



Legacy Reserves

Lea County, NM (NAD-27 2015)

Lea Unit #46H

Lea Unit #46H

OH

Plan: Plan #2

Standard Planning Report

04 February, 2016



APR 14 2016



TDS
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well: Lea Unit #46H
Company:	Legacy Reserves	TVD Reference:	KB @ 3692.00usft (McVay 4)
Project:	Lea County, NM (NAD-27 2015)	MD Reference:	KB @ 3692.00usft (McVay 4)
Site:	Lea Unit #46H	North Reference:	Grid
Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

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 #46H		
Site Position:		Northing:	581,668.60 usft
From:	Map	Easting:	750,681.50 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in
		Latitude:	32° 35' 47.311 N
		Longitude:	103° 31' 9.724 W
		Grid Convergence:	0.44 °

Well:	Lea Unit #46H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	32° 35' 47.311 N
		Longitude:	103° 31' 9.724 W
		Ground Level:	3,674.00 usft

Wellbore:	OH		
Magnetics	Model Name	Sample Date	Declination
	IGRF2015	7/18/2015	(°)
			7.16
			Dip Angle
			(°)
			60.44
			Field Strength
			(nT)
			48,361

Design:	Plan #2		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			178.24

Plan Sections										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(usft)	(°)	(°)	(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	
8,927.04	0.00	0.00	8,927.04	0.00	0.00	0.00	0.00	0.00	0.00	
9,827.04	90.00	169.60	9,500.00	-563.54	103.43	10.00	10.00	0.00	169.60	
10,158.68	90.00	179.55	9,500.00	-893.29	134.75	3.00	0.00	3.00	90.00	
14,843.14	90.00	179.55	9,500.00	-5,577.60	171.60	0.00	0.00	0.00	0.00	BHL (LU #46H/OH)



TDS
Planning Report



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Company:	Legacy Reserves	TVD Reference:	KB @ 3692.00usft (McVay 4)
Project:	Lea County, NM (NAD-27, 2015)	MD Reference:	KB @ 3692.00usft (McVay 4)
Site:	Lea Unit #46H	North Reference:	Grid
Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned 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	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00

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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)
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	0.00	0.00
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00	0.00	0.00
8,900.00	0.00	0.00	8,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,927.04	0.00	0.00	8,927.04	0.00	0.00	0.00	0.00	0.00	0.00
KOP - Start Build 10.00									
8,950.00	2.30	169.60	8,949.99	-0.45	0.08	0.45	10.00	10.00	0.00
9,000.00	7.30	169.60	8,999.80	-4.56	0.84	4.59	10.00	10.00	0.00
9,050.00	12.30	169.60	9,049.06	-12.93	2.37	12.99	10.00	10.00	0.00
9,100.00	17.30	169.60	9,097.39	-25.48	4.68	25.61	10.00	10.00	0.00
9,150.00	22.30	169.60	9,144.42	-42.13	7.73	42.35	10.00	10.00	0.00
9,200.00	27.30	169.60	9,189.79	-62.75	11.52	63.08	10.00	10.00	0.00
9,250.00	32.30	169.60	9,233.17	-87.18	16.00	87.63	10.00	10.00	0.00
9,300.00	37.30	169.60	9,274.21	-115.24	21.15	115.83	10.00	10.00	0.00
9,350.00	42.30	169.60	9,312.62	-146.70	26.93	147.46	10.00	10.00	0.00
9,400.00	47.30	169.60	9,348.09	-181.34	33.28	182.28	10.00	10.00	0.00
9,450.00	52.30	169.60	9,380.35	-218.89	40.17	220.02	10.00	10.00	0.00
9,500.00	57.30	169.60	9,409.17	-259.06	47.55	260.40	10.00	10.00	0.00
9,550.00	62.30	169.60	9,434.31	-301.55	55.34	303.11	10.00	10.00	0.00
9,600.00	67.30	169.60	9,455.60	-346.03	63.51	347.82	10.00	10.00	0.00
9,650.00	72.30	169.60	9,472.86	-392.17	71.98	394.20	10.00	10.00	0.00

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Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned 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)
9,700.00	77.30	169.60	9,485.97	-439.61	80.68	441.89	10.00	10.00	0.00
9,750.00	82.30	169.60	9,494.83	-488.00	89.56	490.52	10.00	10.00	0.00
9,800.00	87.30	169.60	9,499.36	-536.96	98.55	539.74	10.00	10.00	0.00
9,827.04	90.00	169.60	9,500.00	-563.54	103.43	566.46	10.00	10.00	0.00
EOC/TURN - Start DLS 3.00 TFO 90.00									
9,900.00	90.00	171.79	9,500.00	-635.54	115.23	638.78	3.00	0.00	3.00
10,000.00	90.00	174.79	9,500.00	-734.84	126.91	738.40	3.00	0.00	3.00
10,100.00	90.00	177.79	9,500.00	-834.62	133.38	838.33	3.00	0.00	3.00
10,158.68	90.00	179.55	9,500.00	-893.29	134.75	897.01	3.00	0.00	3.00
END TURN - Start 4684.46 hold at 10168.68 MD									
10,200.00	90.00	179.55	9,500.00	-934.60	135.07	938.31	0.00	0.00	0.00
10,300.00	90.00	179.55	9,500.00	-1,034.60	135.86	1,038.29	0.00	0.00	0.00
10,400.00	90.00	179.55	9,500.00	-1,134.60	136.65	1,138.26	0.00	0.00	0.00
10,500.00	90.00	179.55	9,500.00	-1,234.59	137.43	1,238.24	0.00	0.00	0.00
10,600.00	90.00	179.55	9,500.00	-1,334.59	138.22	1,338.21	0.00	0.00	0.00
10,700.00	90.00	179.55	9,500.00	-1,434.59	139.01	1,438.18	0.00	0.00	0.00
10,800.00	90.00	179.55	9,500.00	-1,534.58	139.79	1,538.16	0.00	0.00	0.00
10,900.00	90.00	179.55	9,500.00	-1,634.58	140.58	1,638.13	0.00	0.00	0.00
11,000.00	90.00	179.55	9,500.00	-1,734.58	141.37	1,738.11	0.00	0.00	0.00
11,100.00	90.00	179.55	9,500.00	-1,834.58	142.15	1,838.08	0.00	0.00	0.00
11,200.00	90.00	179.55	9,500.00	-1,934.57	142.94	1,938.05	0.00	0.00	0.00
11,300.00	90.00	179.55	9,500.00	-2,034.57	143.73	2,038.03	0.00	0.00	0.00
11,400.00	90.00	179.55	9,500.00	-2,134.57	144.51	2,138.00	0.00	0.00	0.00
11,500.00	90.00	179.55	9,500.00	-2,234.56	145.30	2,237.97	0.00	0.00	0.00
11,600.00	90.00	179.55	9,500.00	-2,334.56	146.09	2,337.95	0.00	0.00	0.00
11,700.00	90.00	179.55	9,500.00	-2,434.56	146.87	2,437.92	0.00	0.00	0.00
11,800.00	90.00	179.55	9,500.00	-2,534.55	147.66	2,537.90	0.00	0.00	0.00
11,900.00	90.00	179.55	9,500.00	-2,634.55	148.45	2,637.87	0.00	0.00	0.00
12,000.00	90.00	179.55	9,500.00	-2,734.55	149.23	2,737.84	0.00	0.00	0.00
12,100.00	90.00	179.55	9,500.00	-2,834.54	150.02	2,837.82	0.00	0.00	0.00
12,200.00	90.00	179.55	9,500.00	-2,934.54	150.81	2,937.79	0.00	0.00	0.00
12,300.00	90.00	179.55	9,500.00	-3,034.54	151.59	3,037.76	0.00	0.00	0.00
12,400.00	90.00	179.55	9,500.00	-3,134.54	152.38	3,137.74	0.00	0.00	0.00
12,500.00	90.00	179.55	9,500.00	-3,234.53	153.17	3,237.71	0.00	0.00	0.00
12,600.00	90.00	179.55	9,500.00	-3,334.53	153.95	3,337.69	0.00	0.00	0.00
12,700.00	90.00	179.55	9,500.00	-3,434.53	154.74	3,437.66	0.00	0.00	0.00
12,800.00	90.00	179.55	9,500.00	-3,534.52	155.53	3,537.63	0.00	0.00	0.00
12,900.00	90.00	179.55	9,500.00	-3,634.52	156.31	3,637.61	0.00	0.00	0.00
13,000.00	90.00	179.55	9,500.00	-3,734.52	157.10	3,737.58	0.00	0.00	0.00
13,100.00	90.00	179.55	9,500.00	-3,834.51	157.89	3,837.56	0.00	0.00	0.00
13,200.00	90.00	179.55	9,500.00	-3,934.51	158.67	3,937.53	0.00	0.00	0.00
13,300.00	90.00	179.55	9,500.00	-4,034.51	159.46	4,037.50	0.00	0.00	0.00
13,400.00	90.00	179.55	9,500.00	-4,134.50	160.25	4,137.48	0.00	0.00	0.00
13,500.00	90.00	179.55	9,500.00	-4,234.50	161.03	4,237.45	0.00	0.00	0.00
13,600.00	90.00	179.55	9,500.00	-4,334.50	161.82	4,337.42	0.00	0.00	0.00
13,700.00	90.00	179.55	9,500.00	-4,434.50	162.61	4,437.40	0.00	0.00	0.00
13,800.00	90.00	179.55	9,500.00	-4,534.49	163.39	4,537.37	0.00	0.00	0.00
13,900.00	90.00	179.55	9,500.00	-4,634.49	164.18	4,637.35	0.00	0.00	0.00
14,000.00	90.00	179.55	9,500.00	-4,734.49	164.97	4,737.32	0.00	0.00	0.00
14,100.00	90.00	179.55	9,500.00	-4,834.48	165.75	4,837.29	0.00	0.00	0.00
14,200.00	90.00	179.55	9,500.00	-4,934.48	166.54	4,937.27	0.00	0.00	0.00
14,300.00	90.00	179.55	9,500.00	-5,034.48	167.33	5,037.24	0.00	0.00	0.00
14,400.00	90.00	179.55	9,500.00	-5,134.47	168.11	5,137.21	0.00	0.00	0.00
14,500.00	90.00	179.55	9,500.00	-5,234.47	168.90	5,237.19	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Lea Unit #46H
Company:	Legacy Reserves	TVD Reference:	KB @ 3692.00usft (McVay 4)
Project:	Lea County, NM (NAD-27 2015)	MD Reference:	KB @ 3692.00usft (McVay 4)
Site:	Lea Unit #46H	North Reference:	Grid
Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned 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)
14,600.00	90.00	179.55	9,500.00	-5,334.47	169.69	5,337.16	0.00	0.00	0.00
14,700.00	90.00	179.55	9,500.00	-5,434.46	170.47	5,437.14	0.00	0.00	0.00
14,800.00	90.00	179.55	9,500.00	-5,534.46	171.26	5,537.11	0.00	0.00	0.00
14,843.14	90.00	179.55	9,500.00	-5,577.60	171.60	5,580.24	0.00	0.00	0.00
TD at 14843.14									

Design Targets									
Target Name	hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude
EOC (LU #46H/OH Plan)	- plan hits target center	0.00	0.00	9,500.00	-563.54	103.43	581,105.06	750,784.93	32° 35' 41.727 N
	- Point								
BHL (LU #46H/OH)	- plan hits target center	0.00	179.55	9,500.00	-5,577.60	171.60	576,091.00	750,853.10	32° 34' 52.108 N
	- Rectangle (sides W80.00 H4,683.23 D30.00)								103° 31' 8.217 W

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
8,927.04	8,927.04	0.00	0.00	KOP - Start Build 10.00
9,827.04	9,500.00	-563.54	103.43	EOC/TURN - Start DLS 3.00 TFO 90.00
10,158.68	9,500.00	-893.29	134.75	END TURN - Start 4684.46 hold at 10158.68 MD
14,843.14	9,500.00	-5,577.60	171.60	TD at 14843.14



Legacy Reserves

Lea County, NM (NAD-27 2015)

Lea Unit #46H

Lea Unit #46H

OH

Plan #2

Anticollision Report

04 February, 2016





TDS
Anticollision Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County, NM (NAD-27, 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000:1 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Reference		Plan #2	
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 9,999.98 usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date 2/4/2016		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	14,843.14	Plan #2 (OH)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Lea Federal:						
#21 - OH - OH	10,758.55	9,484.87	108.17	66.72	2.610	CC, ES, SF
#24 - OH - OH	14,411.21	9,468.84	420.72	308.51	3.749	CC, ES, SF
Lea Unit						
#1 - OH - OH	13,193.49	9,464.00	229.59	29.40	1.147	Level 2, CC, ES, SF
#16 - OH - OH	13,057.41	9,470.18	260.05	171.76	2.945	CC, ES, SF
#20 - OH - OH	14,843.14	9,516.37	2,880.32	2,769.60	26.015	CC, ES, SF
#30H - OH - OH	14,843.14	9,482.89	237.48	186.58	4.665	CC, ES, SF
SWD #2 - OH - OH	4,631.89	4,600.00	4,300.09	4,045.62	16.898	CC, ES
SWD #2 - OH - OH	4,700.00	4,600.00	4,300.63	4,046.04	16.893	SF
Lea Unit #44H						
Lea Unit #44H - OH - OH	7,831.35	7,829.93	77.83	46.79	2.507	CC
Lea Unit #44H - OH - OH	8,953.11	8,952.86	81.47	45.96	2.294	ES, SF
Lea Unit #45H						
Lea Unit #45H - OH - Plan #2	8,927.04	8,926.04	50.20	10.34	1.259	Level 3, CC
Lea Unit #45H - OH - Plan #2	8,950.00	8,948.99	50.28	10.32	1.258	Level 3, ES, SF

Offset Design												Offset Site Error:	0.00 usft
Lea Federal - #21 - OH - OH												Offset Well Error:	0.00 usft
Survey Program: 100-Scientific Gyro, 9770-MWD													
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre N-S (usft)	Offset Wellbore Centre E-W (usft)					
0.00	0.00	0.00	0.00	0.00	0.00	177.62	-1,439.20	59.80	1,440.59				
100.00	100.00	90.86	90.86	0.09	0.08	177.61	-1,438.82	59.99	1,440.12	1,439.94	0.17	8,331.622	
200.00	200.00	191.26	191.26	0.32	0.21	177.59	-1,437.92	60.44	1,439.24	1,438.73	0.51	2,823.159	
300.00	300.00	291.52	291.51	0.54	0.34	177.57	-1,437.04	60.92	1,438.38	1,437.53	0.85	1,688.700	
400.00	400.00	391.03	391.02	0.77	0.47	177.55	-1,436.16	61.43	1,437.53	1,436.33	1.19	1,206.284	
500.00	500.00	489.12	489.10	0.99	0.59	177.53	-1,435.39	61.84	1,436.75	1,435.22	1.53	936.904	
600.00	600.00	584.56	584.54	1.22	0.71	177.53	-1,434.85	61.96	1,436.20	1,434.32	1.88	764.213	
700.00	700.00	683.79	683.77	1.44	0.81	177.53	-1,434.52	61.81	1,435.86	1,433.64	2.22	646.291	
800.00	800.00	784.15	784.12	1.67	0.89	177.55	-1,434.20	61.33	1,435.52	1,432.97	2.54	564.226	
900.00	900.00	884.45	884.42	1.89	0.96	177.58	-1,433.86	60.60	1,435.15	1,432.30	2.85	502.762	
1,000.00	1,000.00	981.80	981.77	2.12	1.04	177.61	-1,433.60	59.83	1,434.85	1,431.70	3.15	455.455	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH-	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Lea Federal - #21 - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 100-Scientific Gyro 9770-MWD												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre N-S (usft)	Offset Wellbore Centre E-W (usft)					
1,100.00	1,100.00	1,081.00	1,080.97	2.34	1.11	177.64	-1,433.48	59.04	1,434.70	1,431.26	3.44	417.220	
1,200.00	1,200.00	1,181.61	1,181.58	2.56	1.19	177.67	-1,433.36	58.21	1,434.55	1,430.82	3.73	384.836	
1,300.00	1,300.00	1,282.80	1,282.76	2.79	1.29	177.71	-1,433.18	57.38	1,434.33	1,430.31	4.02	356.493	
1,400.00	1,400.00	1,383.61	1,383.56	3.01	1.40	177.74	-1,432.91	56.52	1,434.04	1,429.71	4.32	331.633	
1,500.00	1,500.00	1,483.37	1,483.32	3.24	1.51	177.78	-1,432.64	55.55	1,433.72	1,429.10	4.62	310.110	
1,600.00	1,600.00	1,584.67	1,584.62	3.46	1.62	177.82	-1,432.34	54.44	1,433.38	1,428.46	4.92	291.120	
1,700.00	1,700.00	1,684.99	1,684.92	3.69	1.74	177.86	-1,431.97	53.40	1,432.97	1,427.75	5.23	274.071	
1,800.00	1,800.00	1,784.21	1,784.14	3.91	1.86	177.89	-1,431.61	52.67	1,432.58	1,427.04	5.54	258.480	
1,900.00	1,900.00	1,882.53	1,882.47	4.14	1.99	177.91	-1,431.32	52.32	1,432.28	1,426.41	5.87	244.142	
2,000.00	2,000.00	1,981.68	1,981.61	4.36	2.11	177.91	-1,431.12	52.19	1,432.07	1,425.87	6.20	230.820	
2,100.00	2,100.00	2,081.34	2,081.27	4.59	2.21	177.91	-1,430.95	52.20	1,431.91	1,425.35	6.55	218.515	
2,200.00	2,200.00	2,182.87	2,182.80	4.81	2.31	177.91	-1,430.75	52.25	1,431.70	1,424.80	6.90	207.383	
2,300.00	2,300.00	2,284.31	2,284.24	5.04	2.40	177.90	-1,430.42	52.42	1,431.39	1,424.14	7.25	197.504	
2,400.00	2,400.00	2,385.57	2,385.50	5.26	2.47	177.88	-1,429.99	52.82	1,430.98	1,423.40	7.58	188.788	
2,500.00	2,500.00	2,486.25	2,486.18	5.49	2.54	177.86	-1,429.48	53.35	1,430.49	1,422.59	7.91	180.889	
2,600.00	2,600.00	2,585.92	2,585.85	5.71	2.62	177.84	-1,428.97	53.81	1,430.00	1,421.76	8.24	173.593	
2,700.00	2,700.00	2,687.57	2,687.49	5.94	2.70	177.82	-1,428.41	54.44	1,429.47	1,420.91	8.56	166.915	
2,800.00	2,800.00	2,787.11	2,787.02	6.16	2.76	177.77	-1,427.78	55.68	1,428.89	1,420.01	8.87	161.026	
2,900.00	2,900.00	2,887.15	2,887.03	6.39	2.81	177.68	-1,427.13	57.86	1,428.33	1,419.16	9.17	155.768	
3,000.00	3,000.00	2,986.96	2,986.80	6.61	2.86	177.56	-1,426.45	60.85	1,427.77	1,418.31	9.46	150.934	
3,100.00	3,100.00	3,091.16	3,090.92	6.84	2.92	177.41	-1,425.59	64.60	1,427.10	1,417.35	9.75	146.330	
3,200.00	3,200.00	3,195.87	3,195.55	7.06	2.99	177.23	-1,424.34	68.85	1,426.10	1,416.05	10.05	141.905	
3,300.00	3,300.00	3,298.78	3,298.35	7.28	3.07	177.05	-1,422.82	73.25	1,424.84	1,414.49	10.35	137.679	
3,400.00	3,400.00	3,399.09	3,398.58	7.51	3.15	176.91	-1,421.26	76.82	1,423.47	1,412.82	10.65	133.627	
3,500.00	3,500.00	3,493.39	3,492.85	7.73	3.25	176.84	-1,420.06	78.51	1,422.30	1,411.33	10.97	129.644	
3,597.94	3,597.94	3,577.47	3,576.94	7.95	3.30	176.83	-1,419.62	78.66	1,421.80	1,410.55	11.25	126.407	
3,600.00	3,600.00	3,579.23	3,578.70	7.96	3.30	176.83	-1,419.62	78.66	1,421.80	1,410.55	11.25	126.343	
3,700.00	3,700.00	3,665.49	3,664.95	8.18	3.32	176.85	-1,420.10	78.12	1,422.31	1,410.82	11.50	123.705	
3,800.00	3,800.00	3,753.91	3,753.35	8.41	3.32	176.90	-1,421.42	76.94	1,423.73	1,412.01	11.73	121.403	
3,900.00	3,900.00	3,848.44	3,847.84	8.63	3.33	176.98	-1,423.50	75.10	1,425.82	1,413.86	11.96	119.218	
4,000.00	4,000.00	3,948.70	3,948.06	8.86	3.34	177.07	-1,425.80	73.00	1,428.00	1,415.81	12.20	117.079	
4,100.00	4,100.00	4,047.57	4,046.87	9.08	3.36	177.16	-1,428.05	70.94	1,430.17	1,417.74	12.44	114.995	
4,200.00	4,200.00	4,143.84	4,143.09	9.31	3.38	177.25	-1,430.44	68.70	1,432.54	1,419.86	12.68	112.983	
4,300.00	4,300.00	4,242.68	4,241.85	9.53	3.41	177.37	-1,433.16	65.95	1,435.15	1,422.23	12.93	111.022	
4,400.00	4,400.00	4,349.45	4,348.55	9.76	3.45	177.49	-1,435.87	63.05	1,437.57	1,424.39	13.18	109.052	
4,500.00	4,500.00	4,455.05	4,454.10	9.98	3.50	177.59	-1,437.92	60.64	1,439.41	1,425.97	13.44	107.088	
4,600.00	4,600.00	4,552.38	4,551.39	10.21	3.54	177.67	-1,439.72	58.56	1,441.18	1,427.48	13.70	105.212	
4,700.00	4,700.00	4,650.80	4,649.77	10.43	3.59	177.75	-1,441.81	56.60	1,443.22	1,429.26	13.96	103.417	
4,800.00	4,800.00	4,753.34	4,752.27	10.66	3.64	177.84	-1,443.88	54.55	1,445.15	1,430.94	14.22	101.646	
4,900.00	4,900.00	4,857.93	4,856.83	10.88	3.70	177.92	-1,445.76	52.52	1,446.88	1,432.39	14.49	99.887	
5,000.00	5,000.00	4,961.61	4,960.47	11.11	3.77	178.00	-1,447.25	50.54	1,448.25	1,433.49	14.76	98.140	
5,100.00	5,100.00	5,060.94	5,059.78	11.33	3.84	178.08	-1,448.57	48.62	1,449.52	1,434.49	15.03	96.448	
5,200.00	5,200.00	5,158.10	5,156.90	11.56	3.91	178.16	-1,450.01	46.70	1,450.93	1,435.63	15.30	94.831	
5,300.00	5,300.00	5,257.32	5,256.10	11.78	3.98	178.23	-1,451.64	44.98	1,452.52	1,436.95	15.57	93.276	
5,400.00	5,400.00	5,362.88	5,361.63	12.00	4.05	178.28	-1,453.21	43.54	1,453.97	1,438.12	15.85	91.736	
5,500.00	5,500.00	5,467.02	5,465.76	12.23	4.13	178.33	-1,454.29	42.47	1,454.97	1,438.84	16.13	90.209	
5,600.00	5,600.00	5,570.09	5,568.83	12.45	4.21	178.37	-1,455.16	41.43	1,455.79	1,439.38	16.41	88.711	
5,700.00	5,700.00	5,674.70	5,673.43	12.68	4.30	178.40	-1,456.76	40.70	1,456.34	1,439.64	16.70	87.231	
5,800.00	5,800.00	5,775.02	5,773.75	12.90	4.38	178.41	-1,456.10	40.37	1,456.67	1,439.69	16.98	85.803	
5,900.00	5,900.00	5,876.48	5,875.21	13.13	4.44	178.41	-1,456.44	40.32	1,457.00	1,439.74	17.26	84.421	
6,000.00	6,000.00	5,975.04	5,973.77	13.35	4.49	178.41	-1,456.71	40.34	1,457.28	1,439.74	17.54	83.076	
6,100.00	6,100.00	6,076.95	6,075.68	13.58	4.53	178.40	-1,457.04	40.60	1,457.61	1,439.78	17.83	81.746	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



TDS
Anticollision Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Lea Federal - #21 - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 100-Scientific Gyro: 9770-MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Tooface (")	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N-S (usft)	+E-W (usft)						
6,200.00	6,200.00	6,183.25	6,181.98	13.80	4.57	178.38	-1,457.06	41.12	1,457.65	1,439.52	18.13	80.405		
6,300.00	6,300.00	6,280.72	6,279.44	14.03	4.60	178.36	-1,456.88	41.78	1,457.48	1,439.06	18.42	79.114		
6,310.19	6,310.19	6,290.46	6,289.19	14.05	4.60	178.35	-1,456.88	41.85	1,457.48	1,439.02	18.45	78.986		
6,400.00	6,400.00	6,379.10	6,377.82	14.25	4.64	178.33	-1,456.90	42.55	1,457.52	1,438.81	18.72	77.877		
6,500.00	6,500.00	6,475.17	6,473.89	14.48	4.67	178.30	-1,457.06	43.30	1,457.72	1,438.71	19.01	76.699		
6,600.00	6,600.00	6,577.55	6,576.27	14.70	4.73	178.28	-1,457.39	43.70	1,458.05	1,438.75	19.30	75.550		
6,700.00	6,700.00	6,680.88	6,679.60	14.93	4.82	178.29	-1,457.46	43.52	1,458.11	1,438.52	19.59	74.412		
6,800.00	6,800.00	6,780.62	6,779.34	15.15	4.92	178.30	-1,457.42	43.29	1,458.06	1,438.17	19.89	73.307		
6,869.84	6,869.84	6,850.12	6,848.84	15.31	4.99	178.30	-1,457.41	43.16	1,458.05	1,437.96	20.10	72.557		
6,900.00	6,900.00	6,880.19	6,878.91	15.38	5.01	178.31	-1,457.42	43.11	1,458.05	1,437.87	20.18	72.238		
7,000.00	7,000.00	6,979.67	6,978.38	15.60	5.11	178.31	-1,457.45	42.89	1,458.08	1,437.60	20.48	71.203		
7,100.00	7,100.00	7,079.24	7,077.95	15.83	5.21	178.33	-1,457.52	42.40	1,458.13	1,437.36	20.77	70.198		
7,200.00	7,200.00	7,179.60	7,178.31	16.05	5.31	178.36	-1,457.60	41.67	1,458.20	1,437.13	21.07	69.220		
7,300.00	7,300.00	7,281.63	7,280.34	16.28	5.42	178.40	-1,457.62	40.83	1,458.19	1,436.83	21.36	68.260		
7,400.00	7,400.00	7,382.58	7,381.28	16.50	5.53	178.43	-1,457.51	39.86	1,458.05	1,436.40	21.66	67.323		
7,500.00	7,500.00	7,481.91	7,480.61	16.72	5.63	178.47	-1,457.39	38.86	1,457.91	1,435.96	21.95	66.413		
7,600.00	7,600.00	7,582.29	7,580.99	16.95	5.74	178.52	-1,457.31	37.77	1,457.80	1,435.55	22.25	65.527		
7,700.00	7,700.00	7,683.13	7,681.82	17.17	5.85	178.57	-1,457.18	36.38	1,457.63	1,435.09	22.54	64.661		
7,800.00	7,800.00	7,783.88	7,782.55	17.40	5.96	178.63	-1,457.00	34.79	1,457.41	1,434.58	22.84	63.814		
7,900.00	7,900.00	7,883.36	7,882.02	17.62	6.06	178.69	-1,456.80	33.20	1,457.18	1,434.05	23.13	62.982		
8,000.00	8,000.00	7,981.96	7,980.61	17.85	6.17	178.75	-1,456.67	31.72	1,457.02	1,433.59	23.43	62.194		
8,100.00	8,100.00	8,080.52	8,079.16	18.07	6.28	178.80	-1,456.64	30.50	1,456.96	1,433.24	23.72	61.422		
8,111.00	8,111.00	8,091.36	8,090.00	18.10	6.29	178.81	-1,456.64	30.38	1,456.96	1,433.21	23.75	61.339		
8,200.00	8,200.00	8,178.64	8,177.27	18.30	6.39	178.84	-1,456.71	29.49	1,457.01	1,433.00	24.01	60.675		
8,300.00	8,300.00	8,276.14	8,274.76	18.52	6.50	178.88	-1,456.93	28.52	1,457.21	1,432.91	24.31	59.955		
8,400.00	8,400.00	8,374.97	8,373.60	18.75	6.61	178.91	-1,457.28	27.61	1,457.56	1,432.96	24.60	59.256		
8,500.00	8,500.00	8,477.98	8,476.60	18.97	6.72	178.94	-1,457.60	27.05	1,457.85	1,432.96	24.89	58.564		
8,600.00	8,600.00	8,575.29	8,573.91	19.20	6.82	178.95	-1,457.81	26.79	1,458.06	1,432.88	25.19	57.893		
8,700.00	8,700.00	8,667.03	8,665.64	19.42	6.90	178.96	-1,458.36	26.48	1,458.66	1,433.19	25.47	57.262		
8,800.00	8,800.00	8,777.59	8,776.20	19.65	7.01	178.99	-1,459.23	25.83	1,459.47	1,433.69	25.78	56.619		
8,900.00	8,900.00	8,883.37	8,881.98	19.87	7.12	179.02	-1,459.14	24.83	1,459.36	1,433.28	26.08	55.967		
8,927.04	8,927.04	8,909.10	8,907.70	19.93	7.15	179.04	-1,459.10	24.52	1,459.30	1,433.15	26.15	55.796		
8,950.00	8,949.99	8,928.52	8,927.12	19.98	7.17	9.46	-1,459.10	24.31	1,458.85	1,432.64	26.21	55.654		
9,000.00	8,999.80	8,970.68	8,969.28	20.06	7.21	9.56	-1,459.27	23.95	1,459.42	1,428.60	26.33	55.265		
9,050.00	9,049.06	9,000.00	8,998.60	20.15	7.24	9.73	-1,459.52	23.78	1,447.05	1,420.62	26.43	54.754		
9,100.00	9,097.39	9,041.00	9,039.59	20.23	7.27	10.01	-1,460.26	23.71	1,435.37	1,408.83	26.54	54.081		
9,150.00	9,144.42	9,071.93	9,070.50	20.32	7.29	10.36	-1,461.23	23.80	1,420.17	1,393.53	26.64	53.308		
9,200.00	9,189.79	9,100.00	9,098.55	20.40	7.31	10.82	-1,462.42	24.00	1,401.49	1,374.75	26.73	52.423		
9,250.00	9,233.17	9,140.03	9,138.53	20.49	7.33	11.46	-1,464.44	24.40	1,379.25	1,352.41	26.84	51.385		
9,300.00	9,274.21	9,175.78	9,174.22	20.59	7.35	12.26	-1,466.44	24.86	1,353.51	1,326.57	26.94	50.239		
9,350.00	9,312.62	9,209.46	9,207.83	20.71	7.37	13.28	-1,468.48	25.37	1,324.43	1,297.40	27.04	48.985		
9,400.00	9,348.09	9,240.52	9,238.83	20.85	7.39	14.56	-1,470.53	25.88	1,292.22	1,265.10	27.13	47.634		
9,450.00	9,380.35	9,269.41	9,267.63	21.02	7.41	16.21	-1,472.57	26.39	1,257.11	1,229.89	27.21	46.193		
9,500.00	9,409.17	9,300.00	9,298.13	21.21	7.42	18.42	-1,474.89	26.97	1,219.33	1,192.02	27.30	44.660		
9,550.00	9,434.31	9,317.81	9,315.88	21.44	7.43	21.10	-1,476.32	27.32	1,179.14	1,151.77	27.37	43.083		
9,600.00	9,455.60	9,336.89	9,334.89	21.70	7.44	24.77	-1,477.96	27.71	1,136.87	1,109.44	27.44	41.435		
9,650.00	9,472.86	9,353.37	9,351.30	21.99	7.45	29.77	-1,479.45	28.06	1,092.81	1,065.30	27.50	39.734		
9,700.00	9,485.97	9,367.08	9,364.94	22.32	7.46	36.74	-1,480.75	28.37	1,047.24	1,019.68	27.57	37.991		
9,750.00	9,494.83	9,377.82	9,375.63	22.68	7.47	46.53	-1,481.81	28.61	1,000.51	972.88	27.63	36.214		
9,800.00	9,499.36	9,385.43	9,383.20	23.07	7.47	59.97	-1,482.58	28.79	952.95	925.26	27.69	34.414		
9,827.04	9,500.00	9,388.19	9,385.94	23.30	7.47	68.75	-1,482.86	28.85	927.01	899.29	27.73	33.434		
9,900.00	9,500.00	9,400.00	9,397.68	23.91	7.48	68.50	-1,484.09	29.13	856.77	828.94	27.83	30.781		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



TDS
Anticollision Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design														Lea Federal - #21 - OH - OH		Offset Site Error:		0.00 usft
Survey Program: 100-Scientific Gyro, 9770-MWD																Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance				Minimum Separation (usft)	Separation Factor	Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)								
10,000.00	9,500.00	9,400.00	9,397.68	24.81	7.48	63.82	-1,484.09	29.13	759.96	732.00	27.96	27.177						
10,100.00	9,500.00	9,412.57	9,410.17	25.79	7.49	61.91	-1,485.44	29.44	662.65	634.50	28.15	23.541						
10,158.68	9,500.00	9,418.17	9,415.74	26.40	7.49	60.06	-1,486.05	29.58	605.34	577.07	28.27	21.414						
10,200.00	9,500.00	9,422.19	9,419.73	26.85	7.49	61.63	-1,486.50	29.68	564.99	536.62	28.37	19.917						
10,300.00	9,500.00	9,432.24	9,429.71	28.00	7.50	65.76	-1,487.63	29.93	467.85	439.15	28.71	16.298						
10,400.00	9,500.00	9,442.75	9,440.15	29.21	7.51	70.42	-1,488.84	30.20	371.93	342.63	29.30	12.695						
10,500.00	9,500.00	9,453.77	9,451.09	30.49	7.51	75.63	-1,490.15	30.49	278.43	247.96	30.46	9.139						
10,600.00	9,500.00	9,465.33	9,462.57	31.82	7.52	81.40	-1,491.54	30.80	190.90	157.75	33.15	5.759						
10,700.00	9,500.00	9,477.48	9,474.61	33.20	7.53	87.68	-1,493.05	31.14	122.77	83.66	39.11	3.139						
10,758.55	9,500.00	9,484.87	9,481.95	34.03	7.53	91.56	-1,493.98	31.34	108.17	66.72	41.45	2.610 CC, ES, SF						
10,800.00	9,500.00	9,490.25	9,487.27	34.62	7.53	94.38	-1,494.67	31.49	115.71	75.93	39.79	2.908						
10,900.00	9,500.00	9,503.71	9,500.61	36.08	7.54	101.36	-1,496.43	31.88	177.11	143.86	33.25	5.327						
11,000.00	9,500.00	9,517.18	9,513.96	37.57	7.55	108.07	-1,498.17	32.36	262.67	232.37	30.30	8.669						
11,100.00	9,500.00	9,530.23	9,526.89	39.09	7.56	114.19	-1,499.83	32.92	355.36	326.21	29.15	12.191						
11,200.00	9,500.00	9,542.87	9,539.42	40.64	7.56	119.69	-1,501.42	33.56	450.82	422.17	28.64	15.740						
11,300.00	9,500.00	9,555.13	9,551.57	42.21	7.57	124.58	-1,502.93	34.28	547.61	519.22	28.40	19.285						
11,400.00	9,500.00	9,567.02	9,563.34	43.80	7.57	128.91	-1,504.38	35.06	645.16	616.89	28.27	22.821						
11,500.00	9,500.00	9,578.55	9,574.75	45.40	7.58	132.73	-1,505.75	35.90	743.17	714.96	28.21	26.346						
11,600.00	9,500.00	9,589.74	9,585.83	47.03	7.59	136.11	-1,507.07	36.80	841.48	813.30	28.18	29.860						
11,700.00	9,500.00	9,600.00	9,595.98	48.67	7.59	138.94	-1,508.26	37.68	940.02	911.84	28.18	33.363						
11,800.00	9,500.00	9,610.37	9,606.24	50.32	7.60	141.58	-1,509.44	38.66	1,038.72	1,010.53	28.18	36.855						
11,900.00	9,500.00	9,619.72	9,615.49	51.98	7.60	143.78	-1,510.48	39.64	1,137.55	1,109.35	28.20	40.337						
12,000.00	9,500.00	9,628.65	9,624.30	53.66	7.60	145.74	-1,511.44	40.66	1,236.48	1,208.26	28.22	43.810						
12,100.00	9,500.00	9,637.17	9,632.71	55.34	7.61	147.50	-1,512.34	41.70	1,335.51	1,307.26	28.25	47.273						
12,200.00	9,500.00	9,645.31	9,640.74	57.04	7.61	149.09	-1,513.18	42.77	1,434.61	1,406.33	28.28	50.725						
12,300.00	9,500.00	9,653.10	9,648.41	58.74	7.61	150.52	-1,513.96	43.85	1,533.77	1,505.46	28.31	54.168						
12,400.00	9,500.00	9,660.56	9,655.75	60.45	7.61	151.82	-1,514.70	44.94	1,632.99	1,604.64	28.35	57.601						
12,500.00	9,500.00	9,667.71	9,662.78	62.17	7.62	153.01	-1,515.39	46.04	1,732.26	1,703.87	28.39	61.024						
12,600.00	9,500.00	9,680.00	9,674.85	63.89	7.62	154.94	-1,516.53	48.05	1,831.58	1,803.14	28.43	64.416						
12,700.00	9,500.00	9,680.00	9,674.85	65.62	7.62	154.94	-1,516.53	48.05	1,930.91	1,902.45	28.46	67.844						
12,800.00	9,500.00	9,689.85	9,684.52	67.35	7.65	156.37	-1,517.43	49.76	2,030.29	2,001.78	28.51	71.225						
12,900.00	9,500.00	9,698.07	9,692.56	69.09	7.67	157.51	-1,518.17	51.23	2,129.69	2,101.14	28.55	74.602						
13,000.00	9,500.00	9,706.14	9,700.47	70.84	7.70	158.57	-1,518.90	52.72	2,229.11	2,200.52	28.59	77.968						
13,100.00	9,500.00	9,714.08	9,708.23	72.58	7.73	159.56	-1,519.60	54.23	2,328.55	2,299.91	28.63	81.325						
13,200.00	9,500.00	9,721.88	9,715.85	74.34	7.76	160.49	-1,520.28	55.76	2,428.00	2,399.32	28.68	84.671						
13,300.00	9,500.00	9,729.55	9,723.33	76.09	7.78	161.37	-1,520.95	57.30	2,527.47	2,498.75	28.72	88.006						
13,400.00	9,500.00	9,737.09	9,730.68	77.85	7.81	162.20	-1,521.60	58.86	2,626.96	2,598.19	28.76	91.330						
13,500.00	9,500.00	9,744.51	9,737.90	79.62	7.84	162.98	-1,522.23	60.42	2,726.46	2,697.65	28.81	94.644						
13,600.00	9,500.00	9,751.80	9,744.99	81.38	7.87	163.72	-1,522.85	62.00	2,825.97	2,797.12	28.85	97.946						
13,700.00	9,500.00	9,758.97	9,751.96	83.15	7.89	164.42	-1,523.45	63.59	2,925.49	2,896.59	28.90	101.237						
13,800.00	9,500.00	9,770.00	9,762.66	84.92	7.94	165.45	-1,524.36	66.09	3,025.03	2,996.08	28.95	104.504						
13,900.00	9,500.00	9,774.28	9,766.81	86.70	7.94	165.84	-1,524.72	67.09	3,124.57	3,095.58	28.99	107.768						
14,000.00	9,500.00	9,784.34	9,776.55	88.47	7.94	166.71	-1,525.55	69.45	3,224.12	3,195.07	29.05	110.986						
14,100.00	9,500.00	9,794.47	9,786.35	90.25	7.95	167.55	-1,526.38	71.87	3,323.67	3,294.56	29.11	114.187						
14,200.00	9,500.00	9,804.68	9,796.22	92.03	7.95	168.36	-1,527.23	74.36	3,423.22	3,394.06	29.17	117.369						
14,300.00	9,500.00	9,814.96	9,806.15	93.82	7.95	169.13	-1,528.09	76.90	3,522.77	3,493.55	29.23	120.533						
14,400.00	9,500.00	9,825.33	9,816.14	95.60	7.96	169.87	-1,528.96	79.51	3,622.33	3,593.04	29.29	123.679						
14,500.00	9,500.00	9,833.00	9,823.53	97.39	7.96	170.40	-1,529.60	81.48	3,721.88	3,692.53	29.35	126.828						
14,600.00	9,500.00	9,833.00	9,823.53	99.18	7.96	170.40	-1,529.60	81.48	3,821.45	3,792.06	29.39	130.021						
14,700.00	9,500.00	9,846.24	9,836.28	100.96	7.96	171.27	-1,530.71	84.87	3,921.01	3,891.54	29.46	133.081						
14,800.00	9,500.00	9,851.94	9,841.77	102.76	7.96	171.62	-1,531.18	86.32	4,020.59	3,991.06	29.52	136.193						
14,843.14	9,500.00	9,854.38	9,844.12	103.53	7.96	171.77	-1,531.37	86.94	4,063.55	4,034.00	29.55	137.531						

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



TDS
Anticollision Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at:	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum



TDS
Anticollision Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Lea Federal - #24 - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 100-ISCWSA-GYRO-3													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
0.00	0.00	0.00	0.00	0.00	0.00	-177.72	-5,101.10	-203.40	5,105.33					
100.00	100.00	48.10	48.10	0.09	0.05	-177.72	-5,101.15	-203.38	5,105.21	5,105.07	0.14	N/A		
200.00	200.00	175.70	175.70	0.32	0.23	-177.72	-5,101.33	-203.17	5,105.41	5,104.86	0.54	9,397.653		
300.00	300.00	262.98	262.98	0.54	0.38	-177.72	-5,101.02	-202.81	5,105.05	5,104.13	0.91	5,579.442		
317.50	317.50	275.50	275.50	0.58	0.40	-177.72	-5,101.01	-202.73	5,105.04	5,104.07	0.98	5,232.883		
400.00	400.00	356.20	356.20	0.77	0.55	-177.73	-5,101.13	-202.09	5,105.13	5,103.83	1.30	3,923.260		
470.18	470.18	428.19	428.18	0.92	0.68	-177.74	-5,101.13	-201.54	5,105.11	5,103.52	1.58	3,221.480		
500.00	500.00	454.00	454.00	0.99	0.73	-177.74	-5,101.14	-201.34	5,105.12	5,103.42	1.70	3,008.849		
600.00	600.00	543.43	543.42	1.22	0.90	-177.75	-5,101.35	-200.71	5,105.31	5,103.24	2.08	2,456.884		
700.00	700.00	636.70	636.69	1.44	1.07	-177.75	-5,101.70	-200.11	5,105.67	5,103.20	2.47	2,069.658		
800.00	800.00	737.33	737.31	1.67	1.26	-177.76	-5,102.18	-199.58	5,106.12	5,103.25	2.87	1,779.114		
900.00	900.00	852.83	852.81	1.89	1.47	-177.76	-5,102.49	-199.22	5,106.38	5,103.09	3.30	1,547.732		
1,000.00	1,000.00	970.95	970.94	2.12	1.68	-177.77	-5,102.42	-198.95	5,106.31	5,102.58	3.73	1,369.454		
1,100.00	1,100.00	1,062.06	1,062.04	2.34	1.83	-177.77	-5,102.20	-199.04	5,106.08	5,101.97	4.11	1,242.266		
1,122.71	1,122.71	1,080.73	1,080.71	2.39	1.86	-177.77	-5,102.19	-198.97	5,106.07	5,101.88	4.19	1,217.597		
1,200.00	1,200.00	1,144.59	1,144.57	2.56	1.98	-177.77	-5,102.29	-198.62	5,106.17	5,101.69	4.48	1,140.008		
1,300.00	1,300.00	1,255.80	1,255.78	2.79	2.18	-177.78	-5,102.66	-198.25	5,106.51	5,101.61	4.90	1,042.391		
1,400.00	1,400.00	1,370.95	1,370.92	3.01	2.36	-177.77	-5,102.39	-198.60	5,106.27	5,100.95	5.32	959.351		
1,500.00	1,500.00	1,462.05	1,462.02	3.24	2.51	-177.77	-5,102.22	-198.70	5,106.09	5,100.38	5.70	895.032		
1,536.21	1,536.21	1,494.24	1,494.22	3.32	2.56	-177.77	-5,102.21	-198.72	5,106.07	5,100.23	5.84	874.000		
1,600.00	1,600.00	1,557.26	1,557.24	3.46	2.67	-177.77	-5,102.21	-198.74	5,106.08	5,099.99	6.10	837.624		
1,700.00	1,700.00	1,664.62	1,664.60	3.69	2.86	-177.77	-5,102.18	-198.72	5,106.06	5,099.55	6.51	784.589		
1,800.00	1,800.00	1,761.80	1,761.78	3.91	3.02	-177.77	-5,102.04	-198.70	5,105.91	5,099.01	6.90	739.807		
1,841.98	1,841.98	1,800.00	1,799.98	4.01	3.09	-177.77	-5,102.03	-198.71	5,105.89	5,098.83	7.06	722.966		
1,900.00	1,900.00	1,855.62	1,855.60	4.14	3.18	-177.77	-5,102.04	-198.77	5,105.91	5,098.62	7.29	700.389		
2,000.00	2,000.00	1,967.49	1,967.46	4.36	3.37	-177.77	-5,102.02	-198.95	5,105.91	5,098.20	7.71	662.246		
2,100.00	2,100.00	2,062.54	2,062.51	4.59	3.53	-177.77	-5,101.82	-198.74	5,105.70	5,097.60	8.10	630.310		
2,129.25	2,129.25	2,087.28	2,087.25	4.65	3.58	-177.77	-5,101.82	-198.63	5,105.68	5,097.47	8.21	621.952		
2,200.00	2,200.00	2,143.16	2,143.14	4.81	3.68	-177.77	-5,101.90	-198.40	5,105.78	5,097.31	8.47	603.108		
2,300.00	2,300.00	2,229.86	2,229.84	5.04	3.83	-177.77	-5,102.33	-198.39	5,106.27	5,097.43	8.84	577.476		
2,400.00	2,400.00	2,345.33	2,345.31	5.26	4.04	-177.78	-5,102.83	-197.96	5,106.69	5,097.42	9.27	550.886		
2,500.00	2,500.00	2,453.62	2,453.60	5.49	4.23	-177.78	-5,102.98	-197.51	5,106.80	5,097.12	9.68	527.329		
2,600.00	2,600.00	2,558.43	2,558.40	5.71	4.41	-177.78	-5,103.04	-197.79	5,106.87	5,096.78	10.09	506.030		
2,700.00	2,700.00	2,673.36	2,673.33	5.94	4.61	-177.78	-5,102.89	-197.39	5,106.73	5,096.21	10.52	485.594		
2,776.99	2,776.99	2,735.24	2,735.21	6.11	4.72	-177.79	-5,102.74	-197.25	5,106.55	5,095.75	10.80	472.948		
2,800.00	2,800.00	2,750.19	2,750.16	6.16	4.75	-177.79	-5,102.75	-197.23	5,106.57	5,095.69	10.88	469.567		
2,900.00	2,900.00	2,844.54	2,844.51	6.39	4.92	-177.79	-5,103.17	-197.09	5,107.00	5,095.73	11.26	453.360		
3,000.00	3,000.00	2,990.67	2,990.63	6.61	5.18	-177.80	-5,102.82	-195.92	5,106.68	5,094.94	11.74	434.834		
3,100.00	3,100.00	3,097.55	3,097.51	6.84	5.37	-177.81	-5,102.08	-195.20	5,105.96	5,093.81	12.15	420.097		
3,200.00	3,200.00	3,200.00	3,199.95	7.06	5.55	-177.81	-5,101.25	-194.68	5,105.14	5,092.58	12.56	406.544		
3,281.99	3,281.99	3,240.03	3,239.99	7.24	5.62	-177.81	-5,101.07	-194.80	5,104.79	5,091.98	12.81	398.441		
3,300.00	3,300.00	3,248.54	3,248.49	7.28	5.63	-177.81	-5,101.07	-194.89	5,104.80	5,091.94	12.87	396.730		
3,400.00	3,400.00	3,300.00	3,299.94	7.51	5.72	-177.80	-5,101.42	-195.92	5,105.51	5,092.33	13.18	387.338		
3,500.00	3,500.00	3,366.50	3,366.40	7.73	5.83	-177.78	-5,102.37	-198.02	5,107.04	5,093.52	13.52	377.721		
3,600.00	3,600.00	3,453.07	3,452.90	7.96	5.97	-177.74	-5,103.93	-201.28	5,109.02	5,095.13	13.90	367.665		
3,700.00	3,700.00	3,555.19	3,554.92	8.18	6.15	-177.70	-5,105.92	-205.24	5,111.08	5,096.78	14.30	357.441		
3,800.00	3,800.00	3,668.38	3,668.01	8.41	6.34	-177.65	-5,107.91	-209.62	5,113.00	5,098.27	14.72	347.295		
3,900.00	3,900.00	3,775.93	3,775.47	8.63	6.52	-177.61	-5,109.53	-213.60	5,114.65	5,099.52	15.14	337.922		
4,000.00	4,000.00	3,875.81	3,875.28	8.86	6.69	-177.57	-5,110.98	-217.19	5,116.26	5,100.73	15.54	329.333		
4,100.00	4,100.00	3,976.67	3,976.05	9.08	6.86	-177.53	-5,112.45	-220.83	5,117.88	5,101.94	15.94	321.137		
4,200.00	4,200.00	4,086.33	4,085.64	9.31	7.05	-177.48	-5,113.95	-224.86	5,119.40	5,103.05	16.35	313.036		
4,300.00	4,300.00	4,171.18	4,170.42	9.53	7.20	-177.45	-5,115.11	-227.79	5,120.93	5,104.20	16.73	306.147		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Lea Federal - #24 - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 100-ISCWSA-GYRO-3												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance		Minimum		Separation		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
4,400.00	4,400.00	4,267.79	4,266.98	9.76	7.37	-177.42	-5,116.72	-230.75	5,122.73	5,105.61	17.12	299.202	
4,500.00	4,500.00	4,399.61	4,398.73	9.98	7.60	-177.38	-5,118.56	-234.58	5,124.27	5,106.70	17.58	291.500	
4,600.00	4,600.00	4,488.71	4,487.79	10.21	7.75	-177.35	-5,119.57	-236.96	5,125.54	5,107.58	17.96	285.387	
4,700.00	4,700.00	4,580.31	4,579.38	10.43	7.92	-177.34	-5,120.86	-237.94	5,126.99	5,108.65	18.35	279.465	
4,800.00	4,800.00	4,663.18	4,662.22	10.66	8.06	-177.35	-5,122.29	-237.19	5,128.67	5,109.96	18.72	274.023	
4,900.00	4,900.00	4,746.64	4,745.66	10.88	8.21	-177.34	-5,123.97	-237.88	5,130.72	5,111.63	19.09	268.790	
5,000.00	5,000.00	4,841.40	4,840.40	11.11	8.38	-177.34	-5,126.12	-238.42	5,133.01	5,113.53	19.48	263.482	
5,100.00	5,100.00	4,949.25	4,948.21	11.33	8.57	-177.33	-5,128.45	-239.56	5,135.22	5,115.32	19.90	258.061	
5,200.00	5,200.00	5,059.28	5,058.21	11.56	8.77	-177.31	-5,130.65	-240.88	5,137.27	5,116.95	20.32	252.804	
5,300.00	5,300.00	5,174.31	5,173.23	11.78	8.98	-177.30	-5,132.68	-241.96	5,139.08	5,118.32	20.75	247.634	
5,400.00	5,400.00	5,276.94	5,275.84	12.00	9.16	-177.29	-5,134.27	-242.98	5,140.67	5,119.51	21.16	242.926	
5,500.00	5,500.00	5,401.70	5,400.58	12.23	9.38	-177.28	-5,135.96	-244.21	5,142.09	5,120.48	21.61	237.942	
5,600.00	5,600.00	5,525.78	5,524.64	12.45	9.61	-177.26	-5,136.99	-245.77	5,142.98	5,120.92	22.06	233.175	
5,700.00	5,700.00	5,651.98	5,650.83	12.68	9.83	-177.24	-5,137.39	-247.65	5,143.36	5,120.86	22.50	228.566	
5,800.00	5,800.00	5,770.69	5,769.52	12.90	10.04	-177.22	-5,137.23	-249.53	5,143.30	5,120.37	22.93	224.271	
5,887.54	5,887.54	5,846.72	5,845.54	13.10	10.17	-177.21	-5,137.03	-250.67	5,143.14	5,119.88	23.26	221.095	
5,900.00	5,900.00	5,856.07	5,854.90	13.13	10.19	-177.20	-5,137.02	-250.82	5,143.14	5,119.84	23.31	220.675	
6,000.00	6,000.00	5,944.80	5,943.61	13.35	10.35	-177.19	-5,137.18	-252.21	5,143.39	5,119.70	23.69	217.150	
6,100.00	6,100.00	6,042.06	6,040.87	13.58	10.52	-177.17	-5,137.36	-253.64	5,143.64	5,119.56	24.08	213.597	
6,200.00	6,200.00	6,128.69	6,127.48	13.80	10.68	-177.16	-5,137.72	-254.57	5,144.11	5,119.65	24.46	210.319	
6,300.00	6,300.00	6,219.98	6,218.78	14.03	10.84	-177.16	-5,138.36	-254.64	5,144.82	5,119.97	24.85	207.068	
6,400.00	6,400.00	6,395.50	6,394.29	14.25	11.15	-177.16	-5,138.90	-254.87	5,145.35	5,119.97	25.38	202.735	
6,494.18	6,494.18	6,453.39	6,452.18	14.46	11.25	-177.17	-5,138.69	-254.33	5,144.98	5,119.29	25.69	200.252	
6,500.00	6,500.00	6,456.73	6,455.52	14.48	11.25	-177.17	-5,138.69	-254.30	5,144.98	5,119.27	25.71	200.105	
6,600.00	6,600.00	6,525.31	6,524.09	14.70	11.37	-177.17	-5,139.04	-253.81	5,145.42	5,119.36	26.06	197.475	
6,700.00	6,700.00	6,626.42	6,625.20	14.93	11.55	-177.17	-5,139.67	-254.15	5,146.05	5,119.59	26.46	194.477	
6,800.00	6,800.00	6,726.78	6,725.56	15.15	11.74	-177.16	-5,140.29	-254.94	5,146.71	5,119.85	26.86	191.580	
6,900.00	6,900.00	6,881.08	6,879.85	15.38	12.01	-177.15	-5,140.67	-256.02	5,147.09	5,119.73	27.36	188.129	
6,986.47	6,986.47	6,945.70	6,944.47	15.57	12.12	-177.15	-5,140.42	-256.15	5,146.80	5,119.13	27.67	186.034	
7,000.00	7,000.00	6,953.58	6,952.35	15.60	12.14	-177.15	-5,140.42	-256.15	5,146.81	5,119.10	27.71	185.738	
7,100.00	7,100.00	7,020.25	7,019.02	15.83	12.25	-177.15	-5,140.78	-256.06	5,147.30	5,119.25	28.05	183.496	
7,200.00	7,200.00	7,120.41	7,119.17	16.05	12.43	-177.15	-5,141.53	-256.29	5,148.06	5,119.61	28.46	180.910	
7,300.00	7,300.00	7,223.87	7,222.63	16.28	12.62	-177.15	-5,142.29	-256.32	5,148.80	5,119.93	28.87	178.357	
7,400.00	7,400.00	7,331.49	7,330.25	16.50	12.81	-177.15	-5,142.95	-256.08	5,149.40	5,120.11	29.29	175.826	
7,500.00	7,500.00	7,429.67	7,428.43	16.72	12.99	-177.15	-5,143.46	-256.20	5,149.92	5,120.23	29.69	173.463	
7,600.00	7,600.00	7,520.54	7,519.30	16.95	13.15	-177.15	-5,144.08	-256.34	5,150.61	5,120.54	30.08	171.243	
7,700.00	7,700.00	7,624.16	7,622.91	17.17	13.34	-177.14	-5,144.77	-256.77	5,151.29	5,120.80	30.49	168.952	
7,800.00	7,800.00	7,717.78	7,716.53	17.40	13.51	-177.14	-5,145.49	-256.88	5,152.07	5,121.18	30.88	166.822	
7,900.00	7,900.00	7,870.56	7,869.30	17.62	13.78	-177.14	-5,146.22	-256.91	5,152.65	5,121.27	31.38	164.197	
8,000.00	8,000.00	7,977.83	7,976.58	17.85	13.96	-177.15	-5,145.77	-256.48	5,152.19	5,120.40	31.79	162.084	
8,100.00	8,100.00	8,077.85	8,076.59	18.07	14.13	-177.15	-5,145.46	-256.01	5,151.86	5,119.68	32.18	160.097	
8,200.00	8,200.00	8,183.16	8,181.90	18.30	14.30	-177.15	-5,145.03	-255.85	5,151.45	5,118.87	32.58	158.118	
8,300.00	8,300.00	8,259.26	8,258.01	18.52	14.43	-177.15	-5,144.81	-255.93	5,151.17	5,118.23	32.93	156.404	
8,300.02	8,300.02	8,259.28	8,258.02	18.52	14.43	-177.15	-5,144.81	-255.93	5,151.17	5,118.23	32.94	156.404	
8,400.00	8,400.00	8,367.79	8,366.53	18.75	14.62	-177.15	-5,144.92	-256.06	5,151.30	5,117.95	33.35	154.472	
8,500.00	8,500.00	8,487.33	8,486.07	18.97	14.82	-177.15	-5,144.43	-255.90	5,150.86	5,117.09	33.77	152.510	
8,600.00	8,600.00	8,591.59	8,590.33	19.20	14.99	-177.15	-5,143.82	-255.74	5,150.27	5,116.10	34.17	150.711	
8,694.85	8,694.85	8,654.11	8,652.85	19.41	15.10	-177.16	-5,143.61	-255.45	5,149.95	5,115.45	34.49	149.297	
8,700.00	8,700.00	8,657.33	8,656.06	19.42	15.11	-177.16	-5,143.61	-255.43	5,149.95	5,115.44	34.51	149.223	
8,800.00	8,800.00	8,761.21	8,759.95	19.65	15.29	-177.16	-5,143.90	-255.15	5,150.22	5,115.31	34.82	147.499	
8,900.00	8,900.00	8,864.82	8,863.56	19.87	15.47	-177.16	-5,143.63	-255.41	5,149.97	5,114.65	35.32	145.806	
8,927.04	8,927.04	8,886.74	8,885.48	19.93	15.50	-177.16	-5,143.62	-255.46	5,149.96	5,114.54	35.42	145.400	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User.Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Lea Federal - #24 - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 100-ISCWSA-GYRO-3												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toothface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N-S (usft)	+E-W (usft)					
8,950.00	8,949.99	8,900.00	8,898.73	19.98	15.53	13.25	-5,143.62	-255.50	5,149.52	5,114.04	35.49	145.111	
9,000.00	8,999.80	8,942.42	8,941.16	20.06	15.60	13.36	-5,143.69	-255.60	5,145.55	5,109.91	35.65	144.351	
9,050.00	9,049.06	8,979.50	8,978.24	20.15	15.67	13.56	-5,143.85	-255.68	5,137.49	5,101.70	35.80	143.519	
9,100.00	9,097.39	9,019.25	9,017.98	20.23	15.74	13.89	-5,144.12	-255.75	5,125.39	5,089.44	35.95	142.561	
9,150.00	9,144.42	9,062.14	9,060.87	20.32	15.82	14.34	-5,144.45	-255.75	5,109.28	5,073.17	36.11	141.479	
9,200.00	9,189.79	9,104.61	9,103.34	20.40	15.89	14.95	-5,144.82	-255.63	5,089.28	5,053.00	36.27	140.309	
9,250.00	9,233.17	9,155.25	9,153.98	20.49	15.98	15.75	-5,145.23	-255.44	5,065.47	5,029.03	36.44	138.997	
9,300.00	9,274.21	9,200.00	9,198.73	20.59	16.06	16.77	-5,145.55	-255.27	5,038.01	5,001.41	36.60	137.647	
9,350.00	9,312.62	9,233.30	9,232.02	20.71	16.12	18.03	-5,145.78	-255.13	5,007.18	4,970.44	36.73	136.306	
9,400.00	9,348.09	9,262.15	9,260.87	20.85	16.17	19.62	-5,146.03	-255.01	4,973.26	4,936.40	36.86	134.932	
9,450.00	9,380.35	9,288.51	9,287.23	21.02	16.22	21.65	-5,146.30	-254.89	4,936.50	4,899.53	36.97	133.519	
9,500.00	9,409.17	9,300.00	9,298.72	21.21	16.24	24.20	-5,146.42	-254.84	4,897.18	4,860.13	37.06	132.156	
9,550.00	9,434.31	9,330.72	9,329.44	21.44	16.30	27.72	-5,146.80	-254.65	4,855.56	4,818.39	37.17	130.628	
9,600.00	9,455.60	9,347.33	9,346.05	21.70	16.33	32.34	-5,147.04	-254.49	4,812.00	4,774.74	37.26	129.160	
9,650.00	9,472.86	9,361.02	9,359.74	21.99	16.35	38.70	-5,147.25	-254.34	4,766.79	4,729.46	37.33	127.686	
9,700.00	9,485.97	9,371.66	9,370.37	22.32	16.37	47.60	-5,147.42	-254.20	4,720.27	4,682.87	37.40	126.214	
9,750.00	9,494.83	9,379.14	9,377.85	22.68	16.38	60.02	-5,147.54	-254.10	4,672.80	4,635.35	37.46	124.752	
9,800.00	9,499.36	9,383.36	9,382.07	23.07	16.39	76.36	-5,147.62	-254.04	4,624.73	4,587.23	37.51	123.307	
9,827.04	9,500.00	9,384.26	9,382.97	23.30	16.39	86.36	-5,147.63	-254.02	4,598.61	4,561.09	37.53	122.533	
9,900.00	9,500.00	9,385.38	9,384.09	23.91	16.39	85.81	-5,147.65	-254.01	4,527.80	4,490.21	37.58	120.473	
10,000.00	9,500.00	9,386.88	9,385.59	24.81	16.40	84.70	-5,147.68	-253.98	4,429.83	4,392.19	37.65	117.664	
10,100.00	9,500.00	9,388.34	9,387.05	25.79	16.40	82.70	-5,147.70	-253.96	4,331.02	4,293.31	37.71	114.860	
10,158.68	9,500.00	9,389.18	9,387.89	26.40	16.40	80.57	-5,147.72	-253.95	4,272.73	4,234.99	37.74	113.224	
10,200.00	9,500.00	9,400.00	9,398.70	26.85	16.42	82.00	-5,147.92	-253.77	4,231.63	4,193.86	37.77	112.023	
10,300.00	9,500.00	9,400.00	9,398.70	28.00	16.42	82.00	-5,147.92	-253.77	4,132.16	4,094.33	37.83	109.236	
10,400.00	9,500.00	9,400.00	9,398.70	29.21	16.42	82.00	-5,147.92	-253.77	4,032.70	3,994.82	37.89	106.443	
10,500.00	9,500.00	9,400.00	9,398.70	30.49	16.42	82.00	-5,147.92	-253.77	3,933.28	3,895.33	37.95	103.643	
10,600.00	9,500.00	9,400.00	9,398.70	31.82	16.42	82.00	-5,147.92	-253.77	3,833.88	3,795.86	38.02	100.836	
10,700.00	9,500.00	9,400.00	9,398.70	33.20	16.42	82.00	-5,147.92	-253.77	3,734.52	3,696.42	38.10	98.022	
10,800.00	9,500.00	9,400.00	9,398.70	34.62	16.42	82.00	-5,147.92	-253.77	3,635.19	3,597.00	38.18	95.201	
10,900.00	9,500.00	9,400.35	9,399.05	36.08	16.42	82.05	-5,147.92	-253.76	3,535.90	3,497.62	38.28	92.371	
11,000.00	9,500.00	9,403.22	9,401.93	37.57	16.43	82.43	-5,147.98	-253.71	3,436.64	3,398.26	38.39	89.525	
11,100.00	9,500.00	9,406.02	9,404.72	39.09	16.43	82.80	-5,148.03	-253.67	3,337.44	3,298.93	38.51	86.672	
11,200.00	9,500.00	9,408.74	9,407.44	40.64	16.43	83.17	-5,148.08	-253.62	3,238.28	3,199.64	38.64	83.812	
11,300.00	9,500.00	9,411.39	9,410.09	42.21	16.44	83.52	-5,148.13	-253.57	3,139.17	3,100.39	38.78	80.946	
11,400.00	9,500.00	9,413.97	9,412.67	43.80	16.44	83.86	-5,148.17	-253.52	3,040.11	3,001.17	38.94	78.072	
11,500.00	9,500.00	9,416.48	9,415.18	45.40	16.45	84.20	-5,148.21	-253.48	2,941.13	2,902.01	39.12	75.191	
11,600.00	9,500.00	9,418.93	9,417.63	47.03	16.45	84.53	-5,148.26	-253.43	2,842.20	2,802.89	39.31	72.303	
11,700.00	9,500.00	9,421.31	9,420.01	48.67	16.46	84.85	-5,148.30	-253.39	2,743.36	2,703.84	39.53	69.406	
11,800.00	9,500.00	9,423.64	9,422.34	50.32	16.46	85.16	-5,148.33	-253.34	2,644.60	2,604.84	39.77	66.502	
11,900.00	9,500.00	9,425.91	9,424.60	51.98	16.46	85.47	-5,148.37	-253.30	2,545.94	2,505.90	40.04	63.591	
12,000.00	9,500.00	9,428.12	9,426.82	53.66	16.47	85.77	-5,148.41	-253.26	2,447.38	2,407.05	40.34	60.671	
12,100.00	9,500.00	9,430.28	9,428.97	55.34	16.47	86.06	-5,148.44	-253.22	2,348.95	2,308.27	40.68	57.745	
12,200.00	9,500.00	9,432.39	9,431.08	57.04	16.48	86.34	-5,148.48	-253.17	2,250.65	2,209.59	41.06	54.812	
12,300.00	9,500.00	9,434.45	9,433.14	58.74	16.48	86.62	-5,148.51	-253.13	2,152.51	2,111.01	41.50	51.873	
12,400.00	9,500.00	9,436.46	9,435.15	60.45	16.48	86.90	-5,148.54	-253.09	2,054.54	2,012.55	41.99	48.929	
12,500.00	9,500.00	9,438.42	9,437.11	62.17	16.49	87.16	-5,148.57	-253.05	1,956.78	1,914.23	42.55	45.983	
12,600.00	9,500.00	9,440.34	9,439.03	63.89	16.49	87.42	-5,148.60	-253.02	1,859.26	1,816.05	43.20	43.037	
12,700.00	9,500.00	9,442.22	9,440.91	65.62	16.49	87.68	-5,148.63	-252.98	1,762.01	1,718.06	43.95	40.095	
12,800.00	9,500.00	9,444.05	9,442.74	67.35	16.50	87.93	-5,148.65	-252.94	1,665.08	1,620.27	44.81	37.160	
12,900.00	9,500.00	9,445.85	9,444.54	69.09	16.50	88.17	-5,148.68	-252.90	1,568.54	1,522.73	45.81	34.239	
13,000.00	9,500.00	9,447.60	9,446.29	70.84	16.50	88.41	-5,148.71	-252.87	1,472.46	1,425.47	46.99	31.339	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



TDS
Anticollision Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Lea Federal - #24 - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 100-ISCWSA-GYRO-3												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
13,100.00	9,500.00	9,449.32	9,448.01	72.58	16.51	88.64	-5,148.73	-252.83	1,376.94	1,328.57	48.37	28.469	
13,200.00	9,500.00	9,451.00	9,449.69	74.34	16.51	88.87	-5,148.75	-252.79	1,282.09	1,232.09	50.00	25.643	
13,300.00	9,500.00	9,452.64	9,451.33	76.09	16.51	89.09	-5,148.78	-252.76	1,188.09	1,136.15	51.94	22.874	
13,400.00	9,500.00	9,454.26	9,452.94	77.85	16.51	89.31	-5,148.80	-252.72	1,095.15	1,040.89	54.27	20.181	
13,500.00	9,500.00	9,455.83	9,454.52	79.62	16.52	89.53	-5,148.82	-252.69	1,003.57	946.50	57.07	17.584	
13,600.00	9,500.00	9,457.38	9,456.06	81.38	16.52	89.74	-5,148.84	-252.66	913.76	853.28	60.47	15.110	
13,700.00	9,500.00	9,458.89	9,457.58	83.15	16.52	89.94	-5,148.86	-252.62	826.28	761.66	64.62	12.787	
13,800.00	9,500.00	9,460.38	9,459.06	84.92	16.53	90.14	-5,148.88	-252.59	741.97	672.30	69.67	10.650	
13,900.00	9,500.00	9,461.83	9,460.52	86.70	16.53	90.34	-5,148.90	-252.56	662.04	586.23	75.81	8.733	
14,000.00	9,500.00	9,463.26	9,461.94	88.47	16.53	90.54	-5,148.92	-252.53	588.28	505.14	83.14	7.076	
14,100.00	9,500.00	9,464.66	9,463.34	90.25	16.53	90.73	-5,148.94	-252.50	523.30	431.76	91.54	5.717	
14,200.00	9,500.00	9,466.03	9,464.71	92.03	16.54	90.91	-5,148.95	-252.46	470.75	370.44	100.31	4.693	
14,300.00	9,500.00	9,467.37	9,466.06	93.82	16.54	91.10	-5,148.97	-252.43	435.17	327.28	107.89	4.033	
14,400.00	9,500.00	9,468.69	9,467.37	95.60	16.54	91.28	-5,148.99	-252.40	420.87	308.83	112.04	3.756	
14,411.21	9,500.00	9,468.84	9,467.52	95.80	16.54	91.30	-5,148.99	-252.40	420.72	308.51	112.21	3.749	CC, ES, SF
14,500.00	9,500.00	9,469.99	9,468.67	97.39	16.54	91.45	-5,149.00	-252.38	429.99	318.66	111.33	3.862	
14,600.00	9,500.00	9,471.26	9,469.94	99.18	16.54	91.63	-5,149.02	-252.35	461.14	354.72	106.42	4.333	
14,700.00	9,500.00	9,472.51	9,471.19	100.96	16.55	91.80	-5,149.03	-252.32	510.29	410.96	99.33	5.137	
14,800.00	9,500.00	9,473.73	9,472.41	102.76	16.55	91.96	-5,149.05	-252.29	572.84	480.95	91.89	6.234	
14,843.14	9,500.00	9,474.25	9,472.93	103.53	16.55	92.03	-5,149.06	-252.28	602.95	514.12	88.83	6.788	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User.Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Lea Unit - #1 - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 14735-INC												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum		Separation		Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre N-S (usft)	Offset Wellbore Centre E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-178.97	-3,929.81	-70.96	3,930.62				
100.00	100.00	64.00	64.00	0.09	0.85	-178.97	-3,929.81	-70.96	3,930.45	3,929.51	0.94	4,161.755	
200.00	200.00	164.00	164.00	0.32	2.18	-178.97	-3,929.81	-70.96	3,930.45	3,927.95	2.50	1,571.839	
300.00	300.00	264.00	264.00	0.54	3.51	-178.97	-3,929.81	-70.96	3,930.45	3,926.39	4.06	968.887	
400.00	400.00	364.00	364.00	0.77	4.85	-178.97	-3,929.81	-70.96	3,930.45	3,924.84	5.61	700.267	
500.00	500.00	464.00	464.00	0.99	6.18	-178.97	-3,929.81	-70.96	3,930.45	3,923.28	7.17	548.264	
600.00	600.00	564.00	564.00	1.22	7.51	-178.97	-3,929.81	-70.96	3,930.45	3,921.73	8.73	450.480	
700.00	700.00	664.00	664.00	1.44	8.84	-178.97	-3,929.81	-70.96	3,930.45	3,920.17	10.28	382.297	
800.00	800.00	764.00	764.00	1.67	10.17	-178.97	-3,929.81	-70.96	3,930.45	3,918.61	11.84	332.040	
900.00	900.00	864.00	864.00	1.89	11.50	-178.97	-3,929.81	-70.96	3,930.45	3,917.06	13.39	293.462	
1,000.00	1,000.00	964.00	964.00	2.12	12.83	-178.97	-3,929.81	-70.96	3,930.45	3,915.50	14.95	262.915	
1,100.00	1,100.00	1,064.00	1,064.00	2.34	14.17	-178.97	-3,929.81	-70.96	3,930.45	3,913.95	16.51	238.128	
1,200.00	1,200.00	1,164.00	1,164.00	2.56	15.50	-178.97	-3,929.81	-70.96	3,930.45	3,912.39	18.06	217.612	
1,300.00	1,300.00	1,264.00	1,264.00	2.79	16.83	-178.97	-3,929.81	-70.96	3,930.45	3,910.83	19.62	200.350	
1,400.00	1,400.00	1,364.00	1,364.00	3.01	18.16	-178.97	-3,929.81	-70.96	3,930.45	3,909.28	21.17	185.626	
1,500.00	1,500.00	1,464.00	1,464.00	3.24	19.49	-178.97	-3,929.81	-70.96	3,930.45	3,907.72	22.73	172.918	
1,600.00	1,600.00	1,564.00	1,564.00	3.46	20.82	-178.97	-3,929.81	-70.96	3,930.45	3,906.16	24.29	161.839	
1,700.00	1,700.00	1,664.00	1,664.00	3.69	22.15	-178.97	-3,929.81	-70.96	3,930.45	3,904.61	25.84	152.093	
1,800.00	1,800.00	1,764.00	1,764.00	3.91	23.49	-178.97	-3,929.81	-70.96	3,930.45	3,903.05	27.40	143.455	
1,900.00	1,900.00	1,864.00	1,864.00	4.14	24.82	-178.97	-3,929.81	-70.96	3,930.45	3,901.50	28.95	135.745	
2,000.00	2,000.00	1,964.00	1,964.00	4.36	26.15	-178.97	-3,929.81	-70.96	3,930.45	3,899.94	30.51	128.822	
2,100.00	2,100.00	2,064.00	2,064.00	4.59	27.48	-178.97	-3,929.81	-70.96	3,930.45	3,898.38	32.07	122.571	
2,200.00	2,200.00	2,164.00	2,164.00	4.81	28.81	-178.97	-3,929.81	-70.96	3,930.45	3,896.83	33.62	116.898	
2,300.00	2,300.00	2,264.00	2,264.00	5.04	30.14	-178.97	-3,929.81	-70.96	3,930.45	3,895.27	35.18	111.727	
2,400.00	2,400.00	2,364.00	2,364.00	5.26	31.47	-178.97	-3,929.81	-70.96	3,930.45	3,893.72	36.74	106.994	
2,500.00	2,500.00	2,464.00	2,464.00	5.49	32.80	-178.97	-3,929.81	-70.96	3,930.45	3,892.16	38.29	102.646	
2,600.00	2,600.00	2,564.00	2,564.00	5.71	34.14	-178.97	-3,929.81	-70.96	3,930.45	3,890.60	39.85	98.637	
2,700.00	2,700.00	2,664.00	2,664.00	5.94	35.47	-178.97	-3,929.81	-70.96	3,930.45	3,889.05	41.40	94.930	
2,800.00	2,800.00	2,764.00	2,764.00	6.16	36.80	-178.97	-3,929.81	-70.96	3,930.45	3,887.49	42.96	91.492	
2,900.00	2,900.00	2,864.00	2,864.00	6.39	38.13	-178.97	-3,929.81	-70.96	3,930.45	3,885.93	44.52	88.293	
3,000.00	3,000.00	2,964.00	2,964.00	6.61	39.46	-178.97	-3,929.81	-70.96	3,930.45	3,884.38	46.07	85.311	
3,100.00	3,100.00	3,064.00	3,064.00	6.84	40.79	-178.97	-3,929.81	-70.96	3,930.45	3,882.82	47.63	82.524	
3,200.00	3,200.00	3,164.00	3,164.00	7.06	42.12	-178.97	-3,929.81	-70.96	3,930.45	3,881.27	49.18	79.913	
3,300.00	3,300.00	3,264.00	3,264.00	7.28	43.46	-178.97	-3,929.81	-70.96	3,930.45	3,879.71	50.74	77.462	
3,400.00	3,400.00	3,364.00	3,364.00	7.51	44.79	-178.97	-3,929.81	-70.96	3,930.45	3,878.15	52.30	75.157	
3,500.00	3,500.00	3,464.00	3,464.00	7.73	46.12	-178.97	-3,929.81	-70.96	3,930.45	3,876.60	53.85	72.985	
3,600.00	3,600.00	3,564.00	3,564.00	7.96	47.45	-178.97	-3,929.81	-70.96	3,930.45	3,875.04	55.41	70.936	
3,700.00	3,700.00	3,664.00	3,664.00	8.18	48.78	-178.97	-3,929.81	-70.96	3,930.45	3,873.49	56.96	68.998	
3,800.00	3,800.00	3,764.00	3,764.00	8.41	50.11	-178.97	-3,929.81	-70.96	3,930.45	3,871.93	58.52	67.163	
3,900.00	3,900.00	3,864.00	3,864.00	8.63	51.44	-178.97	-3,929.81	-70.96	3,930.45	3,870.37	60.08	65.424	
4,000.00	4,000.00	3,964.00	3,964.00	8.86	52.78	-178.97	-3,929.81	-70.96	3,930.45	3,868.82	61.63	63.772	
4,100.00	4,100.00	4,064.00	4,064.00	9.08	54.11	-178.97	-3,929.81	-70.96	3,930.45	3,867.26	63.19	62.201	
4,200.00	4,200.00	4,164.00	4,164.00	9.31	55.44	-178.97	-3,929.81	-70.96	3,930.45	3,865.71	64.75	60.706	
4,300.00	4,300.00	4,264.00	4,264.00	9.53	56.77	-178.97	-3,929.81	-70.96	3,930.45	3,864.15	66.30	59.281	
4,400.00	4,400.00	4,364.00	4,364.00	9.76	58.10	-178.97	-3,929.81	-70.96	3,930.45	3,862.59	67.86	57.922	
4,500.00	4,500.00	4,464.00	4,464.00	9.98	59.43	-178.97	-3,929.81	-70.96	3,930.45	3,861.04	69.41	56.624	
4,600.00	4,600.00	4,564.00	4,564.00	10.21	60.76	-178.97	-3,929.81	-70.96	3,930.45	3,859.48	70.97	55.382	
4,700.00	4,700.00	4,664.00	4,664.00	10.43	62.09	-178.97	-3,929.81	-70.96	3,930.45	3,857.92	72.53	54.194	
4,800.00	4,800.00	4,764.00	4,764.00	10.66	63.43	-178.97	-3,929.81	-70.96	3,930.45	3,856.37	74.08	53.055	
4,900.00	4,900.00	4,864.00	4,864.00	10.88	64.76	-178.97	-3,929.81	-70.96	3,930.45	3,854.81	75.64	51.964	
5,000.00	5,000.00	4,964.00	4,964.00	11.11	66.09	-178.97	-3,929.81	-70.96	3,930.45	3,853.26	77.19	50.916	
5,100.00	5,100.00	5,064.00	5,064.00	11.33	67.42	-178.97	-3,929.81	-70.96	3,930.45	3,851.70	78.75	49.910	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at:	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Lea Unit - #1 - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 14735-INC												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis (usft)	Highside Toolface (°)	Offset Wellbore Centre (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,200.00	5,200.00	5,164.00	5,164.00	11.56	68.75	-178.97	-3,929.81	-70.96	3,930.45	3,850.14	80.31	48.943	
5,300.00	5,300.00	5,264.00	5,264.00	11.78	70.08	-178.97	-3,929.81	-70.96	3,930.45	3,848.59	81.86	48.013	
5,400.00	5,400.00	5,364.00	5,364.00	12.00	71.41	-178.97	-3,929.81	-70.96	3,930.45	3,847.03	83.42	47.117	
5,500.00	5,500.00	5,464.00	5,464.00	12.23	72.75	-178.97	-3,929.81	-70.96	3,930.45	3,845.48	84.97	46.254	
5,600.00	5,600.00	5,564.00	5,564.00	12.45	74.08	-178.97	-3,929.81	-70.96	3,930.45	3,843.92	86.53	45.422	
5,700.00	5,700.00	5,664.00	5,664.00	12.68	75.41	-178.97	-3,929.81	-70.96	3,930.45	3,842.36	88.09	44.620	
5,800.00	5,800.00	5,764.00	5,764.00	12.90	76.74	-178.97	-3,929.81	-70.96	3,930.45	3,840.81	89.64	43.845	
5,900.00	5,900.00	5,864.00	5,864.00	13.13	78.07	-178.97	-3,929.81	-70.96	3,930.45	3,839.25	91.20	43.097	
6,000.00	6,000.00	5,964.00	5,964.00	13.35	79.40	-178.97	-3,929.81	-70.96	3,930.45	3,837.70	92.76	42.374	
6,100.00	6,100.00	6,064.00	6,064.00	13.58	80.73	-178.97	-3,929.81	-70.96	3,930.45	3,836.14	94.31	41.675	
6,200.00	6,200.00	6,164.00	6,164.00	13.80	82.06	-178.97	-3,929.81	-70.96	3,930.45	3,834.58	95.87	40.999	
6,300.00	6,300.00	6,264.00	6,264.00	14.03	83.40	-178.97	-3,929.81	-70.96	3,930.45	3,833.03	97.42	40.344	
6,400.00	6,400.00	6,364.00	6,364.00	14.25	84.73	-178.97	-3,929.81	-70.96	3,930.45	3,831.47	98.98	39.710	
6,500.00	6,500.00	6,464.00	6,464.00	14.48	86.06	-178.97	-3,929.81	-70.96	3,930.45	3,829.91	100.54	39.095	
6,600.00	6,600.00	6,564.00	6,564.00	14.70	87.39	-178.97	-3,929.81	-70.96	3,930.45	3,828.36	102.09	38.499	
6,700.00	6,700.00	6,664.00	6,664.00	14.93	88.72	-178.97	-3,929.81	-70.96	3,930.45	3,826.80	103.65	37.921	
6,800.00	6,800.00	6,764.00	6,764.00	15.15	90.05	-178.97	-3,929.81	-70.96	3,930.45	3,825.25	105.20	37.360	
6,900.00	6,900.00	6,864.00	6,864.00	15.38	91.38	-178.97	-3,929.81	-70.96	3,930.45	3,823.69	106.76	36.816	
7,000.00	7,000.00	6,964.00	6,964.00	15.60	92.72	-178.97	-3,929.81	-70.96	3,930.45	3,822.13	108.32	36.287	
7,100.00	7,100.00	7,064.00	7,064.00	15.83	94.05	-178.97	-3,929.81	-70.96	3,930.45	3,820.58	109.87	35.773	
7,200.00	7,200.00	7,164.00	7,164.00	16.05	95.38	-178.97	-3,929.81	-70.96	3,930.45	3,819.02	111.43	35.273	
7,300.00	7,300.00	7,264.00	7,264.00	16.28	96.71	-178.97	-3,929.81	-70.96	3,930.45	3,817.47	112.99	34.787	
7,400.00	7,400.00	7,364.00	7,364.00	16.50	98.04	-178.97	-3,929.81	-70.96	3,930.45	3,815.91	114.54	34.315	
7,500.00	7,500.00	7,464.00	7,464.00	16.72	99.37	-178.97	-3,929.81	-70.96	3,930.45	3,814.35	116.10	33.855	
7,600.00	7,600.00	7,564.00	7,564.00	16.95	100.70	-178.97	-3,929.81	-70.96	3,930.45	3,812.80	117.65	33.407	
7,700.00	7,700.00	7,664.00	7,664.00	17.17	102.04	-178.97	-3,929.81	-70.96	3,930.45	3,811.24	119.21	32.971	
7,800.00	7,800.00	7,764.00	7,764.00	17.40	103.37	-178.97	-3,929.81	-70.96	3,930.45	3,809.68	120.77	32.546	
7,900.00	7,900.00	7,864.00	7,864.00	17.62	104.70	-178.97	-3,929.81	-70.96	3,930.45	3,808.13	122.32	32.132	
8,000.00	8,000.00	7,964.00	7,964.00	17.85	106.03	-178.97	-3,929.81	-70.96	3,930.45	3,806.57	123.88	31.728	
8,100.00	8,100.00	8,064.00	8,064.00	18.07	107.36	-178.97	-3,929.81	-70.96	3,930.45	3,805.02	125.43	31.335	
8,200.00	8,200.00	8,164.00	8,164.00	18.30	108.69	-178.97	-3,929.81	-70.96	3,930.45	3,803.46	126.99	30.951	
8,300.00	8,300.00	8,264.00	8,264.00	18.52	110.02	-178.97	-3,929.81	-70.96	3,930.45	3,801.90	128.55	30.576	
8,400.00	8,400.00	8,364.00	8,364.00	18.75	111.35	-178.97	-3,929.81	-70.96	3,930.45	3,800.35	130.10	30.210	
8,500.00	8,500.00	8,464.00	8,464.00	18.97	112.69	-178.97	-3,929.81	-70.96	3,930.45	3,798.79	131.66	29.853	
8,600.00	8,600.00	8,564.00	8,564.00	19.20	114.02	-178.97	-3,929.81	-70.96	3,930.45	3,797.24	133.21	29.505	
8,700.00	8,700.00	8,664.00	8,664.00	19.42	115.35	-178.97	-3,929.81	-70.96	3,930.45	3,795.68	134.77	29.164	
8,800.00	8,800.00	8,764.00	8,764.00	19.65	116.68	-178.97	-3,929.81	-70.96	3,930.45	3,794.12	136.33	28.831	
8,900.00	8,900.00	8,864.00	8,864.00	19.87	118.01	-178.97	-3,929.81	-70.96	3,930.45	3,792.57	137.88	28.506	
8,927.04	8,927.04	8,891.04	8,891.04	19.93	118.37	-178.97	-3,929.81	-70.96	3,930.45	3,792.15	138.30	28.419	
8,950.00	8,949.99	8,913.99	8,913.99	19.98	118.68	11.44	-3,929.81	-70.96	3,930.00	3,791.35	138.65	28.344	
9,000.00	8,999.80	8,963.80	8,963.80	20.06	119.34	11.54	-3,929.81	-70.96	3,925.90	3,786.50	139.40	28.163	
9,050.00	9,049.06	9,013.06	9,013.06	20.15	120.00	11.73	-3,929.81	-70.96	3,917.57	3,777.43	140.14	27.954	
9,100.00	9,097.39	9,061.39	9,061.39	20.23	120.64	12.04	-3,929.81	-70.96	3,905.06	3,764.19	140.87	27.721	
9,150.00	9,144.42	9,108.42	9,108.42	20.32	121.27	12.47	-3,929.81	-70.96	3,888.47	3,746.89	141.58	27.465	
9,200.00	9,189.79	9,153.79	9,153.79	20.40	121.87	13.03	-3,929.81	-70.96	3,867.94	3,725.67	142.27	27.188	
9,250.00	9,233.17	9,197.17	9,197.17	20.49	122.45	13.76	-3,929.81	-70.96	3,843.61	3,700.69	142.92	26.893	
9,300.00	9,274.21	9,238.21	9,238.21	20.59	122.99	14.69	-3,929.81	-70.96	3,815.69	3,672.14	143.55	26.581	
9,350.00	9,312.62	9,276.62	9,276.62	20.71	123.50	15.88	-3,929.81	-70.96	3,784.37	3,640.24	144.13	26.256	
9,400.00	9,348.09	9,312.09	9,312.09	20.85	123.98	17.39	-3,929.81	-70.96	3,749.92	3,605.24	144.67	25.920	
9,450.00	9,380.35	9,344.35	9,344.35	21.02	124.41	19.34	-3,929.81	-70.96	3,712.58	3,567.42	145.17	25.574	
9,500.00	9,409.17	9,373.17	9,373.17	21.21	124.79	21.89	-3,929.81	-70.96	3,672.66	3,527.05	145.61	25.222	
9,550.00	9,434.31	9,398.31	9,398.31	21.44	125.13	25.30	-3,929.81	-70.96	3,630.46	3,484.45	146.00	24.866	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well: Lea Unit #46H
Project:	Lea County, NM (NAD-27-2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Lea Unit - #1 - OH - OH														Offset Site Error:	0.00 usft
Survey Program: 14735-INC														Offset Well Error:	0.00 usft
Reference	Offset		Semi Major Axis		Distance		Minimum		Separation		Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/S (usft)	+E/W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
9,600.00	9,455.60	9,419.60	9,419.60	21.70	125.41	29.97	-3,929.81	-70.96	3,586.30	3,439.96	146.34	24.507			
9,650.00	9,472.86	9,436.86	9,436.86	21.99	125.64	36.57	-3,929.81	-70.96	3,540.53	3,393.91	146.62	24.148			
9,700.00	9,485.97	9,449.97	9,449.97	22.32	125.81	46.14	-3,929.81	-70.96	3,493.49	3,346.66	146.83	23.792			
9,750.00	9,494.83	9,458.83	9,458.83	22.68	125.93	60.00	-3,929.81	-70.96	3,445.55	3,298.56	146.99	23.441			
9,800.00	9,499.36	9,463.36	9,463.36	23.07	125.99	78.68	-3,929.81	-70.96	3,397.08	3,250.00	147.09	23.096			
9,827.04	9,500.00	9,464.00	9,464.00	23.30	126.00	90.00	-3,929.81	-70.96	3,370.78	3,223.67	147.11	22.913			
9,900.00	9,500.00	9,464.00	9,464.00	23.91	126.00	90.00	-3,929.81	-70.96	3,299.53	3,152.37	147.16	22.422			
10,000.00	9,500.00	9,464.00	9,464.00	24.81	126.00	90.00	-3,929.81	-70.96	3,201.09	3,053.88	147.21	21.745			
10,100.00	9,500.00	9,464.00	9,464.00	25.79	126.00	90.00	-3,929.81	-70.96	3,101.93	2,954.67	147.26	21.065			
10,158.68	9,500.00	9,464.00	9,464.00	26.40	126.00	90.00	-3,929.81	-70.96	3,043.48	2,896.20	147.28	20.665			
10,200.00	9,500.00	9,464.00	9,464.00	26.85	126.00	90.00	-3,929.81	-70.96	3,002.28	2,854.99	147.29	20.383			
10,300.00	9,500.00	9,464.00	9,464.00	28.00	126.00	90.00	-3,929.81	-70.96	2,902.59	2,755.25	147.34	19.700			
10,400.00	9,500.00	9,464.00	9,464.00	29.21	126.00	90.00	-3,929.81	-70.96	2,802.91	2,655.53	147.38	19.018			
10,500.00	9,500.00	9,464.00	9,464.00	30.49	126.00	90.00	-3,929.81	-70.96	2,703.26	2,555.83	147.43	18.335			
10,600.00	9,500.00	9,464.00	9,464.00	31.82	126.00	90.00	-3,929.81	-70.96	2,603.64	2,456.14	147.49	17.653			
10,700.00	9,500.00	9,464.00	9,464.00	33.20	126.00	90.00	-3,929.81	-70.96	2,504.04	2,356.48	147.56	16.970			
10,800.00	9,500.00	9,464.00	9,464.00	34.62	126.00	90.00	-3,929.81	-70.96	2,404.48	2,256.85	147.63	16.287			
10,900.00	9,500.00	9,464.00	9,464.00	36.08	126.00	90.00	-3,929.81	-70.96	2,304.96	2,157.24	147.72	15.604			
11,000.00	9,500.00	9,464.00	9,464.00	37.57	126.00	90.00	-3,929.81	-70.96	2,205.48	2,057.67	147.81	14.921			
11,100.00	9,500.00	9,464.00	9,464.00	39.09	126.00	90.00	-3,929.81	-70.96	2,106.04	1,958.13	147.92	14.238			
11,200.00	9,500.00	9,464.00	9,464.00	40.64	126.00	90.00	-3,929.81	-70.96	2,006.67	1,858.63	148.04	13.555			
11,300.00	9,500.00	9,464.00	9,464.00	42.21	126.00	90.00	-3,929.81	-70.96	1,907.36	1,759.18	148.18	12.872			
11,400.00	9,500.00	9,464.00	9,464.00	43.80	126.00	90.00	-3,929.81	-70.96	1,808.13	1,659.78	148.35	12.188			
11,500.00	9,500.00	9,464.00	9,464.00	45.40	126.00	90.00	-3,929.81	-70.96	1,708.99	1,560.44	148.54	11.505			
11,600.00	9,500.00	9,464.00	9,464.00	47.03	126.00	90.00	-3,929.81	-70.96	1,609.95	1,461.18	148.77	10.822			
11,700.00	9,500.00	9,464.00	9,464.00	48.67	126.00	90.00	-3,929.81	-70.96	1,511.04	1,362.00	149.04	10.139			
11,800.00	9,500.00	9,464.00	9,464.00	50.32	126.00	90.00	-3,929.81	-70.96	1,412.28	1,262.92	149.36	9.455			
11,900.00	9,500.00	9,464.00	9,464.00	51.98	126.00	90.00	-3,929.81	-70.96	1,313.71	1,163.95	149.76	8.772			
12,000.00	9,500.00	9,464.00	9,464.00	53.66	126.00	90.00	-3,929.81	-70.96	1,215.38	1,065.13	150.24	8.089			
12,100.00	9,500.00	9,464.00	9,464.00	55.34	126.00	90.00	-3,929.81	-70.96	1,117.34	966.48	150.85	7.407			
12,200.00	9,500.00	9,464.00	9,464.00	57.04	126.00	90.00	-3,929.81	-70.96	1,019.68	868.05	151.62	6.725			
12,300.00	9,500.00	9,464.00	9,464.00	58.74	126.00	90.00	-3,929.81	-70.96	922.52	769.90	152.62	6.045			
12,400.00	9,500.00	9,464.00	9,464.00	60.45	126.00	90.00	-3,929.81	-70.96	826.04	672.11	153.93	5.366			
12,500.00	9,500.00	9,464.00	9,464.00	62.17	126.00	90.00	-3,929.81	-70.96	730.51	574.83	155.68	4.692			
12,600.00	9,500.00	9,464.00	9,464.00	63.89	126.00	90.00	-3,929.81	-70.96	636.35	478.26	158.10	4.025			
12,700.00	9,500.00	9,464.00	9,464.00	65.62	126.00	90.00	-3,929.81	-70.96	544.29	382.79	161.49	3.370			
12,800.00	9,500.00	9,464.00	9,464.00	67.35	126.00	90.00	-3,929.81	-70.96	455.57	289.21	166.37	2.738			
12,900.00	9,500.00	9,464.00	9,464.00	69.09	126.00	90.00	-3,929.81	-70.96	372.63	199.19	173.43	2.149			
13,000.00	9,500.00	9,464.00	9,464.00	70.84	126.00	90.00	-3,929.81	-70.96	300.25	116.97	183.28	1.638			
13,100.00	9,500.00	9,464.00	9,464.00	72.58	126.00	90.00	-3,929.81	-70.96	247.90	53.38	194.51	1.274 Level 3			
13,193.49	9,500.00	9,464.00	9,464.00	74.22	126.00	90.00	-3,929.81	-70.96	229.59	29.40	200.19	1.147 Level 2, CC, ES, SF			
13,200.00	9,500.00	9,464.00	9,464.00	74.34	126.00	90.00	-3,929.81	-70.96	229.68	29.47	200.21	1.147 Level 2			
13,300.00	9,500.00	9,464.00	9,464.00	76.09	126.00	90.00	-3,929.81	-70.96	253.09	58.42	194.67	1.300 Level 3			
13,400.00	9,500.00	9,464.00	9,464.00	77.85	126.00	90.00	-3,929.81	-70.96	308.80	124.59	184.21	1.676			
13,500.00	9,500.00	9,464.00	9,464.00	79.62	126.00	90.00	-3,929.81	-70.96	382.96	207.84	175.12	2.187			
13,600.00	9,500.00	9,464.00	9,464.00	81.38	126.00	90.00	-3,929.81	-70.96	466.86	298.33	168.53	2.770			
13,700.00	9,500.00	9,464.00	9,464.00	83.15	126.00	90.00	-3,929.81	-70.96	556.11	392.19	163.92	3.393			
13,800.00	9,500.00	9,464.00	9,464.00	84.92	126.00	90.00	-3,929.81	-70.96	648.51	487.86	160.65	4.037			
13,900.00	9,500.00	9,464.00	9,464.00	86.70	126.00	90.00	-3,929.81	-70.96	742.87	584.59	158.29	4.693			
14,000.00	9,500.00	9,464.00	9,464.00	88.47	126.00	90.00	-3,929.81	-70.96	838.55	682.01	156.54	5.357			
14,100.00	9,500.00	9,464.00	9,464.00	90.25	126.00	90.00	-3,929.81	-70.96	935.13	779.90	155.22	6.024			
14,200.00	9,500.00	9,464.00	9,464.00	92.03	126.00	90.00	-3,929.81	-70.96	1,032.36	878.15	154.21	6.694			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County NM (NAD-27/2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Lea Unit - #1 - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 14735-INC													Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum		Separation		Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,300.00	9,500.00	9,464.00	9,464.00	93.82	126.00	90.00	-3,929.81	-70.96	1,130.07	976.65	153.42	7.366		
14,400.00	9,500.00	9,464.00	9,464.00	95.60	126.00	90.00	-3,929.81	-70.96	1,228.16	1,075.36	152.79	8.038		
14,500.00	9,500.00	9,464.00	9,464.00	97.39	126.00	90.00	-3,929.81	-70.96	1,326.53	1,174.23	152.29	8.710		
14,600.00	9,500.00	9,464.00	9,464.00	99.18	126.00	90.00	-3,929.81	-70.96	1,425.12	1,273.24	151.89	9.383		
14,700.00	9,500.00	9,464.00	9,464.00	100.96	126.00	90.00	-3,929.81	-70.96	1,523.90	1,372.34	151.56	10.055		
14,800.00	9,500.00	9,464.00	9,464.00	102.76	126.00	90.00	-3,929.81	-70.96	1,622.83	1,471.54	151.29	10.727		
14,843.14	9,500.00	9,464.00	9,464.00	103.53	126.00	90.00	-3,929.81	-70.96	1,665.55	1,514.36	151.18	11.017		

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM.5000.1 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Lea Unit - #16 - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 100-ISCWSA-GYRO-3												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Between Centres (usft)	Between Ellipses (usft)					
0.00	0.00	0.00	0.00	0.00	0.00	-178.89	-3,729.81	-72.51	3,730.66				
100.00	100.00	56.47	56.47	0.09	0.05	-178.89	-3,729.89	-72.55	3,730.62	3,730.47	0.14	N/A	
200.00	200.00	149.33	149.33	0.32	0.19	-178.88	-3,730.32	-72.82	3,731.07	3,730.57	0.50	7,445.060	
300.00	300.00	249.13	249.12	0.54	0.37	-178.87	-3,730.78	-73.29	3,731.55	3,730.64	0.91	4,114.215	
400.00	400.00	342.18	342.18	0.77	0.55	-178.87	-3,731.30	-73.67	3,732.11	3,730.81	1.30	2,864.537	
500.00	500.00	430.16	430.15	0.99	0.71	-178.87	-3,732.02	-73.77	3,732.94	3,731.25	1.69	2,205.445	
600.00	600.00	518.80	518.79	1.22	0.88	-178.87	-3,733.08	-73.76	3,734.13	3,732.04	2.08	1,791.105	
700.00	700.00	622.47	622.45	1.44	1.07	-178.86	-3,734.42	-74.07	3,735.42	3,732.92	2.50	1,492.936	
800.00	800.00	736.78	736.75	1.67	1.28	-178.85	-3,735.52	-74.74	3,736.39	3,733.46	2.94	1,272.409	
900.00	900.00	836.39	836.35	1.89	1.47	-178.85	-3,736.30	-75.28	3,737.19	3,733.84	3.34	1,117.585	
1,000.00	1,000.00	931.15	931.11	2.12	1.65	-178.83	-3,737.16	-76.09	3,738.12	3,734.37	3.74	999.032	
1,100.00	1,100.00	1,037.18	1,037.12	2.34	1.84	-178.82	-3,738.14	-77.17	3,739.06	3,734.90	4.16	899.351	
1,200.00	1,200.00	1,150.88	1,150.82	2.56	2.06	-178.80	-3,738.81	-78.14	3,739.67	3,735.08	4.59	815.583	
1,300.00	1,300.00	1,252.67	1,252.61	2.79	2.25	-178.80	-3,739.19	-78.64	3,740.05	3,735.05	4.99	749.054	
1,400.00	1,400.00	1,346.79	1,346.73	3.01	2.42	-178.79	-3,739.62	-79.02	3,740.51	3,735.13	5.39	694.124	
1,500.00	1,500.00	1,442.61	1,442.54	3.24	2.60	-178.78	-3,740.22	-79.70	3,741.15	3,735.37	5.79	646.503	
1,600.00	1,600.00	1,540.18	1,540.11	3.46	2.78	-178.76	-3,740.86	-80.86	3,741.84	3,735.65	6.19	604.951	
1,700.00	1,700.00	1,622.98	1,622.89	3.69	2.94	-178.74	-3,741.54	-82.00	3,742.70	3,736.15	6.56	570.762	
1,800.00	1,800.00	1,700.00	1,699.87	3.91	3.08	-178.71	-3,742.88	-84.05	3,744.43	3,737.51	6.92	541.106	
1,900.00	1,900.00	1,773.81	1,773.61	4.14	3.22	-178.67	-3,744.62	-86.87	3,746.81	3,739.53	7.28	514.904	
2,000.00	2,000.00	1,914.69	1,914.34	4.36	3.48	-178.59	-3,747.38	-92.55	3,748.90	3,741.15	7.75	483.725	
2,100.00	2,100.00	2,029.29	2,028.88	4.59	3.69	-178.53	-3,748.61	-96.25	3,750.05	3,741.87	8.18	458.717	
2,200.00	2,200.00	2,126.58	2,126.12	4.81	3.87	-178.49	-3,749.61	-99.10	3,751.15	3,742.58	8.57	437.705	
2,300.00	2,300.00	2,233.86	2,233.35	5.04	4.07	-178.44	-3,750.61	-102.17	3,752.16	3,743.18	8.98	417.723	
2,400.00	2,400.00	2,344.88	2,344.33	5.26	4.28	-178.39	-3,751.41	-105.13	3,752.95	3,743.55	9.40	399.236	
2,500.00	2,500.00	2,453.06	2,452.48	5.49	4.48	-178.36	-3,751.84	-107.51	3,753.41	3,743.60	9.81	382.523	
2,600.00	2,600.00	2,555.59	2,554.99	5.71	4.67	-178.33	-3,752.17	-109.50	3,753.79	3,743.58	10.21	367.510	
2,700.00	2,700.00	2,666.16	2,665.55	5.94	4.87	-178.30	-3,752.38	-111.16	3,754.03	3,743.40	10.63	353.216	
2,800.00	2,800.00	2,774.68	2,774.07	6.16	5.05	-178.30	-3,752.28	-111.46	3,753.94	3,742.90	11.04	340.183	
2,900.00	2,900.00	2,901.08	2,900.46	6.39	5.24	-178.32	-3,751.72	-110.27	3,753.48	3,742.01	11.47	327.315	
3,000.00	3,000.00	3,013.62	3,012.98	6.61	5.40	-178.34	-3,750.58	-108.60	3,752.43	3,740.55	11.88	315.990	
3,100.00	3,100.00	3,121.23	3,120.57	6.84	5.56	-178.37	-3,749.23	-106.92	3,751.13	3,738.86	12.28	305.586	
3,200.00	3,200.00	3,233.30	3,232.62	7.06	5.73	-178.39	-3,747.50	-105.35	3,749.54	3,736.86	12.68	295.650	
3,300.00	3,300.00	3,333.47	3,332.76	7.28	5.88	-178.41	-3,745.73	-103.94	3,747.74	3,734.67	13.07	286.711	
3,400.00	3,400.00	3,421.84	3,421.12	7.51	6.02	-178.43	-3,744.37	-102.71	3,746.16	3,732.72	13.44	278.667	
3,500.00	3,500.00	3,511.67	3,510.92	7.73	6.16	-178.45	-3,743.25	-101.43	3,744.88	3,731.06	13.82	271.007	
3,600.00	3,600.00	3,606.77	3,606.01	7.96	6.31	-178.47	-3,742.25	-100.15	3,743.79	3,729.59	14.20	263.588	
3,700.00	3,700.00	3,711.97	3,711.20	8.18	6.48	-178.49	-3,741.17	-98.92	3,742.73	3,728.13	14.60	256.265	
3,800.00	3,800.00	3,835.04	3,834.25	8.41	6.68	-178.50	-3,739.28	-97.67	3,741.15	3,726.12	15.04	248.820	
3,900.00	3,900.00	3,932.19	3,931.38	8.63	6.84	-178.52	-3,737.59	-96.65	3,739.38	3,723.96	15.42	242.428	
4,000.00	4,000.00	4,024.74	4,023.91	8.86	6.99	-178.53	-3,736.13	-95.70	3,737.78	3,721.98	15.81	236.462	
4,100.00	4,100.00	4,115.25	4,114.41	9.08	7.14	-178.55	-3,734.86	-94.79	3,736.36	3,720.17	16.19	230.825	
4,200.00	4,200.00	4,200.00	4,199.15	9.31	7.28	-178.56	-3,734.17	-93.91	3,735.49	3,718.93	16.56	225.598	
4,300.00	4,300.00	4,280.67	4,279.81	9.53	7.42	-178.57	-3,733.89	-93.13	3,735.07	3,718.15	16.92	220.709	
4,400.00	4,400.00	4,374.58	4,373.72	9.76	7.57	-178.58	-3,733.67	-92.32	3,734.82	3,717.51	17.31	215.751	
4,478.77	4,478.77	4,447.23	4,446.37	9.93	7.70	-178.59	-3,733.63	-91.63	3,734.75	3,717.14	17.61	212.029	
4,500.00	4,500.00	4,466.68	4,465.81	9.98	7.73	-178.60	-3,733.64	-91.45	3,734.76	3,717.06	17.70	211.051	
4,600.00	4,600.00	4,563.19	4,562.32	10.21	7.89	-178.61	-3,733.77	-90.61	3,734.88	3,716.79	18.09	206.468	
4,700.00	4,700.00	4,663.80	4,662.93	10.43	8.07	-178.62	-3,733.93	-89.94	3,735.01	3,716.52	18.49	202.000	
4,800.00	4,800.00	4,764.24	4,763.37	10.66	8.24	-178.63	-3,734.06	-89.46	3,735.13	3,716.24	18.89	197.723	
4,900.00	4,900.00	4,863.73	4,862.86	10.88	8.41	-178.64	-3,734.19	-88.92	3,735.25	3,715.96	19.29	193.641	
5,000.00	5,000.00	4,948.48	4,947.60	11.11	8.56	-178.64	-3,734.41	-88.36	3,735.51	3,715.84	19.66	189.977	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



TDS
Anticollision Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User.Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Lea Unit - #16 - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 100-ISCWSA-GYRO-3												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Tooface (")	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
5,100.00	5,100.00	5,024.87	5,024.00	11.33	8.69	-178.65	-3,735.07	-87.90	3,736.36	3,716.34	20.02	186.615	
5,200.00	5,200.00	5,100.00	5,099.11	11.56	8.83	-178.66	-3,736.19	-87.66	3,737.84	3,717.46	20.38	183.423	
5,300.00	5,300.00	5,192.45	5,191.55	11.78	8.99	-178.66	-3,737.96	-87.55	3,739.75	3,718.99	20.77	180.081	
5,400.00	5,400.00	5,293.50	5,292.58	12.00	9.17	-178.66	-3,740.01	-87.44	3,741.79	3,720.61	21.17	176.730	
5,500.00	5,500.00	5,401.46	5,400.52	12.23	9.36	-178.66	-3,742.07	-87.35	3,743.69	3,722.10	21.59	173.391	
5,600.00	5,600.00	5,507.57	5,506.61	12.45	9.55	-178.66	-3,743.87	-87.34	3,745.39	3,723.38	22.01	170.194	
5,700.00	5,700.00	5,606.01	5,605.04	12.68	9.73	-178.66	-3,745.50	-87.75	3,747.05	3,724.64	22.41	167.221	
5,800.00	5,800.00	5,723.56	5,722.57	12.90	9.94	-178.64	-3,747.18	-88.68	3,748.50	3,725.66	22.84	164.089	
5,900.00	5,900.00	5,844.42	5,843.42	13.13	10.16	-178.63	-3,748.24	-89.89	3,749.40	3,726.11	23.28	161.023	
6,000.00	6,000.00	5,952.39	5,951.38	13.35	10.35	-178.61	-3,748.75	-91.20	3,749.89	3,726.19	23.70	158.221	
6,100.00	6,100.00	6,055.45	6,054.43	13.58	10.53	-178.59	-3,749.13	-92.39	3,750.29	3,726.19	24.11	155.572	
6,200.00	6,200.00	6,157.53	6,156.51	13.80	10.72	-178.57	-3,749.42	-93.46	3,750.60	3,726.09	24.51	153.019	
6,300.00	6,300.00	6,249.37	6,248.34	14.03	10.88	-178.56	-3,749.73	-94.25	3,750.96	3,726.06	24.90	150.656	
6,400.00	6,400.00	6,338.21	6,337.17	14.25	11.04	-178.55	-3,750.32	-94.90	3,751.65	3,726.37	25.28	148.404	
6,500.00	6,500.00	6,434.62	6,433.58	14.48	11.21	-178.54	-3,751.15	-95.81	3,752.53	3,726.86	25.68	146.145	
6,600.00	6,600.00	6,537.46	6,536.41	14.70	11.40	-178.52	-3,752.03	-96.89	3,753.41	3,727.32	26.09	143.891	
6,700.00	6,700.00	6,642.64	6,641.58	14.93	11.59	-178.50	-3,752.81	-98.01	3,754.18	3,727.68	26.50	141.682	
6,800.00	6,800.00	6,743.10	6,742.03	15.15	11.77	-178.49	-3,753.43	-98.97	3,754.82	3,727.92	26.90	139.581	
6,900.00	6,900.00	6,836.02	6,834.95	15.38	11.94	-178.48	-3,754.13	-99.78	3,755.59	3,728.30	27.29	137.612	
7,000.00	7,000.00	6,927.11	6,926.03	15.60	12.11	-178.47	-3,754.99	-100.49	3,756.56	3,728.88	27.68	135.718	
7,100.00	7,100.00	7,017.47	7,016.38	15.83	12.27	-178.46	-3,755.14	-100.82	3,757.84	3,729.77	28.07	133.891	
7,200.00	7,200.00	7,127.05	7,125.95	16.05	12.47	-178.45	-3,757.46	-101.75	3,759.07	3,730.58	28.49	131.948	
7,300.00	7,300.00	7,233.53	7,232.42	16.28	12.66	-178.43	-3,758.51	-102.96	3,760.09	3,731.18	28.90	130.086	
7,400.00	7,400.00	7,337.16	7,336.04	16.50	12.85	-178.41	-3,759.38	-104.16	3,760.95	3,731.64	29.31	128.296	
7,500.00	7,500.00	7,437.65	7,436.52	16.72	13.04	-178.40	-3,760.19	-105.33	3,761.80	3,732.08	29.72	126.580	
7,600.00	7,600.00	7,535.75	7,534.61	16.95	13.22	-178.38	-3,760.96	-106.41	3,762.61	3,732.49	30.12	124.927	
7,700.00	7,700.00	7,628.11	7,626.96	17.17	13.38	-178.36	-3,761.85	-107.45	3,763.61	3,733.10	30.51	123.363	
7,800.00	7,800.00	7,726.29	7,725.13	17.40	13.56	-178.35	-3,762.91	-108.56	3,764.71	3,733.80	30.91	121.799	
7,900.00	7,900.00	7,823.79	7,822.62	17.62	13.74	-178.33	-3,763.99	-109.72	3,765.86	3,734.55	31.31	120.281	
8,000.00	8,000.00	7,916.24	7,915.05	17.85	13.91	-178.31	-3,765.16	-110.82	3,767.16	3,735.46	31.70	118.839	
8,100.00	8,100.00	8,013.01	8,011.80	18.07	14.09	-178.30	-3,766.54	-111.91	3,768.62	3,736.52	32.10	117.407	
8,200.00	8,200.00	8,123.17	8,121.95	18.30	14.29	-178.28	-3,767.97	-113.05	3,769.95	3,737.42	32.52	115.916	
8,300.00	8,300.00	8,229.70	8,228.47	18.52	14.49	-178.27	-3,769.16	-114.03	3,771.09	3,738.15	32.94	114.481	
8,400.00	8,400.00	8,340.70	8,339.47	18.75	14.69	-178.26	-3,770.12	-114.56	3,771.97	3,738.60	33.37	113.043	
8,500.00	8,500.00	8,446.40	8,445.16	18.97	14.89	-178.25	-3,770.81	-114.91	3,772.62	3,738.84	33.78	111.666	
8,600.00	8,600.00	8,544.92	8,543.68	19.20	15.07	-178.25	-3,771.38	-114.98	3,773.21	3,739.02	34.19	110.363	
8,700.00	8,700.00	8,640.62	8,639.38	19.42	15.24	-178.26	-3,772.07	-114.56	3,773.91	3,739.33	34.59	109.113	
8,800.00	8,800.00	8,725.69	8,724.44	19.65	15.38	-178.27	-3,772.78	-113.94	3,774.75	3,739.79	34.96	107.959	
8,900.00	8,900.00	8,800.00	8,798.73	19.87	15.52	-178.28	-3,774.06	-113.05	3,776.38	3,741.06	35.32	106.913	
8,927.04	8,927.04	8,800.00	8,798.73	19.93	15.52	-178.28	-3,774.06	-113.05	3,776.97	3,741.59	35.38	106.753	
8,950.00	8,949.99	8,822.75	8,821.47	19.98	15.56	12.11	-3,774.62	-112.67	3,777.07	3,741.61	35.47	106.498	
9,000.00	8,999.80	8,855.38	8,854.08	20.06	15.61	12.16	-3,775.54	-111.94	3,774.37	3,738.76	35.61	106.001	
9,050.00	9,049.06	8,900.00	8,898.66	20.15	15.69	12.31	-3,777.06	-110.59	3,767.68	3,731.91	35.77	105.326	
9,100.00	9,097.39	8,926.33	8,924.95	20.23	15.74	12.56	-3,778.06	-109.71	3,756.93	3,721.03	35.90	104.648	
9,150.00	9,144.42	8,968.00	8,966.57	20.32	15.81	12.93	-3,779.68	-108.52	3,742.18	3,706.12	36.06	103.780	
9,200.00	9,189.79	9,011.08	9,009.61	20.40	15.89	13.44	-3,781.42	-107.52	3,723.51	3,687.29	36.22	102.806	
9,250.00	9,233.17	9,062.17	9,060.65	20.49	15.98	14.13	-3,783.43	-106.55	3,700.94	3,664.54	36.39	101.693	
9,300.00	9,274.21	9,113.63	9,112.07	20.59	16.07	15.03	-3,785.36	-105.77	3,674.60	3,638.04	36.57	100.492	
9,350.00	9,312.62	9,171.75	9,170.15	20.71	16.18	16.22	-3,787.29	-105.04	3,644.64	3,607.89	36.75	99.176	
9,400.00	9,348.09	9,220.42	9,218.80	20.85	16.26	17.73	-3,788.68	-104.52	3,611.27	3,574.36	36.91	97.839	
9,450.00	9,380.35	9,259.82	9,258.18	21.02	16.34	19.65	-3,789.72	-104.10	3,574.87	3,537.82	37.05	96.487	
9,500.00	9,409.17	9,295.08	9,293.43	21.21	16.40	22.14	-3,790.60	-103.74	3,535.75	3,498.58	37.18	95.103	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



TDS
Anticollision Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Lea Unit - #16 - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 100-ISCWSA-GYRO-3												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N-S (usft)	+E-W (usft)					
9,550.00	9,434.31	9,327.38	9,325.71	21.44	16.46	25.48	-3,791.34	-103.41	3,494.23	3,456.94	37.30	93.688	
9,600.00	9,455.60	9,355.01	9,353.34	21.70	16.51	30.01	-3,791.94	-103.17	3,450.64	3,413.24	37.40	92.260	
9,650.00	9,472.86	9,377.54	9,375.86	21.99	16.55	36.32	-3,792.39	-103.00	3,405.33	3,367.84	37.49	90.826	
9,700.00	9,485.97	9,394.83	9,393.15	22.32	16.58	45.33	-3,792.71	-102.88	3,358.66	3,321.09	37.57	89.396	
9,750.00	9,494.83	9,406.49	9,404.80	22.68	16.60	58.15	-3,792.92	-102.80	3,311.02	3,273.39	37.63	87.979	
9,800.00	9,499.36	9,412.82	9,411.14	23.07	16.61	75.37	-3,793.04	-102.76	3,262.77	3,225.09	37.69	86.578	
9,827.04	9,500.00	9,414.13	9,412.45	23.30	16.61	85.99	-3,793.06	-102.75	3,236.56	3,198.85	37.71	85.829	
9,900.00	9,500.00	9,415.66	9,413.97	23.91	16.62	85.40	-3,793.09	-102.75	3,165.51	3,127.75	37.76	83.828	
10,000.00	9,500.00	9,417.71	9,416.03	24.81	16.62	84.19	-3,793.12	-102.73	3,067.32	3,029.49	37.83	81.089	
10,100.00	9,500.00	9,419.72	9,418.04	25.79	16.62	81.94	-3,793.16	-102.72	2,968.35	2,930.47	37.88	78.352	
10,158.68	9,500.00	9,420.88	9,419.20	26.40	16.63	79.46	-3,793.18	-102.72	2,910.00	2,872.08	37.91	76.752	
10,200.00	9,500.00	9,421.69	9,420.00	26.85	16.63	79.64	-3,793.19	-102.71	2,868.85	2,830.92	37.93	75.626	
10,300.00	9,500.00	9,423.62	9,421.94	28.00	16.63	80.05	-3,793.22	-102.70	2,769.30	2,731.31	37.99	72.895	
10,400.00	9,500.00	9,425.54	9,423.85	29.21	16.63	80.46	-3,793.26	-102.69	2,669.77	2,631.72	38.05	70.162	
10,500.00	9,500.00	9,427.43	9,425.75	30.49	16.64	80.86	-3,793.29	-102.68	2,570.28	2,532.16	38.12	67.425	
10,600.00	9,500.00	9,429.31	9,427.63	31.82	16.64	81.27	-3,793.32	-102.67	2,470.82	2,432.63	38.20	64.685	
10,700.00	9,500.00	9,431.17	9,429.49	33.20	16.64	81.67	-3,793.35	-102.66	2,371.42	2,333.13	38.28	61.942	
10,800.00	9,500.00	9,433.01	9,431.33	34.62	16.65	82.06	-3,793.38	-102.65	2,272.06	2,233.68	38.38	59.194	
10,900.00	9,500.00	9,434.83	9,433.15	36.08	16.65	82.46	-3,793.41	-102.64	2,172.76	2,134.27	38.49	56.443	
11,000.00	9,500.00	9,436.64	9,434.95	37.57	16.65	82.85	-3,793.44	-102.63	2,073.53	2,034.90	38.62	53.687	
11,100.00	9,500.00	9,438.43	9,436.74	39.09	16.66	83.24	-3,793.47	-102.62	1,974.37	1,935.60	38.77	50.927	
11,200.00	9,500.00	9,440.20	9,438.51	40.64	16.66	83.62	-3,793.50	-102.62	1,875.30	1,836.36	38.94	48.161	
11,300.00	9,500.00	9,441.95	9,440.26	42.21	16.66	84.00	-3,793.53	-102.61	1,776.33	1,737.20	39.14	45.390	
11,400.00	9,500.00	9,443.68	9,442.00	43.80	16.67	84.38	-3,793.56	-102.60	1,677.49	1,638.12	39.37	42.612	
11,500.00	9,500.00	9,445.40	9,443.71	45.40	16.67	84.75	-3,793.58	-102.59	1,578.79	1,539.15	39.64	39.828	
11,600.00	9,500.00	9,447.10	9,445.42	47.03	16.67	85.13	-3,793.61	-102.58	1,480.26	1,440.29	39.97	37.037	
11,700.00	9,500.00	9,448.79	9,447.10	48.67	16.68	85.49	-3,793.64	-102.58	1,381.93	1,341.57	40.36	34.240	
11,800.00	9,500.00	9,450.46	9,448.77	50.32	16.68	85.86	-3,793.66	-102.57	1,283.87	1,243.03	40.84	31.435	
11,900.00	9,500.00	9,452.11	9,450.42	51.98	16.68	86.22	-3,793.69	-102.56	1,186.13	1,144.69	41.44	28.626	
12,000.00	9,500.00	9,453.75	9,452.06	53.66	16.69	86.58	-3,793.72	-102.55	1,088.80	1,046.62	42.18	25.813	
12,100.00	9,500.00	9,455.37	9,453.69	55.34	16.69	86.94	-3,793.74	-102.55	991.99	948.86	43.12	23.003	
12,200.00	9,500.00	9,456.98	9,455.29	57.04	16.69	87.29	-3,793.77	-102.54	895.88	851.54	44.34	20.204	
12,300.00	9,500.00	9,458.58	9,456.89	58.74	16.69	87.64	-3,793.79	-102.53	800.72	754.78	45.94	17.429	
12,400.00	9,500.00	9,460.15	9,458.47	60.45	16.70	87.99	-3,793.81	-102.53	706.90	658.82	48.08	14.702	
12,500.00	9,500.00	9,461.72	9,460.03	62.17	16.70	88.33	-3,793.84	-102.52	615.03	564.03	50.99	12.061	
12,600.00	9,500.00	9,463.27	9,461.58	63.89	16.70	88.67	-3,793.86	-102.52	526.12	471.09	55.03	9.561	
12,700.00	9,500.00	9,464.80	9,463.11	65.62	16.71	89.01	-3,793.89	-102.51	441.97	381.32	60.65	7.287	
12,800.00	9,500.00	9,466.33	9,464.64	67.35	16.71	89.35	-3,793.91	-102.50	365.88	297.54	68.34	5.354	
12,900.00	9,500.00	9,467.83	9,466.14	69.09	16.71	89.68	-3,793.93	-102.50	303.97	226.10	77.87	3.903	
13,000.00	9,500.00	9,469.33	9,467.64	70.84	16.71	90.01	-3,793.95	-102.49	266.31	180.00	86.31	3.086	
13,057.41	9,500.00	9,470.18	9,468.49	71.84	16.72	90.20	-3,793.97	-102.49	260.05	171.76	88.29	2.945 CC, ES, SF	
13,100.00	9,500.00	9,470.81	9,469.12	72.58	16.72	90.33	-3,793.98	-102.49	263.52	175.73	87.78	3.002	
13,200.00	9,500.00	9,472.28	9,470.59	74.34	16.72	90.66	-3,794.00	-102.48	296.57	215.20	81.37	3.645	
13,300.00	9,500.00	9,473.73	9,472.04	76.09	16.72	90.98	-3,794.02	-102.48	355.62	283.06	72.56	4.901	
13,400.00	9,500.00	9,475.18	9,473.48	77.85	16.72	91.30	-3,794.04	-102.47	430.08	365.09	64.99	6.618	
13,500.00	9,500.00	9,476.60	9,474.91	79.62	16.73	91.61	-3,794.06	-102.47	513.30	454.01	59.29	8.658	
13,600.00	9,500.00	9,478.02	9,476.33	81.38	16.73	91.92	-3,794.08	-102.46	601.64	546.52	55.12	10.916	
13,700.00	9,500.00	9,479.43	9,477.73	83.15	16.73	92.23	-3,794.10	-102.46	693.16	641.10	52.06	13.315	
13,800.00	9,500.00	9,480.82	9,479.13	84.92	16.73	92.54	-3,794.12	-102.46	786.74	736.96	49.78	15.805	
13,900.00	9,500.00	9,482.20	9,480.51	86.70	16.74	92.84	-3,794.14	-102.45	881.73	833.68	48.05	18.350	
14,000.00	9,500.00	9,483.57	9,481.88	88.47	16.74	93.14	-3,794.16	-102.45	977.71	931.00	46.72	20.929	
14,100.00	9,500.00	9,484.93	9,483.23	90.25	16.74	93.44	-3,794.18	-102.44	1,074.43	1,028.76	45.67	23.524	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



TDS
Anticollision Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Lea Unit - #16 - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 100-ISCWSA-GYRO-3												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
14,200.00	9,500.00	9,486.27	9,484.58	92.03	16.74	93.74	-3,794.20	-102.44	1,171.70	1,126.85	44.84	26.128	
14,300.00	9,500.00	9,487.60	9,485.91	93.82	16.75	94.03	-3,794.22	-102.44	1,269.39	1,225.21	44.18	28.733	
14,400.00	9,500.00	9,488.93	9,487.23	95.60	16.75	94.32	-3,794.24	-102.43	1,367.41	1,323.77	43.64	31.335	
14,500.00	9,500.00	9,490.24	9,488.55	97.39	16.75	94.61	-3,794.26	-102.43	1,465.70	1,422.50	43.20	33.931	
14,600.00	9,500.00	9,491.54	9,489.85	99.18	16.75	94.89	-3,794.28	-102.42	1,564.20	1,521.37	42.83	36.519	
14,700.00	9,500.00	9,492.83	9,491.14	100.96	16.76	95.17	-3,794.29	-102.42	1,662.88	1,620.35	42.53	39.099	
14,800.00	9,500.00	9,494.11	9,492.42	102.76	16.76	95.45	-3,794.31	-102.42	1,761.71	1,719.44	42.28	41.670	
14,843.14	9,500.00	9,494.66	9,492.96	103.53	16.76	95.57	-3,794.32	-102.42	1,804.39	1,762.21	42.18	42.776	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County, NM (NAD-27-2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00' sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User.Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Lea Unit - #20 - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 100-ISCWSA-GYRO-3													Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum		Separation		Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre N/S (usft)	Offset Wellbore Centre E/W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-160.43	-6,911.60	-2,457.70	7,335.69					
100.00	100.00	76.90	76.90	0.09	0.08	-160.42	-6,911.44	-2,457.83	7,335.49	7,335.33	0.16	N/A		
200.00	200.00	226.63	226.63	0.32	0.33	-160.42	-6,910.43	-2,457.99	7,334.89	7,334.24	0.64	N/A		
300.00	300.00	372.64	372.63	0.54	0.60	-160.42	-6,908.70	-2,457.34	7,333.62	7,332.47	1.15	6,397.161		
400.00	400.00	479.09	479.06	0.77	0.80	-160.42	-6,907.02	-2,456.77	7,331.95	7,330.38	1.57	4,672.206		
500.00	500.00	572.84	572.80	0.99	0.97	-160.42	-6,905.61	-2,456.18	7,330.32	7,328.36	1.97	3,725.186		
600.00	600.00	680.40	680.35	1.22	1.17	-160.42	-6,904.06	-2,455.37	7,328.72	7,326.33	2.39	3,061.260		
700.00	700.00	768.74	768.67	1.44	1.34	-160.43	-6,902.84	-2,454.50	7,327.09	7,324.31	2.78	2,634.400		
800.00	800.00	856.26	856.17	1.67	1.50	-160.43	-6,901.99	-2,453.16	7,325.66	7,322.50	3.17	2,314.525		
900.00	900.00	951.85	951.75	1.89	1.67	-160.44	-6,901.24	-2,451.54	7,324.35	7,320.79	3.56	2,056.045		
1,000.00	1,000.00	1,056.78	1,056.66	2.12	1.86	-160.46	-6,900.46	-2,449.62	7,323.04	7,319.07	3.98	1,841.671		
1,100.00	1,100.00	1,157.07	1,156.93	2.34	2.05	-160.47	-6,899.64	-2,447.78	7,321.66	7,317.27	4.38	1,670.864		
1,200.00	1,200.00	1,248.00	1,247.84	2.56	2.21	-160.48	-6,898.98	-2,446.13	7,320.34	7,315.57	4.77	1,534.473		
1,300.00	1,300.00	1,331.61	1,331.44	2.79	2.37	-160.48	-6,898.38	-2,444.88	7,319.19	7,314.05	5.15	1,422.313		
1,400.00	1,400.00	1,400.00	1,399.82	3.01	2.50	-160.49	-6,898.03	-2,444.07	7,318.34	7,312.85	5.49	1,332.114		
1,500.00	1,500.00	1,481.29	1,481.10	3.24	2.64	-160.49	-6,897.82	-2,443.36	7,317.82	7,311.95	5.86	1,248.273		
1,600.00	1,600.00	1,561.71	1,561.53	3.46	2.78	-160.50	-6,897.77	-2,443.05	7,317.63	7,311.41	6.22	1,175.586		
1,626.81	1,626.81	1,583.99	1,583.81	3.52	2.82	-160.50	-6,897.75	-2,443.08	7,317.63	7,311.30	6.32	1,157.361		
1,700.00	1,700.00	1,658.52	1,658.33	3.69	2.94	-160.49	-6,897.67	-2,443.35	7,317.64	7,311.03	6.61	1,106.603		
1,800.00	1,800.00	1,806.97	1,806.79	3.91	3.19	-160.49	-6,897.26	-2,443.18	7,317.36	7,310.27	7.10	1,030.999		
1,900.00	1,900.00	1,900.00	1,899.81	4.14	3.37	-160.50	-6,896.95	-2,442.42	7,316.77	7,309.28	7.49	976.852		
1,988.24	1,988.24	1,945.43	1,945.24	4.34	3.44	-160.50	-6,896.94	-2,442.09	7,316.53	7,308.76	7.76	942.339		
2,000.00	2,000.00	1,951.91	1,951.72	4.36	3.46	-160.50	-6,896.96	-2,442.05	7,316.53	7,308.73	7.80	937.842		
2,100.00	2,100.00	2,114.11	2,113.91	4.59	3.74	-160.51	-6,897.29	-2,440.99	7,316.71	7,308.41	8.30	881.309		
2,200.00	2,200.00	2,200.00	2,199.80	4.81	3.90	-160.51	-6,896.86	-2,440.31	7,315.98	7,307.30	8.68	842.499		
2,300.00	2,300.00	2,279.37	2,279.17	5.04	4.04	-160.52	-6,896.64	-2,439.74	7,315.49	7,306.44	9.05	808.339		
2,400.00	2,400.00	2,371.19	2,370.99	5.26	4.20	-160.52	-6,896.58	-2,439.32	7,315.28	7,305.85	9.44	775.309		
2,500.00	2,500.00	2,507.72	2,507.52	5.49	4.44	-160.52	-6,895.87	-2,439.72	7,314.90	7,305.00	9.90	738.590		
2,600.00	2,600.00	2,636.67	2,636.46	5.71	4.68	-160.52	-6,895.04	-2,438.92	7,314.11	7,303.75	10.36	705.659		
2,700.00	2,700.00	2,829.07	2,828.82	5.94	5.04	-160.54	-6,892.56	-2,435.76	7,312.30	7,301.36	10.94	668.295		
2,800.00	2,800.00	2,950.20	2,949.90	6.16	5.26	-160.55	-6,890.21	-2,433.19	7,309.76	7,298.37	11.39	641.801		
2,900.00	2,900.00	3,057.76	3,057.41	6.39	5.47	-160.56	-6,887.90	-2,431.05	7,307.07	7,295.26	11.81	618.590		
3,000.00	3,000.00	3,186.72	3,186.29	6.61	5.71	-160.58	-6,885.22	-2,427.41	7,304.19	7,291.91	12.27	595.126		
3,100.00	3,100.00	3,256.58	3,256.11	6.84	5.84	-160.59	-6,883.66	-2,425.52	7,301.21	7,288.58	12.63	578.217		
3,200.00	3,200.00	3,300.00	3,299.50	7.06	5.92	-160.60	-6,882.92	-2,424.31	7,298.78	7,285.84	12.93	564.359		
3,300.00	3,300.00	3,380.94	3,380.42	7.28	6.07	-160.61	-6,881.82	-2,422.48	7,296.79	7,283.48	13.31	548.383		
3,400.00	3,400.00	3,444.92	3,444.39	7.51	6.19	-160.61	-6,881.16	-2,421.59	7,295.35	7,281.70	13.65	534.528		
3,500.00	3,500.00	3,511.99	3,511.45	7.73	6.31	-160.62	-6,880.73	-2,420.88	7,294.39	7,280.39	14.00	521.184		
3,600.00	3,600.00	3,600.00	3,599.46	7.96	6.48	-160.62	-6,880.37	-2,420.33	7,293.79	7,279.40	14.38	507.151		
3,700.00	3,700.00	3,662.62	3,662.08	8.18	6.59	-160.62	-6,880.29	-2,420.09	7,293.50	7,278.79	14.72	495.630		
3,800.00	3,800.00	3,784.18	3,783.63	8.41	6.81	-160.63	-6,880.40	-2,419.55	7,293.48	7,278.32	15.15	481.336		
3,900.00	3,900.00	3,905.68	3,905.14	8.63	7.03	-160.63	-6,879.84	-2,419.17	7,292.93	7,277.33	15.60	467.458		
4,000.00	4,000.00	4,023.43	4,022.88	8.86	7.25	-160.63	-6,879.02	-2,418.53	7,292.09	7,276.05	16.04	454.506		
4,100.00	4,100.00	4,113.03	4,112.48	9.08	7.42	-160.64	-6,878.60	-2,417.56	7,291.28	7,274.85	16.43	443.742		
4,200.00	4,200.00	4,200.00	4,199.43	9.31	7.58	-160.65	-6,878.34	-2,416.05	7,290.45	7,273.64	16.81	433.681		
4,300.00	4,300.00	4,276.20	4,275.61	9.53	7.72	-160.66	-6,878.46	-2,414.32	7,289.89	7,272.73	17.17	424.646		
4,342.40	4,342.40	4,300.00	4,299.40	9.63	7.76	-160.66	-6,878.63	-2,413.73	7,289.84	7,272.53	17.30	421.299		
4,400.00	4,400.00	4,334.92	4,334.31	9.76	7.82	-160.67	-6,878.99	-2,412.86	7,289.92	7,272.43	17.49	416.797		
4,500.00	4,500.00	4,400.00	4,399.36	9.98	7.94	-160.69	-6,879.97	-2,411.32	7,290.53	7,272.70	17.82	409.068		
4,600.00	4,600.00	4,459.79	4,459.12	10.21	8.04	-160.70	-6,881.14	-2,410.06	7,291.64	7,273.50	18.14	401.917		
4,700.00	4,700.00	4,550.97	4,550.28	10.43	8.19	-160.71	-6,883.16	-2,408.43	7,293.14	7,274.63	18.51	393.937		
4,800.00	4,800.00	4,640.86	4,640.12	10.66	8.34	-160.73	-6,885.12	-2,406.72	7,294.58	7,275.70	18.88	386.317		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Lea Unit - #20 - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 100-ISCWSA-GYRO-3												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum		Separation		Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
4,900.00	4,900.00	4,720.77	4,720.00	10.88	8.48	-160.75	-6,887.12	-2,405.44	7,296.39	7,277.16	19.23	379.335	
5,000.00	5,000.00	4,876.99	4,876.16	11.11	8.74	-160.78	-6,890.52	-2,402.72	7,297.86	7,278.15	19.72	370.154	
5,100.00	5,100.00	4,949.46	4,948.60	11.33	8.87	-160.79	-6,891.90	-2,401.36	7,299.08	7,279.02	20.06	363.901	
5,200.00	5,200.00	5,000.00	4,999.12	11.56	8.95	-160.80	-6,893.09	-2,400.59	7,300.86	7,280.49	20.36	358.542	
5,300.00	5,300.00	5,237.49	5,236.53	11.78	9.36	-160.83	-6,897.81	-2,397.88	7,302.74	7,281.75	20.98	348.028	
5,400.00	5,400.00	5,300.00	5,299.03	12.00	9.47	-160.84	-6,898.76	-2,396.80	7,303.49	7,282.17	21.31	342.676	
5,500.00	5,500.00	5,472.74	5,471.72	12.23	9.78	-160.87	-6,900.25	-2,393.45	7,303.58	7,281.74	21.83	334.495	
5,600.00	5,600.00	5,562.80	5,561.77	12.45	9.95	-160.89	-6,900.80	-2,391.52	7,303.46	7,281.24	22.21	328.764	
5,700.00	5,700.00	5,659.73	5,658.67	12.68	10.12	-160.90	-6,901.44	-2,389.58	7,303.42	7,280.82	22.61	323.066	
5,756.93	5,756.93	5,715.00	5,713.93	12.81	10.22	-160.91	-6,901.77	-2,388.62	7,303.41	7,280.58	22.83	319.908	
5,800.00	5,800.00	5,754.81	5,753.74	12.90	10.30	-160.92	-6,902.00	-2,387.88	7,303.42	7,280.43	22.99	317.611	
5,900.00	5,900.00	5,861.07	5,859.98	13.13	10.49	-160.93	-6,902.58	-2,386.45	7,303.47	7,280.07	23.40	312.079	
6,000.00	6,000.00	6,000.00	5,998.90	13.35	10.75	-160.94	-6,902.57	-2,384.98	7,303.11	7,279.24	23.87	305.925	
6,094.78	6,094.78	6,052.87	6,051.77	13.57	10.84	-160.94	-6,902.41	-2,384.82	7,302.78	7,278.61	24.18	302.062	
6,100.00	6,100.00	6,055.39	6,054.30	13.58	10.84	-160.94	-6,902.41	-2,384.82	7,302.78	7,278.59	24.19	301.861	
6,200.00	6,200.00	6,125.33	6,124.23	13.80	10.96	-160.94	-6,902.64	-2,385.10	7,303.16	7,278.63	24.54	297.635	
6,289.68	6,289.68	6,247.78	6,246.68	14.00	11.17	-160.94	-6,902.67	-2,385.02	7,303.10	7,278.15	24.95	292.716	
6,300.00	6,300.00	6,255.13	6,254.03	14.03	11.18	-160.94	-6,902.68	-2,385.01	7,303.10	7,278.11	24.99	292.297	
6,400.00	6,400.00	6,340.42	6,339.32	14.25	11.32	-160.94	-6,902.87	-2,385.02	7,303.30	7,277.95	25.35	288.065	
6,500.00	6,500.00	6,448.00	6,446.90	14.48	11.49	-160.94	-6,903.02	-2,385.18	7,303.48	7,277.73	25.76	283.567	
6,600.00	6,600.00	6,564.06	6,562.96	14.70	11.70	-160.94	-6,903.18	-2,384.94	7,303.55	7,277.37	26.18	278.995	
6,700.00	6,700.00	6,675.82	6,674.72	14.93	11.90	-160.94	-6,903.15	-2,384.37	7,303.36	7,276.76	26.60	274.569	
6,800.00	6,800.00	6,761.59	6,760.49	15.15	12.06	-160.95	-6,903.09	-2,384.06	7,303.18	7,276.21	26.97	270.743	
6,817.26	6,817.26	6,775.36	6,774.26	15.19	12.09	-160.95	-6,903.11	-2,384.01	7,303.18	7,276.14	27.04	270.113	
6,900.00	6,900.00	6,842.17	6,841.07	15.38	12.20	-160.95	-6,903.24	-2,383.85	7,303.27	7,275.93	27.34	267.158	
7,000.00	7,000.00	6,944.12	6,943.02	15.60	12.37	-160.95	-6,903.53	-2,383.95	7,303.57	7,275.84	27.73	263.352	
7,100.00	7,100.00	7,053.39	7,052.29	15.83	12.54	-160.95	-6,903.46	-2,384.24	7,303.59	7,275.45	28.14	259.505	
7,200.00	7,200.00	7,152.10	7,151.00	16.05	12.71	-160.95	-6,903.54	-2,384.43	7,303.72	7,275.18	28.54	255.931	
7,300.00	7,300.00	7,271.01	7,269.90	16.28	12.92	-160.95	-6,903.59	-2,384.11	7,303.68	7,274.71	28.97	252.107	
7,400.00	7,400.00	7,361.09	7,359.99	16.50	13.07	-160.95	-6,903.47	-2,384.02	7,303.52	7,274.17	29.35	248.817	
7,415.32	7,415.32	7,373.42	7,372.31	16.53	13.10	-160.95	-6,903.46	-2,384.02	7,303.52	7,274.11	29.41	248.344	
7,500.00	7,500.00	7,456.70	7,455.60	16.72	13.24	-160.95	-6,903.51	-2,384.02	7,303.56	7,273.82	29.74	245.563	
7,600.00	7,600.00	7,569.95	7,568.85	16.95	13.43	-160.95	-6,903.42	-2,384.07	7,303.50	7,273.33	30.16	242.119	
7,700.00	7,700.00	7,670.54	7,669.44	17.17	13.60	-160.95	-6,903.25	-2,383.94	7,303.30	7,272.74	30.57	238.911	
7,800.00	7,800.00	7,768.06	7,766.95	17.40	13.77	-160.95	-6,903.06	-2,384.06	7,303.16	7,272.19	30.97	235.828	
7,896.75	7,896.75	7,854.85	7,853.75	17.62	13.92	-160.95	-6,902.97	-2,384.08	7,303.07	7,271.73	31.34	233.039	
7,900.00	7,900.00	7,857.63	7,856.52	17.62	13.92	-160.95	-6,902.97	-2,384.08	7,303.07	7,271.72	31.35	232.948	
8,000.00	8,000.00	7,935.15	7,934.05	17.85	14.06	-160.95	-6,903.13	-2,383.93	7,303.21	7,271.50	31.71	230.325	
8,100.00	8,100.00	8,013.56	8,012.46	18.07	14.19	-160.95	-6,903.51	-2,384.09	7,303.72	7,271.66	32.06	227.781	
8,200.00	8,200.00	8,149.34	8,148.24	18.30	14.40	-160.94	-6,903.60	-2,384.84	7,303.92	7,271.40	32.52	224.591	
8,300.00	8,300.00	8,237.21	8,236.10	18.52	14.55	-160.94	-6,903.62	-2,385.30	7,304.11	7,271.22	32.90	222.035	
8,400.00	8,400.00	8,351.01	8,349.90	18.75	14.74	-160.94	-6,904.11	-2,385.00	7,304.46	7,271.14	33.32	219.245	
8,500.00	8,500.00	8,513.41	8,512.28	18.97	15.01	-160.92	-6,902.73	-2,387.05	7,304.02	7,270.20	33.83	215.935	
8,600.00	8,600.00	8,628.28	8,627.14	19.20	15.20	-160.91	-6,901.50	-2,387.91	7,303.27	7,269.02	34.25	213.208	
8,700.00	8,700.00	8,751.92	8,750.76	19.42	15.41	-160.90	-6,899.55	-2,388.55	7,301.90	7,267.20	34.70	210.431	
8,800.00	8,800.00	8,822.30	8,821.12	19.65	15.53	-160.89	-6,898.39	-2,389.53	7,300.81	7,265.76	35.05	208.297	
8,900.00	8,900.00	8,900.00	8,898.80	19.87	15.66	-160.88	-6,897.35	-2,391.09	7,300.17	7,264.76	35.41	206.153	
8,927.04	8,927.04	8,909.01	8,907.81	19.93	15.68	-160.88	-6,897.25	-2,391.29	7,300.06	7,264.57	35.49	205.705	
8,950.00	8,949.99	8,929.41	8,928.20	19.98	15.71	29.55	-6,897.04	-2,391.70	7,299.59	7,264.02	35.57	205.226	
9,000.00	8,999.80	8,973.66	8,972.45	20.06	15.78	29.76	-6,896.69	-2,392.36	7,295.83	7,260.10	35.73	204.195	
9,050.00	9,049.06	9,019.48	9,018.26	20.15	15.86	30.17	-6,896.47	-2,392.75	7,288.34	7,252.45	35.89	203.049	
9,100.00	9,097.39	9,067.45	9,066.24	20.23	15.94	30.80	-6,896.29	-2,393.02	7,277.16	7,241.10	36.06	201.788	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Lea Unit - #20 - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 100-ISCWSA-GYRO-3												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
9,150.00	9,144.42	9,111.58	9,110.37	20.32	16.01	31.67	-6,896.16	-2,393.19	7,262.38	7,226.16	36.23	200.478	
9,200.00	9,189.79	9,148.55	9,147.33	20.40	16.08	32.79	-6,896.14	-2,393.16	7,244.15	7,207.78	36.37	199.158	
9,250.00	9,233.17	9,184.03	9,182.81	20.49	16.14	34.19	-6,896.23	-2,392.96	7,222.63	7,186.11	36.52	197.771	
9,300.00	9,274.21	9,267.53	9,266.31	20.59	16.29	36.08	-6,896.33	-2,392.41	7,197.90	7,161.14	36.75	195.851	
9,350.00	9,312.82	9,378.56	9,377.33	20.71	16.48	38.55	-6,895.25	-2,392.12	7,169.82	7,132.78	37.04	193.592	
9,400.00	9,348.09	9,437.69	9,436.45	20.85	16.59	41.36	-6,894.48	-2,391.29	7,138.77	7,101.54	37.23	191.751	
9,450.00	9,380.35	9,481.19	9,479.95	21.02	16.67	44.70	-6,893.84	-2,390.59	7,105.20	7,067.81	37.40	189.991	
9,500.00	9,409.17	9,500.00	9,498.75	21.21	16.71	48.54	-6,893.55	-2,390.26	7,069.44	7,031.91	37.53	188.391	
9,550.00	9,434.31	9,500.00	9,498.75	21.44	16.71	52.95	-6,893.55	-2,390.26	7,031.86	6,994.23	37.62	186.898	
9,600.00	9,455.60	9,500.00	9,498.75	21.70	16.71	58.13	-6,893.55	-2,390.26	6,992.74	6,955.01	37.73	185.345	
9,650.00	9,472.86	9,500.00	9,498.75	21.99	16.71	64.13	-6,893.55	-2,390.26	6,952.36	6,914.52	37.84	183.739	
9,700.00	9,485.97	9,500.00	9,498.75	22.32	16.71	70.92	-6,893.55	-2,390.26	6,911.01	6,873.05	37.96	182.084	
9,750.00	9,494.83	9,534.64	9,533.38	22.68	16.77	78.92	-6,893.17	-2,389.68	6,868.73	6,830.60	38.14	180.102	
9,800.00	9,499.36	9,536.20	9,534.93	23.07	16.77	86.89	-6,893.16	-2,389.66	6,826.32	6,788.05	38.27	178.362	
9,827.04	9,500.00	9,536.39	9,535.13	23.30	16.77	91.25	-6,893.16	-2,389.65	6,803.35	6,765.00	38.35	177.414	
9,900.00	9,500.00	9,536.30	9,535.04	23.91	16.77	91.33	-6,893.16	-2,389.66	6,740.79	6,702.25	38.54	174.883	
10,000.00	9,500.00	9,536.15	9,534.89	24.81	16.77	91.46	-6,893.16	-2,389.66	6,653.12	6,614.31	38.81	171.409	
10,100.00	9,500.00	9,535.97	9,534.71	25.79	16.77	91.62	-6,893.16	-2,389.66	6,563.36	6,524.26	39.10	167.875	
10,158.68	9,500.00	9,535.84	9,534.58	26.40	16.77	91.73	-6,893.16	-2,389.66	6,509.77	6,470.51	39.26	165.793	
10,200.00	9,500.00	9,535.75	9,534.49	26.85	16.77	91.73	-6,893.16	-2,389.66	6,471.84	6,432.45	39.39	164.306	
10,300.00	9,500.00	9,535.52	9,534.26	28.00	16.77	91.72	-6,893.16	-2,389.67	6,380.20	6,340.48	39.72	160.618	
10,400.00	9,500.00	9,535.29	9,534.03	29.21	16.77	91.72	-6,893.16	-2,389.67	6,288.82	6,248.73	40.09	156.859	
10,500.00	9,500.00	9,535.05	9,533.79	30.49	16.77	91.71	-6,893.16	-2,389.68	6,197.71	6,157.21	40.50	153.036	
10,600.00	9,500.00	9,534.81	9,533.54	31.82	16.77	91.70	-6,893.17	-2,389.68	6,106.87	6,065.93	40.94	149.158	
10,700.00	9,500.00	9,534.56	9,533.30	33.20	16.77	91.70	-6,893.17	-2,389.68	6,016.33	5,974.90	41.43	145.233	
10,800.00	9,500.00	9,534.30	9,533.04	34.62	16.77	91.69	-6,893.17	-2,389.69	5,926.08	5,884.14	41.95	141.269	
10,900.00	9,500.00	9,534.05	9,532.79	36.08	16.77	91.69	-6,893.17	-2,389.69	5,836.16	5,793.65	42.51	137.275	
11,000.00	9,500.00	9,533.78	9,532.52	37.57	16.77	91.68	-6,893.17	-2,389.70	5,746.57	5,703.45	43.12	133.261	
11,100.00	9,500.00	9,533.51	9,532.25	39.09	16.77	91.68	-6,893.17	-2,389.70	5,657.33	5,613.55	43.77	129.237	
11,200.00	9,500.00	9,533.24	9,531.98	40.64	16.76	91.67	-6,893.18	-2,389.70	5,568.45	5,523.98	44.47	125.212	
11,300.00	9,500.00	9,532.95	9,531.69	42.21	16.76	91.66	-6,893.18	-2,389.71	5,479.96	5,434.74	45.22	121.195	
11,400.00	9,500.00	9,532.67	9,531.41	43.80	16.76	91.66	-6,893.18	-2,389.71	5,391.87	5,345.86	46.01	117.196	
11,500.00	9,500.00	9,532.37	9,531.11	45.40	16.76	91.65	-6,893.18	-2,389.72	5,304.20	5,257.35	46.85	113.223	
11,600.00	9,500.00	9,532.07	9,530.81	47.03	16.76	91.64	-6,893.18	-2,389.72	5,216.98	5,169.24	47.74	109.284	
11,700.00	9,500.00	9,531.76	9,530.50	48.67	16.76	91.64	-6,893.19	-2,389.73	5,130.22	5,081.54	48.68	105.388	
11,800.00	9,500.00	9,531.45	9,530.19	50.32	16.76	91.63	-6,893.19	-2,389.73	5,043.95	4,994.28	49.67	101.543	
11,900.00	9,500.00	9,531.12	9,529.86	51.98	16.76	91.62	-6,893.19	-2,389.74	4,958.20	4,907.48	50.72	97.755	
12,000.00	9,500.00	9,530.79	9,529.53	53.66	16.76	91.62	-6,893.19	-2,389.74	4,872.99	4,821.16	51.82	94.030	
12,100.00	9,500.00	9,530.46	9,529.20	55.34	16.76	91.61	-6,893.20	-2,389.75	4,788.35	4,735.37	52.98	90.375	
12,200.00	9,500.00	9,530.11	9,528.85	57.04	16.76	91.60	-6,893.20	-2,389.76	4,704.32	4,650.12	54.20	86.795	
12,300.00	9,500.00	9,529.75	9,528.49	58.74	16.76	91.59	-6,893.20	-2,389.76	4,620.92	4,565.44	55.48	83.294	
12,400.00	9,500.00	9,529.39	9,528.13	60.45	16.76	91.58	-6,893.21	-2,389.77	4,538.19	4,481.38	56.81	79.878	
12,500.00	9,500.00	9,529.01	9,527.76	62.17	16.76	91.58	-6,893.21	-2,389.77	4,456.17	4,397.95	58.21	76.548	
12,600.00	9,500.00	9,528.63	9,527.37	63.89	16.76	91.57	-6,893.21	-2,389.78	4,374.90	4,315.22	59.68	73.309	
12,700.00	9,500.00	9,528.24	9,526.98	65.62	16.76	91.56	-6,893.21	-2,389.79	4,294.42	4,233.21	61.21	70.163	
12,800.00	9,500.00	9,527.83	9,526.57	67.35	16.76	91.55	-6,893.22	-2,389.79	4,214.77	4,151.97	62.80	67.112	
12,900.00	9,500.00	9,527.42	9,526.16	69.09	16.75	91.54	-6,893.22	-2,389.80	4,136.01	4,071.55	64.47	64.158	
13,000.00	9,500.00	9,526.99	9,525.73	70.84	16.75	91.53	-6,893.22	-2,389.81	4,058.19	3,991.99	66.20	61.302	
13,100.00	9,500.00	9,526.56	9,525.30	72.58	16.75	91.52	-6,893.23	-2,389.81	3,981.35	3,913.35	68.00	58.546	
13,200.00	9,500.00	9,526.11	9,524.85	74.34	16.75	91.51	-6,893.23	-2,389.82	3,905.57	3,835.69	69.88	55.889	
13,300.00	9,500.00	9,525.64	9,524.38	76.09	16.75	91.50	-6,893.24	-2,389.83	3,830.89	3,759.06	71.83	53.332	
13,400.00	9,500.00	9,525.17	9,523.91	77.85	16.75	91.49	-6,893.24	-2,389.84	3,757.40	3,683.54	73.86	50.875	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



TDS
Anticollision Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Lea Unit - #20 - OH - OH													Offset Well Error:	0.00 usft
Survey Program: 100-ISCWSA-GYRO-3														
Reference		Offset		Semi Major Axis		Highside Tooface [°]	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
13,500.00	9,500.00	9,524.68	9,523.42	79.62	16.75	91.48	-6,893.25	-2,389.84	3,685.15	3,609.19	75.95	48.518		
13,600.00	9,500.00	9,524.17	9,522.91	81.38	16.75	91.47	-6,893.25	-2,389.85	3,614.22	3,536.09	78.13	46.259		
13,700.00	9,500.00	9,523.65	9,522.39	83.15	16.75	91.46	-6,893.25	-2,389.86	3,544.70	3,464.32	80.38	44.100		
13,800.00	9,500.00	9,523.12	9,521.86	84.92	16.75	91.44	-6,893.26	-2,389.87	3,476.66	3,393.95	82.70	42.037		
13,900.00	9,500.00	9,522.58	9,521.31	86.70	16.75	91.43	-6,893.27	-2,389.88	3,410.19	3,325.09	85.10	40.072		
14,000.00	9,500.00	9,521.99	9,520.74	88.47	16.74	91.42	-6,893.27	-2,389.89	3,345.40	3,257.83	87.57	38.201		
14,100.00	9,500.00	9,521.41	9,520.15	90.25	16.74	91.41	-6,893.28	-2,389.90	3,282.37	3,192.26	90.11	36.425		
14,200.00	9,500.00	9,520.80	9,519.54	92.03	16.74	91.39	-6,893.28	-2,389.91	3,221.22	3,128.50	92.72	34.741		
14,300.00	9,500.00	9,520.17	9,518.91	93.82	16.74	91.38	-6,893.29	-2,389.92	3,162.04	3,066.65	95.39	33.148		
14,400.00	9,500.00	9,519.52	9,518.27	95.60	16.74	91.36	-6,893.30	-2,389.93	3,104.96	3,006.84	98.12	31.645		
14,500.00	9,500.00	9,518.85	9,517.60	97.39	16.74	91.35	-6,893.30	-2,389.94	3,050.08	2,949.19	100.90	30.229		
14,600.00	9,500.00	9,518.16	9,516.90	99.18	16.74	91.33	-6,893.31	-2,389.95	2,997.56	2,893.83	103.72	28.900		
14,700.00	9,500.00	9,517.44	9,516.18	100.96	16.74	91.32	-6,893.32	-2,389.96	2,947.47	2,840.89	106.58	27.654		
14,800.00	9,500.00	9,516.70	9,515.44	102.76	16.74	91.30	-6,893.33	-2,389.98	2,899.98	2,790.51	109.47	26.491		
14,843.14	9,500.00	9,516.37	9,515.11	103.53	16.73	91.29	-6,893.33	-2,389.98	2,880.32	2,769.60	110.72	26.015 CC, ES, SF		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



TDS
Anticollision Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Lea Unit - #30H - OH - OH														Offset Site Error:	0.00 usft
Survey Program: 100-Scientific Gyro 10462-MWD														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
0.00	0.00	0.00	0.00	0.00	0.00	179.32	-5,738.40	67.90	5,738.83						
100.00	100.00	67.49	67.49	0.09	0.04	179.32	-5,738.49	67.85	5,738.91	5,738.78	0.14	N/A			
200.00	200.00	154.09	154.09	0.32	0.14	179.32	-5,738.85	67.65	5,739.32	5,738.88	0.44	N/A			
300.00	300.00	248.11	248.10	0.54	0.26	179.33	-5,739.39	67.25	5,739.89	5,739.12	0.77	7,421.651			
400.00	400.00	355.79	355.78	0.77	0.39	179.34	-5,740.03	66.55	5,740.48	5,739.37	1.11	5,193.113			
500.00	500.00	471.32	471.31	0.99	0.54	179.34	-5,740.42	65.64	5,740.81	5,739.38	1.42	4,035.316			
600.00	600.00	564.87	564.86	1.22	0.65	179.35	-5,740.63	64.98	5,741.02	5,739.30	1.72	3,341.346			
700.00	700.00	662.08	662.06	1.44	0.78	179.36	-5,741.00	64.19	5,741.40	5,739.38	2.02	2,841.388			
800.00	800.00	759.27	759.24	1.67	0.90	179.37	-5,741.37	63.27	5,741.77	5,739.44	2.32	2,469.835			
900.00	900.00	857.30	857.27	1.89	1.03	179.38	-5,741.82	62.37	5,742.22	5,739.58	2.63	2,181.763			
1,000.00	1,000.00	950.06	950.03	2.12	1.15	179.39	-5,742.27	61.47	5,742.69	5,739.76	2.94	1,956.329			
1,100.00	1,100.00	1,048.05	1,048.00	2.34	1.28	179.40	-5,742.93	59.96	5,743.35	5,740.11	3.24	1,772.801			
1,200.00	1,200.00	1,143.32	1,143.26	2.56	1.40	179.42	-5,743.49	58.27	5,743.92	5,740.38	3.54	1,622.234			
1,300.00	1,300.00	1,224.16	1,224.08	2.79	1.50	179.43	-5,744.20	57.01	5,744.79	5,740.95	3.83	1,498.002			
1,400.00	1,400.00	1,310.10	1,310.00	3.01	1.62	179.45	-5,745.22	55.63	5,745.95	5,741.81	4.14	1,387.714			
1,500.00	1,500.00	1,412.25	1,412.13	3.24	1.75	179.46	-5,746.52	53.91	5,747.21	5,742.74	4.46	1,287.808			
1,600.00	1,600.00	1,517.83	1,517.69	3.46	1.89	179.48	-5,747.77	52.00	5,748.38	5,743.59	4.78	1,201.341			
1,700.00	1,700.00	1,616.29	1,616.12	3.69	2.01	179.50	-5,748.93	49.99	5,749.54	5,744.44	5.10	1,127.982			
1,800.00	1,800.00	1,742.27	1,742.07	3.91	2.18	179.53	-5,750.26	47.45	5,750.61	5,745.18	5.43	1,059.175			
1,900.00	1,900.00	1,879.01	1,878.80	4.14	2.35	179.54	-5,750.66	46.45	5,750.85	5,745.09	5.76	998.645			
2,000.00	2,000.00	1,981.95	1,981.74	4.36	2.49	179.54	-5,750.69	46.29	5,750.88	5,744.83	6.05	949.785			
2,100.00	2,100.00	2,082.53	2,082.33	4.59	2.61	179.54	-5,750.71	46.20	5,750.90	5,744.55	6.35	905.785			
2,200.00	2,200.00	2,192.88	2,192.67	4.81	2.67	179.54	-5,750.64	46.25	5,750.83	5,744.21	6.62	868.073			
2,300.00	2,300.00	2,318.21	2,318.00	5.04	2.62	179.53	-5,750.13	46.76	5,750.43	5,743.55	6.87	836.438			
2,400.00	2,400.00	2,421.01	2,420.80	5.26	2.59	179.53	-5,749.44	47.28	5,749.76	5,742.64	7.12	807.370			
2,500.00	2,500.00	2,509.37	2,509.15	5.49	2.57	179.53	-5,748.96	47.54	5,749.21	5,741.84	7.37	780.368			
2,600.00	2,600.00	2,605.95	2,605.73	5.71	2.55	179.52	-5,748.56	47.84	5,748.81	5,741.18	7.62	753.991			
2,700.00	2,700.00	2,743.76	2,743.53	5.94	2.53	179.51	-5,747.47	49.37	5,748.00	5,740.09	7.91	726.444			
2,800.00	2,800.00	2,885.60	2,885.34	6.16	2.51	179.49	-5,745.56	51.57	5,746.71	5,738.50	8.21	700.205			
2,900.00	2,900.00	2,984.38	2,984.10	6.39	2.51	179.47	-5,743.75	52.96	5,744.88	5,736.40	8.48	677.225			
3,000.00	3,000.00	3,088.06	3,087.74	6.61	2.52	179.46	-5,741.89	54.40	5,743.11	5,734.34	8.77	655.184			
3,100.00	3,100.00	3,198.16	3,197.81	6.84	2.54	179.44	-5,739.78	56.20	5,741.20	5,732.14	9.06	633.914			
3,200.00	3,200.00	3,286.53	3,286.15	7.06	2.56	179.42	-5,738.08	57.61	5,739.30	5,729.96	9.34	614.566			
3,300.00	3,300.00	3,369.95	3,369.55	7.28	2.59	179.41	-5,736.69	58.71	5,737.64	5,728.02	9.62	596.422			
3,400.00	3,400.00	3,447.88	3,447.47	7.51	2.62	179.41	-5,735.64	59.46	5,736.31	5,726.41	9.90	579.447			
3,500.00	3,500.00	3,523.80	3,523.39	7.73	2.65	179.40	-5,734.94	59.97	5,735.40	5,725.22	10.18	563.430			
3,600.00	3,600.00	3,601.62	3,601.20	7.96	2.68	179.40	-5,734.54	60.34	5,734.89	5,724.43	10.46	548.180			
3,700.00	3,700.00	3,700.00	3,699.59	8.18	2.73	179.39	-5,734.19	60.58	5,734.54	5,723.78	10.76	532.854			
3,800.00	3,800.00	3,790.66	3,790.25	8.41	2.81	179.40	-5,733.96	60.45	5,734.29	5,723.23	11.06	518.652			
3,900.00	3,900.00	3,897.77	3,897.35	8.63	2.92	179.40	-5,733.79	59.94	5,734.12	5,722.76	11.36	504.760			
4,000.00	4,000.00	3,989.96	3,989.54	8.86	3.02	179.41	-5,733.62	59.35	5,733.93	5,722.28	11.65	492.082			
4,069.44	4,069.44	4,052.86	4,052.44	9.01	3.08	179.41	-5,733.59	58.93	5,733.89	5,722.04	11.85	483.783			
4,100.00	4,100.00	4,080.47	4,080.05	9.08	3.11	179.41	-5,733.60	58.77	5,733.90	5,721.96	11.94	480.231			
4,200.00	4,200.00	4,189.94	4,189.52	9.31	3.23	179.42	-5,733.61	58.31	5,733.91	5,721.66	12.24	468.391			
4,300.00	4,300.00	4,299.13	4,298.71	9.53	3.35	179.42	-5,733.39	57.95	5,733.71	5,721.16	12.55	456.869			
4,400.00	4,400.00	4,388.16	4,387.74	9.76	3.45	179.42	-5,733.24	57.55	5,733.53	5,720.69	12.84	446.475			
4,431.10	4,431.10	4,413.12	4,412.70	9.83	3.48	179.43	-5,733.23	57.41	5,733.52	5,720.59	12.93	443.456			
4,500.00	4,500.00	4,463.94	4,463.51	9.98	3.53	179.43	-5,733.32	57.03	5,733.64	5,720.52	13.12	437.105			
4,600.00	4,600.00	4,551.73	4,551.30	10.21	3.62	179.44	-5,733.78	56.20	5,734.15	5,720.75	13.40	428.014			
4,700.00	4,700.00	4,662.33	4,661.90	10.43	3.73	179.45	-5,734.34	55.36	5,734.65	5,720.96	13.69	418.866			
4,800.00	4,800.00	4,756.62	4,756.18	10.66	3.83	179.46	-5,734.67	54.52	5,735.00	5,721.02	13.98	410.338			
4,900.00	4,900.00	4,848.03	4,847.58	10.88	3.92	179.46	-5,735.22	53.65	5,735.58	5,721.32	14.26	402.218			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



TDS
Anticollision Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County, NM (NAD:27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User.Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Lea Unit - #30H - OH - OH													Offset Site Error: 0.00 usft	
Survey Program: 100-Scientific Gyro, 10462-MWD													Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
5,000.00	5,000.00	4,937.18	4,936.73	11.11	4.01	179.47	-5,735.81	52.95	5,736.24	5,721.70	14.54	394.461		
5,100.00	5,100.00	5,013.76	5,013.30	11.33	4.08	179.48	-5,736.59	52.27	5,737.25	5,722.43	14.82	387.229		
5,200.00	5,200.00	5,100.00	5,099.53	11.56	4.16	179.48	-5,737.84	51.61	5,738.68	5,723.58	15.10	380.099		
5,300.00	5,300.00	5,188.23	5,187.74	11.78	4.22	179.49	-5,739.32	51.21	5,740.34	5,724.96	15.38	373.154		
5,400.00	5,400.00	5,290.61	5,290.12	12.00	4.29	179.49	-5,741.00	51.00	5,741.98	5,726.30	15.68	366.153		
5,500.00	5,500.00	5,375.33	5,374.82	12.23	4.35	179.49	-5,742.47	50.90	5,743.72	5,727.75	15.97	359.662		
5,600.00	5,600.00	5,489.61	5,489.08	12.45	4.43	179.49	-5,744.56	50.96	5,745.56	5,729.27	16.28	352.831		
5,700.00	5,700.00	5,588.34	5,587.79	12.68	4.50	179.49	-5,746.17	51.01	5,747.18	5,730.59	16.59	346.449		
5,800.00	5,800.00	5,690.54	5,689.99	12.90	4.57	179.49	-5,747.85	51.09	5,748.82	5,731.93	16.90	340.191		
5,900.00	5,900.00	5,800.00	5,799.43	13.13	4.64	179.49	-5,749.53	51.53	5,750.36	5,733.15	17.22	333.980		
6,000.00	6,000.00	5,893.04	5,892.45	13.35	4.69	179.48	-5,750.93	52.01	5,751.88	5,734.35	17.52	328.239		
6,100.00	6,100.00	6,000.00	5,999.40	13.58	4.76	179.48	-5,752.52	52.69	5,753.36	5,735.52	17.84	322.437		
6,200.00	6,200.00	6,083.66	6,083.05	13.80	4.81	179.47	-5,753.81	53.22	5,754.93	5,736.79	18.14	317.193		
6,300.00	6,300.00	6,160.09	6,159.46	14.03	4.86	179.46	-5,755.29	53.78	5,756.86	5,738.43	18.44	312.239		
6,400.00	6,400.00	6,251.46	6,250.81	14.25	4.93	179.46	-5,757.38	54.35	5,759.16	5,740.41	18.75	307.203		
6,500.00	6,500.00	6,345.00	6,344.33	14.48	5.00	179.45	-5,759.51	55.18	5,761.45	5,742.39	19.06	302.277		
6,600.00	6,600.00	6,440.32	6,439.61	14.70	5.07	179.45	-5,761.93	55.81	5,763.98	5,744.60	19.38	297.472		
6,700.00	6,700.00	6,548.95	6,548.20	14.93	5.16	179.44	-5,764.47	56.60	5,766.32	5,746.61	19.71	292.580		
6,800.00	6,800.00	6,671.27	6,670.50	15.15	5.26	179.43	-5,767.22	57.13	5,768.60	5,748.55	20.06	287.609		
6,900.00	6,900.00	6,770.33	6,769.53	15.38	5.35	179.43	-5,769.07	57.61	5,770.47	5,750.09	20.38	283.110		
7,000.00	7,000.00	6,896.11	6,895.30	15.60	5.46	179.42	-5,771.37	58.02	5,772.33	5,751.59	20.74	278.340		
7,100.00	7,100.00	6,992.92	6,992.10	15.83	5.55	179.42	-5,772.86	58.21	5,773.87	5,752.80	21.06	274.101		
7,200.00	7,200.00	7,089.36	7,088.52	16.05	5.64	179.42	-5,774.40	58.57	5,775.47	5,754.08	21.39	269.996		
7,300.00	7,300.00	7,196.05	7,195.19	16.28	5.73	179.41	-5,776.09	59.31	5,777.06	5,755.33	21.73	265.900		
7,400.00	7,400.00	7,310.32	7,309.45	16.50	5.82	179.40	-5,777.66	60.45	5,778.45	5,756.38	22.07	261.869		
7,500.00	7,500.00	7,409.47	7,408.58	16.72	5.90	179.39	-5,778.92	61.34	5,779.73	5,757.33	22.39	258.131		
7,600.00	7,600.00	7,510.23	7,509.33	16.95	5.98	179.38	-5,780.22	62.33	5,781.02	5,758.30	22.72	254.481		
7,700.00	7,700.00	7,619.41	7,618.50	17.17	6.06	179.37	-5,781.44	63.37	5,782.14	5,759.09	23.05	250.843		
7,800.00	7,800.00	7,700.00	7,699.08	17.40	6.13	179.36	-5,782.50	64.09	5,783.46	5,760.11	23.36	247.610		
7,900.00	7,900.00	7,812.94	7,812.00	17.62	6.23	179.36	-5,784.03	65.08	5,784.83	5,761.13	23.70	244.086		
8,000.00	8,000.00	7,900.00	7,899.06	17.85	6.31	179.35	-5,785.12	65.63	5,786.10	5,762.08	24.02	240.917		
8,100.00	8,100.00	7,988.58	7,987.63	18.07	6.40	179.35	-5,786.42	66.11	5,787.58	5,763.24	24.34	237.796		
8,200.00	8,200.00	8,125.79	8,124.82	18.30	6.53	179.34	-5,788.18	66.92	5,788.86	5,764.15	24.71	234.242		
8,300.00	8,300.00	8,225.18	8,224.20	18.52	6.62	179.33	-5,789.24	67.62	5,789.93	5,764.89	25.04	231.208		
8,400.00	8,400.00	8,355.07	8,354.08	18.75	6.73	179.32	-5,790.17	68.66	5,790.65	5,765.26	25.39	228.056		
8,500.00	8,500.00	8,473.95	8,472.96	18.97	6.80	179.31	-5,790.55	69.70	5,790.98	5,765.27	25.71	225.233		
8,600.00	8,600.00	8,570.22	8,569.22	19.20	6.86	179.30	-5,790.70	70.60	5,791.15	5,765.14	26.01	222.692		
8,700.00	8,700.00	8,673.27	8,672.27	19.42	6.92	179.29	-5,790.94	71.70	5,791.39	5,765.09	26.30	220.172		
8,800.00	8,800.00	8,765.92	8,764.92	19.65	6.98	179.28	-5,791.12	72.65	5,791.61	5,765.01	26.60	217.758		
8,900.00	8,900.00	8,847.58	8,846.57	19.87	7.03	179.27	-5,791.48	73.71	5,792.06	5,765.18	26.88	215.445		
8,927.04	8,927.04	8,868.69	8,867.67	19.93	7.05	179.27	-5,791.62	74.08	5,792.24	5,765.28	26.96	214.832		
8,950.00	8,949.99	8,886.61	8,885.59	19.98	7.06	9.67	-5,791.75	74.43	5,791.97	5,764.95	27.02	214.352		
9,000.00	8,999.80	8,923.39	8,922.36	20.06	7.09	9.73	-5,792.08	75.24	5,788.31	5,761.17	27.13	213.316		
9,050.00	9,049.06	8,958.72	8,957.67	20.15	7.12	9.86	-5,792.48	76.07	5,780.50	5,753.25	27.25	212.133		
9,100.00	9,097.39	9,000.00	8,998.94	20.23	7.15	10.09	-5,793.06	77.12	5,768.60	5,741.23	27.37	210.773		
9,150.00	9,144.42	9,038.71	9,037.63	20.32	7.18	10.40	-5,793.65	78.14	5,752.65	5,725.16	27.49	209.290		
9,200.00	9,189.79	9,085.06	9,083.97	20.40	7.22	10.83	-5,794.36	79.32	5,732.69	5,705.08	27.61	207.635		
9,250.00	9,233.17	9,125.32	9,124.20	20.49	7.26	11.38	-5,794.97	80.35	5,708.90	5,681.17	27.72	205.915		
9,300.00	9,274.21	9,161.54	9,160.41	20.59	7.29	12.09	-5,795.56	81.33	5,681.47	5,653.64	27.83	204.128		
9,350.00	9,312.62	9,200.00	9,198.84	20.71	7.32	12.99	-5,796.23	82.44	5,650.62	5,622.68	27.94	202.243		
9,400.00	9,348.09	9,234.75	9,233.58	20.85	7.35	14.15	-5,796.83	83.48	5,616.56	5,588.52	28.04	200.314		
9,450.00	9,380.35	9,271.60	9,270.40	21.02	7.38	15.67	-5,797.45	84.60	5,579.51	5,551.37	28.14	198.311		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County NM (NAD-27-2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Lea Unit - #30H - OH - OH														Offset Site Error:	0.00 usft
Survey Program: 100-Scientific Gyro, 10462-MWD														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance		Minimum Separation		Separation Factor		Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
9,500.00	9,409.17	9,303.86	9,302.64	21.21	7.41	17.66	-5,797.97	85.59	5,539.76	5,511.54	28.22	196.289			
9,550.00	9,434.31	9,328.08	9,326.85	21.44	7.43	20.33	-5,798.36	86.34	5,497.64	5,469.34	28.30	194.283			
9,600.00	9,455.60	9,348.78	9,347.53	21.70	7.45	24.03	-5,798.70	86.98	5,453.48	5,425.11	28.36	192.274			
9,650.00	9,472.86	9,365.79	9,364.53	21.99	7.46	29.40	-5,798.98	87.50	5,407.60	5,379.18	28.42	190.274			
9,700.00	9,485.97	9,378.98	9,377.72	22.32	7.47	37.57	-5,799.20	87.90	5,360.37	5,331.90	28.47	188.294			
9,750.00	9,494.83	9,388.24	9,386.97	22.68	7.48	50.54	-5,799.36	88.19	5,312.14	5,283.63	28.51	186.341			
9,800.00	9,499.36	9,393.50	9,392.23	23.07	7.49	70.81	-5,799.45	88.35	5,263.27	5,234.74	28.54	184.425			
9,827.04	9,500.00	9,394.66	9,393.39	23.30	7.49	84.67	-5,799.47	88.38	5,236.72	5,208.16	28.55	183.403			
9,900.00	9,500.00	9,396.15	9,394.88	23.91	7.49	83.42	-5,799.50	88.43	5,164.78	5,136.20	28.58	180.701			
10,000.00	9,500.00	9,400.00	9,398.72	24.81	7.49	80.40	-5,799.56	88.54	5,065.57	5,036.95	28.62	177.025			
10,100.00	9,500.00	9,400.00	9,398.72	25.79	7.49	70.38	-5,799.56	88.54	4,965.86	4,937.22	28.64	173.397			
10,158.68	9,500.00	9,400.99	9,399.72	26.40	7.49	45.51	-5,799.58	88.57	4,907.22	4,878.57	28.65	171.286			
10,200.00	9,500.00	9,401.78	9,400.50	26.85	7.49	45.77	-5,799.59	88.60	4,865.91	4,837.26	28.66	169.806			
10,300.00	9,500.00	9,403.66	9,402.38	28.00	7.49	46.41	-5,799.63	88.65	4,765.94	4,737.27	28.67	166.221			
10,400.00	9,500.00	9,405.54	9,404.26	29.21	7.50	47.07	-5,799.66	88.71	4,665.97	4,637.28	28.69	162.634			
10,500.00	9,500.00	9,407.41	9,406.13	30.49	7.50	47.73	-5,799.69	88.77	4,566.00	4,537.30	28.71	159.044			
10,600.00	9,500.00	9,409.28	9,407.99	31.82	7.50	48.41	-5,799.72	88.82	4,466.04	4,437.31	28.73	155.454			
10,700.00	9,500.00	9,411.14	9,409.85	33.20	7.50	49.11	-5,799.76	88.88	4,366.07	4,337.32	28.75	151.861			
10,800.00	9,500.00	9,412.99	9,411.70	34.62	7.50	49.81	-5,799.79	88.93	4,266.10	4,237.33	28.77	148.268			
10,900.00	9,500.00	9,414.84	9,413.55	36.08	7.50	50.54	-5,799.82	88.99	4,166.14	4,137.34	28.80	144.675			
11,000.00	9,500.00	9,416.68	9,415.39	37.57	7.51	51.27	-5,799.85	89.04	4,066.17	4,037.35	28.82	141.081			
11,100.00	9,500.00	9,418.51	9,417.22	39.09	7.51	52.02	-5,799.88	89.10	3,966.21	3,937.36	28.85	137.486			
11,200.00	9,500.00	9,420.34	9,419.05	40.64	7.51	52.78	-5,799.91	89.15	3,866.24	3,837.37	28.88	133.893			
11,300.00	9,500.00	9,422.16	9,420.87	42.21	7.51	53.56	-5,799.94	89.20	3,766.28	3,737.38	28.90	130.299			
11,400.00	9,500.00	9,423.97	9,422.68	43.80	7.51	54.35	-5,799.97	89.26	3,666.32	3,637.38	28.94	126.707			
11,500.00	9,500.00	9,425.78	9,424.49	45.40	7.51	55.15	-5,800.00	89.31	3,566.36	3,537.39	28.97	123.115			
11,600.00	9,500.00	9,427.58	9,426.29	47.03	7.52	55.97	-5,800.03	89.36	3,466.40	3,437.40	29.00	119.525			
11,700.00	9,500.00	9,429.38	9,428.09	48.67	7.52	56.80	-5,800.06	89.41	3,366.45	3,337.41	29.04	115.937			
11,800.00	9,500.00	9,431.17	9,429.87	50.32	7.52	57.65	-5,800.09	89.47	3,266.49	3,237.42	29.07	112.351			
11,900.00	9,500.00	9,432.95	9,431.66	51.98	7.52	58.51	-5,800.12	89.52	3,166.54	3,137.43	29.11	108.766			
12,000.00	9,500.00	9,434.73	9,433.44	53.66	7.52	59.39	-5,800.15	89.57	3,066.59	3,037.43	29.15	105.184			
12,100.00	9,500.00	9,436.50	9,435.21	55.34	7.52	60.28	-5,800.18	89.62	2,966.64	2,937.44	29.20	101.605			
12,200.00	9,500.00	9,438.27	9,436.97	57.04	7.53	61.19	-5,800.21	89.67	2,866.69	2,837.45	29.24	98.028			
12,300.00	9,500.00	9,440.03	9,438.73	58.74	7.53	62.11	-5,800.24	89.72	2,766.75	2,737.46	29.29	94.455			
12,400.00	9,500.00	9,441.79	9,440.48	60.45	7.53	63.04	-5,800.27	89.77	2,666.81	2,637.47	29.34	90.884			
12,500.00	9,500.00	9,443.53	9,442.23	62.17	7.53	63.98	-5,800.30	89.82	2,566.87	2,537.48	29.40	87.317			
12,600.00	9,500.00	9,445.28	9,443.97	63.89	7.53	64.94	-5,800.33	89.87	2,466.94	2,437.49	29.45	83.754			
12,700.00	9,500.00	9,447.01	9,445.71	65.62	7.53	65.92	-5,800.36	89.92	2,367.01	2,337.50	29.52	80.193			
12,800.00	9,500.00	9,448.74	9,447.44	67.35	7.53	66.90	-5,800.39	89.97	2,267.09	2,237.51	29.58	76.637			
12,900.00	9,500.00	9,450.47	9,449.16	69.09	7.54	67.90	-5,800.42	90.01	2,167.17	2,137.52	29.65	73.084			
13,000.00	9,500.00	9,452.19	9,450.88	70.84	7.54	68.91	-5,800.44	90.06	2,067.26	2,037.53	29.73	69.534			
13,100.00	9,500.00	9,453.90	9,452.60	72.58	7.54	69.94	-5,800.47	90.11	1,967.36	1,937.55	29.81	65.988			
13,200.00	9,500.00	9,455.61	9,454.30	74.34	7.54	70.97	-5,800.50	90.16	1,867.47	1,837.56	29.91	62.445			
13,300.00	9,500.00	9,457.31	9,456.00	76.09	7.54	72.01	-5,800.53	90.20	1,767.58	1,737.58	30.01	58.905			
13,400.00	9,500.00	9,459.01	9,457.70	77.85	7.54	73.07	-5,800.56	90.25	1,667.71	1,637.59	30.12	55.368			
13,500.00	9,500.00	9,460.70	9,459.39	79.62	7.55	74.13	-5,800.58	90.30	1,567.86	1,537.61	30.25	51.834			
13,600.00	9,500.00	9,462.39	9,461.08	81.38	7.55	75.20	-5,800.61	90.34	1,468.02	1,437.62	30.39	48.300			
13,700.00	9,500.00	9,464.07	9,462.75	83.15	7.55	76.29	-5,800.64	90.39	1,368.20	1,337.64	30.56	44.768			
13,800.00	9,500.00	9,465.74	9,464.43	84.92	7.55	77.38	-5,800.67	90.43	1,268.41	1,237.65	30.76	41.235			
13,900.00	9,500.00	9,467.41	9,466.10	86.70	7.55	78.47	-5,800.69	90.48	1,168.65	1,137.65	31.00	37.701			
14,000.00	9,500.00	9,469.08	9,467.76	88.47	7.55	79.57	-5,800.72	90.52	1,068.94	1,037.65	31.29	34.164			
14,100.00	9,500.00	9,470.73	9,469.42	90.25	7.55	80.68	-5,800.75	90.57	969.28	937.63	31.65	30.622			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Lea Unit - #30H - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 100-Scientific Gyro, 10462-MWD												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
14,200.00	9,500.00	9,472.39	9,471.07	92.03	7.56	81.79	-5,800.77	90.61	869.70	837.57	32.12	27.074	
14,300.00	9,500.00	9,474.03	9,472.72	93.82	7.56	82.91	-5,800.80	90.66	770.22	737.47	32.75	23.517	
14,400.00	9,500.00	9,475.68	9,474.36	95.60	7.56	84.03	-5,800.83	90.70	670.89	637.26	33.62	19.952	
14,500.00	9,500.00	9,477.31	9,475.99	97.39	7.56	85.15	-5,800.85	90.75	571.79	536.89	34.90	16.383	
14,600.00	9,500.00	9,478.94	9,477.62	99.18	7.56	86.27	-5,800.88	90.79	473.07	436.18	36.88	12.826	
14,700.00	9,500.00	9,480.57	9,479.25	100.96	7.56	87.40	-5,800.90	90.83	375.01	334.80	40.22	9.325	
14,800.00	9,500.00	9,482.19	9,480.87	102.76	7.56	88.52	-5,800.93	90.88	278.34	231.89	46.44	5.993	
14,843.14	9,500.00	9,482.89	9,481.57	103.53	7.57	89.00	-5,800.94	90.89	237.48	186.58	50.90	4.665 CC, ES, SF	



TDS
Anticollision Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Lea Unit - SWD #2 - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 505-INC												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Tooface (")	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
0.00	0.00	0.00	0.00	0.00	0.00	-174.69	-4,287.63	-398.20	4,306.20				
100.00	100.00	67.63	67.63	0.09	1.01	-174.69	-4,287.63	-398.18	4,306.08	4,304.98	1.10	3,899.927	
200.00	200.00	167.97	167.97	0.32	2.52	-174.70	-4,287.63	-398.08	4,306.07	4,303.24	2.83	1,521.536	
300.00	300.00	268.31	268.31	0.54	4.02	-174.70	-4,287.63	-397.89	4,306.05	4,301.50	4.56	945.136	
400.00	400.00	368.65	368.65	0.77	5.52	-174.70	-4,287.63	-397.61	4,306.03	4,299.75	6.28	685.460	
500.00	500.00	468.99	468.99	0.99	7.02	-174.71	-4,287.63	-397.25	4,306.00	4,297.99	8.01	537.720	
600.00	600.00	570.23	570.23	1.22	10.44	-174.71	-4,287.63	-396.72	4,305.95	4,294.31	11.64	369.922	
700.00	700.00	671.98	671.98	1.44	14.93	-174.73	-4,287.63	-395.75	4,305.86	4,289.52	16.34	263.505	
800.00	800.00	773.72	773.71	1.67	19.42	-174.75	-4,287.64	-394.33	4,305.74	4,284.69	21.04	204.630	
900.00	900.00	875.45	875.41	1.89	23.91	-174.77	-4,287.64	-392.45	4,305.57	4,279.83	25.74	167.257	
1,000.00	1,000.00	975.62	975.56	2.12	29.72	-174.80	-4,287.64	-390.30	4,305.38	4,273.62	31.75	135.586	
1,100.00	1,100.00	1,075.29	1,075.21	2.34	35.95	-174.83	-4,287.64	-388.22	4,305.19	4,267.01	38.18	112.750	
1,200.00	1,200.00	1,174.87	1,174.87	2.56	42.18	-174.85	-4,287.65	-386.23	4,305.01	4,260.40	44.61	96.494	
1,300.00	1,300.00	1,274.66	1,274.54	2.79	48.40	-174.88	-4,287.65	-384.31	4,304.84	4,253.80	51.05	84.332	
1,400.00	1,400.00	1,374.35	1,374.21	3.01	54.63	-174.90	-4,287.65	-382.46	4,304.68	4,247.20	57.48	74.891	
1,500.00	1,500.00	1,474.03	1,473.88	3.24	60.67	-174.93	-4,287.65	-380.70	4,304.53	4,240.80	63.72	67.550	
1,600.00	1,600.00	1,573.68	1,573.51	3.46	65.91	-174.95	-4,287.66	-379.02	4,304.38	4,235.21	69.17	62.230	
1,700.00	1,700.00	1,673.33	1,673.16	3.69	71.14	-174.97	-4,287.66	-377.43	4,304.24	4,229.63	74.61	57.686	
1,800.00	1,800.00	1,772.99	1,772.80	3.91	76.38	-174.99	-4,287.66	-375.93	4,304.11	4,224.05	80.06	53.761	
1,900.00	1,900.00	1,872.65	1,872.45	4.14	81.61	-175.01	-4,287.66	-374.52	4,303.99	4,218.49	85.51	50.335	
2,000.00	2,000.00	1,972.41	1,972.21	4.36	86.64	-175.03	-4,287.67	-373.20	4,303.88	4,213.14	90.74	47.430	
2,100.00	2,100.00	2,072.41	2,072.19	4.59	91.18	-175.04	-4,287.67	-371.89	4,303.77	4,208.27	95.49	45.068	
2,200.00	2,200.00	2,172.40	2,172.17	4.81	95.72	-175.06	-4,287.67	-370.58	4,303.66	4,203.41	100.25	42.930	
2,300.00	2,300.00	2,272.39	2,272.16	5.04	100.26	-175.08	-4,287.67	-369.27	4,303.55	4,198.55	105.00	40.986	
2,400.00	2,400.00	2,372.38	2,372.14	5.26	104.80	-175.09	-4,287.67	-367.96	4,303.43	4,193.68	109.75	39.210	
2,500.00	2,500.00	2,472.60	2,472.35	5.49	109.79	-175.11	-4,287.67	-366.64	4,303.32	4,188.37	114.96	37.434	
2,600.00	2,600.00	2,573.26	2,572.99	5.71	115.68	-175.13	-4,287.68	-365.16	4,303.20	4,182.14	121.06	35.547	
2,700.00	2,700.00	2,673.91	2,673.63	5.94	121.57	-175.15	-4,287.68	-363.50	4,303.06	4,175.91	127.16	33.840	
2,800.00	2,800.00	2,774.56	2,774.26	6.16	127.46	-175.18	-4,287.68	-361.66	4,302.91	4,169.65	133.26	32.289	
2,900.00	2,900.00	2,875.19	2,874.88	6.39	133.35	-175.21	-4,287.68	-359.62	4,302.75	4,163.38	139.36	30.874	
3,000.00	3,000.00	2,976.00	2,975.66	6.61	141.31	-175.24	-4,287.69	-357.38	4,302.56	4,155.04	147.53	29.165	
3,100.00	3,100.00	3,076.89	3,076.52	6.84	150.41	-175.27	-4,287.69	-354.87	4,302.36	4,145.53	156.83	27.434	
3,200.00	3,200.00	3,177.77	3,177.36	7.06	159.51	-175.31	-4,287.69	-352.10	4,302.14	4,136.01	166.13	25.897	
3,300.00	3,300.00	3,278.63	3,278.18	7.28	168.61	-175.35	-4,287.70	-349.07	4,301.90	4,126.47	175.43	24.522	
3,400.00	3,400.00	3,379.47	3,378.97	7.51	177.70	-175.39	-4,287.70	-345.77	4,301.64	4,116.91	184.73	23.286	
3,500.00	3,500.00	3,478.71	3,478.15	7.73	186.23	-175.43	-4,287.71	-342.42	4,301.37	4,107.90	193.47	22.233	
3,600.00	3,600.00	3,577.18	3,576.57	7.96	194.49	-175.47	-4,287.71	-339.49	4,301.14	4,099.21	201.93	21.300	
3,700.00	3,700.00	3,675.67	3,675.03	8.18	202.74	-175.51	-4,287.72	-337.00	4,300.95	4,090.55	210.40	20.442	
3,800.00	3,800.00	3,774.19	3,773.53	8.41	211.00	-175.53	-4,287.72	-334.95	4,300.79	4,081.92	218.86	19.651	
3,900.00	3,900.00	3,873.39	3,872.72	8.63	216.06	-175.56	-4,287.72	-333.25	4,300.65	4,076.51	224.15	19.187	
4,000.00	4,000.00	3,972.85	3,972.16	8.86	219.99	-175.58	-4,287.72	-331.71	4,300.54	4,072.24	228.30	18.838	
4,100.00	4,100.00	4,072.31	4,071.62	9.08	223.92	-175.59	-4,287.72	-330.34	4,300.43	4,067.99	232.45	18.501	
4,200.00	4,200.00	4,171.78	4,171.07	9.31	227.85	-175.61	-4,287.73	-329.13	4,300.34	4,063.74	236.60	18.176	
4,300.00	4,300.00	4,271.25	4,270.54	9.53	231.78	-175.62	-4,287.73	-328.08	4,300.26	4,059.51	240.75	17.862	
4,400.00	4,400.00	4,370.72	4,370.01	9.76	235.71	-175.64	-4,287.73	-327.19	4,300.20	4,055.30	244.90	17.559	
4,500.00	4,500.00	4,470.19	4,469.48	9.98	239.64	-175.65	-4,287.73	-326.46	4,300.14	4,051.09	249.05	17.266	
4,600.00	4,600.00	4,569.67	4,568.95	10.21	243.58	-175.65	-4,287.73	-325.90	4,300.10	4,046.90	253.20	16.983	
4,631.89	4,631.89	4,600.00	4,599.28	10.28	244.77	-175.66	-4,287.73	-325.76	4,300.09	4,045.62	254.47	16.898 CC, ES	
4,700.00	4,700.00	4,600.00	4,599.28	10.43	244.77	-175.66	-4,287.73	-325.76	4,300.63	4,046.04	254.59	16.893 SF	
4,800.00	4,800.00	4,600.00	4,599.28	10.66	244.77	-175.66	-4,287.73	-325.76	4,303.37	4,048.72	254.65	16.899	
4,900.00	4,900.00	4,600.00	4,599.28	10.88	244.77	-175.66	-4,287.73	-325.76	4,308.44	4,053.86	254.58	16.924	
5,000.00	5,000.00	4,600.00	4,599.28	11.11	244.77	-175.66	-4,287.73	-325.76	4,315.82	4,061.45	254.37	16.967	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



TDS
Anticollision Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County, NM (NAD-27-2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Lea Unit - SWD #2 - OH - OH													Offset Site Error:	0.00 usft
Survey Program 505-INC													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Tooface (")	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
5,100.00	5,100.00	4,600.00	4,599.28	11.33	244.77	-175.66	-4,287.73	-325.76	4,325.49	4,071.47	254.02	17.028		
5,200.00	5,200.00	4,600.00	4,599.28	11.56	244.77	-175.66	-4,287.73	-325.76	4,337.45	4,083.91	253.55	17.107		
5,300.00	5,300.00	4,600.00	4,599.28	11.78	244.77	-175.66	-4,287.73	-325.76	4,351.68	4,098.74	252.94	17.204		
5,400.00	5,400.00	4,600.00	4,599.28	12.00	244.77	-175.66	-4,287.73	-325.76	4,368.15	4,115.94	252.21	17.319		
5,500.00	5,500.00	4,600.00	4,599.28	12.23	244.77	-175.66	-4,287.73	-325.76	4,386.84	4,135.48	251.36	17.452		
5,600.00	5,600.00	4,600.00	4,599.28	12.45	244.77	-175.66	-4,287.73	-325.76	4,407.72	4,157.33	250.39	17.603		
5,700.00	5,700.00	4,600.00	4,599.28	12.68	244.77	-175.66	-4,287.73	-325.76	4,430.76	4,181.45	249.31	17.772		
5,800.00	5,800.00	4,600.00	4,599.28	12.90	244.77	-175.66	-4,287.73	-325.76	4,455.92	4,207.80	248.13	17.958		
5,900.00	5,900.00	4,600.00	4,599.28	13.13	244.77	-175.66	-4,287.73	-325.76	4,483.18	4,236.34	246.84	18.162		
6,000.00	6,000.00	4,600.00	4,599.28	13.35	244.77	-175.66	-4,287.73	-325.76	4,512.48	4,267.03	245.46	18.384		
6,100.00	6,100.00	4,600.00	4,599.28	13.58	244.77	-175.66	-4,287.73	-325.76	4,543.80	4,299.82	243.98	18.623		
6,200.00	6,200.00	4,600.00	4,599.28	13.80	244.77	-175.66	-4,287.73	-325.76	4,577.09	4,334.66	242.43	18.880		
6,300.00	6,300.00	4,600.00	4,599.28	14.03	244.77	-175.66	-4,287.73	-325.76	4,612.31	4,371.51	240.80	19.154		
6,400.00	6,400.00	4,600.00	4,599.28	14.25	244.77	-175.66	-4,287.73	-325.76	4,649.41	4,410.32	239.09	19.446		
6,500.00	6,500.00	4,600.00	4,599.28	14.48	244.77	-175.66	-4,287.73	-325.76	4,688.35	4,451.03	237.32	19.755		
6,600.00	6,600.00	4,600.00	4,599.28	14.70	244.77	-175.66	-4,287.73	-325.76	4,729.08	4,493.59	235.50	20.081		
6,700.00	6,700.00	4,600.00	4,599.28	14.93	244.77	-175.66	-4,287.73	-325.76	4,771.57	4,537.95	233.62	20.425		
6,800.00	6,800.00	4,600.00	4,599.28	15.15	244.77	-175.66	-4,287.73	-325.76	4,815.75	4,584.07	231.69	20.786		
6,900.00	6,900.00	4,600.00	4,599.28	15.38	244.77	-175.66	-4,287.73	-325.76	4,861.60	4,631.88	229.72	21.163		
7,000.00	7,000.00	4,600.00	4,599.28	15.60	244.77	-175.66	-4,287.73	-325.76	4,909.05	4,681.33	227.71	21.558		
7,100.00	7,100.00	4,600.00	4,599.28	15.83	244.77	-175.66	-4,287.73	-325.76	4,958.06	4,732.38	225.68	21.970		
7,200.00	7,200.00	4,600.00	4,599.28	16.05	244.77	-175.66	-4,287.73	-325.76	5,008.59	4,784.98	223.61	22.398		
7,300.00	7,300.00	4,600.00	4,599.28	16.28	244.77	-175.66	-4,287.73	-325.76	5,060.59	4,839.06	221.53	22.844		
7,400.00	7,400.00	4,600.00	4,599.28	16.50	244.77	-175.66	-4,287.73	-325.76	5,114.02	4,894.59	219.43	23.306		
7,500.00	7,500.00	4,600.00	4,599.28	16.72	244.77	-175.66	-4,287.73	-325.76	5,168.84	4,951.52	217.32	23.785		
7,600.00	7,600.00	4,600.00	4,599.28	16.95	244.77	-175.66	-4,287.73	-325.76	5,224.99	5,009.79	215.20	24.280		
7,700.00	7,700.00	4,600.00	4,599.28	17.17	244.77	-175.66	-4,287.73	-325.76	5,282.43	5,069.36	213.07	24.792		
7,800.00	7,800.00	4,600.00	4,599.28	17.40	244.77	-175.66	-4,287.73	-325.76	5,341.14	5,130.19	210.95	25.320		
7,900.00	7,900.00	4,600.00	4,599.28	17.62	244.77	-175.66	-4,287.73	-325.76	5,401.05	5,192.23	208.82	25.864		
8,000.00	8,000.00	4,600.00	4,599.28	17.85	244.77	-175.66	-4,287.73	-325.76	5,462.14	5,255.43	206.71	26.425		
8,100.00	8,100.00	4,600.00	4,599.28	18.07	244.77	-175.66	-4,287.73	-325.76	5,524.36	5,319.77	204.60	27.001		
8,200.00	8,200.00	4,600.00	4,599.28	18.30	244.77	-175.66	-4,287.73	-325.76	5,587.68	5,385.19	202.50	27.594		
8,300.00	8,300.00	4,600.00	4,599.28	18.52	244.77	-175.66	-4,287.73	-325.76	5,652.07	5,451.66	200.41	28.203		
8,400.00	8,400.00	4,600.00	4,599.28	18.75	244.77	-175.66	-4,287.73	-325.76	5,717.47	5,519.13	198.34	28.827		
8,500.00	8,500.00	4,600.00	4,599.28	18.97	244.77	-175.66	-4,287.73	-325.76	5,783.86	5,587.58	196.29	29.467		
8,600.00	8,600.00	4,600.00	4,599.28	19.20	244.77	-175.66	-4,287.73	-325.76	5,851.21	5,656.96	194.25	30.122		
8,700.00	8,700.00	4,600.00	4,599.28	19.42	244.77	-175.66	-4,287.73	-325.76	5,919.49	5,727.25	192.24	30.793		
8,800.00	8,800.00	4,600.00	4,599.28	19.65	244.77	-175.66	-4,287.73	-325.76	5,988.65	5,798.41	190.24	31.479		
8,900.00	8,900.00	4,600.00	4,599.28	19.87	244.77	-175.66	-4,287.73	-325.76	6,058.68	5,870.40	188.28	32.180		
8,927.04	8,927.04	4,600.00	4,599.28	19.93	244.77	-175.66	-4,287.73	-325.76	6,077.76	5,890.01	187.75	32.372		
8,950.00	8,949.99	4,600.00	4,599.28	19.98	244.77	14.19	-4,287.73	-325.76	6,093.69	5,906.40	187.28	32.537		
9,000.00	8,999.80	4,600.00	4,599.28	20.06	244.77	13.18	-4,287.73	-325.76	6,126.25	5,940.05	186.20	32.901		
9,050.00	9,049.06	4,600.00	4,599.28	20.15	244.77	12.37	-4,287.73	-325.76	6,155.73	5,970.69	185.04	33.267		
9,100.00	9,097.39	4,600.00	4,599.28	20.23	244.77	11.72	-4,287.73	-325.76	6,181.96	5,998.15	183.81	33.632		
9,150.00	9,144.42	4,600.00	4,599.28	20.32	244.77	11.21	-4,287.73	-325.76	6,204.78	6,022.26	182.52	33.995		
9,200.00	9,189.79	4,600.00	4,599.28	20.40	244.77	10.82	-4,287.73	-325.76	6,224.05	6,042.87	181.18	34.353		
9,250.00	9,233.17	4,600.00	4,599.28	20.49	244.77	10.51	-4,287.73	-325.76	6,239.65	6,059.86	179.79	34.705		
9,300.00	9,274.21	4,600.00	4,599.28	20.59	244.77	10.29	-4,287.73	-325.76	6,251.50	6,073.14	178.37	35.049		
9,350.00	9,312.62	4,600.00	4,599.28	20.71	244.77	10.15	-4,287.73	-325.76	6,259.54	6,082.62	176.91	35.382		
9,400.00	9,348.09	4,600.00	4,599.28	20.85	244.77	10.07	-4,287.73	-325.76	6,263.70	6,088.26	175.44	35.703		
9,450.00	9,380.35	4,600.00	4,599.28	21.02	244.77	10.07	-4,287.73	-325.76	6,263.97	6,090.02	173.95	36.009		
9,500.00	9,409.17	4,600.00	4,599.28	21.21	244.77	10.13	-4,287.73	-325.76	6,260.35	6,087.88	172.47	36.298		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM-5000.1 Single User.Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Lea Unit - SWD #2 - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 505-INC													Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis (usft)	Highside Toolface (°)	Offset Wellbore Centre N-S (usft)	Offset Wellbore Centre E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,550.00	9,434.31	4,600.00	4,599.28	21.44	244.77	10.27		-4,287.73	-325.76	6,252.86	6,081.86	171.00	36.567	
9,600.00	9,455.60	4,600.00	4,599.28	21.70	244.77	10.48		-4,287.73	-325.76	6,241.54	6,072.00	169.54	36.815	
9,650.00	9,472.86	4,600.00	4,599.28	21.99	244.77	10.77		-4,287.73	-325.76	6,226.45	6,058.34	168.11	37.038	
9,700.00	9,485.97	4,600.00	4,599.28	22.32	244.77	11.15		-4,287.73	-325.76	6,207.69	6,040.97	166.72	37.234	
9,750.00	9,494.83	4,600.00	4,599.28	22.68	244.77	11.65		-4,287.73	-325.76	6,185.36	6,019.99	165.37	37.402	
9,800.00	9,499.36	4,600.00	4,599.28	23.07	244.77	12.27		-4,287.73	-325.76	6,159.60	5,995.52	164.08	37.539	
9,827.04	9,500.00	4,600.00	4,599.28	23.30	244.77	12.67		-4,287.73	-325.76	6,144.29	5,980.88	163.42	37.599	
9,900.00	9,500.00	4,600.00	4,599.28	23.91	244.77	11.13		-4,287.73	-325.76	6,101.76	5,940.17	161.59	37.760	
10,000.00	9,500.00	4,600.00	4,599.28	24.81	244.77	9.03		-4,287.73	-325.76	6,043.71	5,884.69	159.02	38.005	
10,100.00	9,500.00	4,600.00	4,599.28	25.79	244.77	6.93		-4,287.73	-325.76	5,986.09	5,829.70	156.39	38.276	
10,158.68	9,500.00	4,600.00	4,599.28	26.40	244.77	5.72		-4,287.73	-325.76	5,952.55	5,797.73	154.82	38.448	
10,200.00	9,500.00	4,600.00	4,599.28	26.85	244.77	5.72		-4,287.73	-325.76	5,929.11	5,775.41	153.71	38.574	
10,300.00	9,500.00	4,600.00	4,599.28	28.00	244.77	5.72		-4,287.73	-325.76	5,873.20	5,722.23	150.97	38.903	
10,400.00	9,500.00	4,600.00	4,599.28	29.21	244.77	5.72		-4,287.73	-325.76	5,818.47	5,670.29	148.18	39.265	
10,500.00	9,500.00	4,600.00	4,599.28	30.49	244.77	5.72		-4,287.73	-325.76	5,764.96	5,619.61	145.35	39.663	
10,600.00	9,500.00	4,600.00	4,599.28	31.82	244.77	5.72		-4,287.73	-325.76	5,712.69	5,570.23	142.46	40.100	
10,700.00	9,500.00	4,600.00	4,599.28	33.20	244.77	5.72		-4,287.73	-325.76	5,661.71	5,522.19	139.52	40.579	
10,800.00	9,500.00	4,600.00	4,599.28	34.62	244.77	5.72		-4,287.73	-325.76	5,612.05	5,475.52	136.53	41.104	
10,900.00	9,500.00	4,600.00	4,599.28	36.08	244.77	5.72		-4,287.73	-325.76	5,563.74	5,430.25	133.49	41.679	
11,000.00	9,500.00	4,600.00	4,599.28	37.57	244.77	5.72		-4,287.73	-325.76	5,516.82	5,386.43	130.39	42.309	
11,100.00	9,500.00	4,600.00	4,599.28	39.09	244.77	5.72		-4,287.73	-325.76	5,471.33	5,344.09	127.24	42.999	
11,200.00	9,500.00	4,600.00	4,599.28	40.64	244.77	5.72		-4,287.73	-325.76	5,427.30	5,303.26	124.04	43.755	
11,300.00	9,500.00	4,600.00	4,599.28	42.21	244.77	5.72		-4,287.73	-325.76	5,384.77	5,263.99	120.77	44.585	
11,400.00	9,500.00	4,600.00	4,599.28	43.80	244.77	5.72		-4,287.73	-325.76	5,343.77	5,226.31	117.46	45.496	
11,500.00	9,500.00	4,600.00	4,599.28	45.40	244.77	5.72		-4,287.73	-325.76	5,304.33	5,190.25	114.08	46.497	
11,600.00	9,500.00	4,600.00	4,599.28	47.03	244.77	5.72		-4,287.73	-325.76	5,266.50	5,155.86	110.65	47.598	
11,700.00	9,500.00	4,600.00	4,599.28	48.67	244.77	5.72		-4,287.73	-325.76	5,230.31	5,123.16	107.16	48.810	
11,800.00	9,500.00	4,600.00	4,599.28	50.32	244.77	5.72		-4,287.73	-325.76	5,195.80	5,092.19	103.61	50.149	
11,900.00	9,500.00	4,600.00	4,599.28	51.98	244.77	5.72		-4,287.73	-325.76	5,162.99	5,062.98	100.00	51.628	
12,000.00	9,500.00	4,600.00	4,599.28	53.66	244.77	5.72		-4,287.73	-325.76	5,131.91	5,035.57	96.35	53.265	
12,100.00	9,500.00	4,600.00	4,599.28	55.34	244.77	5.72		-4,287.73	-325.76	5,102.61	5,009.98	92.63	55.084	
12,200.00	9,500.00	4,600.00	4,599.28	57.04	244.77	5.72		-4,287.73	-325.76	5,075.12	4,986.24	88.87	57.107	
12,300.00	9,500.00	4,600.00	4,599.28	58.74	244.77	5.72		-4,287.73	-325.76	5,049.45	4,964.39	85.06	59.364	
12,400.00	9,500.00	4,600.00	4,599.28	60.45	244.77	5.72		-4,287.73	-325.76	5,025.64	4,944.43	81.20	61.890	
12,500.00	9,500.00	4,600.00	4,599.28	62.17	244.77	5.72		-4,287.73	-325.76	5,003.71	4,926.41	77.31	64.725	
12,600.00	9,500.00	4,600.00	4,599.28	63.89	244.77	5.72		-4,287.73	-325.76	4,983.70	4,910.33	73.38	67.920	
12,700.00	9,500.00	4,600.00	4,599.28	65.62	244.77	5.72		-4,287.73	-325.76	4,965.62	4,896.20	69.42	71.532	
12,800.00	9,500.00	4,600.00	4,599.28	67.35	244.77	5.72		-4,287.73	-325.76	4,949.50	4,884.05	65.44	75.630	
12,900.00	9,500.00	4,600.00	4,599.28	69.09	244.77	5.72		-4,287.73	-325.76	4,935.35	4,873.88	61.47	80.292	
13,000.00	9,500.00	4,600.00	4,599.28	70.84	244.77	5.72		-4,287.73	-325.76	4,923.19	4,865.67	57.51	85.603	
13,100.00	9,500.00	4,600.00	4,599.28	72.58	244.77	5.72		-4,287.73	-325.76	4,913.03	4,859.42	53.61	91.637	
13,200.00	9,500.00	4,600.00	4,599.28	74.34	244.77	5.72		-4,287.73	-325.76	4,904.90	4,855.06	49.84	98.412	
13,300.00	9,500.00	4,600.00	4,599.28	76.09	244.77	5.72		-4,287.73	-325.76	4,898.79	4,852.46	46.33	105.741	
13,400.00	9,500.00	4,600.00	4,599.28	77.85	244.77	5.72		-4,287.73	-325.76	4,894.72	4,851.33	43.39	112.815	
13,500.00	9,500.00	4,600.00	4,599.28	79.62	244.77	5.72		-4,287.73	-325.76	4,892.68	4,850.97	41.72	117.284	
13,549.40	9,500.00	4,600.00	4,599.28	80.49	244.77	5.72		-4,287.73	-325.76	4,892.44	4,850.74	41.69	117.351	
13,600.00	9,500.00	4,600.00	4,599.28	81.38	244.77	5.72		-4,287.73	-325.76	4,892.70	4,850.37	42.33	115.582	
13,700.00	9,500.00	4,600.00	4,599.28	83.15	244.77	5.72		-4,287.73	-325.76	4,894.75	4,849.47	45.28	108.102	
13,800.00	9,500.00	4,600.00	4,599.28	84.92	244.77	5.72		-4,287.73	-325.76	4,898.85	4,849.29	49.56	98.850	
13,900.00	9,500.00	4,600.00	4,599.28	86.70	244.77	5.72		-4,287.73	-325.76	4,904.98	4,850.55	54.43	90.110	
14,000.00	9,500.00	4,600.00	4,599.28	88.47	244.77	5.72		-4,287.73	-325.76	4,913.14	4,853.57	59.57	82.472	
14,100.00	9,500.00	4,600.00	4,599.28	90.25	244.77	5.72		-4,287.73	-325.76	4,923.32	4,858.49	64.83	75.939	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



TDS
Anticollision Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User.Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Lea Unit - SWD #2 - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 505-INC												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	+N/-S (usft)	+E/-W (usft)	(usft)	(usft)	(usft)		
14,200.00	9,500.00	4,600.00	4,599.28	92.03	244.77	5.72	-4,287.73	-325.76	4,935.50	4,855.37	70.14	70.368	
14,300.00	9,500.00	4,600.00	4,599.28	93.82	244.77	5.72	-4,287.73	-325.76	4,949.68	4,874.23	75.45	65.602	
14,400.00	9,500.00	4,600.00	4,599.28	95.60	244.77	5.72	-4,287.73	-325.76	4,965.83	4,885.09	80.74	61.502	
14,500.00	9,500.00	4,600.00	4,599.28	97.39	244.77	5.72	-4,287.73	-325.76	4,983.93	4,897.93	86.00	57.954	
14,600.00	9,500.00	4,600.00	4,599.28	99.18	244.77	5.72	-4,287.73	-325.76	5,003.97	4,912.76	91.20	54.866	
14,700.00	9,500.00	4,600.00	4,599.28	100.96	244.77	5.72	-4,287.73	-325.76	5,025.91	4,929.57	96.35	52.164	
14,800.00	9,500.00	4,600.00	4,599.28	102.76	244.77	5.72	-4,287.73	-325.76	5,049.75	4,948.32	101.43	49.787	
14,843.14	9,500.00	4,600.00	4,599.28	103.53	244.77	5.72	-4,287.73	-325.76	5,060.60	4,957.01	103.59	48.850	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Lea Unit #44H - Lea Unit #44H - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 100-ISCWSA-GYRO-3 10268-MWD												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		N-S (usft)	E-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.00	0.00	0.00	0.00	0.00	0.00	-90.46	-0.80	-100.10	100.12				
100.00	100.00	97.48	97.48	0.09	0.08	-90.43	-0.76	-100.35	100.36	100.19	0.17	596.186	
200.00	200.00	198.19	198.19	0.32	0.25	-90.23	-0.40	-100.54	100.54	99.97	0.57	175.974	
235.53	235.53	233.53	233.53	0.40	0.32	-90.12	-0.21	-100.50	100.50	99.79	0.71	141.537	
300.00	300.00	297.61	297.61	0.54	0.43	-90.07	-0.12	-100.62	100.62	99.66	0.97	104.251	
400.00	400.00	398.36	398.36	0.77	0.60	-90.06	-0.10	-100.66	100.66	99.29	1.37	73.620	
500.00	500.00	498.32	498.32	0.99	0.77	-89.97	0.06	-100.32	100.32	98.56	1.76	56.976	
600.00	600.00	598.12	598.12	1.22	0.95	-89.91	0.16	-100.10	100.10	97.94	2.16	46.354	
655.77	655.77	653.77	653.77	1.34	1.05	-89.89	0.19	-100.07	100.07	97.69	2.38	42.018	
700.00	700.00	697.91	697.91	1.44	1.13	-89.87	0.22	-100.09	100.09	97.53	2.56	39.132	
800.00	800.00	798.25	798.25	1.67	1.31	-89.79	0.36	-100.01	100.02	97.06	2.96	33.811	
900.00	900.00	898.35	898.34	1.89	1.49	-89.74	0.45	-99.72	99.72	96.36	3.36	29.670	
937.65	937.65	935.65	935.65	1.97	1.55	-89.75	0.43	-99.65	99.65	96.14	3.51	28.392	
1,000.00	1,000.00	997.41	997.40	2.12	1.66	-89.74	0.46	-99.83	99.84	96.08	3.76	26.574	
1,100.00	1,100.00	1,097.52	1,097.52	2.34	1.83	-89.74	0.46	-100.39	100.39	96.24	4.15	24.172	
1,200.00	1,200.00	1,198.43	1,198.42	2.56	2.00	-89.87	0.23	-100.43	100.43	95.88	4.55	22.050	
1,253.79	1,253.79	1,251.80	1,251.79	2.69	2.09	-89.94	0.11	-100.31	100.31	95.54	4.77	21.038	
1,300.00	1,300.00	1,297.62	1,297.61	2.79	2.17	-89.91	0.15	-100.40	100.40	95.45	4.95	20.276	
1,400.00	1,400.00	1,398.01	1,398.01	3.01	2.35	-89.70	0.52	-100.60	100.60	95.25	5.35	18.799	
1,403.18	1,403.18	1,401.19	1,401.18	3.02	2.36	-89.69	0.54	-100.60	100.60	95.24	5.36	18.754	
1,500.00	1,500.00	1,496.92	1,496.91	3.24	2.52	-89.64	0.64	-101.12	101.12	95.37	5.75	17.591	
1,600.00	1,600.00	1,598.13	1,598.12	3.46	2.70	-89.45	0.98	-101.63	101.64	95.49	6.15	16.524	
1,614.25	1,614.25	1,612.27	1,612.25	3.50	2.73	-89.37	1.12	-101.62	101.63	95.42	6.21	16.371	
1,700.00	1,700.00	1,697.05	1,697.03	3.69	2.88	-88.97	1.83	-102.01	102.03	95.49	6.55	15.581	
1,800.00	1,800.00	1,797.35	1,797.33	3.91	3.06	-88.69	2.34	-102.83	102.86	95.91	6.95	14.798	
1,900.00	1,900.00	1,897.91	1,897.89	4.14	3.24	-88.51	2.68	-103.20	103.24	95.89	7.35	14.040	
2,000.00	2,000.00	1,998.12	1,998.09	4.36	3.42	-88.48	2.74	-103.21	103.25	95.49	7.75	13.318	
2,100.00	2,100.00	2,098.07	2,098.05	4.59	3.59	-88.49	2.72	-103.14	103.18	95.03	8.15	12.659	
2,200.00	2,200.00	2,198.14	2,198.12	4.81	3.76	-88.48	2.73	-103.06	103.10	94.55	8.55	12.060	
2,300.00	2,300.00	2,298.25	2,298.22	5.04	3.93	-88.48	2.73	-102.90	102.93	93.99	8.95	11.505	
2,400.00	2,400.00	2,398.17	2,398.15	5.26	4.10	-88.53	2.63	-102.72	102.75	93.41	9.35	10.995	
2,500.00	2,500.00	2,498.57	2,498.55	5.49	4.28	-88.65	2.41	-102.39	102.42	92.67	9.74	10.510	
2,600.00	2,600.00	2,598.40	2,598.37	5.71	4.45	-88.81	2.12	-101.94	101.97	91.82	10.14	10.052	
2,700.00	2,700.00	2,698.81	2,698.77	5.94	4.62	-89.30	1.23	-101.40	101.41	90.86	10.54	9.618	
2,800.00	2,800.00	2,800.77	2,800.72	6.16	4.80	-89.19	1.41	-99.62	99.67	88.72	10.95	9.106	
2,900.00	2,900.00	2,901.38	2,901.27	6.39	4.98	-88.27	2.91	-96.51	96.61	85.26	11.35	8.515	
3,000.00	3,000.00	3,001.26	3,001.07	6.61	5.15	-87.34	4.32	-93.12	93.27	81.52	11.75	7.940	
3,100.00	3,100.00	3,101.16	3,100.91	6.84	5.33	-86.54	5.42	-89.79	90.00	77.85	12.15	7.408	
3,200.00	3,200.00	3,200.99	3,200.89	7.06	5.51	-85.78	6.39	-86.56	86.83	74.28	12.55	6.918	
3,300.00	3,300.00	3,300.48	3,300.12	7.28	5.69	-84.55	7.98	-83.61	84.02	71.06	12.95	6.486	
3,400.00	3,400.00	3,399.54	3,399.14	7.51	5.87	-83.01	9.89	-81.44	82.06	68.71	13.36	6.144	
3,500.00	3,500.00	3,499.57	3,499.15	7.73	6.05	-81.95	11.30	-79.86	80.66	66.91	13.76	5.863	
3,600.00	3,600.00	3,599.10	3,598.67	7.96	6.23	-81.39	11.90	-78.63	79.53	65.37	14.16	5.617	
3,700.00	3,700.00	3,698.66	3,698.23	8.18	6.41	-81.49	11.69	-78.10	78.97	64.41	14.56	5.423	
3,732.20	3,732.20	3,730.63	3,730.20	8.26	6.46	-81.66	11.44	-78.09	78.92	64.23	14.69	5.373	
3,800.00	3,800.00	3,797.96	3,797.52	8.41	6.58	-81.59	11.58	-78.27	79.13	64.17	14.96	5.290	
3,900.00	3,900.00	3,897.72	3,897.28	8.63	6.75	-81.17	12.26	-78.94	79.89	64.54	15.35	5.204	
4,000.00	4,000.00	3,998.87	3,998.42	8.86	6.92	-81.34	12.06	-79.18	80.10	64.34	15.75	5.085	
4,100.00	4,100.00	4,098.77	4,098.32	9.08	7.09	-81.89	11.23	-78.82	79.62	63.47	16.15	4.929	
4,163.77	4,163.77	4,162.22	4,161.77	9.23	7.20	-82.12	10.89	-78.74	79.49	63.08	16.41	4.845	
4,200.00	4,200.00	4,198.27	4,197.82	9.31	7.26	-82.16	10.85	-78.79	79.53	62.98	16.55	4.806	
4,300.00	4,300.00	4,298.37	4,297.92	9.53	7.43	-82.11	10.94	-78.95	79.71	62.76	16.94	4.704	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



TDS
Anticollision Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County NM (NAD-27-2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User.Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Lea Unit #44H - Lea Unit #44H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 100-ISCWSA-GYRO-3 10268-MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)						
4,400.00	4,400.00	4,398.55	4,398.10	9.76	7.61	-82.02	11.06	-78.93	79.70	62.36	17.34	4.595		
4,443.60	4,443.60	4,442.05	4,441.60	9.86	7.69	-81.99	11.10	-78.89	79.67	62.15	17.52	4.548		
4,500.00	4,500.00	4,498.32	4,497.87	9.98	7.79	-82.03	11.06	-78.95	79.72	61.98	17.74	4.493		
4,600.00	4,600.00	4,598.41	4,597.96	10.21	7.95	-82.34	10.65	-79.12	79.83	61.69	18.14	4.401		
4,700.00	4,700.00	4,698.71	4,698.25	10.43	8.13	-82.25	10.75	-78.98	79.70	61.16	18.54	4.299		
4,800.00	4,800.00	4,798.84	4,798.38	10.66	8.30	-82.15	10.83	-78.56	79.30	60.36	18.94	4.187		
4,881.97	4,881.97	4,880.43	4,879.97	10.84	8.45	-82.16	10.79	-78.36	79.10	59.84	19.27	4.105		
4,900.00	4,900.00	4,898.37	4,897.91	10.88	8.48	-82.05	10.95	-78.35	79.11	59.77	19.34	4.091		
5,000.00	5,000.00	4,998.12	4,997.66	11.11	8.65	-82.05	10.98	-78.62	79.38	59.65	19.74	4.022		
5,100.00	5,100.00	5,098.97	5,098.51	11.33	8.82	-82.80	9.94	-78.66	79.29	59.15	20.14	3.937		
5,146.33	5,146.33	5,144.80	5,144.33	11.43	8.90	-83.07	9.54	-78.56	79.14	58.82	20.32	3.894		
5,200.00	5,200.00	5,197.86	5,197.39	11.56	8.99	-83.35	9.19	-78.81	79.34	58.81	20.54	3.864		
5,300.00	5,300.00	5,297.80	5,297.33	11.78	9.16	-83.37	9.26	-79.62	80.16	59.23	20.93	3.830		
5,400.00	5,400.00	5,399.20	5,398.73	12.00	9.34	-83.26	9.41	-79.59	80.15	58.81	21.33	3.757		
5,500.00	5,500.00	5,498.80	5,498.32	12.23	9.52	-83.12	9.52	-78.91	79.48	57.75	21.73	3.657		
5,531.95	5,531.95	5,530.43	5,529.95	12.30	9.57	-82.97	9.72	-78.82	79.41	57.55	21.86	3.633		
5,600.00	5,600.00	5,597.78	5,597.30	12.45	9.69	-82.82	9.96	-79.08	79.71	57.58	22.13	3.602		
5,700.00	5,700.00	5,698.01	5,697.53	12.68	9.86	-83.06	9.73	-79.87	80.46	57.93	22.53	3.572		
5,800.00	5,800.00	5,798.16	5,797.67	12.90	10.03	-83.65	8.96	-80.46	80.96	58.03	22.93	3.531		
5,900.00	5,900.00	5,897.80	5,897.31	13.13	10.20	-84.19	8.26	-81.16	81.58	58.26	23.32	3.498		
6,000.00	6,000.00	5,998.97	5,998.48	13.35	10.38	-84.07	8.44	-81.29	81.73	58.01	23.72	3.445		
6,100.00	6,100.00	6,099.32	6,098.81	13.58	10.56	-83.54	9.10	-80.41	80.93	58.81	24.12	3.355		
6,200.00	6,200.00	6,199.10	6,198.59	13.80	10.73	-83.45	9.13	-79.53	80.05	55.53	24.53	3.264		
6,300.00	6,300.00	6,298.90	6,298.39	14.03	10.91	-83.90	8.45	-78.98	79.43	54.51	24.93	3.187		
6,333.76	6,333.76	6,332.27	6,331.76	14.10	10.96	-84.10	8.15	-78.93	79.35	54.29	25.06	3.166		
6,400.00	6,400.00	6,397.72	6,397.21	14.25	11.08	-84.39	7.78	-79.29	79.68	54.35	25.32	3.146		
6,500.00	6,500.00	6,499.22	6,498.70	14.48	11.25	-84.99	6.97	-79.47	79.78	54.05	25.72	3.101		
6,600.00	6,600.00	6,599.08	6,598.56	14.70	11.43	-85.69	5.94	-78.75	78.98	52.85	26.13	3.023		
6,644.91	6,644.91	6,643.44	6,642.91	14.80	11.50	-85.91	5.62	-78.62	78.82	52.51	26.30	2.996		
6,700.00	6,700.00	6,697.83	6,697.30	14.93	11.60	-86.18	5.26	-78.88	79.06	52.54	26.52	2.981		
6,800.00	6,800.00	6,798.27	6,797.74	15.15	11.77	-86.81	4.43	-79.57	79.69	52.77	26.92	2.960		
6,900.00	6,900.00	6,898.12	6,897.57	15.38	11.94	-87.56	3.41	-80.04	80.11	52.79	27.32	2.932		
7,000.00	7,000.00	6,998.51	6,997.97	15.60	12.12	-88.28	2.41	-80.37	80.41	52.69	27.72	2.901		
7,100.00	7,100.00	7,099.36	7,098.81	15.83	12.30	-88.74	1.75	-79.91	79.93	51.81	28.12	2.843		
7,158.22	7,158.22	7,156.78	7,156.22	15.96	12.40	-88.90	1.53	-79.62	79.63	51.28	28.35	2.809		
7,200.00	7,200.00	7,197.97	7,197.41	16.05	12.47	-89.06	1.31	-79.77	79.79	51.27	28.52	2.798		
7,300.00	7,300.00	7,299.26	7,298.71	16.28	12.64	-89.21	1.09	-79.74	79.75	50.83	28.92	2.758		
7,379.45	7,379.45	7,378.00	7,377.45	16.45	12.78	-88.98	1.41	-79.37	79.39	50.15	29.24	2.715		
7,400.00	7,400.00	7,398.37	7,397.81	16.50	12.82	-88.89	1.54	-79.39	79.41	50.09	29.32	2.709		
7,500.00	7,500.00	7,499.44	7,498.87	16.72	12.99	-88.60	1.93	-78.97	78.99	49.28	29.72	2.658		
7,577.49	7,577.49	7,576.06	7,575.49	16.90	13.13	-88.82	1.61	-78.54	78.56	48.53	30.03	2.616		
7,600.00	7,600.00	7,598.31	7,597.74	16.95	13.17	-88.98	1.39	-78.58	78.60	48.48	30.12	2.610		
7,700.00	7,700.00	7,699.21	7,698.65	17.17	13.34	-89.07	1.27	-78.36	78.37	47.85	30.52	2.568		
7,800.00	7,800.00	7,798.71	7,798.14	17.40	13.52	-89.17	1.13	-77.85	77.86	46.94	30.92	2.518		
7,831.35	7,831.35	7,829.93	7,829.35	17.47	13.57	-89.46	0.73	-77.83	77.83	46.79	31.04	2.507 CC		
7,900.00	7,900.00	7,898.27	7,897.69	17.62	13.69	-90.08	-0.11	-77.97	77.97	46.65	31.32	2.490		
8,000.00	8,000.00	7,997.98	7,997.39	17.85	13.87	-90.80	-1.10	-78.55	78.56	46.84	31.71	2.477		
8,100.00	8,100.00	8,097.88	8,097.29	18.07	14.04	-91.32	-1.83	-79.38	78.40	47.29	32.11	2.473		
8,200.00	8,200.00	8,198.34	8,197.75	18.30	14.21	-91.18	-1.65	-80.00	80.01	47.50	32.51	2.461		
8,300.00	8,300.00	8,297.80	8,297.20	18.52	14.39	-90.72	-1.02	-80.65	80.66	47.75	32.91	2.451		
8,400.00	8,400.00	8,397.64	8,397.03	18.75	14.56	-90.66	-0.95	-81.74	81.75	48.45	33.30	2.455		
8,500.00	8,500.00	8,499.44	8,498.83	18.97	14.74	-90.66	-0.94	-81.85	81.86	48.15	33.70	2.429		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000:1 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Lea Unit #44H - Lea Unit #44H - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 100-ISCWSA-GYRO-3, 10268-MWD												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Tooface (")	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
8,584.77	8,584.77	8,583.38	8,582.77	19.16	14.88	-90.48	-0.68	-81.42	81.42	47.38	34.04	2.392	
8,600.00	8,600.00	8,598.46	8,597.85	19.20	14.91	-90.40	-0.57	-81.43	81.43	47.33	34.10	2.388	
8,700.00	8,700.00	8,698.69	8,698.07	19.42	15.08	-89.70	0.43	-81.49	81.49	46.99	34.50	2.362	
8,713.45	8,713.45	8,712.07	8,711.45	19.45	15.11	-89.58	0.60	-81.48	81.49	46.93	34.56	2.358	
8,800.00	8,800.00	8,798.04	8,797.39	19.65	15.25	-88.08	2.74	-81.75	81.80	46.90	34.90	2.344	
8,900.00	8,900.00	8,899.30	8,898.59	19.87	15.43	-85.63	6.23	-81.60	81.84	46.53	35.30	2.318	
8,927.04	8,927.04	8,926.58	8,925.86	19.93	15.48	-85.05	7.03	-81.29	81.60	46.19	35.41	2.304	
8,950.00	8,949.99	8,949.73	8,949.00	19.98	15.52	106.05	7.55	-80.99	81.47	45.97	35.50	2.295	
8,953.11	8,953.10	8,952.86	8,952.13	19.98	15.53	106.19	7.61	-80.94	81.47	45.96	35.51	2.294	ES, SF
9,000.00	8,999.80	9,000.00	8,999.26	20.06	15.61	109.29	8.13	-80.16	82.00	46.33	35.66	2.299	
9,050.00	9,049.06	9,048.51	9,047.76	20.15	15.69	114.49	8.25	-79.49	84.56	48.73	35.83	2.360	
9,100.00	9,097.39	9,096.16	9,095.41	20.23	15.78	121.06	8.18	-79.31	90.48	54.49	35.99	2.514	
9,150.00	9,144.42	9,143.06	9,142.32	20.32	15.86	128.11	8.01	-79.43	100.55	64.40	36.16	2.781	
9,200.00	9,189.79	9,188.37	9,187.62	20.40	15.94	134.76	7.84	-79.61	115.27	78.95	36.32	3.174	
9,250.00	9,233.17	9,231.75	9,231.00	20.49	16.01	140.44	7.67	-79.84	134.84	98.37	36.47	3.697	
9,300.00	9,274.21	9,272.87	9,272.12	20.59	16.08	144.97	7.47	-80.11	159.09	122.47	36.63	4.344	
9,350.00	9,312.62	9,311.24	9,310.49	20.71	16.15	148.36	7.26	-80.41	187.69	150.92	36.77	5.105	
9,400.00	9,348.09	9,346.23	9,345.47	20.85	16.21	150.71	7.14	-80.71	220.27	183.37	36.90	5.970	
9,450.00	9,380.35	9,377.86	9,377.11	21.02	16.27	152.15	7.12	-80.99	256.44	219.42	37.02	6.928	
9,500.00	9,409.17	9,406.39	9,405.63	21.21	16.31	152.76	7.16	-81.26	295.75	258.63	37.12	7.967	
9,550.00	9,434.31	9,432.96	9,432.20	21.44	16.36	152.68	7.16	-81.44	337.66	300.44	37.22	9.072	
9,600.00	9,455.60	9,455.78	9,455.03	21.70	16.40	151.53	7.08	-81.51	381.74	344.44	37.30	10.234	
9,650.00	9,472.86	9,474.62	9,473.87	21.99	16.43	148.87	6.97	-81.52	427.65	390.28	37.37	11.445	
9,700.00	9,485.97	9,489.25	9,488.49	22.32	16.46	143.70	6.85	-81.49	475.03	437.61	37.42	12.695	
9,750.00	9,494.83	9,499.46	9,498.71	22.68	16.48	133.63	6.75	-81.46	523.51	486.05	37.46	13.977	
9,800.00	9,499.36	9,500.00	9,499.24	23.07	16.48	109.95	6.75	-81.45	572.73	535.27	37.47	15.286	
9,827.04	9,500.00	9,505.00	9,504.24	23.30	16.49	94.53	6.70	-81.43	599.49	562.01	37.48	15.994	
9,900.00	9,500.00	9,505.67	9,504.91	23.91	16.49	93.84	6.69	-81.43	671.70	634.21	37.49	17.916	
10,000.00	9,500.00	9,506.56	9,505.80	24.81	16.49	93.19	6.68	-81.43	770.28	732.77	37.51	20.535	
10,100.00	9,500.00	9,507.41	9,506.65	25.79	16.49	92.72	6.67	-81.43	868.33	830.80	37.53	23.138	
10,158.68	9,500.00	9,507.90	9,507.14	26.40	16.49	92.50	6.67	-81.43	925.60	888.06	37.54	24.657	
10,200.00	9,500.00	9,508.23	9,507.47	26.85	16.49	92.60	6.67	-81.42	965.89	928.35	37.54	25.727	
10,300.00	9,500.00	9,509.03	9,508.27	28.00	16.49	92.81	6.66	-81.42	1,063.74	1,026.18	37.55	28.325	
10,400.00	9,500.00	9,509.81	9,509.06	29.21	16.49	93.03	6.65	-81.42	1,161.95	1,124.38	37.57	30.931	
10,500.00	9,500.00	9,510.58	9,509.82	30.49	16.50	93.24	6.64	-81.42	1,260.44	1,222.86	37.58	33.542	
10,600.00	9,500.00	9,511.33	9,510.57	31.82	16.50	93.44	6.64	-81.42	1,359.15	1,321.56	37.59	36.156	
10,700.00	9,500.00	9,512.06	9,511.30	33.20	16.50	93.64	6.63	-81.41	1,458.04	1,420.43	37.61	38.771	
10,800.00	9,500.00	12,265.30	10,921.69	34.62	33.55	161.53	-1,595.02	-335.19	1,502.05	1,467.36	34.69	43.302	
10,900.00	9,500.00	12,352.24	10,919.16	36.08	34.76	161.58	-1,681.87	-332.35	1,498.53	1,462.56	35.97	41.661	
11,000.00	9,500.00	12,468.00	10,915.94	37.57	36.40	161.64	-1,797.52	-328.69	1,495.16	1,457.72	37.44	39.939	
11,100.00	9,500.00	12,539.95	10,913.84	39.09	37.43	161.66	-1,869.42	-326.94	1,491.94	1,453.24	38.70	38.549	
11,200.00	9,500.00	12,647.72	10,912.07	40.64	38.99	161.68	-1,977.16	-324.85	1,490.04	1,449.84	40.20	37.066	
11,300.00	9,500.00	12,710.72	10,911.15	42.21	39.92	161.69	-2,040.13	-323.93	1,488.53	1,447.07	41.47	35.898	
11,304.55	9,500.00	12,713.38	10,911.16	42.28	39.96	161.69	-2,042.79	-323.88	1,488.53	1,447.01	41.52	35.849	
11,400.00	9,500.00	12,788.15	10,912.56	43.80	41.08	161.75	-2,117.53	-321.98	1,489.59	1,446.80	42.79	34.810	
11,500.00	9,500.00	12,924.99	10,914.27	45.40	43.23	161.90	-2,254.28	-317.44	1,490.08	1,445.62	44.46	33.514	
11,600.00	9,500.00	13,041.75	10,913.18	47.03	45.11	162.00	-2,370.96	-313.36	1,488.34	1,442.29	46.05	32.319	
11,700.00	9,500.00	13,127.00	10,911.42	48.67	46.48	162.05	-2,456.15	-310.78	1,485.83	1,438.34	47.49	31.288	
11,800.00	9,500.00	13,221.00	10,910.93	50.32	47.94	162.12	-2,550.10	-307.99	1,484.67	1,435.70	48.97	30.321	
11,812.39	9,500.00	13,221.00	10,910.93	50.53	47.94	162.12	-2,550.10	-307.99	1,484.62	1,435.54	49.08	30.249	
11,900.00	9,500.00	13,303.42	10,911.97	51.98	49.22	162.20	-2,632.48	-305.66	1,485.11	1,434.74	50.37	29.485	
12,000.00	9,500.00	13,416.89	10,912.39	53.66	51.07	162.26	-2,745.92	-303.17	1,485.03	1,433.02	52.01	28.554	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



TDS
Anticollision Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Lea Unit #44H - Lea Unit #44H - OH - OH													Offset Site Error: 0.00 usft	
Survey Program: 100-ISCWSA-GYRO-3 10268-MWD													Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Distance		Minimum Separation		Separation Factor		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
12,100.00	9,500.00	13,519.08	10,912.00	55.34	52.74	162.29	-2,848.10	-301.53	1,484.41	1,430.80	53.61	27.688		
12,200.00	9,500.00	13,618.49	10,911.60	57.04	54.35	162.31	-2,947.49	-299.89	1,483.77	1,428.57	55.20	26.880		
12,300.00	9,500.00	13,718.94	10,911.39	58.74	55.97	162.37	-3,047.92	-297.60	1,483.11	1,426.33	56.78	26.122		
12,400.00	9,500.00	13,813.88	10,911.47	60.45	57.51	162.45	-3,142.81	-294.69	1,482.51	1,424.22	58.29	25.432		
12,432.07	9,500.00	13,841.19	10,911.52	61.00	57.95	162.46	-3,170.12	-294.18	1,482.46	1,423.69	58.77	25.224		
12,500.00	9,500.00	13,906.58	10,911.58	62.17	59.01	162.45	-3,235.51	-294.02	1,482.63	1,422.75	59.88	24.761		
12,600.00	9,500.00	14,024.76	10,910.50	63.89	60.98	162.37	-3,353.68	-294.74	1,482.18	1,420.45	61.73	24.010		
12,700.00	9,500.00	14,115.47	10,908.95	65.62	62.49	162.30	-3,444.37	-295.57	1,481.10	1,417.70	63.40	23.360		
12,724.85	9,500.00	14,134.02	10,908.79	66.05	62.79	162.28	-3,462.82	-295.79	1,481.05	1,417.26	63.79	23.219		
12,800.00	9,500.00	14,207.93	10,908.57	67.35	63.99	162.22	-3,536.82	-296.78	1,481.31	1,416.22	65.09	22.758		
12,855.71	9,500.00	14,273.80	10,907.97	68.50	65.06	162.16	-3,602.68	-297.61	1,481.16	1,414.91	66.25	22.357		
12,900.00	9,500.00	14,295.92	10,907.94	69.09	65.42	162.15	-3,624.80	-297.88	1,481.33	1,414.57	66.75	22.191		
13,000.00	9,500.00	14,373.48	10,909.18	70.84	66.70	162.10	-3,702.34	-298.85	1,483.36	1,415.05	68.30	21.717		
13,100.00	9,500.00	14,488.86	10,909.88	72.58	68.60	162.00	-3,817.71	-300.89	1,484.65	1,414.42	70.22	21.142		
13,200.00	9,500.00	14,589.08	10,911.17	74.34	70.27	161.96	-3,917.91	-301.80	1,486.39	1,414.42	71.97	20.652		
13,300.00	9,500.00	14,682.27	10,911.80	76.09	71.82	161.91	-4,011.09	-302.55	1,487.56	1,413.88	73.68	20.191		
13,400.00	9,500.00	14,773.86	10,913.79	77.85	73.34	161.89	-4,102.66	-303.10	1,490.02	1,414.69	75.34	19.778		
13,500.00	9,500.00	14,905.29	10,915.00	79.62	75.58	161.81	-4,234.07	-304.47	1,491.50	1,414.12	77.39	19.273		
13,600.00	9,500.00	14,987.50	10,915.15	81.38	76.97	161.77	-4,316.27	-305.18	1,492.23	1,413.20	79.03	18.881		
13,700.00	9,500.00	15,089.20	10,916.80	83.15	78.68	161.77	-4,417.96	-304.71	1,493.88	1,413.13	80.75	18.500		
13,800.00	9,500.00	15,206.34	10,917.58	84.92	80.70	161.76	-4,535.09	-304.47	1,494.69	1,412.06	82.63	18.089		
13,900.00	9,500.00	15,322.54	10,916.56	86.70	82.71	161.70	-4,651.29	-304.81	1,494.17	1,409.61	84.56	17.669		
14,000.00	9,500.00	15,428.54	10,915.85	88.47	84.53	161.73	-4,757.28	-303.04	1,493.27	1,406.97	86.30	17.304		
14,100.00	9,500.00	15,556.01	10,913.47	90.25	86.73	161.75	-4,884.70	-300.60	1,491.16	1,402.99	88.17	16.912		
14,200.00	9,500.00	15,631.32	10,911.51	92.03	88.01	161.74	-4,959.97	-299.52	1,488.58	1,398.82	89.76	16.585		
14,260.50	9,500.00	15,670.00	10,911.34	93.11	88.66	161.76	-4,998.64	-298.78	1,488.12	1,397.49	90.63	16.421		
14,300.00	9,500.00	15,695.09	10,911.55	93.82	89.07	161.77	-5,023.72	-298.28	1,488.30	1,397.13	91.17	16.324		
14,400.00	9,500.00	15,764.00	10,913.47	95.60	90.18	161.81	-5,092.60	-297.22	1,490.59	1,398.02	92.57	16.103		
14,500.00	9,500.00	15,867.19	10,917.20	97.39	91.91	161.86	-5,195.72	-296.26	1,493.99	1,399.75	94.24	15.853		
14,600.00	9,500.00	15,985.54	10,919.08	99.18	93.96	161.85	-5,314.05	-296.27	1,495.66	1,399.50	96.16	15.554		
14,700.00	9,500.00	16,076.59	10,920.87	100.96	95.48	161.83	-5,405.07	-296.74	1,497.90	1,400.04	97.86	15.307		
14,800.00	9,500.00	16,206.89	10,921.56	102.76	97.72	161.75	-5,535.36	-298.12	1,498.95	1,398.97	99.98	14.993		
14,843.14	9,500.00	16,250.02	10,921.33	103.53	98.47	161.71	-5,578.49	-298.72	1,499.03	1,398.23	100.80	14.872		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Lea Unit #45H - Lea Unit #45H - OH - Plan #2												Offset Site Error:	0.00 usft
Survey Program: O-MWD												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.00	0.00	0.00	0.00	0.00	0.00	-90.46	-0.40	-50.20	50.21				
100.00	100.00	99.00	99.00	0.09	0.09	-90.46	-0.40	-50.20	50.20	50.02	0.18	273.747	
200.00	200.00	199.00	199.00	0.32	0.31	-90.46	-0.40	-50.20	50.20	49.57	0.63	79.484	
300.00	300.00	299.00	299.00	0.54	0.54	-90.46	-0.40	-50.20	50.20	49.12	1.08	46.435	
400.00	400.00	399.00	399.00	0.77	0.76	-90.46	-0.40	-50.20	50.20	48.67	1.53	32.797	
500.00	500.00	499.00	499.00	0.99	0.99	-90.46	-0.40	-50.20	50.20	48.22	1.98	25.352	
600.00	600.00	599.00	599.00	1.22	1.21	-90.46	-0.40	-50.20	50.20	47.77	2.43	20.661	
700.00	700.00	699.00	699.00	1.44	1.44	-90.46	-0.40	-50.20	50.20	47.32	2.88	17.436	
800.00	800.00	799.00	799.00	1.67	1.66	-90.46	-0.40	-50.20	50.20	46.87	3.33	15.081	
900.00	900.00	899.00	899.00	1.89	1.89	-90.46	-0.40	-50.20	50.20	46.42	3.78	13.287	
1,000.00	1,000.00	999.00	999.00	2.12	2.11	-90.46	-0.40	-50.20	50.20	45.97	4.23	11.874	
1,100.00	1,100.00	1,099.00	1,099.00	2.34	2.34	-90.46	-0.40	-50.20	50.20	45.52	4.68	10.733	
1,200.00	1,200.00	1,199.00	1,199.00	2.56	2.56	-90.46	-0.40	-50.20	50.20	45.07	5.13	9.792	
1,300.00	1,300.00	1,299.00	1,299.00	2.79	2.79	-90.46	-0.40	-50.20	50.20	44.63	5.58	9.002	
1,400.00	1,400.00	1,399.00	1,399.00	3.01	3.01	-90.46	-0.40	-50.20	50.20	44.18	6.03	8.331	
1,500.00	1,500.00	1,499.00	1,499.00	3.24	3.24	-90.46	-0.40	-50.20	50.20	43.73	6.48	7.753	
1,600.00	1,600.00	1,599.00	1,599.00	3.46	3.46	-90.46	-0.40	-50.20	50.20	43.28	6.93	7.249	
1,700.00	1,700.00	1,699.00	1,699.00	3.69	3.69	-90.46	-0.40	-50.20	50.20	42.83	7.37	6.807	
1,800.00	1,800.00	1,799.00	1,799.00	3.91	3.91	-90.46	-0.40	-50.20	50.20	42.38	7.82	6.416	
1,900.00	1,900.00	1,899.00	1,899.00	4.14	4.14	-90.46	-0.40	-50.20	50.20	41.93	8.27	6.068	
2,000.00	2,000.00	1,999.00	1,999.00	4.36	4.36	-90.46	-0.40	-50.20	50.20	41.48	8.72	5.755	
2,100.00	2,100.00	2,099.00	2,099.00	4.59	4.59	-90.46	-0.40	-50.20	50.20	41.03	9.17	5.473	
2,200.00	2,200.00	2,199.00	2,199.00	4.81	4.81	-90.46	-0.40	-50.20	50.20	40.58	9.62	5.217	
2,300.00	2,300.00	2,299.00	2,299.00	5.04	5.03	-90.46	-0.40	-50.20	50.20	40.13	10.07	4.984	
2,400.00	2,400.00	2,399.00	2,399.00	5.26	5.26	-90.46	-0.40	-50.20	50.20	39.68	10.52	4.771	
2,500.00	2,500.00	2,499.00	2,499.00	5.49	5.48	-90.46	-0.40	-50.20	50.20	39.23	10.97	4.576	
2,600.00	2,600.00	2,599.00	2,599.00	5.71	5.71	-90.46	-0.40	-50.20	50.20	38.78	11.42	4.396	
2,700.00	2,700.00	2,699.00	2,699.00	5.94	5.93	-90.46	-0.40	-50.20	50.20	38.33	11.87	4.229	
2,800.00	2,800.00	2,799.00	2,799.00	6.16	6.16	-90.46	-0.40	-50.20	50.20	37.88	12.32	4.075	
2,900.00	2,900.00	2,899.00	2,899.00	6.39	6.38	-90.46	-0.40	-50.20	50.20	37.43	12.77	3.932	
3,000.00	3,000.00	2,999.00	2,999.00	6.61	6.61	-90.46	-0.40	-50.20	50.20	36.98	13.22	3.798	
3,100.00	3,100.00	3,099.00	3,099.00	6.84	6.83	-90.46	-0.40	-50.20	50.20	36.53	13.67	3.673	
3,200.00	3,200.00	3,199.00	3,199.00	7.06	7.06	-90.46	-0.40	-50.20	50.20	36.08	14.12	3.556	
3,300.00	3,300.00	3,299.00	3,299.00	7.28	7.28	-90.46	-0.40	-50.20	50.20	35.63	14.57	3.446	
3,400.00	3,400.00	3,399.00	3,399.00	7.51	7.51	-90.46	-0.40	-50.20	50.20	35.18	15.02	3.343	
3,500.00	3,500.00	3,499.00	3,499.00	7.73	7.73	-90.46	-0.40	-50.20	50.20	34.74	15.47	3.246	
3,600.00	3,600.00	3,599.00	3,599.00	7.96	7.96	-90.46	-0.40	-50.20	50.20	34.29	15.92	3.154	
3,700.00	3,700.00	3,699.00	3,699.00	8.18	8.18	-90.46	-0.40	-50.20	50.20	33.84	16.37	3.068	
3,800.00	3,800.00	3,799.00	3,799.00	8.41	8.41	-90.46	-0.40	-50.20	50.20	33.39	16.81	2.986	
3,900.00	3,900.00	3,899.00	3,899.00	8.63	8.63	-90.46	-0.40	-50.20	50.20	32.94	17.26	2.908	
4,000.00	4,000.00	3,999.00	3,999.00	8.86	8.86	-90.46	-0.40	-50.20	50.20	32.49	17.71	2.834	
4,100.00	4,100.00	4,099.00	4,099.00	9.08	9.08	-90.46	-0.40	-50.20	50.20	32.04	18.16	2.764	
4,200.00	4,200.00	4,199.00	4,199.00	9.31	9.31	-90.46	-0.40	-50.20	50.20	31.59	18.61	2.697	
4,300.00	4,300.00	4,299.00	4,299.00	9.53	9.53	-90.46	-0.40	-50.20	50.20	31.14	19.06	2.634	
4,400.00	4,400.00	4,399.00	4,399.00	9.76	9.75	-90.46	-0.40	-50.20	50.20	30.69	19.51	2.573	
4,500.00	4,500.00	4,499.00	4,499.00	9.98	9.98	-90.46	-0.40	-50.20	50.20	30.24	19.96	2.515	
4,600.00	4,600.00	4,599.00	4,599.00	10.21	10.20	-90.46	-0.40	-50.20	50.20	29.79	20.41	2.460	
4,700.00	4,700.00	4,699.00	4,699.00	10.43	10.43	-90.46	-0.40	-50.20	50.20	29.34	20.86	2.407	
4,800.00	4,800.00	4,799.00	4,799.00	10.66	10.65	-90.46	-0.40	-50.20	50.20	28.89	21.31	2.356	
4,900.00	4,900.00	4,899.00	4,899.00	10.88	10.88	-90.46	-0.40	-50.20	50.20	28.44	21.76	2.307	
5,000.00	5,000.00	4,999.00	4,999.00	11.11	11.10	-90.46	-0.40	-50.20	50.20	27.99	22.21	2.260	
5,100.00	5,100.00	5,099.00	5,099.00	11.33	11.33	-90.46	-0.40	-50.20	50.20	27.54	22.66	2.216	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



TDS
Anticollision Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User.Db
Reference Design:	Plan #2	Offset-TVD Reference:	Offset Datum

Offset Design: Lea Unit #45H - Lea Unit #45H - OH - Plan #2												Offset Site Error:	0.00 usft
Survey Program: 0-MWD												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)					
5,200.00	5,200.00	5,199.00	5,199.00	11.56	11.55	-90.46	-0.40	-50.20	50.20	27.09	23.11	2.172	
5,300.00	5,300.00	5,299.00	5,299.00	11.78	11.78	-90.46	-0.40	-50.20	50.20	26.64	23.56	2.131	
5,400.00	5,400.00	5,399.00	5,399.00	12.00	12.00	-90.46	-0.40	-50.20	50.20	26.19	24.01	2.091	
5,500.00	5,500.00	5,499.00	5,499.00	12.23	12.23	-90.46	-0.40	-50.20	50.20	25.74	24.46	2.053	
5,600.00	5,600.00	5,599.00	5,599.00	12.45	12.45	-90.46	-0.40	-50.20	50.20	25.30	24.91	2.016	
5,700.00	5,700.00	5,699.00	5,699.00	12.68	12.68	-90.46	-0.40	-50.20	50.20	24.85	25.36	1.980	
5,800.00	5,800.00	5,799.00	5,799.00	12.90	12.90	-90.46	-0.40	-50.20	50.20	24.40	25.81	1.945	
5,900.00	5,900.00	5,899.00	5,899.00	13.13	13.13	-90.46	-0.40	-50.20	50.20	23.95	26.25	1.912	
6,000.00	6,000.00	5,999.00	5,999.00	13.35	13.35	-90.46	-0.40	-50.20	50.20	23.50	26.70	1.880	
6,100.00	6,100.00	6,099.00	6,099.00	13.58	13.58	-90.46	-0.40	-50.20	50.20	23.05	27.15	1.849	
6,200.00	6,200.00	6,199.00	6,199.00	13.80	13.80	-90.46	-0.40	-50.20	50.20	22.60	27.60	1.819	
6,300.00	6,300.00	6,299.00	6,299.00	14.03	14.03	-90.46	-0.40	-50.20	50.20	22.15	28.05	1.790	
6,400.00	6,400.00	6,399.00	6,399.00	14.25	14.25	-90.46	-0.40	-50.20	50.20	21.70	28.50	1.761	
6,500.00	6,500.00	6,499.00	6,499.00	14.48	14.47	-90.46	-0.40	-50.20	50.20	21.25	28.95	1.734	
6,600.00	6,600.00	6,599.00	6,599.00	14.70	14.70	-90.46	-0.40	-50.20	50.20	20.80	29.40	1.707	
6,700.00	6,700.00	6,699.00	6,699.00	14.93	14.92	-90.46	-0.40	-50.20	50.20	20.35	29.85	1.682	
6,800.00	6,800.00	6,799.00	6,799.00	15.15	15.15	-90.46	-0.40	-50.20	50.20	19.90	30.30	1.657	
6,900.00	6,900.00	6,899.00	6,899.00	15.38	15.37	-90.46	-0.40	-50.20	50.20	19.45	30.75	1.633	
7,000.00	7,000.00	6,999.00	6,999.00	15.60	15.60	-90.46	-0.40	-50.20	50.20	19.00	31.20	1.609	
7,100.00	7,100.00	7,099.00	7,099.00	15.83	15.82	-90.46	-0.40	-50.20	50.20	18.55	31.65	1.586	
7,200.00	7,200.00	7,199.00	7,199.00	16.05	16.05	-90.46	-0.40	-50.20	50.20	18.10	32.10	1.564	
7,300.00	7,300.00	7,299.00	7,299.00	16.28	16.27	-90.46	-0.40	-50.20	50.20	17.65	32.55	1.542	
7,400.00	7,400.00	7,399.00	7,399.00	16.50	16.50	-90.46	-0.40	-50.20	50.20	17.20	33.00	1.521	
7,500.00	7,500.00	7,499.00	7,499.00	16.72	16.72	-90.46	-0.40	-50.20	50.20	16.75	33.45	1.501	
7,600.00	7,600.00	7,599.00	7,599.00	16.95	16.95	-90.46	-0.40	-50.20	50.20	16.30	33.90	1.481 Level 3	
7,700.00	7,700.00	7,699.00	7,699.00	17.17	17.17	-90.46	-0.40	-50.20	50.20	15.86	34.35	1.462 Level 3	
7,800.00	7,800.00	7,799.00	7,799.00	17.40	17.40	-90.46	-0.40	-50.20	50.20	15.41	34.80	1.443 Level 3	
7,900.00	7,900.00	7,899.00	7,899.00	17.62	17.62	-90.46	-0.40	-50.20	50.20	14.96	35.25	1.424 Level 3	
8,000.00	8,000.00	7,999.00	7,999.00	17.85	17.85	-90.46	-0.40	-50.20	50.20	14.51	35.70	1.406 Level 3	
8,100.00	8,100.00	8,099.00	8,099.00	18.07	18.07	-90.46	-0.40	-50.20	50.20	14.06	36.14	1.389 Level 3	
8,200.00	8,200.00	8,199.00	8,199.00	18.30	18.30	-90.46	-0.40	-50.20	50.20	13.61	36.59	1.372 Level 3	
8,300.00	8,300.00	8,299.00	8,299.00	18.52	18.52	-90.46	-0.40	-50.20	50.20	13.16	37.04	1.355 Level 3	
8,400.00	8,400.00	8,399.00	8,399.00	18.75	18.75	-90.46	-0.40	-50.20	50.20	12.71	37.49	1.339 Level 3	
8,500.00	8,500.00	8,499.00	8,499.00	18.97	18.97	-90.46	-0.40	-50.20	50.20	12.26	37.94	1.323 Level 3	
8,600.00	8,600.00	8,599.00	8,599.00	19.20	19.20	-90.46	-0.40	-50.20	50.20	11.81	38.39	1.308 Level 3	
8,700.00	8,700.00	8,699.00	8,699.00	19.42	19.42	-90.46	-0.40	-50.20	50.20	11.36	38.84	1.292 Level 3	
8,800.00	8,800.00	8,799.00	8,799.00	19.65	19.64	-90.46	-0.40	-50.20	50.20	10.91	39.29	1.278 Level 3	
8,900.00	8,900.00	8,899.00	8,899.00	19.87	19.87	-90.46	-0.40	-50.20	50.20	10.46	39.74	1.263 Level 3	
8,927.04	8,927.04	8,926.04	8,926.04	19.93	19.93	-90.46	-0.40	-50.20	50.20	10.34	39.86	1.259 Level 3, CC	
8,950.00	8,949.99	8,948.99	8,948.99	19.98	19.98	100.45	-0.40	-50.20	50.28	10.32	39.96	1.258 Level 3, ES, SF	
9,000.00	8,999.80	8,998.80	8,998.80	20.06	20.09	104.95	-0.40	-50.20	51.21	11.06	40.15	1.275 Level 3	
9,050.00	9,049.06	9,048.06	9,048.06	20.15	20.20	113.32	-0.40	-50.20	54.04	13.70	40.34	1.340 Level 3	
9,100.00	9,097.39	9,096.39	9,096.39	20.23	20.31	123.73	-0.40	-50.20	60.34	19.81	40.53	1.489 Level 3	
9,150.00	9,144.42	9,143.42	9,143.42	20.32	20.42	133.94	-0.40	-50.20	71.40	30.68	40.72	1.753	
9,200.00	9,189.79	9,188.79	9,188.79	20.40	20.52	142.48	-0.40	-50.20	87.73	46.83	40.91	2.145	
9,250.00	9,233.17	9,232.17	9,232.17	20.49	20.62	148.99	-0.40	-50.20	109.15	68.07	41.08	2.657	
9,300.00	9,274.21	9,273.21	9,273.21	20.59	20.71	153.71	-0.40	-50.20	135.20	93.94	41.25	3.277	
9,350.00	9,312.62	9,311.62	9,311.62	20.71	20.80	157.04	-0.40	-50.20	165.39	123.98	41.41	3.994	
9,400.00	9,348.09	9,347.09	9,347.09	20.85	20.88	159.31	-0.40	-50.20	199.27	157.71	41.56	4.795	
9,450.00	9,380.35	9,379.35	9,379.35	21.02	20.95	160.73	-0.40	-50.20	236.44	194.75	41.69	5.671	
9,500.00	9,409.17	9,408.17	9,408.17	21.21	21.01	161.41	-0.40	-50.20	276.51	234.70	41.81	6.614	
9,550.00	9,434.31	9,433.31	9,433.31	21.44	21.07	161.36	-0.40	-50.20	319.11	277.20	41.91	7.613	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



TDS
Anticollision Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User.Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Lea Unit #45H - Lea Unit #45H - OH - Plan #2														Offset Site Error:	0.00 usft
Survey Program 0-MWD														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/S (usft)	Offset Wellbore Centre +E/W (usft)							
9,600.00	9,455.60	9,454.60	9,454.60	21.70	21.12	160.44	-0.40	-50.20	363.86	321.86	42.00	8.663			
9,650.00	9,472.86	9,471.86	9,471.86	21.99	21.16	158.24	-0.40	-50.20	410.38	368.31	42.07	9.754			
9,700.00	9,485.97	9,484.97	9,484.97	22.32	21.19	153.73	-0.40	-50.20	458.30	416.17	42.13	10.879			
9,750.00	9,494.83	9,493.83	9,493.83	22.68	21.21	143.85	-0.40	-50.20	507.23	465.07	42.16	12.030			
9,800.00	9,499.36	9,498.36	9,498.36	23.07	21.22	117.88	-0.40	-50.20	556.80	514.61	42.18	13.199			
9,827.04	9,500.00	9,499.00	9,499.00	23.30	21.22	90.00	-0.40	-50.20	583.72	541.53	42.19	13.836			
9,900.00	9,500.00	9,499.00	9,499.00	23.91	21.22	90.00	-0.40	-50.20	656.33	614.13	42.20	15.554			
10,000.00	9,500.00	10,691.91	10,200.00	24.81	25.80	162.38	-736.61	-96.52	735.75	711.62	24.13	30.493			
10,100.00	9,500.00	10,791.74	10,200.00	25.79	26.74	161.91	-836.43	-95.73	737.50	712.26	25.24	29.224			
10,158.68	9,500.00	10,850.41	10,200.00	26.40	27.33	161.83	-895.10	-95.27	737.78	711.92	25.85	28.540			
10,200.00	9,500.00	10,891.73	10,200.00	26.85	27.76	161.83	-936.42	-94.94	737.77	711.50	26.27	28.081			
10,300.00	9,500.00	10,991.73	10,200.00	28.00	28.86	161.83	-1,036.42	-94.16	737.77	710.41	27.36	26.963			
10,400.00	9,500.00	11,091.73	10,200.00	29.21	30.04	161.83	-1,136.41	-93.37	737.77	709.25	28.52	25.865			
10,500.00	9,500.00	11,191.73	10,200.00	30.49	31.27	161.83	-1,236.41	-92.58	737.77	708.02	29.75	24.799			
10,600.00	9,500.00	11,291.73	10,200.00	31.82	32.57	161.83	-1,336.41	-91.79	737.77	706.74	31.03	23.775			
10,700.00	9,500.00	11,391.73	10,200.00	33.20	33.91	161.83	-1,436.40	-91.00	737.77	705.41	32.36	22.797			
10,800.00	9,500.00	11,491.73	10,200.00	34.62	35.30	161.83	-1,536.40	-90.21	737.77	704.03	33.74	21.867			
10,900.00	9,500.00	11,591.73	10,200.00	36.08	36.72	161.83	-1,636.40	-89.42	737.77	702.62	35.15	20.988			
11,000.00	9,500.00	11,691.73	10,200.00	37.57	38.18	161.83	-1,736.39	-88.63	737.77	701.17	36.60	20.158			
11,100.00	9,500.00	11,791.73	10,200.00	39.09	39.68	161.84	-1,836.39	-87.84	737.77	699.69	38.08	19.375			
11,200.00	9,500.00	11,891.73	10,200.00	40.64	41.20	161.84	-1,936.39	-87.05	737.77	698.18	39.58	18.639			
11,300.00	9,500.00	11,991.73	10,200.00	42.21	42.74	161.84	-2,036.38	-86.26	737.77	696.65	41.11	17.945			
11,400.00	9,500.00	12,091.73	10,200.00	43.80	44.30	161.84	-2,136.38	-85.47	737.77	695.10	42.66	17.293			
11,500.00	9,500.00	12,191.73	10,200.00	45.40	45.89	161.84	-2,236.38	-84.69	737.76	693.53	44.23	16.680			
11,600.00	9,500.00	12,291.73	10,200.00	47.03	47.49	161.84	-2,336.37	-83.90	737.76	691.95	45.82	16.102			
11,700.00	9,500.00	12,391.73	10,200.00	48.67	49.11	161.84	-2,436.37	-83.11	737.76	690.34	47.42	15.558			
11,800.00	9,500.00	12,491.73	10,200.00	50.32	50.75	161.84	-2,536.37	-82.32	737.76	688.73	49.04	15.045			
11,900.00	9,500.00	12,591.73	10,200.00	51.98	52.39	161.84	-2,636.37	-81.53	737.76	687.10	50.66	14.562			
12,000.00	9,500.00	12,691.73	10,200.00	53.66	54.05	161.84	-2,736.36	-80.74	737.76	685.46	52.30	14.105			
12,100.00	9,500.00	12,791.73	10,200.00	55.34	55.72	161.84	-2,836.36	-79.95	737.76	683.81	53.95	13.674			
12,200.00	9,500.00	12,891.73	10,200.00	57.04	57.40	161.84	-2,936.36	-79.16	737.76	682.15	55.61	13.266			
12,300.00	9,500.00	12,991.73	10,200.00	58.74	59.09	161.84	-3,036.35	-78.37	737.76	680.48	57.28	12.879			
12,400.00	9,500.00	13,091.73	10,200.00	60.45	60.79	161.84	-3,136.35	-77.58	737.76	678.80	58.96	12.513			
12,500.00	9,500.00	13,191.73	10,200.00	62.17	62.49	161.84	-3,236.35	-76.79	737.76	677.12	60.64	12.166			
12,600.00	9,500.00	13,291.73	10,200.00	63.89	64.20	161.84	-3,336.34	-76.00	737.76	675.42	62.33	11.836			
12,700.00	9,500.00	13,391.73	10,200.00	65.62	65.92	161.84	-3,436.34	-75.21	737.76	673.73	64.03	11.522			
12,800.00	9,500.00	13,491.73	10,200.00	67.35	67.64	161.84	-3,536.34	-74.43	737.75	672.02	65.73	11.224			
12,900.00	9,500.00	13,591.73	10,200.00	69.09	69.37	161.84	-3,636.33	-73.64	737.75	670.32	67.44	10.940			
13,000.00	9,500.00	13,691.73	10,200.00	70.84	71.11	161.84	-3,736.33	-72.85	737.75	668.60	69.15	10.669			
13,100.00	9,500.00	13,791.73	10,200.00	72.58	72.85	161.84	-3,836.33	-72.06	737.75	666.89	70.87	10.411			
13,200.00	9,500.00	13,891.73	10,200.00	74.34	74.59	161.84	-3,936.32	-71.27	737.75	665.17	72.59	10.164			
13,300.00	9,500.00	13,991.73	10,200.00	76.09	76.34	161.84	-4,036.32	-70.48	737.75	663.44	74.31	9.928			
13,400.00	9,500.00	14,091.73	10,200.00	77.85	78.09	161.84	-4,136.32	-69.69	737.75	661.71	76.04	9.702			
13,500.00	9,500.00	14,191.73	10,200.00	79.62	79.85	161.84	-4,236.32	-68.90	737.75	659.98	77.77	9.486			
13,600.00	9,500.00	14,291.73	10,200.00	81.38	81.60	161.84	-4,336.31	-68.11	737.75	658.24	79.50	9.279			
13,700.00	9,500.00	14,391.73	10,200.00	83.15	83.37	161.84	-4,436.31	-67.32	737.75	656.51	81.24	9.081			
13,800.00	9,500.00	14,491.73	10,200.00	84.92	85.13	161.84	-4,536.31	-66.53	737.75	654.76	82.98	8.890			
13,900.00	9,500.00	14,591.73	10,200.00	86.70	86.90	161.84	-4,636.30	-65.74	737.75	653.02	84.73	8.708			
14,000.00	9,500.00	14,691.73	10,200.00	88.47	88.67	161.84	-4,736.30	-64.96	737.75	651.28	86.47	8.532			
14,100.00	9,500.00	14,791.73	10,200.00	90.25	90.44	161.84	-4,836.30	-64.17	737.74	649.53	88.22	8.363			
14,200.00	9,500.00	14,891.73	10,200.00	92.03	92.22	161.84	-4,936.29	-63.38	737.74	647.78	89.97	8.200			
14,300.00	9,500.00	14,991.73	10,200.00	93.82	93.99	161.84	-5,036.29	-62.59	737.74	646.02	91.72	8.043			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



TDS
Anticollision Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County NM (NAD:27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User.Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Lea Unit #45H - Lea Unit #45H - OH - Plan #2													Offset Site Error: 0.00 usft	
Survey Program: 0-MWD													Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
14,400.00	9,500.00	15,091.73	10,200.00	95.60	95.77	161.84	-5,136.29	-61.80	737.74	644.27	93.47	7.893		
14,500.00	9,500.00	15,191.73	10,200.00	97.39	97.55	161.84	-5,236.28	-61.01	737.74	642.51	95.23	7.747		
14,600.00	9,500.00	15,291.73	10,200.00	99.18	99.34	161.84	-5,336.28	-60.22	737.74	640.75	96.99	7.607		
14,700.00	9,500.00	15,391.73	10,200.00	100.96	101.12	161.84	-5,436.28	-59.43	737.74	639.00	98.75	7.471		
14,800.00	9,500.00	15,491.73	10,200.00	102.76	102.91	161.84	-5,536.28	-58.64	737.74	637.23	100.51	7.340		
14,843.14	9,500.00	15,534.87	10,200.00	103.53	103.68	161.84	-5,579.41	-58.30	737.74	636.47	101.27	7.285		

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User.Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB @ 3692.00usft (McVay 4)

Offset Depths are relative to Offset Datum

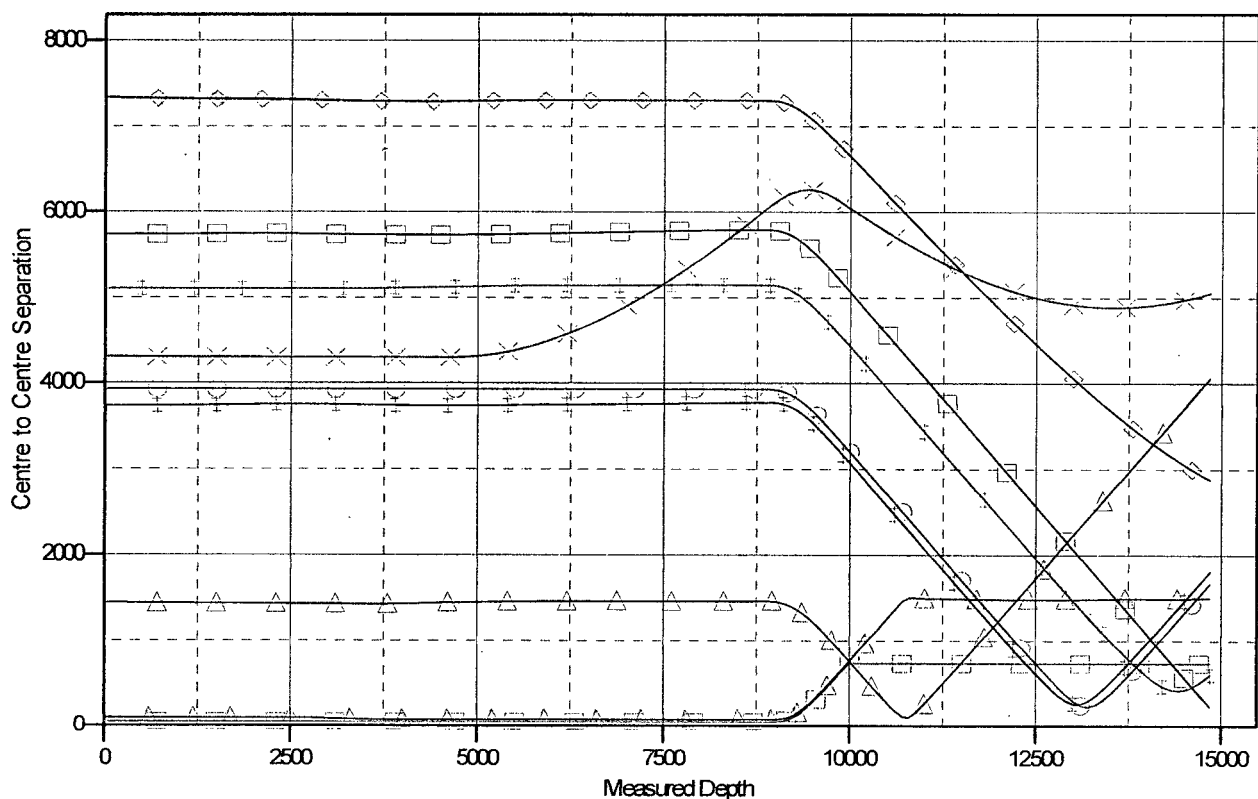
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: Lea Unit #46H

Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30

Grid Convergence at Surface is: 0.44°

Ladder Plot



LEGEND

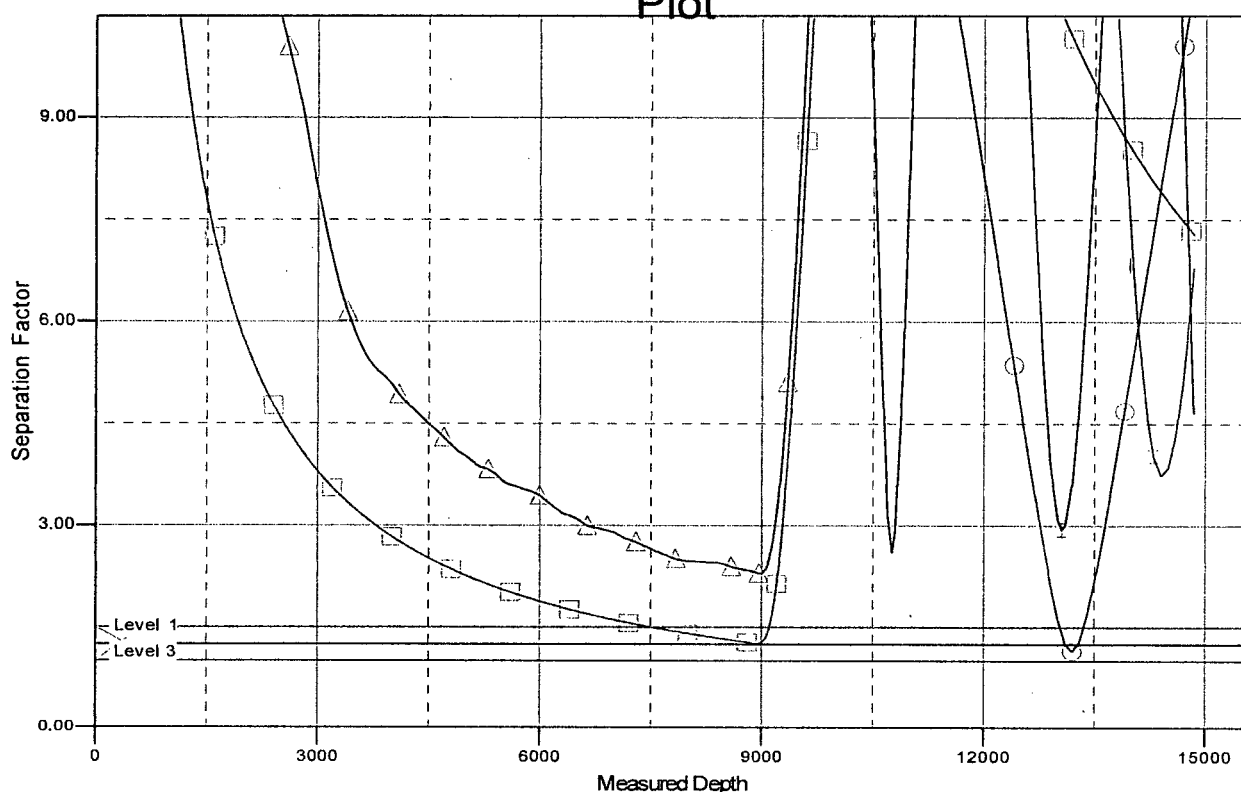
- | | | |
|--------------------------------|-------------------|------------------|
| ▲ Lea Unit#44H, OH, OHV0 | ◆ #20, OH, OHV0 | ■ #30H, OH, OHV0 |
| ■ Lea Unit#45H, OH, Plan #2 V0 | ◆ #16, OH, OHV0 | ▲ #21, OH, OHV0 |
| ● #1, OH, OHV0 | ✕ SWD#2, OH, OHV0 | ◆ #24, OH, OHV0 |

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #46H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3692.00usft (McVay 4)
Reference Site:	Lea Unit #46H	MD Reference:	KB @ 3692.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #46H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User.Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB @ 3692.00usft (McVay 4)
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: Lea Unit #46H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.44°

Separation Factor Plot



LEGEND

▲ Lea Unit#44H, OH, OHV0	◆ #20, OH, OHV0	■ #30H, OH, OHV0
□ Lea Unit#45H, OH, Plan #2 V0	● #16, OH, OHV0	▲ #21, OH, OHV0
○ #1, OH, OHV0	✕ SWD #2, OH, OHV0	● #24, OH, OHV0