



HOBBS 007

APR 04 2016

RECEIVED

Legacy Reserves

Lea County, NM (NAD-27 2015)

Lea Unit #48H

Lea Unit #48H

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:	Site Lea Unit #48H
Company:	Legacy Reserves	TVD Reference:	KB @ 3694.00usft (McVay 4)
Project:	Lea County, NM (NAD-27 2015)	MD Reference:	KB @ 3694.00usft (McVay 4)
Site:	Lea Unit #48H	North Reference:	Grid
Well:	Lea Unit #48H	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 #48H		
Site Position:		Northing:	581,680.30 usft
From:	Map	Easting:	752,101.40 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in
		Latitude:	32° 35' 47.319 N
		Longitude:	103° 30' 53.127 W
		Grid Convergence:	0.44 °

Well	Lea Unit #48H		
Well Position	+N/-S	0.00 usft	Northing: 581,680.30 usft
	+E/-W	0.00 usft	Easting: 752,101.40 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	32° 35' 47.319 N
		Longitude:	103° 30' 53.127 W
		Ground Level:	3,676.00 usft

Wellbore	OH		
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	7/18/2015	7.16	60.44	48,362

Design	Plan #2		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.00	0.00	0.00
			Direction (°) 179.27

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
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	177.00	9,500.00	-572.17	29.99	10.00	10.00	0.00	177.00	
9,911.96	90.00	179.55	9,500.00	-657.05	32.54	3.00	0.00	3.00	90.00	
14,832.67	90.00	179.55	9,500.00	-5,577.60	71.40	0.00	0.00	0.00	0.00	BHL (LU #48H/OH)



TDS
Planning Report



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Project:	Lea County NM (NAD-27 2015)	MD Reference:	KB @ 3694.00usft (McVay 4)
Site:	Lea Unit #48H	North Reference:	Grid
Well:	Lea Unit #48H	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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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)
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	177.00	8,949.99	-0.46	0.02	0.46	10.00	10.00	0.00
9,000.00	7.30	177.00	8,999.80	-4.63	0.24	4.64	10.00	10.00	0.00
9,050.00	12.30	177.00	9,049.06	-13.13	0.69	13.13	10.00	10.00	0.00
9,100.00	17.30	177.00	9,097.39	-25.87	1.36	25.89	10.00	10.00	0.00
9,150.00	22.30	177.00	9,144.42	-42.78	2.24	42.80	10.00	10.00	0.00
9,200.00	27.30	177.00	9,189.79	-63.71	3.34	63.75	10.00	10.00	0.00
9,250.00	32.30	177.00	9,233.17	-88.52	4.64	88.57	10.00	10.00	0.00
9,300.00	37.30	177.00	9,274.21	-117.00	6.13	117.07	10.00	10.00	0.00
9,350.00	42.30	177.00	9,312.62	-148.95	7.81	149.04	10.00	10.00	0.00
9,400.00	47.30	177.00	9,348.09	-184.12	9.65	184.23	10.00	10.00	0.00
9,450.00	52.30	177.00	9,380.35	-222.24	11.65	222.37	10.00	10.00	0.00
9,500.00	57.30	177.00	9,409.17	-263.03	13.78	263.18	10.00	10.00	0.00
9,550.00	62.30	177.00	9,434.31	-306.17	16.05	306.35	10.00	10.00	0.00
9,600.00	67.30	177.00	9,455.60	-351.33	18.41	351.54	10.00	10.00	0.00
9,650.00	72.30	177.00	9,472.86	-398.18	20.87	398.41	10.00	10.00	0.00



TDS
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Project:	Lea County, NM (NAD-27 2015)	MD Reference:	KB @ 3694.00usft (McVay 4)
Site:	Lea Unit #48H	North Reference:	Grid
Well:	Lea Unit #48H	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	177.00	9,485.97	-446.34	23.39	446.61	10.00	10.00	0.00
9,750.00	82.30	177.00	9,494.83	-495.47	25.97	495.76	10.00	10.00	0.00
9,800.00	87.30	177.00	9,499.36	-545.18	28.57	545.50	10.00	10.00	0.00
9,827.04	90.00	177.00	9,500.00	-572.17	29.99	572.51	10.00	10.00	0.00
EOC/TURN - Start DLS 3.00 TFO 90.00									
9,900.00	90.00	179.19	9,500.00	-645.09	32.41	645.45	3.00	0.00	3.00
9,911.96	90.00	179.55	9,500.00	-657.05	32.54	657.41	3.00	0.00	3.00
END TURN - Start 4920.71 hold at 9911.96 MD									
10,000.00	90.00	179.55	9,500.00	-745.08	33.24	745.45	0.00	0.00	0.00
10,100.00	90.00	179.55	9,500.00	-845.08	34.03	845.45	0.00	0.00	0.00
10,200.00	90.00	179.55	9,500.00	-945.08	34.82	945.45	0.00	0.00	0.00
10,300.00	90.00	179.55	9,500.00	-1,045.07	35.61	1,045.45	0.00	0.00	0.00
10,400.00	90.00	179.55	9,500.00	-1,145.07	36.40	1,145.44	0.00	0.00	0.00
10,500.00	90.00	179.55	9,500.00	-1,245.07	37.19	1,245.44	0.00	0.00	0.00
10,600.00	90.00	179.55	9,500.00	-1,345.07	37.98	1,345.44	0.00	0.00	0.00
10,700.00	90.00	179.55	9,500.00	-1,445.06	38.77	1,445.44	0.00	0.00	0.00
10,800.00	90.00	179.55	9,500.00	-1,545.06	39.56	1,545.44	0.00	0.00	0.00
10,900.00	90.00	179.55	9,500.00	-1,645.06	40.35	1,645.44	0.00	0.00	0.00
11,000.00	90.00	179.55	9,500.00	-1,745.05	41.14	1,745.44	0.00	0.00	0.00
11,100.00	90.00	179.55	9,500.00	-1,845.05	41.93	1,845.44	0.00	0.00	0.00
11,200.00	90.00	179.55	9,500.00	-1,945.05	42.72	1,945.43	0.00	0.00	0.00
11,300.00	90.00	179.55	9,500.00	-2,045.04	43.50	2,045.43	0.00	0.00	0.00
11,400.00	90.00	179.55	9,500.00	-2,145.04	44.29	2,145.43	0.00	0.00	0.00
11,500.00	90.00	179.55	9,500.00	-2,245.04	45.08	2,245.43	0.00	0.00	0.00
11,600.00	90.00	179.55	9,500.00	-2,345.03	45.87	2,345.43	0.00	0.00	0.00
11,700.00	90.00	179.55	9,500.00	-2,445.03	46.66	2,445.43	0.00	0.00	0.00
11,800.00	90.00	179.55	9,500.00	-2,545.03	47.45	2,545.43	0.00	0.00	0.00
11,900.00	90.00	179.55	9,500.00	-2,645.03	48.24	2,645.43	0.00	0.00	0.00
12,000.00	90.00	179.55	9,500.00	-2,745.02	49.03	2,745.42	0.00	0.00	0.00
12,100.00	90.00	179.55	9,500.00	-2,845.02	49.82	2,845.42	0.00	0.00	0.00
12,200.00	90.00	179.55	9,500.00	-2,945.02	50.61	2,945.42	0.00	0.00	0.00
12,300.00	90.00	179.55	9,500.00	-3,045.01	51.40	3,045.42	0.00	0.00	0.00
12,400.00	90.00	179.55	9,500.00	-3,145.01	52.19	3,145.42	0.00	0.00	0.00
12,500.00	90.00	179.55	9,500.00	-3,245.01	52.98	3,245.42	0.00	0.00	0.00
12,600.00	90.00	179.55	9,500.00	-3,345.00	53.77	3,345.42	0.00	0.00	0.00
12,700.00	90.00	179.55	9,500.00	-3,445.00	54.56	3,445.42	0.00	0.00	0.00
12,800.00	90.00	179.55	9,500.00	-3,545.00	55.35	3,545.42	0.00	0.00	0.00
12,900.00	90.00	179.55	9,500.00	-3,644.99	56.14	3,645.41	0.00	0.00	0.00
13,000.00	90.00	179.55	9,500.00	-3,744.99	56.93	3,745.41	0.00	0.00	0.00
13,100.00	90.00	179.55	9,500.00	-3,844.99	57.72	3,845.41	0.00	0.00	0.00
13,200.00	90.00	179.55	9,500.00	-3,944.98	58.51	3,945.41	0.00	0.00	0.00
13,300.00	90.00	179.55	9,500.00	-4,044.98	59.30	4,045.41	0.00	0.00	0.00
13,400.00	90.00	179.55	9,500.00	-4,144.98	60.09	4,145.41	0.00	0.00	0.00
13,500.00	90.00	179.55	9,500.00	-4,244.98	60.88	4,245.41	0.00	0.00	0.00
13,600.00	90.00	179.55	9,500.00	-4,344.97	61.67	4,345.41	0.00	0.00	0.00
13,700.00	90.00	179.55	9,500.00	-4,444.97	62.46	4,445.40	0.00	0.00	0.00
13,800.00	90.00	179.55	9,500.00	-4,544.97	63.25	4,545.40	0.00	0.00	0.00
13,900.00	90.00	179.55	9,500.00	-4,644.96	64.04	4,645.40	0.00	0.00	0.00
14,000.00	90.00	179.55	9,500.00	-4,744.96	64.82	4,745.40	0.00	0.00	0.00
14,100.00	90.00	179.55	9,500.00	-4,844.96	65.61	4,845.40	0.00	0.00	0.00
14,200.00	90.00	179.55	9,500.00	-4,944.95	66.40	4,945.40	0.00	0.00	0.00
14,300.00	90.00	179.55	9,500.00	-5,044.95	67.19	5,045.40	0.00	0.00	0.00
14,400.00	90.00	179.55	9,500.00	-5,144.95	67.98	5,145.40	0.00	0.00	0.00
14,500.00	90.00	179.55	9,500.00	-5,244.94	68.77	5,245.39	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Lea Unit #48H
Company:	Legacy Reserves	TVD Reference:	KB @ 3694.00usft (McVay 4)
Project:	Lea County: NM (NAD:27 2015)	MD Reference:	KB @ 3694.00usft (McVay 4)
Site:	Lea Unit #48H	North Reference:	Grid
Well:	Lea Unit #48H	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	-5,344.94	69.56	5,345.39	0.00	0.00	0.00
14,700.00	90.00	179.55	9,500.00	-5,444.94	70.35	5,445.39	0.00	0.00	0.00
14,800.00	90.00	179.55	9,500.00	-5,544.93	71.14	5,545.39	0.00	0.00	0.00
14,832.67	90.00	179.55	9,500.00	-5,577.60	71.40	5,578.06	0.00	0.00	0.00
TD at 14832.67									

Design Targets									
Target Name	hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude Longitude
#5		0.00	0.00	0.00	-3,918.87	1,156.02	577,761.43	753,257.42	32° 35' 8.454 N 103° 30' 39.969 W
- plan misses target center by 4085.82usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Circle (radius 150.00)									
#8		0.00	0.00	0.00	-1,430.50	1,137.03	580,249.80	753,238.43	32° 35' 33.077 N 103° 30' 39.966 W
- plan misses target center by 1827.34usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Circle (radius 150.00)									
EOC (LU #48H/OH Plan)		0.00	0.00	9,500.00	-572.17	29.99	581,108.13	752,131.38	32° 35' 41.655 N 103° 30' 52.828 W
- plan hits target center									
- Point									
BHL (LU #48H/OH)		0.00	179.55	9,500.00	-5,577.60	71.40	576,102.70	752,172.80	32° 34' 52.124 N 103° 30' 52.794 W
- plan hits target center									
- Rectangle (sides W100.00 H4,920.65 D30.00)									

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
8,927.04	8,927.04	0.00	0.00	KOP - Start Build 10.00
9,827.04	9,500.00	-572.17	29.99	EOC/TURN - Start DLS 3.00 TFO 90.00
9,911.96	9,500.00	-657.05	32.54	END TURN - Start 4920.71 hold at 9911.96 MD
14,832.67	9,500.00	-5,577.60	71.40	TD at 14832.67



HOBBS OCD

APR 04 2016

RECEIVED

Legacy Reserves

Lea County, NM (NAD-27 2015)

Lea Unit #48H

Lea Unit #48H

OH

Plan #2

Anticollision Report

04 February, 2016





TDS
Anticollision Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Site Lea Unit #48H
Project:	Lea County - NM (NAD-27-2015)	TVD Reference:	KB @ 3694.00usft (McVay 4)
Reference Site:	Lea Unit #48H	MD Reference:	KB @ 3694.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #48H	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	14,832.67	Plan #2 (OH)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance		Separation Factor	Warning
			Between Centres (usft)	Between Ellipses (usft)		
Offset Well - Wellbore - Design						
Lea Unit						
#2 - OH - OH	12,091.15	9,481.15	203.16	131.36	2.830	CC, ES
#2 - OH - OH	12,100.00	9,481.43	203.35	131.47	2.829	SF
#33H - OH - OH	14,832.67	9,473.82	532.02	434.60	5.461	CC, ES, SF
#7 - OH - OH	14,442.49	9,404.00	238.44	129.67	2.192	CC, ES, SF
SWD #2 - OH - OH	4,633.88	4,600.00	4,640.31	4,400.60	19.358	CC, ES
SWD #2 - OH - OH	4,700.00	4,600.00	4,640.78	4,400.95	19.350	SF
Lea Unit #47H						
Lea Unit #47H - OH - Plan #2	8,927.04	8,927.04	50.00	10.14	1.254	Level 3, CC
Lea Unit #47H - OH - Plan #2	8,950.00	8,949.99	50.02	10.06	1.252	Level 3, ES, SF

Offset Design												Lea Unit - #2 - 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									
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		
0.00	0.00	0.00	0.00	0.00	0.00	-176.61	-2,610.20	-154.40	2,614.82						
100.00	100.00	74.24	74.24	0.09	0.06	-176.62	-2,610.31	-154.36	2,614.88	2,614.74	0.15	N/A			
200.00	200.00	172.17	172.17	0.32	0.21	-176.62	-2,610.69	-154.26	2,615.26	2,614.73	0.53	4,969.542			
300.00	300.00	263.70	263.70	0.54	0.38	-176.62	-2,611.13	-154.29	2,615.75	2,614.83	0.92	2,834.420			
400.00	400.00	348.96	348.95	0.77	0.54	-176.62	-2,611.94	-154.38	2,616.71	2,615.40	1.31	1,995.720			
500.00	500.00	433.69	433.67	0.99	0.70	-176.61	-2,613.27	-154.59	2,618.28	2,616.58	1.70	1,540.815			
600.00	600.00	521.24	521.20	1.22	0.86	-176.61	-2,615.07	-155.11	2,620.37	2,618.28	2.09	1,253.018			
700.00	700.00	611.56	611.50	1.44	1.03	-176.59	-2,617.30	-155.93	2,622.89	2,620.40	2.49	1,054.766			
800.00	800.00	706.51	706.40	1.67	1.21	-176.58	-2,619.91	-156.69	2,625.68	2,622.79	2.89	908.842			
900.00	900.00	841.65	841.49	1.89	1.46	-176.57	-2,623.41	-157.14	2,628.43	2,625.07	3.35	784.004			
1,000.00	1,000.00	955.86	955.69	2.12	1.66	-176.61	-2,624.16	-155.43	2,628.89	2,625.12	3.78	696.363			
1,100.00	1,100.00	1,034.76	1,034.58	2.34	1.80	-176.61	-2,625.44	-155.58	2,630.47	2,626.33	4.14	634.710			
1,200.00	1,200.00	1,140.38	1,140.18	2.56	2.00	-176.60	-2,627.17	-156.05	2,632.14	2,627.57	4.57	576.452			
1,300.00	1,300.00	1,243.48	1,243.27	2.79	2.19	-176.59	-2,628.75	-156.53	2,633.69	2,628.70	4.98	528.499			
1,400.00	1,400.00	1,380.67	1,380.45	3.01	2.44	-176.57	-2,630.06	-157.47	2,634.77	2,629.32	5.45	483.238			
1,500.00	1,500.00	1,464.33	1,464.10	3.24	2.58	-176.55	-2,630.12	-158.49	2,634.95	2,629.13	5.82	452.577			
1,600.00	1,600.00	1,553.09	1,552.85	3.46	2.75	-176.53	-2,631.02	-159.32	2,636.00	2,629.79	6.21	424.746			
1,700.00	1,700.00	1,668.07	1,667.83	3.69	2.96	-176.51	-2,631.98	-160.45	2,636.91	2,630.27	6.64	397.323			

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



TDS
Anticollision Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Site Lea Unit #48H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3694.00usft (McVay 4)
Reference Site:	Lea Unit #48H	MD Reference:	KB @ 3694.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #48H	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 - #2 - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 100-ISCWSA-GYRO-3													Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
1,800.00	1,800.00	1,773.03	1,772.77	3.91	3.14	-176.49	-2,632.29	-161.54	2,637.26	2,630.21	7.05	374.289		
1,900.00	1,900.00	1,873.87	1,873.62	4.14	3.32	-176.49	-2,632.63	-161.70	2,637.60	2,630.16	7.45	354.097		
2,000.00	2,000.00	1,992.47	1,992.21	4.36	3.52	-176.50	-2,632.72	-160.85	2,637.65	2,629.78	7.87	335.052		
2,079.00	2,079.00	2,061.27	2,061.01	4.54	3.63	-176.52	-2,632.59	-160.32	2,637.47	2,629.30	8.16	323.057		
2,100.00	2,100.00	2,078.91	2,078.65	4.59	3.66	-176.52	-2,632.61	-160.17	2,637.48	2,629.24	8.24	320.059		
2,200.00	2,200.00	2,188.12	2,187.85	4.81	3.84	-176.53	-2,632.70	-159.82	2,637.55	2,628.90	8.65	304.981		
2,300.00	2,300.00	2,290.37	2,290.10	5.04	4.01	-176.51	-2,632.36	-160.48	2,637.26	2,628.22	9.04	291.744		
2,400.00	2,400.00	2,394.22	2,393.95	5.26	4.18	-176.51	-2,631.95	-160.71	2,636.88	2,627.45	9.43	279.625		
2,482.45	2,482.45	2,464.72	2,464.45	5.45	4.29	-176.51	-2,631.78	-160.66	2,636.68	2,626.95	9.73	270.872		
2,500.00	2,500.00	2,479.50	2,479.23	5.49	4.32	-176.51	-2,631.79	-160.69	2,636.69	2,626.89	9.80	269.092		
2,600.00	2,600.00	2,599.61	2,599.34	5.71	4.52	-176.51	-2,631.62	-160.71	2,636.58	2,626.35	10.23	257.831		
2,700.00	2,700.00	2,697.50	2,697.23	5.94	4.68	-176.52	-2,631.06	-159.95	2,635.96	2,625.35	10.61	248.430		
2,800.00	2,800.00	2,792.51	2,792.22	6.16	4.84	-176.55	-2,630.69	-158.38	2,635.48	2,624.48	11.00	239.695		
2,900.00	2,900.00	2,902.19	2,901.87	6.39	5.02	-176.62	-2,630.25	-155.57	2,634.93	2,623.52	11.41	231.018		
3,000.00	3,000.00	3,009.66	3,009.27	6.61	5.20	-176.69	-2,629.49	-152.13	2,634.03	2,622.22	11.81	222.990		
3,100.00	3,100.00	3,115.29	3,114.84	6.84	5.38	-176.77	-2,628.46	-148.36	2,632.85	2,620.63	12.22	215.524		
3,200.00	3,200.00	3,207.85	3,207.32	7.06	5.54	-176.84	-2,627.65	-144.87	2,631.76	2,619.16	12.60	208.892		
3,300.00	3,300.00	3,314.52	3,313.92	7.28	5.73	-176.93	-2,626.68	-140.93	2,630.65	2,617.64	13.00	202.280		
3,400.00	3,400.00	3,410.04	3,409.38	7.51	5.89	-176.99	-2,625.73	-137.91	2,629.49	2,616.09	13.39	196.335		
3,500.00	3,500.00	3,500.00	3,499.32	7.73	6.05	-177.04	-2,625.26	-135.79	2,628.83	2,615.06	13.77	190.877		
3,600.00	3,600.00	3,587.04	3,586.34	7.96	6.20	-177.08	-2,625.18	-134.13	2,628.60	2,614.46	14.15	185.794		
3,637.45	3,637.45	3,620.16	3,619.45	8.04	6.26	-177.09	-2,625.17	-133.53	2,628.56	2,614.27	14.29	183.947		
3,700.00	3,700.00	3,672.16	3,671.45	8.18	6.35	-177.11	-2,625.32	-132.63	2,628.69	2,614.17	14.52	181.025		
3,800.00	3,800.00	3,762.46	3,761.73	8.41	6.52	-177.14	-2,625.97	-131.09	2,629.32	2,614.42	14.90	176.412		
3,900.00	3,900.00	3,856.88	3,856.13	8.63	6.69	-177.19	-2,626.90	-129.14	2,630.20	2,614.91	15.30	171.958		
4,000.00	4,000.00	3,955.63	3,954.85	8.86	6.87	-177.24	-2,628.05	-126.79	2,631.25	2,615.55	15.69	167.653		
4,100.00	4,100.00	4,054.24	4,053.41	9.08	7.04	-177.30	-2,629.19	-124.16	2,632.28	2,616.18	16.09	163.564		
4,200.00	4,200.00	4,146.60	4,145.73	9.31	7.21	-177.35	-2,630.41	-121.65	2,633.47	2,616.99	16.48	159.789		
4,300.00	4,300.00	4,238.38	4,237.48	9.53	7.38	-177.39	-2,631.94	-119.82	2,635.04	2,618.17	16.87	156.211		
4,400.00	4,400.00	4,332.47	4,331.54	9.76	7.55	-177.43	-2,633.69	-118.14	2,636.82	2,619.56	17.26	152.761		
4,500.00	4,500.00	4,420.55	4,419.59	9.98	7.71	-177.47	-2,635.60	-116.57	2,638.92	2,621.27	17.64	149.576		
4,600.00	4,600.00	4,500.00	4,498.98	10.21	7.86	-177.50	-2,637.86	-114.96	2,641.67	2,623.66	18.01	146.701		
4,700.00	4,700.00	4,596.83	4,595.73	10.43	8.04	-177.56	-2,641.06	-112.68	2,644.87	2,626.47	18.41	143.698		
4,800.00	4,800.00	4,688.54	4,687.36	10.66	8.21	-177.61	-2,644.29	-110.47	2,648.29	2,629.49	18.79	140.909		
4,900.00	4,900.00	4,786.87	4,785.60	10.88	8.39	-177.65	-2,647.93	-108.49	2,651.91	2,632.71	19.20	138.143		
5,000.00	5,000.00	4,902.19	4,900.84	11.11	8.60	-177.69	-2,651.89	-106.87	2,655.29	2,635.65	19.63	135.238		
5,100.00	5,100.00	5,000.00	4,998.60	11.33	8.78	-177.72	-2,654.95	-105.65	2,658.36	2,638.32	20.04	132.676		
5,200.00	5,200.00	5,090.25	5,088.79	11.56	8.95	-177.75	-2,657.97	-104.49	2,661.66	2,641.24	20.42	130.322		
5,300.00	5,300.00	5,186.23	5,184.70	11.78	9.12	-177.77	-2,661.46	-103.57	2,665.25	2,644.43	20.82	127.996		
5,400.00	5,400.00	5,261.72	5,260.13	12.00	9.26	-177.78	-2,664.52	-103.29	2,669.30	2,648.12	21.18	126.032		
5,500.00	5,500.00	5,348.85	5,347.15	12.23	9.42	-177.78	-2,668.84	-103.66	2,674.26	2,652.70	21.56	124.039		
5,600.00	5,600.00	5,452.86	5,451.03	12.45	9.61	-177.76	-2,673.97	-104.54	2,679.22	2,657.24	21.98	121.912		
5,700.00	5,700.00	5,557.44	5,555.48	12.68	9.80	-177.74	-2,678.97	-105.52	2,684.03	2,661.63	22.39	119.851		
5,800.00	5,800.00	5,659.92	5,657.85	12.90	9.98	-177.73	-2,683.69	-106.48	2,688.67	2,665.86	22.81	117.881		
5,900.00	5,900.00	5,767.03	5,764.84	13.13	10.18	-177.71	-2,688.51	-107.44	2,693.20	2,669.97	23.23	115.925		
6,000.00	6,000.00	5,873.61	5,871.33	13.35	10.37	-177.69	-2,692.95	-108.51	2,697.40	2,673.75	23.65	114.032		
6,100.00	6,100.00	5,965.54	5,963.18	13.58	10.54	-177.68	-2,696.76	-109.41	2,701.59	2,677.55	24.05	112.348		
6,200.00	6,200.00	6,064.56	6,062.09	13.80	10.72	-177.66	-2,701.18	-110.46	2,706.09	2,681.64	24.45	110.663		
6,300.00	6,300.00	6,171.16	6,168.59	14.03	10.91	-177.64	-2,705.73	-111.57	2,710.40	2,685.52	24.88	108.954		
6,400.00	6,400.00	6,272.41	6,269.75	14.25	11.10	-177.63	-2,709.88	-112.33	2,714.53	2,689.24	25.29	107.342		
6,500.00	6,500.00	6,370.06	6,367.32	14.48	11.28	-177.62	-2,713.94	-112.84	2,718.70	2,693.01	25.69	105.814		
6,600.00	6,600.00	6,469.69	6,466.86	14.70	11.46	-177.61	-2,718.14	-113.45	2,722.94	2,696.84	26.10	104.319		

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

Company:	Legacy Reserves	Local Co-ordinate Reference:	Site Lea Unit #48H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3694.00usft (McVay 4)
Reference Site:	Lea Unit #48H	MD Reference:	KB @ 3694.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #48H	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 - #2 - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 100-ISCWSA-GYRO-3													Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis 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	Warning	
6,700.00	6,700.00	6,564.69	6,561.77	14.93	11.64	-177.60	-2,722.19	-114.03	2,727.23	2,700.73	26.50	102.910		
6,800.00	6,800.00	6,665.51	6,662.49	15.15	11.82	-177.59	-2,726.65	-114.76	2,731.68	2,704.76	26.91	101.502		
6,900.00	6,900.00	6,766.16	6,763.04	15.38	12.01	-177.57	-2,730.97	-115.70	2,736.01	2,708.68	27.32	100.132		
7,000.00	7,000.00	6,866.16	6,865.94	15.60	12.18	-177.56	-2,735.10	-116.49	2,740.44	2,712.72	27.72	98.858		
7,100.00	7,100.00	6,967.66	6,964.34	15.83	12.36	-177.55	-2,739.60	-117.39	2,745.09	2,716.96	28.13	97.602		
7,200.00	7,200.00	7,067.80	7,064.37	16.05	12.55	-177.53	-2,744.21	-118.39	2,749.72	2,721.19	28.54	96.360		
7,300.00	7,300.00	7,164.82	7,161.28	16.28	12.72	-177.51	-2,748.71	-119.29	2,754.40	2,725.46	28.94	95.178		
7,400.00	7,400.00	7,263.89	7,260.23	16.50	12.91	-177.50	-2,753.42	-120.26	2,759.19	2,729.84	29.35	94.017		
7,500.00	7,500.00	7,364.10	7,364.33	16.72	13.08	-177.49	-2,757.92	-121.10	2,764.00	2,734.26	29.75	92.922		
7,600.00	7,600.00	7,464.34	7,462.44	16.95	13.26	-177.47	-2,762.91	-122.14	2,769.13	2,738.98	30.15	91.839		
7,700.00	7,700.00	7,565.18	7,566.15	17.17	13.46	-177.46	-2,767.95	-122.97	2,774.01	2,743.44	30.57	90.740		
7,800.00	7,800.00	7,665.88	7,661.73	17.40	13.63	-177.44	-2,772.69	-123.75	2,778.99	2,748.02	30.97	89.726		
7,900.00	7,900.00	7,764.42	7,739.14	17.62	13.81	-177.43	-2,777.63	-124.63	2,784.09	2,752.71	31.38	88.729		
8,000.00	8,000.00	7,861.99	7,837.58	17.85	14.00	-177.42	-2,782.68	-125.44	2,789.24	2,757.46	31.78	87.753		
8,100.00	8,100.00	7,956.48	7,931.93	18.07	14.17	-177.41	-2,787.59	-126.24	2,794.48	2,762.30	32.18	86.830		
8,200.00	8,200.00	8,050.58	8,025.89	18.30	14.35	-177.39	-2,792.76	-127.25	2,800.01	2,767.43	32.58	85.940		
8,300.00	8,300.00	8,144.27	8,135.41	18.52	14.55	-177.37	-2,798.67	-128.51	2,805.45	2,772.44	33.01	84.978		
8,400.00	8,400.00	8,244.96	8,249.97	18.75	14.76	-177.37	-2,804.34	-128.81	2,810.40	2,776.94	33.46	83.999		
8,500.00	8,500.00	8,346.42	8,371.30	18.97	14.99	-177.34	-2,809.57	-130.40	2,814.78	2,780.86	33.92	82.995		
8,600.00	8,600.00	8,446.85	8,500.64	19.20	15.23	-177.30	-2,813.89	-132.54	2,818.19	2,783.80	34.39	81.954		
8,700.00	8,700.00	8,542.31	8,617.05	19.42	15.44	-177.27	-2,816.78	-134.31	2,820.73	2,785.90	34.83	80.984		
8,800.00	8,800.00	8,642.81	8,718.50	19.65	15.62	-177.23	-2,818.99	-136.25	2,822.99	2,787.75	35.24	80.105		
8,900.00	8,900.00	8,743.22	8,817.88	19.87	15.80	-177.20	-2,821.16	-138.03	2,825.26	2,789.61	35.65	79.256		
8,927.04	8,927.04	8,850.51	8,845.16	19.93	15.85	-177.19	-2,821.75	-138.51	2,825.87	2,790.11	35.76	79.027		
8,950.00	8,949.99	8,953.69	8,968.33	19.98	15.89	5.82	-2,822.25	-138.95	2,825.93	2,790.09	35.85	78.837		
9,000.00	8,999.80	9,050.77	9,015.38	20.06	15.98	5.88	-2,823.28	-139.88	2,822.91	2,786.89	36.01	78.383		
9,050.00	9,049.06	9,153.86	9,158.46	20.15	16.06	5.98	-2,824.30	-140.73	2,815.66	2,779.49	36.18	77.833		
9,100.00	9,097.39	9,254.33	9,202.90	20.23	16.14	6.15	-2,825.45	-141.57	2,804.27	2,767.93	36.34	77.167		
9,150.00	9,144.42	9,354.21	9,257.75	20.31	16.24	6.39	-2,826.83	-142.58	2,788.66	2,752.13	36.53	76.348		
9,200.00	9,189.79	9,454.26	9,107.78	20.39	16.33	6.71	-2,827.96	-143.48	2,768.88	2,732.18	36.70	75.448		
9,250.00	9,233.17	9,554.84	9,149.35	20.48	16.40	7.11	-2,828.89	-144.31	2,745.21	2,708.36	36.85	74.491		
9,300.00	9,274.21	9,654.32	9,188.80	20.58	16.48	7.62	-2,829.81	-145.19	2,717.86	2,680.86	37.00	73.457		
9,350.00	9,312.62	9,754.12	9,225.58	20.69	16.54	8.28	-2,830.69	-146.10	2,687.04	2,649.90	37.14	72.356		
9,400.00	9,348.09	9,854.22	9,259.66	20.83	16.60	9.11	-2,831.53	-146.99	2,652.97	2,615.71	37.26	71.194		
9,450.00	9,380.35	9,954.41	9,290.83	20.99	16.66	10.19	-2,832.32	-147.84	2,615.92	2,578.54	37.38	69.979		
9,500.00	9,409.17	10,054.92	9,317.32	21.18	16.71	11.61	-2,833.01	-148.59	2,576.17	2,538.68	37.48	68.726		
9,550.00	9,434.31	10,154.10	9,340.48	21.40	16.75	13.52	-2,833.65	-149.25	2,534.02	2,496.44	37.58	67.437		
9,600.00	9,455.60	10,254.01	9,360.37	21.64	16.79	16.21	-2,834.22	-149.82	2,489.78	2,452.13	37.66	66.120		
9,650.00	9,472.86	10,354.46	9,376.82	21.92	16.82	20.19	-2,834.71	-150.30	2,443.78	2,406.06	37.72	64.784		
9,700.00	9,485.97	10,454.00	9,394.34	22.24	16.85	26.70	-2,835.24	-150.81	2,396.37	2,358.59	37.79	63.421		
9,750.00	9,494.83	10,554.91	9,399.24	22.58	16.86	37.57	-2,835.39	-150.95	2,347.88	2,310.07	37.82	62.084		
9,800.00	9,499.36	10,654.74	9,405.07	22.95	16.87	58.47	-2,835.57	-151.12	2,298.70	2,260.85	37.85	60.735		
9,827.04	9,500.00	10,754.13	9,406.46	23.16	16.87	75.84	-2,835.62	-151.16	2,271.94	2,234.08	37.86	60.010		
9,900.00	9,500.00	10,854.27	9,408.59	23.75	16.87	71.12	-2,835.68	-151.23	2,199.50	2,161.62	37.88	58.065		
9,911.96	9,500.00	10,954.62	9,408.95	23.85	16.87	70.02	-2,835.69	-151.24	2,187.60	2,149.72	37.88	57.745		
10,000.00	9,500.00	11,054.26	9,411.58	24.63	16.88	70.70	-2,835.77	-151.32	2,100.00	2,062.09	37.91	55.397		
10,100.00	9,500.00	11,154.27	9,414.59	25.64	16.88	71.47	-2,835.87	-151.40	2,000.54	1,962.60	37.94	52.724		
10,200.00	9,500.00	11,254.28	9,417.59	26.74	16.89	72.25	-2,835.96	-151.49	1,901.13	1,863.15	37.99	50.049		
10,300.00	9,500.00	11,354.29	9,420.60	27.92	16.89	73.04	-2,836.06	-151.59	1,801.78	1,763.75	38.04	47.372		
10,400.00	9,500.00	11,454.31	9,423.62	29.16	16.90	73.84	-2,836.15	-151.68	1,702.50	1,664.41	38.09	44.692		
10,500.00	9,500.00	11,554.34	9,426.64	30.46	16.91	74.64	-2,836.24	-151.77	1,603.31	1,565.14	38.17	42.009		
10,600.00	9,500.00	11,654.37	9,429.67	31.82	16.91	75.45	-2,836.34	-151.86	1,504.22	1,465.96	38.25	39.323		

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:	Site Lea Unit #48H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3694.00usft (McVay 4)
Reference Site:	Lea Unit #48H	MD Reference:	KB @ 3694.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #48H	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 - #2 - 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	Offset		+N-S (usft)	+E-W (usft)						
10,700.00	9,500.00	9,438.40	9,432.70	33.22	16.92	76.27	-2,836.43	-151.95	1,405.25	1,366.88	38.36	36.632		
10,800.00	9,500.00	9,441.44	9,435.74	34.66	16.92	77.09	-2,836.53	-152.05	1,306.42	1,267.93	38.50	33.937		
10,900.00	9,500.00	9,444.48	9,438.78	36.13	16.93	77.92	-2,836.62	-152.14	1,207.79	1,169.12	38.67	31.235		
11,000.00	9,500.00	9,447.54	9,441.83	37.64	16.93	78.75	-2,836.72	-152.23	1,109.39	1,070.50	38.89	28.527		
11,100.00	9,500.00	9,450.59	9,444.88	39.18	16.94	79.59	-2,836.81	-152.33	1,011.29	972.11	39.18	25.810		
11,200.00	9,500.00	9,453.65	9,447.94	40.73	16.94	80.44	-2,836.91	-152.42	913.60	874.02	39.58	23.084		
11,300.00	9,500.00	9,456.72	9,451.00	42.32	16.95	81.29	-2,837.01	-152.52	816.45	776.33	40.12	20.349		
11,400.00	9,500.00	9,459.79	9,454.07	43.92	16.96	82.14	-2,837.10	-152.61	720.07	679.17	40.90	17.606		
11,500.00	9,500.00	9,462.86	9,457.14	45.54	16.96	83.00	-2,837.20	-152.71	624.82	582.78	42.04	14.863		
11,600.00	9,500.00	9,465.94	9,460.22	47.17	16.97	83.86	-2,837.30	-152.81	531.29	487.52	43.77	12.139		
11,700.00	9,500.00	9,469.03	9,463.30	48.82	16.97	84.73	-2,837.39	-152.91	440.60	394.12	46.47	9.481		
11,800.00	9,500.00	9,472.12	9,466.39	50.48	16.98	85.60	-2,837.49	-153.00	354.91	304.10	50.81	6.986		
11,900.00	9,500.00	9,475.22	9,469.48	52.15	16.98	86.47	-2,837.59	-153.10	278.88	221.27	57.61	4.841		
12,000.00	9,500.00	9,478.32	9,472.58	53.83	16.99	87.34	-2,837.69	-153.20	222.65	156.10	66.55	3.346		
12,091.15	9,500.00	9,481.15	9,475.41	55.38	16.99	88.14	-2,837.78	-153.29	203.16	131.36	71.79	2.830 CC, ES		
12,100.00	9,500.00	9,481.43	9,475.69	55.53	16.99	88.22	-2,837.78	-153.30	203.35	131.47	71.88	2.829 SF		
12,200.00	9,500.00	9,484.54	9,478.80	57.23	17.00	89.10	-2,837.88	-153.40	230.45	162.63	67.82	3.398		
12,300.00	9,500.00	9,487.66	9,481.91	58.93	17.01	89.98	-2,837.98	-153.50	291.29	230.95	60.33	4.828		
12,400.00	9,500.00	9,490.78	9,485.03	60.65	17.01	90.85	-2,838.08	-153.60	369.55	315.16	54.39	6.795		
12,500.00	9,500.00	9,493.91	9,488.16	62.37	17.02	91.73	-2,838.18	-153.71	456.36	405.99	50.37	9.060		
12,600.00	9,500.00	9,497.05	9,491.29	64.10	17.02	92.61	-2,838.28	-153.81	547.67	499.97	47.70	11.482		
12,700.00	9,500.00	9,500.19	9,494.43	65.84	17.03	93.49	-2,838.38	-153.91	641.56	595.69	45.87	13.985		
12,800.00	9,500.00	9,503.50	9,497.73	67.57	17.04	94.41	-2,838.48	-154.02	737.05	692.46	44.59	16.529		
12,900.00	9,500.00	9,506.84	9,501.07	69.32	17.04	95.34	-2,838.59	-154.13	833.58	789.92	43.66	19.091		
13,000.00	9,500.00	9,510.22	9,504.45	71.07	17.05	96.28	-2,838.70	-154.24	930.84	887.86	42.98	21.659		
13,100.00	9,500.00	9,513.65	9,507.88	72.82	17.05	97.23	-2,838.81	-154.35	1,028.61	986.15	42.46	24.228		
13,200.00	9,500.00	9,517.12	9,511.34	74.58	17.06	98.18	-2,838.92	-154.46	1,126.76	1,084.71	42.05	26.793		
13,300.00	9,500.00	9,520.64	9,514.85	76.34	17.07	99.13	-2,839.04	-154.58	1,225.20	1,183.46	41.74	29.352		
13,400.00	9,500.00	9,524.20	9,518.41	78.10	17.07	100.10	-2,839.16	-154.69	1,323.87	1,282.37	41.49	31.904		
13,500.00	9,500.00	9,527.80	9,522.01	79.87	17.08	101.07	-2,839.28	-154.81	1,422.71	1,381.41	41.30	34.449		
13,600.00	9,500.00	9,531.46	9,525.66	81.63	17.09	102.04	-2,839.40	-154.93	1,521.70	1,480.56	41.14	36.986		
13,700.00	9,500.00	9,535.16	9,529.36	83.41	17.09	103.02	-2,839.53	-155.05	1,620.80	1,579.78	41.02	39.514		
13,800.00	9,500.00	9,538.91	9,533.10	85.18	17.10	104.00	-2,839.65	-155.17	1,720.00	1,679.08	40.92	42.034		
13,900.00	9,500.00	9,542.71	9,536.90	86.96	17.11	104.99	-2,839.78	-155.29	1,819.28	1,778.44	40.84	44.545		
14,000.00	9,500.00	9,546.56	9,540.74	88.74	17.11	105.98	-2,839.91	-155.41	1,918.63	1,877.85	40.78	47.048		
14,100.00	9,500.00	9,550.46	9,544.64	90.52	17.12	106.97	-2,840.05	-155.54	2,018.04	1,977.31	40.73	49.542		
14,200.00	9,500.00	9,554.41	9,548.59	92.30	17.13	107.96	-2,840.19	-155.66	2,117.50	2,076.80	40.70	52.027		
14,300.00	9,500.00	9,558.42	9,552.59	94.09	17.14	108.95	-2,840.33	-155.79	2,216.99	2,176.32	40.68	54.504		
14,400.00	9,500.00	9,562.48	9,556.65	95.87	17.14	109.95	-2,840.47	-155.92	2,316.53	2,275.87	40.66	56.971		
14,500.00	9,500.00	9,566.60	9,560.77	97.66	17.15	110.94	-2,840.62	-156.05	2,416.10	2,375.44	40.65	59.430		
14,600.00	9,500.00	9,570.78	9,564.94	99.45	17.16	111.93	-2,840.77	-156.18	2,515.70	2,475.04	40.65	61.880		
14,700.00	9,500.00	9,575.01	9,569.17	101.24	17.17	112.93	-2,840.92	-156.31	2,615.32	2,574.66	40.66	64.320		
14,800.00	9,500.00	9,579.31	9,573.46	103.04	17.17	113.92	-2,841.08	-156.45	2,714.96	2,674.29	40.67	66.752		
14,832.67	9,500.00	9,580.72	9,574.87	103.62	17.18	114.24	-2,841.13	-156.49	2,747.52	2,706.84	40.68	67.544		

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:	Site Lea Unit #48H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3694.00usft (McVay 4)
Reference Site:	Lea Unit #48H	MD Reference:	KB @ 3694.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #48H	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 - #33H - OH - OH													Offset Well Error:	0.00 usft	
Survey Program: 100-VES-ISCWSA-GYRO-3, 5467-MWD															
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	-177.93	-6,065.20	-219.40	6,069.20						
100.00	100.00	68.76	68.76	0.09	0.05	-177.93	-6,065.26	-219.38	6,069.23	6,069.09	0.14	N/A			
200.00	200.00	151.27	151.27	0.32	0.17	-177.93	-6,065.51	-219.26	6,069.53	6,069.04	0.49	N/A			
300.00	300.00	245.78	245.78	0.54	0.35	-177.93	-6,066.07	-218.79	6,070.11	6,069.22	0.89	6,854.253			
400.00	400.00	346.58	346.58	0.77	0.54	-177.94	-6,066.58	-218.04	6,070.59	6,069.30	1.29	4,704.380			
500.00	500.00	438.87	438.86	0.99	0.71	-177.95	-6,067.19	-217.40	6,071.21	6,069.53	1.68	3,611.057			
600.00	600.00	541.26	541.25	1.22	0.90	-177.95	-6,067.87	-216.75	6,071.86	6,069.77	2.09	2,903.239			
700.00	700.00	648.45	648.43	1.44	1.10	-177.96	-6,068.51	-216.19	6,072.44	6,069.93	2.51	2,418.433			
800.00	800.00	751.95	751.93	1.67	1.30	-177.96	-6,068.98	-215.89	6,072.88	6,069.96	2.93	2,075.632			
900.00	900.00	860.28	860.26	1.89	1.49	-177.96	-6,069.44	-215.88	6,073.31	6,069.95	3.35	1,812.053			
1,000.00	1,000.00	961.44	961.42	2.12	1.67	-177.96	-6,069.69	-216.01	6,073.55	6,069.79	3.76	1,613.676			
1,100.00	1,100.00	1,051.92	1,051.90	2.34	1.83	-177.96	-6,070.01	-216.23	6,073.92	6,069.76	4.16	1,461.771			
1,200.00	1,200.00	1,152.33	1,152.31	2.56	2.01	-177.96	-6,070.48	-216.68	6,074.41	6,069.85	4.56	1,331.411			
1,300.00	1,300.00	1,264.95	1,264.93	2.79	2.20	-177.95	-6,070.84	-217.31	6,074.74	6,069.76	4.99	1,218.108			
1,400.00	1,400.00	1,377.50	1,377.47	3.01	2.39	-177.94	-6,070.96	-217.85	6,074.87	6,069.47	5.41	1,123.791			
1,500.00	1,500.00	1,518.12	1,518.08	3.24	2.62	-177.93	-6,070.47	-219.23	6,074.55	6,068.69	5.86	1,035.967			
1,600.00	1,600.00	1,615.87	1,615.81	3.46	2.79	-177.91	-6,069.76	-221.44	6,073.91	6,067.66	6.25	971.861			
1,700.00	1,700.00	1,700.00	1,699.90	3.69	2.93	-177.89	-6,069.27	-223.92	6,073.43	6,066.81	6.62	918.031			
1,800.00	1,800.00	1,781.35	1,781.21	3.91	3.07	-177.86	-6,069.02	-226.38	6,073.24	6,066.26	6.98	870.209			
1,900.00	1,900.00	1,900.83	1,900.64	4.14	3.28	-177.83	-6,068.73	-229.61	6,073.11	6,065.71	7.41	819.843			
2,000.00	2,000.00	2,011.17	2,010.96	4.36	3.48	-177.81	-6,068.15	-232.19	6,072.67	6,064.85	7.82	776.601			
2,100.00	2,100.00	2,120.82	2,120.57	4.59	3.67	-177.78	-6,067.39	-234.80	6,072.07	6,063.84	8.23	737.783			
2,200.00	2,200.00	2,232.96	2,232.67	4.81	3.87	-177.76	-6,066.39	-237.32	6,071.27	6,062.62	8.64	702.308			
2,300.00	2,300.00	2,334.67	2,334.36	5.04	4.05	-177.74	-6,065.38	-239.45	6,070.36	6,061.32	9.04	671.379			
2,400.00	2,400.00	2,437.44	2,437.11	5.26	4.23	-177.72	-6,064.37	-241.17	6,069.45	6,060.01	9.44	642.922			
2,500.00	2,500.00	2,544.73	2,544.38	5.49	4.42	-177.71	-6,063.20	-242.84	6,068.42	6,058.57	9.85	616.275			
2,600.00	2,600.00	2,654.84	2,654.47	5.71	4.61	-177.69	-6,061.89	-244.27	6,067.28	6,057.03	10.26	591.446			
2,700.00	2,700.00	2,773.66	2,773.27	5.94	4.82	-177.68	-6,060.18	-245.55	6,065.89	6,055.21	10.68	567.716			
2,800.00	2,800.00	2,958.79	2,958.35	6.16	5.13	-177.67	-6,055.91	-246.02	6,063.56	6,052.34	11.22	540.275			
2,900.00	2,900.00	3,092.84	3,092.33	6.39	5.36	-177.68	-6,051.59	-245.35	6,060.32	6,048.64	11.68	518.992			
3,000.00	3,000.00	3,204.28	3,203.69	6.61	5.55	-177.69	-6,047.59	-244.28	6,056.70	6,044.60	12.09	500.782			
3,100.00	3,100.00	3,311.79	3,311.11	6.84	5.73	-177.70	-6,043.57	-242.87	6,052.90	6,040.39	12.51	483.989			
3,200.00	3,200.00	3,400.00	3,399.26	7.06	5.88	-177.71	-6,040.34	-241.69	6,049.19	6,036.30	12.89	469.432			
3,300.00	3,300.00	3,476.76	3,475.97	7.28	6.01	-177.72	-6,037.75	-240.67	6,045.76	6,032.51	13.25	456.380			
3,400.00	3,400.00	3,555.13	3,554.29	7.51	6.15	-177.73	-6,035.38	-239.69	6,042.68	6,029.07	13.61	443.948			
3,500.00	3,500.00	3,638.01	3,637.14	7.73	6.29	-177.73	-6,033.14	-238.82	6,039.94	6,025.96	13.98	431.939			
3,600.00	3,600.00	3,730.35	3,729.45	7.96	6.45	-177.74	-6,030.83	-238.00	6,037.40	6,023.03	14.37	420.076			
3,700.00	3,700.00	3,827.99	3,827.06	8.18	6.63	-177.74	-6,028.44	-237.39	6,034.92	6,020.15	14.77	408.572			
3,800.00	3,800.00	3,922.35	3,921.39	8.41	6.79	-177.75	-6,026.17	-236.90	6,032.51	6,017.34	15.16	397.812			
3,900.00	3,900.00	4,012.83	4,011.85	8.63	6.95	-177.75	-6,024.13	-236.61	6,030.24	6,014.69	15.55	387.764			
4,000.00	4,000.00	4,100.00	4,098.99	8.86	7.11	-177.75	-6,022.19	-236.39	6,028.02	6,012.09	15.93	378.337			
4,100.00	4,100.00	4,184.58	4,183.56	9.08	7.26	-177.75	-6,020.51	-236.21	6,026.05	6,009.74	16.31	369.461			
4,200.00	4,200.00	4,271.54	4,270.51	9.31	7.41	-177.75	-6,019.12	-236.06	6,024.44	6,007.75	16.69	360.914			
4,300.00	4,300.00	4,398.90	4,397.84	9.53	7.64	-177.76	-6,017.00	-235.73	6,022.79	6,005.65	17.15	351.268			
4,400.00	4,400.00	4,473.24	4,472.18	9.76	7.78	-177.76	-6,015.69	-235.75	6,021.03	6,003.52	17.51	343.944			
4,500.00	4,500.00	4,570.87	4,569.79	9.98	7.96	-177.75	-6,014.24	-236.40	6,019.57	6,001.67	17.91	336.164			
4,600.00	4,600.00	4,682.64	4,681.54	10.21	8.16	-177.74	-6,012.40	-237.67	6,017.97	5,999.64	18.33	328.275			
4,700.00	4,700.00	4,810.16	4,809.02	10.43	8.39	-177.72	-6,009.87	-239.40	6,016.04	5,997.26	18.79	320.255			
4,800.00	4,800.00	4,925.66	4,924.48	10.66	8.61	-177.70	-6,007.16	-241.34	6,013.77	5,994.55	19.22	312.937			
4,900.00	4,900.00	5,033.91	5,032.66	10.88	8.80	-177.68	-6,004.31	-243.49	6,011.21	5,991.57	19.64	306.128			
5,000.00	5,000.00	5,120.54	5,119.24	11.11	8.96	-177.66	-6,002.11	-245.54	6,008.76	5,988.75	20.02	300.177			
5,100.00	5,100.00	15,600.00	10,904.07	11.33	89.67	-155.22	-918.76	-424.13	5,912.31	5,871.73	40.58	145.708			

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

Company:	Legacy Reserves	Local Co-ordinate Reference:	Site Lea Unit #48H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3694.00usft (McVay 4)
Reference Site:	Lea Unit #48H	MD Reference:	KB @ 3694.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #48H	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 - #33H - OH - OH														Offset Site Error: 0.00 usft	
Survey Program: 100-VES-JSCWSA-GYRO-3, 5467-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			
5,200.00	5,200.00	15,600.00	10,904.07	11.56	89.67	-155.22	-918.76	-424.13	5,813.81	5,773.15	40.66	142.972			
5,300.00	5,300.00	15,600.00	10,904.07	11.78	89.67	-155.22	-918.76	-424.13	5,715.36	5,674.61	40.76	140.232			
5,400.00	5,400.00	15,600.00	10,904.07	12.00	89.67	-155.22	-918.76	-424.13	5,616.97	5,576.12	40.85	137.487			
5,500.00	5,500.00	15,600.00	10,904.07	12.23	89.67	-155.22	-918.76	-424.13	5,518.64	5,477.68	40.96	134.739			
5,600.00	5,600.00	15,600.00	10,904.07	12.45	89.67	-155.22	-918.76	-424.13	5,420.36	5,379.30	41.07	131.989			
5,700.00	5,700.00	15,600.00	10,904.07	12.68	89.67	-155.22	-918.76	-424.13	5,322.15	5,280.97	41.18	129.237			
5,800.00	5,800.00	15,600.00	10,904.07	12.90	89.67	-155.22	-918.76	-424.13	5,224.01	5,182.71	41.30	126.484			
5,900.00	5,900.00	15,600.00	10,904.07	13.13	89.67	-155.22	-918.76	-424.13	5,125.94	5,084.52	41.43	123.732			
6,000.00	6,000.00	15,600.00	10,904.07	13.35	89.67	-155.22	-918.76	-424.13	5,027.95	4,986.39	41.56	120.981			
6,100.00	6,100.00	15,600.00	10,904.07	13.58	89.67	-155.22	-918.76	-424.13	4,930.04	4,888.34	41.70	118.233			
6,200.00	6,200.00	15,600.00	10,904.07	13.80	89.67	-155.22	-918.76	-424.13	4,832.21	4,790.37	41.84	115.487			
6,300.00	6,300.00	15,600.00	10,904.07	14.03	89.67	-155.22	-918.76	-424.13	4,734.47	4,692.48	41.99	112.746			
6,400.00	6,400.00	15,600.00	10,904.07	14.25	89.67	-155.22	-918.76	-424.13	4,636.83	4,594.68	42.15	110.009			
6,500.00	6,500.00	15,600.00	10,904.07	14.48	89.67	-155.22	-918.76	-424.13	4,539.30	4,496.98	42.31	107.278			
6,600.00	6,600.00	15,600.00	10,904.07	14.70	89.67	-155.22	-918.76	-424.13	4,441.87	4,399.39	42.48	104.554			
6,700.00	6,700.00	15,600.00	10,904.07	14.93	89.67	-155.22	-918.76	-424.13	4,344.56	4,301.90	42.66	101.837			
6,800.00	6,800.00	15,600.00	10,904.07	15.15	89.67	-155.22	-918.76	-424.13	4,247.37	4,204.53	42.85	99.129			
6,900.00	6,900.00	15,600.00	10,904.07	15.38	89.67	-155.22	-918.76	-424.13	4,150.32	4,107.28	43.04	96.430			
7,000.00	7,000.00	15,600.00	10,904.07	15.60	89.67	-155.22	-918.76	-424.13	4,053.41	4,010.17	43.24	93.741			
7,100.00	7,100.00	15,600.00	10,904.07	15.83	89.67	-155.22	-918.76	-424.13	3,956.66	3,913.21	43.45	91.062			
7,200.00	7,200.00	15,600.00	10,904.07	16.05	89.67	-155.22	-918.76	-424.13	3,860.07	3,816.40	43.67	88.396			
7,300.00	7,300.00	15,600.00	10,904.07	16.28	89.67	-155.22	-918.76	-424.13	3,763.66	3,719.76	43.90	85.742			
7,400.00	7,400.00	15,600.00	10,904.07	16.50	89.67	-155.22	-918.76	-424.13	3,667.44	3,623.30	44.13	83.101			
7,500.00	7,500.00	15,600.00	10,904.07	16.72	89.67	-155.22	-918.76	-424.13	3,571.43	3,527.05	44.38	80.474			
7,600.00	7,600.00	15,600.00	10,904.07	16.95	89.67	-155.22	-918.76	-424.13	3,475.64	3,431.00	44.64	77.863			
7,700.00	7,700.00	15,600.00	10,904.07	17.17	89.67	-155.22	-918.76	-424.13	3,380.10	3,335.19	44.91	75.267			
7,800.00	7,800.00	15,600.00	10,904.07	17.40	89.67	-155.22	-918.76	-424.13	3,284.82	3,239.63	45.19	72.688			
7,900.00	7,900.00	15,600.00	10,904.07	17.62	89.67	-155.22	-918.76	-424.13	3,189.83	3,144.35	45.49	70.127			
8,000.00	8,000.00	15,600.00	10,904.07	17.85	89.67	-155.22	-918.76	-424.13	3,095.16	3,049.36	45.80	67.584			
8,100.00	8,100.00	15,600.00	10,904.07	18.07	89.67	-155.22	-918.76	-424.13	3,000.83	2,954.71	46.12	65.062			
8,200.00	8,200.00	15,600.00	10,904.07	18.30	89.67	-155.22	-918.76	-424.13	2,906.89	2,860.42	46.47	62.560			
8,300.00	8,300.00	15,600.00	10,904.07	18.52	89.67	-155.22	-918.76	-424.13	2,813.36	2,766.53	46.83	60.080			
8,400.00	8,400.00	15,600.00	10,904.07	18.75	89.67	-155.22	-918.76	-424.13	2,720.29	2,673.08	47.21	57.623			
8,500.00	8,500.00	15,600.00	10,904.07	18.97	89.67	-155.22	-918.76	-424.13	2,627.73	2,580.12	47.61	55.192			
8,600.00	8,600.00	15,600.00	10,904.07	19.20	89.67	-155.22	-918.76	-424.13	2,535.73	2,487.69	48.04	52.786			
8,700.00	8,700.00	15,600.00	10,904.07	19.42	89.67	-155.22	-918.76	-424.13	2,444.37	2,395.87	48.49	50.409			
8,800.00	8,800.00	15,600.00	10,904.07	19.65	89.67	-155.22	-918.76	-424.13	2,353.70	2,304.73	48.97	48.061			
8,900.00	8,900.00	15,600.00	10,904.07	19.87	89.67	-155.22	-918.76	-424.13	2,263.82	2,214.34	49.49	45.745			
8,927.04	8,927.04	15,600.00	10,904.07	19.93	89.67	-155.22	-918.76	-424.13	2,239.67	2,190.04	49.63	45.125			
8,950.00	8,949.99	15,600.00	10,904.07	19.98	89.67	30.06	-918.76	-424.13	2,219.03	2,169.27	49.76	44.596			
9,000.00	8,999.80	15,600.00	10,904.07	20.06	89.67	36.43	-918.76	-424.13	2,173.10	2,123.06	50.04	43.430			
9,050.00	9,049.06	15,600.00	10,904.07	20.15	89.67	45.57	-918.76	-424.13	2,126.04	2,075.71	50.33	42.243			
9,100.00	9,097.39	15,600.00	10,904.07	20.23	89.67	58.71	-918.76	-424.13	2,078.15	2,027.52	50.63	41.047			
9,150.00	9,144.42	15,600.00	10,904.07	20.31	89.67	76.51	-918.76	-424.13	2,029.74	1,978.81	50.94	39.849			
9,200.00	9,189.79	15,600.00	10,904.07	20.39	89.67	96.87	-918.76	-424.13	1,981.17	1,929.91	51.25	38.655			
9,250.00	9,233.17	15,600.00	10,904.07	20.48	89.67	115.22	-918.76	-424.13	1,932.79	1,881.21	51.58	37.474			
9,300.00	9,274.21	15,600.00	10,904.07	20.58	89.67	128.95	-918.76	-424.13	1,885.01	1,833.10	51.91	36.314			
9,350.00	9,312.62	15,600.00	10,904.07	20.69	89.67	138.51	-918.76	-424.13	1,838.25	1,786.00	52.25	35.183			
9,400.00	9,348.09	15,600.00	10,904.07	20.83	89.67	145.13	-918.76	-424.13	1,792.96	1,740.37	52.59	34.092			
9,450.00	9,380.35	15,600.00	10,904.07	20.99	89.67	149.81	-918.76	-424.13	1,749.62	1,696.68	52.94	33.049			
9,500.00	9,409.17	15,600.00	10,904.07	21.18	89.67	153.21	-918.76	-424.13	1,708.71	1,655.42	53.29	32.065			
9,550.00	9,434.31	15,600.00	10,904.07	21.40	89.67	155.73	-918.76	-424.13	1,670.74	1,617.10	53.64	31.150			

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

Company:	Legacy Reserves	Local Co-ordinate Reference:	Site Lea Unit #48H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3694.00usft (McVay 4)
Reference Site:	Lea Unit #48H	MD Reference:	KB @ 3694.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #48H	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 - #33H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 100-VES-ISCWSA-GYRO-3, 5467-MWD													Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,600.00	9,455.60	15,600.00	10,904.07	21.64	89.67	157.63		-918.76	-424.13	1,636.20	1,582.22	53.98	30.313	
9,650.00	9,472.86	15,600.00	10,904.07	21.92	89.67	159.06		-918.76	-424.13	1,605.59	1,551.28	54.31	29.562	
9,700.00	9,485.97	15,600.00	10,904.07	22.24	89.67	160.13		-918.76	-424.13	1,579.38	1,524.75	54.63	28.908	
9,750.00	9,494.83	15,600.00	10,904.07	22.58	89.67	160.92		-918.76	-424.13	1,557.99	1,503.05	54.94	28.358	
9,800.00	9,499.36	15,600.00	10,904.07	22.95	89.67	161.48		-918.76	-424.13	1,541.80	1,486.57	55.23	27.918	
9,827.04	9,500.00	15,600.00	10,904.07	23.16	89.67	161.69		-918.76	-424.13	1,535.31	1,479.94	55.37	27.730	
9,900.00	9,500.00	15,600.00	10,904.07	23.75	89.67	162.10		-918.76	-424.13	1,521.23	1,465.52	55.71	27.306	
9,911.96	9,500.00	15,600.00	10,904.07	23.85	89.67	162.16		-918.76	-424.13	1,518.17	1,463.41	55.76	27.245	
10,000.00	9,500.00	15,600.00	10,904.07	24.63	89.67	162.16		-918.76	-424.13	1,506.71	1,450.58	56.13	26.844	
10,100.00	9,500.00	15,600.00	10,904.07	25.64	89.67	162.16		-918.76	-424.13	1,498.72	1,442.14	56.58	26.490	
10,170.06	9,500.00	15,600.00	10,904.07	26.41	89.67	162.16		-918.76	-424.13	1,497.08	1,440.18	56.90	26.313	
10,200.00	9,500.00	15,579.00	10,904.29	26.74	89.30	162.17		-939.75	-423.69	1,497.23	1,440.38	56.85	26.335	
10,300.00	9,500.00	15,465.85	10,905.11	27.92	87.30	162.24		-1,052.87	-421.21	1,497.51	1,441.11	56.40	26.551	
10,400.00	9,500.00	15,345.15	10,904.58	29.16	85.18	162.30		-1,173.54	-418.32	1,496.61	1,440.68	55.93	26.759	
10,500.00	9,500.00	15,228.05	10,902.29	30.46	83.15	162.34		-1,290.59	-415.72	1,494.30	1,438.76	55.55	26.902	
10,600.00	9,500.00	15,128.23	10,899.60	31.82	81.47	162.34		-1,390.35	-414.00	1,491.46	1,436.09	55.37	26.937	
10,700.00	9,500.00	15,035.28	10,897.22	33.22	79.94	162.33		-1,483.26	-412.87	1,488.89	1,433.60	55.29	26.929	
10,800.00	9,500.00	14,959.00	10,895.99	34.66	78.65	162.31		-1,559.53	-412.16	1,487.32	1,431.97	55.35	26.871	
10,900.00	9,500.00	14,855.15	10,895.22	36.13	76.85	162.29		-1,663.38	-411.83	1,486.77	1,431.54	55.23	26.921	
11,000.00	9,500.00	14,746.00	10,893.30	37.64	75.00	162.24		-1,772.51	-411.72	1,485.29	1,430.18	55.11	26.952	
11,100.00	9,500.00	14,666.83	10,892.08	39.18	73.66	162.19		-1,851.67	-412.13	1,484.26	1,429.02	55.24	26.871	
11,200.00	9,500.00	14,558.00	10,891.00	40.73	71.82	162.10		-1,960.49	-413.28	1,483.89	1,428.70	55.19	26.887	
11,245.32	9,500.00	14,524.52	10,890.63	41.45	71.26	162.07		-1,993.97	-413.62	1,483.67	1,428.39	55.28	26.839	
11,300.00	9,500.00	14,486.43	10,890.59	42.32	70.63	162.04		-2,032.05	-414.14	1,483.98	1,428.58	55.40	26.785	
11,400.00	9,500.00	14,388.26	10,891.28	43.92	69.00	161.95		-2,130.20	-415.99	1,485.47	1,430.01	55.47	26.782	
11,500.00	9,500.00	14,288.49	10,891.53	45.54	67.36	161.84		-2,229.94	-418.24	1,486.66	1,431.11	55.55	26.762	
11,600.00	9,500.00	14,184.10	10,891.66	47.17	65.58	161.72		-2,334.30	-420.84	1,487.81	1,432.19	55.62	26.751	
11,700.00	9,500.00	14,080.60	10,891.39	48.82	63.84	161.59		-2,437.76	-423.64	1,488.65	1,432.94	55.72	26.719	
11,800.00	9,500.00	13,993.00	10,891.09	50.48	62.42	161.48		-2,525.34	-425.77	1,489.40	1,433.48	55.92	26.636	
11,900.00	9,500.00	13,899.00	10,891.99	52.15	60.91	161.39		-2,619.31	-427.66	1,491.20	1,435.14	56.06	26.600	
12,000.00	9,500.00	13,815.21	10,893.89	53.83	59.55	161.34		-2,703.07	-429.25	1,494.13	1,437.88	56.25	26.563	
12,100.00	9,500.00	13,716.20	10,896.21	55.53	57.98	161.27		-2,802.03	-431.17	1,497.23	1,440.86	56.37	26.562	
12,200.00	9,500.00	13,627.18	10,898.76	57.23	56.58	161.22		-2,891.00	-432.54	1,500.69	1,444.16	56.53	26.547	
12,300.00	9,500.00	13,537.12	10,902.07	58.93	55.11	161.19		-2,980.99	-433.81	1,504.88	1,448.22	56.67	26.557	
12,400.00	9,500.00	13,402.69	10,906.10	60.65	52.89	161.19		-3,115.35	-434.29	1,508.03	1,451.51	56.52	26.683	
12,500.00	9,500.00	13,305.48	10,908.56	62.37	51.26	161.19		-3,212.53	-434.17	1,510.64	1,454.05	56.58	26.698	
12,600.00	9,500.00	13,172.40	10,910.12	64.10	49.01	161.20		-3,345.60	-433.47	1,511.79	1,455.37	56.43	26.793	
12,700.00	9,500.00	13,037.39	10,910.08	65.84	46.85	161.36		-3,480.45	-427.83	1,510.61	1,454.50	56.12	26.919	
12,800.00	9,500.00	12,956.00	10,911.16	67.57	45.53	161.59		-3,561.56	-421.20	1,509.45	1,453.35	56.11	26.903	
12,900.00	9,500.00	12,862.00	10,912.88	69.32	43.96	161.86		-3,655.23	-413.58	1,508.89	1,452.92	55.98	26.956	
12,951.62	9,500.00	12,816.82	10,913.55	70.22	43.22	161.97		-3,700.30	-410.43	1,508.64	1,452.68	55.97	26.956	
13,000.00	9,500.00	12,780.79	10,914.24	71.07	42.63	162.04		-3,736.26	-408.49	1,508.84	1,452.81	56.03	26.929	
13,100.00	9,500.00	12,676.13	10,916.21	72.82	40.96	162.18		-3,840.83	-404.39	1,509.68	1,453.69	55.99	26.963	
13,200.00	9,500.00	12,597.59	10,917.80	74.58	39.71	162.26		-3,919.31	-401.92	1,510.89	1,454.72	56.17	26.897	
13,300.00	9,500.00	12,483.07	10,920.56	76.34	37.80	162.37		-4,033.76	-398.82	1,512.64	1,456.53	56.12	26.954	
13,400.00	9,500.00	12,332.13	10,920.64	78.10	35.33	162.54		-4,184.58	-393.00	1,511.69	1,455.89	55.80	27.090	
13,500.00	9,500.00	12,227.80	10,918.49	79.87	33.68	162.62		-4,288.82	-389.42	1,508.91	1,453.02	55.89	26.999	
13,600.00	9,500.00	12,122.43	10,915.80	81.63	32.05	162.63		-4,394.14	-387.44	1,506.16	1,450.11	56.05	26.873	
13,700.00	9,500.00	12,021.46	10,912.70	83.41	30.59	162.61		-4,495.05	-386.08	1,503.06	1,446.76	56.30	26.699	
13,800.00	9,500.00	9,509.36	9,505.16	85.18	12.95	93.49		-5,896.79	-354.90	1,415.26	1,368.79	46.47	30.454	
13,900.00	9,500.00	9,505.99	9,501.79	86.96	12.94	93.04		-5,896.90	-354.74	1,320.32	1,272.00	48.33	27.321	
14,000.00	9,500.00	9,502.60	9,498.40	88.74	12.93	92.59		-5,897.02	-354.58	1,226.18	1,175.66	50.52	24.271	

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

Company:	Legacy Reserves	Local Co-ordinate Reference:	Site Lea Unit #48H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3694.00usft (McVay 4)
Reference Site:	Lea Unit #48H	MD Reference:	KB @ 3694.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #48H	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 - #33H - OH - OH													Offset Site Error: 0.00 usft	
Survey Program: 100-VES-ISCWSA-GYRO-3, 5467-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)				
14,100.00	9,500.00	9,499.19	9,495.01	90.52	12.93	92.14	-5,897.14	-354.42	1,133.03	1,079.90	53.13	21.325		
14,200.00	9,500.00	9,495.78	9,491.59	92.30	12.92	91.68	-5,897.25	-354.26	1,041.15	984.89	56.26	18.506		
14,300.00	9,500.00	9,492.34	9,488.17	94.09	12.92	91.23	-5,897.37	-354.09	950.89	890.86	60.03	15.841		
14,400.00	9,500.00	9,488.90	9,484.73	95.87	12.91	90.77	-5,897.49	-353.93	862.76	798.18	64.58	13.359		
14,500.00	9,500.00	9,485.44	9,481.27	97.66	12.91	90.30	-5,897.61	-353.77	777.50	707.39	70.12	11.089		
14,600.00	9,500.00	9,481.96	9,477.80	99.45	12.90	89.84	-5,897.72	-353.60	696.16	619.35	76.81	9.063		
14,700.00	9,500.00	9,478.47	9,474.32	101.24	12.90	89.37	-5,897.84	-353.43	620.27	535.44	84.84	7.312		
14,800.00	9,500.00	9,474.97	9,470.82	103.04	12.89	88.90	-5,897.97	-353.26	552.10	457.95	94.15	5.864		
14,832.67	9,500.00	9,473.82	9,469.67	103.62	12.89	88.75	-5,898.01	-353.21	532.02	434.60	97.42	5.461	CC, ES, SF	



TDS
Anticollision Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Site Lea Unit #48H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3694.00usft (McVay 4)
Reference Site:	Lea Unit #48H	MD Reference:	KB @ 3694.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #48H	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 - #7 - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 100-ISCWSA-GYRO-3													Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis 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	Warning	
0.00	0.00	0.00	0.00	0.00	0.00	-178.32	-5,250.20	-154.40	5,252.50					
100.00	100.00	87.62	87.62	0.09	0.06	-178.32	-5,250.15	-154.40	5,252.43	5,252.27	0.16	N/A		
182.81	182.81	164.81	164.81	0.28	0.19	-178.32	-5,250.10	-154.42	5,252.37	5,251.90	0.47	N/A		
200.00	200.00	180.45	180.45	0.32	0.21	-178.32	-5,250.10	-154.43	5,252.37	5,251.84	0.53	9,895.258		
300.00	300.00	282.09	282.09	0.54	0.40	-178.31	-5,250.13	-154.53	5,252.41	5,251.48	0.93	5,647.028		
400.00	400.00	399.97	399.97	0.77	0.61	-178.31	-5,249.95	-154.63	5,252.26	5,250.89	1.36	3,852.613		
463.87	463.87	445.87	445.87	0.91	0.69	-178.31	-5,249.87	-154.62	5,252.15	5,250.56	1.59	3,310.161		
500.00	500.00	471.83	471.83	0.99	0.73	-178.31	-5,249.90	-154.58	5,252.18	5,250.47	1.71	3,065.301		
600.00	600.00	610.23	610.22	1.22	0.97	-178.32	-5,249.87	-154.25	5,252.21	5,250.03	2.18	2,408.933		
700.00	700.00	700.00	700.00	1.44	1.13	-178.32	-5,249.40	-154.09	5,251.69	5,249.13	2.57	2,045.716		
800.00	800.00	785.47	785.47	1.67	1.28	-178.32	-5,249.15	-154.18	5,251.42	5,248.48	2.94	1,784.141		
818.00	818.00	800.00	800.00	1.71	1.31	-178.32	-5,249.15	-154.25	5,251.41	5,248.40	3.01	1,744.882		
900.00	900.00	878.41	878.41	1.89	1.44	-178.32	-5,249.17	-154.37	5,251.45	5,248.12	3.33	1,577.545		
1,000.00	1,000.00	969.04	969.03	2.12	1.59	-178.32	-5,249.32	-154.05	5,251.59	5,247.88	3.71	1,416.088		
1,100.00	1,100.00	1,094.99	1,094.99	2.34	1.81	-178.32	-5,249.44	-153.88	5,251.71	5,247.56	4.15	1,265.063		
1,200.00	1,200.00	1,184.42	1,184.42	2.56	1.97	-178.32	-5,249.29	-154.05	5,251.55	5,247.01	4.53	1,158.343		
1,300.00	1,300.00	1,286.53	1,286.52	2.79	2.15	-178.32	-5,249.25	-154.03	5,251.51	5,246.57	4.94	1,063.667		
1,400.00	1,400.00	1,387.14	1,387.14	3.01	2.33	-178.32	-5,249.15	-153.95	5,251.41	5,246.07	5.34	983.673		
1,500.00	1,500.00	1,485.50	1,485.50	3.24	2.50	-178.32	-5,249.07	-154.00	5,251.33	5,245.59	5.74	915.540		
1,600.00	1,600.00	1,605.38	1,605.37	3.46	2.71	-178.32	-5,248.78	-153.93	5,251.09	5,244.92	6.17	850.718		
1,700.00	1,700.00	1,700.00	1,699.99	3.69	2.88	-178.32	-5,248.33	-154.20	5,250.62	5,244.05	6.57	799.509		
1,800.00	1,800.00	1,782.24	1,782.24	3.91	3.03	-178.31	-5,248.11	-154.51	5,250.38	5,243.44	6.94	756.872		
1,800.97	1,800.97	1,782.98	1,782.97	3.92	3.03	-178.31	-5,248.11	-154.51	5,250.38	5,243.44	6.94	756.493		
1,900.00	1,900.00	1,868.33	1,868.32	4.14	3.18	-178.31	-5,248.23	-154.89	5,250.53	5,243.22	7.31	718.370		
2,000.00	2,000.00	1,967.11	1,967.09	4.36	3.34	-178.31	-5,248.53	-155.00	5,250.84	5,243.13	7.70	681.880		
2,100.00	2,100.00	2,099.20	2,099.19	4.59	3.57	-178.31	-5,248.58	-154.98	5,250.90	5,242.74	8.15	643.980		
2,165.58	2,165.58	2,147.59	2,147.58	4.73	3.66	-178.31	-5,248.50	-155.05	5,250.79	5,242.40	8.39	626.173		
2,200.00	2,200.00	2,172.78	2,172.77	4.81	3.70	-178.31	-5,248.52	-155.09	5,250.82	5,242.31	8.51	617.253		
2,300.00	2,300.00	2,261.29	2,261.28	5.04	3.85	-178.31	-5,248.82	-155.16	5,251.16	5,242.27	8.88	591.103		
2,400.00	2,400.00	2,377.36	2,377.35	5.26	4.05	-178.31	-5,249.18	-155.14	5,251.47	5,242.16	9.31	564.151		
2,500.00	2,500.00	2,487.00	2,486.99	5.49	4.25	-178.30	-5,249.12	-155.78	5,251.44	5,241.71	9.72	540.019		
2,600.00	2,600.00	2,581.57	2,581.55	5.71	4.42	-178.29	-5,249.05	-156.31	5,251.38	5,241.26	10.11	519.199		
2,645.63	2,645.63	2,636.21	2,636.20	5.81	4.52	-178.29	-5,249.03	-156.55	5,251.37	5,241.05	10.31	509.213		
2,700.00	2,700.00	2,712.49	2,712.47	5.94	4.65	-178.29	-5,248.74	-156.57	5,251.16	5,240.60	10.57	496.849		
2,800.00	2,800.00	2,851.83	2,851.80	6.16	4.89	-178.31	-5,247.45	-154.96	5,250.21	5,239.17	11.04	475.582		
2,900.00	2,900.00	2,970.06	2,970.00	6.39	5.10	-178.33	-5,245.66	-153.15	5,248.64	5,237.16	11.47	457.466		
3,000.00	3,000.00	3,093.24	3,093.14	6.61	5.31	-178.35	-5,243.42	-151.35	5,246.78	5,234.86	11.92	440.298		
3,100.00	3,100.00	3,181.42	3,181.30	6.84	5.47	-178.36	-5,241.66	-150.17	5,244.75	5,232.45	12.30	426.435		
3,200.00	3,200.00	3,274.49	3,274.34	7.06	5.63	-178.37	-5,240.01	-148.83	5,242.94	5,230.25	12.69	413.146		
3,300.00	3,300.00	3,375.83	3,375.66	7.28	5.81	-178.39	-5,238.27	-147.38	5,241.18	5,228.09	13.10	400.202		
3,400.00	3,400.00	3,491.43	3,491.23	7.51	6.02	-178.40	-5,236.09	-146.29	5,239.27	5,225.75	13.53	387.278		
3,500.00	3,500.00	3,584.06	3,583.84	7.73	6.19	-178.41	-5,234.23	-145.59	5,237.24	5,223.32	13.92	376.219		
3,600.00	3,600.00	3,675.62	3,675.38	7.96	6.35	-178.41	-5,232.54	-144.84	5,235.38	5,221.07	14.31	365.818		
3,700.00	3,700.00	3,798.40	3,798.13	8.18	6.58	-178.42	-5,230.18	-144.05	5,233.46	5,218.70	14.76	354.622		
3,800.00	3,800.00	3,915.87	3,915.57	8.41	6.79	-178.43	-5,227.34	-143.24	5,231.01	5,215.82	15.20	344.254		
3,900.00	3,900.00	4,001.90	4,001.57	8.63	6.95	-178.44	-5,225.28	-142.65	5,228.60	5,213.02	15.58	335.652		
4,000.00	4,000.00	4,100.00	4,099.64	8.86	7.13	-178.45	-5,223.04	-141.66	5,226.29	5,210.30	15.98	327.035		
4,100.00	4,100.00	4,184.23	4,183.84	9.08	7.28	-178.46	-5,221.26	-140.69	5,224.15	5,207.79	16.36	319.335		
4,200.00	4,200.00	4,298.34	4,297.93	9.31	7.49	-178.47	-5,218.98	-139.39	5,222.13	5,205.34	16.79	311.006		
4,300.00	4,300.00	4,381.33	4,380.89	9.53	7.64	-178.48	-5,217.30	-138.30	5,220.07	5,202.90	17.17	304.068		
4,400.00	4,400.00	4,485.62	4,485.15	9.76	7.83	-178.50	-5,215.36	-137.02	5,218.18	5,200.60	17.58	296.797		
4,500.00	4,500.00	4,569.67	4,569.19	9.98	7.98	-178.50	-5,213.81	-136.45	5,216.32	5,198.36	17.96	290.427		

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:	Site Lea Unit #48H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3694.00usft (McVay 4)
Reference Site:	Lea Unit #48H	MD Reference:	KB @ 3694.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #48H	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 - #7 - 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 +M-S (usft)	Offset Wellbore Centre +E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
4,600.00	4,600.00	4,665.04	4,664.55	10.21	8.16	-178.50	-5,212.31	-136.36	5,214.75	5,196.39	18.36	284.017	
4,700.00	4,700.00	4,787.25	4,786.74	10.43	8.38	-178.51	-5,210.19	-135.75	5,213.01	5,194.20	18.81	277.159	
4,800.00	4,800.00	4,874.98	4,874.45	10.66	8.54	-178.51	-5,208.49	-135.71	5,211.08	5,191.88	19.20	271.478	
4,900.00	4,900.00	4,987.48	4,986.93	10.88	8.75	-178.50	-5,206.42	-136.48	5,209.27	5,189.64	19.63	265.432	
5,000.00	5,000.00	5,092.00	5,091.43	11.11	8.94	-178.49	-5,204.23	-137.14	5,207.19	5,187.15	20.04	259.811	
5,100.00	5,100.00	5,165.41	5,164.82	11.33	9.07	-178.48	-5,202.84	-137.64	5,205.32	5,184.92	20.40	255.131	
5,200.00	5,200.00	5,298.13	5,297.51	11.56	9.32	-178.47	-5,200.56	-139.12	5,203.70	5,182.84	20.87	249.371	
5,300.00	5,300.00	5,386.62	5,385.98	11.78	9.48	-178.46	-5,198.67	-139.80	5,201.59	5,180.33	21.26	244.717	
5,400.00	5,400.00	5,456.98	5,456.33	12.00	9.61	-178.45	-5,197.42	-140.22	5,199.85	5,178.24	21.61	240.618	
5,500.00	5,500.00	5,549.75	5,549.08	12.23	9.78	-178.44	-5,196.29	-141.14	5,198.64	5,176.64	22.00	236.256	
5,600.00	5,600.00	5,668.35	5,667.67	12.45	9.99	-178.43	-5,194.45	-142.21	5,197.11	5,174.66	22.44	231.549	
5,700.00	5,700.00	5,754.79	5,754.09	12.68	10.15	-178.43	-5,193.07	-142.69	5,195.53	5,172.70	22.83	227.584	
5,800.00	5,800.00	5,848.65	5,847.94	12.90	10.32	-178.42	-5,191.90	-143.26	5,194.29	5,171.06	23.23	223.636	
5,900.00	5,900.00	5,943.93	5,943.21	13.13	10.50	-178.41	-5,190.62	-143.80	5,192.98	5,169.35	23.63	219.795	
6,000.00	6,000.00	6,025.28	6,024.56	13.35	10.65	-178.41	-5,189.82	-144.25	5,192.00	5,167.99	24.00	216.327	
6,100.00	6,100.00	6,100.00	6,099.28	13.58	10.79	-178.40	-5,189.26	-144.68	5,191.31	5,166.95	24.36	213.092	
6,170.75	6,170.75	6,153.47	6,152.75	13.74	10.88	-178.40	-5,189.09	-144.91	5,191.11	5,166.50	24.61	210.926	
6,200.00	6,200.00	6,171.65	6,170.92	13.80	10.91	-178.40	-5,189.11	-144.94	5,191.14	5,166.44	24.71	210.105	
6,300.00	6,300.00	6,299.28	6,298.56	14.03	11.12	-178.40	-5,189.33	-145.00	5,191.38	5,166.23	25.15	206.430	
6,400.00	6,400.00	6,384.27	6,383.55	14.25	11.27	-178.40	-5,189.17	-145.32	5,191.20	5,165.68	25.52	203.393	
6,500.00	6,500.00	6,519.96	6,519.23	14.48	11.52	-178.39	-5,188.67	-145.76	5,190.85	5,164.86	25.99	199.728	
6,600.00	6,600.00	6,615.18	6,614.45	14.70	11.69	-178.39	-5,187.98	-145.61	5,190.13	5,163.74	26.39	196.677	
6,700.00	6,700.00	6,700.00	6,699.27	14.93	11.84	-178.40	-5,187.76	-145.17	5,189.82	5,163.05	26.76	193.909	
6,800.00	6,800.00	6,820.32	6,819.59	15.15	12.05	-178.40	-5,187.18	-144.84	5,189.34	5,162.13	27.20	190.774	
6,900.00	6,900.00	6,900.00	6,899.26	15.38	12.19	-178.40	-5,186.91	-144.80	5,188.96	5,161.39	27.57	188.234	
6,917.26	6,917.26	6,900.00	6,899.26	15.42	12.19	-178.40	-5,186.91	-144.80	5,188.93	5,161.32	27.61	187.968	
7,000.00	7,000.00	6,972.67	6,971.94	15.60	12.31	-178.40	-5,187.00	-144.72	5,189.03	5,161.12	27.91	185.926	
7,100.00	7,100.00	7,090.54	7,089.81	15.83	12.50	-178.40	-5,187.10	-144.96	5,189.13	5,160.80	28.33	183.175	
7,200.00	7,200.00	7,199.91	7,199.18	16.05	12.70	-178.39	-5,186.80	-145.64	5,188.87	5,160.13	28.75	180.510	
7,300.00	7,300.00	7,294.73	7,293.99	16.28	12.87	-178.39	-5,186.53	-145.70	5,188.59	5,159.45	29.14	178.063	
7,400.00	7,400.00	7,385.92	7,385.18	16.50	13.02	-178.40	-5,186.41	-145.30	5,188.44	5,158.92	29.52	175.740	
7,500.00	7,500.00	7,500.00	7,499.26	16.72	13.23	-178.40	-5,186.10	-145.01	5,188.15	5,158.20	29.95	173.220	
7,572.47	7,572.47	7,555.21	7,554.47	16.89	13.32	-178.40	-5,185.93	-145.05	5,187.96	5,157.75	30.21	171.732	
7,600.00	7,600.00	7,572.90	7,572.15	16.95	13.35	-178.40	-5,185.95	-145.09	5,187.99	5,157.68	30.30	171.209	
7,700.00	7,700.00	7,673.38	7,672.64	17.17	13.52	-178.40	-5,186.27	-145.30	5,188.32	5,157.62	30.69	169.034	
7,800.00	7,800.00	7,779.26	7,778.51	17.40	13.70	-178.39	-5,186.36	-145.38	5,188.40	5,157.30	31.10	166.850	
7,900.00	7,900.00	7,869.17	7,868.42	17.62	13.85	-178.39	-5,186.47	-145.91	5,188.54	5,157.07	31.47	164.862	
8,000.00	8,000.00	7,972.25	7,971.50	17.85	14.02	-178.38	-5,186.76	-146.27	5,188.83	5,156.96	31.87	162.819	
8,100.00	8,100.00	8,103.53	8,102.78	18.07	14.25	-178.38	-5,186.66	-146.27	5,188.77	5,156.45	32.32	160.547	
8,200.00	8,200.00	8,200.00	8,199.25	18.30	14.42	-178.38	-5,186.31	-146.50	5,188.40	5,155.68	32.72	158.572	
8,300.00	8,300.00	8,298.64	8,297.89	18.52	14.60	-178.38	-5,185.99	-146.61	5,188.09	5,154.96	33.12	156.622	
8,396.39	8,396.39	8,379.14	8,378.39	18.74	14.75	-178.38	-5,185.87	-146.51	5,187.94	5,154.46	33.48	154.939	
8,400.00	8,400.00	8,382.15	8,381.40	18.75	14.75	-178.38	-5,185.87	-146.49	5,187.94	5,154.44	33.50	154.877	
8,500.00	8,500.00	8,479.37	8,478.62	18.97	14.92	-178.38	-5,185.94	-146.27	5,188.01	5,154.12	33.89	153.090	
8,600.00	8,600.00	8,562.24	8,561.49	19.20	15.06	-178.38	-5,186.09	-146.52	5,188.20	5,153.95	34.25	151.473	
8,700.00	8,700.00	8,667.28	8,666.53	19.42	15.23	-178.38	-5,186.58	-146.54	5,188.67	5,154.02	34.65	149.743	
8,800.00	8,800.00	8,765.33	8,764.57	19.65	15.40	-178.37	-5,186.79	-147.26	5,188.91	5,153.87	35.04	148.087	
8,900.00	8,900.00	8,868.15	8,867.39	19.87	15.57	-178.36	-5,187.14	-148.44	5,189.28	5,153.84	35.44	146.431	
8,927.04	8,927.04	8,898.71	8,897.95	19.93	15.62	-178.36	-5,187.20	-148.91	5,189.35	5,153.80	35.55	145.970	
8,950.00	8,949.99	8,917.54	8,916.77	19.98	15.66	4.65	-5,187.24	-149.21	5,188.95	5,153.32	35.63	145.644	
9,000.00	8,999.80	8,957.60	8,956.83	20.06	15.72	4.69	-5,187.37	-149.81	5,184.97	5,149.20	35.78	144.917	
9,050.00	9,049.06	9,000.00	8,999.22	20.15	15.80	4.77	-5,187.60	-150.37	5,176.78	5,140.85	35.94	144.059	

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:	Site Lea Unit #48H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3694.00usft (McVay 4)
Reference Site:	Lea Unit #48H	MD Reference:	KB @ 3694.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #48H	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 - #7 - 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)					
9,100.00	9,097.39	9,052.60	9,051.82	20.23	15.89	4.90	-5,187.91	-151.01	5,164.35	5,128.25	36.11	143.025			
9,150.00	9,144.42	9,106.75	9,105.96	20.31	15.98	5.08	-5,188.14	-151.62	5,147.70	5,111.42	36.28	141.880			
9,200.00	9,189.79	9,153.55	9,152.76	20.39	16.06	5.32	-5,188.30	-152.27	5,126.98	5,090.54	36.44	140.687			
9,250.00	9,233.17	9,198.27	9,197.47	20.48	16.14	5.63	-5,188.43	-153.07	5,102.39	5,065.79	36.60	139.423			
9,300.00	9,274.21	9,230.41	9,229.61	20.58	16.19	6.01	-5,188.55	-153.71	5,074.14	5,037.41	36.73	138.165			
9,350.00	9,312.62	9,260.18	9,259.37	20.69	16.24	6.49	-5,188.71	-154.30	5,042.50	5,005.65	36.85	136.854			
9,400.00	9,348.09	9,287.78	9,286.96	20.83	16.29	7.11	-5,188.91	-154.83	5,007.68	4,970.72	36.96	135.496			
9,450.00	9,380.35	9,349.75	9,348.92	20.89	16.40	8.00	-5,189.29	-155.92	4,969.89	4,932.76	37.12	133.873			
9,500.00	9,409.17	9,404.00	9,403.17	21.18	16.49	9.20	-5,189.21	-156.71	4,929.15	4,891.87	37.27	132.254			
9,550.00	9,434.31	9,404.00	9,403.17	21.40	16.49	10.66	-5,189.21	-156.71	4,886.11	4,848.80	37.32	130.929			
9,600.00	9,455.60	9,404.00	9,403.17	21.64	16.49	12.74	-5,189.21	-156.71	4,841.17	4,803.81	37.36	129.580			
9,650.00	9,472.86	9,404.00	9,403.17	21.92	16.49	15.91	-5,189.21	-156.71	4,794.60	4,757.21	37.40	128.215			
9,700.00	9,485.97	9,404.00	9,403.17	22.24	16.49	21.22	-5,189.21	-156.71	4,746.73	4,709.30	37.42	126.840			
9,750.00	9,494.83	9,404.00	9,403.17	22.58	16.49	31.44	-5,189.21	-156.71	4,697.87	4,660.43	37.44	125.464			
9,800.00	9,499.36	9,404.00	9,403.17	22.95	16.49	55.30	-5,189.21	-156.71	4,648.38	4,610.92	37.46	124.093			
9,827.04	9,500.00	9,404.00	9,403.17	23.16	16.49	79.57	-5,189.21	-156.71	4,621.48	4,584.02	37.46	123.355			
9,900.00	9,500.00	9,404.00	9,403.17	23.75	16.49	72.72	-5,189.21	-156.71	4,548.74	4,511.26	37.47	121.381			
9,911.96	9,500.00	9,404.00	9,403.17	23.85	16.49	70.69	-5,189.21	-156.71	4,536.80	4,499.32	37.48	121.057			
10,000.00	9,500.00	9,404.00	9,403.17	24.63	16.49	70.69	-5,189.21	-156.71	4,448.88	4,411.39	37.49	118.678			
10,100.00	9,500.00	9,404.00	9,403.17	25.64	16.49	70.69	-5,189.21	-156.71	4,349.03	4,311.53	37.50	115.968			
10,200.00	9,500.00	9,404.00	9,403.17	26.74	16.49	70.69	-5,189.21	-156.71	4,249.18	4,211.66	37.52	113.254			
10,300.00	9,500.00	9,404.00	9,403.17	27.92	16.49	70.69	-5,189.21	-156.71	4,149.34	4,111.81	37.54	110.538			
10,400.00	9,500.00	9,404.00	9,403.17	29.16	16.49	70.69	-5,189.21	-156.71	4,049.51	4,011.95	37.56	107.819			
10,500.00	9,500.00	9,404.00	9,403.17	30.46	16.49	70.69	-5,189.21	-156.71	3,949.69	3,912.11	37.58	105.097			
10,600.00	9,500.00	9,404.00	9,403.17	31.82	16.49	70.69	-5,189.21	-156.71	3,849.88	3,812.27	37.61	102.372			
10,700.00	9,500.00	9,404.00	9,403.17	33.22	16.49	70.69	-5,189.21	-156.71	3,750.07	3,712.44	37.63	99.645			
10,800.00	9,500.00	9,404.00	9,403.17	34.66	16.49	70.69	-5,189.21	-156.71	3,650.28	3,612.62	37.66	96.915			
10,900.00	9,500.00	9,404.00	9,403.17	36.13	16.49	70.69	-5,189.21	-156.71	3,550.50	3,512.80	37.70	94.182			
11,000.00	9,500.00	9,404.00	9,403.17	37.64	16.49	70.69	-5,189.21	-156.71	3,450.73	3,413.00	37.74	91.446			
11,100.00	9,500.00	9,404.00	9,403.17	39.18	16.49	70.69	-5,189.21	-156.71	3,350.98	3,313.21	37.78	88.708			
11,200.00	9,500.00	9,404.00	9,403.17	40.73	16.49	70.69	-5,189.21	-156.71	3,251.24	3,213.42	37.82	85.966			
11,300.00	9,500.00	9,404.00	9,403.17	42.32	16.49	70.69	-5,189.21	-156.71	3,151.52	3,113.65	37.87	83.222			
11,400.00	9,500.00	9,404.00	9,403.17	43.92	16.49	70.69	-5,189.21	-156.71	3,051.82	3,013.89	37.92	80.475			
11,500.00	9,500.00	9,404.00	9,403.17	45.54	16.49	70.69	-5,189.21	-156.71	2,952.13	2,914.15	37.98	77.725			
11,600.00	9,500.00	9,404.00	9,403.17	47.17	16.49	70.69	-5,189.21	-156.71	2,852.47	2,814.42	38.05	74.972			
11,700.00	9,500.00	9,404.00	9,403.17	48.82	16.49	70.69	-5,189.21	-156.71	2,752.83	2,714.71	38.12	72.215			
11,800.00	9,500.00	9,404.00	9,403.17	50.48	16.49	70.69	-5,189.21	-156.71	2,653.22	2,615.02	38.20	69.455			
11,900.00	9,500.00	9,404.00	9,403.17	52.15	16.49	70.69	-5,189.21	-156.71	2,553.64	2,515.35	38.29	66.691			
12,000.00	9,500.00	9,404.00	9,403.17	53.83	16.49	70.69	-5,189.21	-156.71	2,454.10	2,415.71	38.39	63.922			
12,100.00	9,500.00	9,404.00	9,403.17	55.53	16.49	70.69	-5,189.21	-156.71	2,354.59	2,316.08	38.51	61.148			
12,200.00	9,500.00	9,404.00	9,403.17	57.23	16.49	70.69	-5,189.21	-156.71	2,255.13	2,216.49	38.64	58.370			
12,300.00	9,500.00	9,404.00	9,403.17	58.93	16.49	70.69	-5,189.21	-156.71	2,155.71	2,116.93	38.78	55.586			
12,400.00	9,500.00	9,404.00	9,403.17	60.65	16.49	70.69	-5,189.21	-156.71	2,056.36	2,017.41	38.95	52.795			
12,500.00	9,500.00	9,404.00	9,403.17	62.37	16.49	70.69	-5,189.21	-156.71	1,957.07	1,917.92	39.14	49.998			
12,600.00	9,500.00	9,404.00	9,403.17	64.10	16.49	70.69	-5,189.21	-156.71	1,857.85	1,818.48	39.37	47.193			
12,700.00	9,500.00	9,404.00	9,403.17	65.84	16.49	70.69	-5,189.21	-156.71	1,758.73	1,719.10	39.63	44.380			
12,800.00	9,500.00	9,404.00	9,403.17	67.57	16.49	70.69	-5,189.21	-156.71	1,659.70	1,619.77	39.94	41.558			
12,900.00	9,500.00	9,404.00	9,403.17	69.32	16.49	70.69	-5,189.21	-156.71	1,560.81	1,520.50	40.30	38.727			
13,000.00	9,500.00	9,404.00	9,403.17	71.07	16.49	70.69	-5,189.21	-156.71	1,462.06	1,421.32	40.74	35.886			
13,100.00	9,500.00	9,404.00	9,403.17	72.82	16.49	70.69	-5,189.21	-156.71	1,363.50	1,322.22	41.27	33.036			
13,200.00	9,500.00	9,404.00	9,403.17	74.58	16.49	70.69	-5,189.21	-156.71	1,265.16	1,223.24	41.92	30.178			
13,300.00	9,500.00	9,404.00	9,403.17	76.34	16.49	70.69	-5,189.21	-156.71	1,167.10	1,124.37	42.73	27.314			

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:	Site Lea Unit #48H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3694.00usft (McVay 4)
Reference Site:	Lea Unit #48H	MD Reference:	KB @ 3694.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #48H	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 - #7 - 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)				
13,400.00	9,500.00	9,404.00	9,403.17	78.10	16.49	70.69	-5,189.21	-156.71	1,069.41	1,025.67	43.74	24.449		
13,500.00	9,500.00	9,404.00	9,403.17	79.87	16.49	70.69	-5,189.21	-156.71	972.18	927.15	45.03	21.590		
13,600.00	9,500.00	9,404.00	9,403.17	81.63	16.49	70.69	-5,189.21	-156.71	875.58	828.88	46.70	18.751		
13,700.00	9,500.00	9,404.00	9,403.17	83.41	16.49	70.69	-5,189.21	-156.71	779.83	730.94	48.89	15.951		
13,800.00	9,500.00	9,404.00	9,403.17	85.18	16.49	70.69	-5,189.21	-156.71	685.31	633.47	51.83	13.221		
13,900.00	9,500.00	9,404.00	9,403.17	86.96	16.49	70.69	-5,189.21	-156.71	592.58	536.71	55.86	10.608		
14,000.00	9,500.00	9,404.00	9,403.17	88.74	16.49	70.69	-5,189.21	-156.71	502.64	441.15	61.49	8.174		
14,100.00	9,500.00	9,404.00	9,403.17	90.52	16.49	70.69	-5,189.21	-156.71	417.31	347.86	69.45	6.009		
14,200.00	9,500.00	9,404.00	9,403.17	92.30	16.49	70.69	-5,189.21	-156.71	340.08	259.49	80.59	4.220		
14,300.00	9,500.00	9,404.00	9,403.17	94.09	16.49	70.69	-5,189.21	-156.71	277.77	183.08	94.69	2.933		
14,400.00	9,500.00	9,404.00	9,403.17	95.87	16.49	70.69	-5,189.21	-156.71	242.20	135.39	106.80	2.268		
14,442.49	9,500.00	9,404.00	9,403.17	96.63	16.49	70.69	-5,189.21	-156.71	238.44	129.67	108.78	2.192 CC, ES, SF		
14,500.00	9,500.00	9,404.00	9,403.17	97.66	16.49	70.69	-5,189.21	-156.71	245.28	138.10	107.18	2.289		
14,600.00	9,500.00	9,404.00	9,403.17	99.45	16.49	70.69	-5,189.21	-156.71	285.77	189.42	96.35	2.966		
14,700.00	9,500.00	9,404.00	9,403.17	101.24	16.49	70.69	-5,189.21	-156.71	350.95	267.22	83.74	4.191		
14,800.00	9,500.00	9,404.00	9,403.17	103.04	16.49	70.69	-5,189.21	-156.71	429.73	356.08	73.66	5.834		
14,832.67	9,500.00	9,404.00	9,403.17	103.62	16.49	70.69	-5,189.21	-156.71	457.27	386.28	70.99	6.442		

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



TDS
Anticollision Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Site Lea Unit #48H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3694.00usft (McVay 4)
Reference Site:	Lea Unit #48H	MD Reference:	KB @ 3694.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #48H	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 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)						
0.00	0.00	0.00	0.00	0.00	0.00	-157.08	-4,299.33	-1,818.10	4,668.07					
100.00	100.00	66.44	66.44	0.09	1.00	-157.08	-4,299.33	-1,818.08	4,667.94	4,666.87	1.07	4,356.892		
200.00	200.00	168.03	168.03	0.32	2.52	-157.08	-4,299.33	-1,817.98	4,667.90	4,665.11	2.79	1,671.190		
300.00	300.00	269.62	269.62	0.54	4.04	-157.08	-4,299.33	-1,817.79	4,667.83	4,663.31	4.51	1,033.864		
400.00	400.00	371.21	371.21	0.77	5.56	-157.08	-4,299.33	-1,817.50	4,667.72	4,661.48	6.24	748.426		
500.00	500.00	472.80	472.80	0.99	7.08	-157.09	-4,299.33	-1,817.13	4,667.59	4,659.62	7.96	586.489		
600.00	600.00	579.24	579.24	1.22	10.84	-157.09	-4,299.33	-1,816.55	4,667.37	4,655.65	11.72	398.320		
700.00	700.00	687.93	687.92	1.44	15.64	-157.11	-4,299.33	-1,815.46	4,666.98	4,650.54	16.44	283.856		
800.00	800.00	796.61	796.58	1.67	20.43	-157.13	-4,299.34	-1,813.85	4,666.40	4,645.23	21.17	220.383		
900.00	900.00	904.77	904.73	1.89	25.29	-157.15	-4,299.34	-1,811.72	4,665.64	4,639.67	25.97	179.673		
1,000.00	1,000.00	1,003.35	1,003.29	2.12	31.45	-157.17	-4,299.34	-1,809.62	4,664.81	4,632.93	31.88	148.329		
1,100.00	1,100.00	1,101.93	1,101.85	2.34	37.61	-157.20	-4,299.34	-1,807.58	4,664.02	4,626.21	37.81	123.370		
1,200.00	1,200.00	1,200.52	1,200.41	2.56	43.77	-157.22	-4,299.35	-1,805.63	4,663.25	4,619.51	43.74	106.612		
1,300.00	1,300.00	1,299.11	1,298.98	2.79	49.93	-157.24	-4,299.35	-1,803.75	4,662.51	4,612.83	49.68	93.848		
1,400.00	1,400.00	1,397.70	1,397.56	3.01	56.09	-157.26	-4,299.35	-1,801.94	4,661.81	4,606.18	55.63	83.803		
1,500.00	1,500.00	1,496.21	1,496.06	3.24	61.84	-157.28	-4,299.36	-1,800.22	4,661.14	4,599.93	61.21	76.151		
1,600.00	1,600.00	1,594.61	1,594.45	3.46	67.01	-157.30	-4,299.36	-1,798.58	4,660.50	4,594.21	66.28	70.315		
1,700.00	1,700.00	1,693.02	1,692.84	3.69	72.18	-157.32	-4,299.36	-1,797.03	4,659.89	4,588.54	71.35	65.308		
1,800.00	1,800.00	1,791.43	1,791.24	3.91	77.35	-157.33	-4,299.36	-1,795.57	4,659.32	4,582.89	76.43	60.965		
1,900.00	1,900.00	1,889.84	1,889.64	4.14	82.52	-157.35	-4,299.36	-1,794.19	4,658.78	4,577.28	81.50	57.163		
2,000.00	2,000.00	1,889.00	1,888.79	4.36	87.39	-157.36	-4,299.37	-1,792.88	4,658.27	4,571.97	86.30	53.979		
2,100.00	2,100.00	2,088.99	2,088.77	4.59	91.93	-157.38	-4,299.37	-1,791.57	4,657.77	4,566.98	90.79	51.305		
2,200.00	2,200.00	2,188.98	2,188.76	4.81	96.47	-157.39	-4,299.37	-1,790.26	4,657.27	4,561.99	95.28	48.882		
2,300.00	2,300.00	2,288.97	2,288.74	5.04	101.01	-157.41	-4,299.37	-1,788.95	4,656.77	4,557.00	99.77	46.677		
2,400.00	2,400.00	2,388.97	2,388.72	5.26	105.55	-157.42	-4,299.37	-1,787.64	4,656.27	4,552.01	104.26	44.661		
2,500.00	2,500.00	2,490.66	2,490.41	5.49	110.84	-157.44	-4,299.37	-1,786.29	4,655.76	4,546.31	109.44	42.540		
2,600.00	2,600.00	2,594.05	2,593.79	5.71	116.90	-157.46	-4,299.38	-1,784.74	4,655.18	4,539.85	115.33	40.364		
2,700.00	2,700.00	2,697.43	2,697.15	5.94	122.95	-157.48	-4,299.38	-1,782.99	4,654.54	4,533.32	121.22	38.398		
2,800.00	2,800.00	2,800.81	2,800.51	6.16	129.00	-157.50	-4,299.38	-1,781.04	4,653.82	4,526.71	127.11	36.613		
2,900.00	2,900.00	2,904.18	2,903.86	6.39	135.05	-157.52	-4,299.38	-1,778.90	4,653.03	4,520.02	133.00	34.984		
3,000.00	3,000.00	3,008.90	3,008.55	6.61	144.28	-157.55	-4,299.39	-1,776.49	4,652.15	4,510.35	141.80	32.808		
3,100.00	3,100.00	3,113.70	3,113.32	6.84	153.73	-157.58	-4,299.39	-1,773.79	4,651.17	4,500.36	150.81	30.841		
3,200.00	3,200.00	3,218.49	3,218.07	7.06	163.18	-157.61	-4,299.40	-1,770.81	4,650.09	4,490.26	159.83	29.094		
3,300.00	3,300.00	3,323.26	3,322.79	7.28	172.63	-157.65	-4,299.40	-1,767.54	4,648.91	4,480.06	168.85	27.532		
3,400.00	3,400.00	3,413.00	3,412.47	7.51	180.72	-157.69	-4,299.40	-1,764.52	4,647.65	4,471.02	176.63	26.313		
3,500.00	3,500.00	3,518.88	3,518.30	7.73	189.60	-157.73	-4,299.41	-1,761.07	4,646.41	4,461.27	185.13	25.098		
3,600.00	3,600.00	3,611.51	3,610.89	7.96	197.36	-157.76	-4,299.41	-1,758.48	4,645.35	4,452.74	192.61	24.118		
3,700.00	3,700.00	3,704.16	3,703.52	8.18	205.13	-157.78	-4,299.42	-1,756.27	4,644.45	4,444.37	200.08	23.213		
3,800.00	3,800.00	3,800.00	3,799.34	8.41	213.16	-157.80	-4,299.42	-1,754.39	4,643.71	4,435.91	207.80	22.347		
3,900.00	3,900.00	3,893.88	3,893.21	8.63	216.87	-157.82	-4,299.42	-1,752.82	4,643.08	4,431.52	211.55	21.947		
4,000.00	4,000.00	3,991.09	3,990.41	8.86	220.71	-157.84	-4,299.42	-1,751.35	4,642.51	4,427.08	215.43	21.550		
4,100.00	4,100.00	4,088.31	4,087.61	9.08	224.56	-157.85	-4,299.43	-1,750.03	4,642.00	4,422.69	219.31	21.166		
4,200.00	4,200.00	4,185.53	4,184.83	9.31	228.40	-157.87	-4,299.43	-1,748.87	4,641.55	4,418.37	223.18	20.797		
4,300.00	4,300.00	4,282.75	4,282.04	9.53	232.24	-157.88	-4,299.43	-1,747.87	4,641.16	4,414.10	227.06	20.440		
4,400.00	4,400.00	4,379.98	4,379.26	9.76	236.08	-157.89	-4,299.43	-1,747.02	4,640.83	4,409.90	230.93	20.096		
4,500.00	4,500.00	4,477.21	4,476.49	9.98	239.92	-157.89	-4,299.43	-1,746.32	4,640.57	4,405.76	234.80	19.764		
4,600.00	4,600.00	4,574.44	4,573.72	10.21	243.76	-157.90	-4,299.43	-1,745.78	4,640.36	4,401.69	238.67	19.442		
4,633.88	4,633.88	4,600.00	4,599.28	10.28	244.77	-157.90	-4,299.43	-1,745.66	4,640.31	4,400.60	239.71	19.358 CC, ES		
4,700.00	4,700.00	4,600.00	4,599.28	10.43	244.77	-157.90	-4,299.43	-1,745.66	4,640.78	4,400.95	239.83	19.350 SF		
4,800.00	4,800.00	4,600.00	4,599.28	10.66	244.77	-157.90	-4,299.43	-1,745.66	4,643.28	4,403.35	239.93	19.353		
4,900.00	4,900.00	4,600.00	4,599.28	10.88	244.77	-157.90	-4,299.43	-1,745.66	4,647.93	4,408.02	239.91	19.374		
5,000.00	5,000.00	4,600.00	4,599.28	11.11	244.77	-157.90	-4,299.43	-1,745.66	4,654.73	4,414.94	239.78	19.412		

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

Company:	Legacy Reserves	Local Co-ordinate Reference:	Site Lea Unit #48H
Project:	Lea County NM (NAD-27 2015)	TVD Reference:	KB @ 3694.00usft (McVay 4)
Reference Site:	Lea Unit #48H	MD Reference:	KB @ 3694.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #48H	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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside	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)		
5,100.00	5,100.00	4,600.00	4,599.28	11.33	244.77	-157.90	-4,299.43	-1,745.66	4,663.66	4,424.11	239.55	19.468	
5,200.00	5,200.00	4,600.00	4,599.28	11.56	244.77	-157.90	-4,299.43	-1,745.66	4,674.71	4,435.50	239.21	19.542	
5,300.00	5,300.00	4,600.00	4,599.28	11.78	244.77	-157.90	-4,299.43	-1,745.66	4,687.87	4,449.11	238.76	19.634	
5,400.00	5,400.00	4,600.00	4,599.28	12.00	244.77	-157.90	-4,299.43	-1,745.66	4,703.12	4,464.91	238.21	19.743	
5,500.00	5,500.00	4,600.00	4,599.28	12.23	244.77	-157.90	-4,299.43	-1,745.66	4,720.44	4,482.88	237.56	19.870	
5,600.00	5,600.00	4,600.00	4,599.28	12.45	244.77	-157.90	-4,299.43	-1,745.66	4,739.81	4,503.00	236.81	20.015	
5,700.00	5,700.00	4,600.00	4,599.28	12.68	244.77	-157.90	-4,299.43	-1,745.66	4,761.20	4,525.23	235.97	20.177	
5,800.00	5,800.00	4,600.00	4,599.28	12.90	244.77	-157.90	-4,299.43	-1,745.66	4,784.59	4,549.55	235.04	20.356	
5,900.00	5,900.00	4,600.00	4,599.28	13.13	244.77	-157.90	-4,299.43	-1,745.66	4,809.94	4,575.91	234.02	20.553	
6,000.00	6,000.00	4,600.00	4,599.28	13.35	244.77	-157.90	-4,299.43	-1,745.66	4,837.22	4,604.30	232.92	20.767	
6,100.00	6,100.00	4,600.00	4,599.28	13.58	244.77	-157.90	-4,299.43	-1,745.66	4,866.41	4,634.66	231.75	20.999	
6,200.00	6,200.00	4,600.00	4,599.28	13.80	244.77	-157.90	-4,299.43	-1,745.66	4,897.46	4,666.97	230.50	21.247	
6,300.00	6,300.00	4,600.00	4,599.28	14.03	244.77	-157.90	-4,299.43	-1,745.66	4,930.35	4,701.17	229.18	21.513	
6,400.00	6,400.00	4,600.00	4,599.28	14.25	244.77	-157.90	-4,299.43	-1,745.66	4,965.04	4,737.24	227.80	21.796	
6,500.00	6,500.00	4,600.00	4,599.28	14.48	244.77	-157.90	-4,299.43	-1,745.66	5,001.48	4,775.13	226.36	22.096	
6,600.00	6,600.00	4,600.00	4,599.28	14.70	244.77	-157.90	-4,299.43	-1,745.66	5,039.65	4,814.79	224.86	22.412	
6,700.00	6,700.00	4,600.00	4,599.28	14.93	244.77	-157.90	-4,299.43	-1,745.66	5,079.50	4,856.18	223.31	22.746	
6,800.00	6,800.00	4,600.00	4,599.28	15.15	244.77	-157.90	-4,299.43	-1,745.66	5,120.99	4,899.27	221.72	23.097	
6,900.00	6,900.00	4,600.00	4,599.28	15.38	244.77	-157.90	-4,299.43	-1,745.66	5,164.08	4,943.99	220.09	23.464	
7,000.00	7,000.00	4,600.00	4,599.28	15.60	244.77	-157.90	-4,299.43	-1,745.66	5,208.74	4,990.32	218.42	23.848	
7,100.00	7,100.00	4,600.00	4,599.28	15.83	244.77	-157.90	-4,299.43	-1,745.66	5,254.92	5,038.21	216.71	24.248	
7,200.00	7,200.00	4,600.00	4,599.28	16.05	244.77	-157.90	-4,299.43	-1,745.66	5,302.58	5,087.60	214.98	24.666	
7,300.00	7,300.00	4,600.00	4,599.28	16.28	244.77	-157.90	-4,299.43	-1,745.66	5,351.69	5,138.47	213.22	25.099	
7,400.00	7,400.00	4,600.00	4,599.28	16.50	244.77	-157.90	-4,299.43	-1,745.66	5,402.21	5,190.76	211.44	25.549	
7,500.00	7,500.00	4,600.00	4,599.28	16.72	244.77	-157.90	-4,299.43	-1,745.66	5,454.09	5,244.44	209.65	26.015	
7,600.00	7,600.00	4,600.00	4,599.28	16.95	244.77	-157.90	-4,299.43	-1,745.66	5,507.29	5,299.46	207.84	26.498	
7,700.00	7,700.00	4,600.00	4,599.28	17.17	244.77	-157.90	-4,299.43	-1,745.66	5,561.79	5,355.77	206.02	26.997	
7,800.00	7,800.00	4,600.00	4,599.28	17.40	244.77	-157.90	-4,299.43	-1,745.66	5,617.54	5,413.35	204.19	27.511	
7,900.00	7,900.00	4,600.00	4,599.28	17.62	244.77	-157.90	-4,299.43	-1,745.66	5,674.50	5,472.14	202.36	28.042	
8,000.00	8,000.00	4,600.00	4,599.28	17.85	244.77	-157.90	-4,299.43	-1,745.66	5,732.64	5,532.12	200.52	28.588	
8,100.00	8,100.00	4,600.00	4,599.28	18.07	244.77	-157.90	-4,299.43	-1,745.66	5,791.93	5,593.24	198.69	29.151	
8,200.00	8,200.00	4,600.00	4,599.28	18.30	244.77	-157.90	-4,299.43	-1,745.66	5,852.32	5,655.46	196.86	29.729	
8,300.00	8,300.00	4,600.00	4,599.28	18.52	244.77	-157.90	-4,299.43	-1,745.66	5,913.78	5,718.75	195.03	30.322	
8,400.00	8,400.00	4,600.00	4,599.28	18.75	244.77	-157.90	-4,299.43	-1,745.66	5,976.29	5,783.08	193.21	30.931	
8,500.00	8,500.00	4,600.00	4,599.28	18.97	244.77	-157.90	-4,299.43	-1,745.66	6,039.81	5,848.41	191.40	31.555	
8,600.00	8,600.00	4,600.00	4,599.28	19.20	244.77	-157.90	-4,299.43	-1,745.66	6,104.30	5,914.70	189.61	32.195	
8,700.00	8,700.00	4,600.00	4,599.28	19.42	244.77	-157.90	-4,299.43	-1,745.66	6,169.74	5,981.92	187.82	32.849	
8,800.00	8,800.00	4,600.00	4,599.28	19.65	244.77	-157.90	-4,299.43	-1,745.66	6,236.10	6,050.05	186.05	33.519	
8,900.00	8,900.00	4,600.00	4,599.28	19.87	244.77	-157.90	-4,299.43	-1,745.66	6,303.35	6,119.06	184.29	34.203	
8,927.04	8,927.04	4,600.00	4,599.28	19.93	244.77	-157.90	-4,299.43	-1,745.66	6,321.68	6,137.86	183.82	34.391	
8,950.00	8,949.99	4,600.00	4,599.28	19.98	244.77	24.24	-4,299.43	-1,745.66	6,336.99	6,153.58	183.40	34.552	
9,000.00	8,999.80	4,600.00	4,599.28	20.06	244.77	22.65	-4,299.43	-1,745.66	6,368.26	6,185.84	182.42	34.910	
9,050.00	9,049.06	4,600.00	4,599.28	20.15	244.77	21.36	-4,299.43	-1,745.66	6,396.56	6,215.20	181.36	35.271	
9,100.00	9,097.39	4,600.00	4,599.28	20.23	244.77	20.32	-4,299.43	-1,745.66	6,421.70	6,241.48	180.22	35.632	
9,150.00	9,144.42	4,600.00	4,599.28	20.31	244.77	19.50	-4,299.43	-1,745.66	6,443.54	6,264.51	179.02	35.993	
9,200.00	9,189.79	4,600.00	4,599.28	20.39	244.77	18.85	-4,299.43	-1,745.66	6,461.94	6,284.17	177.77	36.351	
9,250.00	9,233.17	4,600.00	4,599.28	20.48	244.77	18.35	-4,299.43	-1,745.66	6,476.79	6,300.33	176.46	36.704	
9,300.00	9,274.21	4,600.00	4,599.28	20.58	244.77	17.99	-4,299.43	-1,745.66	6,488.00	6,312.89	175.12	37.050	
9,350.00	9,312.62	4,600.00	4,599.28	20.69	244.77	17.76	-4,299.43	-1,745.66	6,495.51	6,321.78	173.74	37.387	
9,400.00	9,348.09	4,600.00	4,599.28	20.83	244.77	17.64	-4,299.43	-1,745.66	6,499.28	6,326.94	172.34	37.712	
9,450.00	9,380.35	4,600.00	4,599.28	20.99	244.77	17.64	-4,299.43	-1,745.66	6,499.28	6,328.35	170.93	38.024	
9,500.00	9,409.17	4,600.00	4,599.28	21.18	244.77	17.76	-4,299.43	-1,745.66	6,495.50	6,325.99	169.51	38.319	

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

Company:	Legacy Reserves	Local Co-ordinate Reference:	Site Lea Unit #48H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3694.00usft (McVay 4)
Reference Site:	Lea Unit #48H	MD Reference:	KB @ 3694.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #48H	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		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	
9,550.00	9,434.31	4,600.00	4,599.28	21.40	244.77	17.99	-4,299.43	-1,745.66	6,487.98	6,319.88	168.10	38.595	
9,600.00	9,455.60	4,600.00	4,599.28	21.64	244.77	18.35	-4,299.43	-1,745.66	6,476.76	6,310.05	166.71	38.850	
9,650.00	9,472.86	4,600.00	4,599.28	21.92	244.77	18.85	-4,299.43	-1,745.66	6,461.90	6,296.55	165.35	39.081	
9,700.00	9,485.97	4,600.00	4,599.28	22.24	244.77	19.50	-4,299.43	-1,745.66	6,443.49	6,279.48	164.01	39.286	
9,750.00	9,494.83	4,600.00	4,599.28	22.58	244.77	20.32	-4,299.43	-1,745.66	6,421.65	6,258.92	162.73	39.463	
9,800.00	9,499.36	4,600.00	4,599.28	22.95	244.77	21.36	-4,299.43	-1,745.66	6,396.50	6,235.00	161.49	39.608	
9,827.04	9,500.00	4,600.00	4,599.28	23.16	244.77	22.02	-4,299.43	-1,745.66	6,381.57	6,220.72	160.85	39.673	
9,900.00	9,500.00	4,600.00	4,599.28	23.75	244.77	20.61	-4,299.43	-1,745.66	6,339.94	6,180.82	159.12	39.844	
9,911.96	9,500.00	4,600.00	4,599.28	23.85	244.77	20.37	-4,299.43	-1,745.66	6,333.09	6,174.26	158.83	39.872	
10,000.00	9,500.00	4,600.00	4,599.28	24.63	244.77	20.37	-4,299.43	-1,745.66	6,283.07	6,126.35	156.72	40.092	
10,100.00	9,500.00	4,600.00	4,599.28	25.64	244.77	20.37	-4,299.43	-1,745.66	6,227.27	6,072.97	154.30	40.359	
10,200.00	9,500.00	4,600.00	4,599.28	26.74	244.77	20.37	-4,299.43	-1,745.66	6,172.59	6,020.73	151.86	40.648	
10,300.00	9,500.00	4,600.00	4,599.28	27.92	244.77	20.37	-4,299.43	-1,745.66	6,119.05	5,969.66	149.39	40.960	
10,400.00	9,500.00	4,600.00	4,599.28	29.16	244.77	20.37	-4,299.43	-1,745.66	6,066.70	5,919.79	146.90	41.298	
10,500.00	9,500.00	4,600.00	4,599.28	30.46	244.77	20.37	-4,299.43	-1,745.66	6,015.54	5,871.16	144.39	41.663	
10,600.00	9,500.00	4,600.00	4,599.28	31.82	244.77	20.37	-4,299.43	-1,745.66	5,965.63	5,823.78	141.85	42.057	
10,700.00	9,500.00	4,600.00	4,599.28	33.22	244.77	20.37	-4,299.43	-1,745.66	5,916.98	5,777.70	139.28	42.482	
10,800.00	9,500.00	4,600.00	4,599.28	34.66	244.77	20.37	-4,299.43	-1,745.66	5,869.64	5,732.95	136.69	42.942	
10,900.00	9,500.00	4,600.00	4,599.28	36.13	244.77	20.37	-4,299.43	-1,745.66	5,823.62	5,689.56	134.06	43.440	
11,000.00	9,500.00	4,600.00	4,599.28	37.64	244.77	20.37	-4,299.43	-1,745.66	5,778.98	5,647.57	131.41	43.977	
11,100.00	9,500.00	4,600.00	4,599.28	39.18	244.77	20.37	-4,299.43	-1,745.66	5,735.72	5,607.00	128.73	44.557	
11,200.00	9,500.00	4,600.00	4,599.28	40.73	244.77	20.37	-4,299.43	-1,745.66	5,693.90	5,567.89	126.01	45.185	
11,300.00	9,500.00	4,600.00	4,599.28	42.32	244.77	20.37	-4,299.43	-1,745.66	5,653.53	5,530.26	123.27	45.863	
11,400.00	9,500.00	4,600.00	4,599.28	43.92	244.77	20.37	-4,299.43	-1,745.66	5,614.66	5,494.16	120.50	46.596	
11,500.00	9,500.00	4,600.00	4,599.28	45.54	244.77	20.37	-4,299.43	-1,745.66	5,577.31	5,459.61	117.69	47.388	
11,600.00	9,500.00	4,600.00	4,599.28	47.17	244.77	20.37	-4,299.43	-1,745.66	5,541.51	5,426.65	114.87	48.244	
11,700.00	9,500.00	4,600.00	4,599.28	48.82	244.77	20.37	-4,299.43	-1,745.66	5,507.30	5,395.28	112.01	49.168	
11,800.00	9,500.00	4,600.00	4,599.28	50.48	244.77	20.37	-4,299.43	-1,745.66	5,474.69	5,365.56	109.13	50.165	
11,900.00	9,500.00	4,600.00	4,599.28	52.15	244.77	20.37	-4,299.43	-1,745.66	5,443.73	5,337.49	106.24	51.240	
12,000.00	9,500.00	4,600.00	4,599.28	53.83	244.77	20.37	-4,299.43	-1,745.66	5,414.44	5,311.11	103.34	52.397	
12,100.00	9,500.00	4,600.00	4,599.28	55.53	244.77	20.37	-4,299.43	-1,745.66	5,386.85	5,286.43	100.42	53.641	
12,200.00	9,500.00	4,600.00	4,599.28	57.23	244.77	20.37	-4,299.43	-1,745.66	5,360.98	5,263.46	97.52	54.975	
12,300.00	9,500.00	4,600.00	4,599.28	58.93	244.77	20.37	-4,299.43	-1,745.66	5,336.86	5,242.24	94.62	56.401	
12,400.00	9,500.00	4,600.00	4,599.28	60.65	244.77	20.37	-4,299.43	-1,745.66	5,314.51	5,222.75	91.76	57.918	
12,500.00	9,500.00	4,600.00	4,599.28	62.37	244.77	20.37	-4,299.43	-1,745.66	5,293.96	5,205.02	88.94	59.524	
12,600.00	9,500.00	4,600.00	4,599.28	64.10	244.77	20.37	-4,299.43	-1,745.66	5,275.22	5,189.04	86.18	61.208	
12,700.00	9,500.00	4,600.00	4,599.28	65.84	244.77	20.37	-4,299.43	-1,745.66	5,258.32	5,174.80	83.52	62.955	
12,800.00	9,500.00	4,600.00	4,599.28	67.57	244.77	20.37	-4,299.43	-1,745.66	5,243.27	5,162.28	80.99	64.738	
12,900.00	9,500.00	4,600.00	4,599.28	69.32	244.77	20.37	-4,299.43	-1,745.66	5,230.09	5,151.46	78.63	66.514	
13,000.00	9,500.00	4,600.00	4,599.28	71.07	244.77	20.37	-4,299.43	-1,745.66	5,218.79	5,142.30	76.50	68.223	
13,100.00	9,500.00	4,600.00	4,599.28	72.82	244.77	20.37	-4,299.43	-1,745.66	5,209.39	5,134.74	74.65	69.780	
13,200.00	9,500.00	4,600.00	4,599.28	74.58	244.77	20.37	-4,299.43	-1,745.66	5,201.90	5,128.71	73.19	71.079	
13,300.00	9,500.00	4,600.00	4,599.28	76.34	244.77	20.37	-4,299.43	-1,745.66	5,196.32	5,124.14	72.18	71.992	
13,400.00	9,500.00	4,600.00	4,599.28	78.10	244.77	20.37	-4,299.43	-1,745.66	5,192.66	5,120.93	71.73	72.396	
13,500.00	9,500.00	4,600.00	4,599.28	79.87	244.77	20.37	-4,299.43	-1,745.66	5,190.92	5,119.01	71.90	72.193	
13,540.19	9,500.00	4,600.00	4,599.28	80.58	244.77	20.37	-4,299.43	-1,745.66	5,190.76	5,118.60	72.16	71.930	
13,600.00	9,500.00	4,600.00	4,599.28	81.63	244.77	20.37	-4,299.43	-1,745.66	5,191.11	5,118.35	72.76	71.350	
13,700.00	9,500.00	4,600.00	4,599.28	83.41	244.77	20.37	-4,299.43	-1,745.66	5,193.22	5,118.94	74.28	69.910	
13,800.00	9,500.00	4,600.00	4,599.28	85.18	244.77	20.37	-4,299.43	-1,745.66	5,197.26	5,120.82	76.45	67.987	
13,900.00	9,500.00	4,600.00	4,599.28	86.96	244.77	20.37	-4,299.43	-1,745.66	5,203.22	5,124.06	79.16	65.730	
14,000.00	9,500.00	4,600.00	4,599.28	88.74	244.77	20.37	-4,299.43	-1,745.66	5,211.09	5,128.75	82.34	63.290	
14,100.00	9,500.00	4,600.00	4,599.28	90.52	244.77	20.37	-4,299.43	-1,745.66	5,220.86	5,134.98	85.88	60.790	

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

Company:	Legacy Reserves	Local Co-ordinate Reference:	Site Lea Unit #48H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3694.00usft (McVay 4)
Reference Site:	Lea Unit #48H	MD Reference:	KB @ 3694.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #48H	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)	Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning		
Reference	Offset	Reference	Offset	Reference	Offset		+N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
14,200.00	9,500.00	4,600.00	4,599.28	92.30	244.77	20.37	-4,299.43	-1,745.66	5,232.53	5,142.82	89.71	58.325			
14,300.00	9,500.00	4,600.00	4,599.28	94.09	244.77	20.37	-4,299.43	-1,745.66	5,246.08	5,152.32	93.76	55.953			
14,400.00	9,500.00	4,600.00	4,599.28	95.87	244.77	20.37	-4,299.43	-1,745.66	5,261.49	5,163.53	97.96	53.710			
14,500.00	9,500.00	4,600.00	4,599.28	97.66	244.77	20.37	-4,299.43	-1,745.66	5,278.76	5,176.48	102.27	51.615			
14,600.00	9,500.00	4,600.00	4,599.28	99.45	244.77	20.37	-4,299.43	-1,745.66	5,297.85	5,191.20	106.65	49.673			
14,700.00	9,500.00	4,600.00	4,599.28	101.24	244.77	20.37	-4,299.43	-1,745.66	5,318.76	5,207.68	111.08	47.883			
14,800.00	9,500.00	4,600.00	4,599.28	103.04	244.77	20.37	-4,299.43	-1,745.66	5,341.46	5,225.93	115.52	46.238			
14,832.67	9,500.00	4,600.00	4,599.28	103.62	244.77	20.37	-4,299.43	-1,745.66	5,349.25	5,232.28	116.97	45.731			



TDS
Anticollision Report



Company:	Legacy Reserves	Local Co-ordinate Reference:	Site Lea Unit #48H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3694.00usft (McVay 4)
Reference Site:	Lea Unit #48H	MD Reference:	KB @ 3694.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #48H	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 #47H - Lea Unit #47H - OH - Plan #2												Offset Site Error:	0.00 usft
Survey Program: 0-MVD												Offset Well Error:	0.00 usft
Reference													
Measured		Vertical		Measured		Vertical		Semi Major Axis		Distance		Warning	
Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Reference	Offset	Highside	Offset Wellbore Centre	Between	Between
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	Toolface	+N-S	+E-W	Centres
										(°)	(usft)	(usft)	Ellipses
													Minimum
													Separation
													Factor
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-90.57	-0.50	-50.00	50.00
100.00	100.00	100.00	100.00	100.00	100.00	0.09	0.09	0.09	0.09	-90.57	-0.50	-50.00	50.00
200.00	200.00	200.00	200.00	200.00	200.00	0.32	0.32	0.32	0.32	-90.57	-0.50	-50.00	50.00
300.00	300.00	300.00	300.00	300.00	300.00	0.54	0.54	0.54	0.54	-90.57	-0.50	-50.00	50.00
400.00	400.00	400.00	400.00	400.00	400.00	0.77	0.77	0.77	0.77	-90.57	-0.50	-50.00	50.00
500.00	500.00	500.00	500.00	500.00	500.00	0.99	0.99	0.99	0.99	-90.57	-0.50	-50.00	50.00
600.00	600.00	600.00	600.00	600.00	600.00	1.22	1.22	1.22	1.22	-90.57	-0.50	-50.00	50.00
700.00	700.00	700.00	700.00	700.00	700.00	1.44	1.44	1.44	1.44	-90.57	-0.50	-50.00	50.00
800.00	800.00	800.00	800.00	800.00	800.00	1.67	1.67	1.67	1.67	-90.57	-0.50	-50.00	50.00
900.00	900.00	900.00	900.00	900.00	900.00	1.89	1.89	1.89	1.89	-90.57	-0.50	-50.00	50.00
1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	2.12	2.12	-90.57	-0.50	-50.00	50.00
1,100.00	1,100.00	1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	2.34	2.34	-90.57	-0.50	-50.00	50.00
1,200.00	1,200.00	1,200.00	1,200.00	1,200.00	1,200.00	2.56	2.56	2.56	2.56	-90.57	-0.50	-50.00	50.00
1,300.00	1,300.00	1,300.00	1,300.00	1,300.00	1,300.00	2.79	2.79	2.79	2.79	-90.57	-0.50	-50.00	50.00
1,400.00	1,400.00	1,400.00	1,400.00	1,400.00	1,400.00	3.01	3.01	3.01	3.01	-90.57	-0.50	-50.00	50.00
1,500.00	1,500.00	1,500.00	1,500.00	1,500.00	1,500.00	3.24	3.24	3.24	3.24	-90.57	-0.50	-50.00	50.00
1,600.00	1,600.00	1,600.00	1,600.00	1,600.00	1,600.00	3.46	3.46	3.46	3.46	-90.57	-0.50	-50.00	50.00
1,700.00	1,700.00	1,700.00	1,700.00	1,700.00	1,700.00	3.69	3.69	3.69	3.69	-90.57	-0.50	-50.00	50.00
1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	3.91	3.91	3.91	3.91	-90.57	-0.50	-50.00	50.00
1,900.00	1,900.00	1,900.00	1,900.00	1,900.00	1,900.00	4.14	4.14	4.14	4.14	-90.57	-0.50	-50.00	50.00
2,000.00	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00	4.36	4.36	4.36	4.36	-90.57	-0.50	-50.00	50.00
2,100.00	2,100.00	2,100.00	2,100.00	2,100.00	2,100.00	4.59	4.59	4.59	4.59	-90.57	-0.50	-50.00	50.00
2,200.00	2,200.00	2,200.00	2,200.00	2,200.00	2,200.00	4.81	4.81	4.81	4.81	-90.57	-0.50	-50.00	50.00
2,300.00	2,300.00	2,300.00	2,300.00	2,300.00	2,300.00	5.04	5.04	5.04	5.04	-90.57	-0.50	-50.00	50.00
2,400.00	2,400.00	2,400.00	2,400.00	2,400.00	2,400.00	5.26	5.26	5.26	5.26	-90.57	-0.50	-50.00	50.00
2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	5.49	5.49	5.49	5.49	-90.57	-0.50	-50.00	50.00
2,600.00	2,600.00	2,600.00	2,600.00	2,600.00	2,600.00	5.71	5.71	5.71	5.71	-90.57	-0.50	-50.00	50.00
2,700.00	2,700.00	2,700.00	2,700.00	2,700.00	2,700.00	5.94	5.94	5.94	5.94	-90.57	-0.50	-50.00	50.00
2,800.00	2,800.00	2,800.00	2,800.00	2,800.00	2,800.00	6.16	6.16	6.16	6.16	-90.57	-0.50	-50.00	50.00
2,900.00	2,900.00	2,900.00	2,900.00	2,900.00	2,900.00	6.39	6.39	6.39	6.39	-90.57	-0.50	-50.00	50.00
3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	6.61	6.61	6.61	6.61	-90.57	-0.50	-50.00	50.00
3,100.00	3,100.00	3,100.00	3,100.00	3,100.00	3,100.00	6.84	6.84	6.84	6.84	-90.57	-0.50	-50.00	50.00
3,200.00	3,200.00	3,200.00	3,200.00	3,200.00	3,200.00	7.06	7.06	7.06	7.06	-90.57	-0.50	-50.00	50.00
3,300.00	3,300.00	3,300.00	3,300.00	3,300.00	3,300.00	7.28	7.28	7.28	7.28	-90.57	-0.50	-50.00	50.00
3,400.00	3,400.00	3,400.00	3,400.00	3,400.00	3,400.00	7.51	7.51	7.51	7.51	-90.57	-0.50	-50.00	50.00
3,500.00	3,500.00	3,500.00	3,500.00	3,500.00	3,500.00	7.73	7.73	7.73	7.73	-90.57	-0.50	-50.00	50.00
3,600.00	3,600.00	3,600.00	3,600.00	3,600.00	3,600.00	7.96	7.96	7.96	7.96	-90.57	-0.50	-50.00	50.00
3,700.00	3,700.00	3,700.00	3,700.00	3,700.00	3,700.00	8.18	8.18	8.18	8.18	-90.57	-0.50	-50.00	50.00
3,800.00	3,800.00	3,800.00	3,800.00	3,800.00	3,800.00	8.41	8.41	8.41	8.41	-90.57	-0.50	-50.00	50.00
3,900.00	3,900.00	3,900.00	3,900.00	3,900.00	3,900.00	8.63	8.63	8.63	8.63	-90.57	-0.50	-50.00	50.00
4,000.00	4,000.00	4,000.00	4,000.00	4,000.00	4,000.00	8.86	8.86	8.86	8.86	-90.57	-0.50	-50.00	50.00
4,100.00	4,100.00	4,100.00	4,100.00	4,100.00	4,100.00	9.08	9.08	9.08	9.08	-90.57	-0.50	-50.00	50.00
4,200.00	4,200.00	4,200.00	4,200.00	4,200.00	4,200.00	9.31	9.31	9.31	9.31	-90.57	-0.50	-50.00	50.00
4,300.00	4,300.00	4,300.00	4,300.00	4,300.00	4,300.00	9.53	9.53	9.53	9.53	-90.57	-0.50	-50.00	50.00
4,400.00	4,400.00	4,400.00	4,400.00	4,400.00	4,400.00	9.76	9.76	9.76	9.76	-90.57	-0.50	-50.00	50.00
4,500.00	4,500.00	4,500.00	4,500.00	4,500.00	4,500.00	9.98	9.98	9.98	9.98	-90.57	-0.50	-50.00	50.00
4,600.00	4,600.00	4,600.00	4,600.00	4,600.00	4,600.00	10.21	10.21	10.21	10.21	-90.57	-0.50	-50.00	50.00
4,700.00	4,700.00	4,700.00	4,700.00	4,700.00	4,700.00	10.43	10.43	10.43	10.43	-90.57	-0.50	-50.00	50.00
4,800.00	4,800.00	4,800.00	4,800.00	4,800.00	4,800.00	10.66	10.66	10.66	10.66	-90.57	-0.50	-50.00	50.00
4,900.00	4,900.00	4,900.00	4,900.00	4,900.00	4,900.00	10.88	10.88	10.88	10.88	-90.57	-0.50	-50.00	50.00
5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	11.11	11.11	11.11	11.11	-90.57	-0.50	-50.00	50.00
5,100.00	5,100.00	5,100.00	5,100.00	5,100.00	5,100.00	11.33	11.33	11.33	11.33	-90.57	-0.50	-50.00	50.00

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

Company:	Legacy Reserves	Local Co-ordinate Reference:	Site Lea Unit #48H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3694.00usft (McVay 4)
Reference Site:	Lea Unit #48H	MD Reference:	KB @ 3694.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #48H	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 #47H - Lea Unit #47H - 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		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		
5,200.00	5,200.00	5,200.00	5,200.00	11.56	11.56	-90.57	-0.50	-50.00	50.00	26.89	23.11	2.164		
5,300.00	5,300.00	5,300.00	5,300.00	11.78	11.78	-90.57	-0.50	-50.00	50.00	26.44	23.56	2.122		
5,400.00	5,400.00	5,400.00	5,400.00	12.00	12.00	-90.57	-0.50	-50.00	50.00	25.99	24.01	2.083		
5,500.00	5,500.00	5,500.00	5,500.00	12.23	12.23	-90.57	-0.50	-50.00	50.00	25.54	24.46	2.044		
5,600.00	5,600.00	5,600.00	5,600.00	12.45	12.45	-90.57	-0.50	-50.00	50.00	25.09	24.91	2.007		
5,700.00	5,700.00	5,700.00	5,700.00	12.68	12.68	-90.57	-0.50	-50.00	50.00	24.64	25.36	1.972		
5,800.00	5,800.00	5,800.00	5,800.00	12.90	12.90	-90.57	-0.50	-50.00	50.00	24.19	25.81	1.938		
5,900.00	5,900.00	5,900.00	5,900.00	13.13	13.13	-90.57	-0.50	-50.00	50.00	23.75	26.26	1.904		
6,000.00	6,000.00	6,000.00	6,000.00	13.35	13.35	-90.57	-0.50	-50.00	50.00	23.30	26.71	1.872		
6,100.00	6,100.00	6,100.00	6,100.00	13.58	13.58	-90.57	-0.50	-50.00	50.00	22.85	27.16	1.841		
6,200.00	6,200.00	6,200.00	6,200.00	13.80	13.80	-90.57	-0.50	-50.00	50.00	22.40	27.61	1.811		
6,300.00	6,300.00	6,300.00	6,300.00	14.03	14.03	-90.57	-0.50	-50.00	50.00	21.95	28.06	1.782		
6,400.00	6,400.00	6,400.00	6,400.00	14.25	14.25	-90.57	-0.50	-50.00	50.00	21.50	28.50	1.754		
6,500.00	6,500.00	6,500.00	6,500.00	14.48	14.48	-90.57	-0.50	-50.00	50.00	21.05	28.95	1.727		
6,600.00	6,600.00	6,600.00	6,600.00	14.70	14.70	-90.57	-0.50	-50.00	50.00	20.60	29.40	1.701		
6,700.00	6,700.00	6,700.00	6,700.00	14.93	14.93	-90.57	-0.50	-50.00	50.00	20.15	29.85	1.675		
6,800.00	6,800.00	6,800.00	6,800.00	15.15	15.15	-90.57	-0.50	-50.00	50.00	19.70	30.30	1.650		
6,900.00	6,900.00	6,900.00	6,900.00	15.38	15.38	-90.57	-0.50	-50.00	50.00	19.25	30.75	1.626		
7,000.00	7,000.00	7,000.00	7,000.00	15.60	15.60	-90.57	-0.50	-50.00	50.00	18.80	31.20	1.603		
7,100.00	7,100.00	7,100.00	7,100.00	15.83	15.83	-90.57	-0.50	-50.00	50.00	18.35	31.65	1.580		
7,200.00	7,200.00	7,200.00	7,200.00	16.05	16.05	-90.57	-0.50	-50.00	50.00	17.90	32.10	1.558		
7,300.00	7,300.00	7,300.00	7,300.00	16.28	16.28	-90.57	-0.50	-50.00	50.00	17.45	32.55	1.536		
7,400.00	7,400.00	7,400.00	7,400.00	16.50	16.50	-90.57	-0.50	-50.00	50.00	17.00	33.00	1.515		
7,500.00	7,500.00	7,500.00	7,500.00	16.72	16.72	-90.57	-0.50	-50.00	50.00	16.55	33.45	1.495 Level 3		
7,600.00	7,600.00	7,600.00	7,600.00	16.95	16.95	-90.57	-0.50	-50.00	50.00	16.10	33.90	1.475 Level 3		
7,700.00	7,700.00	7,700.00	7,700.00	17.17	17.17	-90.57	-0.50	-50.00	50.00	15.65	34.35	1.456 Level 3		
7,800.00	7,800.00	7,800.00	7,800.00	17.40	17.40	-90.57	-0.50	-50.00	50.00	15.20	34.80	1.437 Level 3		
7,900.00	7,900.00	7,900.00	7,900.00	17.62	17.62	-90.57	-0.50	-50.00	50.00	14.75	35.25	1.419 Level 3		
8,000.00	8,000.00	8,000.00	8,000.00	17.85	17.85	-90.57	-0.50	-50.00	50.00	14.31	35.70	1.401 Level 3		
8,100.00	8,100.00	8,100.00	8,100.00	18.07	18.07	-90.57	-0.50	-50.00	50.00	13.86	36.15	1.383 Level 3		
8,200.00	8,200.00	8,200.00	8,200.00	18.30	18.30	-90.57	-0.50	-50.00	50.00	13.41	36.60	1.366 Level 3		
8,300.00	8,300.00	8,300.00	8,300.00	18.52	18.52	-90.57	-0.50	-50.00	50.00	12.96	37.05	1.350 Level 3		
8,400.00	8,400.00	8,400.00	8,400.00	18.75	18.75	-90.57	-0.50	-50.00	50.00	12.51	37.50	1.334 Level 3		
8,500.00	8,500.00	8,500.00	8,500.00	18.97	18.97	-90.57	-0.50	-50.00	50.00	12.06	37.94	1.318 Level 3		
8,600.00	8,600.00	8,600.00	8,600.00	19.20	19.20	-90.57	-0.50	-50.00	50.00	11.61	38.39	1.302 Level 3		
8,700.00	8,700.00	8,700.00	8,700.00	19.42	19.42	-90.57	-0.50	-50.00	50.00	11.16	38.84	1.287 Level 3		
8,800.00	8,800.00	8,800.00	8,800.00	19.65	19.65	-90.57	-0.50	-50.00	50.00	10.71	39.29	1.273 Level 3		
8,900.00	8,900.00	8,900.00	8,900.00	19.87	19.87	-90.57	-0.50	-50.00	50.00	10.26	39.74	1.258 Level 3		
8,927.04	8,927.04	8,927.04	8,927.04	19.93	19.93	-90.57	-0.50	-50.00	50.00	10.14	39.86	1.254 Level 3, CC		
8,950.00	8,949.99	8,949.99	8,949.99	19.98	19.98	92.95	-0.50	-50.00	50.02	10.06	39.96	1.252 Level 3, ES, SF		
9,000.00	8,999.80	8,999.80	8,999.80	20.06	20.10	97.64	-0.50	-50.00	50.41	10.26	40.15	1.255 Level 3		
9,050.00	9,049.06	9,049.06	9,049.06	20.15	20.21	106.62	-0.50	-50.00	52.24	11.89	40.34	1.295 Level 3		
9,100.00	9,097.39	9,097.39	9,097.39	20.23	20.32	118.17	-0.50	-50.00	57.28	16.75	40.53	1.413 Level 3		
9,150.00	9,144.42	9,144.42	9,144.42	20.31	20.42	129.78	-0.50	-50.00	67.21	26.48	40.72	1.650		
9,200.00	9,189.79	9,189.79	9,189.79	20.39	20.52	139.54	-0.50	-50.00	82.71	41.80	40.91	2.022		
9,250.00	9,233.17	9,233.17	9,233.17	20.48	20.62	146.93	-0.50	-50.00	103.60	62.51	41.09	2.521		
9,300.00	9,274.21	9,274.21	9,274.21	20.58	20.71	152.23	-0.50	-50.00	129.32	88.06	41.26	3.134		
9,350.00	9,312.62	9,312.62	9,312.62	20.69	20.80	155.94	-0.50	-50.00	159.31	117.89	41.42	3.846		
9,400.00	9,348.09	9,348.09	9,348.09	20.83	20.88	158.45	-0.50	-50.00	193.06	151.50	41.56	4.645		
9,450.00	9,380.35	9,380.35	9,380.35	20.99	20.95	160.02	-0.50	-50.00	230.15	188.45	41.70	5.520		
9,500.00	9,409.17	9,409.17	9,409.17	21.18	21.02	160.80	-0.50	-50.00	270.17	228.35	41.82	6.461		
9,550.00	9,434.31	9,434.31	9,434.31	21.40	21.07	160.81	-0.50	-50.00	312.72	270.80	41.92	7.460		

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

Company:	Legacy Reserves	Local Co-ordinate Reference:	Site Lea Unit #48H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3694.00usft (McVay 4)
Reference Site:	Lea Unit #48H	MD Reference:	KB @ 3694.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #48H	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 #47H - Lea Unit #47H - 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		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)				Offset	Well	Site
9,600.00	9,455.60	9,455.60	9,455.60	21.64	21.12	159.91	-0.50	-50.00	357.44	315.43	42.01	8.509		
9,650.00	9,472.86	9,472.86	9,472.86	21.92	21.16	157.71	-0.50	-50.00	403.94	361.86	42.08	9.600		
9,700.00	9,485.97	9,485.97	9,485.97	22.24	21.19	153.17	-0.50	-50.00	451.84	409.71	42.13	10.725		
9,750.00	9,494.83	9,494.83	9,494.83	22.58	21.21	143.21	-0.50	-50.00	500.77	458.60	42.17	11.875		
9,800.00	9,499.36	9,499.36	9,499.36	22.95	21.22	117.36	-0.50	-50.00	550.32	508.13	42.19	13.044		
9,827.04	9,500.00	9,500.00	9,500.00	23.16	21.22	90.00	-0.50	-50.00	577.24	535.05	42.19	13.681		
9,900.00	9,500.00	9,500.00	9,500.00	23.75	21.22	90.00	-0.50	-50.00	649.83	607.63	42.20	15.398		
9,911.86	9,500.00	9,500.00	9,500.00	23.85	21.22	90.00	-0.50	-50.00	661.71	619.51	42.20	15.680		
10,000.00	9,500.00	10,687.42	10,200.00	24.63	25.77	162.78	-721.35	-183.91	733.29	709.39	23.90	30.681		
10,100.00	9,500.00	10,800.21	10,200.00	25.64	26.76	162.05	-833.77	-192.85	735.94	710.81	25.13	29.289		
10,200.00	9,500.00	10,913.38	10,200.00	26.74	27.87	161.81	-946.89	-195.14	736.81	710.55	26.26	28.057		
10,300.00	9,500.00	11,013.38	10,200.00	27.92	28.94	161.81	-1,046.89	-194.35	736.81	709.46	27.35	26.939		
10,400.00	9,500.00	11,113.38	10,200.00	29.16	30.07	161.81	-1,146.89	-193.56	736.81	708.30	28.51	25.844		
10,500.00	9,500.00	11,213.38	10,200.00	30.46	31.27	161.81	-1,246.88	-192.78	736.81	707.07	29.73	24.780		
10,600.00	9,500.00	11,313.38	10,200.00	31.82	32.53	161.81	-1,346.88	-191.99	736.81	705.79	31.01	23.757		
10,700.00	9,500.00	11,413.38	10,200.00	33.22	33.84	161.81	-1,446.88	-191.20	736.81	704.46	32.34	22.780		
10,800.00	9,500.00	11,513.38	10,200.00	34.66	35.20	161.81	-1,546.87	-190.41	736.81	703.09	33.72	21.852		
10,900.00	9,500.00	11,613.38	10,200.00	36.13	36.60	161.81	-1,646.87	-189.62	736.81	701.68	35.13	20.974		
11,000.00	9,500.00	11,713.38	10,200.00	37.64	38.03	161.81	-1,746.87	-188.83	736.81	700.23	36.58	20.144		
11,100.00	9,500.00	11,813.38	10,200.00	39.18	39.50	161.81	-1,846.86	-188.04	736.81	698.76	38.05	19.362		
11,200.00	9,500.00	11,913.38	10,200.00	40.73	41.00	161.81	-1,946.86	-187.25	736.81	697.25	39.56	18.625		
11,300.00	9,500.00	12,013.38	10,200.00	42.32	42.52	161.81	-2,046.86	-186.47	736.81	695.72	41.09	17.933		
11,400.00	9,500.00	12,113.38	10,200.00	43.92	44.07	161.81	-2,146.85	-185.68	736.81	694.17	42.64	17.281		
11,500.00	9,500.00	12,213.38	10,200.00	45.54	45.64	161.81	-2,246.85	-184.89	736.81	692.60	44.21	16.667		
11,600.00	9,500.00	12,313.38	10,200.00	47.17	47.23	161.81	-2,346.85	-184.10	736.81	691.02	45.79	16.090		
11,700.00	9,500.00	12,413.38	10,200.00	48.82	48.83	161.81	-2,446.85	-183.31	736.81	689.42	47.40	15.546		
11,800.00	9,500.00	12,513.38	10,200.00	50.48	50.45	161.81	-2,546.84	-182.52	736.81	687.80	49.01	15.034		
11,900.00	9,500.00	12,613.38	10,200.00	52.15	52.08	161.81	-2,646.84	-181.73	736.81	686.17	50.64	14.550		
12,000.00	9,500.00	12,713.38	10,200.00	53.83	53.73	161.81	-2,746.84	-180.94	736.81	684.53	52.28	14.094		
12,100.00	9,500.00	12,813.38	10,200.00	55.53	55.39	161.81	-2,846.83	-180.16	736.81	682.88	53.93	13.662		
12,200.00	9,500.00	12,913.38	10,200.00	57.23	57.06	161.81	-2,946.83	-179.37	736.81	681.22	55.59	13.254		
12,300.00	9,500.00	13,013.38	10,200.00	58.93	58.74	161.81	-3,046.83	-178.58	736.81	679.55	57.26	12.868		
12,400.00	9,500.00	13,113.38	10,200.00	60.65	60.43	161.81	-3,146.82	-177.79	736.81	677.88	58.94	12.502		
12,500.00	9,500.00	13,213.38	10,200.00	62.37	62.12	161.81	-3,246.82	-177.00	736.81	676.19	60.62	12.155		
12,600.00	9,500.00	13,313.38	10,200.00	64.10	63.82	161.81	-3,346.82	-176.21	736.81	674.50	62.31	11.825		
12,700.00	9,500.00	13,413.38	10,200.00	65.84	65.53	161.81	-3,446.81	-175.42	736.81	672.81	64.01	11.511		
12,800.00	9,500.00	13,513.38	10,200.00	67.57	67.25	161.81	-3,546.81	-174.63	736.81	671.10	65.71	11.213		
12,900.00	9,500.00	13,613.38	10,200.00	69.32	68.97	161.81	-3,646.81	-173.85	736.81	669.40	67.42	10.929		
13,000.00	9,500.00	13,713.38	10,200.00	71.07	70.70	161.81	-3,746.80	-173.06	736.82	667.68	69.13	10.658		
13,100.00	9,500.00	13,813.38	10,200.00	72.82	72.44	161.81	-3,846.80	-172.27	736.82	665.97	70.85	10.400		
13,200.00	9,500.00	13,913.38	10,200.00	74.58	74.17	161.81	-3,946.80	-171.48	736.82	664.25	72.57	10.153		
13,300.00	9,500.00	14,013.38	10,200.00	76.34	75.92	161.81	-4,046.80	-170.69	736.82	662.52	74.29	9.918		
13,400.00	9,500.00	14,113.38	10,200.00	78.10	77.66	161.81	-4,146.79	-169.90	736.82	660.79	76.02	9.692		
13,500.00	9,500.00	14,213.38	10,200.00	79.87	79.41	161.81	-4,246.79	-169.11	736.82	659.06	77.76	9.476		
13,600.00	9,500.00	14,313.38	10,200.00	81.63	81.17	161.81	-4,346.79	-168.32	736.82	657.33	79.49	9.269		
13,700.00	9,500.00	14,413.38	10,200.00	83.41	82.92	161.81	-4,446.78	-167.54	736.82	655.59	81.23	9.071		
13,800.00	9,500.00	14,513.38	10,200.00	85.18	84.68	161.81	-4,546.78	-166.75	736.82	653.85	82.97	8.880		
13,900.00	9,500.00	14,613.38	10,200.00	86.96	86.45	161.81	-4,646.78	-165.96	736.82	652.10	84.72	8.698		
14,000.00	9,500.00	14,713.38	10,200.00	88.74	88.21	161.81	-4,746.77	-165.17	736.82	650.36	86.46	8.522		
14,100.00	9,500.00	14,813.38	10,200.00	90.52	89.98	161.81	-4,846.77	-164.38	736.82	648.61	88.21	8.353		
14,200.00	9,500.00	14,913.38	10,200.00	92.30	91.75	161.81	-4,946.77	-163.59	736.82	646.86	89.96	8.190		
14,300.00	9,500.00	15,013.38	10,200.00	94.09	93.53	161.81	-5,046.76	-162.80	736.82	645.10	91.71	8.034		

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:	Site Lea Unit #48H
Project:	Lea County: NM (NAD-27 2015)	TVD Reference:	KB @ 3694.00usft (McVay 4)
Reference Site:	Lea Unit #48H	MD Reference:	KB @ 3694.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #48H	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 #47H - Lea Unit #47H - 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	Vertical	Measured	Vertical	Reference	Offset	Highside	Offset Wellbore Centre		Between	Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
14,400.00	9,500.00	15,113.38	10,200.00	95.87	95.30	161.81	-5,146.76	-162.01	736.82	643.35	93.47	7.883		
14,500.00	9,500.00	15,213.38	10,200.00	97.66	97.08	161.81	-5,246.76	-161.23	736.82	641.59	95.23	7.738		
14,600.00	9,500.00	15,313.38	10,200.00	99.45	98.86	161.81	-5,346.75	-160.44	736.82	639.84	96.98	7.597		
14,700.00	9,500.00	15,413.38	10,200.00	101.24	100.64	161.81	-5,446.75	-159.65	736.82	638.08	98.74	7.462		
14,800.00	9,500.00	15,513.38	10,200.00	103.04	102.43	161.81	-5,546.75	-158.86	736.82	636.31	100.51	7.331		
14,832.67	9,500.00	15,546.04	10,200.00	103.62	103.01	161.81	-5,579.41	-158.60	736.82	635.74	101.08	7.289		

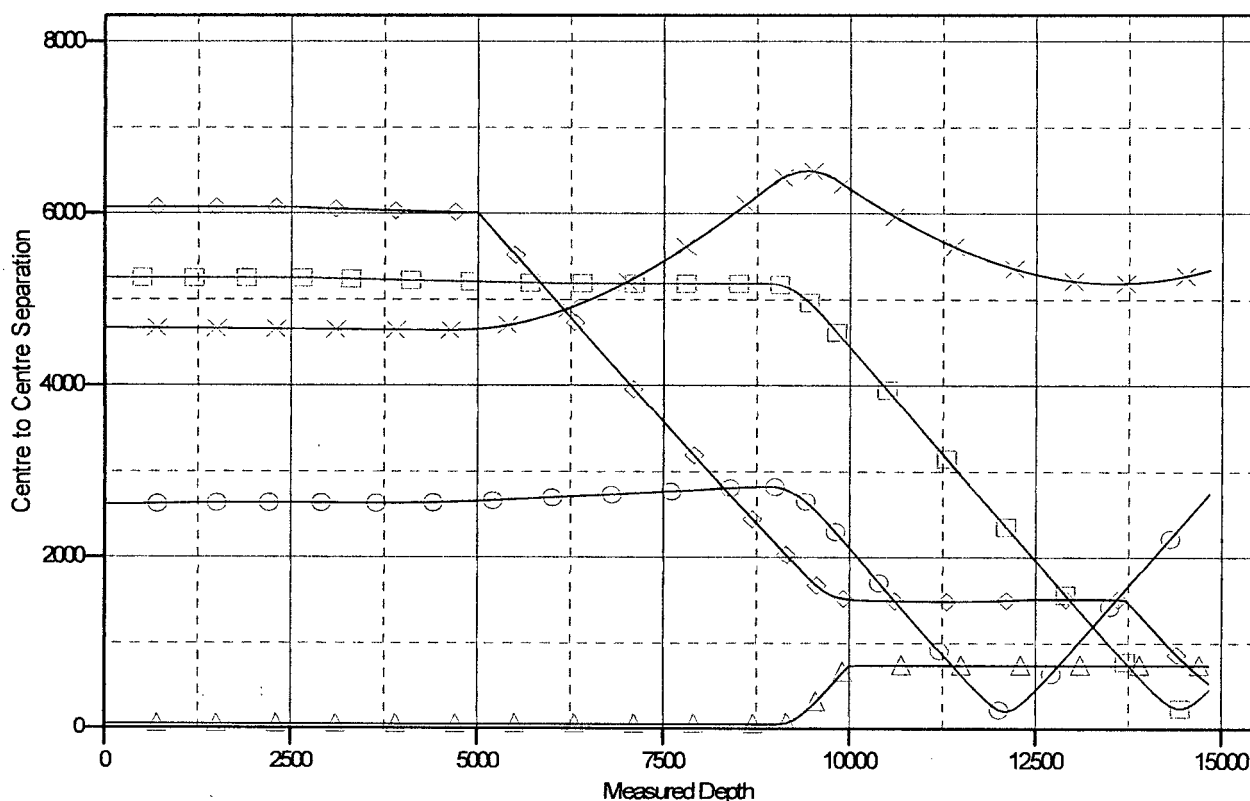
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Legacy Reserves	Local Co-ordinate Reference:	Site Lea Unit #48H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3694.00usft (McVay 4)
Reference Site:	Lea Unit #48H	MD Reference:	KB @ 3694.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #48H	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 @ 3694.00usft (McVay 4)
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: Lea Unit #48H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.44°

Ladder Plot



LEGEND

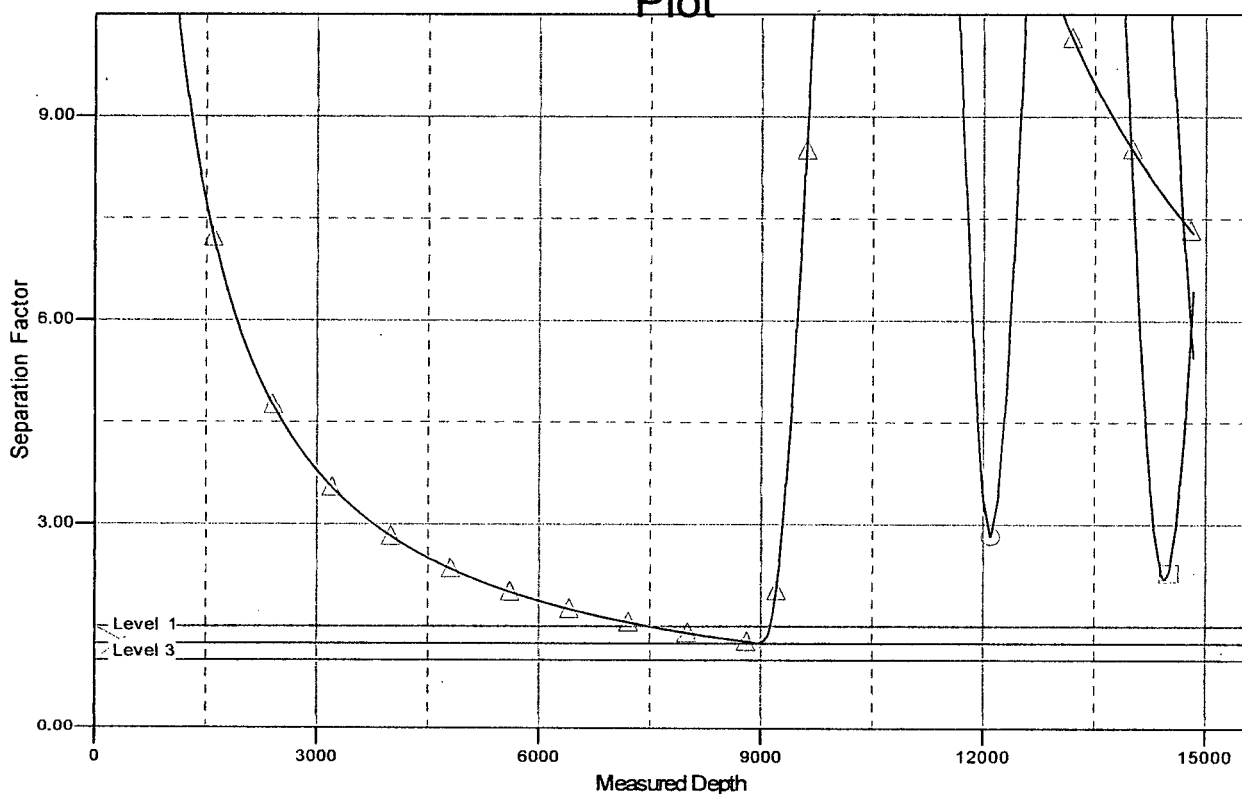
- ▲ Lea Unit #47H, OH, Plan #2 V0
- #2, OH, OH V0
- ✕ SWD #2, OH, OH V0
- #7, OH, OH V0
- ◆ #33H, OH, OH V0

Company:	Legacy Reserves	Local Co-ordinate Reference:	Site Lea Unit #48H
Project:	Lea County, NM (NAD-27.2015)	TVD Reference:	KB @ 3694.00usft (McVay 4)
Reference Site:	Lea Unit #48H	MD Reference:	KB @ 3694.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid:
Reference Well:	Lea Unit #48H	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 @ 3694.00usft (McVay 4)
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: Lea Unit #48H
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#47H, OH, Plan #2 V0
- #2, OH, OHV0
- ✱ SWD#2, OH, OHV0
- #7, OH, OHV0
- ◆ #33H, OH, OHV0