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Legacy Reserves

Lea County, NM (NAD-27 2015)

Lea Unit #40H

Lea Unit #40H

OH

Plan #1

Anticollision Report

17 February, 2016

HOBBS OCD

FEB 29 2016

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Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #40H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3693.00usft (McVay 4)
Reference Site:	Lea Unit #40H	MD Reference:	KB @ 3693.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #40H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference	Plan #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	2/17/2016		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	18,310.13	Plan #1 (OH)	MWD	MWD - Standard	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Lea Federal						
#28 - OH - OH	12,625.38	10,563.91	284.07	218.09	4.305	CC, ES, SF
Lea Unit						
#12 - OH - OH	16,600.00	10,600.99	104.22	-479.10	0.179	Level 1, SF
#12 - OH - OH	16,662.01	10,600.99	83.77	-245.69	0.254	Level 1, CC
#12 - OH - OH	16,800.00	10,600.99	161.42	-571.43	0.220	Level 1, ES
#12 - ST-01 - ST-01	16,600.00	10,600.99	104.22	-479.10	0.179	Level 1, SF
#12 - ST-01 - ST-01	16,662.01	10,600.99	83.77	-245.69	0.254	Level 1, CC
#12 - ST-01 - ST-01	16,800.00	10,600.99	161.42	-571.43	0.220	Level 1, ES

Offset Design										Lea Federal - #28 - OH - OH				Offset Site Error: 0.00 usft	
Survey Program: 100-ISCWSA-GYRO-3														Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Distance								Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	-5.63	2,194.10	-216.40	2,204.92						
100.00	100.00	73.61	73.61	0.09	0.07	-5.63	2,194.08	-216.33	2,204.72	2,204.56	0.16	N/A			
200.00	200.00	176.01	176.01	0.32	0.24	-5.62	2,193.97	-216.08	2,204.59	2,204.05	0.54	4,076.957			
300.00	300.00	275.01	275.01	0.54	0.42	-5.62	2,193.83	-215.75	2,204.42	2,203.47	0.94	2,342.844			
400.00	400.00	374.11	374.11	0.77	0.61	-5.61	2,193.76	-215.35	2,204.31	2,202.97	1.34	1,645.321			
500.00	500.00	472.48	472.48	0.99	0.79	-5.60	2,193.72	-215.09	2,204.24	2,202.50	1.74	1,269.755			
600.00	600.00	574.99	574.98	1.22	0.98	-5.60	2,193.68	-214.93	2,204.19	2,202.05	2.14	1,029.375			
655.18	655.18	627.18	627.18	1.34	1.07	-5.59	2,193.63	-214.87	2,204.12	2,201.77	2.36	935.372			
700.00	700.00	666.24	666.24	1.44	1.14	-5.59	2,193.68	-214.85	2,204.18	2,201.66	2.52	873.030			
800.00	800.00	775.30	775.30	1.67	1.33	-5.59	2,193.95	-214.72	2,204.43	2,201.49	2.94	750.464			
900.00	900.00	879.86	879.85	1.89	1.52	-5.58	2,193.64	-214.24	2,204.09	2,200.75	3.35	658.534			
1,000.00	1,000.00	983.42	983.42	2.12	1.71	-5.57	2,193.26	-213.72	2,203.67	2,199.92	3.76	586.526			
1,100.00	1,100.00	1,085.53	1,085.52	2.34	1.90	-5.56	2,192.69	-213.44	2,203.10	2,198.93	4.17	528.671			
1,200.00	1,200.00	1,185.43	1,185.42	2.56	2.07	-5.56	2,192.08	-213.36	2,202.48	2,197.91	4.57	481.422			
1,300.00	1,300.00	1,282.59	1,282.58	2.79	2.25	-5.56	2,191.54	-213.35	2,201.93	2,196.95	4.98	442.295			
1,400.00	1,400.00	1,385.28	1,385.26	3.01	2.43	-5.56	2,191.02	-213.30	2,201.41	2,196.02	5.39	408.208			
1,500.00	1,500.00	1,492.19	1,492.17	3.24	2.62	-5.56	2,190.20	-213.37	2,200.66	2,194.85	5.82	378.419			
1,600.00	1,600.00	1,590.30	1,590.28	3.46	2.79	-5.58	2,189.27	-213.92	2,199.77	2,193.55	6.22	353.724			
1,700.00	1,700.00	1,686.21	1,686.18	3.69	2.95	-5.61	2,188.46	-214.87	2,199.03	2,192.42	6.62	332.408			

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

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Reference Well:	Lea Unit #40H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:
Lea Federal - #28 - OH - OH													0.00 usft
Survey Program: 100-ISCWSA-GYRO-3													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum		Separation		Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
1,800.00	1,800.00	1,782.05	1,782.01	3.91	3.12	-5.63	2,187.87	-215.57	2,198.48	2,191.47	7.01	313.520	
1,900.00	1,900.00	1,877.51	1,877.48	4.14	3.29	-5.63	2,187.53	-215.53	2,198.13	2,190.72	7.41	296.786	
2,000.00	2,000.00	1,976.23	1,976.19	4.36	3.46	-5.60	2,187.43	-214.56	2,197.93	2,190.12	7.80	281.675	
2,100.00	2,100.00	2,074.63	2,074.59	4.59	3.64	-5.58	2,187.36	-213.61	2,197.77	2,189.57	8.20	268.085	
2,189.68	2,189.68	2,161.73	2,161.68	4.79	3.80	-5.56	2,187.37	-212.91	2,197.71	2,189.16	8.55	257.069	
2,200.00	2,200.00	2,171.72	2,171.67	4.81	3.82	-5.56	2,187.38	-212.84	2,197.71	2,189.12	8.59	255.863	
2,300.00	2,300.00	2,266.47	2,266.41	5.04	3.98	-5.54	2,187.56	-212.18	2,197.83	2,188.86	8.97	244.907	
2,400.00	2,400.00	2,364.59	2,364.54	5.26	4.15	-5.52	2,187.95	-211.53	2,198.16	2,188.80	9.36	234.780	
2,500.00	2,500.00	2,464.93	2,464.87	5.49	4.33	-5.51	2,188.34	-210.96	2,198.49	2,188.74	9.75	225.386	
2,600.00	2,600.00	2,565.99	2,565.93	5.71	4.51	-5.49	2,188.69	-210.52	2,198.80	2,188.65	10.15	216.672	
2,700.00	2,700.00	2,665.97	2,665.91	5.94	4.68	-5.48	2,189.01	-209.97	2,199.06	2,188.52	10.54	208.611	
2,800.00	2,800.00	2,765.63	2,765.57	6.16	4.86	-5.46	2,189.36	-209.29	2,199.35	2,188.42	10.94	201.122	
2,900.00	2,900.00	2,862.61	2,862.54	6.39	5.04	-5.44	2,189.77	-208.43	2,199.69	2,188.36	11.33	194.226	
3,000.00	3,000.00	2,958.48	2,958.40	6.61	5.21	-5.40	2,190.41	-207.10	2,200.22	2,188.50	11.71	187.830	
3,100.00	3,100.00	3,055.09	3,054.99	6.84	5.38	-5.36	2,191.24	-205.49	2,200.92	2,188.81	12.10	181.839	
3,200.00	3,200.00	3,149.20	3,149.09	7.06	5.55	-5.31	2,192.22	-203.84	2,201.79	2,189.31	12.49	176.298	
3,300.00	3,300.00	3,245.24	3,245.09	7.28	5.73	-5.26	2,193.53	-202.09	2,202.98	2,190.10	12.88	171.069	
3,400.00	3,400.00	3,348.12	3,347.95	7.51	5.91	-5.21	2,194.91	-200.21	2,204.15	2,190.88	13.28	165.989	
3,500.00	3,500.00	3,450.59	3,450.41	7.73	6.10	-5.17	2,196.10	-198.57	2,205.17	2,191.49	13.68	161.199	
3,600.00	3,600.00	3,552.86	3,552.66	7.96	6.28	-5.13	2,197.19	-197.32	2,206.11	2,192.03	14.08	156.680	
3,700.00	3,700.00	3,661.16	3,660.95	8.18	6.47	-5.11	2,198.03	-196.72	2,206.85	2,192.36	14.49	152.280	
3,800.00	3,800.00	3,760.61	3,760.40	8.41	6.63	-5.13	2,198.41	-197.19	2,207.26	2,192.37	14.89	148.253	
3,900.00	3,900.00	3,856.47	3,856.26	8.63	6.79	-5.13	2,199.01	-197.48	2,207.91	2,192.63	15.28	144.510	
4,000.00	4,000.00	3,953.63	3,953.41	8.86	6.95	-5.14	2,199.73	-197.71	2,208.68	2,193.01	15.67	140.934	
4,100.00	4,100.00	4,044.95	4,044.73	9.08	7.10	-5.14	2,200.61	-197.98	2,209.66	2,193.61	16.05	137.636	
4,200.00	4,200.00	4,137.17	4,136.94	9.31	7.26	-5.15	2,201.96	-198.38	2,211.15	2,194.71	16.44	134.505	
4,300.00	4,300.00	4,239.57	4,239.32	9.53	7.43	-5.17	2,203.45	-199.37	2,212.69	2,195.85	16.84	131.369	
4,400.00	4,400.00	4,341.78	4,341.51	9.76	7.59	-5.21	2,204.76	-200.90	2,214.11	2,196.86	17.25	128.374	
4,500.00	4,500.00	4,441.32	4,441.03	9.98	7.76	-5.25	2,205.97	-202.57	2,215.47	2,197.83	17.65	125.547	
4,600.00	4,600.00	4,534.56	4,534.25	10.21	7.91	-5.28	2,207.22	-204.16	2,216.97	2,198.93	18.03	122.930	
4,700.00	4,700.00	4,620.03	4,619.69	10.43	8.06	-5.32	2,208.80	-205.67	2,218.97	2,200.56	18.41	120.547	
4,800.00	4,800.00	4,700.00	4,699.62	10.66	8.19	-5.36	2,210.88	-207.28	2,221.76	2,202.99	18.77	118.373	
4,900.00	4,900.00	4,797.97	4,797.52	10.88	8.36	-5.40	2,213.91	-209.36	2,225.03	2,205.87	19.17	116.089	
5,000.00	5,000.00	4,898.20	4,897.68	11.11	8.53	-5.45	2,217.08	-211.46	2,228.38	2,208.81	19.57	113.873	
5,100.00	5,100.00	5,001.42	5,000.83	11.33	8.71	-5.49	2,220.26	-213.51	2,231.64	2,211.66	19.98	111.707	
5,200.00	5,200.00	5,107.40	5,106.72	11.56	8.89	-5.57	2,223.23	-216.69	2,234.72	2,214.33	20.39	109.590	
5,300.00	5,300.00	5,227.10	5,226.30	11.78	9.10	-5.68	2,225.67	-221.43	2,237.12	2,216.29	20.83	107.392	
5,400.00	5,400.00	5,331.94	5,331.05	12.00	9.27	-5.77	2,227.32	-225.21	2,239.05	2,217.80	21.24	105.408	
5,500.00	5,500.00	5,435.43	5,434.48	12.23	9.45	-5.85	2,228.80	-228.55	2,240.80	2,219.15	21.65	103.504	
5,600.00	5,600.00	5,536.68	5,535.68	12.45	9.63	-5.92	2,230.17	-231.19	2,242.41	2,220.36	22.05	101.681	
5,700.00	5,700.00	5,635.25	5,634.22	12.68	9.80	-5.98	2,231.57	-233.62	2,244.08	2,221.63	22.45	99.948	
5,800.00	5,800.00	5,738.31	5,737.24	12.90	9.97	-6.03	2,233.03	-236.01	2,245.73	2,222.87	22.86	98.237	
5,900.00	5,900.00	5,845.42	5,844.32	13.13	10.16	-6.09	2,234.27	-238.34	2,247.11	2,223.84	23.28	96.544	
6,000.00	6,000.00	5,949.22	5,948.09	13.35	10.34	-6.14	2,235.22	-240.35	2,248.23	2,224.55	23.68	94.925	
6,100.00	6,100.00	6,049.78	6,048.63	13.58	10.52	-6.18	2,236.07	-242.23	2,249.28	2,225.19	24.09	93.381	
6,200.00	6,200.00	6,149.36	6,148.20	13.80	10.69	-6.23	2,236.93	-244.03	2,250.32	2,225.84	24.49	91.895	
6,300.00	6,300.00	6,250.19	6,249.01	14.03	10.87	-6.27	2,237.80	-245.85	2,251.38	2,226.49	24.89	90.448	
6,400.00	6,400.00	6,351.43	6,350.22	14.25	11.05	-6.32	2,238.59	-247.74	2,252.36	2,227.07	25.30	89.042	
6,500.00	6,500.00	6,451.90	6,450.67	14.48	11.22	-6.37	2,239.33	-249.84	2,253.32	2,227.62	25.70	87.686	
6,600.00	6,600.00	6,551.89	6,550.63	14.70	11.40	-6.42	2,240.00	-252.23	2,254.26	2,228.16	26.10	86.375	
6,700.00	6,700.00	6,650.47	6,649.18	14.93	11.57	-6.48	2,240.69	-254.65	2,255.23	2,228.74	26.50	85.113	
6,800.00	6,800.00	6,752.00	6,750.67	15.15	11.75	-6.54	2,241.45	-257.10	2,256.25	2,229.35	26.90	83.873	

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Well Error:	0.00 usft	Output errors are at	2.00 sigma
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Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error: 0.00 usft
Lea Federal - #28 - OH - OH														Offset Well Error: 0.00 usft
Survey Program: 100-ISCWSA-GYRO-3														
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
6,900.00	6,900.00	6,856.48	6,855.12	15.38	11.94	-6.60	2,242.05	-259.58	2,257.09	2,229.78	27.31	82.647		
7,000.00	7,000.00	6,959.65	6,958.26	15.60	12.12	-6.67	2,242.46	-262.10	2,257.76	2,230.05	27.72	81.460		
7,100.00	7,100.00	7,060.72	7,059.29	15.83	12.30	-6.73	2,242.75	-264.59	2,258.34	2,230.22	28.12	80.316		
7,200.00	7,200.00	7,161.98	7,160.52	16.05	12.47	-6.79	2,243.00	-267.15	2,258.88	2,230.36	28.52	79.202		
7,300.00	7,300.00	7,260.60	7,259.11	16.28	12.65	-6.85	2,243.20	-269.67	2,259.39	2,230.47	28.92	78.131		
7,400.00	7,400.00	7,358.97	7,357.45	16.50	12.82	-6.92	2,243.51	-272.22	2,260.02	2,230.70	29.32	77.094		
7,500.00	7,500.00	7,460.06	7,458.51	16.72	13.00	-6.98	2,243.84	-274.86	2,260.65	2,230.93	29.72	76.072		
7,600.00	7,600.00	7,561.53	7,559.94	16.95	13.18	-7.05	2,244.08	-277.50	2,261.21	2,231.09	30.12	75.074		
7,700.00	7,700.00	7,663.85	7,662.23	17.17	13.37	-7.11	2,244.27	-280.12	2,261.70	2,231.18	30.52	74.096		
7,800.00	7,800.00	7,764.09	7,762.43	17.40	13.55	-7.18	2,244.36	-282.67	2,262.11	2,231.18	30.92	73.150		
7,900.00	7,900.00	7,866.19	7,864.50	17.62	13.73	-7.24	2,244.45	-285.26	2,262.51	2,231.18	31.33	72.221		
8,000.00	8,000.00	7,967.90	7,966.18	17.85	13.91	-7.31	2,244.39	-287.94	2,262.79	2,231.06	31.73	71.314		
8,100.00	8,100.00	8,068.59	8,066.83	18.07	14.09	-7.38	2,244.28	-290.70	2,263.03	2,230.90	32.13	70.433		
8,200.00	8,200.00	8,170.98	8,169.17	18.30	14.27	-7.46	2,244.08	-293.74	2,263.22	2,230.69	32.53	69.566		
8,300.00	8,300.00	8,269.68	8,267.82	18.52	14.45	-7.53	2,243.80	-296.79	2,263.35	2,230.42	32.93	68.731		
8,400.00	8,400.00	8,373.26	8,371.35	18.75	14.63	-7.62	2,243.53	-300.05	2,263.50	2,230.17	33.34	67.900		
8,500.00	8,500.00	8,475.59	8,473.64	18.97	14.82	-7.70	2,243.06	-303.15	2,263.46	2,229.72	33.74	67.088		
8,600.00	8,600.00	8,574.06	8,572.06	19.20	14.99	-7.77	2,242.62	-306.07	2,263.41	2,229.27	34.13	66.309		
8,602.54	8,602.54	8,576.54	8,574.54	19.20	15.00	-7.77	2,242.60	-306.15	2,263.41	2,229.26	34.14	66.289		
8,700.00	8,700.00	8,673.25	8,671.20	19.42	15.17	-7.85	2,242.23	-309.09	2,263.43	2,228.90	34.53	65.546		
8,800.00	8,800.00	8,772.02	8,769.93	19.65	15.35	-7.93	2,241.85	-312.18	2,263.49	2,228.56	34.93	64.803		
8,900.00	8,900.00	8,863.94	8,861.79	19.87	15.52	-8.00	2,241.64	-315.21	2,263.72	2,228.40	35.31	64.104		
9,000.00	9,000.00	8,953.97	8,951.77	20.10	15.68	-8.08	2,241.81	-318.42	2,264.40	2,228.70	35.70	63.437		
9,100.00	9,100.00	9,050.43	9,048.17	20.32	15.85	-8.17	2,242.32	-321.89	2,265.44	2,229.35	36.09	62.773		
9,200.00	9,200.00	9,151.36	9,149.02	20.55	16.04	-8.26	2,242.82	-325.64	2,266.45	2,229.96	36.49	62.109		
9,300.00	9,300.00	9,245.42	9,243.01	20.77	16.21	-8.35	2,243.32	-329.29	2,267.54	2,230.66	36.88	61.483		
9,400.00	9,400.00	9,337.53	9,335.03	21.00	16.38	-8.45	2,244.14	-333.19	2,269.04	2,231.77	37.27	60.886		
9,500.00	9,500.00	9,431.58	9,428.98	21.22	16.55	-8.55	2,245.14	-337.36	2,270.76	2,233.10	37.66	60.301		
9,600.00	9,600.00	9,523.43	9,520.73	21.44	16.72	-8.64	2,246.51	-341.42	2,272.89	2,234.84	38.04	59.745		
9,700.00	9,700.00	9,627.76	9,624.96	21.67	16.91	-8.75	2,248.14	-345.83	2,275.07	2,236.62	38.45	59.164		
9,800.00	9,800.00	9,735.26	9,732.37	21.89	17.11	-8.84	2,249.55	-350.00	2,276.96	2,238.09	38.87	58.579		
9,900.00	9,900.00	9,838.85	9,835.89	22.12	17.30	-8.93	2,250.69	-353.69	2,278.60	2,239.32	39.28	58.011		
10,000.00	10,000.00	9,934.95	9,931.92	22.34	17.47	-9.01	2,251.70	-357.19	2,280.21	2,240.54	39.67	57.475		
10,027.04	10,027.04	9,959.17	9,956.12	22.40	17.52	-9.03	2,252.01	-358.07	2,280.70	2,240.93	39.78	57.338		
10,050.00	10,049.99	9,979.74	9,976.68	22.46	17.55	-6.61	2,252.30	-358.81	2,280.69	2,240.83	39.86	57.212		
10,100.00	10,099.80	10,032.00	10,028.89	22.57	17.65	-6.70	2,253.06	-360.66	2,277.54	2,237.47	40.07	56.840		
10,150.00	10,149.06	10,089.92	10,086.78	22.68	17.76	-6.87	2,253.74	-362.64	2,269.93	2,229.65	40.29	56.346		
10,200.00	10,197.39	10,144.89	10,141.71	22.79	17.86	-7.11	2,254.20	-364.46	2,257.92	2,217.42	40.49	55.759		
10,250.00	10,244.42	10,197.94	10,194.74	22.90	17.96	-7.43	2,254.50	-366.21	2,241.63	2,200.93	40.70	55.082		
10,300.00	10,289.79	10,238.26	10,235.03	23.00	18.03	-7.83	2,254.71	-367.58	2,221.31	2,180.44	40.87	54.352		
10,350.00	10,333.17	10,276.47	10,273.22	23.11	18.10	-8.33	2,254.99	-369.00	2,197.24	2,156.20	41.03	53.547		
10,400.00	10,374.21	10,314.72	10,311.43	23.22	18.17	-8.98	2,255.34	-370.51	2,169.58	2,128.39	41.19	52.669		
10,450.00	10,412.62	10,353.95	10,350.63	23.35	18.24	-9.82	2,255.70	-372.08	2,138.46	2,097.12	41.35	51.720		
10,500.00	10,448.09	10,390.23	10,386.88	23.50	18.31	-10.89	2,256.03	-373.54	2,104.11	2,062.62	41.49	50.714		
10,550.00	10,480.35	10,424.85	10,421.47	23.66	18.37	-12.30	2,256.33	-374.92	2,066.78	2,025.16	41.62	49.657		
10,600.00	10,509.17	10,456.34	10,452.94	23.84	18.43	-14.16	2,256.56	-376.18	2,026.74	1,985.00	41.74	48.556		
10,650.00	10,534.31	10,483.80	10,480.37	24.05	18.48	-16.69	2,256.73	-377.28	1,984.31	1,942.46	41.84	47.422		
10,700.00	10,555.60	10,506.80	10,503.35	24.28	18.52	-20.25	2,256.86	-378.21	1,939.82	1,897.89	41.93	46.262		
10,750.00	10,572.86	10,525.05	10,521.59	24.53	18.56	-25.51	2,256.95	-378.94	1,893.64	1,851.64	42.00	45.084		
10,800.00	10,585.97	10,538.96	10,535.49	24.82	18.58	-33.76	2,257.01	-379.51	1,846.13	1,804.07	42.06	43.893		
10,850.00	10,594.83	10,548.44	10,544.96	25.12	18.60	-47.49	2,257.05	-379.89	1,797.64	1,755.54	42.10	42.695		
10,900.00	10,599.36	10,553.43	10,549.95	25.45	18.61	-70.07	2,257.07	-380.10	1,748.56	1,706.43	42.14	41.499		

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

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #40H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3693.00usft (McVay 4)
Reference Site:	Lea Unit #40H	MD Reference:	KB @ 3693.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #40H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Lea Federal - #28 - OH - OH		Offset Site Error:	0.00 usft
Survey Program: 100-ISCWSA-GYRO-3													Offset Well Error:	0.00 usft		
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
10,927.04	10,600.00	10,554.25	10,550.77	25.64	18.61	-85.72	2,257.07	-380.13	1,721.91	1,679.76	42.15	40.854				
11,000.00	10,600.00	10,554.68	10,551.20	26.19	18.61	-85.80	2,257.07	-380.15	1,649.99	1,607.81	42.18	39.120				
11,100.00	10,600.00	10,555.27	10,551.78	27.02	18.61	-85.92	2,257.08	-380.17	1,551.58	1,509.35	42.23	36.741				
11,200.00	10,600.00	10,555.86	10,552.37	27.96	18.61	-86.04	2,257.08	-380.20	1,453.39	1,411.09	42.30	34.359				
11,300.00	10,600.00	10,556.44	10,552.95	28.98	18.61	-86.16	2,257.08	-380.22	1,355.46	1,313.07	42.39	31.974				
11,400.00	10,600.00	10,557.02	10,553.53	30.08	18.62	-86.27	2,257.08	-380.24	1,257.86	1,215.34	42.52	29.585				
11,500.00	10,600.00	10,557.59	10,554.11	31.25	18.62	-86.39	2,257.09	-380.27	1,160.66	1,117.98	42.69	27.191				
11,600.00	10,600.00	10,558.17	10,554.68	32.48	18.62	-86.51	2,257.09	-380.29	1,063.99	1,021.07	42.91	24.794				
11,700.00	10,600.00	10,558.74	10,555.25	33.77	18.62	-86.62	2,257.09	-380.32	967.98	924.76	43.23	22.392				
11,800.00	10,600.00	10,559.31	10,555.82	35.11	18.62	-86.74	2,257.09	-380.34	872.88	829.21	43.67	19.987				
11,900.00	10,600.00	10,559.88	10,556.39	36.49	18.62	-86.85	2,257.09	-380.36	779.01	734.70	44.31	17.582				
12,000.00	10,600.00	10,560.44	10,556.95	37.91	18.62	-86.96	2,257.10	-380.38	686.86	641.63	45.23	15.186				
12,100.00	10,600.00	10,561.00	10,557.51	39.37	18.62	-87.08	2,257.10	-380.41	597.25	550.66	46.60	12.818				
12,200.00	10,600.00	10,561.56	10,558.07	40.86	18.62	-87.19	2,257.10	-380.43	511.51	462.86	48.64	10.515				
12,300.00	10,600.00	10,562.12	10,558.63	42.37	18.62	-87.30	2,257.10	-380.45	431.93	380.23	51.70	8.355				
12,400.00	10,600.00	10,562.67	10,559.18	43.91	18.63	-87.41	2,257.11	-380.48	362.62	306.59	56.03	6.472				
12,500.00	10,600.00	10,563.22	10,559.73	45.48	18.63	-87.52	2,257.11	-380.50	310.51	249.23	61.28	5.067				
12,600.00	10,600.00	10,563.77	10,560.28	47.06	18.63	-87.64	2,257.11	-380.52	285.20	219.75	65.46	4.357				
12,625.38	10,600.00	10,563.91	10,560.42	47.47	18.63	-87.66	2,257.11	-380.53	284.07	218.09	65.99	4.305	CC, ES, SF			
12,700.00	10,600.00	10,564.32	10,560.83	48.66	18.63	-87.75	2,257.11	-380.54	293.71	227.79	65.92	4.455				
12,800.00	10,600.00	10,564.86	10,561.37	50.28	18.63	-87.86	2,257.11	-380.57	333.45	270.41	63.04	5.289				
12,900.00	10,600.00	10,565.41	10,561.91	51.92	18.63	-87.97	2,257.12	-380.59	395.11	335.86	59.25	6.668				
13,000.00	10,600.00	10,565.95	10,562.45	53.56	18.63	-88.07	2,257.12	-380.61	470.14	414.18	55.96	8.401				
13,100.00	10,600.00	10,566.48	10,562.99	55.22	18.63	-88.18	2,257.12	-380.63	553.13	499.70	53.43	10.352				
13,200.00	10,600.00	10,567.02	10,563.52	56.89	18.63	-88.29	2,257.12	-380.65	641.00	589.45	51.55	12.435				
13,300.00	10,600.00	10,567.55	10,564.05	58.58	18.63	-88.40	2,257.12	-380.68	731.98	681.83	50.15	14.596				
13,400.00	10,600.00	10,568.08	10,564.58	60.27	18.64	-88.50	2,257.13	-380.70	825.06	775.97	49.09	16.806				
13,500.00	10,600.00	10,568.61	10,565.11	61.97	18.64	-88.61	2,257.13	-380.72	919.59	871.30	48.28	19.046				
13,600.00	10,600.00	10,569.14	10,565.64	63.67	18.64	-88.72	2,257.13	-380.74	1,015.16	967.51	47.65	21.304				
13,700.00	10,600.00	10,569.66	10,566.16	65.39	18.64	-88.82	2,257.13	-380.76	1,111.52	1,064.37	47.15	23.573				
13,800.00	10,600.00	10,570.18	10,566.68	67.11	18.64	-88.93	2,257.13	-380.78	1,208.47	1,161.71	46.75	25.848				
13,900.00	10,600.00	10,570.70	10,567.20	68.84	18.64	-89.03	2,257.13	-380.81	1,305.88	1,259.45	46.43	28.125				
14,000.00	10,600.00	10,571.22	10,567.72	70.57	18.64	-89.14	2,257.14	-380.83	1,403.65	1,357.48	46.17	30.404				
14,100.00	10,600.00	10,571.73	10,568.23	72.31	18.64	-89.24	2,257.14	-380.85	1,501.71	1,455.76	45.95	32.681				
14,200.00	10,600.00	10,572.24	10,568.74	74.06	18.64	-89.34	2,257.14	-380.87	1,600.02	1,554.25	45.77	34.957				
14,300.00	10,600.00	10,572.75	10,569.25	75.81	18.64	-89.45	2,257.14	-380.89	1,698.52	1,652.90	45.62	37.230				
14,400.00	10,600.00	10,573.26	10,569.76	77.56	18.65	-89.55	2,257.14	-380.91	1,797.19	1,751.69	45.50	39.500				
14,500.00	10,600.00	10,573.77	10,570.27	79.32	18.65	-89.65	2,257.15	-380.93	1,896.00	1,850.60	45.40	41.766				
14,600.00	10,600.00	10,574.27	10,570.77	81.08	18.65	-89.75	2,257.15	-380.95	1,994.92	1,949.61	45.31	44.028				
14,700.00	10,600.00	10,574.77	10,571.27	82.85	18.65	-89.85	2,257.15	-380.97	2,093.95	2,048.71	45.24	46.286				
14,800.00	10,600.00	10,575.27	10,571.77	84.61	18.65	-89.95	2,257.15	-380.99	2,193.07	2,147.89	45.18	48.539				
14,900.00	10,600.00	10,575.77	10,572.27	86.39	18.65	-90.05	2,257.15	-381.01	2,292.26	2,247.13	45.14	50.787				
15,000.00	10,600.00	10,576.27	10,572.76	88.16	18.65	-90.15	2,257.15	-381.03	2,391.52	2,346.42	45.10	53.030				
15,100.00	10,600.00	10,576.76	10,573.26	89.94	18.65	-90.25	2,257.16	-381.05	2,490.84	2,445.77	45.07	55.267				
15,200.00	10,600.00	10,577.25	10,573.75	91.72	18.65	-90.35	2,257.16	-381.07	2,590.21	2,545.16	45.05	57.500				
15,300.00	10,600.00	10,577.74	10,574.24	93.50	18.65	-90.45	2,257.16	-381.09	2,689.63	2,644.60	45.03	59.727				
15,400.00	10,600.00	10,578.23	10,574.72	95.28	18.65	-90.55	2,257.16	-381.11	2,789.09	2,744.06	45.02	61.948				
15,500.00	10,600.00	10,578.71	10,575.21	97.07	18.66	-90.65	2,257.16	-381.13	2,888.58	2,843.56	45.02	64.163				
15,600.00	10,600.00	10,579.20	10,575.69	98.86	18.66	-90.74	2,257.16	-381.15	2,988.11	2,943.09	45.02	66.372				
15,700.00	10,600.00	10,579.68	10,576.17	100.65	18.66	-90.84	2,257.17	-381.17	3,087.67	3,042.65	45.03	68.576				
15,800.00	10,600.00	10,580.16	10,576.65	102.44	18.66	-90.94	2,257.17	-381.19	3,187.26	3,142.23	45.03	70.773				
15,900.00	10,600.00	10,580.64	10,577.13	104.24	18.66	-91.03	2,257.17	-381.21	3,286.88	3,241.83	45.05	72.964				

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

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #40H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3693.00usft (McVay 4)
Reference Site:	Lea Unit #40H	MD Reference:	KB @ 3693.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #40H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error: 0.00 usft	
Survey Program: 100-ISCWSA-GYRO-3														Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
16,000.00	10,600.00	10,581.11	10,577.60	106.04	18.66	-91.13	2,257.17	-381.23	3,386.51	3,341.45	45.06	75.149			
16,100.00	10,600.00	10,581.58	10,578.07	107.83	18.66	-91.22	2,257.17	-381.25	3,486.17	3,441.08	45.08	77.328			
16,200.00	10,600.00	10,582.06	10,578.55	109.63	18.66	-91.32	2,257.17	-381.27	3,585.84	3,540.74	45.11	79.499			
16,300.00	10,600.00	10,582.52	10,579.01	111.43	18.66	-91.41	2,257.18	-381.29	3,685.54	3,640.41	45.13	81.665			
16,400.00	10,600.00	10,582.99	10,579.48	113.24	18.66	-91.51	2,257.18	-381.31	3,785.24	3,740.09	45.16	83.824			
16,500.00	10,600.00	10,583.46	10,579.95	115.04	18.66	-91.60	2,257.18	-381.33	3,884.97	3,839.78	45.19	85.976			
16,600.00	10,600.00	10,583.92	10,580.41	116.85	18.67	-91.69	2,257.18	-381.35	3,984.71	3,939.49	45.22	88.121			
16,700.00	10,600.00	10,584.38	10,580.87	118.65	18.67	-91.79	2,257.18	-381.37	4,084.46	4,039.20	45.25	90.259			
16,800.00	10,600.00	10,584.84	10,581.33	120.46	18.67	-91.88	2,257.18	-381.39	4,184.22	4,138.93	45.29	92.391			
16,900.00	10,600.00	10,585.30	10,581.79	122.27	18.67	-91.97	2,257.19	-381.41	4,283.99	4,238.67	45.33	94.515			
17,000.00	10,600.00	10,585.76	10,582.25	124.08	18.67	-92.06	2,257.19	-381.42	4,383.78	4,338.41	45.37	96.633			
17,100.00	10,600.00	10,586.21	10,582.70	125.89	18.67	-92.15	2,257.19	-381.44	4,483.57	4,438.16	45.41	98.743			
17,200.00	10,600.00	10,586.67	10,583.15	127.70	18.67	-92.24	2,257.19	-381.46	4,583.37	4,537.92	45.45	100.846			
17,300.00	10,600.00	10,587.12	10,583.60	129.51	18.67	-92.33	2,257.19	-381.48	4,683.18	4,637.69	45.49	102.941			
17,400.00	10,600.00	10,587.57	10,584.05	131.32	18.67	-92.42	2,257.19	-381.50	4,783.00	4,737.46	45.54	105.030			
17,500.00	10,600.00	10,588.01	10,584.50	133.14	18.67	-92.51	2,257.19	-381.52	4,882.83	4,837.24	45.59	107.111			
17,600.00	10,600.00	10,588.46	10,584.94	134.95	18.67	-92.60	2,257.20	-381.54	4,982.66	4,937.02	45.64	109.184			
17,700.00	10,600.00	10,588.90	10,585.39	136.77	18.67	-92.69	2,257.20	-381.55	5,082.50	5,036.81	45.69	111.251			
17,800.00	10,600.00	10,589.35	10,585.83	138.58	18.68	-92.78	2,257.20	-381.57	5,182.34	5,136.61	45.74	113.309			
17,900.00	10,600.00	10,589.79	10,586.27	140.40	18.68	-92.87	2,257.20	-381.59	5,282.20	5,236.41	45.79	115.360			
18,000.00	10,600.00	10,590.22	10,586.71	142.22	18.68	-92.96	2,257.20	-381.61	5,382.05	5,336.21	45.84	117.403			
18,100.00	10,600.00	10,590.66	10,587.14	144.04	18.68	-93.04	2,257.20	-381.63	5,481.91	5,436.02	45.90	119.439			
18,200.00	10,600.00	10,591.10	10,587.58	145.86	18.68	-93.13	2,257.20	-381.65	5,581.78	5,535.83	45.95	121.467			
18,300.00	10,600.00	10,591.53	10,588.01	147.68	18.68	-93.22	2,257.20	-381.66	5,681.65	5,635.64	46.01	123.487			
18,310.13	10,600.00	10,591.57	10,588.06	147.86	18.68	-93.23	2,257.21	-381.66	5,691.77	5,645.76	46.02	123.691			

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #40H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3693.00usft (McVay 4)
Reference Site:	Lea Unit #40H	MD Reference:	KB @ 3693.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #40H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Lea Unit - #12 - OH - OH													Offset Well Error:	0.00 usft
Survey Program: 207-INC, 16000-MWD														
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
0.00	0.00	0.61	0.61	0.00	0.01	-3.82	6,295.69	-420.80	6,309.74					
100.00	100.00	101.57	101.57	0.09	2.49	-3.82	6,295.71	-420.47	6,309.73	6,307.15	2.58	2,445.859		
200.00	200.00	202.53	202.52	0.32	4.96	-3.81	6,295.75	-419.50	6,309.71	6,304.43	5.28	1,195.721		
300.00	300.00	301.96	301.94	0.54	8.70	-3.80	6,295.79	-418.40	6,309.68	6,300.44	9.24	682.949		
400.00	400.00	401.91	401.89	0.77	12.06	-3.79	6,295.83	-417.52	6,309.66	6,296.84	12.82	491.998		
500.00	500.00	502.30	502.28	0.99	15.93	-3.79	6,295.87	-416.55	6,309.64	6,292.72	16.92	372.986		
600.00	600.00	601.76	601.74	1.22	19.57	-3.78	6,295.92	-415.43	6,309.61	6,288.83	20.78	303.573		
700.00	700.00	701.26	701.23	1.44	22.20	-3.77	6,295.94	-414.94	6,309.60	6,285.96	23.64	266.931		
800.00	800.00	801.26	801.23	1.67	24.45	-3.77	6,295.96	-414.50	6,309.59	6,283.48	26.12	241.607		
900.00	900.00	901.26	901.23	1.89	26.71	-3.76	6,295.98	-414.06	6,309.58	6,280.99	28.59	220.670		
1,000.00	1,000.00	1,001.53	1,001.50	2.12	29.66	-3.76	6,296.00	-413.53	6,309.57	6,277.80	31.77	198.599		
1,100.00	1,100.00	1,101.80	1,101.77	2.34	32.62	-3.75	6,296.03	-412.81	6,309.55	6,274.60	34.95	180.514		
1,200.00	1,200.00	1,201.70	1,201.67	2.56	35.13	-3.74	6,296.07	-411.99	6,309.53	6,271.84	37.69	167.404		
1,300.00	1,300.00	1,301.45	1,301.41	2.79	37.46	-3.74	6,296.10	-411.33	6,309.52	6,269.27	40.25	156.777		
1,400.00	1,400.00	1,401.20	1,401.16	3.01	39.79	-3.73	6,296.12	-410.85	6,309.51	6,266.71	42.80	147.420		
1,500.00	1,500.00	1,500.95	1,500.91	3.24	42.12	-3.73	6,296.13	-410.54	6,309.50	6,264.15	45.35	139.116		
1,600.00	1,600.00	1,600.71	1,600.67	3.46	44.45	-3.73	6,296.14	-410.41	6,309.50	6,261.59	47.91	131.698		
1,700.00	1,700.00	1,701.01	1,700.96	3.69	47.56	-3.73	6,296.14	-410.31	6,309.50	6,258.26	51.24	123.136		
1,800.00	1,800.00	1,801.50	1,801.45	3.91	50.94	-3.72	6,296.16	-409.87	6,309.49	6,254.64	54.85	115.035		
1,900.00	1,900.00	1,901.99	1,901.94	4.14	54.33	-3.72	6,296.19	-409.08	6,309.47	6,251.01	58.46	107.933		
2,000.00	2,000.00	2,002.47	2,002.41	4.36	57.71	-3.71	6,296.24	-407.94	6,309.44	6,247.38	62.07	101.658		
2,100.00	2,100.00	2,102.94	2,102.88	4.59	61.09	-3.69	6,296.30	-406.45	6,309.41	6,243.74	65.67	96.072		
2,200.00	2,200.00	2,202.92	2,202.85	4.81	65.69	-3.68	6,296.38	-404.75	6,309.37	6,238.88	70.49	89.502		
2,300.00	2,300.00	2,302.76	2,302.67	5.04	70.67	-3.66	6,296.45	-403.15	6,309.34	6,233.64	75.70	83.350		
2,400.00	2,400.00	2,402.60	2,402.50	5.26	75.65	-3.65	6,296.51	-401.66	6,309.31	6,228.41	80.90	77.988		
2,500.00	2,500.00	2,502.45	2,502.34	5.49	80.63	-3.64	6,296.57	-400.28	6,309.28	6,223.18	86.10	73.275		
2,600.00	2,600.00	2,602.97	2,602.84	5.71	86.66	-3.62	6,296.63	-398.78	6,309.25	6,216.89	92.36	68.315		
2,700.00	2,700.00	2,703.61	2,703.46	5.94	92.89	-3.61	6,296.72	-396.78	6,309.21	6,210.39	98.81	63.849		
2,800.00	2,800.00	2,804.23	2,804.05	6.16	100.16	-3.58	6,296.83	-394.26	6,309.16	6,202.85	106.31	59.349		
2,900.00	2,900.00	2,904.84	2,904.62	6.39	110.08	-3.56	6,296.96	-391.21	6,309.10	6,192.65	116.45	54.177		
3,000.00	3,000.00	3,005.41	3,005.13	6.61	120.00	-3.52	6,297.11	-387.63	6,309.03	6,182.44	126.60	49.836		
3,100.00	3,100.00	3,105.45	3,105.09	6.84	131.57	-3.49	6,297.28	-383.71	6,308.96	6,170.57	138.39	45.589		
3,200.00	3,200.00	3,205.37	3,204.93	7.06	143.49	-3.45	6,297.45	-379.79	6,308.89	6,158.36	150.53	41.911		
3,300.00	3,300.00	3,305.17	3,304.66	7.28	154.81	-3.42	6,297.61	-375.90	6,308.82	6,146.75	162.08	38.925		
3,400.00	3,400.00	3,404.76	3,404.18	7.51	164.99	-3.38	6,297.77	-372.27	6,308.76	6,136.28	172.48	36.577		
3,500.00	3,500.00	3,504.36	3,503.73	7.73	175.17	-3.35	6,297.91	-368.97	6,308.71	6,125.82	182.89	34.495		
3,600.00	3,600.00	3,603.99	3,603.31	7.96	185.36	-3.33	6,298.04	-366.01	6,308.66	6,115.37	193.30	32.637		
3,700.00	3,700.00	3,703.63	3,702.92	8.18	194.25	-3.30	6,298.15	-363.38	6,308.62	6,106.21	202.42	31.167		
3,800.00	3,800.00	3,803.28	3,802.54	8.41	201.35	-3.28	6,298.25	-361.09	6,308.59	6,098.85	209.74	30.078		
3,900.00	3,900.00	3,902.95	3,902.19	8.63	208.45	-3.26	6,298.33	-359.16	6,308.56	6,091.50	217.06	29.063		
4,000.00	4,000.00	4,002.91	4,002.13	8.86	214.37	-3.25	6,298.40	-357.41	6,308.54	6,085.33	223.21	28.263		
4,100.00	4,100.00	4,102.89	4,102.10	9.08	220.20	-3.23	6,298.48	-355.67	6,308.51	6,079.24	229.27	27.516		
4,200.00	4,200.00	4,202.87	4,202.06	9.31	225.95	-3.22	6,298.55	-353.93	6,308.49	6,073.25	235.24	26.818		
4,300.00	4,300.00	4,302.77	4,301.95	9.53	231.14	-3.20	6,298.62	-352.24	6,308.47	6,067.81	240.65	26.214		
4,400.00	4,400.00	4,402.68	4,401.85	9.76	236.33	-3.19	6,298.69	-350.66	6,308.45	6,062.37	246.07	25.637		
4,500.00	4,500.00	4,502.60	4,501.75	9.98	241.52	-3.17	6,298.76	-349.16	6,308.43	6,056.94	251.49	25.084		
4,600.00	4,600.00	4,602.51	4,601.66	10.21	246.72	-3.16	6,298.82	-347.77	6,308.41	6,051.50	256.91	24.555		
4,700.00	4,700.00	4,702.51	4,701.64	10.43	251.91	-3.15	6,298.87	-346.44	6,308.39	6,046.06	262.33	24.048		
4,800.00	4,800.00	4,802.56	4,801.69	10.66	257.11	-3.14	6,298.93	-345.04	6,308.38	6,040.62	267.76	23.560		
4,900.00	4,900.00	4,902.62	4,901.73	10.88	262.32	-3.12	6,299.00	-343.55	6,308.36	6,035.18	273.18	23.092		
5,000.00	5,000.00	5,002.67	5,001.77	11.11	267.52	-3.11	6,299.06	-341.97	6,308.34	6,029.73	278.61	22.642		
5,100.00	5,100.00	5,102.72	5,101.81	11.33	272.72	-3.09	6,299.14	-340.31	6,308.32	6,024.29	284.03	22.210		

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

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #40H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3693.00usft (McVay 4)
Reference Site:	Lea Unit #40H	MD Reference:	KB @ 3693.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #40H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error: 0.00 usft
Lea Unit - #12 - OH - OH														Offset Well Error: 0.00 usft
Survey Program: 207-INC, 16000-MWD														
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
5,200.00	5,200.00	5,202.82	5,201.90	11.56	279.08	-3.08	6,299.21	-338.53	6,308.30	6,017.68	290.62	21.707		
5,300.00	5,300.00	5,302.96	5,302.02	11.78	286.22	-3.06	6,299.30	-336.53	6,308.28	6,010.30	297.98	21.170		
5,400.00	5,400.00	5,403.09	5,402.12	12.00	293.36	-3.04	6,299.39	-334.29	6,308.26	6,002.91	305.35	20.659		
5,500.00	5,500.00	5,503.21	5,502.21	12.23	300.49	-3.02	6,299.50	-331.83	6,308.23	5,995.52	312.71	20.173		
5,600.00	5,600.00	5,602.69	5,601.66	12.45	306.52	-2.99	6,299.59	-329.58	6,308.21	5,989.25	318.96	19.778		
5,700.00	5,700.00	5,702.15	5,701.11	12.68	312.03	-2.98	6,299.65	-328.32	6,308.20	5,983.50	324.70	19.428		
5,800.00	5,800.00	5,802.14	5,801.10	12.90	315.32	-2.98	6,299.69	-327.44	6,308.19	5,979.98	328.21	19.220		
5,900.00	5,900.00	5,902.23	5,901.19	13.13	319.03	-2.97	6,299.72	-326.55	6,308.18	5,976.03	332.15	18.992		
6,000.00	6,000.00	6,002.62	6,001.57	13.35	324.26	-2.95	6,299.78	-325.17	6,308.17	5,970.57	337.60	18.685		
6,100.00	6,100.00	6,102.77	6,101.69	13.58	329.95	-2.94	6,299.87	-323.15	6,308.15	5,964.64	343.52	18.363		
6,200.00	6,200.00	6,202.68	6,201.59	13.80	336.54	-2.92	6,299.95	-321.27	6,308.14	5,957.80	350.33	18.006		
6,300.00	6,300.00	6,303.01	6,301.89	14.03	343.94	-2.90	6,300.05	-318.93	6,308.12	5,950.16	357.95	17.623		
6,400.00	6,400.00	6,402.98	6,401.82	14.25	352.34	-2.87	6,300.16	-316.31	6,308.10	5,941.51	366.58	17.208		
6,500.00	6,500.00	6,502.94	6,501.75	14.48	360.75	-2.85	6,300.27	-313.70	6,308.08	5,932.86	375.21	16.812		
6,600.00	6,600.00	6,602.91	6,601.69	14.70	369.15	-2.83	6,300.39	-311.08	6,308.06	5,924.22	383.85	16.434		
6,700.00	6,700.00	6,703.08	6,701.82	14.93	378.55	-2.80	6,300.51	-308.26	6,308.04	5,914.58	393.47	16.032		
6,800.00	6,800.00	6,803.15	6,801.83	15.15	388.93	-2.77	6,300.65	-304.85	6,308.02	5,903.95	404.07	15.611		
6,900.00	6,900.00	6,903.09	6,901.71	15.38	399.91	-2.74	6,300.80	-301.36	6,308.00	5,892.72	415.28	15.190		
7,000.00	7,000.00	7,003.03	7,001.59	15.60	410.90	-2.71	6,300.95	-297.88	6,307.99	5,881.49	426.50	14.790		
7,100.00	7,100.00	7,102.97	7,101.47	15.83	421.90	-2.67	6,301.10	-294.39	6,307.97	5,870.25	437.72	14.411		
7,200.00	7,200.00	7,202.91	7,201.34	16.05	432.90	-2.64	6,301.25	-290.91	6,307.96	5,859.01	448.95	14.050		
7,300.00	7,300.00	7,302.85	7,301.22	16.28	443.91	-2.61	6,301.40	-287.42	6,307.95	5,847.77	460.18	13.708		
7,400.00	7,400.00	7,402.78	7,401.09	16.50	454.78	-2.58	6,301.55	-283.94	6,307.94	5,836.66	471.28	13.385		
7,500.00	7,500.00	7,502.67	7,500.93	16.72	464.50	-2.55	6,301.68	-280.75	6,307.93	5,826.71	481.22	13.108		
7,600.00	7,600.00	7,602.60	7,600.83	16.95	474.22	-2.53	6,301.80	-277.99	6,307.93	5,816.76	491.17	12.843		
7,700.00	7,700.00	7,702.59	7,700.77	17.17	483.95	-2.50	6,301.93	-275.00	6,307.93	5,806.80	501.12	12.588		
7,800.00	7,800.00	7,802.55	7,800.67	17.40	494.29	-2.47	6,302.08	-271.59	6,307.92	5,796.24	511.69	12.328		
7,855.60	7,855.60	7,858.11	7,856.20	17.52	500.43	-2.45	6,302.16	-269.65	6,307.92	5,789.97	517.95	12.179		
7,900.00	7,900.00	7,902.48	7,900.55	17.62	505.33	-2.44	6,302.22	-268.10	6,307.92	5,784.97	522.95	12.062		
8,000.00	8,000.00	8,002.43	8,000.43	17.85	516.01	-2.40	6,302.37	-264.63	6,307.93	5,774.06	533.86	11.816		
8,100.00	8,100.00	8,102.41	8,100.36	18.07	525.76	-2.38	6,302.51	-261.50	6,307.93	5,764.10	543.83	11.599		
8,200.00	8,200.00	8,202.40	8,200.32	18.30	535.01	-2.35	6,302.62	-258.80	6,307.93	5,754.62	553.31	11.400		
8,300.00	8,300.00	8,302.37	8,300.25	18.52	543.45	-2.33	6,302.73	-256.18	6,307.94	5,745.96	561.97	11.225		
8,400.00	8,400.00	8,402.47	8,400.33	18.75	550.90	-2.31	6,302.83	-253.90	6,307.94	5,738.30	569.65	11.073		
8,500.00	8,500.00	8,502.46	8,500.29	18.97	556.73	-2.29	6,302.91	-252.16	6,307.95	5,732.25	575.70	10.957		
8,600.00	8,600.00	8,602.44	8,600.26	19.20	562.56	-2.28	6,302.98	-250.41	6,307.95	5,726.20	581.76	10.843		
8,700.00	8,700.00	8,702.43	8,700.23	19.42	568.40	-2.26	6,303.06	-248.67	6,307.96	5,720.14	587.81	10.731		
8,800.00	8,800.00	8,802.49	8,800.29	19.65	574.01	-2.25	6,303.12	-247.10	6,307.96	5,714.31	593.65	10.626		
8,900.00	8,900.00	8,902.40	8,900.18	19.87	580.49	-2.23	6,303.19	-245.55	6,307.97	5,707.62	600.35	10.507		
9,000.00	9,000.00	9,002.28	9,000.05	20.10	586.96	-2.21	6,303.27	-243.62	6,307.98	5,700.92	607.06	10.391		
9,100.00	9,100.00	9,102.16	9,099.89	20.32	593.44	-2.19	6,303.37	-241.32	6,307.99	5,694.23	613.76	10.278		
9,200.00	9,200.00	9,201.83	9,199.53	20.55	602.05	-2.17	6,303.49	-238.47	6,308.00	5,685.41	622.59	10.132		
9,300.00	9,300.00	9,301.75	9,299.39	20.77	613.05	-2.13	6,303.64	-234.98	6,308.02	5,674.21	633.81	9.953		
9,400.00	9,400.00	9,401.69	9,399.27	21.00	624.10	-2.10	6,303.79	-231.50	6,308.04	5,662.95	645.09	9.779		
9,500.00	9,500.00	9,501.63	9,499.15	21.22	635.16	-2.07	6,303.94	-228.02	6,308.06	5,651.70	656.37	9.611		
9,600.00	9,600.00	9,601.57	9,599.02	21.44	646.22	-2.04	6,304.09	-224.53	6,308.09	5,640.44	667.65	9.448		
9,700.00	9,700.00	9,701.51	9,698.90	21.67	657.28	-2.01	6,304.24	-221.05	6,308.11	5,629.18	678.93	9.291		
9,800.00	9,800.00	9,801.45	9,798.78	21.89	668.34	-1.98	6,304.39	-217.56	6,308.14	5,617.92	690.22	9.139		
9,900.00	9,900.00	9,900.74	9,897.98	22.12	681.14	-1.94	6,304.56	-213.47	6,308.18	5,604.94	703.23	8.970		
10,000.00	10,000.00	10,000.80	9,997.95	22.34	695.12	-1.90	6,304.75	-209.05	6,308.22	5,590.78	717.43	8.793		
10,027.04	10,027.04	10,027.82	10,024.94	22.40	698.82	-1.89	6,304.80	-207.87	6,308.23	5,587.04	721.19	8.747		
10,050.00	10,049.99	10,050.75	10,047.85	22.46	701.96	0.57	6,304.84	-206.87	6,307.78	5,583.39	724.39	8.708		

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

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #40H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3693.00usft (McVay 4)
Reference Site:	Lea Unit #40H	MD Reference:	KB @ 3693.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #40H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design										Lea Unit - #12 - OH - OH		Offset Site Error:		0.00 usft
Survey Program: 207-INC, 16000-MWD												Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
10,100.00	10,099.80	10,100.54	10,097.59	22.57	708.52	0.59	6,304.94	-204.71	6,303.62	5,572.57	731.05	8.623		
10,150.00	10,149.06	10,149.82	10,146.83	22.68	714.63	0.62	6,305.03	-202.61	6,295.14	5,557.87	737.27	8.538		
10,200.00	10,197.39	10,198.17	10,195.14	22.79	720.63	0.66	6,305.11	-200.59	6,282.40	5,539.02	743.38	8.451		
10,250.00	10,244.42	10,245.23	10,242.16	22.90	726.46	0.70	6,305.19	-198.68	6,265.49	5,516.17	749.32	8.362		
10,300.00	10,289.79	10,290.64	10,287.53	23.00	732.09	0.75	6,305.27	-196.88	6,244.55	5,489.50	755.05	8.270		
10,350.00	10,333.17	10,334.05	10,330.91	23.11	737.48	0.81	6,305.34	-195.20	6,219.73	5,459.21	760.53	8.178		
10,400.00	10,374.21	10,375.13	10,371.96	23.22	742.57	0.88	6,305.41	-193.64	6,191.23	5,425.52	765.71	8.086		
10,450.00	10,412.62	10,413.57	10,410.38	23.35	747.34	0.97	6,305.47	-192.22	6,159.26	5,388.70	770.56	7.993		
10,500.00	10,448.09	10,449.08	10,445.86	23.50	751.74	1.08	6,305.53	-190.93	6,124.06	5,349.03	775.03	7.902		
10,550.00	10,480.35	10,481.38	10,478.13	23.66	755.74	1.22	6,305.58	-189.79	6,085.90	5,306.80	779.10	7.811		
10,600.00	10,509.17	10,510.20	10,506.94	23.84	759.16	1.41	6,305.62	-188.78	6,045.08	5,262.50	782.57	7.725		
10,650.00	10,534.31	10,535.33	10,532.06	24.05	761.95	1.67	6,305.66	-187.90	6,001.90	5,216.49	785.41	7.642		
10,700.00	10,555.60	10,556.60	10,553.32	24.28	764.31	2.04	6,305.69	-187.16	5,956.68	5,168.88	787.81	7.561		
10,750.00	10,572.86	10,573.86	10,570.56	24.53	766.22	2.63	6,305.71	-186.56	5,909.79	5,120.04	789.75	7.483		
10,800.00	10,585.97	10,586.96	10,583.65	24.82	767.67	3.69	6,305.73	-186.10	5,861.57	5,070.34	791.23	7.408		
10,850.00	10,594.83	10,595.81	10,592.50	25.12	768.65	6.10	6,305.75	-185.79	5,812.38	5,020.16	792.22	7.337		
10,900.00	10,599.36	10,600.34	10,597.02	25.45	769.16	16.94	6,305.75	-185.64	5,762.61	4,969.88	792.74	7.269		
10,927.04	10,600.00	10,600.98	10,597.66	25.64	769.23	87.99	6,305.75	-185.61	5,735.58	4,942.78	792.81	7.235		
11,000.00	10,600.00	10,600.98	10,597.66	26.19	769.23	87.99	6,305.75	-185.61	5,662.63	4,869.82	792.81	7.142		
11,100.00	10,600.00	10,600.98	10,597.66	27.02	769.23	87.99	6,305.75	-185.61	5,562.64	4,769.82	792.82	7.016		
11,200.00	10,600.00	10,600.98	10,597.66	27.96	769.23	87.99	6,305.75	-185.61	5,462.65	4,669.83	792.82	6.890		
11,300.00	10,600.00	10,600.98	10,597.66	28.98	769.23	87.99	6,305.75	-185.61	5,362.67	4,569.83	792.83	6.764		
11,400.00	10,600.00	10,600.98	10,597.66	30.08	769.23	87.99	6,305.75	-185.61	5,262.68	4,469.84	792.84	6.638		
11,500.00	10,600.00	10,600.98	10,597.66	31.25	769.23	87.99	6,305.75	-185.61	5,162.69	4,369.84	792.85	6.512		
11,600.00	10,600.00	10,600.98	10,597.66	32.48	769.23	87.99	6,305.75	-185.61	5,062.70	4,269.85	792.86	6.385		
11,700.00	10,600.00	10,600.98	10,597.66	33.77	769.23	87.99	6,305.75	-185.61	4,962.72	4,169.85	792.87	6.259		
11,800.00	10,600.00	10,600.98	10,597.66	35.11	769.23	87.99	6,305.75	-185.61	4,862.73	4,069.85	792.88	6.133		
11,900.00	10,600.00	10,600.98	10,597.66	36.49	769.23	87.99	6,305.75	-185.61	4,762.75	3,969.86	792.89	6.007		
12,000.00	10,600.00	10,600.98	10,597.66	37.91	769.23	87.99	6,305.75	-185.61	4,662.76	3,869.86	792.90	5.881		
12,100.00	10,600.00	10,600.98	10,597.66	39.37	769.23	87.99	6,305.75	-185.61	4,562.78	3,769.86	792.92	5.754		
12,200.00	10,600.00	10,600.98	10,597.67	40.86	769.23	87.99	6,305.75	-185.61	4,462.80	3,669.87	792.93	5.628		
12,300.00	10,600.00	10,600.98	10,597.67	42.37	769.23	87.99	6,305.75	-185.61	4,362.82	3,569.87	792.95	5.502		
12,400.00	10,600.00	10,600.98	10,597.67	43.91	769.23	87.99	6,305.75	-185.61	4,262.83	3,469.87	792.96	5.376		
12,500.00	10,600.00	10,600.98	10,597.67	45.48	769.23	87.99	6,305.75	-185.61	4,162.85	3,369.88	792.98	5.250		
12,600.00	10,600.00	10,600.98	10,597.67	47.06	769.23	87.99	6,305.75	-185.61	4,062.88	3,269.88	793.00	5.123		
12,700.00	10,600.00	10,600.98	10,597.67	48.66	769.23	87.99	6,305.75	-185.61	3,962.90	3,169.88	793.01	4.997		
12,800.00	10,600.00	10,600.98	10,597.67	50.28	769.23	87.99	6,305.75	-185.61	3,862.92	3,069.89	793.03	4.871		
12,900.00	10,600.00	10,600.98	10,597.67	51.92	769.23	87.99	6,305.75	-185.61	3,762.94	2,969.89	793.05	4.745		
13,000.00	10,600.00	10,600.98	10,597.67	53.56	769.23	87.99	6,305.75	-185.61	3,662.97	2,869.90	793.07	4.619		
13,100.00	10,600.00	10,600.98	10,597.67	55.22	769.23	87.99	6,305.75	-185.61	3,563.00	2,769.91	793.09	4.493		
13,200.00	10,600.00	10,600.98	10,597.67	56.89	769.23	87.99	6,305.75	-185.61	3,463.03	2,669.92	793.11	4.366		
13,300.00	10,600.00	10,600.98	10,597.67	58.58	769.23	87.99	6,305.75	-185.61	3,363.06	2,569.93	793.13	4.240		
13,400.00	10,600.00	10,600.98	10,597.67	60.27	769.23	87.99	6,305.75	-185.61	3,263.09	2,469.94	793.15	4.114		
13,500.00	10,600.00	10,600.98	10,597.67	61.97	769.23	87.99	6,305.75	-185.61	3,163.12	2,369.95	793.17	3.988		
13,600.00	10,600.00	10,600.98	10,597.67	63.67	769.23	87.99	6,305.75	-185.61	3,063.16	2,269.96	793.19	3.862		
13,700.00	10,600.00	10,600.98	10,597.67	65.39	769.23	87.99	6,305.75	-185.61	2,963.20	2,169.98	793.21	3.736		
13,800.00	10,600.00	10,600.98	10,597.67	67.11	769.23	88.00	6,305.75	-185.61	2,863.24	2,070.00	793.24	3.610		
13,900.00	10,600.00	10,600.98	10,597.67	68.84	769.23	88.00	6,305.75	-185.61	2,763.28	1,970.03	793.26	3.483		
14,000.00	10,600.00	10,600.98	10,597.67	70.57	769.23	88.00	6,305.75	-185.61	2,663.33	1,870.05	793.28	3.357		
14,100.00	10,600.00	10,600.98	10,597.67	72.31	769.23	88.00	6,305.75	-185.61	2,563.38	1,770.08	793.30	3.231		
14,200.00	10,600.00	10,600.98	10,597.67	74.06	769.23	88.00	6,305.75	-185.61	2,463.44	1,670.12	793.32	3.105		
14,300.00	10,600.00	10,600.98	10,597.67	75.81	769.23	88.00	6,305.75	-185.61	2,363.50	1,570.16	793.33	2.979		

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

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #40H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3693.00usft (McVay 4)
Reference Site:	Lea Unit #40H	MD Reference:	KB @ 3693.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #40H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error: 0.00 usft
Lea Unit - #12 - OH - OH														Offset Well Error: 0.00 usft
Survey Program: 207-INC. 16000-MWD														
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
14,400.00	10,600.00	10,600.98	10,597.67	77.56	769.23	88.00	6,305.75	-185.61	2,263.56	1,470.21	793.35	2.853		
14,500.00	10,600.00	10,600.98	10,597.67	79.32	769.23	88.00	6,305.75	-185.61	2,163.63	1,370.27	793.37	2.727		
14,600.00	10,600.00	10,600.98	10,597.67	81.08	769.23	88.00	6,305.75	-185.61	2,063.71	1,270.33	793.38	2.601		
14,700.00	10,600.00	10,600.98	10,597.67	82.85	769.23	88.00	6,305.75	-185.61	1,963.80	1,170.41	793.39	2.475		
14,800.00	10,600.00	10,600.99	10,597.67	84.61	769.23	88.00	6,305.75	-185.61	1,863.89	1,070.50	793.40	2.349		
14,900.00	10,600.00	10,600.99	10,597.67	86.39	769.23	88.00	6,305.75	-185.61	1,764.00	970.60	793.40	2.223		
15,000.00	10,600.00	10,600.99	10,597.67	88.16	769.23	88.00	6,305.75	-185.61	1,664.12	870.72	793.40	2.097		
15,100.00	10,600.00	10,600.99	10,597.67	89.94	769.23	88.00	6,305.75	-185.61	1,564.26	770.87	793.39	1.972		
15,200.00	10,600.00	10,600.99	10,597.67	91.72	769.23	88.00	6,305.75	-185.61	1,464.41	671.04	793.37	1.846		
15,300.00	10,600.00	10,600.99	10,597.67	93.50	769.23	88.00	6,305.75	-185.61	1,364.59	571.25	793.34	1.720		
15,400.00	10,600.00	10,600.99	10,597.67	95.28	769.23	88.00	6,305.75	-185.61	1,264.79	471.50	793.29	1.594		
15,500.00	10,600.00	10,600.99	10,597.67	97.07	769.23	88.00	6,305.75	-185.61	1,165.03	371.80	793.22	1.469 Level 3		
15,600.00	10,600.00	10,600.99	10,597.67	98.86	769.23	88.00	6,305.75	-185.61	1,065.31	272.19	793.12	1.343 Level 3		
15,700.00	10,600.00	10,600.99	10,597.67	100.65	769.23	88.00	6,305.75	-185.61	965.65	172.68	792.97	1.218 Level 2		
15,800.00	10,600.00	10,600.99	10,597.67	102.44	769.23	88.00	6,305.75	-185.61	866.07	73.31	792.76	1.092 Level 2		
15,900.00	10,600.00	10,600.99	10,597.67	104.24	769.23	88.00	6,305.75	-185.61	766.60	-25.83	792.43	0.967 Level 1		
16,000.00	10,600.00	10,600.99	10,597.67	106.04	769.23	88.00	6,305.75	-185.61	667.29	-124.63	791.92	0.843 Level 1		
16,100.00	10,600.00	10,600.99	10,597.67	107.83	769.23	88.00	6,305.75	-185.61	568.22	-222.84	791.06	0.718 Level 1		
16,200.00	10,600.00	10,600.99	10,597.68	109.63	769.23	88.00	6,305.75	-185.61	469.54	-319.94	789.49	0.595 Level 1		
16,300.00	10,600.00	10,600.99	10,597.68	111.43	769.23	88.00	6,305.75	-185.61	371.58	-414.60	786.17	0.473 Level 1		
16,400.00	10,600.00	10,600.99	10,597.68	113.24	769.23	88.00	6,305.75	-185.61	275.08	-502.57	777.64	0.354 Level 1		
16,500.00	10,600.00	10,600.99	10,597.68	115.04	769.23	88.00	6,305.75	-185.61	182.39	-565.24	747.63	0.244 Level 1		
16,600.00	10,600.00	10,600.99	10,597.68	116.85	769.23	88.00	6,305.75	-185.61	104.22	-479.10	583.32	0.179 Level 1, SF		
16,662.01	10,600.00	10,600.99	10,597.68	117.97	769.23	88.00	6,305.75	-185.61	83.77	-245.69	329.45	0.254 Level 1, CC		
16,700.00	10,600.00	10,600.99	10,597.68	118.65	769.23	88.00	6,305.75	-185.61	91.98	-388.12	480.10	0.192 Level 1		
16,800.00	10,600.00	10,600.99	10,597.68	120.46	769.23	88.00	6,305.75	-185.61	161.42	-571.43	732.85	0.220 Level 1, ES		
16,900.00	10,600.00	10,600.99	10,597.68	122.27	769.23	88.00	6,305.75	-185.61	252.30	-523.93	776.23	0.325 Level 1		
17,000.00	10,600.00	10,600.99	10,597.68	124.08	769.23	88.00	6,305.75	-185.61	348.21	-439.05	787.27	0.442 Level 1		
17,100.00	10,600.00	10,600.99	10,597.68	125.89	769.23	88.00	6,305.75	-185.61	445.93	-345.29	791.21	0.564 Level 1		
17,200.00	10,600.00	10,600.99	10,597.68	127.70	769.23	88.00	6,305.75	-185.61	544.47	-248.50	792.98	0.687 Level 1		
17,300.00	10,600.00	10,600.99	10,597.68	129.51	769.23	88.00	6,305.75	-185.61	643.46	-150.43	793.90	0.811 Level 1		
17,400.00	10,600.00	10,600.99	10,597.68	131.32	769.23	88.00	6,305.75	-185.61	742.73	-51.71	794.44	0.935 Level 1		
17,500.00	10,600.00	10,600.99	10,597.68	133.14	769.23	88.00	6,305.75	-185.61	842.16	47.38	794.79	1.060 Level 2		
17,600.00	10,600.00	10,600.99	10,597.68	134.95	769.23	88.00	6,305.75	-185.61	941.72	146.68	795.04	1.185 Level 2		
17,700.00	10,600.00	10,600.99	10,597.68	136.77	769.23	88.00	6,305.75	-185.61	1,041.36	246.14	795.22	1.310 Level 3		
17,800.00	10,600.00	10,600.99	10,597.68	138.58	769.23	88.00	6,305.75	-185.61	1,141.07	345.70	795.37	1.435 Level 3		
17,900.00	10,600.00	10,600.99	10,597.68	140.40	769.23	88.00	6,305.75	-185.61	1,240.82	445.32	795.50	1.560		
18,000.00	10,600.00	10,600.99	10,597.68	142.22	769.23	88.00	6,305.75	-185.61	1,340.61	545.00	795.60	1.685		
18,100.00	10,600.00	10,600.99	10,597.68	144.04	769.23	88.00	6,305.75	-185.61	1,440.43	644.72	795.70	1.810		
18,200.00	10,600.00	10,600.99	10,597.68	145.86	769.23	88.00	6,305.75	-185.61	1,540.27	744.48	795.79	1.936		
18,300.00	10,600.00	10,600.99	10,597.68	147.68	769.23	88.00	6,305.75	-185.61	1,640.13	844.25	795.88	2.061		
18,310.13	10,600.00	10,600.99	10,597.68	147.86	769.23	88.00	6,305.75	-185.61	1,650.25	854.36	795.89	2.073		

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #40H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3693.00usft (McVay 4)
Reference Site:	Lea Unit #40H	MD Reference:	KB @ 3693.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #40H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	QH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error:	0.00 usft
Lea Unit - #12 - ST-01 - ST-01														Offset Well Error:	0.00 usft
Survey Program: 207-INC, 15700-INC, 15990-MWD, 16431-MWD															
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
0.00	0.00	0.61	0.61	0.00	0.01	-3.82	6,295.69	-420.80	6,309.74						
100.00	100.00	101.57	101.57	0.09	2.49	-3.82	6,295.71	-420.47	6,309.73	6,307.15	2.58	2,445.859			
200.00	200.00	202.53	202.52	0.32	4.96	-3.81	6,295.75	-419.50	6,309.71	6,304.43	5.28	1,195.721			
300.00	300.00	301.96	301.94	0.54	8.70	-3.80	6,295.79	-418.40	6,309.68	6,300.44	9.24	682.949			
400.00	400.00	401.91	401.89	0.77	12.06	-3.79	6,295.83	-417.52	6,309.66	6,296.84	12.82	491.998			
500.00	500.00	502.30	502.28	0.99	15.93	-3.79	6,295.87	-416.55	6,309.64	6,292.72	16.92	372.986			
600.00	600.00	601.76	601.74	1.22	19.57	-3.78	6,295.92	-415.43	6,309.61	6,288.83	20.78	303.573			
700.00	700.00	701.26	701.23	1.44	22.20	-3.77	6,295.94	-414.94	6,309.60	6,285.96	23.64	266.931			
800.00	800.00	801.26	801.23	1.67	24.45	-3.77	6,295.96	-414.50	6,309.59	6,283.48	26.12	241.607			
900.00	900.00	901.26	901.23	1.89	26.71	-3.76	6,295.98	-414.06	6,309.58	6,280.99	28.59	220.670			
1,000.00	1,000.00	1,001.53	1,001.50	2.12	29.66	-3.76	6,296.00	-413.53	6,309.57	6,277.80	31.77	198.599			
1,100.00	1,100.00	1,101.80	1,101.77	2.34	32.62	-3.75	6,296.03	-412.81	6,309.55	6,274.60	34.95	180.514			
1,200.00	1,200.00	1,201.70	1,201.67	2.56	35.13	-3.74	6,296.07	-411.99	6,309.53	6,271.84	37.69	167.404			
1,300.00	1,300.00	1,301.45	1,301.41	2.79	37.46	-3.74	6,296.10	-411.33	6,309.52	6,269.27	40.25	156.777			
1,400.00	1,400.00	1,401.20	1,401.16	3.01	39.79	-3.73	6,296.12	-410.85	6,309.51	6,266.71	42.80	147.420			
1,500.00	1,500.00	1,500.95	1,500.91	3.24	42.12	-3.73	6,296.13	-410.54	6,309.50	6,264.15	45.35	139.116			
1,600.00	1,600.00	1,600.71	1,600.67	3.46	44.45	-3.73	6,296.14	-410.41	6,309.50	6,261.59	47.91	131.698			
1,700.00	1,700.00	1,701.01	1,700.96	3.69	47.56	-3.73	6,296.14	-410.31	6,309.50	6,258.26	51.24	123.136			
1,800.00	1,800.00	1,801.50	1,801.45	3.91	50.94	-3.72	6,296.16	-409.87	6,309.49	6,254.64	54.85	115.035			
1,900.00	1,900.00	1,901.99	1,901.94	4.14	54.33	-3.72	6,296.19	-409.08	6,309.47	6,251.01	58.46	107.933			
2,000.00	2,000.00	2,002.47	2,002.41	4.36	57.71	-3.71	6,296.24	-407.94	6,309.44	6,247.38	62.07	101.658			
2,100.00	2,100.00	2,102.94	2,102.88	4.59	61.09	-3.69	6,296.30	-406.45	6,309.41	6,243.74	65.67	96.072			
2,200.00	2,200.00	2,202.92	2,202.85	4.81	65.69	-3.68	6,296.38	-404.75	6,309.37	6,238.88	70.49	89.502			
2,300.00	2,300.00	2,302.76	2,302.67	5.04	70.67	-3.66	6,296.45	-403.15	6,309.34	6,233.64	75.70	83.350			
2,400.00	2,400.00	2,402.60	2,402.50	5.26	75.65	-3.65	6,296.51	-401.66	6,309.31	6,228.41	80.90	77.988			
2,500.00	2,500.00	2,502.45	2,502.34	5.49	80.63	-3.64	6,296.57	-400.28	6,309.28	6,223.18	86.10	73.275			
2,600.00	2,600.00	2,602.97	2,602.84	5.71	86.66	-3.62	6,296.63	-398.78	6,309.25	6,218.89	92.36	68.315			
2,700.00	2,700.00	2,703.61	2,703.46	5.94	92.89	-3.61	6,296.72	-396.78	6,309.21	6,210.39	98.81	63.849			
2,800.00	2,800.00	2,804.23	2,804.05	6.16	100.16	-3.58	6,296.83	-394.26	6,309.16	6,202.85	106.31	59.349			
2,900.00	2,900.00	2,904.84	2,904.62	6.39	110.08	-3.56	6,296.96	-391.21	6,309.10	6,192.65	116.45	54.177			
3,000.00	3,000.00	3,005.41	3,005.13	6.61	120.00	-3.52	6,297.11	-387.63	6,309.03	6,182.44	126.60	49.836			
3,100.00	3,100.00	3,105.45	3,105.09	6.84	131.57	-3.49	6,297.28	-383.71	6,308.96	6,170.57	138.39	45.589			
3,200.00	3,200.00	3,205.37	3,204.93	7.06	143.49	-3.45	6,297.45	-379.79	6,308.89	6,158.36	150.53	41.911			
3,300.00	3,300.00	3,305.17	3,304.66	7.28	154.81	-3.42	6,297.61	-375.90	6,308.82	6,146.75	162.08	38.925			
3,400.00	3,400.00	3,404.76	3,404.18	7.51	164.99	-3.38	6,297.77	-372.27	6,308.76	6,136.28	172.48	36.577			
3,500.00	3,500.00	3,504.36	3,503.73	7.73	175.17	-3.35	6,297.91	-368.97	6,308.71	6,125.82	182.89	34.495			
3,600.00	3,600.00	3,603.99	3,603.31	7.96	185.36	-3.33	6,298.04	-366.01	6,308.66	6,115.37	193.30	32.637			
3,700.00	3,700.00	3,703.63	3,702.92	8.18	194.25	-3.30	6,298.15	-363.38	6,308.62	6,106.21	202.42	31.167			
3,800.00	3,800.00	3,803.28	3,802.54	8.41	201.35	-3.28	6,298.25	-361.09	6,308.59	6,098.85	209.74	30.078			
3,900.00	3,900.00	3,902.95	3,902.19	8.63	208.45	-3.26	6,298.33	-359.16	6,308.56	6,091.50	217.06	29.063			
4,000.00	4,000.00	4,002.91	4,002.13	8.86	214.37	-3.25	6,298.40	-357.41	6,308.54	6,085.33	223.21	28.263			
4,100.00	4,100.00	4,102.89	4,102.10	9.08	220.20	-3.23	6,298.48	-355.67	6,308.51	6,079.24	229.27	27.516			
4,200.00	4,200.00	4,202.87	4,202.06	9.31	225.95	-3.22	6,298.55	-353.93	6,308.49	6,073.25	235.24	26.818			
4,300.00	4,300.00	4,302.77	4,301.95	9.53	231.14	-3.20	6,298.62	-352.24	6,308.47	6,067.81	240.65	26.214			
4,400.00	4,400.00	4,402.68	4,401.85	9.76	236.33	-3.19	6,298.69	-350.66	6,308.45	6,062.37	246.07	25.637			
4,500.00	4,500.00	4,502.60	4,501.75	9.98	241.52	-3.17	6,298.76	-349.16	6,308.43	6,056.94	251.49	25.084			
4,600.00	4,600.00	4,602.51	4,601.66	10.21	246.72	-3.16	6,298.82	-347.77	6,308.41	6,051.50	256.91	24.555			
4,700.00	4,700.00	4,702.51	4,701.64	10.43	251.91	-3.15	6,298.87	-346.44	6,308.39	6,046.06	262.33	24.048			
4,800.00	4,800.00	4,802.56	4,801.69	10.66	257.11	-3.14	6,298.93	-345.04	6,308.38	6,040.62	267.76	23.560			
4,900.00	4,900.00	4,902.62	4,901.73	10.88	262.32	-3.12	6,299.00	-343.55	6,308.36	6,035.18	273.18	23.092			
5,000.00	5,000.00	5,002.67	5,001.77	11.11	267.52	-3.11	6,299.06	-341.97	6,308.34	6,029.73	278.61	22.642			
5,100.00	5,100.00	5,102.72	5,101.81	11.33	272.72	-3.09	6,299.14	-340.31	6,308.32	6,024.29	284.03	22.210			

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

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #40H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3693.00usft (McVay 4)
Reference Site:	Lea Unit #40H	MD Reference:	KB @ 3693.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #40H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error: 0.00 usft
Lea Unit - #12 - ST-01 - ST-01														Offset Well Error: 0.00 usft
Survey Program: 207-INC, 15700-INC, 15990-MWD, 16431-MWD														
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
5,200.00	5,200.00	5,202.82	5,201.90	11.56	279.08	-3.08	6,299.21	-338.53	6,308.30	6,017.68	290.62	21.707		
5,300.00	5,300.00	5,302.96	5,302.02	11.78	286.22	-3.06	6,299.30	-336.53	6,308.28	6,010.30	297.98	21.170		
5,400.00	5,400.00	5,403.09	5,402.12	12.00	293.36	-3.04	6,299.39	-334.29	6,308.26	6,002.91	305.35	20.659		
5,500.00	5,500.00	5,503.21	5,502.21	12.23	300.49	-3.02	6,299.50	-331.83	6,308.23	5,995.52	312.71	20.173		
5,600.00	5,600.00	5,602.69	5,601.66	12.45	306.52	-2.99	6,299.59	-329.58	6,308.21	5,989.25	318.96	19.778		
5,700.00	5,700.00	5,702.15	5,701.11	12.68	312.03	-2.98	6,299.65	-328.32	6,308.20	5,983.50	324.70	19.428		
5,800.00	5,800.00	5,802.14	5,801.10	12.90	315.32	-2.98	6,299.69	-327.44	6,308.19	5,979.98	328.21	19.220		
5,900.00	5,900.00	5,902.23	5,901.19	13.13	319.03	-2.97	6,299.72	-326.55	6,308.18	5,976.03	332.15	18.992		
6,000.00	6,000.00	6,002.62	6,001.57	13.35	324.26	-2.95	6,299.78	-325.17	6,308.17	5,970.57	337.60	18.685		
6,100.00	6,100.00	6,102.77	6,101.69	13.58	329.95	-2.94	6,299.87	-323.15	6,308.15	5,964.64	343.52	18.363		
6,200.00	6,200.00	6,202.68	6,201.59	13.80	336.54	-2.92	6,299.95	-321.27	6,308.14	5,957.80	350.33	18.006		
6,300.00	6,300.00	6,303.01	6,301.89	14.03	343.94	-2.90	6,300.05	-318.93	6,308.12	5,950.16	357.95	17.623		
6,400.00	6,400.00	6,402.98	6,401.82	14.25	352.34	-2.87	6,300.16	-316.31	6,308.10	5,941.51	366.58	17.208		
6,500.00	6,500.00	6,502.94	6,501.75	14.48	360.75	-2.85	6,300.27	-313.70	6,308.08	5,932.86	375.21	16.812		
6,600.00	6,600.00	6,602.91	6,601.69	14.70	369.15	-2.83	6,300.39	-311.08	6,308.06	5,924.22	383.85	16.434		
6,700.00	6,700.00	6,703.08	6,701.82	14.93	378.55	-2.80	6,300.51	-308.26	6,308.04	5,914.58	393.47	16.032		
6,800.00	6,800.00	6,803.15	6,801.83	15.15	388.93	-2.77	6,300.65	-304.85	6,308.02	5,903.95	404.07	15.611		
6,900.00	6,900.00	6,903.09	6,901.71	15.38	399.91	-2.74	6,300.80	-301.36	6,308.00	5,892.72	415.28	15.190		
7,000.00	7,000.00	7,003.03	7,001.59	15.60	410.90	-2.71	6,300.95	-297.88	6,307.99	5,881.49	426.50	14.790		
7,100.00	7,100.00	7,102.97	7,101.47	15.83	421.90	-2.67	6,301.10	-294.39	6,307.97	5,870.25	437.72	14.411		
7,200.00	7,200.00	7,202.91	7,201.34	16.05	432.90	-2.64	6,301.25	-290.91	6,307.96	5,859.01	448.95	14.050		
7,300.00	7,300.00	7,302.85	7,301.22	16.28	443.91	-2.61	6,301.40	-287.42	6,307.95	5,847.77	460.18	13.708		
7,400.00	7,400.00	7,402.78	7,401.09	16.50	454.78	-2.58	6,301.55	-283.94	6,307.94	5,836.66	471.28	13.385		
7,500.00	7,500.00	7,502.67	7,500.93	16.72	464.50	-2.55	6,301.68	-280.75	6,307.93	5,826.71	481.22	13.108		
7,600.00	7,600.00	7,602.60	7,600.83	16.95	474.22	-2.53	6,301.80	-277.99	6,307.93	5,816.76	491.17	12.843		
7,700.00	7,700.00	7,702.59	7,700.77	17.17	483.95	-2.50	6,301.93	-275.00	6,307.93	5,806.80	501.12	12.588		
7,800.00	7,800.00	7,802.55	7,800.67	17.40	494.29	-2.47	6,302.08	-271.59	6,307.92	5,796.24	511.69	12.328		
7,855.60	7,855.60	7,858.11	7,856.20	17.52	500.43	-2.45	6,302.16	-269.65	6,307.92	5,789.97	517.95	12.179		
7,900.00	7,900.00	7,902.48	7,900.55	17.62	505.33	-2.44	6,302.22	-268.10	6,307.92	5,784.97	522.95	12.062		
8,000.00	8,000.00	8,002.43	8,000.43	17.85	516.01	-2.40	6,302.37	-264.63	6,307.93	5,774.06	533.86	11.816		
8,100.00	8,100.00	8,102.41	8,100.36	18.07	525.76	-2.38	6,302.51	-261.50	6,307.93	5,764.10	543.83	11.599		
8,200.00	8,200.00	8,202.40	8,200.32	18.30	535.01	-2.35	6,302.62	-258.80	6,307.93	5,754.62	553.31	11.400		
8,300.00	8,300.00	8,302.37	8,300.25	18.52	543.45	-2.33	6,302.73	-256.18	6,307.94	5,745.96	561.97	11.225		
8,400.00	8,400.00	8,402.47	8,400.33	18.75	550.90	-2.31	6,302.83	-253.90	6,307.94	5,738.30	569.65	11.073		
8,500.00	8,500.00	8,502.46	8,500.29	18.97	556.73	-2.29	6,302.91	-252.16	6,307.95	5,732.25	575.70	10.957		
8,600.00	8,600.00	8,602.44	8,600.26	19.20	562.56	-2.28	6,302.98	-250.41	6,307.95	5,726.20	581.76	10.843		
8,700.00	8,700.00	8,702.43	8,700.23	19.42	568.40	-2.26	6,303.06	-248.67	6,307.96	5,720.14	587.81	10.731		
8,800.00	8,800.00	8,802.49	8,800.29	19.65	574.01	-2.25	6,303.12	-247.10	6,307.96	5,714.31	593.65	10.626		
8,900.00	8,900.00	8,902.40	8,900.18	19.87	580.49	-2.23	6,303.19	-245.55	6,307.97	5,707.62	600.35	10.507		
9,000.00	9,000.00	9,002.28	9,000.05	20.10	586.96	-2.21	6,303.27	-243.62	6,307.98	5,700.92	607.06	10.391		
9,100.00	9,100.00	9,102.16	9,099.89	20.32	593.44	-2.19	6,303.37	-241.32	6,307.99	5,694.23	613.76	10.278		
9,200.00	9,200.00	9,201.83	9,199.53	20.55	602.05	-2.17	6,303.49	-238.47	6,308.00	5,685.41	622.59	10.132		
9,300.00	9,300.00	9,301.75	9,299.39	20.77	613.05	-2.13	6,303.64	-234.98	6,308.02	5,674.21	633.81	9.953		
9,400.00	9,400.00	9,401.69	9,399.27	21.00	624.10	-2.10	6,303.79	-231.50	6,308.04	5,662.95	645.09	9.779		
9,500.00	9,500.00	9,501.63	9,499.15	21.22	635.16	-2.07	6,303.94	-228.02	6,308.06	5,651.70	656.37	9.611		
9,600.00	9,600.00	9,601.57	9,599.02	21.44	646.22	-2.04	6,304.09	-224.53	6,308.09	5,640.44	667.65	9.448		
9,700.00	9,700.00	9,701.51	9,698.90	21.67	657.28	-2.01	6,304.24	-221.05	6,308.11	5,629.18	678.93	9.291		
9,800.00	9,800.00	9,801.45	9,798.78	21.89	668.34	-1.98	6,304.39	-217.56	6,308.14	5,617.92	690.22	9.139		
9,900.00	9,900.00	9,900.74	9,897.98	22.12	681.14	-1.94	6,304.56	-213.47	6,308.18	5,604.94	703.23	8.970		
10,000.00	10,000.00	10,000.80	9,997.95	22.34	695.12	-1.90	6,304.75	-209.05	6,308.22	5,590.78	717.43	8.793		
10,027.04	10,027.04	10,027.82	10,024.94	22.40	698.82	-1.89	6,304.80	-207.87	6,308.23	5,587.04	721.19	8.747		
10,050.00	10,049.99	10,050.75	10,047.85	22.46	701.96	0.57	6,304.84	-206.87	6,307.78	5,583.39	724.39	8.708		

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

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #40H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3693.00usft (McVay 4)
Reference Site:	Lea Unit #40H	MD Reference:	KB @ 3693.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #40H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error:	0.00 usft
Lea Unit - #12 - ST-01 - ST-01														Offset Well Error:	0.00 usft
Survey Program: 207-INC, 15700-INC, 15990-MWD, 16431-MWD															
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
10,100.00	10,099.80	10,100.54	10,097.59	22.57	708.52	0.59	6,304.94	-204.71	6,303.62	5,572.57	731.05	8.623			
10,150.00	10,149.06	10,149.82	10,146.83	22.68	714.63	0.62	6,305.03	-202.61	6,295.14	5,557.87	737.27	8.538			
10,200.00	10,197.39	10,198.17	10,195.14	22.79	720.63	0.66	6,305.11	-200.59	6,282.40	5,539.02	743.38	8.451			
10,250.00	10,244.42	10,245.23	10,242.16	22.90	726.46	0.70	6,305.19	-198.68	6,265.49	5,516.17	749.32	8.362			
10,300.00	10,289.79	10,290.64	10,287.53	23.00	732.09	0.75	6,305.27	-196.88	6,244.55	5,489.50	755.05	8.270			
10,350.00	10,333.17	10,334.05	10,330.91	23.11	737.48	0.81	6,305.34	-195.20	6,219.73	5,459.21	760.53	8.178			
10,400.00	10,374.21	10,375.13	10,371.96	23.22	742.57	0.88	6,305.41	-193.64	6,191.23	5,425.52	765.71	8.086			
10,450.00	10,412.62	10,413.57	10,410.38	23.35	747.34	0.97	6,305.47	-192.22	6,159.26	5,388.70	770.56	7.993			
10,500.00	10,448.09	10,449.08	10,445.86	23.50	751.74	1.08	6,305.53	-190.93	6,124.06	5,349.03	775.03	7.902			
10,550.00	10,480.35	10,481.38	10,478.13	23.66	755.74	1.22	6,305.58	-189.79	6,085.90	5,306.80	779.10	7.811			
10,600.00	10,509.17	10,510.20	10,506.94	23.84	759.16	1.41	6,305.62	-188.78	6,045.08	5,262.50	782.57	7.725			
10,650.00	10,534.31	10,535.33	10,532.06	24.05	761.95	1.67	6,305.66	-187.90	6,001.90	5,216.49	785.41	7.642			
10,700.00	10,555.60	10,556.60	10,553.32	24.28	764.31	2.04	6,305.69	-187.16	5,956.68	5,168.88	787.81	7.561			
10,750.00	10,572.86	10,573.86	10,570.56	24.53	766.22	2.63	6,305.71	-186.56	5,909.79	5,120.04	789.75	7.483			
10,800.00	10,585.97	10,586.96	10,583.65	24.82	767.67	3.69	6,305.73	-186.10	5,861.57	5,070.34	791.23	7.408			
10,850.00	10,594.83	10,595.81	10,592.50	25.12	768.65	6.10	6,305.75	-185.79	5,812.38	5,020.16	792.22	7.337			
10,900.00	10,599.36	10,600.34	10,597.02	25.45	769.16	16.94	6,305.75	-185.64	5,762.61	4,969.88	792.74	7.269			
10,927.04	10,600.00	10,600.98	10,597.66	25.64	769.23	87.99	6,305.75	-185.61	5,735.58	4,942.78	792.81	7.235			
11,000.00	10,600.00	10,600.98	10,597.66	26.19	769.23	87.99	6,305.75	-185.61	5,662.63	4,869.82	792.81	7.142			
11,100.00	10,600.00	10,600.98	10,597.66	27.02	769.23	87.99	6,305.75	-185.61	5,562.64	4,769.82	792.82	7.016			
11,200.00	10,600.00	10,600.98	10,597.66	27.96	769.23	87.99	6,305.75	-185.61	5,462.65	4,669.83	792.82	6.890			
11,300.00	10,600.00	10,600.98	10,597.66	28.98	769.23	87.99	6,305.75	-185.61	5,362.67	4,569.83	792.83	6.764			
11,400.00	10,600.00	10,600.98	10,597.66	30.08	769.23	87.99	6,305.75	-185.61	5,262.68	4,469.84	792.84	6.638			
11,500.00	10,600.00	10,600.98	10,597.66	31.25	769.23	87.99	6,305.75	-185.61	5,162.69	4,369.84	792.85	6.512			
11,600.00	10,600.00	10,600.98	10,597.66	32.48	769.23	87.99	6,305.75	-185.61	5,062.70	4,269.85	792.86	6.385			
11,700.00	10,600.00	10,600.98	10,597.66	33.77	769.23	87.99	6,305.75	-185.61	4,962.72	4,169.85	792.87	6.259			
11,800.00	10,600.00	10,600.98	10,597.66	35.11	769.23	87.99	6,305.75	-185.61	4,862.73	4,069.85	792.88	6.133			
11,900.00	10,600.00	10,600.98	10,597.66	36.49	769.23	87.99	6,305.75	-185.61	4,762.75	3,969.86	792.89	6.007			
12,000.00	10,600.00	10,600.98	10,597.66	37.91	769.23	87.99	6,305.75	-185.61	4,662.76	3,869.86	792.90	5.881			
12,100.00	10,600.00	10,600.98	10,597.66	39.37	769.23	87.99	6,305.75	-185.61	4,562.78	3,769.86	792.92	5.754			
12,200.00	10,600.00	10,600.98	10,597.67	40.86	769.23	87.99	6,305.75	-185.61	4,462.80	3,669.87	792.93	5.628			
12,300.00	10,600.00	10,600.98	10,597.67	42.37	769.23	87.99	6,305.75	-185.61	4,362.82	3,569.87	792.95	5.502			
12,400.00	10,600.00	10,600.98	10,597.67	43.91	769.23	87.99	6,305.75	-185.61	4,262.83	3,469.87	792.96	5.376			
12,500.00	10,600.00	10,600.98	10,597.67	45.48	769.23	87.99	6,305.75	-185.61	4,162.85	3,369.88	792.98	5.250			
12,600.00	10,600.00	10,600.98	10,597.67	47.06	769.23	87.99	6,305.75	-185.61	4,062.88	3,269.88	793.00	5.123			
12,700.00	10,600.00	10,600.98	10,597.67	48.66	769.23	87.99	6,305.75	-185.61	3,962.90	3,169.88	793.01	4.997			
12,800.00	10,600.00	10,600.98	10,597.67	50.28	769.23	87.99	6,305.75	-185.61	3,862.92	3,069.89	793.03	4.871			
12,900.00	10,600.00	10,600.98	10,597.67	51.92	769.23	87.99	6,305.75	-185.61	3,762.94	2,969.89	793.05	4.745			
13,000.00	10,600.00	10,600.98	10,597.67	53.56	769.23	87.99	6,305.75	-185.61	3,662.97	2,869.90	793.07	4.619			
13,100.00	10,600.00	10,600.98	10,597.67	55.22	769.23	87.99	6,305.75	-185.61	3,563.00	2,769.91	793.09	4.493			
13,200.00	10,600.00	10,600.98	10,597.67	56.89	769.23	87.99	6,305.75	-185.61	3,463.03	2,669.92	793.11	4.366			
13,300.00	10,600.00	10,600.98	10,597.67	58.58	769.23	87.99	6,305.75	-185.61	3,363.06	2,569.93	793.13	4.240			
13,400.00	10,600.00	10,600.98	10,597.67	60.27	769.23	87.99	6,305.75	-185.61	3,263.09	2,469.94	793.15	4.114			
13,500.00	10,600.00	10,600.98	10,597.67	61.97	769.23	87.99	6,305.75	-185.61	3,163.12	2,369.95	793.17	3.988			
13,600.00	10,600.00	10,600.98	10,597.67	63.67	769.23	87.99	6,305.75	-185.61	3,063.16	2,269.96	793.19	3.862			
13,700.00	10,600.00	10,600.98	10,597.67	65.39	769.23	87.99	6,305.75	-185.61	2,963.20	2,169.98	793.21	3.736			
13,800.00	10,600.00	10,600.98	10,597.67	67.11	769.23	88.00	6,305.75	-185.61	2,863.24	2,070.00	793.24	3.610			
13,900.00	10,600.00	10,600.98	10,597.67	68.84	769.23	88.00	6,305.75	-185.61	2,763.28	1,970.03	793.26	3.483			
14,000.00	10,600.00	10,600.98	10,597.67	70.57	769.23	88.00	6,305.75	-185.61	2,663.33	1,870.05	793.28	3.357			
14,100.00	10,600.00	10,600.98	10,597.67	72.31	769.23	88.00	6,305.75	-185.61	2,563.38	1,770.08	793.30	3.231			
14,200.00	10,600.00	10,600.98	10,597.67	74.06	769.23	88.00	6,305.75	-185.61	2,463.44	1,670.12	793.32	3.105			
14,300.00	10,600.00	10,600.98	10,597.67	75.81	769.23	88.00	6,305.75	-185.61	2,363.50	1,570.16	793.33	2.979			

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

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #40H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3693.00usft (McVay 4)
Reference Site:	Lea Unit #40H	MD Reference:	KB @ 3693.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #40H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

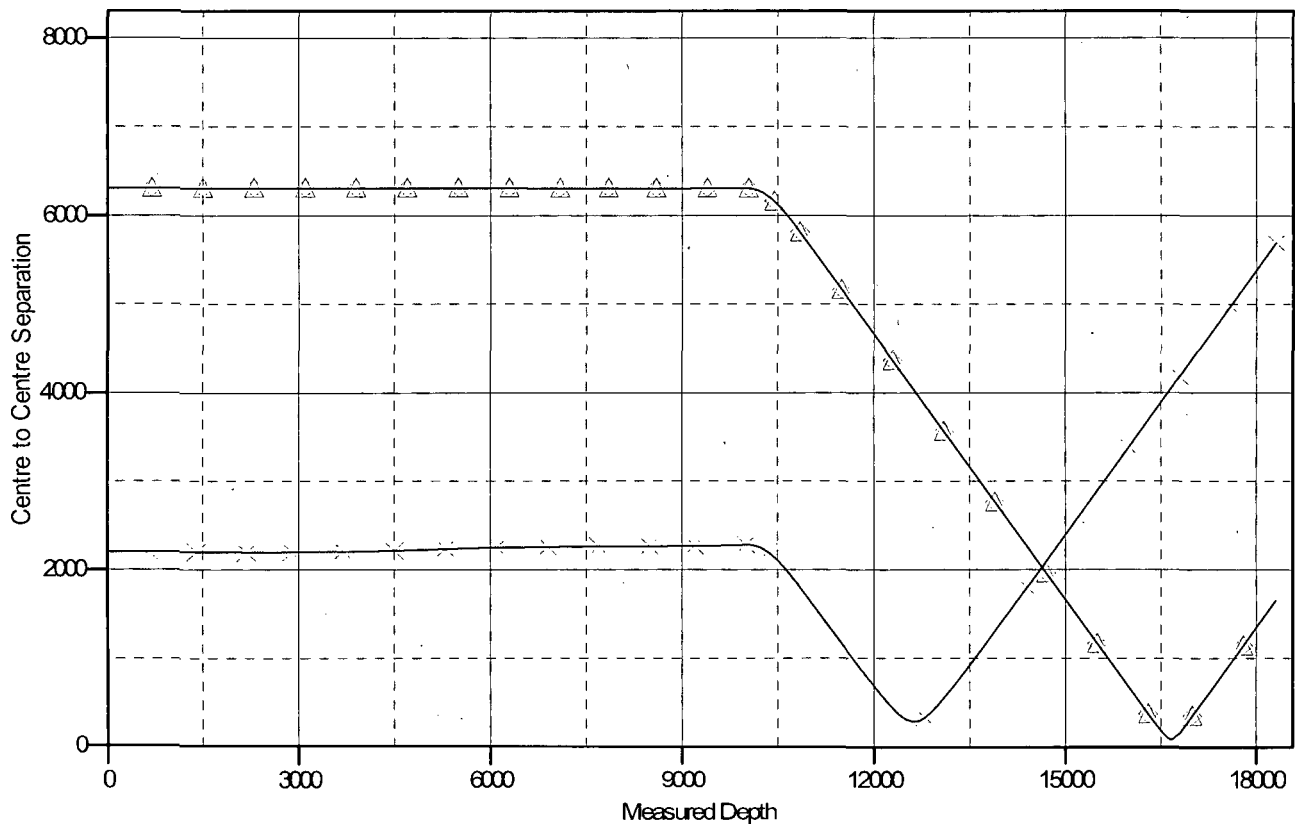
Offset Design														Offset Site Error: 0.00 usft
Lea Unit - #12 - ST-01 - ST-01														Offset Well Error: 0.00 usft
Survey Program: 207-INC, 15700-INC, 15990-MWD, 16431-MWD														
Reference	Offset	Semi Major Axis		Distance		Minimum		Separation		Warning				
Measured Depth (usft)	Vertical 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		
14,400.00	10,600.00	10,600.98	10,597.67	77.56	769.23	88.00	6,305.75	-185.61	2,263.56	1,470.21	793.35	2.853		
14,500.00	10,600.00	10,600.98	10,597.67	79.32	769.23	88.00	6,305.75	-185.61	2,163.63	1,370.27	793.37	2.727		
14,600.00	10,600.00	10,600.98	10,597.67	81.08	769.23	88.00	6,305.75	-185.61	2,063.71	1,270.33	793.38	2.601		
14,700.00	10,600.00	10,600.98	10,597.67	82.85	769.23	88.00	6,305.75	-185.61	1,963.80	1,170.41	793.39	2.475		
14,800.00	10,600.00	10,600.99	10,597.67	84.61	769.23	88.00	6,305.75	-185.61	1,863.89	1,070.50	793.40	2.349		
14,900.00	10,600.00	10,600.99	10,597.67	86.39	769.23	88.00	6,305.75	-185.61	1,764.00	970.60	793.40	2.223		
15,000.00	10,600.00	10,600.99	10,597.67	88.16	769.23	88.00	6,305.75	-185.61	1,664.12	870.72	793.40	2.097		
15,100.00	10,600.00	10,600.99	10,597.67	89.94	769.23	88.00	6,305.75	-185.61	1,564.26	770.87	793.39	1.972		
15,200.00	10,600.00	10,600.99	10,597.67	91.72	769.23	88.00	6,305.75	-185.61	1,464.41	671.04	793.37	1.846		
15,300.00	10,600.00	10,600.99	10,597.67	93.50	769.23	88.00	6,305.75	-185.61	1,364.59	571.25	793.34	1.720		
15,400.00	10,600.00	10,600.99	10,597.67	95.28	769.23	88.00	6,305.75	-185.61	1,264.79	471.50	793.29	1.594		
15,500.00	10,600.00	10,600.99	10,597.67	97.07	769.23	88.00	6,305.75	-185.61	1,165.03	371.80	793.22	1.469	Level 3	
15,600.00	10,600.00	10,600.99	10,597.67	98.86	769.23	88.00	6,305.75	-185.61	1,065.31	272.19	793.12	1.343	Level 3	
15,700.00	10,600.00	10,600.99	10,597.67	100.65	769.23	88.00	6,305.75	-185.61	965.65	172.68	792.97	1.218	Level 2	
15,800.00	10,600.00	10,600.99	10,597.67	102.44	769.23	88.00	6,305.75	-185.61	866.07	73.31	792.76	1.092	Level 2	
15,900.00	10,600.00	10,600.99	10,597.67	104.24	769.23	88.00	6,305.75	-185.61	766.60	-25.83	792.43	0.967	Level 1	
16,000.00	10,600.00	10,600.99	10,597.67	106.04	769.23	88.00	6,305.75	-185.61	667.29	-124.63	791.92	0.843	Level 1	
16,100.00	10,600.00	10,600.99	10,597.67	107.83	769.23	88.00	6,305.75	-185.61	568.22	-222.84	791.06	0.718	Level 1	
16,200.00	10,600.00	10,600.99	10,597.68	109.63	769.23	88.00	6,305.75	-185.61	469.54	-319.94	789.49	0.595	Level 1	
16,300.00	10,600.00	10,600.99	10,597.68	111.43	769.23	88.00	6,305.75	-185.61	371.58	-414.60	786.17	0.473	Level 1	
16,400.00	10,600.00	10,600.99	10,597.68	113.24	769.23	88.00	6,305.75	-185.61	275.08	-502.57	777.64	0.354	Level 1	
16,500.00	10,600.00	10,600.99	10,597.68	115.04	769.23	88.00	6,305.75	-185.61	182.39	-565.24	747.63	0.244	Level 1	
16,600.00	10,600.00	10,600.99	10,597.68	116.85	769.23	88.00	6,305.75	-185.61	104.22	-479.10	583.32	0.179	Level 1, SF	
16,662.01	10,600.00	10,600.99	10,597.68	117.97	769.23	88.00	6,305.75	-185.61	83.77	-245.69	329.45	0.254	Level 1, CC	
16,700.00	10,600.00	10,600.99	10,597.68	118.65	769.23	88.00	6,305.75	-185.61	91.98	-388.12	480.10	0.192	Level 1	
16,800.00	10,600.00	10,600.99	10,597.68	120.46	769.23	88.00	6,305.75	-185.61	161.42	-571.43	732.85	0.220	Level 1, ES	
16,900.00	10,600.00	10,600.99	10,597.68	122.27	769.23	88.00	6,305.75	-185.61	252.30	-523.93	776.23	0.325	Level 1	
17,000.00	10,600.00	10,600.99	10,597.68	124.08	769.23	88.00	6,305.75	-185.61	348.21	-439.05	787.27	0.442	Level 1	
17,100.00	10,600.00	10,600.99	10,597.68	125.89	769.23	88.00	6,305.75	-185.61	445.93	-345.29	791.21	0.564	Level 1	
17,200.00	10,600.00	10,600.99	10,597.68	127.70	769.23	88.00	6,305.75	-185.61	544.47	-248.50	792.98	0.687	Level 1	
17,300.00	10,600.00	10,600.99	10,597.68	129.51	769.23	88.00	6,305.75	-185.61	643.46	-150.43	793.90	0.811	Level 1	
17,400.00	10,600.00	10,600.99	10,597.68	131.32	769.23	88.00	6,305.75	-185.61	742.73	-51.71	794.44	0.935	Level 1	
17,500.00	10,600.00	10,600.99	10,597.68	133.14	769.23	88.00	6,305.75	-185.61	842.16	47.38	794.79	1.060	Level 2	
17,600.00	10,600.00	10,600.99	10,597.68	134.95	769.23	88.00	6,305.75	-185.61	941.72	146.68	795.04	1.185	Level 2	
17,700.00	10,600.00	10,600.99	10,597.68	136.77	769.23	88.00	6,305.75	-185.61	1,041.36	246.14	795.22	1.310	Level 3	
17,800.00	10,600.00	10,600.99	10,597.68	138.58	769.23	88.00	6,305.75	-185.61	1,141.07	345.70	795.37	1.435	Level 3	
17,900.00	10,600.00	10,600.99	10,597.68	140.40	769.23	88.00	6,305.75	-185.61	1,240.82	445.32	795.50	1.560		
18,000.00	10,600.00	10,600.99	10,597.68	142.22	769.23	88.00	6,305.75	-185.61	1,340.61	545.00	795.60	1.685		
18,100.00	10,600.00	10,600.99	10,597.68	144.04	769.23	88.00	6,305.75	-185.61	1,440.43	644.72	795.70	1.810		
18,200.00	10,600.00	10,600.99	10,597.68	145.86	769.23	88.00	6,305.75	-185.61	1,540.27	744.48	795.79	1.936		
18,300.00	10,600.00	10,600.99	10,597.68	147.68	769.23	88.00	6,305.75	-185.61	1,640.13	844.25	795.88	2.061		
18,310.13	10,600.00	10,600.99	10,597.68	147.86	769.23	88.00	6,305.75	-185.61	1,650.25	854.36	795.89	2.073		

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #40H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3693.00usft (McVay 4)
Reference Site:	Lea Unit #40H	MD Reference:	KB @ 3693.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #40H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB @ 3693.00usft (McVay 4)
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: Lea Unit #40H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.44°

Ladder Plot



LEGEND

▲ #12,ST-01,ST-01 V0 ◆ #12,OH,OH V0 ✕ #28,OH,OH V0

Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #40H
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 3693.00usft (McVay 4)
Reference Site:	Lea Unit #40H	MD Reference:	KB @ 3693.00usft (McVay 4)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Lea Unit #40H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB @ 3693.00usft (McVay 4)

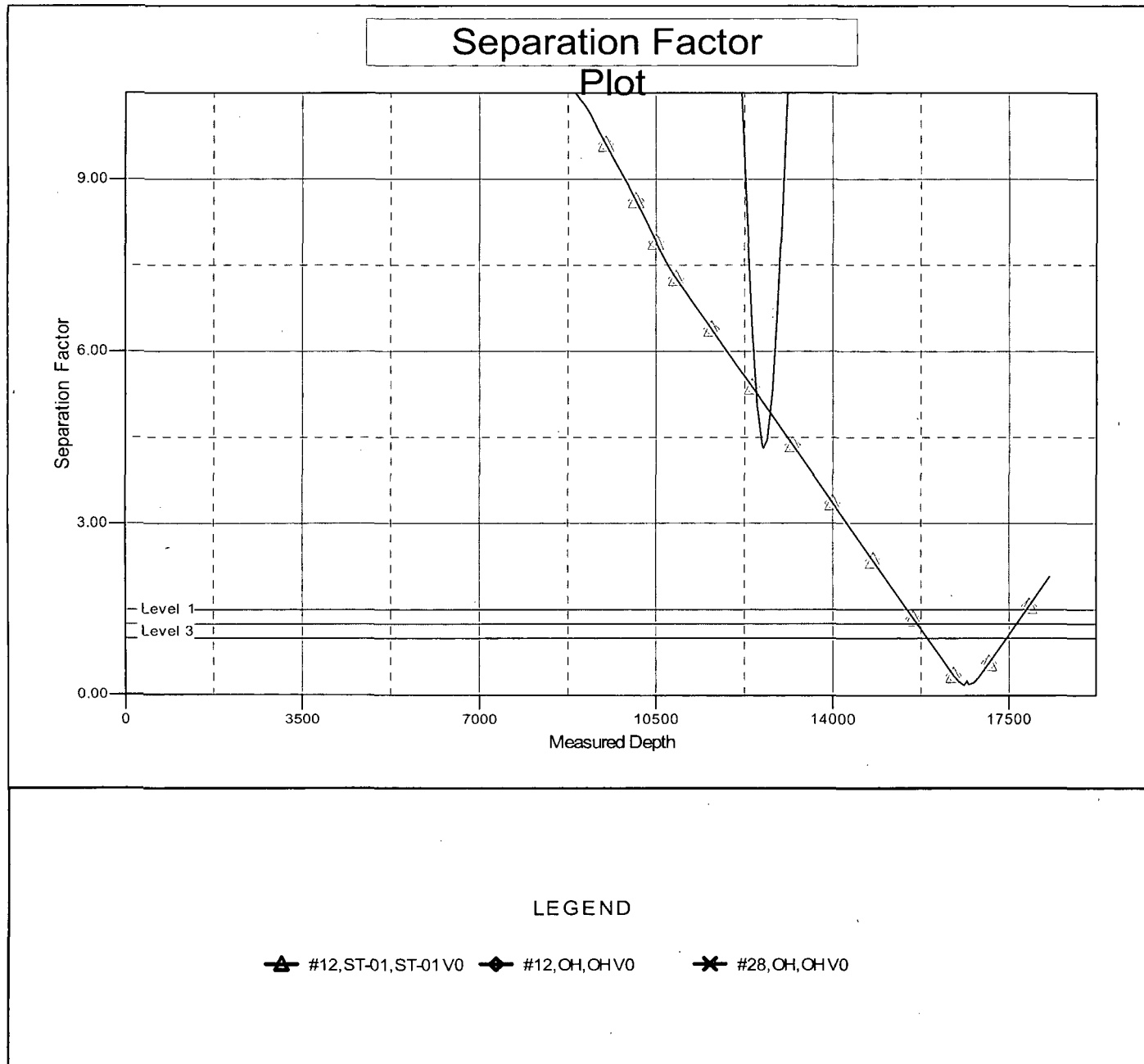
Offset Depths are relative to Offset Datum

Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: Lea Unit #40H

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

Grid Convergence at Surface is: 0.44°





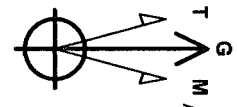
Legacy Reserves
Project: Lea County, NM
Site: Lea Unit
Well: #40H
Wellbore: OH
Plan: Plan #1 (#40H/OH)

Section Details									
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
2	10027.0	0.00	0.00	10027.0	0.0	0.0	0.00	0.00	0.0
3	10927.0	90.00	357.55	10600.0	572.4	-24.5	10.00	357.55	573.0
4	18310.1	90.00	357.55	10600.0	7948.8	-339.6	0.00	0.00	7866.1

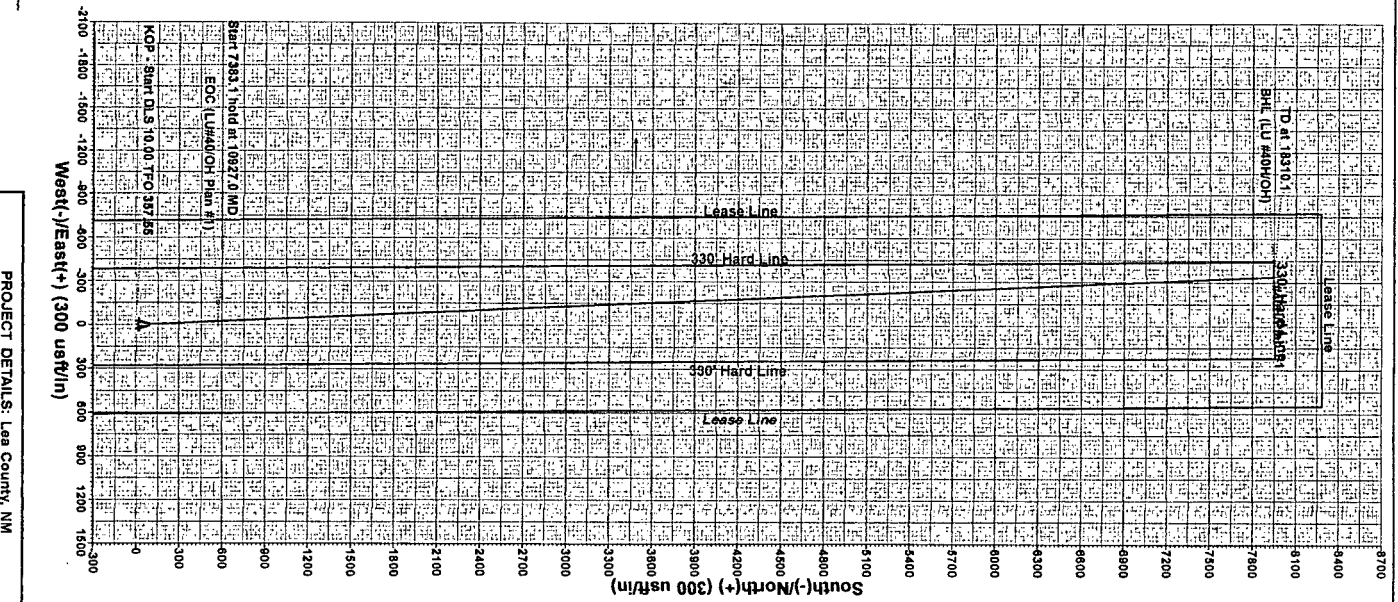
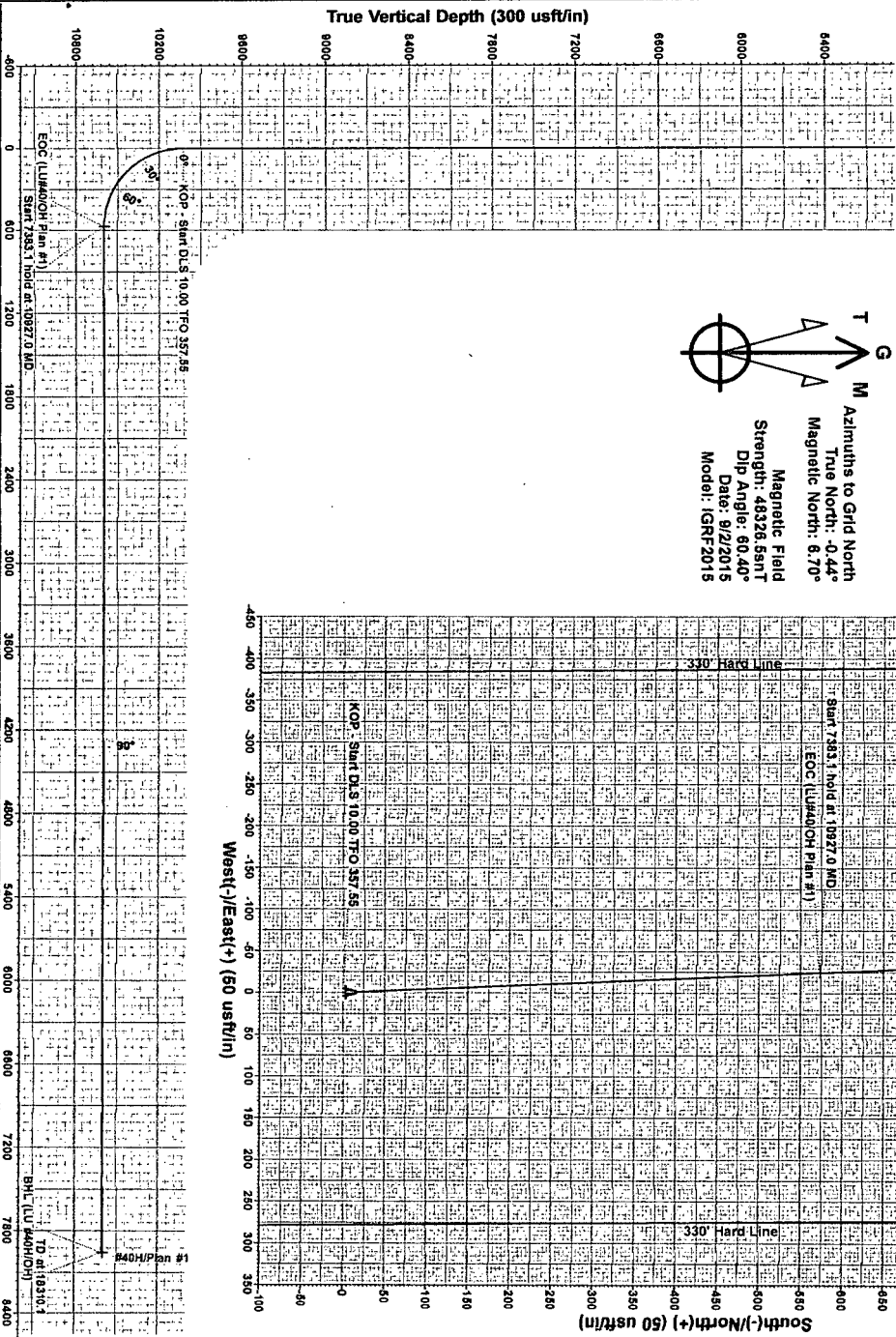
WELL DETAILS: #40H

Ground Elevation: 3675.0
RKB Elevation: KB @ 3693.0usft (McVay 4)
Rig Name: McVay 4

Northing 667612.40 Easting 764704.80
Latitude 32° 33' 26.931 N Longitude 103° 30' 23.984 W



Azimuths to Grid North
True North: -0.44°
Magnetic North: 6.70°
Magnetic Field
Strength: 48326.5nT
Dip Angle: 60.40°
Date: 8/2/2015
Model: IGRF2015



Plan: Plan #1 (#40H/OH)
dated By: Well Planner Date: 12/31, September 02 2015
Terra Directional Services
3705 South County Road 1210, Midland, TX 79706
Office: (432) 618-1210

PROJECT DETAILS: Lea County, NM
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