



Section Details

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	9927.04	0.00	0.00	9927.04	0.00	0.00	0.00	0.00	0.00	
3	10827.04	90.00	357.55	10500.00	572.43	-24.47	10.00	357.55	572.96	
4	18211.44	90.00	357.55	10500.00	7960.10	-339.90	0.00	0.00	7957.36	BHL-D1 (LU#60H/L1)

Legacy Reserves
 Project: Lea County, NM (NAD-27 2015)
 Site: Lea Unit #60H
 Well: Lea Unit #60H
 Wellbore: Lateral #1
 Plan: Design #1 (Lea Unit #60H/Lateral #1)

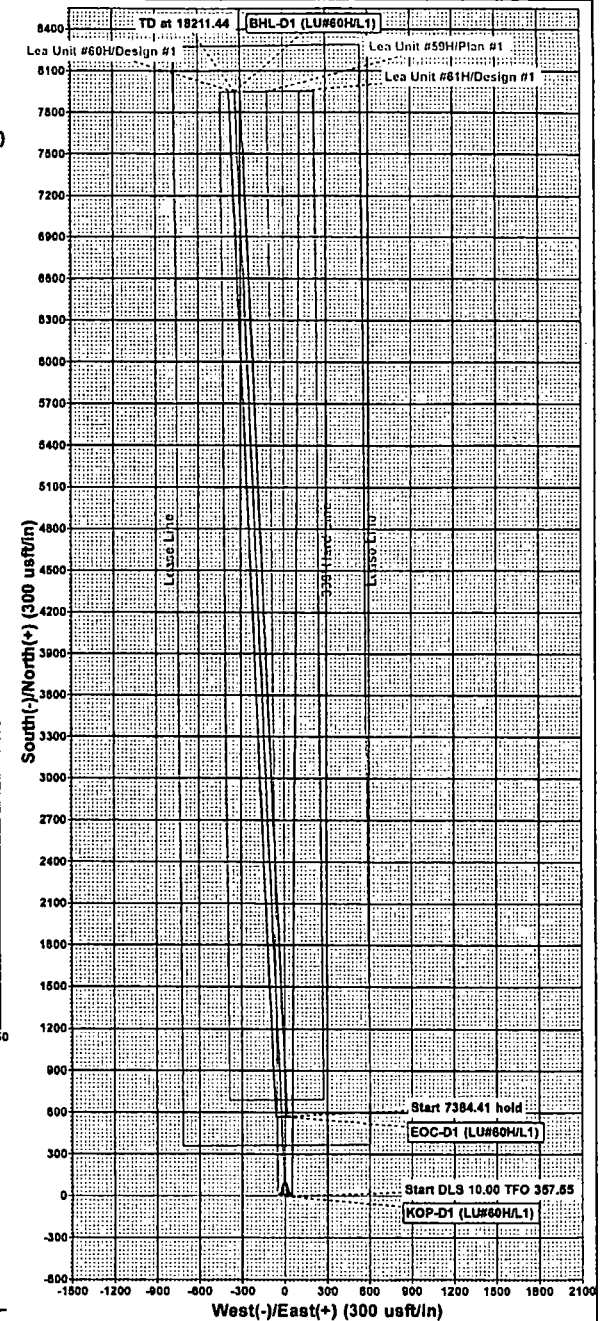
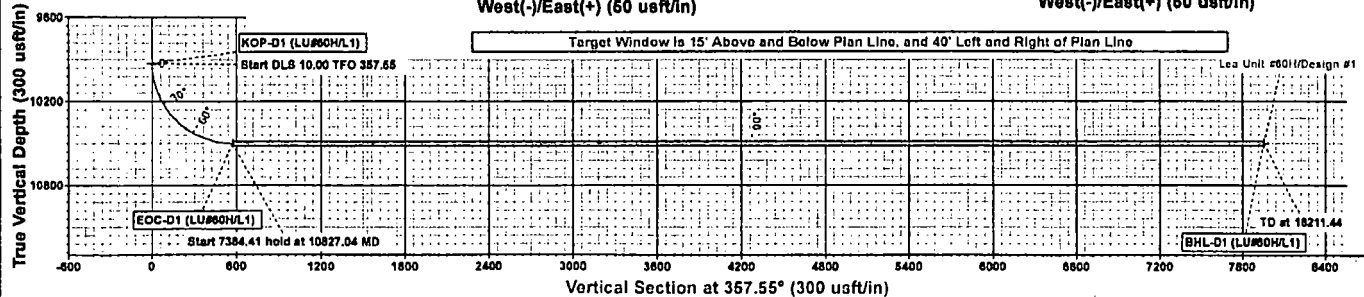
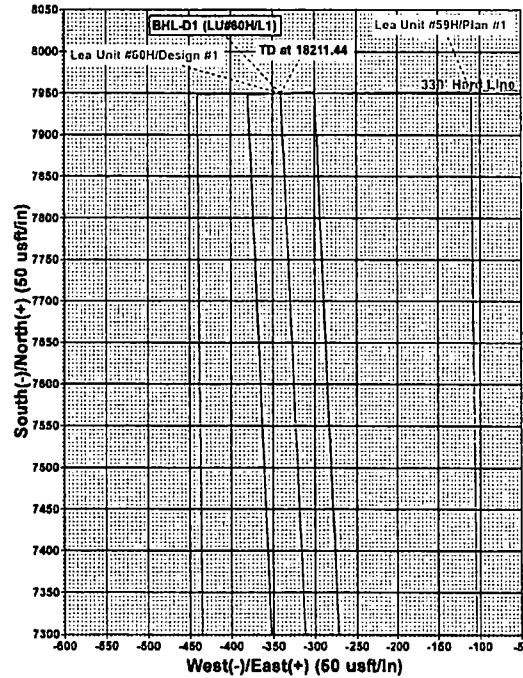
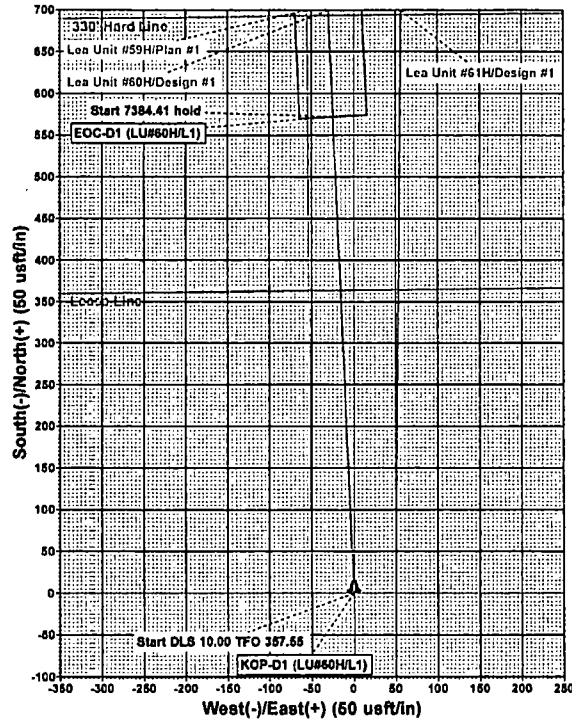
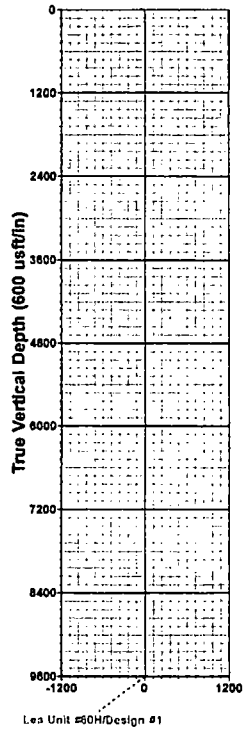
WELL DETAILS: Lea Unit #60H

Ground Elevation:: 3676.00
 RKB Elevation: KB @ 3694.00uoft (McVay 4)
 Rig Name: McVay 4



Azimuths to Grid North
 True North: -0.45°
 Magnetic North: -0.45°
 Magnetic Field
 Strength: 0.05nT
 Dip Angle: 0.00°
 Date: 11/20/2016
 Model: USER DEFINED

Northing 567524.00 Easting 756024.70 Latitude 32° 33' 26.944 N Longitude 103° 30' 8.663 W



Plan: Design #1 (Lea Unit #60H/Lateral #1)
 Issued By: Well Planner Date: 15:24, December 03 2016

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

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



Legacy Reserves

Lea County, NM (NAD-27 2015)

Lea Unit #60H

Lea Unit #60H

Lateral #1

Plan: Design #1

Standard Planning Report

03 December, 2016

HOBBS OCD

SEP 18 2017

RECEIVED





TDS
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Lea Unit #60H
Company:	Legacy Reserves	TVD Reference:	KB @ 3694.00usft (McVay 4)
Project:	Lea County, NM (NAD-27 2015)	MD Reference:	KB @ 3694.00usft (McVay 4)
Site:	Lea Unit #60H	North Reference:	Grid
Well:	Lea Unit #60H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral #1		
Design:	Design #1		

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 #60H				
Site Position:	Map	Northing:	567,524.00 usft	Latitude:	32° 33' 26.944 N
From:	Map	Easting:	756,024.70 usft	Longitude:	103° 30' 8.563 W
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	0.45 °

Well	Lea Unit #60H					
Well Position	+N/-S	0.00 usft	Northing:	567,524.00 usft	Latitude:	32° 33' 26.944 N
	+E/-W	0.00 usft	Easting:	756,024.70 usft	Longitude:	103° 30' 8.563 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,676.00 usft

Wellbore:	Lateral #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	User Defined	11/20/2016	0.00	0.00	0

Design:	Design #1				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	357.55	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,927.04	0.00	0.00	9,927.04	0.00	0.00	0.00	0.00	0.00	0.00	
10,827.04	90.00	357.55	10,500.00	572.43	-24.47	10.00	10.00	-0.27	357.55	
18,211.45	90.00	357.55	10,500.00	7,950.10	-339.90	0.00	0.00	0.00	0.00	BHL-D1 (LU#60H/L1)



TDS
Planning Report



Database: EDM 5000.1 Single User Db
Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Site: Lea Unit #60H
Well: Lea Unit #60H
Wellbore: Lateral #1
Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #60H
TVD Reference: KB @ 3694.00usft (McVay 4)
MD Reference: KB @ 3694.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00



TDS
Planning Report



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Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	0.00	0.00
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00	0.00	0.00
8,900.00	0.00	0.00	8,900.00	0.00	0.00	0.00	0.00	0.00	0.00
9,000.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00	0.00	0.00
9,100.00	0.00	0.00	9,100.00	0.00	0.00	0.00	0.00	0.00	0.00
9,200.00	0.00	0.00	9,200.00	0.00	0.00	0.00	0.00	0.00	0.00
9,300.00	0.00	0.00	9,300.00	0.00	0.00	0.00	0.00	0.00	0.00
9,400.00	0.00	0.00	9,400.00	0.00	0.00	0.00	0.00	0.00	0.00
9,500.00	0.00	0.00	9,500.00	0.00	0.00	0.00	0.00	0.00	0.00
9,600.00	0.00	0.00	9,600.00	0.00	0.00	0.00	0.00	0.00	0.00
9,700.00	0.00	0.00	9,700.00	0.00	0.00	0.00	0.00	0.00	0.00
9,800.00	0.00	0.00	9,800.00	0.00	0.00	0.00	0.00	0.00	0.00
9,900.00	0.00	0.00	9,900.00	0.00	0.00	0.00	0.00	0.00	0.00
9,927.04	0.00	0.00	9,927.04	0.00	0.00	0.00	0.00	0.00	0.00
Start DLS 10.00 TFO 357.55									
9,950.00	2.30	357.55	9,949.99	0.46	-0.02	0.46	10.00	10.00	0.00
10,000.00	7.30	357.55	9,999.80	4.63	-0.20	4.64	10.00	10.00	0.00
10,050.00	12.30	357.55	10,049.06	13.13	-0.56	13.14	10.00	10.00	0.00
10,100.00	17.30	357.55	10,097.39	25.88	-1.11	25.91	10.00	10.00	0.00
10,150.00	22.30	357.55	10,144.42	42.80	-1.83	42.84	10.00	10.00	0.00



TDS
Planning Report



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MD Reference: KB @ 3694.00usft (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)
10,200.00	27.30	357.55	10,189.79	63.74	-2.73	63.80	10.00	10.00	0.00
10,250.00	32.30	357.55	10,233.17	88.56	-3.79	88.64	10.00	10.00	0.00
10,300.00	37.30	357.55	10,274.21	117.05	-5.00	117.16	10.00	10.00	0.00
10,350.00	42.30	357.55	10,312.62	149.02	-6.37	149.15	10.00	10.00	0.00
10,400.00	47.30	357.55	10,348.09	184.20	-7.88	184.37	10.00	10.00	0.00
10,450.00	52.30	357.55	10,380.35	222.34	-9.51	222.55	10.00	10.00	0.00
10,500.00	57.30	357.55	10,409.17	263.15	-11.25	263.39	10.00	10.00	0.00
10,550.00	62.30	357.55	10,434.31	306.31	-13.10	306.59	10.00	10.00	0.00
10,600.00	67.30	357.55	10,455.60	351.49	-15.03	351.81	10.00	10.00	0.00
10,650.00	72.30	357.55	10,472.86	398.36	-17.03	398.72	10.00	10.00	0.00
10,700.00	77.30	357.55	10,485.97	446.55	-19.09	446.96	10.00	10.00	0.00
10,750.00	82.30	357.55	10,494.83	495.70	-21.19	496.15	10.00	10.00	0.00
10,800.00	87.30	357.55	10,499.36	545.43	-23.32	545.93	10.00	10.00	0.00
10,827.04	90.00	357.55	10,500.00	572.43	-24.47	572.96	10.00	10.00	0.00
Start 7384.41 hold at 10827.04 MD									
10,900.00	90.00	357.55	10,500.00	645.33	-27.59	645.92	0.00	0.00	0.00
11,000.00	90.00	357.55	10,500.00	745.24	-31.86	745.92	0.00	0.00	0.00
11,100.00	90.00	357.55	10,500.00	845.15	-36.13	845.92	0.00	0.00	0.00
11,200.00	90.00	357.55	10,500.00	945.05	-40.41	945.92	0.00	0.00	0.00
11,300.00	90.00	357.55	10,500.00	1,044.96	-44.68	1,045.92	0.00	0.00	0.00
11,400.00	90.00	357.55	10,500.00	1,144.87	-48.95	1,145.92	0.00	0.00	0.00
11,500.00	90.00	357.55	10,500.00	1,244.78	-53.22	1,245.92	0.00	0.00	0.00
11,600.00	90.00	357.55	10,500.00	1,344.69	-57.49	1,345.92	0.00	0.00	0.00
11,700.00	90.00	357.55	10,500.00	1,444.60	-61.76	1,445.92	0.00	0.00	0.00
11,800.00	90.00	357.55	10,500.00	1,544.51	-66.03	1,545.92	0.00	0.00	0.00
11,900.00	90.00	357.55	10,500.00	1,644.42	-70.31	1,645.92	0.00	0.00	0.00
12,000.00	90.00	357.55	10,500.00	1,744.32	-74.58	1,745.92	0.00	0.00	0.00
12,100.00	90.00	357.55	10,500.00	1,844.23	-78.85	1,845.92	0.00	0.00	0.00
12,200.00	90.00	357.55	10,500.00	1,944.14	-83.12	1,945.92	0.00	0.00	0.00
12,300.00	90.00	357.55	10,500.00	2,044.05	-87.39	2,045.92	0.00	0.00	0.00
12,400.00	90.00	357.55	10,500.00	2,143.96	-91.66	2,145.92	0.00	0.00	0.00
12,500.00	90.00	357.55	10,500.00	2,243.87	-95.93	2,245.92	0.00	0.00	0.00
12,600.00	90.00	357.55	10,500.00	2,343.78	-100.21	2,345.92	0.00	0.00	0.00
12,700.00	90.00	357.55	10,500.00	2,443.69	-104.48	2,445.92	0.00	0.00	0.00
12,800.00	90.00	357.55	10,500.00	2,543.59	-108.75	2,545.92	0.00	0.00	0.00
12,900.00	90.00	357.55	10,500.00	2,643.50	-113.02	2,645.92	0.00	0.00	0.00
13,000.00	90.00	357.55	10,500.00	2,743.41	-117.29	2,745.92	0.00	0.00	0.00
13,100.00	90.00	357.55	10,500.00	2,843.32	-121.56	2,845.92	0.00	0.00	0.00
13,200.00	90.00	357.55	10,500.00	2,943.23	-125.84	2,945.92	0.00	0.00	0.00
13,300.00	90.00	357.55	10,500.00	3,043.14	-130.11	3,045.92	0.00	0.00	0.00
13,400.00	90.00	357.55	10,500.00	3,143.05	-134.38	3,145.92	0.00	0.00	0.00
13,500.00	90.00	357.55	10,500.00	3,242.96	-138.65	3,245.92	0.00	0.00	0.00
13,600.00	90.00	357.55	10,500.00	3,342.86	-142.92	3,345.92	0.00	0.00	0.00
13,700.00	90.00	357.55	10,500.00	3,442.77	-147.19	3,445.92	0.00	0.00	0.00
13,800.00	90.00	357.55	10,500.00	3,542.68	-151.46	3,545.92	0.00	0.00	0.00
13,900.00	90.00	357.55	10,500.00	3,642.59	-155.74	3,645.92	0.00	0.00	0.00
14,000.00	90.00	357.55	10,500.00	3,742.50	-160.01	3,745.92	0.00	0.00	0.00
14,100.00	90.00	357.55	10,500.00	3,842.41	-164.28	3,845.92	0.00	0.00	0.00
14,200.00	90.00	357.55	10,500.00	3,942.32	-168.55	3,945.92	0.00	0.00	0.00
14,300.00	90.00	357.55	10,500.00	4,042.23	-172.82	4,045.92	0.00	0.00	0.00
14,400.00	90.00	357.55	10,500.00	4,142.13	-177.09	4,145.92	0.00	0.00	0.00
14,500.00	90.00	357.55	10,500.00	4,242.04	-181.37	4,245.92	0.00	0.00	0.00
14,600.00	90.00	357.55	10,500.00	4,341.95	-185.64	4,345.92	0.00	0.00	0.00
14,700.00	90.00	357.55	10,500.00	4,441.86	-189.91	4,445.92	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 #60H
Well: Lea Unit #60H
Wellbore: Lateral #1
Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #60H
TVD Reference: KB @ 3694.00usft (McVay 4)
MD Reference: KB @ 3694.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,800.00	90.00	357.55	10,500.00	4,541.77	-194.18	4,545.92	0.00	0.00	0.00
14,900.00	90.00	357.55	10,500.00	4,641.68	-198.45	4,645.92	0.00	0.00	0.00
15,000.00	90.00	357.55	10,500.00	4,741.59	-202.72	4,745.92	0.00	0.00	0.00
15,100.00	90.00	357.55	10,500.00	4,841.49	-206.99	4,845.92	0.00	0.00	0.00
15,200.00	90.00	357.55	10,500.00	4,941.40	-211.27	4,945.92	0.00	0.00	0.00
15,300.00	90.00	357.55	10,500.00	5,041.31	-215.54	5,045.92	0.00	0.00	0.00
15,400.00	90.00	357.55	10,500.00	5,141.22	-219.81	5,145.92	0.00	0.00	0.00
15,500.00	90.00	357.55	10,500.00	5,241.13	-224.08	5,245.92	0.00	0.00	0.00
15,600.00	90.00	357.55	10,500.00	5,341.04	-228.35	5,345.92	0.00	0.00	0.00
15,700.00	90.00	357.55	10,500.00	5,440.95	-232.62	5,445.92	0.00	0.00	0.00
15,800.00	90.00	357.55	10,500.00	5,540.86	-236.89	5,545.92	0.00	0.00	0.00
15,900.00	90.00	357.55	10,500.00	5,640.76	-241.17	5,645.92	0.00	0.00	0.00
16,000.00	90.00	357.55	10,500.00	5,740.67	-245.44	5,745.92	0.00	0.00	0.00
16,100.00	90.00	357.55	10,500.00	5,840.58	-249.71	5,845.92	0.00	0.00	0.00
16,200.00	90.00	357.55	10,500.00	5,940.49	-253.98	5,945.92	0.00	0.00	0.00
16,300.00	90.00	357.55	10,500.00	6,040.40	-258.25	6,045.92	0.00	0.00	0.00
16,400.00	90.00	357.55	10,500.00	6,140.31	-262.52	6,145.92	0.00	0.00	0.00
16,500.00	90.00	357.55	10,500.00	6,240.22	-266.80	6,245.92	0.00	0.00	0.00
16,600.00	90.00	357.55	10,500.00	6,340.13	-271.07	6,345.92	0.00	0.00	0.00
16,700.00	90.00	357.55	10,500.00	6,440.03	-275.34	6,445.92	0.00	0.00	0.00
16,800.00	90.00	357.55	10,500.00	6,539.94	-279.61	6,545.92	0.00	0.00	0.00
16,900.00	90.00	357.55	10,500.00	6,639.85	-283.88	6,645.92	0.00	0.00	0.00
17,000.00	90.00	357.55	10,500.00	6,739.76	-288.15	6,745.92	0.00	0.00	0.00
17,100.00	90.00	357.55	10,500.00	6,839.67	-292.42	6,845.92	0.00	0.00	0.00
17,200.00	90.00	357.55	10,500.00	6,939.58	-296.70	6,945.92	0.00	0.00	0.00
17,300.00	90.00	357.55	10,500.00	7,039.49	-300.97	7,045.92	0.00	0.00	0.00
17,400.00	90.00	357.55	10,500.00	7,139.40	-305.24	7,145.92	0.00	0.00	0.00
17,500.00	90.00	357.55	10,500.00	7,239.30	-309.51	7,245.92	0.00	0.00	0.00
17,600.00	90.00	357.55	10,500.00	7,339.21	-313.78	7,345.92	0.00	0.00	0.00
17,700.00	90.00	357.55	10,500.00	7,439.12	-318.05	7,445.92	0.00	0.00	0.00
17,800.00	90.00	357.55	10,500.00	7,539.03	-322.33	7,545.92	0.00	0.00	0.00
17,900.00	90.00	357.55	10,500.00	7,638.94	-326.60	7,645.92	0.00	0.00	0.00
18,000.00	90.00	357.55	10,500.00	7,738.85	-330.87	7,745.92	0.00	0.00	0.00
18,100.00	90.00	357.55	10,500.00	7,838.76	-335.14	7,845.92	0.00	0.00	0.00
18,200.00	90.00	357.55	10,500.00	7,938.67	-339.41	7,945.92	0.00	0.00	0.00
18,211.45	90.00	357.55	10,500.00	7,950.10	-339.90	7,957.36	0.00	0.00	0.00

TD at 18211.44



TDS
Planning Report



Database: EDM 5000.1 Single User Db
Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Site: Lea Unit #60H
Well: Lea Unit #60H
Wellbore: Lateral #1
Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #60H
TVD Reference: KB @ 3694.00usft (McVay 4)
MD Reference: KB @ 3694.00usft (McVay 4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Design-Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
KOP-D1 (LU#60H/L1) - plan hits target center - Point	0.00	0.00	9,927.04	0.00	0.00	567,524.00	756,024.70	32° 33' 26.944 N	103° 30' 8.563 W
EOC-D1 (LU#60H/L1) - plan hits target center - Point	0.00	0.00	10,500.00	572.43	-24.47	568,096.44	756,000.22	32° 33' 32.610 N	103° 30' 8.796 W
BHL-D1 (LU#60H/L1) - plan hits target center - Rectangle (sides W80.00 H7,384.40 D30.00)	0.00	357.55	10,500.00	7,950.10	-339.90	575,474.10	755,684.80	32° 34' 45.635 N	103° 30' 11.809 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
9,927.04	9,927.04	0.00	0.00	Start DLS 10.00 TFO 357.55
10,827.04	10,500.00	572.43	-24.47	Start 7384.41 hold at 10827.04 MD
18,211.45	10,500.00	7,950.10	-339.90	TD at 18211.44



Legacy Reserves

Lea County, NM (NAD-27 2015)

Lea Unit #60H

Lea Unit #60H

Lateral #1

Design #1

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Anticollision Report

03 December, 2016



Company:	Legacy Reserves
Project:	Lea County, NM (NAD-27 2015)
Reference Site:	Lea Unit #60H
Site Error:	0.00 usft
Reference Well:	Lea Unit #60H
Well Error:	0.00 usft
Reference Wellbore	Lateral #1
Reference Design:	Design #1

Local Co-ordinate Reference:	Well Lea Unit #60H
TVD Reference:	KB @ 3694.00usft (McVay 4)
MD Reference:	KB @ 3694.00usft (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	12/3/2016		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	18,211.45	Design #1 (Lateral #1)	MWD	MWD - Standard	

Summary							
Site Name	Reference	Offset	Distance		Separation		Warning
	Measured Depth (usft)	Measured Depth (usft)	Between Centres (usft)	Between Ellipses (usft)			
Offset Well - Wellbore - Design							
Lea Unit #59H							
Lea Unit #59H - OH - Plan #1	9,971.65	9,971.61	49.97	5.41	1.122	Level 2, CC	
Lea Unit #59H - OH - Plan #1	10,000.00	9,999.80	50.06	5.38	1.120	Level 2, ES, SF	
Lea Unit #61H							
Lea Unit #61H - Lateral #1 - Design #1	9,201.10	9,202.10	50.10	9.00	1.219	Level 2, CC	
Lea Unit #61H - Lateral #1 - Design #1	9,300.00	9,300.47	50.42	8.88	1.214	Level 2, ES, SF	

Offset Design				Lea Unit #59H - Lea Unit #59H - OH - Plan #1							Offset Site Error: 0.00 usft				
Survey Program: 0-MWD														Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
							+N-S (usft)	+E-W (usft)							
0.00	0.00	0.00	0.00	0.00	0.00	-90.46	-0.40	-50.00	50.00						
100.00	100.00	100.00	100.00	0.09	0.09	-90.46	-0.40	-50.00	50.00	49.82	0.18	271.293			
200.00	200.00	200.00	200.00	0.32	0.32	-90.46	-0.40	-50.00	50.00	49.37	0.63	78.887			
300.00	300.00	300.00	300.00	0.54	0.54	-90.46	-0.40	-50.00	50.00	48.92	1.08	46.154			
400.00	400.00	400.00	400.00	0.77	0.77	-90.46	-0.40	-50.00	50.00	48.47	1.53	32.619			
500.00	500.00	500.00	500.00	0.99	0.99	-90.46	-0.40	-50.00	50.00	48.02	1.98	25.222			
600.00	600.00	600.00	600.00	1.22	1.22	-90.46	-0.40	-50.00	50.00	47.57	2.43	20.560			
700.00	700.00	700.00	700.00	1.44	1.44	-90.46	-0.40	-50.00	50.00	47.12	2.88	17.353			
800.00	800.00	800.00	800.00	1.67	1.67	-90.46	-0.40	-50.00	50.00	46.67	3.33	15.011			
900.00	900.00	900.00	900.00	1.89	1.89	-90.46	-0.40	-50.00	50.00	46.22	3.78	13.226			
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-90.46	-0.40	-50.00	50.00	45.77	4.23	11.820			
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	-90.46	-0.40	-50.00	50.00	45.32	4.68	10.685			
1,200.00	1,200.00	1,200.00	1,200.00	2.56	2.56	-90.46	-0.40	-50.00	50.00	44.87	5.13	9.748			
1,300.00	1,300.00	1,300.00	1,300.00	2.79	2.79	-90.46	-0.40	-50.00	50.00	44.42	5.58	8.963			
1,400.00	1,400.00	1,400.00	1,400.00	3.01	3.01	-90.46	-0.40	-50.00	50.00	43.97	6.03	8.295			
1,500.00	1,500.00	1,500.00	1,500.00	3.24	3.24	-90.46	-0.40	-50.00	50.00	43.52	6.48	7.719			
1,600.00	1,600.00	1,600.00	1,600.00	3.46	3.46	-90.46	-0.40	-50.00	50.00	43.07	6.93	7.218			
1,700.00	1,700.00	1,700.00	1,700.00	3.69	3.69	-90.46	-0.40	-50.00	50.00	42.62	7.38	6.778			
1,800.00	1,800.00	1,800.00	1,800.00	3.91	3.91	-90.46	-0.40	-50.00	50.00	42.18	7.83	6.389			
1,900.00	1,900.00	1,900.00	1,900.00	4.14	4.14	-90.46	-0.40	-50.00	50.00	41.73	8.28	6.042			
2,000.00	2,000.00	2,000.00	2,000.00	4.36	4.36	-90.46	-0.40	-50.00	50.00	41.28	8.73	5.731			



TDS
Anticollision Report



Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #60H
Site Error: 0.00 usft
Reference Well: Lea Unit #60H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #60H
TVD Reference: KB @ 3694.00usft (McVay 4)
MD Reference: KB @ 3694.00usft (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 #59H - Lea Unit #59H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centro +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
2,100.00	2,100.00	2,100.00	2,100.00	4.59	4.59	-90.46	-0.40	-50.00	50.00	40.83	9.17	5.450		
2,200.00	2,200.00	2,200.00	2,200.00	4.81	4.81	-90.46	-0.40	-50.00	50.00	40.38	9.62	5.195		
2,300.00	2,300.00	2,300.00	2,300.00	5.04	5.04	-90.46	-0.40	-50.00	50.00	39.93	10.07	4.963		
2,400.00	2,400.00	2,400.00	2,400.00	5.26	5.26	-90.46	-0.40	-50.00	50.00	39.48	10.52	4.751		
2,500.00	2,500.00	2,500.00	2,500.00	5.49	5.49	-90.46	-0.40	-50.00	50.00	39.03	10.97	4.557		
2,600.00	2,600.00	2,600.00	2,600.00	5.71	5.71	-90.46	-0.40	-50.00	50.00	38.58	11.42	4.377		
2,700.00	2,700.00	2,700.00	2,700.00	5.94	5.94	-90.46	-0.40	-50.00	50.00	38.13	11.87	4.212		
2,800.00	2,800.00	2,800.00	2,800.00	6.16	6.16	-90.46	-0.40	-50.00	50.00	37.68	12.32	4.058		
2,900.00	2,900.00	2,900.00	2,900.00	6.39	6.39	-90.46	-0.40	-50.00	50.00	37.23	12.77	3.915		
3,000.00	3,000.00	3,000.00	3,000.00	6.61	6.61	-90.46	-0.40	-50.00	50.00	36.78	13.22	3.782		
3,100.00	3,100.00	3,100.00	3,100.00	6.84	6.84	-90.46	-0.40	-50.00	50.00	36.33	13.67	3.658		
3,200.00	3,200.00	3,200.00	3,200.00	7.06	7.06	-90.46	-0.40	-50.00	50.00	35.88	14.12	3.541		
3,300.00	3,300.00	3,300.00	3,300.00	7.28	7.28	-90.46	-0.40	-50.00	50.00	35.43	14.57	3.432		
3,400.00	3,400.00	3,400.00	3,400.00	7.51	7.51	-90.46	-0.40	-50.00	50.00	34.98	15.02	3.329		
3,500.00	3,500.00	3,500.00	3,500.00	7.73	7.73	-90.46	-0.40	-50.00	50.00	34.53	15.47	3.233		
3,600.00	3,600.00	3,600.00	3,600.00	7.96	7.96	-90.46	-0.40	-50.00	50.00	34.08	15.92	3.141		
3,700.00	3,700.00	3,700.00	3,700.00	8.18	8.18	-90.46	-0.40	-50.00	50.00	33.63	16.37	3.055		
3,800.00	3,800.00	3,800.00	3,800.00	8.41	8.41	-90.46	-0.40	-50.00	50.00	33.18	16.82	2.973		
3,900.00	3,900.00	3,900.00	3,900.00	8.63	8.63	-90.46	-0.40	-50.00	50.00	32.74	17.27	2.896		
4,000.00	4,000.00	4,000.00	4,000.00	8.86	8.86	-90.46	-0.40	-50.00	50.00	32.29	17.72	2.822		
4,100.00	4,100.00	4,100.00	4,100.00	9.08	9.08	-90.46	-0.40	-50.00	50.00	31.84	18.17	2.753		
4,200.00	4,200.00	4,200.00	4,200.00	9.31	9.31	-90.46	-0.40	-50.00	50.00	31.39	18.62	2.686		
4,300.00	4,300.00	4,300.00	4,300.00	9.53	9.53	-90.46	-0.40	-50.00	50.00	30.94	19.06	2.623		
4,400.00	4,400.00	4,400.00	4,400.00	9.76	9.76	-90.46	-0.40	-50.00	50.00	30.49	19.51	2.562		
4,500.00	4,500.00	4,500.00	4,500.00	9.98	9.98	-90.46	-0.40	-50.00	50.00	30.04	19.96	2.505		
4,600.00	4,600.00	4,600.00	4,600.00	10.21	10.21	-90.46	-0.40	-50.00	50.00	29.59	20.41	2.449		
4,700.00	4,700.00	4,700.00	4,700.00	10.43	10.43	-90.46	-0.40	-50.00	50.00	29.14	20.86	2.397		
4,800.00	4,800.00	4,800.00	4,800.00	10.66	10.66	-90.46	-0.40	-50.00	50.00	28.69	21.31	2.346		
4,900.00	4,900.00	4,900.00	4,900.00	10.88	10.88	-90.46	-0.40	-50.00	50.00	28.24	21.76	2.298		
5,000.00	5,000.00	5,000.00	5,000.00	11.11	11.11	-90.46	-0.40	-50.00	50.00	27.79	22.21	2.251		
5,100.00	5,100.00	5,100.00	5,100.00	11.33	11.33	-90.46	-0.40	-50.00	50.00	27.34	22.66	2.207		
5,200.00	5,200.00	5,200.00	5,200.00	11.56	11.56	-90.46	-0.40	-50.00	50.00	26.89	23.11	2.164		
5,300.00	5,300.00	5,300.00	5,300.00	11.78	11.78	-90.46	-0.40	-50.00	50.00	26.44	23.56	2.122		
5,400.00	5,400.00	5,400.00	5,400.00	12.00	12.00	-90.46	-0.40	-50.00	50.00	25.99	24.01	2.083		
5,500.00	5,500.00	5,500.00	5,500.00	12.23	12.23	-90.46	-0.40	-50.00	50.00	25.54	24.46	2.044		
5,600.00	5,600.00	5,600.00	5,600.00	12.45	12.45	-90.46	-0.40	-50.00	50.00	25.09	24.91	2.007		
5,700.00	5,700.00	5,700.00	5,700.00	12.68	12.68	-90.46	-0.40	-50.00	50.00	24.64	25.36	1.972		
5,800.00	5,800.00	5,800.00	5,800.00	12.90	12.90	-90.46	-0.40	-50.00	50.00	24.19	25.81	1.937		
5,900.00	5,900.00	5,900.00	5,900.00	13.13	13.13	-90.46	-0.40	-50.00	50.00	23.74	26.26	1.904		
6,000.00	6,000.00	6,000.00	6,000.00	13.35	13.35	-90.46	-0.40	-50.00	50.00	23.29	26.71	1.872		
6,100.00	6,100.00	6,100.00	6,100.00	13.58	13.58	-90.46	-0.40	-50.00	50.00	22.85	27.16	1.841		
6,200.00	6,200.00	6,200.00	6,200.00	13.80	13.80	-90.46	-0.40	-50.00	50.00	22.40	27.61	1.811		
6,300.00	6,300.00	6,300.00	6,300.00	14.03	14.03	-90.46	-0.40	-50.00	50.00	21.95	28.06	1.782		
6,400.00	6,400.00	6,400.00	6,400.00	14.25	14.25	-90.46	-0.40	-50.00	50.00	21.50	28.50	1.754		
6,500.00	6,500.00	6,500.00	6,500.00	14.48	14.48	-90.46	-0.40	-50.00	50.00	21.05	28.95	1.727		
6,600.00	6,600.00	6,600.00	6,600.00	14.70	14.70	-90.46	-0.40	-50.00	50.00	20.60	29.40	1.701		
6,700.00	6,700.00	6,700.00	6,700.00	14.93	14.93	-90.46	-0.40	-50.00	50.00	20.15	29.85	1.675		
6,800.00	6,800.00	6,800.00	6,800.00	15.15	15.15	-90.46	-0.40	-50.00	50.00	19.70	30.30	1.650		
6,900.00	6,900.00	6,900.00	6,900.00	15.38	15.38	-90.46	-0.40	-50.00	50.00	19.25	30.75	1.626		
7,000.00	7,000.00	7,000.00	7,000.00	15.60	15.60	-90.46	-0.40	-50.00	50.00	18.80	31.20	1.603		
7,100.00	7,100.00	7,100.00	7,100.00	15.83	15.83	-90.46	-0.40	-50.00	50.00	18.35	31.65	1.580		
7,200.00	7,200.00	7,200.00	7,200.00	16.05	16.05	-90.46	-0.40	-50.00	50.00	17.90	32.10	1.558		

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 #60H
Site Error: 0.00 usft
Reference Well: Lea Unit #60H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #60H
TVD Reference: KB @ 3694.00usft (McVay 4)
MD Reference: KB @ 3694.00usft (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 #59H - Lea Unit #59H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: D-MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth Depth (usft)	Vertical Depth Depth (usft)	Measured Depth Depth (usft)	Vertical Depth Depth (usft)	Reference (usft)	Offset (usft)	Highside Toothface (")	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
7,300.00	7,300.00	7,300.00	7,300.00	16.28	16.28	-90.46	-0.40	-50.00	50.00	17.45	32.55	1.536		
7,400.00	7,400.00	7,400.00	7,400.00	16.50	16.50	-90.46	-0.40	-50.00	50.00	17.00	33.00	1.515		
7,500.00	7,500.00	7,500.00	7,500.00	16.72	16.72	-90.46	-0.40	-50.00	50.00	16.55	33.45	1.495 Level 3		
7,600.00	7,600.00	7,600.00	7,600.00	16.95	16.95	-90.46	-0.40	-50.00	50.00	16.10	33.90	1.475 Level 3		
7,700.00	7,700.00	7,700.00	7,700.00	17.17	17.17	-90.46	-0.40	-50.00	50.00	15.65	34.35	1.456 Level 3		
7,800.00	7,800.00	7,800.00	7,800.00	17.40	17.40	-90.46	-0.40	-50.00	50.00	15.20	34.80	1.437 Level 3		
7,900.00	7,900.00	7,900.00	7,900.00	17.62	17.62	-90.46	-0.40	-50.00	50.00	14.75	35.25	1.419 Level 3		
8,000.00	8,000.00	8,000.00	8,000.00	17.85	17.85	-90.46	-0.40	-50.00	50.00	14.30	35.70	1.401 Level 3		
8,100.00	8,100.00	8,100.00	8,100.00	18.07	18.07	-90.46	-0.40	-50.00	50.00	13.85	36.15	1.383 Level 3		
8,200.00	8,200.00	8,200.00	8,200.00	18.30	18.30	-90.46	-0.40	-50.00	50.00	13.41	36.60	1.366 Level 3		
8,300.00	8,300.00	8,300.00	8,300.00	18.52	18.52	-90.46	-0.40	-50.00	50.00	12.96	37.05	1.350 Level 3		
8,400.00	8,400.00	8,400.00	8,400.00	18.75	18.75	-90.46	-0.40	-50.00	50.00	12.51	37.50	1.334 Level 3		
8,500.00	8,500.00	8,500.00	8,500.00	18.97	18.97	-90.46	-0.40	-50.00	50.00	12.06	37.94	1.318 Level 3		
8,600.00	8,600.00	8,600.00	8,600.00	19.20	19.20	-90.46	-0.40	-50.00	50.00	11.61	38.39	1.302 Level 3		
8,700.00	8,700.00	8,700.00	8,700.00	19.42	19.42	-90.46	-0.40	-50.00	50.00	11.16	38.84	1.287 Level 3		
8,800.00	8,800.00	8,800.00	8,800.00	19.65	19.65	-90.46	-0.40	-50.00	50.00	10.71	39.29	1.273 Level 3		
8,900.00	8,900.00	8,900.00	8,900.00	19.87	19.87	-90.46	-0.40	-50.00	50.00	10.26	39.74	1.258 Level 3		
9,000.00	9,000.00	9,000.00	9,000.00	20.10	20.10	-90.46	-0.40	-50.00	50.00	9.81	40.19	1.244 Level 2		
9,100.00	9,100.00	9,100.00	9,100.00	20.32	20.32	-90.46	-0.40	-50.00	50.00	9.36	40.64	1.230 Level 2		
9,200.00	9,200.00	9,200.00	9,200.00	20.55	20.55	-90.46	-0.40	-50.00	50.00	8.91	41.09	1.217 Level 2		
9,300.00	9,300.00	9,300.00	9,300.00	20.77	20.77	-90.46	-0.40	-50.00	50.00	8.46	41.54	1.204 Level 2		
9,400.00	9,400.00	9,400.00	9,400.00	21.00	21.00	-90.46	-0.40	-50.00	50.00	8.01	41.99	1.191 Level 2		
9,500.00	9,500.00	9,500.00	9,500.00	21.22	21.22	-90.46	-0.40	-50.00	50.00	7.56	42.44	1.178 Level 2		
9,600.00	9,600.00	9,600.00	9,600.00	21.44	21.44	-90.46	-0.40	-50.00	50.00	7.11	42.89	1.166 Level 2		
9,700.00	9,700.00	9,700.00	9,700.00	21.67	21.67	-90.46	-0.40	-50.00	50.00	6.66	43.34	1.154 Level 2		
9,800.00	9,800.00	9,800.00	9,800.00	21.89	21.89	-90.46	-0.40	-50.00	50.00	6.21	43.79	1.142 Level 2		
9,900.00	9,900.00	9,900.00	9,900.00	22.12	22.12	-90.46	-0.40	-50.00	50.00	5.76	44.24	1.130 Level 2		
9,927.04	9,927.04	9,927.04	9,927.04	22.18	22.18	-90.46	-0.40	-50.00	50.00	5.64	44.36	1.127 Level 2		
9,950.00	9,949.99	9,949.99	9,949.99	22.23	22.23	-88.54	-0.40	-50.00	49.99	5.53	44.46	1.124 Level 2		
9,971.65	9,971.61	9,971.61	9,971.61	22.28	22.28	-90.00	-0.40	-50.00	49.97	5.41	44.56	1.122 Level 2, CC		
10,000.00	9,999.80	9,999.80	9,999.80	22.34	22.34	-93.30	-0.40	-50.00	50.06	5.38	44.68	1.120 Level 2, ES, SF		
10,050.00	10,049.06	10,049.06	10,049.06	22.46	22.45	-102.57	-0.40	-50.00	51.26	6.37	44.89	1.142 Level 2		
10,100.00	10,097.39	10,097.39	10,097.39	22.57	22.56	-114.79	-0.40	-50.00	55.51	10.41	45.10	1.231 Level 2		
10,150.00	10,144.42	10,144.42	10,144.42	22.67	22.67	-127.27	-0.40	-50.00	64.70	19.38	45.32	1.428 Level 3		
10,200.00	10,189.79	10,189.79	10,189.79	22.78	22.77	-137.82	-0.40	-50.00	79.68	34.14	45.54	1.750		
10,250.00	10,233.17	10,233.17	10,233.17	22.88	22.87	-145.77	-0.40	-50.00	100.24	54.50	45.75	2.191		
10,300.00	10,274.21	10,274.21	10,274.21	23.04	22.96	-151.44	-0.40	-50.00	125.78	79.83	45.94	2.738		
10,350.00	10,312.62	10,312.62	10,312.62	23.24	23.05	-155.38	-0.40	-50.00	155.66	109.54	46.12	3.375		
10,400.00	10,348.09	10,358.06	10,358.04	23.49	23.15	-159.07	0.44	-50.01	188.79	142.53	46.26	4.081		
10,450.00	10,380.35	10,413.55	10,413.22	23.80	23.27	-162.43	6.12	-50.05	222.43	176.32	46.11	4.824		
10,500.00	10,409.17	10,475.59	10,473.93	24.18	23.41	-165.12	18.76	-50.14	255.80	210.28	45.52	5.619		
10,550.00	10,434.31	10,546.31	10,540.99	24.63	23.57	-167.39	41.06	-50.31	288.31	243.98	44.33	6.504		
10,600.00	10,455.60	10,628.57	10,614.84	25.15	23.73	-169.39	77.15	-50.58	319.20	276.92	42.28	7.550		
10,650.00	10,472.86	10,725.98	10,694.51	25.76	23.96	-171.17	132.99	-51.00	347.42	308.35	39.07	8.892		
10,700.00	10,485.97	10,842.43	10,775.67	26.43	24.30	-172.75	216.22	-51.63	371.53	337.12	34.42	10.795		
10,750.00	10,494.83	10,980.28	10,847.65	27.17	24.83	-174.12	333.38	-52.51	389.63	361.09	28.54	13.650		
10,800.00	10,499.36	11,136.85	10,892.88	27.98	25.66	-175.24	482.77	-53.64	399.63	376.24	23.39	17.085		
10,827.04	10,500.00	11,225.90	10,899.96	28.44	26.23	-175.73	571.44	-54.31	401.07	378.70	22.37	17.927		
10,900.00	10,500.00	11,299.58	10,899.96	29.75	26.76	-176.10	645.12	-54.86	400.89	378.21	22.68	17.676		
11,000.00	10,500.00	11,399.52	10,899.96	31.72	27.57	-176.60	745.06	-55.61	400.67	377.49	23.18	17.288		
11,100.00	10,500.00	11,499.46	10,899.96	33.84	28.47	-177.11	844.99	-56.37	400.47	376.72	23.75	16.861		
11,200.00	10,500.00	11,599.40	10,899.96	36.09	29.46	-177.61	944.93	-57.12	400.31	375.91	24.40	16.406		

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 #60H
Site Error: 0.00 usft
Reference Well: Lea Unit #60H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #60H
TVD Reference: KB @ 3694.00usft (McVay 4)
MD Reference: KB @ 3694.00usft (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 #59H - Lea Unit #59H - OH - Plan #1														Offset Site Error: 0.00 usft
Survey Program: 0-MWD														Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centro +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
11,300.00	10,500.00	11,699.33	10,899.96	38.46	30.53	-178.11	1,044.86	-57.87	400.18	375.06	25.12	15.931		
11,400.00	10,500.00	11,799.27	10,899.96	40.91	31.67	-178.61	1,144.80	-58.62	400.08	374.18	25.90	15.445		
11,500.00	10,500.00	11,899.21	10,899.96	43.44	32.87	-179.12	1,244.73	-59.38	400.01	373.26	26.75	14.952		
11,600.00	10,500.00	11,999.15	10,899.96	46.03	34.12	-179.62	1,344.67	-60.13	399.97	372.31	27.66	14.459		
11,673.25	10,500.00	12,072.35	10,899.96	47.96	35.08	-179.99	1,417.87	-60.68	399.96	371.59	28.37	14.098		
11,700.00	10,500.00	12,099.09	10,899.96	48.67	35.43	179.87	1,444.60	-60.88	399.97	371.34	28.63	13.970		
11,800.00	10,500.00	12,199.02	10,899.96	51.35	36.78	179.37	1,544.54	-61.64	399.99	370.33	29.66	13.487		
11,900.00	10,500.00	12,298.96	10,899.96	54.08	38.17	178.87	1,644.47	-62.39	400.04	369.30	30.74	13.012		
12,000.00	10,500.00	12,398.90	10,899.96	56.83	39.60	178.36	1,744.41	-63.14	400.13	368.24	31.89	12.548		
12,100.00	10,500.00	12,498.84	10,899.97	59.62	41.05	177.86	1,844.34	-63.89	400.25	367.16	33.09	12.096		
12,200.00	10,500.00	12,598.78	10,899.97	62.42	42.54	177.36	1,944.28	-64.65	400.39	366.04	34.35	11.656		
12,300.00	10,500.00	12,698.71	10,899.97	65.25	44.05	176.85	2,044.21	-65.40	400.57	364.90	35.67	11.230		
12,400.00	10,500.00	12,798.65	10,899.97	68.10	45.59	176.35	2,144.15	-66.15	400.78	363.73	37.05	10.818		
12,500.00	10,500.00	12,898.59	10,899.97	70.96	47.15	175.85	2,244.08	-66.90	401.02	362.53	38.49	10.420		
12,600.00	10,500.00	12,998.53	10,899.97	73.84	48.72	175.35	2,344.02	-67.66	401.29	361.30	39.99	10.035		
12,700.00	10,500.00	13,098.47	10,899.97	76.73	50.32	174.85	2,443.95	-68.41	401.59	360.04	41.55	9.665		
12,800.00	10,500.00	13,198.40	10,899.97	79.63	51.93	174.35	2,543.89	-69.16	401.93	358.75	43.18	9.309		
12,900.00	10,500.00	13,298.34	10,899.97	82.54	53.55	173.85	2,643.83	-69.91	402.29	357.42	44.87	8.967		
13,000.00	10,500.00	13,398.28	10,899.97	85.46	55.19	173.35	2,743.76	-70.67	402.68	356.06	46.62	8.638		
13,100.00	10,500.00	13,498.22	10,899.97	88.39	56.83	172.86	2,843.70	-71.42	403.10	354.67	48.44	8.322		
13,200.00	10,500.00	13,598.16	10,899.97	91.32	58.49	172.36	2,943.63	-72.17	403.56	353.24	50.32	8.020		
13,300.00	10,500.00	13,698.09	10,899.97	94.26	60.16	171.87	3,043.57	-72.93	404.04	351.77	52.27	7.730		
13,400.00	10,500.00	13,798.03	10,899.97	97.21	61.84	171.38	3,143.50	-73.68	404.55	350.27	54.28	7.453		
13,500.00	10,500.00	13,897.97	10,899.97	100.17	63.53	170.88	3,243.44	-74.43	405.10	348.74	56.36	7.187		
13,600.00	10,500.00	13,997.91	10,899.97	103.12	65.22	170.39	3,343.37	-75.18	405.67	347.16	58.51	6.934		
13,700.00	10,500.00	14,097.85	10,899.97	106.09	66.92	169.90	3,443.31	-75.94	406.27	345.55	60.72	6.691		
13,800.00	10,500.00	14,197.79	10,899.98	109.06	68.63	169.42	3,543.24	-76.69	406.91	343.91	63.00	6.459		
13,900.00	10,500.00	14,297.72	10,899.98	112.03	70.35	168.93	3,643.18	-77.44	407.57	342.22	65.34	6.237		
14,000.00	10,500.00	14,397.66	10,899.98	115.00	72.07	168.45	3,743.11	-78.19	408.26	340.51	67.75	6.026		
14,100.00	10,500.00	14,497.60	10,899.98	117.98	73.79	167.96	3,843.05	-78.95	408.98	338.75	70.23	5.824		
14,200.00	10,500.00	14,597.54	10,899.98	120.96	75.52	167.48	3,942.98	-79.70	409.73	336.96	72.77	5.631		
14,300.00	10,500.00	14,697.48	10,899.98	123.95	77.26	167.00	4,042.92	-80.45	410.51	335.13	75.37	5.446		
14,400.00	10,500.00	14,797.41	10,899.98	126.93	79.00	166.53	4,142.85	-81.20	411.31	333.27	78.04	5.270		
14,500.00	10,500.00	14,897.35	10,899.98	129.92	80.74	166.05	4,242.79	-81.96	412.15	331.38	80.77	5.103		
14,600.00	10,500.00	14,997.29	10,899.98	132.91	82.49	165.58	4,342.72	-82.71	413.01	329.44	83.57	4.942		
14,700.00	10,500.00	15,097.23	10,899.98	135.91	84.24	165.11	4,442.66	-83.46	413.90	327.48	86.43	4.789		
14,800.00	10,500.00	15,197.17	10,899.98	138.90	85.99	164.64	4,542.59	-84.21	414.82	325.48	89.34	4.643		
14,900.00	10,500.00	15,297.10	10,899.98	141.90	87.75	164.17	4,642.53	-84.97	415.77	323.45	92.32	4.503		
15,000.00	10,500.00	15,397.04	10,899.98	144.90	89.51	163.70	4,742.47	-85.72	416.75	321.38	95.36	4.370		
15,100.00	10,500.00	15,496.98	10,899.98	147.90	91.27	163.24	4,842.40	-86.47	417.75	319.28	98.46	4.243		
15,200.00	10,500.00	15,596.92	10,899.98	150.91	93.03	162.78	4,942.34	-87.23	418.78	317.16	101.62	4.121		
15,300.00	10,500.00	15,696.86	10,899.98	153.91	94.80	162.32	5,042.27	-87.98	419.83	315.00	104.84	4.005		
15,400.00	10,500.00	15,796.79	10,899.98	156.92	96.57	161.87	5,142.21	-88.73	420.92	312.81	108.11	3.893		
15,500.00	10,500.00	15,896.73	10,899.98	159.92	98.34	161.41	5,242.14	-89.48	422.03	310.59	111.44	3.787		
15,600.00	10,500.00	15,996.67	10,899.99	162.93	100.12	160.96	5,342.08	-90.24	423.16	308.34	114.82	3.685		
15,700.00	10,500.00	16,096.61	10,899.99	165.94	101.90	160.51	5,442.01	-90.99	424.32	306.06	118.26	3.588		
15,800.00	10,500.00	16,196.55	10,899.99	168.95	103.67	160.07	5,541.95	-91.74	425.51	303.76	121.75	3.495		
15,900.00	10,500.00	16,296.48	10,899.99	171.96	105.45	159.62	5,641.88	-92.49	426.73	301.43	125.29	3.406		
16,000.00	10,500.00	16,396.42	10,899.99	174.98	107.24	159.18	5,741.82	-93.25	427.96	299.08	128.89	3.320		
16,100.00	10,500.00	16,496.36	10,899.99	177.99	109.02	158.74	5,841.75	-94.00	429.23	296.69	132.54	3.239		
16,200.00	10,500.00	16,596.30	10,899.99	181.01	110.80	158.31	5,941.69	-94.75	430.52	294.29	136.23	3.160		
16,300.00	10,500.00	16,696.24	10,899.99	184.02	112.59	157.87	6,041.62	-95.50	431.83	291.86	139.98	3.085		

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 #60H
Site Error: 0.00 usft
Reference Well: Lea Unit #60H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #60H
TVD Reference: KB @ 3694.00usft (McVay 4)
MD Reference: KB @ 3694.00usft (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 #59H - Lea Unit #59H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
16,400.00	10,500.00	16,796.18	10,899.99	187.04	114.38	157.44	6,141.56	-96.26	433.17	289.40	143.77	3.013	
16,500.00	10,500.00	16,896.11	10,899.99	190.05	116.17	157.01	6,241.49	-97.01	434.54	286.93	147.61	2.944	
16,600.00	10,500.00	16,996.05	10,899.99	193.07	117.96	156.59	6,341.43	-97.76	435.92	284.43	151.49	2.878	
16,700.00	10,500.00	17,095.99	10,899.99	196.09	119.75	156.16	6,441.36	-98.52	437.33	281.91	155.42	2.814	
16,800.00	10,500.00	17,195.93	10,899.99	199.11	121.54	155.74	6,541.30	-99.27	438.77	279.37	159.40	2.753	
16,900.00	10,500.00	17,295.87	10,899.99	202.13	123.34	155.33	6,641.23	-100.02	440.23	276.82	163.41	2.694	
17,000.00	10,500.00	17,395.80	10,899.99	205.15	125.13	154.91	6,741.17	-100.77	441.71	274.24	167.47	2.638	
17,100.00	10,500.00	17,495.74	10,899.99	208.17	126.93	154.50	6,841.11	-101.53	443.21	271.64	171.57	2.583	
17,200.00	10,500.00	17,595.68	10,899.99	211.19	128.72	154.09	6,941.04	-102.28	444.74	269.03	175.71	2.531	
17,300.00	10,500.00	17,695.62	10,900.00	214.21	130.52	153.69	7,040.98	-103.03	446.29	266.40	179.89	2.481	
17,400.00	10,500.00	17,795.56	10,900.00	217.24	132.32	153.28	7,140.91	-103.78	447.86	263.76	184.11	2.433	
17,500.00	10,500.00	17,895.49	10,900.00	220.26	134.12	152.88	7,240.85	-104.54	449.46	261.09	188.36	2.386	
17,600.00	10,500.00	17,995.43	10,900.00	223.28	135.92	152.48	7,340.78	-105.29	451.08	258.42	192.66	2.341	
17,700.00	10,500.00	18,095.37	10,900.00	226.31	137.72	152.09	7,440.72	-106.04	452.71	255.73	196.98	2.298	
17,800.00	10,500.00	18,195.31	10,900.00	229.33	139.52	151.70	7,540.65	-106.79	454.37	253.03	201.35	2.257	
17,900.00	10,500.00	18,295.25	10,900.00	232.36	141.33	151.31	7,640.59	-107.55	456.05	250.31	205.74	2.217	
18,000.00	10,500.00	18,395.18	10,900.00	235.38	143.13	150.92	7,740.52	-108.30	457.75	247.58	210.17	2.178	
18,100.00	10,500.00	18,495.12	10,900.00	238.41	144.93	150.54	7,840.46	-109.05	459.48	244.84	214.63	2.141	
18,200.00	10,500.00	18,595.06	10,900.00	241.43	146.74	150.16	7,940.39	-109.81	461.22	242.09	219.13	2.105	
18,211.45	10,500.00	18,606.50	10,900.00	241.78	146.94	150.11	7,951.83	-109.89	461.42	241.78	219.64	2.101	

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 #60H
Site Error: 0.00 usft
Reference Well: Lea Unit #60H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #60H
TVD Reference: KB @ 3694.00usft (McVay 4)
MD Reference: KB @ 3694.00usft (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 #61H - Lea Unit #61H - Lateral #1 - Design #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance				Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/S (usft)	+E/W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	1.00	1.00	0.00	0.00	89.43	0.50	50.10	50.10				
100.00	100.00	101.00	101.00	0.09	0.09	89.43	0.50	50.10	50.10	49.92	0.19	268.565	
200.00	200.00	201.00	201.00	0.32	0.32	89.43	0.50	50.10	50.10	49.47	0.64	78.767	
300.00	300.00	301.00	301.00	0.54	0.54	89.43	0.50	50.10	50.10	49.02	1.09	46.151	
400.00	400.00	401.00	401.00	0.77	0.77	89.43	0.50	50.10	50.10	48.57	1.54	32.637	
500.00	500.00	501.00	501.00	0.99	0.99	89.43	0.50	50.10	50.10	48.12	1.98	25.245	
600.00	600.00	601.00	601.00	1.22	1.22	89.43	0.50	50.10	50.10	47.67	2.43	20.583	
700.00	700.00	701.00	701.00	1.44	1.44	89.43	0.50	50.10	50.10	47.22	2.88	17.374	
800.00	800.00	801.00	801.00	1.67	1.67	89.43	0.50	50.10	50.10	46.77	3.33	15.031	
900.00	900.00	901.00	901.00	1.89	1.89	89.43	0.50	50.10	50.10	46.32	3.78	13.245	
1,000.00	1,000.00	1,001.00	1,001.00	2.12	2.12	89.43	0.50	50.10	50.10	45.87	4.23	11.838	
1,100.00	1,100.00	1,101.00	1,101.00	2.34	2.34	89.43	0.50	50.10	50.10	45.42	4.68	10.701	
1,200.00	1,200.00	1,201.00	1,201.00	2.56	2.57	89.43	0.50	50.10	50.10	44.97	5.13	9.764	
1,300.00	1,300.00	1,301.00	1,301.00	2.79	2.79	89.43	0.50	50.10	50.10	44.52	5.58	8.977	
1,400.00	1,400.00	1,401.00	1,401.00	3.01	3.02	89.43	0.50	50.10	50.10	44.07	6.03	8.308	
1,500.00	1,500.00	1,501.00	1,501.00	3.24	3.24	89.43	0.50	50.10	50.10	43.62	6.48	7.732	
1,600.00	1,600.00	1,601.00	1,601.00	3.46	3.47	89.43	0.50	50.10	50.10	43.17	6.93	7.230	
1,700.00	1,700.00	1,701.00	1,701.00	3.69	3.69	89.43	0.50	50.10	50.10	42.72	7.38	6.790	
1,800.00	1,800.00	1,801.00	1,801.00	3.91	3.92	89.43	0.50	50.10	50.10	42.27	7.83	6.400	
1,900.00	1,900.00	1,901.00	1,901.00	4.14	4.14	89.43	0.50	50.10	50.10	41.82	8.28	6.052	
2,000.00	2,000.00	2,001.00	2,001.00	4.36	4.36	89.43	0.50	50.10	50.10	41.37	8.73	5.741	
2,100.00	2,100.00	2,101.00	2,101.00	4.59	4.59	89.43	0.50	50.10	50.10	40.93	9.18	5.459	
2,200.00	2,200.00	2,201.00	2,201.00	4.81	4.81	89.43	0.50	50.10	50.10	40.48	9.63	5.205	
2,300.00	2,300.00	2,301.00	2,301.00	5.04	5.04	89.43	0.50	50.10	50.10	40.03	10.08	4.972	
2,400.00	2,400.00	2,401.00	2,401.00	5.26	5.26	89.43	0.50	50.10	50.10	39.58	10.53	4.760	
2,500.00	2,500.00	2,501.00	2,501.00	5.49	5.49	89.43	0.50	50.10	50.10	39.13	10.98	4.565	
2,600.00	2,600.00	2,601.00	2,601.00	5.71	5.71	89.43	0.50	50.10	50.10	38.68	11.42	4.385	
2,700.00	2,700.00	2,701.00	2,701.00	5.94	5.94	89.43	0.50	50.10	50.10	38.23	11.87	4.219	
2,800.00	2,800.00	2,801.00	2,801.00	6.16	6.16	89.43	0.50	50.10	50.10	37.78	12.32	4.065	
2,900.00	2,900.00	2,901.00	2,901.00	6.39	6.39	89.43	0.50	50.10	50.10	37.33	12.77	3.922	
3,000.00	3,000.00	3,001.00	3,001.00	6.61	6.61	89.43	0.50	50.10	50.10	36.88	13.22	3.789	
3,100.00	3,100.00	3,101.00	3,101.00	6.84	6.84	89.43	0.50	50.10	50.10	36.43	13.67	3.664	
3,200.00	3,200.00	3,201.00	3,201.00	7.06	7.06	89.43	0.50	50.10	50.10	35.98	14.12	3.548	
3,300.00	3,300.00	3,301.00	3,301.00	7.28	7.29	89.43	0.50	50.10	50.10	35.53	14.57	3.438	
3,400.00	3,400.00	3,401.00	3,401.00	7.51	7.51	89.43	0.50	50.10	50.10	35.08	15.02	3.335	
3,500.00	3,500.00	3,501.00	3,501.00	7.73	7.74	89.43	0.50	50.10	50.10	34.63	15.47	3.239	
3,600.00	3,600.00	3,601.00	3,601.00	7.96	7.96	89.43	0.50	50.10	50.10	34.18	15.92	3.147	
3,700.00	3,700.00	3,701.00	3,701.00	8.18	8.19	89.43	0.50	50.10	50.10	33.73	16.37	3.061	
3,800.00	3,800.00	3,801.00	3,801.00	8.41	8.41	89.43	0.50	50.10	50.10	33.28	16.82	2.979	
3,900.00	3,900.00	3,901.00	3,901.00	8.63	8.64	89.43	0.50	50.10	50.10	32.83	17.27	2.901	
4,000.00	4,000.00	4,001.00	4,001.00	8.86	8.86	89.43	0.50	50.10	50.10	32.38	17.72	2.828	
4,100.00	4,100.00	4,101.00	4,101.00	9.08	9.09	89.43	0.50	50.10	50.10	31.93	18.17	2.758	
4,200.00	4,200.00	4,201.00	4,201.00	9.31	9.31	89.43	0.50	50.10	50.10	31.49	18.62	2.691	
4,300.00	4,300.00	4,301.00	4,301.00	9.53	9.53	89.43	0.50	50.10	50.10	31.04	19.07	2.628	
4,400.00	4,400.00	4,401.00	4,401.00	9.76	9.76	89.43	0.50	50.10	50.10	30.59	19.52	2.567	
4,500.00	4,500.00	4,501.00	4,501.00	9.98	9.98	89.43	0.50	50.10	50.10	30.14	19.97	2.509	
4,600.00	4,600.00	4,601.00	4,601.00	10.21	10.21	89.43	0.50	50.10	50.10	29.69	20.42	2.454	
4,700.00	4,700.00	4,701.00	4,701.00	10.43	10.43	89.43	0.50	50.10	50.10	29.24	20.87	2.401	
4,800.00	4,800.00	4,801.00	4,801.00	10.66	10.66	89.43	0.50	50.10	50.10	28.79	21.31	2.351	
4,900.00	4,900.00	4,901.00	4,901.00	10.88	10.88	89.43	0.50	50.10	50.10	28.34	21.76	2.302	
5,000.00	5,000.00	5,001.00	5,001.00	11.11	11.11	89.43	0.50	50.10	50.10	27.89	22.21	2.255	
5,100.00	5,100.00	5,101.00	5,101.00	11.33	11.33	89.43	0.50	50.10	50.10	27.44	22.66	2.211	

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TDS
Anticollision Report



Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #60H
Site Error: 0.00 usft
Reference Well: Lea Unit #60H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #60H
TVD Reference: KB @ 3694.00usft (McVay 4)
MD Reference: KB @ 3694.00usft (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 #61H - Lea Unit #61H - Lateral #1 - Design #1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,200.00	5,200.00	5,201.00	5,201.00	11.56	11.56	89.43	0.50	50.10	50.10	26.99	23.11	2.168		
5,300.00	5,300.00	5,301.00	5,301.00	11.78	11.78	89.43	0.50	50.10	50.10	26.54	23.56	2.126		
5,400.00	5,400.00	5,401.00	5,401.00	12.00	12.01	89.43	0.50	50.10	50.10	26.09	24.01	2.087		
5,500.00	5,500.00	5,501.00	5,501.00	12.23	12.23	89.43	0.50	50.10	50.10	25.64	24.46	2.048		
5,600.00	5,600.00	5,601.00	5,601.00	12.45	12.46	89.43	0.50	50.10	50.10	25.19	24.91	2.011		
5,700.00	5,700.00	5,701.00	5,701.00	12.68	12.68	89.43	0.50	50.10	50.10	24.74	25.36	1.976		
5,800.00	5,800.00	5,801.00	5,801.00	12.90	12.91	89.43	0.50	50.10	50.10	24.29	25.81	1.941		
5,900.00	5,900.00	5,901.00	5,901.00	13.13	13.13	89.43	0.50	50.10	50.10	23.84	26.28	1.908		
6,000.00	6,000.00	6,001.00	6,001.00	13.35	13.36	89.43	0.50	50.10	50.10	23.39	26.71	1.878		
6,100.00	6,100.00	6,101.00	6,101.00	13.58	13.58	89.43	0.50	50.10	50.10	22.94	27.16	1.845		
6,200.00	6,200.00	6,201.00	6,201.00	13.80	13.81	89.43	0.50	50.10	50.10	22.49	27.61	1.815		
6,300.00	6,300.00	6,301.00	6,301.00	14.03	14.03	89.43	0.50	50.10	50.10	22.04	28.06	1.786		
6,400.00	6,400.00	6,401.00	6,401.00	14.25	14.25	89.43	0.50	50.10	50.10	21.60	28.51	1.758		
6,500.00	6,500.00	6,501.00	6,501.00	14.48	14.48	89.43	0.50	50.10	50.10	21.15	28.96	1.730		
6,600.00	6,600.00	6,601.00	6,601.00	14.70	14.70	89.43	0.50	50.10	50.10	20.70	29.41	1.704		
6,700.00	6,700.00	6,701.00	6,701.00	14.93	14.93	89.43	0.50	50.10	50.10	20.25	29.86	1.678		
6,800.00	6,800.00	6,801.00	6,801.00	15.15	15.15	89.43	0.50	50.10	50.10	19.80	30.31	1.653		
6,900.00	6,900.00	6,901.00	6,901.00	15.38	15.38	89.43	0.50	50.10	50.10	19.35	30.75	1.629		
7,000.00	7,000.00	7,001.00	7,001.00	15.60	15.60	89.43	0.50	50.10	50.10	18.90	31.20	1.606		
7,100.00	7,100.00	7,101.00	7,101.00	15.83	15.83	89.43	0.50	50.10	50.10	18.45	31.65	1.583		
7,200.00	7,200.00	7,201.00	7,201.00	16.05	16.05	89.43	0.50	50.10	50.10	18.00	32.10	1.561		
7,300.00	7,300.00	7,301.00	7,301.00	16.28	16.28	89.43	0.50	50.10	50.10	17.55	32.55	1.539		
7,400.00	7,400.00	7,401.00	7,401.00	16.50	16.50	89.43	0.50	50.10	50.10	17.10	33.00	1.518		
7,500.00	7,500.00	7,501.00	7,501.00	16.72	16.73	89.43	0.50	50.10	50.10	16.65	33.45	1.498 Level 3		
7,600.00	7,600.00	7,601.00	7,601.00	16.95	16.95	89.43	0.50	50.10	50.10	16.20	33.90	1.478 Level 3		
7,700.00	7,700.00	7,701.00	7,701.00	17.17	17.18	89.43	0.50	50.10	50.10	15.75	34.35	1.459 Level 3		
7,800.00	7,800.00	7,801.00	7,801.00	17.40	17.40	89.43	0.50	50.10	50.10	15.30	34.80	1.440 Level 3		
7,900.00	7,900.00	7,901.00	7,901.00	17.62	17.63	89.43	0.50	50.10	50.10	14.85	35.25	1.421 Level 3		
8,000.00	8,000.00	8,001.00	8,001.00	17.85	17.85	89.43	0.50	50.10	50.10	14.40	35.70	1.403 Level 3		
8,100.00	8,100.00	8,101.00	8,101.00	18.07	18.08	89.43	0.50	50.10	50.10	13.95	36.15	1.386 Level 3		
8,200.00	8,200.00	8,201.00	8,201.00	18.30	18.30	89.43	0.50	50.10	50.10	13.50	36.60	1.369 Level 3		
8,300.00	8,300.00	8,301.00	8,301.00	18.52	18.53	89.43	0.50	50.10	50.10	13.05	37.05	1.352 Level 3		
8,400.00	8,400.00	8,401.00	8,401.00	18.75	18.75	89.43	0.50	50.10	50.10	12.60	37.50	1.336 Level 3		
8,500.00	8,500.00	8,501.00	8,501.00	18.97	18.97	89.43	0.50	50.10	50.10	12.16	37.95	1.320 Level 3		
8,600.00	8,600.00	8,601.00	8,601.00	19.20	19.20	89.43	0.50	50.10	50.10	11.71	38.40	1.305 Level 3		
8,700.00	8,700.00	8,701.00	8,701.00	19.42	19.42	89.43	0.50	50.10	50.10	11.26	38.85	1.290 Level 3		
8,800.00	8,800.00	8,801.00	8,801.00	19.65	19.65	89.43	0.50	50.10	50.10	10.81	39.30	1.275 Level 3		
8,900.00	8,900.00	8,901.00	8,901.00	19.87	19.87	89.43	0.50	50.10	50.10	10.36	39.75	1.261 Level 3		
9,000.00	9,000.00	9,001.00	9,001.00	20.10	20.10	89.43	0.50	50.10	50.10	9.91	40.19	1.246 Level 2		
9,100.00	9,100.00	9,101.00	9,101.00	20.32	20.32	89.43	0.50	50.10	50.10	9.46	40.64	1.233 Level 2		
9,200.00	9,200.00	9,201.00	9,201.00	20.55	20.55	89.43	0.50	50.10	50.10	9.01	41.09	1.219 Level 2		
9,201.10	9,201.10	9,202.10	9,202.10	20.55	20.55	89.43	0.50	50.10	50.10	9.00	41.10	1.219 Level 2, CC		
9,300.00	9,300.00	9,300.47	9,300.27	20.77	20.77	84.08	5.20	50.14	50.42	8.88	41.54	1.214 Level 2, ES, SF		
9,400.00	9,400.00	9,395.67	9,393.25	21.00	20.99	63.46	25.14	50.32	56.78	15.14	41.63	1.364 Level 3		
9,500.00	9,500.00	9,482.22	9,473.87	21.22	21.17	41.90	56.39	50.59	80.47	40.19	40.28	1.998		
9,600.00	9,600.00	9,557.93	9,538.84	21.44	21.33	28.59	93.42	50.92	122.72	84.71	38.00	3.229		
9,700.00	9,700.00	9,622.56	9,591.89	21.67	21.49	21.27	131.68	51.25	178.52	142.83	35.69	5.002		
9,800.00	9,800.00	9,677.07	9,632.20	21.89	21.65	17.03	168.33	51.57	243.90	210.30	33.60	7.260		
9,900.00	9,900.00	9,722.89	9,663.27	22.12	21.79	14.40	201.99	51.87	316.24	284.46	31.78	9.952		
9,927.04	9,927.04	9,733.97	9,670.38	22.18	21.83	13.86	210.50	51.95	336.75	305.42	31.33	10.748		
9,950.00	9,949.99	9,750.00	9,680.35	22.23	21.89	14.93	223.04	52.06	354.26	322.81	31.45	11.263		
10,000.00	9,999.80	9,763.62	9,688.55	22.34	21.94	13.20	233.91	52.15	390.91	360.77	30.14	12.971		

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 #60H
Site Error: 0.00 usft
Reference Well: Lea Unit #60H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #60H
TVD Reference: KB @ 3694.00usft (McVay 4)
MD Reference: KB @ 3694.00usft (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 #61H - Lea Unit #61H - Lateral #1 - Design #1														Offset Site Error:	0.00 usft
Survey Program: O-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)							
10,050.00	10,049.06	9,784.35	9,700.53	22.46	22.02	11.89	250.83	52.30	425.98	396.88	29.30	14.538			
10,100.00	10,097.39	9,800.00	9,709.17	22.57	22.08	10.58	263.88	52.41	459.34	431.20	28.14	16.321			
10,150.00	10,144.42	9,826.62	9,723.03	22.67	22.19	9.59	286.61	52.61	490.73	463.12	27.61	17.775			
10,200.00	10,189.79	9,850.00	9,734.31	22.78	22.29	8.84	307.08	52.79	520.25	493.39	26.86	19.369			
10,250.00	10,233.17	9,869.73	9,743.18	22.88	22.39	8.26	324.69	52.95	547.76	521.84	25.92	21.131			
10,300.00	10,274.21	9,900.00	9,755.60	23.04	22.54	7.77	352.30	53.19	573.35	547.86	25.48	22.498			
10,350.00	10,312.62	9,913.44	9,760.64	23.24	22.61	7.40	364.76	53.30	596.56	572.26	24.30	24.545			
10,400.00	10,348.09	9,935.48	9,768.27	23.49	22.73	7.10	385.43	53.48	617.74	594.20	23.55	26.236			
10,450.00	10,380.35	9,950.00	9,772.85	23.80	22.81	6.85	399.21	53.60	636.81	614.24	22.57	28.219			
10,500.00	10,409.17	9,979.83	9,781.19	24.18	22.99	6.67	427.84	53.85	653.44	631.25	22.19	29.449			
10,550.00	10,434.31	10,000.00	9,785.97	24.63	23.11	6.52	447.44	54.03	667.88	646.33	21.56	30.984			
10,600.00	10,455.60	10,024.45	9,790.84	25.15	23.27	6.43	471.39	54.24	680.01	658.87	21.14	32.172			
10,650.00	10,472.86	10,050.00	9,794.83	25.76	23.43	6.38	496.63	54.46	689.83	669.00	20.83	33.121			
10,700.00	10,485.97	10,069.24	9,797.09	26.43	23.57	6.36	515.74	54.63	697.26	676.76	20.50	34.012			
10,750.00	10,494.83	10,100.00	9,799.36	27.17	23.78	6.40	546.41	54.90	702.44	681.96	20.48	34.299			
10,800.00	10,499.36	10,114.13	9,799.85	27.98	23.89	6.43	560.53	55.02	705.04	684.67	20.37	34.614			
10,827.04	10,500.00	10,127.04	9,800.00	28.44	23.98	6.48	573.44	55.13	705.51	685.08	20.43	34.530			
10,900.00	10,500.00	10,198.20	9,800.00	29.75	24.54	6.77	644.60	55.76	705.94	685.01	20.92	33.739			
11,000.00	10,500.00	10,298.07	9,800.00	31.72	25.42	7.19	744.46	56.64	706.56	684.85	21.72	32.536			
11,100.00	10,500.00	10,397.84	9,800.00	33.84	26.40	7.60	844.32	57.51	707.23	684.60	22.62	31.261			
11,200.00	10,500.00	10,497.81	9,800.00	36.09	27.46	8.01	944.19	58.39	707.93	684.29	23.64	29.946			
11,300.00	10,500.00	10,597.67	9,800.00	38.46	28.60	8.42	1,044.05	59.27	708.67	683.91	24.76	28.623			
11,400.00	10,500.00	10,697.54	9,800.00	40.91	29.81	8.83	1,143.91	60.15	709.44	683.46	25.97	27.312			
11,500.00	10,500.00	10,797.41	9,800.00	43.44	31.07	9.24	1,243.78	61.02	710.25	682.97	27.28	26.033			
11,600.00	10,500.00	10,897.27	9,800.00	46.03	32.39	9.65	1,343.64	61.90	711.10	682.42	28.68	24.797			
11,700.00	10,500.00	10,997.14	9,800.00	48.67	33.76	10.06	1,443.50	62.78	711.98	681.82	30.15	23.612			
11,800.00	10,500.00	11,097.01	9,800.00	51.35	35.17	10.47	1,543.37	63.66	712.90	681.19	31.71	22.483			
11,900.00	10,500.00	11,196.88	9,800.00	54.08	36.62	10.87	1,643.23	64.53	713.85	680.51	33.34	21.413			
12,000.00	10,500.00	11,296.74	9,800.00	56.83	38.10	11.28	1,743.09	65.41	714.84	679.80	35.04	20.402			
12,100.00	10,500.00	11,396.61	9,800.00	59.62	39.60	11.68	1,842.96	66.29	715.87	679.06	36.81	19.449			
12,200.00	10,500.00	11,496.48	9,800.00	62.42	41.14	12.09	1,942.82	67.17	716.93	678.29	38.64	18.552			
12,300.00	10,500.00	11,596.35	9,800.00	65.25	42.69	12.49	2,042.69	68.04	718.03	677.48	40.54	17.710			
12,400.00	10,500.00	11,696.21	9,800.00	68.10	44.27	12.89	2,142.55	68.92	719.16	676.65	42.50	16.919			
12,500.00	10,500.00	11,796.08	9,800.00	70.96	45.86	13.29	2,242.41	69.80	720.33	675.80	44.53	16.177			
12,600.00	10,500.00	11,895.95	9,800.00	73.84	47.48	13.68	2,342.28	70.68	721.53	674.92	46.61	15.481			
12,700.00	10,500.00	11,995.82	9,800.00	76.73	49.10	14.08	2,442.14	71.55	722.77	674.02	48.75	14.827			
12,800.00	10,500.00	12,095.68	9,800.00	79.63	50.74	14.47	2,542.00	72.43	724.04	673.09	50.94	14.213			
12,900.00	10,500.00	12,195.55	9,800.00	82.54	52.39	14.87	2,641.87	73.31	725.34	672.15	53.19	13.636			
13,000.00	10,500.00	12,295.42	9,800.00	85.46	54.08	15.26	2,741.73	74.19	726.68	671.18	55.50	13.093			
13,100.00	10,500.00	12,395.29	9,800.00	88.39	55.73	15.65	2,841.59	75.06	728.06	670.20	57.86	12.583			
13,200.00	10,500.00	12,495.15	9,800.00	91.32	57.41	16.04	2,941.46	75.94	729.46	669.19	60.27	12.103			
13,300.00	10,500.00	12,595.02	9,800.00	94.26	59.10	16.43	3,041.32	76.82	730.91	668.17	62.73	11.651			
13,400.00	10,500.00	12,694.89	9,800.00	97.21	60.80	16.81	3,141.18	77.70	732.38	667.13	65.25	11.224			
13,500.00	10,500.00	12,794.75	9,800.00	100.17	62.51	17.20	3,241.05	78.57	733.89	666.07	67.81	10.822			
13,600.00	10,500.00	12,894.62	9,800.00	103.12	64.22	17.58	3,340.91	79.45	735.43	665.00	70.43	10.442			
13,700.00	10,500.00	12,994.49	9,800.00	106.09	65.94	17.96	3,440.77	80.33	737.00	663.91	73.09	10.083			
13,800.00	10,500.00	13,094.36	9,800.00	109.06	67.66	18.34	3,540.64	81.20	738.61	662.80	75.81	9.743			
13,900.00	10,500.00	13,194.22	9,800.00	112.03	69.39	18.72	3,640.50	82.08	740.25	661.68	78.57	9.422			
14,000.00	10,500.00	13,294.09	9,800.00	115.00	71.13	19.09	3,740.36	82.96	741.92	660.54	81.38	9.117			
14,100.00	10,500.00	13,393.96	9,800.00	117.98	72.87	19.47	3,840.23	83.84	743.62	659.39	84.23	8.828			
14,200.00	10,500.00	13,493.83	9,800.00	120.96	74.61	19.84	3,940.09	84.71	745.35	658.22	87.13	8.554			
14,300.00	10,500.00	13,593.69	9,800.00	123.95	76.35	20.21	4,039.95	85.59	747.12	657.04	90.08	8.294			

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 #60H
Site Error: 0.00 usft
Reference Well: Lea Unit #60H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #60H
TVD Reference: KB @ 3694.00usft (McVay 4)
MD Reference: KB @ 3694.00usft (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 #61H - Lea Unit #61H - Lateral #1 - Design #1														Offset Site Error:	0.00 usft
Survey Program: 0-MWD														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
14,400.00	10,500.00	13,693.56	9,800.00	126.93	78.10	20.58	4,139.82	86.47	748.91	655.84	93.07	8.047			
14,500.00	10,500.00	13,793.43	9,800.00	129.92	79.86	20.95	4,239.68	87.35	750.74	654.64	96.11	7.812			
14,600.00	10,500.00	13,893.30	9,800.00	132.91	81.61	21.31	4,339.55	88.22	752.60	653.41	99.19	7.588			
14,700.00	10,500.00	13,993.16	9,800.00	135.91	83.37	21.68	4,439.41	89.10	754.49	652.18	102.31	7.375			
14,800.00	10,500.00	14,093.03	9,800.00	138.90	85.14	22.04	4,539.27	89.98	756.41	650.93	105.47	7.172			
14,900.00	10,500.00	14,192.90	9,800.00	141.90	86.90	22.40	4,639.14	90.86	758.36	649.68	108.68	6.978			
15,000.00	10,500.00	14,292.76	9,800.00	144.90	88.67	22.76	4,739.00	91.73	760.34	648.41	111.93	6.793			
15,100.00	10,500.00	14,392.63	9,800.00	147.90	90.44	23.12	4,838.86	92.61	762.35	647.13	115.22	6.616			
15,200.00	10,500.00	14,492.50	9,800.00	150.91	92.21	23.47	4,938.73	93.49	764.38	645.83	118.55	6.448			
15,300.00	10,500.00	14,592.37	9,800.00	153.91	93.98	23.82	5,038.59	94.37	766.45	644.53	121.92	6.287			
15,400.00	10,500.00	14,692.23	9,800.00	156.92	95.76	24.17	5,138.45	95.24	768.55	643.22	125.33	6.132			
15,500.00	10,500.00	14,792.10	9,800.00	159.92	97.54	24.52	5,238.32	96.12	770.67	641.90	128.78	5.985			
15,600.00	10,500.00	14,891.97	9,800.00	162.93	99.31	24.87	5,338.18	97.00	772.83	640.56	132.26	5.843			
15,700.00	10,500.00	14,991.84	9,800.00	165.94	101.10	25.21	5,438.04	97.88	775.01	639.22	135.79	5.708			
15,800.00	10,500.00	15,091.70	9,800.00	168.95	102.88	25.56	5,537.91	98.75	777.22	637.87	139.35	5.578			
15,900.00	10,500.00	15,191.57	9,800.00	171.96	104.66	25.90	5,637.77	99.63	779.46	636.51	142.94	5.453			
16,000.00	10,500.00	15,291.44	9,800.00	174.98	106.45	26.24	5,737.63	100.51	781.72	635.15	146.58	5.333			
16,100.00	10,500.00	15,391.31	9,800.00	177.99	108.23	26.57	5,837.50	101.39	784.01	633.77	150.24	5.218			
16,200.00	10,500.00	15,491.17	9,800.00	181.01	110.02	26.91	5,937.36	102.26	786.33	632.39	153.94	5.108			
16,300.00	10,500.00	15,591.04	9,800.00	184.02	111.81	27.24	6,037.22	103.14	788.68	631.00	157.68	5.002			
16,400.00	10,500.00	15,690.91	9,800.00	187.04	113.60	27.57	6,137.09	104.02	791.05	629.60	161.45	4.900			
16,500.00	10,500.00	15,790.77	9,800.00	190.05	115.39	27.90	6,236.95	104.90	793.45	628.20	165.25	4.801			
16,600.00	10,500.00	15,890.64	9,800.00	193.07	117.18	28.23	6,336.82	105.77	795.88	626.79	169.09	4.707			
16,700.00	10,500.00	15,990.51	9,800.00	196.09	118.98	28.56	6,436.68	106.65	798.33	625.37	172.95	4.616			
16,800.00	10,500.00	16,090.38	9,800.00	199.11	120.77	28.88	6,536.54	107.53	800.80	623.95	176.85	4.528			
16,900.00	10,500.00	16,190.24	9,800.00	202.13	122.57	29.20	6,636.41	108.41	803.31	622.53	180.78	4.444			
17,000.00	10,500.00	16,290.11	9,800.00	205.15	124.36	29.52	6,736.27	109.28	805.83	621.09	184.74	4.362			
17,100.00	10,500.00	16,389.98	9,800.00	208.17	126.16	29.84	6,836.13	110.16	808.39	619.66	188.73	4.283			
17,200.00	10,500.00	16,489.85	9,800.00	211.19	127.96	30.15	6,936.00	111.04	810.96	618.22	192.75	4.207			
17,300.00	10,500.00	16,589.71	9,800.00	214.21	129.75	30.47	7,035.86	111.92	813.56	616.77	196.79	4.134			
17,400.00	10,500.00	16,689.58	9,800.00	217.24	131.55	30.78	7,135.72	112.79	816.19	615.32	200.87	4.063			
17,500.00	10,500.00	16,789.45	9,800.00	220.26	133.35	31.09	7,235.59	113.67	818.84	613.87	204.97	3.995			
17,600.00	10,500.00	16,889.32	9,800.00	223.28	135.15	31.39	7,335.45	114.55	821.51	612.42	209.10	3.929			
17,700.00	10,500.00	16,989.18	9,800.00	226.31	136.95	31.70	7,435.31	115.43	824.21	610.96	213.25	3.865			
17,800.00	10,500.00	17,089.05	9,800.00	229.33	138.76	32.00	7,535.18	116.30	826.93	609.50	217.43	3.803			
17,900.00	10,500.00	17,188.92	9,800.00	232.36	140.56	32.30	7,635.04	117.18	829.67	608.03	221.64	3.743			
18,000.00	10,500.00	17,288.78	9,800.00	235.38	142.36	32.60	7,734.90	118.06	832.44	606.57	225.87	3.685			
18,100.00	10,500.00	17,388.65	9,800.00	238.41	144.16	32.90	7,834.77	118.93	835.22	605.10	230.13	3.629			
18,200.00	10,500.00	17,488.52	9,800.00	241.43	145.97	33.19	7,934.63	119.81	838.04	603.63	234.40	3.575			
18,211.45	10,500.00	17,499.95	9,800.00	241.78	146.17	33.23	7,946.06	119.91	838.36	603.46	234.90	3.569			



TDS
Anticollision Report



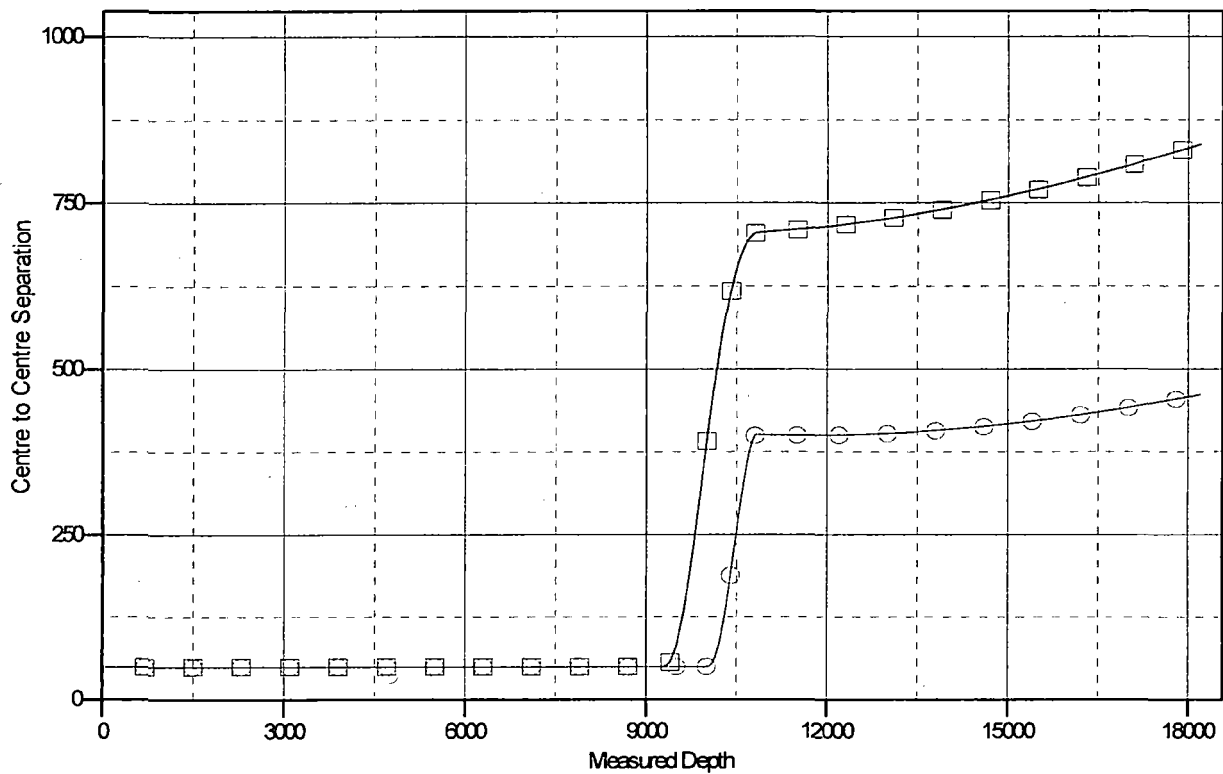
Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #60H
Site Error: 0.00 usft
Reference Well: Lea Unit #60H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Lea Unit #60H
TVD Reference: KB @ 3694.00usft (McVay 4)
MD Reference: KB @ 3694.00usft (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 @ 3694.00usft (McVay 4)
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.00 W

Coordinates are relative to: Lea Unit #60H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.45°

Ladder Plot



LEGEND

—■— Lea Unit #61H, Lateral #1, Design #1 V0 —○— Lea Unit #59H, OH, Plan #1 V0



TDS
Anticollision Report

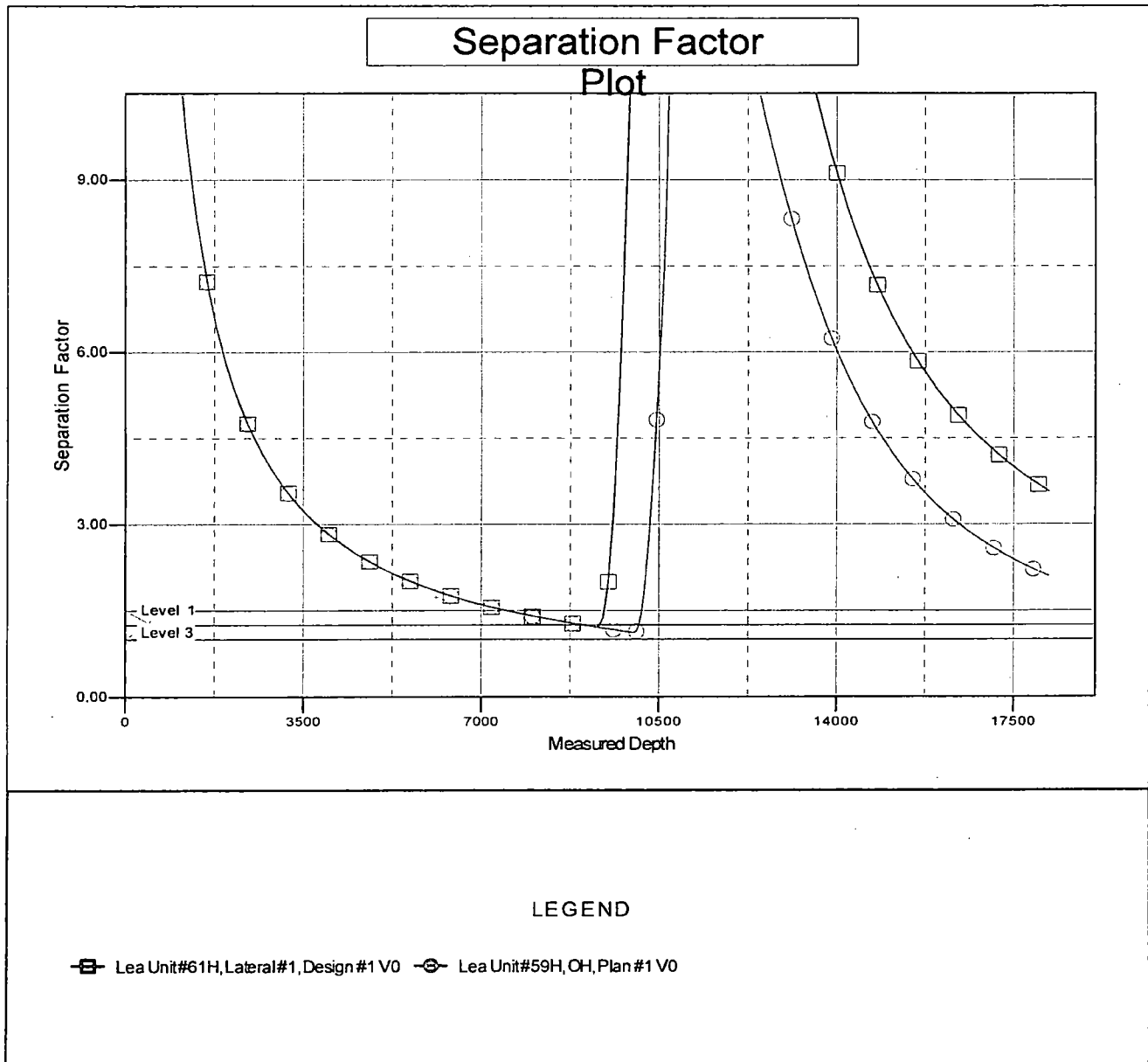


Company: Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Reference Site: Lea Unit #60H
Site Error: 0.00 usft
Reference Well: Lea Unit #60H
Well Error: 0.00 usft
Reference Wellbore: Lateral #1
Reference Design: Design #1

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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 @ 3694.00usft (McVay 4)
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: Lea Unit #60H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.45°





Legacy Reserves
Project: Lea County, NM (NAD-27 2015)
Site: Lea Unit #60H
Well: Lea Unit #60H
Wellbore: Lateral #1
Plan: Design #1 (Lea Unit #60H/Lateral #1)

Section Details

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	9927.04	0.00	0.00	9927.04	0.00	0.00	0.00	0.00	0.00	
3	10827.04	90.00	357.55	10500.00	572.43	-24.47	10.00	357.55	572.95	
4	18211.44	90.00	357.55	10500.00	7950.10	-339.90	0.00	0.00	7957.36	BHL-D1 (LU#60H/L1)

WELL DETAILS: Lea Unit #60H

Ground Elevation: 3676.00
RKB Elevation: KB @ 3694.00usft (McVay 4)
Rig Name: McVay 4



Azimuths to Grid North
True North: -0.45°
Magnetic North: -0.45°

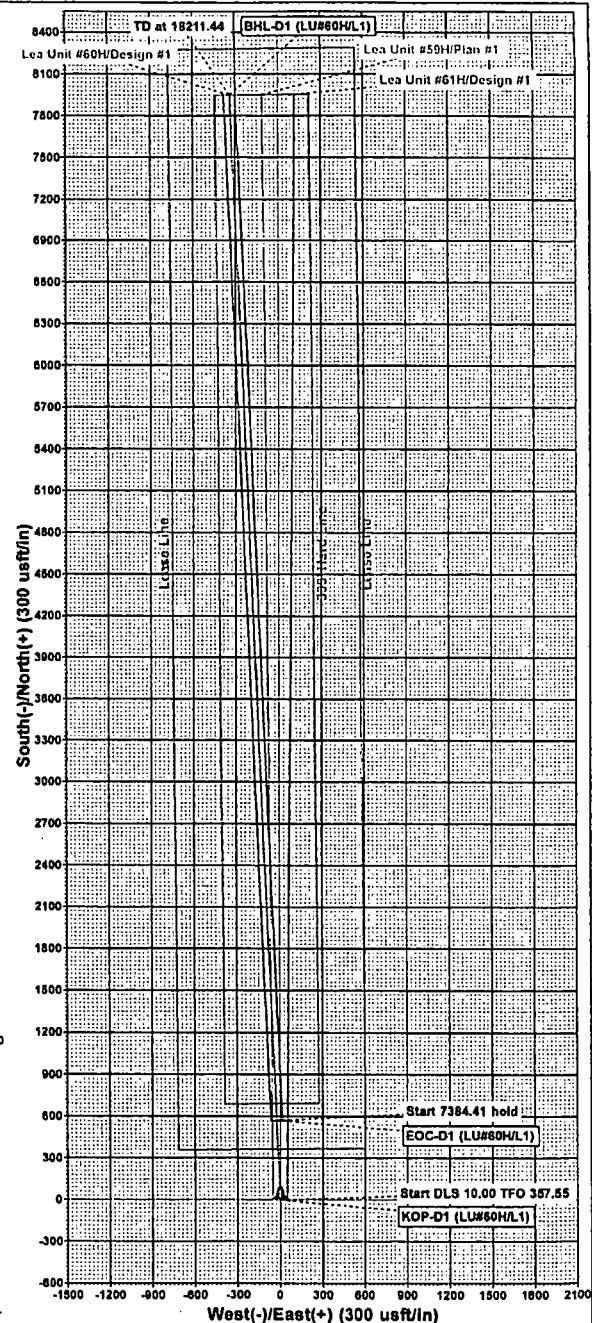
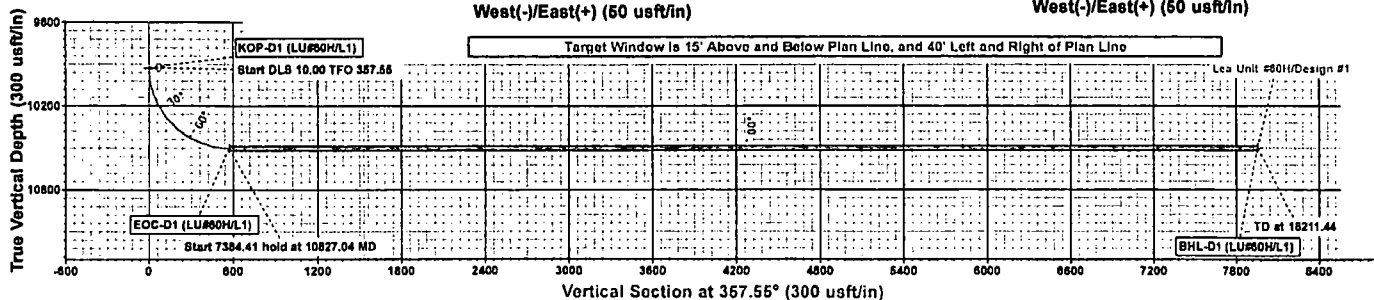
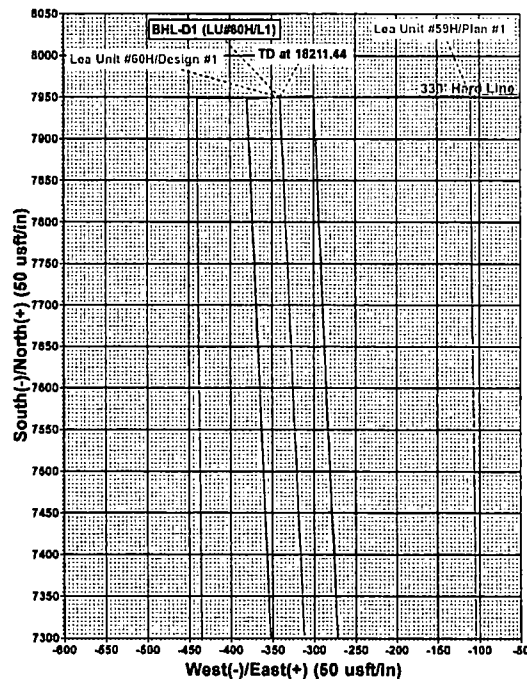
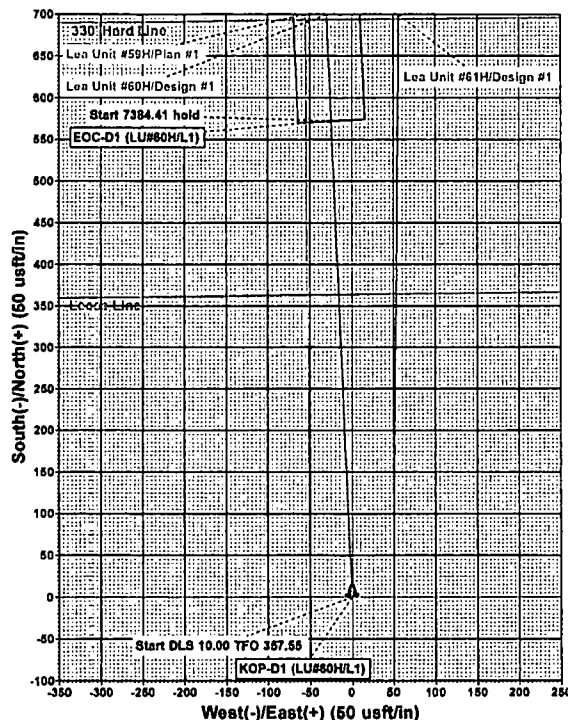
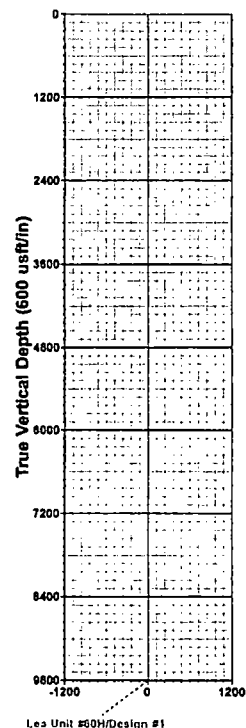
Magnetic Field
Strength: 0.05nT
Dip Angle: 0.00°
Date: 11/20/2016
Model: USER DEFINED

Northing
567524.00

Easting
756024.70

Latitude
32° 33' 28.944 N

Longitude
103° 30' 8.663 W



Plan: Design #1 (Lea Unit #60H/Lateral #1)
dated By: Well Planner Date: 15:24, December 03 2016

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

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