



HOBBS OCD

MAY 09 2016

RECEIVED

Apache Corporation

Lea County, NM (NAD27 NME)

West Blinebry Drinkard Unit

#66W

OH

Plan: Plan 1 03-11-16

Standard Planning Report

11 March, 2016



MAY 12 2016



Phoenix Technology Services LP

Planning Report



Database:	Compass 5000 GCR	Local Co-ordinate Reference:	Well #66W
Company:	Apache Corporation	TVD Reference:	GL + KB @ 3488.00usft (TBD)
Project:	Lea County, NM (NAD27 NME)	MD Reference:	GL + KB @ 3488.00usft (TBD)
Site:	West Blinebry Drinkard Unit	North Reference:	Grid
Well:	#66W	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 03-11-16		

Project	Lea County, NM (NAD27 NME)		
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	West Blinebry Drinkard Unit		
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Site Position:		Northing:	540,688.00 usft	Latitude:	32° 28' 52.21189 N
From:	Map	Easting:	855,919.70 usft	Longitude:	103° 10' 44.94293 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.62 °

Well	#66W		
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Well Position	+N/-S	0.00 usft	Northing:	540,688.00 usft	Latitude:	32° 28' 52.21189 N
	+E/-W	0.00 usft	Easting:	855,919.70 usft	Longitude:	103° 10' 44.94293 W
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,477.00 usft	

Wellbore	OH		
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	3/11/2016	7.02	60.57	48,473

Design	Plan 1 03-11-16		
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Audit Notes:

Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
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Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	135.21

Plan Sections										
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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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,450.00	0.00	0.00	1,450.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,584.95	2.70	135.21	1,584.90	-2.26	2.24	2.00	2.00	0.00	135.21	
6,855.90	2.70	135.21	6,850.00	-178.40	177.10	0.00	0.00	0.00	0.00	BHL - West Blinebr



Phoenix Technology Services LP

Planning Report



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Site:	West Blinbry Drinkard Unit	North Reference:	Grid
Well:	#66W	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 03-11-16		

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,450.00	0.00	0.00	1,450.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, Begin 2.00°/100° Build									
1,500.00	1.00	135.21	1,500.00	-0.31	0.31	0.44	2.00	2.00	0.00
1,584.95	2.70	135.21	1,584.90	-2.26	2.24	3.18	2.00	2.00	0.00
Hold 2.70° Inc, 135.21° Azm									
1,600.00	2.70	135.21	1,599.93	-2.76	2.74	3.89	0.00	0.00	0.00
1,700.00	2.70	135.21	1,699.82	-6.10	6.06	8.60	0.00	0.00	0.00
1,800.00	2.70	135.21	1,799.71	-9.44	9.37	13.30	0.00	0.00	0.00
1,900.00	2.70	135.21	1,899.60	-12.78	12.69	18.01	0.00	0.00	0.00
2,000.00	2.70	135.21	1,999.49	-16.13	16.01	22.72	0.00	0.00	0.00
2,100.00	2.70	135.21	2,099.38	-19.47	19.32	27.43	0.00	0.00	0.00
2,200.00	2.70	135.21	2,199.27	-22.81	22.64	32.14	0.00	0.00	0.00
2,300.00	2.70	135.21	2,299.16	-26.15	25.96	36.85	0.00	0.00	0.00
2,400.00	2.70	135.21	2,399.05	-29.49	29.28	41.56	0.00	0.00	0.00
2,500.00	2.70	135.21	2,498.94	-32.83	32.59	46.27	0.00	0.00	0.00
2,600.00	2.70	135.21	2,598.82	-36.18	35.91	50.97	0.00	0.00	0.00
2,700.00	2.70	135.21	2,698.71	-39.52	39.23	55.68	0.00	0.00	0.00
2,800.00	2.70	135.21	2,798.60	-42.86	42.55	60.39	0.00	0.00	0.00
2,900.00	2.70	135.21	2,898.49	-46.20	45.86	65.10	0.00	0.00	0.00
3,000.00	2.70	135.21	2,998.38	-49.54	49.18	69.81	0.00	0.00	0.00
3,100.00	2.70	135.21	3,098.27	-52.89	52.50	74.52	0.00	0.00	0.00
3,200.00	2.70	135.21	3,198.16	-56.23	55.82	79.23	0.00	0.00	0.00
3,300.00	2.70	135.21	3,298.05	-59.57	59.13	83.94	0.00	0.00	0.00
3,400.00	2.70	135.21	3,397.94	-62.91	62.45	88.64	0.00	0.00	0.00
3,500.00	2.70	135.21	3,497.83	-66.25	65.77	93.35	0.00	0.00	0.00
3,600.00	2.70	135.21	3,597.71	-69.59	69.09	98.06	0.00	0.00	0.00
3,700.00	2.70	135.21	3,697.60	-72.94	72.40	102.77	0.00	0.00	0.00
3,800.00	2.70	135.21	3,797.49	-76.28	75.72	107.48	0.00	0.00	0.00
3,900.00	2.70	135.21	3,897.38	-79.62	79.04	112.19	0.00	0.00	0.00
4,000.00	2.70	135.21	3,997.27	-82.96	82.35	116.90	0.00	0.00	0.00
4,100.00	2.70	135.21	4,097.16	-86.30	85.67	121.61	0.00	0.00	0.00
4,200.00	2.70	135.21	4,197.05	-89.65	88.99	126.31	0.00	0.00	0.00
4,300.00	2.70	135.21	4,296.94	-92.99	92.31	131.02	0.00	0.00	0.00
4,400.00	2.70	135.21	4,396.83	-96.33	95.62	135.73	0.00	0.00	0.00
4,500.00	2.70	135.21	4,496.72	-99.67	98.94	140.44	0.00	0.00	0.00
4,600.00	2.70	135.21	4,596.61	-103.01	102.26	145.15	0.00	0.00	0.00
4,700.00	2.70	135.21	4,696.49	-106.35	105.58	149.86	0.00	0.00	0.00
4,800.00	2.70	135.21	4,796.38	-109.70	108.89	154.57	0.00	0.00	0.00
4,900.00	2.70	135.21	4,896.27	-113.04	112.21	159.28	0.00	0.00	0.00
5,000.00	2.70	135.21	4,996.16	-116.38	115.53	163.99	0.00	0.00	0.00
5,100.00	2.70	135.21	5,096.05	-119.72	118.85	168.69	0.00	0.00	0.00
5,200.00	2.70	135.21	5,195.94	-123.06	122.16	173.40	0.00	0.00	0.00
5,300.00	2.70	135.21	5,295.83	-126.41	125.48	178.11	0.00	0.00	0.00
5,400.00	2.70	135.21	5,395.72	-129.75	128.80	182.82	0.00	0.00	0.00
5,500.00	2.70	135.21	5,495.61	-133.09	132.12	187.53	0.00	0.00	0.00
5,600.00	2.70	135.21	5,595.50	-136.43	135.43	192.24	0.00	0.00	0.00
5,700.00	2.70	135.21	5,695.39	-139.77	138.75	196.95	0.00	0.00	0.00
5,800.00	2.70	135.21	5,795.27	-143.11	142.07	201.66	0.00	0.00	0.00
5,900.00	2.70	135.21	5,895.16	-146.46	145.38	206.36	0.00	0.00	0.00
6,000.00	2.70	135.21	5,995.05	-149.80	148.70	211.07	0.00	0.00	0.00
6,100.00	2.70	135.21	6,094.94	-153.14	152.02	215.78	0.00	0.00	0.00
6,200.00	2.70	135.21	6,194.83	-156.48	155.34	220.49	0.00	0.00	0.00
6,300.00	2.70	135.21	6,294.72	-159.82	158.65	225.20	0.00	0.00	0.00

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Site:	West Blinebry Drinkard Unit	North Reference:	Grid
Well:	#66W	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 03-11-16		

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)
6,400.00	2.70	135.21	6,394.61	-163.16	161.97	229.91	0.00	0.00	0.00
6,500.00	2.70	135.21	6,494.50	-166.51	165.29	234.62	0.00	0.00	0.00
6,600.00	2.70	135.21	6,594.39	-169.85	168.61	239.33	0.00	0.00	0.00
6,700.00	2.70	135.21	6,694.28	-173.19	171.92	244.03	0.00	0.00	0.00
6,800.00	2.70	135.21	6,794.17	-176.53	175.24	248.74	0.00	0.00	0.00
6,855.90	2.70	135.21	6,850.00	-178.40	177.10	251.38	0.00	0.00	0.00
TD at 6855.90									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
BHL - West Blinebry I	0.00	0.00	6,850.00	-178.40	177.10	540,509.60	856,096.79	32° 28' 50.42784 N	03° 10' 42.89839 W
- plan hits target center									
- Point									

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,258.00	1,258.00	Rustler		0.00		
1,458.00	1,458.00	Salado		0.00		
2,488.05	2,487.00	Tansil		0.00		
2,618.20	2,617.00	Yates		0.00		
2,883.49	2,882.00	Seven Rivers		0.00		
3,423.09	3,421.00	Queen		0.00		
3,700.40	3,698.00	Grayburg		0.00		
5,163.02	5,159.00	Glorieta		0.00		
5,256.12	5,252.00	Paddock		0.00		
5,698.61	5,694.00	Blinebry		0.00		
6,177.14	6,172.00	Tubb		0.00		
6,491.49	6,486.00	Drinkard		0.00		
6,744.77	6,739.00	Abo		0.00		

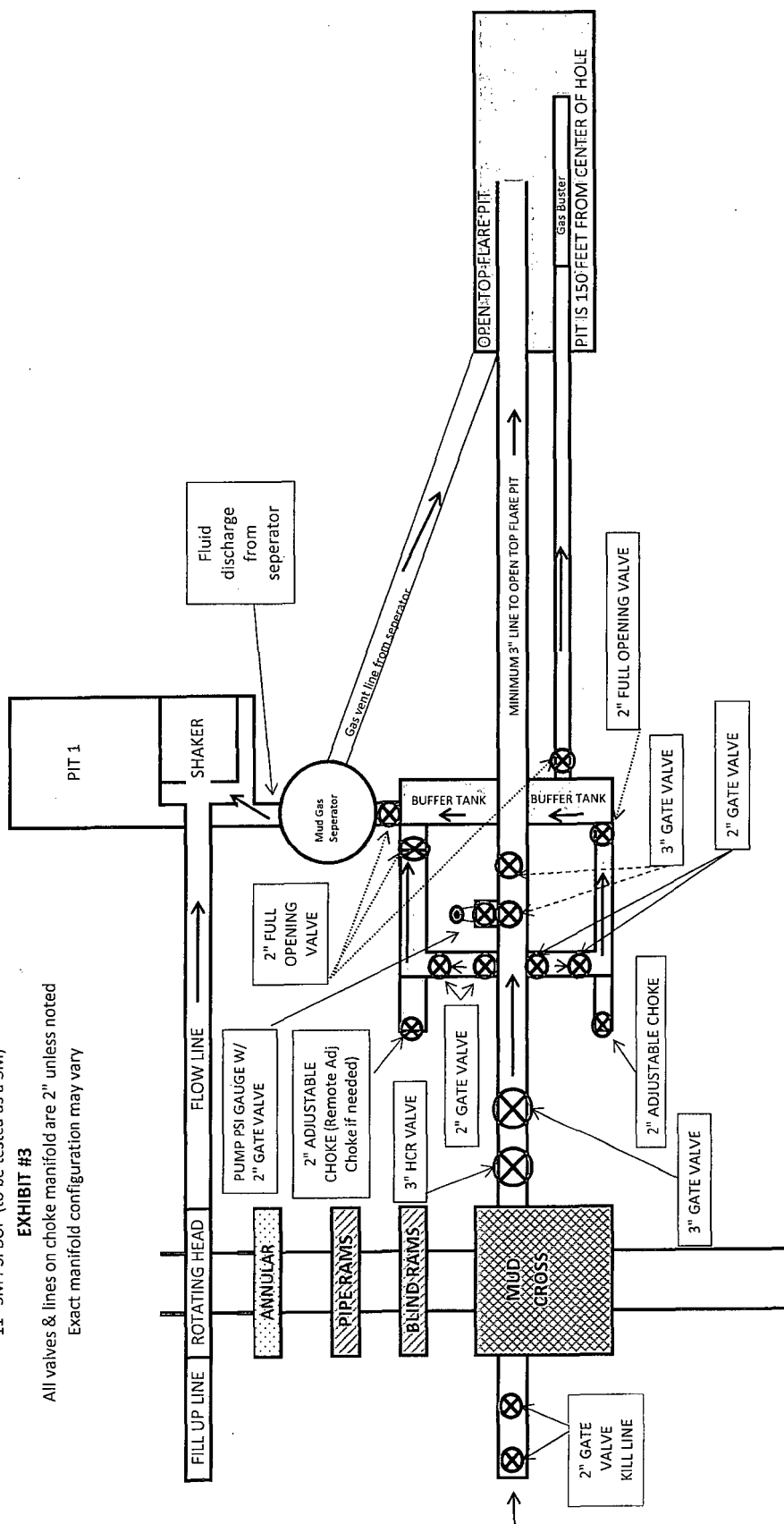
Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,450.00	1,450.00	0.00	0.00	KOP, Begin 2.00°/100' Build
1,584.95	1,584.90	-2.26	2.24	Hold 2.70° Inc, 135.21° Azm
6,855.90	6,850.00	-178.40	177.10	TD at 6855.90

APACHE BOP AND CHOKE MANIFOLD SCHEMATIC

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

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 ***