



30-025-43092

Legacy Reserves

Lea County, NM (NAD-27 2015)

Lea Unit #37H

Lea Unit #37H

OH

Design: Lateral #1

Standard Survey Report

07 October, 2016

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TDS
Survey Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #37H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Site:	Lea Unit #37H	MD Reference:	KB @ 3692.00usft (McVay 4)
Well:	Lea Unit #37H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	Database:	EDM 5000.1 Single User Db

Project	Lea County, NM (NAD-27 2015)		
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	Lea Unit #37H				
Site Position:		Northing:	567,504.90 usft	Latitude:	32° 33' 26.923 N
From:	Map	Easting:	753,834.80 usft	Longitude:	103° 30' 34.149 W
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	0.44 °

Well	Lea Unit #37H					
Well Position	+N/-S	0.00 usft	Northing:	567,504.90 usft	Latitude:	32° 33' 26.923 N
	+E/-W	0.00 usft	Easting:	753,834.80 usft	Longitude:	103° 30' 34.149 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,674.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	9/2/2015	7.14	60.40	48,326

Design	Lateral #1				
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	354.33	

Survey Program	Date 10/7/2016			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
171.00	18,207.00	TDS MWD #1 (OH)	MWD	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)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
171.00	0.40	271.10	171.00	0.01	-0.60	0.07	0.23	0.23	0.00	
First TDS MWD Survey										
264.00	0.40	273.40	264.00	0.04	-1.25	0.16	0.02	0.00	2.47	
354.00	0.40	310.40	353.99	0.26	-1.80	0.44	0.28	0.00	41.11	
443.00	0.50	316.80	442.99	0.74	-2.30	0.97	0.13	0.11	7.19	
533.00	0.40	332.40	532.99	1.31	-2.72	1.57	0.17	-0.11	17.33	
624.00	0.60	336.20	623.99	2.03	-3.05	2.32	0.22	0.22	4.18	
714.00	0.50	318.20	713.98	2.75	-3.51	3.08	0.22	-0.11	-20.00	
806.00	0.30	319.60	805.98	3.23	-3.93	3.60	0.22	-0.22	1.52	
896.00	0.30	311.60	895.98	3.57	-4.26	3.97	0.05	0.00	-8.89	



TDS
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Site: Lea Unit #37H
Well: Lea Unit #37H
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Local Co-ordinate Reference: Well Lea Unit #37H
TVD Reference: KB @ 3692.00usft (McVay 4)
MD Reference: KB @ 3692.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 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)
987.00	0.50	337.20	986.98	4.09	-4.59	4.53	0.29	0.22	28.13
1,168.00	0.40	4.90	1,167.97	5.45	-4.84	5.90	0.13	-0.06	15.30
1,259.00	0.40	10.90	1,258.97	6.08	-4.76	6.52	0.05	0.00	6.59
1,351.00	0.50	331.50	1,350.97	6.75	-4.89	7.20	0.35	0.11	-42.83
1,445.00	0.40	328.80	1,444.96	7.39	-5.25	7.87	0.11	-0.11	-2.87
1,540.00	0.40	315.10	1,539.96	7.91	-5.66	8.43	0.10	0.00	-14.42
1,633.00	0.70	297.90	1,632.96	8.40	-6.39	8.99	0.36	0.32	-18.49
1,711.00	0.70	309.00	1,710.95	8.92	-7.18	9.59	0.17	0.00	14.23
1,820.00	0.60	287.30	1,819.94	9.51	-8.24	10.28	0.24	-0.09	-19.91
1,914.00	0.50	304.00	1,913.94	9.89	-9.05	10.74	0.20	-0.11	17.77
2,008.00	0.40	319.00	2,007.94	10.37	-9.61	11.26	0.16	-0.11	15.96
2,103.00	0.50	343.60	2,102.93	11.01	-9.94	11.94	0.23	0.11	25.89
2,197.00	0.40	323.00	2,196.93	11.67	-10.26	12.63	0.20	-0.11	-21.91
2,291.00	0.40	321.30	2,290.93	12.19	-10.66	13.18	0.01	0.00	-1.81
2,386.00	0.40	333.30	2,385.93	12.74	-11.02	13.77	0.09	0.00	12.63
2,480.00	0.30	343.20	2,479.92	13.27	-11.23	14.32	0.12	-0.11	10.53
2,574.00	0.30	4.70	2,573.92	13.75	-11.28	14.80	0.12	0.00	22.87
2,668.00	0.20	352.50	2,667.92	14.16	-11.29	15.21	0.12	-0.11	-12.98
2,762.00	0.30	22.00	2,761.92	14.55	-11.22	15.59	0.17	0.11	31.38
2,856.00	0.60	12.90	2,855.92	15.26	-11.01	16.27	0.33	0.32	-9.68
2,951.00	0.90	38.70	2,950.91	16.33	-10.44	17.28	0.47	0.32	27.16
3,045.00	1.10	43.40	3,044.90	17.56	-9.35	18.40	0.23	0.21	5.00
3,139.00	1.10	46.60	3,138.88	18.83	-8.08	19.54	0.07	0.00	3.40
3,233.00	0.30	19.10	3,232.87	19.69	-7.34	20.31	0.90	-0.85	-29.26
3,327.00	0.40	1.40	3,326.87	20.25	-7.25	20.86	0.16	0.11	-18.83
3,422.00	0.60	28.30	3,421.87	21.02	-7.01	21.61	0.32	0.21	28.32
3,516.00	0.70	22.40	3,515.86	21.98	-6.56	22.52	0.13	0.11	-6.28
3,610.00	0.90	24.60	3,609.85	23.18	-6.03	23.66	0.22	0.21	2.34
3,704.00	1.00	3.80	3,703.84	24.67	-5.67	25.11	0.38	0.11	-22.13
3,798.00	1.00	359.10	3,797.82	26.31	-5.63	26.74	0.09	0.00	-5.00
3,892.00	0.70	348.20	3,891.81	27.69	-5.76	28.13	0.36	-0.32	-11.60
3,987.00	0.30	233.30	3,986.81	28.11	-6.08	28.58	0.92	-0.42	-120.95
4,081.00	0.40	229.90	4,080.81	27.75	-6.53	28.26	0.11	0.11	-3.62
4,175.00	0.40	241.40	4,174.81	27.39	-7.06	27.95	0.09	0.00	12.23
4,270.00	0.30	214.90	4,269.80	27.02	-7.50	27.63	0.20	-0.11	-27.89
4,364.00	0.40	256.00	4,363.80	26.74	-7.96	27.40	0.28	0.11	43.72
4,458.00	0.40	264.90	4,457.80	26.63	-8.60	27.35	0.07	0.00	9.47
4,552.00	0.20	234.50	4,551.80	26.51	-9.06	27.27	0.26	-0.21	-32.34
4,646.00	0.10	242.20	4,645.80	26.37	-9.27	27.16	0.11	-0.11	8.19
4,741.00	0.00	212.70	4,740.80	26.34	-9.34	27.13	0.11	-0.11	0.00
4,835.00	0.20	278.50	4,834.80	26.36	-9.50	27.17	0.21	0.21	0.00
4,929.00	0.10	327.30	4,928.80	26.45	-9.71	27.28	0.16	-0.11	51.91
5,023.00	0.10	322.30	5,022.80	26.59	-9.81	27.43	0.01	0.00	-5.32

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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)
5,117.00	0.40	329.20	5,116.80	26.93	-10.02	27.79	0.32	0.32	7.34
5,211.00	0.10	171.30	5,210.80	27.14	-10.18	28.01	0.53	-0.32	-167.98
5,305.00	0.20	349.60	5,304.80	27.22	-10.20	28.09	0.32	0.11	189.68
5,399.00	0.30	89.20	5,398.80	27.38	-9.98	28.23	0.41	0.11	105.96
5,493.00	0.30	97.60	5,492.79	27.35	-9.49	28.15	0.05	0.00	8.94
5,527.00	0.30	8.50	5,526.79	27.43	-9.39	28.22	1.24	0.00	-262.06
5,658.00	0.60	48.10	5,657.79	28.22	-8.83	28.96	0.32	0.23	30.23
5,720.00	0.40	19.40	5,719.79	28.65	-8.51	29.35	0.51	-0.32	-46.29
5,814.00	0.60	332.40	5,813.79	29.39	-8.63	30.10	0.47	0.21	-50.00
5,909.00	0.40	267.50	5,908.78	29.82	-9.19	30.58	0.59	-0.21	-68.32
6,003.00	0.60	228.90	6,002.78	29.48	-9.89	30.31	0.40	0.21	-41.06
6,097.00	1.20	239.20	6,096.77	28.65	-11.11	29.61	0.66	0.64	10.96
6,191.00	1.90	244.40	6,190.73	27.47	-13.36	28.66	0.76	0.74	5.53
6,285.00	3.10	241.30	6,284.64	25.58	-17.00	27.13	1.28	1.28	-3.30
6,379.00	4.00	248.40	6,378.46	23.15	-22.27	25.24	1.06	0.96	7.55
6,473.00	4.90	248.60	6,472.18	20.48	-29.06	23.25	0.96	0.96	0.21
6,568.00	5.70	247.20	6,566.77	17.17	-37.19	20.76	0.85	0.84	-1.47
6,662.00	5.80	249.40	6,660.30	13.69	-45.94	18.16	0.26	0.11	2.34
6,756.00	5.80	252.10	6,753.81	10.56	-54.90	15.93	0.29	0.00	2.87
6,850.00	5.70	250.90	6,847.34	7.57	-63.83	13.84	0.17	-0.11	-1.28
6,944.00	5.50	252.20	6,940.89	4.67	-72.53	11.81	0.25	-0.21	1.38
7,039.00	5.30	250.80	7,035.47	1.84	-81.01	9.83	0.25	-0.21	-1.47
7,133.00	5.20	248.70	7,129.08	-1.14	-89.08	7.67	0.23	-0.11	-2.23
7,227.00	5.10	251.80	7,222.70	-3.99	-97.02	5.61	0.31	-0.11	3.30
7,322.00	4.90	251.00	7,317.34	-6.63	-104.86	3.76	0.22	-0.21	-0.84
7,416.00	4.70	251.30	7,411.01	-9.17	-112.31	1.97	0.21	-0.21	0.32
7,510.00	4.70	260.90	7,504.69	-11.02	-119.76	0.87	0.84	0.00	10.21
7,698.00	4.70	262.50	7,692.06	-13.24	-135.00	0.16	0.07	0.00	0.85
7,793.00	4.40	260.30	7,786.76	-14.36	-142.45	-0.22	0.37	-0.32	-2.32
7,887.00	4.50	260.50	7,880.48	-15.58	-149.64	-0.72	0.11	0.11	0.21
7,981.00	4.30	259.60	7,974.20	-16.82	-156.75	-1.26	0.23	-0.21	-0.96
8,075.00	4.10	260.10	8,067.95	-18.04	-163.52	-1.79	0.22	-0.21	0.53
8,169.00	4.00	261.00	8,161.71	-19.13	-170.07	-2.23	0.13	-0.11	0.96
8,263.00	3.80	261.40	8,255.50	-20.11	-176.39	-2.58	0.21	-0.21	0.43
8,358.00	3.30	257.90	8,350.31	-21.15	-182.17	-3.05	0.57	-0.53	-3.68
8,452.00	2.50	251.50	8,444.19	-22.37	-186.76	-3.81	0.92	-0.85	-6.81
8,546.00	2.80	270.10	8,538.09	-23.02	-191.00	-4.03	0.96	0.32	19.79
8,641.00	3.60	281.40	8,632.94	-22.42	-196.25	-2.92	1.07	0.84	11.89
8,735.00	3.00	276.20	8,726.79	-21.57	-201.59	-1.55	0.71	-0.64	-5.53
8,829.00	3.90	273.60	8,820.62	-21.11	-207.22	-0.53	0.97	0.96	-2.77
8,923.00	3.70	265.30	8,914.41	-21.15	-213.44	0.04	0.62	-0.21	-8.83
9,017.00	3.30	250.20	9,008.24	-22.32	-219.00	-0.57	1.06	-0.43	-16.06
9,112.00	3.20	249.70	9,103.09	-24.17	-224.06	-1.91	0.11	-0.11	-0.53

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9,206.00	3.40	263.30	9,196.93	-25.40	-229.29	-2.62	0.86	0.21	14.47
9,300.00	3.70	268.50	9,290.75	-25.81	-235.09	-2.45	0.47	0.32	5.53
9,394.00	4.00	284.50	9,384.54	-25.06	-241.30	-1.10	1.18	0.32	17.02
9,488.00	4.00	281.40	9,478.31	-23.59	-247.69	0.99	0.23	0.00	-3.30
9,582.00	3.60	272.30	9,572.11	-22.83	-253.85	2.36	0.77	-0.43	-9.68
9,676.00	3.70	268.10	9,665.92	-22.81	-259.83	2.97	0.30	0.11	-4.47
9,770.00	3.80	264.70	9,759.71	-23.20	-265.96	3.19	0.26	0.11	-3.62
9,805.00	3.80	263.70	9,794.64	-23.43	-268.27	3.19	0.19	0.00	-2.86
9,907.00	4.20	326.60	9,896.43	-20.68	-273.69	6.46	4.10	0.39	61.67
9,954.00	10.00	358.60	9,943.07	-15.16	-274.74	12.06	14.49	12.34	68.09
10,001.00	16.50	10.00	9,988.80	-4.50	-273.68	22.57	14.84	13.83	24.26
10,048.00	21.00	8.00	10,033.30	10.42	-271.35	37.18	9.67	9.57	-4.26
10,095.00	23.40	1.30	10,076.81	28.10	-269.96	54.63	7.41	5.11	-14.26
10,142.00	26.20	358.40	10,119.48	47.81	-270.04	74.25	6.49	5.96	-6.17
10,190.00	30.20	355.90	10,161.77	70.45	-271.20	96.90	8.69	8.33	-5.21
10,237.00	33.90	356.50	10,201.60	95.33	-272.84	121.82	7.90	7.87	1.28
10,282.00	36.00	358.80	10,238.49	121.08	-273.89	147.55	5.51	4.67	5.11
10,329.00	38.20	0.20	10,275.97	149.43	-274.13	175.78	5.01	4.68	2.98
10,376.00	43.30	359.10	10,311.57	180.10	-274.33	206.32	10.96	10.85	-2.34
10,423.00	48.90	357.70	10,344.14	213.94	-275.29	240.09	12.11	11.91	-2.98
10,470.00	54.50	355.70	10,373.26	250.74	-277.44	276.92	12.37	11.91	-4.26
10,517.00	60.00	355.00	10,398.68	290.12	-280.65	316.43	11.77	11.70	-1.49
10,564.00	64.00	354.70	10,420.74	331.44	-284.38	357.92	8.53	8.51	-0.64
10,611.00	69.80	355.80	10,439.17	374.51	-287.95	401.13	12.53	12.34	2.34
10,658.00	72.70	356.90	10,454.28	418.92	-290.78	445.60	6.56	6.17	2.34
10,705.00	77.80	356.20	10,466.24	464.27	-293.51	491.00	10.95	10.85	-1.49
10,753.00	82.10	353.70	10,474.62	511.34	-297.68	538.25	10.32	8.96	-5.21
10,846.00	89.70	353.00	10,481.26	603.41	-308.42	630.93	8.21	8.17	-0.75
10,936.00	90.30	352.63	10,481.27	692.70	-319.67	720.89	0.78	0.66	-0.41
As-Drilled FTP									
10,967.00	90.50	352.50	10,481.05	723.44	-323.69	751.88	0.78	0.66	-0.41
11,061.00	90.70	353.70	10,480.07	816.75	-334.98	845.85	1.29	0.21	1.28
11,155.00	91.70	354.30	10,478.10	910.21	-344.80	939.83	1.24	1.06	0.64
11,249.00	91.60	355.60	10,475.39	1,003.81	-353.07	1,033.78	1.39	-0.11	1.38
11,343.00	90.20	356.10	10,473.91	1,097.55	-359.87	1,127.73	1.58	-1.49	0.53
11,532.00	88.90	356.10	10,475.40	1,286.10	-372.73	1,316.63	0.69	-0.69	0.00
11,626.00	89.30	355.80	10,476.88	1,379.85	-379.37	1,410.58	0.53	0.43	-0.32
11,720.00	89.20	356.40	10,478.11	1,473.63	-385.76	1,504.53	0.65	-0.11	0.64
11,814.00	89.50	356.30	10,479.17	1,567.43	-391.74	1,598.46	0.34	0.32	-0.11
11,908.00	89.70	355.90	10,479.83	1,661.21	-398.14	1,692.42	0.48	0.21	-0.43
12,003.00	89.70	354.50	10,480.33	1,755.87	-406.09	1,787.40	1.47	0.00	-1.47
12,097.00	89.60	355.20	10,480.90	1,849.49	-414.52	1,881.40	0.75	-0.11	0.74
12,191.00	89.50	357.60	10,481.64	1,943.30	-420.42	1,975.33	2.56	-0.11	2.55
12,285.00	90.30	358.20	10,481.80	2,037.23	-423.87	2,069.14	1.06	0.85	0.64

Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Site: Lea Unit #37H
Well: Lea Unit #37H
Wellbore: OH
Design: Lateral #1

Local Co-ordinate Reference: Well Lea Unit #37H
TVD Reference: KB @ 3692.00usft (McVay 4)
MD Reference: KB @ 3692.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 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)
12,379.00	90.70	357.30	10,480.98	2,131.15	-427.56	2,162.97	1.05	0.43	-0.96
12,473.00	91.30	356.90	10,479.34	2,225.02	-432.31	2,256.84	0.77	0.64	-0.43
12,567.00	90.50	357.60	10,477.87	2,318.90	-436.82	2,350.71	1.13	-0.85	0.74
12,661.00	89.10	358.20	10,478.19	2,412.83	-440.27	2,444.52	1.62	-1.49	0.64
12,755.00	89.50	358.40	10,479.34	2,506.78	-443.06	2,538.29	0.48	0.43	0.21
12,849.00	90.10	358.20	10,479.67	2,600.74	-445.84	2,632.06	0.67	0.64	-0.21
12,944.00	90.90	358.30	10,478.84	2,695.69	-448.75	2,726.84	0.85	0.84	0.11
13,038.00	90.10	357.30	10,478.02	2,789.62	-452.35	2,820.66	1.36	-0.85	-1.06
13,132.00	90.10	356.20	10,477.86	2,883.46	-457.68	2,914.57	1.17	0.00	-1.17
13,227.00	90.30	356.00	10,477.52	2,978.24	-464.14	3,009.53	0.30	0.21	-0.21
13,321.00	91.20	355.60	10,476.29	3,071.98	-471.03	3,103.49	1.05	0.96	-0.43
13,415.00	92.00	355.50	10,473.67	3,165.66	-478.32	3,197.43	0.86	0.85	-0.11
13,509.00	92.40	355.80	10,470.06	3,259.32	-485.44	3,291.34	0.53	0.43	0.32
13,603.00	91.90	357.20	10,466.53	3,353.08	-491.18	3,385.20	1.58	-0.53	1.49
13,698.00	89.70	358.10	10,465.21	3,447.98	-495.07	3,480.02	2.50	-2.32	0.95
13,792.00	90.50	358.10	10,465.04	3,541.93	-498.19	3,573.82	0.85	0.85	0.00
13,886.00	88.10	357.90	10,466.19	3,635.86	-501.47	3,667.61	2.56	-2.55	-0.21
13,980.00	87.20	358.30	10,470.05	3,729.72	-504.58	3,761.33	1.05	-0.96	0.43
14,074.00	88.70	358.10	10,473.41	3,823.62	-507.53	3,855.05	1.61	1.60	-0.21
14,168.00	90.00	357.80	10,474.48	3,917.55	-510.90	3,948.86	1.42	1.38	-0.32
14,262.00	91.10	358.40	10,473.57	4,011.49	-514.01	4,042.65	1.33	1.17	0.64
14,356.00	89.70	358.40	10,472.92	4,105.45	-516.64	4,136.40	1.49	-1.49	0.00
14,451.00	90.10	356.90	10,473.08	4,200.37	-520.53	4,231.24	1.63	0.42	-1.58
14,545.00	90.60	355.50	10,472.51	4,294.15	-526.76	4,325.19	1.58	0.53	-1.49
14,639.00	91.30	355.80	10,470.95	4,387.87	-533.89	4,419.15	0.81	0.74	0.32
14,733.00	89.40	355.90	10,470.38	4,481.62	-540.69	4,513.11	2.02	-2.02	0.11
14,828.00	88.40	356.00	10,472.20	4,576.36	-547.40	4,608.05	1.06	-1.05	0.11
14,922.00	88.70	355.10	10,474.58	4,670.05	-554.69	4,702.00	1.01	0.32	-0.96
15,016.00	90.10	355.50	10,475.56	4,763.72	-562.39	4,795.98	1.55	1.49	0.43
15,110.00	92.70	355.80	10,473.27	4,857.42	-569.52	4,889.92	2.78	2.77	0.32
15,205.00	92.70	356.20	10,468.79	4,952.08	-576.14	4,984.77	0.42	0.00	0.42
15,298.00	93.60	356.40	10,463.68	5,044.74	-582.13	5,077.58	0.99	0.97	0.22
15,393.00	91.30	356.00	10,459.62	5,139.44	-588.42	5,172.43	2.46	-2.42	-0.42
15,487.00	91.30	355.00	10,457.49	5,233.13	-595.80	5,266.39	1.06	0.00	-1.06
15,581.00	91.60	354.20	10,455.11	5,326.68	-604.64	5,360.36	0.91	0.32	-0.85
15,675.00	90.20	354.30	10,453.63	5,420.19	-614.05	5,454.34	1.49	-1.49	0.11
15,769.00	89.80	353.60	10,453.63	5,513.67	-623.96	5,548.34	0.86	-0.43	-0.74
15,864.00	91.30	354.70	10,452.72	5,608.16	-633.64	5,643.33	1.96	1.58	1.16
15,958.00	92.90	355.30	10,449.28	5,701.74	-641.83	5,737.26	1.82	1.70	0.64
16,052.00	93.50	354.70	10,444.03	5,795.24	-650.01	5,831.10	0.90	0.64	-0.64
16,146.00	93.00	356.40	10,438.70	5,888.80	-657.29	5,924.93	1.88	-0.53	1.81
16,240.00	91.00	357.30	10,435.42	5,982.59	-662.45	6,018.77	2.33	-2.13	0.96
16,335.00	88.80	357.40	10,435.58	6,077.49	-666.85	6,113.63	2.32	-2.32	0.11



TDS
Survey Report



Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Site: Lea Unit #37H
Well: Lea Unit #37H
Wellbore: OH
Design: Lateral #1

Local Co-ordinate Reference: Well Lea Unit #37H
TVD Reference: KB @ 3692.00usft (McVay 4)
MD Reference: KB @ 3692.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 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)
16,429.00	88.70	356.60	10,437.64	6,171.33	-671.76	6,207.51	0.86	-0.11	-0.85
16,523.00	88.30	356.90	10,440.10	6,265.15	-677.09	6,301.39	0.53	-0.43	0.32
16,618.00	88.40	356.90	10,442.83	6,359.97	-682.23	6,396.26	0.11	0.11	0.00
16,712.00	89.20	357.10	10,444.80	6,453.82	-687.14	6,490.13	0.88	0.85	0.21
16,806.00	90.50	356.40	10,445.05	6,547.67	-692.47	6,584.05	1.57	1.38	-0.74
16,901.00	92.80	355.70	10,442.31	6,642.40	-699.01	6,678.96	2.53	2.42	-0.74
16,995.00	92.10	355.20	10,438.29	6,736.01	-706.46	6,772.85	0.91	-0.74	-0.53
17,089.00	91.10	354.10	10,435.67	6,829.56	-715.23	6,866.81	1.58	-1.06	-1.17
17,184.00	90.20	354.80	10,434.59	6,924.11	-724.41	6,961.81	1.20	-0.95	0.74
17,278.00	89.30	357.50	10,435.00	7,017.89	-730.72	7,055.75	3.03	-0.96	2.87
17,372.00	89.30	358.40	10,436.15	7,111.82	-734.09	7,149.55	0.96	0.00	0.96
17,466.00	88.20	358.30	10,438.20	7,205.76	-736.79	7,243.30	1.18	-1.17	-0.11
17,561.00	87.90	358.00	10,441.43	7,300.65	-739.86	7,338.03	0.45	-0.32	-0.32
17,655.00	87.80	358.50	10,444.96	7,394.54	-742.73	7,431.74	0.54	-0.11	0.53
17,749.00	89.00	358.60	10,447.58	7,488.47	-745.10	7,525.45	1.28	1.28	0.11
17,843.00	90.80	357.80	10,447.75	7,582.42	-748.06	7,619.23	2.10	1.91	-0.85
17,937.00	91.20	357.20	10,446.11	7,676.32	-752.15	7,713.07	0.77	0.43	-0.64
18,032.00	92.80	356.60	10,442.79	7,771.12	-757.29	7,807.92	1.80	1.68	-0.63
Last TDS MWD Survey									
18,206.00	92.80	356.60	10,434.29	7,944.60	-767.60	7,981.57	0.00	0.00	0.00
AS-Drilled LTP									
18,207.00	92.80	356.60	10,434.24	7,945.60	-767.66	7,982.57	0.00	0.00	0.00
Projection to Bit/TD									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
171.00	171.00	0.01	-0.60	First TDS MWD Survey
10,936.00	10,481.27	692.70	-319.67	As-Drilled FTP
18,032.00	10,442.79	7,771.12	-757.29	Last TDS MWD Survey
18,206.00	10,434.29	7,944.60	-767.60	AS-Drilled LTP
18,207.00	10,434.24	7,945.60	-767.66	Projection to Bit/TD

Checked By: _____ Approved By: _____ Date: _____