Form 3160-5
(February 2005)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

FORM APPROVED
OMB NO. 1004-0135
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.

SUBMIT IN TRIPLICATE

RECEIVED
FEB 25 2010
NMOCD ARTESIA

1a. Type of Well ☑ Oil Well ☐ Gas Well ☐ Other	5. Lease Serial No. **NMNM-77046**
	6. If Indian, Allottee or Tribe Name
	7. Unit or CA Agreement Name and No.
2. Name of Operator **DEVON ENERGY PRODUCTION COMPANY, LP**	8 Well Name and No. **North Pure Gold 9 Federal 6**
3. Address and Telephone No. 20 N. Broadway, Oklahoma City, Ok 73102-8260 405-235-3611	9. API Well No. **30-015-37370**
4. Location of Well (Report location clearly and in accordance with Federal requirements)* 990' FNL 2100' FWL C SEC 9 T23S R31E	10. Field and Pool, or Exploratory **Los Medanos; Delaware**
	11. County or Parish **Eddy** State **NM**

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OS SUBMISSION	TYPE OF ACTION			
☑ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing / ☐ Casing Repair	☐ Fracture Treat / ☐ New Construction	☐ Reclamation / ☐ Recomplete	☐ Well Integrity / ☐ Other
☐ Final Abandonment Notice	☑ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work and approximate duration thereof If the proposal deepen directionally or recomplete horizontally, give subsurface location 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 requirement, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection)

Devon Energy Production Company L. P. respectfully requests permission to change the casing design, mud program, Pressure Control Equipment and cement procedures.

HoleSize	Hole Interval	OD Csg	Casing Interval	Weight	Collar	Grade
14-3/4"	0 – 530	11-3/4"	0 – 530	42#	STC	H-40
11"	530 – 2,000	8-5/8"	0 – 2,000	24#	STC	J-55
11"	2,000 – 4,100	8-5/8"	2,000 – 4,100	32#	LTC	J-55
7-7/8"	4,100 – 8,200	5-1/2"	0 – 8,200	17#	LTC	J-55

Casing Size	Collapse Design Factor	Burst Design Factor	Tension Design Factor
11-3/4"	4.31	7.98	13.79
8-5/8" 24# J-55 STC	1.32	2.84	2.12
8-5/8" 32# J-55 LTC	1.19	1.84	6.21
5-1/2"	1.28	1.39	1.77

(See attached)

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

Signed Judy A. Barnett Name **Judy A. Barnett X8699** Title Regulatory Analyst Date 2/4/2010

(This space for Federal or State Office use)

Approved by _____ Title _____ Date _____

Conditions of approval, if any:

Title 18 U S C. Section 1001, makes it a crime for any person knowingly and willfully to make any department or agency of the United States any false, fictitious or fraudulent statements or representations to any matte

***See Instruction on Reverse Side**

ENGR OK
MAK

D. D. 2/25/10

APPROVED
FEB 23 2010
/s/ Myles Kristof
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Mud Program:

Depth	Mud Wt.	Visc.	Fluid Loss	Type System
0 – 530	8.4 – 9.0	30 – 34	N/C	FW
530 – 4,100	9.8 – 10.0	28 – 32	N/C	Brine
4,100 – 8,200	8.6 – 9.0	28 – 32	NC -12	FW

Pressure Control Equipment:

The BOP system used to drill the intermediate hole will consist of an 11" 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 an 11" 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.

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 5,000 psi WP.

Cementing Program

11-3/4" Surface

Lead: 140 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 4% bwoc Bentonite + 81.4% Fresh Water, 13.5 PPG **Yield:** 1.75 cf/sk **TOC @ surface Tail**: 250 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 56.3% Fresh Water, 14.8 PPG **Yield:** 1.35 cf/sk

8-5/8" Intermediate

Lead: 880 sacks (35:65) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 6% bwoc Bentonite + 107.8% Fresh Water, 12.5 PPG **Yield**: 2.04 cf/sk. **TOC @ surface Tail**: 300 sacks 60:40 Poz + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 0.4% bwoc Sodium Metasilicate + 4% bwoc MPA-5 + 64.7% Water, 13.8 PPG **Yield**: 1.37 cf/sk.

5-1/2" Production

1st Stage
Lead: 330 sacks (35 65) Poz (Fly Ash):Class H Cement + 3% bwow Sodium Chloride + 0.25% bwoc R-3 + 0.125 lbs/sack Cello Flake + 3 lbs/sack LCM-1 + 6% bwoc Bentonite + 0.3% bwoc FL-52A + 102.5% Fresh Water, 12.5 PPG
Yield: 1.95 cf/sk **Tail**: 390 sacks (60:40) Poz (Fly Ash):Class C Cement + 1% bwow Sodium Chloride + 0.1% bwoc R-3 + 0.125 lbs/sack Cello Flake + 2 lbs/sack Kol Seal + 0.5% bwoc BA-10A + 4% bwoc MPA-5 + 61.4% Fresh Water, 13.8 PPG **Yield**: 1.35 cf/sk

DV TOOL at ~4,400'

2nd Stage
Lead: 225 sacks Class C Cement + 3% bwoc Sodium Metasilicate + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 158.6% Fresh Water, 11.4 PPG **Yield**: 2.91 cf/sk **TOC @ surface Tail**: 160 sacks (60:40) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 0.4% bwoc Sodium Metasilicate + 4% bwoc MPA-5 + 64.7% Fresh Water, 13.8 PPG **Yield**: 1.38 cf/sk

TOC for All Strings:
Surface: 0'
Intermediate: 0'
Production: 0'

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Devon Energy Production Company**
LEASE NO.:	**NMNM-77046**
WELL NAME & NO.:	**North Pure Gold 9 Federal 6**
SURFACE HOLE FOOTAGE:	**990' FNL & 2100' FWL**
LOCATION:	**Section 9, T. 23 S., R 31 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. **Although there are no measured amounts of Hydrogen Sulfide reported, it is always a potential hazard. 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. 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. 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.

R-111-P potash
Possible Lost circulation in the Delaware and Bone Spring formations.
Possible brine and water flows in the Salado, Castile, Delaware, and Bone Spring formations.

1. The **11-3/4** inch surface casing shall be set **at approximately 530 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** 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 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 **8-5/8** inch intermediate casing is:

   ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Casing to be set a minimum of 100' and not more than 600' below the base of the salt. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash.**

Formation below the 8-5/8" 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.

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. **Additional cement may 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.

5. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

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.

   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 **8-5/8"** 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.**

4. 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.

    f. **Effective November 1, 2008, no variances will be granted on reduced pressure tests on the surface casing and BOP/BOPE. Onshore Order 2 requirements will be in effect.**

D. DRILL STEM TEST

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

MAK 021010