

CONOCOPHILLIPS COMPANY
WARREN UNIT #33
API #30-025-25044
REPAIR TUBING/PACKER LEAK AND REACTIVATE

A. History/Justification

The purpose of the proposed project is to repair a suspected tubing/packer leak and return the Warren Unit #33 to injection. The well has pressure on the casing after it passed a mechanical integrity test, just after it was worked over. The Warren Unit #33 supports 5 offset Warren Blinebry-Tubb producers..

B. Well Category:

Well Category 2.. This well is not capable of hydrocarbon flow. Class 2, 3000 psi, Hydraulic BOP is recommended. **ONE BOP EXCEPTION:** One untested barrier – dynamic fluid column.

C. Recommended Procedure

1. If well will backflow, MI and set frac tank and back flow well to frac tank.
2. MIRU well service unit. RU pump truck and pump down tubing to kill well if needed. ND WH and NU shop tested, Class 2 Hydraulic BOP and environmental tray.
3. Pull additional tension +/- 2 points on packer in an attempt to get the packer to seal. PT to #500. If doesn't test, proceed to Step 4.
4. Unset Arrowset 1XS packer. Pull up hole and reset packer within 100' of top perf (between 5806' - 5,906'). Pull 12 point tension. Re-PT to #500. If doesn't test, proceed to Step 5.

Note: Well cannot be reactivated if packer is set more than 100' above top perf (5906') as per regulatory requirements. Current PKR set @ 5813' this only gives you 7' to move up.

5. Unset Arrowset 1XS packer. Pull up hole and reset packer above 5806'. Pull 12 point tension. Inject water over night into well with rig on location. The next day, check if there is any backside pressure and notify production engineer.

If backside pressure exists, ND BOP, NU WH, and RDMO well service rig pending orders.
If no backside pressure, run casing inspection log, wait on orders and proceed to Step 6.

6. Set Arrowset 1XS packer @ specified depth based on log within 100' of top perf (between 5806' - 5,906'). Pull 12 point tension. PT to #500.

If tests, ND BOP and NU WH. RDMO well service rig. Connect surface lines. Notify NMOCD to witness mechanical integrity test. Pressure test casing to 500 psig for 30 minutes, recording test using circular chart. Turn well over to Operations. Place well on water injection. Report injection rate and injection pressure in morning report. Submit change of status report.
If doesn't test, ND BOP, NU WH, and RDMO well service rig pending orders.

Conditions of Approval

ConocoPhillips Co.
Warren Unit 33
API 30-025-25044

Work to be completed by 9/22/15.

1. Due to being within the Lesser Prairie Chicken habitat, this workover activity will be restricted to the hours of 9:00am through 3:00am for the period of March 1 through June 15. Exceptions to these restrictions may be granted by BLM's Johnny Chopp <jchopp@blm.gov> 575.234.2227
2. Subject to like approval by the New Mexico Oil Conservation Division.
3. Notify BLM 575-393-3612 as work begins. Some procedures are to be witnessed. If there is no response leave a voice mail with the API#, workover purpose, and a call back phone number. Note the contact, time, & date in your subsequent report.
4. **Before cement is pumped, casing or a liner is added, replaced, or repaired prior BLM approval of the design is required. Use notice of intent Form 3160-5.**
5. Surface disturbance beyond the existing pad shall have prior approval.
6. A closed loop system is required. The operator shall properly dispose of drilling/circulating contents at an authorized disposal site. Tanks are required for all operations, no excavated pits.
7. Functional H₂S monitoring equipment shall be on location.
8. All waste (i.e. trash, salts, chemicals, sewage, gray water, etc.) created as a result of work over operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area. Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

Well with a Packer - Operations

- 1) Conduct a Mechanical Integrity Test of the tubing/casing annulus after a tubing, packer or casing seal is established.
- 2) The minimum test pressure should be 500 psig for 30 minutes or 300 psig for 60 minutes, with a minimum 200 psig differential between tubing and casing pressure (at test time) but no more than 70% of casing burst pressure as described by Onshore Order 2.III.B.1.h. (The tubing or reservoir pressure may need to be reduced). Verify all annular casing vents are plumbed to surface and those valves open to the surface during this pressure test. An alternate method for a BLM approved MIT is to have the fluid filled system open to atmospheric pressure and have a loss of less than five barrels in 30 days witnessed by a BLM authorized officer.

- 3) Document the pressure test on a one hour full rotation calibrated (within 6 months) recorder chart registering within 25 to 85 per cent of its full range. Greater than 10% pressure leakoff will be viewed as a failed MIT. Less than 10% pressure leakoff will be evaluated site specifically and may restrict injection approval.
- 4) Make arrangements 24 hours before the test for BLM to witness. In Lea County phone 575-393-3612. If no answer, leave a voice mail or email with the API#, workover purpose, and a call back phone number
- 5) Submit a subsequent Sundry Form 3160-5 relating the MIT activity. Include a copy of the recorded MIT pressure chart. List the name of the BLM witness, or the notified person and date of notification. NMOCD is to retain the original recorded MIT chart.
- 6) Use of tubing internal protection, tubing on/off equipment just above the packer, a profile nipple, and an in line tubing check valve below the packer or between the on/off tool and packer is a "Best Management Practice". The setting depths and descriptions of each are to be included in the subsequent sundry.
- 7) **Submit the original subsequent sundry with three copies to BLM Carlsbad.**
- 8) Compliance with a NMOCD Administrative Order is required, submit documentation of that authorization.
 - a) Approved injection pressure compliance is required.
 - b) If injection pressure exceeds the approved pressure you are required to reduce that pressure and notify the BLM within 24 hours.
 - c) When injection pressure is within 50 psig of the maximum pressure, install automation equipment that will prevent exceeding that maximum. Submit a subsequent report (Sundry Form 3160-5) describing the installed automation equipment within 30 days.
- 9) Unexplained significant variations of rate or pressure to be reported within 5 days of notice.
- 10) The casing/tubing annulus is required to be monitored for communication with injection fluid or loss of casing integrity. A BLM inspector may request verification of a full annular fluid level at any time.

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