

OCD-ARTESIA

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
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

FORM APPROVED
OMB NO. 1004-0135
EXPIRES: March 31, 2007

SUBMIT IN TRIPLICATE

1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other _____

2. Name of Operator
DEVON ENERGY PRODUCTION COMPANY, LP

3. Address and Telephone No.
20 N. Broadway, Oklahoma City, Ok 73102-8260 405-235-3611

4. Location of Well (Report location clearly and in accordance with Federal requirements)*
330' FNL 660' FWL D SEC 26 T24S R31E
BHL: 330' FSL & 660' FWL

RECEIVED
MAR 08 2010
NMOCD ARTESIA

5. Lease Serial No.
NM-012121

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.

8. Well Name and No.
Cotton Draw 26 Federal 4H

9. API Well No.
30-015-37409

10. Field and Pool, or Exploratory
Poker Lake South; Delaware

11. County or Parish State
Eddy NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other _____
	<input checked="" type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	


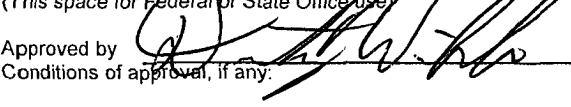
13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work and approximate duration thereof. If the proposal deepens directionally or recompletes horizontally, give subsurface location and measured 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

Devon Energy Production Company L.P. respectfully requests to deviate from the original APD with the attached changes: Casing & Cementing, Design Factors, Mud Program and Pressure Control Equipment. Please see the attached.

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Attachments

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

Signed 	Name Title	Judy A. Barnett Regulatory Analyst	Date 2/8/2010
(This space for Federal or State Office use)			
Approved by 	Title	/s/ Dustin Winkler BUREAU OF LAND MANAGEMENT CARLSBAD FIELD OFFICE	Date

*See Instruction on Reverse Side

D. 28-3-15-10

COTTON DRAW 26 FED 4H - SUNDRY

API#30-015-37409

Page 2

2/08/10

Casing Program

<u>Hole Size</u>	<u>Hole Interval</u>	<u>OD Csg</u>	<u>Casing Interval</u>	<u>Weight</u>	<u>Collar</u>	<u>Grade</u>
17-1/2"	0 – 750	13-3/8"	0 – 750	48#	STC	H-40
12-1/4"	750 – 3,000	9-5/8"	0 – 3,000	36#	LTC	J-55
12-1/4"	3,000 – 4,380	9-5/8"	3,000 – 4,380	40#	LTC	J-55
8-1/2"	4,380 – 7,650	5-1/2"	0 – 7,650	17#	LTC	N-80
8-1/2"	7,650 – 12,687	5-1/2"	7,650 – 12,687	17#	BTC	N-80

Design Factors:

<u>Casing Size</u>	<u>Collapse Design Factor</u>	<u>Burst Design Factor</u>	<u>Tension Design Factor</u>
13-3/8"	2.19	4.93	8.94
9-5/8" 36# J-55 LTC	1.29	2.26	2.78
9-5/8" 40# J-55 LTC	1.13	1.73	9.42
5-1/2" 17# N-80 LTC	1.75	2.16	1.61
5-1/2" 17# N-80 BTC	1.61	1.99	5.21

Mud Program:

<u>Depth</u>	<u>Mud Wt.</u>	<u>Visc.</u>	<u>Fluid Loss</u>	<u>Type System</u>
0 – 750	8.4 – 9.0	30 – 34	N/C	FW
750 – 4,380	9.8 – 10.0	28 – 32	N/C	Brine
4,380 – 12,687	8.6 – 9.0	28 – 32	NC -12	FW

Pressure Control Equipment:

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

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. 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 5,000 psi WP.

Cementing Program

13-3/8" Surface
Lead: 485 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 4% bwoc Bentonite + 81.4% Fresh Water, 13.5 ppg,
Yield: 1.75 cf/sk
TOC @ surface.
Tail: 250 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 56.3% Fresh Water, 14.8 ppg
Yield: 1.35 cf/sk

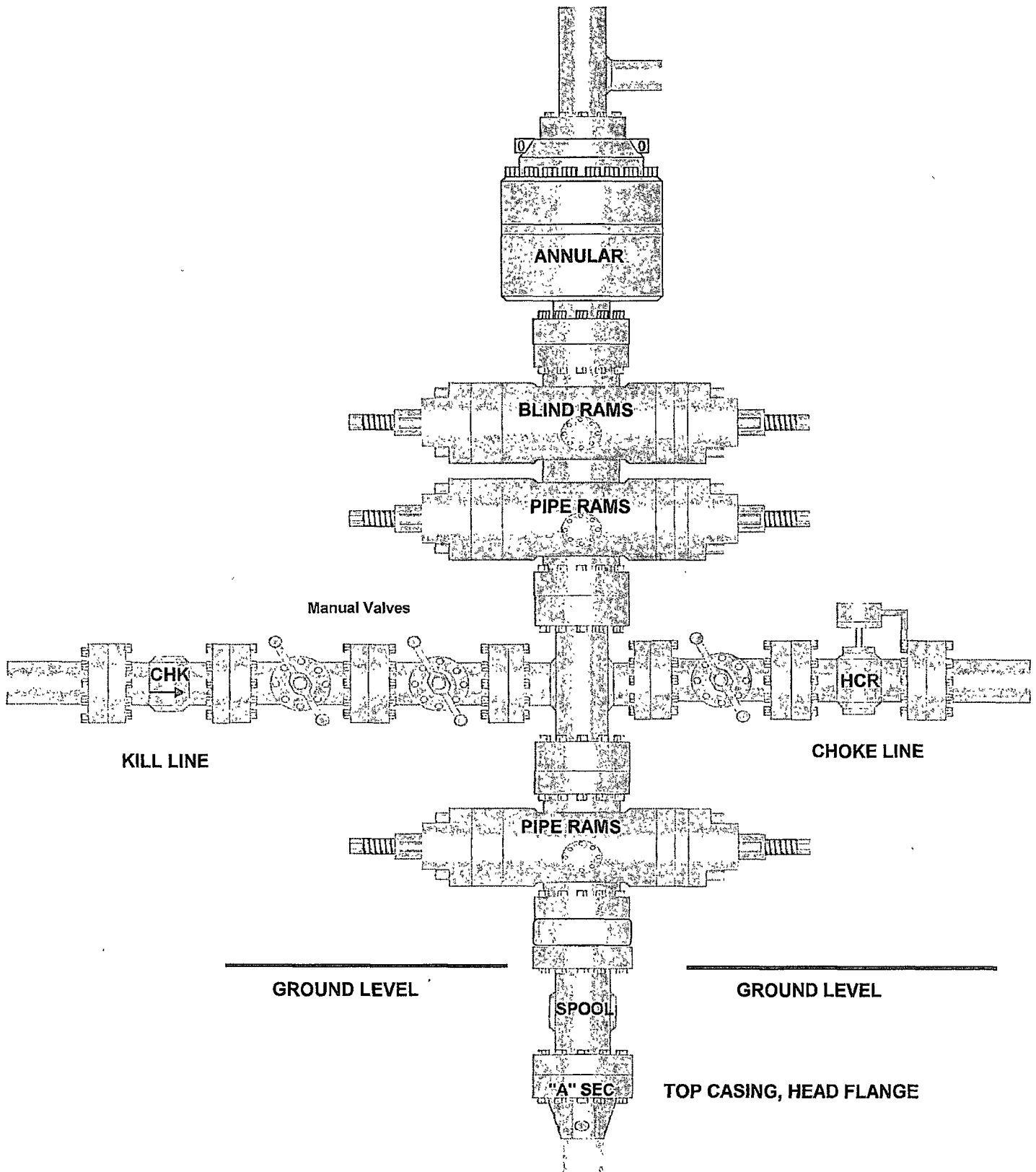
9-5/8" Intermediate
Lead: 1,270 sacks (35:65) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 6% bwoc Bentonite + 107.8% Fresh Water, 12.5 ppg
Yield: 2.04 cf/sk
TOC @ surface
Tail: 300 sacks 60:40 Poz + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 0.4% bwoc Sodium Metasilicate + 4% bwoc MPA-5 + 64.7% Water, 13.8 ppg
Yield: 1.38 cf/sk.

5-1/2" Production
1st Stage
Lead: 1,345 sacks (50:50) Poz (Fly Ash):Class H Cement + 5% bwow Sodium Chloride + 0.3% bwoc CD-32 + 0.5% bwoc FL-25 + 2% bwoc Bentonite + 0.6% bwoc Sodium Metasilicate + 0.5% bwoc FL-52A + 58.3% Fresh Water, 14.2 ppg
Yield: 1.31 cf/sk
DV TOOL at ~7,600 ft
2nd Stage
Lead: 535 sacks (35:65) Poz (Fly Ash):Class C Cement + 1% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 6% bwoc Bentonite + 0.4% bwoc FL-52A + 103.2% Fresh Water, 12.5 ppg
Yield: 1.96 cf/sk
TOC @ 3,880 ft
Tail: 375 sacks (60:40) Poz (Fly Ash):Class C Cement + 1% bwow Sodium Chloride + 0.2% bwoc R-3 + 0.125 lbs/sack Cello Flake + 0.5% bwoc BA-10A + 4% bwoc MPA-5 + 63.2% Fresh Water, 13.8 ppg
Yield: 1.34cf/sk

TOC for All Strings:
Surface: 0'
Intermediate: 0'
Production: 3,880'

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

13-5/8" x 5,000 psi BOP Stack



PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Devon Energy Production Company, LP
LEASE NO.:	NM-012121
WELL NAME & NO.:	Cotton Draw 26 Federal #4H
SURFACE HOLE FOOTAGE:	330' FNL & 660' FWL
BOTTOM HOLE FOOTAGE	330' FSL & 660' FWL
LOCATION:	Section 26, T. 24 S., R 31 E., NMPM
COUNTY:	Eddy County, New Mexico

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
- b. Setting and/or Cementing of all casing strings
- c. BOPE tests

☒ **Eddy County**

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

1. **Although Hydrogen Sulfide has not been reported in this section, it is always a potential hazard. If Hydrogen Sulfide is encountered, please report measured amounts 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.
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 CAL/GR/N well log run from TD to surface will 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 and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.

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

Wait on cement (WOC) time 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. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. 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 Castile, Salado, Delaware and Bone Spring Formations. Possible lost circulation in the Delaware and Bone Spring Formations.

1. **The 13 3/8 inch surface casing shall be set at approximately 750 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.**
 - 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:
Set this casing in the Lamar Limestone.

☒ 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 minimum of one every other joint.

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

- a. First stage to DV tool, cement shall:

☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job.

- b. Second stage above DV tool, cement shall:

☒ 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 **3000 (3M) psi. 5M system tested as a 3M.**
 - 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.

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8 inch** intermediate 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.**
4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. Casing cut-off and BOP installation will not be initiated until the cement has had 4-6 hours of setup time in a water basin and 12 hours in the potash areas. This time will start after the cement plug is bumped. Testing the BOP/BOPE against a plug can commence after meeting the above conditions plus the BOP installation time.
 - b. The tests shall be done by an independent service company utilizing a test plug.
 - c. The results of the test shall be reported to the appropriate BLM office.
 - d. 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.**
 - e. 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.

D. DRILL STEM TEST

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

DHW 021810