

Results of Directional Survey

DD

API number:	30-025-41873		
OGRID:		Operator:	APACHE CORP
		Property:	WEST BLINEBRY DRINKARD UNIT # 206

surface	ULSTR:	H	09	T	21S	R	37E
				1570	FNL	565	FEL

BH Loc	ULSTR:	A	09	T	21S	R	37E
6930	MD	6910.4	TVD	1299	FNL	927	FEL

Top Perf/OH	ULSTR:	H	09	T	21S	R	37E
5602	MD	5587.4	TVD	1365	FNL	834	FEL

Bot Perf/OH	ULSTR:	A	09	T	21S	R	37E
6650	MD	6630.7	TVD	1316	FNL	906	FEL

	MD	N/S	E/W	VD
	5583.00	204.38	-267.47	5568.42
TOP PERFS/OH	5602.00	205.32	-268.73	5587.35
	5711.00	210.72	-275.95	5695.98
	6607.00	251.83	-337.89	6588.86
BOT PERFS/OH	6650.00	254.17	-341.31	6630.65
	6735.00	258.81	-348.07	6713.26

NEXT TO LAST	6880.00	268.05	-358.72	6860.57
LAST READING	6930.00	270.90	-361.89	6910.39
TD	6930.00	270.90	-361.89	6910.39

Surface Location	1570	FN	565	FE
Projected BHL	1299	FN	927	FE
Location of				
Top Perfs/OH	1365	FN	834	FE
Bottom Perfs/OH	1316	FN	906	FE

SUMMARY of Subsurface Locations

Surface Location	H-09-21S-37E	1570	FN	565	FE	Vert. Depth
Top Perfs/OH	H-09-21S-37E	1365	FN	834	FE	5587.35
Bottom Perfs/OH	A-09-21S-37E	1316	FN	906	FE	6630.65
Projected TD	A-09-21S-37E	1299	FN	927	FE	6910.39

FEB 11 2015

Apache Corporation (873)
303 Veterans Airpark Lane, #3000
Midland, TX 79705

West Blinbry Drinkard Unit #206
Lea County, New Mexico

30-025-41873

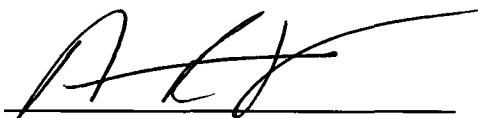
H-9-215-37E 1570' FNL + 565' FEL

347	3.47	1.00	1.75	6.07	6.07
584	2.37	0.50	0.88	2.07	8.15
827	2.43	0.50	0.88	2.13	10.27
1083	2.56	0.10	0.18	0.45	10.72
1254	1.71	0.60	1.05	1.80	12.52

HOBSOCD

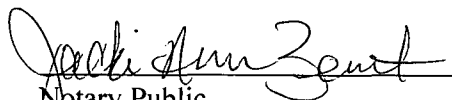
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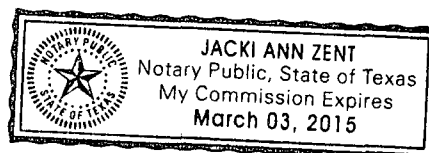
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Archie Brown - General Manager

The attached instrument was acknowledged before me on the 4th day of November, 2014 by Archie Brown - General Manager, CapStar Drilling, Inc.


Notary Public



jm



Apache Corporation (873)

Lea County, NM (NAD83 NME)

West Blinebry Drinkard Unit 30-025-41873
#206 D

WB1/Job #1411605

H-9-21S-37E

1570' FUL + 565' FEL

Design: Surveys (Capstar 118)

Standard Survey Report

03 November, 2014



Company:	Apache Corporation	Local Co-ordinate Reference:	Well #206 D
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	KB @ 3473.94usft (Capstar 118)
Site:	West Blinebry Drinkard Unit	MD Reference:	KB @ 3473.94usft (Capstar 118)
Well:	#206 D	North Reference:	Grid
Wellbore:	WB1/Job #1411605	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Capstar 118)	Database:	Compass 5000 GCR epdm

Project	Lea County, NM (NAD83 NME)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	West Blinebry Drinkard Unit				
Site Position:		Northing:	542,793.05 usft	Latitude:	32° 29' 12.26799 N
From:	Map	Easting:	902,763.71 usft	Longitude:	103° 9' 40.31178 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.63 °

Well	#206 D					
Well Position	+N/-S	0.00 usft	Northing:	546,240.18 usft	Latitude:	32° 29' 46.37318 N
	+E/-W	0.00 usft	Easting:	902,756.40 usft	Longitude:	103° 9' 39.95478 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,461.94 usft

Wellbore	WB1/Job #1411605				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	10/13/2014	7.16	60.42	48,455

Design	Surveys (Capstar 118)				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	307.07	

Survey Program	Date	10/31/2014			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
76.42	1,285.42	SDI Gyro Survey (WB1/Job #1411605)	Scientific Gyro	Scientific Drilling Intl. Standard Wireline Keeper	
1,285.00	6,930.00	Phoenix MWD Survey (WB1/Job #141160)	PHX+MWD+BGGM	PHX+MWD+BGGM v3:standard declination	

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
76.42	0.57	82.49	76.42	0.05	0.38	-0.27	0.75	0.75	0.00
163.42	0.68	70.82	163.41	0.28	1.29	-0.87	0.19	0.13	-13.41
250.42	0.69	66.31	250.41	0.66	2.26	-1.41	0.06	0.01	-5.18
333.42	0.73	59.34	333.40	1.13	3.17	-1.85	0.11	0.05	-8.40
421.42	0.71	44.88	421.39	1.80	4.04	-2.14	0.21	-0.02	-16.43
511.42	0.73	37.14	511.39	2.65	4.78	-2.22	0.11	0.02	-8.60
602.42	0.77	33.94	602.38	3.62	5.47	-2.18	0.06	0.04	-3.52
687.42	0.83	42.55	687.37	4.55	6.21	-2.21	0.16	0.07	10.13
773.42	0.88	31.55	773.36	5.57	6.97	-2.21	0.20	0.06	-12.79

Company: Apache Corporation
Project: Lea County, NM (NAD83 NME)
Site: West Blinbry Drinkard Unit
Well: #206 D
Wellbore: WB1/Job #1411605
Design: Surveys (Capstar 118)

Local Co-ordinate Reference: Well #206 D
TVD Reference: KB @ 3473.94usft (Capstar 118)
MD Reference: KB @ 3473.94usft (Capstar 118)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Compass 5000 GCR epdm

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)
858.42	0.87	31.98	858.35	6.67	7.66	-2.09	0.01	-0.01	0.51
944.42	0.89	21.47	944.34	7.85	8.25	-1.85	0.19	0.02	-12.22
1,029.42	0.58	24.20	1,029.33	8.85	8.66	-1.58	0.37	-0.36	3.21
1,114.42	0.49	37.21	1,114.33	9.54	9.06	-1.48	0.18	-0.11	15.31
1,200.42	0.37	30.69	1,200.33	10.07	9.43	-1.45	0.15	-0.14	-7.58
1,285.42	0.05	77.29	1,285.33	10.31	9.60	-1.44	0.40	-0.38	54.82
First Phoenix MWD Survey									
1,484.00	0.20	102.90	1,483.91	10.25	10.02	-1.82	0.08	0.08	12.90
1,570.00	2.90	299.70	1,569.87	11.30	8.28	0.20	3.60	3.14	-189.77
1,655.00	4.10	304.10	1,654.71	14.07	3.90	5.37	1.45	1.41	5.18
1,826.00	5.60	314.90	1,825.10	23.39	-7.08	19.74	1.02	0.88	6.32
1,911.00	5.30	317.80	1,909.71	29.22	-12.65	27.71	0.48	-0.35	3.41
1,997.00	5.10	321.70	1,995.36	35.16	-17.69	35.31	0.47	-0.23	4.53
2,082.00	5.50	310.50	2,080.00	40.77	-23.13	43.03	1.30	0.47	-13.18
2,168.00	5.40	311.30	2,165.61	46.12	-29.30	51.18	0.15	-0.12	0.93
2,253.00	5.30	311.90	2,250.24	51.38	-35.23	59.08	0.13	-0.12	0.71
2,338.00	5.30	315.30	2,334.88	56.79	-40.91	66.88	0.37	0.00	4.00
2,424.00	4.40	302.60	2,420.57	61.40	-46.49	74.10	1.62	-1.05	-14.77
2,509.00	4.20	302.90	2,505.33	64.84	-51.85	80.45	0.24	-0.24	0.35
2,637.00	3.60	302.10	2,633.04	69.52	-59.19	89.13	0.47	-0.47	-0.63
2,766.00	3.50	301.80	2,761.79	73.75	-65.96	97.09	0.08	-0.08	-0.23
2,894.00	4.30	305.70	2,889.49	78.61	-73.18	105.78	0.66	0.63	3.05
3,022.00	4.30	297.10	3,017.13	83.60	-81.35	115.30	0.50	0.00	-6.72
3,150.00	4.90	298.00	3,144.72	88.35	-90.45	125.42	0.47	0.47	0.70
3,278.00	4.60	302.30	3,272.28	93.66	-99.61	135.94	0.36	-0.23	3.36
3,406.00	4.40	302.10	3,399.88	99.01	-108.11	145.94	0.16	-0.16	-0.16
3,534.00	4.00	299.50	3,527.54	103.82	-116.16	155.26	0.35	-0.31	-2.03
3,662.00	5.00	303.90	3,655.14	109.13	-124.67	165.26	0.83	0.78	3.44
3,790.00	4.60	303.00	3,782.70	115.03	-133.61	175.95	0.32	-0.31	-0.70
3,918.00	5.80	304.50	3,910.17	121.49	-143.24	187.53	0.94	0.94	1.17
4,046.00	5.50	301.90	4,037.54	128.40	-153.78	200.10	0.31	-0.23	-2.03
4,174.00	5.40	301.30	4,164.97	134.77	-164.13	212.20	0.09	-0.08	-0.47
4,303.00	5.40	304.70	4,293.39	141.38	-174.31	224.30	0.25	0.00	2.64
4,431.00	5.40	303.30	4,420.83	148.11	-184.30	236.33	0.10	0.00	-1.09
4,559.00	5.00	300.60	4,548.30	154.26	-194.13	247.88	0.37	-0.31	-2.11
4,687.00	4.90	299.90	4,675.82	159.82	-203.67	258.85	0.09	-0.08	-0.55
4,815.00	5.00	302.30	4,803.34	165.53	-213.13	269.83	0.18	0.08	1.88
4,943.00	5.40	306.20	4,930.82	172.07	-222.70	281.41	0.42	0.31	3.05
5,071.00	5.30	305.90	5,058.26	179.09	-232.35	293.35	0.08	-0.08	-0.23
5,199.00	5.10	305.90	5,185.73	185.89	-241.75	304.94	0.16	-0.16	0.00
5,327.00	4.80	304.80	5,313.26	192.29	-250.75	315.98	0.25	-0.23	-0.86
5,455.00	4.50	304.80	5,440.83	198.21	-259.27	326.35	0.23	-0.23	0.00
5,583.00	4.70	309.10	5,568.42	204.38	-267.47	336.61	0.31	0.16	3.36

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Well:	#206 D	North Reference:	Grid
Wellbore:	WB1/Job #1411605	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Capstar 118)	Database:	Compass 5000 GCR epdm

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)
5,711.00	4.80	304.50	5,695.98	210.72	-275.95	347.20	0.31	0.08	-3.59
5,839.00	4.40	301.70	5,823.57	216.34	-284.54	357.44	0.36	-0.31	-2.19
5,967.00	4.20	302.50	5,951.21	221.43	-292.67	367.00	0.16	-0.16	0.63
6,095.00	4.80	309.10	6,078.82	227.33	-300.78	377.03	0.62	0.47	5.16
6,223.00	4.40	310.60	6,206.40	233.90	-308.67	387.28	0.33	-0.31	1.17
6,351.00	5.40	300.20	6,333.94	240.13	-317.60	398.16	1.04	0.78	-8.13
6,479.00	5.30	300.10	6,461.38	246.12	-327.92	410.01	0.08	-0.08	-0.08
6,607.00	5.00	299.50	6,588.86	251.83	-337.89	421.40	0.24	-0.23	-0.47
6,735.00	6.10	308.50	6,716.26	258.81	-348.07	433.73	1.09	0.86	7.03
6,864.00	5.20	313.30	6,844.64	267.09	-357.69	446.40	0.79	-0.70	3.72
6,880.00	4.90	312.00	6,860.57	268.05	-358.72	447.80	2.01	-1.88	-8.13
Last Phoenix MWD Survey									
6,930.00	4.90	312.00	6,910.39	270.90	-361.89	452.05	0.00	0.00	0.00
Projection to TD									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,285.42	1,285.33	10.31	9.60	First Phoenix MWD Survey
6,880.00	6,860.57	268.05	-358.72	Last Phoenix MWD Survey
6,930.00	6,910.39	270.90	-361.89	Projection to TD

Checked By: _____ Approved By: _____ Date: _____