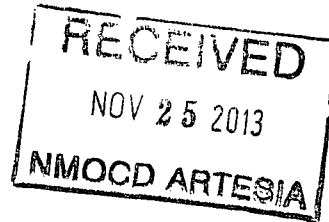




PHOENIX
TECHNOLOGY SERVICES

November 22, 2013

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



Attention: Regulatory Department

Re: Apache Corporation
Washington 33 State #67
Eddy County, NM
API #30-015-41680
Job No. 1311522

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	Drainhole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Brad Hill	67	603	4,472	11/16/13	11/18/13	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,

Sonya Thomas

Sonya
Operations Administrator

Certified mail receipt number: 7011 1570 0001 4365 0267

RECEIVED

Phoenix Technology Services SURVEY DATA CERTIFICATION

NOV 25 2013

INMOCD ARTESIA


PHOENIX
TECHNOLOGY SERVICES

PHOENIX JOB NUMBER

1311522

OPERATOR

Apache Corporation

WELL NAME

Washington 33 State #67

COUNTY & STATE

Eddy Count, New Mexico

API WELL NUMBER

30-015-41680

PROPOSED DIRECTION

214.58

TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
500 ft	499.88 ft	1.92	212.25	7.86 ft	.68 ft	Gyrodata Gyro

FIRST	FIRST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
16-Nov-13	603 ft	1.8	213.5

SURVEY INSTRUMENT

TYPE

Phoenix MWD

LAST	LAST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
18-Nov-13	4,472 ft	0.8	315.9

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

PROJECTED	PROJECTED		
TD SURVEY	TD SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
18-Nov-13	4,520 ft	0.8	315.9

Brad Hill

PRINT YOUR NAME ABOVE

Brad Hill

SIGN YOUR NAME ABOVE

11/18/13

TODAY'S DATE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	
	7.53
DECLINATION OR GRID	GRID

MWD SUPERVISOR 1

Brad Hill

DIRECTIONAL DRILLER 1

Ken Smith

MWD SUPERVISOR 2

0

DIRECTIONAL DRILLER 2

Justin Watson

1805 Brittmore Road

Houston, Texas 77043

(713)3370609 (Voice); (713)337-0599 (Fax)



EXPLORING WHAT'S POSSIBLE



Apache Corporation

Eddy County, NM (NAD27 NME)

Washington 33 State

#67

WB1/Job #1311522

Survey: Phoenix MWD Survey

Phoenix Final Survey Report

22 November, 2013





Phoenix Technology Services

Phoenix Final Survey Report



Company:	Apache Corporation	Local Co-ordinate Reference:	Well #67
Project:	Eddy County, NM (NAD27/NME)	TVD Reference:	KB @ 3691'00usft (Capstar 114)
Site:	Washington 33 State	MD Reference:	KB @ 3691'00usft (Capstar 114)
Well:	#67	North Reference:	Grid
Wellbore:	WB1/Job #1311522	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Capstar 114)	Database:	GCR:DB

Project:	Eddy 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:	Washington 33 State		
Site Position:	Map	Northing:	653,591.90 usft
From:		Easting:	549,165.70 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"
		Latitude:	32° 47' 48.16208 N
		Longitude:	104° 10' 23.99797 W
		Grid Convergence:	0.09 °

Well:	#67		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 47' 52.15563 N
		Longitude:	104° 10' 37.11587 W
		Ground Level:	3,680.00 usft

Wellbore:	WB1/Job #1311522		
Magnetics	Model Name	Sample Date	Declination
			(°)
	BGGM2013	11/05/13	7.73
			Dip Angle
			(°)
			60.54
			Field Strength
			(nT)
			48,633

Design:	Surveys (Capstar 114)		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			214.58

Survey Program	Date 11/22/13		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
100.00	500.00	Gyro (WB1/Job #1311522)	CB-GYRO-MS
603.00	4,520.00	Phoenix MWD Survey (WB1/Job #131152)	MWD
			Description
			Camera based gyro multishot
			MWD - Standard

Survey	MD	Inc	Azi (azimuth)	TVD	N/S	E/W	V. Sec	DLeg
	(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)
	500.00	1.92	212.25	499.88	-7.86	-0.68	6.86	0.00
Tie-on to Gyro								
	603.00	1.80	213.50	602.83	-10.67	-2.50	10.20	0.12
First Phoenix MWD Survey								
	649.00	1.90	215.50	648.81	-11.89	-3.34	11.68	0.26
	734.00	1.80	243.70	733.76	-13.63	-5.35	14.26	1.07
	820.00	2.20	252.60	819.71	-14.72	-8.14	16.74	0.59
	905.00	3.80	242.10	904.59	-16.53	-12.18	20.52	1.98
	991.00	3.80	240.40	990.40	-19.27	-17.18	25.62	0.13
	1,077.00	4.50	254.90	1,076.18	-21.56	-22.92	30.75	1.46
	1,162.00	5.00	242.20	1,160.89	-24.15	-29.41	36.58	1.37



Phoenix Technology Services

Phoenix Final Survey Report



Company:	Apache Corporation	Local Co-ordinate Reference:	Well #67
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3691.00usft (Capstar 114)
Site:	Washington 33 State	MD Reference:	KB @ 3691.00usft (Capstar 114)
Well:	#67	North Reference:	Grid
Wellbore:	WB1/Job #1311522	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Capstar 114)	Database:	GCR DB

Survey							
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
1,248.00	5.10	226.70	1,246.56	-28.52	-35.51	43.64	1.59
1,333.00	4.70	231.70	1,331.25	-33.27	-40.99	50.66	0.69
1,419.00	5.40	220.20	1,416.92	-38.55	-46.37	58.05	1.43
1,505.00	5.10	222.40	1,502.56	-44.46	-51.56	65.87	0.42
1,590.00	5.90	216.80	1,587.16	-50.75	-56.72	73.98	1.13
1,676.00	7.00	216.20	1,672.62	-58.52	-62.47	83.63	1.28
1,761.00	8.60	212.30	1,756.83	-68.07	-68.92	95.16	1.98
1,847.00	9.90	211.40	1,841.71	-79.81	-76.21	108.97	1.52
1,933.00	10.00	210.90	1,926.42	-92.53	-83.90	123.80	0.15
2,018.00	11.10	206.80	2,009.98	-106.17	-91.38	139.27	1.57
2,104.00	11.00	206.30	2,094.39	-120.91	-98.74	155.59	0.16
2,192.00	10.60	206.60	2,180.83	-135.68	-106.09	171.92	0.46
2,278.00	10.50	205.50	2,265.37	-149.82	-113.00	187.49	0.26
2,363.00	9.80	209.50	2,349.04	-163.11	-119.90	202.34	1.17
2,449.00	8.50	208.20	2,433.95	-175.08	-126.51	215.95	1.53
2,535.00	8.30	207.80	2,519.02	-186.17	-132.41	228.43	0.24
2,620.00	6.80	211.00	2,603.29	-195.91	-137.86	239.55	1.83
2,706.00	5.50	203.60	2,688.79	-204.06	-142.13	248.67	1.77
2,792.00	4.40	202.30	2,774.47	-210.88	-145.03	255.94	1.29
2,877.00	2.90	205.90	2,859.29	-215.84	-147.21	261.25	1.78
2,963.00	1.90	206.40	2,945.22	-219.07	-148.79	264.82	1.16
3,048.00	0.50	124.40	3,030.20	-220.54	-149.11	266.21	2.23
3,134.00	0.60	151.30	3,116.20	-221.15	-148.59	266.41	0.32
3,219.00	0.30	133.50	3,201.19	-221.69	-148.21	266.65	0.39
3,305.00	0.30	147.50	3,287.19	-222.04	-147.93	266.77	0.09
3,390.00	0.40	133.70	3,372.19	-222.43	-147.60	266.90	0.15
3,476.00	0.40	144.10	3,458.19	-222.88	-147.20	267.05	0.08
3,561.00	0.20	151.80	3,543.19	-223.25	-146.96	267.22	0.24
3,647.00	0.20	162.20	3,629.19	-223.53	-146.84	267.38	0.04
3,732.00	0.30	138.30	3,714.19	-223.83	-146.65	267.52	0.17
3,818.00	0.30	157.30	3,800.18	-224.21	-146.41	267.70	0.12
3,904.00	0.10	211.10	3,886.18	-224.48	-146.36	267.89	0.30
3,989.00	0.20	291.10	3,971.18	-224.49	-146.54	268.00	0.24
4,075.00	0.40	282.40	4,057.18	-224.37	-146.97	268.15	0.24
4,161.00	0.40	264.50	4,143.18	-224.34	-147.57	268.46	0.14
4,246.00	0.60	270.20	4,228.18	-224.36	-148.31	268.90	0.24
4,334.00	0.70	297.90	4,316.17	-224.11	-149.24	269.22	0.37
4,420.00	0.80	303.10	4,402.16	-223.54	-150.21	269.30	0.14
4,472.00	0.80	315.90	4,454.16	-223.08	-150.77	269.24	0.34
Last Phoenix MWD Survey							
4,520.00	0.80	315.90	4,502.15	-222.60	-151.23	269.10	0.00
Projection to TD							



Phoenix Technology Services

Phoenix Final Survey Report



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Well:	#67	North Reference:	Grid
Wellbore:	WB1/Job #1311522	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Capstar 114)	Database:	GCR DB

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
500.00	499.88	-7.86	-0.68	Tie-on to Gyro
603.00	602.83	-10.67	-2.50	First Phoenix MWD Survey
4,472.00	4,454.16	-223.08	-150.77	Last Phoenix MWD Survey
4,520.00	4,502.15	-222.60	-151.23	Projection to TD

Checked By: _____	Approved By: _____	Date: _____
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