Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Hobbs
HOBBS OCD
FEB 07 2019
RECEIVED

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

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

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other	5. Lease Serial No. Multiple--See Attached
	6. If Indian, Allottee or Tribe Name
	7. If Unit or CA/Agreement, Name and/or No. Multiple--See Attached
	8. Well Name and No. Multiple--See Attached
2. Name of Operator Contact: STAR L HARRELL EOG RESOURCES INCORPORATED E-Mail: Star_Harrell@eogresources.com	9. API Well No. 30-025-44831 Multiple--See Attached
3a. Address MIDLAND, TX 79702 3b. Phone No. (include area code) Ph: 432-848-9161	10. Field and Pool or Exploratory Area Multiple--See Attached
4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)* Multiple--See Attached	11. County or Parish, State LEA COUNTY, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Change to Original APD
	☐ 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 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.

EOG Resources, Inc. respectfully requests to, on multiple wells, amend the cementing program to include a bradenhead squeeze stage and to amend the casing program and revise annulus clearance criteria. The list of wells & API numbers is attached.

Cement
EOG requests a variance from the minimum standards to pump a two stage cement job on the 7-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated TOC @ the Brushy Canyon and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. A top out stage will be performed as a contingency.

EOG also requests to perform this cement procedure on previously permitted 4 string designs in the 7-5/8" 2nd Intermediate casing string as a contingency plan.

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

Electronic Submission #451738 verified by the BLM Well Information System
For EOG RESOURCES INCORPORATED, sent to the Hobbs
Committed to AFMSS for processing by CHRISTOPHER WALLS on 01/28/2019 (19CRW0003SE)

Name *(Printed/Typed)* STAR L HARRELL — Title SR REGULATORY SPECIALIST

Signature (Electronic Submission) — Date 01/24/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By CHRISTOPHER WALLS — Title PETROLEUM ENGINEER — Date 01/28/2019

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 Hobbs

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)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Additional data for EC transaction #451738 that would not fit on the form

5. Lease Serial No., continued

NMNM02965A
NMNM108504
NMNM118726
NMNM121490
NMNM122622
NMNM26079
NMNM26394
NMNM66927

Wells/Facilities, continued

Agreement	Lease	Well/Fac Name, Number	API Number	Location
NMNM122622	NMNM122622	PEACHTREE 24 FED COM 701H	30-025-44831-00-X1	Sec 24 T26S R33E SESE 190FSL 732FEL 32.022179 N Lat, 103.519905 W Lon
NMNM108504	NMNM108504	JAVELINA 30 FED 701H	30-025-42829-00-X1	Sec 30 T25S R34E Lot 3 2191FSL 566FWL
NMNM108504	NMNM108504	JAVELINA 30 FED 702H	30-025-42830-00-X1	Sec 30 T25S R34E Lot 3 2191FSL 599FWL
NMNM122622	NMNM122622	PEACHTREE 24 FED COM 704H	30-025-44834-00-X1	Sec 24 T26S R33E SWSE 190FSL 1767FEL 32.022185 N Lat, 103.523245 W Lon
NMNM02965A	NMNM02965A	MAGNOLIA 15 FED COM 703H	30-025-44374-00-X1	Sec 15 T26S R33E NENW 1145FNL 2133FWL 32.047588 N Lat, 103.561836 W Lon
NMNM02965A	NMNM02965A	MAGNOLIA 15 FED COM 705H	30-025-44346-00-X1	Sec 15 T26S R33E NENW 1080FNL 2159FWL 32.047768 N Lat, 103.561752 W Lon
NMNM02965A	NMNM02965A	MAGNOLIA 15 FED COM 706H	30-025-44399-00-X1	Sec 15 T26S R33E NWNE 390FNL 1903FEL 32.049660 N Lat, 103.557793 W Lon
NMNM02965A	NMNM02965A	MAGNOLIA 15 FED COM 707H	30-025-44400-00-X1	Sec 15 T26S R33E NWNE 390FNL 1868FEL 32.049660 N Lat, 103.557678 W Lon
NMNM02965A	NMNM02965A	MAGNOLIA 15 FED COM 710H	30-025-44402-00-X1	Sec 15 T26S R33E NENE 771FNL 1268FEL 32.048611 N Lat, 103.555748 W Lon
NMNM02965A	NMNM02965A	MAGNOLIA 15 FED COM 711H	30-025-44403-00-X1	Sec 15 T26S R33E NENE 746FNL 1244FEL 32.048679 N Lat, 103.555664 W Lon
NMNM02965A	NMNM02965A	MAGNOLIA 15 FED COM 712H	30-025-44404-00-X1	Sec 15 T26S R33E NENE 740FNL 683FEL 32.048695 N Lat, 103.553856 W Lon
NMNM02965A	NMNM02965A	MAGNOLIA 15 FED COM 713H	30-025-44405-00-X1	Sec 15 T26S R33E NENE 740FNL 648FEL 32.048691 N Lat, 103.553741 W Lon
NMNM02965A	NMNM02965A	MAGNOLIA 15 FED COM 714H	30-025-44406-00-X1	Sec 15 T26S R33E NENE 740FNL 613FEL 32.048691 N Lat, 103.553627 W Lon
NMNM02965A	NMNM02965A	PEACHTREE 24 FED COM 705H	30-025-44751-00-X1	Sec 24 T26S R33E SESW 268FSL 2321FWL 32.022408 N Lat, 103.527107 W Lon
NMNM02965A	NMNM02965A	PEACHTREE 24 FED COM 706H	30-025-44752-00-X1	Sec 24 T26S R33E SESW 268FSL 2286FWL 32.022408 N Lat, 103.527222 W Lon
NMNM02965A	NMNM02965A	PEACHTREE 24 FED COM 707H	30-025-44756-00-X1	Sec 24 T26S R33E SESW 268FSL 2251FWL 32.022411 N Lat, 103.527336 W Lon
NMNM02965A	NMNM02965A	PEACHTREE 24 FED COM 709H	30-025-44753-00-X1	Sec 24 T26S R33E SWSW 268FSL 786FWL 32.022423 N Lat, 103.532059 W Lon
NMNM02965A	NMNM02965A	PEACHTREE 24 FED COM 710H	30-025-44754-00-X1	Sec 24 T26S R33E SWSW 268FSL 751FWL 32.022423 N Lat, 103.532173 W Lon
NMNM02965A	NMNM02965A	PEACHTREE 24 FEDERAL COM 708H	30-025-44755-00-X1	Sec 24 T26S R33E SWSW 268FSL 821FWL 32.022423 N Lat, 103.531952 W Lon
NMNM26394	NMNM26394	GREEN DRAKE 16 FED COM 701H		Sec 16 T25S R33E NWSW 2390FSL 627FWL 32.129906 N Lat, 103.583733 W Lon
NMNM26394	NMNM26394	GREEN DRAKE 16 FED COM 702H		Sec 16 T25S R33E NWSW 2390FSL 660FWL 32.129902 N Lat, 103.583626 W Lon
NMNM26394	NMNM26394	GREEN DRAKE 16 FED COM 703H		Sec 16 T25S R33E NWSW 2390FSL 693FWL 32.129902 N Lat, 103.583519 W Lon
NMNM26394	NMNM26394	GREEN DRAKE 16 FED COM 704H		Sec 16 T25S R33E NESW 2075FSL 1560FWL 32.129032 N Lat, 103.580719 W Lon
NMNM26394	NMNM26394	GREEN DRAKE 16 FED COM 705H		Sec 16 T25S R33E NESW 2051FSL 1583FWL 32.128967 N Lat, 103.580643 W Lon
NMNM118726	NMNM118726	ANTIETAM 9 FED COM 713H		Sec 9 T25S R33E NENE 1052FNL 690FEL 32.149448 N Lat, 103.570999 W Lon
NMNM118726	NMNM118726	ANTIETAM 9 FED COM 714H		Sec 9 T25S R33E NENE 1052FNL 657FEL 32.149449 N Lat, 103.570890 W Lon
NMNM118726	NMNM118726	ANTIETAM 9 FED COM 715H		Sec 9 T25S R33E NENE 1052FNL 624FEL 32.149448 N Lat, 103.570786 W Lon
NMNM26079	NMNM26079	STREETCAR 15 FED 706H	30-025-42877-00-X1	Sec 15 T25S R33E SWSW 250FSL 560FWL
NMNM121490	NMNM121490	COLGROVE 35 FED COM 701H	30-025-43018-00-X1	Sec 35 T26S R33E Lot 4 360FSL 215FWL
NMNM121490	NMNM121490	COLGROVE 35 FED COM 702H	30-025-42983-00-X1	Sec 35 T26S R33E Lot 4 360FSL 245FWL
NMNM121490	NMNM121490	COLGROVE 35 FED COM 703H	30-025-43568-00-X1	Sec 35 T26S R33E 252FSL 1970FWL 32.000824 N Lat, 103.544815 W Lon
NMNM121490	NMNM121490	COLGROVE 35 FED COM 704H	30-025-43569-00-X1	Sec 35 T26S R33E 252FSL 2000FWL 32.000824 N Lat, 103.544716 W Lon
NMNM121490	NMNM121490	RATTLESNAKE 28 FED COM 710H	30-025-44921-00-X1	Sec 28 T26S R33E NENE 840FNL 1248FEL 32.019405 N Lat, 103.572746 W Lon
NMNM121490	NMNM121490	RATTLESNAKE 28 FED COM 711H	30-025-44920-00-X1	Sec 28 T26S R33E NENE 840FNL 1283FEL 32.019409 N Lat, 103.572853 W Lon
NMNM66927	NMNM66927	NAUTILUS 16 FED COM 707H	30-025-44245-00-X1	Sec 16 T26S R34E SWSE 280FSL 2565FEL 32.036957 N Lat, 103.474571 W Lon
NMNM66927	NMNM66927	NAUTILUS 16 FED COM 708H	30-025-44246-00-X1	Sec 16 T26S R34E SWSE 280FSL 2530FEL 32.036957 N Lat, 103.474457 W Lon

10. Field and Pool, continued

RED HILLS-WOLFCAMP, WEST (GAS)
RED TANK
WC025G09S253309A-UPPER WC

10. Field and Pool, continued

WC025G09S263327G UP WOLFCAMP
WC025G09S263327G-UP WOLFCAMP

32. Additional remarks, continued

EOG will include the final fluid top verified by Echo-meter and the volume of displacement fluid above the cement slurry in the annulus in all post-drill sundries on wells utilizing this cement program.

EOG will report to the BLM the volume of fluid (limited to 5 bbls) used to flush intermediate casing valves following backside cementing procedures.

Surface Casing
- Casing shoe will be set at a minimum of 25' below the Tamarisk Anhydrite formation and a minimum of 25' above the Top Salt
- Casing string will consist of 9-5/8' 40 lb/ft J-55 casing with LTC connections
- Cement will be brought to surface

Intermediate Casing
- Casing shoe will be set 100' below the top of the Third Bone Spring Carbonate
- Casing string will consist of 7-5/8" 26.4 lb/ft P-110 HC casing with Ultra SF connections (spec sheet attached)
- Cement will be brought to surface according to the program outlined above

Production Casing
- Casing string will consist of 3 segments:
o 5-1/2" 17 lb/ft HCP-110 casing with LTC connections from surface to 500' above the 7-5/8" casing shoe
o 5-1/2" 17 lb/ft HCP-110 casing with VAM SFC connections covering a 500' section above the 7-5/8" intermediate shoe
o 5-1/2" 17 lb/ft HCP-110 casing with LTC connections from the 7-5/8" intermediate shoe to target depth
- Cement will tie back 500' above the 7-5/8" casing shoe

A diagram of the casing design can be found at the end of this document.

EOG also requests to retain the option to utilize previously permitted 4 string designs, if applicable.

Annulus Clearance
EOG requests variance to allow deviation from the 0.422" annulus clearance requirement from Onshore Order #2 under the following conditions:
- Annular clearance to meet or exceed 0.422" between intermediate casing ID and production casing coupling only on the first 500' overlap between both casing strings.
- Annular clearance less than 0.422" is acceptable for the curve and lateral portions of the production open hole section.

eog resources

Revised Permit Information 1/24/2019

Abstract: Amend the cementing program and add bradenhead squeeze stage. Amend the casing program and revise annulus clearance criteria.

EOG requests that these amendments be applied to the following wells:

Well Name	API Number
Priority 1	
Peachtree 24 Fed Com #701H	30-025-44831
Peachtree 24 Fed Com #704H	30-025-44834
Peachtree 24 Fed Com #705H	30-025-44751
Peachtree 24 Fed Com #706H	30-025-44752
Peachtree 24 Fed Com #707H	30-025-44756
Peachtree 24 Fed Com #708H	30-025-44755
Peachtree 24 Fed Com #709H	30-025-44753
Peachtree 24 Fed Com #710H	30-025-44754
Green Drake 16 Fed Com #701H	30-025-45475
Green Drake 16 Fed Com #702H	30-025-45471
Green Drake 16 Fed Com #703H	30-025-45472
Green Drake 16 Fed Com #704H	30-025-45473
Green Drake 16 Fed Com #705H	30-025-45474
Magnolia 15 Fed Com #703H	30-025-44374
Magnolia 15 Fed Com #705H	30-025-44346
Magnolia 15 Fed Com #706H	30-025-44399
Magnolia 15 Fed Com #707H	30-025-44400
Magnolia 15 Fed Com #710H	30-025-44402
Magnolia 15 Fed Com #711H	30-025-44403
Magnolia 15 Fed Com #713H	30-025-44405
Magnolia 15 Fed Com #714H	30-025-44406
Javelina 30 Fed #701H	30-025-42829
Javelina 30 Fed #702H	30-025-42830
Antietam 9 Fed Com #713H	30-025-45476
Antietam 9 Fed Com #714H	30-025-45477
Antietam 9 Fed Com #715H	30-025-45478
Streetcar 15 Fed #706H	30-025-42877

Priority 2	
Rattlesnake 28 Fed Com #710HX	30-025-44921
Rattlesnake 28 Fed Com #711HX	30-025-44920
Rattlesnake 28 Fed Com #712HX	30-025-45248
Colgrove 35 Fed Com #701H	30-025-43018
Colgrove 35 Fed Com #702H	30-025-42983
Colgrove 35 Fed Com #703H	30-025-43568
Colgrove 35 Fed Com #704H	30-025-43569
Priority 3	
Nautilus 16 Fed Com #707H	30-025-44245
Nautilus 16 Fed Com #708H	30-025-44246

Cement

EOG requests a variance from the minimum standards to pump a two stage cement job on the 7-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated TOC @ the Brushy Canyon and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. A top out stage will be performed as a contingency.

Cementing Program:

Primary Plans For 7-5/8" cement Job:

Casing		Slurry	#Sks	Wt. (ppg)	Yld (ft3/sack)	H20 gal/sk	500# Comp. Strength	Slurry Discription
Intermediate 1st stage		Tail	404	14.2	1.11	4.47	4:11 Hrs	Class C Cement, Salt
Intermediate 2nd Stage (Tail Slurry) to be pumped as bradenhead Squeeze from surface, down the Intermediate annulus								
Intermediate 2nd stage	Min Density Option	Tail	400	12.7	2.30	12.91	7:00 Hrs	Class C cement, Salt, Gel, Expansive Agent
	Max Density Option		617	14.8	1.49	7.05	4:39 Hrs	
Displacement		Fresh Water	Maximum 5 bbls	8.4	N/A	N/A	N/A	N/A
Intermediate Contingency Stage to be pumped as a top out down the intermediate annulus								
Contingency: Top Out	Min Density Option	Tail	72	12.7	2.30	12.91	7:00 Hrs	Class C cement, Salt, Gel, Expansive Agent
	Max Density Option		112	14.8	1.49	7.05	4:39 Hrs	

EOG also requests variance for the option to perform this cement procedure on previously permitted 4 string designs in the 7-5/8" 2nd Intermediate casing string as a contingency plan.

EOG will include the final fluid top verified by Echo-meter and the volume of displacement fluid above the cement slurry in the annulus in all post-drill sundries on wells utilizing this cement program.

EOG will report to the BLM the volume of fluid (limited to 5 bbls) used to flush intermediate casing valves following backside cementing procedures.

Casing

EOG requests the option to use a 3 string design implemented to the following parameters:

Surface Casing

- Casing shoe will be set at a minimum of 25' below the Tamarisk Anhydrite formation and a minimum of 25' above the Top Salt
- Casing string will consist of 9-5/8" 40 lb/ft J-55 casing with LTC connections
- Cement will be brought to surface

Intermediate Casing

- Casing shoe will be set 100' below the top of the Third Bone Spring Carbonate
- Casing string will consist of 7-5/8" 26.4 lb/ft P-110 HC casing with Ultra SF connections (spec sheet attached)
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Production Casing

- Casing string will consist of 3 segments:
    - 5-1/2" 17 lb/ft HCP-110 casing with LTC connections from surface to 500' above the 7-5/8" casing shoe
    - 5-1/2" 17 lb/ft HCP-110 casing with VAM SFC connections covering a 500' section above the 7-5/8" intermediate shoe
    - 5-1/2" 17 lb/ft HCP-110 casing with LTC connections from the 7-5/8" intermediate shoe to target depth
- Cement will tie back 500' above the 7-5/8" casing shoe

A diagram of the casing design can be found at the end of this document.

EOG also requests to retain the option to utilize previously permitted 4 string designs, if applicable

Annulus Clearance

EOG requests variance to allow deviation from the 0.422" annulus clearance requirement from Onshore Order #2 under the following conditions:

- Annular clearance to meet or exceed 0.422" between intermediate casing ID and production casing coupling only on the first 500' overlap between both casing strings.
- Annular clearance less than 0.422" is acceptable for the curve and lateral portions of the production open hole section.

Proposed Casing Design