PHOENIX
TECHNOLOGY SERVICES

RECEIVED
MAR 25 2013
NMOCD ARTESIA

March 20, 2013

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
NFE Federal 26H
Eddy Co., NM
API #30-015-40462
Job No. 1310211

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	
Matthew Dice	26H	459	9,815	02/26/13	03/18/13	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,

Kelly Jo Walter

Kelly Jo Walter
Operations Administrator

Certified mail receipt number: 7011 1570 0001 4364 9469

1805 Brittmoore Rd. Houston, TX 77043 • Phone (713) 337-0600 • Fax (713) 337-0599
www.phxtech.com

RECEIVED
MAR 25 2013
NMOCD ARTESIA

Phoenix Technology Services
SURVEY DATA CERTIFICATION

PHOENIX TECHNOLOGY SERVICES

PHOENIX JOB NUMBER	1310211	OPERATOR	Apache
WELL NAME	NFE Federal 26H	COUNTY & STATE	Eddy,NM

API WELL NUMBER	30-015-40462

PROPOSED DIRECTION	89.6

TIE-IN DATA						
MEASURED DEPTH	VERTICAL DEPTH	INCLIN	AZIMUTH	N-S COORD	E-W COORD	DATA SOURCE
ft	.00 ft	.0 ft	.0 ft	.00 ft	.00 ft	Surface

FIRST SURVEY DATE	FIRST SURVEY DEPTH	INCLIN	AZIMUTH
26-Feb-13	459 ft	4.1	245.0

SURVEY INSTRUMENT TYPE
Phoenix MWD

LAST SURVEY DATE	LAST SURVEY DEPTH	INCLIN	AZIMUTH
18-Mar-13	9,815 ft	87.4	90

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
18-Mar-13	9,871 ft	87.4	90

Matthew Dice
PRINT YOUR NAME ABOVE

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	7.44
DECLINATION OR GRID	DECLINATION

18-Mar-13
TODAY'S DATE

MWD SUPERVISOR 1	Matt Dice	DIRECTIONAL DRILLER 1	Tim Owens
MWD SUPERVISOR 2	Travis LaGarce	DIRECTIONAL DRILLER 2	Ken Smith

1805 Brittmore Road Houston, Texas 77043 (713)3370609 (Voice), (713)337-0599 (Fax)

nothing will printout below this line

By the end of the job complete this form, print it out, sign it and put in your job folder
This form is backup for any questions on data reliability
Survey Instrument type is either a MWD, Steering Tool, or Single Shot

RECEIVED
MAR 25 2013
NMOCD ARTESIA

Apache Corporation

Eddy County, NM (NAD27 NME)
NFE Federal #26H
Wellbore #1 / Job #1310211

Survey: Phoenix MWD Survey

Phoenix Final Survey Report

18 March, 2013

PHOENIX
TECHNOLOGY SERVICES

Phoenix Technology Services

Phoenix Final Survey Report

Company:	Apache Corporation	**Local Co-ordinate Reference:**	Well #26H
Project:	Eddy County, NM (NAD27 NME)	**TVD Reference:**	RF @ 3740.00usft (Basic 44)
Site:	NFE Federal	**MD Reference:**	RF @ 3740.00usft (Basic 44)
Well:	#26H	**North Reference:**	Grid
Wellbore:	Wellbore #1 / Job #1310211	**Survey Calculation Method:**	Minimum Curvature
Design:	Surveys (Basic 44)	**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: NFE Federal

Site Position:		**Northing:**	673,264.70 usft	**Latitude:**	32° 51' 0.490362 N
From:	Map	**Easting:**	633,303.50 usft	**Longitude:**	103° 53' 57.349661 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.24 °

Well: #26H

Well Position	**+N/-S**	0.00 usft	**Northing:**	673,329.70 usft	**Latitude:**	32° 51' 1.133543 N
	+E/-W	0.00 usft	**Easting:**	633,303.50 usft	**Longitude:**	103° 53' 57.346530 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	13.00 usft	**Ground Level:**	3,727.00 usft

Wellbore: Wellbore #1 / Job #1310211

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010_14	02/20/13	7.58	60.67	48,786

Design: Surveys (Basic 44)

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	89.60

Survey Program: Date 03/18/13

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
459.00	9,871.00	Phoenix MWD Survey (Wellbore #1 / Job #	MWD	MWD - Standard

Phoenix Technology Services

Phoenix Final Survey Report

Company:	Apache Corporation	**Local Co-ordinate Reference:**	Well #26H
Project:	Eddy County, NM (NAD27 NME)	**TVD Reference:**	RF @ 3740.00usft (Basic 44)
Site:	NFE Federal	**MD Reference:**	RF @ 3740.00usft (Basic 44)
Well:	#26H	**North Reference:**	Grid
Wellbore:	Wellbore #1 / Job #1310211	**Survey Calculation Method:**	Minimum Curvature
Design:	Surveys (Basic 44)	**Database:**	GCR DB

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
0.00	0.00	0.00	3,740.00	0.00	0.00	0.00	0.00	0.00	673,329.70	633,303.50
459.00	4.10	245.00	3,281.39	458.61	-6.94	-14.88	-14.93	0.89	673,322.76	633,288.62
Phoenix First MWD Survey										
517.00	4.00	246.30	3,223.54	516.46	-8.63	-18.61	-18.67	0.23	673,321.07	633,284.89
601.00	3.60	243.50	3,139.72	600.28	-10.98	-23.65	-23.73	0.52	673,318.72	633,279.85
685.00	3.30	242.90	3,055.87	684.13	-13.26	-28.16	-28.26	0.36	673,316.44	633,275.34
769.00	2.60	233.30	2,971.98	768.02	-15.50	-31.84	-31.95	1.02	673,314.20	633,271.66
851.00	1.80	222.30	2,890.05	849.95	-17.56	-34.20	-34.32	1.10	673,312.14	633,269.30
935.00	0.50	141.20	2,806.06	933.94	-18.82	-34.86	-34.99	2.13	673,310.88	633,268.64
1,018.00	4.20	77.90	2,723.14	1,016.86	-18.47	-31.66	-31.79	4.82	673,311.23	633,271.84
1,101.00	6.70	74.60	2,640.52	1,099.48	-16.55	-24.02	-24.13	3.03	673,313.15	633,279.48
1,185.00	8.00	73.70	2,557.21	1,182.79	-13.60	-13.68	-13.78	1.55	673,316.10	633,289.82
1,268.00	7.40	76.60	2,474.96	1,265.04	-10.75	-2.94	-3.02	0.86	673,318.95	633,300.56
1,352.00	8.00	77.50	2,391.72	1,348.28	-8.23	8.03	7.97	0.73	673,321.47	633,311.53
1,435.00	6.40	82.40	2,309.38	1,430.62	-6.36	18.25	18.21	2.06	673,323.34	633,321.75
1,519.00	5.20	84.00	2,225.81	1,514.19	-5.35	26.68	26.64	1.44	673,324.35	633,330.18
1,602.00	4.50	83.70	2,143.11	1,596.89	-4.60	33.66	33.62	0.84	673,325.10	633,337.16
1,686.00	3.90	81.60	2,059.33	1,680.67	-3.82	39.76	39.73	0.74	673,325.88	633,343.26
1,770.00	3.00	83.10	1,975.48	1,764.52	-3.14	44.77	44.74	1.08	673,326.56	633,348.27
1,853.00	2.80	83.30	1,892.59	1,847.41	-2.64	48.94	48.92	0.24	673,327.06	633,352.44
1,937.00	1.80	81.40	1,808.66	1,931.34	-2.20	52.28	52.26	1.19	673,327.50	633,355.78
2,020.00	1.10	83.40	1,725.69	2,014.31	-1.92	54.36	54.34	0.85	673,327.78	633,357.86
2,104.00	0.20	83.30	1,641.69	2,098.31	-1.81	55.30	55.29	1.07	673,327.89	633,358.80
2,187.00	0.10	33.60	1,558.69	2,181.31	-1.73	55.49	55.48	0.19	673,327.97	633,358.99
2,271.00	0.50	17.90	1,474.69	2,265.31	-1.32	55.64	55.63	0.48	673,328.38	633,359.14
2,355.00	0.30	10.70	1,390.70	2,349.30	-0.75	55.80	55.79	0.25	673,328.95	633,359.30
2,438.00	0.70	9.30	1,307.70	2,432.30	-0.04	55.92	55.92	0.48	673,329.66	633,359.42

Company:	Apache Corporation	**Local Co-ordinate Reference:**	Well #26H
Project:	Eddy County, NM (NAD27 NME)	**TVD Reference:**	RF @ 3740.00usft (Basic 44)
Site:	NFE Federal	**MD Reference:**	RF @ 3740.00usft (Basic 44)
Well:	#26H	**North Reference:**	Grid
Wellbore:	Wellbore #1 / Job #1310211	**Survey Calculation Method:**	Minimum Curvature
Design:	Surveys (Basic 44)	**Database:**	GCR DB

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
2,522.00	0.80	345.30	1,223.71	2,516.29	1.03	55.85	55.86	0.39	673,330.73	633,359.35
2,605.00	0.70	346.40	1,140.71	2,599.29	2.09	55.59	55.60	0.12	673,331.79	633,359.09
2,689.00	0.90	332.90	1,056.72	2,683.28	3.17	55.16	55.19	0.33	673,332.87	633,358.66
2,773.00	1.30	327.90	972.74	2,767.26	4.57	54.36	54.39	0.49	673,334.27	633,357.86
2,856.00	1.20	318.00	889.76	2,850.24	6.01	53.28	53.32	0.29	673,335.71	633,356.78
2,940.00	1.40	322.10	805.78	2,934.22	7.47	52.06	52.11	0.26	673,337.17	633,355.56
3,024.00	1.40	315.50	721.80	3,018.20	9.02	50.71	50.77	0.19	673,338.72	633,354.21
3,109.00	1.50	317.50	636.83	3,103.17	10.58	49.23	49.30	0.13	673,340.28	633,352.73
3,192.00	1.30	332.60	553.86	3,186.14	12.21	48.06	48.14	0.50	673,341.91	633,351.56
3,276.00	1.10	332.60	469.87	3,270.13	13.78	47.25	47.35	0.24	673,343.48	633,350.75
3,359.00	1.30	324.50	386.89	3,353.11	15.25	46.34	46.44	0.32	673,344.95	633,349.84
3,423.00	1.10	318.90	322.91	3,417.09	16.30	45.51	45.62	0.36	673,346.00	633,349.01
3,540.00	1.30	331.10	205.93	3,534.07	18.31	44.13	44.26	0.28	673,348.01	633,347.63
3,624.00	0.90	345.30	121.95	3,618.05	19.78	43.50	43.64	0.57	673,349.48	633,347.00
3,666.00	0.70	345.80	79.95	3,660.05	20.35	43.36	43.50	0.48	673,350.05	633,346.86
3,750.00	0.70	142.80	-4.05	3,744.05	20.44	43.54	43.68	1.63	673,350.14	633,347.04
3,834.00	1.30	150.10	-88.03	3,828.03	19.21	44.33	44.46	0.73	673,348.91	633,347.83
3,918.00	1.00	146.30	-172.02	3,912.02	17.77	45.21	45.33	0.37	673,347.47	633,348.71
4,002.00	1.00	154.20	-256.00	3,996.00	16.50	45.93	46.05	0.16	673,346.20	633,349.43
4,085.00	1.20	157.60	-338.99	4,078.99	15.04	46.58	46.69	0.25	673,344.74	633,350.08
4,169.00	1.10	157.80	-422.97	4,162.97	13.48	47.22	47.31	0.12	673,343.18	633,350.72
4,253.00	1.00	163.00	-506.96	4,246.96	12.04	47.74	47.82	0.16	673,341.74	633,351.24
4,337.00	1.00	166.50	-590.94	4,330.94	10.62	48.13	48.20	0.07	673,340.32	633,351.63
4,414.00	1.00	168.80	-667.93	4,407.93	9.31	48.41	48.48	0.05	673,339.01	633,351.91
4,497.00	1.10	168.90	-750.92	4,490.92	7.82	48.71	48.76	0.12	673,337.52	633,352.21
4,581.00	1.00	167.10	-834.90	4,574.90	6.31	49.03	49.07	0.13	673,336.01	633,352.53
4,665.00	1.00	173.50	-918.89	4,658.89	4.87	49.27	49.31	0.13	673,334.57	633,352.77

Company:	Apache Corporation	**Local Co-ordinate Reference:**	Well #26H
Project:	Eddy County, NM (NAD27 NME)	**TVD Reference:**	RF @ 3740.00usft (Basic 44)
Site:	NFE Federal	**MD Reference:**	RF @ 3740.00usft (Basic 44)
Well:	#26H	**North Reference:**	Grid
Wellbore:	Wellbore #1 / Job #131021	**Survey Calculation Method:**	Minimum Curvature
Design:	Surveys (Basic 44)	**Database:**	GCR DB

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
4,749.00	0.80	176.80	-1,002.88	4,742.88	3.56	49.39	49.41	0.25	673,333.26	633,352.89
4,829.00	0.90	174.10	-1,082.87	4,822.87	2.37	49.48	49.50	0.13	673,332.07	633,352.98
4,925.00	0.30	154.70	-1,178.87	4,918.87	1.40	49.67	49.68	0.65	673,331.10	633,353.17
4,957.00	1.20	98.70	-1,210.86	4,950.86	1.27	50.04	50.04	3.32	673,330.97	633,353.54
4,989.00	5.30	93.50	-1,242.81	4,982.81	1.13	51.84	51.85	12.83	673,330.83	633,355.34
5,022.00	8.70	93.00	-1,275.55	5,015.55	0.91	55.86	55.86	10.30	673,330.61	633,359.36
5,054.00	11.90	93.40	-1,307.03	5,047.03	0.58	61.57	61.57	10.00	673,330.28	633,365.07
5,086.00	16.30	91.10	-1,338.06	5,078.06	0.30	69.36	69.36	13.86	673,330.00	633,372.86
5,118.00	21.10	89.50	-1,368.37	5,108.37	0.26	79.61	79.61	15.08	673,329.96	633,383.11
5,150.00	26.00	88.50	-1,397.69	5,137.69	0.50	92.39	92.39	15.36	673,330.20	633,395.89
5,182.00	30.80	87.80	-1,425.83	5,165.83	1.00	107.60	107.60	15.04	673,330.70	633,411.10
5,214.00	35.70	88.60	-1,452.58	5,192.58	1.54	125.13	125.14	15.37	673,331.24	633,428.63
5,246.00	40.90	89.40	-1,477.69	5,217.69	1.88	144.95	144.96	16.32	673,331.58	633,448.45
5,278.00	45.90	90.90	-1,500.93	5,240.93	1.81	166.93	166.94	15.95	673,331.51	633,470.43
5,310.00	50.60	93.10	-1,522.24	5,262.24	0.96	190.78	190.78	15.56	673,330.66	633,494.28
5,343.00	54.70	93.60	-1,542.25	5,282.25	-0.58	216.96	216.95	12.48	673,329.12	633,520.46
5,375.00	59.60	93.20	-1,559.61	5,299.61	-2.17	243.79	243.77	15.35	673,327.53	633,547.29
5,407.00	64.50	92.10	-1,574.60	5,314.60	-3.47	272.02	271.99	15.61	673,326.23	633,575.52
5,439.00	69.80	91.40	-1,587.02	5,327.02	-4.37	301.48	301.45	16.68	673,325.33	633,604.98
5,471.00	75.10	91.20	-1,596.67	5,336.67	-5.06	331.98	331.93	16.57	673,324.64	633,635.48
5,503.00	80.70	91.60	-1,603.37	5,343.37	-5.82	363.24	363.19	17.54	673,323.88	633,666.74
5,556.00	89.90	90.30	-1,607.71	5,347.71	-6.69	416.00	415.94	17.53	673,323.01	633,719.50
5,588.00	91.30	89.30	-1,607.38	5,347.38	-6.58	448.00	447.94	5.38	673,323.12	633,751.50
5,653.00	91.80	87.60	-1,605.62	5,345.62	-4.82	512.95	512.90	2.73	673,324.88	633,816.45
5,749.00	90.00	89.40	-1,604.11	5,344.11	-2.31	608.89	608.86	2.65	673,327.39	633,912.39
5,845.00	90.10	88.60	-1,604.03	5,344.03	-0.64	704.88	704.86	0.84	673,329.06	634,008.38
5,942.00	89.80	87.90	-1,604.11	5,344.11	2.33	801.83	801.83	0.79	673,332.03	634,105.33

Company:	Apache Corporation	**Local Co-ordinate Reference:**	Well #26H
Project:	Eddy County, NM (NAD27 NME)	**TVD Reference:**	RF @ 3740.00usft (Basic 44)
Site:	NFE Federal	**MD Reference:**	RF @ 3740.00usft (Basic 44)
Well:	#26H	**North Reference:**	Grid
Wellbore:	Wellbore #1 / Job #1310211	**Survey Calculation Method:**	Minimum Curvature
Design:	Surveys (Basic 44)	**Database:**	GCR DB

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
6,038.00	90.30	88.70	-1,604.03	5,344.03	5.17	897.79	897.80	0.98	673,334.87	634,201.29
6,134.00	89.90	87.60	-1,603.86	5,343.86	8.27	993.74	993.77	1.22	673,337.97	634,297.24
6,231.00	88.80	87.20	-1,604.96	5,344.96	12.67	1,090.63	1,090.69	1.21	673,342.37	634,394.13
6,327.00	88.40	88.70	-1,607.31	5,347.31	16.11	1,186.54	1,186.62	1.62	673,345.81	634,490.04
6,423.00	87.20	89.80	-1,610.99	5,350.99	17.36	1,282.45	1,282.54	1.70	673,347.06	634,585.95
6,520.00	89.20	91.60	-1,614.04	5,354.04	16.18	1,379.39	1,379.47	2.77	673,345.88	634,682.89
6,616.00	88.10	91.20	-1,616.30	5,356.30	13.83	1,475.33	1,475.39	1.22	673,343.53	634,778.83
6,712.00	90.40	91.70	-1,617.56	5,357.56	11.40	1,571.29	1,571.33	2.45	673,341.10	634,874.79
6,809.00	90.20	91.50	-1,617.05	5,357.05	8.69	1,668.25	1,668.27	0.29	673,338.39	634,971.75
6,905.00	89.40	91.00	-1,617.38	5,357.38	6.60	1,764.22	1,764.23	0.98	673,336.30	635,067.72
7,001.00	89.10	90.80	-1,618.64	5,358.64	5.09	1,860.20	1,860.19	0.38	673,334.79	635,163.70
7,098.00	88.50	91.20	-1,620.67	5,360.67	3.40	1,957.17	1,957.14	0.74	673,333.10	635,260.67
7,194.00	87.90	90.60	-1,623.69	5,363.69	1.89	2,053.11	2,053.07	0.88	673,331.59	635,356.61
7,290.00	86.90	89.50	-1,628.04	5,368.04	1.81	2,149.00	2,148.96	1.55	673,331.51	635,452.50
7,387.00	88.50	89.30	-1,631.93	5,371.93	2.82	2,245.92	2,245.88	1.66	673,332.52	635,549.42
7,483.00	90.10	89.40	-1,633.11	5,373.11	3.91	2,341.90	2,341.87	1.67	673,333.61	635,645.40
7,579.00	90.50	89.30	-1,632.60	5,372.60	5.00	2,437.89	2,437.87	0.43	673,334.70	635,741.39
7,676.00	89.80	88.60	-1,632.35	5,372.35	6.78	2,534.88	2,534.86	1.02	673,336.48	635,838.38
7,772.00	88.50	87.90	-1,633.77	5,373.77	9.71	2,630.82	2,630.82	1.54	673,339.41	635,934.32
7,868.00	89.60	88.30	-1,635.37	5,375.37	12.89	2,726.75	2,726.77	1.22	673,342.59	636,030.25
7,965.00	90.50	88.30	-1,635.28	5,375.28	15.77	2,823.71	2,823.75	0.93	673,345.47	636,127.21
8,061.00	90.30	88.00	-1,634.61	5,374.61	18.87	2,919.65	2,919.71	0.38	673,348.57	636,223.15
8,157.00	89.80	88.20	-1,634.53	5,374.53	22.05	3,015.60	3,015.68	0.56	673,351.75	636,319.10
8,254.00	89.30	89.10	-1,635.29	5,375.29	24.34	3,112.57	3,112.66	1.06	673,354.04	636,416.07
8,350.00	88.20	89.60	-1,637.38	5,377.38	25.43	3,208.54	3,208.64	1.26	673,355.13	636,512.04
8,446.00	87.30	89.50	-1,641.15	5,381.15	26.18	3,304.46	3,304.56	0.94	673,355.88	636,607.96
8,543.00	90.30	89.50	-1,643.18	5,383.18	27.03	3,401.42	3,401.53	3.09	673,356.73	636,704.92

Phoenix Technology Services

Phoenix Final Survey Report

Company:	Apache Corporation	Local Co-ordinate Reference:	Well #26H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	RF @ 3740.00usft (Basic 44)
Site:	NFE Federal	MD Reference:	RF @ 3740.00usft (Basic 44)
Well:	#26H	North Reference:	Grid
Wellbore:	Wellbore #1 / Job #1310211	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Basic 44)	Database:	GCR DB

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
8,639.00	89.70	90.10	-1,643.18	5,383.18	27.36	3,497.42	3,497.53	0.88	673,357.06	636,800.92
8,735.00	88.90	90.10	-1,644.36	5,384.36	27.19	3,593.42	3,593.52	0.83	673,356.89	636,896.92
8,832.00	89.50	90.40	-1,645.71	5,385.71	26.77	3,690.40	3,690.50	0.69	673,356.47	636,993.90
8,928.00	91.00	90.80	-1,645.29	5,385.29	25.76	3,786.40	3,786.48	1.62	673,355.46	637,089.90
9,024.00	90.50	90.90	-1,644.04	5,384.04	24.34	3,882.38	3,882.45	0.53	673,354.04	637,185.88
9,120.00	90.30	91.20	-1,643.37	5,383.37	22.58	3,978.36	3,978.42	0.38	673,352.28	637,281.86
9,217.00	90.10	92.30	-1,643.03	5,383.03	19.62	4,075.31	4,075.35	1.15	673,349.32	637,378.81
9,313.00	89.70	90.40	-1,643.19	5,383.19	17.36	4,171.28	4,171.30	2.02	673,347.06	637,474.78
9,409.00	89.00	91.00	-1,644.28	5,384.28	16.18	4,267.26	4,267.27	0.96	673,345.88	637,570.76
9,506.00	90.80	90.30	-1,644.45	5,384.45	15.08	4,364.25	4,364.25	1.99	673,344.78	637,667.75
9,602.00	88.30	87.00	-1,645.21	5,385.21	17.34	4,460.20	4,460.22	4.31	673,347.04	637,763.70
9,698.00	88.00	88.20	-1,648.31	5,388.31	21.36	4,556.07	4,556.10	1.29	673,351.06	637,859.57
9,795.00	87.60	90.10	-1,652.03	5,392.03	22.80	4,652.98	4,653.03	2.00	673,352.50	637,956.48
9,815.00	87.40	90.00	-1,652.90	5,392.90	22.78	4,672.96	4,673.01	1.12	673,352.48	637,976.46
Phoenix Last MWD Survey										
9,871.00	87.40	90.00	-1,655.44	5,395.44	22.78	4,728.90	4,728.95	0.00	673,352.48	638,032.40
Projection to Bit										

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
459.00	458.61	-6.94	-14.88	Phoenix First MWD Survey
9,815.00	5,392.90	22.78	4,672.96	Phoenix Last MWD Survey
9,871.00	5,395.44	22.78	4,728.90	Projection to Bit

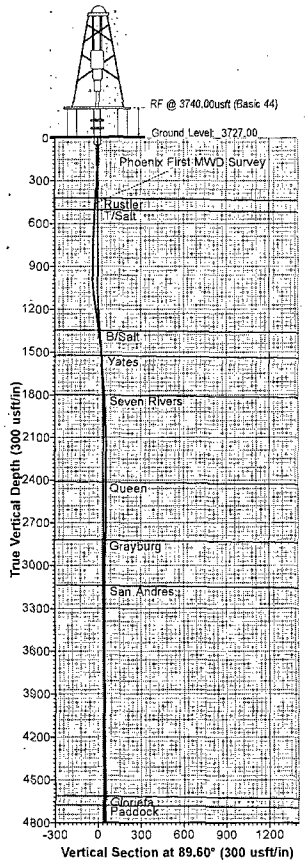
Checked By: _____ Approved By: _____ Date: _____

Project: Eddy County, NM (NAD27 NME)
Site: NFE Federal
Well: #26H
Wellbore: Wellbore #1 / Job #1310211
Design: Plan #4 02-20-13

PHOENIX TECHNOLOGY SERVICES

Azimuths to Grid North
True North: -0.23°
Magnetic North: 7.34°

Magnetic Field
Strength: 48786.1snT
Dip Angle: 60.67°
Date: 02/20/2013
Model: IGRF2010_14



WELL DETAILS

Ground Level: 3727.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	673329.70	633303.50	32° 51' 1.133543 N	103° 53' 57.346530 W

SITE DETAILS: NFE Federal

Site Centre Northing: 673264.70
Easting: 633303.50

Positional Uncertainty: 0.00
Convergence: 0.24
Local North: Grid

Map System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone Name: New Mexico East 3001

Local Origin: Well #26H, Grid North

Latitude: 32° 51' 1.133543 N
Longitude: 103° 53' 57.346530 W

Grid East: 633303.50
Grid North: 673329.70
Scale Factor: 1.000

Geomagnetic Model: IGRF2010_14
Sample Date: 20-Feb-13
Magnetic Declination: 7.58°
Dip Angle from Horizontal: 60.67°
Magnetic Field Strength: 48786

To convert a Magnetic Direction to a Grid Direction, Add 7.34°
To convert a Magnetic Direction to a True Direction, Add 7.58° East
To convert a True Direction to a Grid Direction, Subtract 0.24°

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2	1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00		Start Build 2.00 Nudge
3	1150.00	3.00	89.60	1149.93	0.03	3.93	2.00	89.60	3.93		Start 600.00 hold at 1150.00 MD
4	1750.00	3.00	89.60	1749.11	0.25	35.33	0.00	0.00	35.33		Start Drop -2.00
5	1900.00	0.00	0.00	1899.04	0.27	39.25	2.00	180.00	39.25		Start 3059.00 hold at 1900.00 MD
6	4959.00	0.00	0.00	4958.04	0.27	39.25	0.00	0.00	39.25		KOP Start Build 15.00
7	5553.17	89.12	89.60	5340.00	2.91	415.37	15.00	89.60	415.38		LP Start 1949.86 hold at 5553.17 MD
8	7503.02	89.12	89.60	5370.00	16.60	2364.94	0.00	0.00	2365.00	MP-NFE Fed #26H	Start DLS 3.00 TFO 0.01
9	7508.19	89.27	89.60	5370.07	16.64	2370.11	3.00	0.01	2370.16		Start 2359.54 hold at 7508.19 MD
10	9867.73	89.27	89.60	5400.00	33.20	4729.40	0.00	0.00	4729.52	PBHL-NFE Fed #26H	TD at 9867.73

PROJECT DETAILS: Eddy County, NM (NAD27 NME)

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001

System Datum: Mean Sea Level

DESIGN TARGET DETAILS

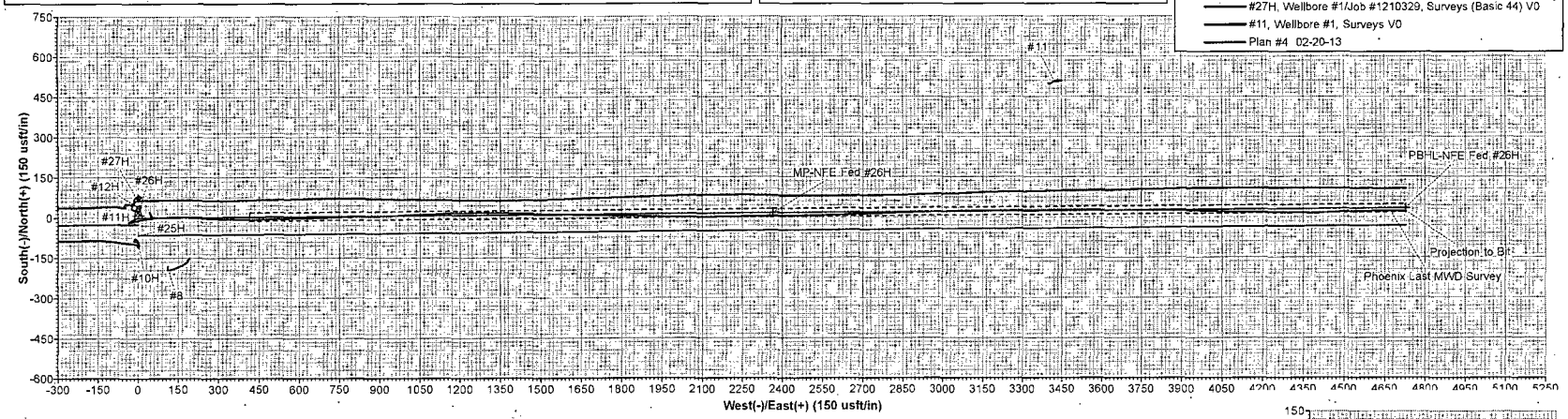
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
MP-NFE Fed #26H	5370.00	16.60	2364.94	673346.30	635868.44	32° 51' 1.200795 N	103° 53' 29.623337 W	Rectangle (Sides: L30.00 W50.00)
- plan hits target center								
PBHL-NFE Fed #26H	5400.00	33.20	4729.40	673362.90	638032.90	32° 51' 1.266326 N	103° 53' 1.905820 W	Rectangle (Sides: L30.00 W50.00)
- plan hits target center								

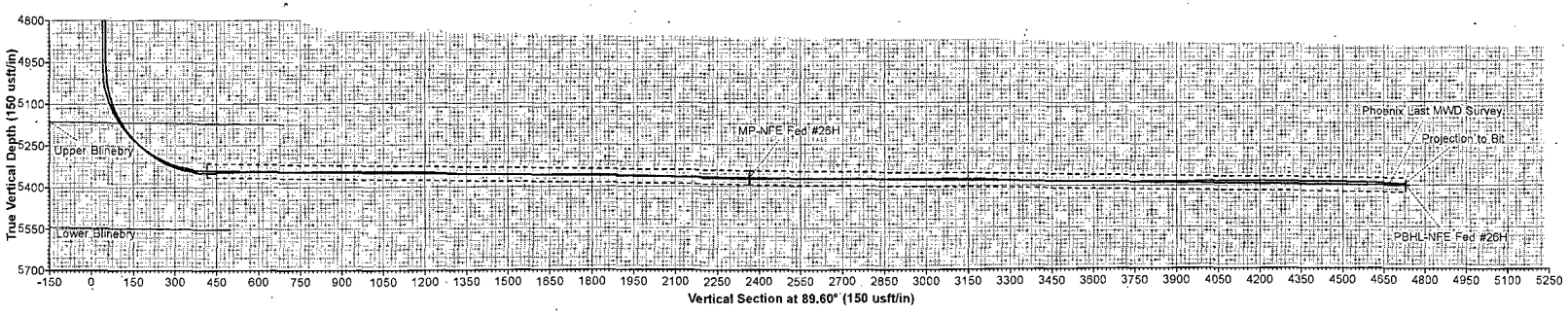
FORMATION TOP DETAILS

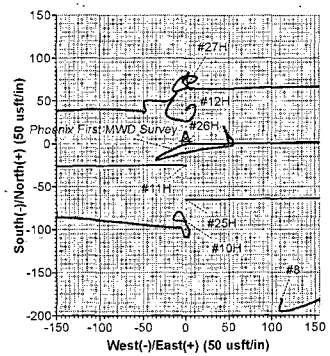
TVDPath	MDPath	Formation	DipAngle	DipDir
421.00	421.00	Rustler	0.86	89.60
502.00	502.00	T/Salt	0.86	89.60
1346.21	1346.55	B/Salt	0.86	89.60
1522.35	1522.93	Yates	0.86	89.60
1799.56	1800.50	Seven Rivers	0.86	89.60
2412.59	2413.55	Queen	0.86	89.60
2819.59	2820.55	Grayburg	0.86	89.60
3136.59	3137.55	San Andres	0.86	89.60
4611.59	4612.55	Glorieta	0.86	89.60
4675.59	4676.55	Paddock	0.86	89.60
5165.51	5178.32	Upper Blinebry	0.86	89.60

LEGEND

- #11H, Wellbore #1, Plan 1 05-01-2012 V0
- #12H, Wellbore #1 / Job #1211107, Surveys (Basic 44) V0
- #10H, Wellbore #1 / Job #1211217, Surveys (Basic 44) V0
- #25H, Wellbore #1/Job #1210327, Plan #2 041812 V0
- #26H, Wellbore #1 / Job #1310211, Surveys (Basic 44) V0
- #27H, Wellbore #1/Job #1210329, Surveys (Basic 44) V0
- #11, Wellbore #1, Surveys V0
- Plan #4 02-20-13







Created By: Julio Piña Date: 10:08, March 18 2013