

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

FORM APPROVED
OMB No. 1004-0135
Expires November 30, 2000

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

1. Type of Well <input checked="" type="checkbox"/> Oil Well, <input type="checkbox"/> Gas Well, <input type="checkbox"/> Other		5. Lease Serial No. NMLC-058181
2. Name of Operator Lime Rock Resources A, L.P.		6. If Indian, Allotment or Indian Name
3a. Address 1111 Bagby St., Suite 4600 Houston, TX 77002	3b. Phone No. (include area code) 713-292-9537	7. If Unit of CA/Agreement, Land or For No.
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 480' FSL & 1650' FWL-Sec. 25-T17S-R27E		8. Well Name and No. Enron Federal, Well No. 10
		9. API Well No. 30-015-37217
		10. Field and Pool, or Exploratory Area Red Lake; Queen-Grayburg-SA
		11. County or Parish, State Eddy, NM

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 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	

3. 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 recompleat 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 recompleat 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.)

Lime Rock Resources A, L.P. is proposing to change the above captioned well APD total depth from 3,300' to 4,800'. A new Application for Drilling submittal for this APD was mailed 1/26/10 and should arrive 1/27/10. This form will be faxed to Cheryle Ryan today and also will be mailed.

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

George R. Smith

Title agent

Signature

George R. Smith

Date 1/27/10

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by (Signature)

Dustin Winkler

Name
(Printed/Typed)

Office

APPROVED

FEB 11 2010
/s/ Dustin Winkler

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.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

(Continued on next page)

D.S.

**APPLICATION FOR DRILLING
LIME ROCK RESOURCES A, L.P.**

Enron Federal, Well No. 11
380' FSL & 2310' FEL, Sec. 25-T17S-R27E
Eddy County, New Mexico
Lease No.: NMLC-058181
(Development Well)

In conjunction with Form 3160-3, Application for Permit to Drill subject well, Lime Rock Resources A, L.P. submits the following items of pertinent information in accordance with BLM requirements:

1. The geologic surface formation is recent Permian with quaternary alluvium and other surficial deposits.

2. The estimated tops of geologic markers are as follows:

Yates	510'	San Andres	1,732'
Seven Rivers	820'	Glorieta	3,086'
Queen	966'	Yeso	3,244'
Grayburg	1,353'	Tubb	4,587'
		T.D	4,800'

3. The estimated depths at which water, oil or gas formations are anticipated to be encountered:

Water: Surface water possible between 80' - 230'.
Oil: Possible in the San Andres, Glorieta and Tubb below 1,732'
Gas: Possible in the San Andres, Glorieta and Tubb below 1,732'

4. Proposed New Casing Program:

HOLE SIZE	CASING SIZE	WEIGHT	GRADE	JOINT	SETTING DEPTH FACTOR	COLLAPSE DESIGN FACTOR	BURST DESIGN FACTOR	TENSION DESIGN FACTOR
12 1/4"	8 5/8"	24.0#	J-55	ST&C	350'	1.2	1.18	2.0
7 7/8"	5 1/2"	17.0#	J-55	LT&C	4,800'	2.06	1.21	2.3

5. Proposed Control Equipment: A 3M Shaffer Type LWS Double Gate BOP will be installed on the 8 5/8" casing. Casing and BOP will be tested as a 2M system as per Onshore Oil & Gas Order #2 before drilling out with the 7 7/8". The Pipe Rams will be operated and checked daily, plus each time drill pipe is out of hole. This will be documented on driller's log. See Exhibit "E".

6. Cement Program

CASING	DEPTH	QUANTITY OF CEMENT	TOC	YEILD
8 5/8"	350'	Lead: 150 sks "C" + 2% CACL2 + 125#/sk Pheno seal @ 14.8 ppg - 1.35 cu ft/sk - 6.37 gal/sk	Surface	1.35
		Tail: 200 sks "C" 2% CACL2 @ 14.8 ppg - 1.35 cu ft/sk - 6.39 gal/sk, R/D Howco		1.35
5 1/2"	4,800'	Lead: 450 sks 35/65 Poz/C", +.125#/sk P-E-Flake + 3#/sk salt + 3#/sk ilsonite @ 12.8 ppg - 1.89 cu ft/sk - 9.97 gal/sk	Surface	1.89
		Tail: 450 sks "C" + .125#/sk P-E Flake + 4% LAP-1 + 5% CFR-3 + .25#/sk D-air @ 14.8 ppg - 1.33 cu ft/sk - 6.26 gal/sk		1.33

7. Mud Program:

MUD PROGRAM		MUD WEIGHT	VIS.	W/L CONTROL
DEPTH	MUD			
0 - 350'	Fresh water mud:	8.5 ppg	40 - 45	No W/L control
350' - 4800'	Brine water, Starch, SWG	10.5 ppg	30	W/L control <24cc

8. Auxiliary Equipment: Blowout Preventer, gas detector, Kelly cock.

9. Testing, Logging, and Coring Program:

Drill Stem Tests: None planned unless warranted.

Logging: T.D -Surface Casing: GR-DLL, GR-CND

350' to surface: G/R/Neutron

Coring: None planned unless warranted..

10. No abnormal pressures or temperatures are anticipated. In the event abnormal pressures are encountered the proposed mud program will be modified to increase the mud weight. Estimated Surface Pressure = 1,565 psi (evac. hole) and BHP of 2,621 psi (evac) with temperature of 108°.

11. H₂S: None expected. The mud log unit will be cautioned to use a gas trap to detect H₂S and if any is detected the mud weight will be increased along with H₂S inhibitors sufficient to control the gas. H₂S monitoring equipment will be installed before drilling out from the 8 5/8" casing. See Exhibit "F".

12. Anticipated starting date: February 22, 2010.

Anticipated completion of drilling operations: Approx. 3 - 4 weeks

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Lime Rock Resources A, LP
LEASE NO.:	NMLC-058181
WELL NAME & NO.:	Enron Federal #10
SURFACE HOLE FOOTAGE:	480' FSL & 1650' FWL
LOCATION:	Section 25, T. 17 S., R 27 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. A Hydrogen Sulfide (H₂S) Drilling Plan should be activated 500 feet prior to drilling into the Yates 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.
3. **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.

HIGH CAVE/KARST – CONTINGENCY CASING WILL BE REQUIRED IF LOST CIRCULATION OCCURS WHILE DRILLING THE SURFACE HOLE. THE SURFACE HOLE WILL HAVE TO BE REAMED AND A LARGER CASING INSTALLED. IF LOST CIRCULATION OCCURS WHILE DRILLING THE 7-7/8" HOLE, THE CEMENT PROGRAM FOR THE 5-1/2" CASING WILL NEED TO BE MODIFIED AND THE BLM IS TO BE CONTACTED PRIOR TO RUNNING THE CASING. A MINIMUM OF TWO CASING STRINGS CEMENTED TO SURFACE IS REQUIRED IN HIGH CAVE/KARST AREAS. THE CEMENT MUST BE IN A SOLID SHEATH THEREFORE, ONE INCH OPERATIONS WILL NOT BE PERMITTED. A DV TOOL WILL BE REQUIRED.

Possible lost circulation in the Grayburg and San Andres formations.

1. The 8-5/8 inch surface casing shall be set at **approximately 450 feet (a minimum of 25 feet into the Tansill and above the salt)** and cemented to the surface.
Freshwater mud to be used to setting depth.
 - 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. 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 **5-1/2** inch production casing is:
 - ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office.
- 3. 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 **2000 (2M) psi. 3M System tested as a 2M**
- 3. 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 021010