

HOBBS OCD

16-806

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

MAY 09 2016

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM-90161	
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 APACHE CORPORATION (873)		7. If Unit or CA Agreement, Name and No. NMNM-120042X, W. Blinbry Drinkard	
3a. Address 303 VETERANS AIRPARK LN #1000 MIDLAND, TX 79705		8. Lease Name and Well No. WEST BLINBRY DRINKARD UNIT #176 (37346)	
3b. Phone No. (include area code) 432-818-1167		9. API Well No. 30-025-43222	
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 260' FSL & 1875' FEL At proposed prod. zone 175' FSL & 1970' FEL		10. Field and Pool, or Exploratory EUNICE;BLI-TU-DR, N <22900> K2	
11. Sec., T. R. M. or Blk. and Survey or Area UL: O SEC: 9 T21S R37E		12. County or Parish LEA	
13. State NM		14. Distance in miles and direction from nearest town or post office* APPROX 5 MILES NORTH OF EUNICE, NM	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 175'	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. ~200'	19. Proposed Depth TVD: 6850' MD: 6851'	20. BLM/BIA Bond No. on file BLM-CO-1463 NATIONWIDE / NMB000736	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) GL: 3481'	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. | 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 <i>Sorina L. Flores</i>	Name (Printed/Typed) SORINA L. FLORES	Date 3/21/16
Title SUPV OF DRILLING SERVICES		
Approved by (Signature) <i>/s/George MacDonell</i>	Name (Printed/Typed)	Date MAY - 4 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)

Lea County Controlled Water Basin

See attached NMOCD
Conditions of Approval

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

Approval Subject to General Requirements
& Special Stipulations Attached

MAY 12 2016

APACHE CORPORATION (OGRID: 873)
WEST BLINEBRY DRINKARD UNIT #176

1. Geologic Formations

TVD of target	6850'	Pilot hole depth	N/A
MD at TD:	6851'	Deepest expected fresh water:	65'

Back Reef

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Aeolian	Surface	Water	
Rustler	1291'	Water	
Salado	1479'	Salt	
Tansil	2477'	Barren	
Yates	2617'	Oil, Gas, Water	
Seven Rivers	2870'	Oil, Gas, Water	
Queen	3430'	Oil, Gas, Water	Loss circ
Grayburg	3742'	Oil, Gas, Water	Loss circ
San Andres	4097'	Oil, Gas, Water	Loss circ
Glorieta	5169'	Oil, Gas, Water	
Paddock	5252'	Oil	
Blinebry	5663'	Oil	Target Zone
Tubb	6158'	Oil	Target Zone
Drinkard	6468'	Oil	Target Zone
ABO	6727'	Oil	
TD	6851'	Target Zone	

*See
COA*

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

2. Casing Program *See COA*

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
	From	To							
11"	0	1350' 1400'	8-5/8"	24	J55	STC	3.41	1.95	1.8
7-7/8"	0	6851'	5-1/2"	17	L80	LTC	1.74	1.93	1.8
BLM Minimum Safety Factor							1.125	1	1.6 Dry 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)
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If yes, are the first 2 strings cemented to surface and 3 rd 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 2 nd 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 *See COA*

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	250	13.5	1.75	9.13	9	Lead: Cl C + 4% Bentonite + 1% CaCL ₂ + 0.25# CF (12hr: 677psi, 24hr: 1093psi)
	200	14.8	1.34	6.34	5	Tail: Cl C + 2% CaCL ₂ + 0.25# CF (12hr: 1121psi, 24hr: 1795psi)
Prod.	600	12.6	1.95	10.65	9	Lead: Cl C 35/65 + 6% Bentonite + 0.1% R-20 + 0.25# CF + 3% Salt (12hr-677psi, 24hr-1093psi)
	DV/ECP Tool : N/A					
	300	14.2	1.28	5.81	5	Tail: Cl C 50/50 + 2% Bentonite + 0.4% Fl-12 + 0.1% R-20 + 0.25# CF + 3% Salt (12hr-1121psi, 24hr-1795psi)

***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 ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Prod 1 st Stage	200	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 : 4300'						
Prod 2 nd 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)

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

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WEST BLINEBRY DRINKARD UNIT #176

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

N/A	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.
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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	3M
			Pipe Ram	x	
			Double Ram		
			Other*		

**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. 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.
NO	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.
	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. <ul style="list-style-type: none"> Provide description here See attached schematic.

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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
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6. Logging and Testing Procedures

Logging, Coring and Testing.	
X	Will run GR/CNL from TD 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	Surf. shoe to TD
X	Density	Surf. shoe to TD
X	CBL	Production casing
	Mud log	
	PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	3014 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	H ₂ S is present
	H ₂ S Plan attached

8. Other facets of operation

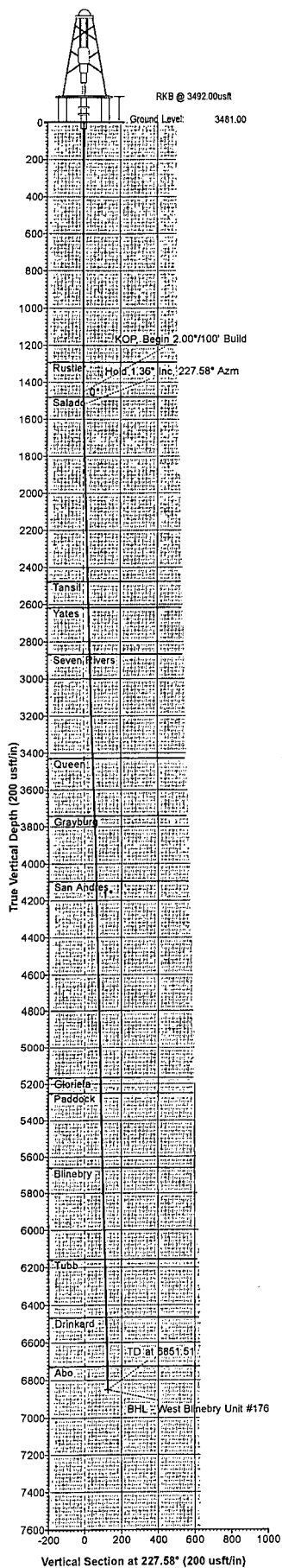
Is this a walking operation? If yes, describe. N/A

Will be pre-setting casing? If yes, describe. N/A

Attachments

Y Directional Plan

N/A Other



WELL DETAILS											
			Ground Level:		3481.00		Latitude		Longitude		
+N-S	+E-W	Northing	Easting		32° 29' 12.34519 N		103° 9' 54.19276 W				
0.00	0.00	542770.00	860244.90								

SECTION DETAILS											
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSec	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1450.00	0.00	0.00	1450.00	0.00	0.00	0.00	0.00	0.00	0.00	KOP Begin 2.00°/100' Build
3	1517.97	1.36	227.58	1517.98	-0.54	-0.60	2.00	227.58	0.81	0.81	Hold 1.36° Inc, 227.58° Azm
4	6851.51	1.36	227.58	6850.00	-85.90	-94.00	0.00	0.00	127.34	BHL - West Blinebry Unit #176	TD at 6851.51

DESIGN TARGET DETAILS											
Name		TVD		+N-S		+E-W		Northing		Easting	
BHL - West Blinebry Unit #176		6850.00		-85.90		-94.00		542684.10		860150.90	
								32° 29' 11.50549 N		103° 9' 55.30098 W	
										Point	
										</	

Map System: US State Plane 1927 (Exact solution)	
Datum: NAD 1927 (NADCON CONUS)	
Ellipsoid: Clarke 1866	
Zone Name: New Mexico East 3001	
Local Origin: Well #176, Grid North	
Latitude: 32° 29' 12.34519 N	
Longitude: 103° 9' 54.19276 W	
Grid East: 860244.90	
Grid North: 542770.00	
Scale Factor: 1.000	
Geomagnetic Model: HDGM	
Sample Date: 15-Mar-16	
Magnetic Declination: 7.00°	
Dip Angle from Horizontal: 60.58°	
Magnetic Field Strength: 48481	
To convert a Magnetic Direction to a Grid Direction, Add 6.37°	
To convert a Magnetic Direction to a True Direction, Add 7.00° East	
To convert a True Direction to a Grid Direction, Subtract 0.63°	

FORMATION TOP DETAILS				
TVDPath	MDPath	Formation	DipAngle	DipDir
1291.00	1291.00	Rustler	0.00	
1479.00	1479.00	Salado	0.00	
2477.00	2477.28	Tansil	0.00	
2617.00	2617.32	Yates	0.00	
2870.00	2870.39	Seven Rivers	0.00	
3430.00	3430.54	Queen	0.00	
3742.00	3742.83	Grayburg	0.00	
4097.00	4097.73	San Andres	0.00	
5169.00	5170.03	Glorieta	0.00	
5252.00	5253.06	Paddock	0.00	
5683.00	5684.17	Blinebry	0.00	
6158.00	6159.31	Tubb	0.00	
6468.00	6469.40	Drinkard	0.00	
6727.00	6728.47	Abo	0.00	

