New Mexico Oil Conservation Division, Dist.
1625 N. French Dr.
Hobbs, NM 88240

Form 3 160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 10 04-0135
Expires: March 3 1, 1993

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 TRIPLICA TE

5. Lease Designation and Serial No.: LC 031670A

6. If Indian, Allonee or Tribe Name:

7. If Unit or CA, Agreement Designation:

1. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No: SEMU # 21

2. Name of Operator: ~~CONOCO INC~~ CONOCO INC.

9. API Well No: 30-025-07816

3. Address and Telephone No.: 10 DESTA DR. STE. 100W, MIDLAND, TX. 79705-4500 (915) 686-5424

10. Field and Pool, or Exploratory Area: Warren Tubb Gas (87080)

4. Location of Well (Footage, Sec., T R., M. or Survey Description): Section 19, T-20-S, R-38-E, 660' FSL & 1980' FEL

11. County or Parish, State: Lea Co., NM

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

TYPE OF SUBMISSION	TYPE OF ACTION	
☒ Notice of Intent	☐ Abandonment	☐ Change of Plans
☐ Subsequent Repon	☒ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracrunng
	☐ Casing Repair	☐ Water Shut -Off
	☐ Altering Casing	☐ Conversion to Injection
	☐ Other _____	☐ Dispose Water

(Note: Repo nres ults of multiple compition on Wdl Completion or Recompletion Report and Log form.)

13. Describe Proposed or Compieted 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 proposed to recomplete this well to the Tubb using the procedure attached on the April 11, 2001 (approved April 19, 2001) sundry. That procedure stated that the Blinebry perforations (5833-6094") would remain open. The new attached procedure states that the Blinebry perforations will be squeezed off. The RBP set at approximately 6150' cemented with 100 sxs class C cmt.

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

Signed Kay Maddox Title Kay Maddox - Regulatory Agent (915) 686-5798 Date January 9, 2002

(This space for Federal or State office use)

Approved by (ORIG. SGD.) ALEXIS C. SWOBODA Title PETROLEUM ENGINEER Date JAN 10 2002

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

SEMU Burger #21
Tubb Recompletion
January 2002

WELL INFORMATION:
(Wellview file is currently not loaded)

AFE #:	9048
Spud Date:	3/29/50 (Deepened to 8,000 in 1969)
Last Action to well:	Changed out pump (1/22/99)
API Number:	300250781600
Location:	660' FSL and 1980' FEL, Sec 19 (O)-T20S-R38E, Lea County, NM
Recompletion Zone:	Warren Tubb Gas Pool
Battery Destination:	SEMU Permian Battery
Total Expected Prod.:	250 MCFD
TD:	9,730'
PBTD:	7,250'
GLE:	3,533
KBE:	3,546'
AGL:	13'

Casing Specifications:

Pipe	Depth (ft)	Drift ID (in)	Collapse (psi)	Burst (psi)	Capacity (bbl/ft)
Surface: 13-3/8", 48#, H-40	263	-	-	-	-
Intermediate: 9-5/8", 36#, J-55	3,697	8.765	2,020	3,520	.0773
Production: 7", 23#, J-55	0 - 4,914	6.241	3,270	4,360	.0394
7", 20#, J-55	4,914 - 8,000	6.331	2,270	3,740	.0405
Cemented 1st stage with 650 sx Class "C" cement. Cemented 2nd stage with 650 sx light weight cement with 5# Gilsonite and ¼# flow seal per sx. Had full returns while cementing. TOC at 5,300' based on 7/10/74 Bond Log.					

Note: Collapsed casing at 6,750'

Tubing Specifications:

Pipe	Depth	Drift ID (in)	Collapse (psi)	Burst (psi)	Capacity (bbl/ft)
2-7/8", 6.5#, J-55, EUE 8rd	6,850	2.347	7,680	7,260	.00579
4-1/2" 15.5#, C-75, EUE8rd	+/- 6,300	3.833	10,392	9829	.01422

RECOMMENDED PROCEDURE AND NOTES

Notes:

1. All depths in this procedure are referenced from KB unless noted otherwise.
2. Please give service companies 48 hours advance notice prior to performing work on the well.
3. Hold prejob safety meetings prior to beginning any new work.

Safety Precautions:

1. Smoking will not be allowed within 100' of the wellhead and only in designated areas.
2. All on-site personnel are to wear safety glasses with side-shields, steel-toed boots, plastic hardhats, and 100% cotton outerwear at all times.
3. Eye protection and hand protection should be worn when handling acid/chemicals. Eye protection should be worn when there is the potential for acid/chemicals to blow or splash into the eyes.
4. While the perforating guns are in the open, radio's will not be used within 500' of the location. Signs indicating this will be placed on all access roads (signs will be provided by the perforating company).
5. The service company should bring communication devices for each individual operating pumps/valves and for the field engineer.
6. Fresh water will be on location in case of accidental discharge or an emergency (water to be provided by the treating company). Emergency shower trailer will be available and ready for use (and tested) when acidizing.
7. Eye wash bottles should be available and ready for use. All on-site personnel should be aware of the location of these bottles.
8. Only personnel needed for the job will be allowed on location. Only perforating company personnel will be allowed to handle the perforating guns.
9. Hold tailgate safety meetings daily prior to any work being performed. Determine safe location where all personnel will meet in the event of an emergency.
10. See attached Pre-Job Safety Assessment sheet.

Kill Fluids:

- 8.6 ppg brine (completion fluid)

Frac Fluids/Breakdown Fluids:

- As per BJ Services specs/procedure

TUBB RECOMPLETION PROCEDURE

1. MIRU workover rig. Unseat pump and POOH with rod string and lay down. Send rods and pump in to be inspected.

2. ND wellhead and NU 7-1/16", 5M BOP stack and test to 2000 PSIG as per SOP.

3. RU wellhead inspection services and scan out with ±6,850' of 2-7/8", 6.5#/ft, J-55 tbg. Rack back API blue band or better tbg to re-run in well.

4. PU bit and casing scraper for 7", 23#/ft, J-55 csg. (drift = 6.241") on 2-7/8" tbg. TIH to 6,720'. POOH.

5. RUWL RIH and set a CIBP at 6,700". Dump 35' cement on CIBP. RDWL.

6. NDBOP. Change out the 11' X 2000# X 7-1/16" X 2000# tubinghead to 11" X 2000# X 7-1/16" X 3000# to accommodate the annular pressure required during the stimulation. NU and retest BOP to 3000 psi.

7. PU a 7" CS-1 packer and Loc-Set RBP on 2-7/8" tbg. RIH to set packer at ±6,150 (bottom Blinebry perf at 6,094'). Test casing 2,500 PSIG. Release packer to re-set at 5,780' (top Blinebry perf at 5,833'). Load the annulus and test to 2,500 PSIG. If both above tests are good, set RBP at 6,150'. POOH with packer and tbg.

8. TIH with open-ended 2-7/8" tbg. Attempt to circulate hole clean with fresh water. Circulate ±875 lbs of 20/40 sand on top of RBP. PU tbg about 1,000' and let sand fall on top of RBP. Estimate should leave ±36' of fill based on 24.3171# sand/ft in 7", 20#/ft csg. RIH and tag top of sand to ensure proper placement (should be within 20' of lowest Blinebry perf).

9. RU BJ Services. Squeeze Blinebry perforations as per BJ Services recommendations. WOC while holding pressure on squeeze. POOH with tbg.

10. PU and RIH with bit and drill collars to tag top of cement. Drill out cement and test squeezed perfs to 2,500 PSIG. If squeeze holds continue in hole to clean out to RBP at 6,150'. POOH with bit and collars.

11. RIH with retrieving tool on 2-7/8" tbg to RBP. Wash remaining sand and displace hole w/ completion fluid. Release RBP at 6,150' and POOH.

12. RU wireline services. Make-up packoff lubricator to BOP. TIH with 4" HSC casing guns with 19 gm charges loaded at 2 SPF, 120° phasing (0.48" diam.;19" pen.) to perforate the Tubb interval. Correlate perforations to PDK-100 Gamma Ray/CCL log dated July 11, 2001.

    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.

	Interval	NEP (ft)	Shots (@ 2 SPF)
Tubb	6,429' - 6,433'	4	9
	6,444' - 6,452'	8	17
	6,479' - 6,487'	8	17
	Total	20	43

    POOH with perforating gun. RD wireline services.

13. PU a 15' spaced PPI tool on 2-7/8" tbg. Drop a standing valve to close the bottom packer of the PPI tool.

14. RU BJ Services. Install a treating line with a nitrogen actuated relief valve and a remote actuated ball injector. Load the annulus with 8.6 ppg brine and monitor for leaks during acid job. Test the treating line before testing and setting the N_2 actuated relief valve.

15. Pump a total of ±1,000 gals of 15% NEFE-HCL acid across the Tubb interval. Displace the acid with 8.6 ppg brine water.

16. Release the PPI tool and PU above the top Tubb perf. Set the packer at 6,300'. Fish the standing valve prior to acid stimulation. Install and test a 2nd nitrogen pop off valve on annulus side. Pressure the annulus to 2,000 PSIG and maintain pressure during entire job. Perform an acid breakdown using ±2,000 of 15% NEFE-HCL acid. Divert the acid with 7/8", 1.3 s.g. ball sealers. Pump the acid breakdown as per BJ Services recommendation. Displace the acid to the bottom perforation.

TREATING LINE TEST PRESSURE: A minimum 1000 psig over MATP	**5,270**	**PSIG**
MAXIMUM ALLOWABLE WORKING PRESSURE: Based on weakest component in system – Highest test pressure **2270-collapse of casing + 2000 PSIG applied annular pressure.**	**4,270**	**PSIG**
NITROGEN POP OFF SET PRESSURE: Relief pressure set at the lesser of : **300 psig less than 90% MAWP or,** **300 psig over MATP**	**3,800** **2,300 - annulus**	**PSIG** **PSIG**
MAXIMUM ALLOWABLE TREATING PRESSURE (MATP): If reached, human action required.	**3,500**	**PSIG**
MAXIMUM ANTICIPATED TREATING PRESSURE: Based on frac design	**2,714**	**PSIG**

17. Record ISIP, 5, 10, and 15 min SI pressures.

18. Unload the well to a tank until the pressure bleeds off. Release packer and RIH through perfed interval to knock off balls. POOH with PPI tool and 2-7/8" tbg string

19. Change pipe rams to 4-½" and test to 3000 psi. Have available a 4-½" X 2-7/8" change over for TIW valve.

20. Install a frac tube inside a CS-1 treating packer (8,000 PSIG differential) suitable for 7", 20#, J-55 csg. PU and RIH on 4-½" tbg. Set the packer at ±6,200. Land tubing. NU 4-1/16" Frac Tree. Test Adapter to 3000 psi. Test tree to 6000 psi. Prepare to sand frac the Tubb interval down 4-½" tbg.

21. Install a treating line with a nitrogen actuated relief valve. Install a 2nd nitrogen actuated relief valve on the annulus side. Load the annulus with 8.6 ppg brine and maintain 2,000 PSIG during entire stimulation. See table below for pressure limits.

	Surface (PSI)
TREATING LINE TEST PRESSURE: A minimum 1000 psig over MATP	**6000**
MAXIMUM ALLOWABLE WORKING PRESSURE: Based on weakest component in system – Highest test pressure **Bottom hole Press = 2270 (collapse of csg) + 2,000 (applied annular press) = 4,270** **Surface Press = 4,270 (bottom hole) + 2594 (friction press) = 6864**	6,864
NITROGEN POP OFF SET PRESSURE: Relief pressure set at the lesser of : **300 psig less than 90% MAWP or,** **300 psig over MATP** *** ANNULAR POP OFF SET PRESSURE**	5800 * 2,300
MAXIMUM ALLOWABLE TREATING PRESSURE (MATP): If reached, human action required.	**5000**
MAXIMUM ANTICIPATED TREATING PRESSURE: Based on frac design **Max. Anticipated STP = BHFP – Hydrostatic Press + Fric. Press = 4,642 psi** **BHFP = 0.75 x 6458' = 4,844 psi** **Hydrostatic Press = 6,458' x .433 = 2,796 psi** **Friction Pressure = 2594 psi**	**4642**

Note: In case of a screen-out, the friction pressure would disappear and the pressure applied at the perfs would be = 4,844 PSIG. This is based on a friction pressure for 40 BPM of Spectra Frac-G down 4-½" tbg.

22. Perform a step-down test to obtain data that will be used to determine any near wellbore restrictions and fluid efficiency.

23. Pump the Spectra Frac G-3500 treatment as per BJ Services recommendation. Tag the frac with a single radioactive isotope. Ensure BJ is prepared to by-pass their sand tub during flush so as to not leave sand in the the 4-½" tbg.

24. Shut down and record ISIP, 5, 10, and 15 min SI pressures. RD BJ Services and leave well SI for +/-3 hrs to allow the cross-linked gel to break.

25. Flowback to a tank until the well cleans up or dies. ND Frac tree. NU 7-1/16", 5K BOP and test as per SOP to 3000 psi. POOH and lay down 4-½" treating string.

26. PU a bit and scraper for 7", 23#/ft csg on 2-7/8" tbg string. TIH to clean out sand and tag PBTD at 6,700'. POOH with bit and tbg.

27. MIRU wireline company. Run post-treatment gamma ray/CCL over the Tubb perforated interval to determine placement of fracture fluids and frac height. POOH with logging tool. RD wireline company.

28. PU and RIH with the following production assembly:

    - 2-7/8" wireline entry guide
    - 2-7/8" pup joint with a 2.25 R nipple
    - 7" model M1-X production packer (ID 1.938")
    - 2-7/8", 6.5#, J-55 production tbg to surface

29. Space the packer at +/-75' above the the top Tubb perforation Reverse circulate packer fluid up to the surface. Set the packer. ND BOP stack and NU a 2-9/16" production tree.

    Wellhead Specs:

    - 2-9/16" swab valve
    - 2-9/16" master valve
    - a flow tee
    - 2-1/16" wing valve
    - Axelson safe-o-matic valve with direct operation, set at 1000 PSIG

    Note: Facility Engineer to possibly change the pressure setting based on final facility design

30. Notify area operator. Send in weekly tests with pressures, volumes, and fluid levels until the well stabilizes.

Prepared by: Elicia Fajardo
Engineer
Hobbs OU
January 2, 2002

Attachments: BJ Stimulation Procedures