Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Hobbs

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.

HOBBS OCD

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

JAN 07 2014

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 AA 29 6H

2. Name of Operator
CONOCOPHILLIPS
Contact: KRISTINA MICKENS
E-Mail: kristina.mickens@conocophillips.com

9. API Well No.
30-025-41512

3a. Address
600 N DAIRY ASHFORD P-10-4056
HOUSTON, TX 77079

3b. Phone No. (include area code)
Ph: 281-206-5282

10. Field and Pool, or Exploratory
JENNINGS; BS UPPER SHALE

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 29 T26S R32E 330FNL 2066FEL

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 APD
	☐ 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.
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.

SEE ATTACHED FOR CONDITIONS OF APPROVAL

Proposed bottom hole from 330' FSL & 1707' FEL of 29-26S-32E to 330' FSL & 2307' FEL of 29-26S-32E

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

Electronic Submission #229002 verified by the BLM Well Information System
For CONOCOPHILLIPS, sent to the Hobbs
Committed to AFMSS for processing by JOHNNY DICKERSON on 12/11/2013 ()

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

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.

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

JAN 08 2014

Additional data for EC transaction #229002 that would not fit on the form

32. Additional remarks, continued

We are also requesting to amend the well name from Wilder Federal 29 6H to Wilder Federal AA 29 6H

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

HOBBS OCD
JAN 07 2014
RECEIVED

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
30-025-41512	97838	JENNINGS; BS UPPER SHALE

Property Code	Property Name	Well Number
39470	WILDER FEDERAL AA 29	6H

OGRID No.	Operator Name	Elevation
217817	CONOCO PHILLIPS	3141'

Surface Location

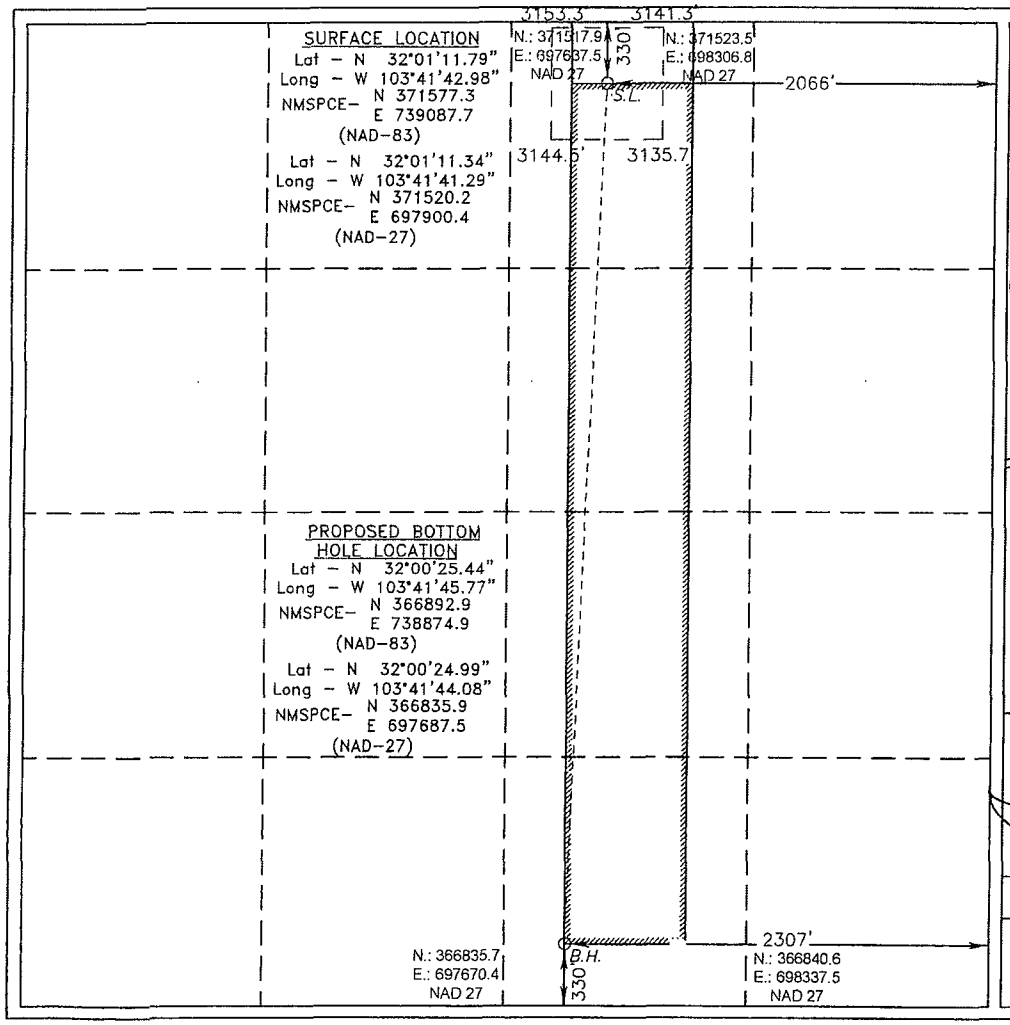
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	29	26 S	32 E		330	NORTH	2066	EAST	LEA

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
O	29	26 S	32 E		330	SOUTH	2307	EAST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	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



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 12/9/13
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.

FEBRUARY 25, 2013
Date Surveyed

Signature & Seal of Professional Surveyor

GARY L. JONES
NEW MEXICO
7977
REGISTERED PROFESSIONAL SURVEYOR

No. 28238

Certificate No. Gary L. Jones 7977

BASIN SURVEYS 28238

Wilder Federal AA 29-6H
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 4420'. 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').

DRILLING PLAN

PROSPECT/FIELD	Bonespring/Red Hills			COUNTY/STATE		Lea County, NM	
OWNERS	ConocoPhillips			LEASE			
WELL NO.	Wilder Federal 29 #6H		FNL	FSL	FEL	FWL	
LOCATION		Surface Location:	330		2068		
		Bottom Hole Location:		330	2307		SECITON 29
EST. T.D.	Leg #1 13,638' MD				GROUND ELEV.		3,141' (est)
						RKB	3,166' (est)

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

Marker	TVD	S.S. Depth
Quaternary	Surface	
Rustler	956	-2,208
Delaware Top	4,299	-1,133
Ford Shale	4,398	-1,232
Bone Spring	8,120	-4,954
Bone Spring 1st Carbonate Top	8,426	-5,262
Bone Spring 1st Carbonate Base	8,483	-5,317
Avalon A Shale Top	8,703	-5,537
Avalon A Shale Base	8,898	-5,732

LOGS:

Type	Interval
Open Hole:	
GR-MWD	13638- 8,360'

DEVIATION:

Surf:	12° max., svy every 900'
Int1/2: Pilot	3° max., svy every 200'
Int 2: Curve	92° max., svy every 30'
Prod:	92° max., svy every 200'

CORES: No core.

SAMPLES:

Mudlogging:	Start	End	
Two-Man:	1010'	TD	Vertical and Horizontal sections

BOP:

H&P486 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 Up Dip

Max. Anticipated BHP: 0.65 psi/ft

Surface Formation:

MUD:	Interval	Type	Max. MW	Vis	WL	Remarks
Surface:	0'-1070'	Aquagel - Spud Mud	8.9	32-36	NC	
Intermediate:	1070'-4420'	Brine	10.5	28-30	5-8	
Production:	4420'-13638'	Cut Brine	9.3	30-40	<=6	

CASING:	Size	Wt ppf	Hole	Depth	Cement	WOC	Remarks
Surface:	13-3/8"	54.5	17-1/2"	1,070'	To Surface	18hrs	
Intermediate:	9-5/8"	36	12-1/4"	4,420'	To Surface	18hrs	
Production:	5-1/2"	17	8-3/4"	13,638'	500' into Intermediate	18hrs	

DIRECTIONAL PLAN

	MD	TVD	AZ	
Surface:	N/A	N/A	0	Directional Company: DDC
Vertical KOP.:	8,360'	8,324'	179.7	Vertical Build Rate: 11.0 °/100'
End Build:	9,175'	8,843'	179.7	Tan Leg Turn Rate: 0.0 °/100'
Tangent:	N/A	N/A	179.7	
Turn:	N/A	N/A	179.7	
TD:	13,638'	8,841'	179.7	

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: 11/26/13 Doc: REV:2

HOBBS OCD

JAN 07 2014

RECEIVED

Wilder Federal 29 #6H

Surface Location: 330FNL 2066FEL

Bottom Hole Location 330FSL 2307FEL

Directional:

	MD	TVD	FNL/FSL	FEL/FWL	S-T-R	AZI
Vertical KOP :	8360	8324	0	0	0	179.7
End Build :	9,175'	8,843'	0	0	0	179.7
Tangent:	N/A	N/A	0	0	0	179.7
Turn:	N/A	N/A	0	0	0	179.7
TD:	13,638'	8,841'	0	0	0	179.7

Formation	TVD
Quaternary	Surface
Rustler	-958
Delaware Top	-4299
Bone Spring	-8120
Bone Soring 1st Carbonate Top	-8426
Bone Spring 1st Carbonate Base	-8483
Avalon A Shale Top	-8703
Avalon A Shale Base	-8899

CASING

Surface

1,079' 13-3/8" 54.5# J-55 BTC

Intermediate

4,429' 36# J-55 BTC

Optional DV+ACP

5,500'

Drill Fluids	Cement		Analysis
Data. These numbers are only estimates.			
Surface:	Surface:	Slurry Top	
Aquagel - Spud Mud	320 Sx Lead	Surface.	
8.9#	770 Sx Tail		
w/ high vis sweeps	Based on 17.-1/2" OH,		
	with 150% excess		
Intermediate:	Intermediate	Slurry Top	Mudlogging:
Brine	1,250 Sx Lead	Surface.	Two-Man:
10.5#	250 Sx Tail		1010'
28-30 Vis			
8-8 WL	Based on 12.25 in. Hole		TD
	with 200% excess		
Production:	Production	Slurry Top	
Cut Brine	Stage 1	500' into 9-5/8".	
9.3#	450 Sx Lead		
30-40 Vis	1,463 Sx Tail		
<=6 WL	Stage 2		
	170 Sx Lead		
high vis sweeps	Based on 8.75 in. Hole		
as required.	with 125% excess		

KOP (11°/100') 8,360

Landing Point @ 9,175 ft MD 8,843 ft TVD

Max. Anticipated BHP: 0.65 psi/ft

Open Hole:
None.

GR-MWD
8360
TD @ 13,638' MD

Cased Hole Logs:
None.

Production
13,638' MD 5-1/2" 17# P-110 BTC
8,841 ' TVD

TD @ 13,638' MD
8,841' TVD

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 1010'
Drill 12 1/4" intermediate hole with Vertical Seeking Scout Tool+Motor and INC Survey Tool till 4420'
RIH 9 5/8" CSG and cement it up to surface
Drill 8 3/4" intermediate #2 hole with Vertical Seeking Scout Tool+Motor and INC Survey Tool till 8300ft
Run Gyro till 8300ft.
Began GR-MWD service after KOP 8360'.
The 8 3/4" curve will be drilled with ~ 11°/100' build rate and 180° Azimuth with PDM+MWD till 9175' MD/ 8843' TVD.
The 6 3/4" Lateral will be drilled with PDM+MWD till TD 13638' MD/ 8841' TVD holding 90° INC & 180° Azi.
POOH Backreaming after circulating the hole until clean returns.
RIH 5 1/2" CSG and cement to 500 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.

Vick Harvey
Geologist
Date 11/26/2013

Jason Levinson
Drilling Engineer
Date 11/26/2013

RECEIVED
JAN 07 2014
HOBBS OCD

Bonespring/Red Hills
ConocoPhillips
Wilder Federal 29 #6H

Surface Casing:	
Surface Casing Depth (Ft)	1,070
Surface Casing O.D. (In.)	13.375
Surface Casing ID (In)	12.715
Hole O.D. (In)	17.5
Excess (%)	150%
Volume Tail (Sx)	320
Yield Tail (Cu. Ft./Sx)	1.33
Yield Lead (Cu. Ft./Sx)	1.75
Shoe Joint (Ft)	40
Shoe Volume (Cu. Ft)	35.3
Tail feet of cement	300
Calculated Total Volume (Cu. Ft.)	1,789
Calc. Tail Volume (Cu. Ft.)	417
Calc. Lead Volume (Cu. Ft.)	1,337
Calc. Lead Volume (Sx)	770

Intermediate #1 Casing (Lead):	
Intermediate Casing O.D. (In.)	9.625
Intermediate Casing ID (In)	8.835
Hole O.D. (In)	12.25
Excess (%)	150%
cap 12-1/4 - 9-5/8"	0.0558
Calculated fill:	3,920'
Yield Lead (Cu. Ft./Sx)	2.47
Calculated Total Lead (Cu. Ft.)	3,069
Calc. Lead Volume (Sx)	1250

Intermediate #1 Casing (Tail):	
Intermediate Casing O.D. (In.)	9-5/8"
Production Casing ID (In)	8.835
Hole O.D. (In)	12.25
Excess (%)	200%
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.)	330
Required Tail Volume (Sx)	250

Production Casing Stage 1(Lead):	
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")	4,440'
Yield Lead (Cu. Ft./Sx)	3.22
Calculated Total Lead (Cu. Ft.)	1,441
Calc. Lead Volume (Sx)	450

Production Casing Stage 1 (Tail):	
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:	5,278'
Yield ~~Lead~~ Tail (Cu. Ft./Sx)	1.27
Calculated Total Tail (Cu. Ft.)	1,858
Required Tail Volume (Sx)	1463

4050

8,360'

Production Casing Stage 2 (Lead):	
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")	1,580'
Yield Lead (Cu. Ft./Sx)	3.22
Calculated Total Lead (Cu. Ft.)	544
Calc. Lead Volume (Sx)	170

5,500'

460sx lead @ 3.19 ft^3/sx

1415sx tail @ 1.27 ft^3/sx

Both volumes are proposed with 35% excess

Top of cement to 500ft. inside the previous casing shoe at 4650ft.

13676' - 4150'

Optional DV tool at 5500ft.

Stage 2

150sx lead @ 3.19 ft^3/sx

Volume is proposed with 35% excess

Top of cement to 500ft. inside the previous casing shoe at 4650ft.

5500' - 4150'

Wilder Federal 29-6H

Stage 1

450sx lead @ 3.19 ft^3/sx

1417sx tail @ 1.27 ft^3/sx

Both volumes are proposed with 35% excess

Top of cement to 500ft. inside the previous casing shoe at 4420ft.

13638' - 3920'

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 4420ft.

5500' - 3920'

As with the Wilder Federal 28-3H, we will determine the need for the stage tool while drilling the 8-3/4" section if any losses are encountered. I will also be working the Wilder Federal 28-8H as soon as possible.

Wilder Federal Wells

Levinson, Jason A <Jason.A.Levinson@conocophillips.com> Mon, Dec 30, 2013 at 12:16 PM
To: "jamason@blm.gov" <jamason@blm.gov>
Cc: "Mickens, Kristina" <Kristina.Mickens@conocophillips.com>, "Ramos, Roger R" <Roger.R.Ramos@conocophillips.com>, "Garner, Justin B" <Justin.B.Garner@conocophillips.com>

Jennifer,

Please refer to the following for your questions regarding the DV tool placement and cement volumes for the following wells:

Wilder Federal 29-2H

-

Stage 1

510sx lead @ 3.19 ft^3/sx

1368sx tail @ 1.27 ft^3/sx

Both volumes are proposed with 35% excess

Top of cement to 500ft. inside the previous casing shoe at 4300ft.

13597' - 3800'

Optional DV tool at 5500ft.

Stage 2

190sx lead @ 3.19 ft^3/sx

Volume is proposed with 35% excess

Top of cement to 500ft. inside the previous casing shoe at 4300ft.

5500' - 3800'

Wilder Federal 29-5H

Stage 1

Please let me know if you have any questions or concerns.

Thanks,

Jason Levinson | Senior Drilling Engineer
ConocoPhillips Company
600 N Dairy Ashford Rd, P10-05-5006 Houston, TX 77079
jason.a.levinson@conocophillips.com | Direct 832.486.2225 | Mobile 281.682.2783

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	ConocoPhillips Company
LEASE NO.:	NMNM-27508
WELL NAME & NO.:	Wilder Federal AA 29 6H
SURFACE HOLE FOOTAGE:	0330' FNL & 2066' FEL
BOTTOM HOLE FOOTAGE	0330' FSL & 2307' FEL
LOCATION:	Section 29, T. 26 S., R 32 E., NMPM
COUNTY:	Lea County, New Mexico
API:	30-025-41512

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 shall 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.**

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 to surface (horizontal well – vertical portion of hole) 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 water flows in the Salado, Castile, Delaware, and Bone Spring.
Possible lost circulation in the Red Beds, Delaware, and Bone Spring.

1. The **13-3/8** inch surface casing shall be set at approximately **1070** feet (**in a competent bed <u>below the Magenta Dolomite</u>, which is a <u>Member of the Rustler</u>, and if salt is encountered, set casing at least 25 feet 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 cementing will be done prior to drilling out that string.

Formation below the 13-3/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

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:

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

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.

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

Cement Option #1:

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

Cement Option #2:

Operator has proposed DV tool at depth of 5500'. Operator is to submit sundry if DV tool depth varies by more than 100' from approved depth.

a. First stage to DV tool:

☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve approved top of cement on the next stage.

b. 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. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi. **5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**

3. 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**.

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.

JAM 010314