Form 3160-3
(March 2012)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: NMNM112279

6. If Indian, Allotee or Tribe Name:

1a. Type of work: ☑ DRILL ☐ REENTER

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

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone

8. Lease Name and Well No.: FOX 30 FED COM 705H (318097)

2. Name of Operator: EOG RESOURCES INCORPORATED (7377)

9. API Well No.: 30-026-44557

3a. Address: 1111 Bagby Sky Lobby2 Houston TX 77002

3b. Phone No. *(include area code)*: (713)651-7000

10. Field and Pool, or Exploratory: RED HILLS / WC-025 S253336D 98094

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface: NWSE / 2192 FSL / 1928 FEL / LAT 32.1002621 / LONG -103.5067091

At proposed prod. zone: SWSE / 230 FSL / 1651 FEL / LAT 32.0803624 / LONG -103.505802

11. Sec., T. R. M. or Blk. and Survey or Area: SEC 30 / T25S / R34E / NMP

14. Distance in miles and direction from nearest town or post office*: 19 miles

12. County or Parish: LEA

13. State: NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any): 230 feet

16. No. of acres in lease: 559.6

17. Spacing Unit dedicated to this well: 240

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.: 331 feet

19. Proposed Depth: 12600 feet / 20047 feet

20. BLM/BIA Bond No. on file: FED: NM2308

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3324 feet

22. Approximate date work will start*: 01/01/2018

23. Estimated duration: 25 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature	Name *(Printed/Typed)*	Date
(Electronic Submission)	Stan Wagner / Ph: (432)686-3689	08/22/2017
Title: Regulatory Specialsit		

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Cody Layton / Ph: (575)234-5959	02/05/2018
Title: Supervisor Multiple Resources	Office: CARLSBAD	

Application approval 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.
Conditions of approval, if any, are attached.

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.

(Continued on page 2)

*(Instructions on page 2)

APPROVED WITH CONDITIONS

KZ 04/02/18

Approval Date: 02/05/2018

Additional Operator Remarks

Location of Well

1. SHL: NWSE / 2192 FSL / 1928 FEL / TWSP: 25S / RANGE: 34E / SECTION: 30 / LAT: 32.1002621 / LONG: -103.5067091 (TVD: 0 feet, MD: 0 feet)
   PPP: NWNE / 150 FNL / 1651 FEL / TWSP: 25S / RANGE: 34E / SECTION: 31 / LAT: 32.0938258 / LONG: -103.5058108 (TVD: 12600 feet, MD: 15100 feet)
   PPP: NWSE / 2312 FSL / 1928 FEL / TWSP: 25S / RANGE: 34E / SECTION: 30 / LAT: 32.1005943 / LONG: -103.5058152 (TVD: 12556 feet, MD: 12680 feet)
   BHL: SWSE / 230 FSL / 1651 FEL / TWSP: 25S / RANGE: 34E / SECTION: 31 / LAT: 32.0803624 / LONG: -103.505802 (TVD: 12600 feet, MD: 20047 feet)

BLM Point of Contact

Name: Judith Yeager
Title: Legal Instruments Examiner
Phone: 5752345936
Email: jyeager@blm.gov

EOG RESOURCES, INC.
FOX 30 FED COM NO. 705H

1. GEOLOGIC NAME OF SURFACE FORMATION:
Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	940'
Top of Salt	1,240'
Base of Salt / Top Anhydrite	4,950'
Base Anhydrite	5,200'
Lamar	5,200'
Bell Canyon	5,230'
Cherry Canyon	6,235'
Brushy Canyon	7,830'
Bone Spring Lime	9,330'
1st Bone Spring Sand	10,315'
2nd Bone Spring Shale	10,515'
2nd Bone Spring Sand	10,835'
3rd Bone Spring Carb	11,315'
3rd Bone Spring Sand	11,895'
Wolfcamp	12,365'
TD	12,600'

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

Upper Permian Sands	0- 400'	Fresh Water
Cherry Canyon	6,235'	Oil
Brushy Canyon	7,830'	Oil
1st Bone Spring Sand	10,315'	Oil
2nd Bone Spring Shale	10,515'	Oil
2nd Bone Spring Sand	10,835'	Oil
3rd Bone Spring Carb	11,315'	Oil
3rd Bone Spring Sand	11,895'	Oil
Wolfcamp	12,365'	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 10.75" casing at 965' and circulating cement back to surface.

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4. CASING PROGRAM - NEW

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF_{min} Collapse	DF_{min} Burst	DF_{min} Tension
14.75"	0 – 965'	10.75"	40.5#	J55	STC	1.125	1.25	1.60
9.875"	0 – 1,000'	7.625"	29.7#	HCP-110	LTC	1.125	1.25	1.60
9.875"	1,000' – 3,000'	7.625"	29.7#	P-110EC	SLIJ II	1.125	1.25	1.60
8.75"	3,000' – 11,400'	7.625"	29.7#	HCP-110	FlushMax III	1.125	1.25	1.60
6.75"	0' – 10,900'	5.5"	20#	P-110EC	DWC/C-IS MS	1.125	1.25	1.60
6.75"	10,900'-20,047'	5.5"	20#	P-110EC	VAM SFC	1.125	1.25	1.60

Variance is requested to wave the centralizer requirements for the 7-5/8" FJ casing in the 8-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 8-3/4" hole interval to maximize cement bond and zonal isolation.

Variance is also requested to wave any centralizer requirements for the 5-1/2" FJ casing in the 6-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 6-3/4" hole interval to maximize cement bond and zonal isolation.

Cementing Program:

Depth	No. Sacks	Wt. ppg	Yld Ft^3/ft	Mix Water Gal/sk	Slurry Description
10-3/4" 965'	325	13.5	1.73	9.13	Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% $CaCl_2$ + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	200	14.8	1.34	6.34	Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate
7-5/8" 11,400'	250	14.8	1.38	6.48	Class C + 5% Gypsum + 3% CaCl2 pumped via Bradenhead (TOC @ Surface)
	2000	14.8	1.38	6.48	Class C + 5% Gypsum + 3% CaCl2 pumped via Bradenhead
	550	14.4	1.20	4.81	50:50 Class H:Poz + 0.25% CPT20A + 0.40% CPT49 + 0.20% CPT35 + 0.80% CPT16A + 0.25% CPT503P pumped Conventionally
5-1/2" 20,047'	850	14.1	1.26	5.80	Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17 (TOC @ 10,900')

Note: Cement volumes based on bit size plus at least 25% excess in the open hole plus 10% excess in the cased-hole overlap section.

5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:

Variance is requested to use a co-flex line between the BOP and choke manifold (instead of using a 4" OD steel line).

The minimum blowout preventer equipment (BOPE) shown in Exhibit #1 will consist of a single ram, mud cross and double ram-type (10,000 psi WP) preventer and an annular preventer (10,000-psi WP). Both units will be hydraulically operated and the ram-type will be equipped with blind rams on bottom and drill pipe rams on top. All BOPE will be tested in accordance with Onshore Oil & Gas order No. 2.

Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 10,000/ 250 psig and the annular preventer to 5,000/ 250 psig. The surface casing will be tested to 1500 psi for 30 minutes.

Before drilling out of the intermediate casing, the ram-type BOP and accessory equipment will be tested to 10,000/ 250 psig and the annular preventer to 5,000/ 250 psig. The intermediate casing will be tested to 2000 psi for 30 minutes.

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.

A hydraulically operated choke will be installed prior to drilling out of the intermediate casing shoe.

6. TYPES AND CHARACTERISTICS OF THE PROPOSED MUD SYSTEM:

During this procedure we plan to use a Closed-Loop System and haul contents to the required disposal.

The applicable depths and properties of the drilling fluid systems are as follows.

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 965'	Fresh - Gel	8.6-8.8	28-34	N/c
965' – 11,400'	Brine	8.8-10.0	28-34	N/c
11,400' – 20,047' Lateral	Oil Base	10.0-14.0	58-68	3 - 6

The highest mud weight needed to balance formation is expected to be 11.5 ppg. In order to maintain hole stability, mud weights up to 14.0 ppg may be utilized.

An electronic pit volume totalizer (PVT) will be utilized on the circulating system, to monitor pit volume, flow rate, pump pressure and stroke rate.

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.

(C) H_2S monitoring and detection equipment will be utilized from surface casing point to TD.

8. LOGGING, TESTING AND CORING PROGRAM:

Open-hole logs are not planned for this well.

GR–CCL Will be run in cased hole during completions phase of operations.

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

The estimated bottom-hole temperature (BHT) at TD is 181 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 7534 psig (based on 11.5 ppg MW). No hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. Severe loss circulation is expected from 7,300' to Intermediate casing point.

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 60-90 days will be required for completion and testing before a decision is made to install permanent facilities.

(A) EOG Resources requests the option to contract a Surface Rig to drill, set surface casing, and cement on the subject well. If the timing between rigs is such that EOG Resources would not be able to preset the surface, the Primary Rig will MIRU and drill the well in its entirety per the APD.

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11. WELLHEAD:

A multi-bowl wellhead system will be utilized.

After running the 10-3/4" surface casing, a 13-5/8" BOP/BOPE system with a minimum working pressure of 10,000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 10,000 psi pressure test. This pressure test will be repeated at least every 30 days, as per Onshore Order No. 2

The minimum working pressure of the BOP and related BOPE required for drilling below the surface casing shoe shall be 10,000 psi.

The multi-bowl wellhead will be installed by vendor's representative(s). A copy of the installation instructions for the Stream Flo FBD100 Multi-Bowl WH system has been sent to the NM BLM office in Carlsbad, NM.

The wellhead will be installed by a third party welder while being monitored by WH vendor's representative.

All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type.

A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 5000 psi.

Both the surface and intermediate casing strings will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater.

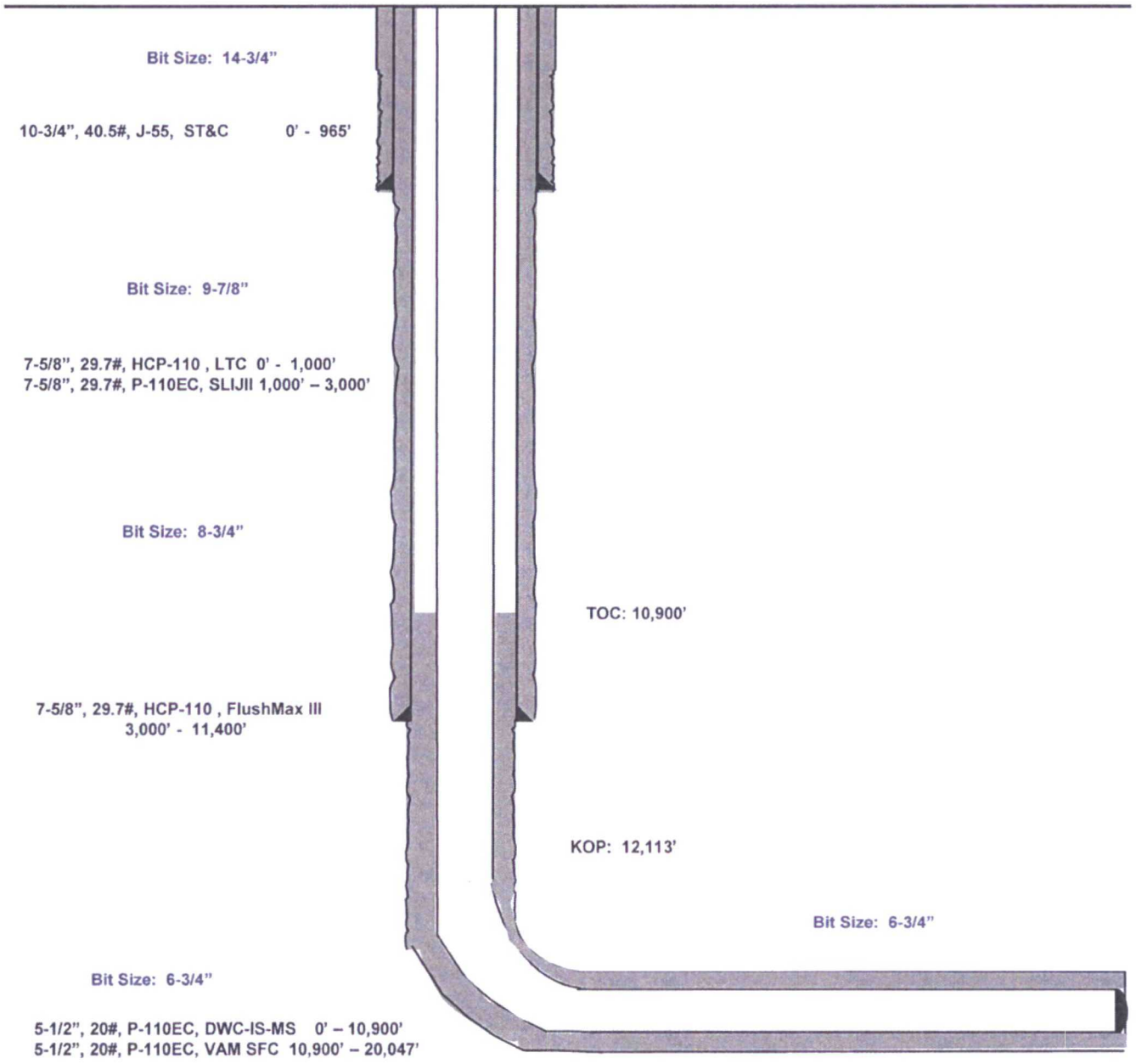
Fox 30 Fed Com #705H

Lea County, New Mexico
Proposed Wellbore

2192' FSL
1928' FEL
Section 30
T-25-S, R-34-E

API: 30-025-*****

KB: 3,349'
GL: 3,324'



Lateral: 20,047' MD, 12,600' TVD
Upper Most Perf:
2312' FSL & 1651' FEL Sec. 30
Lower Most Perf:
330' FSL & 1651' FEL Sec. 31
BH Location: 230' FSL & 1651' FEL
Section 31
T-25-S, R-34-E