APD

Form 3160-5
(August 2007)

OCD Artesia

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

5. Lease Serial No.
NMNM89052

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.
APACHE 25 FED 18H

2. Name of Operator
DEVON ENERGY PRODUCTION CO.LP
Contact: TRINA C COUCH
Mail: trina.couch@dvn.com

9. API Well No.
30-015-41395

3a. Address
DEVON ENERGY PRODUCTION CO.LP 333 WEST SHERIDAN AVE
OKLAHOMA CITY, OK 73102-5015

3b. Phone No. (include area code)
Ph: 405-228-7203
OKLAHOMA CITY, OK 73102-5015

10. Field and Pool, or Exploratory
LOS MEDANOS;BONE SPRING

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 25 T22S R30E 1080FNL 330FEL

11. County or Parish, and State
EDDY COUNTY 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.)

With regards to the Apache 25 Fed 18H (API 30-015-41395), Devon Energy Production Company, L.P. respectfully requests to cancel the casing design change sundry that was approved on July 23, 2013 and return to the original APD casing design plan, which was approved on May 8, 2013. In addition to this request, Devon is submitting a Contingency Casing Design plan, if conditions while drilling this well dictate.

Accepted for record
NMOCD TOS 9/3/2013

Attached:
Primary Drilling Plan
Contingency Casing Plan

RECEIVED
SEP 03 2013
NMOCD ARTESIA

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

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

Electronic Submission #217772 verified by the BLM Well Information System
For DEVON ENERGY PRODUCTION CO.LP, sent to the Carlsbad
Committed to AFMSS for processing by JOHNNY DICKERSON on 08/22/2013 ()

Name *(Printed/Typed)* TRINA C COUCH — Title REGULATORY ASSOCIATE

Signature (Electronic Submission) — Date 08/21/2013

APPROVED
AUG 29 2013
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 ****

APACHE 25 FED 18H– APD DRILLING PLAN (Primary Casing Plan)
JSP 8.20.13

Casing Program

Hole Size	Hole Interval	OD Csg	Casing Interval	Weight	Collar	Grade
17-1/2"	0 - 520	13-3/8"	0 - 520	48#	STC	H-40
12-1/4"	520 - 3870	9-5/8"	0 - 3870	40#	LTC	J-55
8-3/4"	3870 – 10,100	5-1/2"	0 – 10,100	17#	LTC	P-110
8-3/4"	10,100 – ~~15,676~~ 15183 per directional plan	5-1/2"	10,100 – ~~15,676~~ 15183 per directional plan	17#	BTC	P-110

MAX TVD: 10,980 FT

Design Factors

Casing Size	Collapse Design Factor	Burst Design Factor	Tension Design Factor
13-3/8"48# H-40 LTC	3.1	6.9	11.4
9-5/8" 40# J-55 LTC	1.3	2.0	3.4
5-1/2" 17# P-110 LTC	1.8	2.3	2.1
5-1/2" 17# P-110 BTC	1.7	2.1	6.0

Mud Program

Depth	Mud Wt.	Visc.	Fluid Loss	Type System
0 - 520	8.4 – 9.0	30 – 34	N/C	FW
520 - 3870	9.8 – 10.0	28 – 32	N/C	Brine
3870 – 11,582	8.6 – 9.2	28 – 32	N/C	FW/CB
11,852 – ~~15,676~~ 15183	9.2 – 9.6	28 – 32	N/C	CB

Pressure Control Equipment

The BOP system used to drill the intermediate hole will consist of a 13-5/8" 3M Triple Ram and Annular preventer. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2 as a **3M system** prior to drilling out the surface casing shoe.

The BOP system used to drill the production hole will consist of a 13-5/8" 3M Triple Ram and Annular preventer. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2 as a **3M system** prior to drilling out the intermediate casing shoe.

The pipe rams will be operated and checked as per Onshore Order No 2. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at **3,000 psi WP**.

See COA

Devon requests a variance to use a flexible line with flanged ends between the BOP and the choke manifold (choke line). The line will be kept as straight as possible with minimal turns.

Cementing Program (cement volumes based on at least 25% excess)

13-3/8" Surface (Excess: 150%)

Mix and pump 710 sks
HalCem – C
1% Calcium Chloride - Flake (Accelerator)
0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive)

Fluid Weight	14.80 lbm/gal
Slurry Yield:	1.34 ft^3/sk
Total Mixing Fluid:	6.34 Gal/sk
Top of Fluid:	0 ft
Calculated Fill:	520 ft
Volume:	167.1 bbl
Calculated Sacks:	702.3 sks
Proposed Sacks:	710 sks

9-5/8" Intermediate (Excess: 75%)

Lead with 810 sks
EconoCem – HLC
5 % Salt (Salt)
0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive)

Fluid Weight	12.90 lbm/gal
Slurry Yield:	1.85 ft^3/sk
Total Mixing Fluid:	9.81 Gal/sk
Top of Fluid:	0 ft
Calculated Fill:	2875 ft
Volume:	264.27 bbl
Calculated Sacks:	803 sks
Proposed Sacks:	810 sks

Tail-in with 430 sks
HalCem – C
0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive)

Fluid Weight	14.80 lbm/gal
Slurry Yield:	1.33 ft^3/sk
Total Mixing Fluid:	6.32 Gal/sk
Top of Fluid:	2870 ft
Calculated Fill:	1000ft
Volume:	100.65 bbl
Calculated Sacks:	426.5 sks
Proposed Sacks:	430 sks

5-1/2" Production Casing (Excess: 25%)

Stage 1

Lead with 780 sks
ECONOCEM (TM) SYSTEM
0.2 % HR-601 (Retarder)

Fluid Weight	12.50 lbm/gal
Slurry Yield:	1.95 ft3/sk
Total Mixing Fluid:	10.81 Gal/sk
Top of Fluid:	5500 ft
Calculated Fill:	4790 ft
Volume:	269.37 bbl
Calculated Sacks:	775.20 sks
Proposed Sacks:	780 sks

Tail-in with 1410 sks
VERSACEM (TM) SYSTEM
0.5 % Halad(R)-344 (Low Fluid Loss Control)
0.4 % CFR-3 (Dispersant)
1 % Salt (Salt) Top of Fluid:
0.2 % HR-601 (Retarder)

Fluid Weight	14.50 lbm/gal
Slurry Yield:	1.21 ft3/sk
Total Mixing Fluid:	5.34 Gal/sk
10290 ft	
Calculated Fill:	5386 ft
Volume:	303.82 bbl
Calculated Sacks:	1406.28 sks
Proposed Sacks:	1410 sks

See COA

DV TOOL at 5,500 ft

Stage 2

SW
COA

Lead with 540 sks
VERSACEM (TM) SYSTEM
0.15 % SA-1015 (Suspension Agent)
0.25 lbm/sk D-AIR 5000 (Defoamer)
0.1 % HR-601 (Retarder)

Fluid Weight	11.50 lbm/gal
Slurry Yield:	2.55 ft3/sk
Total Mixing Fluid:	15.15 Gal/sk
Top of Fluid:	0 ft
Calculated Fill:	5000 ft
Volume:	243.27 bbl
Calculated Sacks:	535.64 sks
Proposed Sacks:	540 sks

Tail-in with 120 sks
HALCEM (TM) SYSTEM
0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive)

Fluid Weight	14.80 lbm/gal
Slurry Yield:	1.33 ft3/sk
Total Mixing Fluid:	6.32 Gal/sk
Top of Fluid:	5000 ft
Calculated Fill:	500 ft
Volume:	28.12 bbl
Calculated Sacks:	119.15 sks
Proposed Sacks:	120 sks

TOC for All Strings:

Surface:	0
Intermediate:	0
Production Casing:	0

ACTUAL CEMENT VOLUMES WILL BE ADJUSTED BASED ON FLUID CALIPER AND CALIPER LOG DATA.

APACHE 25 FED 18H– APD DRILLING PLAN (Contingency Casing Plan)
JSP 8.20.13

Casing Program

Hole Size	Hole Interval	OD Csg	Casing Interval	Weight	Collar	Grade
17-1/2"	0 - 520	13-3/8"	0 - 520	48#	STC	H-40
12-1/4"	520 - 3870	9-5/8"	0 - 3870	40#	LTC	J-55
8-3/4"	3870 – 11,582	7"	0 – 11,582	29#	BTC	P-110
6-1/8"	11,852 – ~~15,676~~	4-1/2"	10,240 – ~~15,676~~	13.5#	BTC	P-110

MAX TVD: 10,980 FT

15,183 per directional plan.

Design Factors

Casing Size	Collapse Design Factor	Burst Design Factor	Tension Design Factor
13-3/8"48# H-40 LTC	3.1	6.9	11.4
9-5/8" 40# J-55 LTC	1.3	2.0	3.4
7" 29# P-110 BTC	1.6	2.1	2.8
4-1/2" 13.5# P-110 BTC	1.9	2.2	6.0

Mud Program

Depth	Mud Wt.	Visc.	Fluid Loss	Type System
0 - 520	8.4 – 9.0	30 – 34	N/C	FW
520 - 3870	9.8 – 10.0	28 – 32	N/C	Brine
3870 – 11,582	8.6 – 9.2	28 – 32	N/C	FW/CB
11,852 – ~~15,676~~	9.2 – 9.6	28 – 32	N/C	CB

Pressure Control Equipment
The BOP system used to drill the intermediate hole will consist of a 13-5/8" 3M Triple Ram and Annular preventer. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2 as a **3M system** prior to drilling out the surface casing shoe.

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The pipe rams will be operated and checked as per Onshore Order No 2. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at **3,000 psi WP**.

Devon requests a variance to use a flexible line with flanged ends between the BOP and the choke manifold (choke line). The line will be kept as straight as possible with minimal turns.

See COA

Cementing Program (cement volumes based on at least 25% excess)

13-3/8" Surface (Excess: 150%)

Mix and pump 710 sks
HalCem – C
1% Calcium Chloride - Flake (Accelerator)
0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive)

Fluid Weight	14.80 lbm/gal
Slurry Yield:	1.34 ft^3/sk
Total Mixing Fluid:	6.34 Gal/sk
Top of Fluid:	0 ft
Calculated Fill:	520 ft
Volume:	167.1 bbl
Calculated Sacks:	702.3 sks
Proposed Sacks:	710 sks

9-5/8" Intermediate (Excess: 75%)

Lead with 810 sks
EconoCem – HLC
5 % Salt (Salt)
0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive)

Fluid Weight	12.90 lbm/gal
Slurry Yield:	1.85 ft^3/sk
Total Mixing Fluid:	9.81 Gal/sk
Top of Fluid:	0 ft
Calculated Fill:	2875 ft
Volume:	264.27 bbl
Calculated Sacks:	803 sks
Proposed Sacks:	810 sks

Tail-in with 430 sks
HalCem – C
0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive)

Fluid Weight	14.80 lbm/gal
Slurry Yield:	1.33 ft^3/sk
Total Mixing Fluid:	6.32 Gal/sk
Top of Fluid:	2870 ft
Calculated Fill:	1000ft
Volume:	100.65 bbl
Calculated Sacks:	426.5 sks
Proposed Sacks:	430 sks

7" Production Casing (Excess: 50%)

Stage 1

Lead with 440 sks
TUNED LIGHT (TM) SYSTEM
2 lbm/sk Kol-Seal (Lost Circulation Additive)
0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive)
0.2 lbm/sk HR-800 (Retarder)

Fluid Weight	10.40 lbm/gal
Slurry Yield:	2.91 ft3/sk
Total Mixing Fluid:	15.24 Gal/sk
Top of Fluid:	5500 ft
Calculated Fill:	5582 ft
Volume:	224.19 bbl
Calculated Sacks:	432.55 sks
Proposed Sacks:	440 sks

Tail-in with 110 sks
VERSACEM (TM) SYSTEM
0.3 % Halad(R)-9 (Low Fluid Loss Control)
0.2 % HR-800 (Retarder)
1 lbm/sk Kol-Seal (Lost Circulation Additive)

Fluid Weight	14.40 lbm/gal
Slurry Yield:	1.25 ft3/sk
Total Mixing Fluid:	5.69 Gal/sk
Top of Fluid:	11082 ft
Calculated Fill:	500 ft
Volume:	23.42 bbl
Calculated Sacks:	105.30 sks
Proposed Sacks:	110 sks

DV TOOL at 5,500 ft

Stage 2

Lead with 420 sks
ECONOCEM (TM) SYSTEM
5 % Salt (Salt) Slurry Yield:
0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive)

Fluid Weight	12.70 lbm/gal
1.94 ft3/sk	
Total Mixing Fluid:	10.47 Gal/sk
Top of Fluid:	0 ft
Calculated Fill:	4750 ft
Volume:	144.58 bbl
Calculated Sacks:	419.30 sks
Proposed Sacks:	420 sks

See COA

Tail-in with 130 sks
HALCEM (TM) SYSTEM

Fluid Weight	14.80 lbm/gal
Slurry Yield:	1.33 ft3/sk
Total Mixing Fluid:	6.34 Gal/sk
Top of Fluid:	4750 ft
Calculated Fill:	750 ft
Volume:	30.12 bbl
Calculated Sacks:	127.54 sks
Proposed Sacks:	130 sks

4 ½" Production Liner (Excess: 25%)

Stage 1

Lead with 530 sks
VERSACEM (TM) SYSTEM
0.5 % Halad(R)-344 (Low Fluid Loss Control)
0.4 % CFR-3 (Dispersant)
1 % Salt (Salt)
0.2 % HR-601 (Retarder)

Fluid Weight	14.50 lbm/gal
Slurry Yield:	1.21 ft3/sk
Total Mixing Fluid:	5.34 Gal/sk
Top of Fluid:	10240 ft
Calculated Fill:	5436 ft
Volume:	114.32 bbl
Calculated Sacks:	529.17 sks
Proposed Sacks:	530 sks

TOC for All Strings:

Surface:	0
Intermediate:	0
Production Casing:	0
Production Liner:	10,240'

ACTUAL CEMENT VOLUMES WILL BE ADJUSTED BASED ON FLUID CALIPER AND CALIPER LOG DATA.

CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Devon Energy Production Company, L.P.**
LEASE NO.:	**NMNM-89052**
WELL NAME & NO.:	**Apache 25 Fed 18H**
SURFACE HOLE FOOTAGE:	**1080' FNL & 0330' FEL**
BOTTOM HOLE FOOTAGE	**1980' FNL & 0330' FWL**
LOCATION:	**Section 25, T. 22 S., R 30 E., NMPM**
COUNTY:	**Eddy County, New Mexico**
API:	**30-015-41395**

I. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours 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)

☒ **Eddy County**
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

1. **A Hydrogen Sulfide (H2S) Drilling Plan shall be activated prior to drilling out the surface shoe. 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, 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.

R-111-P/WIPP
High Cave/Karst
Possibility of water and brine flows in the Salado and Castile Groups.
Possibility of lost circulation in the Delaware and Bone Springs.

1. The **13-3/8** inch surface casing shall be set at approximately **520** feet (**in a competent bed <u>below the Magenta Dolomite</u>, a <u>Member of the Rustler</u>**) 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.

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. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to high cave/karst and R-111-potash.**

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

<u>Contingency Production Casing:</u>

3. The minimum required fill of cement behind the **7** inch production casing is:

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 circulation on the next stage. **Excess calculates to negative 3% - Additional cement will be required.**

b. Second stage above DV tool:

☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Excess calculates to 15% - Additional cement may be required.**

4. The minimum required fill of cement behind the **4-1/2** inch production Liner is:

☒ Cement as proposed by operator. Operator shall provide method of verification.

Production Casing without Contingency:

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

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 circulation on the next stage.

b. Second stage above DV tool:

☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Excess calculates to 8% - Additional cement may be required.**

6. 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.

7. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

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 potash areas, 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. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.

    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.

F. WIPP Requirements

The proposed well is located within 330' of the WIPP Land Withdrawal Area boundary. As a result, Devon Energy Production Company, L.P. is required to submit daily drilling reports, logs and deviation survey information to the Bureau of Land Management and the Department of Energy per requirements of the Joint Powers Agreement until a total vertical depth of 7,000 feet is reached. These reports will have at a minimum the rate of penetration and a clearly marked section showing the deviation for each 500 foot interval. Operator may be required to do more frequent deviation surveys based on the daily information submitted and may be required to take other corrective measures. Information from this well will be included in the Quarterly Drilling Report. Information will also be provided to the New Mexico Oil Conservation Division after drilling activities have been completed. Upon completion of the well, the operator shall submit a complete directional survey. Any future entry into the well for purposes of completing additional drilling will require supplemental information.

Devon Energy Production Company, L.P. can email the required information to Mr. Melvin Balderrama at Melvin.Balderama@wipp.ws or Mr. J. Neatherlin at Jimmy.Neatherlin@wipp.ws fax to his attention at 575-234-6062.

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