

Devon Energy

Lea County, NM (NAD 83)

Gaucha 21 Fed

6H

OH

Design: OH

Standard Survey Report

05 November, 2018

HOBBS CCD
FEB 26 2019
RECEIVED

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 6H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GL 3428 + 30' @ 3458.0usft (Precision 593)
Site:	Gaucha 21 Fed	MD Reference:	GL 3428 + 30' @ 3458.0usft (Precision 593)
Well:	6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14 Single User Db

Project	Lea County, NM (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Gaucha 21 Fed				
Site Position:		Northing:	499,717.68 usft	Latitude:	32° 22' 14.972 N
From:	Map	Easting:	808,432.48 usft	Longitude:	103° 28' 5.583 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.46 °

Well	6H					
Well Position	+N/-S	0.0 usft	Northing:	499,717.99 usft	Latitude:	32° 22' 14.973 N
	+E/-W	0.0 usft	Easting:	808,462.45 usft	Longitude:	103° 28' 5.234 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,428.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	9/5/2018	6.78	60.20	47,910.40693695

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	359.69	

Survey Program	Date	11/5/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
139.0	15,336.0	Legacy MWD (OH)	MWD	OWSG MWD - Standard	

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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
139.0	0.30	77.71	139.0	0.1	0.4	0.1	0.22	0.22	0.00	
234.0	0.74	25.88	234.0	0.7	0.9	0.7	0.63	0.46	-54.56	
388.0	0.40	72.21	388.0	1.7	1.8	1.7	0.35	-0.22	30.08	
479.0	0.30	75.65	479.0	1.9	2.3	1.9	0.11	-0.11	3.78	
569.0	0.29	70.73	569.0	2.0	2.8	2.0	0.03	-0.01	-5.47	
664.0	0.24	78.57	664.0	2.1	3.2	2.1	0.06	-0.05	8.25	
754.0	0.30	6.32	754.0	2.4	3.4	2.4	0.36	0.07	-80.28	
843.0	0.18	236.98	843.0	2.6	3.3	2.6	0.49	-0.13	-145.33	
898.0	0.36	264.18	898.0	2.5	3.1	2.5	0.39	0.33	49.45	

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 6H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GL 3428 + 30' @ 3458.0usft (Precision 593)
Site:	Gaucha 21 Fed	MD Reference:	GL 3428 + 30' @ 3458.0usft (Precision 593)
Well:	6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14 Single User 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)
994.0	0.37	257.67	994.0	2.4	2.5	2.4	0.04	0.01	-6.78
1,085.0	0.43	257.53	1,085.0	2.3	1.9	2.3	0.07	0.07	-0.15
1,176.0	0.42	271.27	1,176.0	2.2	1.2	2.2	0.11	-0.01	15.10
1,268.0	0.40	262.46	1,268.0	2.2	0.5	2.2	0.07	-0.02	-9.58
1,359.0	0.48	248.37	1,359.0	2.0	-0.1	2.0	0.15	0.09	-15.48
1,445.0	0.64	248.68	1,445.0	1.7	-0.9	1.7	0.19	0.19	0.36
1,505.0	0.71	244.07	1,505.0	1.4	-1.6	1.4	0.15	0.12	-7.68
1,599.0	1.04	245.93	1,599.0	0.8	-2.9	0.8	0.35	0.35	1.98
1,640.0	0.96	241.17	1,639.9	0.5	-3.5	0.5	0.28	-0.20	-11.61
1,758.0	0.78	257.81	1,757.9	-0.2	-5.2	-0.1	0.26	-0.15	14.10
1,852.0	1.00	233.43	1,851.9	-0.8	-6.4	-0.8	0.46	0.23	-25.94
1,946.0	0.80	255.55	1,945.9	-1.4	-7.7	-1.4	0.42	-0.21	23.53
2,040.0	0.68	216.30	2,039.9	-2.1	-8.7	-2.0	0.54	-0.13	-41.76
2,134.0	0.71	212.00	2,133.9	-3.0	-9.3	-2.9	0.06	0.03	-4.57
2,229.0	0.29	244.58	2,228.9	-3.6	-9.9	-3.5	0.52	-0.44	34.29
2,323.0	0.68	23.99	2,322.9	-3.2	-9.9	-3.1	0.98	0.41	148.31
2,417.0	0.87	52.45	2,416.9	-2.2	-9.1	-2.2	0.45	0.20	30.28
2,511.0	0.90	28.02	2,510.9	-1.2	-8.1	-1.1	0.40	0.03	-25.99
2,606.0	0.71	30.24	2,605.9	0.0	-7.5	0.0	0.20	-0.20	2.34
2,700.0	0.80	66.18	2,699.9	0.8	-6.6	0.8	0.50	0.10	38.23
2,794.0	1.27	50.90	2,793.8	1.7	-5.2	1.7	0.58	0.50	-16.26
2,888.0	1.04	49.73	2,887.8	2.9	-3.7	2.9	0.25	-0.24	-1.24
2,982.0	0.53	43.27	2,981.8	3.8	-2.8	3.8	0.55	-0.54	-6.87
3,076.0	0.90	49.09	3,075.8	4.6	-1.9	4.6	0.40	0.39	6.19
3,171.0	0.89	69.17	3,170.8	5.3	-0.7	5.3	0.33	-0.01	21.14
3,265.0	0.77	43.44	3,264.8	6.0	0.4	6.0	0.41	-0.13	-27.37
3,359.0	0.39	97.77	3,358.8	6.5	1.2	6.5	0.67	-0.40	57.80
3,454.0	1.02	92.16	3,453.8	6.4	2.4	6.4	0.67	0.66	-5.91
3,548.0	0.34	85.02	3,547.8	6.4	3.5	6.4	0.73	-0.72	-7.60
3,642.0	0.06	216.76	3,641.8	6.4	3.7	6.3	0.41	-0.30	140.15
3,737.0	0.16	74.37	3,736.8	6.4	3.8	6.3	0.22	0.11	-149.88
3,831.0	0.08	25.86	3,830.8	6.5	4.0	6.4	0.13	-0.09	-51.61
3,925.0	0.51	142.39	3,924.8	6.2	4.3	6.2	0.59	0.46	123.97
4,019.0	0.44	61.81	4,018.8	6.0	4.8	6.0	0.66	-0.07	-85.72
4,113.0	0.56	68.42	4,112.8	6.4	5.6	6.3	0.14	0.13	7.03
4,208.0	0.34	129.77	4,207.8	6.3	6.2	6.3	0.52	-0.23	64.58
4,302.0	0.50	98.04	4,301.7	6.1	6.8	6.1	0.29	0.17	-33.76
4,396.0	0.47	32.00	4,395.7	6.4	7.5	6.3	0.56	-0.03	-70.26
4,490.0	0.28	189.63	4,489.7	6.5	7.6	6.4	0.78	-0.20	167.69
4,585.0	0.08	45.77	4,584.7	6.3	7.6	6.3	0.37	-0.21	-151.43
4,679.0	0.52	76.27	4,678.7	6.4	8.1	6.4	0.48	0.47	32.45
4,773.0	0.50	107.98	4,772.7	6.4	8.9	6.4	0.30	-0.02	33.73
4,867.0	0.54	124.16	4,866.7	6.0	9.6	6.0	0.16	0.04	17.21
4,961.0	0.89	91.17	4,960.7	5.8	10.7	5.7	0.56	0.37	-35.10

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 6H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GL 3428 + 30' @ 3458.0usft (Precision 593)
Site:	Gaucha 21 Fed	MD Reference:	GL 3428 + 30' @ 3458.0usft (Precision 593)
Well:	6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14 Single User 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)
5,050.0	0.89	81.72	5,049.7	5.9	12.1	5.8	0.16	0.00	-10.62
5,179.0	0.72	89.44	5,178.7	6.0	13.9	5.9	0.16	-0.13	5.98
5,274.0	1.07	145.08	5,273.7	5.3	15.0	5.2	0.94	0.37	58.57
5,368.0	1.85	169.55	5,367.7	3.1	15.8	3.0	1.04	0.83	26.03
5,462.0	2.81	177.22	5,461.6	-0.7	16.2	-0.8	1.07	1.02	8.16
5,556.0	3.92	173.56	5,555.4	-6.2	16.7	-6.3	1.20	1.18	-3.89
5,651.0	5.11	168.76	5,650.1	-13.6	17.9	-13.7	1.31	1.25	-5.05
5,745.0	6.11	162.30	5,743.7	-22.4	20.2	-22.6	1.26	1.06	-6.87
5,839.0	6.44	163.34	5,837.1	-32.3	23.2	-32.4	0.37	0.35	1.11
5,933.0	7.04	161.81	5,930.5	-42.8	26.5	-42.9	0.67	0.64	-1.63
6,027.0	7.09	161.70	6,023.7	-53.8	30.1	-53.9	0.06	0.05	-0.12
6,121.0	7.12	161.46	6,117.0	-64.8	33.8	-65.0	0.04	0.03	-0.26
6,215.0	7.22	159.23	6,210.3	-75.8	37.8	-76.0	0.31	0.11	-2.37
6,309.0	7.09	149.07	6,303.6	-86.3	42.8	-86.6	1.35	-0.14	-10.81
6,404.0	7.15	147.88	6,397.8	-96.4	49.0	-96.6	0.17	0.06	-1.25
6,498.0	6.73	151.25	6,491.1	-106.2	54.8	-106.5	0.62	-0.45	3.59
6,592.0	6.78	151.25	6,584.5	-115.9	60.1	-116.2	0.05	0.05	0.00
6,687.0	6.78	151.71	6,678.8	-125.7	65.4	-126.1	0.06	0.00	0.48
6,781.0	6.68	151.29	6,772.2	-135.4	70.7	-135.8	0.12	-0.11	-0.45
6,875.0	6.69	152.49	6,865.5	-145.0	75.8	-145.5	0.15	0.01	1.28
6,970.0	6.63	153.15	6,959.9	-154.8	80.9	-155.3	0.10	-0.06	0.69
7,064.0	6.60	152.66	7,053.3	-164.5	85.8	-164.9	0.07	-0.03	-0.52
7,158.0	6.48	152.62	7,146.7	-174.0	90.7	-174.5	0.13	-0.13	-0.04
7,252.0	6.52	152.81	7,240.1	-183.5	95.6	-184.0	0.05	0.04	0.20
7,347.0	6.72	154.31	7,334.4	-193.3	100.5	-193.8	0.28	0.21	1.58
7,441.0	6.63	155.72	7,427.8	-203.2	105.1	-203.7	0.20	-0.10	1.50
7,536.0	6.53	154.88	7,522.2	-213.1	109.6	-213.6	0.15	-0.11	-0.88
7,630.0	6.50	155.18	7,615.6	-222.7	114.2	-223.3	0.05	-0.03	0.32
7,724.0	6.55	159.99	7,708.9	-232.6	118.2	-233.2	0.58	0.05	5.12
7,818.0	5.44	160.43	7,802.4	-241.8	121.5	-242.5	1.18	-1.18	0.47
7,912.0	4.43	161.31	7,896.1	-249.5	124.2	-250.1	1.08	-1.07	0.94
8,006.0	3.88	150.37	7,989.8	-255.7	126.9	-256.3	1.02	-0.59	-11.64
8,101.0	3.82	150.61	8,084.6	-261.2	130.1	-261.9	0.07	-0.06	0.25
8,195.0	3.05	148.95	8,178.5	-266.1	132.9	-266.8	0.83	-0.82	-1.77
8,289.0	2.28	151.05	8,272.3	-269.9	135.1	-270.6	0.83	-0.82	2.23
8,383.0	2.47	153.21	8,366.3	-273.3	136.9	-274.0	0.22	0.20	2.30
8,477.0	1.79	138.46	8,460.2	-276.2	138.8	-277.0	0.92	-0.72	-15.69
8,571.0	1.34	109.52	8,554.2	-277.7	140.8	-278.4	0.95	-0.48	-30.79
8,666.0	0.86	98.22	8,649.2	-278.2	142.6	-278.9	0.55	-0.51	-11.89
8,760.0	0.88	92.62	8,743.1	-278.3	144.0	-279.1	0.09	0.02	-5.96
8,854.0	0.83	64.79	8,837.1	-278.0	145.3	-278.8	0.44	-0.05	-29.61
8,949.0	0.11	174.45	8,932.1	-277.8	146.0	-278.6	0.92	-0.76	115.43
9,043.0	0.73	211.73	9,026.1	-278.4	145.7	-279.2	0.69	0.66	39.66

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 6H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GL 3428 + 30' @ 3458.0usft (Precision 593)
Site:	Gaucha 21 Fed	MD Reference:	GL 3428 + 30' @ 3458.0usft (Precision 593)
Well:	6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14 Single User 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)
9,137.0	0.69	206.02	9,120.1	-279.4	145.1	-280.2	0.09	-0.04	-6.07
9,231.0	0.67	217.63	9,214.1	-280.4	144.5	-281.2	0.15	-0.02	12.35
9,326.0	0.46	332.09	9,309.1	-280.5	144.0	-281.3	1.01	-0.22	120.48
9,420.0	0.44	303.66	9,403.1	-280.0	143.5	-280.7	0.24	-0.02	-30.24
9,514.0	0.99	289.75	9,497.1	-279.5	142.4	-280.3	0.61	0.59	-14.80
9,608.0	1.40	276.06	9,591.1	-279.1	140.5	-279.8	0.53	0.44	-14.56
9,702.0	1.13	276.92	9,685.1	-278.9	138.5	-279.6	0.29	-0.29	0.91
9,733.0	1.14	270.03	9,716.0	-278.8	137.9	-279.6	0.44	0.03	-22.23
9,795.0	1.37	327.09	9,778.0	-278.2	136.8	-278.9	1.96	0.37	92.03
KOP 9795'MD / 9778'TVD									
9,820.0	3.21	352.03	9,803.0	-277.3	136.6	-278.0	8.20	7.36	99.76
9,869.0	8.78	2.71	9,851.7	-272.2	136.6	-272.9	11.54	11.37	21.80
9,914.0	13.97	6.03	9,895.8	-263.3	137.3	-264.1	11.62	11.53	7.38
9,961.0	19.48	9.33	9,940.8	-249.9	139.2	-250.7	11.89	11.72	7.02
10,008.0	24.68	6.41	9,984.4	-232.4	141.5	-233.2	11.30	11.06	-6.21
10,055.0	30.59	6.15	10,026.0	-210.8	143.9	-211.6	12.58	12.57	-0.55
10,102.0	36.27	7.07	10,065.2	-185.1	146.9	-185.9	12.13	12.09	1.96
10,197.0	41.56	0.46	10,139.1	-125.6	150.6	-126.4	7.07	5.57	-6.96
10,291.0	49.56	357.26	10,204.9	-58.6	149.2	-59.4	8.85	8.51	-3.40
10,371.8	55.61	357.81	10,254.0	5.5	146.4	4.7	7.51	7.49	0.68
330' FSL10371.8'MD / 10254'TVD									
10,385.0	56.60	357.89	10,261.3	16.5	146.0	15.7	7.51	7.49	0.62
10,479.0	62.48	358.81	10,308.9	97.4	143.7	96.6	6.31	6.26	0.98
10,573.0	68.07	359.54	10,348.3	182.8	142.5	182.0	5.99	5.95	0.78
10,667.0	76.60	358.09	10,376.8	272.2	140.6	271.5	9.19	9.07	-1.54
10,761.0	85.06	357.59	10,391.7	364.9	137.1	364.1	9.02	9.00	-0.53
10,856.0	89.69	357.87	10,396.1	459.7	133.3	458.9	4.88	4.87	0.29
10,950.0	90.90	358.15	10,395.6	553.6	130.1	552.9	1.32	1.29	0.30
11,044.0	92.41	358.25	10,392.9	647.5	127.1	646.8	1.61	1.61	0.11
11,139.0	92.83	357.40	10,388.5	742.4	123.5	741.7	1.00	0.44	-0.89
11,233.0	92.05	356.20	10,384.5	836.1	118.3	835.5	1.52	-0.83	-1.28
11,327.0	90.87	357.31	10,382.1	929.9	113.0	929.3	1.72	-1.26	1.18
11,421.0	89.41	358.96	10,381.9	1,023.9	109.9	1,023.3	2.34	-1.55	1.76
11,515.0	88.85	0.65	10,383.3	1,117.9	109.6	1,117.3	1.89	-0.60	1.80
11,610.0	89.75	0.77	10,384.5	1,212.8	110.8	1,212.2	0.96	0.95	0.13
11,704.0	88.40	0.89	10,386.0	1,306.8	112.1	1,306.2	1.44	-1.44	0.13
11,798.0	89.13	0.48	10,388.0	1,400.8	113.3	1,400.2	0.89	0.78	-0.44
11,892.0	90.31	1.07	10,388.5	1,494.8	114.5	1,494.1	1.40	1.26	0.63
11,987.0	89.36	0.43	10,388.8	1,589.8	115.8	1,589.1	1.21	-1.00	-0.67
12,081.0	90.20	0.86	10,389.1	1,683.8	116.8	1,683.1	1.00	0.89	0.46
12,175.0	92.16	2.37	10,387.2	1,777.7	119.5	1,777.0	2.63	2.09	1.61
12,269.0	92.94	0.05	10,383.0	1,871.6	121.5	1,870.9	2.60	0.83	-2.47
12,364.0	92.05	358.22	10,378.9	1,966.5	120.0	1,965.8	2.14	-0.94	-1.93
12,458.0	91.18	356.76	10,376.2	2,060.3	115.9	2,059.7	1.81	-0.93	-1.55

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 6H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GL 3428 + 30' @ 3458.0usft (Precision 593)
Site:	Gaucha 21 Fed	MD Reference:	GL 3428 + 30' @ 3458.0usft (Precision 593)
Well:	6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14 Single User 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)
12,552.0	89.13	356.88	10,376.0	2,154.2	110.7	2,153.6	2.18	-2.18	0.13
12,646.0	87.59	358.12	10,378.7	2,248.1	106.6	2,247.4	2.10	-1.64	1.32
12,740.0	85.85	359.96	10,384.0	2,341.9	105.0	2,341.3	2.69	-1.85	1.96
12,835.0	85.96	2.37	10,390.8	2,436.6	106.9	2,436.0	2.53	0.12	2.54
12,929.0	88.10	3.89	10,395.7	2,530.3	112.1	2,529.7	2.79	2.28	1.62
13,023.0	90.81	3.45	10,396.6	2,624.1	118.1	2,623.5	2.92	2.88	-0.47
13,117.0	91.82	1.45	10,394.4	2,718.0	122.1	2,717.3	2.38	1.07	-2.13
13,212.0	91.76	359.98	10,391.5	2,813.0	123.3	2,812.3	1.55	-0.06	-1.55
13,306.0	89.78	358.53	10,390.2	2,906.9	122.1	2,906.2	2.61	-2.11	-1.54
13,400.0	89.02	358.42	10,391.2	3,000.9	119.6	3,000.2	0.82	-0.81	-0.12
13,494.0	90.62	359.46	10,391.5	3,094.9	117.8	3,094.2	2.03	1.70	1.11
13,588.0	91.93	0.55	10,389.4	3,188.8	117.8	3,188.2	1.81	1.39	1.16
13,683.0	91.01	359.31	10,386.9	3,283.8	117.7	3,283.1	1.62	-0.97	-1.31
13,772.0	90.00	357.49	10,386.2	3,372.8	115.2	3,372.1	2.34	-1.13	-2.04
13,871.0	89.97	358.43	10,386.2	3,471.7	111.7	3,471.1	0.95	-0.03	0.95
13,965.0	92.10	0.50	10,384.5	3,565.7	110.8	3,565.0	3.16	2.27	2.20
14,059.0	93.14	0.15	10,380.2	3,659.6	111.4	3,658.9	1.17	1.11	-0.37
14,153.0	92.13	358.00	10,375.9	3,753.5	109.9	3,752.8	2.52	-1.07	-2.29
14,248.0	90.48	358.93	10,373.7	3,848.4	107.3	3,847.8	1.99	-1.74	0.98
14,342.0	91.04	0.18	10,372.5	3,942.4	106.6	3,941.7	1.46	0.60	1.33
14,436.0	89.47	1.29	10,372.0	4,036.4	107.8	4,035.7	2.05	-1.67	1.18
14,530.0	89.86	1.50	10,372.6	4,130.3	110.1	4,129.7	0.47	0.41	0.22
14,624.0	90.06	1.97	10,372.7	4,224.3	112.9	4,223.6	0.54	0.21	0.50
14,719.0	90.84	1.12	10,371.9	4,319.3	115.5	4,318.6	1.21	0.82	-0.89
14,813.0	90.84	0.66	10,370.5	4,413.2	116.9	4,412.5	0.49	0.00	-0.49
14,907.0	90.98	0.49	10,369.0	4,507.2	117.9	4,506.5	0.23	0.15	-0.18
15,001.0	91.65	1.11	10,366.9	4,601.2	119.2	4,600.5	0.97	0.71	0.66
15,096.0	92.07	359.24	10,363.8	4,696.1	119.5	4,695.4	2.02	0.44	-1.97
15,190.0	90.36	357.33	10,361.8	4,790.1	116.7	4,789.4	2.73	-1.82	-2.03
15,256.6	90.07	356.97	10,361.6	4,856.6	113.4	4,855.9	0.69	-0.44	-0.54
100' FNL 15256.6'MD / 10361.6'TVD									
15,279.0	89.97	356.85	10,361.6	4,878.9	112.2	4,878.3	0.69	-0.44	-0.54
Last Survey 15279'MD / 10361.6'TVD									
15,336.0	89.97	356.85	10,361.6	4,935.9	109.0	4,935.2	0.00	0.00	0.00
PTB 15336'MD / 10361.6'TVD									

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 6H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GL 3428 + 30' @ 3458.0usft (Precision 593)
Site:	Gaucha 21 Fed	MD Reference:	GL 3428 + 30' @ 3458.0usft (Precision 593)
Well:	6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14 Single User Db

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
9,795.0	9,778.0	-278.2	136.8	KOP 9795'MD / 9778'TVD
10,371.8	10,254.0	5.5	146.4	330' FSL10371.8'MD / 10254'TVD
15,256.6	10,361.6	4,856.6	113.4	100' FNL 15256.6'MD / 10361.6'TVD
15,279.0	10,361.6	4,878.9	112.2	Last Survey 15279'MD / 10361.6'TVD
15,336.0	10,361.6	4,935.9	109.0	PTB 15336'MD / 10361.6'TVD

Checked By: _____	Approved By: _____	Date: _____
--------------------------	---------------------------	--------------------

devon

Devon Energy
Field: Lea County, NM (NAD 83)
Location: Gaucha 21 Fed
Well: 6H
OH
Plan: Plan 6
GL 3428 + 30' @ 3458.0usft (Precision 593)



Azimuths to Grid North
True North: -0.48°
Magnetic North: 6.32°
Magnetic Field
Strength: 47910.4nT
Dip Angle: 60.20°
Date: 9/5/2018
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.32°

LEGACY DIRECTIONAL

PROJECT DETAILS: Lea County, NM (NAD 83)

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

WELL DETAILS: 6H

+N/-S	+E/-W	GL 3428 + 30' @ 3458.0usft (Precision 593)	3428.0	Slot
0.0	0.0	Northing 499717.99	Eastings 808462.45 32° 22' 14.973 N 103° 28' 5.234 W	

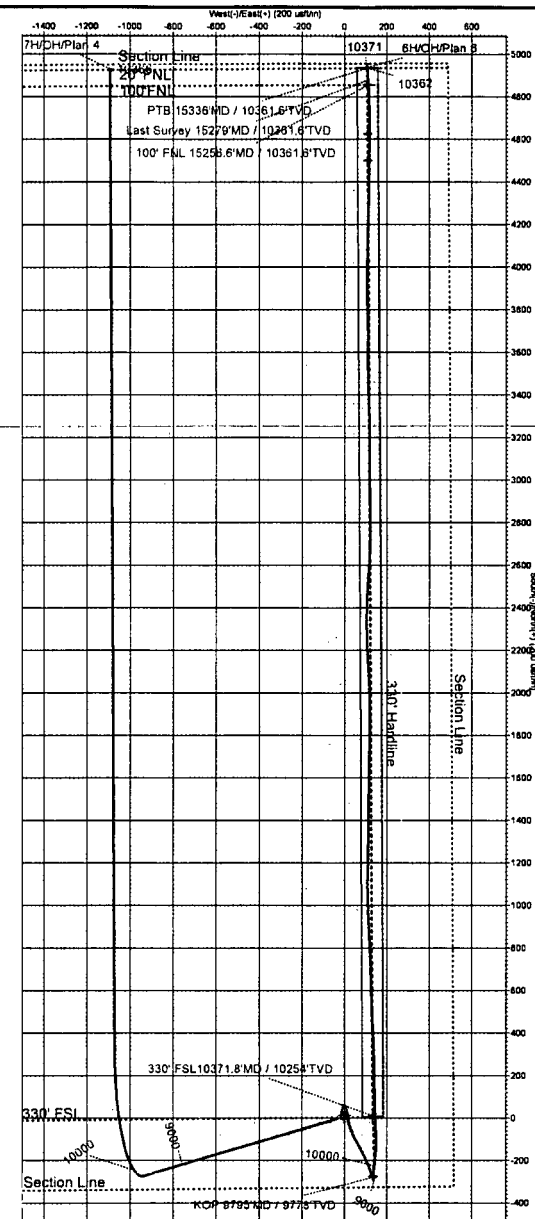
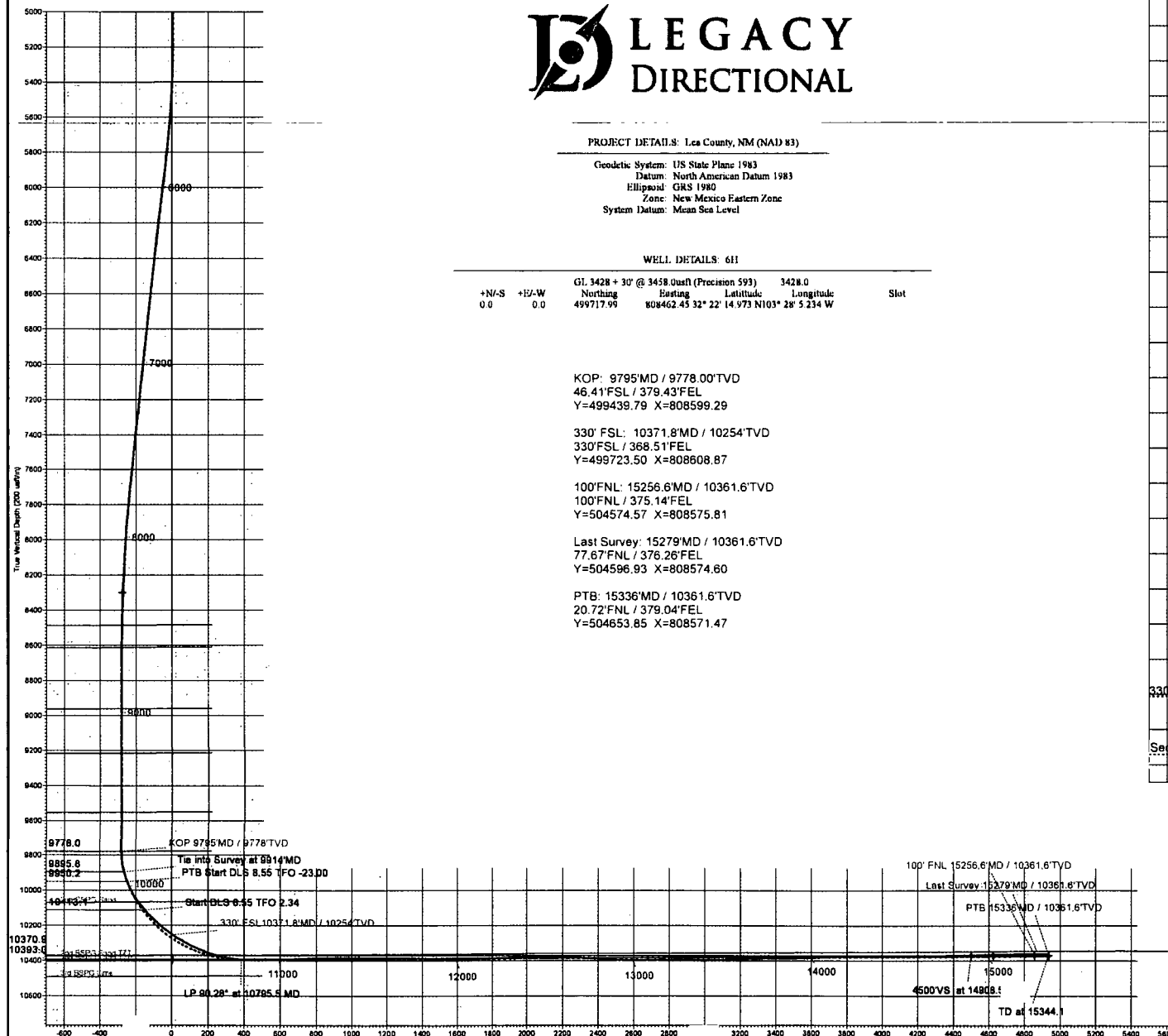
KOP: 9795' MD / 9778.00' TVD
46.41' FSL / 379.43' FEL
Y=499439.79 X=808599.29

330' FSL: 10371.8' MD / 10254' TVD
330' FSL / 368.51' FEL
Y=499723.50 X=808608.87

100' FNL: 15256.6' MD / 10361.6' TVD
100' FNL / 375.14' FEL
Y=504574.57 X=808575.81

Last Survey: 15279' MD / 10361.6' TVD
77.67' FNL / 376.26' FEL
Y=504596.93 X=808574.60

PTB: 15336' MD / 10361.6' TVD
20.72' FNL / 379.04' FEL
Y=504653.85 X=808571.47



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1818.0	1818.1	Rustler
2113.0	2113.1	Top of Salt
5398.0	5398.3	Delaware
8484.4	8501.2	1st BSPG Lime
8611.4	8628.2	Leonard A
8960.4	8977.2	Leonard B
9214.4	9231.3	Leonard C
9549.4	9566.3	1st BSPG Sand
9777.4	9794.3	2nd BSPG Lime
10066.9	10100.8	2nd BSPG Sand
10369.0	10612.3	2nd BSPG Sand T.T