

OCD Hobbs

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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


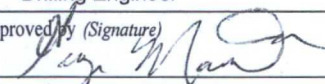
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1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM 115000; NMNM117126	
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator Endurance Resources, LLC (270329)		7. If Unit or CA Agreement, Name and No.	
3a. Address 203 West Wall Suite 1000 Midland, Texas 79701		8. Lease Name and Well No. (317056) TALCO 9 26 35 FED 3H	
3b. Phone No. (include area code) 432-242-4680		9. API Well No. 30-025-43458	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 2440' FNL & 2280' FWL - Sec 9 (9) At proposed prod. zone 330' FNL & 2280' FWL - Sec 4 (8)		10. Field and Pool, or Exploratory (9811) WC-025 609 5263504N; WOLF CAMP	
14. Distance in miles and direction from nearest town or post office* 11 Miles West from Jal, NM		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) 2280'	16. No. of acres in lease 1680 ac	17. Spacing Unit dedicated to this well 240	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 3000'	19. Proposed Depth MD 19,909' TVD 12,765'	20. BLM/BIA Bond No. on file NMB001220	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3174.3 GL	22. Approximate date work will start* 09/15/2016	23. Estimated duration 45 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. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification |
| 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). | 6. Such other site specific information and/or plans as may be required by the BLM. |

25. Signature 	Name (Printed/Typed) Tinlee Tilton	Date 08/05/2016
Title Drilling Engineer		
Approved by (Signature) 	Name (Printed/Typed) George MacDonell	Date 10/7/16
Title FIELD MANAGER		
Office CARLSBAD FIELD OFFICE		

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.

APPROVAL FOR TWO YEARS

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)

KK
10/24/16

SEE ATTACHED FOR
CONDITIONS OF APPROVAL



Endurance Resources LLC

DRILLING & OPERATIONS PROGRAM

Talco 9 26 35 Federal #3H
SHL: 2440' FNL & 2280' FEL
Sec 9-26S-35E
BHL: 330' FNL & 2280' FEL
Sec 4-26S-35E
Lea Co, NM

1. Geological Name of Surface Formation

Quaternary

2. Estimated Tops of Important Geological Markers

Fresh Water	400'
Rustler	1000'
Lamar Limestone	5,290'
Delaware	5,320' – Oil
Bone Spring	9,165' – Oil
1 st Bone Spring	10,480' – Oil
2 nd Bone Spring	11,010' – Oil
3 rd Bone Spring	12,150' – Oil
Wolfcamp	12,482' – Oil
TVD: 12,765'; MD: 19,909'	
TD of Pilot Hole: 13,155'	

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: 5,320' – 13,155' (Delaware through Wolfcamp)

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



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4. Proposed Casing Program:

Hole Size	Casing Size	Depth	#/ft	Grade	Connection	Collapse	Burst	Tension
14 3/4"	10 3/4"	0 - 1,150'	40.5	J-55	BTC	2.94	5.82	15.03
9 7/8"	7 5/8"	0 - 11,565'	29.7	HCP-110	LT&C	1.24	1.75	2.24
6 3/4"	5"	0 - 19,909'	18	P-110	BTC	1.56	1.62	1.69

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 IS FULL DUE TO LOST CIRCULATION ZONES THAT MAY OCCUR. CENTRALIZERS WILL BE USED ON SURFACE CASING

5. Proposed Cement Program:

a. 10 3/4" Surface – TOC @ Surface

Lead: 530 sks ExtendaCem Class C (13.7 ppg / 1.656 cuft/sk)

Tail: 270 sks HalCem Class C (14.8 ppg / 1.326 cuft/sk)

**Calculated w/ 100% excess on OH volume

b. 7 5/8" Intermediate – TOC @ Surface

Lead I: 760 sks NeoCem Class H (9 ppg / 3.506 cuft/sk)

Lead II: 320 sks NeoCem Class H (11 ppg / 3.257 cuft/sk)

Tail: 270 sks NeoCem Class H (13.2 ppg / 1.515 cuft/sk)

**Calculated w/ 70% excess on OH volumes & 10% in CH

c. Pilot Plug Back

Plug #1: 13155' – 12805': 53 sks HalCem Class H (12.5 ppg / 2.075 cuft/sk)

Plug #1: 12600' – 11900': 105 sks HalCem Class H (12.5 ppg / 2.075 cuft/sk)

**Calculated w/ 20% excess

d. 5" Production – TOC @ 9000'

Tail: 850 sks NeoCem Class H (14.5 ppg / 2.162 cuft/sk)

**Calculated w/ 20% excess in vertical OH, 20% excess on lateral OH volumes

NOTE: THE ABOVE CEMENT VOLUMES COULD BE REVISED PENDING FLUID CALIPER & CALIPER LOG DATA.

6. Minimum Specifications for Pressure Control:

13-5/8 (10M) working pressure BOP system consisting of one set of blind rams and two sets of pipe rams and a 10,000# annular type preventer (please see schematic). A 10M choke manifold & 120 gallon accumulator with floor and



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6. Minimum Specifications for Pressure Control:

13-5/8 (10M) working pressure BOP system consisting of one set of blind rams and two sets of pipe rams and a 10,000# annular type preventer (please see schematic). A 10M 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 surface casing through running of production casing, the well will be equipped with a 10M BOP system. Below the surface casing 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 surface casing, BOP will be tested by an independent testing company to 250 psi low & 5,000 psi high. Hydril will be tested to 250 psi low and 5,000 psi high. Surface casing will be tested to 1500 psi for 30 minutes. Before drilling out the intermediate casing, the BOP will be retested by an independent testing company to 250 psi low & 10,000 psi high. Hydril will be test to 250 psi low and 5000 psi high. Intermediate casing will be tested to 3000 psi for 30 minutes. 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. An IBOP or float sub will be in use at all times. A wear bushing will be installed in the casing head. All BOPE connections subjected to well pressure will be flanged, welded, or clamped.

A multi-bowl wellhead type system will be used so we will not N/D the BOP system in order to set the intermediate casing (please see attached schematic).



7. Estimated BHP:

5920 psi @ 13,155' 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 – 1,150'	Fresh	8.4	29-32	NC
1,150' – 11,565'	OBM	8.8 – 9.2	55-65	<8
11,565' – 19,909'	OBM	11 – 13	58-68	<5

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
- H₂S detection equipment will be in operation & breathing apparatuses will be on location after the drill out of the surface casing shoe until the production casing is cemented.

10. Testing, Logging & Coring Program:

- No drill stem tests are planned.
- Neutron Porosity well log ran from KOP to 200'.
- Open hole logs are planned.
- Sidewall coring is planned.

11. Potential Hazards:

Abnormal pressures are expected in the Wolfcamp, but risk will be mitigated with casing design and mud weight. If H₂S is encountered, Endurance Resources LLC will comply with Onshore Order #6. Regardless, all personnel will be trained & qualified with H₂S safety. Rig safety equipment will all also be checked daily once drill out of the surface casing shoe to TD. It has been noted that H₂S has been encountered in the salt section. If H₂S is encountered, measurements & formations will be reported to the BLM.



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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.

Highlight All Changes

Application

Section 1 - General

APD ID: 10400004554 Tie to previous NOS? Submission Date: 08/16/2016
BLM Office: HOBBS User: Alana Baker Title: Legal Instruments Examiner
Federal/Indian APD: FED Is the first lease penetrated for production Federal or Indian? FED
Lease number: NMNM117126 Lease Acres: 1080
Surface access agreement in place? Allotted? Reservation:
Agreement in place? N Federal or Indian agreement:
Agreement number:
Agreement name:
Keep application confidential? N
Permitting Agent? NO APD Operator: ENDURANCE RESOURCES LLC
Operator letter of designation:
Keep application confidential? N

Signed By: Tinlee Tilton

Title: Drilling Engineer

Signed Date: 08/05/2016

APD Form Attachment(s)

Talco 9 26 35 Fed 3H_3160_08-16-2016.pdf

Operator Info

Operator Organization Name: ENDURANCE RESOURCES LLC Zip: 79701
Operator Address: 203 W. Wall Street, Suite 1000
Operator PO Box:
Operator City: Midland State: TX
Operator Phone: (432)242-4680
Operator Internet Address:

Section 2 - Well Information

Well in Master Development Plan? NO Mater Development Plan name:
Well in Master SUPO? NO Master SUPO name:
Well in Master Drilling Plan? NO Master Drilling Plan name:
Well Name: TALCO 9 26 35 FED Well Number: 3H Well API Number:
Field/Pool or Exploratory? Field and Pool Field Name: UNDESIGNATED Pool Name: WOLFCAMP

Is the proposed well in an area containing other mineral resources? NONE

Describe other minerals:

Is the proposed well in a Helium production area? N Use Existing Well Pad? NO New surface disturbance?

Type of Well Pad: SINGLE WELL

Multiple Well Pad Name:

Number:

Well Class: HORIZONTAL

Number of Legs: 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type:

Describe sub-type:

Distance to town: 11 Miles

Distance to nearest well: 3000 FT

Distance to lease line: 2280 FT

Reservoir well spacing assigned acres Measurement: 240 Acres

Well plat: Talco 9 26 35 Fed 3H_C102_08-16-2016.pdf

Well work start Date: 09/15/2016

Duration: 45 DAYS

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland:

USFS Ranger District:

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83

Vertical Datum: NAVD88

Survey number:

	STATE: NEW MEXICO	Meridian: NEW MEXICO PRINCIPAL	County: LEA
	Latitude: 32.058363	Longitude: -104.371183	
SHL	Elevation: 3174	MD: 0	TVD: 0
Leg #: 1	Lease Type: FEDERAL	Lease #: NMNM117126	
	NS-Foot: 2440	NS Indicator: FNL	
	EW-Foot: 2280	EW Indicator: FEL	
	Twsp: 26S	Range: 35E	Section: 9
	Aliquot: SWNE	Lot:	Tract:
	STATE:	Meridian:	County:
	Latitude:	Longitude:	
KOP	Elevation:	MD:	TVD:
Leg #: 1	Lease Type:	Lease #:	
	NS-Foot:	NS Indicator:	
	EW-Foot:	EW Indicator:	
	Twsp:	Range:	Section:
	Aliquot:	Lot:	Tract:
	STATE: NEW MEXICO	Meridian: NEW MEXICO PRINCIPAL	County: LEA
	Latitude: 32.078678	Longitude: -103.371283	
PPP	Elevation: -9591	MD: 19909	TVD: 12765
Leg #: 1	Lease Type: FEDERAL	Lease #: NMNM115000	
	NS-Foot: 330	NS Indicator: FNL	
	EW-Foot: 2280	EW Indicator: FEL	
	Twsp: 26S	Range: 35E	Section: 4
	Aliquot: NWNE	Lot:	Tract:
	STATE:	Meridian:	County:
	Latitude:	Longitude:	
EXIT	Elevation:	MD:	TVD:
Leg #: 1	Lease Type:	Lease #:	
	NS-Foot:	NS Indicator:	
	EW-Foot:	EW Indicator:	
	Twsp:	Range:	Section:
	Aliquot:	Lot:	Tract:
	STATE: NEW MEXICO	Meridian: NEW MEXICO PRINCIPAL	County: LEA
	Latitude: 32.078678	Longitude: -103.371283	
BHL	Elevation: -9591	MD: 19909	TVD: 12765
Leg #: 1	Lease Type: FEDERAL	Lease #: NMNM115000	

NS-Foot: 330

NS Indicator: FNL

EW-Foot: 2280

EW Indicator: FEL

Twsp: 26S

Range: 35E

Section: 4

Aliquot: NWNE

Lot:

Tract:

Drilling Plan

Drilling Plan Attachments

Drilling Plan Attachment(s)

Talco 9 26 35 Fed 3H_Drilling Plan_08-16-2016.pdf

Talco 9 26 35 Fed 3H_Drilling Plan Revised_09-08-2016.pdf

Hydrogen Sulfide Drilling Operations Plan

Talco 9 26 35 Fed 3H_H2SPlan_08-16-2016.pdf

Other Attachments

DP General Comments:

SUPO

SUPO Attachments

Surface Use Plan Attachment(s)

Talco 9 26 35 Fed 3H_SUPO_08-16-2016.pdf

Map or Plat Attachment(s)

Talco 9 26 35 Fed 3H_Maps_08-16-2016.pdf

SUPO General Comments:

PWD

PWD Attachments

Produced Water Disposal Plan Attachment

Produces Water Disposal Plan Map Attachment(s)

PWD General Comments:

Bond Info

Bond Information

Federal/Indian APD: FED

BLM Bond number: NMB001220

BIA Bond number:

Do you have a reclamation bond?

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment:

Bond Attachment(s)

BIA Bond Comments:

Operator Certification

Operator Certification

Operator Certification Attachment

Talco 9 26 35 Fed 3H_Operator Certification_08-16-2016.pdf

Payment Info

Payment

APD Fee Payment Method: PAY.GOV

pay.gov Tracking ID: 3624840

Form Attachment(s)

APD Form Attachment(s)

Talco 9 26 35 Fed 3H_3160_08-16-2016.pdf

Well Plat Attachment(s)

Talco 9 26 35 Fed 3H_C102_08-16-2016.pdf

Drilling Plan Attachment(s)

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Talco 9 26 35 Fed 3H_Drilling Plan Revised_09-08-2016.pdf

Hydrogen Sulfide Drilling Operations Plan

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Surface Use Plan Attachment(s)

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Talco 9 26 35 Fed 3H_SUPO_08-16-2016.pdf

Map or Plat Attachment(s)

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Produce Water Disposal Attachment

Produced Water Disposal Plan Attachment

Produces Water Disposal Plan Map Attachment

Bond Information Attachments

Bond Attachment(s)

Operator Certification Attachment

Operator Certification Attachment

Talco 9 26 35 Fed 3H_Operator Certification_08-16-2016.pdf