

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

NMOCD  
Hobbs

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.**

5. Lease Serial No.  
SHL - NMNM112943 BHL - 132995  
6. If Indian, Allottee or Tribe Name

**SUBMIT IN TRIPLICATE - Other instructions on page 2.**

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator  
Endurance Resources LLC

3a. Address  
203 W Wall St, Ste 1000, Midland, TX 79701

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
Sec 33, T 25S, R 35E, 150 FSL, 1980 FWL, Lea Co, NM

3b. Phone No. (include area code)  
432-242-4680

APR 18 2016

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

8. Well Name and No.  
Mustang 33 Federal #2H

9. API Well No.  
30-025-42902

10. Field and Pool or Exploratory Area  
JABALINA; DELAWARE, SW

11. Country or Parish, State  
New Mexico

**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 checked="" 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 type="checkbox"/> Other
	<input checked="" 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 recompleat 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 recompleat 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.)

Endurance Resources LLC respectfully requests to change the formation to be drilled from a Third Bone Spring Sand well to a Brushy Canyon. This will result in the following casing design changes:

12 1/4" hole drilled to 1075' with 9 5/8" 40# J-55 LT&C set at the same depth: Collapse = 5.11, Burst = 7.86, Tension = 12.09

8 3/4" hole drilled to 9375' with 7" 20# HCP-110 BTC set at the same depth: Collapse = 2.62, Burst = 2.65, Tension = 3.42

6 1/8" hole drilled to 18885' with 4 1/2" 13.5# HCP-110 BTC set from 6400' - 18885' Collapse = 3.07, Burst = 2.93, Tension = 1.66

The mud program will remain the same as originally submitted.

The lateral length will now encompass two sections. Please refer to the attached C-102 and directional plan that reflects this.

Endurance would also like to request that the field/pooling be changed to JABELINA; DELAWARE; SW as reflected above and on the updated C-102.

REJECTED - 3 string to surface is required.

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

Name (Printed/Typed)  
Tinlee Tilton

Title Drilling Engineer

Signature

Date 1/26/2016

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Title

Date

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

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)

MAY 06 2016



**HOBBS OCD**  
**APR 18 2016**  
**RECEIVED**

**Endurance Resources LLC**

**DRILLING & OPERATIONS PROGRAM**

**Mustang 33 Fed 2H**

**SHL: 150' FSL & 1980' FWL**

**Sec 33-25S-35E**

**BHL: 330' FNL & 1980' FWL**

**Sec 28-25S-35E**

**Lea Co, NM**

**1. Geological Name of Surface Formation**

Quaternary

**2. Estimated Tops of Important Geological Markers**

Fresh Water	400'
Rustler	987'
Top of Salt	1,544'
Lamar Limestone	5,260'
Bell Canyon	5,272' - Oil
Cherry Canyon	6,344'
Brushy canyon	7,807' - Oil
TVD: 9,047'; MD: 18,885'	

**3. Estimated Depths of Anticipated Fresh Water, Oil or Gas**

The estimated depths at which water, oil and gas will be encountered are as follows:

Water: Average depth to water: 400'. Minimum depth: 0'. Max: 400'. As reported from the New Mexico Office of the State Engineer website.

Oil & Gas: 5,272' – 9,047' (Bell Canyon through Brushy Canyon)

No other formations are expected to give up oil, gas, or fresh water in measurable quantities.



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#### 4. Proposed Casing Program:

Size	Depth	#/ft	Grade	Connection	Collapse	Burst	Tension
9-5/8"	1,075'	40	J-55	LT&C	5.11	7.86	12.09
7"	9,375'	29	HCP-110	BTC/TTRS-1	2.62	2.65	3.42
4-1/2"	18,885'	13.5	HCP-110	BTC/TTRS-1	3.07	2.93	1.66

NOTE: ALL CASING IS NEW & API APPROVED. WHILE RUNNING CASING, PIPE WILL BE KEPT A MINIMUM OF 1/3 FULL AT ALL TIMES TO AVOID APPROACHING COLLAPSE PRESSURE OF THE CASING. SURFACE CASING WILL BE WATCHED & NECESSARY ADJUSTMENTS MADE TO ENSURE PIPE IF FULL DUE TO LOST CIRCULATION ZONES THAT MAY OCCUR. CENTRALIZERS WILL BE USED ON SURFACE, INTERMEDIATE, and PRODUCTION CASING.

#### 5. Proposed Cement Program:

##### a. 9-5/8" Surface

Lead: 300 sks ExtendaCem Class C (13.7 ppg / 1.694 cuft/sk)

Tail: 155 sks HalCem Class C (14.8 ppg / 1.326 cuft/sk)

\*\*Calculated w/ 100% excess on OH volume

##### b. 7" Intermediate

Lead: 500 sks Tuned Light Class H (9.0 ppg / 3.556 cuft/sk)

Tail: 250 sks VersaCem Class H + 0.3% Super CBL + 0.2% Halad-9 retarder + 0.2% HR-800 retarder (14.4 ppg / 1.247 cuft/sk)

\*\*Calculated w/ 50% excess on OH volumes & 10% in CH

##### c. 4 1/2" Production

Tail: 965 sks VersaCem Class H + 0.5 % Halad-344 + 0.4% Halad-322 + 0.4% HR-800 retarder (14.5 ppg / 1.227 cuft/sk)

\*\*Calculated w/ 20% excess in OH

NOTE: THE ABOVE CEMENT VOLUMES COULD BE REVISED PENDING FLUID CALIPER & CALIPER LOG DATA. ALL VOLUMES ARE DESIGNED TO CIRCULATE TO SURFACE OR OFF THE TOP OF THE LINER HANGER.

#### 6. Minimum Specifications for Pressure Control:

13-5/8 (10M) working pressure BOP system consisting of one set of blind rams and one set of pipe rams and a 5000# annular type preventer (please see BOP schematic). A 5M choke manifold & 120 gallon accumulator with floor and remote operating stations & auxiliary power system. Rotating head as needed. A KC will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.



BOP unit will be hydraulically operated. BOP will be NU and operated at least once a day while drilling and the blind rams will be operated when out of the hole during trips. From the base of the 9-5/8" csg through running of production liner, the well will be equipped with a 10M BOP system. Below the 9-5/8 csg shoe, this 10M system will be equipped with a HCR valve, remote kill line, & annular to match. The remote kill line will be installed prior to testing the system & tested to stack pressure.

Before drilling out of the 9-5/8 surface casing, BOP will be tested by an independent surface company to 250 psi low & 5000 psi high. Hydril will be tested to 250 psi low and 2500 psi high. These low pressure tests from 250 to 300 psi will be held a minimum of 10 minutes if test is done with a test plug & 30 minutes without a test plug.

7. Estimated BHP:  
4071 psi @ 9,047' TVD

8. Mud Program: The applicable depths & properties of this system are as follows:

Depth	Type of System	Mud Weight	Viscosity (sec)	Waterloss (cc)
0 – 1,075'	Fresh	8.4	29-32	NC
1,075' – 9,375'	OBM	8.8	50-60	-
9,375' – 18,885'	Cut Brine	8.8 - 9.2	28-32	<12

NOTE: NECESSARY MUD PRODUCTS FOR WEIGHT ADDITION & FLUID LOSS WILL BE ON LOCATION AT ALL TIMES. VISUAL MUD MONITORING EQUIPMENT (I.E. TRIP TANK) WILL BE IN PLACE TO DETECT VOLUME CHANGES INDICATING LOSS OR GAIN OF CIRCULATION VOLUME WITH ALARMS.

9. Auxiliary Well Control & Monitoring Equipment:

- A KC will be in the drill string at all times.
- A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times



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- c. H<sub>2</sub>S detection equipment will be in operation & breathing apparatuses will be on location after the drill out of the 9-5/8" casing shoe until the 4-1/2" liner is cemented.

**10. Testing, Logging & Coring Program:**

- a. No drill stem tests are planned.
- b. GR/N well log ran from KOP to surface.
- c. No coring is planned.

**11. Potential Hazards:**

No abnormal pressures or temperatures are expected. If H<sub>2</sub>S is encountered, Endurance Resources LLC will comply with Onshore Order #6. Regardless, all personnel will be trained & qualified with H<sub>2</sub>S safety. Rig safety equipment will all also be checked daily once drill out of the 9-5/8" casing shoe to TD. It has been noted that H<sub>2</sub>S has been encountered in the salt section. If H<sub>2</sub>S is encountered, measurements & formations will be reported to the BLM.

**12. Anticipated starting date & Duration of Operations:**

Road & location construction will begin after the BLM has approved the APD. Anticipated spud date will begin after BLM approval & after a drilling rig is secured. Move in operations & drilling is expected to take no more than 45 days. An additional 30-50 days will be needed to complete this well & construct surface facilities and/or lay flow lines in order to place well on production.