

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

State of New Mexico

Form C-101
Revised July 18, 2013

Energy Minerals and Natural Resources**Oil Conservation Division**

☐ AMENDED REPORT

1220 South St. Francis Dr. **AUG 25 2014**

Santa Fe, NM 87505

RECEIVED

(D)

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

1. Operator Name and Address ConocoPhillips Company 600 N. Dairy Ashford Rd; P10-3-3096 Houston, TX 77079-1175		2. OGRID Number 217817
4. Property Code 31158	5. Property Name Vacuum Abo Unit	3. API Number 30-025-42072
Tract 7		6. Well No. 707

7. Surface Location

UL - Lot B	Section 34	Township 17S	Range 35E	Lot Idn	Feet from 285	N/S Line North	Feet From 1674	E/W Line East	County Lea
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8. Proposed Bottom Hole Location

UL - Lot A	Section 34	Township 17S	Range 35E	Lot Idn	Feet from 261	N/S Line North	Feet From 1166	E/W Line East	County Lea
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9. Pool Information

Pool Name Vacuum; Abo Reef	Pool Code 61780
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Additional Well Information

11. Work Type New Drill	12. Well Type Oil	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3926'
16. Multiple S/	17. Proposed Depth 9100'/9141' TVD/MD	18. Formation Abo	19. Contractor	20. Spud Date 10/01/14
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	12.25	9.625	36	1660'	700	0
Int 1	8.75	7.625	26	5200'	500	0
Prod	6.75	5.5	20	9131'	532'	4800

Casing/Cement Program: Additional Comments

COP plans to have a 10' rathole.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	3000	3000	Townsend
Double Ram	3000	3000	Schaffer

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 ☒ and/or 19.15.14.9 (B) NMAC ☐, if applicable.

Signature: *Susan B. Maunder*

Printed name: Susan B. Maunder

Title: Sr. Regulatory Specialist

E-mail Address: Susan.B.Maunder@cop.com

Date: 8/20/14

Phone: 281-206-5281

OIL CONSERVATION DIVISION

Approved By:

Title: *Petroleum Engineer*

Approved Date: *08/26/14*

Expiration Date: *08/26/16*

Conditions of Approval Attached ***

AUG 26 2014 PM

CONDITIONS OF APPROVAL

API #	Operator	Well name & Number
30-025-42072	ConocoPhillips Company	Vacuum Abo Unit # 707

Applicable conditions of approval marked with XXXXXX

Administrative Orders Required

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Other wells

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Drilling

XXXXXXX	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
XXXXXXX	If using a pit for drilling and completion operations, must have an approved pit from prior to spudding the well.

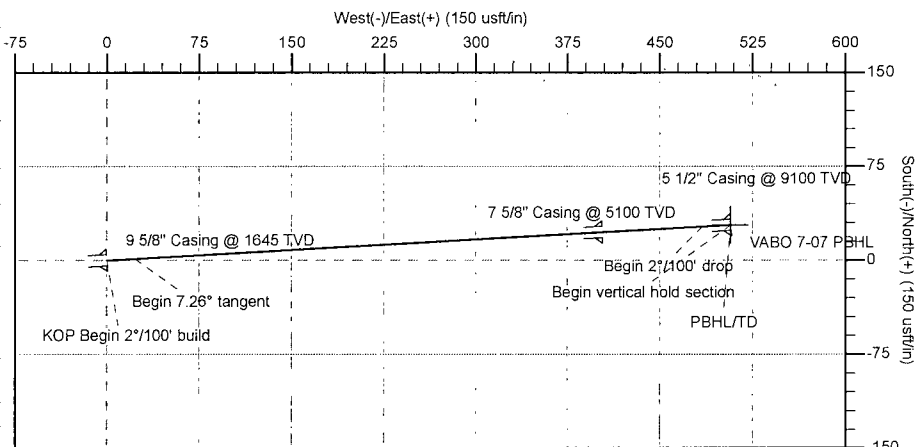
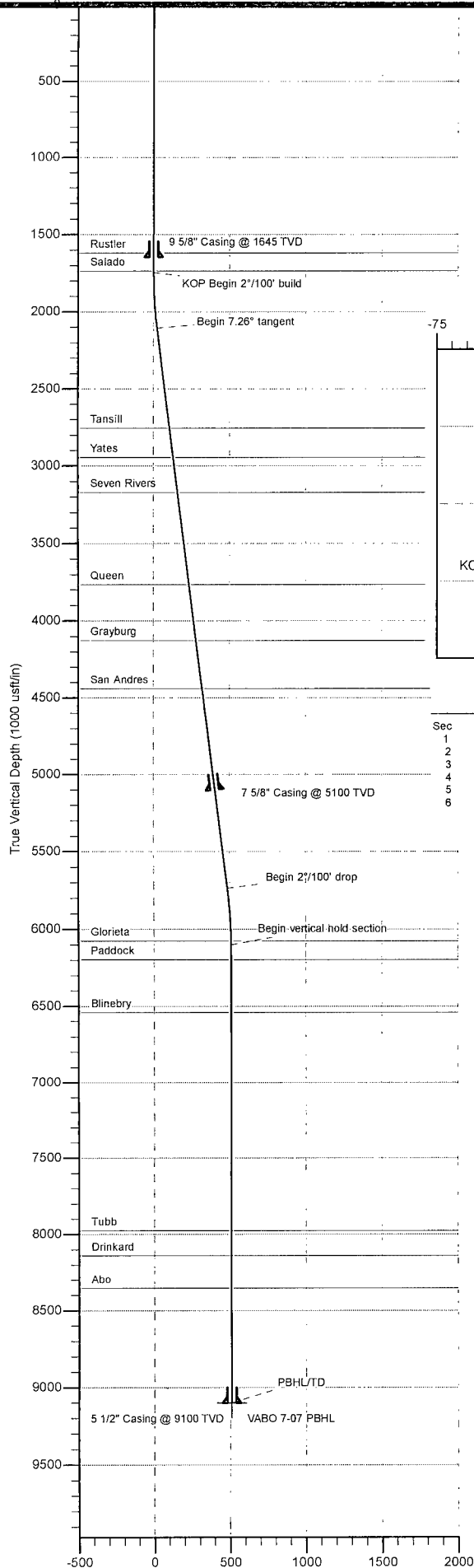
Casing & Cement

XXXXXXX	SURFACE & INTERMEDIATE(1) CASING - Cement must circulate to surface --
	INTERMEDIATE2 CASING - Cement must tie back into intermediate casing --
XXXXXXX	PRODUCTION CASING - Cement must tie back into intermediate casing --
XXXXXXX	If cement does not circulate to surface, must run temperature survey or other log to determine top of cement.
	South Area
XXXXXXX	Surface casing must be set 25' below top of Rustler Anhydrite in order to seal off protectable water
	North Area



Well: Vacuum ABO Unit Well No. 7-07
Site: Vacuum ABO Unit
Project: Lea County, New Mexico
Design: rev0
Rig: PD 822

True Vertical Depth (1000 usft/in)



Section Details

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1745.00	0.00	0.00	1745.00	0.00	0.00	0.00	0.00	0.00	KOP Begin 2"/100' build
3	2107.94	7.26	86.82	2108.97	1.27	22.92	2.00	86.82	22.96	Begin 7.26" tangent
4	5768.33	7.26	86.82	5738.03	26.89	484.72	0.00	0.00	485.46	Begin 2"/100' drop
5	6131.28	0.00	86.82	6100.00	28.16	507.64	2.00	180.00	508.42	Begin vertical hold section
6	9131.28	0.00	86.82	9100.00	28.16	507.64	0.00	0.00	508.42	PBHL/TD

Surface Location: RKB=3925.7+13 @ 3938.70usft (PD 822)
US State Plane 1927 (Exact solution)
New Mexico East 3001

Northing 655045.50 Easting 773970.16 Latitude 32° 47' 51.48777855 N Longitude 103° 26' 30.31451598 W
Total Correction (M => G) To convert a Magnetic Direction to a Grid Direction, Add 6.70°



Azimuths to Grid North
True North: -0.48°
Magnetic North: 6.70°

Magnetic Field
Strength: 48660.4nT
Dip Angle: 60.66°
Date: 7/21/2014
Model: IGRF2010

FORMATION TOP DETAILS

TVDPPath	MDPath	Formation
1620.00	1620.00	Rustler
1735.00	1735.00	Salado
2755.00	2761.21	Tansill
2945.00	2952.74	Yates
3170.00	3179.56	Seven Rivers
3765.00	3779.37	Queen
4125.00	4142.27	Grayburg
4440.00	4459.82	San Andres
6075.00	6106.28	Glorieta
6195.00	6226.28	Paddock
6540.00	6571.28	Blinebry
7975.00	8006.28	Tubb
8140.00	8171.28	Drinkard
8355.00	8386.28	Abo





HOBBS OCD

AUG 25 2014

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ConocoPhillips

Lea County, New Mexico

Vacuum ABO Unit

Vacuum ABO Unit Well No. 7-07

Original Hole

Plan: rev0

Standard Planning Report

21 July, 2014

Database:	EDM 5000.1 Ddatabase	Local Co-ordinate Reference:	Well Vacuum ABO Unit Well No. 7-07
Company:	ConocoPhillips	TVD Reference:	RKB=3925.7+13 @ 3938.70usft (PD 822)
Project:	Lea County, New Mexico	MD Reference:	RKB=3925.7+13 @ 3938.70usft (PD 822)
Site:	Vacuum ABO Unit	North Reference:	Grid
Well:	Vacuum ABO Unit Well No. 7-07	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Project	Lea County, New Mexico		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Vacuum ABO Unit		
Site Position:		Northing:	657,758.66 usft
From:	Map	Easting:	778,438.28 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 48' 17.95688364 N
		Longitude:	103° 25' 37.70173029 W
		Grid Convergence:	0.49 °

Well	Vacuum ABO Unit Well No. 7-07, Surf Loc: 285 FNL 1674 FEL Sect 34		
Well Position	+N/-S	-2,713.16 usft	Northing: 655,045.50 usft
	+E/-W	-4,468.12 usft	Easting: 773,970.16 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	Ground Level: 3,925.70 usft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	7/21/2014	7.18	60.66	48,660

Design	rev0				
Audit Notes:					
Version:	Phase:	PROTOTYPE		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0.00	0.00	0.00	86.82	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,745.00	0.00	0.00	1,745.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,107.94	7.26	86.82	2,106.97	1.27	22.92	2.00	2.00	0.00	86.82	
5,768.33	7.26	86.82	5,738.03	26.89	484.72	0.00	0.00	0.00	0.00	
6,131.28	0.00	86.82	6,100.00	28.16	507.64	2.00	-2.00	0.00	180.00	
9,131.28	0.00	86.82	9,100.00	28.16	507.64	0.00	0.00	0.00	0.00	VABO 7-07 PBHL

Database: EDM 5000.1 Ddatabase
Company: ConocoPhillips
Project: Lea County, New Mexico
Site: Vacuum ABO Unit
Well: Vacuum ABO Unit Well No. 7-07
Wellbore: Original Hole
Design: rev0

Local Co-ordinate Reference: Well Vacuum ABO Unit Well No. 7-07
TVD Reference: RKB=3925.7+13 @ 3938.70usft (PD 822)
MD Reference: RKB=3925.7+13 @ 3938.70usft (PD 822)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,620.00	0.00	0.00	1,620.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,735.00	0.00	0.00	1,735.00	0.00	0.00	0.00	0.00	0.00	0.00
Salado									
1,745.00	0.00	0.00	1,745.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP Begin 2°/100' build									
1,800.00	1.10	86.82	1,800.00	0.03	0.53	0.53	2.00	2.00	0.00
1,900.00	3.10	86.82	1,899.92	0.23	4.19	4.19	2.00	2.00	0.00
2,000.00	5.10	86.82	1,999.66	0.63	11.32	11.34	2.00	2.00	0.00
2,100.00	7.10	86.82	2,099.09	1.22	21.93	21.97	2.00	2.00	0.00
2,107.94	7.26	86.82	2,106.97	1.27	22.92	22.96	2.00	2.00	0.00
Begin 7.26° tangent									
2,200.00	7.26	86.82	2,198.29	1.92	34.54	34.59	0.00	0.00	0.00
2,300.00	7.26	86.82	2,297.49	2.62	47.15	47.23	0.00	0.00	0.00
2,400.00	7.26	86.82	2,396.69	3.32	59.77	59.86	0.00	0.00	0.00
2,500.00	7.26	86.82	2,495.89	4.02	72.39	72.50	0.00	0.00	0.00
2,600.00	7.26	86.82	2,595.09	4.72	85.00	85.13	0.00	0.00	0.00
2,700.00	7.26	86.82	2,694.28	5.42	97.62	97.77	0.00	0.00	0.00
2,761.21	7.26	86.82	2,755.00	5.84	105.34	105.50	0.00	0.00	0.00
Tansill									
2,800.00	7.26	86.82	2,793.48	6.11	110.23	110.40	0.00	0.00	0.00
2,900.00	7.26	86.82	2,892.68	6.81	122.85	123.04	0.00	0.00	0.00
2,952.74	7.26	86.82	2,945.00	7.18	129.50	129.70	0.00	0.00	0.00
Yates									
3,000.00	7.26	86.82	2,991.88	7.51	135.47	135.67	0.00	0.00	0.00
3,100.00	7.26	86.82	3,091.08	8.21	148.08	148.31	0.00	0.00	0.00
3,179.56	7.26	86.82	3,170.00	8.77	158.12	158.36	0.00	0.00	0.00
Seven Rivers									
3,200.00	7.26	86.82	3,190.28	8.91	160.70	160.94	0.00	0.00	0.00
3,300.00	7.26	86.82	3,289.48	9.61	173.31	173.58	0.00	0.00	0.00
3,400.00	7.26	86.82	3,388.67	10.31	185.93	186.21	0.00	0.00	0.00
3,500.00	7.26	86.82	3,487.87	11.01	198.55	198.85	0.00	0.00	0.00
3,600.00	7.26	86.82	3,587.07	11.71	211.16	211.49	0.00	0.00	0.00
3,700.00	7.26	86.82	3,686.27	12.41	223.78	224.12	0.00	0.00	0.00
3,779.37	7.26	86.82	3,765.00	12.97	233.79	234.15	0.00	0.00	0.00

Database: EDM 5000.1 Database
Company: ConocoPhillips
Project: Lea County, New Mexico
Site: Vacuum ABO Unit
Well: Vacuum ABO Unit Well No. 7-07
Wellbore: Original Hole
Design: rev0

Local Co-ordinate Reference: Well Vacuum ABO Unit Well No. 7-07
TVD Reference: RKB=3925.7+13 @ 3938.70usft (PD 822)
MD Reference: RKB=3925.7+13 @ 3938.70usft (PD 822)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Queen									
3,800.00	7.26	86.82	3,785.47	13.11	236.39	236.76	0.00	0.00	0.00
3,900.00	7.26	86.82	3,884.67	13.81	249.01	249.39	0.00	0.00	0.00
4,000.00	7.26	86.82	3,983.87	14.51	261.62	262.03	0.00	0.00	0.00
4,100.00	7.26	86.82	4,083.06	15.21	274.24	274.66	0.00	0.00	0.00
4,142.27	7.26	86.82	4,125.00	15.51	279.57	280.00	0.00	0.00	0.00
Grayburg									
4,200.00	7.26	86.82	4,182.26	15.91	286.86	287.30	0.00	0.00	0.00
4,300.00	7.26	86.82	4,281.46	16.61	299.47	299.93	0.00	0.00	0.00
4,400.00	7.26	86.82	4,380.66	17.31	312.09	312.57	0.00	0.00	0.00
4,459.82	7.26	86.82	4,440.00	17.73	319.63	320.13	0.00	0.00	0.00
San Andres									
4,500.00	7.26	86.82	4,479.86	18.01	324.70	325.20	0.00	0.00	0.00
4,600.00	7.26	86.82	4,579.06	18.71	337.32	337.84	0.00	0.00	0.00
4,700.00	7.26	86.82	4,678.26	19.41	349.94	350.47	0.00	0.00	0.00
4,800.00	7.26	86.82	4,777.45	20.11	362.55	363.11	0.00	0.00	0.00
4,900.00	7.26	86.82	4,876.65	20.81	375.17	375.74	0.00	0.00	0.00
5,000.00	7.26	86.82	4,975.85	21.51	387.78	388.38	0.00	0.00	0.00
5,100.00	7.26	86.82	5,075.05	22.21	400.40	401.01	0.00	0.00	0.00
5,200.00	7.26	86.82	5,174.25	22.91	413.01	413.65	0.00	0.00	0.00
5,300.00	7.26	86.82	5,273.45	23.61	425.63	426.29	0.00	0.00	0.00
5,400.00	7.26	86.82	5,372.65	24.31	438.25	438.92	0.00	0.00	0.00
5,500.00	7.26	86.82	5,471.84	25.01	450.86	451.56	0.00	0.00	0.00
5,600.00	7.26	86.82	5,571.04	25.71	463.48	464.19	0.00	0.00	0.00
5,700.00	7.26	86.82	5,670.24	26.41	476.09	476.83	0.00	0.00	0.00
5,768.33	7.26	86.82	5,738.03	26.89	484.72	485.46	0.00	0.00	0.00
Begin 2°/100' drop									
5,800.00	6.63	86.82	5,769.46	27.10	488.54	489.29	2.00	-2.00	0.00
5,900.00	4.63	86.82	5,868.97	27.64	498.32	499.09	2.00	-2.00	0.00
6,000.00	2.63	86.82	5,968.77	27.99	504.64	505.41	2.00	-2.00	0.00
6,100.00	0.63	86.82	6,068.72	28.15	507.47	508.25	2.00	-2.00	0.00
6,106.28	0.50	86.82	6,075.00	28.15	507.53	508.31	2.00	-2.00	0.00
Glorieta									
6,131.28	0.00	86.82	6,100.00	28.16	507.64	508.42	2.00	-2.00	0.00
Begin vertical hold section									
6,200.00	0.00	86.82	6,168.72	28.16	507.64	508.42	0.00	0.00	0.00
6,226.28	0.00	86.82	6,195.00	28.16	507.64	508.42	0.00	0.00	0.00
Paddock									
6,300.00	0.00	86.82	6,268.72	28.16	507.64	508.42	0.00	0.00	0.00
6,400.00	0.00	86.82	6,368.72	28.16	507.64	508.42	0.00	0.00	0.00
6,500.00	0.00	86.82	6,468.72	28.16	507.64	508.42	0.00	0.00	0.00
6,571.28	0.00	86.82	6,540.00	28.16	507.64	508.42	0.00	0.00	0.00
Blinberry									
6,600.00	0.00	86.82	6,568.72	28.16	507.64	508.42	0.00	0.00	0.00
6,700.00	0.00	86.82	6,668.72	28.16	507.64	508.42	0.00	0.00	0.00
6,800.00	0.00	86.82	6,768.72	28.16	507.64	508.42	0.00	0.00	0.00
6,900.00	0.00	86.82	6,868.72	28.16	507.64	508.42	0.00	0.00	0.00
7,000.00	0.00	86.82	6,968.72	28.16	507.64	508.42	0.00	0.00	0.00
7,100.00	0.00	86.82	7,068.72	28.16	507.64	508.42	0.00	0.00	0.00
7,200.00	0.00	86.82	7,168.72	28.16	507.64	508.42	0.00	0.00	0.00
7,300.00	0.00	86.82	7,268.72	28.16	507.64	508.42	0.00	0.00	0.00
7,400.00	0.00	86.82	7,368.72	28.16	507.64	508.42	0.00	0.00	0.00
7,500.00	0.00	86.82	7,468.72	28.16	507.64	508.42	0.00	0.00	0.00

Database: EDM 5000.1 Ddatabase
Company: ConocoPhillips
Project: Lea County, New Mexico
Site: Vacuum ABO Unit
Well: Vacuum ABO Unit Well No. 7-07
Wellbore: Original Hole
Design: rev0

Local Co-ordinate Reference: Well Vacuum ABO Unit Well No. 7-07
TVD Reference: RKB=3925.7+13 @ 3938.70usft (PD 822)
MD Reference: RKB=3925.7+13 @ 3938.70usft (PD 822)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,600.00	0.00	86.82	7,568.72	28.16	507.64	508.42	0.00	0.00	0.00
7,700.00	0.00	86.82	7,668.72	28.16	507.64	508.42	0.00	0.00	0.00
7,800.00	0.00	86.82	7,768.72	28.16	507.64	508.42	0.00	0.00	0.00
7,900.00	0.00	86.82	7,868.72	28.16	507.64	508.42	0.00	0.00	0.00
8,000.00	0.00	86.82	7,968.72	28.16	507.64	508.42	0.00	0.00	0.00
8,006.28	0.00	86.82	7,975.00	28.16	507.64	508.42	0.00	0.00	0.00
Tubb									
8,100.00	0.00	86.82	8,068.72	28.16	507.64	508.42	0.00	0.00	0.00
8,171.28	0.00	86.82	8,140.00	28.16	507.64	508.42	0.00	0.00	0.00
Drinkard									
8,200.00	0.00	86.82	8,168.72	28.16	507.64	508.42	0.00	0.00	0.00
8,300.00	0.00	86.82	8,268.72	28.16	507.64	508.42	0.00	0.00	0.00
8,386.28	0.00	86.82	8,355.00	28.16	507.64	508.42	0.00	0.00	0.00
Abo									
8,400.00	0.00	86.82	8,368.72	28.16	507.64	508.42	0.00	0.00	0.00
8,500.00	0.00	86.82	8,468.72	28.16	507.64	508.42	0.00	0.00	0.00
8,600.00	0.00	86.82	8,568.72	28.16	507.64	508.42	0.00	0.00	0.00
8,700.00	0.00	86.82	8,668.72	28.16	507.64	508.42	0.00	0.00	0.00
8,800.00	0.00	86.82	8,768.72	28.16	507.64	508.42	0.00	0.00	0.00
8,900.00	0.00	86.82	8,868.72	28.16	507.64	508.42	0.00	0.00	0.00
9,000.00	0.00	86.82	8,968.72	28.16	507.64	508.42	0.00	0.00	0.00
9,100.00	0.00	86.82	9,068.72	28.16	507.64	508.42	0.00	0.00	0.00
9,131.28	0.00	86.82	9,100.00	28.16	507.64	508.42	0.00	0.00	0.00
PBHL/TD									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
VABO 7-07 PBHL	0.00	0.00	9,100.00	28.16	507.64	655,073.66	774,477.80	2° 47' 51.72402189 N	3° 26' 24.36512002 W
- plan hits target center									
- Point									

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,645.00	1,645.00	9 5/8" Casing @ 1645 TVD	9-5/8	12-1/4
5,125.15	5,100.00	7 5/8" Casing @ 5100 TVD	7-5/8	8-3/4
9,131.28	9,100.00	5 1/2" Casing @ 9100 TVD	5-1/2	6-3/4

Database: EDM 5000.1 Ddatabase
Company: ConocoPhillips
Project: Lea County, New Mexico
Site: Vacuum ABO Unit
Well: Vacuum ABO Unit Well No. 7-07
Wellbore: Original Hole
Design: rev0

Local Co-ordinate Reference: Well Vacuum ABO Unit Well No. 7-07
TVD Reference: RKB=3925.7+13 @ 3938.70usft (PD 822)
MD Reference: RKB=3925.7+13 @ 3938.70usft (PD 822)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,620.00	1,620.00	Rustler		0.00	
1,735.00	1,735.00	Salado		0.00	
2,761.21	2,755.00	Tansill		0.00	
2,952.74	2,945.00	Yates		0.00	
3,179.56	3,170.00	Seven Rivers		0.00	
3,779.37	3,765.00	Queen		0.00	
4,142.27	4,125.00	Grayburg		0.00	
4,459.82	4,440.00	San Andres		0.00	
6,106.28	6,075.00	Glorieta		0.00	
6,226.28	6,195.00	Paddock		0.00	
6,571.28	6,540.00	Blinebry		0.00	
8,006.28	7,975.00	Tubb		0.00	
8,171.28	8,140.00	Drinkard		0.00	
8,386.28	8,355.00	Abo		0.00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,745.00	1,745.00	0.00	0.00	KOP Begin 2°/100' build
2,107.94	2,106.97	1.27	22.92	Begin 7.26° tangent
5,768.33	5,738.03	26.89	484.72	Begin 2°/100' drop
6,131.28	6,100.00	28.16	507.64	Begin vertical hold section
9,131.28	9,100.00	28.16	507.64	PBHL/TD

ConocoPhillips
 Lea County New Mexico
 Vacuum ABO Unit
 Vacuum ABO Unit Well No. 7-07
 Original Hole
 rev0

21-Jul-14

MD	Inc	Azimuth	TVD	N/S	E/W	VS	DLS	Y	X	Comment
0	0	0	0	0	0	0	0	0	655045.5	773970.2
100	0	0	100	0	0	0	0	0	655045.5	773970.2
200	0	0	200	0	0	0	0	0	655045.5	773970.2
300	0	0	300	0	0	0	0	0	655045.5	773970.2
400	0	0	400	0	0	0	0	0	655045.5	773970.2
500	0	0	500	0	0	0	0	0	655045.5	773970.2
600	0	0	600	0	0	0	0	0	655045.5	773970.2
700	0	0	700	0	0	0	0	0	655045.5	773970.2
800	0	0	800	0	0	0	0	0	655045.5	773970.2
900	0	0	900	0	0	0	0	0	655045.5	773970.2
1000	0	0	1000	0	0	0	0	0	655045.5	773970.2
1100	0	0	1100	0	0	0	0	0	655045.5	773970.2
1200	0	0	1200	0	0	0	0	0	655045.5	773970.2
1300	0	0	1300	0	0	0	0	0	655045.5	773970.2
1400	0	0	1400	0	0	0	0	0	655045.5	773970.2
1500	0	0	1500	0	0	0	0	0	655045.5	773970.2
1600	0	0	1600	0	0	0	0	0	655045.5	773970.2
1620	0	0	1620	0	0	0	0	0	655045.5	773970.2 Rustler
1700	0	0	1700	0	0	0	0	0	655045.5	773970.2
1735	0	0	1735	0	0	0	0	0	655045.5	773970.2 Salado
1745	0	0	1745	0	0	0	0	0	655045.5	773970.2 KOP Begin :
1800	1.1	86.82	1800	0.03	0.53	0.53	2	655045.5	773970.7	
1900	3.1	86.82	1899.92	0.23	4.19	4.19	2	655045.7	773974.3	
2000	5.1	86.82	1999.66	0.63	11.32	11.34	2	655046.1	773981.5	
2100	7.1	86.82	2099.09	1.22	21.93	21.97	2	655046.7	773992.1	
2107.94	7.26	86.82	2106.97	1.27	22.92	22.96	2	655046.8	773993.1	Begin 7.26°
2200	7.26	86.82	2198.29	1.92	34.54	34.59	0	655047.4	774004.7	
2300	7.26	86.82	2297.49	2.62	47.15	47.23	0	655048.1	774017.3	
2400	7.26	86.82	2396.69	3.32	59.77	59.86	0	655048.8	774029.9	
2500	7.26	86.82	2495.89	4.02	72.39	72.5	0	655049.5	774042.5	
2600	7.26	86.82	2595.09	4.72	85	85.13	0	655050.2	774055.2	
2700	7.26	86.82	2694.28	5.42	97.62	97.77	0	655050.9	774067.8	
2761.21	7.26	86.82	2755	5.84	105.34	105.5	0	655051.3	774075.5	Tansill
2800	7.26	86.82	2793.48	6.11	110.23	110.4	0	655051.6	774080.4	
2900	7.26	86.82	2892.68	6.81	122.85	123.04	0	655052.3	774093	
2952.74	7.26	86.82	2945	7.18	129.5	129.7	0	655052.7	774099.7	Yates
3000	7.26	86.82	2991.88	7.51	135.47	135.67	0	655053	774105.6	
3100	7.26	86.82	3091.08	8.21	148.08	148.31	0	655053.7	774118.2	
3179.56	7.26	86.82	3170	8.77	158.12	158.36	0	655054.3	774128.3	Seven River

MD	Inc	Azimuth	TVD	N/S	E/W	VS	DLS	Y	X	Comment
3200	7.26	86.82	3190.28	8.91	160.7	160.94		0	655054.4	774130.9
3300	7.26	86.82	3289.48	9.61	173.31	173.58		0	655055.1	774143.5
3400	7.26	86.82	3388.67	10.31	185.93	186.21		0	655055.8	774156.1
3500	7.26	86.82	3487.87	11.01	198.54	198.85		0	655056.5	774168.7
3600	7.26	86.82	3587.07	11.71	211.16	211.49		0	655057.2	774181.3
3700	7.26	86.82	3686.27	12.41	223.78	224.12		0	655057.9	774193.9
3779.37	7.26	86.82	3765	12.97	233.79	234.15		0	655058.5	774203.9 Queen
3800	7.26	86.82	3785.47	13.11	236.39	236.76		0	655058.6	774206.6
3900	7.26	86.82	3884.67	13.81	249.01	249.39		0	655059.3	774219.2
4000	7.26	86.82	3983.87	14.51	261.62	262.03		0	655060	774231.8
4100	7.26	86.82	4083.06	15.21	274.24	274.66		0	655060.7	774244.4
4142.27	7.26	86.82	4125	15.51	279.57	280		0	655061	774249.7 Grayburg
4200	7.26	86.82	4182.26	15.91	286.86	287.3		0	655061.4	774257
4300	7.26	86.82	4281.46	16.61	299.47	299.93		0	655062.1	774269.6
4400	7.26	86.82	4380.66	17.31	312.09	312.57		0	655062.8	774282.2
4459.82	7.26	86.82	4440	17.73	319.63	320.13		0	655063.2	774289.8 San Andres
4500	7.26	86.82	4479.86	18.01	324.7	325.2		0	655063.5	774294.9
4600	7.26	86.82	4579.06	18.71	337.32	337.84		0	655064.2	774307.5
4700	7.26	86.82	4678.26	19.41	349.94	350.47		0	655064.9	774320.1
4800	7.26	86.82	4777.45	20.11	362.55	363.11		0	655065.6	774332.7
4900	7.26	86.82	4876.65	20.81	375.17	375.74		0	655066.3	774345.3
5000	7.26	86.82	4975.85	21.51	387.78	388.38		0	655067	774357.9
5100	7.26	86.82	5075.05	22.21	400.4	401.01		0	655067.7	774370.6
5200	7.26	86.82	5174.25	22.91	413.01	413.65		0	655068.4	774383.2
5300	7.26	86.82	5273.45	23.61	425.63	426.29		0	655069.1	774395.8
5400	7.26	86.82	5372.65	24.31	438.25	438.92		0	655069.8	774408.4
5500	7.26	86.82	5471.84	25.01	450.86	451.56		0	655070.5	774421
5600	7.26	86.82	5571.04	25.71	463.48	464.19		0	655071.2	774433.6
5700	7.26	86.82	5670.24	26.41	476.09	476.83		0	655071.9	774446.3
5768.33	7.26	86.82	5738.03	26.89	484.72	485.46		0	655072.4	774454.9 Begin 2°/10
5800	6.63	86.82	5769.46	27.1	488.54	489.29		2	655072.6	774458.7
5900	4.63	86.82	5868.97	27.64	498.32	499.09		2	655073.1	774468.5
6000	2.63	86.82	5968.77	27.99	504.64	505.41		2	655073.5	774474.8
6100	0.63	86.82	6068.72	28.15	507.47	508.25		2	655073.7	774477.6
6106.28	0.5	86.82	6075	28.15	507.53	508.31		2	655073.7	774477.7 Glorieta
6131.28	0	86.82	6100	28.16	507.64	508.42		2	655073.7	774477.8 Begin vertic
6200	0	86.82	6168.72	28.16	507.64	508.42		0	655073.7	774477.8
6226.28	0	86.82	6195	28.16	507.64	508.42		0	655073.7	774477.8 Paddock
6300	0	86.82	6268.72	28.16	507.64	508.42		0	655073.7	774477.8
6400	0	86.82	6368.72	28.16	507.64	508.42		0	655073.7	774477.8
6500	0	86.82	6468.72	28.16	507.64	508.42		0	655073.7	774477.8
6571.28	0	86.82	6540	28.16	507.64	508.42		0	655073.7	774477.8 Blinbry
6600	0	86.82	6568.72	28.16	507.64	508.42		0	655073.7	774477.8
6700	0	86.82	6668.72	28.16	507.64	508.42		0	655073.7	774477.8
6800	0	86.82	6768.72	28.16	507.64	508.42		0	655073.7	774477.8
6900	0	86.82	6868.72	28.16	507.64	508.42		0	655073.7	774477.8

MD	Inc	Azimuth	TVD	N/S	E/W	VS	DLS	Y	X	Comment
7000		0	86.82	6968.72	28.16	507.64	508.42	0	655073.7	774477.8
7100		0	86.82	7068.72	28.16	507.64	508.42	0	655073.7	774477.8
7200		0	86.82	7168.72	28.16	507.64	508.42	0	655073.7	774477.8
7300		0	86.82	7268.72	28.16	507.64	508.42	0	655073.7	774477.8
7400		0	86.82	7368.72	28.16	507.64	508.42	0	655073.7	774477.8
7500		0	86.82	7468.72	28.16	507.64	508.42	0	655073.7	774477.8
7600		0	86.82	7568.72	28.16	507.64	508.42	0	655073.7	774477.8
7700		0	86.82	7668.72	28.16	507.64	508.42	0	655073.7	774477.8
7800		0	86.82	7768.72	28.16	507.64	508.42	0	655073.7	774477.8
7900		0	86.82	7868.72	28.16	507.64	508.42	0	655073.7	774477.8
8000		0	86.82	7968.72	28.16	507.64	508.42	0	655073.7	774477.8
8006.28		0	86.82	7975	28.16	507.64	508.42	0	655073.7	774477.8 Tubb
8100		0	86.82	8068.72	28.16	507.64	508.42	0	655073.7	774477.8
8171.28		0	86.82	8140	28.16	507.64	508.42	0	655073.7	774477.8 Drinkard
8200		0	86.82	8168.72	28.16	507.64	508.42	0	655073.7	774477.8
8300		0	86.82	8268.72	28.16	507.64	508.42	0	655073.7	774477.8
8386.28		0	86.82	8355	28.16	507.64	508.42	0	655073.7	774477.8 Abo
8400		0	86.82	8368.72	28.16	507.64	508.42	0	655073.7	774477.8
8500		0	86.82	8468.72	28.16	507.64	508.42	0	655073.7	774477.8
8600		0	86.82	8568.72	28.16	507.64	508.42	0	655073.7	774477.8
8700		0	86.82	8668.72	28.16	507.64	508.42	0	655073.7	774477.8
8800		0	86.82	8768.72	28.16	507.64	508.42	0	655073.7	774477.8
8900		0	86.82	8868.72	28.16	507.64	508.42	0	655073.7	774477.8
9000		0	86.82	8968.72	28.16	507.64	508.42	0	655073.7	774477.8
9100		0	86.82	9068.72	28.16	507.64	508.42	0	655073.7	774477.8
9131.28		0	86.82	9100	28.16	507.64	508.42	0	655073.7	774477.8 PBHL/TD

All data are in feet unless otherwise stated. Directions and coordinates are relative to Grid North.

Vertical depths are relative to RKB=3925.7+13

The Dogleg Severity is in Degrees per 100 feet.

Vertical Section is from 0.00 E/-W 0.00 N/-S and calculated along an Azimuth of 86.825° (Grid).

Coordinate New Mexico East 3001.

Central meridian is -104.333°.

Grid Convergence at Surface is 0.483°.

Based upon at a Measured Depth of 9131.28ft.

the Bottom in the Direction of 86.825° (Grid).

Closed Loop System Design, Operating and Maintenance, and Closure Plan

ConocoPhillips Company
Well: Vacuum Abo Unit (VAU) 7-07
Location: Sec. 34, T17S, R35E
Date: 8/20/2014

ConocoPhillips proposes the following plan for design, operating and maintenance, and closure of our proposed closed loop system for the above named well:

1. We propose to use a closed loop system with steel pits, haul-off bins, and frac tanks for containing all cuttings, solids, mud, water, brine, and liquids. We will not dig a pit, nor will we use a drying pad, nor will we build an earth pit above ground level, nor will we dispose of or bury any waste on location.

All drilling waste and all drilling fluids (fresh water, brine, mud, cuttings, drill solids, cement returns, and any other liquid or solid that may be involved) will be contained on location in the rig's steel pits or in haul-off bins or in frac tanks as needed. The intent is as follows:

- We propose to use the rigs' steel pits for containing and maintaining the drilling fluids.
- We propose to remove cuttings and drilled solids from the mud by using solids control equipment and to contain such cuttings and drilled solids on location in haul-off bins.
- We propose that any excess water that may need to be stored on location will be stored in tanks.

The closed loop system components will be inspected daily by each tour and any needed repairs will be made immediately. Any leak in the system will be repaired immediately, and any spilled liquids and/or solids will be cleaned immediately, and the area where any such spill occurred will be remediated immediately.

2. Cuttings and solids will be removed from location in haul-off bins by an authorized contractor and disposed of at an authorized facility. For this well, we propose the following disposal facility:

R-360 Inc.
4507 West Carlsbad Hwy, Hobbs, NM 88240,
P.O. Box 388; Hobbs, New Mexico 88241
Toll Free Phone: 877.505.4274, Local Phone Number: 432.638.4076

The physical address for the plant where the disposal facility is located is Highway 62/180 at mile marker 66 (33 miles East of Hobbs, NM and 32 miles West of Carlsbad, NM).

The Permit Number for R-360 is NM-01-0006.

A photograph showing the type of haul-off bins that will be used is attached.

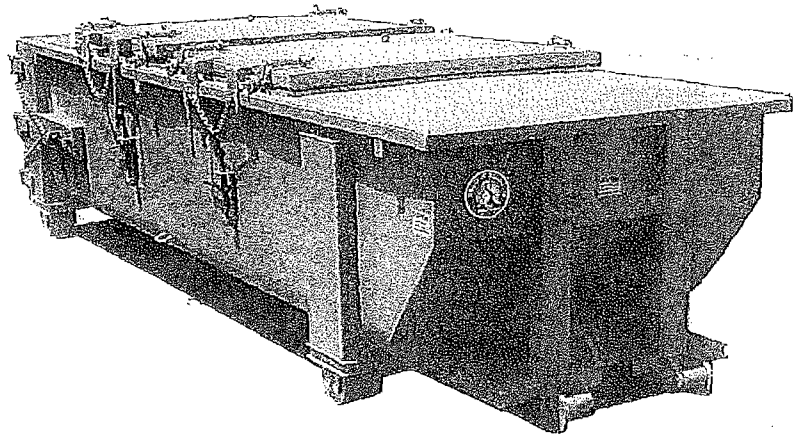
3. Mud will be transported by vacuum truck and disposed of at R-360 Inc. at the facility described above.
4. Fresh Water and Brine will be hauled off by vacuum truck and disposed of at an authorized salt water disposal well. We propose the following for disposal of fresh water and brine as needed:
 - Nabors Well Services Company, 3221 NW County Rd; Hobbs, NM 88240, PO 5208 Hobbs, NM, 88241, Permit SWD 092. (Well Location: **Section 3, T19S R37E**)
 - Basic Energy Services, P.O. Box 1869; Eunice, NM 88231 Phone Number: 575.394.2545, Facility located at Hwy 18, Mile Marker 19; Eunice, NM.

Steven Herrin
Drilling Engineer
Office: 281-206-5115
Cell: 432-209-7558

SPECIFICATIONS

Heavy Duty Split Metal Rolling Lid

FLOOR: 3/16" PL one piece
 CROSS MEMBER: 3 x 4.1 channel 16" on center
 WALLS: 3/16" PL solid welded with tubing top, inside liner hooks
 DOOR: 3/16" PL with tubing frame
 FRONT: 3/16" PL slant formed
 PICK UP: Standard cable with 2" x 6" x 1/4" rails, gusset at each crossmember
 WHEELS: 10 DIA x 9 long with rease fittings
 DOOR LATCH: 3 independent ratchet binders with chains, vertical second latch
 GASKETS: Extruded rubber seal with metal retainers
 WELDS: All welds continuous except sub-structure crossmembers
 FINISH: Coated inside and out with direct to metal, rust inhibiting acrylic enamel color coat
 HYDROTESTING: Full capacity static test
 DIMENSIONS: 22'-11" long (21'-8" inside), 99" wide (88" inside), see drawing for height
 OPTIONS: Steel grit blast and special paint, Ampliroll, Hail and Dino pickup
 ROOF: 3/16" PL roof panels with tubing and channel support frame
 LIDS: (2) 68" x 90" metal rolling lids spring loaded, self raising
 ROLLERS: 4" V-groove rollers with delrin bearings and grease fittings
 OPENING: (2) 60" x 82" openings with 8" divider centered on container
 LATCH: (2) independent ratchet binders with chains per lid
 GASKETS: Extruded rubber seal with metal retainers



CONT.	A	B
20 YD	41	53
25 YD	53	65
30 YD	65	77

