumper sub, jars, collars and intensifier.
 23. Circulate well and engage tubing stub at ~8,140 ft.
 24. Release HES packer and circulate well to remove gas.
 25. POOH and LD packer.
 26. RIH with fishing BHA: spear, bumper sub, jars, 2- 4.5" drill collars, intensifier, 7 joints of 2 7/8" tubing x-over to 3.5" tubing; attempt to shear the Otis Permatrieve packer. POOH with spear and packer.
 27. RIH with a bumper sub and 5-5/8" drill bit into 6-5/8" liner and drill out cement and Baker Model N permanent BP at 8,603 ft. Push the remaining pieces of BP to bottom of the liner. POOH and lay down drill bit.
 28. MIRU WL unit and run Gyro from PBTD to surface.
 29. Run noise and temperature log from PBTD to surface.
 30. RDMO WL.
 31. Evaluate Cement Bond Log for the quality of cement bond across and above the hydrocarbon / critical intervals.
 32. Cementing: Notify DOGGR to witness cementing. RIH with work string open ended and lay down a continuous ~1,100 ft 14.8 ppg cement plug in 3 of ~367 ft long increments starting at the bottom of wellbore all the way to 7,800 ft.
 33. Pull 7 stands and leave the well closed overnight for cement to set.
 34. The next day tag TOC. Notify DOGGR to witness cement tag.
 35. Press test 8-5/8" casing to 500 psi. Notify DOGGR to witness pressure test.

36. Stop the work for log evaluation.

37. Prepare a Supplementary Notice to Rework to cover the remaining P&A operations from 7,800 ft back to 830 ft.