



Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Site: Lea Unit #58H
Well: Lea Unit #58H
Wellbore: Lateral #1
Plan: Design #1 (Lea Unit #58H/Lateral #1)



KB @ 3679.00usft (McVay #4)
Ground Level: 3661.00

Section Details

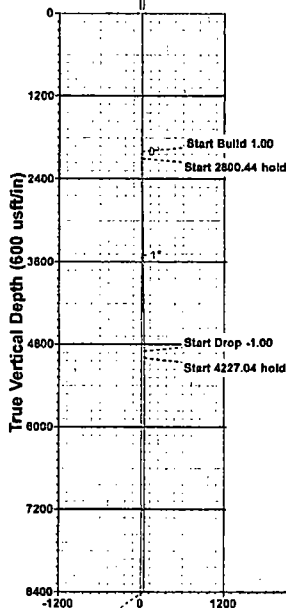
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dieg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00	
3	2100.00	1.00	210.00	2099.99	-0.76	-0.44	1.00	210.00	0.71	
4	4900.44	1.00	210.00	4900.01	-43.08	-24.87	0.00	0.00	40.39	
6	5000.44	0.00	0.00	5000.00	-43.84	-25.31	1.00	180.00	41.10	
6	9227.48	0.00	0.00	9227.04	-43.84	-25.31	0.00	0.00	41.10	
7	10127.48	90.00	162.35	9800.00	-589.82	148.41	10.00	162.35	601.68	
8	10793.38	90.00	176.67	9800.00	-1242.04	275.08	2.00	90.00	1263.27	
9	16985.33	90.00	176.67	9800.00	-7416.30	742.80	0.00	0.00	7463.41	BHL-D1 (LU#58H/L1)

WELL DETAILS: Lea Unit #58H

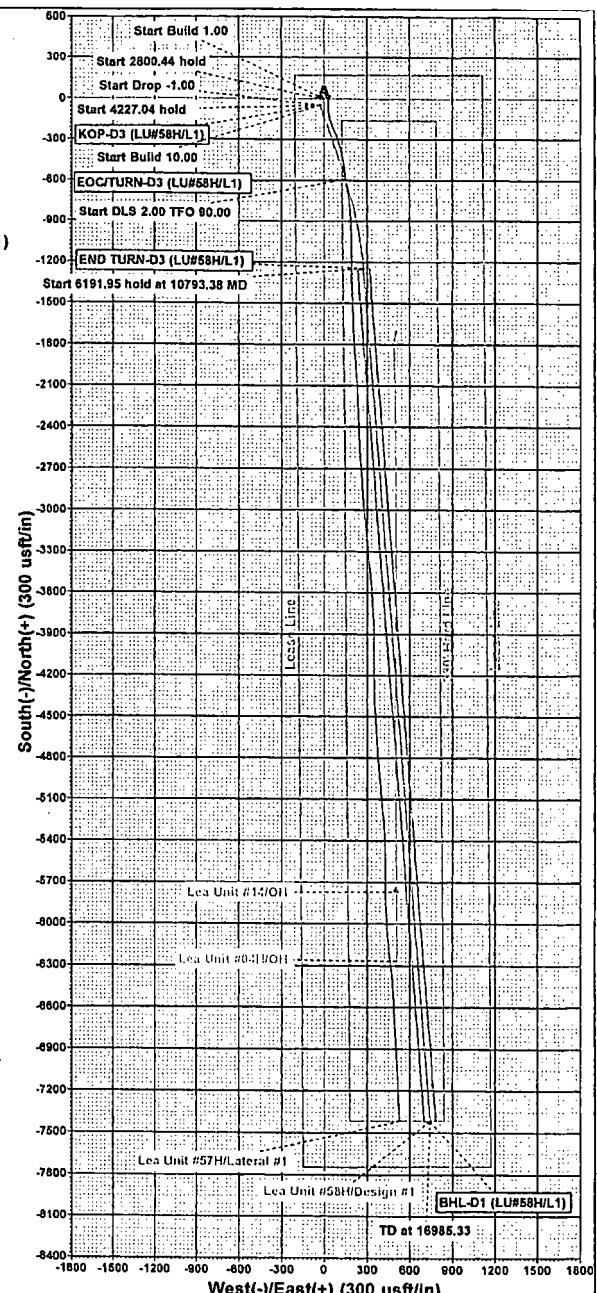
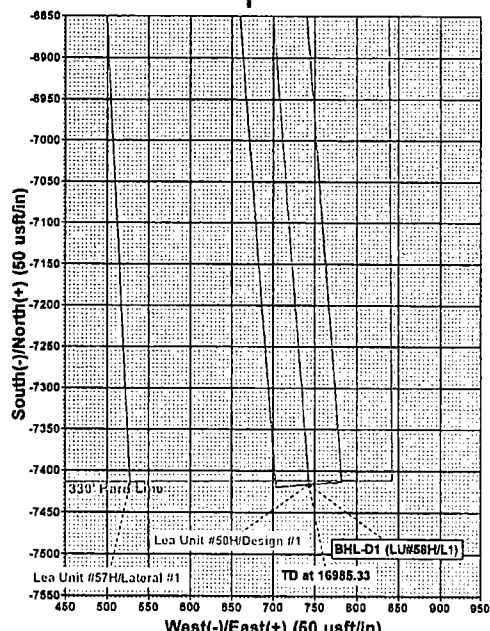
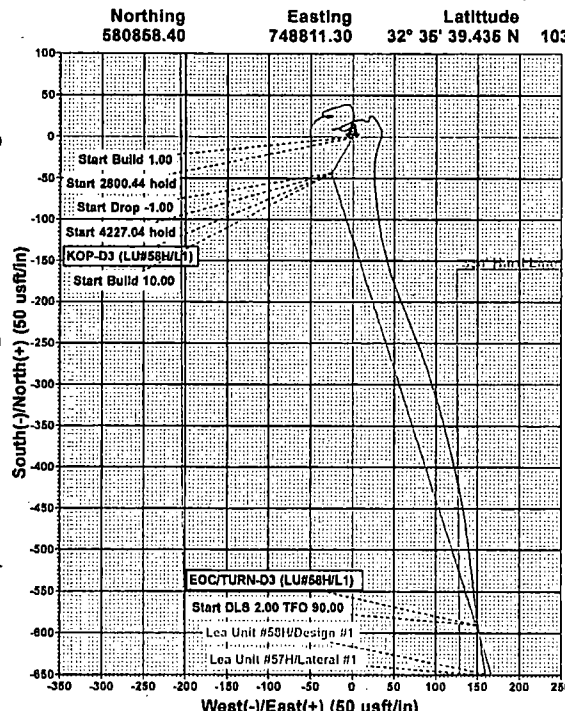
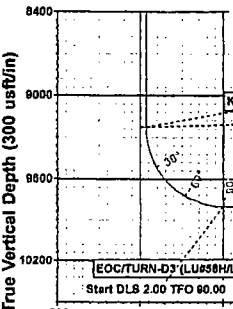
Ground Elevation:: 3661.00
RKB Elevation: KB @ 3679.00usft (McVay #4)
Rig Name: McVay #4



Azimuths to Grid North
True North: -0.43°
Magnetic North: 8.59°
Magnetic Field
Strength: 48220.5nT
Dip Angle: 60.42°
Date: 11/20/2016
Model: IGRF2015



Lea Unit #58H/Design #1



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

Vertical Section at 174.20° (300 usf/in)



Plan: Design #1 (Lea Unit #58H/Lateral #1)
dated By: Well Planner Date: 21:03, December 08 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 1886
Zone: New Mexico East 3001
System Datum: Mean Sea Level
Local North: Grid



Legacy Reserves

Lea County, NM (NAD-27 2015)

Lea Unit #58H

Lea Unit #58H

Lateral #1

Plan: Design #1

Standard Planning Report

06 December, 2016





TDS
Planning Report



Database: EDM 5000.1 Single User Db
Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Site: Lea Unit #58H
Well: Lea Unit #58H
Wellbore: Lateral #1
Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #58H
TVD Reference: KB @ 3679.00usft (McVay #4)
MD Reference: KB @ 3679.00usft (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 #58H

Site Position: Northing: 580,858.40 usft Latitude: 32° 35' 39.435 N
From: Map Easting: 748,811.30 usft Longitude: 103° 31' 31.655 W
Position Uncertainty: 0.00 usft Slot Radius: 13.20 in Grid Convergence: 0.44 °

Well: Lea Unit #58H

Well Position: +N/-S 0.00 usft Northing: 580,858.40 usft Latitude: 32° 35' 39.435 N
+E/-W 0.00 usft Easting: 748,811.30 usft Longitude: 103° 31' 31.655 W
Position Uncertainty: 0.00 usft Wellhead Elevation: 0.00 usft Ground Level: 3,661.00 usft

Wellbore: Lateral #1

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

Design: Design #1

Audit Notes:

Version: Phase: PLAN Tie On Depth: 0.00
Vertical Section: Depth From (TVD) +N/-S +E/-W Direction
(usft) (usft) (usft) (°)
0.00 0.00 0.00 174.28

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	
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	1.00	210.00	2,099.99	-0.76	-0.44	1.00	1.00	0.00	210.00	
4,900.44	1.00	210.00	4,900.01	-43.08	-24.87	0.00	0.00	0.00	0.00	
5,000.44	0.00	0.00	5,000.00	-43.84	-25.31	1.00	-1.00	0.00	180.00	
9,227.48	0.00	0.00	9,227.04	-43.84	-25.31	0.00	0.00	0.00	0.00	
10,127.48	90.00	162.35	9,800.00	-589.82	148.41	10.00	10.00	0.00	162.35	
10,793.38	90.00	175.67	9,800.00	-1,242.04	275.08	2.00	0.00	2.00	90.00	
16,985.33	90.00	175.67	9,800.00	-7,416.30	742.80	0.00	0.00	0.00	0.00	BHL-D1 (LU#58H/L1)



TDS
Planning Report



Database: EDM 5000.1 Single User Db
Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Site: Lea Unit #58H
Well: Lea Unit #58H
Wellbore: Lateral #1
Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #58H
TVD Reference: KB @ 3679.00usft (McVay #4)
MD Reference: KB @ 3679.00usft (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
Start Build 1.00									
2,100.00	1.00	210.00	2,099.99	-0.76	-0.44	0.71	1.00	1.00	0.00
Start 2800.44 hold at 2100.00 MD									
2,200.00	1.00	210.00	2,199.98	-2.27	-1.31	2.13	0.00	0.00	0.00
2,300.00	1.00	210.00	2,299.96	-3.78	-2.18	3.54	0.00	0.00	0.00
2,400.00	1.00	210.00	2,399.95	-5.29	-3.05	4.96	0.00	0.00	0.00
2,500.00	1.00	210.00	2,499.93	-6.80	-3.93	6.38	0.00	0.00	0.00
2,600.00	1.00	210.00	2,599.92	-8.31	-4.80	7.79	0.00	0.00	0.00
2,700.00	1.00	210.00	2,699.90	-9.82	-5.67	9.21	0.00	0.00	0.00
2,800.00	1.00	210.00	2,799.89	-11.34	-6.54	10.63	0.00	0.00	0.00
2,900.00	1.00	210.00	2,899.87	-12.85	-7.42	12.04	0.00	0.00	0.00
3,000.00	1.00	210.00	2,999.86	-14.36	-8.29	13.46	0.00	0.00	0.00
3,100.00	1.00	210.00	3,099.84	-15.87	-9.16	14.88	0.00	0.00	0.00
3,200.00	1.00	210.00	3,199.83	-17.38	-10.04	16.29	0.00	0.00	0.00
3,300.00	1.00	210.00	3,299.81	-18.89	-10.91	17.71	0.00	0.00	0.00
3,400.00	1.00	210.00	3,399.80	-20.40	-11.78	19.13	0.00	0.00	0.00
3,500.00	1.00	210.00	3,499.78	-21.92	-12.65	20.55	0.00	0.00	0.00
3,600.00	1.00	210.00	3,599.77	-23.43	-13.53	21.96	0.00	0.00	0.00
3,700.00	1.00	210.00	3,699.75	-24.94	-14.40	23.38	0.00	0.00	0.00
3,800.00	1.00	210.00	3,799.74	-26.45	-15.27	24.80	0.00	0.00	0.00
3,900.00	1.00	210.00	3,899.72	-27.96	-16.14	26.21	0.00	0.00	0.00
4,000.00	1.00	210.00	3,999.71	-29.47	-17.02	27.63	0.00	0.00	0.00
4,100.00	1.00	210.00	4,099.69	-30.98	-17.89	29.05	0.00	0.00	0.00
4,200.00	1.00	210.00	4,199.68	-32.50	-18.76	30.46	0.00	0.00	0.00
4,300.00	1.00	210.00	4,299.66	-34.01	-19.63	31.88	0.00	0.00	0.00
4,400.00	1.00	210.00	4,399.64	-35.52	-20.51	33.30	0.00	0.00	0.00
4,500.00	1.00	210.00	4,499.63	-37.03	-21.38	34.71	0.00	0.00	0.00
4,600.00	1.00	210.00	4,599.61	-38.54	-22.25	36.13	0.00	0.00	0.00
4,700.00	1.00	210.00	4,699.60	-40.05	-23.12	37.55	0.00	0.00	0.00
4,800.00	1.00	210.00	4,799.58	-41.56	-24.00	38.97	0.00	0.00	0.00
4,900.44	1.00	210.00	4,900.01	-43.08	-24.87	40.39	0.00	0.00	0.00
Start Drop -1.00									



TDS
Planning Report



Database: EDM 5000.1 Single User Db
Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Site: Lea Unit #58H
Well: Lea Unit #58H
Wellbore: Lateral #1
Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #58H
TVD Reference: KB @ 3679.00usft (McVay #4)
MD Reference: KB @ 3679.00usft (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)
5,000.44	0.00	0.00	5,000.00	-43.84	-25.31	41.10	1.00	-1.00	150.00
Start 4227.04 hold at 5000.44 MD									
5,100.00	0.00	0.00	5,099.56	-43.84	-25.31	41.10	0.00	0.00	0.00
5,200.00	0.00	0.00	5,199.56	-43.84	-25.31	41.10	0.00	0.00	0.00
5,300.00	0.00	0.00	5,299.56	-43.84	-25.31	41.10	0.00	0.00	0.00
5,400.00	0.00	0.00	5,399.56	-43.84	-25.31	41.10	0.00	0.00	0.00
5,500.00	0.00	0.00	5,499.56	-43.84	-25.31	41.10	0.00	0.00	0.00
5,600.00	0.00	0.00	5,599.56	-43.84	-25.31	41.10	0.00	0.00	0.00
5,700.00	0.00	0.00	5,699.56	-43.84	-25.31	41.10	0.00	0.00	0.00
5,800.00	0.00	0.00	5,799.56	-43.84	-25.31	41.10	0.00	0.00	0.00
5,900.00	0.00	0.00	5,899.56	-43.84	-25.31	41.10	0.00	0.00	0.00
6,000.00	0.00	0.00	5,999.56	-43.84	-25.31	41.10	0.00	0.00	0.00
6,100.00	0.00	0.00	6,099.56	-43.84	-25.31	41.10	0.00	0.00	0.00
6,200.00	0.00	0.00	6,199.56	-43.84	-25.31	41.10	0.00	0.00	0.00
6,300.00	0.00	0.00	6,299.56	-43.84	-25.31	41.10	0.00	0.00	0.00
6,400.00	0.00	0.00	6,399.56	-43.84	-25.31	41.10	0.00	0.00	0.00
6,500.00	0.00	0.00	6,499.56	-43.84	-25.31	41.10	0.00	0.00	0.00
6,600.00	0.00	0.00	6,599.56	-43.84	-25.31	41.10	0.00	0.00	0.00
6,700.00	0.00	0.00	6,699.56	-43.84	-25.31	41.10	0.00	0.00	0.00
6,800.00	0.00	0.00	6,799.56	-43.84	-25.31	41.10	0.00	0.00	0.00
6,900.00	0.00	0.00	6,899.56	-43.84	-25.31	41.10	0.00	0.00	0.00
7,000.00	0.00	0.00	6,999.56	-43.84	-25.31	41.10	0.00	0.00	0.00
7,100.00	0.00	0.00	7,099.56	-43.84	-25.31	41.10	0.00	0.00	0.00
7,200.00	0.00	0.00	7,199.56	-43.84	-25.31	41.10	0.00	0.00	0.00
7,300.00	0.00	0.00	7,299.56	-43.84	-25.31	41.10	0.00	0.00	0.00
7,400.00	0.00	0.00	7,399.56	-43.84	-25.31	41.10	0.00	0.00	0.00
7,500.00	0.00	0.00	7,499.56	-43.84	-25.31	41.10	0.00	0.00	0.00
7,600.00	0.00	0.00	7,599.56	-43.84	-25.31	41.10	0.00	0.00	0.00
7,700.00	0.00	0.00	7,699.56	-43.84	-25.31	41.10	0.00	0.00	0.00
7,800.00	0.00	0.00	7,799.56	-43.84	-25.31	41.10	0.00	0.00	0.00
7,900.00	0.00	0.00	7,899.56	-43.84	-25.31	41.10	0.00	0.00	0.00
8,000.00	0.00	0.00	7,999.56	-43.84	-25.31	41.10	0.00	0.00	0.00
8,100.00	0.00	0.00	8,099.56	-43.84	-25.31	41.10	0.00	0.00	0.00
8,200.00	0.00	0.00	8,199.56	-43.84	-25.31	41.10	0.00	0.00	0.00
8,300.00	0.00	0.00	8,299.56	-43.84	-25.31	41.10	0.00	0.00	0.00
8,400.00	0.00	0.00	8,399.56	-43.84	-25.31	41.10	0.00	0.00	0.00
8,500.00	0.00	0.00	8,499.56	-43.84	-25.31	41.10	0.00	0.00	0.00
8,600.00	0.00	0.00	8,599.56	-43.84	-25.31	41.10	0.00	0.00	0.00
8,700.00	0.00	0.00	8,699.56	-43.84	-25.31	41.10	0.00	0.00	0.00
8,800.00	0.00	0.00	8,799.56	-43.84	-25.31	41.10	0.00	0.00	0.00
8,900.00	0.00	0.00	8,899.56	-43.84	-25.31	41.10	0.00	0.00	0.00
9,000.00	0.00	0.00	8,999.56	-43.84	-25.31	41.10	0.00	0.00	0.00
9,100.00	0.00	0.00	9,099.56	-43.84	-25.31	41.10	0.00	0.00	0.00
9,200.00	0.00	0.00	9,199.56	-43.84	-25.31	41.10	0.00	0.00	0.00
9,227.48	0.00	0.00	9,227.04	-43.84	-25.31	41.10	0.00	0.00	0.00
Start Build 10.00									
9,250.00	2.25	162.35	9,249.56	-44.26	-25.18	41.53	10.00	10.00	0.00
9,300.00	7.25	162.35	9,299.37	-48.21	-23.92	45.58	10.00	10.00	0.00
9,350.00	12.25	162.35	9,348.63	-56.27	-21.35	53.87	10.00	10.00	0.00
9,400.00	17.25	162.35	9,396.97	-68.40	-17.49	66.32	10.00	10.00	0.00
9,450.00	22.25	162.35	9,444.01	-84.50	-12.37	82.85	10.00	10.00	0.00
9,500.00	27.25	162.35	9,489.40	-104.44	-6.03	103.32	10.00	10.00	0.00
9,550.00	32.25	162.35	9,532.80	-128.08	1.49	127.59	10.00	10.00	0.00
9,600.00	37.25	162.35	9,573.87	-155.23	10.13	155.47	10.00	10.00	0.00



TDS
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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)
9,650.00	42.25	162.35	9,612.30	-185.69	19.82	186.74	10.00	10.00	0.00
9,700.00	47.25	162.35	9,647.79	-219.22	30.49	221.17	10.00	10.00	0.00
9,750.00	52.25	162.35	9,680.09	-255.58	42.06	258.50	10.00	10.00	0.00
9,800.00	57.25	162.35	9,708.93	-294.48	54.44	298.44	10.00	10.00	0.00
9,850.00	62.25	162.35	9,734.11	-335.62	67.53	340.68	10.00	10.00	0.00
9,900.00	67.25	162.35	9,755.43	-378.70	81.24	384.91	10.00	10.00	0.00
9,950.00	72.25	162.35	9,772.73	-423.39	95.46	430.80	10.00	10.00	0.00
10,000.00	77.25	162.35	9,785.88	-469.35	110.08	477.98	10.00	10.00	0.00
10,050.00	82.25	162.35	9,794.77	-516.22	124.99	526.10	10.00	10.00	0.00
10,100.00	87.25	162.35	9,799.34	-563.65	140.08	574.80	10.00	10.00	0.00
10,127.48	90.00	162.35	9,800.00	-589.82	148.41	601.68	10.00	10.00	0.00
Start DLS 2.00 TFO 90.00									
10,200.00	90.00	163.80	9,800.00	-659.20	169.52	672.81	2.00	0.00	2.00
10,300.00	90.00	165.80	9,800.00	-755.70	195.74	771.44	2.00	0.00	2.00
10,400.00	90.00	167.80	9,800.00	-853.05	218.57	870.59	2.00	0.00	2.00
10,500.00	90.00	169.80	9,800.00	-951.14	237.99	970.13	2.00	0.00	2.00
10,600.00	90.00	171.80	9,800.00	-1,049.85	253.98	1,069.94	2.00	0.00	2.00
10,700.00	90.00	173.80	9,800.00	-1,149.06	266.51	1,169.90	2.00	0.00	2.00
10,793.38	90.00	175.67	9,800.00	-1,242.04	275.08	1,263.27	2.00	0.00	2.00
Start 6191.95 hold at 10793.38 MD									
10,800.00	90.00	175.67	9,800.00	-1,248.64	275.58	1,269.89	0.00	0.00	0.00
10,900.00	90.00	175.67	9,800.00	-1,348.35	283.14	1,369.86	0.00	0.00	0.00
11,000.00	90.00	175.67	9,800.00	-1,448.07	290.69	1,469.83	0.00	0.00	0.00
11,100.00	90.00	175.67	9,800.00	-1,547.78	298.24	1,569.80	0.00	0.00	0.00
11,200.00	90.00	175.67	9,800.00	-1,647.50	305.80	1,669.77	0.00	0.00	0.00
11,300.00	90.00	175.67	9,800.00	-1,747.21	313.35	1,769.74	0.00	0.00	0.00
11,400.00	90.00	175.67	9,800.00	-1,846.93	320.91	1,869.71	0.00	0.00	0.00
11,500.00	90.00	175.67	9,800.00	-1,946.64	328.46	1,969.68	0.00	0.00	0.00
11,600.00	90.00	175.67	9,800.00	-2,046.36	336.01	2,069.65	0.00	0.00	0.00
11,700.00	90.00	175.67	9,800.00	-2,146.07	343.57	2,169.62	0.00	0.00	0.00
11,800.00	90.00	175.67	9,800.00	-2,245.78	351.12	2,269.60	0.00	0.00	0.00
11,900.00	90.00	175.67	9,800.00	-2,345.50	358.67	2,369.57	0.00	0.00	0.00
12,000.00	90.00	175.67	9,800.00	-2,445.21	366.23	2,469.54	0.00	0.00	0.00
12,100.00	90.00	175.67	9,800.00	-2,544.93	373.78	2,569.51	0.00	0.00	0.00
12,200.00	90.00	175.67	9,800.00	-2,644.64	381.33	2,669.48	0.00	0.00	0.00
12,300.00	90.00	175.67	9,800.00	-2,744.36	388.89	2,769.45	0.00	0.00	0.00
12,400.00	90.00	175.67	9,800.00	-2,844.07	396.44	2,869.42	0.00	0.00	0.00
12,500.00	90.00	175.67	9,800.00	-2,943.78	403.99	2,969.39	0.00	0.00	0.00
12,600.00	90.00	175.67	9,800.00	-3,043.50	411.55	3,069.36	0.00	0.00	0.00
12,700.00	90.00	175.67	9,800.00	-3,143.21	419.10	3,169.33	0.00	0.00	0.00
12,800.00	90.00	175.67	9,800.00	-3,242.93	426.66	3,269.30	0.00	0.00	0.00
12,900.00	90.00	175.67	9,800.00	-3,342.64	434.21	3,369.27	0.00	0.00	0.00
13,000.00	90.00	175.67	9,800.00	-3,442.36	441.76	3,469.24	0.00	0.00	0.00
13,100.00	90.00	175.67	9,800.00	-3,542.07	449.32	3,569.21	0.00	0.00	0.00
13,200.00	90.00	175.67	9,800.00	-3,641.78	456.87	3,669.19	0.00	0.00	0.00
13,300.00	90.00	175.67	9,800.00	-3,741.50	464.42	3,769.16	0.00	0.00	0.00
13,400.00	90.00	175.67	9,800.00	-3,841.21	471.98	3,869.13	0.00	0.00	0.00
13,500.00	90.00	175.67	9,800.00	-3,940.93	479.53	3,969.10	0.00	0.00	0.00
13,600.00	90.00	175.67	9,800.00	-4,040.64	487.08	4,069.07	0.00	0.00	0.00
13,700.00	90.00	175.67	9,800.00	-4,140.36	494.64	4,169.04	0.00	0.00	0.00
13,800.00	90.00	175.67	9,800.00	-4,240.07	502.19	4,269.01	0.00	0.00	0.00
13,900.00	90.00	175.67	9,800.00	-4,339.78	509.75	4,368.98	0.00	0.00	0.00
14,000.00	90.00	175.67	9,800.00	-4,439.50	517.30	4,468.95	0.00	0.00	0.00
14,100.00	90.00	175.67	9,800.00	-4,539.21	524.85	4,568.92	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 #58H
Well: Lea Unit #58H
Wellbore: Lateral #1
Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #58H
TVD Reference: KB @ 3679.00usft (McVay #4)
MD Reference: KB @ 3679.00usft (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)
14,200.00	90.00	175.67	9,800.00	-4,638.93	532.41	4,668.89	0.00	0.00	0.00
14,300.00	90.00	175.67	9,800.00	-4,738.64	539.96	4,768.86	0.00	0.00	0.00
14,400.00	90.00	175.67	9,800.00	-4,838.36	547.51	4,868.83	0.00	0.00	0.00
14,500.00	90.00	175.67	9,800.00	-4,938.07	555.07	4,968.80	0.00	0.00	0.00
14,600.00	90.00	175.67	9,800.00	-5,037.78	562.62	5,068.77	0.00	0.00	0.00
14,700.00	90.00	175.67	9,800.00	-5,137.50	570.17	5,168.75	0.00	0.00	0.00
14,800.00	90.00	175.67	9,800.00	-5,237.21	577.73	5,268.72	0.00	0.00	0.00
14,900.00	90.00	175.67	9,800.00	-5,336.93	585.28	5,368.69	0.00	0.00	0.00
15,000.00	90.00	175.67	9,800.00	-5,436.64	592.84	5,468.66	0.00	0.00	0.00
15,100.00	90.00	175.67	9,800.00	-5,536.36	600.39	5,568.63	0.00	0.00	0.00
15,200.00	90.00	175.67	9,800.00	-5,636.07	607.94	5,668.60	0.00	0.00	0.00
15,300.00	90.00	175.67	9,800.00	-5,735.78	615.50	5,768.57	0.00	0.00	0.00
15,400.00	90.00	175.67	9,800.00	-5,835.50	623.05	5,868.54	0.00	0.00	0.00
15,500.00	90.00	175.67	9,800.00	-5,935.21	630.60	5,968.51	0.00	0.00	0.00
15,600.00	90.00	175.67	9,800.00	-6,034.93	638.16	6,068.48	0.00	0.00	0.00
15,700.00	90.00	175.67	9,800.00	-6,134.64	645.71	6,168.45	0.00	0.00	0.00
15,800.00	90.00	175.67	9,800.00	-6,234.36	653.26	6,268.42	0.00	0.00	0.00
15,900.00	90.00	175.67	9,800.00	-6,334.07	660.82	6,368.39	0.00	0.00	0.00
16,000.00	90.00	175.67	9,800.00	-6,433.78	668.37	6,468.36	0.00	0.00	0.00
16,100.00	90.00	175.67	9,800.00	-6,533.50	675.93	6,568.33	0.00	0.00	0.00
16,200.00	90.00	175.67	9,800.00	-6,633.21	683.48	6,668.31	0.00	0.00	0.00
16,300.00	90.00	175.67	9,800.00	-6,732.93	691.03	6,768.28	0.00	0.00	0.00
16,400.00	90.00	175.67	9,800.00	-6,832.64	698.59	6,868.25	0.00	0.00	0.00
16,500.00	90.00	175.67	9,800.00	-6,932.36	706.14	6,968.22	0.00	0.00	0.00
16,600.00	90.00	175.67	9,800.00	-7,032.07	713.69	7,068.19	0.00	0.00	0.00
16,700.00	90.00	175.67	9,800.00	-7,131.78	721.25	7,168.16	0.00	0.00	0.00
16,800.00	90.00	175.67	9,800.00	-7,231.50	728.80	7,268.13	0.00	0.00	0.00
16,900.00	90.00	175.67	9,800.00	-7,331.21	736.35	7,368.10	0.00	0.00	0.00
16,985.33	90.00	175.67	9,800.00	-7,416.30	742.80	7,453.41	0.00	0.00	0.00
TD at 16985.33									

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-D3 (LU#58H/L1) - plan hits target center - Point	0.00	0.00	9,227.04	-43.84	-25.31	580,814.57	748,785.99	32° 35' 39.003 N	103° 31' 31.955 W
BHL-D1 (LU#58H/L1) - plan hits target center - Rectangle (sides W80.00 H6,190.14 D30.00)	0.00	175.67	9,800.00	-7,416.30	742.80	573,442.10	749,554.10	32° 34' 25.996 N	103° 31' 23.633 W
END TURN-D3 (LU#58H) - plan hits target center - Point	0.00	0.00	9,800.00	-1,242.04	275.08	579,616.36	749,086.38	32° 35' 27.125 N	103° 31' 28.550 W
EOC/TURN-D3 (LU#58H) - plan hits target center - Point	0.00	0.00	9,800.00	-589.82	148.41	580,268.58	748,959.71	32° 35' 33.588 N	103° 31' 29.973 W



TDS
Planning Report



Database: EDM 5000.1 Single User Db
Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Site: Lea Unit #58H
Well: Lea Unit #58H
Wellbore: Lateral #1
Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #58H
TVD Reference: KB @ 3679.00usft (McVay #4)
MD Reference: KB @ 3679.00usft (McVay #4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
2,000.00	2,000.00	0.00	0.00	Start Build 1.00
2,100.00	2,099.99	-0.76	-0.44	Start 2800.44 hold at 2100.00 MD
4,900.44	4,900.01	-43.08	-24.87	Start Drop -1.00
5,000.44	5,000.00	-43.84	-25.31	Start 4227.04 hold at 5000.44 MD
9,227.48	9,227.04	-43.84	-25.31	Start Build 10.00
10,127.48	9,800.00	-589.82	148.41	Start DLS 2.00 TFO 90.00
10,793.38	9,800.00	-1,242.04	275.08	Start 6191.95 hold at 10793.38 MD
16,985.33	9,800.00	-7,416.30	742.80	TD at 16985.33



Legacy Reserves

Lea County, NM (NAD-27 2015)

Lea Unit #58H

Lea Unit #58H

Lateral #1

Design #1

HOBBS OCD
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Anticollision Report

06 December, 2016





TDS
Anticollision Report



Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #58H
Site Error: 0.00 usft
Reference Well: Lea Unit #58H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #58H
TVD Reference: KB @ 3679.00usft (McVay #4)
MD Reference: KB @ 3679.00usft (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	12/6/2016		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	16,985.33	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 Unit #04H - OH - OH	11,279.63	9,797.23	186.41	131.14	3.372	CC, ES
Lea Unit #04H - OH - OH	11,300.00	9,797.85	187.52	131.76	3.363	SF
Lea Unit #14 - OH - OH	15,328.01	7,803.00	1,970.32	1,914.64	35.387	CC, ES
Lea Unit #14 - OH - OH	15,600.00	7,803.00	1,989.00	1,931.84	34.794	SF
Lea Unit #57H						
Lea Unit #57H - Lateral #1 - Lateral #1	1,515.31	1,518.15	34.40	28.57	5.906	CC
Lea Unit #57H - Lateral #1 - Lateral #1	4,300.00	4,304.76	43.47	27.11	2.657	ES
Lea Unit #57H - Lateral #1 - Lateral #1	5,800.00	5,803.90	53.31	31.76	2.474	SF

Offset Design											Lea County Offset Wells - Lea Unit #04H - OH - OH		Offset Site Error:	0.00 usft
Survey Program: 100-ISCWSA-GYRO-3, 10698-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	
0.00	0.00	0.00	0.00	0.00	0.00	165.48	-1,808.30	468.50	1,868.01					
100.00	100.00	110.41	110.40	0.09	0.12	165.48	-1,807.83	468.30	1,867.57	1,867.37	0.20	9,576.506		
200.00	200.00	209.81	209.80	0.32	0.29	165.48	-1,807.10	467.93	1,866.76	1,866.16	0.60	3,103.033		
300.00	300.00	310.41	310.41	0.54	0.48	165.49	-1,806.34	467.64	1,865.95	1,864.94	1.01	1,839.080		
400.00	400.00	411.81	411.79	0.77	0.67	165.48	-1,805.50	467.44	1,865.10	1,863.67	1.43	1,304.385		
500.00	500.00	515.88	515.86	0.99	0.86	165.48	-1,804.45	467.25	1,864.08	1,862.23	1.85	1,007.392		
600.00	600.00	616.28	616.25	1.22	1.05	165.47	-1,803.27	467.22	1,862.94	1,860.68	2.26	823.269		
700.00	700.00	715.65	715.61	1.44	1.23	165.46	-1,802.06	467.49	1,861.82	1,859.15	2.67	696.882		
800.00	800.00	816.44	816.40	1.67	1.42	165.44	-1,800.78	467.85	1,860.69	1,857.61	3.08	603.687		
900.00	900.00	915.99	915.94	1.89	1.60	165.41	-1,799.49	468.34	1,859.55	1,856.06	3.49	532.888		
1,000.00	1,000.00	1,015.49	1,015.43	2.12	1.79	165.38	-1,798.18	468.91	1,858.42	1,854.52	3.90	477.031		
1,100.00	1,100.00	1,109.59	1,109.52	2.34	1.96	165.36	-1,797.13	469.35	1,857.47	1,853.17	4.29	432.695		
1,200.00	1,200.00	1,200.00	1,199.93	2.56	2.13	165.35	-1,796.58	469.66	1,856.97	1,852.29	4.68	396.772		
1,300.00	1,300.00	1,298.12	1,298.05	2.79	2.31	165.34	-1,796.29	470.03	1,856.78	1,851.70	5.08	365.801		
1,400.00	1,400.00	1,397.97	1,397.90	3.01	2.48	165.32	-1,796.00	470.54	1,856.62	1,851.14	5.47	339.295		
1,500.00	1,500.00	1,497.06	1,496.99	3.24	2.66	165.30	-1,795.75	470.95	1,856.48	1,850.62	5.87	316.398		
1,600.00	1,600.00	1,600.00	1,599.93	3.46	2.85	165.29	-1,795.48	471.24	1,856.29	1,850.02	6.27	295.886		
1,700.00	1,700.00	1,697.19	1,697.12	3.69	3.03	165.28	-1,795.19	471.57	1,856.10	1,849.43	6.67	278.309		
1,800.00	1,800.00	1,798.60	1,798.52	3.91	3.22	165.26	-1,794.88	472.16	1,855.95	1,848.88	7.07	262.565		

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 #58H
Site Error: 0.00 usft
Reference Well: Lea Unit #58H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #58H
TVD Reference: KB @ 3679.00usft (McVay #4)
MD Reference: KB @ 3679.00usft (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 #04H - OH - OH													Offset Site Error: 0.00 usft
Survey Program: 100-HSCWSA-GYRO-3, 10898-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	
1,900.00	1,900.00	1,900.00	1,899.92	4.14	3.40	165.23	-1,794.41	473.01	1,855.72	1,848.25	7.47	248.478	
2,000.00	2,000.00	1,996.89	1,996.80	4.36	3.58	165.20	-1,793.98	473.95	1,855.53	1,847.67	7.86	236.089	
2,100.00	2,099.99	2,099.25	2,099.15	4.56	3.76	-44.86	-1,793.54	474.98	1,854.76	1,846.52	8.23	225.291	
2,200.00	2,199.98	2,194.69	2,194.59	4.74	3.94	-44.92	-1,793.20	475.89	1,853.42	1,844.85	8.57	216.269	
2,300.00	2,299.95	2,295.40	2,295.30	4.91	4.12	-44.99	-1,792.95	476.86	1,852.19	1,843.27	8.92	207.661	
2,400.00	2,399.95	2,400.00	2,399.89	5.10	4.31	-45.06	-1,792.53	477.78	1,850.80	1,841.52	9.28	199.393	
2,500.00	2,499.93	2,497.16	2,497.04	5.28	4.49	-45.13	-1,792.11	478.56	1,849.36	1,839.72	9.64	191.910	
2,600.00	2,599.92	2,600.00	2,599.88	5.47	4.68	-45.19	-1,791.67	479.30	1,847.90	1,837.90	10.00	184.700	
2,700.00	2,699.90	2,697.85	2,697.73	5.66	4.87	-45.25	-1,791.23	479.97	1,846.42	1,836.05	10.37	178.093	
2,800.00	2,799.89	2,803.20	2,803.07	5.86	5.06	-45.33	-1,790.64	480.95	1,844.89	1,834.15	10.75	171.694	
2,900.00	2,899.87	2,905.44	2,905.30	6.05	5.25	-45.41	-1,789.78	482.14	1,843.17	1,832.05	11.12	165.739	
3,000.00	2,999.86	3,009.21	3,009.06	6.25	5.45	-45.51	-1,788.64	483.63	1,841.27	1,829.77	11.50	160.089	
3,100.00	3,099.84	3,110.37	3,110.20	6.45	5.64	-45.60	-1,787.36	485.19	1,839.24	1,827.36	11.88	154.820	
3,200.00	3,199.83	3,211.76	3,211.57	6.65	5.83	-45.70	-1,786.01	486.79	1,837.17	1,824.91	12.26	149.844	
3,300.00	3,299.81	3,321.56	3,321.34	6.86	6.03	-45.81	-1,784.29	488.35	1,834.82	1,822.16	12.66	144.947	
3,400.00	3,399.80	3,437.20	3,436.93	7.06	6.25	-45.92	-1,781.51	489.86	1,831.64	1,818.57	13.07	140.143	
3,500.00	3,499.78	3,541.78	3,541.46	7.27	6.45	-46.03	-1,778.44	491.31	1,827.98	1,814.52	13.46	135.765	
3,600.00	3,599.77	3,645.28	3,644.90	7.48	6.64	-46.14	-1,775.20	492.68	1,824.13	1,810.28	13.86	131.626	
3,700.00	3,699.75	3,752.89	3,752.44	7.69	6.84	-46.25	-1,771.64	493.69	1,820.01	1,805.75	14.26	127.620	
3,800.00	3,799.74	3,864.11	3,863.58	7.90	7.05	-46.35	-1,767.41	494.37	1,815.33	1,800.66	14.67	123.732	
3,900.00	3,899.72	3,968.28	3,967.67	8.11	7.24	-46.43	-1,763.07	494.47	1,810.15	1,795.08	15.07	120.101	
4,000.00	3,999.71	4,066.54	4,065.83	8.32	7.42	-46.51	-1,758.96	494.50	1,804.94	1,789.48	15.46	116.717	
4,100.00	4,099.69	4,163.78	4,163.00	8.53	7.60	-46.59	-1,755.02	494.55	1,799.87	1,784.02	15.86	113.515	
4,200.00	4,199.68	4,257.86	4,257.01	8.75	7.77	-46.66	-1,751.37	494.71	1,795.01	1,778.77	16.24	110.509	
4,300.00	4,299.66	4,350.71	4,349.80	8.96	7.94	-46.74	-1,746.08	495.11	1,790.55	1,773.92	16.63	107.678	
4,400.00	4,399.64	4,449.41	4,448.44	9.18	8.13	-46.83	-1,744.84	495.73	1,786.38	1,769.36	17.02	104.934	
4,500.00	4,499.63	4,554.65	4,553.61	9.39	8.32	-46.94	-1,741.10	496.63	1,782.04	1,764.61	17.43	102.243	
4,600.00	4,599.61	4,656.54	4,655.42	9.61	8.51	-47.05	-1,737.13	497.73	1,777.44	1,759.61	17.83	99.689	
4,700.00	4,699.60	4,755.21	4,754.01	9.83	8.70	-47.16	-1,733.28	498.87	1,772.86	1,754.63	18.23	97.273	
4,800.00	4,799.58	4,850.89	4,849.61	10.04	8.88	-47.27	-1,729.65	500.04	1,768.41	1,749.79	18.62	94.989	
4,900.44	4,900.01	4,949.59	4,948.24	10.26	9.06	-47.39	-1,726.14	501.39	1,764.22	1,745.20	19.01	92.784	
5,000.44	5,000.00	5,052.19	5,050.75	10.48	9.26	162.53	-1,722.30	502.97	1,760.52	1,741.11	19.41	90.686	
5,100.00	5,099.56	5,151.59	5,150.07	10.68	9.44	162.44	-1,718.49	504.54	1,757.35	1,737.55	19.80	88.754	
5,200.00	5,199.56	5,246.50	5,244.91	10.89	9.62	162.37	-1,715.04	505.80	1,754.28	1,734.11	20.18	86.937	
5,300.00	5,299.56	5,340.47	5,338.82	11.09	9.80	162.31	-1,712.09	506.82	1,751.62	1,731.07	20.56	85.210	
5,400.00	5,399.56	5,436.08	5,434.39	11.29	9.98	162.25	-1,709.37	507.69	1,749.20	1,728.26	20.94	83.542	
5,500.00	5,499.56	5,529.81	5,528.09	11.50	10.15	162.21	-1,707.10	508.39	1,747.11	1,725.79	21.32	81.958	
5,600.00	5,599.56	5,624.92	5,623.18	11.71	10.33	162.17	-1,705.14	508.94	1,745.33	1,723.63	21.70	80.433	
5,700.00	5,699.56	5,721.31	5,719.56	11.91	10.51	162.14	-1,703.46	509.41	1,743.82	1,721.73	22.08	78.962	
5,800.00	5,799.56	5,820.76	5,819.00	12.12	10.70	162.12	-1,701.88	509.70	1,742.39	1,719.92	22.46	77.524	
5,900.00	5,899.56	5,918.73	5,916.95	12.33	10.88	162.09	-1,700.39	510.00	1,741.04	1,718.17	22.87	76.144	
6,000.00	5,999.56	6,015.51	6,013.72	12.54	11.06	162.07	-1,699.13	510.21	1,739.86	1,716.61	23.25	74.822	
6,100.00	6,099.56	6,117.01	6,115.21	12.75	11.25	162.06	-1,697.91	510.23	1,738.73	1,715.07	23.65	73.516	
6,200.00	6,199.56	6,218.68	6,216.87	12.96	11.44	162.05	-1,696.60	510.08	1,737.46	1,713.41	24.05	72.242	
6,300.00	6,299.56	6,314.90	6,313.08	13.17	11.61	162.05	-1,695.47	509.89	1,736.28	1,711.84	24.44	71.040	
6,400.00	6,399.56	6,410.73	6,408.91	13.38	11.79	162.04	-1,694.59	509.69	1,735.34	1,710.51	24.83	69.885	
6,500.00	6,499.56	6,509.26	6,507.44	13.59	11.96	162.05	-1,693.88	509.38	1,734.56	1,709.33	25.23	68.758	
6,600.00	6,599.56	6,607.68	6,605.06	13.80	12.14	162.05	-1,693.26	509.05	1,733.85	1,708.23	25.62	67.668	
6,700.00	6,699.56	6,705.66	6,703.84	14.02	12.31	162.06	-1,692.76	508.68	1,733.26	1,707.24	26.02	66.620	
6,800.00	6,799.56	6,804.66	6,802.84	14.23	12.48	162.07	-1,692.40	508.18	1,732.75	1,706.34	26.41	65.606	
6,900.00	6,899.56	6,902.56	6,900.73	14.44	12.64	162.09	-1,692.19	507.49	1,732.33	1,705.53	26.80	64.638	
7,000.00	6,999.56	7,000.09	6,998.26	14.66	12.79	162.12	-1,692.18	506.60	1,732.05	1,704.86	27.18	63.714	

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 #58H
Site Error: 0.00 usft
Reference Well: Lea Unit #58H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #58H
TVD Reference: KB @ 3679.00usft (McVay #4)
MD Reference: KB @ 3679.00usft (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 #04H - OH - OH													Offset Site Error: 0.00 usft
Survey Program: 100-ISCWSA-GYRO-3, 10698-MWD													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,100.00	7,099.56	7,100.00	7,098.16	14.87	12.95	162.15	-1,692.25	505.60	1,731.80	1,704.23	27.57	62.811	
7,200.00	7,199.56	7,198.90	7,197.06	15.08	13.10	162.18	-1,692.34	504.65	1,731.60	1,703.64	27.96	61.938	
7,300.00	7,299.56	7,296.83	7,294.99	15.30	13.26	162.21	-1,692.56	503.69	1,731.51	1,703.17	28.34	61.100	
7,344.29	7,343.85	7,340.70	7,338.85	15.39	13.32	162.23	-1,692.70	503.24	1,731.51	1,703.00	28.51	60.736	
7,400.00	7,399.56	7,395.93	7,394.08	15.51	13.41	162.25	-1,692.89	502.69	1,731.52	1,702.79	28.72	60.286	
7,500.00	7,499.56	7,492.55	7,490.69	15.73	13.56	162.28	-1,693.32	501.73	1,731.64	1,702.54	29.10	59.509	
7,600.00	7,599.56	7,591.01	7,589.14	15.94	13.71	162.32	-1,693.92	500.73	1,731.91	1,702.43	29.48	58.754	
7,700.00	7,699.56	7,691.19	7,689.32	16.16	13.86	162.36	-1,694.58	499.69	1,732.22	1,702.36	29.86	58.013	
7,800.00	7,799.56	7,788.78	7,786.90	16.37	14.01	162.40	-1,695.28	498.67	1,732.59	1,702.35	30.24	57.302	
7,900.00	7,899.56	7,887.66	7,885.77	16.59	14.16	162.44	-1,696.12	497.59	1,733.07	1,702.45	30.62	56.608	
8,000.00	7,999.56	7,986.65	7,984.75	16.81	14.31	162.48	-1,697.01	496.52	1,733.61	1,702.61	30.99	55.933	
8,100.00	8,099.56	8,090.93	8,089.02	17.02	14.48	162.52	-1,697.85	495.47	1,734.07	1,702.69	31.38	55.255	
8,200.00	8,199.56	8,194.30	8,192.38	17.24	14.64	162.56	-1,698.40	494.46	1,734.29	1,702.51	31.77	54.584	
8,300.00	8,299.56	8,292.89	8,290.97	17.46	14.80	162.59	-1,698.86	493.53	1,734.45	1,702.29	32.16	53.939	
8,400.00	8,399.56	8,395.18	8,393.25	17.67	14.96	162.62	-1,699.26	492.77	1,734.60	1,702.05	32.55	53.298	
8,500.00	8,499.56	8,500.81	8,498.89	17.89	15.14	162.64	-1,699.32	492.26	1,734.51	1,701.57	32.95	52.646	
8,600.00	8,599.56	8,605.82	8,603.90	18.11	15.32	162.65	-1,699.02	491.84	1,734.12	1,700.76	33.36	51.989	
8,700.00	8,699.56	8,710.78	8,708.86	18.33	15.51	162.65	-1,698.38	491.53	1,733.44	1,699.68	33.77	51.337	
8,800.00	8,799.56	8,814.10	8,812.17	18.54	15.70	162.65	-1,697.33	491.39	1,732.43	1,698.26	34.17	50.694	
8,900.00	8,899.56	8,900.00	8,898.06	18.76	15.86	162.63	-1,696.76	491.59	1,731.86	1,697.31	34.55	50.129	
8,916.81	8,916.37	8,913.30	8,911.37	18.80	15.88	162.63	-1,696.73	491.66	1,731.85	1,697.24	34.61	50.044	
9,000.00	8,999.56	8,984.86	8,982.92	18.98	16.01	162.62	-1,696.84	492.08	1,732.13	1,697.22	34.91	49.621	
9,100.00	9,099.56	9,078.74	9,076.80	19.20	16.16	162.61	-1,697.52	492.73	1,733.01	1,697.74	35.27	49.129	
9,200.00	9,199.56	9,171.85	9,169.90	19.42	16.30	162.59	-1,698.48	493.41	1,734.22	1,698.58	35.64	48.660	
9,227.48	9,227.04	9,200.00	9,198.05	19.48	16.35	162.59	-1,698.86	493.62	1,734.63	1,698.89	35.74	48.529	
9,250.00	9,249.56	9,217.12	9,215.16	19.52	16.38	0.24	-1,699.11	493.75	1,734.55	1,698.73	35.82	48.428	
9,300.00	9,299.37	9,260.82	9,258.85	19.62	16.45	0.24	-1,699.86	494.10	1,731.34	1,695.36	35.98	48.115	
9,350.00	9,348.63	9,304.51	9,302.53	19.72	16.51	0.24	-1,700.76	494.45	1,723.98	1,687.83	36.15	47.689	
9,400.00	9,396.97	9,350.77	9,348.78	19.82	16.59	0.25	-1,701.84	494.82	1,712.44	1,676.12	36.32	47.147	
9,450.00	9,444.01	9,395.93	9,393.93	19.93	16.66	0.26	-1,702.96	495.16	1,696.77	1,660.28	36.49	46.501	
9,500.00	9,489.40	9,444.82	9,442.80	20.04	16.74	0.27	-1,704.17	495.53	1,677.02	1,640.36	36.66	45.745	
9,550.00	9,532.80	9,492.10	9,490.06	20.16	16.81	0.29	-1,705.23	495.88	1,653.26	1,616.43	36.83	44.894	
9,600.00	9,573.87	9,532.84	9,530.80	20.30	16.87	0.31	-1,706.11	496.19	1,625.71	1,588.74	36.98	43.966	
9,650.00	9,612.30	9,570.33	9,568.27	20.46	16.93	0.33	-1,706.97	496.48	1,594.68	1,557.56	37.12	42.964	
9,700.00	9,647.79	9,605.34	9,603.27	20.64	16.99	0.37	-1,707.80	496.74	1,560.39	1,523.14	37.25	41.893	
9,750.00	9,680.09	9,638.38	9,636.30	20.85	17.04	0.42	-1,708.61	496.97	1,523.07	1,485.70	37.37	40.758	
9,800.00	9,708.93	9,668.07	9,665.99	21.10	17.09	0.49	-1,709.34	497.16	1,483.00	1,445.52	37.48	39.572	
9,850.00	9,734.11	9,694.19	9,692.10	21.37	17.13	0.58	-1,710.00	497.31	1,440.48	1,402.91	37.57	38.340	
9,900.00	9,755.43	9,715.88	9,713.78	21.69	17.16	0.72	-1,710.55	497.43	1,395.84	1,358.19	37.65	37.074	
9,950.00	9,772.73	9,733.60	9,731.49	22.04	17.19	0.94	-1,711.02	497.51	1,349.42	1,311.71	37.72	35.779	
10,000.00	9,785.88	9,747.43	9,745.32	22.43	17.21	1.31	-1,711.39	497.56	1,301.57	1,263.81	37.77	34.465	
10,050.00	9,794.77	9,757.25	9,755.13	22.85	17.23	2.09	-1,711.66	497.59	1,252.65	1,214.85	37.80	33.138	
10,100.00	9,799.34	9,762.96	9,760.84	23.31	17.24	4.66	-1,711.82	497.61	1,203.02	1,165.20	37.82	31.807	
10,127.48	9,800.00	9,764.33	9,762.21	23.57	17.24	12.78	-1,711.86	497.62	1,175.58	1,137.75	37.83	31.076	
10,200.00	9,800.00	9,766.28	9,764.16	24.28	17.24	-34.73	-1,711.92	497.62	1,103.09	1,065.25	37.84	29.152	
10,300.00	9,800.00	9,769.00	9,766.88	25.30	17.25	-64.17	-1,712.00	497.63	1,003.21	965.36	37.86	26.501	
10,400.00	9,800.00	9,771.76	9,769.64	26.41	17.25	-74.46	-1,712.08	497.64	903.57	865.69	37.88	23.854	
10,500.00	9,800.00	9,774.55	9,772.42	27.60	17.26	-79.41	-1,712.16	497.64	804.41	766.48	37.92	21.213	
10,600.00	9,800.00	9,777.37	9,775.24	28.85	17.26	-82.33	-1,712.24	497.65	706.06	668.06	38.00	18.579	
10,700.00	9,800.00	9,780.21	9,778.09	30.14	17.27	-84.28	-1,712.32	497.66	609.08	570.90	38.18	15.954	
10,793.38	9,800.00	9,782.90	9,780.77	31.38	17.27	-85.63	-1,712.40	497.66	520.56	482.03	38.53	13.510	
10,800.00	9,800.00	9,783.09	9,780.96	31.47	17.27	-85.69	-1,712.40	497.66	514.39	475.82	38.57	13.337	

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 #58H
Site Error: 0.00 usft
Reference Well: Lea Unit #58H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #58H
TVD Reference: KB @ 3679.00usft (McVay #4)
MD Reference: KB @ 3679.00usft (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 #04H - OH - OH														Offset Site Error:	0.00 usft
Survey Program: 100-ISCWSA-GYRO-3, 10698-MWD														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance		Minimum Separation		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
10,900.00	9,800.00	9,785.99	9,783.86	32.84	17.28	-86.58	-1,712.49	497.67	422.78	383.37	39.40	10.729			
11,000.00	9,800.00	9,788.91	9,786.78	34.25	17.28	-87.48	-1,712.57	497.68	335.97	294.79	41.17	8.160			
11,100.00	9,800.00	9,791.87	9,789.73	35.70	17.29	-88.38	-1,712.65	497.68	258.82	214.00	44.82	5.775			
11,200.00	9,800.00	9,794.84	9,792.71	37.19	17.29	-89.30	-1,712.75	497.69	202.69	151.73	50.96	3.977			
11,279.63	9,800.00	9,797.23	9,795.10	38.40	17.29	-90.03	-1,712.82	497.69	186.41	131.14	55.28	3.372 CC, ES			
11,300.00	9,800.00	9,797.85	9,795.71	38.71	17.29	-90.22	-1,712.84	497.69	187.52	131.76	55.76	3.363 SF			
11,400.00	9,800.00	9,800.87	9,798.73	40.26	17.30	-91.15	-1,712.93	497.70	221.87	167.64	54.23	4.091			
11,500.00	9,800.00	9,803.88	9,801.74	41.84	17.30	-92.07	-1,713.02	497.70	288.56	238.04	50.52	5.712			
11,600.00	9,800.00	9,806.88	9,804.75	43.44	17.31	-92.99	-1,713.11	497.71	370.53	322.90	47.63	7.779			
11,700.00	9,800.00	9,809.88	9,807.74	45.05	17.31	-93.91	-1,713.20	497.71	459.67	413.97	45.70	10.058			
11,800.00	9,800.00	9,812.88	9,810.74	46.69	17.32	-94.83	-1,713.29	497.72	552.53	508.11	44.42	12.440			
11,900.00	9,800.00	9,815.87	9,813.72	48.34	17.32	-95.74	-1,713.38	497.72	647.50	603.98	43.53	14.876			
12,000.00	9,800.00	9,818.85	9,816.71	50.00	17.33	-96.64	-1,713.47	497.72	743.78	700.89	42.89	17.341			
12,100.00	9,800.00	9,821.83	9,819.68	51.68	17.33	-97.54	-1,713.56	497.73	840.92	798.50	42.42	19.822			
12,200.00	9,800.00	9,824.80	9,822.65	53.37	17.34	-98.44	-1,713.64	497.73	938.65	896.58	42.07	22.312			
12,300.00	9,800.00	9,827.77	9,825.62	55.08	17.34	-99.33	-1,713.73	497.73	1,036.81	995.01	41.80	24.806			
12,400.00	9,800.00	11,921.62	10,892.27	56.79	27.14	-174.70	-2,871.22	500.57	1,102.53	1,066.71	35.83	30.773			
12,500.00	9,800.00	11,996.00	10,891.27	58.51	28.07	-174.96	-2,945.59	501.00	1,100.56	1,063.79	36.77	29.933			
12,600.00	9,800.00	12,107.48	10,890.63	60.24	29.55	-175.35	-3,057.07	501.86	1,099.43	1,061.54	37.90	29.012			
12,700.00	9,800.00	12,218.00	10,889.27	61.97	31.07	-175.76	-3,167.57	502.26	1,097.70	1,058.65	39.05	28.113			
12,762.45	9,800.00	12,250.00	10,889.03	63.06	31.50	-175.90	-3,199.56	501.98	1,096.83	1,057.24	39.59	27.705			
12,800.00	9,800.00	12,278.32	10,889.33	63.72	31.88	-176.02	-3,227.89	501.80	1,097.01	1,057.04	39.96	27.450			
12,900.00	9,800.00	12,396.56	10,890.03	65.46	33.58	-176.50	-3,346.11	501.65	1,097.11	1,055.92	41.19	26.634			
13,000.00	9,800.00	12,519.59	10,887.55	67.22	35.41	-176.93	-3,469.11	502.62	1,094.57	1,052.08	42.49	25.762			
13,100.00	9,800.00	12,619.59	10,886.04	68.98	36.89	-177.26	-3,569.08	503.70	1,092.73	1,049.04	43.88	25.014			
13,200.00	9,800.00	12,692.87	10,885.31	70.75	37.98	-177.59	-3,642.35	502.99	1,091.28	1,046.55	44.73	24.389			
13,248.92	9,800.00	12,736.72	10,885.21	71.61	38.65	-177.76	-3,686.20	502.91	1,091.04	1,045.75	45.29	24.089			
13,300.00	9,800.00	12,761.75	10,885.66	72.52	39.03	-177.89	-3,711.22	502.39	1,091.74	1,045.98	45.75	23.862			
13,400.00	9,800.00	12,881.57	10,888.21	74.29	40.87	-178.53	-3,830.97	499.31	1,093.60	1,046.49	47.10	23.217			
13,500.00	9,800.00	12,992.81	10,887.93	76.07	42.63	-178.91	-3,942.19	500.43	1,093.13	1,044.69	48.45	22.563			
13,505.73	9,800.00	12,995.70	10,887.93	76.17	42.68	-178.92	-3,945.08	500.46	1,093.13	1,044.62	48.50	22.538			
13,600.00	9,800.00	13,080.32	10,889.04	77.85	43.99	-179.24	-4,029.69	500.75	1,094.18	1,044.53	49.65	22.038			
13,700.00	9,800.00	13,213.66	10,887.97	79.64	46.14	-179.67	-4,163.01	502.58	1,093.23	1,042.04	51.19	21.357			
13,800.00	9,800.00	13,296.00	10,886.79	81.43	47.44	-179.97	-4,245.33	502.05	1,091.80	1,039.41	52.39	20.839			
13,836.10	9,800.00	13,327.00	10,886.74	82.07	47.93	-179.82	-4,276.33	501.49	1,091.74	1,038.90	52.84	20.662			
13,900.00	9,800.00	13,365.09	10,887.21	83.22	48.53	-179.62	-4,314.41	500.57	1,092.54	1,039.03	53.51	20.419			
14,000.00	9,800.00	13,471.93	10,888.81	85.01	50.26	-179.03	-4,421.18	497.42	1,094.15	1,039.20	54.94	19.915			
14,100.00	9,800.00	13,577.76	10,891.08	86.81	51.97	-178.58	-4,526.98	496.70	1,096.51	1,040.12	56.39	19.445			
14,200.00	9,800.00	13,681.09	10,891.77	88.61	53.66	-178.24	-4,630.29	498.02	1,097.34	1,039.52	57.83	18.977			
14,300.00	9,800.00	13,772.03	10,892.96	90.41	55.14	-178.02	-4,721.17	500.49	1,098.81	1,039.65	59.16	18.573			
14,400.00	9,800.00	13,877.04	10,892.88	92.22	56.86	-177.58	-4,826.18	500.09	1,098.97	1,038.31	60.67	18.115			
14,500.00	9,800.00	13,996.00	10,893.47	94.02	58.82	-177.08	-4,945.13	499.43	1,099.90	1,037.58	62.32	17.646			
14,511.24	9,800.00	14,004.43	10,893.41	94.23	58.96	-177.05	-4,953.56	499.41	1,099.87	1,037.40	62.47	17.607			
14,600.00	9,800.00	14,070.25	10,894.28	95.83	60.02	-176.79	-5,019.37	499.47	1,101.25	1,037.65	63.60	17.315			
14,700.00	9,800.00	14,186.00	10,894.32	97.64	61.95	-176.37	-5,135.12	499.96	1,101.56	1,036.29	65.27	16.877			
14,800.00	9,800.00	14,282.00	10,894.86	99.45	63.53	-176.02	-5,231.11	500.44	1,102.59	1,035.81	66.78	16.511			
14,900.00	9,800.00	14,380.08	10,896.24	101.27	65.15	-175.68	-5,329.18	501.18	1,104.47	1,036.15	68.32	16.166			
15,000.00	9,800.00	14,466.66	10,896.87	103.08	66.58	-175.36	-5,415.75	501.48	1,105.85	1,036.07	69.78	15.848			
15,100.00	9,800.00	14,566.00	10,897.82	104.90	68.25	-175.05	-5,515.07	502.90	1,107.32	1,035.97	71.35	15.519			
15,200.00	9,800.00	14,693.08	10,899.75	106.72	70.40	-174.69	-5,642.10	505.39	1,109.51	1,036.31	73.20	15.156			
15,300.00	9,800.00	14,765.86	10,900.30	108.54	71.62	-174.46	-5,714.88	506.33	1,110.87	1,036.32	74.56	14.899			
15,400.00	9,800.00	14,874.12	10,901.62	110.36	73.44	-174.03	-5,823.12	506.00	1,112.86	1,036.51	76.35	14.576			

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 #58H
Site Error: 0.00 usft
Reference Well: Lea Unit #58H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #58H
TVD Reference: KB @ 3679.00usft (McVay #4)
MD Reference: KB @ 3679.00usft (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 #04H - OH - OH												Offset Well Error:	0.00 usft
Survey Program: 100-ISCWSA-GYRO-3, 10698-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
15,500.00	9,800.00	14,949.87	10,903.64	112.18	74.68	173.77	-5,898.83	506.51	1,116.16	1,038.40	77.76	14.354	
15,600.00	9,800.00	15,107.76	10,905.53	114.01	77.37	173.20	-6,056.69	506.91	1,118.47	1,038.33	80.13	13.958	
15,700.00	9,800.00	15,201.04	10,904.05	115.83	78.94	172.89	-6,149.95	508.22	1,117.65	1,035.85	81.80	13.664	
15,719.25	9,800.00	15,215.63	10,903.89	116.18	79.19	172.84	-6,164.54	508.26	1,117.60	1,035.51	82.09	13.614	
15,800.00	9,800.00	15,299.00	10,902.88	117.66	80.59	172.41	-6,247.88	506.34	1,117.66	1,033.99	83.67	13.357	
15,820.31	9,800.00	15,318.00	10,902.58	118.03	80.92	172.31	-6,266.87	505.81	1,117.62	1,033.56	84.06	13.296	
15,900.00	9,800.00	15,318.00	10,902.58	119.48	80.92	172.31	-6,266.87	505.81	1,120.39	1,035.89	84.49	13.260	
16,000.00	9,800.00	15,318.00	10,902.58	121.31	80.92	172.31	-6,266.87	505.81	1,131.82	1,047.21	84.61	13.378	
16,100.00	9,800.00	15,318.00	10,902.58	123.14	80.92	172.31	-6,266.87	505.81	1,151.85	1,067.58	84.26	13.670	
16,200.00	9,800.00	15,318.00	10,902.58	124.97	80.92	172.31	-6,266.87	505.81	1,180.04	1,096.52	83.52	14.129	
16,300.00	9,800.00	15,318.00	10,902.58	126.80	80.92	172.31	-6,266.87	505.81	1,215.83	1,133.37	82.46	14.745	
16,400.00	9,800.00	15,318.00	10,902.58	128.63	80.92	172.31	-6,266.87	505.81	1,258.56	1,177.41	81.15	15.509	
16,500.00	9,800.00	15,318.00	10,902.58	130.46	80.92	172.31	-6,266.87	505.81	1,307.57	1,227.88	79.68	16.409	
16,600.00	9,800.00	15,318.00	10,902.58	132.29	80.92	172.31	-6,266.87	505.81	1,362.16	1,284.03	78.13	17.435	
16,700.00	9,800.00	15,318.00	10,902.58	134.13	80.92	172.31	-6,266.87	505.81	1,421.69	1,345.16	76.54	18.576	
16,800.00	9,800.00	15,318.00	10,902.58	135.96	80.92	172.31	-6,266.87	505.81	1,485.58	1,410.63	74.95	19.820	
16,900.00	9,800.00	15,318.00	10,902.58	137.80	80.92	172.31	-6,266.87	505.81	1,553.29	1,479.87	73.42	21.157	
16,985.33	9,800.00	15,318.00	10,902.58	139.36	80.92	172.31	-6,266.87	505.81	1,613.72	1,541.56	72.15	22.365	



TDS
Anticollision Report



Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #58H
Site Error: 0.00 usft
Reference Well: Lea Unit #58H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #58H
TVD Reference: KB @ 3679.00usft (McVay #4)
MD Reference: KB @ 3679.00usft (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 #14 - OH - OH													Offset Site Error: 0.00 usft
Survey Program: 100-ISCWSA-GYRO-3													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
0.00	0.00	0.00	0.00	0.00	0.00	175.05	-5,767.05	499.55	5,788.72				
100.00	100.00	64.24	64.24	0.09	0.06	175.05	-5,767.09	499.51	5,788.68	5,788.53	0.15	N/A	
200.00	200.00	175.54	175.54	0.32	0.22	175.05	-5,767.17	499.38	5,788.75	5,788.21	0.54	N/A	
300.00	300.00	280.70	280.70	0.54	0.41	175.05	-5,766.98	499.44	5,788.58	5,787.63	0.95	6,109.446	
400.00	400.00	376.75	376.75	0.77	0.58	175.05	-5,766.84	499.27	5,788.42	5,787.08	1.34	4,311.648	
473.70	473.70	443.70	443.70	0.93	0.70	175.05	-5,766.84	498.80	5,788.37	5,786.74	1.62	3,562.675	
500.00	500.00	467.06	467.05	0.99	0.74	175.05	-5,766.86	498.63	5,788.38	5,786.65	1.72	3,357.242	
600.00	600.00	549.23	549.22	1.22	0.88	175.06	-5,767.05	498.11	5,788.56	5,786.47	2.09	2,769.438	
700.00	700.00	635.54	635.53	1.44	1.03	175.06	-5,767.51	498.08	5,789.08	5,786.62	2.46	2,349.580	
800.00	800.00	731.69	731.68	1.67	1.20	175.07	-5,768.12	497.68	5,789.68	5,786.83	2.86	2,026.695	
900.00	900.00	819.42	819.41	1.89	1.36	175.07	-5,768.85	497.20	5,790.45	5,787.22	3.24	1,788.824	
1,000.00	1,000.00	911.23	911.21	2.12	1.53	175.08	-5,769.75	496.99	5,791.42	5,787.79	3.63	1,597.071	
1,100.00	1,100.00	1,021.58	1,021.55	2.34	1.73	175.08	-5,770.78	496.63	5,792.31	5,788.26	4.05	1,430.267	
1,200.00	1,200.00	1,121.08	1,121.05	2.56	1.91	175.09	-5,771.69	496.24	5,793.19	5,788.74	4.45	1,300.428	
1,300.00	1,300.00	1,241.00	1,240.97	2.79	2.13	175.09	-5,772.51	495.66	5,793.83	5,788.93	4.90	1,183.339	
1,400.00	1,400.00	1,364.15	1,364.12	3.01	2.36	175.10	-5,773.00	495.10	5,794.20	5,788.86	5.34	1,085.092	
1,500.00	1,500.00	1,472.79	1,472.76	3.24	2.56	175.10	-5,773.01	494.55	5,794.15	5,788.40	5.75	1,007.232	
1,600.00	1,600.00	1,573.58	1,573.54	3.46	2.74	175.11	-5,773.01	493.94	5,794.11	5,787.96	6.15	942.005	
1,700.00	1,700.00	1,677.22	1,677.18	3.69	2.93	175.12	-5,772.97	493.36	5,794.02	5,787.46	6.55	884.075	
1,800.00	1,800.00	1,846.19	1,846.14	3.91	3.22	175.12	-5,771.75	492.63	5,793.24	5,786.18	7.06	820.190	
1,900.00	1,900.00	1,948.05	1,947.99	4.14	3.39	175.12	-5,770.35	492.33	5,791.84	5,784.39	7.46	776.463	
2,000.00	2,000.00	2,038.97	2,038.90	4.36	3.55	175.13	-5,769.25	491.88	5,790.59	5,782.75	7.84	738.721	
2,100.00	2,099.99	2,138.62	2,138.55	4.56	3.72	-34.89	-5,768.12	491.53	5,788.71	5,780.51	8.21	705.281	
2,200.00	2,199.98	2,239.26	2,239.18	4.74	3.89	-34.89	-5,766.92	491.05	5,786.06	5,777.50	8.56	676.233	
2,300.00	2,299.96	2,340.06	2,339.97	4.91	4.07	-34.90	-5,765.80	490.59	5,783.48	5,774.57	8.91	649.061	
2,400.00	2,399.95	2,444.30	2,444.20	5.10	4.25	-34.91	-5,764.47	490.08	5,780.73	5,771.46	9.28	623.255	
2,500.00	2,499.93	2,543.65	2,543.55	5.28	4.43	-34.91	-5,763.29	489.63	5,778.08	5,768.44	9.64	599.629	
2,600.00	2,599.92	2,668.90	2,668.78	5.47	4.65	-34.92	-5,761.48	489.25	5,775.19	5,765.14	10.05	574.849	
2,700.00	2,699.90	2,774.52	2,774.38	5.66	4.84	-34.93	-5,759.56	489.26	5,771.94	5,761.52	10.43	553.613	
2,800.00	2,799.89	2,891.30	2,891.14	5.86	5.04	-34.95	-5,757.29	489.48	5,768.60	5,757.77	10.83	532.729	
2,900.00	2,899.87	3,033.79	3,033.58	6.05	5.29	-34.96	-5,753.64	490.41	5,764.66	5,753.38	11.28	511.103	
3,000.00	2,999.86	3,146.00	3,145.72	6.25	5.49	-35.01	-5,750.12	492.15	5,760.24	5,748.56	11.68	493.258	
3,100.00	3,099.84	3,246.97	3,246.62	6.45	5.66	-35.04	-5,746.87	493.95	5,755.75	5,743.69	12.06	477.285	
3,200.00	3,199.83	3,331.66	3,331.26	6.65	5.81	-35.06	-5,744.18	495.25	5,751.31	5,738.89	12.41	463.282	
3,300.00	3,299.81	3,400.00	3,399.57	6.86	5.93	-35.08	-5,742.38	496.15	5,747.37	5,734.63	12.74	451.056	
3,400.00	3,399.80	3,470.25	3,469.80	7.06	6.05	-35.10	-5,740.92	496.93	5,743.96	5,730.89	13.07	439.328	
3,500.00	3,499.78	3,534.36	3,533.90	7.27	6.17	-35.11	-5,739.92	497.43	5,741.07	5,727.68	13.40	428.561	
3,600.00	3,599.77	3,600.00	3,599.54	7.48	6.28	-35.11	-5,739.47	497.35	5,738.90	5,725.18	13.72	418.264	
3,700.00	3,699.75	3,728.91	3,728.44	7.69	6.52	-35.13	-5,738.42	497.09	5,736.63	5,722.47	14.16	405.118	
3,800.00	3,799.74	3,800.00	3,799.53	7.90	6.65	-35.13	-5,737.83	497.15	5,734.40	5,719.90	14.50	395.491	
3,900.00	3,899.72	3,871.05	3,870.57	8.11	6.77	-35.14	-5,737.60	497.22	5,732.67	5,717.84	14.83	386.490	
4,000.00	3,999.71	3,941.36	3,940.89	8.32	6.88	-35.15	-5,737.77	497.35	5,731.50	5,716.34	15.16	378.028	
4,100.00	4,099.69	4,017.08	4,016.60	8.53	7.01	-35.16	-5,738.31	497.65	5,730.81	5,715.31	15.50	369.789	
4,200.00	4,199.68	4,100.00	4,099.52	8.75	7.14	-35.17	-5,739.14	497.85	5,730.41	5,714.56	15.85	361.625	
4,256.40	4,256.07	4,144.80	4,144.32	8.87	7.21	-35.17	-5,739.70	497.93	5,730.32	5,714.28	16.04	357.245	
4,300.00	4,299.66	4,175.52	4,175.04	8.96	7.26	-35.18	-5,740.16	498.06	5,730.37	5,714.19	16.18	354.085	
4,400.00	4,399.64	4,255.46	4,254.96	9.18	7.40	-35.19	-5,741.61	498.54	5,730.80	5,714.27	16.53	346.702	
4,500.00	4,499.63	4,346.66	4,346.14	9.39	7.55	-35.20	-5,743.48	499.28	5,731.48	5,714.58	16.90	339.220	
4,600.00	4,599.61	4,441.49	4,440.94	9.61	7.70	-35.23	-5,745.42	500.76	5,732.24	5,714.97	17.27	331.906	
4,700.00	4,699.60	4,534.00	4,533.41	9.83	7.86	-35.25	-5,747.40	502.68	5,733.13	5,715.49	17.64	324.960	
4,800.00	4,799.58	4,646.25	4,645.61	10.04	8.05	-35.29	-5,749.85	504.92	5,734.08	5,716.03	18.05	317.672	
4,900.44	4,900.01	4,817.28	4,816.60	10.26	8.34	-35.33	-5,752.16	507.66	5,734.11	5,715.55	18.56	308.894	

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 #58H
Site Error: 0.00 usft
Reference Well: Lea Unit #58H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #58H
TVD Reference: KB @ 3679.00usft (McVay #4)
MD Reference: KB @ 3679.00usft (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 #14 - 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)	Offset Wellbore Centre +E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
4,925.85	4,925.42	4,835.21	4,834.52	10.32	8.37	-35.33	-5,752.32	507.93	5,734.05	5,715.40	18.65	307.482		
5,000.44	5,000.00	4,900.00	4,899.30	10.48	8.48	174.66	-5,753.08	508.82	5,734.61	5,715.69	18.92	303.112		
5,100.00	5,099.56	5,000.00	4,999.29	10.68	8.65	174.64	-5,754.26	510.12	5,735.90	5,716.60	19.30	297.227		
5,200.00	5,199.56	5,076.40	5,075.68	10.89	8.78	174.64	-5,755.20	511.03	5,737.26	5,717.63	19.63	292.217		
5,300.00	5,299.56	5,166.87	5,166.12	11.09	8.93	174.63	-5,756.75	511.90	5,739.04	5,719.05	19.99	287.030		
5,400.00	5,399.56	5,252.41	5,251.65	11.29	9.08	174.62	-5,758.30	512.55	5,740.93	5,720.58	20.35	282.140		
5,500.00	5,499.56	5,336.84	5,336.06	11.50	9.23	174.62	-5,760.13	513.20	5,743.15	5,722.45	20.70	277.448		
5,600.00	5,599.56	5,440.79	5,439.98	11.71	9.41	174.61	-5,762.50	513.97	5,745.49	5,724.41	21.09	272.452		
5,700.00	5,699.56	5,558.35	5,557.51	11.91	9.61	174.61	-5,764.88	514.83	5,747.57	5,726.07	21.50	267.305		
5,800.00	5,799.56	5,690.74	5,689.88	12.12	9.84	174.60	-5,767.05	516.01	5,749.31	5,727.36	21.94	262.008		
5,900.00	5,899.56	5,770.67	5,769.79	12.33	9.98	174.59	-5,768.19	516.82	5,750.83	5,728.54	22.29	257.980		
6,000.00	5,999.56	5,930.42	5,929.52	12.54	10.26	174.58	-5,770.08	518.34	5,752.13	5,729.34	22.78	252.473		
6,100.00	6,099.56	6,027.24	6,026.34	12.75	10.43	174.56	-5,770.68	519.58	5,752.87	5,729.70	23.16	248.365		
6,200.00	6,199.56	6,137.07	6,136.15	12.96	10.63	174.55	-5,771.32	520.98	5,753.57	5,730.00	23.57	244.144		
6,300.00	6,299.56	6,302.94	6,302.02	13.17	10.92	174.54	-5,771.39	522.19	5,753.75	5,729.68	24.07	239.083		
6,400.00	6,399.56	6,400.00	6,399.08	13.38	11.09	174.54	-5,770.84	522.02	5,753.17	5,728.73	24.45	235.346		
6,500.00	6,499.56	6,491.63	6,490.71	13.59	11.25	174.54	-5,770.40	521.99	5,752.69	5,727.88	24.82	231.805		
6,600.00	6,599.56	6,576.94	6,576.02	13.80	11.39	174.54	-5,770.17	522.16	5,752.45	5,727.27	25.18	228.469		
6,644.58	6,644.15	6,615.07	6,614.15	13.90	11.46	174.54	-5,770.17	522.02	5,752.43	5,727.09	25.34	227.012		
6,700.00	6,699.56	6,662.84	6,661.92	14.02	11.54	174.54	-5,770.22	521.78	5,752.46	5,726.92	25.54	225.223		
6,800.00	6,799.56	6,759.67	6,758.74	14.23	11.71	174.55	-5,770.47	521.26	5,752.66	5,726.74	25.92	221.908		
6,900.00	6,899.56	6,860.38	6,859.45	14.44	11.89	174.55	-5,770.69	520.71	5,752.83	5,726.52	26.31	218.627		
7,000.00	6,999.56	6,956.14	6,955.21	14.66	12.05	174.56	-5,770.92	520.40	5,753.04	5,726.34	26.70	215.508		
7,100.00	7,099.56	7,086.09	7,085.16	14.87	12.28	174.56	-5,771.06	520.28	5,753.17	5,726.03	27.14	212.009		
7,200.00	7,199.56	7,175.39	7,174.46	15.08	12.44	174.56	-5,770.87	520.05	5,752.94	5,725.43	27.51	209.148		
7,300.00	7,299.56	7,277.04	7,276.10	15.30	12.61	174.56	-5,770.84	519.82	5,752.89	5,724.99	27.90	206.210		
7,400.00	7,399.56	7,371.78	7,370.85	15.51	12.78	174.56	-5,770.75	519.75	5,752.79	5,724.51	28.28	203.434		
7,413.88	7,413.44	7,384.37	7,383.44	15.54	12.80	174.56	-5,770.75	519.76	5,752.79	5,724.46	28.33	203.062		
7,500.00	7,499.56	7,461.72	7,460.79	15.73	12.94	174.56	-5,770.79	519.92	5,752.86	5,724.21	28.65	200.791		
7,600.00	7,599.56	7,586.98	7,586.05	15.94	13.15	174.56	-5,770.81	520.29	5,752.92	5,723.84	29.08	197.799		
7,677.21	7,676.78	7,647.68	7,646.74	16.11	13.26	174.56	-5,770.66	520.42	5,752.77	5,723.41	29.36	195.956		
7,700.00	7,699.56	7,663.51	7,662.57	16.16	13.29	174.56	-5,770.67	520.47	5,752.78	5,723.35	29.43	195.445		
7,800.00	7,799.56	7,752.98	7,752.05	16.37	13.44	174.55	-5,770.92	520.79	5,753.09	5,723.28	29.81	193.012		
7,900.00	7,899.56	7,803.00	7,802.07	16.59	13.53	174.55	-5,771.03	520.99	5,753.59	5,723.48	30.11	191.083		
8,000.00	7,999.56	7,803.00	7,802.07	16.81	13.53	174.55	-5,771.03	520.99	5,755.63	5,725.31	30.32	189.816		
8,100.00	8,099.56	7,803.00	7,802.07	17.02	13.53	174.55	-5,771.03	520.99	5,759.41	5,728.88	30.53	188.651		
8,200.00	8,199.56	7,803.00	7,802.07	17.24	13.53	174.55	-5,771.03	520.99	5,764.92	5,734.18	30.73	187.589		
8,300.00	8,299.56	7,803.00	7,802.07	17.46	13.53	174.55	-5,771.03	520.99	5,772.15	5,741.22	30.93	186.625		
8,400.00	8,399.56	7,803.00	7,802.07	17.67	13.53	174.55	-5,771.03	520.99	5,781.11	5,749.99	31.12	185.758		
8,500.00	8,499.56	7,803.00	7,802.07	17.89	13.53	174.55	-5,771.03	520.99	5,791.78	5,760.47	31.31	184.986		
8,600.00	8,599.56	7,803.00	7,802.07	18.11	13.53	174.55	-5,771.03	520.99	5,804.16	5,772.67	31.49	184.306		
8,700.00	8,699.56	7,803.00	7,802.07	18.33	13.53	174.55	-5,771.03	520.99	5,818.23	5,786.56	31.67	183.716		
8,800.00	8,799.56	7,803.00	7,802.07	18.54	13.53	174.55	-5,771.03	520.99	5,833.97	5,802.13	31.84	183.214		
8,900.00	8,899.56	7,803.00	7,802.07	18.76	13.53	174.55	-5,771.03	520.99	5,851.39	5,819.38	32.01	182.797		
9,000.00	8,999.56	7,803.00	7,802.07	18.98	13.53	174.55	-5,771.03	520.99	5,870.46	5,838.28	32.17	182.463		
9,100.00	9,099.56	7,803.00	7,802.07	19.20	13.53	174.55	-5,771.03	520.99	5,891.16	5,858.83	32.33	182.210		
9,200.00	9,199.56	7,803.00	7,802.07	19.42	13.53	174.55	-5,771.03	520.99	5,913.48	5,880.99	32.49	182.035		
9,227.48	9,227.04	7,803.00	7,802.07	19.48	13.53	174.55	-5,771.03	520.99	5,919.90	5,887.37	32.53	182.000		
9,250.00	9,249.56	7,803.00	7,802.07	19.52	13.53	12.09	-5,771.03	520.99	5,924.82	5,892.26	32.56	181.985		
9,300.00	9,299.37	7,803.00	7,802.07	19.62	13.53	11.92	-5,771.03	520.99	5,933.01	5,900.40	32.62	181.907		
9,350.00	9,348.63	7,803.00	7,802.07	19.72	13.53	11.83	-5,771.03	520.99	5,937.39	5,904.71	32.67	181.719		
9,400.00	9,396.97	7,803.00	7,802.07	19.82	13.53	11.82	-5,771.03	520.99	5,937.92	5,905.19	32.73	181.420		

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 #58H
Site Error: 0.00 usft
Reference Well: Lea Unit #58H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #58H
TVD Reference: KB @ 3679.00usft (McVay #4)
MD Reference: KB @ 3679.00usft (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 #14 - OH - OH													Offset Site Error: 0.00 usft
Survey Program: 100-ISCWVA-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	
9,450.00	9,444.01	7,803.00	7,802.07	19.93	13.53	11.89	-5,771.03	520.99	5,934.60	5,901.82	32.79	181.013	
9,500.00	9,489.40	7,803.00	7,802.07	20.04	13.53	12.04	-5,771.03	520.99	5,927.46	5,894.62	32.84	180.502	
9,550.00	9,532.80	7,803.00	7,802.07	20.16	13.53	12.27	-5,771.03	520.99	5,916.53	5,883.64	32.89	179.888	
9,600.00	9,573.87	7,803.00	7,802.07	20.30	13.53	12.61	-5,771.03	520.99	5,901.87	5,868.93	32.94	179.174	
9,650.00	9,612.30	7,803.00	7,802.07	20.46	13.53	13.04	-5,771.03	520.99	5,883.58	5,850.59	32.99	178.364	
9,700.00	9,647.79	7,803.00	7,802.07	20.64	13.53	13.60	-5,771.03	520.99	5,861.74	5,828.71	33.03	177.459	
9,750.00	9,680.09	7,803.00	7,802.07	20.85	13.53	14.31	-5,771.03	520.99	5,836.51	5,803.43	33.07	176.465	
9,800.00	9,708.93	7,803.00	7,802.07	21.10	13.53	15.19	-5,771.03	520.99	5,808.01	5,774.89	33.12	175.384	
9,850.00	9,734.11	7,803.00	7,802.07	21.37	13.53	16.30	-5,771.03	520.99	5,776.43	5,743.27	33.16	174.221	
9,900.00	9,755.43	7,803.00	7,802.07	21.69	13.53	17.69	-5,771.03	520.99	5,741.95	5,708.75	33.19	172.983	
9,950.00	9,772.73	7,803.00	7,802.07	22.04	13.53	19.46	-5,771.03	520.99	5,704.78	5,671.55	33.23	171.677	
10,000.00	9,785.88	7,803.00	7,802.07	22.43	13.53	21.75	-5,771.03	520.99	5,665.17	5,631.90	33.26	170.307	
10,050.00	9,794.77	7,803.00	7,802.07	22.85	13.53	24.76	-5,771.03	520.99	5,623.35	5,590.06	33.30	168.884	
10,100.00	9,799.34	7,803.00	7,802.07	23.31	13.53	28.84	-5,771.03	520.99	5,579.62	5,546.29	33.33	167.412	
10,127.48	9,800.00	7,803.00	7,802.07	23.57	13.53	31.71	-5,771.03	520.99	5,554.86	5,521.52	33.35	166.577	
10,200.00	9,800.00	7,803.00	7,802.07	24.28	13.53	28.95	-5,771.03	520.99	5,488.82	5,455.44	33.38	164.430	
10,300.00	9,800.00	7,803.00	7,802.07	25.30	13.53	24.94	-5,771.03	520.99	5,397.42	5,363.99	33.43	161.471	
10,400.00	9,800.00	7,803.00	7,802.07	26.41	13.53	20.70	-5,771.03	520.99	5,305.73	5,272.25	33.48	158.496	
10,500.00	9,800.00	7,803.00	7,802.07	27.60	13.53	16.29	-5,771.03	520.99	5,213.85	5,180.32	33.52	155.525	
10,600.00	9,800.00	7,803.00	7,802.07	28.85	13.53	11.74	-5,771.03	520.99	5,121.88	5,088.31	33.57	152.573	
10,700.00	9,800.00	7,803.00	7,802.07	30.14	13.53	7.13	-5,771.03	520.99	5,029.93	4,996.32	33.61	149.649	
10,793.38	9,800.00	7,803.00	7,802.07	31.38	13.53	2.82	-5,771.03	520.99	4,944.19	4,910.55	33.65	146.952	
10,800.00	9,800.00	7,803.00	7,802.07	31.47	13.53	2.82	-5,771.03	520.99	4,938.12	4,904.47	33.65	146.761	
10,900.00	9,800.00	7,803.00	7,802.07	32.84	13.53	2.82	-5,771.03	520.99	4,846.59	4,812.90	33.68	143.882	
11,000.00	9,800.00	7,803.00	7,802.07	34.25	13.53	2.82	-5,771.03	520.99	4,755.40	4,721.67	33.73	140.990	
11,100.00	9,800.00	7,803.00	7,802.07	35.70	13.53	2.82	-5,771.03	520.99	4,664.57	4,630.79	33.78	138.084	
11,200.00	9,800.00	7,803.00	7,802.07	37.19	13.53	2.82	-5,771.03	520.99	4,574.12	4,540.28	33.84	135.165	
11,300.00	9,800.00	7,803.00	7,802.07	38.71	13.53	2.82	-5,771.03	520.99	4,484.08	4,450.17	33.91	132.231	
11,400.00	9,800.00	7,803.00	7,802.07	40.26	13.53	2.82	-5,771.03	520.99	4,394.47	4,360.48	33.99	129.285	
11,500.00	9,800.00	7,803.00	7,802.07	41.84	13.53	2.82	-5,771.03	520.99	4,305.32	4,271.24	34.08	126.325	
11,600.00	9,800.00	7,803.00	7,802.07	43.44	13.53	2.82	-5,771.03	520.99	4,216.66	4,182.47	34.18	123.352	
11,700.00	9,800.00	7,803.00	7,802.07	45.05	13.53	2.82	-5,771.03	520.99	4,128.51	4,094.21	34.30	120.366	
11,800.00	9,800.00	7,803.00	7,802.07	46.69	13.53	2.82	-5,771.03	520.99	4,040.92	4,006.49	34.43	117.369	
11,900.00	9,800.00	7,803.00	7,802.07	48.34	13.53	2.82	-5,771.03	520.99	3,953.91	3,919.34	34.57	114.381	
12,000.00	9,800.00	7,803.00	7,802.07	50.00	13.53	2.82	-5,771.03	520.99	3,867.53	3,832.80	34.74	111.343	
12,100.00	9,800.00	7,803.00	7,802.07	51.68	13.53	2.82	-5,771.03	520.99	3,781.82	3,746.91	34.91	108.317	
12,200.00	9,800.00	7,803.00	7,802.07	53.37	13.53	2.82	-5,771.03	520.99	3,696.84	3,661.72	35.11	105.284	
12,300.00	9,800.00	7,803.00	7,802.07	55.08	13.53	2.82	-5,771.03	520.99	3,612.62	3,577.28	35.33	102.246	
12,400.00	9,800.00	7,803.00	7,802.07	56.79	13.53	2.82	-5,771.03	520.99	3,529.22	3,493.64	35.57	99.206	
12,500.00	9,800.00	7,803.00	7,802.07	58.51	13.53	2.82	-5,771.03	520.99	3,446.71	3,410.87	35.84	96.167	
12,600.00	9,800.00	7,803.00	7,802.07	60.24	13.53	2.82	-5,771.03	520.99	3,365.14	3,329.01	36.13	93.131	
12,700.00	9,800.00	7,803.00	7,802.07	61.97	13.53	2.82	-5,771.03	520.99	3,284.60	3,248.14	36.45	90.103	
12,800.00	9,800.00	7,803.00	7,802.07	63.72	13.53	2.82	-5,771.03	520.99	3,205.15	3,168.35	36.80	87.087	
12,900.00	9,800.00	7,803.00	7,802.07	65.46	13.53	2.82	-5,771.03	520.99	3,126.88	3,089.69	37.19	84.088	
13,000.00	9,800.00	7,803.00	7,802.07	67.22	13.53	2.82	-5,771.03	520.99	3,049.88	3,012.28	37.60	81.110	
13,100.00	9,800.00	7,803.00	7,802.07	68.98	13.53	2.82	-5,771.03	520.99	2,974.25	2,936.20	38.05	78.161	
13,200.00	9,800.00	7,803.00	7,802.07	70.75	13.53	2.82	-5,771.03	520.99	2,900.10	2,861.56	38.54	75.246	
13,300.00	9,800.00	7,803.00	7,802.07	72.52	13.53	2.82	-5,771.03	520.99	2,827.54	2,788.47	39.07	72.372	
13,400.00	9,800.00	7,803.00	7,802.07	74.29	13.53	2.82	-5,771.03	520.99	2,756.70	2,717.06	39.64	69.547	
13,500.00	9,800.00	7,803.00	7,802.07	76.07	13.53	2.82	-5,771.03	520.99	2,687.71	2,647.46	40.25	66.779	
13,600.00	9,800.00	7,803.00	7,802.07	77.85	13.53	2.82	-5,771.03	520.99	2,620.72	2,579.82	40.90	64.076	
13,700.00	9,800.00	7,803.00	7,802.07	79.64	13.53	2.82	-5,771.03	520.99	2,555.89	2,514.29	41.60	61.446	

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 #58H
Site Error: 0.00 usft
Reference Well: Lea Unit #58H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #58H
TVD Reference: KB @ 3679.00usft (McVay #4)
MD Reference: KB @ 3679.00usft (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 #14 - 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		
13,800.00	9,800.00	7,803.00	7,802.07	81.43	13.53	2.82	-5,771.03	520.99	2,493.38	2,451.05	42.33	58.899			
13,900.00	9,800.00	7,803.00	7,802.07	83.22	13.53	2.82	-5,771.03	520.99	2,433.39	2,390.27	43.11	56.442			
14,000.00	9,800.00	7,803.00	7,802.07	85.01	13.53	2.82	-5,771.03	520.99	2,376.08	2,332.15	43.93	54.085			
14,100.00	9,800.00	7,803.00	7,802.07	86.81	13.53	2.82	-5,771.03	520.99	2,321.87	2,276.88	44.79	51.836			
14,200.00	9,800.00	7,803.00	7,802.07	88.61	13.53	2.82	-5,771.03	520.99	2,270.37	2,224.69	45.68	49.702			
14,300.00	9,800.00	7,803.00	7,802.07	90.41	13.53	2.82	-5,771.03	520.99	2,222.38	2,175.78	46.60	47.693			
14,400.00	9,800.00	7,803.00	7,802.07	92.22	13.53	2.82	-5,771.03	520.99	2,177.92	2,130.39	47.54	45.814			
14,500.00	9,800.00	7,803.00	7,802.07	94.02	13.53	2.82	-5,771.03	520.99	2,137.23	2,088.74	48.49	44.072			
14,600.00	9,800.00	7,803.00	7,802.07	95.83	13.53	2.82	-5,771.03	520.99	2,100.51	2,051.06	49.46	42.472			
14,700.00	9,800.00	7,803.00	7,802.07	97.64	13.53	2.82	-5,771.03	520.99	2,067.98	2,017.57	50.42	41.019			
14,800.00	9,800.00	7,803.00	7,802.07	99.45	13.53	2.82	-5,771.03	520.99	2,039.84	1,988.48	51.36	39.716			
14,900.00	9,800.00	7,803.00	7,802.07	101.27	13.53	2.82	-5,771.03	520.99	2,016.27	1,963.99	52.28	38.566			
15,000.00	9,800.00	7,803.00	7,802.07	103.08	13.53	2.82	-5,771.03	520.99	1,997.43	1,944.27	53.16	37.571			
15,100.00	9,800.00	7,803.00	7,802.07	104.90	13.53	2.82	-5,771.03	520.99	1,983.47	1,929.47	54.00	36.730			
15,200.00	9,800.00	7,803.00	7,802.07	106.72	13.53	2.82	-5,771.03	520.99	1,974.47	1,919.69	54.78	36.043			
15,300.00	9,800.00	7,803.00	7,802.07	108.54	13.53	2.82	-5,771.03	520.99	1,970.52	1,915.02	55.49	35.509			
15,328.01	9,800.00	7,803.00	7,802.07	109.05	13.53	2.82	-5,771.03	520.99	1,970.32	1,914.64	55.68	35.387 CC, ES			
15,400.00	9,800.00	7,803.00	7,802.07	110.36	13.53	2.82	-5,771.03	520.99	1,971.63	1,915.50	56.13	35.125			
15,500.00	9,800.00	7,803.00	7,802.07	112.18	13.53	2.82	-5,771.03	520.99	1,977.81	1,921.12	56.69	34.888			
15,600.00	9,800.00	7,803.00	7,802.07	114.01	13.53	2.82	-5,771.03	520.99	1,989.00	1,931.84	57.17	34.794 SF			
15,700.00	9,800.00	7,803.00	7,802.07	115.83	13.53	2.82	-5,771.03	520.99	2,005.13	1,947.57	57.56	34.838			
15,800.00	9,800.00	7,803.00	7,802.07	117.66	13.53	2.82	-5,771.03	520.99	2,026.06	1,968.20	57.86	35.015			
15,900.00	9,800.00	7,803.00	7,802.07	119.48	13.53	2.82	-5,771.03	520.99	2,051.66	1,993.58	58.09	35.320			
16,000.00	9,800.00	7,803.00	7,802.07	121.31	13.53	2.82	-5,771.03	520.99	2,081.76	2,023.52	58.24	35.746			
16,100.00	9,800.00	7,803.00	7,802.07	123.14	13.53	2.82	-5,771.03	520.99	2,116.16	2,057.84	58.31	36.289			
16,200.00	9,800.00	7,803.00	7,802.07	124.97	13.53	2.82	-5,771.03	520.99	2,154.65	2,096.33	58.32	36.942			
16,300.00	9,800.00	7,803.00	7,802.07	126.80	13.53	2.82	-5,771.03	520.99	2,197.03	2,138.75	58.28	37.699			
16,400.00	9,800.00	7,803.00	7,802.07	128.63	13.53	2.82	-5,771.03	520.99	2,243.06	2,184.88	58.18	38.554			
16,500.00	9,800.00	7,803.00	7,802.07	130.46	13.53	2.82	-5,771.03	520.99	2,292.53	2,234.50	58.04	39.501			
16,600.00	9,800.00	7,803.00	7,802.07	132.29	13.53	2.82	-5,771.03	520.99	2,345.23	2,287.37	57.86	40.535			
16,700.00	9,800.00	7,803.00	7,802.07	134.13	13.53	2.82	-5,771.03	520.99	2,400.94	2,343.29	57.65	41.649			
16,800.00	9,800.00	7,803.00	7,802.07	135.96	13.53	2.82	-5,771.03	520.99	2,459.45	2,402.04	57.41	42.839			
16,900.00	9,800.00	7,803.00	7,802.07	137.80	13.53	2.82	-5,771.03	520.99	2,520.58	2,463.42	57.16	44.099			
16,985.33	9,800.00	7,803.00	7,802.07	139.36	13.53	2.82	-5,771.03	520.99	2,574.66	2,517.73	56.93	45.226			

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 #58H
Site Error: 0.00 usft
Reference Well: Lea Unit #58H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #58H
TVD Reference: KB @ 3679.00usft (McVay #4)
MD Reference: KB @ 3679.00usft (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 #57H - Lea Unit #57H - Lateral #1 - Lateral #1													Offset Site Error: 0.00 usft
Survey Program: 100-VES-ISCWSA-GYRO-3, 5504-MWD													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
0.00	0.00	1.99	1.99	0.00	0.00	-89.77	0.20	-49.90	49.90				
100.00	100.00	101.66	101.66	0.09	0.12	-89.23	0.68	-50.24	50.25	50.08	0.17	293.541	
200.00	200.00	201.66	201.64	0.32	0.28	-87.90	1.87	-50.90	50.94	50.37	0.57	88.934	
300.00	300.00	301.92	301.89	0.54	0.46	-86.02	3.57	-51.26	51.39	50.41	0.97	52.717	
400.00	400.00	402.11	402.06	0.77	0.65	-83.37	5.94	-51.08	51.43	50.05	1.38	37.384	
500.00	500.00	502.22	502.12	0.99	0.83	-79.90	8.99	-50.46	51.26	49.48	1.78	28.866	
600.00	600.00	602.62	602.44	1.22	1.02	-75.58	12.62	-49.09	50.68	48.50	2.18	23.247	
700.00	700.00	702.77	702.49	1.44	1.20	-70.63	16.50	-46.94	49.76	47.18	2.58	19.278	
800.00	800.00	803.27	802.88	1.67	1.39	-65.58	19.99	-44.03	48.36	45.37	2.99	16.186	
900.00	900.00	903.82	903.32	1.89	1.57	-60.58	22.58	-40.04	45.98	42.59	3.40	13.542	
1,000.00	1,000.00	1,003.66	1,003.06	2.12	1.75	-55.49	24.55	-35.70	43.34	39.55	3.79	11.440	
1,100.00	1,100.00	1,103.79	1,103.08	2.34	1.93	-50.52	25.93	-31.48	40.79	36.61	4.19	9.742	
1,200.00	1,200.00	1,203.74	1,202.96	2.56	2.10	-46.33	26.38	-27.62	38.21	33.62	4.58	8.336	
1,300.00	1,300.00	1,303.34	1,302.51	2.79	2.28	-43.53	26.29	-24.97	36.26	31.29	4.97	7.290	
1,400.00	1,400.00	1,403.19	1,402.36	3.01	2.44	-42.84	25.69	-23.82	35.04	29.67	5.37	6.527	
1,500.00	1,500.00	1,502.90	1,502.07	3.24	2.60	-44.18	24.68	-23.98	34.41	28.65	5.76	5.971	
1,515.31	1,515.31	1,518.15	1,517.31	3.27	2.62	-44.52	24.53	-24.12	34.40	28.57	5.82	5.906 CC	
1,600.00	1,600.00	1,602.45	1,601.60	3.46	2.75	-47.21	23.69	-25.60	34.88	28.73	6.16	5.664	
1,700.00	1,700.00	1,702.10	1,701.21	3.69	2.91	-50.75	23.13	-28.31	36.56	30.01	6.56	5.576	
1,800.00	1,800.00	1,802.31	1,801.38	3.91	3.08	-52.73	23.28	-30.59	38.45	31.49	6.96	5.526	
1,900.00	1,900.00	1,902.26	1,901.32	4.14	3.25	-53.15	24.04	-32.08	40.09	32.74	7.36	5.449	
2,000.00	2,000.00	2,002.24	2,001.29	4.36	3.43	-53.19	25.04	-33.46	41.80	34.04	7.76	5.386	
2,100.00	2,099.99	2,102.33	2,101.36	4.56	3.61	-97.65	25.82	-34.86	43.49	35.35	8.14	5.344	
2,200.00	2,199.98	2,202.61	2,201.64	4.74	3.78	99.76	26.42	-35.78	44.85	36.36	8.49	5.280	
2,300.00	2,299.96	2,302.67	2,301.70	4.91	3.97	102.13	26.98	-36.18	45.85	36.99	8.85	5.178	
2,400.00	2,399.95	2,402.68	2,401.71	5.10	4.15	104.77	27.67	-36.27	46.79	37.57	9.22	5.075	
2,500.00	2,499.93	2,502.67	2,501.69	5.28	4.33	107.68	28.54	-36.10	47.79	38.21	9.59	4.985	
2,600.00	2,599.92	2,602.88	2,601.90	5.47	4.51	110.81	29.39	-35.53	48.64	38.68	9.96	4.885	
2,700.00	2,699.90	2,702.98	2,701.98	5.65	4.69	115.12	30.57	-33.84	49.25	38.92	10.33	4.769	
2,800.00	2,799.89	2,803.31	2,802.24	5.86	4.87	121.07	32.07	-30.54	49.60	38.90	10.70	4.635	
2,900.00	2,899.87	2,903.31	2,902.10	6.05	5.05	128.62	33.67	-25.63	49.96	38.88	11.08	4.510	
3,000.00	2,999.86	3,003.02	3,001.63	6.25	5.23	137.03	35.47	-19.76	51.13	39.67	11.46	4.462	
3,100.00	3,099.84	3,102.75	3,101.20	6.45	5.41	144.21	37.22	-14.54	53.37	41.53	11.84	4.507	
3,200.00	3,199.83	3,202.76	3,201.11	6.65	5.59	149.69	38.72	-10.33	56.11	43.88	12.22	4.590	
3,300.00	3,299.81	3,303.48	3,301.76	6.86	5.77	154.25	39.29	-6.58	58.35	45.74	12.61	4.629	
3,400.00	3,399.80	3,404.24	3,402.47	7.06	5.94	157.93	38.46	-3.58	59.44	46.46	12.98	4.578	
3,500.00	3,499.78	3,505.08	3,503.26	7.27	6.11	160.81	36.28	-1.55	59.26	45.91	13.35	4.438	
3,600.00	3,599.77	3,605.75	3,603.87	7.48	6.28	163.39	32.81	-0.15	57.85	44.13	13.72	4.216	
3,700.00	3,699.75	3,706.15	3,704.16	7.69	6.44	165.96	28.41	0.85	55.53	41.44	14.09	3.941	
3,800.00	3,799.74	3,806.31	3,804.21	7.90	6.61	168.30	23.54	1.26	52.71	38.25	14.46	3.645	
3,900.00	3,899.72	3,906.24	3,904.02	8.11	6.77	169.59	18.88	0.52	49.77	34.93	14.84	3.355	
4,000.00	3,999.71	4,006.12	4,003.79	8.32	6.93	169.81	14.63	-1.13	48.92	31.71	15.21	3.085	
4,100.00	4,099.69	4,105.68	4,103.27	8.53	7.10	168.77	11.24	-3.54	44.63	29.03	15.59	2.862	
4,200.00	4,199.68	4,205.07	4,202.60	8.75	7.26	166.80	9.16	-6.19	43.52	27.54	15.98	2.724	
4,257.32	4,256.98	4,262.21	4,259.72	8.87	7.36	165.76	8.40	-7.47	43.40	27.20	16.20	2.680	
4,300.00	4,299.66	4,304.76	4,302.26	8.96	7.43	165.15	7.95	-8.28	43.47	27.11	16.36	2.657 ES	
4,400.00	4,399.64	4,404.35	4,401.84	9.18	7.60	163.79	7.46	-9.96	44.25	27.51	16.75	2.643	
4,500.00	4,499.63	4,504.14	4,501.61	9.39	7.77	162.42	7.63	-11.54	45.73	28.59	17.13	2.669	
4,600.00	4,599.61	4,603.93	4,601.39	9.61	7.94	161.13	8.22	-13.05	47.66	30.14	17.52	2.720	
4,700.00	4,699.60	4,703.95	4,701.40	9.83	8.12	160.13	8.92	-14.38	49.74	31.83	17.91	2.777	
4,800.00	4,799.58	4,803.89	4,801.33	10.04	8.29	158.47	9.56	-15.46	51.83	33.53	18.30	2.832	
4,900.44	4,900.01	4,904.23	4,901.66	10.26	8.47	158.84	10.33	-16.56	54.06	35.36	18.70	2.892	

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 #58H
Site Error: 0.00 usft
Reference Well: Lea Unit #58H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #58H
TVD Reference: KB @ 3679.00usft (McVay #4)
MD Reference: KB @ 3679.00usft (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 #57H - Lea Unit #57H - Lateral #1 - Lateral #1														Offset Site Error:	0.00 usft
Survey Program: 100-VES-ISCWSA-GYRO-3, 5504-MWD														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/S (usft)	+E/W (usft)							
5,000.44	5,000.00	5,004.53	5,001.95	10.48	8.65	8.04	10.86	-17.58	55.24	36.15	19.09	2.894			
5,100.00	5,099.56	5,104.29	5,101.71	10.68	8.82	7.24	10.88	-18.36	55.16	35.69	19.47	2.833			
5,200.00	5,199.56	5,204.61	5,202.02	10.89	9.00	6.28	10.41	-19.34	54.58	34.73	19.84	2.750			
5,300.00	5,299.56	5,304.39	5,301.79	11.09	9.17	4.64	9.94	-20.94	53.96	33.73	20.22	2.668			
5,400.00	5,399.56	5,404.46	5,401.85	11.29	9.34	3.04	9.57	-22.47	53.48	32.88	20.60	2.596			
5,500.00	5,499.56	5,504.46	5,501.83	11.50	9.43	1.72	9.09	-23.72	52.95	32.06	20.89	2.534			
5,600.00	5,599.56	5,604.22	5,601.60	11.71	9.43	1.15	8.82	-24.26	52.67	31.56	21.11	2.495			
5,613.53	5,613.09	5,617.72	5,615.09	11.74	9.44	1.19	8.82	-24.22	52.66	31.53	21.14	2.492			
5,700.00	5,699.56	5,703.99	5,701.37	11.91	9.44	1.96	8.97	-23.51	52.84	31.51	21.32	2.478			
5,800.00	5,799.56	5,803.90	5,801.26	12.12	9.46	3.68	9.36	-21.89	53.31	31.76	21.55	2.474 SF			
5,900.00	5,899.56	5,903.84	5,901.18	12.33	9.48	5.62	9.86	-20.03	53.96	32.18	21.77	2.478			
6,000.00	5,999.56	6,003.74	6,001.06	12.54	9.50	7.76	10.39	-17.92	54.73	32.73	22.01	2.487			
6,100.00	6,099.56	6,103.50	6,100.79	12.75	9.53	9.93	11.20	-15.67	55.88	33.64	22.24	2.512			
6,200.00	6,199.56	6,203.35	6,200.60	12.96	9.57	11.99	12.36	-13.37	57.46	34.98	22.48	2.556			
6,300.00	6,299.56	6,303.33	6,300.55	13.17	9.60	13.95	13.56	-11.05	59.16	36.42	22.73	2.602			
6,400.00	6,399.56	6,403.31	6,400.50	13.38	9.65	15.83	14.73	-8.70	60.88	37.90	22.98	2.649			
6,500.00	6,499.56	6,503.41	6,500.56	13.59	9.69	17.55	15.85	-6.44	62.61	39.37	23.24	2.694			
6,600.00	6,599.56	6,603.54	6,600.67	13.80	9.74	18.89	16.79	-4.57	64.09	40.59	23.50	2.727			
6,700.00	6,699.56	6,703.56	6,700.67	14.02	9.80	20.10	17.62	-2.82	65.45	41.68	23.77	2.754			
6,800.00	6,799.56	6,803.51	6,800.60	14.23	9.86	21.31	18.42	-1.02	66.84	42.80	24.04	2.780			
6,900.00	6,899.56	6,903.60	6,900.67	14.44	9.92	22.56	19.16	0.87	68.23	43.91	24.32	2.806			
7,000.00	6,999.56	7,003.64	7,000.69	14.66	9.99	23.76	19.77	2.69	69.50	44.91	24.60	2.826			
7,100.00	7,099.56	7,103.82	7,100.86	14.87	10.06	24.95	20.20	4.48	70.63	45.75	24.88	2.839			
7,200.00	7,199.56	7,203.86	7,200.89	15.08	10.13	26.03	20.50	6.11	71.60	46.43	25.17	2.845			
7,300.00	7,299.56	7,303.91	7,300.92	15.30	10.21	26.94	20.81	7.54	72.52	47.05	25.46	2.848			
7,400.00	7,399.56	7,403.95	7,400.96	15.51	10.30	27.81	21.06	8.92	73.37	47.61	25.76	2.848			
7,500.00	7,499.56	7,503.99	7,500.98	15.73	10.38	28.69	21.23	10.30	74.18	48.11	26.06	2.846			
7,600.00	7,599.56	7,604.10	7,601.09	15.94	10.47	29.47	21.39	11.55	74.92	48.56	26.37	2.841			
7,700.00	7,699.56	7,704.44	7,701.42	16.16	10.57	30.24	21.26	12.63	75.34	48.66	26.68	2.824			
7,800.00	7,799.56	7,804.66	7,801.63	16.37	10.67	31.25	20.58	13.78	75.35	48.35	26.99	2.791			
7,900.00	7,899.56	7,904.72	7,901.68	16.59	10.77	32.41	19.68	15.01	75.24	47.93	27.31	2.755			
8,000.00	7,999.56	8,004.62	8,001.57	16.81	10.87	33.44	18.83	16.07	75.10	47.47	27.63	2.718			
8,001.11	8,000.68	8,005.73	8,002.68	16.81	10.87	33.45	18.82	16.08	75.10	47.46	27.63	2.718			
8,100.00	8,099.56	8,104.42	8,101.37	17.02	10.97	34.19	18.41	16.98	75.25	47.30	27.95	2.692			
8,200.00	8,199.56	8,204.21	8,201.16	17.24	11.08	34.63	18.40	17.67	75.63	47.36	28.27	2.675			
8,300.00	8,299.56	8,303.81	8,300.75	17.46	11.19	34.77	18.92	18.26	76.41	47.81	28.60	2.672			
8,400.00	8,399.56	8,403.70	8,400.64	17.67	11.30	34.66	19.99	18.81	77.60	48.67	28.92	2.683			
8,500.00	8,499.56	8,503.70	8,500.62	17.89	11.42	34.47	21.12	19.28	78.79	49.53	29.26	2.693			
8,600.00	8,599.56	8,603.58	8,600.49	18.11	11.54	34.26	22.32	19.75	80.05	50.46	29.59	2.705			
8,700.00	8,699.56	8,703.52	8,700.43	18.33	11.66	34.14	23.54	20.38	81.42	51.49	29.93	2.720			
8,800.00	8,799.56	8,803.66	8,800.55	18.54	11.78	34.16	24.61	21.13	82.72	52.45	30.28	2.732			
8,900.00	8,899.56	8,903.75	8,900.64	18.76	11.91	34.10	25.66	21.74	83.94	53.31	30.62	2.741			
9,000.00	8,999.56	9,004.51	9,001.40	18.98	12.04	34.66	25.70	22.77	84.55	53.57	30.97	2.730			
9,100.00	9,099.56	9,104.86	9,101.72	19.20	12.18	36.17	24.41	24.58	84.54	53.21	31.32	2.699			
9,200.00	9,199.56	9,205.11	9,201.94	19.42	12.31	37.93	22.60	26.46	84.22	52.55	31.68	2.659			
9,227.48	9,227.04	9,232.67	9,229.48	19.48	12.35	38.41	22.06	26.93	84.09	52.32	31.78	2.646			
9,232.92	9,232.49	9,238.12	9,234.93	19.49	12.36	-123.86	21.95	27.02	84.08	52.28	31.79	2.644			
9,250.00	9,249.56	9,255.21	9,252.02	19.52	12.38	-123.79	21.60	27.31	84.22	52.36	31.85	2.644			
9,300.00	9,299.37	9,305.15	9,301.94	19.62	12.45	-125.06	20.58	28.13	86.26	54.24	32.02	2.694			
9,350.00	9,348.63	9,354.78	9,351.55	19.72	12.52	-128.26	19.54	28.92	90.97	58.78	32.19	2.826			
9,400.00	9,396.97	9,403.77	9,400.52	19.82	12.59	-132.73	18.37	29.63	98.76	66.39	32.36	3.052			
9,450.00	9,444.01	9,451.37	9,448.10	19.93	12.65	-137.68	17.13	30.26	110.22	77.69	32.53	3.388			

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 #58H
Site Error: 0.00 usft
Reference Well: Lea Unit #58H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #58H
TVD Reference: KB @ 3679.00usft (McVay #4)
MD Reference: KB @ 3679.00usft (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 #57H - Lea Unit #57H - Lateral #1 - Lateral #1													Offset Well Error:		0.00 usft
Survey Program: 100-VES-ISCWSA-GYRO-3, 5504-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 +N/-S (usft)	Centro +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
9,500.00	9,489.40	9,497.22	9,493.94	20.04	12.72	-142.45	15.96	30.86	125.95	93.25	32.70	3.852			
9,550.00	9,532.80	9,541.35	9,538.05	20.16	12.78	-146.66	14.85	31.44	146.07	113.22	32.85	4.446			
9,600.00	9,573.87	9,583.50	9,580.18	20.30	12.84	-150.13	13.74	32.00	170.44	137.43	33.00	5.164			
9,650.00	9,612.30	9,623.09	9,619.75	20.46	12.90	-152.82	12.64	32.53	198.81	165.66	33.14	5.998			
9,700.00	9,647.79	9,659.56	9,656.20	20.64	12.95	-154.76	11.61	33.00	230.94	197.66	33.28	6.940			
9,750.00	9,680.09	9,692.89	9,689.52	20.85	13.00	-156.00	10.69	33.40	266.51	233.11	33.40	7.980			
9,800.00	9,708.93	9,723.05	9,719.66	21.10	13.04	-156.59	9.86	33.75	305.16	271.66	33.50	9.109			
9,850.00	9,734.11	9,749.83	9,746.43	21.37	13.08	-156.47	9.10	34.08	346.50	312.90	33.60	10.314			
9,900.00	9,755.43	9,772.85	9,769.44	21.69	13.11	-155.45	8.43	34.37	390.15	356.47	33.67	11.586			
9,950.00	9,772.73	9,791.93	9,788.51	22.04	13.14	-153.19	7.86	34.61	435.74	402.00	33.74	12.915			
10,000.00	9,785.88	9,807.85	9,804.42	22.43	13.17	-149.04	7.37	34.82	482.91	449.12	33.79	14.291			
10,050.00	9,794.77	9,820.60	9,817.16	22.85	13.18	-141.36	6.93	34.96	531.23	497.40	33.83	15.703			
10,100.00	9,799.34	9,828.53	9,825.08	23.31	13.20	-125.17	6.62	35.04	580.35	546.50	33.85	17.143			
10,127.48	9,800.00	9,830.72	9,827.28	23.57	13.20	-109.15	6.53	35.06	607.56	573.70	33.86	17.943			
10,200.00	9,800.00	10,827.14	10,451.45	24.28	18.66	179.74	-618.54	154.67	650.89	630.71	20.18	32.252			
10,300.00	9,800.00	10,981.82	10,456.27	25.30	20.65	178.10	-771.42	177.28	654.72	633.94	20.78	31.512			
10,400.00	9,800.00	11,088.00	10,451.42	26.41	22.04	176.72	-877.14	185.67	650.70	629.10	21.60	30.123			
10,456.98	9,800.00	11,128.12	10,450.30	27.09	22.52	176.16	-917.21	187.39	649.76	627.68	22.08	29.433			
10,500.00	9,800.00	11,151.00	10,450.36	27.60	22.79	175.84	-940.07	188.14	650.37	627.92	22.44	28.976			
10,600.00	9,800.00	11,240.22	10,453.38	28.85	23.97	174.75	-1,029.20	190.49	654.79	631.33	23.46	27.915			
10,700.00	9,800.00	11,343.28	10,456.53	30.14	25.44	173.72	-1,132.20	192.21	658.95	634.38	24.57	26.822			
10,793.38	9,800.00	11,455.62	10,457.61	31.38	27.11	172.84	-1,244.53	192.67	660.77	635.02	25.75	25.662			
10,800.00	9,800.00	11,462.66	10,457.58	31.47	27.22	172.79	-1,251.57	192.67	660.81	634.98	25.83	25.582			
10,900.00	9,800.00	11,565.05	10,456.79	32.84	28.76	172.16	-1,353.95	193.17	660.97	633.89	27.08	24.410			
11,000.00	9,800.00	11,670.91	10,456.44	34.25	30.36	171.84	-1,459.72	197.46	661.14	632.82	28.32	23.345			
11,100.00	9,800.00	11,778.83	10,454.01	35.70	32.05	171.41	-1,567.56	200.94	659.53	629.85	29.67	22.228			
11,200.00	9,800.00	11,881.32	10,451.21	37.19	33.65	170.97	-1,669.95	204.08	657.52	626.47	31.05	21.178			
11,300.00	9,800.00	11,979.53	10,448.79	38.71	35.14	170.81	-1,767.95	210.00	655.32	622.99	32.33	20.267			
11,400.00	9,800.00	12,071.21	10,447.25	40.26	36.51	170.67	-1,859.45	215.51	653.92	620.32	33.60	19.461			
11,500.00	9,800.00	12,177.85	10,446.00	41.84	38.18	170.52	-1,965.89	222.03	653.02	618.01	35.00	18.556			
11,600.00	9,800.00	12,279.52	10,443.89	43.44	39.85	170.41	-2,067.30	228.83	651.12	614.73	36.38	17.896			
11,700.00	9,800.00	12,375.00	10,442.14	45.05	41.39	170.21	-2,162.63	234.01	649.66	611.87	37.79	17.191			
11,800.00	9,800.00	12,468.82	10,438.62	46.69	43.26	169.89	-2,276.26	239.53	647.04	607.62	39.42	16.415			
11,900.00	9,800.00	12,576.30	10,435.92	48.34	44.69	169.56	-2,363.63	242.90	644.65	603.77	40.89	15.766			
12,000.00	9,800.00	12,667.55	10,434.47	50.00	46.13	169.18	-2,454.82	245.74	643.92	601.47	42.44	15.172			
12,007.98	9,800.00	12,675.06	10,434.40	50.14	46.25	169.15	-2,462.33	245.98	643.91	601.34	42.57	15.126			
12,100.00	9,800.00	12,762.20	10,434.17	51.68	47.64	168.87	-2,549.39	249.45	644.30	600.29	44.01	14.640			
12,200.00	9,800.00	12,862.82	10,434.67	53.37	49.28	168.74	-2,649.84	255.35	645.11	599.57	45.54	14.165			
12,300.00	9,800.00	12,982.14	10,434.20	55.08	51.30	168.70	-2,768.83	264.06	644.87	597.69	47.18	13.659			
12,400.00	9,800.00	13,109.90	10,428.01	56.79	53.52	168.60	-2,896.06	273.83	640.02	591.11	48.91	13.086			
12,500.00	9,800.00	13,208.39	10,421.26	58.51	55.20	168.50	-2,994.02	281.43	633.27	582.82	50.45	12.553			
12,600.00	9,800.00	13,292.89	10,416.74	60.24	56.59	168.45	-3,078.13	288.21	627.95	576.09	51.86	12.109			
12,700.00	9,800.00	13,376.45	10,414.60	61.97	57.97	168.49	-3,161.35	295.34	625.24	572.05	53.20	11.754			
12,800.00	9,800.00	13,475.57	10,414.06	63.72	59.65	168.63	-3,260.04	304.56	624.35	569.78	54.57	11.442			
12,869.45	9,800.00	13,537.24	10,413.72	64.93	60.70	168.76	-3,321.40	310.74	623.68	568.24	55.44	11.250			
12,900.00	9,800.00	13,561.59	10,413.96	65.46	61.12	168.82	-3,345.63	313.15	623.83	568.03	55.80	11.181			
13,000.00	9,800.00	13,659.37	10,416.08	67.22	62.79	169.02	-3,442.95	322.36	625.59	568.47	57.11	10.954			
13,100.00	9,800.00	13,765.13	10,417.00	68.98	64.62	169.07	-3,548.38	330.67	626.38	567.74	58.63	10.683			
13,200.00	9,800.00	13,854.54	10,417.84	70.75	66.15	169.03	-3,637.57	336.82	627.45	567.37	60.07	10.445			
13,300.00	9,800.00	13,940.87	10,420.49	72.52	67.61	169.00	-3,723.67	342.49	630.64	569.18	61.46	10.261			
13,400.00	9,800.00	14,043.35	10,424.49	74.29	69.33	168.75	-3,825.97	346.60	635.17	571.93	63.24	10.044			
13,500.00	9,800.00	14,153.68	10,426.28	76.07	71.21	168.06	-3,938.29	346.81	638.25	572.70	65.54	9.738			

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 #58H
Site Error: 0.00 usft
Reference Well: Lea Unit #58H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #58H
TVD Reference: KB @ 3679.00usft (McVay #4)
MD Reference: KB @ 3679.00usft (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 #57H - Lea Unit #57H - Lateral #1 - Lateral #1													Offset Site Error: 0.00 usft
Survey Program: 100-VES-ISCWSA-GYRO-3, 5504-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	
13,600.00	9,800.00	14,282.31	10,423.86	77.85	73.42	167.20	-4,064.88	347.20	637.86	569.59	68.26	9.344	
13,700.00	9,800.00	14,380.73	10,420.09	79.64	75.09	166.55	-4,163.22	348.10	635.63	565.09	70.55	9.010	
13,800.00	9,800.00	14,474.93	10,417.60	81.43	76.66	166.00	-4,257.37	349.57	634.47	561.74	72.73	8.724	
13,900.00	9,800.00	14,576.23	10,415.35	83.22	78.37	165.55	-4,358.60	352.72	633.41	558.51	74.89	8.457	
14,000.00	9,800.00	14,676.06	10,413.54	85.01	80.08	165.27	-4,458.30	357.47	632.36	555.48	76.88	8.225	
14,100.00	9,800.00	14,775.81	10,412.00	86.81	81.79	165.09	-4,557.87	363.35	631.30	552.55	78.75	8.016	
14,200.00	9,800.00	14,876.06	10,410.65	88.61	83.52	164.95	-4,657.91	369.71	630.31	549.73	80.58	7.822	
14,300.00	9,800.00	14,980.65	10,408.74	90.41	85.33	164.75	-4,762.30	375.84	628.99	546.44	82.55	7.619	
14,400.00	9,800.00	15,076.30	10,407.07	92.22	87.00	164.70	-4,857.66	382.98	627.34	543.11	84.24	7.447	
14,468.90	9,800.00	15,138.38	10,406.92	93.46	88.07	164.77	-4,919.50	388.52	626.94	541.73	85.21	7.358	
14,500.00	9,800.00	15,165.98	10,407.11	94.02	88.55	164.81	-4,946.99	391.00	627.02	541.39	85.63	7.323	
14,600.00	9,800.00	15,255.21	10,408.68	95.83	90.08	164.93	-5,035.87	398.64	628.45	541.47	86.98	7.225	
14,700.00	9,800.00	15,350.99	10,411.50	97.64	91.72	165.01	-5,131.33	406.00	631.26	542.79	88.46	7.136	
14,800.00	9,800.00	15,440.92	10,414.91	99.45	93.28	165.15	-5,220.88	413.54	634.73	544.98	89.75	7.072	
14,900.00	9,800.00	15,530.68	10,420.06	101.27	94.83	165.28	-5,310.22	420.47	640.21	549.18	91.03	7.033	
15,000.00	9,800.00	15,636.37	10,425.94	103.08	96.64	165.18	-5,415.61	425.66	646.29	553.34	92.94	6.954	
15,100.00	9,800.00	15,745.77	10,429.49	104.90	98.54	164.82	-5,524.90	428.78	650.63	555.31	95.32	6.826	
15,200.00	9,800.00	15,852.83	10,431.17	106.72	100.38	164.28	-5,631.94	430.07	653.84	555.87	97.97	6.674	
15,300.00	9,800.00	15,975.92	10,429.74	108.54	102.50	163.54	-5,755.01	430.97	654.58	553.38	101.20	6.468	
15,400.00	9,800.00	16,082.22	10,426.62	110.36	104.33	163.03	-5,861.22	433.89	653.14	549.26	103.88	6.287	
15,500.00	9,800.00	16,181.60	10,423.53	112.18	106.05	162.60	-5,960.50	437.19	651.42	545.01	106.41	6.122	
15,600.00	9,800.00	16,275.56	10,421.21	114.01	107.67	162.27	-6,054.34	441.14	650.09	541.37	108.72	5.980	
15,641.67	9,800.00	16,312.75	10,421.06	114.77	108.32	162.27	-6,091.43	443.89	649.95	540.53	109.42	5.940	
15,700.00	9,800.00	16,369.63	10,421.55	115.83	109.32	162.37	-6,148.04	449.32	650.07	539.86	110.21	5.899	
15,800.00	9,800.00	16,473.23	10,422.64	117.66	111.15	162.67	-6,251.05	460.36	650.14	538.74	111.40	5.836	
15,869.68	9,800.00	16,541.02	10,423.03	118.93	112.35	162.88	-6,318.43	467.79	649.82	537.63	112.19	5.792	
15,900.00	9,800.00	16,566.63	10,423.31	119.48	112.80	162.94	-6,343.90	470.36	649.92	537.38	112.54	5.775	
16,000.00	9,800.00	16,675.76	10,424.47	121.31	114.70	163.01	-6,452.67	479.05	650.90	536.67	114.23	5.698	
16,100.00	9,800.00	16,791.13	10,421.03	123.14	116.71	162.69	-6,567.84	485.01	648.71	531.97	116.74	5.557	
16,200.00	9,800.00	16,895.35	10,416.49	124.97	118.54	162.34	-6,671.83	490.26	645.31	526.09	119.22	5.413	
16,300.00	9,800.00	16,999.28	10,411.09	126.80	120.36	162.02	-6,775.45	496.07	640.95	519.27	121.68	5.268	
16,400.00	9,800.00	17,081.00	10,408.48	128.63	121.77	161.79	-6,857.01	500.29	638.54	514.69	123.85	5.156	
16,421.36	9,800.00	17,093.04	10,408.35	129.02	121.98	161.75	-6,869.04	500.85	638.46	514.24	124.21	5.140	
16,500.00	9,800.00	17,161.84	10,408.22	130.46	123.15	161.57	-6,937.77	503.98	639.07	513.18	125.89	5.077	
16,600.00	9,800.00	17,269.03	10,408.65	132.29	125.00	161.35	-7,044.82	509.30	640.28	512.02	128.26	4.992	
16,700.00	9,800.00	17,352.86	10,409.46	134.13	126.45	161.21	-7,128.54	513.68	641.95	511.80	130.15	4.932	
16,800.00	9,800.00	17,449.67	10,411.95	135.96	128.12	161.05	-7,225.20	518.29	645.28	513.02	132.26	4.879	
16,900.00	9,800.00	17,549.86	10,414.74	137.80	129.86	160.93	-7,325.22	523.43	648.71	514.36	134.36	4.828	
16,985.33	9,800.00	17,635.15	10,417.12	139.36	131.36	160.83	-7,410.36	527.89	651.61	515.48	136.13	4.787	

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



TDS
Anticollision Report



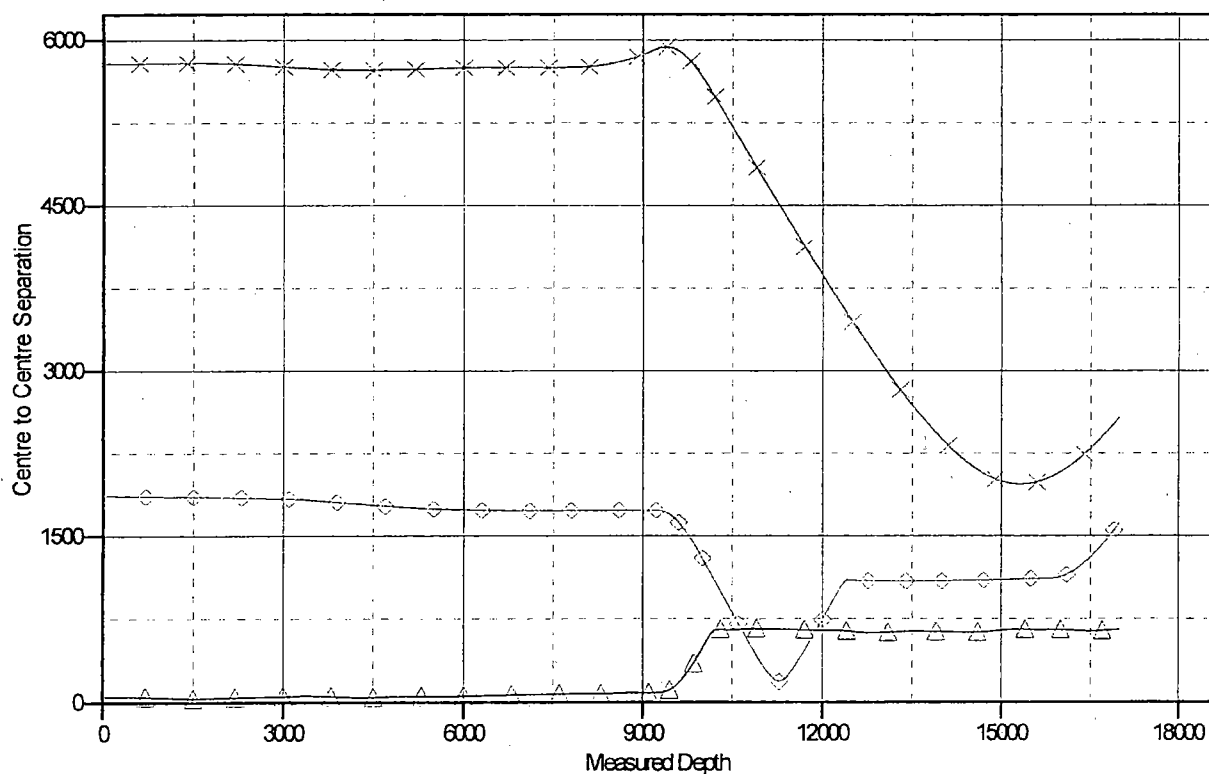
Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #58H
Site Error: 0.00 usft
Reference Well: Lea Unit #58H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #58H
TVD Reference: KB @ 3679.00usft (McVay #4)
MD Reference: KB @ 3679.00usft (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 @ 3679.00usft (McVay #4)
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: Lea Unit #58H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.44°

Ladder Plot



LEGEND

◆ Lea Unit#04H, OH, OHV0

✕ Lea Unit#14, OH, OHV0

△ Lea Unit#57H, Lateral#1, Lateral#1 V0

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



TDS
Anticollision Report



Company: Legacy Reserves
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