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NMOCD-ARTESIA

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007

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.
NM-012897

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE – Other instructions on page 2

1 Type of Well
 Oil Well Gas Well Other

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

2 Name of Operator
Devon Energy Production Co., LP

8 Well Name and No
Mark Twain 5 Federal Com 4H

3a. Address
20 North Broadway
OKC, OK 73102

3b Phone No. (include area code)
(405)-552-7802

9 API Well No
30-015-37329

10 Field and Pool or Exploratory-Area
Dog Canyon; Wolfcamp

4 Location of Well (Footage, Sec., T., R., M., or Survey Description)
NWNW SL: 330' FNL & 50' FWL BHL: 330' FNL & 330' FEL
Sec 5-T17S-R28E

11 Country or Parish, State
Eddy County, NM

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 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 <u>Change in Drilling Program</u> |
| | <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 recomplete 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.)

Devon Energy Production Co., LP respectfully requests permission to change the initial drilling program to the following:
(see attached)

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

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

Name (Printed/Typed)
Stephanie A. Ysasaga

Title Sr. Staff Engineering Technician

Signature

Date 05/11/2010

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

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.

APPROVED
MAY 12 2010
WESLEY W. INGRAM
PETROLEUM ENGINEER

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.

D.G. 5-20-10

RM

MARK TWAIN 4H – SUNDRY

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> |
|------------------|----------------------|---------------|------------------------|---------------|---------------|--------------|
| 12-1/4" | 450-2,300 | 9-5/8" | 0-2,300 | 36# | LTC | J-55 |
| 8-3/4" | 2,300-11,278 | 5-1/2" | 0 – 11,278 | 17# | BTC | P-110 |

An 8-3/4" vertical pilot hole will be drilled to 6,900 ft TVD/TMD. The pilot hole will be plugged from 6,900 ft to the KOP at 6,082 ft (as described in the original APD). An 8-3/4" curve & lateral will be drilled to the proposed TD of 11,278 ft MD.

The 5-1/2" production casing will be run with a packer type completion system with Swell Packers for isolation in the lateral. A port collar (PC) and packer will be run at approx 5,900 ft. The 5-1/2" production casing will be cemented from 5,900 ft to surface as described below.

Design Factors:

| <u>Casing Size</u> | <u>Collapse Design Factor</u> | <u>Burst Design Factor</u> | <u>Tension Design Factor</u> |
|----------------------|-------------------------------|----------------------------|------------------------------|
| 9-5/8" 36# J-55 LTC | 1.69 | 2.94 | 3.00 |
| 5-1/2" 17# P-110 BTC | 2.40 | 3.42 | 2.96 |

Cementing Program

9-5/8" Intermediate

Lead

514 sacks (35:65) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 3 lbs/sack LCM-1 + 4% bwoc Bentonite + 0.8% bwoc Sodium Metasilicate + 5% bwoc MPA-5 + 98.2% Fresh Water, 12.8 ppg

Yield 1.97 cf/sk

Tail

250 sacks Class C Cement + 2% bwoc Calcium Chloride + 56.4% Fresh Water, 14.8 ppg

Yield 1.34 cf/sk

TOC @ surface

5-1/2" Production

1,243 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 @ surface.

Ysasaga, Stephanie

From: Ysasaga, Stephanie
Sent: Tuesday, May 11, 2010 4:49 PM
To: 'Wesley_Ingram@blm.gov'
Subject: Mark Twain 5 Federal Com 4H: NOI - Change Drilling Program

Attachments: Mark Twain 5 Federal Com 4H_NOIChgDP.PDF

Wesley,

Attached is the above. Hard copies to follow in the mail via Fed-Ex next day. Please let me know if you need anything else or require additional information.



Mark Twain 5
ederal Com 4H_NO.

Stephanie A. Ysasaga

Sr. Staff Engineering Technician
(405)-552-7802 Phone (405)-721-7689 Cell
(405)-552-8113 Fax
Corporate Tower 03.056
Stephanie.Ysasaga@dvn.com

PECOS DISTRICT CONDITIONS OF APPROVAL

| | |
|-----------------------|------------------------------------|
| OPERATOR'S NAME: | Devon Energy Prod |
| LEASE NO.: | NM012897 |
| WELL NAME & NO.: | 4H Mark Twain Fed Com |
| SURFACE HOLE FOOTAGE: | 330' FNL & 50' FWL |
| BOTTOM HOLE FOOTAGE: | 330' FNL & 330' FEL |
| LOCATION: | Section 5, T. 17 S., R 28 E., NMPM |
| COUNTY: | Eddy County, New Mexico |

A. 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.

Possible lost circulation in the Grayburg and San Andres formations.

Possible high pressure in the Wolfcamp formation.

1. The 13-3/8 inch surface casing shall be set at approximately **450** feet 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. 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.
Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.

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.

Pilot hole to be plugged as described with cement from bottom of hole to kick off point.

3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
- Cement should circulate from the ported collar at 5900'. If cement does not circulate, contact the appropriate BLM office. Casing below 5900' will be a packer completion system.
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.

WWI 051210