

PHOENIX
TECHNOLOGY SERVICES

April 15, 2014

Oil Conservation Division
State of New Mexico
811 S. First St.
Artesia, New Mexico 88210

Dear District 2 - Artesia

Attention: Regulatory Department

Re: Apache Corporation
SB State #4
Eddy County, NM
API #30-015-42003
Job No. 1410350

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:

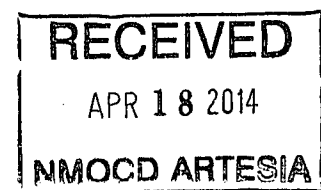
Name & Title of Surveyor	Drain Hole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Josh Goff	4	397	4,066	03/21/14	03/23/14	MWD

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 1745

Phoenix Technology Services SURVEY DATA CERTIFICATION



PHOENIX JOB NUMBER

1410350

OPERATOR

Apache Corporation

WELL NAME

SB State #4

COUNTY & STATE

Eddy County, NM

API WELL NUMBER

30-015-42003

PROPOSED DIRECTION

36.58

TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
282 ft	281.99 ft	0.47	223.26	-78 ft	-1.45 ft	Gyro Data

FIRST SURVEY DATE	FIRST SURVEY DEPTH	INCLIN	AZIMUTH
21-Mar-14	397 ft	.4 ft	256.4

SURVEY INSTRUMENT

TYPE

Phoenix MWD

LAST SURVEY DATE	LAST SURVEY DEPTH	INCLIN	AZIMUTH
23-Mar-14	4,066 ft	0.5	94.8

TO THE BEST OF MY KNOWLEDGE APR 18 2014

CERTIFY THIS SURVEY DATA TO BE

TRUE AND CORRECT.

RECEIVED

INMOUD ARTESIA

PROJECTED TD SURVEY DATE	PROJECTED TD SURVEY DEPTH	INCLIN	AZIMUTH
23-Mar-14	4,114 ft	0.5	94.8

Josh Goff

PRINT YOUR NAME ABOVE

Josh Goff

SIGN YOUR NAME ABOVE

3/23/2014

TODAY'S DATE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED

7.69

DECLINATION OR GRID

GRID

MWD SUPERVISOR 1

Josh Goff

DIRECTIONAL DRILLER 1

Sam Wilson

MWD SUPERVISOR 2

0

DIRECTIONAL DRILLER 2

0

1805 Brittmore Road

Houston, Texas 77043

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

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone: (505) 393-6161 Fax: (505) 393-0720

DISTRICT II
811 S. First St., Artesia, NM 88210
Phone: (505) 748-1283 Fax: (505) 748-9720

DISTRICT III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-	Pool Code	Pool Name Artesia, Glorieta - Yeso
Property Code	Property Name SB STATE	Well Number 4
OGRID No. 873	Operator Name APACHE CORPORATION	Elevation 3551'

Surface Location

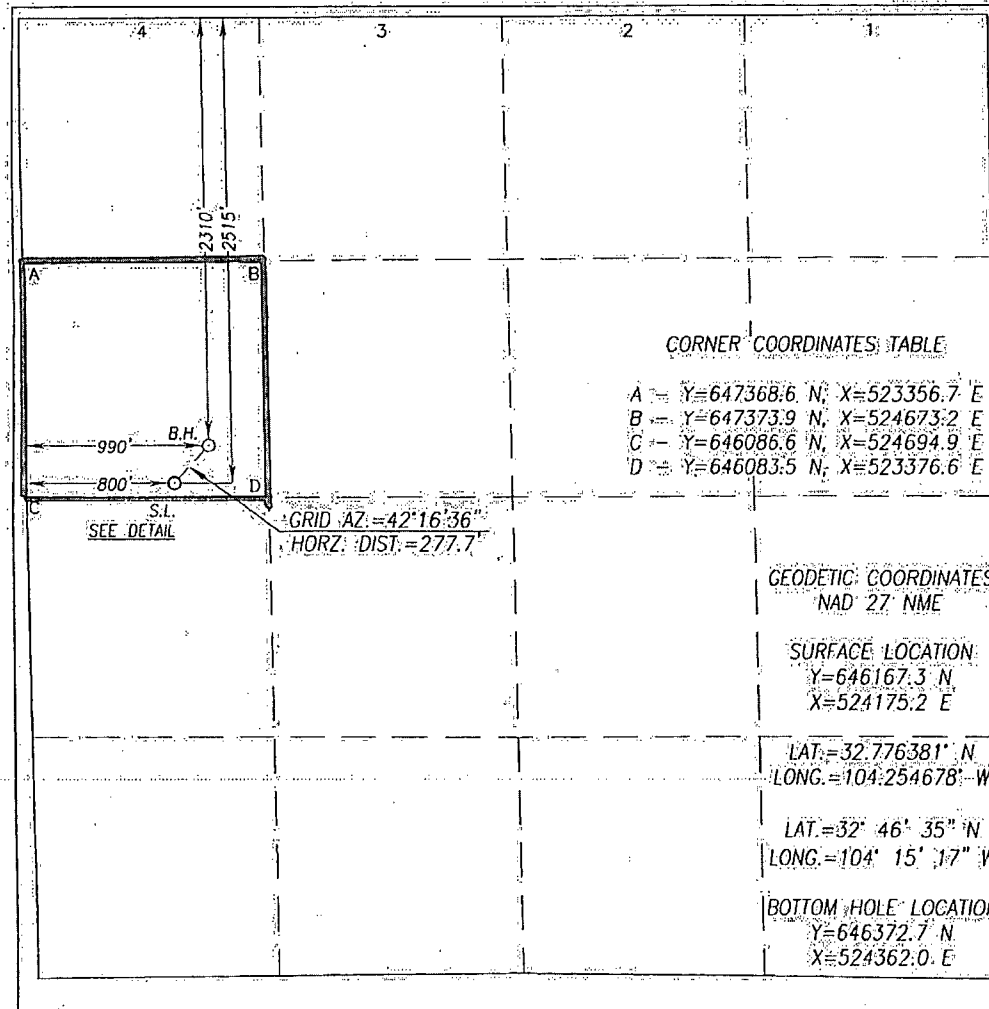
UL or lot No.	Section	Township	Range	Lot Idn.	Feet from the	North/South line	Feet from the	East/West line	County
E	2	18-S	27-E		2515	NORTH	800	WEST	EDDY

Bottom Hole Location If Different From Surface.

UL or lot No.	Section	Township	Range	Lot Idn.	Feet from the	North/South line	Feet from the	East/West line	County
E	2	18-S	27-E		2310	NORTH	990	WEST	EDDY

Dedicated Acres 40	Joint or Infill	Consolidation Code	Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or, unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Michelle Cooper 1-4-14
Signature Date

Michelle Cooper
Printed Name

michelle.cooper@apachecorp.com
E-mail Address

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

DECEMBER 30, 2013

Date of Survey
Signature & Seal of Professional Surveyor:

Gary G. Eidson
Certificate Number 12641
Ronald J. Eidson 3239
ACK: 13.11.1366

Apache Corporation

Eddy County, NM (NAD27 NME)

SB State

#4

WB1/Job #1410350

Survey: Phoenix MWD Surveys

Standard Survey Report

24 March, 2014

Survey Report

Company:	Apache Corporation	Local Co-ordinate Reference:	Well #4
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3562.00usft (Capstar 120)
Site:	SB State	MD Reference:	KB @ 3562.00usft (Capstar 120)
Well:	#4	North Reference:	Grid
Wellbore:	WB1/Job #1410350	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Capstar 120)	Database:	Compass 5000 GCR DB

Project:	Eddy County, NM (NAD27 NME)	System Datum:	Mean Sea Level
Map System:	US State Plane 1927 (Exact solution)		
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site:	SB State		
Site Position:		Northing:	646,167.30 usft
From:	Map	Easting:	524,175.20 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 46' 34.97110 N
		Longitude:	104° 15' 16.83912 W
		Grid Convergence:	0.04 °

Well	#4					
Well Position	+N/-S	0.00 usft	Northing:	646,167.30 usft	Latitude:	32° 46' 34.97110 N
	+E/-W	0.00 usft	Easting:	524,175.20 usft	Longitude:	104° 15' 16.83912 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,551.00 usft

Wellbore		WB1/Job #1410350			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	02/24/14	7.74	60.50	48,575

Design					Surveys (Capstar 120)						
Audit Notes:											
Version:		1.0		Phase:		ACTUAL		Tie On Depth:		0.00	
Vertical Section:		Depth From (TVD)		+N/-S		+E/-W		Direction			
		(usft)		(usft)		(usft)		(°)			
		0.00		0.00		0.00		36.58			

Survey Program	Date	03/24/14		
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
100.00	282.00	Gyrodata Surveys (WB1/Job #1410350)	NS-GYRO-MS	North sensing gyrocompassing m/s
282.00	4,114.00	Phoenix MWD Surveys (WB1/Job #14103)	MWD	MWD - Standard

Survey									
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)
282.00	0.47	223.26	281.99	-0.78	-1.45	-1.49	0.00	0.00	0.00
Tie In to Gyro Surveys									
397.00	0.40	256.40	396.99	-1.22	-2.16	-2.27	0.22	-0.06	28.82
First Phoenix MWD Survey									
487.00	1.30	20.20	486.98	-0.33	-2.12	-1.53	1.73	1.00	137.56
588.00	2.10	29.80	587.93	2.35	-0.80	1.41	0.84	0.79	9.50
674.00	3.70	36.10	673.82	5.96	1.62	5.75	1.89	1.86	7.33
759.00	6.20	30.00	758.50	12.15	5.53	13.05	3.00	2.94	-7.18
844.00	6.10	25.10	843.01	20.21	9.74	22.04	0.63	-0.12	-5.76

Survey Report

Company:	Apache Corporation	Local Co-ordinate Reference:	Well #4
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3562.00usft (Capstar 120)
Site:	SB State	MD Reference:	KB @ 3562.00usft (Capstar 120)
Well:	#4	North Reference:	Grid
Wellbore:	WB1/Job #1410350	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Capstar 120)	Database:	Compass 5000 GCR DB

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)
929.00	6.90	36.10	927.47	28.43	14.66	31.57	1.74	0.94	12.94
1,015.00	6.20	31.90	1,012.91	36.55	20.16	41.36	0.99	-0.81	-4.88
1,100.00	5.50	29.00	1,097.46	44.01	24.56	49.98	0.89	-0.82	-3.41
1,185.00	6.50	47.40	1,182.00	50.83	30.08	58.74	2.53	1.18	21.65
1,271.00	6.20	46.50	1,267.48	57.32	37.03	68.10	0.37	-0.35	-1.05
1,356.00	5.50	42.40	1,352.03	63.49	43.11	76.67	0.96	-0.82	-4.82
1,442.00	6.60	40.30	1,437.55	70.30	49.08	85.70	1.30	1.28	-2.44
1,527.00	6.70	39.00	1,521.98	77.88	55.36	95.53	0.21	0.12	-1.53
1,613.00	8.20	37.30	1,607.25	86.66	62.24	106.68	1.76	1.74	-1.98
1,698.00	8.10	36.80	1,691.39	96.27	69.50	118.73	0.14	-0.12	-0.59
1,783.00	8.20	36.10	1,775.54	105.97	76.66	130.78	0.17	0.12	-0.82
1,869.00	8.10	34.70	1,860.67	115.90	83.72	142.96	0.26	-0.12	-1.63
1,954.00	8.40	42.10	1,944.79	125.43	91.29	155.13	1.30	0.35	8.71
2,039.00	7.50	50.20	2,028.97	133.59	99.72	166.70	1.69	-1.06	9.53
2,124.00	4.10	47.40	2,113.53	139.20	106.22	175.08	4.01	-4.00	-3.29
2,210.00	4.90	19.60	2,199.27	144.74	109.71	181.61	2.67	0.93	-32.33
2,295.00	6.10	18.90	2,283.88	152.43	112.39	189.39	1.41	1.41	-0.82
2,380.00	7.50	26.90	2,368.28	161.65	116.37	199.16	1.98	1.65	9.41
2,465.00	8.40	29.30	2,452.46	172.02	121.91	210.79	1.13	1.06	2.82
2,551.00	8.30	26.90	2,537.55	183.03	127.80	223.14	0.42	-0.12	-2.79
2,636.00	8.10	34.80	2,621.68	193.42	133.99	235.17	1.35	-0.24	9.29
2,721.00	7.70	33.30	2,705.88	203.10	140.53	246.84	0.53	-0.47	-1.76
2,807.00	7.10	42.00	2,791.16	211.86	147.25	257.88	1.48	-0.70	10.12
2,892.00	5.40	47.60	2,875.66	218.46	153.72	267.04	2.12	-2.00	6.59
2,978.00	4.10	60.20	2,961.36	222.72	159.38	273.83	1.93	-1.51	14.65
3,063.00	2.60	74.60	3,046.22	224.74	163.88	278.13	2.01	-1.76	16.94
3,149.00	2.50	71.60	3,132.13	225.85	167.54	281.21	0.19	-0.12	-3.49
3,234.00	2.20	107.30	3,217.06	225.95	170.85	283.26	1.73	-0.35	42.00
3,320.00	0.90	144.30	3,303.03	224.91	172.82	283.60	1.83	-1.51	43.02
3,405.00	1.10	141.50	3,388.02	223.73	173.72	283.19	0.24	0.24	-3.29
3,491.00	0.90	141.50	3,474.01	222.56	174.65	282.80	0.23	-0.23	0.00
3,576.00	0.90	147.60	3,559.00	221.47	175.43	282.39	0.11	0.00	7.18
3,662.00	0.70	147.80	3,644.99	220.46	176.07	281.96	0.23	-0.23	0.23
3,747.00	0.50	116.30	3,729.98	219.85	176.68	281.84	0.45	-0.24	-37.06
3,833.00	0.40	119.60	3,815.98	219.54	177.28	281.94	0.12	-0.12	3.84
3,918.00	0.60	122.90	3,900.98	219.15	177.91	282.01	0.24	0.24	3.88
4,003.00	0.50	122.90	3,985.97	218.71	178.59	282.06	0.12	-0.12	0.00
4,066.00	0.50	94.80	4,048.97	218.53	179.10	282.22	0.39	0.00	-44.60
Final Phoenix MWD Survey									
4,114.00	0.50	94.80	4,096.97	218.50	179.51	282.44	0.00	0.00	0.00
Projection to TD									

Survey Report

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Well:	#4	North Reference:	Grid
Wellbore:	WB1/Job #1410350	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Capstar 120)	Database:	Compass 5000 GCR DB

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
282.00	281.99	-0.78	-1.45	Tie In to Gyro Surveys
397.00	396.99	-1.22	-2.16	First Phoenix MWD Survey
4,066.00	4,048.97	218.53	179.10	Final Phoenix MWD Survey
4,114.00	4,096.97	218.50	179.51	Projection to TD