



Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Site: Lea Unit #56H
Well: Lea Unit #56H
Wellbore: Lateral #1
Plan: Design #1 (Lea Unit #56H/Lateral #1)



KB @ 3680.00usft (McVay 4)
Ground Level: 3662.00

Section Details

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	9227.04	0.00	0.00	9227.04	0.00	0.00	0.00	0.00	0.00	
3	10127.04	90.00	183.95	9800.00	-571.60	-39.44	10.00	183.95	572.96	
4	16992.82	90.00	183.95	9800.00	-7421.10	-512.00	0.00	0.00	7438.74	BHL-D1 (LU#56H/L1)

WELL DETAILS: Lea Unit #56H

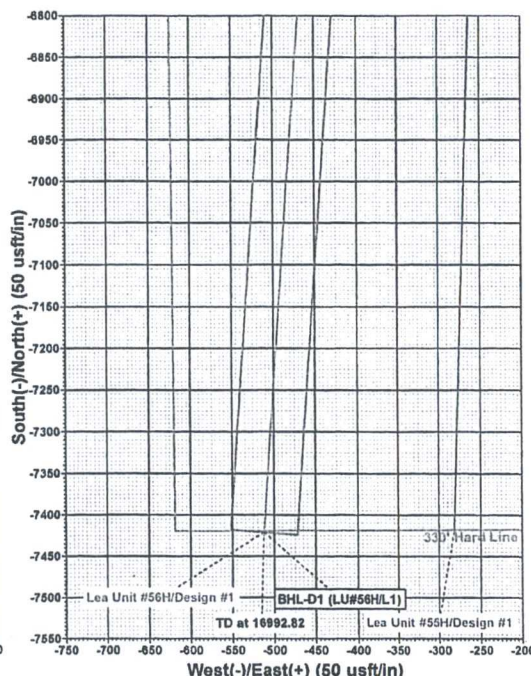
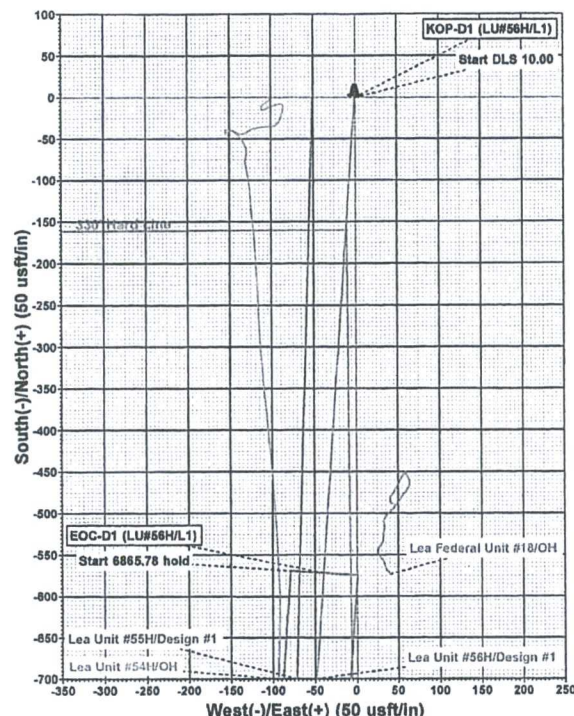
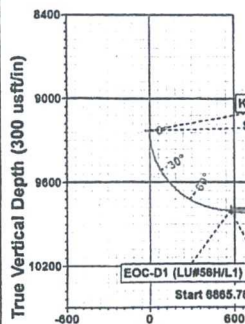
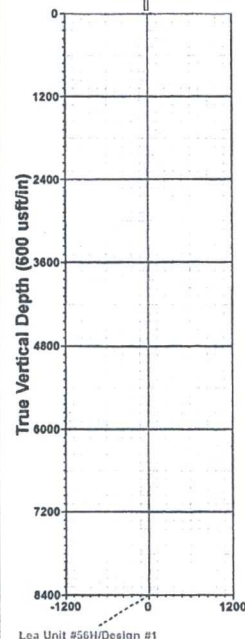
Ground Elevation:: 3662.00
RKB Elevation: KB @ 3680.00usft (McVay 4)
Rig Name: McVay 4



Azimuths to Grid North
True North: -0.43°
Magnetic North: 6.59°

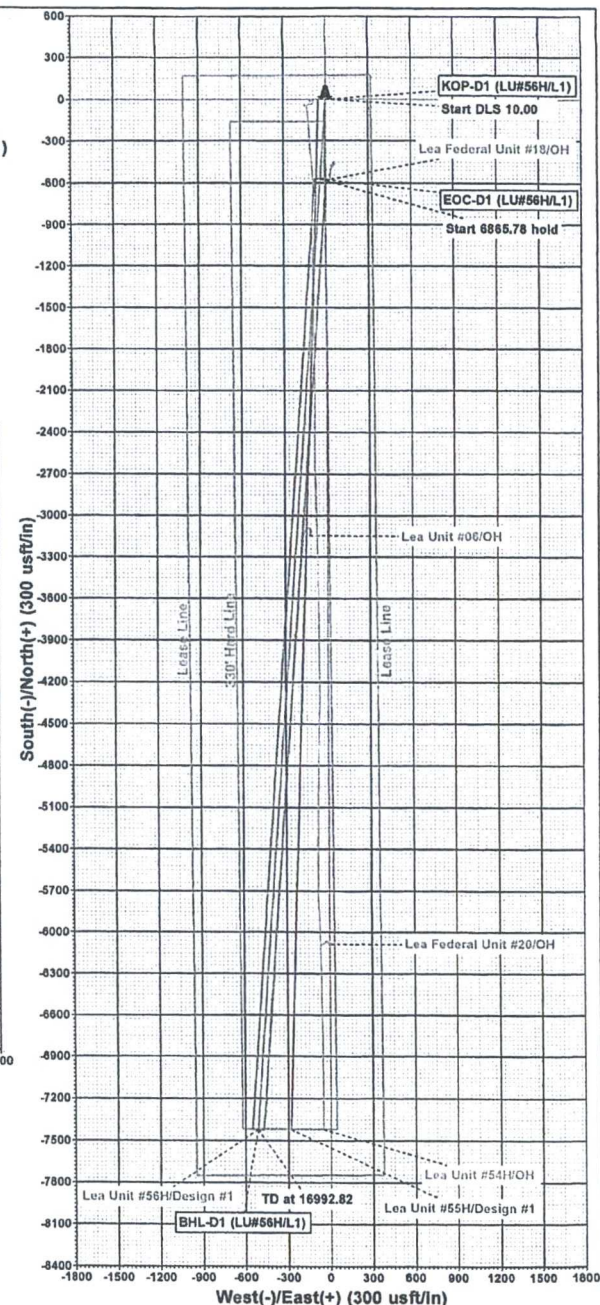
Magnetic Field
Strength: 48220.3snT
Dip Angle: 60.42°
Date: 11/20/2016
Model: IGRF2015

Northing 580866.50 Easting 748286.50 Latitude 32° 36' 39.466 N Longitude 103° 31' 37.789 W



Target Window is 15' Above and Below Plan Line, and 40' Left and Right of Plan Line

Vertical Section at 183.95° (300 usft/in)



Plan: Design #1 (Lea Unit #56H/Lateral #1)
dated By: Well Planner Date: 9:00, December 02 2016

Terra Directional Services
3705 South County Road 1210, Midland, TX 79706
Office: (432) 618-1210

PROJECT DETAILS: Lea County, NM (NAD-27 2015)
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level
Local North: Grid



Legacy Reserves

Lea County, NM (NAD-27 2015)

Lea Unit #56H

Lea Unit #56H

Lateral #1

Plan: Design #1

Standard Planning Report

02 December, 2016

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TDS
Planning Report



Database: EDM 5000.1 Single User Db
Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Site: Lea Unit #56H
Well: Lea Unit #56H
Wellbore: Lateral #1
Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #56H
TVD Reference: KB @ 3680.00usft (McVay 4)
MD Reference: KB @ 3680.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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 #56H		
Site Position:	Northing:	580,856.50 usft	Latitude: 32° 35' 39.456 N
From: Map	Easting:	748,286.50 usft	Longitude: 103° 31' 37.789 W
Position Uncertainty:	0.00 usft	Slot Radius: 13.20 in	Grid Convergence: 0.43 °

Well	Lea Unit #56H		
Well Position	+N/-S	0.00 usft	Northing: 580,856.50 usft
	+E/-W	0.00 usft	Easting: 748,286.50 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
			Ground Level: 3,662.00 usft

Wellbore	Lateral #1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2015	11/20/2016	7.02
			Dip Angle (°)
			60.42
			Field Strength (nT)
			48,220

Design	Design #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction (°)
			183.95

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	
9,227.04	0.00	0.00	9,227.04	0.00	0.00	0.00	0.00	0.00	0.00	
10,127.04	90.00	183.95	9,800.00	-571.60	-39.44	10.00	10.00	-19.56	183.95	
16,992.82	90.00	183.95	9,800.00	-7,421.10	-512.00	0.00	0.00	0.00	0.00	BHL-D1 (LU#56H/L1)



TDS
Planning Report



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MD Reference: KB @ 3680.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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



TDS Planning Report



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Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	0.00	0.00
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00	0.00	0.00
8,900.00	0.00	0.00	8,900.00	0.00	0.00	0.00	0.00	0.00	0.00
9,000.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00	0.00	0.00
9,100.00	0.00	0.00	9,100.00	0.00	0.00	0.00	0.00	0.00	0.00
9,200.00	0.00	0.00	9,200.00	0.00	0.00	0.00	0.00	0.00	0.00
9,227.04	0.00	0.00	9,227.04	0.00	0.00	0.00	0.00	0.00	0.00
Start DLS 10.00 TFO 183.95									
9,250.00	2.30	183.95	9,249.99	-0.46	-0.03	0.46	10.00	10.00	0.00
9,300.00	7.30	183.95	9,299.80	-4.63	-0.32	4.64	10.00	10.00	0.00
9,350.00	12.30	183.95	9,349.06	-13.11	-0.90	13.14	10.00	10.00	0.00
9,400.00	17.30	183.95	9,397.39	-25.85	-1.78	25.91	10.00	10.00	0.00
9,450.00	22.30	183.95	9,444.42	-42.73	-2.95	42.84	10.00	10.00	0.00
9,500.00	27.30	183.95	9,489.79	-63.65	-4.39	63.80	10.00	10.00	0.00
9,550.00	32.30	183.95	9,533.17	-88.43	-6.10	88.64	10.00	10.00	0.00
9,600.00	37.30	183.95	9,574.21	-116.88	-8.06	117.16	10.00	10.00	0.00
9,650.00	42.30	183.95	9,612.62	-148.80	-10.27	149.15	10.00	10.00	0.00
9,700.00	47.30	183.95	9,648.09	-183.93	-12.69	184.37	10.00	10.00	0.00
9,750.00	52.30	183.95	9,680.35	-222.02	-15.32	222.55	10.00	10.00	0.00
9,800.00	57.30	183.95	9,709.17	-262.76	-18.13	263.39	10.00	10.00	0.00



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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)
9,850.00	62.30	183.95	9,734.31	-305.86	-21.10	306.59	10.00	10.00	0.00
9,900.00	67.30	183.95	9,755.60	-350.98	-24.21	351.81	10.00	10.00	0.00
9,950.00	72.30	183.95	9,772.86	-397.78	-27.44	398.72	10.00	10.00	0.00
10,000.00	77.30	183.95	9,785.97	-445.90	-30.76	446.96	10.00	10.00	0.00
10,050.00	82.30	183.95	9,794.83	-494.97	-34.15	496.15	10.00	10.00	0.00
10,100.00	87.30	183.95	9,799.36	-544.63	-37.58	545.93	10.00	10.00	0.00
10,127.04	90.00	183.95	9,800.00	-571.60	-39.44	572.96	10.00	10.00	0.00
Start 6865.78 hold at 10127.04 MD									
10,200.00	90.00	183.95	9,800.00	-644.39	-44.46	645.92	0.00	0.00	0.00
10,300.00	90.00	183.95	9,800.00	-744.15	-51.34	745.92	0.00	0.00	0.00
10,400.00	90.00	183.95	9,800.00	-843.91	-58.22	845.92	0.00	0.00	0.00
10,500.00	90.00	183.95	9,800.00	-943.67	-65.11	945.92	0.00	0.00	0.00
10,600.00	90.00	183.95	9,800.00	-1,043.44	-71.99	1,045.92	0.00	0.00	0.00
10,700.00	90.00	183.95	9,800.00	-1,143.20	-78.87	1,145.92	0.00	0.00	0.00
10,800.00	90.00	183.95	9,800.00	-1,242.96	-85.76	1,245.92	0.00	0.00	0.00
10,900.00	90.00	183.95	9,800.00	-1,342.73	-92.64	1,345.92	0.00	0.00	0.00
11,000.00	90.00	183.95	9,800.00	-1,442.49	-99.52	1,445.92	0.00	0.00	0.00
11,100.00	90.00	183.95	9,800.00	-1,542.25	-106.40	1,545.92	0.00	0.00	0.00
11,200.00	90.00	183.95	9,800.00	-1,642.01	-113.29	1,645.92	0.00	0.00	0.00
11,300.00	90.00	183.95	9,800.00	-1,741.78	-120.17	1,745.92	0.00	0.00	0.00
11,400.00	90.00	183.95	9,800.00	-1,841.54	-127.05	1,845.92	0.00	0.00	0.00
11,500.00	90.00	183.95	9,800.00	-1,941.30	-133.94	1,945.92	0.00	0.00	0.00
11,600.00	90.00	183.95	9,800.00	-2,041.07	-140.82	2,045.92	0.00	0.00	0.00
11,700.00	90.00	183.95	9,800.00	-2,140.83	-147.70	2,145.92	0.00	0.00	0.00
11,800.00	90.00	183.95	9,800.00	-2,240.59	-154.58	2,245.92	0.00	0.00	0.00
11,900.00	90.00	183.95	9,800.00	-2,340.35	-161.47	2,345.92	0.00	0.00	0.00
12,000.00	90.00	183.95	9,800.00	-2,440.12	-168.35	2,445.92	0.00	0.00	0.00
12,100.00	90.00	183.95	9,800.00	-2,539.88	-175.23	2,545.92	0.00	0.00	0.00
12,200.00	90.00	183.95	9,800.00	-2,639.64	-182.12	2,645.92	0.00	0.00	0.00
12,300.00	90.00	183.95	9,800.00	-2,739.41	-189.00	2,745.92	0.00	0.00	0.00
12,400.00	90.00	183.95	9,800.00	-2,839.17	-195.88	2,845.92	0.00	0.00	0.00
12,500.00	90.00	183.95	9,800.00	-2,938.93	-202.76	2,945.92	0.00	0.00	0.00
12,600.00	90.00	183.95	9,800.00	-3,038.69	-209.65	3,045.92	0.00	0.00	0.00
12,700.00	90.00	183.95	9,800.00	-3,138.46	-216.53	3,145.92	0.00	0.00	0.00
12,800.00	90.00	183.95	9,800.00	-3,238.22	-223.41	3,245.92	0.00	0.00	0.00
12,900.00	90.00	183.95	9,800.00	-3,337.98	-230.30	3,345.92	0.00	0.00	0.00
13,000.00	90.00	183.95	9,800.00	-3,437.75	-237.18	3,445.92	0.00	0.00	0.00
13,100.00	90.00	183.95	9,800.00	-3,537.51	-244.06	3,545.92	0.00	0.00	0.00
13,200.00	90.00	183.95	9,800.00	-3,637.27	-250.94	3,645.92	0.00	0.00	0.00
13,300.00	90.00	183.95	9,800.00	-3,737.03	-257.83	3,745.92	0.00	0.00	0.00
13,400.00	90.00	183.95	9,800.00	-3,836.80	-264.71	3,845.92	0.00	0.00	0.00
13,500.00	90.00	183.95	9,800.00	-3,936.56	-271.59	3,945.92	0.00	0.00	0.00
13,600.00	90.00	183.95	9,800.00	-4,036.32	-278.48	4,045.92	0.00	0.00	0.00
13,700.00	90.00	183.95	9,800.00	-4,136.09	-285.36	4,145.92	0.00	0.00	0.00
13,800.00	90.00	183.95	9,800.00	-4,235.85	-292.24	4,245.92	0.00	0.00	0.00
13,900.00	90.00	183.95	9,800.00	-4,335.61	-299.12	4,345.92	0.00	0.00	0.00
14,000.00	90.00	183.95	9,800.00	-4,435.37	-306.01	4,445.92	0.00	0.00	0.00
14,100.00	90.00	183.95	9,800.00	-4,535.14	-312.89	4,545.92	0.00	0.00	0.00
14,200.00	90.00	183.95	9,800.00	-4,634.90	-319.77	4,645.92	0.00	0.00	0.00
14,300.00	90.00	183.95	9,800.00	-4,734.66	-326.66	4,745.92	0.00	0.00	0.00
14,400.00	90.00	183.95	9,800.00	-4,834.43	-333.54	4,845.92	0.00	0.00	0.00
14,500.00	90.00	183.95	9,800.00	-4,934.19	-340.42	4,945.92	0.00	0.00	0.00
14,600.00	90.00	183.95	9,800.00	-5,033.95	-347.30	5,045.92	0.00	0.00	0.00
14,700.00	90.00	183.95	9,800.00	-5,133.71	-354.19	5,145.92	0.00	0.00	0.00



TDS
Planning Report



Database: EDM 5000.1 Single User Db
Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Site: Lea Unit #56H
Well: Lea Unit #56H
Wellbore: Lateral #1
Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #56H
TVD Reference: KB @ 3680.00usft (McVay 4)
MD Reference: KB @ 3680.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
14,800.00	90.00	183.95	9,800.00	-5,233.48	-361.07	5,245.92	0.00	0.00	0.00
14,900.00	90.00	183.95	9,800.00	-5,333.24	-367.95	5,345.92	0.00	0.00	0.00
15,000.00	90.00	183.95	9,800.00	-5,433.00	-374.84	5,445.92	0.00	0.00	0.00
15,100.00	90.00	183.95	9,800.00	-5,532.77	-381.72	5,545.92	0.00	0.00	0.00
15,200.00	90.00	183.95	9,800.00	-5,632.53	-388.60	5,645.92	0.00	0.00	0.00
15,300.00	90.00	183.95	9,800.00	-5,732.29	-395.48	5,745.92	0.00	0.00	0.00
15,400.00	90.00	183.95	9,800.00	-5,832.05	-402.37	5,845.92	0.00	0.00	0.00
15,500.00	90.00	183.95	9,800.00	-5,931.82	-409.25	5,945.92	0.00	0.00	0.00
15,600.00	90.00	183.95	9,800.00	-6,031.58	-416.13	6,045.92	0.00	0.00	0.00
15,700.00	90.00	183.95	9,800.00	-6,131.34	-423.02	6,145.92	0.00	0.00	0.00
15,800.00	90.00	183.95	9,800.00	-6,231.11	-429.90	6,245.92	0.00	0.00	0.00
15,900.00	90.00	183.95	9,800.00	-6,330.87	-436.78	6,345.92	0.00	0.00	0.00
16,000.00	90.00	183.95	9,800.00	-6,430.63	-443.67	6,445.92	0.00	0.00	0.00
16,100.00	90.00	183.95	9,800.00	-6,530.39	-450.55	6,545.92	0.00	0.00	0.00
16,200.00	90.00	183.95	9,800.00	-6,630.16	-457.43	6,645.92	0.00	0.00	0.00
16,300.00	90.00	183.95	9,800.00	-6,729.92	-464.31	6,745.92	0.00	0.00	0.00
16,400.00	90.00	183.95	9,800.00	-6,829.68	-471.20	6,845.92	0.00	0.00	0.00
16,500.00	90.00	183.95	9,800.00	-6,929.45	-478.08	6,945.92	0.00	0.00	0.00
16,600.00	90.00	183.95	9,800.00	-7,029.21	-484.96	7,045.92	0.00	0.00	0.00
16,700.00	90.00	183.95	9,800.00	-7,128.97	-491.85	7,145.92	0.00	0.00	0.00
16,800.00	90.00	183.95	9,800.00	-7,228.73	-498.73	7,245.92	0.00	0.00	0.00
16,900.00	90.00	183.95	9,800.00	-7,328.50	-505.61	7,345.92	0.00	0.00	0.00
16,992.82	90.00	183.95	9,800.00	-7,421.10	-512.00	7,438.74	0.00	0.00	0.00

TD at 16992.82

Design Targets

Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
KOP-D1 (LU#56H/L1) - plan hits target center - Point	0.00	0.00	9,227.04	0.00	0.00	580,856.50	748,286.50	32° 35' 39.456 N	103° 31' 37.789 W
EOC-D1 (LU#56H/L1) - plan hits target center - Point	0.00	0.00	9,800.00	-571.60	-39.44	580,284.90	748,247.06	32° 35' 33.803 N	103° 31' 38.301 W
BHL-D1 (LU#56H/L1) - plan hits target center - Rectangle (sides W80.00 H6,865.78 D30.00)	0.00	183.95	9,800.00	-7,421.10	-512.00	573,435.40	747,774.50	32° 34' 26.063 N	103° 31' 44.429 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
9,227.04	9,227.04	0.00	0.00	Start DLS 10.00 TFO 183.95
10,127.04	9,800.00	-571.60	-39.44	Start 6865.78 hold at 10127.04 MD
16,992.82	9,800.00	-7,421.10	-512.00	TD at 16992.82



Legacy Reserves

Lea County, NM (NAD-27 2015)

Lea Unit #56H

Lea Unit #56H

Lateral #1

Design #1

Anticollision Report

02 December, 2016





TDS
Anticollision Report



Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #56H
Site Error: 0.00 usft
Reference Well: Lea Unit #56H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #56H
TVD Reference: KB @ 3680.00usft (McVay 4)
MD Reference: KB @ 3680.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Reference	Design #1		
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	12/2/2016		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	16,992.82	Design #1 (Lateral #1)	MWD	MWD - Standard	

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Lea County Offset Wells						
Lea Federal Unit #18 - OH - OH	10,090.55	9,786.45	64.92	24.44	1.604	CC, ES, SF
Lea Federal Unit #20 - OH - OH	15,621.25	9,765.92	425.18	296.34	3.300	CC, ES, SF
Lea Unit #06 - OH - OH	12,689.60	9,767.04	93.31	15.93	1.206	Level 2, CC, ES, SF
Lea Unit #54H						
Lea Unit #54H - OH - OH	3,484.09	3,483.75	86.11	72.43	6.297	CC
Lea Unit #54H - OH - OH	3,500.00	3,499.50	86.12	72.39	6.269	ES
Lea Unit #54H - OH - OH	9,514.17	9,505.88	127.24	89.64	3.384	SF
Lea Unit #55H						
Lea Unit #55H - Lateral #1 - Design #1	9,290.84	9,290.71	49.97	8.51	1.205	Level 2, CC
Lea Unit #55H - Lateral #1 - Design #1	9,300.00	9,299.80	49.99	8.48	1.204	Level 2, ES, SF

Offset Design Lea County Offset Wells - Lea Federal Unit #18 - 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		Separation Factor		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	174.83	-488.70	44.20	490.92						
100.00	100.00	86.24	86.24	0.09	0.08	174.85	-488.60	44.06	490.59	490.42	0.17	2,876.690			
200.00	200.00	186.60	186.60	0.32	0.26	174.88	-488.32	43.78	490.28	489.72	0.57	865.915			
300.00	300.00	285.01	285.00	0.54	0.44	174.90	-488.16	43.55	490.09	489.13	0.96	508.071			
400.00	400.00	386.44	386.44	0.77	0.62	174.94	-488.09	43.22	490.00	488.63	1.37	358.269			
500.00	500.00	485.94	485.93	0.99	0.79	174.94	-487.81	43.18	489.72	487.95	1.77	276.478			
549.01	549.01	534.01	534.01	1.10	0.87	174.92	-487.75	43.32	489.67	487.70	1.98	249.264			
600.00	600.00	583.82	583.82	1.22	0.95	174.91	-487.79	43.48	489.73	487.57	2.16	226.323			
700.00	700.00	683.04	683.04	1.44	1.11	174.88	-488.12	43.71	490.08	487.52	2.55	191.942			
800.00	800.00	784.93	784.93	1.67	1.29	174.89	-488.38	43.66	490.33	487.37	2.95	166.117			
900.00	900.00	885.06	885.05	1.89	1.47	174.91	-488.36	43.54	490.29	486.94	3.35	146.300			
1,000.00	1,000.00	986.85	986.84	2.12	1.66	174.93	-488.21	43.34	490.13	486.38	3.76	130.520			
1,100.00	1,100.00	1,087.73	1,087.73	2.34	1.84	174.94	-487.73	43.18	489.65	485.49	4.16	117.691			
1,171.37	1,171.37	1,156.38	1,156.37	2.50	1.95	174.92	-487.48	43.37	489.41	484.97	4.44	110.199			
1,200.00	1,200.00	1,183.65	1,183.64	2.56	2.00	174.90	-487.51	43.48	489.45	484.90	4.55	107.495			
1,300.00	1,300.00	1,283.87	1,283.86	2.79	2.17	174.89	-487.84	43.63	489.79	484.84	4.95	98.952			

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



TDS Anticollision Report



Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #56H
Site Error: 0.00 usft
Reference Well: Lea Unit #56H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #56H
TVD Reference: KB @ 3680.00usft (McVay 4)
MD Reference: KB @ 3680.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Lea County Offset Wells - Lea Federal Unit #18 - OH - OH													Offset Well Error:	0.00 usft
Survey Program: 100-ISCWSA-GYRO-3														
Reference		Offset		Semi Major Axis		Highside Tooface (")	Distance		Minimum Separation (usft)	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N-S (usft)	+E-W (usft)						
1,400.00	1,400.00	1,384.08	1,384.07	3.01	2.35	174.95	-488.08	43.12	489.99	484.64	5.35	91.635		
1,500.00	1,500.00	1,483.39	1,483.38	3.24	2.53	175.01	-488.37	42.66	490.23	484.49	5.74	85.357		
1,600.00	1,600.00	1,584.64	1,584.63	3.46	2.71	175.06	-488.65	42.20	490.47	484.33	6.14	79.835		
1,700.00	1,700.00	1,686.12	1,686.11	3.69	2.89	175.08	-488.59	42.02	490.40	483.85	6.55	74.919		
1,800.00	1,800.00	1,787.95	1,787.94	3.91	3.06	175.05	-488.15	42.24	489.99	483.04	6.95	70.502		
1,900.00	1,900.00	1,886.89	1,886.87	4.14	3.24	175.07	-487.65	42.04	489.46	482.11	7.35	66.590		
2,000.00	2,000.00	1,987.43	1,987.41	4.36	3.42	175.13	-487.28	41.54	489.05	481.30	7.75	63.076		
2,100.00	2,100.00	2,089.00	2,088.98	4.59	3.60	175.17	-486.66	41.08	488.41	480.25	8.16	59.859		
2,200.00	2,200.00	2,189.12	2,189.09	4.81	3.78	175.18	-485.82	40.95	487.56	479.00	8.56	56.929		
2,300.00	2,300.00	2,289.05	2,289.02	5.04	3.96	175.19	-485.00	40.81	486.73	477.76	8.97	54.262		
2,400.00	2,400.00	2,389.36	2,389.33	5.26	4.15	175.21	-484.16	40.56	485.88	476.50	9.38	51.818		
2,500.00	2,500.00	2,489.27	2,489.24	5.49	4.33	175.22	-483.29	40.38	484.99	475.21	9.78	49.574		
2,600.00	2,600.00	2,590.53	2,590.49	5.71	4.51	175.21	-482.28	40.39	484.00	473.81	10.19	47.485		
2,700.00	2,700.00	2,693.68	2,693.62	5.94	4.70	175.16	-480.76	40.70	482.56	471.95	10.61	45.502		
2,800.00	2,800.00	2,802.83	2,802.71	6.16	4.89	174.91	-477.62	42.51	479.83	468.81	11.02	43.524		
2,900.00	2,900.00	2,904.23	2,904.00	6.39	5.07	174.55	-473.46	45.18	475.99	464.56	11.43	41.635		
3,000.00	3,000.00	3,005.02	3,004.65	6.61	5.25	174.19	-469.08	47.71	471.91	460.07	11.84	39.858		
3,100.00	3,100.00	3,105.33	3,104.84	6.84	5.43	173.85	-464.59	50.07	467.70	455.45	12.25	38.189		
3,200.00	3,200.00	3,204.45	3,203.83	7.06	5.61	173.50	-460.16	52.40	463.51	450.86	12.65	36.633		
3,300.00	3,300.00	3,300.00	3,299.30	7.28	5.78	173.20	-456.77	54.44	460.23	447.17	13.05	35.254		
3,400.00	3,400.00	3,393.12	3,392.38	7.51	5.95	173.00	-454.69	55.85	458.16	444.71	13.45	34.059		
3,500.00	3,500.00	3,490.65	3,489.90	7.73	6.12	172.87	-453.27	56.73	456.83	442.98	13.85	32.974		
3,600.00	3,600.00	3,587.67	3,586.92	7.96	6.29	172.77	-452.45	57.39	456.08	441.83	14.25	31.998		
3,648.17	3,648.17	3,633.93	3,633.17	8.07	6.37	172.73	-452.30	57.73	455.97	441.53	14.44	31.575		
3,700.00	3,700.00	3,683.54	3,682.77	8.18	6.46	172.69	-452.39	58.03	456.10	441.46	14.64	31.153		
3,800.00	3,800.00	3,787.65	3,786.89	8.41	6.63	172.62	-452.51	58.61	456.29	441.25	15.04	30.333		
3,900.00	3,900.00	3,890.40	3,889.63	8.63	6.82	172.54	-451.66	59.11	455.54	440.09	15.45	29.480		
4,000.00	4,000.00	3,989.70	3,988.92	8.86	7.00	172.50	-450.66	59.34	454.57	438.71	15.86	28.662		
4,100.00	4,100.00	4,086.29	4,085.51	9.08	7.17	172.49	-450.15	59.38	454.05	437.80	16.26	27.931		
4,200.00	4,200.00	4,188.17	4,187.40	9.31	7.35	172.50	-449.93	59.26	453.82	437.16	16.66	27.236		
4,252.95	4,252.95	4,238.72	4,237.95	9.43	7.44	172.50	-449.75	59.21	453.63	436.76	16.87	26.892		
4,300.00	4,300.00	4,282.69	4,281.91	9.53	7.52	172.49	-449.89	59.28	453.79	436.74	17.05	26.617		
4,400.00	4,400.00	4,380.44	4,379.66	9.76	7.68	172.46	-450.85	59.65	454.81	437.38	17.43	26.092		
4,500.00	4,500.00	4,479.86	4,479.07	9.98	7.84	172.43	-452.04	60.09	456.06	438.24	17.81	25.600		
4,600.00	4,600.00	4,579.32	4,578.52	10.21	8.00	172.37	-453.32	60.77	457.42	439.22	18.20	25.132		
4,700.00	4,700.00	4,677.76	4,676.95	10.43	8.16	172.31	-454.78	61.44	458.98	440.40	18.58	24.697		
4,800.00	4,800.00	4,776.36	4,775.52	10.66	8.32	172.25	-456.59	62.11	460.90	441.93	18.97	24.297		
4,900.00	4,900.00	4,875.99	4,875.13	10.88	8.48	172.19	-458.61	62.92	463.01	443.66	19.36	23.919		
5,000.00	5,000.00	4,975.31	4,974.43	11.11	8.65	172.13	-460.70	63.67	465.20	445.45	19.75	23.559		
5,100.00	5,100.00	5,073.14	5,072.23	11.33	8.81	172.14	-463.10	63.95	467.67	447.54	20.13	23.231		
5,200.00	5,200.00	5,171.23	5,170.27	11.56	8.97	172.24	-466.09	63.48	470.62	450.10	20.52	22.937		
5,300.00	5,300.00	5,271.74	5,270.72	11.78	9.14	172.48	-469.47	61.98	473.76	452.85	20.91	22.654		
5,400.00	5,400.00	5,375.31	5,374.22	12.00	9.32	172.75	-472.53	60.11	476.46	455.14	21.32	22.351		
5,500.00	5,500.00	5,476.79	5,475.65	12.23	9.49	173.03	-474.87	58.05	478.49	456.78	21.72	22.034		
5,600.00	5,600.00	5,577.90	5,576.73	12.45	9.66	173.23	-476.92	56.61	480.34	458.23	22.11	21.721		
5,700.00	5,700.00	5,679.09	5,677.90	12.68	9.84	173.38	-478.67	55.56	481.94	459.43	22.51	21.407		
5,800.00	5,800.00	5,779.37	5,778.16	12.90	10.01	173.51	-480.22	54.65	483.36	460.45	22.91	21.099		
5,900.00	5,900.00	5,879.65	5,878.43	13.13	10.18	173.64	-481.73	53.69	484.75	461.45	23.31	20.799		
6,000.00	6,000.00	5,979.77	5,978.53	13.35	10.36	173.76	-483.17	52.80	486.09	462.39	23.70	20.507		
6,100.00	6,100.00	6,080.90	6,079.65	13.58	10.53	173.90	-484.54	51.80	487.33	463.22	24.10	20.218		
6,200.00	6,200.00	6,181.84	6,180.57	13.80	10.71	174.04	-485.67	50.88	488.32	463.82	24.50	19.928		
6,300.00	6,300.00	6,281.42	6,280.14	14.03	10.88	174.19	-486.72	49.49	489.25	464.35	24.90	19.647		

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



TDS
Anticollision Report



Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #56H
Site Error: 0.00 usft
Reference Well: Lea Unit #56H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #56H
TVD Reference: KB @ 3680.00usft (McVay 4)
MD Reference: KB @ 3680.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design Lea County Offset Wells - Lea Federal Unit #18 - 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
6,400.00	6,400.00	6,380.60	6,379.31	14.25	11.06	174.32	-487.88	48.56	490.32	465.03	25.30	19.382	
6,500.00	6,500.00	6,480.75	6,479.45	14.48	11.23	174.43	-489.14	47.68	491.49	465.79	25.70	19.126	
6,600.00	6,600.00	6,580.39	6,579.08	14.70	11.41	174.55	-490.38	46.79	492.64	466.54	26.09	18.879	
6,700.00	6,700.00	6,680.75	6,679.42	14.93	11.58	174.65	-491.64	46.01	493.82	467.33	26.49	18.639	
6,800.00	6,800.00	6,781.39	6,780.06	15.15	11.76	174.76	-492.79	45.21	494.89	467.99	26.90	18.400	
6,900.00	6,900.00	6,880.92	6,879.58	15.38	11.94	174.89	-493.91	44.19	495.91	468.62	27.29	18.169	
7,000.00	7,000.00	6,981.19	6,979.83	15.60	12.12	175.02	-495.10	43.12	497.00	469.30	27.69	17.946	
7,100.00	7,100.00	7,081.14	7,079.77	15.83	12.29	175.15	-496.22	42.07	498.03	469.94	28.09	17.727	
7,200.00	7,200.00	7,182.04	7,180.66	16.05	12.47	175.27	-497.29	41.17	499.01	470.51	28.50	17.512	
7,300.00	7,300.00	7,282.53	7,281.15	16.28	12.65	175.39	-498.19	40.21	499.82	470.92	28.90	17.296	
7,400.00	7,400.00	7,382.72	7,381.33	16.50	12.83	175.49	-499.01	39.32	500.57	471.27	29.30	17.085	
7,500.00	7,500.00	7,482.34	7,480.94	16.72	13.01	175.60	-499.84	38.46	501.33	471.63	29.70	16.881	
7,600.00	7,600.00	7,582.17	7,580.76	16.95	13.19	175.70	-500.73	37.65	502.16	472.07	30.10	16.684	
7,700.00	7,700.00	7,682.36	7,680.94	17.17	13.37	175.81	-501.63	36.76	502.99	472.50	30.50	16.492	
7,800.00	7,800.00	7,781.31	7,779.89	17.40	13.55	175.91	-502.57	35.93	503.88	472.98	30.90	16.308	
7,900.00	7,900.00	7,881.76	7,880.33	17.62	13.73	175.99	-503.62	35.35	504.89	473.58	31.30	16.130	
8,000.00	8,000.00	7,981.48	7,980.04	17.85	13.91	176.07	-504.61	34.63	505.82	474.12	31.70	15.956	
8,100.00	8,100.00	8,081.74	8,080.29	18.07	14.09	176.17	-505.63	33.84	506.79	474.68	32.10	15.786	
8,200.00	8,200.00	8,182.33	8,180.88	18.30	14.27	176.27	-506.57	33.02	507.66	475.15	32.51	15.617	
8,300.00	8,300.00	8,281.72	8,280.26	18.52	14.45	176.33	-507.44	32.57	508.51	475.60	32.91	15.453	
8,400.00	8,400.00	8,382.58	8,381.12	18.75	14.63	176.36	-508.35	32.33	509.39	476.08	33.31	15.291	
8,500.00	8,500.00	8,483.09	8,481.63	18.97	14.81	176.37	-509.05	32.33	510.09	476.37	33.72	15.129	
8,600.00	8,600.00	8,584.51	8,583.04	19.20	14.99	176.37	-509.60	32.34	510.63	476.51	34.12	14.964	
8,700.00	8,700.00	8,680.96	8,679.49	19.42	15.16	176.37	-510.23	32.35	511.28	476.77	34.52	14.812	
8,800.00	8,800.00	8,781.14	8,779.66	19.65	15.34	176.33	-511.35	32.80	512.43	477.51	34.92	14.674	
8,900.00	8,900.00	8,877.72	8,876.23	19.87	15.51	176.29	-512.57	33.20	513.72	478.40	35.32	14.546	
9,000.00	9,000.00	8,972.77	8,971.26	20.10	15.68	176.25	-514.61	33.70	515.90	480.19	35.71	14.447	
9,100.00	9,100.00	9,069.35	9,067.79	20.32	15.85	176.29	-517.56	33.55	518.93	482.83	36.10	14.373	
9,200.00	9,200.00	9,171.15	9,169.53	20.55	16.03	176.41	-520.96	32.70	522.21	485.70	36.51	14.302	
9,227.04	9,227.04	9,199.25	9,197.62	20.61	16.09	176.45	-521.78	32.40	522.98	486.36	36.63	14.279	
9,250.00	9,249.99	9,221.07	9,219.43	20.65	16.12	-7.48	-522.42	32.20	523.19	486.48	36.71	14.252	
9,300.00	9,299.80	9,268.40	9,266.73	20.74	16.21	-7.54	-523.96	32.03	520.65	483.77	36.87	14.120	
9,350.00	9,349.06	9,315.30	9,313.61	20.82	16.29	-7.75	-525.69	32.22	514.06	477.02	37.04	13.879	
9,400.00	9,397.39	9,361.45	9,359.71	20.90	16.38	-8.09	-527.65	32.33	503.47	466.27	37.20	13.533	
9,450.00	9,444.42	9,407.64	9,405.84	20.99	16.46	-8.55	-529.85	32.23	488.95	451.59	37.36	13.086	
9,500.00	9,489.79	9,457.60	9,455.76	21.07	16.55	-9.23	-532.09	31.99	470.24	432.70	37.54	12.526	
9,550.00	9,533.17	9,505.38	9,503.50	21.14	16.64	-10.16	-533.88	31.67	447.29	409.58	37.71	11.862	
9,600.00	9,574.21	9,551.26	9,549.36	21.24	16.72	-11.44	-535.22	31.17	420.29	382.42	37.87	11.099	
9,650.00	9,612.62	9,593.84	9,591.92	21.36	16.80	-13.17	-536.10	30.49	389.48	351.47	38.02	10.245	
9,700.00	9,648.09	9,630.22	9,628.29	21.49	16.86	-15.52	-536.67	29.82	355.32	317.18	38.15	9.315	
9,750.00	9,680.35	9,662.95	9,661.01	21.65	16.92	-18.86	-537.19	29.31	318.34	280.07	38.27	8.319	
9,800.00	9,709.17	9,692.29	9,690.35	21.83	16.98	-23.76	-537.65	28.93	278.91	240.53	38.38	7.268	
9,850.00	9,734.31	9,717.58	9,715.64	22.03	17.02	-30.96	-538.07	28.64	237.51	199.03	38.48	6.172	
9,900.00	9,755.60	9,739.20	9,737.25	22.27	17.06	-41.50	-538.50	28.39	194.79	156.20	38.59	5.047	
9,950.00	9,772.86	9,757.15	9,755.20	22.54	17.10	-55.87	-538.90	28.18	151.72	112.97	38.74	3.916	
10,000.00	9,785.97	9,771.26	9,769.29	22.83	17.12	-71.93	-539.24	28.02	110.33	71.30	39.02	2.827	
10,050.00	9,794.83	9,781.33	9,779.37	23.16	17.14	-84.87	-539.51	27.90	76.38	36.65	39.73	1.922	
10,090.55	9,798.84	9,786.45	9,784.48	23.44	17.15	-90.57	-539.64	27.84	64.92	24.44	40.48	1.604 CC, ES, SF	
10,100.00	9,799.36	9,787.23	9,785.27	23.51	17.15	-91.19	-539.67	27.83	65.60	25.07	40.53	1.619	
10,127.04	9,800.00	9,788.64	9,786.67	23.71	17.15	-91.48	-539.70	27.82	74.45	34.11	40.34	1.846	
10,200.00	9,800.00	9,790.74	9,788.77	24.29	17.16	-93.33	-539.76	27.79	127.20	87.70	39.50	3.220	
10,300.00	9,800.00	9,793.68	9,791.71	25.18	17.16	-95.91	-539.85	27.76	219.18	180.06	39.12	5.603	

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



TDS
Anticollision Report



Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #56H
Site Error: 0.00 usft
Reference Well: Lea Unit #56H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #56H
TVD Reference: KB @ 3680.00usft (McVay 4)
MD Reference: KB @ 3680.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design Lea County Offset Wells - Lea Federal Unit #18 - 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						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		
10,400.00	9,800.00	9,796.70	9,794.73	26.16	17.17	-98.54	-539.93	27.72	316.05	277.04	39.00	8.103		
10,500.00	9,800.00	9,799.81	9,797.84	27.23	17.17	-101.21	-540.02	27.68	414.38	375.42	38.96	10.637		
10,600.00	9,800.00	9,802.83	9,800.85	28.37	17.18	-103.75	-540.11	27.65	513.34	474.40	38.94	13.183		
10,700.00	9,800.00	9,805.84	9,803.86	29.58	17.18	-106.25	-540.20	27.61	612.62	573.69	38.94	15.734		
10,800.00	9,800.00	9,808.85	9,806.87	30.85	17.19	-108.68	-540.28	27.58	712.10	673.15	38.94	18.287		
10,900.00	9,800.00	9,811.87	9,809.89	32.18	17.20	-111.06	-540.37	27.54	811.69	772.74	38.95	20.839		
11,000.00	9,800.00	9,814.90	9,812.92	33.55	17.20	-113.36	-540.46	27.50	911.36	872.39	38.96	23.391		
11,100.00	9,800.00	9,817.94	9,815.95	34.96	17.21	-115.60	-540.55	27.46	1,011.08	972.10	38.98	25.941		
11,200.00	9,800.00	9,820.97	9,818.99	36.40	17.21	-117.76	-540.64	27.43	1,110.85	1,071.85	38.99	28.488		
11,300.00	9,800.00	9,824.02	9,822.03	37.88	17.22	-119.85	-540.73	27.39	1,210.65	1,171.63	39.01	31.032		
11,400.00	9,800.00	9,827.07	9,825.08	39.39	17.22	-121.86	-540.82	27.35	1,310.47	1,271.44	39.03	33.573		
11,500.00	9,800.00	9,830.13	9,828.14	40.92	17.23	-123.79	-540.91	27.31	1,410.31	1,371.25	39.06	36.111		
11,600.00	9,800.00	9,833.19	9,831.20	42.47	17.23	-125.64	-541.00	27.27	1,510.16	1,471.09	39.08	38.645		
11,700.00	9,800.00	9,836.26	9,834.27	44.05	17.24	-127.41	-541.09	27.23	1,610.03	1,570.93	39.10	41.175		
11,800.00	9,800.00	9,839.33	9,837.34	45.64	17.25	-129.11	-541.18	27.19	1,709.91	1,670.78	39.13	43.700		
11,900.00	9,800.00	9,842.41	9,840.42	47.25	17.25	-130.74	-541.27	27.15	1,809.80	1,770.64	39.15	46.221		
12,000.00	9,800.00	9,845.50	9,843.50	48.87	17.26	-132.30	-541.36	27.11	1,909.69	1,870.51	39.18	48.738		
12,100.00	9,800.00	9,848.59	9,846.59	50.51	17.26	-133.78	-541.45	27.06	2,009.59	1,970.38	39.21	51.250		
12,200.00	9,800.00	9,851.69	9,849.69	52.16	17.27	-135.20	-541.54	27.02	2,109.49	2,070.25	39.24	53.757		
12,300.00	9,800.00	9,854.79	9,852.79	53.81	17.27	-136.56	-541.63	26.98	2,209.40	2,170.13	39.27	56.259		
12,400.00	9,800.00	9,857.90	9,855.90	55.48	17.28	-137.86	-541.72	26.94	2,309.31	2,270.01	39.30	58.755		
12,500.00	9,800.00	9,861.02	9,859.01	57.16	17.29	-139.10	-541.81	26.89	2,409.23	2,369.89	39.34	61.246		
12,600.00	9,800.00	9,864.14	9,862.13	58.85	17.29	-140.28	-541.91	26.85	2,509.15	2,469.78	39.37	63.732		
12,700.00	9,800.00	9,867.27	9,865.26	60.54	17.30	-141.41	-542.00	26.81	2,609.07	2,569.66	39.41	66.211		
12,800.00	9,800.00	9,870.40	9,868.39	62.24	17.30	-142.49	-542.09	26.76	2,708.99	2,669.55	39.44	68.685		
12,900.00	9,800.00	9,873.54	9,871.53	63.95	17.31	-143.52	-542.19	26.72	2,808.92	2,769.44	39.48	71.153		
13,000.00	9,800.00	9,876.69	9,874.67	65.66	17.31	-144.51	-542.28	26.67	2,908.85	2,869.33	39.51	73.614		
13,100.00	9,800.00	9,879.84	9,877.82	67.38	17.32	-145.46	-542.37	26.63	3,008.78	2,969.22	39.55	76.069		
13,200.00	9,800.00	9,883.00	9,880.98	69.10	17.33	-146.37	-542.47	26.58	3,108.71	3,069.11	39.59	78.518		
13,300.00	9,800.00	9,886.16	9,884.14	70.83	17.33	-147.23	-542.56	26.53	3,208.64	3,169.01	39.63	80.959		
13,400.00	9,800.00	9,889.33	9,887.31	72.56	17.34	-148.06	-542.65	26.48	3,308.57	3,268.90	39.67	83.395		
13,500.00	9,800.00	9,892.51	9,890.48	74.30	17.34	-148.86	-542.75	26.44	3,408.51	3,368.79	39.72	85.823		
13,600.00	9,800.00	9,895.69	9,893.66	76.04	17.35	-149.63	-542.84	26.39	3,508.44	3,468.68	39.76	88.244		
13,700.00	9,800.00	9,898.88	9,896.85	77.78	17.35	-150.36	-542.94	26.34	3,608.38	3,568.57	39.80	90.658		
13,800.00	9,800.00	9,900.00	9,897.97	79.52	17.36	-150.61	-542.97	26.32	3,708.31	3,668.47	39.84	93.076		
13,900.00	9,800.00	9,900.00	9,897.97	81.27	17.36	-150.61	-542.97	26.32	3,808.25	3,768.37	39.88	95.493		
14,000.00	9,800.00	9,900.00	9,897.97	83.03	17.36	-150.61	-542.97	26.32	3,908.20	3,868.28	39.92	97.904		
14,100.00	9,800.00	9,909.61	9,907.58	84.78	17.37	-152.61	-543.26	26.18	4,008.13	3,968.15	39.98	100.252		
14,200.00	9,800.00	9,912.21	9,910.17	86.54	17.38	-153.11	-543.33	26.15	4,108.07	4,068.05	40.03	102.633		
14,300.00	9,800.00	9,914.78	9,912.75	88.30	17.38	-153.59	-543.41	26.11	4,208.01	4,167.94	40.07	105.006		
14,400.00	9,800.00	9,917.34	9,915.31	90.06	17.39	-154.05	-543.48	26.08	4,307.96	4,267.83	40.12	107.371		
14,500.00	9,800.00	9,919.88	9,917.85	91.83	17.39	-154.49	-543.56	26.05	4,407.90	4,367.73	40.17	109.729		
14,600.00	9,800.00	9,922.41	9,920.37	93.59	17.40	-154.91	-543.63	26.02	4,507.85	4,467.63	40.22	112.079		
14,700.00	9,800.00	9,924.92	9,922.88	95.36	17.40	-155.32	-543.70	25.99	4,607.79	4,567.52	40.27	114.421		
14,800.00	9,800.00	9,927.41	9,925.37	97.13	17.41	-155.72	-543.78	25.97	4,707.74	4,667.42	40.32	116.755		
14,900.00	9,800.00	9,929.89	9,927.84	98.90	17.41	-156.10	-543.85	25.94	4,807.68	4,767.31	40.37	119.081		
15,000.00	9,800.00	9,932.35	9,930.30	100.68	17.42	-156.46	-543.92	25.92	4,907.63	4,867.21	40.43	121.399		
15,100.00	9,800.00	9,934.79	9,932.74	102.45	17.42	-156.82	-543.99	25.89	5,007.58	4,967.10	40.48	123.708		
15,200.00	9,800.00	9,937.22	9,935.17	104.23	17.42	-157.16	-544.06	25.87	5,107.53	5,067.00	40.53	126.010		
15,300.00	9,800.00	9,939.63	9,937.58	106.00	17.43	-157.49	-544.13	25.85	5,207.48	5,166.89	40.59	128.303		
15,400.00	9,800.00	9,942.03	9,939.98	107.78	17.43	-157.81	-544.20	25.83	5,307.43	5,266.78	40.64	130.587		
15,500.00	9,800.00	9,944.41	9,942.36	109.56	17.44	-158.12	-544.27	25.81	5,407.38	5,366.68	40.70	132.863		

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



TDS
Anticollision Report



Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #56H
Site Error: 0.00 usft
Reference Well: Lea Unit #56H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #56H
TVD Reference: KB @ 3680.00usft (McVay 4)
MD Reference: KB @ 3680.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design Lea County Offset Wells - Lea Federal Unit #18 - 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				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)	Minimum Separation (usft)	Separation Factor	
15,600.00	9,800.00	9,946.77	9,944.72	111.34	17.44	-158.41	-544.33	25.79	5,507.33	5,466.57	40.76	135.131	
15,700.00	9,800.00	9,949.12	9,947.07	113.13	17.45	-158.70	-544.40	25.77	5,607.28	5,566.47	40.81	137.389	
15,800.00	9,800.00	9,951.46	9,949.41	114.91	17.45	-158.98	-544.47	25.76	5,707.23	5,666.36	40.87	139.639	
15,900.00	9,800.00	9,953.78	9,951.73	116.69	17.45	-159.25	-544.53	25.74	5,807.19	5,766.26	40.93	141.881	
16,000.00	9,800.00	9,956.09	9,954.03	118.48	17.46	-159.51	-544.60	25.73	5,907.14	5,866.15	40.99	144.113	
16,100.00	9,800.00	9,958.38	9,956.32	120.26	17.46	-159.77	-544.66	25.71	6,007.09	5,966.04	41.05	146.337	
16,200.00	9,800.00	9,960.66	9,958.60	122.05	17.47	-160.02	-544.73	25.70	6,107.05	6,065.94	41.11	148.551	
16,300.00	9,800.00	9,962.92	9,960.86	123.84	17.47	-160.25	-544.79	25.69	6,207.00	6,165.83	41.17	150.757	
16,400.00	9,800.00	9,965.17	9,963.11	125.63	17.47	-160.49	-544.85	25.68	6,306.96	6,265.72	41.23	152.954	
16,500.00	9,800.00	9,967.40	9,965.34	127.42	17.48	-160.71	-544.92	25.67	6,406.91	6,365.61	41.30	155.141	
16,600.00	9,800.00	9,969.62	9,967.56	129.21	17.48	-160.93	-544.98	25.66	6,506.87	6,465.51	41.36	157.320	
16,700.00	9,800.00	9,971.83	9,969.77	131.00	17.49	-161.14	-545.04	25.66	6,606.82	6,565.40	41.42	159.489	
16,800.00	9,800.00	9,974.02	9,971.96	132.79	17.49	-161.35	-545.10	25.65	6,706.78	6,665.29	41.49	161.649	
16,900.00	9,800.00	9,976.20	9,974.14	134.58	17.49	-161.55	-545.16	25.64	6,806.74	6,765.18	41.56	163.800	
16,992.82	9,800.00	9,978.22	9,976.15	136.25	17.50	-161.73	-545.22	25.64	6,899.52	6,857.90	41.62	165.788	

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



TDS
Anticollision Report



Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #56H
Site Error: 0.00 usft
Reference Well: Lea Unit #56H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #56H
TVD Reference: KB @ 3680.00usft (McVay 4)
MD Reference: KB @ 3680.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Lea County Offset Wells - Lea Federal Unit #20 - OH - OH												Offset Well Error:	0.00 usft
Survey Program: 100-ISCWSA-GYRO-3													
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N-S (usft)	+E-W (usft)					
0.00	0.00	0.00	0.00	0.00	0.00	-179.41	-6,099.50	-62.70	6,099.90				
100.00	100.00	101.58	101.58	0.09	0.10	-179.41	-6,099.22	-62.93	6,099.64	6,099.45	0.19	N/A	
200.00	200.00	224.11	224.11	0.32	0.32	-179.41	-6,098.35	-63.00	6,098.93	6,098.28	0.64	9,493.707	
300.00	300.00	355.74	355.73	0.54	0.57	-179.41	-6,096.85	-62.42	6,097.78	6,096.67	1.12	5,465.017	
400.00	400.00	465.29	465.26	0.77	0.77	-179.42	-6,095.13	-61.85	6,096.21	6,094.66	1.54	3,947.542	
500.00	500.00	557.87	557.82	0.99	0.94	-179.42	-6,093.72	-61.28	6,094.68	6,092.74	1.94	3,142.952	
600.00	600.00	659.58	659.53	1.22	1.13	-179.43	-6,092.28	-60.53	6,093.25	6,090.90	2.35	2,590.721	
700.00	700.00	747.40	747.34	1.44	1.30	-179.44	-6,091.00	-59.76	6,091.79	6,089.06	2.74	2,226.411	
800.00	800.00	826.06	825.98	1.67	1.44	-179.45	-6,090.16	-58.65	6,090.71	6,087.61	3.10	1,964.225	
900.00	900.00	916.46	916.36	1.89	1.61	-179.46	-6,089.41	-57.16	6,089.86	6,086.38	3.48	1,747.918	
1,000.00	1,000.00	1,015.08	1,014.97	2.12	1.79	-179.48	-6,088.68	-55.39	6,089.11	6,085.22	3.88	1,568.954	
1,100.00	1,100.00	1,120.54	1,120.40	2.34	1.98	-179.50	-6,087.83	-53.46	6,088.29	6,083.99	4.29	1,419.004	
1,200.00	1,200.00	1,215.05	1,214.90	2.56	2.15	-179.51	-6,087.10	-51.70	6,087.49	6,082.81	4.68	1,300.470	
1,300.00	1,300.00	1,310.65	1,310.48	2.79	2.33	-179.53	-6,086.41	-50.17	6,086.76	6,081.69	5.07	1,199.677	
1,400.00	1,400.00	1,400.00	1,399.82	3.01	2.50	-179.54	-6,085.93	-49.07	6,086.20	6,080.75	5.46	1,115.628	
1,500.00	1,500.00	1,476.88	1,476.70	3.24	2.64	-179.54	-6,085.72	-48.39	6,085.92	6,080.11	5.81	1,047.010	
1,600.00	1,600.00	1,573.99	1,573.80	3.46	2.80	-179.55	-6,085.66	-48.06	6,085.85	6,079.65	6.20	980.908	
1,700.00	1,700.00	1,678.31	1,678.13	3.69	2.97	-179.54	-6,085.54	-48.42	6,085.74	6,079.13	6.61	920.518	
1,800.00	1,800.00	1,796.88	1,796.70	3.91	3.18	-179.55	-6,085.21	-48.26	6,085.46	6,078.42	7.05	863.609	
1,900.00	1,900.00	1,885.96	1,885.77	4.14	3.34	-179.55	-6,084.88	-47.54	6,085.09	6,077.66	7.43	819.180	
1,954.74	1,954.74	1,923.92	1,923.74	4.26	3.41	-179.56	-6,084.82	-47.23	6,085.00	6,077.38	7.62	799.019	
2,000.00	2,000.00	1,951.82	1,951.63	4.36	3.45	-179.56	-6,084.86	-47.05	6,085.07	6,077.30	7.76	783.808	
2,100.00	2,100.00	2,097.78	2,097.59	4.59	3.71	-179.57	-6,085.27	-46.14	6,085.51	6,077.28	8.23	739.220	
2,200.00	2,200.00	2,200.00	2,199.80	4.81	3.90	-179.57	-6,084.76	-45.31	6,085.01	6,076.37	8.64	704.332	
2,300.00	2,300.00	2,273.99	2,273.79	5.04	4.03	-179.58	-6,084.54	-44.78	6,084.71	6,075.71	8.99	678.569	
2,400.00	2,400.00	2,389.31	2,389.10	5.26	4.24	-179.58	-6,084.43	-44.37	6,084.63	6,075.21	9.42	645.946	
2,500.00	2,500.00	2,513.09	2,512.89	5.49	4.45	-179.58	-6,083.73	-44.71	6,084.05	6,074.18	9.87	616.497	
2,600.00	2,600.00	2,604.52	2,604.32	5.71	4.62	-179.58	-6,083.15	-44.25	6,083.42	6,073.16	10.26	592.964	
2,700.00	2,700.00	2,757.53	2,757.29	5.94	4.90	-179.60	-6,081.82	-42.14	6,082.41	6,071.65	10.76	565.393	
2,800.00	2,800.00	2,887.68	2,887.41	6.16	5.15	-179.63	-6,079.37	-39.51	6,080.65	6,069.44	11.22	542.119	
2,900.00	2,900.00	3,000.00	2,999.68	6.39	5.36	-179.65	-6,077.03	-37.26	6,078.55	6,066.91	11.64	522.017	
3,000.00	3,000.00	3,087.79	3,087.42	6.61	5.52	-179.67	-6,075.20	-35.25	6,076.46	6,064.43	12.03	505.206	
3,100.00	3,100.00	3,200.00	3,199.56	6.84	5.73	-179.70	-6,072.80	-32.05	6,074.29	6,061.83	12.45	487.750	
3,200.00	3,200.00	3,275.95	3,275.47	7.06	5.87	-179.72	-6,071.21	-29.99	6,072.22	6,059.40	12.82	473.833	
3,300.00	3,300.00	3,350.11	3,349.59	7.28	6.01	-179.74	-6,070.11	-28.07	6,070.71	6,057.54	13.17	460.847	
3,400.00	3,400.00	3,427.54	3,427.00	7.51	6.16	-179.75	-6,069.22	-26.81	6,069.55	6,056.02	13.54	448.391	
3,500.00	3,500.00	3,500.00	3,499.46	7.73	6.29	-179.75	-6,068.69	-25.99	6,068.82	6,054.93	13.89	436.902	
3,600.00	3,600.00	3,591.35	3,590.81	7.96	6.46	-179.76	-6,068.30	-25.37	6,068.39	6,054.11	14.28	424.986	
3,681.54	3,681.54	3,651.08	3,650.54	8.14	6.57	-179.76	-6,068.18	-25.14	6,068.23	6,053.67	14.57	416.619	
3,700.00	3,700.00	3,664.17	3,663.62	8.18	6.59	-179.76	-6,068.19	-25.08	6,068.24	6,053.61	14.63	414.799	
3,800.00	3,800.00	3,785.99	3,785.45	8.41	6.81	-179.77	-6,068.29	-24.55	6,068.36	6,053.30	15.06	402.843	
3,900.00	3,900.00	3,905.69	3,905.14	8.63	7.03	-179.77	-6,067.74	-24.17	6,067.89	6,052.39	15.51	391.339	
4,000.00	4,000.00	4,013.17	4,012.61	8.86	7.23	-179.78	-6,066.99	-23.61	6,067.20	6,051.27	15.93	380.964	
4,100.00	4,100.00	4,100.00	4,099.44	9.08	7.40	-179.79	-6,066.54	-22.73	6,066.66	6,050.35	16.31	372.066	
4,200.00	4,200.00	4,186.64	4,186.07	9.31	7.56	-179.80	-6,066.28	-21.32	6,066.34	6,049.66	16.68	363.680	
4,254.84	4,254.84	4,224.41	4,223.84	9.43	7.62	-179.81	-6,066.21	-20.53	6,066.24	6,049.38	16.87	359.626	
4,300.00	4,300.00	4,251.34	4,250.75	9.53	7.67	-179.81	-6,066.25	-19.92	6,066.31	6,049.30	17.02	356.524	
4,400.00	4,400.00	4,300.00	4,299.40	9.76	7.76	-179.82	-6,066.53	-18.73	6,066.96	6,049.64	17.32	350.265	
4,500.00	4,500.00	4,374.51	4,373.89	9.98	7.89	-179.84	-6,067.44	-16.91	6,068.21	6,050.54	17.67	343.468	
4,600.00	4,600.00	4,446.40	4,445.74	10.21	8.01	-179.86	-6,068.76	-15.32	6,070.04	6,052.03	18.01	337.077	
4,700.00	4,700.00	4,534.94	4,534.25	10.43	8.16	-179.87	-6,070.71	-13.72	6,072.22	6,053.85	18.38	330.450	
4,800.00	4,800.00	4,631.82	4,631.09	10.66	8.33	-179.89	-6,072.82	-11.88	6,074.39	6,055.64	18.76	323.835	

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



TDS
Anticollision Report



Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #56H
Site Error: 0.00 usft
Reference Well: Lea Unit #56H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #56H
TVD Reference: KB @ 3680.00usft (McVay 4)
MD Reference: KB @ 3680.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design Lea County Offset Wells - Lea Federal Unit #20 - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 100-ISCWSA-GYRO-3													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						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		
4,900.00	4,900.00	4,714.53	4,713.76	10.88	8.47	-179.90	-6,074.86	-10.53	6,076.86	6,057.74	19.12	317.895		
5,000.00	5,000.00	4,851.49	4,850.66	11.11	8.70	-179.92	-6,077.93	-8.20	6,079.09	6,059.52	19.57	310.660		
5,100.00	5,100.00	4,942.25	4,941.39	11.33	8.85	-179.94	-6,079.65	-6.48	6,080.99	6,061.05	19.94	304.924		
5,200.00	5,200.00	5,000.00	4,999.12	11.56	8.95	-179.95	-6,080.99	-5.59	6,083.37	6,063.11	20.26	300.270		
5,300.00	5,300.00	5,200.00	5,199.05	11.78	9.29	-179.97	-6,085.48	-3.61	6,085.89	6,065.06	20.82	292.249		
5,400.00	5,400.00	5,272.63	5,271.67	12.00	9.42	-179.98	-6,086.16	-2.25	6,086.93	6,065.76	21.17	287.510		
5,500.00	5,500.00	5,443.95	5,442.94	12.23	9.73	179.99	-6,088.01	0.94	6,088.06	6,066.37	21.69	280.675		
5,600.00	5,600.00	5,530.94	5,529.91	12.45	9.89	179.97	-6,088.50	2.80	6,088.62	6,066.56	22.06	275.942		
5,700.00	5,700.00	5,630.49	5,629.44	12.68	10.07	179.95	-6,089.16	4.87	6,089.29	6,066.83	22.46	271.111		
5,800.00	5,800.00	5,734.70	5,733.63	12.90	10.26	179.94	-6,089.78	6.70	6,089.89	6,067.02	22.86	266.349		
5,900.00	5,900.00	5,840.83	5,839.55	13.13	10.45	179.92	-6,090.38	8.28	6,090.46	6,067.19	23.27	261.717		
6,000.00	6,000.00	6,000.00	5,998.90	13.35	10.75	179.91	-6,090.47	10.02	6,090.55	6,066.78	23.77	256.189		
6,083.57	6,083.57	6,053.67	6,052.57	13.54	10.84	179.90	-6,090.31	10.18	6,090.32	6,066.26	24.05	253.184		
6,100.00	6,100.00	6,063.44	6,062.34	13.58	10.85	179.90	-6,090.31	10.17	6,090.33	6,066.22	24.11	252.619		
6,200.00	6,200.00	6,166.69	6,165.59	13.80	11.03	179.91	-6,090.62	9.82	6,090.63	6,066.12	24.51	248.466		
6,267.10	6,267.10	6,237.20	6,236.10	13.95	11.15	179.91	-6,090.57	9.96	6,090.58	6,065.79	24.79	245.729		
6,300.00	6,300.00	6,262.78	6,261.68	14.03	11.19	179.91	-6,090.58	10.00	6,090.60	6,065.69	24.90	244.565		
6,400.00	6,400.00	6,358.88	6,357.78	14.25	11.35	179.91	-6,090.80	9.96	6,090.82	6,065.53	25.29	240.810		
6,500.00	6,500.00	6,461.30	6,460.20	14.48	11.52	179.91	-6,090.94	9.82	6,090.95	6,065.26	25.69	237.068		
6,600.00	6,600.00	6,566.18	6,565.08	14.70	11.70	179.91	-6,091.08	10.07	6,091.09	6,064.99	26.10	233.391		
6,700.00	6,700.00	6,676.81	6,675.71	14.93	11.91	179.90	-6,091.05	10.64	6,091.06	6,064.55	26.52	229.715		
6,773.28	6,773.28	6,743.38	6,742.28	15.09	12.03	179.90	-6,090.99	10.88	6,091.00	6,064.20	26.80	227.307		
6,800.00	6,800.00	6,765.53	6,764.43	15.15	12.07	179.90	-6,091.00	10.96	6,091.01	6,064.11	26.89	226.475		
6,900.00	6,900.00	6,852.76	6,851.66	15.38	12.22	179.90	-6,091.17	11.15	6,091.20	6,063.93	27.27	223.369		
7,000.00	7,000.00	6,971.26	6,970.16	15.60	12.42	179.90	-6,091.45	10.98	6,091.46	6,063.76	27.70	219.915		
7,094.00	7,094.00	7,064.10	7,063.00	15.81	12.56	179.90	-6,091.36	10.73	6,091.37	6,063.30	28.07	216.990		
7,100.00	7,100.00	7,069.25	7,068.14	15.83	12.57	179.90	-6,091.36	10.71	6,091.37	6,063.28	28.09	216.817		
7,200.00	7,200.00	7,163.05	7,161.95	16.05	12.72	179.90	-6,091.45	10.59	6,091.46	6,062.98	28.48	213.870		
7,300.00	7,300.00	7,279.46	7,278.36	16.28	12.93	179.90	-6,091.48	10.91	6,091.50	6,062.59	28.91	210.703		
7,398.81	7,398.81	7,368.92	7,367.81	16.50	13.09	179.90	-6,091.36	10.98	6,091.37	6,062.09	29.29	207.979		
7,400.00	7,400.00	7,369.91	7,368.80	16.50	13.09	179.90	-6,091.36	10.98	6,091.37	6,062.08	29.29	207.948		
7,500.00	7,500.00	7,471.96	7,470.86	16.72	13.26	179.90	-6,091.41	10.97	6,091.42	6,061.72	29.69	205.134		
7,600.00	7,600.00	7,578.24	7,577.14	16.95	13.44	179.90	-6,091.31	10.95	6,091.32	6,061.21	30.11	202.328		
7,700.00	7,700.00	7,682.36	7,681.25	17.17	13.62	179.90	-6,091.13	11.05	6,091.15	6,060.64	30.51	199.613		
7,800.00	7,800.00	7,780.90	7,779.79	17.40	13.79	179.90	-6,090.94	10.93	6,090.96	6,060.04	30.91	197.026		
7,873.80	7,873.80	7,843.90	7,842.80	17.57	13.90	179.90	-6,090.87	10.90	6,090.88	6,059.69	31.19	195.277		
7,900.00	7,900.00	7,865.13	7,864.03	17.62	13.93	179.90	-6,090.88	10.93	6,090.89	6,059.60	31.29	194.679		
8,000.00	8,000.00	7,946.02	7,944.92	17.85	14.07	179.90	-6,091.07	11.07	6,091.13	6,059.47	31.65	192.445		
8,100.00	8,100.00	8,062.34	8,061.24	18.07	14.27	179.90	-6,091.57	10.68	6,091.58	6,059.51	32.08	189.907		
8,200.00	8,200.00	8,173.51	8,172.40	18.30	14.44	179.91	-6,091.48	10.01	6,091.49	6,059.00	32.50	187.458		
8,228.48	8,228.48	8,200.00	8,198.89	18.36	14.48	179.91	-6,091.47	9.84	6,091.48	6,058.88	32.61	186.824		
8,300.00	8,300.00	8,248.56	8,247.45	18.52	14.57	179.91	-6,091.55	9.70	6,091.60	6,058.75	32.85	185.437		
8,400.00	8,400.00	8,426.64	8,425.52	18.75	14.87	179.91	-6,091.56	9.05	6,091.83	6,058.44	33.38	182.473		
8,500.00	8,500.00	8,537.53	8,536.40	18.97	15.05	179.93	-6,090.36	7.72	6,090.74	6,056.93	33.81	180.172		
8,600.00	8,600.00	8,656.33	8,655.18	19.20	15.25	179.93	-6,089.03	6.95	6,089.65	6,055.41	34.24	177.850		
8,700.00	8,700.00	8,772.14	8,770.97	19.42	15.45	179.94	-6,087.11	6.23	6,087.96	6,053.29	34.67	175.594		
8,800.00	8,800.00	8,854.05	8,852.86	19.65	15.59	179.95	-6,085.83	4.88	6,086.41	6,051.37	35.04	173.695		
8,900.00	8,900.00	8,928.10	8,926.89	19.87	15.71	179.97	-6,084.95	3.33	6,085.23	6,049.83	35.40	171.915		
9,000.00	9,000.00	9,000.00	8,998.79	20.10	15.83	179.98	-6,084.45	2.39	6,084.53	6,048.78	35.75	170.204		
9,100.00	9,100.00	9,088.95	9,087.73	20.32	15.98	179.98	-6,084.12	1.88	6,084.15	6,048.02	36.13	168.394		
9,165.26	9,165.26	9,135.48	9,134.26	20.47	16.05	179.98	-6,084.04	1.81	6,084.04	6,047.68	36.36	167.334		
9,200.00	9,200.00	9,158.64	9,157.43	20.55	16.10	179.98	-6,084.06	1.88	6,084.07	6,047.59	36.48	166.792		

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



TDS
Anticollision Report



Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #56H
Site Error: 0.00 usft
Reference Well: Lea Unit #56H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #56H
TVD Reference: KB @ 3680.00usft (McVay 4)
MD Reference: KB @ 3680.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design Lea County Offset Wells - Lea Federal Unit #20 - OH - OH														Offset Site Error: 0.00 usft
Survey Program: 100-ISCWSA-GYRO-3														Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	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)				
9,227.04	9,227.04	9,176.68	9,175.46	20.61	16.13	179.98	-6,084.10	1.98	6,084.14	6,047.57	36.57	166.373		
9,250.00	9,249.99	9,200.00	9,198.78	20.65	16.17	-3.97	-6,084.21	2.19	6,083.78	6,047.13	36.65	165.975		
9,300.00	9,299.80	9,334.54	9,333.31	20.74	16.41	-4.01	-6,083.66	2.58	6,079.37	6,042.40	36.98	164.417		
9,350.00	9,349.06	9,397.11	9,395.88	20.82	16.52	-4.09	-6,082.92	3.11	6,070.31	6,033.14	37.17	163.306		
9,400.00	9,397.39	9,455.20	9,453.95	20.90	16.62	-4.21	-6,082.13	3.98	6,056.92	6,019.56	37.36	162.130		
9,450.00	9,444.42	9,500.00	9,498.75	20.99	16.71	-4.37	-6,081.45	4.74	6,039.33	6,001.80	37.52	160.960		
9,500.00	9,489.79	9,500.00	9,498.75	21.07	16.71	-4.55	-6,081.45	4.74	6,017.94	5,980.34	37.60	160.047		
9,550.00	9,533.17	9,537.60	9,536.34	21.14	16.77	-4.81	-6,081.05	5.37	5,992.73	5,954.99	37.74	158.774		
9,600.00	9,574.21	9,553.40	9,552.14	21.24	16.80	-5.13	-6,080.99	5.61	5,964.13	5,926.29	37.84	157.595		
9,650.00	9,612.62	9,568.28	9,567.01	21.36	16.83	-5.53	-6,081.00	5.83	5,932.24	5,894.30	37.94	156.360		
9,700.00	9,648.09	9,600.00	9,598.73	21.49	16.89	-6.06	-6,081.21	6.27	5,897.33	5,859.27	38.06	154.952		
9,750.00	9,680.35	9,600.00	9,598.73	21.65	16.89	-6.70	-6,081.21	6.27	5,859.45	5,821.33	38.12	153.719		
9,800.00	9,709.17	9,623.85	9,622.58	21.83	16.93	-7.61	-6,081.45	6.53	5,819.00	5,780.79	38.21	152.283		
9,850.00	9,734.31	9,661.89	9,660.62	22.03	16.99	-8.90	-6,081.77	6.67	5,776.14	5,737.81	38.32	150.721		
9,900.00	9,755.60	9,694.01	9,692.74	22.27	17.04	-10.77	-6,081.98	6.54	5,731.17	5,692.76	38.42	149.181		
9,950.00	9,772.86	9,778.27	9,777.00	22.54	17.19	-14.12	-6,081.98	6.70	5,684.41	5,645.82	38.59	147.289		
10,000.00	9,785.97	9,800.00	9,798.72	22.83	17.23	-19.63	-6,081.80	7.08	5,636.21	5,597.55	38.66	145.805		
10,050.00	9,794.83	9,800.00	9,798.72	23.16	17.23	-30.87	-6,081.80	7.08	5,587.09	5,548.42	38.67	144.465		
10,100.00	9,799.36	9,800.00	9,798.72	23.51	17.23	-61.60	-6,081.80	7.08	5,537.43	5,498.75	38.69	143.134		
10,127.04	9,800.00	9,800.00	9,798.72	23.71	17.23	-93.99	-6,081.80	7.08	5,510.48	5,471.79	38.69	142.421		
10,200.00	9,800.00	9,800.00	9,798.72	24.29	17.23	-93.99	-6,081.80	7.08	5,437.74	5,399.04	38.70	140.507		
10,300.00	9,800.00	9,800.00	9,798.72	25.18	17.23	-93.99	-6,081.80	7.08	5,338.06	5,299.34	38.72	137.879		
10,400.00	9,800.00	9,800.00	9,798.72	26.16	17.23	-93.99	-6,081.80	7.08	5,238.38	5,199.65	38.73	135.245		
10,500.00	9,800.00	9,800.00	9,798.72	27.23	17.23	-93.99	-6,081.80	7.08	5,138.72	5,099.97	38.75	132.605		
10,600.00	9,800.00	9,800.00	9,798.72	28.37	17.23	-93.99	-6,081.80	7.08	5,039.08	5,000.30	38.77	129.959		
10,700.00	9,800.00	9,800.00	9,798.72	29.58	17.23	-93.99	-6,081.80	7.08	4,939.44	4,900.64	38.80	127.306		
10,800.00	9,800.00	9,800.00	9,798.72	30.85	17.23	-93.99	-6,081.80	7.08	4,839.82	4,801.00	38.83	124.648		
10,900.00	9,800.00	9,800.00	9,798.72	32.18	17.23	-93.99	-6,081.80	7.08	4,740.22	4,701.36	38.86	121.982		
11,000.00	9,800.00	9,800.00	9,798.72	33.55	17.23	-93.99	-6,081.80	7.08	4,640.64	4,601.74	38.90	119.311		
11,100.00	9,800.00	9,800.00	9,798.72	34.96	17.23	-93.99	-6,081.80	7.08	4,541.07	4,502.13	38.93	116.632		
11,200.00	9,800.00	9,800.00	9,798.72	36.40	17.23	-93.99	-6,081.80	7.08	4,441.52	4,402.54	38.98	113.948		
11,300.00	9,800.00	9,800.00	9,798.72	37.88	17.23	-93.99	-6,081.80	7.08	4,341.99	4,302.97	39.03	111.256		
11,400.00	9,800.00	9,800.00	9,798.72	39.39	17.23	-93.99	-6,081.80	7.08	4,242.49	4,203.41	39.08	108.557		
11,500.00	9,800.00	9,800.00	9,798.72	40.92	17.23	-93.99	-6,081.80	7.08	4,143.01	4,103.87	39.14	105.851		
11,600.00	9,800.00	9,800.00	9,798.72	42.47	17.23	-93.99	-6,081.80	7.08	4,043.55	4,004.35	39.21	103.138		
11,700.00	9,800.00	9,800.00	9,798.72	44.05	17.23	-93.99	-6,081.80	7.08	3,944.13	3,904.85	39.28	100.417		
11,800.00	9,800.00	9,800.00	9,798.72	45.64	17.23	-93.99	-6,081.80	7.08	3,844.73	3,805.37	39.36	97.689		
11,900.00	9,800.00	9,800.00	9,798.72	47.25	17.23	-93.99	-6,081.80	7.08	3,745.36	3,705.92	39.44	94.952		
12,000.00	9,800.00	9,800.00	9,798.72	48.87	17.23	-93.99	-6,081.80	7.08	3,646.03	3,606.49	39.54	92.207		
12,100.00	9,800.00	9,800.00	9,798.72	50.51	17.23	-93.99	-6,081.80	7.08	3,546.74	3,507.09	39.65	89.454		
12,200.00	9,800.00	9,798.12	9,796.84	52.16	17.22	-93.74	-6,081.82	7.04	3,447.49	3,407.72	39.76	86.698		
12,300.00	9,800.00	9,796.25	9,794.97	53.81	17.22	-93.49	-6,081.84	7.01	3,348.28	3,308.38	39.89	83.933		
12,400.00	9,800.00	9,794.50	9,793.22	55.48	17.22	-93.26	-6,081.85	6.97	3,249.11	3,209.08	40.04	81.157		
12,500.00	9,800.00	9,792.84	9,791.56	57.16	17.21	-93.03	-6,081.87	6.94	3,150.01	3,109.81	40.19	78.370		
12,600.00	9,800.00	9,791.26	9,789.99	58.85	17.21	-92.82	-6,081.88	6.91	3,050.96	3,010.58	40.37	75.573		
12,700.00	9,800.00	9,789.78	9,788.50	60.54	17.21	-92.62	-6,081.89	6.89	2,951.97	2,911.40	40.57	72.764		
12,800.00	9,800.00	9,788.37	9,787.09	62.24	17.21	-92.43	-6,081.90	6.86	2,853.05	2,812.26	40.79	69.945		
12,900.00	9,800.00	9,787.03	9,785.75	63.95	17.20	-92.25	-6,081.92	6.84	2,754.21	2,713.17	41.04	67.114		
13,000.00	9,800.00	9,785.75	9,784.48	65.66	17.20	-92.08	-6,081.92	6.82	2,655.46	2,614.14	41.32	64.271		
13,100.00	9,800.00	9,784.54	9,783.26	67.38	17.20	-91.92	-6,081.93	6.80	2,556.80	2,515.17	41.63	61.418		
13,200.00	9,800.00	9,783.38	9,782.11	69.10	17.20	-91.76	-6,081.94	6.78	2,458.25	2,416.27	41.98	58.553		
13,300.00	9,800.00	9,782.28	9,781.00	70.83	17.20	-91.62	-6,081.95	6.76	2,359.83	2,317.44	42.38	55.679		

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



TDS
Anticollision Report



Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #56H
Site Error: 0.00 usft
Reference Well: Lea Unit #56H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #56H
TVD Reference: KB @ 3680.00usft (McVay 4)
MD Reference: KB @ 3680.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design Lea County Offset Wells - Lea Federal Unit #20 - OH - OH													Offset Site Error: 0.00 usft
Survey Program: 100-ISCWSA-GYRO-3													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Distance							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	
13,400.00	9,800.00	9,781.23	9,779.95	72.56	17.19	-91.47	-6,081.96	6.75	2,261.54	2,218.70	42.84	52.794	
13,500.00	9,800.00	9,780.22	9,778.94	74.30	17.19	-91.34	-6,081.96	6.73	2,163.40	2,120.05	43.35	49.902	
13,600.00	9,800.00	9,779.25	9,777.98	76.04	17.19	-91.21	-6,081.97	6.72	2,065.45	2,021.51	43.94	47.004	
13,700.00	9,800.00	9,778.33	9,777.05	77.78	17.19	-91.08	-6,081.98	6.70	1,967.70	1,923.09	44.62	44.102	
13,800.00	9,800.00	9,777.44	9,776.16	79.52	17.19	-90.97	-6,081.98	6.69	1,870.19	1,824.80	45.39	41.200	
13,900.00	9,800.00	9,776.59	9,775.31	81.27	17.19	-90.85	-6,081.99	6.68	1,772.96	1,726.67	46.29	38.303	
14,000.00	9,800.00	9,775.77	9,774.50	83.03	17.18	-90.74	-6,081.99	6.67	1,676.05	1,628.72	47.33	35.415	
14,100.00	9,800.00	9,774.99	9,773.71	84.78	17.18	-90.63	-6,082.00	6.66	1,579.53	1,530.99	48.53	32.545	
14,200.00	9,800.00	9,774.23	9,772.95	86.54	17.18	-90.53	-6,082.00	6.65	1,483.46	1,433.52	49.95	29.702	
14,300.00	9,800.00	9,773.50	9,772.22	88.30	17.18	-90.43	-6,082.00	6.64	1,387.96	1,336.35	51.61	26.896	
14,400.00	9,800.00	9,772.80	9,771.52	90.06	17.18	-90.34	-6,082.01	6.63	1,293.13	1,239.56	53.57	24.141	
14,500.00	9,800.00	9,772.12	9,770.85	91.83	17.18	-90.25	-6,082.01	6.62	1,199.14	1,143.25	55.89	21.454	
14,600.00	9,800.00	9,771.47	9,770.19	93.59	17.18	-90.16	-6,082.01	6.61	1,106.21	1,047.53	58.68	18.853	
14,700.00	9,800.00	9,770.84	9,769.56	95.36	17.18	-90.08	-6,082.02	6.61	1,014.62	952.60	62.02	16.360	
14,800.00	9,800.00	9,770.23	9,768.96	97.13	17.18	-89.99	-6,082.02	6.60	924.77	858.71	66.06	13.999	
14,900.00	9,800.00	9,769.64	9,768.37	98.90	17.17	-89.91	-6,082.02	6.59	837.23	766.27	70.97	11.798	
15,000.00	9,800.00	9,769.07	9,767.80	100.68	17.17	-89.84	-6,082.03	6.58	752.81	675.87	76.93	9.785	
15,100.00	9,800.00	9,768.52	9,767.25	102.45	17.17	-89.76	-6,082.03	6.58	672.66	588.49	84.17	7.992	
15,200.00	9,800.00	9,767.99	9,766.71	104.23	17.17	-89.69	-6,082.03	6.57	598.52	505.71	92.80	6.449	
15,300.00	9,800.00	9,767.47	9,766.20	106.00	17.17	-89.62	-6,082.03	6.57	532.89	430.16	102.73	5.187	
15,400.00	9,800.00	9,766.97	9,765.70	107.78	17.17	-89.56	-6,082.04	6.56	479.30	366.05	113.25	4.232	
15,500.00	9,800.00	9,766.49	9,765.21	109.56	17.17	-89.49	-6,082.04	6.56	442.13	319.50	122.63	3.606	
15,600.00	9,800.00	9,766.02	9,764.74	111.34	17.17	-89.43	-6,082.04	6.55	425.71	297.39	128.32	3.318	
15,621.25	9,800.00	9,765.92	9,764.64	111.72	17.17	-89.41	-6,082.04	6.55	425.18	296.34	128.84	3.300 CC, ES, SF	
15,700.00	9,800.00	9,765.56	9,764.29	113.13	17.17	-89.36	-6,082.04	6.55	432.41	303.96	128.45	3.366	
15,800.00	9,800.00	9,765.12	9,763.84	114.91	17.17	-89.30	-6,082.05	6.54	461.22	337.77	123.46	3.736	
15,900.00	9,800.00	9,764.69	9,763.41	116.69	17.17	-89.25	-6,082.05	6.54	508.40	392.84	115.57	4.399	
16,000.00	9,800.00	9,764.27	9,762.99	118.48	17.16	-89.19	-6,082.05	6.53	569.41	462.45	106.96	5.324	
16,100.00	9,800.00	9,763.86	9,762.59	120.26	17.16	-89.14	-6,082.05	6.53	640.29	541.41	98.88	6.475	
16,200.00	9,800.00	9,763.46	9,762.19	122.05	17.16	-89.08	-6,082.05	6.52	718.14	626.33	91.81	7.822	
16,300.00	9,800.00	9,763.08	9,761.80	123.84	17.16	-89.03	-6,082.05	6.52	800.92	715.11	85.80	9.334	
16,400.00	9,800.00	9,762.71	9,761.43	125.63	17.16	-88.98	-6,082.06	6.52	887.25	806.49	80.76	10.987	
16,500.00	9,800.00	9,762.34	9,761.06	127.42	17.16	-88.93	-6,082.06	6.51	976.20	899.67	76.53	12.756	
16,600.00	9,800.00	9,761.98	9,760.71	129.21	17.16	-88.88	-6,082.06	6.51	1,067.10	994.13	72.97	14.624	
16,700.00	9,800.00	9,761.64	9,760.36	131.00	17.16	-88.84	-6,082.06	6.51	1,159.51	1,089.55	69.96	16.574	
16,800.00	9,800.00	9,761.30	9,760.03	132.79	17.16	-88.79	-6,082.06	6.50	1,253.08	1,185.68	67.40	18.592	
16,900.00	9,800.00	9,760.97	9,759.70	134.58	17.16	-88.75	-6,082.06	6.50	1,347.57	1,282.36	65.21	20.666	
16,992.82	9,800.00	9,760.67	9,759.40	136.25	17.16	-88.71	-6,082.06	6.50	1,435.95	1,372.50	63.45	22.633	

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



TDS
Anticollision Report



Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #56H
Site Error: 0.00 usft
Reference Well: Lea Unit #56H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #56H
TVD Reference: KB @ 3680.00usft (McVay 4)
MD Reference: KB @ 3680.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design Lea County Offset Wells - Lea Unit #06 - OH - OH													Offset Site Error: 0.00 usft
Survey Program: 100-ISCWSA-GYRO-3													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Tooface (")	Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
0.00	0.00	0.00	0.00	0.00	0.00	-176.97	-3,130.21	-165.94	3,134.79				
100.00	100.00	64.10	64.10	0.09	0.06	-176.97	-3,130.23	-165.93	3,134.63	3,134.47	0.15	N/A	
200.00	200.00	170.99	170.99	0.32	0.21	-176.97	-3,130.23	-165.95	3,134.63	3,134.10	0.53	5,892.013	
300.00	300.00	271.94	271.94	0.54	0.39	-176.96	-3,130.00	-166.10	3,134.41	3,133.48	0.93	3,368.042	
400.00	400.00	369.80	369.80	0.77	0.56	-176.96	-3,129.85	-166.14	3,134.26	3,132.93	1.33	2,357.087	
500.00	500.00	472.18	472.18	0.99	0.75	-176.96	-3,129.71	-166.11	3,134.12	3,132.38	1.74	1,799.423	
570.10	570.10	536.05	536.05	1.15	0.86	-176.96	-3,129.61	-166.09	3,134.01	3,132.00	2.01	1,557.298	
600.00	600.00	560.87	560.87	1.22	0.91	-176.96	-3,129.63	-166.12	3,134.04	3,131.92	2.12	1,476.540	
700.00	700.00	652.98	652.98	1.44	1.06	-176.96	-3,129.95	-166.30	3,134.40	3,131.89	2.50	1,252.094	
800.00	800.00	785.81	785.80	1.67	1.29	-176.96	-3,130.07	-166.09	3,134.53	3,131.58	2.96	1,060.213	
900.00	900.00	891.72	891.71	1.89	1.48	-176.95	-3,129.18	-166.75	3,133.73	3,130.36	3.37	929.697	
1,000.00	1,000.00	990.48	990.47	2.12	1.66	-176.93	-3,128.35	-167.53	3,132.93	3,129.15	3.77	830.516	
1,100.00	1,100.00	1,088.53	1,088.51	2.34	1.84	-176.92	-3,127.57	-168.30	3,132.17	3,128.00	4.17	750.619	
1,200.00	1,200.00	1,186.14	1,186.11	2.56	2.02	-176.91	-3,126.87	-169.00	3,131.49	3,126.92	4.57	684.834	
1,300.00	1,300.00	1,283.85	1,283.82	2.79	2.20	-176.89	-3,126.23	-169.72	3,130.89	3,125.92	4.97	629.663	
1,400.00	1,400.00	1,367.83	1,367.80	3.01	2.35	-176.89	-3,125.92	-170.04	3,130.54	3,125.19	5.34	585.843	
1,409.61	1,409.61	1,375.64	1,375.61	3.04	2.36	-176.89	-3,125.91	-170.03	3,130.54	3,125.16	5.38	582.012	
1,500.00	1,500.00	1,473.82	1,473.78	3.24	2.53	-176.89	-3,125.93	-169.60	3,130.54	3,124.79	5.75	544.059	
1,600.00	1,600.00	1,581.39	1,581.35	3.46	2.72	-176.90	-3,125.49	-169.44	3,130.12	3,123.95	6.17	507.022	
1,694.67	1,694.67	1,660.71	1,660.67	3.68	2.86	-176.90	-3,125.24	-169.49	3,129.84	3,123.31	6.52	479.695	
1,700.00	1,700.00	1,664.92	1,664.89	3.69	2.86	-176.90	-3,125.24	-169.49	3,129.84	3,123.29	6.54	478.286	
1,800.00	1,800.00	1,768.58	1,768.55	3.91	3.04	-176.90	-3,125.40	-169.41	3,129.99	3,123.04	6.95	450.611	
1,868.04	1,868.04	1,834.08	1,834.04	4.07	3.15	-176.90	-3,125.31	-169.25	3,129.89	3,122.67	7.21	434.033	
1,900.00	1,900.00	1,859.68	1,859.65	4.14	3.19	-176.90	-3,125.33	-169.24	3,129.92	3,122.59	7.33	427.178	
2,000.00	2,000.00	1,962.93	1,962.90	4.36	3.37	-176.90	-3,125.67	-169.39	3,130.25	3,122.53	7.73	405.027	
2,100.00	2,100.00	2,069.63	2,069.59	4.59	3.56	-176.90	-3,125.57	-169.24	3,130.15	3,122.01	8.14	384.600	
2,200.00	2,200.00	2,175.76	2,175.72	4.81	3.74	-176.90	-3,125.37	-169.52	3,129.98	3,121.43	8.55	366.056	
2,300.00	2,300.00	2,278.02	2,277.98	5.04	3.92	-176.90	-3,125.00	-169.30	3,129.61	3,120.65	8.96	349.375	
2,400.00	2,400.00	2,378.99	2,378.95	5.26	4.11	-176.89	-3,124.59	-169.57	3,129.21	3,119.85	9.36	334.157	
2,500.00	2,500.00	2,480.03	2,479.98	5.49	4.29	-176.89	-3,124.15	-169.63	3,128.78	3,119.01	9.77	320.147	
2,581.26	2,581.26	2,547.30	2,547.26	5.67	4.41	-176.89	-3,123.95	-169.56	3,128.55	3,118.48	10.07	310.570	
2,600.00	2,600.00	2,561.72	2,561.68	5.71	4.43	-176.89	-3,123.96	-169.55	3,128.56	3,118.42	10.14	308.521	
2,700.00	2,700.00	2,672.32	2,672.28	5.94	4.62	-176.89	-3,124.20	-169.59	3,128.80	3,118.24	10.56	296.389	
2,800.00	2,800.00	2,793.31	2,793.27	6.16	4.84	-176.90	-3,123.49	-169.40	3,128.19	3,117.20	11.00	284.411	
2,900.00	2,900.00	2,902.67	2,902.62	6.39	5.04	-176.90	-3,122.39	-168.86	3,127.16	3,115.74	11.42	273.771	
3,000.00	3,000.00	3,003.88	3,003.82	6.61	5.22	-176.92	-3,121.23	-168.13	3,125.98	3,114.15	11.83	264.211	
3,100.00	3,100.00	3,118.46	3,118.39	6.84	5.43	-176.93	-3,119.59	-167.25	3,124.51	3,112.24	12.26	254.764	
3,200.00	3,200.00	3,221.63	3,221.53	7.06	5.62	-176.96	-3,117.88	-165.85	3,122.78	3,110.10	12.68	246.347	
3,300.00	3,300.00	3,324.37	3,324.24	7.28	5.80	-176.98	-3,116.09	-164.15	3,120.95	3,107.86	13.09	238.479	
3,400.00	3,400.00	3,428.53	3,428.37	7.51	5.99	-177.02	-3,114.21	-162.34	3,119.06	3,105.56	13.50	231.041	
3,500.00	3,500.00	3,542.05	3,541.84	7.73	6.20	-177.06	-3,111.80	-159.92	3,116.83	3,102.90	13.93	223.761	
3,600.00	3,600.00	3,650.52	3,650.24	7.96	6.40	-177.10	-3,109.11	-157.50	3,114.23	3,099.88	14.35	217.021	
3,700.00	3,700.00	3,750.64	3,750.29	8.18	6.58	-177.14	-3,106.49	-154.97	3,111.49	3,096.74	14.76	210.861	
3,800.00	3,800.00	3,844.86	3,844.46	8.41	6.75	-177.19	-3,104.12	-152.55	3,108.86	3,093.71	15.15	205.178	
3,900.00	3,900.00	3,945.42	3,944.96	8.63	6.94	-177.23	-3,101.77	-150.20	3,106.41	3,090.85	15.56	199.649	
4,000.00	4,000.00	4,053.84	4,053.34	8.86	7.13	-177.25	-3,098.88	-149.08	3,103.70	3,087.71	15.98	194.200	
4,100.00	4,100.00	4,149.35	4,148.80	9.08	7.31	-177.27	-3,096.26	-147.73	3,100.89	3,084.51	16.38	189.279	
4,200.00	4,200.00	4,240.33	4,239.74	9.31	7.48	-177.29	-3,094.05	-146.35	3,098.39	3,081.61	16.78	184.699	
4,300.00	4,300.00	4,331.32	4,330.71	9.53	7.65	-177.30	-3,092.01	-145.70	3,096.12	3,078.95	17.17	180.340	
4,400.00	4,400.00	4,416.05	4,415.42	9.76	7.80	-177.32	-3,090.49	-144.71	3,094.27	3,076.72	17.55	176.321	
4,500.00	4,500.00	4,500.00	4,499.35	9.98	7.96	-177.35	-3,089.47	-143.06	3,092.96	3,075.03	17.93	172.548	
4,600.00	4,600.00	4,585.84	4,585.15	10.21	8.11	-177.39	-3,088.87	-140.76	3,092.13	3,073.83	18.30	168.965	

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



TDS
Anticollision Report



Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #56H
Site Error: 0.00 usft
Reference Well: Lea Unit #56H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #56H
TVD Reference: KB @ 3680.00usft (McVay 4)
MD Reference: KB @ 3680.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Lea County Offset Wells - Lea Unit #06 - OH - OH													Offset Well Error:	0.00 usft
Survey Program: 100-ISCWSA-GYRO-3														
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		
4,700.00	4,700.00	4,680.34	4,679.61	10.43	8.28	-177.44	-3,088.51	-137.94	3,091.62	3,072.93	18.69	165.424		
4,800.00	4,800.00	4,782.45	4,781.69	10.66	8.46	-177.49	-3,088.16	-135.49	3,091.17	3,072.08	19.09	161.915		
4,900.00	4,900.00	4,879.97	4,879.20	10.88	8.64	-177.52	-3,087.75	-134.00	3,090.68	3,071.20	19.49	158.604		
4,993.12	4,993.12	4,959.90	4,959.12	11.09	8.78	-177.54	-3,087.60	-132.86	3,090.45	3,070.62	19.83	155.814		
5,000.00	5,000.00	4,965.60	4,964.82	11.11	8.79	-177.54	-3,087.60	-132.76	3,090.45	3,070.59	19.86	155.616		
5,100.00	5,100.00	5,052.03	5,051.23	11.33	8.94	-177.57	-3,087.92	-131.17	3,090.74	3,070.51	20.23	152.777		
5,200.00	5,200.00	5,135.13	5,134.32	11.56	9.08	-177.60	-3,088.55	-129.66	3,091.44	3,070.84	20.59	150.127		
5,300.00	5,300.00	5,214.94	5,214.11	11.78	9.22	-177.62	-3,089.73	-128.54	3,092.84	3,071.89	20.95	147.662		
5,400.00	5,400.00	5,317.13	5,316.28	12.00	9.38	-177.64	-3,091.48	-127.54	3,094.50	3,073.17	21.34	145.042		
5,500.00	5,500.00	5,426.04	5,425.17	12.23	9.56	-177.66	-3,093.07	-126.42	3,095.92	3,074.18	21.74	142.422		
5,600.00	5,600.00	5,529.26	5,528.38	12.45	9.74	-177.67	-3,094.47	-125.68	3,097.25	3,075.12	22.13	139.952		
5,700.00	5,700.00	5,650.61	5,649.73	12.68	9.94	-177.68	-3,095.57	-125.21	3,098.14	3,075.59	22.56	137.348		
5,800.00	5,800.00	5,767.41	5,766.53	12.90	10.13	-177.68	-3,095.80	-125.59	3,098.35	3,075.36	22.98	134.824		
5,850.42	5,850.42	5,817.31	5,816.42	13.02	10.22	-177.68	-3,095.78	-125.31	3,098.31	3,075.13	23.18	133.665		
5,900.00	5,900.00	5,857.79	5,856.91	13.13	10.29	-177.69	-3,095.85	-125.02	3,098.38	3,075.02	23.36	132.636		
6,000.00	6,000.00	5,946.64	5,945.75	13.35	10.44	-177.70	-3,096.35	-124.44	3,098.92	3,075.18	23.73	130.570		
6,100.00	6,100.00	6,041.53	6,040.64	13.58	10.60	-177.71	-3,097.05	-124.06	3,099.64	3,075.52	24.12	128.534		
6,200.00	6,200.00	6,138.02	6,137.12	13.80	10.76	-177.71	-3,097.94	-123.84	3,100.55	3,076.05	24.50	126.556		
6,300.00	6,300.00	6,248.66	6,247.76	14.03	10.95	-177.72	-3,098.87	-123.63	3,101.39	3,076.48	24.91	124.508		
6,400.00	6,400.00	6,345.81	6,344.90	14.25	11.12	-177.73	-3,099.33	-123.12	3,101.85	3,076.55	25.30	122.615		
6,500.00	6,500.00	6,441.06	6,440.15	14.48	11.28	-177.73	-3,100.24	-123.01	3,102.79	3,077.11	25.68	120.812		
6,600.00	6,600.00	6,546.03	6,545.11	14.70	11.46	-177.74	-3,100.86	-122.40	3,103.35	3,077.26	26.09	118.970		
6,700.00	6,700.00	6,636.38	6,635.46	14.93	11.62	-177.75	-3,101.70	-122.01	3,104.25	3,077.79	26.46	117.309		
6,800.00	6,800.00	6,738.06	6,737.13	15.15	11.79	-177.76	-3,102.68	-121.52	3,105.19	3,078.33	26.86	115.612		
6,900.00	6,900.00	6,836.68	6,835.74	15.38	11.96	-177.77	-3,103.64	-120.97	3,106.14	3,078.89	27.25	113.985		
7,000.00	7,000.00	6,938.53	6,937.60	15.60	12.14	-177.78	-3,104.66	-120.45	3,107.13	3,079.48	27.65	112.380		
7,100.00	7,100.00	7,038.50	7,037.55	15.83	12.31	-177.79	-3,105.52	-119.77	3,107.96	3,079.91	28.04	110.825		
7,200.00	7,200.00	7,132.72	7,131.77	16.05	12.48	-177.80	-3,106.55	-119.41	3,109.03	3,080.60	28.43	109.362		
7,300.00	7,300.00	7,238.62	7,237.66	16.28	12.66	-177.81	-3,107.61	-118.90	3,110.01	3,081.18	28.84	107.855		
7,400.00	7,400.00	7,334.65	7,333.69	16.50	12.83	-177.82	-3,108.51	-118.41	3,110.93	3,081.71	29.22	106.450		
7,500.00	7,500.00	7,426.98	7,426.01	16.72	12.99	-177.82	-3,109.65	-118.26	3,112.16	3,082.55	29.61	105.116		
7,600.00	7,600.00	7,532.55	7,531.58	16.95	13.17	-177.83	-3,110.91	-118.02	3,113.34	3,083.32	30.01	103.731		
7,700.00	7,700.00	7,638.08	7,637.10	17.17	13.35	-177.83	-3,112.02	-117.79	3,114.38	3,083.96	30.42	102.377		
7,800.00	7,800.00	7,742.24	7,741.25	17.40	13.53	-177.84	-3,112.87	-117.45	3,115.18	3,084.36	30.83	101.058		
7,900.00	7,900.00	7,836.21	7,835.21	17.62	13.69	-177.83	-3,113.68	-117.88	3,116.06	3,084.84	31.21	99.832		
8,000.00	8,000.00	7,933.09	7,932.09	17.85	13.86	-177.83	-3,114.74	-117.90	3,117.16	3,085.55	31.61	98.627		
8,100.00	8,100.00	8,040.27	8,039.27	18.07	14.05	-177.84	-3,115.77	-117.66	3,118.10	3,086.09	32.02	97.389		
8,200.00	8,200.00	8,144.90	8,143.89	18.30	14.23	-177.84	-3,116.60	-117.66	3,118.90	3,086.48	32.42	96.190		
8,300.00	8,300.00	8,264.57	8,263.56	18.52	14.43	-177.83	-3,117.17	-118.05	3,119.40	3,086.54	32.86	94.935		
8,378.79	8,378.79	8,345.80	8,344.79	18.70	14.57	-177.83	-3,117.10	-118.06	3,119.33	3,086.15	33.18	94.020		
8,400.00	8,400.00	8,364.41	8,363.40	18.75	14.60	-177.83	-3,117.11	-118.03	3,119.34	3,086.08	33.26	93.794		
8,500.00	8,500.00	8,463.00	8,461.99	18.97	14.78	-177.84	-3,117.29	-117.76	3,119.52	3,085.86	33.65	92.693		
8,600.00	8,600.00	8,569.05	8,568.03	19.20	14.96	-177.84	-3,117.32	-117.76	3,119.55	3,085.48	34.06	91.579		
8,667.90	8,667.90	8,634.91	8,633.90	19.35	15.08	-177.84	-3,117.28	-117.74	3,119.50	3,085.17	34.33	90.864		
8,700.00	8,700.00	8,663.85	8,662.84	19.42	15.13	-177.84	-3,117.29	-117.70	3,119.51	3,085.06	34.45	90.541		
8,800.00	8,800.00	8,760.18	8,759.17	19.65	15.29	-177.84	-3,117.49	-117.55	3,119.71	3,084.87	34.85	89.526		
8,900.00	8,900.00	8,857.98	8,856.96	19.87	15.46	-177.83	-3,117.71	-117.97	3,119.95	3,084.71	35.24	88.528		
9,000.00	9,000.00	8,948.21	8,947.19	20.10	15.61	-177.82	-3,118.04	-118.84	3,120.36	3,084.73	35.62	87.590		
9,100.00	9,100.00	9,036.12	9,035.10	20.32	15.76	-177.80	-3,118.72	-119.75	3,121.17	3,085.17	36.00	86.694		
9,200.00	9,200.00	9,127.97	9,126.93	20.55	15.91	-177.78	-3,119.72	-120.74	3,122.30	3,085.91	36.39	85.808		
9,227.04	9,227.04	9,153.15	9,152.11	20.61	15.96	-177.78	-3,120.03	-121.00	3,122.65	3,086.16	36.49	85.571		
9,250.00	9,249.99	9,174.53	9,173.48	20.65	15.99	-1.72	-3,120.31	-121.21	3,122.49	3,085.92	36.57	85.374		

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



TDS
Anticollision Report



Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #56H
Site Error: 0.00 usft
Reference Well: Lea Unit #56H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #56H
TVD Reference: KB @ 3680.00usft (McVay 4)
MD Reference: KB @ 3680.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User, Db
Offset TVD Reference: Offset Datum

Offset Design Lea County Offset Wells - Lea Unit #06 - 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)			
9,300.00	9,299.80	9,217.47	9,216.42	20.74	16.07	-1.73	-3,120.91	-121.80	3,119.04	3,082.30	36.73	84.912	
9,350.00	9,349.06	9,255.81	9,254.75	20.82	16.13	-1.75	-3,121.58	-121.93	3,111.40	3,074.52	36.88	84.359	
9,400.00	9,397.39	9,300.00	9,298.93	20.90	16.21	-1.79	-3,122.51	-122.28	3,099.68	3,062.63	37.04	83.676	
9,450.00	9,444.42	9,333.95	9,332.88	20.99	16.27	-1.84	-3,123.33	-122.52	3,083.89	3,046.70	37.18	82.934	
9,500.00	9,489.79	9,373.83	9,372.74	21.07	16.34	-1.92	-3,124.36	-122.72	3,064.13	3,026.79	37.33	82.073	
9,550.00	9,533.17	9,414.72	9,413.62	21.14	16.41	-2.03	-3,125.50	-122.85	3,040.52	3,003.04	37.48	81.117	
9,600.00	9,574.21	9,458.89	9,457.76	21.24	16.49	-2.17	-3,126.72	-122.97	3,013.16	2,975.52	37.64	80.062	
9,650.00	9,612.62	9,500.33	9,499.19	21.36	16.56	-2.35	-3,127.84	-123.08	2,982.23	2,944.45	37.78	78.941	
9,700.00	9,648.09	9,540.45	9,539.29	21.49	16.63	-2.58	-3,128.88	-123.13	2,947.96	2,910.05	37.91	77.754	
9,750.00	9,680.35	9,577.01	9,575.85	21.65	16.69	-2.89	-3,129.79	-123.06	2,910.62	2,872.58	38.04	76.519	
9,800.00	9,709.17	9,608.13	9,606.95	21.83	16.75	-3.31	-3,130.54	-122.92	2,870.50	2,832.35	38.15	75.251	
9,850.00	9,734.31	9,632.12	9,630.94	22.03	16.79	-3.87	-3,131.12	-122.83	2,827.94	2,789.71	38.23	73.963	
9,900.00	9,755.60	9,652.68	9,651.49	22.27	16.83	-4.68	-3,131.63	-122.77	2,783.28	2,744.97	38.31	72.651	
9,950.00	9,772.86	9,669.64	9,668.45	22.54	16.86	-5.92	-3,132.07	-122.74	2,736.86	2,698.48	38.37	71.324	
10,000.00	9,785.97	9,682.85	9,681.65	22.83	16.88	-8.04	-3,132.41	-122.73	2,689.01	2,650.59	38.42	69.988	
10,050.00	9,794.83	9,692.20	9,691.00	23.16	16.90	-12.43	-3,132.66	-122.72	2,640.09	2,601.64	38.46	68.653	
10,100.00	9,799.36	9,700.00	9,698.80	23.51	16.91	-26.30	-3,132.86	-122.73	2,590.48	2,552.00	38.48	67.319	
10,127.04	9,800.00	9,700.00	9,698.80	23.71	16.91	-54.21	-3,132.86	-122.73	2,563.50	2,525.01	38.49	66.610	
10,200.00	9,800.00	9,700.85	9,699.65	24.29	16.91	-54.55	-3,132.89	-122.73	2,490.61	2,452.12	38.49	64.702	
10,300.00	9,800.00	9,704.00	9,702.79	25.18	16.92	-55.86	-3,132.97	-122.73	2,390.72	2,352.21	38.51	62.081	
10,400.00	9,800.00	9,707.10	9,705.90	26.16	16.92	-57.18	-3,133.05	-122.73	2,290.84	2,252.31	38.53	59.461	
10,500.00	9,800.00	9,710.16	9,708.95	27.23	16.93	-58.53	-3,133.13	-122.73	2,190.96	2,152.41	38.55	56.841	
10,600.00	9,800.00	9,713.16	9,711.96	28.37	16.93	-59.90	-3,133.21	-122.73	2,091.09	2,052.52	38.57	54.221	
10,700.00	9,800.00	9,716.13	9,714.92	29.58	16.94	-61.28	-3,133.28	-122.73	1,991.22	1,952.63	38.59	51.602	
10,800.00	9,800.00	9,719.05	9,717.84	30.85	16.95	-62.68	-3,133.36	-122.73	1,891.37	1,852.76	38.61	48.983	
10,900.00	9,800.00	9,721.92	9,720.71	32.18	16.95	-64.09	-3,133.43	-122.73	1,791.53	1,752.89	38.64	46.364	
11,000.00	9,800.00	9,724.76	9,723.55	33.55	16.96	-65.52	-3,133.50	-122.73	1,691.71	1,653.04	38.67	43.747	
11,100.00	9,800.00	9,727.55	9,726.34	34.96	16.96	-66.96	-3,133.57	-122.73	1,591.90	1,553.19	38.70	41.129	
11,200.00	9,800.00	9,730.30	9,729.09	36.40	16.97	-68.40	-3,133.64	-122.73	1,492.11	1,453.37	38.74	38.512	
11,300.00	9,800.00	9,733.01	9,731.80	37.88	16.97	-69.86	-3,133.71	-122.73	1,392.35	1,353.56	38.79	35.896	
11,400.00	9,800.00	9,735.69	9,734.47	39.39	16.97	-71.32	-3,133.77	-122.73	1,292.63	1,253.78	38.84	33.279	
11,500.00	9,800.00	9,738.32	9,737.11	40.92	16.98	-72.79	-3,133.84	-122.73	1,192.94	1,154.03	38.91	30.663	
11,600.00	9,800.00	9,740.92	9,739.71	42.47	16.98	-74.26	-3,133.90	-122.73	1,093.30	1,054.32	38.98	28.046	
11,700.00	9,800.00	9,743.48	9,742.27	44.05	16.99	-75.72	-3,133.96	-122.73	993.73	954.65	39.08	25.426	
11,800.00	9,800.00	9,746.01	9,744.79	45.64	16.99	-77.19	-3,134.02	-122.73	894.25	855.04	39.21	22.805	
11,900.00	9,800.00	9,748.50	9,747.29	47.25	17.00	-78.66	-3,134.08	-122.73	794.89	755.50	39.39	20.180	
12,000.00	9,800.00	9,750.96	9,749.74	48.87	17.00	-80.11	-3,134.14	-122.73	695.71	656.06	39.65	17.548	
12,100.00	9,800.00	9,753.39	9,752.17	50.51	17.01	-81.57	-3,134.20	-122.73	596.79	556.76	40.03	14.908	
12,200.00	9,800.00	9,755.78	9,754.56	52.16	17.01	-83.01	-3,134.25	-122.73	498.29	457.63	40.66	12.255	
12,300.00	9,800.00	9,758.14	9,756.92	53.81	17.01	-84.44	-3,134.31	-122.73	400.52	358.75	41.78	9.588	
12,400.00	9,800.00	9,760.47	9,759.25	55.48	17.02	-85.86	-3,134.36	-122.73	304.19	260.20	44.00	6.914	
12,500.00	9,800.00	9,762.76	9,761.54	57.16	17.02	-87.27	-3,134.41	-122.73	211.28	162.19	49.09	4.304	
12,600.00	9,800.00	9,765.03	9,763.81	58.85	17.03	-88.66	-3,134.46	-122.72	129.35	67.19	62.16	2.081	
12,689.60	9,800.00	9,767.04	9,765.81	60.36	17.03	-89.89	-3,134.51	-122.72	93.31	15.93	77.38	1.206 Level 2, CC, ES, SF	
12,700.00	9,800.00	9,767.27	9,766.05	60.54	17.03	-90.03	-3,134.51	-122.72	93.89	16.66	77.23	1.216 Level 2	
12,800.00	9,800.00	9,769.48	9,768.25	62.24	17.03	-91.38	-3,134.56	-122.72	144.53	83.99	60.54	2.387	
12,900.00	9,800.00	9,771.66	9,770.43	63.95	17.04	-92.72	-3,134.61	-122.72	230.11	180.27	49.85	4.616	
13,000.00	9,800.00	9,773.81	9,772.59	65.66	17.04	-94.04	-3,134.66	-122.72	324.05	278.65	45.40	7.138	
13,100.00	9,800.00	9,775.94	9,774.71	67.38	17.05	-95.33	-3,134.70	-122.72	420.78	377.49	43.28	9.721	
13,200.00	9,800.00	9,778.03	9,776.81	69.10	17.05	-96.61	-3,134.75	-122.72	518.74	476.59	42.14	12.308	
13,300.00	9,800.00	9,780.11	9,778.88	70.83	17.05	-97.86	-3,134.79	-122.72	617.34	575.87	41.47	14.885	
13,400.00	9,800.00	9,782.15	9,780.92	72.56	17.06	-99.08	-3,134.84	-122.72	716.33	675.28	41.05	17.450	

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



TDS
Anticollision Report



Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #56H
Site Error: 0.00 usft
Reference Well: Lea Unit #56H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #56H
TVD Reference: KB @ 3680.00usft (McVay 4)
MD Reference: KB @ 3680.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design Lea County Offset Wells - Lea Unit #06 - 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						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	
13,500.00	9,800.00	9,784.17	9,782.94	74.30	17.06	-100.29	-3,134.88	-122.71	815.56	774.79	40.77	20.003	
13,600.00	9,800.00	9,786.17	9,784.94	76.04	17.06	-101.47	-3,134.92	-122.71	914.96	874.37	40.58	22.544	
13,700.00	9,800.00	9,788.14	9,786.91	77.78	17.07	-102.63	-3,134.96	-122.71	1,014.46	974.01	40.46	25.076	
13,800.00	9,800.00	9,790.09	9,788.86	79.52	17.07	-103.76	-3,135.01	-122.71	1,114.06	1,073.69	40.37	27.599	
13,900.00	9,800.00	9,792.01	9,790.78	81.27	17.07	-104.87	-3,135.05	-122.71	1,213.71	1,173.41	40.31	30.112	
14,000.00	9,800.00	9,793.91	9,792.68	83.03	17.08	-105.95	-3,135.08	-122.71	1,313.42	1,273.15	40.27	32.618	
14,100.00	9,800.00	9,800.00	9,798.77	84.78	17.09	-109.34	-3,135.21	-122.70	1,413.17	1,372.91	40.26	35.105	
14,200.00	9,800.00	9,800.00	9,798.77	86.54	17.09	-109.34	-3,135.21	-122.70	1,512.94	1,472.70	40.24	37.599	
14,300.00	9,800.00	9,800.00	9,798.77	88.30	17.09	-109.34	-3,135.21	-122.70	1,612.74	1,572.51	40.23	40.086	
14,400.00	9,800.00	9,801.53	9,800.30	90.06	17.09	-110.17	-3,135.24	-122.70	1,712.56	1,672.32	40.24	42.561	
14,500.00	9,800.00	9,803.69	9,802.46	91.83	17.09	-111.33	-3,135.28	-122.70	1,812.40	1,772.15	40.25	45.027	
14,600.00	9,800.00	9,805.88	9,804.64	93.59	17.10	-112.48	-3,135.33	-122.70	1,912.25	1,871.98	40.27	47.485	
14,700.00	9,800.00	9,808.08	9,806.84	95.36	17.10	-113.62	-3,135.37	-122.70	2,012.12	1,971.82	40.29	49.936	
14,800.00	9,800.00	9,810.29	9,809.06	97.13	17.11	-114.75	-3,135.42	-122.69	2,112.00	2,071.67	40.32	52.379	
14,900.00	9,800.00	9,812.53	9,811.29	98.90	17.11	-115.87	-3,135.47	-122.69	2,211.88	2,171.53	40.35	54.814	
15,000.00	9,800.00	9,814.78	9,813.55	100.68	17.11	-116.98	-3,135.51	-122.69	2,311.77	2,271.39	40.39	57.241	
15,100.00	9,800.00	9,817.05	9,815.82	102.45	17.12	-118.07	-3,135.56	-122.69	2,411.68	2,371.25	40.42	59.660	
15,200.00	9,800.00	9,819.34	9,818.11	104.23	17.12	-119.15	-3,135.61	-122.69	2,511.58	2,471.12	40.46	62.072	
15,300.00	9,800.00	9,821.65	9,820.41	106.00	17.13	-120.22	-3,135.66	-122.69	2,611.49	2,570.99	40.50	64.475	
15,400.00	9,800.00	9,823.98	9,822.74	107.78	17.13	-121.27	-3,135.70	-122.68	2,711.41	2,670.86	40.55	66.870	
15,500.00	9,800.00	9,826.33	9,825.09	109.56	17.13	-122.31	-3,135.75	-122.68	2,811.33	2,770.74	40.59	69.258	
15,600.00	9,800.00	9,828.69	9,827.46	111.34	17.14	-123.33	-3,135.80	-122.68	2,911.26	2,870.62	40.64	71.637	
15,700.00	9,800.00	9,831.08	9,829.84	113.13	17.14	-124.34	-3,135.86	-122.68	3,011.18	2,970.50	40.69	74.007	
15,800.00	9,800.00	9,833.49	9,832.25	114.91	17.15	-125.33	-3,135.91	-122.68	3,111.11	3,070.38	40.74	76.370	
15,900.00	9,800.00	9,835.91	9,834.67	116.69	17.15	-126.31	-3,135.96	-122.68	3,211.05	3,170.26	40.79	78.724	
16,000.00	9,800.00	9,838.36	9,837.12	118.48	17.16	-127.27	-3,136.01	-122.68	3,310.98	3,270.14	40.84	81.069	
16,100.00	9,800.00	9,840.83	9,839.59	120.26	17.16	-128.21	-3,136.07	-122.67	3,410.92	3,370.03	40.90	83.406	
16,200.00	9,800.00	9,843.32	9,842.08	122.05	17.16	-129.14	-3,136.12	-122.67	3,510.86	3,469.91	40.95	85.734	
16,300.00	9,800.00	9,845.83	9,844.59	123.84	17.17	-130.05	-3,136.17	-122.67	3,610.80	3,569.80	41.01	88.054	
16,400.00	9,800.00	9,848.36	9,847.12	125.63	17.17	-130.95	-3,136.23	-122.67	3,710.75	3,669.68	41.06	90.364	
16,500.00	9,800.00	9,850.92	9,849.67	127.42	17.18	-131.83	-3,136.29	-122.67	3,810.69	3,769.57	41.12	92.666	
16,600.00	9,800.00	9,853.49	9,852.25	129.21	17.18	-132.69	-3,136.34	-122.67	3,910.64	3,869.46	41.18	94.959	
16,700.00	9,800.00	9,856.09	9,854.85	131.00	17.19	-133.54	-3,136.40	-122.67	4,010.59	3,969.34	41.24	97.243	
16,800.00	9,800.00	9,858.71	9,857.47	132.79	17.19	-134.37	-3,136.46	-122.66	4,110.54	4,069.23	41.30	99.518	
16,900.00	9,800.00	9,861.36	9,860.11	134.58	17.20	-135.18	-3,136.52	-122.66	4,210.48	4,169.12	41.37	101.784	
16,992.82	9,800.00	9,863.83	9,862.59	136.25	17.20	-135.93	-3,136.57	-122.66	4,303.26	4,261.84	41.43	103.878	

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



TDS Anticollision Report



Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #56H
Site Error: 0.00 usft
Reference Well: Lea Unit #56H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #56H
TVD Reference: KB @ 3680.00usft (McVay 4)
MD Reference: KB @ 3680.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design													Offset Site Error: 0.00 usft
Lea Unit #54H - Lea Unit #54H - OH - OH													Offset Well Error: 0.00 usft
Survey Program: 100-VES-ISCWSA-GYRO-3, 9896-MWD													
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
0.00	0.00	0.00	0.00	0.00	0.00	-90.17	-0.30	-100.20	100.21				
100.00	100.00	98.71	98.71	0.09	0.08	-90.22	-0.39	-100.34	100.34	100.18	0.17	600.743	
200.00	200.00	198.27	198.26	0.32	0.26	-90.26	-0.47	-100.85	100.85	100.27	0.58	174.522	
300.00	300.00	298.52	298.51	0.54	0.44	-90.13	-0.23	-101.46	101.46	100.48	0.99	102.951	
400.00	400.00	399.21	399.20	0.77	0.61	-89.98	0.03	-101.60	101.60	100.23	1.38	73.734	
500.00	500.00	499.43	499.42	0.99	0.77	-89.94	0.11	-101.29	101.29	99.53	1.77	57.381	
556.80	556.80	555.81	555.80	1.12	0.87	-89.95	0.08	-101.17	101.17	99.18	1.99	50.865	
600.00	600.00	598.68	598.67	1.22	0.94	-90.04	-0.06	-101.24	101.24	99.08	2.16	46.870	
700.00	700.00	699.33	699.32	1.44	1.12	-90.30	-0.52	-101.25	101.25	98.69	2.56	39.539	
754.70	754.70	753.71	753.70	1.56	1.22	-90.41	-0.73	-101.16	101.17	98.39	2.78	36.413	
800.00	800.00	798.74	798.73	1.67	1.30	-90.47	-0.84	-101.22	101.23	98.27	2.96	34.213	
900.00	900.00	898.19	898.18	1.89	1.47	-90.88	-1.56	-101.75	101.76	98.40	3.36	30.283	
1,000.00	1,000.00	998.69	998.67	2.12	1.66	-91.55	-2.77	-102.29	102.33	98.57	3.76	27.201	
1,100.00	1,100.00	1,097.65	1,097.62	2.34	1.84	-92.14	-3.85	-103.07	103.15	98.99	4.16	24.775	
1,200.00	1,200.00	1,197.18	1,197.13	2.56	2.02	-92.78	-5.08	-104.58	104.72	100.15	4.57	22.924	
1,300.00	1,300.00	1,297.02	1,296.95	2.79	2.21	-93.47	-6.46	-106.37	106.58	101.61	4.97	21.429	
1,400.00	1,400.00	1,397.10	1,397.00	3.01	2.39	-94.14	-7.82	-108.17	108.47	103.09	5.38	20.161	
1,500.00	1,500.00	1,497.65	1,497.53	3.24	2.58	-94.67	-8.96	-109.69	110.07	104.28	5.79	19.018	
1,600.00	1,600.00	1,598.07	1,597.95	3.46	2.76	-95.11	-9.90	-110.76	111.21	105.01	6.20	17.951	
1,700.00	1,700.00	1,698.15	1,698.02	3.69	2.95	-95.50	-10.75	-111.60	112.12	105.52	6.60	16.983	
1,800.00	1,800.00	1,799.25	1,799.11	3.91	3.13	-95.75	-11.28	-111.95	112.52	105.51	7.00	16.068	
1,872.94	1,872.94	1,872.07	1,871.94	4.08	3.26	-95.86	-11.48	-111.89	112.48	105.19	7.29	15.428	
1,900.00	1,900.00	1,899.09	1,898.95	4.14	3.31	-95.91	-11.58	-111.88	112.48	105.08	7.40	15.206	
2,000.00	2,000.00	1,999.60	1,999.46	4.36	3.49	-96.09	-11.92	-111.66	112.30	104.51	7.79	14.413	
2,090.95	2,090.95	2,090.10	2,089.95	4.57	3.65	-96.38	-12.47	-111.42	112.11	103.96	8.15	13.757	
2,100.00	2,100.00	2,099.10	2,098.95	4.59	3.66	-96.43	-12.55	-111.41	112.11	103.93	8.18	13.698	
2,200.00	2,200.00	2,198.97	2,198.82	4.81	3.85	-96.87	-13.41	-111.41	112.21	103.63	8.58	13.072	
2,300.00	2,300.00	2,298.86	2,298.71	5.04	4.03	-97.25	-14.19	-111.52	112.42	103.44	8.98	12.513	
2,400.00	2,400.00	2,398.87	2,398.72	5.26	4.22	-97.50	-14.70	-111.72	112.68	103.29	9.39	12.002	
2,500.00	2,500.00	2,499.60	2,499.45	5.49	4.40	-97.66	-15.01	-111.60	112.61	102.82	9.79	11.504	
2,600.00	2,600.00	2,600.28	2,600.12	5.71	4.57	-97.82	-15.22	-110.86	111.90	101.72	10.18	10.993	
2,700.00	2,700.00	2,700.93	2,700.77	5.94	4.73	-97.85	-15.10	-109.56	110.61	100.04	10.57	10.464	
2,800.00	2,800.00	2,803.20	2,803.00	6.16	4.90	-97.52	-14.12	-106.93	107.93	96.97	10.96	9.847	
2,900.00	2,900.00	2,903.67	2,903.38	6.39	5.06	-96.89	-12.46	-103.12	103.96	92.61	11.35	9.158	
3,000.00	3,000.00	3,003.64	3,003.26	6.61	5.22	-96.25	-10.84	-99.04	99.72	87.97	11.75	8.489	
3,100.00	3,100.00	3,103.40	3,102.92	6.84	5.39	-95.45	-9.07	-95.02	95.53	83.39	12.14	7.868	
3,200.00	3,200.00	3,203.26	3,202.68	7.06	5.56	-95.00	-7.97	-91.02	91.45	78.91	12.54	7.293	
3,300.00	3,300.00	3,301.74	3,301.11	7.28	5.73	-95.15	-7.92	-87.86	88.24	75.30	12.94	6.819	
3,400.00	3,400.00	3,400.51	3,399.87	7.51	5.90	-95.76	-8.68	-86.09	86.54	73.20	13.34	6.487	
3,484.09	3,484.09	3,483.75	3,483.09	7.70	6.06	-96.82	-10.23	-85.50	86.11	72.43	13.67	6.297 CC	
3,500.00	3,500.00	3,499.50	3,498.83	7.73	6.08	-97.08	-10.62	-85.47	86.12	72.39	13.74	6.269 ES	
3,600.00	3,600.00	3,598.57	3,597.85	7.96	6.27	-99.16	-13.83	-85.76	86.88	72.74	14.13	6.147	
3,700.00	3,700.00	3,697.97	3,697.16	8.18	6.45	-101.80	-18.12	-86.68	88.58	74.04	14.53	6.095	
3,800.00	3,800.00	3,797.60	3,796.68	8.41	6.63	-104.42	-22.63	-88.01	90.90	75.97	14.93	6.088	
3,900.00	3,900.00	3,897.83	3,896.82	8.63	6.81	-106.48	-26.48	-89.50	93.36	78.03	15.33	6.089	
4,000.00	4,000.00	3,997.32	3,996.24	8.86	6.99	-107.99	-29.63	-91.23	95.96	80.23	15.73	6.099	
4,100.00	4,100.00	4,096.75	4,095.61	9.08	7.17	-109.01	-32.27	-93.66	99.12	82.98	16.13	6.143	
4,200.00	4,200.00	4,197.11	4,195.91	9.31	7.35	-109.47	-34.10	-96.46	102.36	85.82	16.54	6.188	
4,300.00	4,300.00	4,297.12	4,295.88	9.53	7.53	-109.34	-34.87	-99.36	105.34	88.40	16.94	6.217	
4,400.00	4,400.00	4,397.05	4,395.75	9.76	7.70	-108.82	-34.92	-102.49	108.32	90.97	17.35	6.244	
4,500.00	4,500.00	4,496.66	4,495.31	9.98	7.87	-108.24	-34.88	-105.81	111.47	93.72	17.75	6.281	
4,600.00	4,600.00	4,596.66	4,595.25	10.21	8.05	-107.84	-35.13	-109.19	114.76	96.61	18.15	6.322	

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



TDS
Anticollision Report



Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #56H
Site Error: 0.00 usft
Reference Well: Lea Unit #56H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #56H
TVD Reference: KB @ 3680.00usft (McVay 4)
MD Reference: KB @ 3680.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design Lea Unit #54H - Lea Unit #54H - OH - OH													Offset Site Error: 0.00 usft
Survey Program: 100-VES-ISCWSA-GYRO-3, 9896-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	
4,700.00	4,700.00	4,696.52	4,695.05	10.43	8.23	-107.59	-35.67	-112.48	118.07	99.51	18.56	6.363	
4,800.00	4,800.00	4,797.30	4,795.79	10.66	8.41	-107.46	-36.32	-115.46	121.08	102.11	18.97	6.384	
4,900.00	4,900.00	4,897.02	4,895.47	10.88	8.58	-107.38	-36.97	-118.11	123.81	104.44	19.37	6.392	
5,000.00	5,000.00	4,998.23	4,996.65	11.11	8.76	-107.26	-37.44	-120.48	126.19	106.40	19.78	6.379	
5,100.00	5,100.00	5,098.89	5,097.30	11.33	8.94	-107.17	-37.71	-122.07	127.77	107.58	20.19	6.328	
5,200.00	5,200.00	5,198.57	5,196.98	11.56	9.12	-107.21	-38.24	-123.41	129.22	108.62	20.60	6.274	
5,300.00	5,300.00	5,298.17	5,296.55	11.78	9.31	-107.43	-39.21	-124.90	130.93	109.93	21.00	6.234	
5,400.00	5,400.00	5,399.54	5,397.91	12.00	9.49	-107.65	-40.11	-126.06	132.29	110.88	21.41	6.178	
5,500.00	5,500.00	5,498.18	5,496.54	12.23	9.67	-107.88	-41.01	-127.15	133.62	111.80	21.82	6.125	
5,600.00	5,600.00	5,598.79	5,597.14	12.45	9.86	-108.03	-41.85	-128.59	135.24	113.02	22.23	6.085	
5,700.00	5,700.00	5,697.55	5,695.88	12.68	10.04	-108.05	-42.46	-130.28	137.06	114.43	22.63	6.057	
5,800.00	5,800.00	5,797.49	5,795.79	12.90	10.22	-108.10	-43.29	-132.42	139.36	116.32	23.04	6.049	
5,900.00	5,900.00	5,897.52	5,895.80	13.13	10.40	-108.06	-43.90	-134.63	141.64	118.19	23.45	6.041	
6,000.00	6,000.00	5,998.73	5,996.99	13.35	10.58	-107.81	-43.89	-136.59	143.48	119.62	23.86	6.014	
6,100.00	6,100.00	6,098.40	6,096.64	13.58	10.76	-107.39	-43.32	-138.34	144.99	120.73	24.26	5.976	
6,200.00	6,200.00	6,199.14	6,197.36	13.80	10.93	-106.85	-42.43	-140.07	146.37	121.70	24.67	5.934	
6,300.00	6,300.00	6,298.02	6,296.22	14.03	11.10	-106.36	-41.65	-141.85	147.86	122.80	25.07	5.899	
6,400.00	6,400.00	6,397.93	6,396.11	14.25	11.28	-105.87	-40.96	-144.03	149.77	124.30	25.47	5.880	
6,500.00	6,500.00	6,498.90	6,497.05	14.48	11.46	-105.33	-40.03	-145.99	151.39	125.51	25.88	5.850	
6,600.00	6,600.00	6,597.68	6,595.81	14.70	11.63	-105.00	-39.60	-147.82	153.07	126.79	26.28	5.825	
6,700.00	6,700.00	6,698.71	6,696.82	14.93	11.81	-104.73	-39.37	-149.72	154.83	128.14	26.69	5.801	
6,800.00	6,800.00	6,799.06	6,797.17	15.15	12.00	-104.56	-39.25	-151.09	156.12	129.02	27.10	5.761	
6,900.00	6,900.00	6,899.10	6,897.20	15.38	12.18	-104.48	-39.32	-152.27	157.27	129.77	27.51	5.718	
7,000.00	7,000.00	7,000.35	6,998.45	15.60	12.36	-104.34	-39.13	-153.10	158.02	130.10	27.92	5.661	
7,100.00	7,100.00	7,100.64	7,098.74	15.83	12.54	-104.26	-38.99	-153.40	158.28	129.95	28.32	5.588	
7,200.00	7,200.00	7,200.40	7,198.49	16.05	12.71	-104.12	-38.66	-153.73	158.52	129.79	28.72	5.518	
7,300.00	7,300.00	7,300.27	7,298.36	16.28	12.88	-103.93	-38.25	-154.20	158.88	129.75	29.13	5.455	
7,400.00	7,400.00	7,400.64	7,398.73	16.50	13.06	-103.95	-38.37	-154.47	159.16	129.63	29.53	5.390	
7,500.00	7,500.00	7,501.17	7,499.26	16.72	13.23	-103.98	-38.44	-154.45	159.16	129.23	29.93	5.318	
7,600.00	7,600.00	7,600.96	7,599.05	16.95	13.40	-103.99	-38.46	-154.34	159.06	128.74	30.32	5.246	
7,607.22	7,607.22	7,608.13	7,606.22	16.97	13.41	-104.00	-38.49	-154.33	159.06	128.71	30.35	5.241	
7,700.00	7,700.00	7,700.23	7,698.32	17.17	13.58	-104.35	-39.47	-154.29	159.26	128.54	30.72	5.185	
7,800.00	7,800.00	7,800.08	7,798.15	17.40	13.76	-104.91	-41.10	-154.36	159.74	128.62	31.12	5.133	
7,900.00	7,900.00	7,900.92	7,898.98	17.62	13.94	-105.30	-42.22	-154.34	160.01	128.49	31.52	5.076	
8,000.00	8,000.00	8,001.13	7,999.20	17.85	14.11	-105.50	-42.75	-154.13	159.95	128.03	31.92	5.011	
8,027.88	8,027.88	8,028.82	8,026.88	17.91	14.16	-105.55	-42.88	-154.07	159.93	127.90	32.03	4.993	
8,100.00	8,100.00	8,100.43	8,098.50	18.07	14.29	-105.62	-43.11	-154.13	160.05	127.73	32.32	4.952	
8,200.00	8,200.00	8,201.57	8,199.63	18.30	14.47	-105.69	-43.28	-154.04	160.00	127.29	32.72	4.891	
8,300.00	8,300.00	8,302.79	8,300.85	18.52	14.63	-105.56	-42.72	-153.37	159.22	126.12	33.10	4.810	
8,400.00	8,400.00	8,403.59	8,401.64	18.75	14.79	-105.27	-41.55	-152.21	157.80	124.31	33.49	4.712	
8,500.00	8,500.00	8,504.26	8,502.29	18.97	14.95	-105.09	-40.58	-150.48	155.89	122.01	33.88	4.602	
8,600.00	8,600.00	8,603.23	8,601.24	19.20	15.11	-105.07	-40.06	-148.81	154.12	119.86	34.26	4.498	
8,700.00	8,700.00	8,704.00	8,701.99	19.42	15.28	-105.17	-39.86	-147.04	152.38	117.73	34.65	4.397	
8,800.00	8,800.00	8,802.30	8,800.28	19.65	15.44	-105.35	-39.96	-145.61	151.00	115.96	35.04	4.309	
8,900.00	8,900.00	8,903.88	8,901.84	19.87	15.61	-106.04	-41.32	-143.76	149.61	114.18	35.43	4.222	
9,000.00	9,000.00	9,004.46	9,002.33	20.10	15.78	-107.36	-44.01	-140.75	147.51	111.68	35.83	4.117	
9,100.00	9,100.00	9,103.75	9,101.54	20.32	15.96	-108.70	-46.65	-137.80	145.50	109.28	36.23	4.016	
9,200.00	9,200.00	9,202.69	9,200.43	20.55	16.13	-109.84	-48.92	-135.57	144.13	107.51	36.62	3.935	
9,227.04	9,227.04	9,229.30	9,227.03	20.61	16.18	-110.14	-49.55	-135.10	143.91	107.17	36.73	3.918	
9,250.00	9,249.99	9,251.90	9,249.62	20.65	16.22	65.84	-50.12	-134.76	143.59	106.77	36.82	3.900	
9,300.00	9,299.80	9,301.07	9,298.76	20.74	16.30	66.91	-51.52	-134.15	141.81	104.83	36.98	3.835	
9,350.00	9,349.06	9,350.81	9,348.48	20.82	16.39	69.78	-53.02	-133.59	138.56	101.42	37.14	3.731	

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



TDS
Anticollision Report



Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #56H
Site Error: 0.00 usft
Reference Well: Lea Unit #56H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #56H
TVD Reference: KB @ 3680.00usft (McVay 4)
MD Reference: KB @ 3680.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design Lea Unit #54H - Lea Unit #54H - OH - OH														Offset Site Error: 0.00 usft
Survey Program: 100-VES-ISCWSA-GYRO-3, 9895-MWD														Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N-S (usft)	+E-W (usft)						
9,400.00	9,397.39	9,399.73	9,397.38	20.90	16.48	74.56	-54.48	-132.95	134.26	96.97	37.29	3.601		
9,450.00	9,444.42	9,447.25	9,444.87	20.99	16.56	81.21	-55.88	-132.28	130.00	92.58	37.42	3.474		
9,500.00	9,489.79	9,493.23	9,490.82	21.07	16.64	89.48	-57.22	-131.62	127.41	89.85	37.56	3.392		
9,514.17	9,502.30	9,505.88	9,503.47	21.09	16.67	92.03	-57.59	-131.44	127.24	89.64	37.60	3.384 SF		
9,550.00	9,533.17	9,537.01	9,534.59	21.14	16.72	98.66	-58.47	-131.02	128.48	90.78	37.70	3.408		
9,600.00	9,574.21	9,578.50	9,576.05	21.24	16.80	107.79	-59.62	-130.54	135.23	97.38	37.85	3.573		
9,650.00	9,612.62	9,617.44	9,614.98	21.36	16.87	115.96	-60.66	-130.17	148.85	110.84	38.01	3.916		
9,700.00	9,648.09	9,653.59	9,651.11	21.49	16.93	122.63	-61.62	-129.90	169.45	131.27	38.18	4.438		
9,750.00	9,680.35	9,686.66	9,684.17	21.65	16.99	127.59	-62.51	-129.72	196.35	158.02	38.33	5.122		
9,800.00	9,709.17	9,716.37	9,713.88	21.83	17.03	130.88	-63.31	-129.61	228.56	190.11	38.46	5.944		
9,850.00	9,734.31	9,742.47	9,739.96	22.03	17.05	132.55	-64.01	-129.54	265.13	226.58	38.55	6.878		
9,900.00	9,755.60	9,764.76	9,762.24	22.27	17.07	132.55	-64.60	-129.50	305.22	266.59	38.63	7.902		
9,950.00	9,772.86	9,783.08	9,780.56	22.54	17.09	130.66	-65.07	-129.48	348.11	309.42	38.69	8.998		
10,000.00	9,785.97	9,797.30	9,794.77	22.83	17.10	126.29	-65.44	-129.47	393.18	354.44	38.74	10.150		
10,050.00	9,794.83	9,807.32	9,804.79	23.16	17.11	118.40	-65.70	-129.47	439.87	401.10	38.77	11.346		
10,100.00	9,799.36	9,813.06	9,810.53	23.51	17.12	105.43	-65.84	-129.47	487.68	448.89	38.79	12.572		
10,127.04	9,800.00	9,814.37	9,811.84	23.71	17.12	95.88	-65.87	-129.47	513.84	475.04	38.80	13.243		
10,200.00	9,800.00	9,816.20	9,813.67	24.29	17.12	96.71	-65.92	-129.47	584.86	546.05	38.81	15.069		
10,300.00	9,800.00	9,818.70	9,816.17	25.18	17.12	97.85	-65.98	-129.47	682.87	644.04	38.83	17.587		
10,400.00	9,800.00	9,821.20	9,818.67	26.16	17.13	98.97	-66.05	-129.47	781.37	742.52	38.84	20.116		
10,500.00	9,800.00	9,823.70	9,821.16	27.23	17.13	100.08	-66.11	-129.47	880.20	841.34	38.86	22.651		
10,600.00	9,800.00	9,826.18	9,823.65	28.37	17.13	101.19	-66.17	-129.48	979.26	940.39	38.87	25.191		
10,700.00	9,800.00	9,828.66	9,826.13	29.58	17.13	102.28	-66.24	-129.48	1,078.49	1,039.60	38.89	27.732		
10,800.00	9,800.00	11,792.04	10,887.77	30.85	27.01	179.46	-1,240.93	-95.98	1,088.83	1,063.62	25.20	43.206		
10,900.00	9,800.00	11,876.50	10,888.68	32.18	28.08	179.85	-1,325.37	-94.39	1,089.83	1,063.73	26.10	41.762		
11,000.00	9,800.00	12,009.01	10,889.32	33.55	29.88	-179.60	-1,457.86	-93.00	1,090.45	1,063.23	27.22	40.060		
11,100.00	9,800.00	12,108.42	10,887.84	34.96	31.34	-179.23	-1,557.27	-92.68	1,089.03	1,060.77	28.27	38.528		
11,200.00	9,800.00	12,195.78	10,887.13	36.40	32.58	-178.87	-1,644.62	-91.96	1,088.34	1,059.04	29.30	37.146		
11,210.13	9,800.00	12,204.80	10,887.11	36.55	32.71	-178.83	-1,653.64	-91.86	1,088.34	1,058.93	29.41	37.009		
11,300.00	9,800.00	12,285.62	10,887.34	37.88	33.84	-178.50	-1,734.45	-91.04	1,088.75	1,058.37	30.38	35.834		
11,400.00	9,800.00	12,409.68	10,886.72	39.39	35.72	-177.99	-1,858.50	-89.94	1,088.49	1,056.82	31.67	34.366		
11,500.00	9,800.00	12,516.62	10,884.31	40.92	37.38	-177.53	-1,965.42	-88.66	1,086.53	1,053.61	32.92	33.004		
11,600.00	9,800.00	12,611.74	10,882.42	42.47	38.82	-177.11	-2,060.51	-87.39	1,084.91	1,050.77	34.14	31.777		
11,700.00	9,800.00	12,712.08	10,880.62	44.05	40.38	-176.74	-2,160.82	-87.23	1,083.50	1,048.08	35.42	30.593		
11,800.00	9,800.00	12,811.98	10,878.75	45.64	41.97	-176.38	-2,260.71	-87.58	1,082.02	1,045.30	36.72	29.470		
11,900.00	9,800.00	12,908.00	10,877.17	47.25	43.48	-176.09	-2,356.70	-88.78	1,080.74	1,042.73	38.01	28.433		
12,000.00	9,800.00	13,001.14	10,876.13	48.87	44.92	-175.83	-2,449.82	-90.34	1,079.99	1,040.68	39.31	27.476		
12,052.14	9,800.00	13,049.03	10,875.83	49.72	45.66	-175.69	-2,497.72	-91.06	1,079.88	1,039.89	39.99	27.004		
12,100.00	9,800.00	13,092.32	10,875.69	50.51	46.33	-175.53	-2,541.00	-90.96	1,079.99	1,039.36	40.63	26.584		
12,200.00	9,800.00	13,182.38	10,875.78	52.16	47.75	-175.06	-2,631.02	-88.27	1,080.90	1,038.89	42.01	25.728		
12,300.00	9,800.00	13,299.21	10,875.98	53.81	49.64	-174.42	-2,747.77	-84.09	1,082.11	1,038.48	43.63	24.802		
12,400.00	9,800.00	13,404.16	10,874.38	55.48	51.38	-173.87	-2,852.66	-80.96	1,081.59	1,036.39	45.20	23.928		
12,500.00	9,800.00	13,502.09	10,872.92	57.16	53.00	-173.35	-2,950.54	-78.13	1,081.19	1,034.43	46.76	23.123		
12,531.64	9,800.00	13,530.86	10,872.55	57.69	53.46	-173.21	-2,979.30	-77.35	1,081.14	1,033.90	47.24	22.885		
12,600.00	9,800.00	13,592.19	10,872.06	58.85	54.46	-172.90	-3,040.61	-75.88	1,081.37	1,033.09	48.28	22.396		
12,700.00	9,800.00	13,687.60	10,871.86	60.54	56.01	-172.46	-3,136.00	-73.95	1,082.30	1,032.43	49.87	21.703		
12,800.00	9,800.00	13,787.71	10,871.86	62.24	57.66	-172.01	-3,236.09	-72.27	1,083.46	1,031.95	51.51	21.032		
12,900.00	9,800.00	13,884.00	10,872.03	63.95	59.26	-171.59	-3,332.37	-70.92	1,084.81	1,031.66	53.15	20.409		
13,000.00	9,800.00	14,007.82	10,870.71	65.66	61.32	-171.03	-3,456.17	-68.94	1,084.99	1,029.93	55.06	19.706		
13,100.00	9,800.00	14,105.78	10,868.75	67.38	62.96	-170.59	-3,554.10	-67.50	1,084.35	1,027.55	56.79	19.093		
13,145.43	9,800.00	14,146.96	10,868.09	68.16	63.65	-170.41	-3,595.27	-66.92	1,084.26	1,026.69	57.56	18.836		
13,200.00	9,800.00	14,199.80	10,867.43	69.10	64.54	-170.17	-3,648.09	-66.22	1,084.34	1,025.81	58.52	18.528		

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



TDS
Anticollision Report



Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #56H
Site Error: 0.00 usft
Reference Well: Lea Unit #56H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #56H
TVD Reference: KB @ 3680.00usft (McVay 4)
MD Reference: KB @ 3680.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design Lea Unit #54H - Lea Unit #54H - OH - OH													Offset Site Error: 0.00 usft
Survey Program: 100-VES-ISCWSA-GYRO-3, 9896-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	
13,300.00	9,800.00	14,298.33	10,866.25	70.83	66.18	-169.76	-3,746.62	-65.23	1,084.54	1,024.23	60.31	17.984	
13,400.00	9,800.00	14,394.74	10,865.37	72.56	67.79	-169.35	-3,843.01	-64.13	1,085.09	1,022.98	62.11	17.471	
13,500.00	9,800.00	14,489.68	10,864.75	74.30	69.37	-168.95	-3,937.95	-63.12	1,085.95	1,022.03	63.92	16.989	
13,600.00	9,800.00	14,579.66	10,864.85	76.04	70.88	-168.59	-4,027.93	-62.28	1,087.59	1,021.89	65.70	16.553	
13,700.00	9,800.00	14,668.14	10,865.81	77.78	72.35	-168.23	-4,116.39	-61.25	1,090.27	1,022.77	67.50	16.152	
13,800.00	9,800.00	14,765.43	10,867.73	79.52	73.98	-167.84	-4,213.66	-59.92	1,093.91	1,024.51	69.41	15.761	
13,900.00	9,800.00	14,863.30	10,869.28	81.27	75.98	-167.48	-4,331.51	-60.64	1,096.53	1,025.10	71.44	15.350	
14,000.00	9,800.00	14,979.14	10,870.24	83.03	77.61	-167.32	-4,427.29	-63.81	1,098.31	1,025.16	73.15	15.015	
14,100.00	9,800.00	15,068.75	10,872.08	84.78	79.10	-167.18	-4,516.83	-66.79	1,101.09	1,026.29	74.80	14.720	
14,200.00	9,800.00	15,200.93	10,873.63	86.54	81.29	-166.83	-4,648.87	-68.79	1,103.64	1,026.70	76.94	14.344	
14,300.00	9,800.00	15,297.00	10,872.70	88.30	82.92	-166.54	-4,745.03	-69.87	1,104.03	1,025.18	78.85	14.001	
14,400.00	9,800.00	15,393.48	10,872.29	90.06	84.56	-166.29	-4,841.50	-71.56	1,104.82	1,024.08	80.74	13.683	
14,500.00	9,800.00	15,499.74	10,871.78	91.83	86.37	-166.03	-4,947.73	-73.81	1,105.50	1,022.79	82.71	13.366	
14,600.00	9,800.00	15,595.22	10,871.14	93.59	87.98	-165.80	-5,043.19	-75.95	1,105.99	1,021.39	84.60	13.073	
14,700.00	9,800.00	15,674.00	10,871.55	95.36	89.30	-165.58	-5,121.96	-76.94	1,107.87	1,021.47	86.39	12.824	
14,800.00	9,800.00	15,769.00	10,873.04	97.13	90.89	-165.29	-5,216.95	-77.19	1,111.05	1,022.65	88.40	12.569	
14,900.00	9,800.00	15,869.05	10,874.70	98.90	92.59	-164.97	-5,316.98	-77.28	1,114.40	1,023.90	90.49	12.315	
15,000.00	9,800.00	15,969.73	10,876.28	100.68	94.32	-164.68	-5,417.65	-77.88	1,117.57	1,024.98	92.59	12.071	
15,100.00	9,800.00	16,065.53	10,878.19	102.45	95.96	-164.42	-5,513.42	-78.70	1,121.09	1,026.48	94.61	11.849	
15,200.00	9,800.00	16,178.50	10,879.34	104.23	97.86	-164.06	-5,626.39	-78.86	1,123.88	1,026.96	96.93	11.595	
15,300.00	9,800.00	16,274.32	10,879.48	106.00	99.47	-163.65	-5,722.19	-77.10	1,126.46	1,027.22	99.24	11.351	
15,400.00	9,800.00	16,370.99	10,879.86	107.78	101.11	-163.20	-5,818.82	-74.40	1,129.60	1,027.93	101.67	11.110	
15,500.00	9,800.00	16,477.49	10,880.04	109.56	102.95	-162.72	-5,925.28	-71.75	1,132.51	1,028.25	104.27	10.862	
15,600.00	9,800.00	16,564.76	10,880.09	111.34	104.45	-162.34	-6,012.54	-69.87	1,135.35	1,028.76	106.59	10.651	
15,700.00	9,800.00	16,644.75	10,881.87	113.13	105.82	-162.02	-6,092.48	-68.06	1,140.23	1,031.45	108.77	10.483	
15,800.00	9,800.00	16,741.30	10,884.58	114.91	107.46	-161.62	-6,188.96	-65.47	1,145.90	1,034.65	111.24	10.301	
15,900.00	9,800.00	16,853.41	10,887.75	116.69	109.38	-161.16	-6,300.98	-62.24	1,151.76	1,037.74	114.02	10.102	
16,000.00	9,800.00	16,964.36	10,889.12	118.48	111.29	-160.74	-6,411.91	-60.62	1,155.62	1,038.91	116.71	9.902	
16,100.00	9,800.00	17,083.03	10,889.93	120.26	113.31	-160.30	-6,530.56	-59.04	1,159.05	1,039.52	119.52	9.697	
16,200.00	9,800.00	17,186.16	10,888.85	122.05	115.06	-159.85	-6,633.66	-56.71	1,161.19	1,038.88	122.31	9.494	
16,300.00	9,800.00	17,285.54	10,887.73	123.84	116.76	-159.41	-6,733.00	-54.48	1,163.32	1,038.24	125.08	9.301	
16,400.00	9,800.00	17,385.47	10,886.60	125.63	118.50	-158.98	-6,832.91	-52.51	1,165.41	1,037.54	127.87	9.114	
16,500.00	9,800.00	17,474.79	10,886.49	127.42	120.04	-158.66	-6,922.22	-51.68	1,168.12	1,037.73	130.39	8.959	
16,600.00	9,800.00	17,573.37	10,887.12	129.21	121.74	-158.35	-7,020.80	-51.54	1,171.29	1,038.34	132.95	8.810	
16,700.00	9,800.00	17,668.54	10,888.00	131.00	123.37	-158.06	-7,115.97	-51.33	1,174.79	1,039.32	135.47	8.672	
16,800.00	9,800.00	17,767.35	10,889.15	132.79	125.07	-157.77	-7,214.77	-51.22	1,178.51	1,040.47	138.05	8.537	
16,900.00	9,800.00	17,864.49	10,890.58	134.58	126.74	-157.50	-7,311.90	-51.34	1,182.45	1,041.87	140.58	8.411	
16,992.82	9,800.00	17,956.53	10,892.02	136.25	128.30	-157.25	-7,403.93	-51.37	1,186.24	1,043.28	142.97	8.297	

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



TDS
Anticollision Report



Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #56H
Site Error: 0.00 usft
Reference Well: Lea Unit #56H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #56H
TVD Reference: KB @ 3680.00usft (McVay 4)
MD Reference: KB @ 3680.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design Lea Unit #55H - Lea Unit #55H - Lateral #1 - Design #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.00	0.00	0.00	0.00	0.00	0.00	-90.11	-0.10	-50.10	50.10				
100.00	100.00	100.00	100.00	0.09	0.09	-90.11	-0.10	-50.10	50.10	49.92	0.18	271.828	
200.00	200.00	200.00	200.00	0.32	0.32	-90.11	-0.10	-50.10	50.10	49.47	0.63	79.042	
300.00	300.00	300.00	300.00	0.54	0.54	-90.11	-0.10	-50.10	50.10	49.02	1.08	46.245	
400.00	400.00	400.00	400.00	0.77	0.77	-90.11	-0.10	-50.10	50.10	48.57	1.53	32.683	
500.00	500.00	500.00	500.00	0.99	0.99	-90.11	-0.10	-50.10	50.10	48.12	1.98	25.272	
600.00	600.00	600.00	600.00	1.22	1.22	-90.11	-0.10	-50.10	50.10	47.67	2.43	20.601	
700.00	700.00	700.00	700.00	1.44	1.44	-90.11	-0.10	-50.10	50.10	47.22	2.88	17.387	
800.00	800.00	800.00	800.00	1.67	1.67	-90.11	-0.10	-50.10	50.10	46.77	3.33	15.040	
900.00	900.00	900.00	900.00	1.89	1.89	-90.11	-0.10	-50.10	50.10	46.32	3.78	13.252	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-90.11	-0.10	-50.10	50.10	45.87	4.23	11.844	
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	-90.11	-0.10	-50.10	50.10	45.42	4.68	10.706	
1,200.00	1,200.00	1,200.00	1,200.00	2.56	2.56	-90.11	-0.10	-50.10	50.10	44.97	5.13	9.768	
1,300.00	1,300.00	1,300.00	1,300.00	2.79	2.79	-90.11	-0.10	-50.10	50.10	44.52	5.58	8.981	
1,400.00	1,400.00	1,400.00	1,400.00	3.01	3.01	-90.11	-0.10	-50.10	50.10	44.07	6.03	8.311	
1,500.00	1,500.00	1,500.00	1,500.00	3.24	3.24	-90.11	-0.10	-50.10	50.10	43.62	6.48	7.734	
1,600.00	1,600.00	1,600.00	1,600.00	3.46	3.46	-90.11	-0.10	-50.10	50.10	43.17	6.93	7.232	
1,700.00	1,700.00	1,700.00	1,700.00	3.69	3.69	-90.11	-0.10	-50.10	50.10	42.72	7.38	6.792	
1,800.00	1,800.00	1,800.00	1,800.00	3.91	3.91	-90.11	-0.10	-50.10	50.10	42.27	7.83	6.401	
1,900.00	1,900.00	1,900.00	1,900.00	4.14	4.14	-90.11	-0.10	-50.10	50.10	41.82	8.28	6.054	
2,000.00	2,000.00	2,000.00	2,000.00	4.36	4.36	-90.11	-0.10	-50.10	50.10	41.37	8.73	5.742	
2,100.00	2,100.00	2,100.00	2,100.00	4.59	4.59	-90.11	-0.10	-50.10	50.10	40.93	9.17	5.461	
2,200.00	2,200.00	2,200.00	2,200.00	4.81	4.81	-90.11	-0.10	-50.10	50.10	40.48	9.62	5.205	
2,300.00	2,300.00	2,300.00	2,300.00	5.04	5.04	-90.11	-0.10	-50.10	50.10	40.03	10.07	4.973	
2,400.00	2,400.00	2,400.00	2,400.00	5.26	5.26	-90.11	-0.10	-50.10	50.10	39.58	10.52	4.761	
2,500.00	2,500.00	2,500.00	2,500.00	5.49	5.49	-90.11	-0.10	-50.10	50.10	39.13	10.97	4.566	
2,600.00	2,600.00	2,600.00	2,600.00	5.71	5.71	-90.11	-0.10	-50.10	50.10	38.68	11.42	4.386	
2,700.00	2,700.00	2,700.00	2,700.00	5.94	5.94	-90.11	-0.10	-50.10	50.10	38.23	11.87	4.220	
2,800.00	2,800.00	2,800.00	2,800.00	6.16	6.16	-90.11	-0.10	-50.10	50.10	37.78	12.32	4.066	
2,900.00	2,900.00	2,900.00	2,900.00	6.39	6.39	-90.11	-0.10	-50.10	50.10	37.33	12.77	3.923	
3,000.00	3,000.00	3,000.00	3,000.00	6.61	6.61	-90.11	-0.10	-50.10	50.10	36.88	13.22	3.790	
3,100.00	3,100.00	3,100.00	3,100.00	6.84	6.84	-90.11	-0.10	-50.10	50.10	36.43	13.67	3.665	
3,200.00	3,200.00	3,200.00	3,200.00	7.06	7.06	-90.11	-0.10	-50.10	50.10	35.98	14.12	3.548	
3,300.00	3,300.00	3,300.00	3,300.00	7.28	7.28	-90.11	-0.10	-50.10	50.10	35.53	14.57	3.439	
3,400.00	3,400.00	3,400.00	3,400.00	7.51	7.51	-90.11	-0.10	-50.10	50.10	35.08	15.02	3.336	
3,500.00	3,500.00	3,500.00	3,500.00	7.73	7.73	-90.11	-0.10	-50.10	50.10	34.63	15.47	3.239	
3,600.00	3,600.00	3,600.00	3,600.00	7.96	7.96	-90.11	-0.10	-50.10	50.10	34.18	15.92	3.147	
3,700.00	3,700.00	3,700.00	3,700.00	8.18	8.18	-90.11	-0.10	-50.10	50.10	33.73	16.37	3.061	
3,800.00	3,800.00	3,800.00	3,800.00	8.41	8.41	-90.11	-0.10	-50.10	50.10	33.28	16.82	2.979	
3,900.00	3,900.00	3,900.00	3,900.00	8.63	8.63	-90.11	-0.10	-50.10	50.10	32.83	17.27	2.902	
4,000.00	4,000.00	4,000.00	4,000.00	8.86	8.86	-90.11	-0.10	-50.10	50.10	32.38	17.72	2.828	
4,100.00	4,100.00	4,100.00	4,100.00	9.08	9.08	-90.11	-0.10	-50.10	50.10	31.93	18.17	2.758	
4,200.00	4,200.00	4,200.00	4,200.00	9.31	9.31	-90.11	-0.10	-50.10	50.10	31.48	18.62	2.691	
4,300.00	4,300.00	4,300.00	4,300.00	9.53	9.53	-90.11	-0.10	-50.10	50.10	31.04	19.06	2.628	
4,400.00	4,400.00	4,400.00	4,400.00	9.76	9.76	-90.11	-0.10	-50.10	50.10	30.59	19.51	2.567	
4,500.00	4,500.00	4,500.00	4,500.00	9.98	9.98	-90.11	-0.10	-50.10	50.10	30.14	19.96	2.510	
4,600.00	4,600.00	4,600.00	4,600.00	10.21	10.21	-90.11	-0.10	-50.10	50.10	29.69	20.41	2.454	
4,700.00	4,700.00	4,700.00	4,700.00	10.43	10.43	-90.11	-0.10	-50.10	50.10	29.24	20.86	2.401	
4,800.00	4,800.00	4,800.00	4,800.00	10.66	10.66	-90.11	-0.10	-50.10	50.10	28.79	21.31	2.351	
4,900.00	4,900.00	4,900.00	4,900.00	10.88	10.88	-90.11	-0.10	-50.10	50.10	28.34	21.76	2.302	
5,000.00	5,000.00	5,000.00	5,000.00	11.11	11.11	-90.11	-0.10	-50.10	50.10	27.89	22.21	2.256	
5,100.00	5,100.00	5,100.00	5,100.00	11.33	11.33	-90.11	-0.10	-50.10	50.10	27.44	22.66	2.211	

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



TDS
Anticollision Report



Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #56H
Site Error: 0.00 usft
Reference Well: Lea Unit #56H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #56H
TVD Reference: KB @ 3680.00usft (McVay 4)
MD Reference: KB @ 3680.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Lea Unit #55H - Lea Unit #55H - Lateral #1 - Design #1													Offset Well Error:	0.00 usft
Survey Program: 0-MWD														
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	
5,200.00	5,200.00	5,200.00	5,200.00	11.56	11.56	-90.11	-0.10	-50.10	50.10	26.99	23.11	2.168		
5,300.00	5,300.00	5,300.00	5,300.00	11.78	11.78	-90.11	-0.10	-50.10	50.10	26.54	23.56	2.126		
5,400.00	5,400.00	5,400.00	5,400.00	12.00	12.00	-90.11	-0.10	-50.10	50.10	26.09	24.01	2.087		
5,500.00	5,500.00	5,500.00	5,500.00	12.23	12.23	-90.11	-0.10	-50.10	50.10	25.64	24.46	2.048		
5,600.00	5,600.00	5,600.00	5,600.00	12.45	12.45	-90.11	-0.10	-50.10	50.10	25.19	24.91	2.011		
5,700.00	5,700.00	5,700.00	5,700.00	12.68	12.68	-90.11	-0.10	-50.10	50.10	24.74	25.36	1.976		
5,800.00	5,800.00	5,800.00	5,800.00	12.90	12.90	-90.11	-0.10	-50.10	50.10	24.29	25.81	1.941		
5,900.00	5,900.00	5,900.00	5,900.00	13.13	13.13	-90.11	-0.10	-50.10	50.10	23.84	26.26	1.908		
6,000.00	6,000.00	6,000.00	6,000.00	13.35	13.35	-90.11	-0.10	-50.10	50.10	23.39	26.71	1.876		
6,100.00	6,100.00	6,100.00	6,100.00	13.58	13.58	-90.11	-0.10	-50.10	50.10	22.94	27.16	1.845		
6,200.00	6,200.00	6,200.00	6,200.00	13.80	13.80	-90.11	-0.10	-50.10	50.10	22.49	27.61	1.815		
6,300.00	6,300.00	6,300.00	6,300.00	14.03	14.03	-90.11	-0.10	-50.10	50.10	22.04	28.06	1.786		
6,400.00	6,400.00	6,400.00	6,400.00	14.25	14.25	-90.11	-0.10	-50.10	50.10	21.60	28.50	1.758		
6,500.00	6,500.00	6,500.00	6,500.00	14.48	14.48	-90.11	-0.10	-50.10	50.10	21.15	28.95	1.730		
6,600.00	6,600.00	6,600.00	6,600.00	14.70	14.70	-90.11	-0.10	-50.10	50.10	20.70	29.40	1.704		
6,700.00	6,700.00	6,700.00	6,700.00	14.93	14.93	-90.11	-0.10	-50.10	50.10	20.25	29.85	1.678		
6,800.00	6,800.00	6,800.00	6,800.00	15.15	15.15	-90.11	-0.10	-50.10	50.10	19.80	30.30	1.653		
6,900.00	6,900.00	6,900.00	6,900.00	15.38	15.38	-90.11	-0.10	-50.10	50.10	19.35	30.75	1.629		
7,000.00	7,000.00	7,000.00	7,000.00	15.60	15.60	-90.11	-0.10	-50.10	50.10	18.90	31.20	1.606		
7,100.00	7,100.00	7,100.00	7,100.00	15.83	15.83	-90.11	-0.10	-50.10	50.10	18.45	31.65	1.583		
7,200.00	7,200.00	7,200.00	7,200.00	16.05	16.05	-90.11	-0.10	-50.10	50.10	18.00	32.10	1.561		
7,300.00	7,300.00	7,300.00	7,300.00	16.28	16.28	-90.11	-0.10	-50.10	50.10	17.55	32.55	1.539		
7,400.00	7,400.00	7,400.00	7,400.00	16.50	16.50	-90.11	-0.10	-50.10	50.10	17.10	33.00	1.518		
7,500.00	7,500.00	7,500.00	7,500.00	16.72	16.72	-90.11	-0.10	-50.10	50.10	16.65	33.45	1.498 Level 3		
7,600.00	7,600.00	7,600.00	7,600.00	16.95	16.95	-90.11	-0.10	-50.10	50.10	16.20	33.90	1.478 Level 3		
7,700.00	7,700.00	7,700.00	7,700.00	17.17	17.17	-90.11	-0.10	-50.10	50.10	15.75	34.35	1.459 Level 3		
7,800.00	7,800.00	7,800.00	7,800.00	17.40	17.40	-90.11	-0.10	-50.10	50.10	15.30	34.80	1.440 Level 3		
7,900.00	7,900.00	7,900.00	7,900.00	17.62	17.62	-90.11	-0.10	-50.10	50.10	14.85	35.25	1.421 Level 3		
8,000.00	8,000.00	8,000.00	8,000.00	17.85	17.85	-90.11	-0.10	-50.10	50.10	14.40	35.70	1.403 Level 3		
8,100.00	8,100.00	8,100.00	8,100.00	18.07	18.07	-90.11	-0.10	-50.10	50.10	13.95	36.15	1.386 Level 3		
8,200.00	8,200.00	8,200.00	8,200.00	18.30	18.30	-90.11	-0.10	-50.10	50.10	13.50	36.60	1.369 Level 3		
8,300.00	8,300.00	8,300.00	8,300.00	18.52	18.52	-90.11	-0.10	-50.10	50.10	13.05	37.05	1.352 Level 3		
8,400.00	8,400.00	8,400.00	8,400.00	18.75	18.75	-90.11	-0.10	-50.10	50.10	12.60	37.50	1.336 Level 3		
8,500.00	8,500.00	8,500.00	8,500.00	18.97	18.97	-90.11	-0.10	-50.10	50.10	12.16	37.94	1.320 Level 3		
8,600.00	8,600.00	8,600.00	8,600.00	19.20	19.20	-90.11	-0.10	-50.10	50.10	11.71	38.39	1.305 Level 3		
8,700.00	8,700.00	8,700.00	8,700.00	19.42	19.42	-90.11	-0.10	-50.10	50.10	11.26	38.84	1.290 Level 3		
8,800.00	8,800.00	8,800.00	8,800.00	19.65	19.65	-90.11	-0.10	-50.10	50.10	10.81	39.29	1.275 Level 3		
8,900.00	8,900.00	8,900.00	8,900.00	19.87	19.87	-90.11	-0.10	-50.10	50.10	10.36	39.74	1.261 Level 3		
9,000.00	9,000.00	9,000.00	9,000.00	20.10	20.10	-90.11	-0.10	-50.10	50.10	9.91	40.19	1.246 Level 2		
9,100.00	9,100.00	9,100.00	9,100.00	20.32	20.32	-90.11	-0.10	-50.10	50.10	9.46	40.64	1.233 Level 2		
9,200.00	9,200.00	9,200.00	9,200.00	20.55	20.55	-90.11	-0.10	-50.10	50.10	9.01	41.09	1.219 Level 2		
9,227.04	9,227.04	9,227.04	9,227.04	20.61	20.61	-90.11	-0.10	-50.10	50.10	8.89	41.21	1.216 Level 2		
9,250.00	9,249.99	9,249.99	9,249.99	20.65	20.66	86.47	-0.10	-50.10	50.07	8.76	41.31	1.212 Level 2		
9,290.84	9,290.71	9,290.71	9,290.71	20.72	20.75	90.00	-0.10	-50.10	49.97	8.51	41.47	1.205 Level 2, CC		
9,300.00	9,299.80	9,299.80	9,299.80	20.74	20.77	91.24	-0.10	-50.10	49.99	8.48	41.50	1.204 Level 2, ES, SF		
9,350.00	9,349.06	9,349.06	9,349.06	20.82	20.88	100.63	-0.10	-50.10	50.89	9.20	41.69	1.221 Level 2		
9,400.00	9,397.39	9,397.39	9,397.39	20.90	20.99	113.13	-0.10	-50.10	54.75	12.87	41.88	1.307 Level 3		
9,450.00	9,444.42	9,444.42	9,444.42	20.99	21.10	126.03	-0.10	-50.10	63.57	21.50	42.07	1.511		
9,500.00	9,489.79	9,489.79	9,489.79	21.07	21.20	136.97	-0.10	-50.10	78.28	36.02	42.26	1.852		
9,550.00	9,533.17	9,533.17	9,533.17	21.14	21.29	145.21	-0.10	-50.10	98.68	56.24	42.44	2.325		
9,600.00	9,574.21	9,574.21	9,574.21	21.24	21.39	151.06	-0.10	-50.10	124.12	81.51	42.61	2.913		
9,650.00	9,612.62	9,612.62	9,612.62	21.36	21.47	155.11	-0.10	-50.10	153.94	111.17	42.77	3.599		

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



TDS
Anticollision Report



Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #56H
Site Error: 0.00 usft
Reference Well: Lea Unit #56H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #56H
TVD Reference: KB @ 3680.00usft (McVay 4)
MD Reference: KB @ 3680.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design Lea Unit #55H - Lea Unit #55H - Lateral #1 - Design #1													Offset Site Error: 0.00 usft
Survey Program: 0-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)			
9,700.00	9,648.09	9,648.09	9,648.09	21.49	21.55	157.83	-0.10	-50.10	187.60	144.69	42.91	4.372	
9,750.00	9,680.35	9,680.35	9,680.35	21.65	21.63	159.54	-0.10	-50.10	224.63	181.58	43.05	5.218	
9,800.00	9,709.17	9,709.17	9,709.17	21.83	21.69	160.41	-0.10	-50.10	264.60	221.44	43.16	6.130	
9,850.00	9,734.31	9,734.31	9,734.31	22.03	21.75	160.47	-0.10	-50.10	307.13	263.86	43.27	7.098	
9,900.00	9,755.60	9,755.60	9,755.60	22.27	21.79	159.61	-0.10	-50.10	351.83	308.48	43.35	8.115	
9,950.00	9,772.86	9,772.86	9,772.86	22.54	21.83	157.42	-0.10	-50.10	398.32	354.90	43.42	9.173	
10,000.00	9,785.97	9,785.97	9,785.97	22.83	21.86	152.87	-0.10	-50.10	446.22	402.74	43.48	10.263	
10,050.00	9,794.83	9,794.83	9,794.83	23.16	21.88	142.88	-0.10	-50.10	495.13	451.62	43.51	11.379	
10,100.00	9,799.36	9,799.36	9,799.36	23.51	21.89	117.11	-0.10	-50.10	544.68	501.14	43.53	12.511	
10,127.04	9,800.00	9,800.00	9,800.00	23.71	21.89	90.00	-0.10	-50.10	571.60	528.06	43.54	13.128	
10,200.00	9,800.00	9,800.00	9,800.00	24.29	21.89	90.00	-0.10	-50.10	644.31	600.77	43.55	14.796	
10,300.00	9,800.00	10,997.81	10,500.00	25.18	26.51	178.20	-743.46	-73.34	700.35	679.59	20.76	33.739	
10,400.00	9,800.00	11,097.74	10,500.00	26.16	27.44	178.51	-843.34	-76.47	700.24	678.81	21.43	32.672	
10,500.00	9,800.00	11,197.66	10,500.00	27.23	28.46	178.82	-943.22	-79.59	700.15	677.97	22.18	31.560	
10,600.00	9,800.00	11,297.59	10,500.00	28.37	29.56	179.12	-1,043.10	-82.71	700.08	677.07	23.01	30.429	
10,700.00	9,800.00	11,397.52	10,500.00	29.58	30.73	179.43	-1,142.98	-85.83	700.03	676.14	23.89	29.298	
10,800.00	9,800.00	11,497.45	10,500.00	30.85	31.95	179.74	-1,242.86	-88.96	700.01	675.17	24.84	28.184	
10,885.15	9,800.00	11,582.54	10,500.00	31.98	33.04	180.00	-1,327.91	-91.62	700.00	674.32	25.68	27.253	
10,900.00	9,800.00	11,597.38	10,500.00	32.18	33.23	-179.95	-1,342.74	-92.08	700.00	674.17	25.83	27.097	
11,000.00	9,800.00	11,697.31	10,500.00	33.55	34.56	-179.65	-1,442.62	-95.20	700.01	673.14	26.88	26.046	
11,100.00	9,800.00	11,797.24	10,500.00	34.96	35.94	-179.34	-1,542.50	-98.33	700.05	672.09	27.96	25.037	
11,200.00	9,800.00	11,897.17	10,500.00	36.40	37.35	-179.03	-1,642.38	-101.45	700.10	671.01	29.09	24.071	
11,300.00	9,800.00	11,997.10	10,500.00	37.88	38.80	-178.72	-1,742.26	-104.57	700.17	669.93	30.25	23.150	
11,400.00	9,800.00	12,097.03	10,500.00	39.39	40.27	-178.42	-1,842.15	-107.69	700.27	668.83	31.44	22.274	
11,500.00	9,800.00	12,196.96	10,500.00	40.92	41.77	-178.11	-1,942.03	-110.82	700.38	667.72	32.66	21.443	
11,600.00	9,800.00	12,296.89	10,500.00	42.47	43.30	-177.80	-2,041.91	-113.94	700.52	666.60	33.92	20.655	
11,700.00	9,800.00	12,396.82	10,500.00	44.05	44.85	-177.49	-2,141.79	-117.06	700.67	665.48	35.20	19.908	
11,800.00	9,800.00	12,496.74	10,500.00	45.64	46.42	-177.19	-2,241.67	-120.19	700.85	664.34	36.50	19.200	
11,900.00	9,800.00	12,596.67	10,500.00	47.25	48.01	-176.88	-2,341.55	-123.31	701.04	663.21	37.83	18.530	
12,000.00	9,800.00	12,696.60	10,500.00	48.87	49.61	-176.57	-2,441.43	-126.43	701.26	662.07	39.19	17.895	
12,100.00	9,800.00	12,796.53	10,500.00	50.51	51.23	-176.27	-2,541.31	-129.55	701.49	660.93	40.56	17.294	
12,200.00	9,800.00	12,896.46	10,500.00	52.16	52.86	-175.96	-2,641.19	-132.68	701.75	659.78	41.96	16.723	
12,300.00	9,800.00	12,996.39	10,500.00	53.81	54.50	-175.65	-2,741.07	-135.80	702.02	658.64	43.38	16.182	
12,400.00	9,800.00	13,096.32	10,500.00	55.48	56.16	-175.35	-2,840.95	-138.92	702.32	657.49	44.83	15.668	
12,500.00	9,800.00	13,196.25	10,500.00	57.16	57.82	-175.04	-2,940.83	-142.05	702.63	656.34	46.29	15.179	
12,600.00	9,800.00	13,296.18	10,500.00	58.85	59.49	-174.74	-3,040.71	-145.17	702.97	655.19	47.77	14.715	
12,700.00	9,800.00	13,396.11	10,500.00	60.54	61.18	-174.43	-3,140.59	-148.29	703.32	654.04	49.28	14.272	
12,800.00	9,800.00	13,496.04	10,500.00	62.24	62.87	-174.13	-3,240.47	-151.41	703.70	652.89	50.80	13.851	
12,900.00	9,800.00	13,595.97	10,500.00	63.95	64.56	-173.82	-3,340.35	-154.54	704.09	651.74	52.35	13.450	
13,000.00	9,800.00	13,695.90	10,500.00	65.66	66.26	-173.52	-3,440.23	-157.66	704.51	650.59	53.92	13.067	
13,100.00	9,800.00	13,795.82	10,500.00	67.38	67.97	-173.22	-3,540.11	-160.78	704.94	649.44	55.50	12.701	
13,200.00	9,800.00	13,895.75	10,500.00	69.10	69.69	-172.91	-3,639.99	-163.91	705.40	648.29	57.11	12.352	
13,300.00	9,800.00	13,995.68	10,500.00	70.83	71.41	-172.61	-3,739.87	-167.03	705.87	647.13	58.74	12.018	
13,400.00	9,800.00	14,095.61	10,500.00	72.56	73.13	-172.31	-3,839.75	-170.15	706.36	645.98	60.38	11.698	
13,500.00	9,800.00	14,195.54	10,500.00	74.30	74.86	-172.01	-3,939.63	-173.28	706.88	644.83	62.05	11.392	
13,600.00	9,800.00	14,295.47	10,500.00	76.04	76.60	-171.71	-4,039.51	-176.40	707.41	643.67	63.74	11.098	
13,700.00	9,800.00	14,395.40	10,500.00	77.78	78.34	-171.40	-4,139.39	-179.52	707.96	642.51	65.45	10.817	
13,800.00	9,800.00	14,495.33	10,500.00	79.52	80.08	-171.10	-4,239.28	-182.64	708.54	641.35	67.18	10.546	
13,900.00	9,800.00	14,595.26	10,500.00	81.27	81.82	-170.80	-4,339.16	-185.77	709.13	640.19	68.93	10.287	
14,000.00	9,800.00	14,695.19	10,500.00	83.03	83.57	-170.50	-4,439.04	-188.89	709.74	639.03	70.71	10.038	
14,100.00	9,800.00	14,795.12	10,500.00	84.78	85.32	-170.20	-4,538.92	-192.01	710.37	637.87	72.50	9.798	
14,200.00	9,800.00	14,895.05	10,500.00	86.54	87.08	-169.91	-4,638.80	-195.14	711.02	636.70	74.32	9.567	

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



TDS
Anticollision Report



Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #56H
Site Error: 0.00 usft
Reference Well: Lea Unit #56H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #56H
TVD Reference: KB @ 3680.00usft (McVay 4)
MD Reference: KB @ 3680.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design Lea Unit #55H - Lea Unit #55H - Lateral #1 - Design #1													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)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
14,300.00	9,800.00	14,994.98	10,500.00	88.30	88.83	-169.61	-4,738.68	-198.26	711.69	635.53	76.16	9.345	
14,400.00	9,800.00	15,094.90	10,500.00	90.06	90.59	-169.31	-4,838.56	-201.38	712.38	634.36	78.02	9.131	
14,500.00	9,800.00	15,194.83	10,500.00	91.83	92.35	-169.01	-4,938.44	-204.50	713.09	633.19	79.90	8.925	
14,600.00	9,800.00	15,294.76	10,500.00	93.59	94.12	-168.72	-5,038.32	-207.63	713.81	632.01	81.80	8.726	
14,700.00	9,800.00	15,394.69	10,500.00	95.36	95.88	-168.42	-5,138.20	-210.75	714.56	630.84	83.72	8.535	
14,800.00	9,800.00	15,494.62	10,500.00	97.13	97.65	-168.13	-5,238.08	-213.87	715.32	629.65	85.67	8.350	
14,900.00	9,800.00	15,594.55	10,500.00	98.90	99.42	-167.83	-5,337.96	-217.00	716.11	628.47	87.64	8.171	
15,000.00	9,800.00	15,694.48	10,500.00	100.68	101.19	-167.54	-5,437.84	-220.12	716.91	627.28	89.63	7.999	
15,100.00	9,800.00	15,794.41	10,500.00	102.45	102.97	-167.25	-5,537.72	-223.24	717.73	626.09	91.64	7.832	
15,200.00	9,800.00	15,894.34	10,500.00	104.23	104.74	-166.95	-5,637.60	-226.36	718.57	624.90	93.68	7.671	
15,300.00	9,800.00	15,994.27	10,500.00	106.00	106.52	-166.66	-5,737.48	-229.49	719.43	623.70	95.73	7.515	
15,400.00	9,800.00	16,094.20	10,500.00	107.78	108.30	-166.37	-5,837.36	-232.61	720.31	622.50	97.81	7.364	
15,500.00	9,800.00	16,194.13	10,500.00	109.56	110.08	-166.08	-5,937.24	-235.73	721.21	621.29	99.91	7.218	
15,600.00	9,800.00	16,294.06	10,500.00	111.34	111.86	-165.79	-6,037.12	-238.86	722.12	620.08	102.04	7.077	
15,700.00	9,800.00	16,393.98	10,500.00	113.13	113.64	-165.50	-6,137.00	-241.98	723.05	618.87	104.18	6.940	
15,800.00	9,800.00	16,493.91	10,500.00	114.91	115.42	-165.21	-6,236.88	-245.10	724.01	617.65	106.35	6.808	
15,900.00	9,800.00	16,593.84	10,500.00	116.69	117.21	-164.93	-6,336.76	-248.22	724.97	616.43	108.54	6.679	
16,000.00	9,800.00	16,693.77	10,500.00	118.48	118.99	-164.64	-6,436.64	-251.35	725.96	615.21	110.76	6.555	
16,100.00	9,800.00	16,793.70	10,500.00	120.26	120.78	-164.36	-6,536.52	-254.47	726.97	613.98	112.99	6.434	
16,200.00	9,800.00	16,893.63	10,500.00	122.05	122.57	-164.07	-6,636.41	-257.59	727.99	612.74	115.25	6.317	
16,300.00	9,800.00	16,993.56	10,500.00	123.84	124.36	-163.79	-6,736.29	-260.72	729.04	611.51	117.53	6.203	
16,400.00	9,800.00	17,093.49	10,500.00	125.63	126.15	-163.50	-6,836.17	-263.84	730.10	610.27	119.83	6.093	
16,500.00	9,800.00	17,193.42	10,500.00	127.42	127.94	-163.22	-6,936.05	-266.96	731.17	609.02	122.15	5.986	
16,600.00	9,800.00	17,293.35	10,500.00	129.21	129.73	-162.94	-7,035.93	-270.09	732.27	607.77	124.50	5.882	
16,700.00	9,800.00	17,393.28	10,500.00	131.00	131.52	-162.66	-7,135.81	-273.21	733.38	606.51	126.87	5.781	
16,800.00	9,800.00	17,493.21	10,500.00	132.79	133.31	-162.38	-7,235.69	-276.33	734.51	605.26	129.26	5.683	
16,900.00	9,800.00	17,593.13	10,500.00	134.58	135.11	-162.10	-7,335.57	-279.45	735.66	603.99	131.67	5.587	
16,992.82	9,800.00	17,677.81	10,500.00	136.25	136.63	-161.86	-7,420.20	-282.10	736.79	602.97	133.82	5.506	



TDS
Anticollision Report



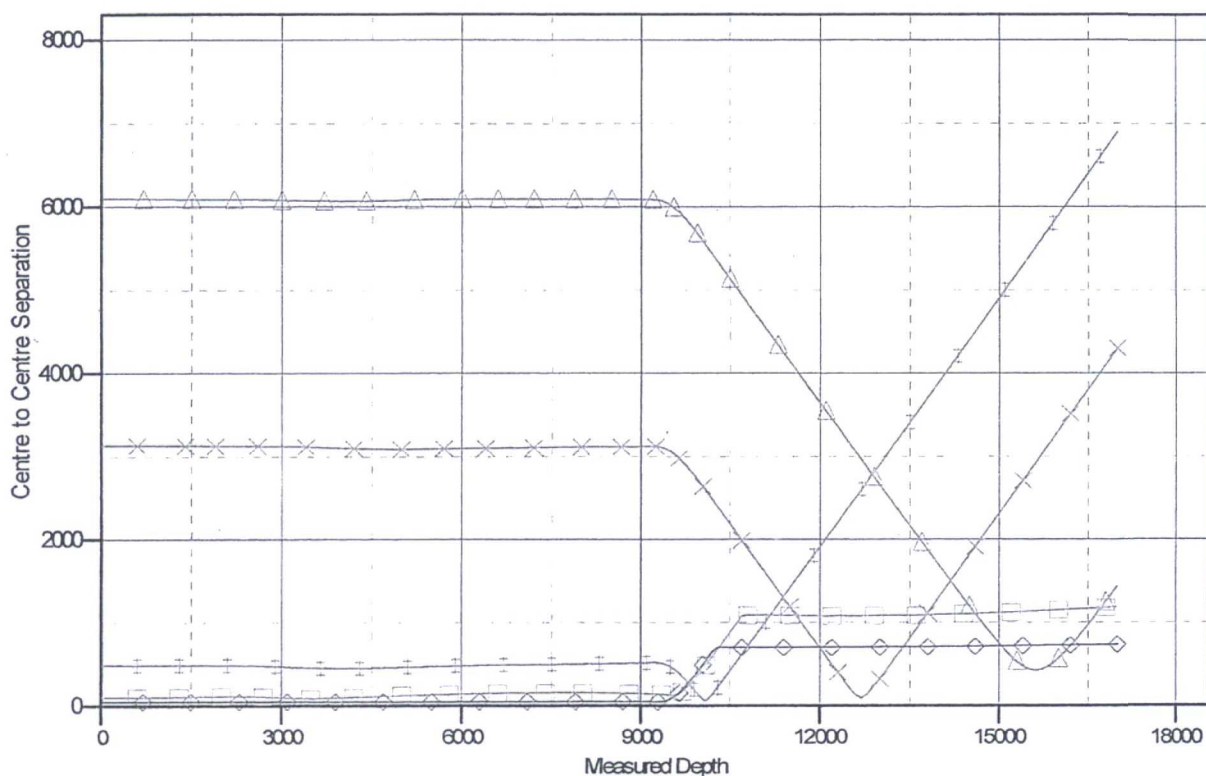
Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #56H
Site Error: 0.00 usft
Reference Well: Lea Unit #56H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #56H
TVD Reference: KB @ 3680.00usft (McVay 4)
MD Reference: KB @ 3680.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Reference Depths are relative to KB @ 3680.00usft (McVay 4)
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: Lea Unit #56H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.43°

Ladder Plot



LEGEND

Lea Federal Unit#18, OH, OH V0 Lea Federal Unit#20, OH, OH V0 Lea Unit#55H, Lateral#1, Design #1 V0
Lea Unit#06, OH, OH V0 Lea Unit#54H, OH, OH V0

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



TDS
Anticollision Report

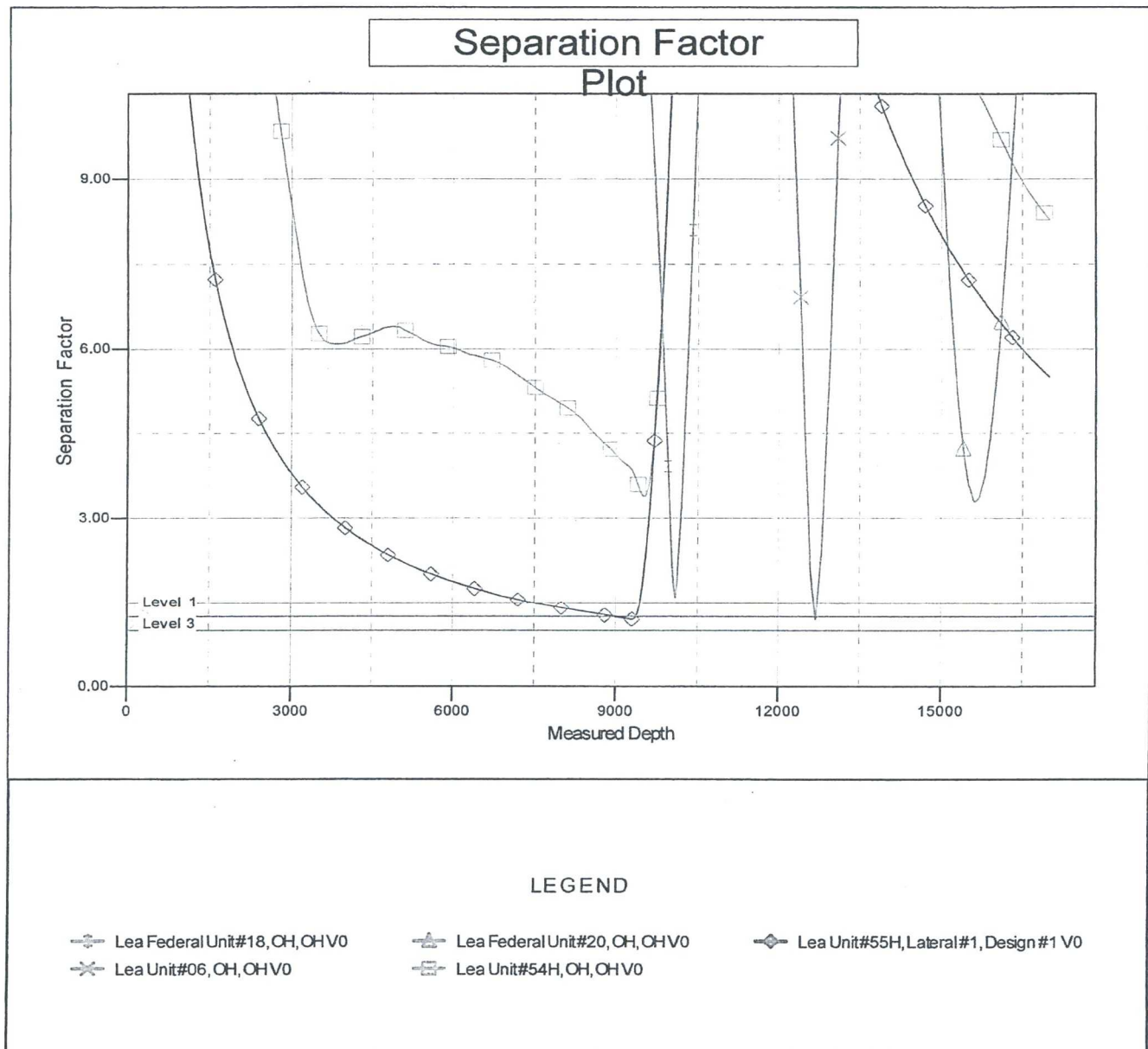


Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #56H
Site Error: 0.00 usft
Reference Well: Lea Unit #56H
Well Error: 0.00 usft
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Local Co-ordinate Reference: Well Lea Unit #56H
TVD Reference: KB @ 3680.00usft (McVay 4)
MD Reference: KB @ 3680.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Reference Depths are relative to KB @ 3680.00usft (McVay 4)
Offset Depths are relative to Offset Datum
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Coordinates are relative to: Lea Unit #56H
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CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation