

OCD Hobbs

HOBBS OCT
OCT 16 2015

ATS-15-397

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

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NMLC-032591A	
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name D	
2. Name of Operator APACHE CORPORATION 873		7. If Unit or CA Agreement, Name and No. W BLINEBRY DRINKARD - NMNM-120042X	
3a. Address 303 VETERANS AIRPARK LN #1000 MIDLAND, TX 79705		8. Lease Name and Well No. #37346 WEST BLINEBRY DRINKARD UNIT #238D	
3b. Phone No. (include area code) 432-818-1167		9. API Well No. 30-025- 42881	
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 2315' FSL & 580' FEL I At proposed prod. zone 2300' FNL & 980' FEL H		10. Field and Pool, or Exploratory EUNICE;BLI-TU-DR,N <22900>	
14. Distance in miles and direction from nearest town or post office* APPROX 4 MILES NORTH OF EUNICE, NM		11. Sec., T. R. M. or Blk. and Survey or Area SEC: 21 T21S R37E	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 580'	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. ~225'	19. Proposed Depth TVD: 6950 MD: 7003'	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. | 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 R Flores</i>	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)

Witness Surface Casing

K2
10/16/15

Capitan Controlled Water Basin

**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 #238D**

HOBBS OGD
OCT 16 2015

1. Geologic Formations

RECEIVED

TVD of target	6950'	Pilot hole depth	N/A
MD at TD:	7003'	Deepest expected fresh water:	65'

Back Reef

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Aeolian	Surface	Water	
Rustler	1183'	Water	
Top of Salt	1183'	Salt	
Tansil	2392'	Barren	
Yates	2536'	Oil, Gas, Water	
Seven Rivers	2789'	Oil, Gas, Water	
Queen	3357'	Oil, Gas, Water	Loss circ
Grayburg	3687'	Oil, Gas, Water	Loss circ
San Andres	4016'	Oil, Gas, Water	Loss circ
Glorieta	5076'	Oil, Gas, Water	
Paddock	5145'	Oil	
Blinebry	5489'	Oil	
Tubb	5063'	Oil	
Drinkard	6387'	Oil	
ABO	6651'	Oil	
TD	7003'	Target Zone	

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

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
	From	To							
11"	0	1333'	8-5/8"	24	J55	STC	1.125	1.0	1.8
7-7/8"	0	7003'	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

APACHE CORPORATION (OGRID: 873)
WEST BLINEBRY DRINKARD UNIT #238D

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

Casing	# Sk	Wt. lb/ gal	Yld ft3/ sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	250	13.5	1.73	9.13	9	Lead: Cl C + 4% Bentonite + 1% CaCL ₂ + 0.25# CF (12hr: 677psi, 24hr: 1093psi)
	250	14.8	1.35	6.34	5	Tail: Cl C + 2% CaCL ₂ + 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	# Sk	Wt. lb/ gal	Yld ft3/ sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Prod 1 st 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 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)

see
COA

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

APACHE CORPORATION (OGRID: 873)
WEST BLINEBRY DRINKARD UNIT #238D

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.
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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	<i>must test to 3000 psi</i> <i>2M 3M</i>
			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. Provide description here See attached schematic.

APACHE CORPORATION (OGRID: 873)
WEST BLINEBRY DRINKARD UNIT #238D

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 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	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	3081 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

YES Directional Plan

N/A Other



Apache Corporation

Lea County, NM

Sec 21, T21S, R37E

West Blinebry Drinkard Unit #238

Wellbore #1

Plan: Design #1

DDC Well Planning Report

15 December, 2014





DDC
Well Planning Report



Database:	Compass	Local Co-ordinate Reference:	Well West Blinebry Drinkard Unit #238
Company:	Apache Corporation	TVD Reference:	Well @ 3439.0usft
Project:	Lea County, NM	MD Reference:	Well @ 3439.0usft
Site:	Sec 21, T21S, R37E	North Reference:	Grid
Well:	West Blinebry Drinkard Unit #238	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
From:	Map	Easting:	861,708.89 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 27' 47.663 N
		Longitude:	103° 9' 38.200 W
		Grid Convergence:	0.63 °

Well	West Blinebry Drinkard Unit #238		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft
		Latitude:	32° 27' 47.663 N
		Longitude:	103° 9' 38.200 W
		Ground Level:	3,426.9 usft

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

Design	Design #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			328.56

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,308.0	0.00	0.00	1,308.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,407.5	0.00	0.00	1,407.5	0.0	0.0	0.00	0.00	0.00	0.00	
1,507.5	8.00	328.56	1,507.2	5.9	-3.6	8.00	8.00	0.00	328.56	
7,003.8	8.00	328.56	6,950.0	658.6	-402.6	0.00	0.00	0.00	0.00	PBHL WBDU #238D



DDC
Well Planning Report



Database:	Compass	Local Co-ordinate Reference:	Well West Blinebry Drinkard Unit #238
Company:	Apache Corporation	TVD Reference:	Well @ 3439.0usft
Project:	Lea County, NM	MD Reference:	Well @ 3439.0usft
Site:	Sec 21, T21S, R37E	North Reference:	Grid
Well:	West Blinebry Drinkard Unit #238	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
Rustler									
1,183.0	0.00	0.00	1,183.0	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									
1,308.0	0.00	0.00	1,308.0	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
Build 8° / 100'									
1,407.5	0.00	0.00	1,407.5	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	7.40	328.56	1,499.7	5.1	-3.1	6.0	8.00	8.00	0.00
EOB 1508' MD / 328.56° Azm / 1507' TVD									
1,507.5	8.00	328.56	1,507.2	5.9	-3.6	7.0	8.00	8.00	0.00
1,600.0	8.00	328.56	1,598.8	16.9	-10.3	19.8	0.00	0.00	0.00
1,700.0	8.00	328.56	1,697.8	28.8	-17.6	33.8	0.00	0.00	0.00
1,800.0	8.00	328.56	1,796.8	40.7	-24.9	47.7	0.00	0.00	0.00
1,900.0	8.00	328.56	1,895.9	52.5	-32.1	61.6	0.00	0.00	0.00
2,000.0	8.00	328.56	1,994.9	64.4	-39.4	75.5	0.00	0.00	0.00
2,100.0	8.00	328.56	2,093.9	76.3	-46.6	89.4	0.00	0.00	0.00
2,200.0	8.00	328.56	2,192.9	88.2	-53.9	103.3	0.00	0.00	0.00
2,300.0	8.00	328.56	2,292.0	100.0	-61.2	117.3	0.00	0.00	0.00
2,400.0	8.00	328.56	2,391.0	111.9	-68.4	131.2	0.00	0.00	0.00
Tansil									
2,401.0	8.00	328.56	2,392.0	112.0	-68.5	131.3	0.00	0.00	0.00
2,500.0	8.00	328.56	2,490.0	123.8	-75.7	145.1	0.00	0.00	0.00
Yates									
2,546.4	8.00	328.56	2,536.0	129.3	-79.1	151.6	0.00	0.00	0.00
2,600.0	8.00	328.56	2,589.0	135.7	-82.9	159.0	0.00	0.00	0.00
2,700.0	8.00	328.56	2,688.1	147.5	-90.2	172.9	0.00	0.00	0.00
2,800.0	8.00	328.56	2,787.1	159.4	-97.5	186.8	0.00	0.00	0.00
Seven Rivers									
2,801.9	8.00	328.56	2,789.0	159.6	-97.6	187.1	0.00	0.00	0.00
2,900.0	8.00	328.56	2,886.1	171.3	-104.7	200.8	0.00	0.00	0.00
3,000.0	8.00	328.56	2,985.2	183.2	-112.0	214.7	0.00	0.00	0.00
3,100.0	8.00	328.56	3,084.2	195.0	-119.2	228.6	0.00	0.00	0.00
3,200.0	8.00	328.56	3,183.2	206.9	-126.5	242.5	0.00	0.00	0.00
3,300.0	8.00	328.56	3,282.2	218.8	-133.8	256.4	0.00	0.00	0.00
Queen									
3,375.5	8.00	328.56	3,357.0	227.8	-139.2	266.9	0.00	0.00	0.00
3,400.0	8.00	328.56	3,381.3	230.7	-141.0	270.4	0.00	0.00	0.00
3,500.0	8.00	328.56	3,480.3	242.5	-148.3	284.3	0.00	0.00	0.00
3,600.0	8.00	328.56	3,579.3	254.4	-155.5	298.2	0.00	0.00	0.00



DDC
Well Planning Report



Database:	Compass	Local Co-ordinate Reference:	Well West Blinebry Drinkard Unit #238
Company:	Apache Corporation	TVD Reference:	Well @ 3439.0usft
Project:	Lea County, NM	MD Reference:	Well @ 3439.0usft
Site:	Sec 21, T21S, R37E	North Reference:	Grid
Well:	West Blinebry Drinkard Unit #238	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)
3,700.0	8.00	328.56	3,678.3	266.3	-162.8	312.1	0.00	0.00	0.00
Grayburg									
3,708.7	8.00	328.56	3,687.0	267.3	-163.4	313.3	0.00	0.00	0.00
3,800.0	8.00	328.56	3,777.4	278.2	-170.1	326.0	0.00	0.00	0.00
3,900.0	8.00	328.56	3,876.4	290.0	-177.3	339.9	0.00	0.00	0.00
4,000.0	8.00	328.56	3,975.4	301.9	-184.6	353.9	0.00	0.00	0.00
San Andres									
4,041.0	8.00	328.56	4,016.0	306.8	-187.5	359.6	0.00	0.00	0.00
4,100.0	8.00	328.56	4,074.4	313.8	-191.8	367.8	0.00	0.00	0.00
4,200.0	8.00	328.56	4,173.5	325.7	-199.1	381.7	0.00	0.00	0.00
4,300.0	8.00	328.56	4,272.5	337.5	-206.3	395.6	0.00	0.00	0.00
4,400.0	8.00	328.56	4,371.5	349.4	-213.6	409.5	0.00	0.00	0.00
4,500.0	8.00	328.56	4,470.6	361.3	-220.9	423.4	0.00	0.00	0.00
4,600.0	8.00	328.56	4,569.6	373.1	-228.1	437.4	0.00	0.00	0.00
4,700.0	8.00	328.56	4,668.6	385.0	-235.4	451.3	0.00	0.00	0.00
4,800.0	8.00	328.56	4,767.6	396.9	-242.6	465.2	0.00	0.00	0.00
4,900.0	8.00	328.56	4,866.7	408.8	-249.9	479.1	0.00	0.00	0.00
5,000.0	8.00	328.56	4,965.7	420.6	-257.2	493.0	0.00	0.00	0.00
Tubbs									
5,098.3	8.00	328.56	5,063.0	432.3	-264.3	506.7	0.00	0.00	0.00
5,100.0	8.00	328.56	5,064.7	432.5	-264.4	506.9	0.00	0.00	0.00
Glorieta									
5,111.4	8.00	328.56	5,076.0	433.9	-265.3	508.5	0.00	0.00	0.00
Paddock									
5,181.1	8.00	328.56	5,145.0	442.1	-270.3	518.2	0.00	0.00	0.00
5,200.0	8.00	328.56	5,163.7	444.4	-271.7	520.9	0.00	0.00	0.00
5,300.0	8.00	328.56	5,262.8	456.3	-278.9	534.8	0.00	0.00	0.00
5,400.0	8.00	328.56	5,361.8	468.1	-286.2	548.7	0.00	0.00	0.00
5,500.0	8.00	328.56	5,460.8	480.0	-293.5	562.6	0.00	0.00	0.00
Blinebry									
5,528.5	8.00	328.56	5,489.0	483.4	-295.5	566.6	0.00	0.00	0.00
5,600.0	8.00	328.56	5,559.8	491.9	-300.7	576.5	0.00	0.00	0.00
5,700.0	8.00	328.56	5,658.9	503.8	-308.0	590.4	0.00	0.00	0.00
5,800.0	8.00	328.56	5,757.9	515.6	-315.2	604.4	0.00	0.00	0.00
5,900.0	8.00	328.56	5,856.9	527.5	-322.5	618.3	0.00	0.00	0.00
6,000.0	8.00	328.56	5,956.0	539.4	-329.8	632.2	0.00	0.00	0.00
6,100.0	8.00	328.56	6,055.0	551.3	-337.0	646.1	0.00	0.00	0.00
6,200.0	8.00	328.56	6,154.0	563.1	-344.3	660.0	0.00	0.00	0.00
6,300.0	8.00	328.56	6,253.0	575.0	-351.5	674.0	0.00	0.00	0.00
6,400.0	8.00	328.56	6,352.1	586.9	-358.8	687.9	0.00	0.00	0.00
Drinkard									
6,435.3	8.00	328.56	6,387.0	591.1	-361.4	692.8	0.00	0.00	0.00
6,500.0	8.00	328.56	6,451.1	598.8	-366.1	701.8	0.00	0.00	0.00
6,600.0	8.00	328.56	6,550.1	610.6	-373.3	715.7	0.00	0.00	0.00
6,700.0	8.00	328.56	6,649.1	622.5	-380.6	729.6	0.00	0.00	0.00
Abo									
6,701.9	8.00	328.56	6,651.0	622.7	-380.7	729.9	0.00	0.00	0.00
6,800.0	8.00	328.56	6,748.2	634.4	-387.8	743.5	0.00	0.00	0.00
6,900.0	8.00	328.56	6,847.2	646.3	-395.1	757.5	0.00	0.00	0.00
7,000.0	8.00	328.56	6,946.2	658.1	-402.4	771.4	0.00	0.00	0.00
PBHL @ 7004' MD / 6950' TVD									
7,003.8	8.00	328.56	6,950.0	658.6	-402.6	771.9	0.00	0.00	0.00



DDC
Well Planning Report



Database: Compass
Company: Apache Corporation
Project: Lea County, NM
Site: Sec 21, T21S, R37E
Well: West Blinebry Drinkard Unit #238
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: Well West Blinebry Drinkard Unit #238
TVD Reference: Well @ 3439.0usft
MD Reference: Well @ 3439.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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 #238D - plan hits target center - Point	0.00	0.00	6,950.0	658.6	-402.6	534,885.59	861,306.26	32° 27' 54.222 N	103° 9' 42.814 W

Formations

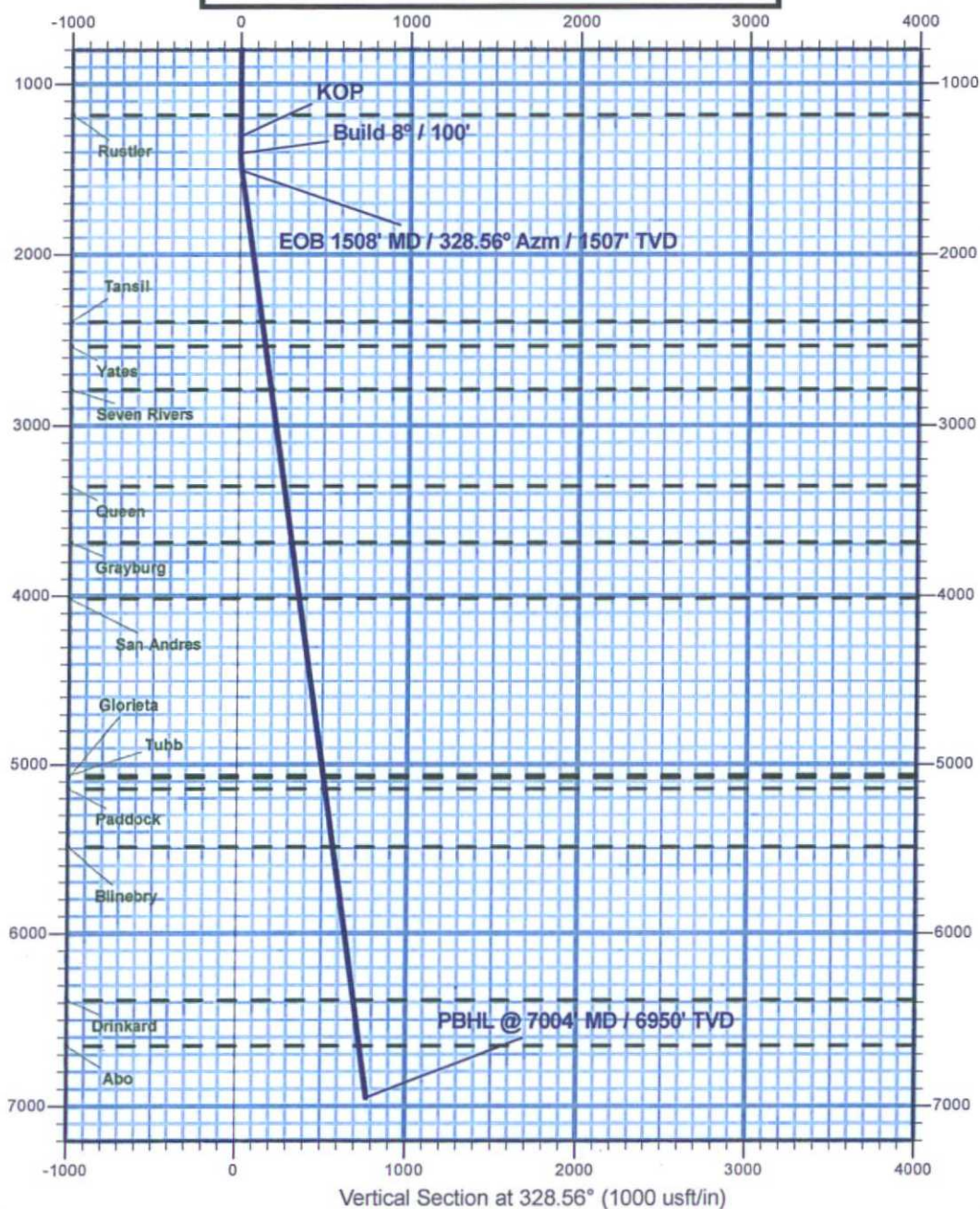
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,183.0	1,183.0	Rustler		0.00	328.56
2,401.0	2,392.0	Tansil		0.00	328.56
2,546.4	2,536.0	Yates		0.00	328.56
2,801.9	2,789.0	Seven Rivers		0.00	328.56
3,375.5	3,357.0	Queen		0.00	328.56
3,708.7	3,687.0	Grayburg		0.00	328.56
4,041.0	4,016.0	San Andres		0.00	328.56
5,098.3	5,063.0	Tubb		0.00	328.56
5,111.4	5,076.0	Glorieta		0.00	328.56
5,181.1	5,145.0	Paddock		0.00	328.56
5,528.5	5,489.0	Blinedbry		0.00	328.56
6,435.3	6,387.0	Drinkard		0.00	328.56
6,701.9	6,651.0	Abo		0.00	328.56

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,308.0	1,308.0	0.0	0.0	KOP
1,407.5	1,407.5	0.0	0.0	Build 8° / 100'
1,507.5	1,507.2	5.9	-3.6	EOB 1508' MD / 328.56° Azm / 1507' TVD
7,003.8	6,950.0	658.6	-402.6	PBHL @ 7004' MD / 6950' TVD

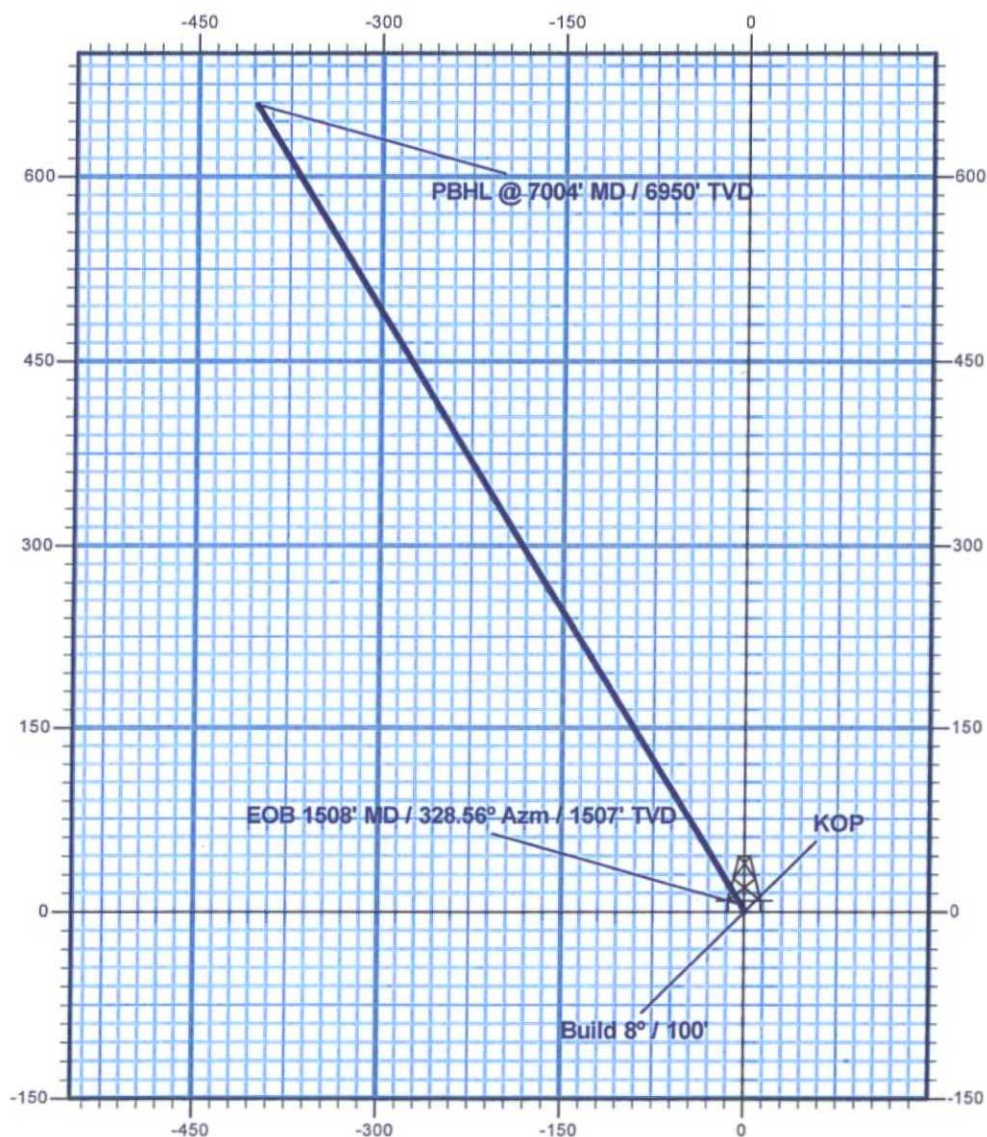


Lea County, NM
Sec 21, T21S, R37E
West Blinebry Drinkard Unit #238
Design #1





Lea County, NM
Sec 21, T21S, R37E
West Blinebry Drinkard Unit #238
Design #1

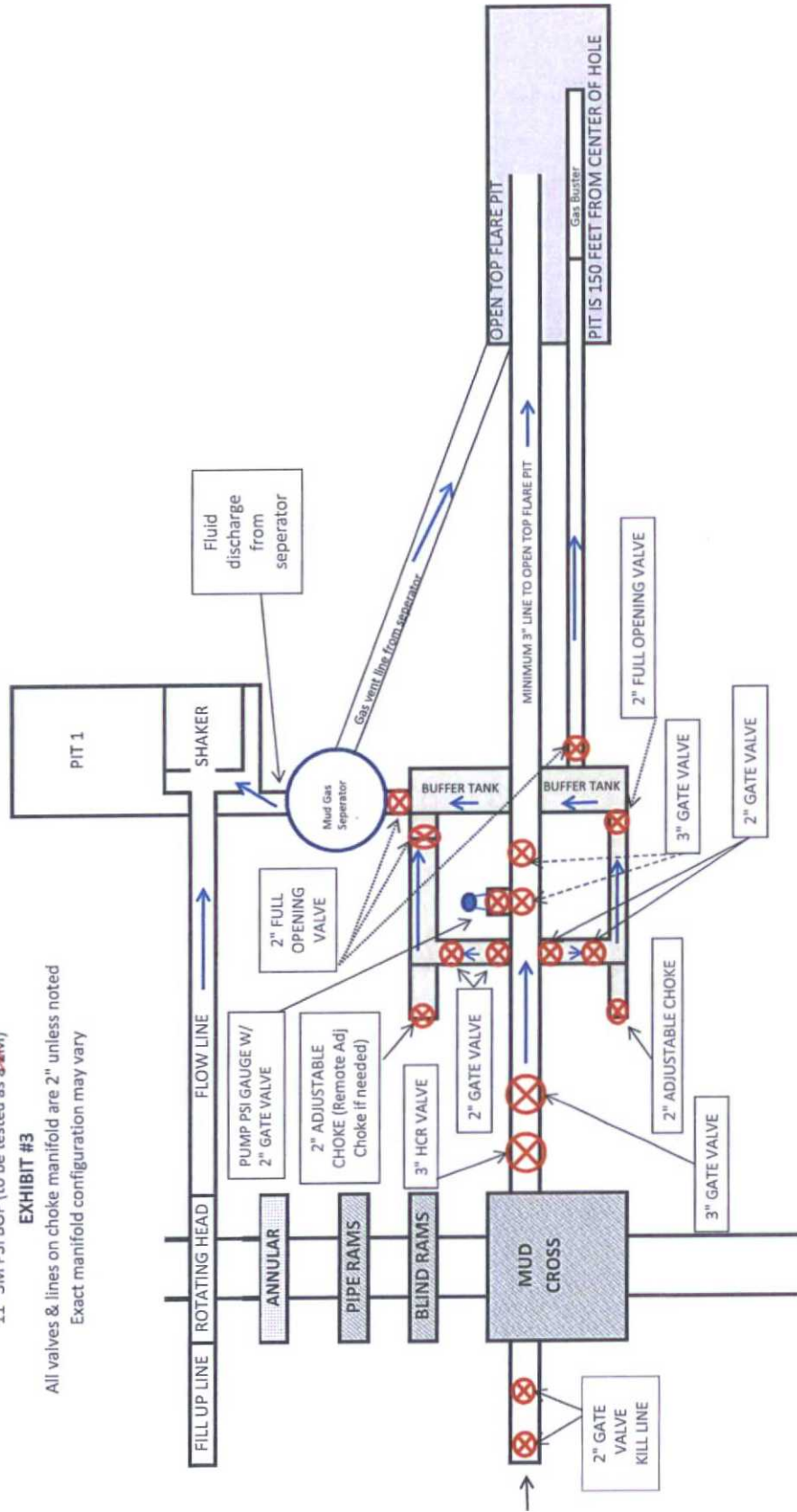


APACHE BOP AND CHOKE MANIFOLD SCHEMATIC

11" 3M PSI BOP (to be tested as a 2M) *3M must test BOP to 3,000psi*

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 ***

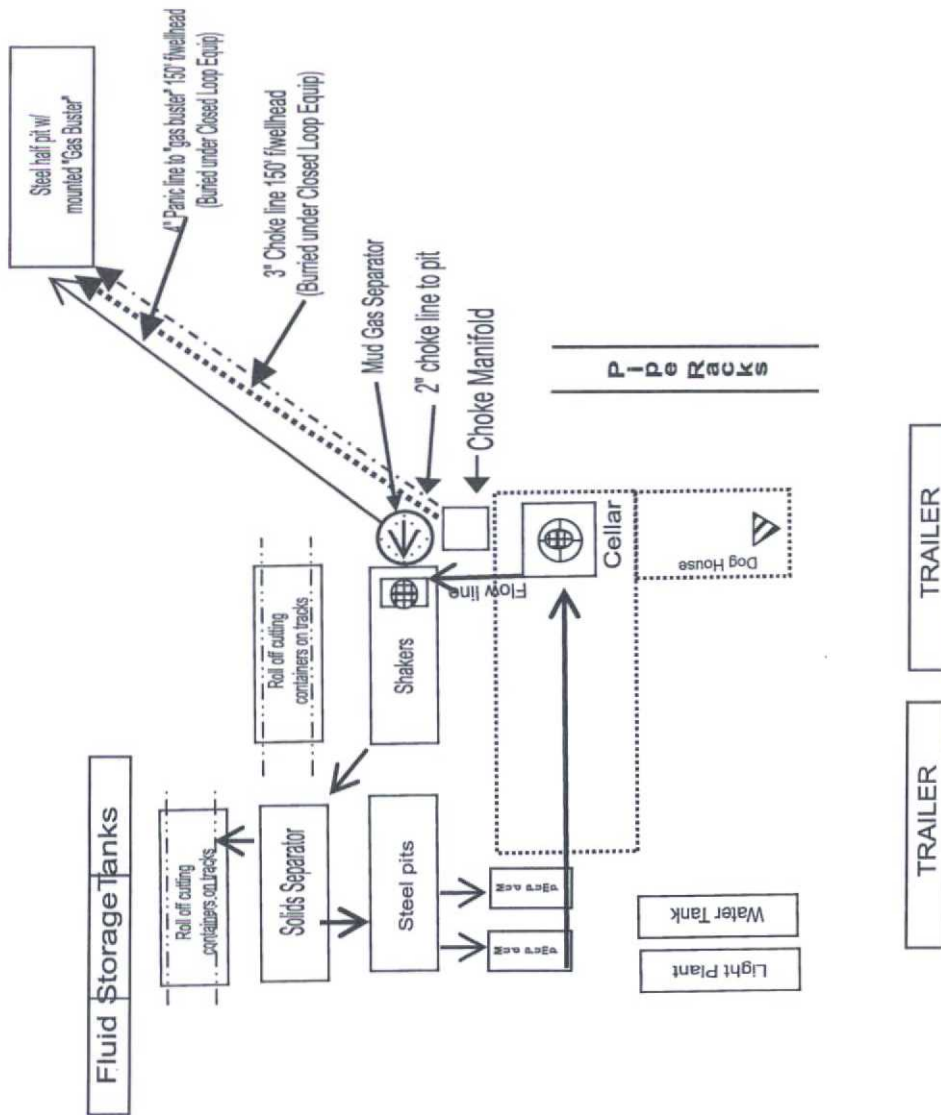


Closed Loop Equipment Diagram

Exhibit 4



West Blinbry Drinkard Unit #238D



Approx 134.71' of
new road

RIG ORIENTATION & LAYOUT **WEST BLINEBRY DRINKARD UNIT 238D** **EXHIBIT 5**

