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Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires July 31, 2010

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 page 2*

5. Lease Serial No.
NM 108503

6. If Indian, Allottee or Tribe Name

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

1. Type of Well
[X] Oil Well [ ] Gas Well [ ] Other

8. Well Name and No.
Vaca 14 Fed 3H

2. Name of Operator
EOG Resources Inc.

9. API Well No.
30-025-39327

3a. Address
P.O. Box 2267 Midland, Texas 79702

3b. Phone No. (*include area code*)
432-686-3689

10. Field and Pool, or Exploratory Area
Red Hills; Bone Spring

4. Location of Well (*Footage, Sec., T., R., M., or Survey Description*)
660 FNL & 1980 FEL, U/L B
Sec 14, T25S, R33E

11. County or Parish, State
Lea NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
[X] Notice of Intent	[ ] Acidize	[ ] Deepen	[ ] Production (Start/Resume)	[ ] Water Shut-Off
[ ] Subsequent Report	[ ] Alter Casing	[ ] Fracture Treat	[ ] Reclamation	[ ] Well Integrity
[ ] Final Abandonment Notice	[ ] Casing Repair	[ ] New Construction	[ ] Recomplete	[ ] Other
	[X] Change Plans	[ ] Plug and Abandon	[ ] Temporarily Abandon	
	[ ] Convert to Injection	[ ] Plug Back	[ ] 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 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 requirements, including reclamation, have been completed, and the operator has determined that the final site is ready for final inspection.)

EOG Resources requests to amend our approved APD. This well was originally intended to be drilled as a horizontal in the 3rd Bone Spring Sand. The 13-3/8" surface and 9-5/8" intermediate casing will be set at the originally approved depths. Upon drilling out of the 9-5/8" intermediate casing, the drilling fluid will be a water based fluid system to a proposed TD of 11100'.
During the drilling of this interval, approximately 1000' of core will be acquired. After reaching TD and logging, EOG Resources will set a CIBP with 30' of cement within 100' of the 9-5/8" casing shoe. The rig will then be moved off location, until the core can be analyzed and a second rig brought back to drill the horizontal section.

Witness Surface & Intermediate Casing

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct
Name (*Printed/Typed*) Stan Wagner
Title Regulatory Analyst
Signature
Date 3/23/09

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by Roger B. Hall
Title Petroleum Engineer
Date 3/26/09
Office CFO

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, makes 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.

Conditions of Approval
EOG Resources Inc.
Vaca 14 Federal 3H
660' FNL & 1980' FEL, Sec. 14-25S-33E
NM-108503
API # 3002539327

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

☒ **Lea County**
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 393-3612

1. **Although Hydrogen Sulfide has not been reported in this section, it is always a possible hazard. It has been reported in the sections to the East and West in the Bone Spring formation. It is recommended that monitoring equipment be onsite for potential Hydrogen Sulfide. If Hydrogen Sulfide is encountered, please report measured amounts 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.

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.

Possible lost circulation in the Castile and Delaware Mountain Groups.
Possible water flows in the Salado, Castile and Delaware Mountain Groups.

1. The **13-3/8** inch surface casing shall be set **at approximately 1175 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface. **Fresh water mud to be used to setting depth. Additional cement required due to additional depth.**

Onshore Order II requires casing to be set across a competent bed and the Rustler Anhydrite is the first formation that meets that criteria.

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:

☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.

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.

3. The minimum required fill of cement behind the **5 ½ or (7** inch as a contingency) production casing is:

☒ Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification.

Formation below the 5 ½ or 7" 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 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.

4. The minimum required fill of cement behind the **4-1/2** inch production liner (if ran as a contingency) is:

☒ Cement to come to top of liner. Operator shall provide method of verification. **Additional cement may be required as excess calculated to less than 20%.**

5. 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.

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.

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. DRILL STEM TEST

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

RGH 032509

DRILLING PROGRAM

EOG RESOURCES, INC.
VACA 14 FED #3
Lea Co. NM

1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	1,150'
Delaware	5,100'
Cherry Canyon	6,200'
Leonard	9,100'
1st Bone Spring Sand	10,080'
2nd Bone Spring Sand	10,900'

3. ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS:

Upper Permian Sands	0- 400'	Fresh Water
Delaware	5,100'	Oil
Cherry Canyon	6,200'	Oil
Leonard	9,100'	Oil
1st Bone Spring Sand	10,080'	Oil
2nd Bone Spring Sand	10,900'	Oil

No other Formations are expected to give up oil, gas or fresh water in measurable quantities. Surface fresh water sands will be protected by setting 13.375" casing at 1,175' and circulating cement back to surface.

4. CASING PROGRAM

Hole	Interval	OD Csg	Weight	Grade	Conn.	Collapse Design Factor	Burst Design Factor	Tension Design Factor
17.50"	0-500'	13.375"	48#	H-40	ST&C	1.43	1.42	2.38
12.25"	0-4,200'	9.625"	40#	J-55	LT&C	1.48	1.26	2.60
12.25"	4,200- 5,150'	9.625"	40#	HCK-55	LT&C	1.48	1.26	2.60
8.75"	0-9,018'	5.5"	17#	HCP-110	LT&C	1.81	1.41	2.71
8.75"	9,018-9,775'	5.5"	17#	HCP-110	BT&C	1.81	1.41	2.71
7.875"	9,775-13,252'	5.5"	17#	HCP-110	BT&C	1.81	1.41	2.71

See COA

Contingency Strings

Hole	Interval	OD Csg	Weight	Grade	Conn.	Collapse Design Factor	Burst Design Factor	Tension Design Factor
8.75"	0-9,775'	7"	26#	HCP-110	LT&C	1.52	1.37	2.28
6.125"	8,800-13,252'	4.5"	13.5#	HCP-110	BT&C	2.57	1.65	4.28

DRILLING PROGRAM

EOG RESOURCES, INC.
VACA 14 FED #3
Lea Co. NM

Cementing Program:

13.375" Surface Casing: Cement to surface, Lead: 360 sx 60:40 Poz: C + 0.005 pps Static Free + 5% NaCl + 5 pps LCM-1 + 0.005 gps FP-6L + 1% SMS, 12.8 ppg, 1.65 yield
Tail: 300 sx Premium Plus C + 0.005 pps Static Free + 2% CaCl2 + 0.25 pps CelloFlake + 0.005 gps FP-6L, 14.8 ppg, 1.33 yield

See COA

9.625" Intermediate Casing: Cement to surface, Lead: 1,400 sx 60:40 Poz: C + 0.005 pps Static Free + 5% NaCl + 0.25 pps CelloFlake + 5 pps LCM-1 + 0.005 gps FP-6L + 1% SMS, 12.8 ppg, 1.65 yield
Tail: 200 sx Prem Plus C + 0.25 pps CelloFlake + 0.005 FP-6L + 0.005 pps Static Free + 1% $CaCl_2$, 14.8 ppg, 1.34 yield

700sy

5.5" Production Casing: Cement to 4,650', Lead: 50:50 Poz: Class H + 0.005 pps Static Free + 0.25 pps CelloFlake + 5 pps LCM-1 + 0.005 gps FP-6L + 10% Bentonite, 11.8 ppg, 2.29 yield

915sx Tail: 50:50 Poz: Class H + 2% Bentonite + 0.005 pps Static Free + 0.005 gps FP-13L + 5% NaCl + 0.1% R-3 + 0.2% CD-32 + 0.3% FL-52A, 14.2 ppg, 1.30 yield

Contingency Strings

7" 2nd Intermediate Casing: Cement to 4,650', Lead: 520 sx 60:40 Poz: Class H + 0.005 pps Static Free + 5% NaCl + 0.25 pps CelloFlake + 5 pps LCM-1 + 0.005 gps FP-6L, 12.8 ppg, 1.65 yield
Tail: 200 sx Premium Plus H + 0.005 gps FP-6L + 0.005 pps Static Free + 1% CaCl2 + 0.25 pps CelloFlake, 14.8 ppg, 1.33 yield

4.5" Production Liner: Cement to 8,800' (TOL), 430 sx Premium Plus Class H + 0.005 gps FP-13L + 0.005 pps Static Free + 5% NaCl + 0.3% R-3 + 0.3% CD-32 + 0.2% FL-52A + 1% FL-62 + 0.1% ASA-301 + .1% SMS, 15.6 ppg, 1.19 yield

5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:

(SEE EXHIBIT #1)

The blowout preventer equipment (BOP) shown in Exhibit #1 will consist of a double ram-type (5000 psi WP) preventer and an annular preventer (5000-psi WP). Units will be hydraulically operated and the ram-type will be equipped with blind rams on bottom and drill pipe rams on top. All BOP's and accessory equipment will be tested in accordance with Onshore Oil & Gas order No. 2. for a 2M system prior to drilling out of the surface casing shoe and while drilling the first intermediate section. Before drilling out of the first and second intermediate casing strings, the ram- type BOP and accessory equipment will be tested to 5000/ 250 psig and the annular preventer to 2500/ 250 psig.

Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

Hydraulically operated choke will not be installed prior to the setting and cementing of the 1st intermediate casing string, but will be installed prior to drilling out of the 1st intermediate casing shoe.

6. TYPES AND CHARACTERISTICS OF THE PROPOSED MUD SYSTEM:

The well will be drilled to TD with a combination of brine, cut brine, and polymer mud system. The applicable depths and properties of this system are as follows:

Depth	Type	Wt (PPG)	Viscosity (sec)	Waterloss (cc)
0-1,175'	Fresh – Gel	8.6-8.8	28-34	N/c
1,175'-5,150'	Brine	10.0-10.2	28-34	N/c
5,150'–9,000'	~~Oil Based~~ Water Based	8.0-8.2	35-45	N/c
9,000'–11,100'	~~Oil Based~~ Water Based	8.0-8.2	35-45	6-12
9,018'-13,252'	Polymer (Lateral)	8.6-9.6	35-45	10-25

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the wellsite at all times.

7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

(A) A kelly cock will be kept in the drill string at all times.

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

8. LOGGING, TESTING AND CORING PROGRAM:

Electric logging will consist of GR-Induction and GR-Compensated Density-Neutron from TD to intermediate casing with a GR- Compensated Neutron run from intermediate casing to surface and optional Sonic from TD to intermediate casing. In addition a CMR and ECS will be run over selected intervals. Sidewall cores will be taken over selected intervals.

EOG Resources intends to take approximately 1,000' of whole core.

9. ABNORMAL CONDITIONS, PRESSURES, TEMPERATURES AND POTENTIAL HAZARDS:

The estimated bottom hole temperature (BHT) at TD is 185 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 4500 psig. No hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. No major loss circulation zones have been reported in offsetting wells.

10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

The drilling operation should be finished in approximately one month. If the well is productive, an additional 30-60 days will be required for completion and testing before a decision is made to install permanent facilities.

DRILLING PROGRAM

EOG RESOURCES, INC.
VACA 14 FED #3
Lea Co. NM

ATTACHMENT TO EXHIBIT #1

1. Wear ring to be properly installed in head.

2. Blow out preventer and all fittings must be in good condition, 5000 psi W.P. minimum. Exhibit #1.

3. All fittings to be flanged

4. Safety valve must be available on rig floor at all times with proper connections, valve to be full bore 5000 psi W.P. minimum.

5. All choke and fill lines to be securely anchored especially ends of choke lines.

6. Equipment through which bit must pass shall be at least as large as the diameter of the casing being drilled through.

7. Kelly cock on kelly.

8. Extension wrenches and hand wheels to be properly installed.

9. Blow out preventer control to be located as close to driller's position as feasible.

10. Blow out preventer closing equipment to include minimum 40-gallon accumulator, two independent sources of pump power on each closing unit installation, and meet all API specifications.

Permit Information:

Well Name: Vaca 14 Fed #3 Revised 3/18/09

Location:
SL: 660' FNL & 1980' FEL, Section 14, T-25-S, R-33-E, Lea Co., N.M.
BHL: 660' FSL & 1980' FEL, Section 14, T-25-S, R-33-E, Lea Co., N.M.

Casing Program:

Casing	Setting Depth	Hole Size	Casing Size	Casing Weight	Casing Grade	Desired TOC
Surface	1,175'	17-1/2"	13-3/8"	48#	J-55	Surface
Intermediate	4,000' 5,150'	12-1/4" 12-1/4"	9-5/8" 9-5/8"	40# 40#	J-55 HCK-55	Surface
Production	13,252'	8-3/4" to 9,775' 7-7/8" to TD	5-1/2"	17#	HCP-110	4,650'

Contingency Strings (Will only be run if hole conditions dictate)

Casing	Setting Depth	Hole Size	Casing Size	Casing Weight	Casing Grade	Desired TOC
2nd Intermediate	9,775'	8-3/4"	7"	26#	HCP-110	4,650'
Production Liner	13,252'	6-1/8"	4-1/2"	11.6#	HCP-110	8,800' TOL

Cement Program:

Depth	No. Sacks	
1,175'	360	60:40 Poz: Class C + 0.005 pps Static Free + 0.005 gps FP-6L + 1% SMS + 5% NaCl + 5 pps LCM-1 + 0.25 pps Cello Flake
	300	Tail: Premium Plus C + 0.005 pps Static Free + 2% CaCl2 + 0.25 pps CelloFlake + 0.005 gps FP-6L
5,150'	1,400	60:40 Poz: Class C + 0.005 pps Static Free + 0.005 gps FP-6L + 1% SMS + 5% NaCl + 5 pps LCM-1 + 0.25 pps Cello Flake
	200	Tail: Premium Plus C + 0.005 pps Static Free + 1% CaCl2 + 0.25 pps CelloFlake + 0.005 gps FP-6L
13,252'	700	Lead: 50:50 Poz: Class H + 0.005 pps Static Free + 0.25 pps CelloFlake + 5 pps LCM-1 + 0.005 gps FP-6L + 10% Bentonite
	915	Tail: 50:50 Poz: Class H + 2% Bentonite + 0.005 gps FP-13L + 0.005 pps Static Free + 5% NaCl + 0.1% R-3 + 0.2% CD-32 + 0.3% FL-52A

Cement Program for Contingency Strings

Depth	No. Sacks	
9,775'	520	60:40 Poz: Class H + 0.005 pps Static Free + 0.005 gps FP-6L + 1% SMS + 5% NaCl + 5 pps LCM-1 + 0.25 pps Cello Flake
	200	Tail: Premium Plus H + 0.005 pps Static Free + 1% CaCl2 + 0.25 pps CelloFlake + 0.005 gps FP-6L
13,252'	430	Premium Plus H + 0.005 gps FP-13L + 0.2% FL-52A + 0.005 pps Static Free + 0.3% R-3 + 0.3% CD-32 + 1% FL-62 + 0.1% ASA-301 + 0.1% SMS

Mud Program:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,175'	Fresh - Gel	8.6-8.8	28-34	N/c
1,175' – 5,150'	Brine	10.0-10.2	28-34	N/c
5,150' – 9,000'	~~Oil Based~~ Brine	8.0-8.2	35-45	N/c
9,000'– 11,100'	~~Oil Based~~ Brine	8.0-8.2	35-45	6-12
9,018' – 13,252'	Cut Brine (Lateral)	8.6-9.6	35-45	10-15