•Form 3160-5 (February 2005)

Approved by Conditions of approval, if any

# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

# OCT-ARTERIA

15.22

FORM APROVED
OMB NO. 1004-0135
EVDIDEC: March 24, 2007

SUNDRY NOTICES AND REPORTS ON WELLS						5. Lease Serial No.			
Do not use this form for proposals to drill or to re-enter an						NMNM-66425			
abandoned well. Use Form 3160-3 (APD) for such proposals						6. If Indian, Allottee or Tribe Name			
	SU	JBMIT IN	TRIPLICATE						
1a. Type of Well	Oil Well Ga	as Well		RECEIVED		7. Unit or CA Agreement Name and No.  8 Well Name and No.			
ria. Type of Well 🔯	Oil Well Ga								
2. Name of Operator				MAR <b>03</b> 2010	Laguna Salado 22 Federal 6H				
DEVON ENERGY PRODUCTION COMPANY, LP						9. API Well No.			
3. Address and Telephone No.				NMOCD ARTESI	A	30-015-37371			
20 N. Broadway, Oklahoma City, Ok 73102-8260				405-235-3611		10. Field	10. Field and Pool, or Exploratory		
4. Location of Well (Report location clearly and in accordance with Federal requirements)*						Ingle Wells; Delaware			
1172' FNL 2510' FWL C SEC 22 T23S R29E					11. County or Parish State				
BHL: 330' FNL & 660' FEL PP:2065' FN				IL & 1650' FEL		Eddy NM			
	12. CHECK	APPROI	PRIATE BOX(s) TO	INDICATE NATURE OF NOTI	CE, REPOR	T, OR OTH	ER DATA		
TYPE OS SUBMISSION TYPE OF ACTION									
Notice of Intent			☐ Acidize ☐ Deepen ☐ Produc			tion (Start/Resume)			
		Alter Casing	Fracture Treat	Reclama	, , , , , , , , , , , , , , , , , , , ,				
Subsequent Report Casing Repair				New Construction	Recompl	—			
☐ Final Abandonment Notice ☐ Change Plans ☐ Convert to Injection				Plug and Abandon Plug Back	☐ Tempora	rily Abando snosal	n		
deepen directionally or recomplete	honzontally, give subsi	ly state all p urface locat	pertinent details, and give position and measured and true	pertinent dates, including estimated date be vertical depths of all pertinent markers ring completion of the involved operation	and zones Atta	ich the Bond ur	der which the wor	k will be performed or pro	vide the
Devon Energy Prod	uction Comp	any L.	P. respectfully	requests to change the	casing,	cementin	g & BOP t	o read as follo	ws:
Casing Program	_	-							
HoleSize	Hole Interva	1	OD Csg	Casing Interval	We	eight	Collar	Grade	
17-1/2"	0 - 300		13-3/8"	0 – 300	48	-	STC	H-40	
12-1/4"	300 – 3,000		9-5/8"	0 – 3,000	36	6#	LTC	J-55	
								`	
Design Factors:									
Casing Size	Collapse Design Factor			Burst Design Factor		Tension Design Factor			
13-3/8"	5.48		12.32		22.36				
9-5/8" 36# J-55 LTC	-5/8" 36# J-55 LTC 1.29			2.26		2.80			
Cementing Progran	1								
		I C Ce	ment + 2% hwor	Calcium Chloride + 0.12	25 lhe/ey	CF + 56 3	% FW 14	3 nna Vld: 1 35	cf/sk
TOC @ surface	aa mooo on o	, 0 00,	270 2000	odiolatii Omondo · 0.12	20 100/02	00.0	701 00, 14.0	5 ppg - 11a. 1.55	O//SK
(Attachment)									
14. I hereby certify that the	toregoing is true	and cor	rect						
		F		on trake A. Dames 44. V	9600				
Signed Name Name Indy A Barnett X8699.  Regulator Manual						Date 2/10/2010			
(This space for Federal or	State Office use	1			\U V L	<u> </u>			

SEE ATTACHED FOR CONDITIONS OF APPROVAL

within its jurisqualification of LAND MANAGEMENT
\*See Instruction on ROARLOBAD FIELD OFFICE

D. SQ. 3/4/10

LAGUNA SALADO 22 FED 6H - SUNDRY API# 30-015-37371 Page 2 2/10/10

## **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.

# PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME: | Devon Energy Production Company, LP

**LEASE NO.: NM-66425** 

WELL NAME & NO.: | Laguna Salado 22 Federal #6H

SURFACE HOLE FOOTAGE: | 1172' FNL & 2510' FWL BOTTOM HOLE FOOTAGE: | 330' FNL & 660' FEL

LOCATION: | Section 22, T. 23 S., R 29 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. Due to recent H2S encounters in the salt formation, it is recommended that monitoring equipment be onsite for potential Hydrogen Sulfide prior to drilling out the surface shoe. If Hydrogen Sulfide is encountered, please report measurements 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 are 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. 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.

#### **HIGH CAVE/KARST**

R-111-P potash requirements in effect.

Possible high pressure air pockets in the Salado.

Possible lost circulation in the Delaware Mountain Group and Bone Springs formation.

- 1. The 13-3/8 inch surface casing shall be set at approximately 300 feet and cemented to the surface. Since no shallow fresh water is expected, brine water mud should be used to drill this segment.
  - 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 a 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:

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 to surface. If cement does not circulate, contact the appropriate BLM office.
- 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.
- 5. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed. This includes all pressure tests of casing.

### 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 to be 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" 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. 5M system requires 5M annular.
- 4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. The tests shall be done by an independent service company.
  - b. The results of the test shall be reported to the appropriate BLM office.
  - c. 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.
  - d. 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. DRILLING MUD

Brine mud to be used to drill to top of Delaware formation.

# E. DRILL STEM TEST

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

#### DHW 022210