



October 26, 2013

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

HOBBS OCD

NOV 04 2013

RECEIVED

Attention: Regulatory Department

Re: Apache Corporation
NEDU #726
Lea County, NM
API #30-025-41276
Job No. 1311359

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	
Samuel Wilson	726	1385	6831	10/18/13	10/21/13	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,

Kelly Jo Walter

Kelly Jo Walter
Operations Administrator

Certified mail receipt number: 7011 1570 0001 4364 8783

NOV 05 2013

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PHOENIX TECHNOLOGY SERVICES SURVEY DATA CERTIFICATION


PHOENIX
TECHNOLOGY SERVICES

PHOENIX JOB NUMBER

1311359

OPERATOR

Apache Corporation

WELL NAME

NEDU #726

COUNTY & STATE

Lea County, New Mexico

API WELL NUMBER

30-025-41276

PROPOSED DIRECTION

281.05

TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
1,254 ft	1,253.98 ft	0.15	67.5	3.61	3.79	Gyro

FIRST SURVEY DATE	FIRST SURVEY DEPTH	INCLIN	AZIMUTH
18-Oct-13	1,385 ft	0.3	57.5

SURVEY INSTRUMENT

TYPE

Phoenix MWD

LAST SURVEY DATE	LAST SURVEY DEPTH	INCLIN	AZIMUTH
21-Oct-13	6,831 ft	4.8	280.5

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-Oct-13	6,879 ft	4.8	280.5

Samuel D. Wilson

PRINT YOUR NAME ABOVE

SIGN YOUR NAME ABOVE

10/21/2013

TODAY'S DATE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	6.49
DECLINATION OR GRID	Grid

MWD SUPERVISOR 1

Samuel D. Wilson

DIRECTIONAL DRILLER 1

Richard Thurman

MWD SUPERVISOR 2

n/a

DIRECTIONAL DRILLER 2

Ethan Haley

1805 Brittmore Road

Houston, Texas 77043

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



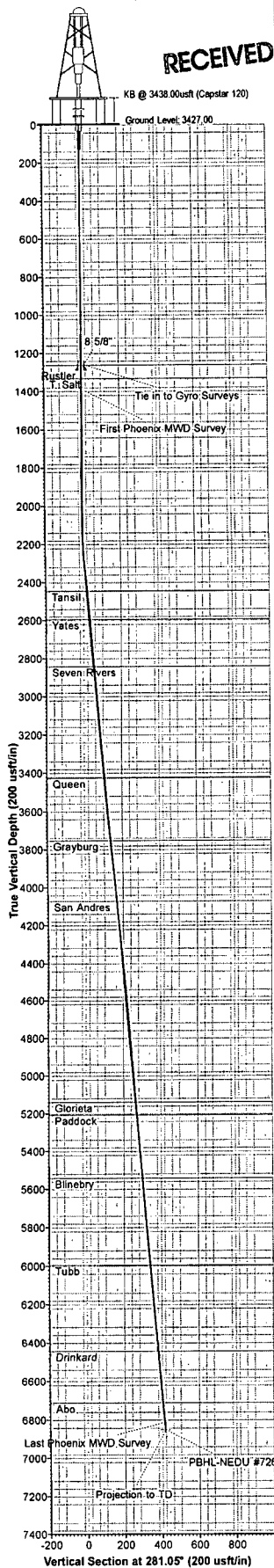
Project: Lea County, NM (NAD83 NME)
Site: NEDU
Well: #726
Wellbore: WB1/Job #1311359
Design: Plan #1 10-10-13
Rig: Capstar 120



T G M
A A
Azimuths to Grid North
True North: -0.63°
Magnetic North: 6.49°
Magnetic Field
Strength: 48579.5nT
Dip Angle: 60.43°
Date: 10/10/2013
Model: IGRF2010_14

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WELL DETAILS

+N/-S	+E/-W	Northing	Ground Level	Easting	Latitude	Longitude
0.00	0.00	538517.32	3427.00	905523.38	32° 28' 29.66487 N	103° 9' 8.65069 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSecl	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2	2100.00	0.00	0.00	2100.00	0.00	0.00	0.00	0.00	0.00		KOP Start DLS 2.00 TFO 281.05
3	2358.60	5.17	281.05	2358.25	2.24	-11.45	2.00	281.05	11.66		Start 4510.11 hold at 2358.60 MD
4	6868.71	5.17	281.05	6850.00	80.18	-410.48	0.00	0.00	418.24	PBHL-NEDU #726	TD at 6868.71

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL-NEDU #726	6850.00	80.18	-410.48	538587.50	905112.90	32° 28' 30.50286 N	103° 9' 13.43124 W	Circle (Radius: 25.00)

plan hits target center

CASING DETAILS

TVD	MD	Name	Size
1288.00	1288.00	8 5/8"	8-5/8
7030.00		5 1/2" Production	5-1/2

LEGEND

— #726, WB1/Job #1311359, Surveys (Capstar 120) V0
— Plan #1 10-10-13

Map System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone Name: New Mexico Eastern Zone

Local Origin: Well #726, Grid North

Latitude: 32° 28' 29.66487 N
Longitude: 103° 9' 8.65069 W

Grid East: 905523.38
Grid North: 538517.32
Scale Factor: 1.000

Geomagnetic Model: IGRF2010_14

Sample Date: 10-Oct-13

Magnetic Declination: 7.12°

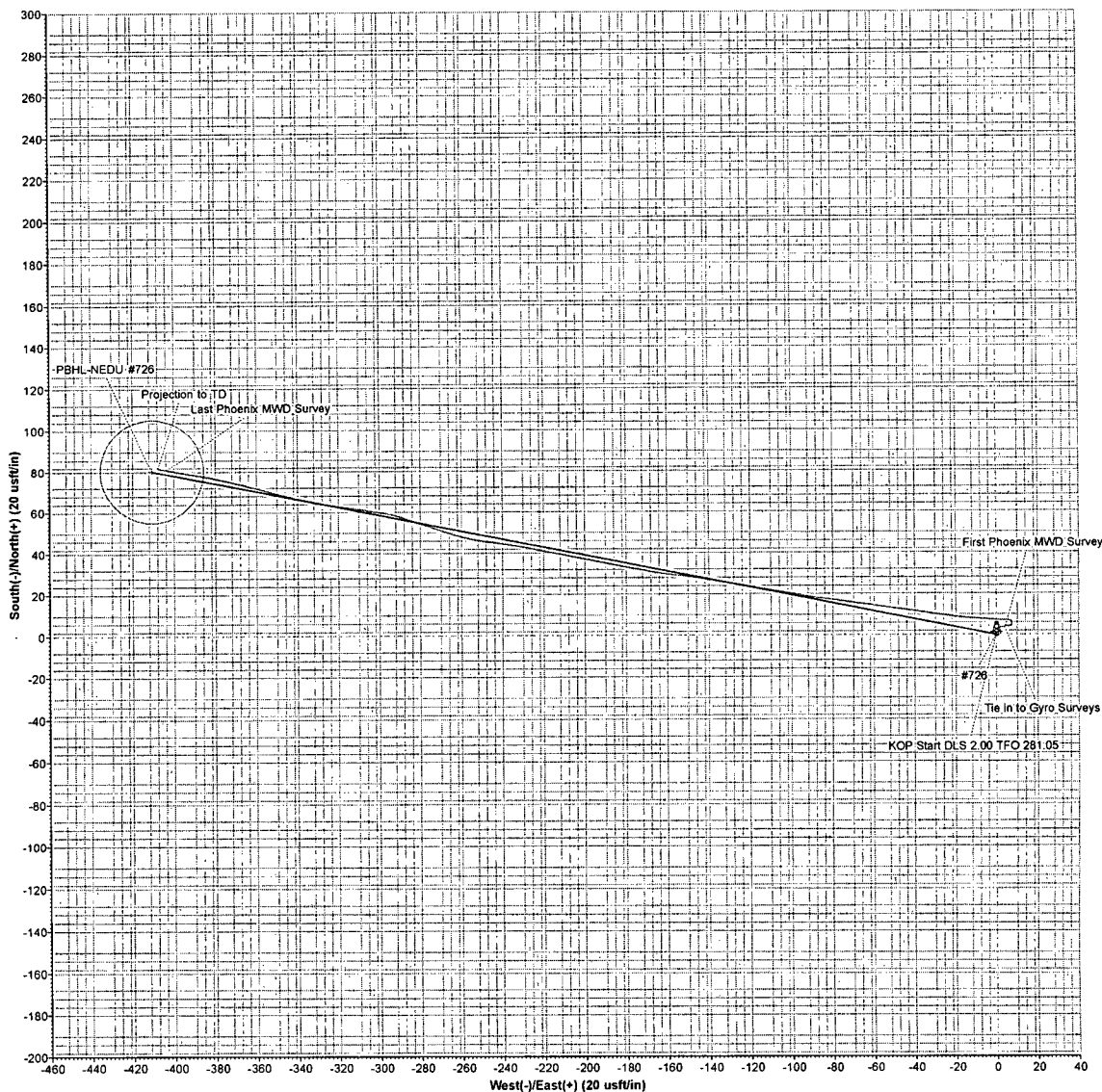
Dip Angle from Horizontal: 60.43°

Magnetic Field Strength: 48580

To convert a Magnetic Direction to a Grid Direction, Add 6.49°
To convert a Magnetic Direction to a True Direction, Add 7.12° East
To convert a True Direction to a Grid Direction, Subtract 0.63°

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
1263.00	1263.00	Rustler	0.00	
1333.00	1333.00	T. Silt	0.00	
2447.00	2447.71	Tansil	0.00	
2595.00	2595.32	Yates	0.00	
2844.00	2846.34	Seven Rivers	0.00	
3428.00	3430.72	Queen	0.00	
3753.00	3758.05	Grayburg	0.00	
4073.00	4080.36	San Andres	0.00	
5141.00	5152.73	Glorieta	0.00	
5208.00	5220.00	Paddock	0.00	
5543.00	5556.37	Blinberry	0.00	
5996.00	6011.22	Tubb	0.00	
6443.00	6460.05	Drinkard	0.00	
6712.00	6730.15	Abo	0.00	



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Apache Corporation

Lea County, NM (NAD83 NME)

NEDU

#726

WB1/Job #1311359

Survey: Phoenix MWD Surveys

Phoenix Final Survey Report

24 October, 2013

Phoenix Technology Services

Phoenix Final Survey Report

Company:	Apache Corporation	Local Co-ordinate Reference:	Well #726
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	KB @ 3438.00usft (Capstar 120)
Site:	NEDU	MD Reference:	KB @ 3438.00usft (Capstar 120)
Well:	#726	North Reference:	Grid
Wellbore:	WB1/Job #1311359	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Capstar 120)	Database:	GCR DB

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	NEDU		
Site Position:		Northing:	549,246.17 usft
From:	Map	Easting:	907,874.81 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"
		Latitude:	32° 30' 15.55234 N
		Longitude:	103° 8' 39.81023 W
		Grid Convergence:	0.64 °

Well	#726		
Well Position	+N/-S	0.00 usft	Latitude: 32° 28' 29.66467 N
	+E/-W	0.00 usft	Longitude: 103° 9' 8.65069 W
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Ground Level:	3,427.00 usft

Wellbore	WB1/Job #1311359				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010_14	10/10/13	7.12	60.43	48,580

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	281.05	

Survey Program	Date 10/21/13				
From	To	Survey (Wellbore)	Tool Name	Description	
(usft)	(usft)				
100.00	1,254.00	Scientific Gyro Surveys (WB1/Job #13113	ISCWSA-GYRO-3	VES Gyro	
1,385.00	6,879.00	Phoenix MWD Surveys (WB1/Job #131135	MWD	MWD - Standard	

Survey								
MD	Inc	Azi (azimuth)	TVD	N/S	E/W	V. Sec	DLeg	
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	
1,254.00	0.15	67.50	1,253.98	3.61	3.79	-3.03	0.00	
Tie in to Gyro Surveys								
1,385.00	0.30	57.50	1,384.98	3.86	4.24	-3.42	0.12	
First Phoenix MWD Survey								
1,470.00	0.30	85.80	1,469.98	4.00	4.65	-3.80	0.17	
1,555.00	0.40	86.90	1,554.98	4.03	5.17	-4.30	0.12	
1,641.00	0.50	80.10	1,640.98	4.11	5.83	-4.94	0.13	
1,726.00	0.80	70.00	1,725.97	4.38	6.76	-5.79	0.38	
1,811.00	0.30	38.60	1,810.97	4.75	7.45	-6.41	0.67	
1,896.00	0.70	347.30	1,895.96	5.43	7.48	-6.30	0.66	
1,982.00	1.00	325.00	1,981.95	6.56	6.93	-5.55	0.51	

Phoenix Technology Services

Phoenix Final Survey Report

Company:	Apache Corporation	Local Co-ordinate Reference:	Well #726
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	KB @ 3438.00usft (Capstar 120)
Site:	NEDU	MD Reference:	KB @ 3438.00usft (Capstar 120)
Well:	#726	North Reference:	Grid
Wellbore:	WB1/Job #1311359	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Capstar 120)	Database:	GCR DB

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (%/100usft)	
2,067.00	1.10	269.60	2,066.94	7.16	5.69	-4.21	1.15	
2,152.00	1.90	267.40	2,151.91	7.09	3.47	-2.04	0.94	
2,237.00	2.70	276.00	2,236.84	7.24	0.07	1.32	1.02	
2,323.00	3.30	272.80	2,322.72	7.57	-4.42	5.79	0.72	
2,408.00	3.90	273.40	2,407.56	7.86	-9.75	11.07	0.71	
2,493.00	4.70	276.30	2,492.32	8.41	-16.09	17.41	0.98	
2,578.00	4.90	277.60	2,577.02	9.28	-23.15	24.50	0.27	
2,663.00	5.20	278.80	2,661.69	10.35	-30.56	31.97	0.37	
2,748.00	5.50	278.20	2,746.32	11.52	-38.40	39.89	0.36	
2,833.00	5.40	277.10	2,830.93	12.59	-46.40	47.95	0.17	
2,919.00	5.40	277.90	2,916.55	13.65	-54.42	56.03	0.09	
3,004.00	5.80	277.90	3,001.15	14.79	-62.64	64.31	0.47	
3,090.00	5.30	278.10	3,086.74	15.95	-70.87	72.62	0.58	
3,175.00	4.80	276.70	3,171.41	16.91	-78.29	80.08	0.61	
3,260.00	5.20	278.40	3,256.09	17.89	-85.63	87.48	0.50	
3,346.00	5.80	279.60	3,341.69	19.19	-93.77	95.71	0.71	
3,431.00	5.40	280.20	3,426.29	20.61	-101.95	104.01	0.48	
3,517.00	5.10	278.00	3,511.93	21.86	-109.71	111.87	0.42	
3,602.00	4.90	281.40	3,596.60	23.10	-117.01	119.27	0.42	
3,687.00	5.80	278.70	3,681.23	24.47	-124.82	127.19	1.10	
3,772.00	5.80	279.70	3,765.80	25.84	-133.30	135.78	0.12	
3,858.00	5.80	279.00	3,851.36	27.25	-141.87	144.47	0.08	
3,943.00	5.40	278.10	3,935.95	28.49	-150.07	152.75	0.48	
4,028.00	5.40	276.30	4,020.57	29.49	-158.01	160.73	0.20	
4,113.00	6.00	280.70	4,105.15	30.76	-166.35	169.16	0.87	
4,198.00	6.40	280.00	4,189.66	32.40	-175.38	178.34	0.48	
4,284.00	6.50	280.30	4,275.11	34.11	-184.89	188.00	0.12	
4,369.00	6.30	281.30	4,359.58	35.88	-194.20	197.47	0.27	
4,454.00	6.50	281.70	4,444.05	37.77	-203.48	206.95	0.24	
4,540.00	5.60	280.40	4,529.57	39.51	-212.38	216.01	1.06	
4,625.00	5.80	281.60	4,614.15	41.13	-220.66	224.45	0.27	
4,711.00	5.10	280.30	4,699.76	42.68	-228.68	232.62	0.83	
4,796.00	4.80	278.20	4,784.45	43.87	-235.92	239.95	0.41	
4,881.00	4.80	278.10	4,869.15	44.87	-242.96	247.05	0.01	
4,966.00	4.80	277.40	4,953.85	45.83	-250.01	254.15	0.07	
5,052.00	4.50	284.00	5,039.57	47.11	-256.85	261.11	0.71	
5,137.00	4.40	287.60	5,124.31	48.91	-263.19	267.68	0.35	
5,222.00	4.60	287.50	5,209.05	50.92	-269.55	274.31	0.24	
5,307.00	4.50	288.10	5,293.78	52.98	-275.97	281.01	0.13	
5,392.00	4.60	288.90	5,378.51	55.12	-282.36	287.69	0.14	
5,477.00	4.00	290.00	5,463.27	57.24	-288.37	294.00	0.71	
5,563.00	4.20	280.30	5,549.05	58.82	-294.29	300.11	0.84	
5,649.00	4.50	279.80	5,634.81	59.96	-300.71	306.63	0.35	
5,734.00	5.10	278.40	5,719.51	61.08	-307.74	313.74	0.72	

Phoenix Technology Services

Phoenix Final Survey Report

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Project:	Lea County, NM (NAD83 NME)	TVD Reference:	KB @ 3438.00usft (Capstar 120)
Site:	NEDU	MD Reference:	KB @ 3438.00usft (Capstar 120)
Well:	#726	North Reference:	Grid
Wellbore:	WB1/Job #1311359	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Capstar 120)	Database:	GCR DB

Survey							
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
5,819.00	5.10	278.10	5,804.17	62.17	-315.22	321.29	0.03
5,904.00	5.00	279.00	5,888.84	63.28	-322.61	328.76	0.15
5,990.00	4.80	280.50	5,974.53	64.52	-329.85	336.10	0.28
6,075.00	5.00	282.70	6,059.22	65.98	-336.96	343.36	0.32
6,160.00	5.40	282.40	6,143.87	67.66	-344.48	351.06	0.47
6,246.00	5.10	285.70	6,229.51	69.56	-352.12	358.92	0.49
6,331.00	5.30	284.20	6,314.16	71.54	-359.56	366.61	0.28
6,417.00	5.20	284.40	6,399.80	73.49	-367.18	374.46	0.12
6,502.00	5.10	283.40	6,484.45	75.32	-374.59	382.08	0.16
6,587.00	5.30	281.40	6,569.10	76.97	-382.11	389.78	0.32
6,672.00	5.30	280.00	6,653.74	78.43	-389.83	397.63	0.15
6,757.00	5.10	280.00	6,738.39	79.77	-397.41	405.34	0.24
6,831.00	4.80	280.50	6,812.11	80.90	-403.70	411.72	0.41
Last Phoenix MWD Survey							
6,879.00	4.80	280.50	6,859.94	81.64	-407.65	415.74	0.00
Projection to TD							

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,254.00	1,253.98	3.61	3.79	Tie in to Gyro Surveys
1,385.00	1,384.98	3.86	4.24	First Phoenix MWD Survey
6,831.00	6,812.11	80.90	-403.70	Last Phoenix MWD Survey
6,879.00	6,859.94	81.64	-407.65	Projection to TD

Checked By: _____ Approved By: _____ Date: _____