

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED  
OMB No. 1004-0137  
Expires: October 31, 2014

**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.*

5. Lease Serial No.  
LC - 029418-B

6. If Indian, Allottee or Tribe Name  
N/A

**SUBMIT IN TRIPLICATE** - Other instructions on page 2.

7. If Unit of CA/Agreement, Name and/or No.  
N/A

1. Type of Well  
 Oil Well     Gas Well     Other

8. Well Name and No.  
Lea C #12

2. Name of Operator  
Capstone Natural Resources, LLC

9. API Well No.  
3001520697

3a. Address  
2250 E 73rd St. Suite 500,  
Tulsa, OK 74136

3b. Phone No. (include area code)  
918-236-3800

10. Field and Pool or Exploratory Area  
Grayburg Jackson 7-rivers-QN-BG-SA

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
SW SW 660' FSL & 660' FWL, SEC 11, TOWNSHIP 17 S, RANGE 31 E

11. County or Parish, State  
Eddy County, New Mexico

12. CHECK THE 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 checked="" type="checkbox"/> Acidize	<input checked="" 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 checked="" 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 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 recomplate 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 must 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 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

MIRU workover service rig. TOOH with pump, rods, and production tubing. Pick up 4 3/4 bit, collars, and work string. TIH and tag up. Rig up reverse unit and swivel. Drill out float collar, shoe joint, and casing shoe. Rig down reverse unit. Rig up air foam unit and deepen well 275' to projected TD of 4,138'. Circulate bottoms up. TOOH with bit, collars, and work string. Rig up wire line and run open hole logs. (Borehole Profile Gamma Ray, Compensated Neutron Photo Density, Gamma Ray, Dual Laterolog Gamma Ray). Rig down wireline. Pick up the TIH to TD with +/- 910' of 4", 9.11#, J, flush joint liner. Top of liner at 3,228'. Rig up cementing equipment and pump +/- 50 sx of class C cement with 2% CACL in tail end stage. Drop ball and close sleeve - open ports and circulate clean. RD cement equipment and TOOH. Rig up wireline and perforate zone 3,900'-4,120' (exact perf interval TBD from logs). RD wireline. PU packer and 3 1/2 work string and TIH. Set PKR at +/-3,200' and Acidize with 2000 gals 15% HCL acid. Swab Test. MIRU frac equipment. Frac perf interval with +/- 2300 bbls, 25# fresh water gel system, 150,000# 16/30 sand, 50,000# of resin coated sand. Rig down frac equipment. TOOH with packer and 3 1/2 workstring. TIH with 2 3/8 production tubing and BHA. RU and TIH with pump and rods. Load and test to 500#. Return well to production.

Accepted for record  
NMOCD

705  
2/11/2013

**RECEIVED**  
FEB 11 2013  
NMOCD ARTESIA

**SEE ATTACHED FOR  
CONDITIONS OF APPROVAL**

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

David Ricks

Title President and Chief Operating Officer

Signature

Date 12/21/2012

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Title

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

**APPROVED**  
FEB 8 2013  
*[Signature]*  
BUREAU OF LAND MANAGEMENT  
CARLSBAD FIELD 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.

(Instructions on page 2)

## Lea "C" Fed #12 Deepening Program

### 1. Estimated Tops of Important Geological Markers

San Andres +/- 3700'

### 2. Estimated Depths of Anticipated Fresh Water, Oil & Gas

Seven Rivers +/- 2300'

Grayburg/San Andres +/- 3700'

Lovington +/- 3780'

Jackson +/- 3800'

This deepening originates in the San Andres and will finish at the base of the Jackson. Both the San Andres, Lovington and the Jackson are oil and gas bearing intervals.

### 3. Casing Program

Hole Size	Interval	OD Casing	Weight	Grade**	Jt./Condition	Burst/collapse/tension***
5-3/4"	3910' - 4185'	4"	9.5#	J-55	ULT-FJ/New	4352/4088/77,040

\*\*Anticipating J-55, could be L-80 or P-110 depending on availability. (Exact grade is unknown at time of requesting permit.)

\*\*\*Burst/collapse/tension are 80% of published API values.

### 4. Casing/Cementing Program

4" Liner: Class C, 90 Sacks, yield 1.37 Ft<sup>3</sup>/Sx. 4" liner will cover all existing perms as well as 100' overlap above top existing perforation. **Capstone Natural Resources LLC request a variance to the Liner Top Fluid Entry or Pressure Test. As per Onshore Order No. 2 Sect III: Requirements, Part B. Casing and Cementing Requirements, subpart b. "No test shall be required for liners that do not incorporate or need a seal mechanism" Capstone Natural Resources LLC believes we meet the criteria to not be required testing the liner top because there is no need for a seal mechanism.**

### 5. Minimum Specifications for Pressure Control

The BOP equipment will be a 3000 psi double ram type manually operated preventer. This equipment will be nipped up to a 7-1/16" 3K flange. The pipe rams are located above blind rams. There is no choke or kill manifold. The BOP is tested to 500 psi prior to drilling new formation. Access to the annulus will be through the valves on the 5-1/2" casing head.

### 6. Types and Characteristics of the Proposed Mud System

This well will be drilled from end to the existing 5-1/2" casing to TD with 2% KCL. A closed loop system will be used during the workover process and all liquids, drilling fluids and cuttings will be hauled off via CRO (Controlled Recovery Incorporated Permit R-9166).

**7. Auxiliary Well Control and Monitoring Equipment**

- A. A full opening drill pipe-stabbing valve with proper drill pipe connections will be on the rig floor at all times.

**8. Logging, Testing and Coring Program**

- A. The electric logging program will consist of GR, Dual Laterolog, PhotoDensity, Comp/Neutron and will be run from TD to 5.5" production casing shoe. Prior to drilling out a cased hole Pulse Neutron log will be run across existing perforations and other possible behind pipe zones; From 3930 to +/- 1900'.
- B. No drill stem tests.
- C. No conventional coring anticipated.
- D. Further testing procedures (if any) will be determined after the 4" liner has been cemented at TD, based on drill shows and log evaluation.

**9. Abnormal Conditions, Pressure, Temperatures and Potential Hazards**

No abnormal pressures or temperatures are anticipated. The estimated bottomhole temperature at TD is 90 degrees and the estimated maximum bottomhole pressure is 1750 psig. The drilling starts in the San Andres and ends in the Jackson, the formation is expected to have low perm; less than 1 md.

**10. Anticipated Starting Date and Duration of Operations**

There will be no road or location work required as this is an existing well location. Once commenced, drilling operations should be finished in approximately 15 days. Work is expected to commence within a few weeks of BLM approval.

**11. Centralizer Program**

No centralizers will be run.

**12. Summary Drilling and Completion Program**

**Deepening Procedure**

- A. MIRU Workover Service Unit. POOH w/ current production equipment. (Test BOP to 500 psi)
- B. MIRU wire line and run pulse neutron log to get water saturations behind 5.5" casing. Run log from 3902 to top of Yates (+/- 1900'). RDMO wireline.
- C. Pick Up 4-3/4" bit & scraper. RIH to PBTD @ 3902. POOH, remove scraper RIH & drill out to original TD @ 3910 then continue until you start getting formation in your returns. POOH w/ Bit.
- D. Pick up 4-3/4" Bi-centered bit. RIH to 3910'. Drill out 5-3/4" hole below 5.5" casing to new TD of 4185'. POOH with Bi-centered bit.
- E. MIRU wireline. Run open hole logs from 4185 to 3910. RDMO wireline.

- F. MIRU casing crew. RIH w/ special float valve, on/off –circulating tool, 958' of 4" 9.5# UFJ casing liner & entry guide on top. (Need 100' overlap of Liner & top perf @ 3327')
- G. Set Liner in slips. Pick up 2-3/8" tubing. RIH w/ expansion joint & 2-3/8" tubing. Tag left hand treads on circulating tool. Screw into tool. Pick up 4" UFJ out of slips and continue into hole until liner rest on TD @ 4185.
- H. MIRU cement company. Cement Liner in place w/ 90 sacks of cmt. Drop Ball & activate circulating tool. Circulate 2 annular volumes. Get off Liner by torqueing tubing to the right. POOH w/ tubing.
- I. RIH w/ 4-3/4" Bit and scraper, Tag Liner top @ 3261'. POOH w/ Bit and scraper. RIH with 3.75" bit and scraper and Tag top of circulation tool in BTM of Liner. POOH.
- J. MIRU Cased hole equipment. Run CBL across 4" Liner. Perforate Jackson Zone as per OHL (3900-4120 Estimated) & Perforate Grayburg/San Andres as per Pulse Neutron log (4spf 60 degrees). RDMO Wireline. (Actual perfs to be determined from logs.)
- K. RIH with 3-1/2" X 5-1/2" Treating Packer on 3.5" Ultra Flush Joint N-80 rental workstring. (This workstring might take a while to set up and track down. Will frac down conventional 3.5" 9.3# L-80 worstring if the UFJ is a problem. ) Tag top of liner & set Packer@ +/- 3200. RDMO WSU.
- L. MIRU Frac Crew, Frac well as designed.
- M. Flow back well until dead. MIRU WSU. Release packer and POOH laying down workstring.
- N. RIH with rental 2-7/8" PC Pump on 2-3/8" production string. (Rental PC Pump to have Drive and POC.) Could substitute Rental PC pump with Rod pump if the well does not appear to make a lot of fluid. RDMO WSU.
- O. Test well with rental equipment until decision is made to purchase or pull rental and produce via rod pump.

## Conditions of Approval

Capstone Natural Resources, LLC.

Lea C 12

API 3001520697

February 08, 2013

### Deeping procedure:

1. Surface disturbance beyond the existing pad must have prior approval.
2. **Prior to conducting work, an MIT must be done and results submitted to the BLM for approval to start work. The following are the MIT criteria:**
  - a. Operator shall set a retrievable CIBP or similar mechanism 50-100 ft above the top most perforations in preparation for the MIT.
  - b. The minimum test pressure should be 500 psig for 30 minutes or 300 psig for 60 minutes, with 200 psig differentials between tubing and casing pressure (at test time) but no more than 70% of casing burst pressure as described by Onshore Order 2.III.B.1.h. (The tubing or reservoir pressure may need to be reduced). An alternate method for a BLM approved MIT is to have the fluid filled system open to atmospheric pressure and have a loss of less than five barrels in 30 days witnessed by a BLM authorized officer.
  - c. Document the pressure test on a calibrated recorder chart registering within 25 to 85 per cent of its full range. Greater than 10% pressure leakoff will be viewed as a failed MIT. Less than 10% pressure leakoff will be evaluated site specifically and may restrict injection approval.
  - d. At least 24 hours before the test: In Eddy County email Paul R. Swartz [paul\\_swartz@blm.gov](mailto:paul_swartz@blm.gov), (phone 575-200-7902). If there is no response phone 575-361-2822. In Lea County email Andy Cortez [andy\\_cortez@blm.gov](mailto:andy_cortez@blm.gov), (phone 575-393-3612 or 575-631-5801). Note the contact notification method, time, & date in your subsequent report.
  - e. Submit a subsequent Sundry Form 3160-5 relating the MIT activity. Include a copy of the recorded MIT pressure chart. List the name of the BLM witness, or the notified person and date of notification. NMOCD is to retain the original recorded MIT chart.
  - f. Submit the original subsequent sundry with three copies to BLM Carlsbad.

**If MIT test fails, operator shall submit sundry for a remediation procedure.**

3. Surface disturbance beyond the existing pad must have prior approval.
4. A closed loop system is required. The operator shall properly dispose of drilling/circulating contents at an authorized disposal site. Tanks are required for all operations, no excavated pits.
5. Functional H<sub>2</sub>S monitoring equipment shall be on location.
6. **3000 (3M) BOP to be used. All blowout preventer (BOP) and related equipment (BOPE) shall comply with reasonable well control requirements. A two ram system with a blind ram and a pipe ram designed for the size of the work string shall be adequate. Tapered work strings will require an additional pipe ram. The manifold shall comply with Onshore Oil and Gas Order #2 Attachment I (3M Diagrams of Choke Manifold Equipment). The accumulator system shall have an immediately available power source to close the rams and retain 200 psi above pre-charge. The pre-charge test shall follow requirements in Onshore Order #2.**
7. **BOP to be tested to 1000 psi based on expected BHP**
8. **Variance requested for not testing seal per Onshore Order NO.2 Section III b. is approved.**
9. The BLM PET witness is to run tbg tally and agree to cement placement. Sample each plug for cement curing time and tag and/or pressure test (WOC time of 4-8 hours recommended) as requested by BLM PET witness.
10. File a **subsequent sundry** Form 3160-5 within 30 days of the plug back and acid treatment. Include an updated wellbore diagram.
11. Submit the BLM Form 3160-4 **Recompletion Report** within 30 days of the date all BLM approved procedures are complete.

**JAM 020813**