Form 3160-3
(March 2012)

OCD Hobbs

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

14-726

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM 18302 & NMNM 96235

6. If Indian, Allotee or Tribe Name
N/A

1a. Type of work: ☑ DRILL ☐ REENTER

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

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

8. Lease Name and Well No. (37609)
SCARECROW 34 FEDERAL COM #3H

2. Name of Operator NADEL AND GUSSMAN PERMIAN, L.L.C. (155615)

9. API Well No.
30-025-43094 (50510)

3a. Address
601 NORTH MARIENFELD, SUITE 508
MIDLAND, TX 79701

3b. Phone No. (include area code)
(432) 682-4429

BLM OCD

10. Field and Pool, or Exploratory
QUERECHO PLAINS; ~~BONE SPRING~~ LOWER BONE SPRING

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface 2210' FSL, 330' FWL - UL L
At proposed prod. zone 2210' FSL, 330' FEL - UL I

FEB 29 2016
RECEIVED

11. Sec., T. R. M. or Blk. and Survey or Area
SEC. 34, T18S, R32E

14. Distance in miles and direction from nearest town or post office*
8 MILES SOUTH OF MALJAMAR, 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)
330 FT

16. No. of acres in lease
440

17. Spacing Unit dedicated to this well
160

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
1,100' MCKAY WEST #1

19. Proposed Depth
TVD 9500'
MD 13,908

20. BLM/BIA Bond No. on file
NM #2812

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3694.7' GL

22. Approximate date work will start*
03/01/2015

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.
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)* JASON GOSS
Date 05/08/2014

Title
DRILLING ENGINEER

Approved by *(Signature)* /s/George MacDonell
Name *(Printed/Typed)*
Date FEB 22 2016

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)

Capitan Controlled Water Basin

KZ 03/01/16

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

DRILLING AND OPERATIONS PLAN
NADEL AND GUSSMAN PERMIAN, L.L.C.
SCARECROW 34 FEDERAL COM #3H

Surface: 2210' FSL & 330' FWL, UL L
BH: 2210' FSL & 330' FEL, UL I
Sec 34, T-18-S, R-32-E
Lea County, New Mexico

1. Geological Surface Formation: **Qal/Vegitated Dunes at surface.**
2. Horizontal Oil well. No pilot hole, depth to Fresh Water 800'. **Elevation 3694.7'**

3. **TOPS OF IMPORTANT GEOLOGICAL MARKERS:** TVD

Rustler	1180'
Top Salt	1400'
BX/Top Tansill	2605'
Yates	2810'
Seven Rivers	3290'
Queen	3933'
Grayburg	4550'
Delaware (Cherry Canyon)	5150'
Bone Springs Ls	7090'
1st Bone Springs Sand	8410'
2nd Bone Springs Sand	8890'
Bone Springs Target	9440'

4. **Estimated Depth of Anticipated/Possible Water, Oil or Gas:**

Santa Rosa	0-800'	Fresh Water from WAIDS database
Yates	3000'	Oil, gas and water
Delaware	5150'	Oil, gas and water
Bone Springs	7150'	Oil, gas and water

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water will be protected by setting 13 3/8" casing at 1230' and circulating cement back to surface, all other intervals will be isolated by the 9 5/8 intermediate and 7" production casing.

5. Proposed Casing Program

See COA

HOLE SIZE	CASING SIZE	WT./GRADE	THREAD/COLLAR	SETTING DEPTH	TOP CEMENT
Conductor	20"	94# H-40	8rd STC	60'	Surface
17.5"	13 3/8" (new)	54.5# J-55	8rd STC	~~1280'~~	Surface
12.25"	9 5/8" (new)	40# J-55	8rd LTC	~~3,080'~~	Surface
8.75"	7" (new)	26# P-110HC	8rd BTC	9,600'	2,500'
6.125"	4 1/2" (new)	13.5# P-110HC	8rd LTC	9,300'-13,908'	N/A**

** Packer Plus completion 20 stages. No cement, packers and frac port open hole completion with liner hanger.

MINIMUM SAFETY FACTORS: **BURST 1.125** **COLLAPSE 1.125** **TENSION 1.8**

ALL CASING WILL BE NEW API APPROVED

CEMENT PROGRAM-ALL CEMENT BLENDS WILL BE TESTED TO BLM MINIMUM REQUIREMENTS. See COA

A. **13 3/8"** **SURFACE** CEMENT TO SURFACE **100% EXCESS OVER CALCULATED**

1200 SACKS CLASS "C"+2%CACL+.25# CELLO-FLAKE+.25% DEFOAMER, 14.8 PPG, 1.35 YIELD, 6.34 GAL/SK

B. **9 5/8"** **INTERMEDIATE** CEMENT TO SURFACE **50% EXCESS OVER CALCULATED**

LEAD 650 SACKS CLASS "C" 35/65 +6% BENTONITE+5% SALT+.25% DEFOAMER 12.8 PPG, 1.9 YIELD, 11.2 GAL/SK

TAIL 200 SACKS CLASS "C" + .25% DEFOAMER, 14.8 PPG, 1.33 YIELD, 6.34 GAL/SK

C. **7"** **PRODUCTION** CEMENT TO 2,500' (WILL RUN FLUID CALIPER) **25% EXCESS OVER FLUID CALIPER, OR 50% OVER CALCULATED.**

See COA

LEAD 850 SACKS CLASS C 50/50 +10% BENTONITE +.15% C-20 RETARDER +3# STAR SEAL +.3% C-12 FLUID LOSS+3% SALT+.25% DEFOAMER, 11.8 PPG, 2.37 YIELD, 13.52 GL/SK

TAIL 250 SACKS CLASS "H" STAR BOND+.5% FL-10+.2%C-20, +3# GILSONITE+.25% DEFOAMER+3% SALT 13.2 PPG, 1.6 YIELD, 13.5 GAL/SK

SPECIFICATIONS FOR PRESSURE CONTROL EQUIPMENT: (EXHIBIT #5) * See COA

A 2000# WP Annular will be installed after running the 13-3/8" casing. A 3,000# WP Double Ram BOP and 3,000 annular will be installed after running the 9-5/8" and 7" casing. Pressure test will be conducted prior to drilling out under all casing strings. BOP controls will be installed prior to drilling under surface casing and will remain in use until completion of drilling operations. BOP's will be inspected and operated as recommended in Onshore Order #2. A Kelly cock and a sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position when the Kelly is not in use. 7" and 9-5/8" BOP will be tested to 3000# and the annular to 1500# with a third party testing company before drilling below each shoe. If operations last more than 30 days from 1st test, will test again as per BLM Onshore Oil and Gas order #2.

MUD PROGRAM:

Spud and drill 17 ½" surface hole with **fresh water (8.4 to 8.7 ppg)** to a depth of approx 1230'. Control lost circulation with paper and LCM pills. Viscosity 28-55, no fluid loss control. Fresh water gel sweeps.

Drill 12 ¼" hole from 1230' to 3,000' with **Brine (10.0+ ppg).** Control lost circulation with paper and LCM pills. Viscosity 28-30, no fluid loss control. Salt water gel sweeps.

Drill 8 ¾" production hole from **3,000'** to **9,600'** (9,022 TD of Vertical hole) with **cut brine (9.0 to 9.2 ppg)**. Control lost circulation with paper and LCM pills. Clean hole with pre-hydrated freshwater sweeps as necessary. System properties from **3000-6000**: viscosity 28-30, fluid loss no control. From **6000'** to **TD** use polymer mud with funnel viscosity of 32-38 seconds and <20ml water loss.

Drill 6 1/8" horizontal production hole from 9,600'-13,908' with **fresh water (8.4-8.7 ppg)**, control filtrate and increase viscosity with Xanthan gum and Poly Anionic Cellulose. Clean hole with high viscosity sweeps and lubricants as necessary. System Properties viscosity 32-34, fluid loss <20 ml/30min.

All necessary mud products for weight addition and fluid loss control will be on location at all times. Mud program subject to change due to hole conditions.

Mud monitoring system: Mud will be maintained and checked daily for mud weight, viscosity, API water loss, pH, etc. Additional electronic monitoring will include a pit volume totalizer to monitor mud volume in active system, pump rate, and mud return flow percentage. H2S monitors and alarms will be located on rig floor, shale shakers, and mud tanks (see rig plat). Gas chromatograph with monitor hydrocarbon gas content of mud from 3,000' to TD. Third party corrosion company will utilize H2S/oxygen scavengers to monitor for corrosion and limit damage to tubulars.

Auxiliary Equipment

A. A Kelly cock will be in the drill string at all times.

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

C. Hydrogen Sulfide detection equipment will be in operation after drilling out the 13 3/8" casing shoe until the 4 ½" liner is run and set and rigging down operations have begun.

TESTING, LOGGING & CORING PROGRAM: * See COA

a. Testing: No DST's are expected.
b. Open hole logs are planned for TD of vertical hole (KOP, 9,022).
    1. Halliburton Triple Combo: Dual lateral log and gamma ray, compensated neutron, caliper log.
c. Mud logging will take place from 3,000ft to TD 10ft samples

d. Gyro survey will be run at KOP of 9,022'
e. MWD (directional) and LWD (gamma) surveys will be taken from KOP (9022') to TD 13,908ft

POTENTIAL HAZARDS:

No significant hazards are expected, no abnormal pressures or temperatures are expected, **Expected pressure gradient will be that of .433 psi/ft or less approx. 4113 psi at 9,500 TVD**, expected temperature at 9,500 TVD is **120 deg F**. Lost circulation may occur, no H_2S is expected, but the operator will utilize a 3rd party H_2S monitoring package from 1230' to TD. If H2S is encountered the operator will comply with the provisions of onshore oil and gas order no 6. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well.

ANTICIPATED STARTING DATE & DURATION:

Nadel & Gussman Permian, LLC anticipates drilling operations to begin around March 1, 2015 and completed in approximately 45 days. An additional 15 days will be needed for completion activities. Road and location construction will begin after the BLM has approved the APD.

5/8/14

Jason Goss, Drilling Engineer Date
Nadel & Gussman Permian, LLC