



HOBBS OCD

SEP 18 2016

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Apache Corporation

Lea County, NM (NAD27 NME)
Pacifico State San Andres Unit
#1H

D-16-105-36E
200' FWL + 660' FWL

ST01/ Job #1610133

Design: Surveys (Trinidad 222)

Standard Survey Report

19 February, 2016

* final must w/
gyro tie on





Phoenix Technology Services LP

Survey Report



Company:	Apache Corporation	Local Co-ordinate Reference:	Well #1H
Project:	Lea County, NM (NAD27 NME)	TVD Reference:	GL + KB @ 4048.00usft (Trinidad 222)
Site:	Pacifico State San Andres Unit	MD Reference:	GL + KB @ 4048.00usft (Trinidad 222)
Well:	#1H	North Reference:	Grid
Wellbore:	ST01 / Job #1610133	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Trinidad 222)	Database:	Compass 5000 GCR

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)	
11,318.00	92.80	177.30	4,940.08	-6,686.51	73.18	6,686.92	0.16	-0.11	-0.11	
11,409.00	92.80	177.40	4,935.63	-6,777.31	77.38	6,777.75	0.11	0.00	0.11	
11,499.00	90.70	177.90	4,932.89	-6,867.19	81.07	6,867.66	2.40	-2.33	0.56	
11,590.00	90.70	177.60	4,931.77	-6,958.11	84.64	6,958.62	0.33	0.00	-0.33	
11,680.00	89.00	178.30	4,932.01	-7,048.05	87.86	7,048.59	2.04	-1.89	0.78	
11,771.00	88.70	179.20	4,933.84	-7,139.01	89.85	7,139.56	1.04	-0.33	0.99	
11,787.00	88.60	179.20	4,934.21	-7,155.00	90.07	7,155.56	0.63	-0.63	0.00	
Final Phoenix MWD Survey										
11,850.00	88.60	179.20	4,935.75	-7,217.98	90.95	7,218.54	0.00	0.00	0.00	
Projection to TD										

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
4,411.12	4,408.76	-98.22	-28.42	Tie In to Gryodata Gyro Surveys	
4,478.00	4,475.44	-103.43	-28.83	First Phoenix MWD Survey	
11,787.00	4,934.21	-7,155.00	90.07	Final Phoenix MWD Survey	
11,850.00	4,935.75	-7,217.98	90.95	Projection to TD	

Phoenix Technology Services
SURVEY DATA CERTIFICATION



PHOENIX JOB NUMBER 1610133

OPERATOR Apache

WELL NAME Pacifico State SA Unit #1H

COUNTY & STATE Lea County, NM

API WELL NUMBER 30-025-42923

PROPOSED DIRECTION 179.38

TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
4411.12	4,408.76 ft	3.78	186.61	-98.25 ft	-28.43 ft	Gyro Data

FIRST	FIRST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
13-Feb-16	4,478 ft	5.2°	182.9°

SURVEY INSTRUMENT
TYPE
Phoenix MWD

LAST	LAST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
18-Feb-16	11,787 ft	88.6	179.2

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-Feb-16	11,850 ft	88.6	179.2

Gatlin Finley

PRINT YOUR NAME ABOVE

Gatlin Finley

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	6.28
DECLINATION OR GRID	GRID

2/18/2016

TODAY'S DATE

MWD SUPERVISOR 1 Gatlin Finley

DIRECTIONAL DRILLER 1 Terry Parker

MWD SUPERVISOR 2 Joe Owens

DIRECTIONAL DRILLER 2 Frank Sullivan

MEASURED DEPTH	INCL	AZIMUTH	DOGLEG SEVERITY	VERTICAL DEPTH	CLOSURE Distance	CLOSURE AZIMUTH	NS	EW
2599.00	1.66	195.62	0.24	2598.75	22.02	212.32	-18.61	-11.77
2690.00	1.78	199.37	0.18	2689.71	24.67	210.70	-21.21	-12.59
2780.00	2.06	201.64	0.31	2779.66	27.64	209.60	-24.03	-13.65
2871.00	2.29	200.28	0.26	2870.59	31.05	208.64	-27.25	-14.88
2961.00	2.33	201.03	0.06	2960.52	34.64	207.81	-30.64	-16.16
3052.00	2.37	201.94	0.06	3051.44	38.35	207.20	-34.11	-17.53
3142.00	2.22	204.05	0.19	3141.37	41.94	206.83	-37.43	-18.93
3233.00	2.16	203.00	0.08	3232.30	45.41	206.58	-40.61	-20.32
3324.00	2.22	198.07	0.22	3323.24	48.86	206.15	-43.86	-21.53
3414.00	2.17	193.02	0.22	3413.17	52.24	205.46	-47.17	-22.46
3505.00	2.21	188.52	0.19	3504.10	55.60	204.55	-50.58	-23.10
3596.00	2.45	187.02	0.27	3595.03	59.15	203.52	-54.24	-23.60
3686.00	2.65	188.49	0.24	3684.94	63.01	202.53	-58.21	-24.14
3777.00	2.80	190.45	0.20	3775.84	67.24	201.70	-62.47	-24.86
3868.00	2.92	190.93	0.14	3866.72	71.71	201.00	-66.94	-25.70
3958.00	3.04	187.37	0.25	3956.60	76.29	200.28	-71.56	-26.44
4049.00	3.11	183.58	0.24	4047.47	81.03	199.39	-76.43	-26.91
4139.00	3.27	183.86	0.18	4137.33	85.87	198.49	-81.43	-27.23
4230.00	3.51	184.65	0.27	4228.17	91.10	197.66	-86.81	-27.63
4320.00	3.46	185.28	0.07	4318.00	96.45	196.94	-92.26	-28.11
4411.00	3.63	185.93	0.19	4408.83	101.98	196.32	-97.87	-28.66
4501.00	3.76	186.60	0.14	4498.64	107.70	195.78	-103.64	-29.29
4592.00	3.73	186.71	0.03	4589.45	113.56	195.31	-109.53	-29.98
4682.00	3.80	186.64	0.08	4679.25	119.40	194.88	-115.39	-30.67
4773.00	3.77	186.37	0.04	4770.06	125.34	194.48	-121.35	-31.35
4864.00	3.65	186.48	0.12	4860.87	131.17	194.12	-127.21	-32.00
4954.00	3.46	186.45	0.21	4950.69	136.71	193.81	-132.76	-32.63
5045.00	3.40	186.97	0.07	5041.53	142.12	193.54	-138.17	-33.27
5136.00	4.11	187.38	0.77	5132.33	148.05	193.28	-144.09	-34.02
5226.00	5.68	187.64	1.75	5222.00	155.68	193.00	-151.69	-35.02
5291.00	6.96	187.06	1.98	5286.61	162.80	192.75	-158.79	-35.93

Final Station Closure:

Distance: 162.80 ft

Az:

192.75



**PHOENIX
TECHNOLOGY SERVICES**

February 24, 2016

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

Attention: Regulatory Department

Re: Apache Corporation
Pacifico State SA Unit #1H
Lea County, NM *D-16-105-36E 200' FWL + 660' FWL*
API #30-025-42923
Job No. 1610133

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	
Gatlin Finley	1H	4,478	11,787	02/13/16	02/18/16	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,
Claudia Carreon

Claudia Carreon
Operations Administrator

Certified mail receipt number: 7015 0640 0000 9907 5401