



PHOENIX
TECHNOLOGY SERVICES

October 22, 2014

Oil Conservation Division
State of New Mexico
1625 N. French Drive
District 1 - Hobbs
Hobbs, New Mexico 88240

Attention: Regulatory Department

Re: Apache Corporation
West Blinbry Drinkard Unit #201D
Lea County, NM
API #30-025-41871
Job No. 1411420

HOBBS OCD
OCT 27 2014
RECEIVED

Enclosed please find the Survey Data Certification, and the original Plat and one copy of the Survey Report performed on the above referenced well by Phoenix Technology Services, Inc. (P-5 No. 664171). Other information required by your office is as follows:

Name & Title of Surveyor	Drain Hole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Charles Love	201D	1,442	6,907	08/17/14	08/21/14	MWD

A certified plat on which the bottom hole location is oriented both to the surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Best Regards,

Dana Robinson

Dana Robinson
Operations Administrator

Certified mail receipt number: 7011 1570 0001 4365 2520

OCT 28 2014

Phoenix Technology Services SURVEY DATA CERTIFICATION

HOBBS OCD
OCT 27 2014
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PHOENIX
TECHNOLOGY SERVICES

PHOENIX JOB NUMBER 1411420

OPERATOR Apache Corporation

WELL NAME West Blinebry Drinkard Unit #201D

COUNTY & STATE

Lea County, NM

API WELL NUMBER 30-025-41871

PROPOSED DIRECTION 106.41

TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
1,362 ft	-1.22 ft	0.20	225.7 ft	1.74S	1.78W	Gyro

FIRST SURVEY DATE	FIRST SURVEY DEPTH	INCLIN	AZIMUTH
17-Aug-14	1,442 ft	0.20	175.9

SURVEY INSTRUMENT TYPE
Phoenix MWD

LAST SURVEY DATE	LAST SURVEY DEPTH	INCLIN	AZIMUTH
21-Aug-14	6,907 ft	6	112

TO THE BEST OF MY KNOWLEDGE I
CERTIFY THIS SURVEY DATA TO BE
TRUE AND CORRECT.

PROJECTED TD SURVEY DATE	PROJECTED TD SURVEY DEPTH	INCLIN	AZIMUTH
21-Aug-14	6,957 ft	6	112

Charles Love

PRINT YOUR NAME ABOVE

Charles Love

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	-0.63
DECLINATION OR GRID	GRID

8/15/2014

TODAY'S DATE

MWD SUPERVISOR 1

Charles Love

DIRECTIONAL DRILLER 1

Tim Owens

MWD SUPERVISOR 2

0

DIRECTIONAL DRILLER 2

Daniel Scott

HOBBS OCD

OCT 27 2014

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Apache Corporation

Lea County, NM (NAD83 NME)

West Blinebry Drinkard Unit

#201D

WB1/ Job #1411420

Survey: Phoenix MWD Surveys

Standard Survey Report

04 September, 2014

Survey Report

Company:	Apache Corporation	Local Co-ordinate Reference:	Well #201 D
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	KB: 12' @ 3493.00usft (Basic 39)
Site:	West Blinebry Drinkard Unit	MD Reference:	KB: 12' @ 3493.00usft (Basic 39)
Well:	#201 D	North Reference:	Grid
Wellbore:	WB1/ Job #1411420	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Basic 39)	Database:	GCR DB v5000

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		
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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	#201 D				
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Well Position	+N/-S	0.00 usft	Northing:	545,411.23 usft	Latitude:	32° 29' 38.38522 N
	+E/-W	0.00 usft	Easting:	900,790.26 usft	Longitude:	103° 10' 3.01380 W
Position Uncertainty	0.00 usft		Wellhead Elevation:	0.00 usft	Ground Level:	3,481.00 usft

Wellbore	WB1/ Job #1411420				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	08/18/14	7.13	60.41	48,483

Design	Surveys (Basic 39)				
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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	106.41

Survey Program	Date 09/04/14				
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From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
1,362.00	1,362.00	Single Shot Gyro Survey (WB1/ Job #1411	NS-GYRO-SS	NS Gyro single shots

Survey										
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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)
1,362.00	0.21	225.65	1,362.00	-1.74	-1.78	-1.22	0.00	0.00	0.00
Tie In to SS Gyro Survey									
1,442.00	0.20	175.90	1,442.00	-1.99	-1.88	-1.24	0.22	-0.01	-62.19
First Phoenix MWD Survey									
1,534.00	1.50	186.00	1,533.98	-3.34	-1.99	-0.97	1.42	1.41	10.98
1,627.00	2.10	159.50	1,626.94	-6.15	-1.52	0.28	1.09	0.65	-28.49
1,720.00	4.00	126.70	1,719.81	-9.69	1.67	4.34	2.70	2.04	-35.27
1,811.00	5.70	107.40	1,810.49	-12.93	8.53	11.84	2.56	1.87	-21.21
1,903.00	6.40	107.30	1,901.97	-15.83	17.79	21.53	0.76	0.76	-0.11
1,996.00	6.50	107.60	1,994.39	-18.96	27.75	31.98	0.11	0.11	0.32

Survey Report

Company:	Apache Corporation	Local Co-ordinate Reference:	Well #201 D
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	KB: 12' @ 3493.00usft (Basic 39)
Site:	West Blinebry Drinkard Unit	MD Reference:	KB: 12' @ 3493.00usft (Basic 39)
Well:	#201 D	North Reference:	Grid
Wellbore:	WB1/ Job #1411420	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Basic 39)	Database:	GCR DB v5000

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)	
2,087.00	6.90	108.50	2,084.76	-22.25	37.85	42.59	0.45	0.44	0.99	
2,181.00	7.40	105.50	2,178.03	-25.66	49.03	54.29	0.66	0.53	-3.19	
2,275.00	7.10	105.40	2,271.28	-28.82	60.47	66.15	0.32	-0.32	-0.11	
2,368.00	7.30	104.10	2,363.55	-31.79	71.74	77.80	0.28	0.22	-1.40	
2,460.00	7.50	104.30	2,454.78	-34.69	83.23	89.64	0.22	0.22	0.22	
2,554.00	7.10	105.10	2,548.02	-37.72	94.78	101.58	0.44	-0.43	0.85	
2,648.00	6.70	105.70	2,641.34	-40.72	105.67	112.87	0.43	-0.43	0.64	
2,742.00	6.20	106.10	2,734.74	-43.61	115.82	123.43	0.53	-0.53	0.43	
2,834.00	6.80	101.50	2,826.15	-46.07	125.93	133.82	0.86	0.65	-5.00	
2,927.00	7.40	101.40	2,918.44	-48.36	137.20	145.27	0.65	0.65	-0.11	
3,019.00	7.00	101.60	3,009.71	-50.65	148.50	156.76	0.44	-0.43	0.22	
3,113.00	6.30	103.10	3,103.08	-52.97	159.13	167.62	0.77	-0.74	1.60	
3,208.00	5.70	103.30	3,197.56	-55.24	168.80	177.53	0.63	-0.63	0.21	
3,303.00	6.90	97.90	3,291.98	-57.11	179.05	187.89	1.41	1.26	-5.68	
3,396.00	6.30	99.80	3,384.37	-58.75	189.61	198.48	0.69	-0.65	2.04	
3,488.00	7.30	103.40	3,475.72	-60.96	200.27	209.33	1.18	1.09	3.91	
3,580.00	6.90	104.10	3,567.01	-63.66	211.31	220.69	0.44	-0.43	0.76	
3,674.00	6.50	103.30	3,660.37	-66.26	221.97	231.65	0.44	-0.43	-0.85	
3,768.00	8.00	104.20	3,753.62	-69.09	233.49	243.50	1.60	1.60	0.96	
3,863.00	7.90	104.90	3,847.70	-72.39	246.21	256.63	0.15	-0.11	0.74	
3,955.00	7.50	104.90	3,938.87	-75.56	258.12	268.95	0.43	-0.43	0.00	
4,048.00	7.20	105.70	4,031.11	-78.70	269.59	280.84	0.34	-0.32	0.86	
4,139.00	7.00	106.00	4,121.41	-81.77	280.41	292.09	0.22	-0.22	0.33	
4,232.00	6.80	106.60	4,213.74	-84.90	291.14	303.26	0.23	-0.22	0.65	
4,324.00	6.60	109.10	4,305.11	-88.19	301.35	313.99	0.38	-0.22	2.72	
4,417.00	6.70	109.80	4,397.49	-91.78	311.51	324.75	0.14	0.11	0.75	
4,508.00	6.90	109.60	4,487.85	-95.41	321.65	335.50	0.22	0.22	-0.22	
4,602.00	7.10	109.10	4,581.14	-99.20	332.46	346.94	0.22	0.21	-0.53	
4,696.00	7.00	111.00	4,674.43	-103.16	343.30	358.46	0.27	-0.11	2.02	
4,788.00	6.80	111.40	4,765.77	-107.15	353.60	369.47	0.22	-0.22	0.43	
4,881.00	6.60	112.10	4,858.13	-111.17	363.68	380.27	0.23	-0.22	0.75	
4,976.00	6.50	112.20	4,952.51	-115.26	373.72	391.06	0.11	-0.11	0.11	
5,071.00	6.30	115.30	5,046.92	-119.52	383.41	401.56	0.42	-0.21	3.26	
5,164.00	8.00	101.80	5,139.20	-123.02	394.36	413.05	2.56	1.83	-14.52	
5,259.00	7.80	102.10	5,233.30	-125.73	407.13	426.07	0.21	-0.21	0.32	
5,352.00	7.40	102.90	5,325.48	-128.39	419.14	438.34	0.44	-0.43	0.86	
5,446.00	7.20	102.50	5,418.72	-131.01	430.79	450.26	0.22	-0.21	-0.43	
5,539.00	6.80	101.50	5,511.03	-133.37	441.88	461.56	0.45	-0.43	-1.08	
5,633.00	6.10	99.60	5,604.43	-135.31	452.26	472.06	0.78	-0.74	-2.02	
5,727.00	5.70	100.60	5,697.93	-137.01	461.77	481.66	0.44	-0.43	1.06	
5,820.00	7.70	98.00	5,790.29	-138.72	472.48	492.42	2.17	2.15	-2.80	
5,913.00	8.90	101.40	5,882.32	-141.01	485.70	505.75	1.39	1.29	3.66	
6,006.00	9.50	107.50	5,974.12	-144.74	500.07	520.59	1.23	0.65	6.56	

Survey Report

Company:	Apache Corporation	Local Co-ordinate Reference:	Well #201 D
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Wellbore:	WB1/ Job #1411420	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Basic 39)	Database:	GCR DB v5000

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)	
6,099.00	8.50	114.90	6,065.98	-149.94	513.63	535.07	1.64	-1.08	7.96	
6,195.00	8.20	115.60	6,160.96	-155.89	526.24	548.84	0.33	-0.31	0.73	
6,286.00	7.50	113.70	6,251.11	-161.08	537.53	561.14	0.82	-0.77	-2.09	
6,380.00	7.10	113.70	6,344.35	-165.88	548.47	572.99	0.43	-0.43	0.00	
6,473.00	6.90	112.90	6,436.65	-170.37	558.87	584.24	0.24	-0.22	-0.86	
6,567.00	6.70	113.50	6,529.99	-174.75	569.10	595.29	0.23	-0.21	0.64	
6,661.00	6.60	112.90	6,623.36	-179.04	579.11	606.10	0.13	-0.11	-0.64	
6,755.00	6.60	113.40	6,716.74	-183.28	589.04	616.83	0.06	0.00	0.53	
6,848.00	6.20	112.90	6,809.16	-187.36	598.57	627.12	0.43	-0.43	-0.54	
6,907.00	6.00	112.00	6,867.82	-189.76	604.37	633.36	0.38	-0.34	-1.53	
Final Phoenix MWD Survey										
6,957.00	6.00	112.00	6,917.55	-191.71	609.21	638.56	0.00	0.00	0.00	
Projection to TD										

Survey Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
1,362.00	1,362.00	-1.74	-1.78	Tie In to SS Gyro Survey	
1,442.00	1,442.00	-1.99	-1.88	First Phoenix MWD Survey	
6,907.00	6,867.82	-189.76	604.37	Final Phoenix MWD Survey	
6,957.00	6,917.55	-191.71	609.21	Projection to TD	