

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

000 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.*

**SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

HOBBS OCD

5. Lease Serial No. NMNM100567
6. If Indian, Allottee, or Tribe Name
7. If Unit or CA/Agreement, Name and/or No.
8. Well Name and No. RAGIN CAJUN 12 FED 3H
9. API Well No. 30-025-42257-00-X1
10. Field and Pool, or Exploratory JABALINA
11. County or Parish, and State LEA COUNTY, NM

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		MAY 12 2015
2. Name of Operator DEVON ENERGY PRODUCTION CO E Contact: DAVID H COOK Email: david.cook@dvn.com		
3a. Address 333 WEST SHERIDAN AVE OKLAHOMA CITY, OK 73102	3b. Phone No. (include area code) Ph: 405-552-7848	RECEIVED
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 12 T26S R34E SWSW 10FSL 1085FWL 32.050677 N Lat, 103.428667 W Lon		

12. CHECK APPROPRIATE BOX(ES) 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 checked="" type="checkbox"/> Other
	<input 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 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 recomple 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.)

Devon Energy respectfully requests to change the production casing design from a 5.5" long string to a 7" x 5.5" combination production string. Cement volumes and safety factors have been updated.

See attached revised Drill Plan.

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct. Electronic Submission #301045 verified by the BLM Well Information System For DEVON ENERGY PRODUCTION CO LP, sent to the Hobbs Committed to AFMSS for processing by JENNIFER SANCHEZ on 05/07/2015 (15JAS0055SE)	
Name (Printed/Typed) DAVID H COOK	Title REGULATORY SPECIALIST
Signature (Electronic Submission)	Date 05/07/2015
THIS SPACE FOR FEDERAL OR STATE OFFICIAL USE MAY 7 2015	
Approved By	Title BUREAU OF LAND MANAGEMENT CARLSBAD FIELD OFFICE
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.	
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 \*\*

MAY 13 2015

**DRILLING PROGRAM**

Devon Energy Production Company, L.P.  
Ragin Cajun 12 Fed 3H

1. **Geologic Name of Surface Formation:** Quaternary

2. **Estimated Tops of Geological Markers & Depths of Anticipated FW, Oil, or Gas:**

a. Fresh Water	180'	
b. Rustler	1070'	Barren
c. Top of Salt	1450'	Barren
d. Base of Salt	5061'	Barren
e. Delaware	5390'	Oil / Gas
f. Cherry Canyon	6415'	Oil / Gas
g. Brushy Canyon	7755'	Oil / Gas
Total Depths	9080' TVD	13825' MD

### 3. Pressure Control Equipment:

A 3M 13-5/8" BOP system (Double Ram and Annular preventer) will be installed and tested prior to drilling out the surface casing shoe. The BOP system used to drill the intermediate hole will be tested per BLM Onshore Oil and Gas Order 2.

A 3M 13-5/8" BOP system (Double Ram and Annular preventer) will be installed and tested prior to drilling out the intermediate casing shoe. The BOP system used to drill the production hole will be tested per BLM Onshore Oil and Gas Order 2.

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 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); **if an H&P rig drills this well. Otherwise no flex line is needed.** The line will be kept as straight as possible with minimal turns.

### Auxiliary Well Control and Monitoring Equipment:

- a. A Kelly cock will be in the drill string at all times.
- b. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.

4. Casing Program:

Hole Size	Hole Interval	Casing OD	Casing Interval	Weight (lb/ft)	Collar	Grade	Collapse Design Factor	Burst Design Factor	Tension Design Factor
17-1/2"	0 - 1100'	13-3/8"	0 - 1100'	48	STC	H-40	1.57	3.52	10.25
12-1/4"	1100-5250'	9-5/8"	0-5250'	40	BTC	HCK-55	1.55	1.45	4.41
8-3/4"	5250-13825'	7"	0-8575'	29	BTC	P-110	2.08	2.54	3.80
8-3/4"	5250-13825'	5-1/2"	8575'-13825'	17	BTC	P-110	1.72	2.45	3.68

Casing Notes:

- All casing is new and API approved

landing 7" @ 8545' per David Cook

Maximum Lateral TVD: 9080'

5. Proposed mud Circulations System:

Depth	Mud Weight	Viscosity	Fluid Loss	Type System
0-1100'	8.4-8.6	30-34	N/C	FW
1100-5250'	10.0	28-32	N/C	Brine
5250-13825'	8.6-9.2	28-32	N/C	FW

The necessary mud products for weight addition and fluid loss control will be on location at all times. Visual mud monitoring equipment will be in place to detect volume changes indicating loss or gain of circulating fluid volume. If abnormal pressures are encountered, electronic/mechanical mud monitoring equipment will be installed.

## 6. Cementing Table:

String	Number of sx	Weight lbs/gal	Water Volume g/sx	Yield cf/sx	Stage; Lead/Tail	Slurry Description
13-3/8" Surface Casing	490	13.5	9.08	1.72	Lead	Class C Cement + 0.125 lbs/sack Poly-E-Flake + 4% bwoc Bentonite + 70.1% Fresh Water
	550	14.8	6.34	1.33	Tail	Class C Cement + 63.5% Fresh Water
9-5/8" Intermediate Casing	1230	12.9	9.82	1.85	Lead	(65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake + 70.9% Fresh Water
	430	14.8	6.32	1.33	Tail	Class C Cement + 0.125 lbs/sack Poly-E-Flake + 63.5% Fresh Water
7 x 5-1/2" Combo Prod.	210	10.4	16.9	3.32	16	Lead: Tuned Light ® + 0.125 lb/sk Pol-E-Flake
	1370	14.5	5.31	1.23	25	Tail: (50:50) Class H Cement: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite

See COA

### TOC for all Strings:

Surface @ 0'  
Intermediate @ 0'  
Production @ 4750'

### Notes:

- Cement volumes Surface 100%, Intermediate 50%, Production based on at least 25% excess
- Actual cement volumes will be adjusted based on fluid caliper and/or caliper log data

## PECOS DISTRICT CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	<b>Devon Energy Production Company, L.P.</b>
<b>LEASE NO.:</b>	<b>NMNM-100567</b>
<b>WELL NAME &amp; NO.:</b>	<b>Rajin Cajun 12 Fed 3H</b>
<b>SURFACE HOLE FOOTAGE:</b>	<b>0010' FSL &amp; 1085' FWL</b>
<b>BOTTOM HOLE FOOTAGE:</b>	<b>0330' FNL &amp; 0660' FWL</b>
<b>LOCATION:</b>	<b>Section 12, T. 26 S., R 34 E., NMPM</b>
<b>COUNTY:</b>	<b>Lea County, New Mexico</b>
<b>API:</b>	<b>30-025-42257</b>

**The original COAs still stand with the following drilling modifications:**

### **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. **Although there are no measured amounts of Hydrogen Sulfide reported, it is always a potential hazard. Operator has stated that they will have monitoring equipment in place prior to drilling out of the surface shoe. 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 or are Non-API. 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.). The initial wellhead installed on the well will remain on the well with spools used as needed.

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

### **Wait on cement (WOC) for Water Basin:**

After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. 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.

Possibility of water flows in the Salado and Castile.

Possibility of lost circulation in the Red Beds, Rustler, and Delaware.

1. The 13-3/8 inch surface casing shall be set at approximately 1100 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**
  - 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.

**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 7 X 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. **Excess calculates to negative 13% - Additional cement <sup>will</sup> be required.**
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. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two 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 050715**