Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Hobbs
HOBBS OCD

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

JAN 07 2014

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

RECEIVED

5. Lease Serial No. NMNM27508	
6. If Indian, Allottee or Tribe Name	
7. If Unit or CA/Agreement, Name and/or No.	
1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other	8. Well Name and No. WILDER FEDERAL 28 4H
2. Name of Operator CONOCOPHILLIPS COMPANY Contact: KRISTINA MICKENS	9. API Well No. 30-025-40502-00-X1
3a. Address 3300 N "A" ST BLDG 6 MIDLAND, TX 79705	3b. Phone No. (include area code) Ph: 281.206.5282
4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)* Sec 28 T26S R32E NWNW 330FNL 330FWL 32.011184 N Lat, 103.411515 W Lon	11. County or Parish, and State LEA COUNTY, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Change to Original A PD
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

ConocoPhillips respectfully submits the attached revised drill plan procedure. Significant changes are:

~~7" Intermediate 2 string has been removed~~.
~~4-1/2" liner with "sleeves & packers" has been removed~~.
5-1/2" long string has been added from surface to TD and increased to 20ppf.
Cement has been added from the set depth of the long string to 500ft. inside the 9-5/8" shoe with an optional DV tool & packer at 5500ft.

> w/drawn so never was approved

We are also requesting to amend the well name from Wilder Federal 28 4H to Wilder Federal AC 28 4H.

SEE ATTACHED FOR CONDITIONS OF APPRC

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

Electronic Submission #229022 verified by the BLM Well Information System
For CONOCOPHILLIPS COMPANY, sent to the Hobbs
Committed to AFMSS for processing by JOHNNY DICKERSON on 12/11/2013 (14JLD0983SE)

Name *(Printed/Typed)* KRISTINA MICKENS — Title

Signature (Electronic Submission) — Date 12/10/2013

APPROVED
JAN 3 2014
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By _____ Title _____ Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make 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.

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

JAN 08 2014

Wilder Federal AC COM 28-4H
9-5/8" Intermediate Casing Collapse Exception

The 9-5/8" 36# J-55 LTC would not be at risk of collapse when set as intermediate casing at approximately 4430'. Our reasons are as follows:

1. The 9-5/8" intermediate casing for this well would not be subject to the production collapse load case of being pumped off to zero pressure on the inside by beam pump or ESP production pumping the fluid level down. The 9-5/8" casing would be isolated from the beam pumping production collapse load case by the production casing that would be run.

2. If loss of circulation occurs during the drilling phase while drilling below the 9-5/8" intermediate casing, we would expect the fluid level would fall no further than 2200' below the surface of ground before reaching hydrostatic balance with the pressure of the loss zone. Our anticipated maximum mud weight for drilling below the 9-5/8" intermediate casing is 9.3 ppg, and our experience has been that we have not had severe losses with this mud weight in our previous wells in this area.

3. The 9-5/8" casing will be filled with mud while running it by filling it at least once each 30 joints (1260').

Jason Levinson | Senior Drilling Engineer
ConocoPhillips Company
600 N Dairy Ashford Rd, P10-05-5006 Houston, TX 77079
jason.a.levinson@conocophillips.com | Direct 281.206.5335 | Mobile 281.682.2783

From: Mason, Jennifer [mailto:jamason@blm.gov]
Sent: Thursday, January 02, 2014 12:38 PM
To: Mickens, Kristina; Levinson, Jason A
Subject: [EXTERNAL]Wilder Federal 28 4H

[Quoted text hidden]

Mason, Jennifer <jamason@blm.gov> Thu, Jan 2, 2014 at 12:11 PM
To: "Levinson, Jason A" <Jason.A.Levinson@conocophillips.com>

please specify it for the correct well with the correct depths. Also, if you can attach it as a word document that would be better when I put it with the sundry.
[Quoted text hidden]

Levinson, Jason A <Jason.A.Levinson@conocophillips.com> Thu, Jan 2, 2014 at 12:13 PM
To: "Mason, Jennifer" <jamason@blm.gov>, "Mickens, Kristina" <Kristina.Mickens@conocophillips.com>

Optional DV tool at 5500ft.

Stage 2

170sx lead @ 3.19 ft^3/sx

Volume is proposed with 35% excess

Top of cement to 500ft. inside the previous casing shoe at 4430ft.

5500' - 3930'

Jason Levinson | Senior Drilling Engineer
ConocoPhillips Company
600 N Dairy Ashford Rd, P10-05-5006 Houston, TX 77079
jason.a.levinson@conocophillips.com | Direct 281.206.5335 | Mobile 281.682.2783

From: Mason, Jennifer [mailto:jamason@blm.gov]
Sent: Thursday, January 02, 2014 12:34 PM
To: Mickens, Kristina; Levinson, Jason A
Subject: [EXTERNAL]Wilder Federal 28 4H

Please send the cement volumes for the DV tool at 5500 for this well.

[Quoted text hidden]

Mason, Jennifer <jamason@blm.gov>

Wilder Federal 28 4H

5 messages

Mason, Jennifer <jamason@blm.gov> Thu, Jan 2, 2014 at 11:34 AM
To: "Mickens, Kristina" <kristina.mickens@conocophillips.com>, Jason.A.Levinson@conocophillips.com

Please send the cement volumes for the DV tool at 5500 for this well.

--
Thank you,

Jennifer Mason
Bureau of Land Management
Carlsbad Field Office
575-234-6237

Mason, Jennifer <jamason@blm.gov> Thu, Jan 2, 2014 at 11:37 AM
To: "Mickens, Kristina" <kristina.mickens@conocophillips.com>, Jason.A.Levinson@conocophillips.com

Also send the collapse statement.

--
Thank you,

Jennifer Mason
Bureau of Land Management
Carlsbad Field Office
575-234-6237

Levinson, Jason A <Jason.A.Levinson@conocophillips.com> Thu, Jan 2, 2014 at 12:05 PM
To: "Mason, Jennifer" <jamason@blm.gov>, "Mickens, Kristina" <Kristina.Mickens@conocophillips.com>

From: Moore, Steven O.

Sent: Tuesday, August 07, 2012 9:31 AM

To: Fernandez, Edward

Subject: Collapse Load Case Explanation (9-5/8" Intermediate Casing) (Wilder Federal 29 # 1H)

Subject: Collapse Load Case Explanation for 9-5/8" Intermediate Casing, Wilder Federal 29 # 1H

HOBBS OCD

JAN 07 2014

RECEIVED

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 Rd., 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
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised August 1, 2011

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-40502	97838	BONE SPRING UPPER SHALE

Property Code	Property Name	Well Number
39134	WILDER FEDERAL AC 28	4H

OGRID No.	Operator Name	Elevation
217817	CONOCO PHILLIPS	3153'

Surface Location

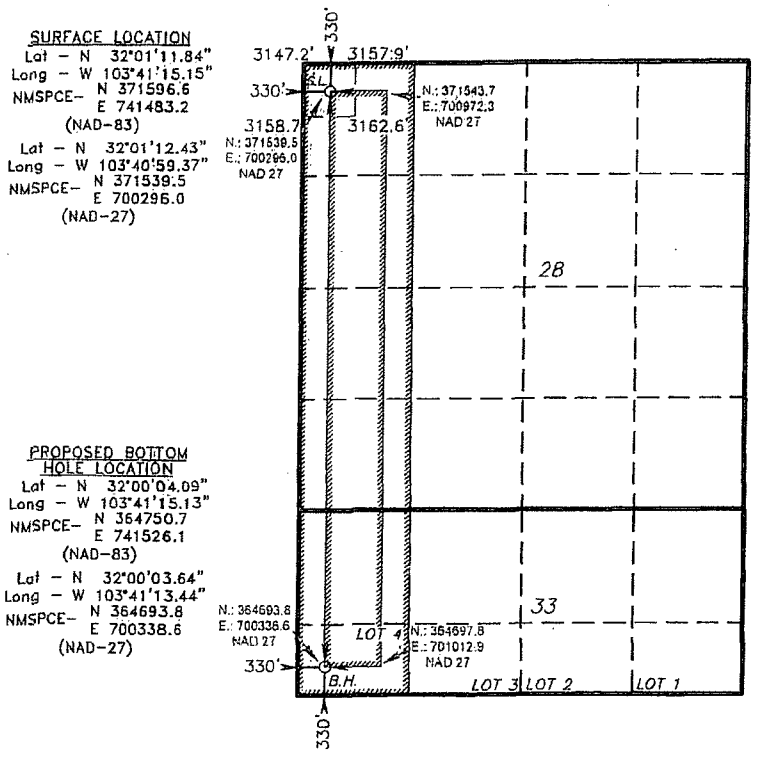
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	28	26 S	32 E		330	NORTH	330	WEST	LEA

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
LOT 4	33	26 S	32 E		330	SOUTH	330	WEST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
230.09			

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



1" = 2000

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.

Kristina Mickens 12/10/13

Signature Date

KRISTINA MICKENS

Printed Name

kristina.mickens@conocophillips.com

Email Address

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 supervison, and that the same is true and correct to the best of my belief.

APRIL 25, 2013

Date Surveyed

Signature & Seal of Professional Surveyor

NEW MEXICO — GARY L. JONES — 7977 — REGISTERED PROFESSIONAL SURVEYOR — BASIN SURVEYS — NO. 27890

Certificate No. Gary L. Jones 7977

BASIN SURVEYS 27890

Bonespring/Red Hills
ConocoPhillips
Wilder Federal 28 #4H

Surface Casing:	
Surface Casing Depth (Ft)	1,040
Surface Casing O.D. (In.)	13.375
Surface Casing ID (In)	12.715
Hole O.D. (In)	17.5
Excess (%)	200%
Volume Tail (Sx)	310
Yield Tail (Cu. Ft./Sx)	1.35
Yield Lead (Cu. Ft./Sx)	1.73
Shoe Joint (Ft)	40
Shoe Volume (Cu. Ft)	35.3
Tail feet of cement	300
Calculated Total Volume (Cu. Ft.)	1,994
Calc. Tail Volume (Cu. Ft.)	417
Calc. Lead Volume (Cu. Ft.)	1,542
Calc. Lead Volume (Sx)	900

Intermediate #1 Casing (Lead):	12.9
Intermediate Casing O.D. (In.)	9.625
Intermediate Casing ID (In)	8.835
Hole O.D. (In)	12.25
Excess (%)	200%
cap 12-1/4 - 9-5/8"	0.0558
Calculated fill:	3,930'
Yield Lead (Cu. Ft./Sx)	1.91
Calculated Total Lead (Cu. Ft.)	3,693
Calc. Lead Volume (Sx)	1940

Intermediate #1 Casing (Tail):	14.8
Intermediate Casing O.D. (In.)	9-5/8"
Production Casing ID (In)	8.835
Hole O.D. (In)	12.25
Excess (%)	250%
cap 12-1/4 - 9-5/8"	0.0558
Calculated fill:	500'
Yield Tail (Cu. Ft./Sx)	1.33
Shoe Joint (Ft)	40
Shoe Volume (Cu. Ft)	17.0
Calc. Tail Volume (Cu. Ft.)	409
Required Tail Volume (Sx)	310

Production (Lead): Stage #1	9.5
Intermediate Casing O.D. (In.)	5.500
Intermediate Casing ID (In)	4.892
Hole O.D. (In)	8.75
Excess (%)	135%
cap 5-1/2" - 8-3/4" bls/ft	0.0450
cap 5-1/2" - 9-5/8" bls/ft	0.0464418
Calculated fill:	4,853'
Yield Lead (Cu. Ft./Sx)	3.22
Calculated Total Lead (Cu. Ft.)	1,661
Calc. Lead Volume (Sx)	520
	8,783'

Production (Tail): Stage #1	13.2
Intermediate Casing O.D. (In.)	5.500
Intermediate Casing ID (In)	4.892
Hole O.D. (In)	8.75
Excess (%)	135%
cap 5-1/2" - 8-3/4" bls/ft	0.0450
cap 5-1/2" - 9-5/8" bls/ft	0.0464418
Calculated fill:	7,420'
Yield Lead (Cu. Ft./Sx)	1.27
Calculated Total Tail (Cu. Ft.)	2,530
Required Tail Volume (Sx)	1992

Production (Lead): Stage #2	9.5ppg
Intermediate Casing O.D. (In.)	5.500
Intermediate Casing ID (In)	4.892
Hole O.D. (In)	8.75
Excess (%)	135%
cap 5-1/2" - 8-3/4" bls/ft	0.0450
cap 5-1/2" - 9-5/8" bls/ft	0.0464418
Calculated fill: (500' into 9-5/8")	1,570'
Yield Lead (Cu. Ft./Sx)	3.22
Calculated Total Lead (Cu. Ft.)	541
Calc. Lead Volume (Sx)	170

Optional DV+ACP placed around 5500ft TVD +/- 300ft

Gel Spacer WG19 or Polymer Spacer Ultra Seal
1 Stage with LCM Kol Seal + Fiber
2 Stage no Fiber LCM to reduce risk of plugging DV Tool

Proceed with stage 2 right after circulating stage 1

DRILLING PLAN

PROSPECT/FIELD	Bonespring/Red Hills			COUNTY/STATE		Lea County, NM
OWNERS	ConocoPhillips			LEASE		
WELL NO.	Wilder Federal 28 #4H		FNL	FSL	FEL	FWL	
LOCATION		Surface Location:	330			330	SECITON 28
		Bottom Hole Location:		330		330	SECITON 33
EST. T.D.	Leg #1 16,203' MD			GROUND ELEV.		3,153' (est)
					RKB	3,178' (est)

PROGNOSIS: Based on 3,169' KB(est)

Marker	TVD	S.S. Depth
Quaternary	Surface	
Rustler	953	2,225
Delaware Top	4,370	-1,192
Ford Shale	4,410	-1,232
Bone Spring	8,204	-5,026
Bone Spring 1st Carbonate Top	8,523	-5,345
Bone Spring 1st Carbonate Base	8,500	-5,322
Avalon A Shale Top	8,716	-5,538
Avalon A Shale Base	8,934	-5,756
Avalon B Zone Top	8,934	-5,756
Avalon B Zone Base	9,122	-5,944
Avalon C Shale Top	9,122	-5,944
Avalon C Shale Base (Should not penetrate)	9,362	-6,184

LOGS:

Type	Interval
Open Hole:	
GR-MWD	16203- 8,483'

DEVIATION:

Surf: 5° max., svy every 500'
Interm1: 10° max., svy every 90'
Interm2: 5° max., svy every 200' - in vertical
03° max., svy every 30' - in curve
Prod: 03° max., svy every 100' - in lateral

DST'S:

CORES: No core.

SAMPLES:

Mudlogging: Start 1040' End TD Vertical and Horizontal sections
Two-Man:

BOP:

H&P #486 BOPE: (With Rotating Head)
COP Category 3 Well Control Requirements
13-5/8"-5Mpsi Annular
13-3/8"-10Mpsi Blind Ram
13-3/8"-10Mpsi Cross / Choke & Kill Lines
13-3/8"-10M psi Pipe Ram
13-3/8"-10Mpsi Spacer Spool

Dip Rate: Slight Down Dip

Max. Anticipated BHP: 0.49 psi/ft

Surface Formation:

MUD:	Interval	Type	Max. MW	Vis	WL	Remarks
Surface:	0'-1040'	Aquagel - Spud Mud	8.9	32-36	NC	
Intermediate:	1040'-4430'	Brine	10.5	28-30	6-8	
Production:	4430'-16203'	Cut Brine	9.5	30-40	<15	

CASING:	Size	Wt ppf	Hole	Depth	Cement	WOC	Remarks
Surface:	13-3/8"	54.5	17-1/2	~~1,040'~~ 940	To Surface	18hrs	
Intermediate:	9-5/8"	36	12-1/4"	4,430' 4350	To Surface	18hrs	
Production:	5-1/2"	20	8-3/4"	16,203'	500' into Intermediate	18hrs	

DIRECTIONAL PLAN

	MD	TVD	AZ
Surface:	N/A	N/A	179.84
Vertical KOP:	8,783'	8,708'	179.84
End Build:	9,529'	9,245'	179.84
Tangent:	N/A	N/A	179.84
Turn:	N/A	N/A	179.84
TD:	16,203'	9,289'	179.84

Directional Company: DDC
Vertical Build Rate: 12.0 °/100'
Tan Leg Turn Rate: 0.0 °/100'

Comments:
Surveys will be taken in intermediate section with INC ONLY or MWD tools. Directional surveys will be taken with MWD Tool.

Prep By: Jason Levinson Date: 11/28/13 Doc: REV.7

Wildor Federal 28 #4H

Surface Location:			Bottom Hole Location	
	330FNL	330FWL	330FSL	330FWL

Directional:

	MD	TVD	FNL/FSL	FEL/FWL	S-T-R	AZI
Vertical KOP:	8783	8766	0	0	0	179.84
End Build:	9,529'	9,245'	0	0	0	179.8
Target:	N/A	N/A	0	0	0	179.8
Turn:	N/A	N/A	0	0	0	179.8
TD:	16,203'	9,289'	0	0	0	179.8

Formation	TVD
Quaternary	Surface
Rustler	-953
Delaware Top	-4370
Bone Spring	-6201
Bone Spring 1st Carbonate Top	-8533
Bone Sprng 1st Carbonate Base	-8500
Avalon A Shale Top	-8716
Avalon A Shale Base	-8934
Avalon B Zone Top	-8934
Avalon B Zone Base	-9122
Avalon C Shale Top	-9122
Avalon C Shale Base (Should not penetrate)	-9352

CASING

Surface
~~13.375"~~ 13-3/8" 54.5# J-55 BTC
940'

Intermediate
~~4.500"~~ 9-5/8" 36# J55 BTC
4350'

Optional DV+ACP
5,503'

Drill Fluids

Surf. Hole:	Surface:	Slurry Top
FW gel mud:	310 Sx Lead	Surface
8.9#	300 Sx Tail	
w/ high vis sweeps	Based on 17-1/2" OH, with 200% excess	
Intermediate:	**Intermediate:**	**Slurry Top**
Brine	1,540 Sx Lead	Surface
10.5#	310 Sx Tail	
25-35 Vis		
5-8 WL	Based on 8.75 in. Hole with 250% excess	
Production:	**Production**	**Slurry Top**
Cut Brine	Stage 1	5503' into 9-5/8".
9.5#	520 Sx Lead	
30-40 Vis	1,092 Sx Tail	
<=5 WL	Stage 2	
	170 Sx Lead	
high vis sweeps as required.	Based on 6.75 in. Hole with 135% excess	

Cement

Data. These numbers are only estimates.

Analysis

Mudlogging:	Two-Man.
	4040'
	TD

Notes for Well:

Refer to the drilling program for detailed casing, drilling fluids, bit etc.
Drill 17 1/2" surface hole with conventional BHA and INC Survey Tool. RIH 13 3/8" CSG and cement it up to surface.
Install well head and NU BOP, CSG Pressure Test and FIT
Mud logger (two-man) to be on at surface casing depth of 1040'
Drill 12 1/4" Intermediate hole with Vertical Steering Scout Tool+Motor and INC Survey Tool till 4430'
RIH 9 5/8" CSG and cement it up to surface . . .
Drill 8 3/4" Intermediate #2 hole with Vertical Steering Scout Tool+Motor and INC Survey Tool till 8783ft.
Run Gyro till 8783ft.
Begin GR-MWD service after KOP 8783'.
The 8 3/4" curve will be drilled with ~ 12°/100' build rate and 180° Azimuth with PDM+MWD till 9529' MD/ 9245' TVD..
The 8 3/4" Lateral will be drilled with PDM+MWD till TD 16203' MD/ 9289' TVD holding 90° INC & 180° AZI.
POOH Backreaming after circulating the hole until clean returns.
RIH 5 1/2" CSG and cement to 200 ft. inside of 9-5/8" shoe in two stages.
Displace cement with fresh water.
POOH laying down drill pipe.
ND BOPE. Install 10M tubing head . Test connection.
Release drilling rig.
POOH laying down 5in Drill Pipe
ND BOPE. Install 10M tubing head . Test connection
Release drilling rig.

Open Hole:
None.

GR-MWD

KOP (12°/100') 8,783

8483
TD @ 16,203' MD

Cased Hole Logs:
None.

Production
16,203' MD 5-1/2" 20# P-110 BTC
9,289' TVD

Landing Point @ 9,529 ft MD 9,245 ft TVD

Max. Anticipated BHP: 0.494 psi/ft

TD @ 16,203' MD
9,289' TVD

Vick Harvey	Date	Jason Levinson	Date
Geologist	11/26/2013	Drilling Engineer	11/25/2013

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	CONOCOPHILLIPS
LEASE NO.:	NM27508
WELL NAME & NO.:	4H WILDER FEDERAL AC 28
SURFACE HOLE FOOTAGE:	330' FNL & 330' FWL
BOTTOM HOLE FOOTAGE	330' FSL & 330' FWL
LOCATION:	Section 28, T.26 S., R.32 E., NMPM
COUNTY:	Eddy County, New Mexico
API:	30-025-40502

I. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

☒ **Lea County**
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 393-3612

1. A Hydrogen Sulfide (H2S) Drilling Plan should be activated 500 feet prior to drilling into the **Delaware** formation. **As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation. This will also be applicable if an un-cemented completion liner is run and a liner top seal, or equivalent, has not been established before the rig move.**

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.

4. **The record of the drilling rate along with the GR/N well log run from TD of the vertical portion of hole to surface shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. IF OPERATOR DOES NOT HAVE THE WELL SPECIFIC CEMENT DETAILS ONSITE PRIOR TO PUMPING THE CEMENT FOR EACH CASING STRING, THE WOC WILL BE 30 HOURS. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Possible lost circulation in the Red Beds, Delaware, and Bone Spring formations. Possible brine and fresh water flows in the Salado, Castile, Delaware and Bone Spring.

1. The **13-3/8** inch surface casing shall be set at approximately **905** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

d. If cement falls back, remedial action will be done prior to drilling out that string.

Intermediate casing shall be kept fluid filled while running into hole to meet BLM minimum collapse requirements.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is: **(Ensure casing is set in the Lamar at approximately 4350')**

☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

☒ Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification.

Operator has proposed a contingency DV tool at 5500'. If operator circulates cement on the first stage, operator is approved to run the DV tool cancellation plug and cancel the second stage of the proposed cement plan. If cement does not circulate, operator will proceed with the second stage.

a. Second stage above DV tool:

☒ Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification.

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi.

    a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.

4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

    b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (18 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

    c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock.

d. The results of the test shall be reported to the appropriate BLM office.

e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**

f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion 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.

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