



Legacy Reserves

Lea County, NM (NAD-27 2015)

Lea Unit #32H

Lea Unit #32H

30-025-42342

Lateral #1

Design: Lateral #1

Standard Survey Report

05 October, 2015





TDS
Survey Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #32H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3673.99usft (McVay 4)
Site:	Lea Unit #32H	MD Reference:	KB @ 3673.99usft (McVay 4)
Well:	Lea Unit #32H	North Reference:	Grid
Wellbore:	Lateral #1	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 #32H, Sec 12, T-20S, R-24E, Unit O				
Site Position:		Northing:	575,785.60 usft	Latitude:	32° 34' 48.888 N
From:	Map	Easting:	753,463.00 usft	Longitude:	103° 30' 37.745 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.44 °

Well	Lea Unit #32H					
Well Position	+N/-S	0.00 usft	Northing:	575,785.60 usft	Latitude:	32° 34' 48.888 N
	+E/-W	0.00 usft	Easting:	753,463.00 usft	Longitude:	103° 30' 37.745 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,655.99 usft

Wellbore	Lateral #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	9/2/2015	7.14	60.42	48,340

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	183.02	

Survey Program	Date 10/5/2015			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.00	5,250.00	Gyro Survey #1 (Lateral #1)	VES-ISCWSA-GYRO-3	Biaxial Semi-Cont. Gyro
5,534.99	18,390.00	TDS MWD Survey #1 (Lateral #1)	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	
100.00	0.47	144.04	100.00	-0.33	0.24	0.32	0.47	0.47	0.00	
200.00	0.43	134.43	200.00	-0.93	0.75	0.89	0.09	-0.04	-9.61	
300.00	0.46	129.57	299.99	-1.45	1.33	1.37	0.05	0.03	-4.86	
400.00	0.31	103.04	399.99	-1.76	1.90	1.66	0.23	-0.15	-26.53	
500.00	0.43	98.15	499.99	-1.88	2.54	1.74	0.12	0.12	-4.89	
600.00	0.19	107.76	599.99	-1.98	3.06	1.82	0.24	-0.24	9.61	
700.00	0.35	100.72	699.99	-2.09	3.52	1.90	0.16	0.16	-7.04	
800.00	0.18	98.94	799.98	-2.17	3.98	1.96	0.17	-0.17	-1.78	
900.00	0.21	61.81	899.98	-2.11	4.29	1.88	0.13	0.03	-37.13	



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Well:	Lea Unit #32H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	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)
1,000.00	0.33	60.64	999.98	-1.88	4.71	1.63	0.12	0.12	-1.17
1,100.00	0.45	47.14	1,099.98	-1.47	5.25	1.19	0.15	0.12	-13.50
1,200.00	0.28	32.23	1,199.98	-1.00	5.66	0.70	0.19	-0.17	-14.91
1,300.00	0.43	30.20	1,299.98	-0.47	5.98	0.15	0.15	0.15	-2.03
1,400.00	0.43	24.74	1,399.97	0.20	6.33	-0.53	0.04	0.00	-5.46
1,500.00	0.81	70.61	1,499.97	0.78	7.15	-1.15	0.60	0.38	45.87
1,600.00	0.48	31.18	1,599.96	1.37	8.04	-1.79	0.53	-0.33	-39.43
1,700.00	0.45	30.70	1,699.96	2.06	8.45	-2.51	0.03	-0.03	-0.48
1,800.00	0.49	16.30	1,799.96	2.81	8.77	-3.27	0.12	0.04	-14.40
1,900.00	0.30	326.69	1,899.95	3.44	8.75	-3.90	0.37	-0.19	-49.61
2,000.00	0.37	342.71	1,999.95	3.97	8.51	-4.41	0.12	0.07	16.02
2,100.00	0.86	26.48	2,099.95	4.95	8.75	-5.40	0.65	0.49	43.77
2,200.00	0.70	11.39	2,199.94	6.22	9.20	-6.70	0.26	-0.16	-15.09
2,300.00	0.98	31.60	2,299.93	7.55	9.77	-8.05	0.40	0.28	20.21
2,400.00	0.91	23.82	2,399.91	9.00	10.54	-9.54	0.15	-0.07	-7.78
2,500.00	0.67	10.26	2,499.90	10.30	10.97	-10.87	0.30	-0.24	-13.56
2,600.00	1.02	39.85	2,599.89	11.56	11.64	-12.16	0.55	0.35	29.59
2,700.00	1.14	38.94	2,699.88	13.02	12.84	-13.68	0.12	0.12	-0.91
2,800.00	1.22	49.90	2,799.85	14.48	14.28	-15.21	0.24	0.08	10.96
2,900.00	2.12	55.40	2,899.81	16.21	16.61	-17.07	0.91	0.90	5.50
3,000.00	2.43	53.89	2,999.73	18.51	19.85	-19.53	0.32	0.31	-1.51
3,100.00	2.08	45.30	3,099.65	21.04	22.85	-22.21	0.49	-0.35	-8.59
3,200.00	2.57	47.50	3,199.57	23.83	25.79	-25.16	0.50	0.49	2.20
3,300.00	2.58	47.14	3,299.47	26.88	29.10	-28.37	0.02	0.01	-0.36
3,400.00	1.91	31.34	3,399.39	29.83	31.61	-31.46	0.91	-0.67	-15.80
3,500.00	2.31	32.38	3,499.33	32.96	33.56	-34.68	0.40	0.40	1.04
3,600.00	1.79	19.28	3,599.26	36.13	35.15	-37.93	0.70	-0.52	-13.10
3,700.00	2.02	28.56	3,699.21	39.15	36.51	-41.02	0.38	0.23	9.28
3,800.00	2.22	29.39	3,799.14	42.39	38.31	-44.35	0.20	0.20	0.83
3,900.00	1.49	17.28	3,899.09	45.32	39.64	-47.34	0.82	-0.73	-12.11
4,000.00	1.94	30.09	3,999.04	48.03	40.88	-50.11	0.59	0.45	12.81
4,100.00	1.45	6.25	4,099.00	50.75	41.86	-52.88	0.85	-0.49	-23.84
4,200.00	1.69	5.44	4,198.96	53.47	42.14	-55.62	0.24	0.24	-0.81
4,300.00	1.41	6.93	4,298.92	56.16	42.43	-58.32	0.28	-0.28	1.49
4,400.00	1.61	359.53	4,398.89	58.79	42.57	-60.95	0.28	0.20	-7.40
4,500.00	1.74	4.35	4,498.85	61.71	42.67	-63.87	0.19	0.13	4.82
4,600.00	1.90	17.94	4,598.80	64.80	43.30	-66.99	0.46	0.16	13.59
4,700.00	1.82	21.63	4,698.74	67.85	44.39	-70.10	0.14	-0.08	3.69
4,800.00	1.88	13.00	4,798.69	70.93	45.35	-73.22	0.28	0.06	-8.63
4,900.00	2.30	17.32	4,898.63	74.44	46.31	-76.78	0.45	0.42	4.32
5,000.00	2.04	13.15	4,998.55	78.09	47.31	-80.47	0.30	-0.26	-4.17
5,100.00	2.12	23.63	5,098.49	81.52	48.46	-83.96	0.39	0.08	10.48
5,250.00	1.95	17.66	5,248.39	86.49	50.35	-89.02	0.18	-0.11	-3.98



TDS
Survey Report



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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)
TIE-IN to VES Gyro									
5,537.00	1.90	19.90	5,535.23	95.62	53.45	-98.30	0.03	-0.02	0.78
5,631.00	1.90	17.10	5,629.18	98.57	54.44	-101.30	0.10	0.00	-2.98
5,725.00	1.90	17.90	5,723.13	101.54	55.37	-104.32	0.03	0.00	0.85
5,819.00	2.00	20.10	5,817.07	104.57	56.42	-107.39	0.13	0.11	2.34
5,913.00	1.80	29.40	5,911.02	107.39	57.70	-110.28	0.39	-0.21	9.89
6,007.00	1.70	22.60	6,004.98	109.97	58.97	-112.92	0.24	-0.11	-7.23
6,101.00	1.80	19.00	6,098.94	112.65	59.98	-115.65	0.16	0.11	-3.83
6,195.00	1.90	23.70	6,192.89	115.47	61.09	-118.53	0.19	0.11	5.00
6,289.00	1.90	29.60	6,286.83	118.25	62.49	-121.38	0.21	0.00	6.28
6,383.00	1.60	35.50	6,380.79	120.68	64.02	-123.88	0.37	-0.32	6.28
6,478.00	1.50	35.30	6,475.76	122.77	65.51	-126.05	0.11	-0.11	-0.21
6,572.00	1.50	35.30	6,569.72	124.78	66.93	-128.13	0.00	0.00	0.00
6,666.00	1.30	19.40	6,663.70	126.79	67.99	-130.20	0.46	-0.21	-16.91
6,760.00	1.30	33.20	6,757.67	128.69	68.93	-132.14	0.33	0.00	14.68
6,853.00	1.40	23.00	6,850.65	130.62	69.95	-134.12	0.28	0.11	-10.97
6,947.00	1.10	20.50	6,944.62	132.52	70.72	-136.06	0.32	-0.32	-2.66
7,042.00	0.90	26.50	7,039.61	134.04	71.37	-137.61	0.24	-0.21	6.32
7,136.00	1.00	27.90	7,133.60	135.43	72.08	-139.04	0.11	0.11	1.49
7,230.00	1.10	27.90	7,227.58	136.95	72.89	-140.60	0.11	0.11	0.00
7,324.00	0.90	28.80	7,321.57	138.39	73.67	-142.08	0.21	-0.21	0.96
7,418.00	0.80	33.50	7,415.56	139.59	74.38	-143.31	0.13	-0.11	5.00
7,512.00	0.60	15.80	7,509.55	140.61	74.88	-144.36	0.31	-0.21	-18.83
7,606.00	0.70	355.20	7,603.54	141.65	74.97	-145.41	0.27	0.11	-21.91
7,701.00	0.40	336.60	7,698.54	142.54	74.79	-146.28	0.36	-0.32	-19.58
7,795.00	0.50	333.90	7,792.54	143.21	74.48	-146.93	0.11	0.11	-2.87
7,889.00	0.50	282.30	7,886.53	143.66	73.89	-147.36	0.46	0.00	-54.89
7,983.00	0.80	297.50	7,980.53	144.05	72.91	-147.69	0.37	0.32	16.17
8,077.00	0.70	287.00	8,074.52	144.52	71.78	-148.10	0.18	-0.11	-11.17
8,171.00	0.60	300.10	8,168.51	144.94	70.81	-148.47	0.19	-0.11	13.94
8,266.00	0.90	284.70	8,263.50	145.38	69.65	-148.84	0.38	0.32	-16.21
8,360.00	0.70	289.70	8,357.50	145.76	68.40	-149.16	0.23	-0.21	5.32
8,454.00	0.60	277.50	8,451.49	146.02	67.37	-149.36	0.18	-0.11	-12.98
8,548.00	0.60	268.80	8,545.48	146.07	66.39	-149.36	0.10	0.00	-9.26
8,642.00	0.40	252.90	8,639.48	145.96	65.58	-149.21	0.26	-0.21	-16.91
8,737.00	0.30	251.10	8,734.48	145.78	65.03	-149.01	0.11	-0.11	-1.89
8,831.00	0.50	227.60	8,828.48	145.43	64.50	-148.62	0.27	0.21	-25.00
8,925.00	1.30	152.10	8,922.47	144.21	64.69	-147.42	1.35	0.85	-80.32
9,019.00	1.70	169.30	9,016.43	141.90	65.45	-145.15	0.64	0.43	18.30
9,113.00	1.90	166.30	9,110.39	139.01	66.08	-142.30	0.24	0.21	-3.19
9,208.00	1.80	172.50	9,205.34	136.00	66.65	-139.33	0.24	-0.11	6.53
9,302.00	2.00	198.60	9,299.29	132.98	66.32	-136.29	0.94	0.21	27.77
9,396.00	1.80	219.70	9,393.24	130.29	64.85	-133.53	0.77	-0.21	22.45



TDS
Survey Report



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9,490.00	2.20	229.30	9,487.18	127.98	62.54	-131.10	0.55	0.43	10.21
9,584.00	2.50	232.10	9,581.10	125.55	59.55	-128.51	0.34	0.32	2.98
9,679.00	2.50	237.60	9,676.01	123.16	56.17	-125.95	0.25	0.00	5.79
9,773.00	2.90	234.20	9,769.91	120.67	52.51	-123.27	0.46	0.43	-3.62
9,868.00	3.10	237.20	9,864.78	117.88	48.40	-120.26	0.27	0.21	3.16
9,962.00	3.60	241.80	9,958.62	115.10	43.66	-117.25	0.60	0.53	4.89
10,056.00	4.00	246.70	10,052.41	112.41	38.05	-114.26	0.55	0.43	5.21
10,150.00	4.20	244.20	10,146.17	109.62	31.94	-111.15	0.29	0.21	-2.66
10,245.00	4.40	240.30	10,240.90	106.30	25.64	-107.50	0.37	0.21	-4.11
10,339.00	4.10	240.80	10,334.64	102.87	19.58	-103.76	0.32	-0.32	0.53
10,370.00	4.90	227.50	10,365.55	101.44	17.63	-102.23	4.23	2.58	-42.90
10,402.00	7.00	217.00	10,397.38	98.96	15.45	-99.63	7.37	6.56	-32.81
10,433.00	9.30	210.30	10,428.06	95.28	13.05	-95.84	8.01	7.42	-21.61
10,465.00	12.40	205.70	10,459.49	89.96	10.26	-90.37	10.05	9.69	-14.38
10,496.00	16.10	202.30	10,489.53	82.98	7.18	-83.24	12.23	11.94	-10.97
10,527.00	19.20	201.60	10,519.06	74.26	3.67	-74.35	10.02	10.00	-2.26
10,559.00	22.10	200.80	10,549.00	63.74	-0.40	-63.63	9.11	9.06	-2.50
10,590.00	25.10	197.60	10,577.41	52.01	-4.46	-51.71	10.52	9.68	-10.32
10,622.00	28.00	194.50	10,606.03	38.27	-8.40	-37.77	10.04	9.06	-9.69
10,653.00	30.70	191.90	10,633.05	23.48	-11.85	-22.82	9.63	8.71	-8.39
10,684.00	32.90	191.00	10,659.40	7.47	-15.09	-6.66	7.26	7.10	-2.90
10,716.00	36.00	190.60	10,685.78	-10.31	-18.48	11.27	9.71	9.69	-1.25
10,747.00	39.40	189.90	10,710.31	-28.96	-21.85	30.08	11.05	10.97	-2.26
10,778.00	42.50	189.10	10,733.72	-49.00	-25.20	50.26	10.14	10.00	-2.58
10,808.00	45.90	189.10	10,755.22	-69.65	-28.50	71.06	11.33	11.33	0.00
10,841.00	49.70	188.40	10,777.39	-93.81	-32.22	95.38	11.62	11.52	-2.12
10,873.00	51.80	187.80	10,797.63	-118.34	-35.71	120.06	6.72	6.56	-1.88
10,904.00	54.10	187.40	10,816.31	-142.86	-38.98	144.72	7.49	7.42	-1.29
10,935.00	58.00	187.10	10,833.62	-168.37	-42.22	170.36	12.61	12.58	-0.97
10,967.00	61.80	186.40	10,849.66	-195.86	-45.47	197.98	12.02	11.88	-2.19
10,998.00	65.20	185.90	10,863.49	-223.44	-48.44	225.68	11.06	10.97	-1.61
11,030.00	68.70	185.00	10,876.02	-252.74	-51.23	255.09	11.24	10.94	-2.81
11,061.00	72.00	184.10	10,886.44	-281.84	-53.55	284.27	10.99	10.65	-2.90
11,093.00	74.40	184.00	10,895.69	-312.40	-55.71	314.90	7.51	7.50	-0.31
11,124.00	77.40	184.40	10,903.24	-342.38	-57.91	344.95	9.76	9.68	1.29
11,176.00	82.20	184.60	10,912.45	-393.38	-61.93	396.10	9.24	9.23	0.38
11,207.00	84.00	185.20	10,916.17	-424.05	-64.56	426.86	6.12	5.81	1.94
11,238.00	85.20	185.70	10,919.09	-454.77	-67.49	457.69	4.19	3.87	1.61
11,270.00	85.10	185.20	10,921.80	-486.51	-70.52	489.55	1.59	-0.31	-1.56
11,301.00	86.40	186.10	10,924.09	-517.27	-73.56	520.43	5.10	4.19	2.90
11,333.00	86.40	186.20	10,926.10	-549.03	-76.98	552.32	0.31	0.00	0.31
11,364.00	87.30	186.30	10,927.81	-579.79	-80.35	583.22	2.92	2.90	0.32
11,395.00	87.70	186.30	10,929.16	-610.58	-83.75	614.14	1.29	1.29	0.00
11,427.00	87.60	186.40	10,930.47	-642.35	-87.29	646.06	0.44	-0.31	0.31



TDS
Survey Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #32H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3673.99usft (McVay 4)
Site:	Lea Unit #32H	MD Reference:	KB @ 3673.99usft (McVay 4)
Well:	Lea Unit #32H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	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)
11,458.00	88.60	186.60	10,931.50	-673.14	-90.79	676.99	3.29	3.23	0.65
11,490.00	89.10	186.70	10,932.14	-704.92	-94.50	708.92	1.59	1.56	0.31
11,521.00	89.30	187.00	10,932.57	-735.69	-98.20	739.84	1.16	0.65	0.97
11,584.00	89.60	187.80	10,933.18	-798.16	-106.31	802.66	1.36	0.48	1.27
11,678.00	89.90	188.70	10,933.59	-891.19	-119.80	896.26	1.01	0.32	0.96
11,772.00	90.20	189.40	10,933.51	-984.02	-134.58	989.74	0.81	0.32	0.74
11,874.00	88.90	188.50	10,934.31	-1,084.77	-150.45	1,091.19	1.55	-1.27	-0.88
11,969.00	89.20	189.20	10,935.88	-1,178.63	-165.06	1,185.68	0.80	0.32	0.74
12,063.00	90.00	190.00	10,936.54	-1,271.31	-180.74	1,279.06	1.20	0.85	0.85
12,157.00	88.60	188.50	10,937.69	-1,364.07	-195.85	1,372.49	2.18	-1.49	-1.60
12,251.00	88.70	188.50	10,939.90	-1,457.01	-209.74	1,466.04	0.11	0.11	0.00
12,345.00	88.00	187.00	10,942.61	-1,550.11	-222.41	1,559.68	1.76	-0.74	-1.60
12,440.00	88.20	187.10	10,945.76	-1,644.34	-234.06	1,654.39	0.24	0.21	0.11
12,534.00	88.40	187.60	10,948.55	-1,737.53	-246.08	1,748.08	0.57	0.21	0.53
12,628.00	88.50	187.70	10,951.09	-1,830.66	-258.59	1,841.74	0.15	0.11	0.11
12,722.00	88.80	186.30	10,953.30	-1,923.93	-270.04	1,935.48	1.52	0.32	-1.49
12,816.00	89.80	186.80	10,954.45	-2,017.31	-280.76	2,029.30	1.19	1.06	0.53
12,911.00	90.50	187.60	10,954.20	-2,111.56	-292.67	2,124.04	1.12	0.74	0.84
13,005.00	89.40	186.70	10,954.29	-2,204.82	-304.37	2,217.80	1.51	-1.17	-0.96
13,099.00	90.20	187.10	10,954.61	-2,298.14	-315.66	2,311.58	0.95	0.85	0.43
13,193.00	89.70	186.70	10,954.70	-2,391.46	-326.96	2,405.36	0.68	-0.53	-0.43
13,287.00	90.60	187.50	10,954.45	-2,484.74	-338.57	2,499.12	1.28	0.96	0.85
13,381.00	89.00	186.30	10,954.78	-2,578.05	-349.87	2,592.90	2.13	-1.70	-1.28
13,475.00	88.90	185.70	10,956.50	-2,671.52	-359.69	2,686.76	0.65	-0.11	-0.64
13,569.00	88.80	185.00	10,958.39	-2,765.09	-368.45	2,780.66	0.75	-0.11	-0.74
13,664.00	89.10	185.10	10,960.13	-2,859.70	-376.81	2,875.59	0.33	0.32	0.11
13,758.00	89.20	185.20	10,961.52	-2,953.31	-385.25	2,969.51	0.15	0.11	0.11
13,852.00	88.10	183.70	10,963.74	-3,047.00	-392.54	3,063.45	1.98	-1.17	-1.60
13,946.00	88.20	182.50	10,966.77	-3,140.81	-397.62	3,157.40	1.28	0.11	-1.28
14,040.00	87.70	180.50	10,970.13	-3,234.72	-400.08	3,251.30	2.19	-0.53	-2.13
14,135.00	88.10	180.50	10,973.62	-3,329.65	-400.91	3,346.15	0.42	0.42	0.00
14,232.00	88.10	180.60	10,976.83	-3,426.59	-401.84	3,443.00	0.10	0.00	0.10
14,327.00	89.10	180.40	10,979.15	-3,521.56	-402.67	3,537.88	1.07	1.05	-0.21
14,421.00	88.10	180.50	10,981.45	-3,615.53	-403.41	3,631.76	1.07	-1.06	0.11
14,515.00	90.00	181.30	10,983.01	-3,709.50	-404.88	3,725.67	2.19	2.02	0.85
14,609.00	90.30	180.90	10,982.76	-3,803.48	-406.69	3,819.62	0.53	0.32	-0.43
14,703.00	90.40	180.30	10,982.19	-3,897.47	-407.67	3,913.54	0.65	0.11	-0.64
14,798.00	90.90	179.90	10,981.11	-3,992.46	-407.84	4,008.41	0.67	0.53	-0.42
14,892.00	90.00	178.20	10,980.37	-4,086.44	-406.28	4,102.17	2.05	-0.96	-1.81
14,986.00	88.10	176.40	10,981.93	-4,180.32	-401.85	4,195.68	2.78	-2.02	-1.91
15,080.00	88.50	177.00	10,984.72	-4,274.12	-396.45	4,289.07	0.77	0.43	0.64
15,174.00	90.20	179.70	10,985.79	-4,368.06	-393.74	4,382.74	3.39	1.81	2.87
15,269.00	89.80	181.70	10,985.79	-4,463.05	-394.90	4,477.66	2.15	-0.42	2.11



TDS
Survey Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #32H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3673.99usft (McVay 4)
Site:	Lea Unit #32H	MD Reference:	KB @ 3673.99usft (McVay 4)
Well:	Lea Unit #32H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	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)	
15,363.00	89.40	181.60	10,986.44	-4,557.01	-397.61	4,571.63	0.44	-0.43	-0.11	
15,457.00	89.50	182.00	10,987.34	-4,650.96	-400.56	4,665.60	0.44	0.11	0.43	
15,551.00	89.30	181.70	10,988.33	-4,744.90	-403.59	4,759.58	0.38	-0.21	-0.32	
15,646.00	89.20	181.60	10,989.57	-4,839.86	-406.33	4,854.54	0.15	-0.11	-0.11	
15,740.00	89.20	181.30	10,990.88	-4,933.82	-408.71	4,948.50	0.32	0.00	-0.32	
15,834.00	89.20	181.00	10,992.20	-5,027.79	-410.59	5,042.44	0.32	0.00	-0.32	
15,928.00	89.50	180.90	10,993.26	-5,121.77	-412.15	5,136.37	0.34	0.32	-0.11	
16,022.00	87.90	180.50	10,995.40	-5,215.74	-413.30	5,230.27	1.75	-1.70	-0.43	
16,117.00	88.90	179.70	10,998.05	-5,310.70	-413.47	5,325.10	1.35	1.05	-0.84	
16,211.00	90.50	178.80	10,998.54	-5,404.68	-412.24	5,418.90	1.95	1.70	-0.96	
16,305.00	88.20	177.60	10,999.61	-5,498.62	-409.28	5,512.55	2.76	-2.45	-1.28	
16,400.00	88.40	178.40	11,002.42	-5,593.52	-405.97	5,607.14	0.87	0.21	0.84	
16,494.00	90.50	180.00	11,003.33	-5,687.50	-404.66	5,700.92	2.81	2.23	1.70	
16,590.00	89.10	179.40	11,003.66	-5,783.50	-404.15	5,796.76	1.59	-1.46	-0.63	
16,684.00	88.40	177.40	11,005.71	-5,877.43	-401.53	5,890.42	2.25	-0.74	-2.13	
16,778.00	89.10	179.10	11,007.76	-5,971.36	-398.66	5,984.07	1.96	0.74	1.81	
16,873.00	89.40	180.60	11,009.01	-6,066.35	-398.41	6,078.91	1.61	0.32	1.58	
16,967.00	89.20	179.50	11,010.16	-6,160.34	-398.49	6,172.78	1.19	-0.21	-1.17	
17,061.00	88.90	178.50	11,011.71	-6,254.31	-396.85	6,266.53	1.11	-0.32	-1.06	
17,155.00	89.80	180.20	11,012.78	-6,348.30	-395.79	6,360.33	2.05	0.96	1.81	
17,250.00	89.30	178.20	11,013.53	-6,443.28	-394.46	6,455.11	2.17	-0.53	-2.11	
17,344.00	90.50	180.00	11,013.69	-6,537.26	-392.99	6,548.89	2.30	1.28	1.91	
17,438.00	90.90	182.00	11,012.54	-6,631.24	-394.63	6,642.82	2.17	0.43	2.13	
17,533.00	91.60	182.00	11,010.47	-6,726.15	-397.94	6,737.78	0.74	0.74	0.00	
17,627.00	89.60	181.50	11,009.49	-6,820.10	-400.81	6,831.74	2.19	-2.13	-0.53	
17,721.00	88.40	180.50	11,011.13	-6,914.07	-402.45	6,925.67	1.66	-1.28	-1.06	
17,815.00	88.70	180.40	11,013.51	-7,008.04	-403.19	7,019.54	0.34	0.32	-0.11	
17,910.00	89.30	180.80	11,015.16	-7,103.01	-404.18	7,114.44	0.76	0.63	0.42	
18,004.00	87.50	180.10	11,017.79	-7,196.97	-404.92	7,208.31	2.05	-1.91	-0.74	
18,098.00	87.70	180.20	11,021.72	-7,290.89	-405.17	7,302.11	0.24	0.21	0.11	
18,192.00	89.40	181.20	11,024.10	-7,384.85	-406.32	7,396.00	2.10	1.81	1.06	
18,287.00	91.00	182.40	11,023.77	-7,479.79	-409.30	7,490.97	2.11	1.68	1.26	
18,336.00	91.50	182.70	11,022.70	-7,528.73	-411.48	7,539.96	1.19	1.02	0.61	
Final MWD Survey										
18,390.00	91.50	182.70	11,021.29	-7,582.66	-414.02	7,593.94	0.00	0.00	0.00	
Projection to Bit/TD										



TDS
Survey Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #32H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3673.99usft (McVay 4)
Site:	Lea Unit #32H	MD Reference:	KB @ 3673.99usft (McVay 4)
Well:	Lea Unit #32H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	Database:	EDM 5000.1 Single User Db

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,250.00	5,248.39	86.49	50.35	TIE-IN to VES Gyro
18,336.00	11,022.70	-7,528.73	-411.48	Final MWD Survey
18,390.00	11,021.29	-7,582.66	-414.02	Projection to Bit/TD

Checked By: _____	Approved By: _____	Date: _____
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