15-316

Form 3160-3
(March 2012)

OCD Hobbs

HOBBS OCD
OCT 16 2015
RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMLC-032591A

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.
W BLINEBRY DRINKARD ; NM NM-120042X

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

8. Lease Name and Well No. (37346)
WEST BLINEBRY DRINKARD UNIT # 243D

2. Name of Operator APACHE CORPORATION (873)

9. API Well No.
30-025- 42882

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,N <22900>

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface 2315' FSL & 505' FEL (I)
At proposed prod. zone 2300' FNL & 310' FEL (H)

UNORTHODOX LOCATION

11. Sec., T. R. M. or Blk. and Survey or Area
SEC: 21 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)
310'

16. No. of acres in lease
80 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.
~75'

19. Proposed Depth
TVD: 6950'
MD: 6998'

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

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
GL: 3426'

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 Serina L Flores
Name *(Printed/Typed)* SORINA L. FLORES
Date 12/17/14

Title
SUPV OF DRILLING SERVICES

Approved by *(Signature)* /S/ STEPHEN J. CAFFEY
Name *(Printed/Typed)*
Date OCT 13 2015

Title FOR FIELD MANAGER
Office BLM-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 10/16/15

Witness Surface Casing

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

SEE ATTACHED FOR CONDITIONS OF APPROVAL

OCT 19 2015

APACHE CORPORATION (OGRID: 873)
WEST BLINEBRY DRINKARD UNIT #243D

1. Geologic Formations

TVD of target	6950'	Pilot hole depth	N/A
MD at TD:	6998'	Deepest expected fresh water:	65'

Back Reef

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Aeolian	Surface	Water	
Rustler	1192'	Water	
Top of Salt	1192'	Salt	
Tansil	2401'	Barren	
Yates	2545'	Oil, Gas, Water	
Seven Rivers	2803'	Oil, Gas, Water	
Queen	3371'	Oil, Gas, Water	Loss circ
Grayburg	3701'	Oil, Gas, Water	Loss circ
San Andres	4045'	Oil, Gas, Water	Loss circ
Glorieta	5105'	Oil, Gas, Water	
Paddock	5164'	Oil	
Blinebry	5503'	Oil	
Tubb	5072'	Oil	
Drinkard	6396'	Oil	
ABO	6665'	Oil	
TD	6998'	Target Zone	

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

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'	8-5/8"	24	J55	STC	1.125	1.0	1.8
7-7/8"	0	6998'	5-1/2"	17	L80	LTC	1.125	1.0	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

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 #243D

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

No	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.

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	must test to 3,000 psi
			Pipe Ram	x	2M 3M
			Double Ram		
			Other*		

See COA

**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. • *Provide description here* See attached schematic.

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	3079 psi
Abnormal Temperature	NO

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

see COA

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

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
_Yes__ Directional Plan
_N/A___ Other

Apache Corporation

Lea County, NM
Sec 21, T21S, R37E
West Blinebry Drinkard Unit #243

Wellbore #1

Plan: Design #1

DDC Well Planning Report

15 December, 2014

The DIRECTIONAL DRILLING COMPANY

Database:	Compass	**Local Co-ordinate Reference:**	Well West Blinebry Drinkard Unit #243
Company:	Apache Corporation	**TVD Reference:**	Well @ 3438.0usft
Project:	Lea County, NM	**MD Reference:**	Well @ 3438.0usft
Site:	Sec 21, T21S, R37E	**North Reference:**	Grid
Well:	West Blinebry Drinkard Unit #243	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	Lea County, NM		
Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Sec 21, T21S, R37E				
Site Position:		**Northing:**	534,227.01 usft	**Latitude:**	32° 27' 47.663 N
From:	Map	**Easting:**	861,708.89 usft	**Longitude:**	103° 9' 38.200 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.63 °

Well	West Blinebry Drinkard Unit #243					
Well Position	**+N/-S**	0.7 usft	**Northing:**	534,227.72 usft	**Latitude:**	32° 27' 47.662 N
	+E/-W	75.0 usft	**Easting:**	861,783.94 usft	**Longitude:**	103° 9' 37.324 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	0.0 usft	**Ground Level:**	3,426.0 usft

Wellbore	Wellbore #1			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	12/15/2014	6.98	60.39	48,452

Design	Design #1				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**	
	0.0	0.0	0.0	16.13	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,317.0	0.00	0.00	1,317.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,975.3	0.00	0.00	1,975.3	0.0	0.0	0.00	0.00	0.00	0.00	
2,075.3	8.00	16.13	2,075.0	6.7	1.9	8.00	8.00	0.00	16.13	
6,998.2	8.00	16.13	6,950.0	664.9	192.3	0.00	0.00	0.00	0.00	PBHL WBDU #243D

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Project:	Lea County, NM	**MD Reference:**	Well @ 3438.0usft
Site:	Sec 21, T21S, R37E	**North Reference:**	Grid
Well:	West Blinebry Drinkard Unit #243	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP									
1,317.0	0.00	0.00	1,317.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
Build 8° / 100'									
1,975.3	0.00	0.00	1,975.3	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	1.97	16.13	2,000.0	0.4	0.1	0.4	8.00	8.00	0.00
EOB @ 2075' MD / 16.13° Azm / 2075' TVD									
2,075.3	8.00	16.13	2,075.0	6.7	1.9	7.0	8.00	8.00	0.00
2,100.0	8.00	16.13	2,099.4	10.0	2.9	10.4	0.00	0.00	0.00
2,200.0	8.00	16.13	2,198.5	23.4	6.8	24.3	0.00	0.00	0.00
2,300.0	8.00	16.13	2,297.5	36.7	10.6	38.2	0.00	0.00	0.00
2,400.0	8.00	16.13	2,396.5	50.1	14.5	52.2	0.00	0.00	0.00
2,500.0	8.00	16.13	2,495.5	63.5	18.4	66.1	0.00	0.00	0.00
2,600.0	8.00	16.13	2,594.6	76.8	22.2	80.0	0.00	0.00	0.00
2,700.0	8.00	16.13	2,693.6	90.2	26.1	93.9	0.00	0.00	0.00
2,800.0	8.00	16.13	2,792.6	103.6	30.0	107.8	0.00	0.00	0.00
2,900.0	8.00	16.13	2,891.6	116.9	33.8	121.7	0.00	0.00	0.00
3,000.0	8.00	16.13	2,990.7	130.3	37.7	135.7	0.00	0.00	0.00
3,100.0	8.00	16.13	3,089.7	143.7	41.6	149.6	0.00	0.00	0.00
3,200.0	8.00	16.13	3,188.7	157.1	45.4	163.5	0.00	0.00	0.00
3,300.0	8.00	16.13	3,287.8	170.4	49.3	177.4	0.00	0.00	0.00
3,400.0	8.00	16.13	3,386.8	183.8	53.2	191.3	0.00	0.00	0.00
3,500.0	8.00	16.13	3,485.8	197.2	57.0	205.2	0.00	0.00	0.00
3,600.0	8.00	16.13	3,584.8	210.5	60.9	219.2	0.00	0.00	0.00
3,700.0	8.00	16.13	3,683.9	223.9	64.8	233.1	0.00	0.00	0.00
3,800.0	8.00	16.13	3,782.9	237.3	68.6	247.0	0.00	0.00	0.00
3,900.0	8.00	16.13	3,881.9	250.6	72.5	260.9	0.00	0.00	0.00
4,000.0	8.00	16.13	3,980.9	264.0	76.4	274.8	0.00	0.00	0.00
4,100.0	8.00	16.13	4,080.0	277.4	80.2	288.7	0.00	0.00	0.00
4,200.0	8.00	16.13	4,179.0	290.7	84.1	302.7	0.00	0.00	0.00
4,300.0	8.00	16.13	4,278.0	304.1	88.0	316.6	0.00	0.00	0.00
4,400.0	8.00	16.13	4,377.1	317.5	91.8	330.5	0.00	0.00	0.00
4,500.0	8.00	16.13	4,476.1	330.9	95.7	344.4	0.00	0.00	0.00
4,600.0	8.00	16.13	4,575.1	344.2	99.6	358.3	0.00	0.00	0.00

Database:	Compass	**Local Co-ordinate Reference:**	Well West Blinebry Drinkard Unit #243
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Project:	Lea County, NM	**MD Reference:**	Well @ 3438.0usft
Site:	Sec 21, T21S, R37E	**North Reference:**	Grid
Well:	West Blinebry Drinkard Unit #243	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,700.0	8.00	16.13	4,674.1	357.6	103.4	372.3	0.00	0.00	0.00
4,800.0	8.00	16.13	4,773.2	371.0	107.3	386.2	0.00	0.00	0.00
4,900.0	8.00	16.13	4,872.2	384.3	111.2	400.1	0.00	0.00	0.00
5,000.0	8.00	16.13	4,971.2	397.7	115.0	414.0	0.00	0.00	0.00
5,100.0	8.00	16.13	5,070.2	411.1	118.9	427.9	0.00	0.00	0.00
5,200.0	8.00	16.13	5,169.3	424.4	122.8	441.8	0.00	0.00	0.00
5,300.0	8.00	16.13	5,268.3	437.8	126.6	455.8	0.00	0.00	0.00
5,400.0	8.00	16.13	5,367.3	451.2	130.5	469.7	0.00	0.00	0.00
5,500.0	8.00	16.13	5,466.3	464.5	134.4	483.6	0.00	0.00	0.00
5,600.0	8.00	16.13	5,565.4	477.9	138.2	497.5	0.00	0.00	0.00
5,700.0	8.00	16.13	5,664.4	491.3	142.1	511.4	0.00	0.00	0.00
5,800.0	8.00	16.13	5,763.4	504.7	146.0	525.3	0.00	0.00	0.00
5,900.0	8.00	16.13	5,862.5	518.0	149.8	539.3	0.00	0.00	0.00
6,000.0	8.00	16.13	5,961.5	531.4	153.7	553.2	0.00	0.00	0.00
6,100.0	8.00	16.13	6,060.5	544.8	157.6	567.1	0.00	0.00	0.00
6,200.0	8.00	16.13	6,159.5	558.1	161.4	581.0	0.00	0.00	0.00
6,300.0	8.00	16.13	6,258.6	571.5	165.3	594.9	0.00	0.00	0.00
6,400.0	8.00	16.13	6,357.6	584.9	169.2	608.8	0.00	0.00	0.00
6,500.0	8.00	16.13	6,456.6	598.2	173.0	622.8	0.00	0.00	0.00
6,600.0	8.00	16.13	6,555.6	611.6	176.9	636.7	0.00	0.00	0.00
6,700.0	8.00	16.13	6,654.7	625.0	180.8	650.6	0.00	0.00	0.00
6,800.0	8.00	16.13	6,753.7	638.4	184.6	664.5	0.00	0.00	0.00
6,900.0	8.00	16.13	6,852.7	651.7	188.5	678.4	0.00	0.00	0.00
PBHL @ 6998' MD / 6950' TVD									
6,998.2	8.00	16.13	6,950.0	664.9	192.3	692.1	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL WBDU #243D - plan hits target center - Point	0.00	0.00	6,950.0	664.9	192.3	534,892.57	861,976.23	32° 27' 54.219 N	103° 9' 34.995 W

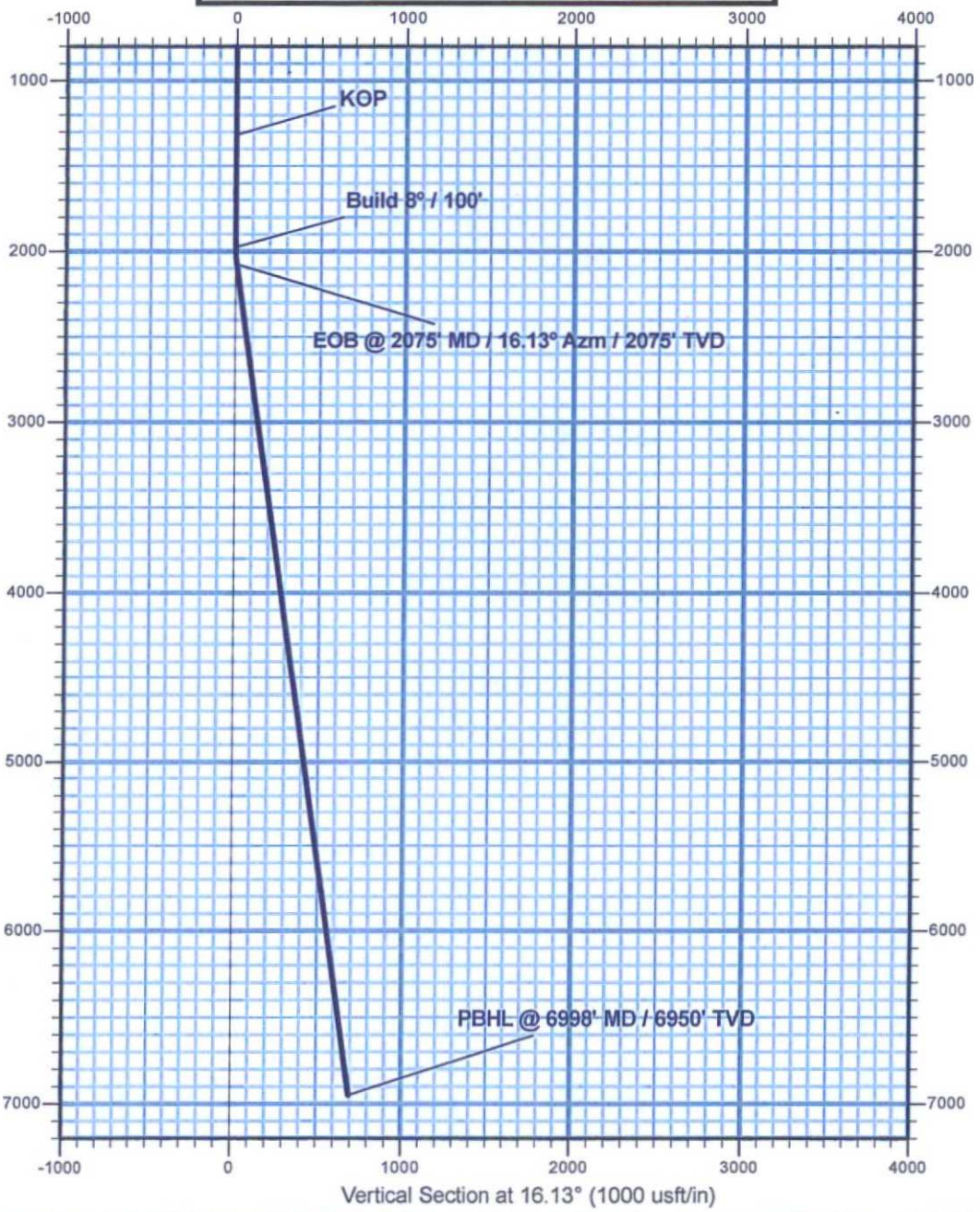
Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
1,317.0	1,317.0	0.0	0.0	KOP
1,975.3	1,975.3	0.0	0.0	Build 8° / 100'
2,075.3	2,075.0	6.7	1.9	EOB @ 2075' MD / 16.13° Azm / 2075' TVD
6,998.2	6,950.0	664.9	192.3	PBHL @ 6998' MD / 6950' TVD

Apache

DDC
The DIRECTIONAL DRILLING COMPANY

Lea County, NM
Sec 21, T21S, R37E
West Blinebry Drinkard Unit #243
Design #1



Apache

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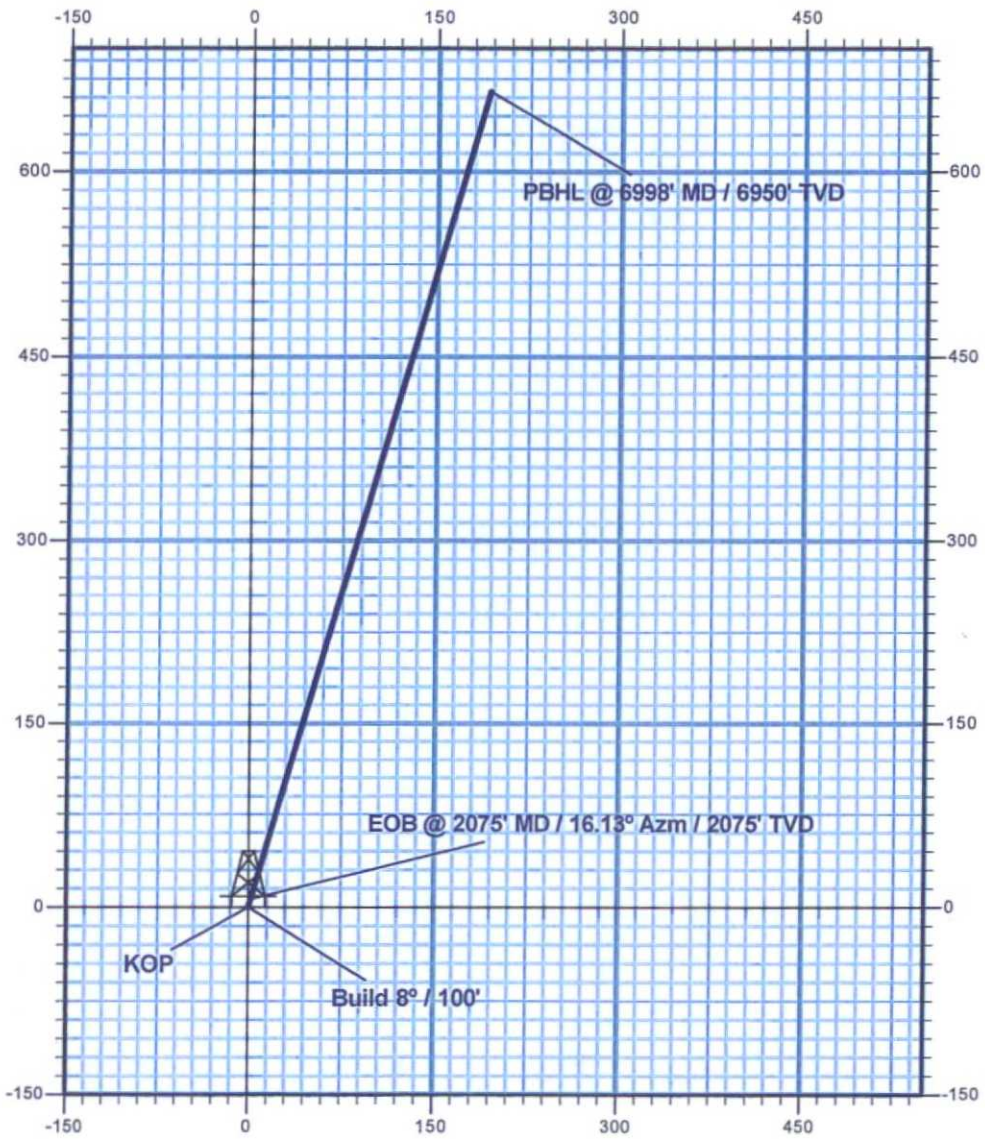


APACHE BOP AND CHOKE MANIFOLD SCHEMATIC

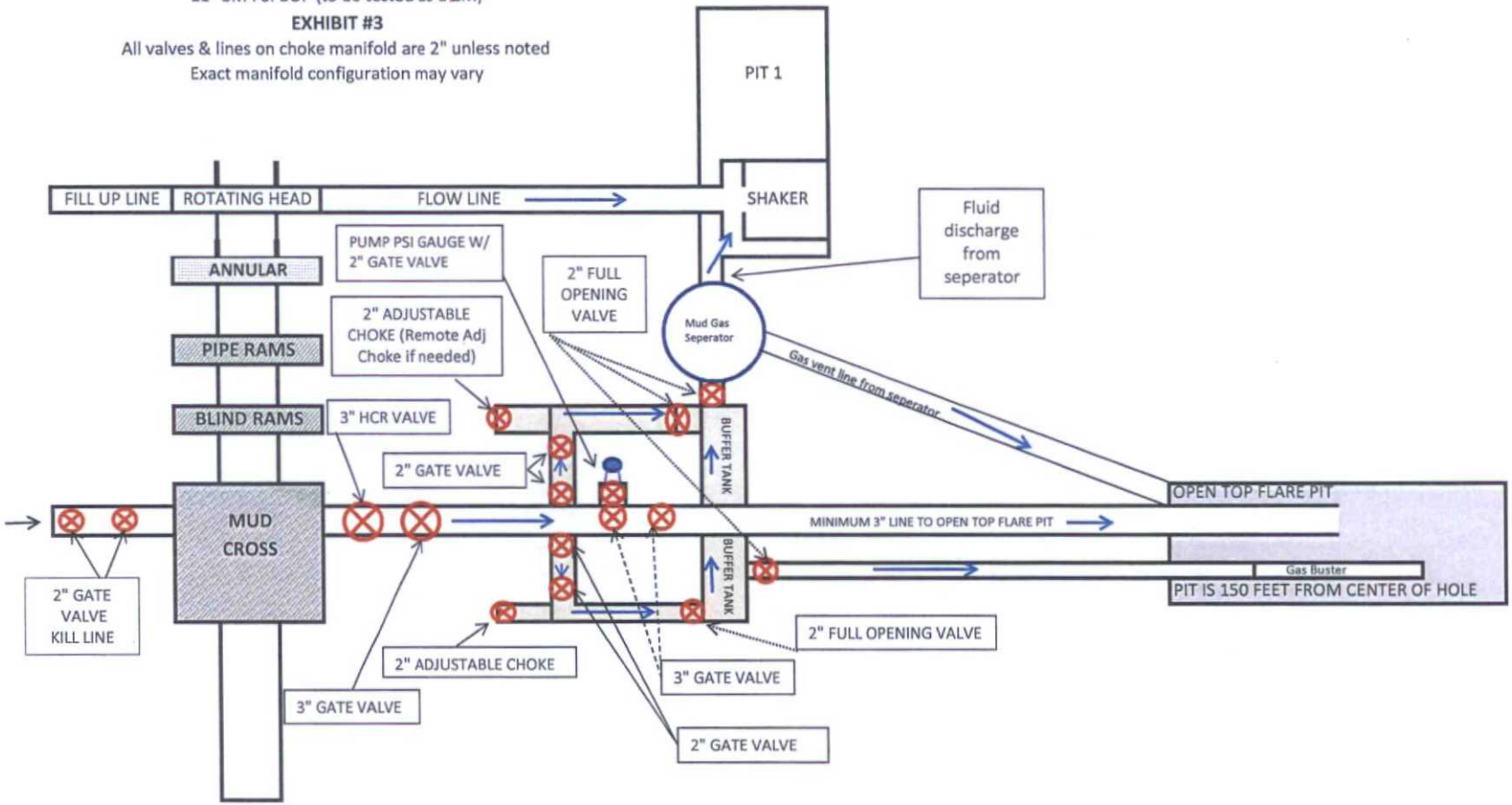
3M must test to 3,000 psi

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 ***

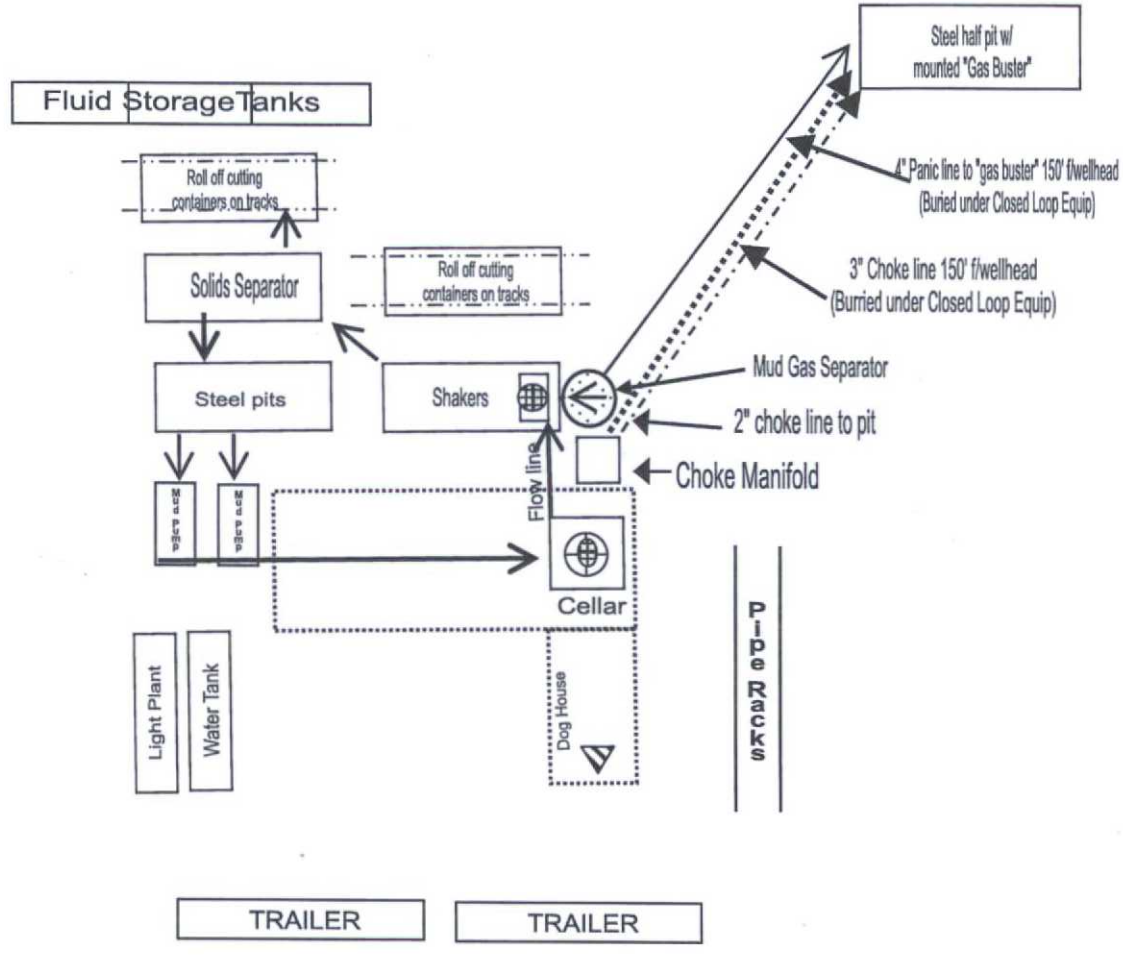
Apache

Closed Loop Equipment Diagram

Exhibit 4

N W E S

West Blinebry Drinkard Unit #243D



Approx 134.71' of new road

RIG ORIENTATION & LAYOUT
WEST BLINEBRY DRINKARD UNIT 243D
EXHIBIT 5