15-288

OCD Hobbs

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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.
NMNM-090161

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.
NMNM-120042X; W Blinebry Drinkard

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

8. Lease Name and Well No. (37346)
WEST BLINEBRY DRINKARD UNIT #205

2. Name of Operator APACHE CORPORATION (873)

9. API Well No.
30-025- 43044

3a. Address 303 VETERANS AIRPARK LN #1000
MIDLAND, TX 79705

3b. Phone No. *(include area code)*
432-818-1167

10. Field and Pool, or Exploratory
EUNICE;BLI-TU-DR, NORTH<22900>

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface 1310' FNL & 1970' FWL (C)
At proposed prod. zone SAME

11. Sec., T. R. M. or Blk. and Survey or Area
SEC: 9 T21S R37E

14. Distance in miles and direction from nearest town or post office*
APPROX 4 MILES NORTH OF EUNICE, 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)
1310'

16. No. of acres in lease
640 ACRES

17. Spacing Unit dedicated to this well
40 ACRES

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
~ 600'

19. Proposed Depth
7000'

20. BLM/BIA Bond No. on file
BLM-CO-1463 NATIONWIDE / NMB000736

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
GL: 3485'

22. Approximate date work will start*
As Soon As Approved

23. Estimated duration
~ 8 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 Sorina L Flores
Name *(Printed/Typed)* SORINA L. FLORES
Date 12/11/14

Title
SUPV OF DRILLING SERVICES

Approved by *(Signature)* Steve Caffey
Name *(Printed/Typed)*
Date JAN 25 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

01/29/16

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

# APACHE CORPORATION (OGRID: 873)
# WEST BLINEBRY DRINKARD UNIT #205

## 1. Geologic Formations

| | | | |
|---|---|---|---|
| TVD of target | 7000' | Pilot hole depth | N/A |
| MD at TD: | 7000' | Deepest expected fresh water: | 65' |

**Back Reef**

| Formation | Depth (TVD) from KB | Water/Mineral Bearing/ Target Zone? | Hazards* |
|---|---|---|---|
| Quaternary Aeolian | Surface | Water | |
| Rustler | 1287' | Water | |
| Top of Salt | 1369' | Salt | |
| Tansil | 2529' | Barren | |
| Yates | 2641' | Oil, Gas, Water | |
| Seven Rivers | 2884' | Oil, Gas, Water | |
| Queen | 3446' | Oil, Gas, Water | Loss circ |
| Grayburg | 3759' | Oil, Gas, Water | Loss circ |
| San Andres | 4021' | Oil, Gas, Water | Loss circ |
| Glorieta | 5145' | Oil, Gas, Water | |
| Paddock | 5399' | Oil | |
| Blinebry | 5684' | Oil | |
| Tubb | 6142' | Oil | |
| Drinkard | 6468' | Oil | |
| ABO | 6671' | Oil | |
| TD | 7000' | Target Zone | |

**H2S, water flows, loss of circulation, abnormal pressures, etc.*

See COA

## 2. Casing Program

| Hole Size | Casing Interval From | Casing Interval To | Csg. Size | Weight (lbs) | Grade | Conn. | SF Collapse | SF Burst | SF Tension |
|---|---|---|---|---|---|---|---|---|---|
| 11" | 0 | ~~1333'~~ 1360' | 8-5/8" | 24 | J55 | STC | 1.125 | 1.0 | 1.8 |
| 7-7/8" | 0 | 7000' | 5-1/2" | 17 | L80 | LTC | 1.125 | 1.0 | 1.8 |
| | | | | BLM Minimum Safety Factor | | | 1.125 | 1 | 1.6 Dry<br>1.8 Wet |

*All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h*

Must have table for contingency casing

| | Y or N |
|---|---|
| Is casing new? If used, attach certification as required in Onshore Order #1 | Y |
| Does casing meet API specifications? If no, attach casing specification sheet. | Y |
| Is premium or uncommon casing planned? If yes attach casing specification sheet. | N |
| Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria). | Y |
| Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing? | N/A |
| | |
| Is well located within Capitan Reef? | N |
| If yes, does production casing cement tie back a minimum of 50' above the Reef? | |
| Is well within the designated 4 string boundary. | |
| | |
| Is well located in SOPA but not in R-111-P? | N |

# APACHE CORPORATION (OGRID: 873)
## WEST BLINEBRY DRINKARD UNIT #205

| | |
|---|---|
| If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing? | |
| | |
| Is well located in R-111-P and SOPA? | N |
| If yes, are the first three strings cemented to surface? | |
| Is 2nd string set 100' to 600' below the base of salt? | |
| | |
| Is well located in high Cave/Karst? | N |
| If yes, are there two strings cemented to surface? | |
| (For 2 string wells) If yes, is there a contingency casing if lost circulation occurs? | |
| | |
| Is well located in critical Cave/Karst? | N |
| If yes, are there three strings cemented to surface? | |

### 3. Cementing Program

| Casing | # Sks | Wt. lb/ gal | Yld ft3/ sack | $H_20$ gal/sk | 500# Comp. Strength (hours) | Slurry Description |
|---|---|---|---|---|---|---|
| Surf. | 250 | 13.5 | 1.73 | 9.13 | 9 | Lead: Cl C + 4% Bentonite + 1% CaCL2 + 0.25# CF *(12hr: 677psi, 24hr: 1093psi)* |
| | 250 | 14.8 | 1.35 | 6.34 | 5 | Tail: Cl C + 2% CaCL2 + 0.25# *CF (12hr: 1121psi, 24hr: 1795psi)* |
| Prod. | 950 | 12.6 | 1.95 | 10.65 | 8.5 | Lead: Cl C 35/65 + 6% Bentonite + 0.1% R-20 + 0.25# CF + 3% Salt *(12hr-671psi, 24hr-979psi)* |
| | DV/ECP Tool : N/A | | | | | |
| | 300 | 14.2 | 1.28 | 5.81 | 8.5 | Tail: Cl C 50:50 + 2% Bentonite + 0.4% Fl-12 + 0.1% R-20 + 0.25# CF + 3% Salt *(12hr-910psi, 24hr-16985psi)* |

***If DVT used: DV tool depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.*

*******PRODUCTION CMT CONTINGENCY IF WATER FLOWS ENCOUNTERED********

| Casing | # Sks | Wt. lb/ gal | Yld ft3/ sack | $H_20$ gal/sk | 500# Comp. Strength (hours) | Slurry Description |
|---|---|---|---|---|---|---|
| Prod 1st Stage | 260 | 12.6 | 1.95 | 10.65 | 8.5 | Lead: Cl C 35/65 + 6% Bentonite + 0.1% R-20 + 0.25# CF + 3% Salt *(12hr-671psi, 24hr-979psi)* |
| | 300 | 14.2 | 1.28 | 5.81 | 8.5 | Tail: Cl C 50/50 + 2% Bentonite + 0.4% FL-12 + 0.1% R-20 + 0.25# CF + 3% Salt *(12hr-910psi, 24hr-16985psi)* |
| | DV/ECP Tool : 4440' | | | | | |
| Prod 2nd Stage | 415 | 12.6 | 1.95 | 10.65 | 8.5 | Lead: Cl C 35/65 + 6% Bentonite + 0.1% R-20 + 0.25# CF + 3% Salt *(12hr-671psi, 24hr-979psi)* |
| | 100 | 14.8 | 1.33 | 6.32 | 6.5 | Tail: Cl C *(12hr-1281psi, 24hr-1951psi)* |

See COA

| Casing String | TOC | % Excess |
|---|---|---|
| Surface | 0' | 100% |
| Production | 0' | 30% |

# APACHE CORPORATION (OGRID: 873)
## WEST BLINEBRY DRINKARD UNIT #205

No pilot hole proposed

Include Pilot Hole Cementing specs:
**Pilot hole depth: N/A**
**KOP: N/A**

| Plug top | Plug Bottom | % Excess | No. Sacks | Wt. lb/gal | Yld ft3/sack | Water gal/sk | Slurry Description and Cement Type |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |

### 4. Pressure Control Equipment

| | |
|---|---|
| | A variance is requested for the use of a diverter on the surface casing. See attached for schematic. |

See COA

| BOP installed and tested before drilling which hole? | Size? | Min. Required WP | Type | ✓ | Tested to: |
|---|---|---|---|---|---|
| 7-7/8" | 11" | 3M | Annular | x | 50% of working pressure |
| | | | Blind Ram | x | 2M 3M |
| | | | Pipe Ram | x | |
| | | | Double Ram | | |
| | | | Other* | | Must test to 3,000 psi |

**Specify if additional ram is utilized.*

BOP/BOPE will be tested by an independent service company to 250 psi low & the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional & tested.

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. Other accessories to the BOP equipment will include a Kelly cock & floor safety valve (inside BOP) & choke lines and choke manifold. See attached schematics.

| | |
|---|---|
| | Formation integrity test will be performed per Onshore Order #2.<br>On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil & Gas Order #2 III.B.1.i. |
| | A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs & hydrostatic test chart. |
| No | Y /N Are anchors required by manufacturer? **NO** |
| No | A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.<br>• *Provide description here*<br><br>See attached schematic. |

# APACHE CORPORATION (OGRID: 873)
## WEST BLINEBRY DRINKARD UNIT #205

### 5. Mud Program

| Depth | | Type | Weight (ppg) | Viscosity | Water Loss |
|---|---|---|---|---|---|
| From | To | | | | |
| 0 | Surf. shoe | FW | 8.7 – 9.1 | 32-34 | N/C |
| Surf shoe | TD | Brine | 9.8 – 10.2 | 32-34 | N/C |

*Sufficient mud materials to maintain mud properties & meet minimum lost circulation & weight increase requirements will be kept on location at all times.*

| | |
|---|---|
| What will be used to monitor the loss or gain of fluid? | PVT/Pason/Visual Monitoring |

### 6. Logging and Testing Procedures

| Logging, Coring and Testing. | |
|---|---|
| X | Will run GR/CNL fromTD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM. |
| | No Logs are planned based on well control or offset log information. |
| | Drill stem test? If yes, explain |
| | Coring? If yes, explain |

| Additional logs planned | | Interval |
|---|---|---|
| X | Resistivity | Int. shoe to TD |
| X | Density | Int. shoe to TD |
| X | CBL | Production casing |
| | Mud log | Intermediate shoe to TD |
| | PEX | |

### 7. Drilling Conditions

| Condition | Specify what type and where? |
|---|---|
| BH Pressure at deepest TVD | 3080 psi |
| Abnormal Temperature | NO |

Mitigation measure for abnormal conditions. Describe: Lost circulation material/sweeps/mud scavengers.

| Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM. | |
|---|---|
| X | H2S is present |
| | H2S Plan attached |

See COA

### 8. Other facets of operation

Is this a walking operation? If yes, describe. N/A
Will be pre-setting casing? If yes, describe. N/A

Attachments
N/A Directional Plan
N/A Other

# APACHE BOP AND CHOKE MANIFOLD SCHEMATIC

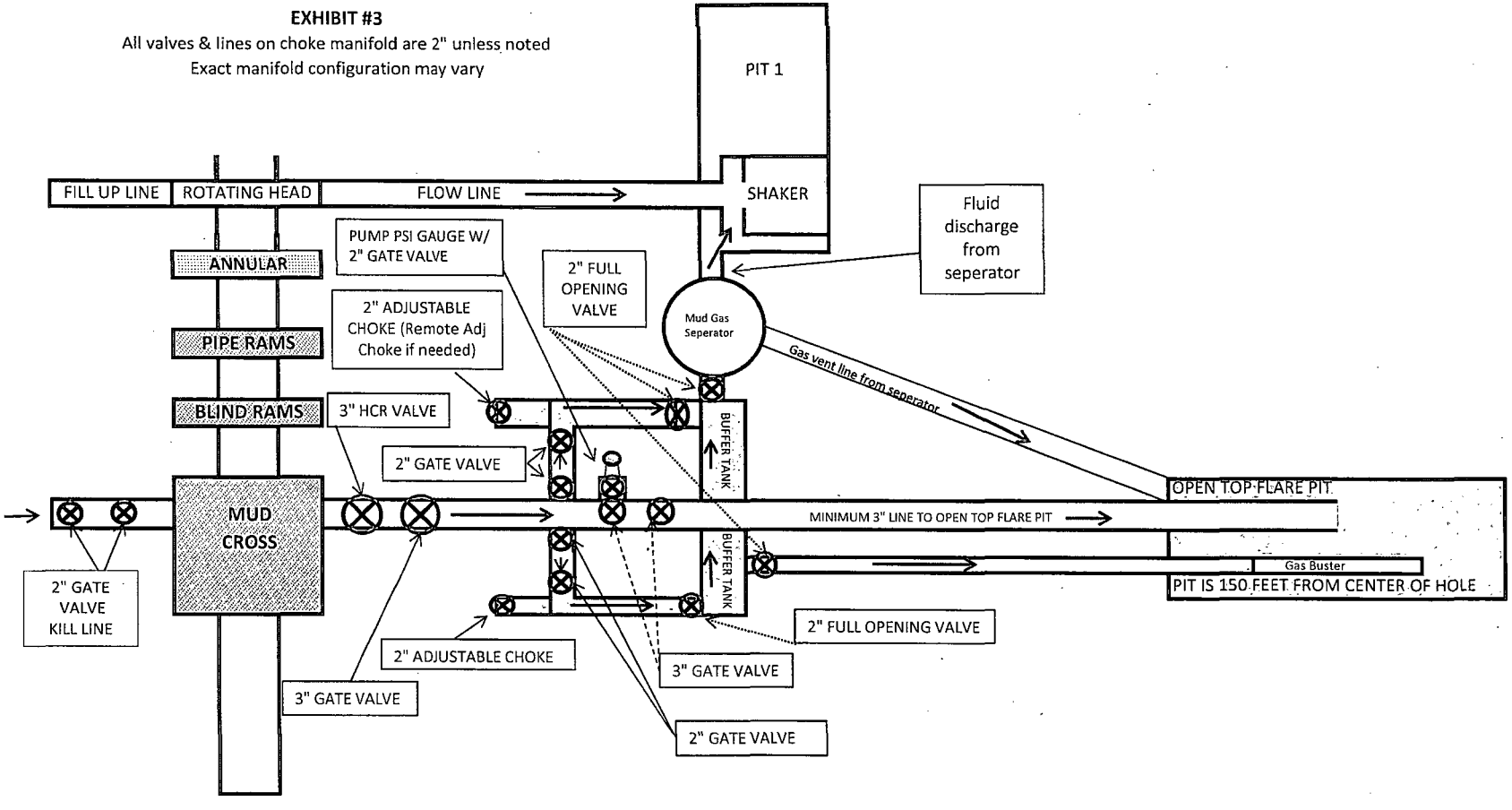
must test BOP to 3,000 psi

11" 3M PSI BOP ~~(to be tested as a 2M)~~

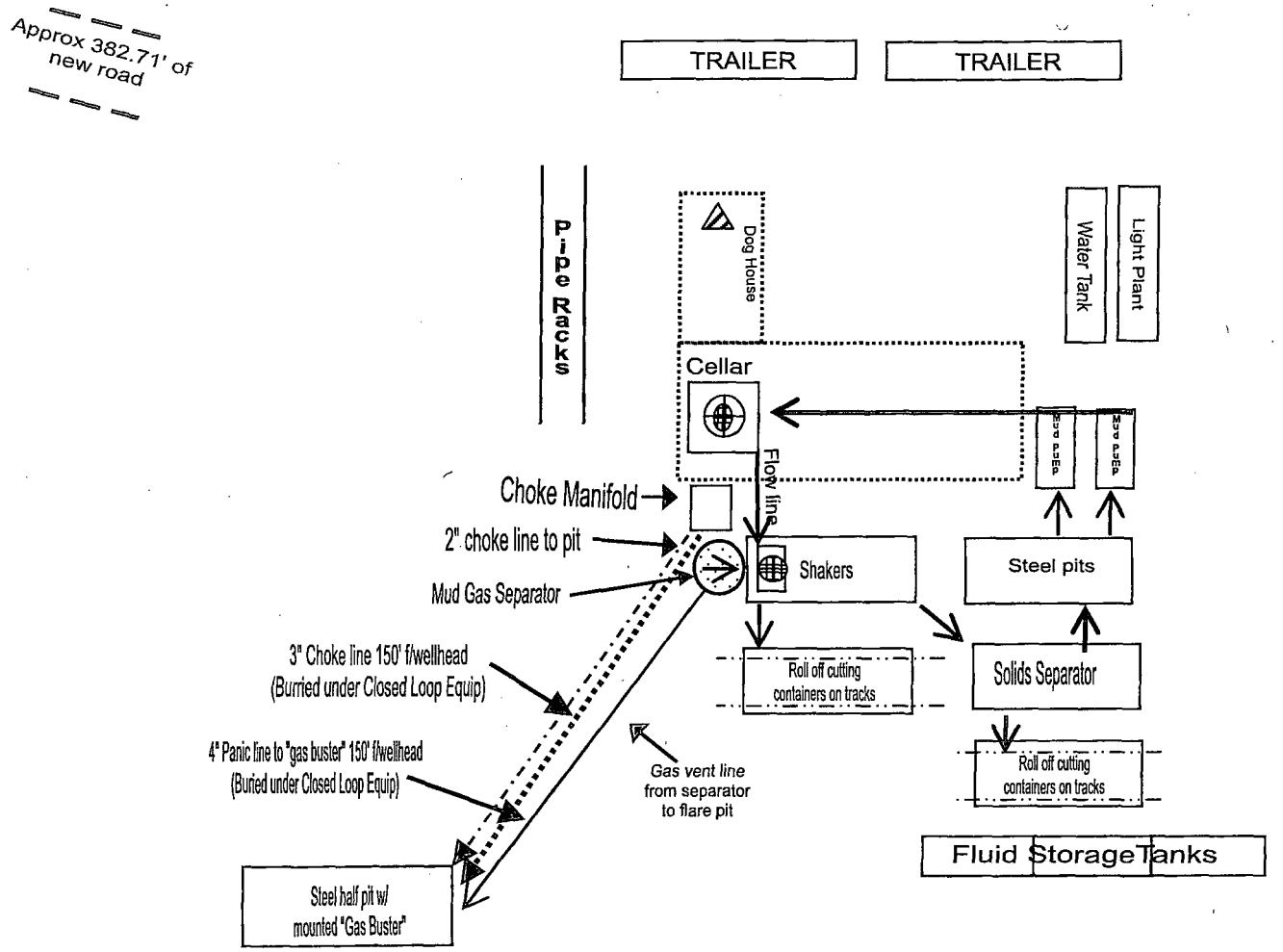
**EXHIBIT #3**

All valves & lines on choke manifold are 2" unless noted

Exact manifold configuration may vary




*** If H2S is encountered in quantities greater than 100ppm, Apache will shut in well & install a remote operated choke ***




Apache

Closed Loop Equipment Diagram

Exhibit 4

N E S W

West Blinebry Drinkard Unit #205

**RIG ORIENTATION & LAYOUT**
**WEST BLINEBRY DRINKARD UNIT 205**
***EXHIBIT 5***