

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

HOBBS OCD
SEP 26 2013
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State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-101
Revised November 14, 2012

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

Operator Name and Address ConocoPhillips Company P. O. Box 51810 Midland, TX 79710		OGRID Number 217817
Property Code 31158		API Number 30 - 025-02888
Property Name Vacuum Abo Unit Tract 04		Well No. 05

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
A	26	17S	35E		990	North	330	East	Lea

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County

9. Pool Information

Pool Name	Pool Code
Upper Abo perfs @ 8611'-8641'	

Additional Well Information

Work Type Recomplete	Well Type Oil	Cable/Rotary Rotary	Lease Type State	Ground Level Elevation 3924' GL
Multiple yes	Proposed Depth 9100'	Formation Vacuum; Upper Abo	Contractor	Spud Date 08/14/1962
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

21. Proposed Casing and Cement Program

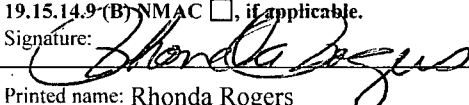

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
surf	15"	10 3/4"	32.75	330	450	surf
intermedia	9 7/8"	7 5/8"	26.4	3596'	2290	surf
Production	6 3/4"	5 1/2"	14 & 14.5	9100'	710	3434'

Casing/Cement Program: Additional Comments

Top of liner @ 3434'. Attached is procedure & wellbore schematic
During this procedure we plan to use the Closed-Loop System and haul content to the required disposal

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that I have complied with 19.15.14.9 (A) NMAC <input type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input type="checkbox"/> , if applicable. Signature:  Printed name: Rhonda Rogers Title: Staff Regulatory Technician E-mail Address: rogers@conocophillips.com Date: 09/24/2013 Phone: (432)688-9174		OIL CONSERVATION DIVISION Approved By:  Title: Petroleum Engineer Approved Date: 10/06/13 Expiration Date: 10/06/15 Conditions of Approval Attached
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OCT 08 2013

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State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-02888	² Pool Code	³ Pool Name Upper Abo
⁴ Property Code 31158	⁵ Property Name Vacuum Abo Unit Tract 4	⁶ Well Number 05
⁷ OGRID No. 217817	⁸ Operator Name ConocoPhillips Company	⁹ Elevation 3924' GL

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	26	17S	35E		990	North	330	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	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, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.	
	Signature 	Date 09/25/2013
	Printed Name Rhonda Rogers	
	E-mail Address rogersr@conocophillips.com	
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	

VACUUM ABO UNIT #4-05
Recompletion
UPPER ABO PROCEDURE
API # 30-025-02888

The scope of this procedure: to add pay in the upper Abo formation and sand frac new perforations, commingle with current Abo reef production.

Field: Vacuum (ABO)

Location: 930' FNL & 330' FEL, Section 26, T-17S, R-35E, Lea Co., NM.
Lat - 32° 48' 36.936" N Long 103° 25' 12.144" W

Depths: TD = 9,100' PBTB = 8,980'

Elevation: GL = 3924' KB = 14' KBM = 3938'

Spud Date: 08/14/1962

WELL CLASSIFICATION

This well has an anticipated gas rate and surface pressure less than 500 MCFD and 3000 psi. The Upper Abo formation is tight and not expected to produce without artificial lift.

Category 1 Wells

- Wells incapable of flowing gas or associated gas at rates greater than 500 MCFD at a land location.

Wells incapable of developing a 100 ppm H₂S ROE greater than 50 feet as defined in Equation 6-1 or the Nomograph (Figure 6-1)

Barriers requirement for Category 1 well:

- One untested barrier,

Class 2 BOP

- Land wells with a MPSP of 1000 psi or less, not located in a designated "sensitive area".
- Manual BOP's may be used if the 100 ppm H₂S ROE is less than the closing handle length of the BOP's. **For all other conditions hydraulic BOP's are required.**

HYDROGEN SULFIDE (H₂S) POISON GAS

Wells in this area and this well in particular may produce Hydrogen Sulfide (H₂S) poison gas. H₂S in high concentration is fatal. All persons arriving on location must have H₂S certification & training that occurred within the last year. All personnel must be clean shaven to allow a good seal around ones face and rescue breathing equipment. H₂S monitoring equipment will be rigged up and tested prior to executing work. Every occurrence of H₂S at surface is to be noted on the Well view daily reports. Reference ConocoPhillips' Hydrogen Sulfide Policy.

- The calculated 100 ppm H₂S radius of exposure once the ESP is down and the well is loaded is not anticipated to exceed 11 feet with a maximum H₂S level of 15,000 ppm
- Under producing conditions w/ ESP operating the calculated 100 ppm H₂S radius of exposure for the well is 38 feet with maximum H₂S level of 15,000 ppm
- The calculated 500 ppm H₂S radius of exposure once the ESP is down and the well is loaded is not anticipated to exceed 5 feet with a maximum H₂S level of 15,000 ppm
- Under producing conditions w/ ESP operating the calculated 500 ppm H₂S radius of exposure for the well is 17 feet with maximum H₂S level of 15,000 ppm
- Last Test: 0.2 bopd, 14 mcfpd, & 18 bwppd

PROCEDURE

Wellbore Preparation:

1. MI-RU WSU and ancillary equipment.
2. POOH with rods and pump. Visually inspect, laydown any bad rods, and stand the remainder back in the derrick. Send pump to shop for R&R.
3. Control well by feeding in inhibited brine. Ensure well is static prior to proceeding to next step.
4. ND wellhead and NU BOP. Ensure BOP is stump tested to 2,000 psi prior to MI-RU.
5. NU the following 3k psi BOPE according to standard ConocoPhillips policy.

- Two hydraulic rams (2 $\frac{3}{8}$ " pipe rams - top and blinds - bottom)
- Or
- One hydraulic ram (blinds) + one hydraulic annular

Either is acceptable per current COPC well control manual

6. Release and POOH with production tubing and TAC. Send TAC to shop for R&R. Visually inspect production tubing while POOH, lay down any bad joints, and stand remaining good tubing back in derrick. Note: It may be necessary to hydro-test tubing back in wellbore based on visually inspection
7. MI-RU hydro-test unit. Prepare to test production tubing to 6000 psi.
Note: all tubing tests will take place below slips/grade in the wellbore only.
8. PU-RIH with bit and scrapper on production tubing. Hydro-test tubing and then release hydro-test services.
9. Continue to 8670' to confirm wellbore is clear and open. POOH. Laydown bit.
10. TIH with treating packer and set @ 8650'±. Acidize the current perms from 8674-8854' with 5000 gals 15% HCL. Release packer and POOH. Lay down packer and stand tubing back in derrick.

Upper Abo Completion:

11. MIRU *Apollo* e-line services with packoff (note: use of lubricator shop tested to 2,000 psig is acceptable).
12. PU-RIH with Gamma Ray - CCL tools with casing gauge ring to 8670'± RKB.
Note- top existing perforation is located at 8674'.
13. PU-RIH w/CIBP along with the first perforating run. Set CIBP @ 8665'± RKB. Release from CIBP.
14. Perforate using 3 $\frac{1}{8}$ " Titan Slick Gun w/ deep penetrating charges (eh-0.43", pen - 42") or equivalent loaded at 4 SPF to accomplish 60 degree phasing. Perforate as follows:

Note: Correlate w/ Schlumberger GR-Sonic Porosity Log dated 09/09/1962

<u>Upper Abo</u>	<u>Feet</u>	<u>SPF</u>	<u>Shots</u>
8611' - 8641'	30	4	120

15. POOH with perforating gun(s) and inspect to verify number of shots fired. Record information in WellView.
16. RD-MO *Apollo* e-line services.
17. Replace 2 3/8" BOP pipe rams w\ 3 1/2" pipe rams. Retest BOP rams per standard ConocoPhillips policy. This BOP was shop tested to 2,000 psig.
18. MI-RU hydro-test services to test work string while RIH.
19. PU-RIH w\ treating packer for 5 1/2", 17#/ft casing on 3 1/2" (9.3#/ft, L-80) work string. Test 3 1/2" work string to 85% of burst pressure (8600 psi) below slips while RIH. Once on depth with work string, release hydro-test services.
20. Set treating packer @ 8,450'±. Place a pressure gauge on 3 1/2" work string - casing annulus, close pipe rams and monitor the 3 1/2" x 5 1/2" backside pressure throughout job.
Note: Install a spring operated relief valve, set no higher than 1,000 psi, on the 3 1/2" x 5 1/2" annulus.
21. Order Frac Tanks and Frac Fluids as directed by *Halliburton*.
22. MI-RU *Halliburton* stimulation services. RU frac valve directly onto 3 1/2" work string to frac the Upper Abo up to 30 bpm (see proposal). Bring adequate horsepower to accomplish up to 30 bpm @ 7,000 psi treating pressure. An acid ball-out will be part of the procedure, so a remote ball launcher and N2 operated relief valve are required. Install a spring operated relief valve, set no higher than 1000 psi, on the 3 1/2" x 5 1/2" annulus.

TREATING LINE TEST PRESSURE: A minimum 500 psig over MAWP. Acceptable test will be no more than 300 psi leak off in 5 minutes, with no more than 1% leak off in last minute, AND NO VISIBLE LEAKS).	8500	PSIG
MAXIMUM ALLOWABLE WORKING PRESSURE: Based on weakest component in system (85% of 3 1/2" L-80 workstring burst)	8,600	PSIG
NITROGEN POP-OFF SETTING: the valve is to be tested prior to pumping, and must pop within 500 psi of set pressure.	7800	PSIG
TRUCK KILL SETTING	7500	PSIG
MAXIMUM ALLOWABLE TREATING PRESSURE: If reached, human action required.	7100	PSIG
MAXIMUM ANTICIPATED TREATING PRESSURE: Based on frac design	7000	PSIG

Tubing (Surface)								
Trt Stage	Stage Desc	Flow Path	Fluid Desc	Rate Liq/Prop	Clean Vol	Proppant	Proppant Conc	Prop. Mass
1-1	Pre-Pad	IN	Water Frac G - R (8)	30	1000		0	0
1-2	Pad	IN	Hybor G - R (17)	30	20000		0	0
1-3	Proppant Laden Fluid	IN	Hybor G - R (17)	30	8000	Premium White-20/40	0.5	4000
1-4	Proppant Laden Fluid	IN	Hybor G - R (17)	30	10000	Premium White-20/40	1	10000
1-5	Proppant Laden Fluid	IN	Hybor G - R (17)	30	12000	Premium White-20/40	1.5	18000
1-6	Proppant Laden Fluid	IN	Hybor G - R (17)	30	12250	Premium White-20/40	2	24500
1-7	Proppant Laden Fluid	IN	Hybor G - R (17)	30	13000	Premium White-20/40	2.25	29250
1-8	Proppant Laden Fluid	IN	Hybor G - R (17)	30	16900	Premium White-20/40	2.5	42250
1-9	Proppant Laden Fluid	IN	Hybor G - R (17)	30	9000	CRC-20/40	2.5	22500
1-10	Flush	IN	Water Frac G - R (8)	30	3245		0	0
Totals					105395			150500

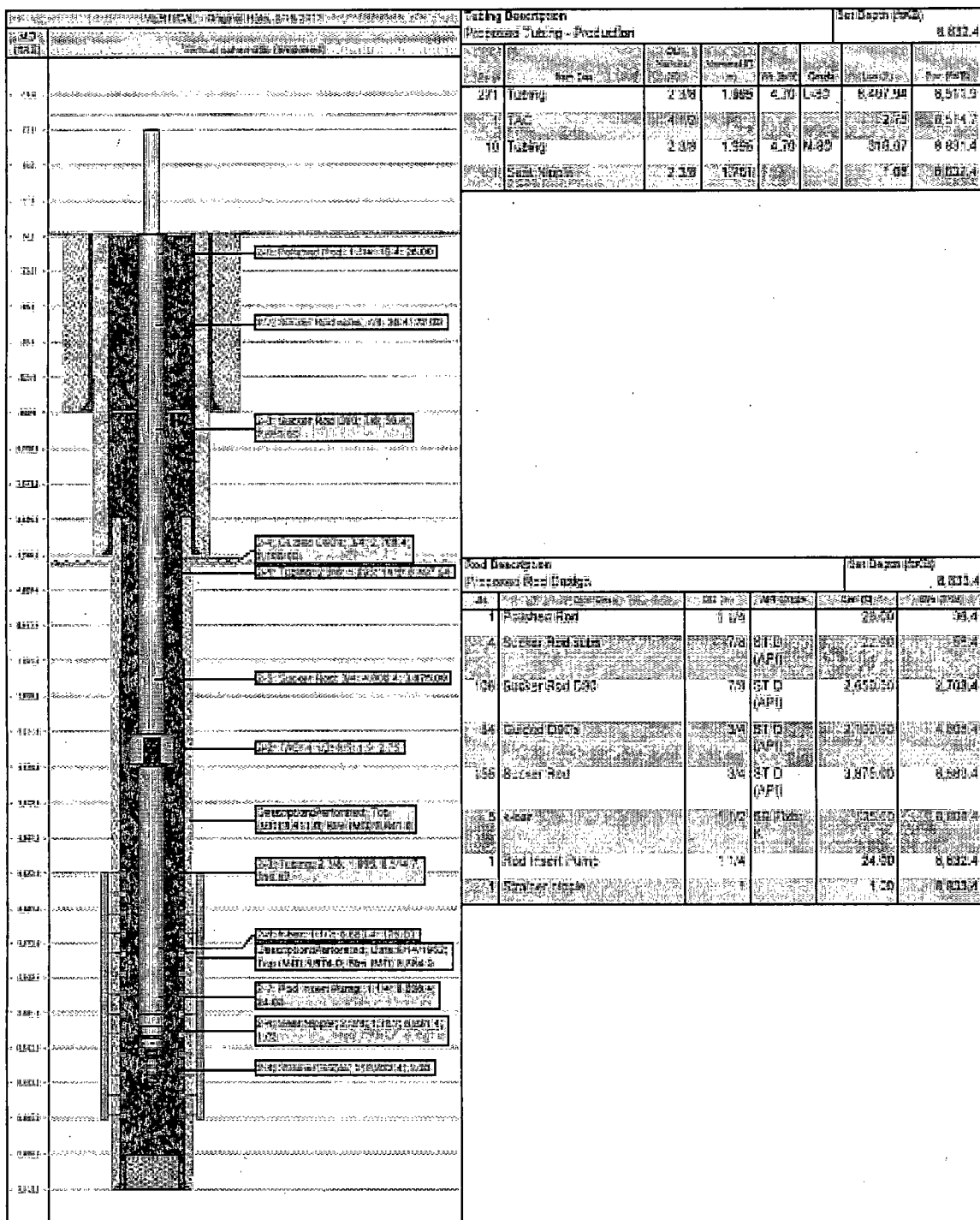
*Run 55 gallons of Scalechek LP-65 in first 1,000 gals of Pre-Pad stage

** Run 10 gal/Mgal Superset-W in Stage 8 to have chemicals lined out before stage 9

23. Fracture stimulate as per Halliburton design lead w/ 1000# of 100 mesh sand up front in linear gel as diverting agent.
24. Obtain ISIP. Continue monitoring and recording for 20 minutes following shut-in (every 5 minutes).
25. RD-MO *Halliburton* stimulation equipment.
26. Shut-in well overnight to allow Resin time to cure.
27. Flow well back @ rate of 3-5 bbl/minute until well loads up and dies.
28. Unseat treating packer Tag for Fill (TFF) and record. POOH. Laydown treating packer and 3½" work string.
29. Replace 3½" pipe rams in BOP with 2¾" pipe rams (top) & blinds (bottom) and retest BOP rams per ConocoPhillips well control policy. This is a 2,000 psi shop tested BOP.
30. PU a bit and RIH w\ on 2¾" production tubing. Tag up on sand and cleanout wellbore to CIBP @ 8665'.
31. Drill up CIBP and continue to clean out wellbore to PBTD – 8939' (or lowest perforation – 8854'). POOH once convinced wellbore is clean.
32. POOH, laydown bit and stand production tubing back in derrick.
33. RIH with 2¾" production tubing with tubing anchor. Space out and land tubing anchor 8512'± and end of tubing assembly @8,832' (historical location - see pre-pull in Well view).
34. ND BOPE and NU Wellhead.
35. Pump 5 gals Champion corrosion inhibitor down tubing.
36. RIH with pump and rods (see pre-pull in Well View).
37. Hang well off, long stroke to confirm good pump action.

- [illegible]

Proposed Rod and Tubing Configuration VACUUM ABO UNIT 004-005



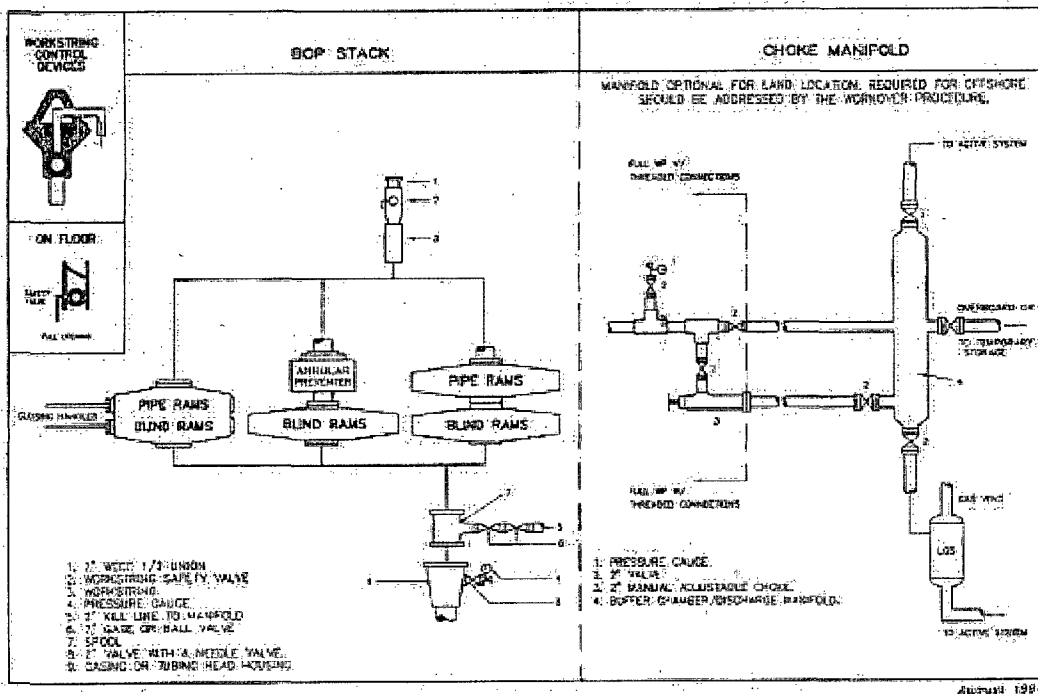


Figure 6-3 Class 2 BOP and Choke Manifold