



30-015-42910

Apache Corporation

Eddy County, NM (NAD27 NME)

NFE Federal

#55H

OH / Job #1513745

Design: Surveys (Capstar 114)

Standard Survey Report

23 June, 2015

NM OIL CONSERVATION
ARTESIA DISTRICT
OCT 02 2015
RECEIVED



Company:	Apache Corporation	Local Co-ordinate Reference:	Well #55H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3781.00usft (Capstar 114)
Site:	NFE Federal	MD Reference:	KB @ 3781.00usft (Capstar 114)
Well:	#55H	North Reference:	Grid
Wellbore:	OH / Job #1513745	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Capstar 114)	Database:	Compass 5000 GCR

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
From:	Map	Easting:	633,303.50 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 51' 0.49036 N
		Longitude:	103° 53' 57.34966 W
		Grid Convergence:	0.24 °

Well	#55H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 52' 10.47591 N
		Longitude:	103° 54' 12.07184 W
		Ground Level:	3,770.00 usft

Wellbore	OH / Job #1513745		
Magnetics	Model Name	Sample Date	Declination
			(°)
	HDGM	6/10/2015	7.67
			Dip Angle
			(°)
			Field Strength
			(nT)
			48,563

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
			(°)
			89.61

Survey Program	Date 6/23/2015		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
121.00	4,700.00	Phoenix Gyro Survey (OH / Job #1513745)	PHX_SPT_GTD
4,711.00	10,992.00	Phoenix MWD Survey (OH / Job #1513745)	PHX+MWD+HDGM
			Description
			PHX Continuous north-seeking gyro
			PHX+MWD+HDGM

Survey										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn	
Depth	(°)	(°)	Depth	(usft)	(usft)	Section	Rate	Rate	Rate	
(usft)			(usft)			(usft)	(°/100usft)	(°/100usft)	(°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
121.00	0.58	291.76	121.00	0.23	-0.57	-0.57	0.48	0.48	0.00	
239.00	0.88	304.62	238.99	0.96	-1.87	-1.86	0.29	0.25	10.90	
328.00	0.27	314.50	327.98	1.50	-2.58	-2.57	0.69	-0.69	11.10	
415.00	0.39	235.21	414.98	1.47	-2.97	-2.96	0.50	0.14	-91.14	
505.00	0.57	243.51	504.98	1.10	-3.62	-3.62	0.21	0.20	9.22	
609.00	0.55	254.41	608.97	0.73	-4.57	-4.56	0.10	-0.02	10.48	
693.00	0.54	251.07	692.97	0.50	-5.33	-5.33	0.04	-0.01	-3.98	
778.00	0.44	261.42	777.97	0.32	-6.03	-6.03	0.16	-0.12	12.18	
864.00	0.27	277.31	863.97	0.30	-6.56	-6.56	0.23	-0.20	18.48	

Company:	Apache Corporation	Local Co-ordinate Reference:	Well #55H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3781.00usft (Capstar 114)
Site:	NFE Federal	MD Reference:	KB @ 3781.00usft (Capstar 114)
Well:	#55H	North Reference:	Grid
Wellbore:	OH / Job #1513745	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Capstar 114)	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)
949.00	0.19	4.93	948.97	0.46	-6.74	-6.74	0.38	-0.09	103.08
1,035.00	0.22	31.67	1,034.96	0.74	-6.65	-6.64	0.12	0.03	31.09
1,120.00	0.37	54.26	1,119.96	1.04	-6.34	-6.33	0.22	0.18	26.58
1,206.00	0.59	52.32	1,205.96	1.48	-5.76	-5.75	0.26	0.26	-2.26
1,291.00	0.98	77.33	1,290.95	1.90	-4.71	-4.69	0.60	0.46	29.42
1,377.00	1.01	72.14	1,376.94	2.30	-3.27	-3.25	0.11	0.03	-6.03
1,462.00	1.04	80.98	1,461.93	2.65	-1.79	-1.77	0.19	0.04	10.40
1,548.00	0.97	88.24	1,547.91	2.79	-0.29	-0.27	0.17	-0.08	8.44
1,633.00	0.90	98.77	1,632.90	2.71	1.08	1.10	0.22	-0.08	12.39
1,718.00	0.62	104.44	1,717.89	2.50	2.19	2.21	0.34	-0.33	6.67
1,804.00	0.44	103.20	1,803.89	2.30	2.96	2.98	0.21	-0.21	-1.44
1,888.00	0.29	94.05	1,887.89	2.22	3.49	3.50	0.19	-0.18	-10.89
1,973.00	0.18	111.26	1,972.89	2.15	3.83	3.84	0.15	-0.13	20.25
2,058.00	0.26	69.76	2,057.89	2.17	4.13	4.15	0.20	0.09	-48.82
2,142.00	0.24	60.74	2,141.89	2.32	4.46	4.48	0.05	-0.02	-10.74
2,228.00	0.25	52.57	2,227.89	2.52	4.77	4.79	0.04	0.01	-9.50
2,313.00	0.24	43.20	2,312.88	2.77	5.04	5.06	0.05	-0.01	-11.02
2,399.00	0.09	52.82	2,398.88	2.94	5.22	5.24	0.18	-0.17	11.19
2,484.00	0.09	90.34	2,483.88	2.98	5.34	5.36	0.07	0.00	44.14
2,570.00	0.11	169.41	2,569.88	2.90	5.42	5.44	0.15	0.02	91.94
2,655.00	0.17	140.17	2,654.88	2.72	5.52	5.53	0.11	0.07	-34.40
2,740.00	0.19	149.24	2,739.88	2.50	5.67	5.69	0.04	0.02	10.67
2,825.00	0.11	148.85	2,824.88	2.31	5.78	5.80	0.09	-0.09	-0.46
2,911.00	0.15	198.69	2,910.88	2.13	5.79	5.80	0.13	0.05	57.95
2,996.00	0.16	207.72	2,995.88	1.92	5.70	5.71	0.03	0.01	10.62
3,082.00	0.24	196.55	3,081.88	1.64	5.59	5.60	0.10	0.09	-12.99
3,167.00	0.29	178.66	3,166.88	1.26	5.55	5.55	0.11	0.06	-21.05
3,253.00	0.40	182.45	3,252.88	0.74	5.54	5.54	0.13	0.13	4.41
3,338.00	0.25	162.28	3,337.88	0.27	5.58	5.58	0.22	-0.18	-23.73
3,423.00	0.37	166.87	3,422.88	-0.18	5.70	5.70	0.14	0.14	5.40
3,509.00	0.27	181.60	3,508.88	-0.65	5.76	5.75	0.15	-0.12	17.13
3,594.00	0.23	240.64	3,593.88	-0.93	5.60	5.60	0.29	-0.05	69.46
3,680.00	0.18	259.49	3,679.87	-1.04	5.32	5.31	0.10	-0.06	21.92
3,765.00	0.16	22.43	3,764.87	-0.96	5.23	5.23	0.35	-0.02	144.64
3,849.00	0.15	41.01	3,848.87	-0.77	5.35	5.35	0.06	-0.01	22.12
3,934.00	0.19	44.21	3,933.87	-0.58	5.52	5.52	0.05	0.05	3.76
4,020.00	0.05	32.46	4,019.87	-0.45	5.64	5.64	0.16	-0.16	-13.66
4,105.00	0.09	19.15	4,104.87	-0.35	5.68	5.68	0.05	0.05	-15.66
4,191.00	0.09	282.17	4,190.87	-0.27	5.64	5.64	0.16	0.00	-112.77
4,276.00	0.06	79.94	4,275.87	-0.25	5.62	5.62	0.17	-0.04	185.61
4,362.00	0.06	126.41	4,361.87	-0.27	5.70	5.70	0.06	0.00	54.03
4,447.00	0.04	20.10	4,446.87	-0.27	5.75	5.74	0.10	-0.02	-125.07
4,532.00	0.09	266.81	4,531.87	-0.25	5.69	5.69	0.13	0.06	-133.28

Company:	Apache Corporation	Local Co-ordinate Reference:	Well #55H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3781.00usft (Capstar 114)
Site:	NFE Federal	MD Reference:	KB @ 3781.00usft (Capstar 114)
Well:	#55H	North Reference:	Grid
Wellbore:	OH / Job #1513745	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Capstar 114)	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)
4,617.00	0.18	70.87	4,616.87	-0.21	5.75	5.75	0.31	0.11	193.01
4,700.00	0.22	88.00	4,699.87	-0.16	6.03	6.03	0.09	0.05	20.64
Tie-on to Phoenix Gyro Survey									
4,711.00	0.10	34.50	4,710.87	-0.15	6.06	6.06	1.63	-1.09	-486.36
First Phoenix MWD Survey									
4,754.00	1.50	82.60	4,753.87	-0.04	6.64	6.64	3.34	3.26	111.86
4,797.00	6.50	87.10	4,796.75	0.15	9.63	9.63	11.64	11.63	10.47
4,840.00	12.50	85.70	4,839.14	0.62	16.71	16.71	13.96	13.95	-3.26
4,883.00	17.90	85.80	4,880.62	1.46	27.94	27.95	12.56	12.56	0.23
4,928.00	22.50	85.90	4,922.84	2.58	43.44	43.45	10.22	10.22	0.22
4,971.00	27.30	87.60	4,961.83	3.58	61.51	61.53	11.29	11.16	3.95
5,014.00	31.60	89.90	4,999.27	4.01	82.64	82.66	10.34	10.00	5.35
5,060.00	36.60	91.40	5,037.35	3.70	108.41	108.44	11.02	10.87	3.26
5,105.00	41.80	91.30	5,072.21	3.03	136.84	136.85	11.56	11.56	-0.22
5,148.00	46.90	89.60	5,102.95	2.82	166.88	166.90	12.18	11.86	-3.95
5,190.00	52.00	88.30	5,130.25	3.41	198.78	198.80	12.37	12.14	-3.10
5,233.00	57.10	87.80	5,155.18	4.61	233.78	233.80	11.90	11.86	-1.16
5,279.00	61.80	87.90	5,178.55	6.10	273.35	273.39	10.22	10.22	0.22
5,321.00	66.80	89.50	5,196.76	6.94	311.17	311.21	12.39	11.90	3.81
5,364.00	72.30	91.10	5,211.78	6.72	351.45	351.48	13.26	12.79	3.72
5,407.00	77.60	91.60	5,222.94	5.74	392.94	392.97	12.38	12.33	1.16
5,450.00	82.50	92.10	5,230.37	4.37	435.26	435.28	11.45	11.40	1.16
5,493.00	85.40	91.50	5,234.90	3.03	478.00	478.01	6.89	6.74	-1.40
5,535.00	85.60	91.90	5,238.20	1.79	519.85	519.85	1.06	0.48	0.95
5,662.00	86.30	90.80	5,247.17	-1.20	646.49	646.47	1.02	0.55	-0.87
5,790.00	86.50	90.20	5,255.20	-2.31	774.24	774.20	0.49	0.16	-0.47
5,922.00	85.80	88.50	5,264.07	-0.82	905.92	905.90	1.39	-0.53	-1.29
6,050.00	86.60	88.00	5,272.55	3.08	1,033.58	1,033.58	0.74	0.63	-0.39
6,178.00	86.50	87.20	5,280.25	8.43	1,161.24	1,161.27	0.63	-0.08	-0.63
6,306.00	88.70	87.90	5,285.61	13.90	1,289.00	1,289.06	1.80	1.72	0.55
6,434.00	89.00	87.30	5,288.18	19.26	1,416.86	1,416.96	0.52	0.23	-0.47
6,562.00	89.20	88.70	5,290.19	23.73	1,544.76	1,544.89	1.10	0.16	1.09
6,694.00	89.70	89.30	5,291.46	26.03	1,676.74	1,676.87	0.59	0.38	0.45
6,822.00	89.60	88.90	5,292.24	28.04	1,804.72	1,804.87	0.32	-0.08	-0.31
6,950.00	90.30	88.70	5,292.35	30.72	1,932.69	1,932.85	0.57	0.55	-0.16
7,077.00	89.80	89.30	5,292.24	32.94	2,059.67	2,059.84	0.61	-0.39	0.47
7,209.00	89.50	88.40	5,293.05	35.59	2,191.64	2,191.83	0.72	-0.23	-0.68
7,337.00	88.90	89.30	5,294.84	38.15	2,319.60	2,319.80	0.84	-0.47	0.70
7,465.00	88.90	89.90	5,297.29	39.05	2,447.57	2,447.78	0.47	0.00	0.47
7,593.00	88.80	91.30	5,299.86	37.71	2,575.53	2,575.73	1.10	-0.08	1.09
7,722.00	88.40	90.40	5,303.01	35.79	2,704.48	2,704.66	0.76	-0.31	-0.70
7,850.00	88.80	90.40	5,306.14	34.90	2,832.44	2,832.61	0.31	0.31	0.00
7,981.00	89.90	89.60	5,307.63	34.90	2,963.43	2,963.60	1.04	0.84	-0.61
8,109.00	89.80	88.20	5,307.96	37.36	3,091.40	3,091.58	1.10	-0.08	-1.09

Company:	Apache Corporation	Local Co-ordinate Reference:	Well #55H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3781.00usft (Capstar 114)
Site:	NFE Federal	MD Reference:	KB @ 3781.00usft (Capstar 114)
Well:	#55H	North Reference:	Grid
Wellbore:	OH / Job #1513745	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Capstar 114)	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)
8,237.00	89.20	89.40	5,309.08	40.04	3,219.36	3,219.56	1.05	-0.47	0.94
8,366.00	88.70	90.80	5,311.44	39.81	3,348.34	3,348.53	1.15	-0.39	1.09
8,494.00	89.00	90.20	5,314.01	38.70	3,476.31	3,476.49	0.52	0.23	-0.47
8,622.00	89.10	89.70	5,316.13	38.81	3,604.29	3,604.47	0.40	0.08	-0.39
8,753.00	89.80	90.90	5,317.39	38.12	3,735.28	3,735.45	1.06	0.53	0.92
8,881.00	89.70	89.80	5,317.95	37.34	3,863.27	3,863.44	0.86	-0.08	-0.86
9,009.00	89.70	90.50	5,318.62	37.01	3,991.27	3,991.43	0.55	0.00	0.55
9,141.00	89.50	88.60	5,319.54	38.04	4,123.26	4,123.42	1.45	-0.15	-1.44
9,272.00	89.20	91.40	5,321.03	38.04	4,254.23	4,254.39	2.15	-0.23	2.14
9,400.00	88.80	90.70	5,323.26	35.70	4,382.19	4,382.33	0.63	-0.31	-0.55
9,528.00	88.80	89.90	5,325.94	35.03	4,510.16	4,510.29	0.62	0.00	-0.63
9,657.00	88.80	90.60	5,328.64	34.46	4,639.13	4,639.26	0.54	0.00	0.54
9,784.00	89.10	90.80	5,330.97	32.91	4,766.10	4,766.21	0.28	0.24	0.16
9,912.00	89.60	90.90	5,332.42	31.01	4,894.08	4,894.17	0.40	0.39	0.08
10,041.00	90.30	91.40	5,332.54	28.43	5,023.05	5,023.13	0.67	0.54	0.39
10,169.00	89.70	90.40	5,332.54	26.42	5,151.03	5,151.09	0.91	-0.47	-0.78
10,300.00	89.90	90.00	5,332.99	25.96	5,282.03	5,282.08	0.34	0.15	-0.31
10,429.00	89.50	89.00	5,333.67	27.08	5,411.02	5,411.08	0.83	-0.31	-0.78
10,557.00	89.30	88.40	5,335.01	29.99	5,538.98	5,539.06	0.49	-0.16	-0.47
10,685.00	89.10	87.10	5,336.80	35.01	5,666.87	5,666.97	1.03	-0.16	-1.02
10,813.00	88.50	85.80	5,339.48	42.94	5,794.59	5,794.75	1.12	-0.47	-1.02
10,923.00	88.80	84.90	5,342.07	51.85	5,904.20	5,904.41	0.86	0.27	-0.82
Last Phoenix MWD Survey									
10,992.00	88.80	84.90	5,343.51	57.98	5,972.91	5,973.16	0.00	0.00	0.00
Projection to Bit									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
4,700.00	4,699.87	-0.16	6.03	Tie-on to Phoenix Gyro Survey
4,711.00	4,710.87	-0.15	6.06	First Phoenix MWD Survey
10,923.00	5,342.07	51.85	5,904.20	Last Phoenix MWD Survey
10,992.00	5,343.51	57.98	5,972.91	Projection to Bit

Checked By: _____ Approved By: _____ Date: _____

SURVEY CERTIFICATION FORM

3610 Elkins Road Midland, TX 79705 t:432-684-0057 f: 432-686-7964



Company: Apache

Job #: 1513777

Well Name: NFE Federal #55H

County/State: Eddy Co, New Mexico

Survey Instrument Type: North Seek Rate Gyro

API # 30-015-42910

TIE-IN DATA

Measure Depth (ft)	Vertical Depth (ft)	Inclination (°)	Azimuth (°)	N-S Coordinates	E-W Coordinates	Data Source
0	0	0	0	0	0	Surface

First Survey

Date	Depth (ft)	Inclination (°)	Azimuth (°)
2015-06-16	0	0	0

Last Survey

Date	Depth (ft)	Inclination (°)	Azimuth (°)
2015-06-16	4700'	0.22	88

Projected TD Survey

Date	Depth (ft)	Inclination (°)	Azimuth (°)
0	0	0	0

Grid Correction
-0.23

Gyro Operator: Leon Laskowski

Gyro Supervisor: [Signature]

To the best of my knowledge I certify this survey data to be correct and true

Date: 2015-06-16

Print Name: Leon Laskowski

Signature: [Signature]



Company: Apache
 Well: NFE Federal #55H
 Location: Eddy Co, NM
 Rig: Capstar 114

Job Number: 1513777
 Grid Corr.: -0.23
 Lat: 32.87
 Long: 103.90

Calculation Method: Minimum Curvature
 Proposed Azimuth:
 RKB - MSL in feet: 11'
 Tie Into:

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)			
Enter Tie-In Survey on Line 10						Field Copy Non Definitive							
TIE IN	0	0.00	0	0	0	0	0	0					
Gyro	121.00	0.58	291.76	121	121.00	0.23	0.23 N	0.57 W	0.61	291.76	0.48	0.48	241.12
	239.00	0.88	304.62	118	238.99	0.96	0.96 N	1.87 W	2.10	297.26	0.29	0.25	10.90
	328.00	0.27	314.50	89	327.98	1.50	1.50 N	2.58 W	2.98	300.14	0.69	-0.69	11.10
	415.00	0.39	235.21	87	414.98	1.47	1.47 N	2.97 W	3.32	296.38	0.50	0.14	-91.14
	505.00	0.57	243.51	90	504.98	1.10	1.10 N	3.62 W	3.79	286.87	0.21	0.20	9.22
	609.00	0.55	254.41	104	608.97	0.73	0.73 N	4.57 W	4.63	279.13	0.10	-0.02	10.48
	693.00	0.54	251.07	84	692.97	0.50	0.50 N	5.33 W	5.35	275.33	0.04	-0.01	-3.98
	778.00	0.44	261.42	85	777.97	0.32	0.32 N	6.03 W	6.04	273.02	0.16	-0.12	12.18
	864.00	0.27	277.31	86	863.97	0.30	0.30 N	6.56 W	6.57	272.58	0.23	-0.20	18.48
	949.00	0.19	4.93	85	948.96	0.46	0.46 N	6.74 W	6.76	273.91	0.38	-0.09	-320.45
	1035.00	0.22	31.67	86	1034.96	0.74	0.74 N	6.65 W	6.69	276.38	0.12	0.03	31.09
	1120.00	0.37	54.26	85	1119.96	1.04	1.04 N	6.34 W	6.42	279.34	0.22	0.18	26.58
	1206.00	0.59	52.32	86	1205.96	1.48	1.48 N	5.76 W	5.95	284.36	0.26	0.26	-2.26
	1291.00	0.98	77.33	85	1290.95	1.90	1.90 N	4.71 W	5.08	292.01	0.60	0.46	29.42
	1377.00	1.01	72.14	86	1376.94	2.30	2.30 N	3.27 W	3.99	305.10	0.11	0.03	-6.03
	1462.00	1.04	80.98	85	1461.93	2.65	2.65 N	1.79 W	3.20	325.90	0.19	0.04	10.40
	1548.00	0.97	88.24	86	1547.91	2.79	2.79 N	0.29 W	2.81	353.99	0.17	-0.08	8.44
	1633.00	0.90	98.77	85	1632.90	2.71	2.71 N	1.08 E	2.92	21.80	0.22	-0.08	12.39
	1718.00	0.62	104.44	85	1717.89	2.50	2.50 N	2.19 E	3.32	41.27	0.34	-0.33	6.67
	1804.00	0.44	103.20	86	1803.89	2.30	2.30 N	2.96 E	3.75	52.12	0.21	-0.21	-1.44
	1888.00	0.29	94.05	84	1887.89	2.22	2.22 N	3.49 E	4.13	57.58	0.19	-0.18	-10.89
	1973.00	0.18	111.26	85	1972.89	2.15	2.15 N	3.83 E	4.39	60.65	0.15	-0.13	20.25
	2058.00	0.26	69.76	85	2057.89	2.17	2.17 N	4.13 E	4.67	62.29	0.20	0.09	-48.82
	2142.00	0.24	60.74	84	2141.89	2.32	2.32 N	4.46 E	5.03	62.52	0.05	-0.02	-10.74
	2228.00	0.25	52.57	86	2227.88	2.52	2.52 N	4.77 E	5.40	62.12	0.04	0.01	-9.50
	2313.00	0.24	43.20	85	2312.88	2.77	2.77 N	5.04 E	5.75	61.24	0.05	-0.01	-11.02
	2399.00	0.09	52.82	86	2398.88	2.94	2.94 N	5.22 E	5.99	60.61	0.18	-0.17	11.19



TECHNOLOGY SERVICES USA INC.

Celebrating 20 Years of Focused Solutions

3610 Elkins Road, Midland, Texas 79705 T. 432.684.0057 F. 432.686.7964 www.phxtech.com

June 18, 2015

Apache Corporation
Attention: Regulatory Department
303 Veterans Airpark Lane, Suite 3000,
Midland, TX 79705

Re: Apache Corporation
NFE Federal #55H
Eddy County, NM
API #30-015-42910
Job No. 1513777

Dear Regulatory Department;

Phoenix Technology Services, Inc. has filed the Survey Data Certification, Surveys, and Lease Plat for the above referenced well with the State of New Mexico Oil Conservation Division – District 2 via certified mail. A copy of the filing is attached for your records.

Name of Surveyor	Drain Hole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Leon Laskowski	55H	0	4,700	06/16/15	06/16/15	Gyro

Thank you for the opportunity to be of service. Please contact me if you have any questions or require additional information.

Best Regards,

Alicia Marquez
Operations Administrator



TECHNOLOGY SERVICES USA INC.

Celebrating 20 Years of Focused Solutions

3610 Elkins Road, Midland, Texas 79705 T. 432.684.0057 F. 432.686.7964 www.phxtech.com

June 18, 2015

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 #55H
Eddy County, NM
API #30-015-42910
Job No. 1513777

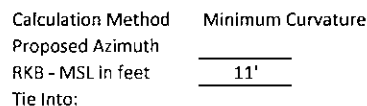
Enclosed please find the Survey Data Certification, and the original Plat and one copy of the Survey Report performed on the above referenced Well by Phoenix Technology Services, Inc. (P-5 No. 664171). Other information required by your office is as follows:

Name & Title of Surveyor	Drain Hole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Leon Laskowski	55H	0	4,700	06/16/15	06/16/15	Gyro

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,

Alicia Marquez
Operations Administrator



WELL NAME: NFE FEDERAL COM 55H
API: 30-015-42910
SPUD DATE: 8/10/2015
PRODUCING FORMATION: YESO UPR BLINEBRY
FIELD: CEDAR LAKE (BP)
COUNTY: EDDY
STATE: NEW MEXICO
WORKING INTEREST: 100.00%

SURFACE LOC: 395' FNL & 1025' FEL
SECTION: 6
TOWNSHIP: 17-S
RANGE: 31-E
SURVEY: JOHN WEST SURVEYING CO
BOTTOM HOLE LOC: 378' FNL & 333' FEL
SECTION: 5
TOWNSHIP: 17-S
RANGE: 31-E
SURVEY: JOHN WEST SURVEYING CO
DRILL RIG: CAPSTAR 114
RIG RELEASE: 6/27/2015

KB (ft): 3,781.00
GL (ft): 3,770.00
KBGL DIFF (ft): 11.00
TMD (ft): 10,992.00
TD OF PILOT HOLE (ft): N/A
FC DEPTH (ft): 10,953.00
PBMD (ft): 10,992.00
RDV DEPTH (ft): N/A
ORIO VALVE (ft): N/A
DEEPEST TVD (ft): 5,344.00

TAPERED CASING STRING:

7" 29# L-80 TO X-OVER @ 4,745'
TAPERING TO 5.5" 20# L-80 SET @ 10,955'

KOP (ft): 4,745
LATERAL LENGTH (ft): 5,477
TD OF PILOT HOLE (ft): N/A

PACKERS & SLEEVES
TOP PERF (MD): 5,515
BOTTOM PERF (MD): 10,944

TMD (ft): 10,992
FC DEPTH (ft): 10,953
PBMD (ft): 10,992
RDV DEPTH (ft): N/A
ORIO VALVE (ft): N/A

COMPLETION:

STIMULATION:

STATUS:

COMMENTS:

LAST UPDATED BY: HILLARI GOULD
LAST UPDATED: 8/28/2015

PACKERS & SLEEVES - 20 STAGES				
TOTAL ACID (gal)	TOTAL LTR (bbl)	TOTAL PROPPANT (lbs)	MAX WH RATE (bpm)	MAX WH PRESSURE (psi)
3,547	85.439	3,812,092	93.00	6,903
PRODUCTION METHOD				
Pumping	ESP	SETTING DEPTH	0	
CROSSOVER SUB @ 4,745'				

