

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

N.M. Oil Cons. Division
1625 N. French Dr.
Hobbs, NM 88240

APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993
Lease Designation and Serial No.
LC/031670(A)/LC031695(A)

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

CONOCO INC.

3. Address and Telephone No.

10 DESTA DR. STE. 100W, MIDLAND, TX. 79705-4500 (915) 686-5424

4. Location of Well (Footage, Sec., T. R. M. or Survey Description)

Section 30, T-20-S, R-38-E
660 FNL & 990 FEL

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

8. Well Name and No.

SEMU # 157

9. API Well No.

30-025-35538

10. Field and Pool, or Exploratory Area

North Hardy Tubb Drinkard

11. County or Parish, State

Lea Co., NM

CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

- ☒ Notice of Intent
☐ Subsequent Repon
☐ Final Abandonment Notice

TYPE OF ACTION

- ☐ Abandonment
☒ Recompletion
☐ Plugging Back
☐ Casing Repair
☐ Altering Casing
☐ Other
- ☐ Change of Plans
☐ New Construction
☐ Non-Routine Fracrunng
☐ Water Shut-Off
☐ Conversion to Injection
☐ Dispose Water

(Note: Reponresultof multiplecompletiononWdl
Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Conoco recently drilled this well unsuccessfully to the Strawn. Conoco proposes to come up hole perforate and test the Tubb Drinkard using the attached procedure.

14. I hereby certify that the foregoing is true and correct

Signed

Kay Maddox

Title - Regulatory Agent (915) 686-5798

Date July 27, 2001

(This space for Federal or State office use)

Approved by

(ORIG. SGD.) ALEXIS C. SWOBODA

Title

PETROLEUM ENGINEER

Date

AUG 01 2001

Conditions of approval if any

BLM(6), NMOCD(1), SHEAR, PONCA, COST ASST, FILE ROOM

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

District I
PO Box 1980, Hobbs, NM 88241-1980

State of New Mexico
Energy, Minerals & Natural Resources Department

Revised February 21, 1994

District II
PO Drawer DD, Artesia, NM 88211-0719

OIL CONSERVATION DIVISION

instructions on back

District III
1000 Rio Brazos Rd. Aztec, NM 87410

PO Box 2088

Submit to Appropriate District Office

Santa Fe, NM 87504-2088

State Lease - 4 Copies

District IV
PO Box 2088, Santa Fe, NM 87504-2088

Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

| | | | | | |
|----------------------------|--|---|--|--|------------------------|
| API Number 30-025-35538 | | 2 Pool Code | | 3 Pool Name North Hardy Tubb Drinkard | |
| 4 Property Code 13492 | | 5 Property Name SEMU | | | 6 Well Number # 157 |
| 7 OGRID No. 005073 | | 8 Operator Name Conoco Inc., 10 Desta Drive, Ste. 100W, Midland, TX 79705-4500 | | | 9 Elevation 3530 |

10 Surface Location

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| A | 30 | 20S | 38E | | 660 | North | 990 | East | Lea |

11 Bottom Hole Location If Different From Surface

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| | | | | | | | | | |


| | | | |
|--------------------------|--------------------|-----------------------|--------------|
| 12 Dedicated Acres 40 | 13 Joint or Infill | 14 Consolidation Code | 15 Order No. |
|--------------------------|--------------------|-----------------------|--------------|

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

| | | | |
|----|--|--|--|
| 16 | | | |
| | | | |
| | | | |
| | | | |

17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief

| | |
|---|------------------|
|  | |
| Signature | Kay Maddox |
| Printed Name | Regulatory Agent |
| Title | July 27, 2001 |
| Date | |

18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

| | |
|--|--|
| Date of Survey | |
| Signature and Seal of Professional Surveyor: | |
| Certificate Number | |

SEMU No. 157
Tubb/Drinkard Completion Procedure
June 27, 2001

Spud Date: May, 2001
Last Action To Well: Nipped up tubing head and release drilling rig.

Location: 660' FNL & 990' FEL of Sec. 30, T20S, R38E
Zone (Pool): North Hardy Tubb/Drinkard
Battery: North Hardy Strawn Battery

TD: 7875'
PBTD: 7828' (Depth of float collar)
Stage Collar: 3916'

Ground Elevation: 3530'
KB Elevation: 3541' (11' ABGL)

Cementing Summary:

First stage cemented with 280 sks 50/50 Poz Class C with 10% bentonite. Tailed in with 500 sks 15/61/11 PoZ Class C: CSE. Circulated 52 bbls to surface after opening stage tool.

Second stage cemented with lead slurry of 890 sks of 50/50 Poz Class C cement containing 10% gel followed by tail slurry of 100 sks of 15:61:11 Poz Class C cement. Circulated 35 bbls of cement to surface.

Completion Summary:

This procedure will test the upper Drinkard zone and if productive will be commingled with the Tubb sometime after the Tubb has been completed. The Drinkard completion will consist of perforating using standard 4" casing guns followed by a small acid breakdown. After swab testing the Drinkard a decision will be made to either temporarily abandon the zone with a RBP or permanently abandon with a CIBP and cement.

The Tubb will then be perforated and sand frac'd via the 5 1/2" casing similar to other recent Tubb completions. It is expected that the Tubb will be similar to the No. 154 well and will be completed as a flowing gas well or possibly a high GOR flowing oil well. The well will be tested using temporary testing facilities then shut-in until a flowline can be layed to the SEUM Strawn battery. This well will have an oil allowable of 142 BOPD if completed as an oil well or an allowable of 1.4 MMCFGPD if completed as a gas well.

| | | | <u>Burst</u> | <u>Collapse</u> | <u>Drift</u> |
|-----------------|------------------------------|-------------|---------------------|------------------------|---------------------|
| Casing: | 8 5/8", 24 #/ft | 0 to 1,515' | | | |
| | 5 1/2", 17 #/Ft., J-55, LT&C | 0 to 7,872' | 5,310 | 4,910 | 4.767 |
| Proposed | | | | | |
| Tubing: | 2 7/8", J-55, 6.5#/Ft., EUE | | 7,260 | 7,680 | 2.347 |

ESTIMATED RESERVOIR INFORMATION:**Wellbore Fluids:**

Tubb Gas or $\pm 38^\circ$ API oil with sour (1200-1400 ppm H₂S),
 Drinkard $\pm 38^\circ$ API oil with sour (1200-1400 ppm H₂S),

Proposed Perforations:

| | | | <u>NEP</u> | <u>Shots</u> |
|-----------------|-----------------------|----------------|-------------------|---------------------|
| Drinkard | Standard 4" | 6790' to 6802' | 12' | 49 |
| | Hollow Carrier | 6810' to 6822' | 12' | 49 |
| | | 6828' to 6834' | <u>6'</u> | <u>25</u> |
| | Total Drinkard | | 30' | 123 |
| Tubb | Standard 4" | 6463' to 6470' | 7' | 29 |
| | Hollow Carrier | 6500' to 6512' | <u>12'</u> | <u>49</u> |
| | Total Tubb | | 19' | 78 |

Tubb Temp/Press: 105°F / 2450 PSI (assuming 0.38 psi/ft gradient)

Drinkard Temp/Press: 105° F/ 2600 PSI (assuming 0.38 psi/ft gradient)

Expected Production: Tubb 1.5 MMCFGPD & 20 BOPD
 Drinkard 20 BOPD & 100 MCFG (Possible watercut)

Procedure:

1. RU workover rig. Install BOP stack and test to 3,000 PSIG according to SOP's. PU 4 3/4" bit, casing scrapers and drill collars on 2 7/8", J-55 tubing and TIH to drill out the stage collar at 3916'. Continue to TIH to tag PBTD at 7,828'. Circulate hole clean with 8.6 ppg brine water. TOOH with tubing.
2. RU electric line company. Install lubricator with packoff and RIH with CBL and log from PBTD to 200' above TOC or 200' inside surface pipe. Run main log under 1000 PSIG, be prepared to be able to run log under 2,000 PSIG if required. Note: Cement was circulated to surface on both stages.
3. Pressure test casing to 4,500 PSIG (maximum anticipated reservoir pressure). This is 85% of the rated burst pressure of the casing.
4. TIH with 4" hollow carrier perforating guns loaded 4 JSPF with 19 gm charges in 120 degree phasing to perforate the following Drinkard intervals:

Safety Note: All 2-way radios and phones are to be turned off while perforating for a distance of 500'. Warning signs are to be posted on all incoming roads.

| | | <u>NEP</u> | <u>Shots</u> |
|-----------------|-----------------------|------------|--------------|
| Drinkard | 6790' to 6802' | 12' | 49 |
| | 6810' to 6822' | 12' | 49 |
| | 6828' to 6834' | <u>6'</u> | <u>25</u> |
| | Total Drinkard | 30' | 123 |

5. TIH with 2 7/8", J-55 production tubing with 5 1/2" CS-1 treating packer. Hydrostatically testing tubing to 6,500 PSIG. Set the packer at 6,750'. Prepare for acid breakdown.
6. Set a temporary test tank.
7. RU BJ. RU treating line. Test treating lines to 6,000 PSIG against treating valve. Release pressure, set treating line nitrogen actuated relief valve to 5,500 PSIG and test. Open the casing valve and leave open to the pit during breakdown. Pump acid breakdown treatments as follows:
 - a.) Breakdown the interval from 6790' to 6834' by pumping 3000 gals of 15% NEFE. Pump at 5 BPM dropping 175, 1.3 SG, 7/8" RCN ball sealers. Maximum treating pressure will be 5,000 PSIG. Displace treatment to bottom perforation.

| | | |
|---|-------------|-------------|
| TREATING LINE TEST PRESSURE: A minimum 1000 psig over MATP | 6000 | PSIG |
| MAXIMUM ALLOWABLE WORKING PRESSURE: Based on weakest component in system | 6500 | PSIG |
| NITROGEN POP OFF SET PRESSURE: Relief pressure set at the lesser of : 300 psig less than 90% MAWP or, 300 psig over MATP | 5500 | PSIG |
| MAXIMUM ALLOWABLE TREATING PRESSURE: If reached, human action required. | 5000 | PSIG |
| MAXIMUM ANTICIPATED TREATING PRESSURE: Based on frac design | 4000 | PSIG |

8. RD BJ and swab test the Drinkard to the test tank. If the Drinkard is considered to be non-commercial a CIBP will be set at 6,750' (40' above the top perforation) and 35' of cement will be placed on the CIBP for permanent abandonment. If the Drinkard is considered to be commercial, PU 5 1/2" loc-set RBP and TIH on 2 7/8" tubing to set at 6750'. Load the hole and pressure test plug to 4500 PSIG. TOOH with tubing.

9. RU electric line company. Install lubricator with a pack-off and RIH with 4" hollow carrier perforating guns loaded 4 JSPF with 19 gm charges in 120 degree phasing to perforate the Tubb interval interval as follows:

Safety Note: All 2-way radios and phones are to be turned off while perforating for a distance of 500'. Warning signs are to be posted on all incoming roads.

| | | | <u>NEP</u> | <u>Shots</u> |
|------|-------------------|----------------|------------|--------------|
| Tubb | Standard 4" | 6463' to 6470' | 7' | 29 |
| | Hollow Carrier | 6500' to 6512' | 12' | 49 |
| | Total Tubb | | 19' | 78 |

10. TIH with 2 7/8", J-55 production tubing with 5 1/2" CS-1 treating packer. Set the packer at 6450'.
11. RU BJ and perform 2,000 gal 15% NEFE acid breakdown. RU treating line with remote automated ball injector. Load the casing and test the casing and packer to 4,500 PSIG. Release the pressure on the casing and leave open to the pit during breakdown. Test treating lines to 6,000 PSIG against treating valve. Release pressure, set treating line nitrogen actuated relief valve to 5,500 PSIG and test. Pump acid breakdown treatments as follows:
- Load tubing with 40 bbls treated slick water.
 - Pump 2000 gals (48 bbls) 15% HCL at 5 BPM dropping 125, 7/8", 1.3 SG ball sealers throughout the treatment.
 - Displace treatment with 42 bbls of treated slick water.
 - Release the packer and run the packer down to 6550' to clear the ball sealers off the perforations. PU and reset the packer at 6450'.
 - Pump 150 bbls of treated fresh water at 6 to 7 BPM and perform fluid leakoff diagnostics test. Monitor shut-in pressure decline for at least 30 minutes. RD BJ

| | | |
|---|-------------|-------------|
| TREATING LINE TEST PRESSURE: A minimum 1000 psig over MATP | 6000 | PSIG |
| MAXIMUM ALLOWABLE WORKING PRESSURE: Based on weakest component in system | 6500 | PSIG |
| NITROGEN POP OFF SET PRESSURE: Relief pressure set at the lesser of : 300 psig less than 90% MAWP or, 300 psig over MATP | 5500 | PSIG |
| MAXIMUM ALLOWABLE TREATING PRESSURE: If reached, human action required. | 5000 | PSIG |
| MAXIMUM ANTICIPATED TREATING PRESSURE: Based on frac design | 4000 | PSIG |

12. Release the packer and TOOH. ND BOP's and NU 7 1/16" 5K PSIG frac spool and valve. Test the frac valve to 4,500 PSIG.
13. RU BJ services to the 5,000 PSIG WP frac valve to sand frac the Tubb via 5 1/2" J-55 casing. Install treating line with a nitrogen actuated relief valve. Pump the Spectra G-3500 treatment as per attached BJ Services procedure. Treatment to be pumped at 40 BPM. Tag the frac with a single radioactive isotope.

Step Down Rate Procedure

- a.) Load the casing with 6,400 gals (152 bbls) of 2% KCL slick water. As soon as the casing is loaded increase the rate to 40 BPM. As soon as the slick water reaches the perforations continue to pump for 1 min. then step down the rate to 30 BPM and continue to pump for 1 min. Repeat at 20 BPM and 10 BPM rates.

Frac Procedure

- a.) Pump 1,000 gals (24 bbls) Spectra Frac G 3500
- b.) Pump 25,000 gals (595 bbls) Spectra Frac G 3500 Pad containing 0.5 ppg 100 mesh sand with 50 ppt S-8 (silica flour)
- c.) Pump 3,000 gals (71 bbls) Spectra Frac G 3500 Pad
- d.) Pump 7,000 gals (167 bbls) Spectra Frac G 3500 with 2 to 5 ppg 16/30 Tempered LC
- e.) Pump 7,000 gals (167 bbls) Spectra Frac G 3500 with 5 to 8 ppg 16/30 Tempered LC
- f.) Pump 7,000 gals (167 bbls) Spectra Frac G 3500 with 8 to 10 ppg 16/30 Tempered LC
- g.) Pump 4,000 gals (95 bbls) Spectra Frac G 3500 with 10 ppg 16/30 Super LC with 5 gpt Superset O
- h.) Pump 6,100 gals (145 bbls) Base Gel Flush (2 bbls short of top perf)

| | | |
|---|-------------|-------------|
| TREATING LINE TEST PRESSURE: A minimum 1000 psig over MATP | 5000 | PSIG |
| MAXIMUM ALLOWABLE WORKING PRESSURE: Based on weakest component in system – Highest test pressure | 4500 | PSIG |
| NITROGEN POP OFF SET PRESSURE: Relief pressure set at the lesser of : 300 psig less than 90% MAWP or, 300 psig over MATP | 4300 | PSIG |
| MAXIMUM ALLOWABLE TREATING PRESSURE (MATP): If reached, human action required. | 4000 | PSIG |
| MAXIMUM ANTICIPATED TREATING PRESSURE: Based on frac design | 2900 | PSIG |

14. Shut down and record ISIP, 5, 10 and 15 minute pressures. RD BJ.
15. Flow back to the pit until the well cleans up or dies. RD frac valve and spool. If necessary, kill the well with 8.6 ppg brine water prior to rigging down frac valve.
16. NU BOP and test to 3,000 PSIG according to SOP's.
17. PU 4-3/4" bit and RIH w/ tubing. Tag sand and clean out wellbore to the RBP or CIBP at 6,750'. POOH with bit and tubing.
18. PU 2 7/8", J-55 production tubing and the production bottom assembly as follows:
 - a) wireline re-entry guide with a 2.19" ID No-Go "R" profile nipple
 - b) 5 1/2", MX 1 packer
 - c) 2 7/8", J-55 tubing to surface
19. Space out the packer at 6,400'. Reverse circulate packer fluid. Set the packer and land the tubing in the tubing head. . Install back pressure valve in tubing hanger. Remove the BOP stack and install a 5,000 WP production tree (2 9/16" single master valve, flow tee, 2 1/16" wing valve with 64/64" adjustable choke & 2 9/16" swab valve.) Remove BPV.
20. Install a flow manifold, a temporary separator with a flare and a test tank. Swab well to initiate flowback to the temporary test tank. Once it begins to clean up switch the well into the test separator until the well completely cleans up. After cleanup shut the well in until the flowline and separator are installed. RD and move off.
21. MIRU ARC. Run post-treatment gamma ray/CCL memory log over Tubb perforated intervals to determine placement of fracture fluids and proppant. POOH with logging tool. RDMO wireline company.
22. Once the permanent facilities are installed open the well and produce it at a constant rate for a 30 day period. At the end of the flow period RU ARC wireline service and RIH with tandem bottom hole pressure bombs and land in the "R" profile nipple. Release wireline and shut-in well to conduct 7-day pressure buildup. Retrieve bombs and return the well to production through the production facilities.