

3002543077



HOBBS OCD

FEB 16 2016

RECEIVED

Legacy Reserves

Lea County, NM

Lea Unit

#38H

OH

Plan: Plan #1

Standard Planning Report

02 September, 2015



FEB 18 2016

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #38H
Company:	Legacy Reserves	TVD Reference:	KB @ 3692.0usft (McVay 4)
Project:	Lea County, NM	MD Reference:	KB @ 3692.0usft (McVay 4)
Site:	Lea Unit	North Reference:	Grid
Well:	#38H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project	Lea County, NM		
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		
Site Position:		Northing:	567,504.40 usft
From:	Map	Easting:	753,784.90 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 33' 26.922 N
		Longitude:	103° 30' 34.732 W
		Grid Convergence:	0.44 °

Well	#38H		
Well Position	+N-S	7.6 usft	Northing:
	+E-W	869.8 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft
		Latitude:	32° 33' 26.931 N
		Longitude:	103° 30' 24.570 W
		Ground Level:	3,674.0 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	IGRF2015	9/2/2015	7.14
			Dip Angle
			60.40
			Field Strength
			48,327

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.0
Vertical Section:	Depth From (TVD)	+N-S	+E-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			359.57

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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
10,327.0	0.00	0.00	10,327.0	0.0	0.0	0.00	0.00	0.00	0.00	
11,227.0	90.00	359.57	10,900.0	572.9	-4.3	10.00	10.00	-0.05	359.57	
18,605.4	90.00	359.57	10,900.0	7,951.1	-59.6	0.00	0.00	0.00	0.00	BHL (LU #38H/OH)



TDS
Planning Report



Database: EDM 5000.1 Single User Db
Company: Legacy Reserves
Project: Lea County, NM
Site: Lea Unit
Well: #38H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #38H
TVD Reference: KB @ 3692.0usft (McVay 4)
MD Reference: KB @ 3692.0usft (McVay 4)
North Reference: Gnd
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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00

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Company:	Legacy Reserves	TVD Reference:	KB @ 3692.0usft (McVay 4)
Project:	Lea County NM	MD Reference:	KB @ 3692.0usft (McVay 4)
Site:	Lea Unit	North Reference:	Grid
Well:	#38H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,700.0	0.00	0.00	6,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,900.0	0.00	0.00	6,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,000.0	0.00	0.00	7,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,100.0	0.00	0.00	7,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,200.0	0.00	0.00	7,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,300.0	0.00	0.00	7,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,400.0	0.00	0.00	7,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,500.0	0.00	0.00	7,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,600.0	0.00	0.00	7,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,700.0	0.00	0.00	7,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,800.0	0.00	0.00	7,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,900.0	0.00	0.00	7,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,000.0	0.00	0.00	8,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,100.0	0.00	0.00	8,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,200.0	0.00	0.00	8,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,300.0	0.00	0.00	8,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,400.0	0.00	0.00	8,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,500.0	0.00	0.00	8,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,600.0	0.00	0.00	8,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,700.0	0.00	0.00	8,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,800.0	0.00	0.00	8,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,900.0	0.00	0.00	8,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,000.0	0.00	0.00	9,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,100.0	0.00	0.00	9,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,200.0	0.00	0.00	9,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,300.0	0.00	0.00	9,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,400.0	0.00	0.00	9,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,500.0	0.00	0.00	9,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,600.0	0.00	0.00	9,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,700.0	0.00	0.00	9,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,800.0	0.00	0.00	9,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,900.0	0.00	0.00	9,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
10,000.0	0.00	0.00	10,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
10,100.0	0.00	0.00	10,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
10,200.0	0.00	0.00	10,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
10,300.0	0.00	0.00	10,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
10,327.0	0.00	0.00	10,327.0	0.0	0.0	0.0	0.00	0.00	0.00	
KOP - Start DLS 10.00 TFO 359.57										
10,350.0	2.30	359.57	10,350.0	0.5	0.0	0.5	10.00	10.00	0.00	

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Wellbore:	OH		
Design:	Plan #1		

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)	
10,400.0	7.30	359.57	10,399.8	4.6	0.0	4.6	10.00	10.00	0.00	
10,450.0	12.30	359.57	10,449.1	13.2	-0.1	13.2	10.00	10.00	0.00	
10,500.0	17.30	359.57	10,497.4	25.9	-0.2	25.9	10.00	10.00	0.00	
10,550.0	22.30	359.57	10,544.4	42.9	-0.3	42.9	10.00	10.00	0.00	
10,600.0	27.30	359.57	10,589.8	63.8	-0.5	63.8	10.00	10.00	0.00	
10,650.0	32.30	359.57	10,633.2	88.7	-0.7	88.7	10.00	10.00	0.00	
10,700.0	37.30	359.57	10,674.2	117.2	-0.9	117.2	10.00	10.00	0.00	
10,750.0	42.30	359.57	10,712.6	149.2	-1.1	149.2	10.00	10.00	0.00	
10,800.0	47.30	359.57	10,748.1	184.4	-1.4	184.4	10.00	10.00	0.00	
10,850.0	52.30	359.57	10,780.3	222.6	-1.7	222.6	10.00	10.00	0.00	
10,900.0	57.30	359.57	10,809.2	263.4	-2.0	263.4	10.00	10.00	0.00	
10,950.0	62.30	359.57	10,834.3	306.6	-2.3	306.6	10.00	10.00	0.00	
11,000.0	67.30	359.57	10,855.6	351.8	-2.6	351.8	10.00	10.00	0.00	
11,050.0	72.30	359.57	10,872.8	398.7	-3.0	398.8	10.00	10.00	0.00	
11,100.0	77.30	359.57	10,885.9	447.0	-3.4	447.0	10.00	10.00	0.00	
11,150.0	82.30	359.57	10,894.8	496.2	-3.7	496.2	10.00	10.00	0.00	
11,200.0	87.30	359.57	10,899.3	546.0	-4.1	546.0	10.00	10.00	0.00	
11,227.0	90.00	359.57	10,900.0	572.9	-4.3	573.0	10.00	10.00	0.00	
EOC - Start 7378.4 hold at 11227.0 MD										
11,300.0	90.00	359.57	10,900.0	645.9	-4.8	646.0	0.00	0.00	0.00	
11,400.0	90.00	359.57	10,900.0	745.9	-5.6	746.0	0.00	0.00	0.00	
11,500.0	90.00	359.57	10,900.0	845.9	-6.3	846.0	0.00	0.00	0.00	
11,600.0	90.00	359.57	10,900.0	945.9	-7.1	946.0	0.00	0.00	0.00	
11,700.0	90.00	359.57	10,900.0	1,045.9	-7.8	1,046.0	0.00	0.00	0.00	
11,800.0	90.00	359.57	10,900.0	1,145.9	-8.6	1,146.0	0.00	0.00	0.00	
11,900.0	90.00	359.57	10,900.0	1,245.9	-9.3	1,246.0	0.00	0.00	0.00	
12,000.0	90.00	359.57	10,900.0	1,345.9	-10.1	1,346.0	0.00	0.00	0.00	
12,100.0	90.00	359.57	10,900.0	1,445.9	-10.8	1,446.0	0.00	0.00	0.00	
12,200.0	90.00	359.57	10,900.0	1,545.9	-11.6	1,546.0	0.00	0.00	0.00	
12,300.0	90.00	359.57	10,900.0	1,645.9	-12.3	1,646.0	0.00	0.00	0.00	
12,400.0	90.00	359.57	10,900.0	1,745.9	-13.1	1,746.0	0.00	0.00	0.00	
12,500.0	90.00	359.57	10,900.0	1,845.9	-13.8	1,846.0	0.00	0.00	0.00	
12,600.0	90.00	359.57	10,900.0	1,945.9	-14.6	1,946.0	0.00	0.00	0.00	
12,700.0	90.00	359.57	10,900.0	2,045.9	-15.3	2,046.0	0.00	0.00	0.00	
12,800.0	90.00	359.57	10,900.0	2,145.9	-16.1	2,146.0	0.00	0.00	0.00	
12,900.0	90.00	359.57	10,900.0	2,245.9	-16.8	2,246.0	0.00	0.00	0.00	
13,000.0	90.00	359.57	10,900.0	2,345.9	-17.6	2,346.0	0.00	0.00	0.00	
13,100.0	90.00	359.57	10,900.0	2,445.9	-18.3	2,446.0	0.00	0.00	0.00	
13,200.0	90.00	359.57	10,900.0	2,545.9	-19.1	2,546.0	0.00	0.00	0.00	
13,300.0	90.00	359.57	10,900.0	2,645.9	-19.8	2,646.0	0.00	0.00	0.00	
13,400.0	90.00	359.57	10,900.0	2,745.9	-20.6	2,746.0	0.00	0.00	0.00	
13,500.0	90.00	359.57	10,900.0	2,845.9	-21.3	2,846.0	0.00	0.00	0.00	
13,600.0	90.00	359.57	10,900.0	2,945.9	-22.1	2,946.0	0.00	0.00	0.00	
13,700.0	90.00	359.57	10,900.0	3,045.9	-22.8	3,046.0	0.00	0.00	0.00	
13,800.0	90.00	359.57	10,900.0	3,145.9	-23.6	3,146.0	0.00	0.00	0.00	
13,900.0	90.00	359.57	10,900.0	3,245.9	-24.3	3,246.0	0.00	0.00	0.00	
14,000.0	90.00	359.57	10,900.0	3,345.9	-25.1	3,346.0	0.00	0.00	0.00	
14,100.0	90.00	359.57	10,900.0	3,445.9	-25.8	3,446.0	0.00	0.00	0.00	
14,200.0	90.00	359.57	10,900.0	3,545.9	-26.6	3,546.0	0.00	0.00	0.00	
14,300.0	90.00	359.57	10,900.0	3,645.9	-27.3	3,646.0	0.00	0.00	0.00	
14,400.0	90.00	359.57	10,900.0	3,745.9	-28.1	3,746.0	0.00	0.00	0.00	
14,500.0	90.00	359.57	10,900.0	3,845.8	-28.8	3,846.0	0.00	0.00	0.00	
14,600.0	90.00	359.57	10,900.0	3,945.8	-29.6	3,946.0	0.00	0.00	0.00	
14,700.0	90.00	359.57	10,900.0	4,045.8	-30.3	4,046.0	0.00	0.00	0.00	

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #38H
Company:	Legacy Reserves	TVD Reference:	KB @ 3692.0usft (McVay 4)
Project:	Lea County, NM	MD Reference:	KB @ 3692.0usft (McVay 4)
Site:	Lea Unit	North Reference:	Grid
Well:	#38H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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)
14,800.0	90.00	359.57	10,900.0	4,145.8	-31.1	4,146.0	0.00	0.00	0.00
14,900.0	90.00	359.57	10,900.0	4,245.8	-31.8	4,246.0	0.00	0.00	0.00
15,000.0	90.00	359.57	10,900.0	4,345.8	-32.6	4,346.0	0.00	0.00	0.00
15,100.0	90.00	359.57	10,900.0	4,445.8	-33.3	4,446.0	0.00	0.00	0.00
15,200.0	90.00	359.57	10,900.0	4,545.8	-34.1	4,546.0	0.00	0.00	0.00
15,300.0	90.00	359.57	10,900.0	4,645.8	-34.8	4,646.0	0.00	0.00	0.00
15,400.0	90.00	359.57	10,900.0	4,745.8	-35.6	4,746.0	0.00	0.00	0.00
15,500.0	90.00	359.57	10,900.0	4,845.8	-36.3	4,846.0	0.00	0.00	0.00
15,600.0	90.00	359.57	10,900.0	4,945.8	-37.1	4,946.0	0.00	0.00	0.00
15,700.0	90.00	359.57	10,900.0	5,045.8	-37.8	5,046.0	0.00	0.00	0.00
15,800.0	90.00	359.57	10,900.0	5,145.8	-38.6	5,146.0	0.00	0.00	0.00
15,900.0	90.00	359.57	10,900.0	5,245.8	-39.3	5,246.0	0.00	0.00	0.00
16,000.0	90.00	359.57	10,900.0	5,345.8	-40.1	5,346.0	0.00	0.00	0.00
16,100.0	90.00	359.57	10,900.0	5,445.8	-40.8	5,446.0	0.00	0.00	0.00
16,200.0	90.00	359.57	10,900.0	5,545.8	-41.6	5,546.0	0.00	0.00	0.00
16,300.0	90.00	359.57	10,900.0	5,645.8	-42.3	5,646.0	0.00	0.00	0.00
16,400.0	90.00	359.57	10,900.0	5,745.8	-43.1	5,746.0	0.00	0.00	0.00
16,500.0	90.00	359.57	10,900.0	5,845.8	-43.8	5,846.0	0.00	0.00	0.00
16,600.0	90.00	359.57	10,900.0	5,945.8	-44.6	5,946.0	0.00	0.00	0.00
16,700.0	90.00	359.57	10,900.0	6,045.8	-45.3	6,046.0	0.00	0.00	0.00
16,800.0	90.00	359.57	10,900.0	6,145.8	-46.1	6,146.0	0.00	0.00	0.00
16,900.0	90.00	359.57	10,900.0	6,245.8	-46.8	6,246.0	0.00	0.00	0.00
17,000.0	90.00	359.57	10,900.0	6,345.8	-47.6	6,346.0	0.00	0.00	0.00
17,100.0	90.00	359.57	10,900.0	6,445.8	-48.3	6,446.0	0.00	0.00	0.00
17,200.0	90.00	359.57	10,900.0	6,545.8	-49.1	6,546.0	0.00	0.00	0.00
17,300.0	90.00	359.57	10,900.0	6,645.8	-49.8	6,646.0	0.00	0.00	0.00
17,400.0	90.00	359.57	10,900.0	6,745.8	-50.6	6,746.0	0.00	0.00	0.00
17,500.0	90.00	359.57	10,900.0	6,845.8	-51.3	6,846.0	0.00	0.00	0.00
17,600.0	90.00	359.57	10,900.0	6,945.8	-52.1	6,946.0	0.00	0.00	0.00
17,700.0	90.00	359.57	10,900.0	7,045.8	-52.8	7,046.0	0.00	0.00	0.00
17,800.0	90.00	359.57	10,900.0	7,145.8	-53.6	7,146.0	0.00	0.00	0.00
17,900.0	90.00	359.57	10,900.0	7,245.8	-54.3	7,246.0	0.00	0.00	0.00
18,000.0	90.00	359.57	10,900.0	7,345.8	-55.1	7,346.0	0.00	0.00	0.00
18,100.0	90.00	359.57	10,900.0	7,445.7	-55.8	7,446.0	0.00	0.00	0.00
18,200.0	90.00	359.57	10,900.0	7,545.7	-56.6	7,546.0	0.00	0.00	0.00
18,300.0	90.00	359.57	10,900.0	7,645.7	-57.3	7,646.0	0.00	0.00	0.00
18,400.0	90.00	359.57	10,900.0	7,745.7	-58.1	7,746.0	0.00	0.00	0.00
18,500.0	90.00	359.57	10,900.0	7,845.7	-58.8	7,846.0	0.00	0.00	0.00
18,605.4	90.00	359.57	10,900.0	7,951.1	-59.6	7,951.3	0.00	0.00	0.00
TD at 18605.4									



TDS
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #38H
Company:	Legacy Reserves	TVD Reference:	KB @ 3692.0usft (McVay 4)
Project:	Lea County NM	MD Reference:	KB @ 3692.0usft (McVay 4)
Site:	Lea Unit	North Reference:	Grid
Well:	#38H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
EOC (LU #38H/OH Plan - plan hits target center - Point	0.00	0.00	10,900.0	572.9	-4.3	568,084.94	754,650.40	32° 33' 32.600 N	103° 30' 24.568 W
BHL (LU #38H/OH) - plan hits target center - Point	0.00	0.00	10,900.0	7,951.1	-59.6	575,463.10	754,595.10	32° 34' 45.610 N	103° 30' 24.544 W

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,327.0	10,327.0	0.0	0.0	KOP - Start DLS 10.00 TFO 359.57
11,227.0	10,900.0	572.9	-4.3	EOC - Start 7378.4 hold at 11227.0 MD
18,605.4	10,900.0	7,951.1	-59.6	TD at 18605.4

Legacy Reserves
#38H - Plan #1

Lea County, NM
Lea Unit
Your Ref:

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
0		0	0	0	0	0	0
100		0	0	100	0	0	0
200		0	0	200	0	0	0
300		0	0	300	0	0	0
400		0	0	400	0	0	0
500		0	0	500	0	0	0
600		0	0	600	0	0	0
700		0	0	700	0	0	0
800		0	0	800	0	0	0
900		0	0	900	0	0	0
1000		0	0	1000	0	0	0
1100		0	0	1100	0	0	0
1200		0	0	1200	0	0	0
1300		0	0	1300	0	0	0
1400		0	0	1400	0	0	0
1500		0	0	1500	0	0	0
1600		0	0	1600	0	0	0
1700		0	0	1700	0	0	0
1800		0	0	1800	0	0	0
1900		0	0	1900	0	0	0
2000		0	0	2000	0	0	0
2100		0	0	2100	0	0	0
2200		0	0	2200	0	0	0
2300		0	0	2300	0	0	0
2400		0	0	2400	0	0	0
2500		0	0	2500	0	0	0
2600		0	0	2600	0	0	0
2700		0	0	2700	0	0	0
2800		0	0	2800	0	0	0
2900		0	0	2900	0	0	0
3000		0	0	3000	0	0	0
3100		0	0	3100	0	0	0

3200	0	0	3200	0	0	0	0
3300	0	0	3300	0	0	0	0
3400	0	0	3400	0	0	0	0
3500	0	0	3500	0	0	0	0
3600	0	0	3600	0	0	0	0
3700	0	0	3700	0	0	0	0
3800	0	0	3800	0	0	0	0
3900	0	0	3900	0	0	0	0
4000	0	0	4000	0	0	0	0
4100	0	0	4100	0	0	0	0
4200	0	0	4200	0	0	0	0
4300	0	0	4300	0	0	0	0
4400	0	0	4400	0	0	0	0
4500	0	0	4500	0	0	0	0
4600	0	0	4600	0	0	0	0
4700	0	0	4700	0	0	0	0
4800	0	0	4800	0	0	0	0
4900	0	0	4900	0	0	0	0
5000	0	0	5000	0	0	0	0
5100	0	0	5100	0	0	0	0
5200	0	0	5200	0	0	0	0
5300	0	0	5300	0	0	0	0
5400	0	0	5400	0	0	0	0
5500	0	0	5500	0	0	0	0
5600	0	0	5600	0	0	0	0
5700	0	0	5700	0	0	0	0
5800	0	0	5800	0	0	0	0
5900	0	0	5900	0	0	0	0
6000	0	0	6000	0	0	0	0
6100	0	0	6100	0	0	0	0
6200	0	0	6200	0	0	0	0
6300	0	0	6300	0	0	0	0
6400	0	0	6400	0	0	0	0
6500	0	0	6500	0	0	0	0
6600	0	0	6600	0	0	0	0
6700	0	0	6700	0	0	0	0
6800	0	0	6800	0	0	0	0
6900	0	0	6900	0	0	0	0
7000	0	0	7000	0	0	0	0
7100	0	0	7100	0	0	0	0
7200	0	0	7200	0	0	0	0
7300	0	0	7300	0	0	0	0
7400	0	0	7400	0	0	0	0
7500	0	0	7500	0	0	0	0
7600	0	0	7600	0	0	0	0
7700	0	0	7700	0	0	0	0
7800	0	0	7800	0	0	0	0

7900	0	0	7900	0	0	0	0
8000	0	0	8000	0	0	0	0
8100	0	0	8100	0	0	0	0
8200	0	0	8200	0	0	0	0
8300	0	0	8300	0	0	0	0
8400	0	0	8400	0	0	0	0
8500	0	0	8500	0	0	0	0
8600	0	0	8600	0	0	0	0
8700	0	0	8700	0	0	0	0
8800	0	0	8800	0	0	0	0
8900	0	0	8900	0	0	0	0
9000	0	0	9000	0	0	0	0
9100	0	0	9100	0	0	0	0
9200	0	0	9200	0	0	0	0
9300	0	0	9300	0	0	0	0
9400	0	0	9400	0	0	0	0
9500	0	0	9500	0	0	0	0
9600	0	0	9600	0	0	0	0
9700	0	0	9700	0	0	0	0
9800	0	0	9800	0	0	0	0
9900	0	0	9900	0	0	0	0
10000	0	0	10000	0	0	0	0
10100	0	0	10100	0	0	0	0
10200	0	0	10200	0	0	0	0
10300	0	0	10300	0	0	0	0
10327	0	0	10327	0	0	0	0
10350	2.3	359.571	10349.99	0.46	0	0.46	10
10400	7.3	359.571	10399.8	4.64	-0.03	4.64	10
10450	12.3	359.571	10449.06	13.15	-0.1	13.15	10
10500	17.3	359.571	10497.38	25.92	-0.19	25.92	10
10550	22.3	359.571	10544.41	42.85	-0.32	42.85	10
10600	27.3	359.571	10589.79	63.82	-0.48	63.82	10
10650	32.3	359.571	10633.16	88.66	-0.66	88.66	10
10700	37.3	359.571	10674.21	117.18	-0.88	117.19	10
10750	42.3	359.571	10712.61	149.18	-1.12	149.18	10
10800	47.3	359.571	10748.08	184.4	-1.38	184.4	10
10850	52.3	359.571	10780.34	222.57	-1.67	222.58	10
10900	57.3	359.571	10809.15	263.42	-1.97	263.42	10
10950	62.3	359.571	10834.29	306.61	-2.3	306.62	10
11000	67.3	359.571	10855.58	351.84	-2.64	351.85	10
11050	72.3	359.571	10872.83	398.75	-2.99	398.76	10
11100	77.3	359.571	10885.94	446.98	-3.35	447	10
11150	82.3	359.571	10894.79	496.18	-3.72	496.19	10
11200	87.3	359.571	10899.32	545.95	-4.09	545.97	10
11227	90	359.571	10899.96	572.94	-4.29	572.95	10
11300	90	359.571	10899.96	645.94	-4.84	645.96	0
11400	90	359.571	10899.96	745.94	-5.59	745.96	0

11500	90	359.571	10899.96	845.93	-6.34	845.96	0
11600	90	359.571	10899.96	945.93	-7.09	945.96	0
11700	90	359.571	10899.96	1045.93	-7.84	1045.96	0
11800	90	359.571	10899.96	1145.93	-8.59	1145.96	0
11900	90	359.571	10899.96	1245.92	-9.34	1245.96	0
12000	90	359.571	10899.96	1345.92	-10.09	1345.96	0
12100	90	359.571	10899.96	1445.92	-10.84	1445.96	0
12200	90	359.571	10899.96	1545.91	-11.59	1545.96	0
12300	90	359.571	10899.96	1645.91	-12.34	1645.96	0
12400	90	359.571	10899.96	1745.91	-13.09	1745.96	0
12500	90	359.571	10899.97	1845.91	-13.84	1845.96	0
12600	90	359.571	10899.97	1945.9	-14.59	1945.96	0
12700	90	359.571	10899.97	2045.9	-15.34	2045.96	0
12800	90	359.571	10899.97	2145.9	-16.09	2145.96	0
12900	90	359.571	10899.97	2245.89	-16.83	2245.96	0
13000	90	359.571	10899.97	2345.89	-17.58	2345.96	0
13100	90	359.571	10899.97	2445.89	-18.33	2445.96	0
13200	90	359.571	10899.97	2545.89	-19.08	2545.96	0
13300	90	359.571	10899.97	2645.88	-19.83	2645.96	0
13400	90	359.571	10899.97	2745.88	-20.58	2745.96	0
13500	90	359.571	10899.97	2845.88	-21.33	2845.96	0
13600	90	359.571	10899.97	2945.88	-22.08	2945.96	0
13700	90	359.571	10899.97	3045.87	-22.83	3045.96	0
13800	90	359.571	10899.97	3145.87	-23.58	3145.96	0
13900	90	359.571	10899.97	3245.87	-24.33	3245.96	0
14000	90	359.571	10899.97	3345.86	-25.08	3345.96	0
14100	90	359.571	10899.97	3445.86	-25.83	3445.96	0
14200	90	359.571	10899.97	3545.86	-26.58	3545.96	0
14300	90	359.571	10899.98	3645.86	-27.33	3645.96	0
14400	90	359.571	10899.98	3745.85	-28.08	3745.96	0
14500	90	359.571	10899.98	3845.85	-28.83	3845.96	0
14600	90	359.571	10899.98	3945.85	-29.58	3945.96	0
14700	90	359.571	10899.98	4045.84	-30.33	4045.96	0
14800	90	359.571	10899.98	4145.84	-31.08	4145.96	0
14900	90	359.571	10899.98	4245.84	-31.83	4245.96	0
15000	90	359.571	10899.98	4345.84	-32.58	4345.96	0
15100	90	359.571	10899.98	4445.83	-33.33	4445.96	0
15200	90	359.571	10899.98	4545.83	-34.07	4545.96	0
15300	90	359.571	10899.98	4645.83	-34.82	4645.96	0
15400	90	359.571	10899.98	4745.82	-35.57	4745.96	0
15500	90	359.571	10899.98	4845.82	-36.32	4845.96	0
15600	90	359.571	10899.98	4945.82	-37.07	4945.96	0
15700	90	359.571	10899.98	5045.82	-37.82	5045.96	0
15800	90	359.571	10899.98	5145.81	-38.57	5145.96	0
15900	90	359.571	10899.98	5245.81	-39.32	5245.96	0
16000	90	359.571	10899.99	5345.81	-40.07	5345.96	0
16100	90	359.571	10899.99	5445.8	-40.82	5445.96	0

16200	90	359.571	10899.99	5545.8	-41.57	5545.96	0
16300	90	359.571	10899.99	5645.8	-42.32	5645.96	0
16400	90	359.571	10899.99	5745.8	-43.07	5745.96	0
16500	90	359.571	10899.99	5845.79	-43.82	5845.96	0
16600	90	359.571	10899.99	5945.79	-44.57	5945.96	0
16700	90	359.571	10899.99	6045.79	-45.32	6045.96	0
16800	90	359.571	10899.99	6145.79	-46.07	6145.96	0
16900	90	359.571	10899.99	6245.78	-46.82	6245.96	0
17000	90	359.571	10899.99	6345.78	-47.57	6345.96	0
17100	90	359.571	10899.99	6445.78	-48.32	6445.96	0
17200	90	359.571	10899.99	6545.77	-49.07	6545.96	0
17300	90	359.571	10899.99	6645.77	-49.82	6645.96	0
17400	90	359.571	10899.99	6745.77	-50.57	6745.96	0
17500	90	359.571	10899.99	6845.77	-51.31	6845.96	0
17600	90	359.571	10899.99	6945.76	-52.06	6945.96	0
17700	90	359.571	10899.99	7045.76	-52.81	7045.96	0
17800	90	359.571	10900	7145.76	-53.56	7145.96	0
17900	90	359.571	10900	7245.75	-54.31	7245.96	0
18000	90	359.571	10900	7345.75	-55.06	7345.96	0
18100	90	359.571	10900	7445.75	-55.81	7445.96	0
18200	90	359.571	10900	7545.75	-56.56	7545.96	0
18300	90	359.571	10900	7645.74	-57.31	7645.96	0
18400	90	359.571	10900	7745.74	-58.06	7745.96	0
18500	90	359.571	10900	7845.74	-58.81	7845.96	0
18605.37	90	359.571	10900	7951.1	-59.6	7951.32	0

All data are in feet unless otherwise stated. Directions and coordinates are relative to Grid North.
Vertical depths are relative to KB. Northings and Eastings are relative to Well.

The Dogleg Severity is in Degrees per 100 feet.

Vertical Section is from Slot and calculated along an Azimuth of 359.571° (Grid).

Coordinate System is NAD 1927 (NADCON CONUS) US State Plane 1927 (Exact solution), New Mexico East 3001.

Central meridian is -104.333°.

Grid Convergence at Surface is 0.445°.

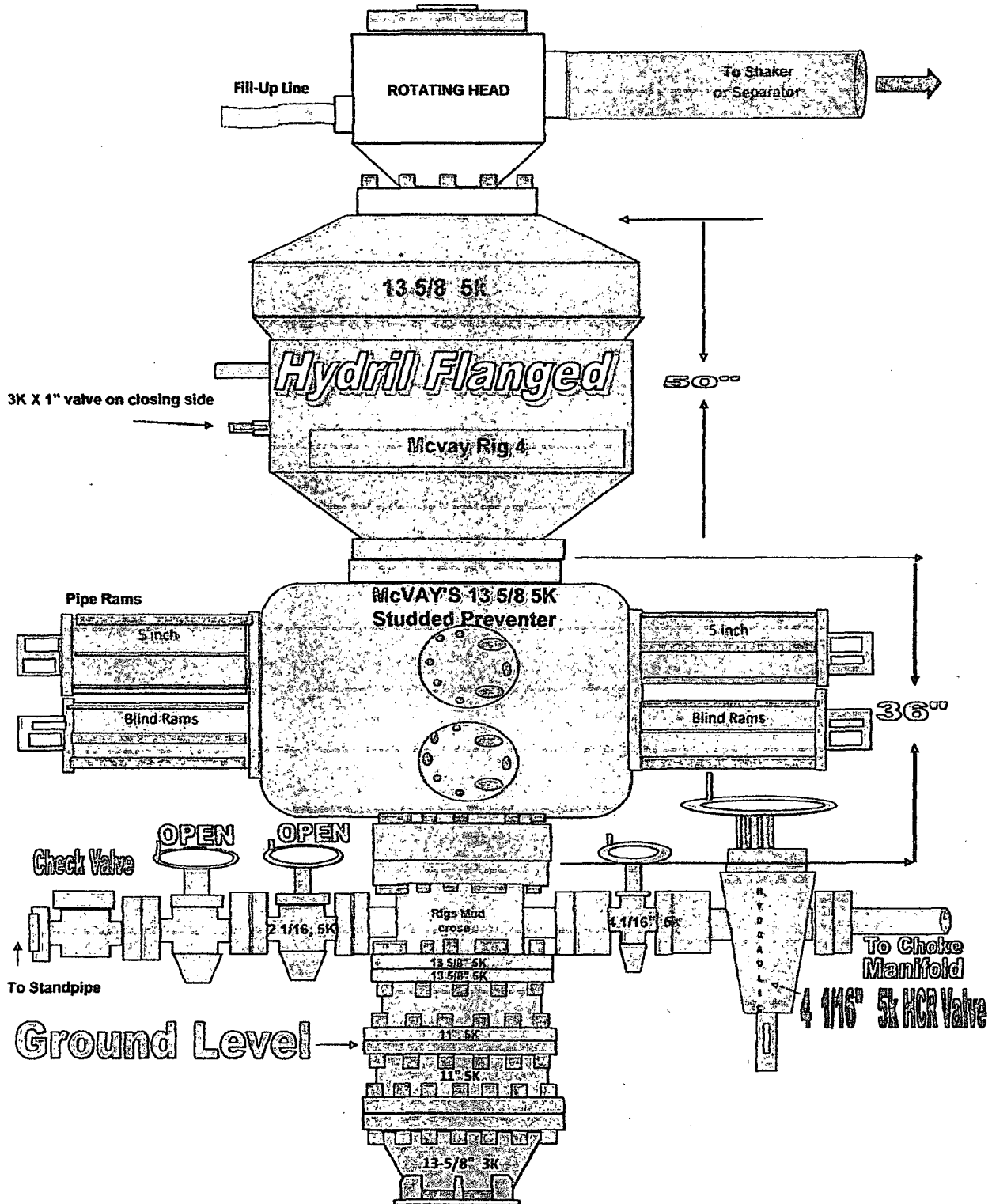
Based upon Minimum Curvature type calculations, at a Measured Depth of 18605.37ft.,
the Bottom Hole Displacement is 7951.32ft., in the Direction of 359.571° (Grid).

Legacy Reserves
#38H - Plan #1

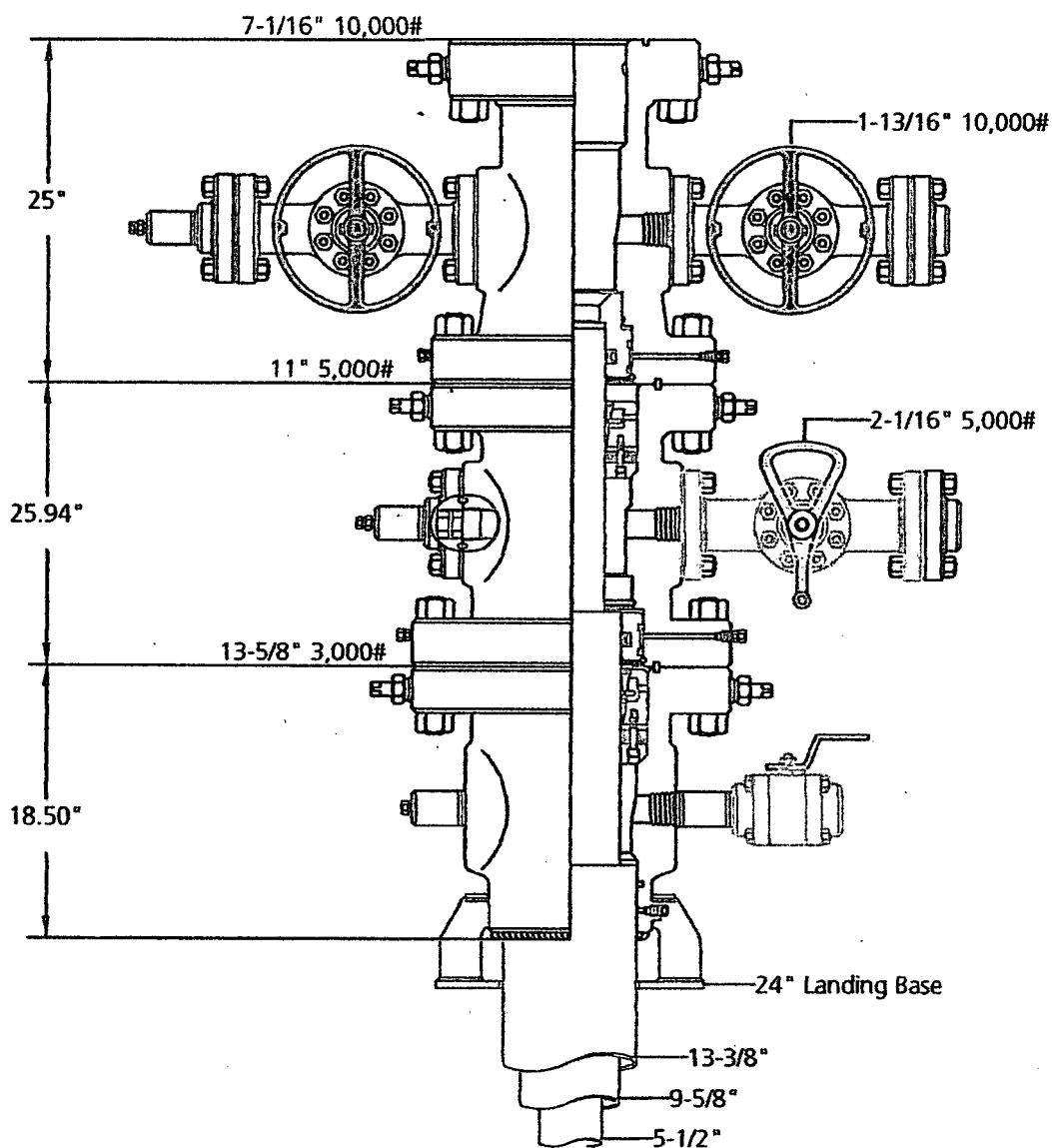
Lea County, NM
Lea Unit
Your Ref:

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
0	0	0	0	0	0	0	0
100	0	0	100	0	0	0	0
200	0	0	200	0	0	0	0
300	0	0	300	0	0	0	0
400	0	0	400	0	0	0	0
500	0	0	500	0	0	0	0
600	0	0	600	0	0	0	0
700	0	0	700	0	0	0	0
800	0	0	800	0	0	0	0
900	0	0	900	0	0	0	0
1000	0	0	1000	0	0	0	0
1100	0	0	1100	0	0	0	0
1200	0	0	1200	0	0	0	0
1300	0	0	1300	0	0	0	0
1400	0	0	1400	0	0	0	0
1500	0	0	1500	0	0	0	0
1600	0	0	1600	0	0	0	0
1700	0	0	1700	0	0	0	0
1800	0	0	1800	0	0	0	0
1900	0	0	1900	0	0	0	0
2000	0	0	2000	0	0	0	0
2100	0	0	2100	0	0	0	0
2200	0	0	2200	0	0	0	0
2300	0	0	2300	0	0	0	0
2400	0	0	2400	0	0	0	0
2500	0	0	2500	0	0	0	0
2600	0	0	2600	0	0	0	0
2700	0	0	2700	0	0	0	0
2800	0	0	2800	0	0	0	0
2900	0	0	2900	0	0	0	0
3000	0	0	3000	0	0	0	0
3100	0	0	3100	0	0	0	0

McVay Rig 4



Note: Dimensional information reflected on this drawing are estimated measurements only.

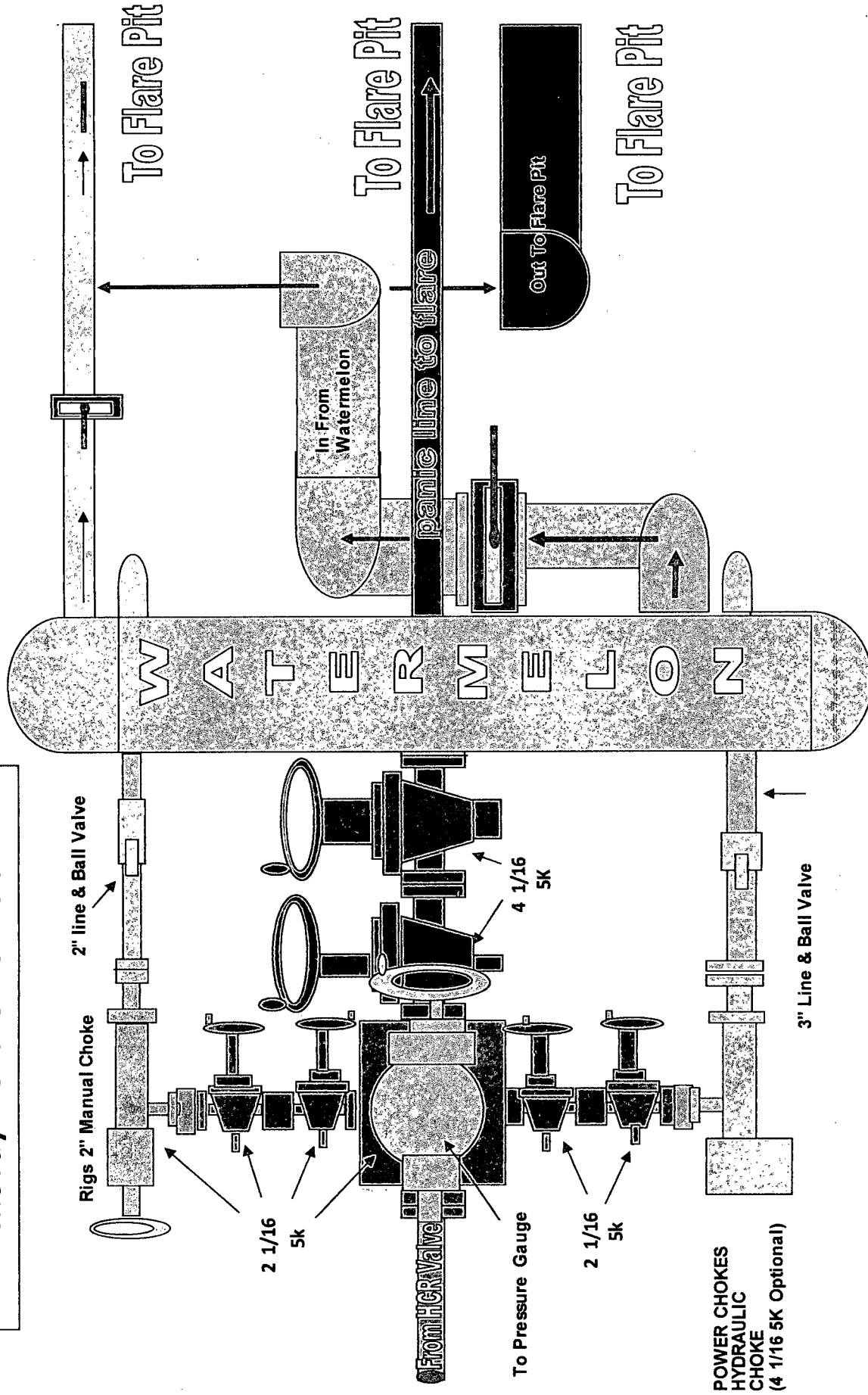


Legacy Reserves
Conventional 3- String

 CAMERON

Item: Jeanette	Date: 7-15-15	Working Pressure:	# 1274616
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McVay 4 Choke Manifold



*We use the same choke manifolds for all aspects of our operations & all are rated to 10K;

* All connections downstream from BOP thru chokes Are Flanged, All connections downstream from chokes are Flanged .