

LEAM Drilling Systems LLC
Planning Report

1540682

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well: 55H
Company:	DEVON ENERGY	TVD Reference:	GE 3204' + KB 25' @ 3229.00usft (Cactus 126)
Project:	Eddy County NM (NAD-83)	MD Reference:	GE 3204' + KB 25' @ 3229.00usft (Cactus 126)
Site:	Burton Flat Deep Unit	North Reference:	Grid
Well:	55H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project:	Eddy County NM (NAD-83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

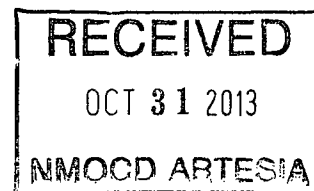
Site:	Burton Flat Deep Unit		
Site Position:		Northing:	548,073.21 usft
From:	Map	Easting:	592,066.43 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"
		Latitude:	32° 30' 23.782 N
		Longitude:	104° 10' 7.587 W
		Grid Convergence:	0.09 °

Well	55H					
Well Position	+N/-S	2,675.60 usft	Northing:	550,748.81 usft	Latitude:	32° 30' 50.260 N
	+E/-W	-74.07 usft	Easting:	591,992.36 usft	Longitude:	104° 10' 8.404 W
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	3,204.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	04/12/13	7.66	60.31	48,544

Design: Plan #1				
Audit Notes:				
Version:		Phase: PLAN	Tie On Depth: 0.00	
Vertical Section	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	87.01

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,172.78	0.00	0.00	6,172.78	0.00	0.00	0.00	0.00	0.00	0.00	
6,809.88	89.19	87.01	6,582.00	21.04	402.95	14.00	14.00	13.66	87.01	
11,433.90	89.19	87.01	6,647.00	262.13	5,020.22	0.00	0.00	0.00	0.00	PBHL(BFDH 55H)



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Site:	Burton Flat Deep Unit	North Reference:	Grid
Well:	55H	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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00

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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)
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,172.78	0.00	0.00	6,172.78	0.00	0.00	0.00	0.00	0.00	0.00
KOP: Start DLS 14.00 TFO 87.01									
6,175.00	0.31	87.01	6,175.00	0.00	0.01	0.01	14.00	14.00	0.00
6,200.00	3.81	87.01	6,199.98	0.05	0.90	0.90	14.00	14.00	0.00
6,225.00	7.31	87.01	6,224.86	0.17	3.32	3.33	14.00	14.00	0.00
6,250.00	10.81	87.01	6,249.54	0.38	7.25	7.26	14.00	14.00	0.00
6,275.00	14.31	87.01	6,273.94	0.66	12.68	12.70	14.00	14.00	0.00
6,300.00	17.81	87.01	6,297.96	1.02	19.59	19.61	14.00	14.00	0.00
6,325.00	21.31	87.01	6,321.51	1.46	27.95	27.98	14.00	14.00	0.00
6,350.00	24.81	87.01	6,344.51	1.97	37.72	37.77	14.00	14.00	0.00
6,375.00	28.31	87.01	6,366.87	2.55	48.89	48.95	14.00	14.00	0.00
6,400.00	31.81	87.01	6,388.51	3.21	61.39	61.47	14.00	14.00	0.00
6,425.00	35.31	87.01	6,409.33	3.93	75.19	75.29	14.00	14.00	0.00
6,450.00	38.81	87.01	6,429.28	4.71	90.23	90.36	14.00	14.00	0.00
6,475.00	42.31	87.01	6,448.27	5.56	106.46	106.61	14.00	14.00	0.00
6,500.00	45.81	87.01	6,466.23	6.47	123.82	123.99	14.00	14.00	0.00
6,525.00	49.31	87.01	6,483.10	7.43	142.25	142.44	14.00	14.00	0.00
6,550.00	52.81	87.01	6,498.81	8.44	161.66	161.88	14.00	14.00	0.00
6,575.00	56.31	87.01	6,513.30	9.50	182.00	182.25	14.00	14.00	0.00
6,600.00	59.81	87.01	6,526.53	10.61	203.18	203.46	14.00	14.00	0.00
6,625.00	63.31	87.01	6,538.43	11.76	225.13	225.44	14.00	14.00	0.00
6,650.00	66.81	87.01	6,548.97	12.94	247.77	248.10	14.00	14.00	0.00
6,675.00	70.31	87.01	6,558.11	14.15	271.00	271.37	14.00	14.00	0.00
6,700.00	73.81	87.01	6,565.81	15.39	294.75	295.15	14.00	14.00	0.00
6,725.00	77.31	87.01	6,572.04	16.65	318.92	319.36	14.00	14.00	0.00
6,750.00	80.81	87.01	6,576.78	17.93	343.43	343.90	14.00	14.00	0.00
6,775.00	84.31	87.01	6,580.02	19.22	368.18	368.69	14.00	14.00	0.00
6,800.00	87.81	87.01	6,581.74	20.52	393.09	393.62	14.00	14.00	0.00
6,809.88	89.19	87.01	6,582.00	21.04	402.95	403.50	14.00	14.00	0.00
EOC: Start 4624.02 hold at 6809.88 MD									
6,900.00	89.19	87.01	6,583.26	25.74	492.94	493.61	0.00	0.00	0.00
7,000.00	89.19	87.01	6,584.67	30.95	592.79	593.60	0.00	0.00	0.00
7,100.00	89.19	87.01	6,586.07	36.17	692.65	693.59	0.00	0.00	0.00
7,200.00	89.19	87.01	6,587.48	41.38	792.50	793.58	0.00	0.00	0.00
7,300.00	89.19	87.01	6,588.89	46.59	892.35	893.57	0.00	0.00	0.00
7,400.00	89.19	87.01	6,590.29	51.81	992.21	993.56	0.00	0.00	0.00
7,500.00	89.19	87.01	6,591.70	57.02	1,092.06	1,093.55	0.00	0.00	0.00
7,600.00	89.19	87.01	6,593.10	62.23	1,191.92	1,193.54	0.00	0.00	0.00
7,700.00	89.19	87.01	6,594.51	67.45	1,291.77	1,293.53	0.00	0.00	0.00
7,800.00	89.19	87.01	6,595.91	72.66	1,391.63	1,393.52	0.00	0.00	0.00
7,900.00	89.19	87.01	6,597.32	77.88	1,491.48	1,493.51	0.00	0.00	0.00
8,000.00	89.19	87.01	6,598.73	83.09	1,591.33	1,593.50	0.00	0.00	0.00

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Wellbore:	OH		
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8,100.00	89.19	87.01	6,600.13	88.30	1,691.19	1,693.49	0.00	0.00	0.00
8,200.00	89.19	87.01	6,601.54	93.52	1,791.04	1,793.48	0.00	0.00	0.00
8,300.00	89.19	87.01	6,602.94	98.73	1,890.90	1,893.47	0.00	0.00	0.00
8,400.00	89.19	87.01	6,604.35	103.95	1,990.75	1,993.46	0.00	0.00	0.00
8,500.00	89.19	87.01	6,605.76	109.16	2,090.60	2,093.45	0.00	0.00	0.00
8,600.00	89.19	87.01	6,607.16	114.37	2,190.46	2,193.44	0.00	0.00	0.00
8,700.00	89.19	87.01	6,608.57	119.59	2,290.31	2,293.43	0.00	0.00	0.00
8,800.00	89.19	87.01	6,609.97	124.80	2,390.17	2,393.42	0.00	0.00	0.00
8,900.00	89.19	87.01	6,611.38	130.01	2,490.02	2,493.41	0.00	0.00	0.00
9,000.00	89.19	87.01	6,612.78	135.23	2,589.87	2,593.40	0.00	0.00	0.00
9,100.00	89.19	87.01	6,614.19	140.44	2,689.73	2,693.39	0.00	0.00	0.00
9,200.00	89.19	87.01	6,615.60	145.66	2,789.58	2,793.38	0.00	0.00	0.00
9,300.00	89.19	87.01	6,617.00	150.87	2,889.44	2,893.37	0.00	0.00	0.00
9,400.00	89.19	87.01	6,618.41	156.08	2,989.29	2,993.36	0.00	0.00	0.00
9,500.00	89.19	87.01	6,619.81	161.30	3,089.14	3,093.35	0.00	0.00	0.00
9,600.00	89.19	87.01	6,621.22	166.51	3,189.00	3,193.34	0.00	0.00	0.00
9,700.00	89.19	87.01	6,622.62	171.72	3,288.85	3,293.33	0.00	0.00	0.00
9,800.00	89.19	87.01	6,624.03	176.94	3,388.71	3,393.32	0.00	0.00	0.00
9,900.00	89.19	87.01	6,625.44	182.15	3,488.56	3,493.31	0.00	0.00	0.00
10,000.00	89.19	87.01	6,626.84	187.37	3,588.42	3,593.30	0.00	0.00	0.00
10,100.00	89.19	87.01	6,628.25	192.58	3,688.27	3,693.29	0.00	0.00	0.00
10,200.00	89.19	87.01	6,629.65	197.79	3,788.12	3,793.28	0.00	0.00	0.00
10,300.00	89.19	87.01	6,631.06	203.01	3,887.98	3,893.27	0.00	0.00	0.00
10,400.00	89.19	87.01	6,632.47	208.22	3,987.83	3,993.26	0.00	0.00	0.00
10,500.00	89.19	87.01	6,633.87	213.44	4,087.69	4,093.25	0.00	0.00	0.00
10,600.00	89.19	87.01	6,635.28	218.65	4,187.54	4,193.24	0.00	0.00	0.00
10,700.00	89.19	87.01	6,636.68	223.86	4,287.39	4,293.23	0.00	0.00	0.00
10,800.00	89.19	87.01	6,638.09	229.08	4,387.25	4,393.22	0.00	0.00	0.00
10,900.00	89.19	87.01	6,639.49	234.29	4,487.10	4,493.21	0.00	0.00	0.00
11,000.00	89.19	87.01	6,640.90	239.50	4,586.96	4,593.20	0.00	0.00	0.00
11,100.00	89.19	87.01	6,642.31	244.72	4,686.81	4,693.19	0.00	0.00	0.00
11,200.00	89.19	87.01	6,643.71	249.93	4,786.66	4,793.18	0.00	0.00	0.00
11,300.00	89.19	87.01	6,645.12	255.15	4,886.52	4,893.18	0.00	0.00	0.00
11,400.00	89.19	87.01	6,646.52	260.36	4,986.37	4,993.17	0.00	0.00	0.00
11,433.90	89.19	87.01	6,647.00	262.13	5,020.22	5,027.06	0.00	0.00	0.00
TD at 11433.90' MD									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
hit/miss target									
Shape									
SHL(BFDH 55H)	0.00	0.00	0.00	0.00	0.00	550,748.81	591,992.36	32° 30' 50.260 N	104° 10' 8.404 W
- plan hits target center									
- Point									
PBHL(BFDH 55H)	0.81	87.01	6,647.00	262.13	5,020.22	551,010.94	597,012.59	32° 30' 52.773 N	104° 9' 9.768 W
- plan hits target center									
- Rectangle (sides W50.00 H4,624.02 D20.00)									

LEAM Drilling Systems LLC

Planning Report

Database	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 55H
Company	DEVON ENERGY	TVD Reference:	GE 3204 KB 25 @ 3229.00usft (Cactus 126)
Project	Eddy County NM (NAD-83)	MD Reference:	GE 3204 KB 25 @ 3229.00usft (Cactus 126)
Site:	Burton Flat Deep Unit	North Reference:	Gnd
Well:	55H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/S (usft)	+E/W (usft)	
6,172.78	6,172.78	0.00	0.00	KOP: Start DLS 14.00 TFO 87.01
6,809.88	6,582.00	21.04	402.95	EOC: Start 4624.02 hold at 6809.88 MD
11,433.90	6,647.00	262.13	5,020.22	TD at 11433.90' MD

DEVON ENERGY

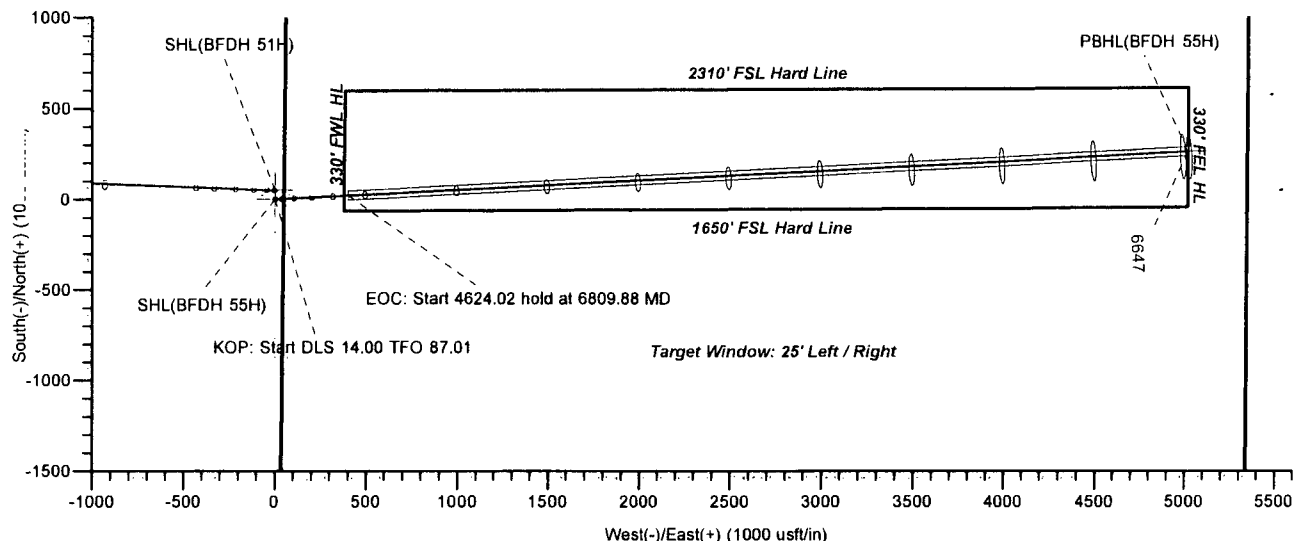
Project: Eddy County, NM (NAD-83)
 Site: Burton Flat Deep Unit
 Well: 55H
 Wellbore: OH
 Design: Plan #1

devon



Azimuths to Grid North
 True North: -0.09°
 Magnetic North: 7.57°

Magnetic Field
 Strength: 48543.9nT
 Dip Angle: 60.31°
 Date: 04/12/2013
 Model: IGRF2010

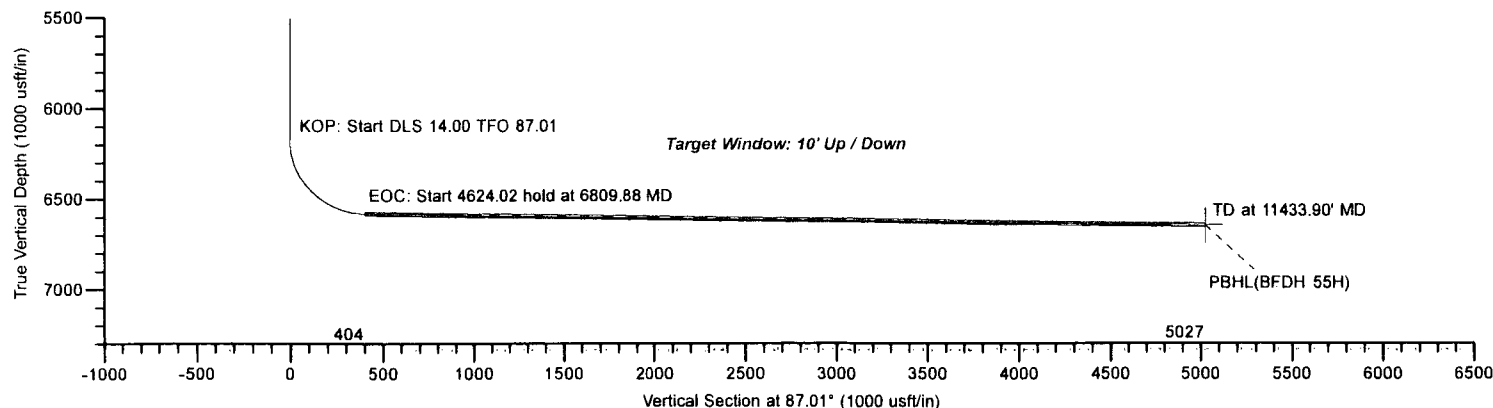


DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL(BFDH 55H)	0.00	0.00	0.00	550748.81	591992.36 32° 30' 50.260 N	104° 10' 8.404 W	
PBHL(BFDH 55H)	6647.00	262.13	5020.22	551010.94	597012.58 32° 30' 52.773 N	104° 9' 9.768 W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	6172.78	0.00	0.00	6172.78	0.00	0.00	0.00	0.00	0.00	
3	6809.88	89.19	87.01	6582.00	21.04	402.95	14.00	87.01	403.50	
4	11433.90	89.19	87.01	6647.00	262.13	5020.22	0.00	0.00	5027.06	PBHL(BFDH 55H)



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LEAM DRILLING SYSTEMS LLC
 2010 East Davis, Conroe, Texas 77301
 Phone: 936/756-7577, Fax 936/756-7595

Plan: Plan #1 (55H/OH)
 Burton Flat Deep Unit
 Created By: David Vogler Date: 11:47, April 12 2013
 Date: _____
 Approved: _____ Date: _____

DEVON ENERGY

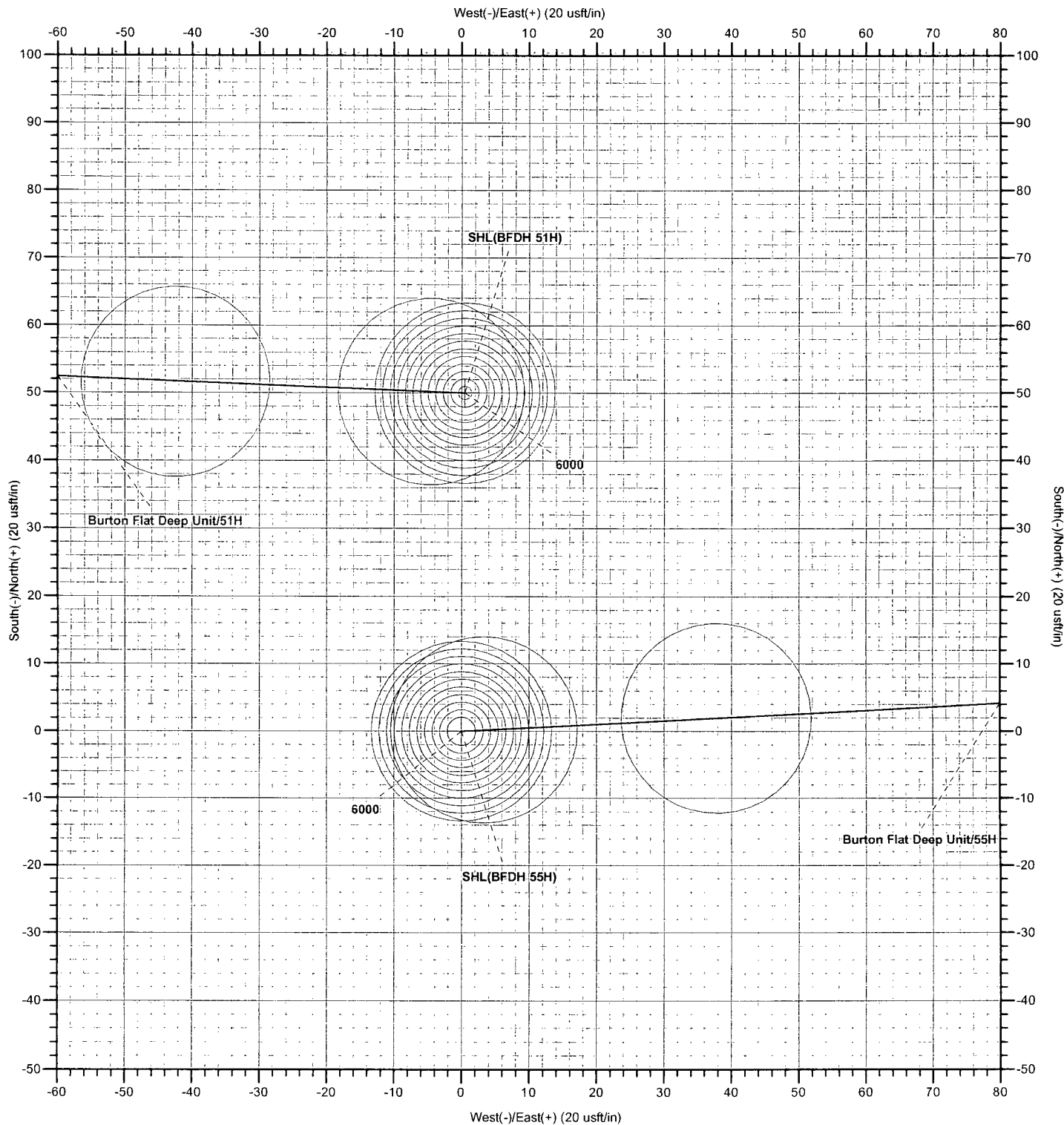
Project: Eddy County, NM (NAD-83)
Site: Burton Flat Deep Unit
Well: 55H
Wellbore: OH
Design: Plan #1



Azimuths to Grid North
True North: -0.09°
Magnetic North: 7.57°

Magnetic Field
Strength: 48543.9nT
Dip Angle: 60.31°
Date: 04/12/2013
Model: IGRF2010

devon



LEAM DRILLING SYSTEMS LLC
2010 East Davis, Conroe, Texas 77301
Phone: 936/756-7577, Fax 936/756-7595

Plan: Plan #1 (55H/OH)
Burton Flat Deep Unit
Created By: Tyler Carlson Date: 11:50, April 12 2013
Date: _____
Approved: _____ Date: _____

LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 55H
Project:	Eddy County NM (NAD-83)	TVD Reference:	GE 3204 + KB 25' @ 3229.00usft (Cactus 126)
Reference Site:	Burton Flat Deep Unit	MD Reference:	GE 3204 + KB 25' @ 3229.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	55H	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:	Reference Datum

Reference	Plan #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 100.00usft	Error Model:	ISCWSA
Depth Range:	0.00 to 11,433.90usft	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 2,000,000.00 usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	04/12/13		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	11,433.90	Plan #1 (OH)	LEAM 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						
Burton Flat Deep Unit						
51H - OH - Plan #2	6,129.77	6,127.77	50.00	22.73	1.834	CC
51H - OH - Plan #2	6,172.78	6,170.57	50.07	22.61	1.824	ES
51H - OH - Plan #2	6,175.00	6,172.76	50.08	22.62	1.823	SF

Offset Design Burton Flat Deep Unit - 51H - OH - Plan #2											Offset Site Error: 0.00 usf		
Survey Program: 0-LEAM MWD											Offset Well Error: 0.00 usf		
Reference		Offset		Semi Major Axis			Distance				Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre N-S (usft)	Offset Wellbore Centre E-W (usft)	Between Centres (usft)	Between Ellipses (usft)		Minimum Separation (usft)	Separation Factor
0.00	0.00	0.00	2.00	0.00	0.00	0.56	50.00	0.49	50.04				
100.00	100.00	98.00	100.00	0.08	0.08	0.56	50.00	0.49	50.00	49.84	0.17	299.615	
200.00	200.00	198.00	200.00	0.31	0.30	0.56	50.00	0.49	50.00	49.39	0.61	81.489	
300.00	300.00	298.00	300.00	0.53	0.53	0.56	50.00	0.49	50.00	48.94	1.06	47.033	
400.00	400.00	398.00	400.00	0.76	0.75	0.56	50.00	0.49	50.00	48.49	1.51	33.056	
500.00	500.00	498.00	500.00	0.98	0.98	0.56	50.00	0.49	50.00	48.04	1.96	25.483	
600.00	600.00	598.00	600.00	1.21	1.20	0.56	50.00	0.49	50.00	47.59	2.41	20.733	
700.00	700.00	698.00	700.00	1.43	1.43	0.56	50.00	0.49	50.00	47.14	2.86	17.476	
800.00	800.00	798.00	800.00	1.66	1.65	0.56	50.00	0.49	50.00	46.69	3.31	15.103	
900.00	900.00	898.00	900.00	1.88	1.88	0.56	50.00	0.49	50.00	46.24	3.76	13.297	
1,000.00	1,000.00	998.00	1,000.00	2.11	2.10	0.56	50.00	0.49	50.00	45.79	4.21	11.877	
1,100.00	1,100.00	1,098.00	1,100.00	2.33	2.33	0.56	50.00	0.49	50.00	45.34	4.66	10.732	
1,200.00	1,200.00	1,198.00	1,200.00	2.56	2.55	0.56	50.00	0.49	50.00	44.89	5.11	9.787	
1,300.00	1,300.00	1,298.00	1,300.00	2.78	2.78	0.56	50.00	0.49	50.00	44.44	5.56	8.996	
1,400.00	1,400.00	1,398.00	1,400.00	3.01	3.00	0.56	50.00	0.49	50.00	43.99	6.01	8.323	
1,500.00	1,500.00	1,498.00	1,500.00	3.23	3.23	0.56	50.00	0.49	50.00	43.54	6.46	7.743	
1,600.00	1,600.00	1,598.00	1,600.00	3.46	3.45	0.56	50.00	0.49	50.00	43.10	6.91	7.239	
1,700.00	1,700.00	1,698.00	1,700.00	3.68	3.68	0.56	50.00	0.49	50.00	42.65	7.36	6.797	
1,800.00	1,800.00	1,798.00	1,800.00	3.91	3.90	0.56	50.00	0.49	50.00	42.20	7.81	6.406	
1,900.00	1,900.00	1,898.00	1,900.00	4.13	4.13	0.56	50.00	0.49	50.00	41.75	8.26	6.057	
2,000.00	2,000.00	1,998.00	2,000.00	4.35	4.35	0.56	50.00	0.49	50.00	41.30	8.71	5.744	
2,100.00	2,100.00	2,098.00	2,100.00	4.58	4.58	0.56	50.00	0.49	50.00	40.85	9.15	5.462	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well: 55H
Project:	Eddy County, NM (NAD: 83)	TVD Reference:	GE 3204 + KB 25' @ 3229.00usft (Cactus 126)
Reference Site:	Burton Flat Deep Unit	MD Reference:	GE 3204 + KB 25' @ 3229.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	55H	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:	Reference Datum

Offset Design: Burton Flat Deep Unit - 55H - OH - Plan #2												Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Highside		Offset Wellbore Centre		Distance		Minimum	Separation	Warning	
Measured Vertical Depth (usft)	Measured Vertical Depth (usft)	Reference (usft)	Offset (usft)	Reference (usft)	Offset (usft)	+N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)	Factor		
2,200.00	2,200.00	2,198.00	2,200.00	4.80	4.80	50.00	0.49	50.00	40.40	9.80	5.206		
2,300.00	2,300.00	2,298.00	2,300.00	5.03	5.02	50.00	0.49	50.00	39.95	10.05	4.973		
2,400.00	2,400.00	2,398.00	2,400.00	5.25	5.25	50.00	0.49	50.00	39.50	10.50	4.761		
2,500.00	2,500.00	2,498.00	2,500.00	5.48	5.47	50.00	0.49	50.00	39.05	10.95	4.565		
2,600.00	2,600.00	2,598.00	2,600.00	5.70	5.70	50.00	0.49	50.00	38.60	11.40	4.385		
2,700.00	2,700.00	2,698.00	2,700.00	5.93	5.92	50.00	0.49	50.00	38.15	11.85	4.219		
2,800.00	2,800.00	2,798.00	2,800.00	6.15	6.15	50.00	0.49	50.00	37.70	12.30	4.065		
2,900.00	2,900.00	2,898.00	2,900.00	6.38	6.37	50.00	0.49	50.00	37.25	12.75	3.921		
3,000.00	3,000.00	2,998.00	3,000.00	6.60	6.60	50.00	0.49	50.00	36.80	13.20	3.788		
3,100.00	3,100.00	3,098.00	3,100.00	6.83	6.82	50.00	0.49	50.00	36.35	13.65	3.663		
3,200.00	3,200.00	3,198.00	3,200.00	7.05	7.05	50.00	0.49	50.00	35.90	14.10	3.546		
3,300.00	3,300.00	3,298.00	3,300.00	7.28	7.27	50.00	0.49	50.00	35.45	14.55	3.437		
3,400.00	3,400.00	3,398.00	3,400.00	7.50	7.50	50.00	0.49	50.00	35.00	15.00	3.334		
3,500.00	3,500.00	3,498.00	3,500.00	7.73	7.72	50.00	0.49	50.00	34.55	15.45	3.237		
3,600.00	3,600.00	3,598.00	3,600.00	7.95	7.95	50.00	0.49	50.00	34.10	15.90	3.145		
3,700.00	3,700.00	3,698.00	3,700.00	8.18	8.17	50.00	0.49	50.00	33.66	16.35	3.059		
3,800.00	3,800.00	3,798.00	3,800.00	8.40	8.40	50.00	0.49	50.00	33.21	16.80	2.977		
3,900.00	3,900.00	3,898.00	3,900.00	8.63	8.62	50.00	0.49	50.00	32.76	17.25	2.899		
4,000.00	4,000.00	3,998.00	4,000.00	8.85	8.85	50.00	0.49	50.00	32.31	17.70	2.826		
4,100.00	4,100.00	4,098.00	4,100.00	9.07	9.07	50.00	0.49	50.00	31.86	18.15	2.756		
4,200.00	4,200.00	4,198.00	4,200.00	9.30	9.30	50.00	0.49	50.00	31.41	18.59	2.689		
4,300.00	4,300.00	4,298.00	4,300.00	9.52	9.52	50.00	0.49	50.00	30.96	19.04	2.626		
4,400.00	4,400.00	4,398.00	4,400.00	9.75	9.74	50.00	0.49	50.00	30.51	19.49	2.565		
4,500.00	4,500.00	4,498.00	4,500.00	9.97	9.97	50.00	0.49	50.00	30.06	19.94	2.507		
4,600.00	4,600.00	4,598.00	4,600.00	10.20	10.19	50.00	0.49	50.00	29.61	20.39	2.452		
4,700.00	4,700.00	4,698.00	4,700.00	10.42	10.42	50.00	0.49	50.00	29.16	20.84	2.399		
4,800.00	4,800.00	4,798.00	4,800.00	10.65	10.64	50.00	0.49	50.00	28.71	21.29	2.348		
4,900.00	4,900.00	4,898.00	4,900.00	10.87	10.87	50.00	0.49	50.00	28.26	21.74	2.300		
5,000.00	5,000.00	4,998.00	5,000.00	11.10	11.09	50.00	0.49	50.00	27.81	22.19	2.253		
5,100.00	5,100.00	5,098.00	5,100.00	11.32	11.32	50.00	0.49	50.00	27.36	22.64	2.209		
5,200.00	5,200.00	5,198.00	5,200.00	11.55	11.54	50.00	0.49	50.00	26.91	23.09	2.166		
5,300.00	5,300.00	5,298.00	5,300.00	11.77	11.77	50.00	0.49	50.00	26.46	23.54	2.124		
5,400.00	5,400.00	5,398.00	5,400.00	12.00	11.99	50.00	0.49	50.00	26.01	23.99	2.084		
5,500.00	5,500.00	5,498.00	5,500.00	12.22	12.22	50.00	0.49	50.00	25.56	24.44	2.046		
5,600.00	5,600.00	5,598.00	5,600.00	12.45	12.44	50.00	0.49	50.00	25.11	24.89	2.009		
5,700.00	5,700.00	5,698.00	5,700.00	12.67	12.67	50.00	0.49	50.00	24.66	25.34	1.973		
5,800.00	5,800.00	5,798.00	5,800.00	12.90	12.89	50.00	0.49	50.00	24.21	25.79	1.939		
5,900.00	5,900.00	5,898.00	5,900.00	13.12	13.12	50.00	0.49	50.00	23.77	26.24	1.906		
6,000.00	6,000.00	5,998.00	6,000.00	13.35	13.34	50.00	0.49	50.00	23.32	26.69	1.874		
6,100.00	6,100.00	6,098.00	6,100.00	13.57	13.57	50.00	0.49	50.00	22.87	27.14	1.843		
6,129.77	6,129.77	6,127.77	6,129.77	13.64	13.63	50.00	0.49	50.00	22.73	27.27	1.834 CC		
6,172.78	6,172.78	6,170.57	6,172.53	13.73	13.72	50.06	-0.98	50.07	22.61	27.46	1.824 ES		
6,175.00	6,175.00	6,172.76	6,174.71	13.74	13.73	50.07	-1.17	50.08	22.62	27.47	1.823 SF		
6,200.00	6,199.98	6,197.15	6,198.93	13.79	13.78	50.18	-4.09	50.39	22.83	27.56	1.828		
6,225.00	6,224.86	6,220.61	6,222.01	13.84	13.82	50.35	-8.25	51.57	23.91	27.66	1.865		
6,250.00	6,249.54	6,242.71	6,243.50	13.89	13.87	50.55	-13.37	54.58	26.87	27.72	1.969		
6,275.00	6,273.94	6,263.12	6,263.08	13.94	13.91	50.78	-19.13	60.35	32.65	27.70	2.179		
6,300.00	6,297.96	6,281.64	6,280.57	14.00	13.96	51.03	-25.18	69.33	41.76	27.57	2.515		
6,325.00	6,321.51	6,298.14	6,295.92	14.05	13.99	51.27	-31.24	81.48	54.15	27.33	2.981		
6,350.00	6,344.51	6,312.60	6,309.16	14.11	14.03	51.50	-37.06	96.41	69.41	27.01	3.570		
6,375.00	6,366.87	6,325.00	6,320.34	14.17	14.06	51.71	-42.41	113.66	87.03	26.62	4.269		

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well: 55H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3204 - KB 25' @ 3229.00usft (Cactus 126)
Reference Site:	Burton Flat Deep Unit	MD Reference:	GE 3204 - KB 25' @ 3229.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Gnd
Reference Well:	55H	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:	Reference Datum

Offset Design: Burton Flat Deep Unit - 55H - OH - Plan #2													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD													Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Offset		Highside	Offset Wellbore Centre		Distance	Between	Minimum	Separation	Warning	
Measured	Vertical	Measured	Vertical	Reference	Offset	Toolface	+N-S	+E-W	Centres	Ellipses	Separation	Factor		
Depth	Depth	Depth	Depth	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
(usft)	(usft)	(usft)	(usft)											
6,400.00	6,388.51	6,335.65	6,329.81	14.24	14.08	-137.43	51.91	-47.28	132.77	106.55	26.22	5.064		
6,425.00	6,409.33	6,344.43	6,337.52	14.31	14.11	-137.49	52.08	-51.48	153.37	127.52	25.85	5.933		
6,450.00	6,429.28	6,350.00	6,342.36	14.39	14.12	-135.55	52.19	-54.23	175.15	149.50	25.65	6.827		
6,475.00	6,448.27	6,357.18	6,348.54	14.48	14.14	-133.48	52.33	-57.87	197.83	172.30	25.53	7.749		
6,500.00	6,466.23	6,361.41	6,352.16	14.58	14.15	-128.76	52.42	-60.06	221.22	195.40	25.82	8.567		
6,525.00	6,483.10	6,364.39	6,354.70	14.70	14.16	-121.32	52.48	-61.63	245.12	218.49	26.62	9.206		
6,550.00	6,498.81	6,366.25	6,356.27	14.82	14.17	-110.14	52.52	-62.62	269.37	241.45	27.92	9.648		
6,575.00	6,513.30	6,367.09	6,356.98	14.97	14.17	-94.54	52.54	-63.07	293.85	264.78	29.07	10.107		
6,600.00	6,526.53	6,367.01	6,356.91	15.13	14.17	-75.87	52.54	-63.02	318.42	289.73	28.69	11.098		
6,625.00	6,538.43	6,366.10	6,356.15	15.31	14.17	-58.02	52.52	-62.54	342.99	316.78	26.21	13.087		
6,650.00	6,548.97	6,364.45	6,354.75	15.52	14.16	-43.97	52.48	-61.67	367.47	344.69	22.78	16.130		
6,675.00	6,558.11	6,362.14	6,352.78	15.74	14.15	-33.94	52.43	-60.44	391.77	372.23	19.54	20.051		
6,700.00	6,565.81	6,359.22	6,350.29	15.98	14.15	-26.92	52.37	-58.92	415.81	398.98	16.82	24.714		
6,725.00	6,572.04	6,350.00	6,342.36	16.24	14.12	-21.07	52.19	-54.23	439.61	425.28	14.33	30.681		
6,750.00	6,576.78	6,350.00	6,342.36	16.52	14.12	-18.08	52.19	-54.23	462.88	450.09	12.79	36.177		
6,775.00	6,580.02	6,350.00	6,342.36	16.81	14.12	-15.75	52.19	-54.23	485.80	474.23	11.57	41.975		
6,800.00	6,581.74	6,342.58	6,335.90	17.12	14.10	-13.42	52.04	-50.58	508.20	497.68	10.52	48.296		
6,809.88	6,582.00	6,340.57	6,334.14	17.25	14.10	-12.72	52.00	-49.62	516.92	506.68	10.25	50.448		
6,900.00	6,583.26	6,325.00	6,320.34	18.52	14.06	-11.91	51.71	-42.41	597.00	586.54	10.46	57.095		
7,000.00	6,584.67	6,300.00	6,297.63	20.12	14.00	-10.76	51.30	-31.96	687.84	677.16	10.68	64.411		
7,100.00	6,586.07	6,300.00	6,297.63	21.89	14.00	-10.76	51.30	-31.96	780.06	768.73	11.33	68.863		
7,200.00	6,587.48	6,275.00	6,274.33	23.80	13.94	-9.79	50.94	-22.92	873.53	861.85	11.69	74.734		
7,300.00	6,588.89	6,275.00	6,274.33	25.80	13.94	-9.79	50.94	-22.92	967.83	955.43	12.40	78.070		
7,400.00	6,590.29	6,263.76	6,263.69	27.88	13.92	-9.40	50.79	-19.32	1,062.95	1,049.96	12.99	81.823		
7,500.00	6,591.70	6,250.00	6,250.53	30.03	13.89	-8.96	50.63	-15.31	1,158.76	1,145.18	13.58	85.343		
7,600.00	6,593.10	6,250.00	6,250.53	32.22	13.89	-8.96	50.63	-15.31	1,254.95	1,240.62	14.33	87.587		
7,700.00	6,594.51	6,250.00	6,250.53	34.46	13.89	-8.96	50.63	-15.31	1,351.69	1,336.61	15.09	89.580		
7,800.00	6,595.91	6,237.92	6,238.87	36.73	13.86	-8.61	50.51	-12.16	1,448.65	1,432.93	15.72	92.162		
7,900.00	6,597.32	6,225.00	6,226.30	39.03	13.83	-8.26	50.39	-9.17	1,546.08	1,529.73	16.35	94.561		
8,000.00	6,598.73	6,225.00	6,226.30	41.35	13.83	-8.26	50.39	-9.17	1,643.59	1,626.47	17.12	95.998		
8,100.00	6,600.13	6,225.00	6,226.30	43.69	13.83	-8.26	50.39	-9.17	1,741.38	1,723.49	17.90	97.301		
8,200.00	6,601.54	6,225.00	6,226.30	46.04	13.83	-8.26	50.39	-9.17	1,839.41	1,820.74	18.68	98.488		
8,300.00	6,602.94	6,225.00	6,226.30	48.41	13.83	-8.26	50.39	-9.17	1,937.64	1,918.18	19.46	99.573		
8,400.00	6,604.35	6,214.55	6,216.07	50.79	13.81	-8.00	50.30	-7.05	2,035.89	2,015.77	20.12	101.182		
8,500.00	6,605.76	6,211.71	6,213.28	53.18	13.81	-7.93	50.28	-6.51	2,134.34	2,113.47	20.87	102.258		
8,600.00	6,607.16	6,200.00	6,201.74	55.58	13.78	-7.66	50.20	-4.52	2,233.03	2,211.51	21.53	103.738		
8,700.00	6,608.57	6,200.00	6,201.74	57.99	13.78	-7.66	50.20	-4.52	2,331.65	2,309.34	22.31	104.521		
8,800.00	6,609.97	6,200.00	6,201.74	60.41	13.78	-7.66	50.20	-4.52	2,430.38	2,407.29	23.09	105.248		
8,900.00	6,611.38	6,200.00	6,201.74	62.83	13.78	-7.66	50.20	-4.52	2,529.21	2,505.34	23.88	105.925		
9,000.00	6,612.78	6,200.00	6,201.74	65.26	13.78	-7.66	50.20	-4.52	2,628.13	2,603.47	24.66	106.558		
9,100.00	6,614.19	6,200.00	6,201.74	67.69	13.78	-7.66	50.20	-4.52	2,727.13	2,701.88	25.45	107.150		
9,200.00	6,615.60	6,200.00	6,201.74	70.12	13.78	-7.66	50.20	-4.52	2,826.20	2,799.96	26.24	107.705		
9,300.00	6,617.00	6,200.00	6,201.74	72.56	13.78	-7.66	50.20	-4.52	2,925.33	2,898.30	27.03	108.227		
9,400.00	6,618.41	6,200.00	6,201.74	75.01	13.78	-7.66	50.20	-4.52	3,024.52	2,996.70	27.82	108.718		
9,500.00	6,619.81	6,200.00	6,201.74	77.45	13.78	-7.66	50.20	-4.52	3,123.77	3,095.15	28.61	109.181		
9,600.00	6,621.22	6,200.00	6,201.74	79.90	13.78	-7.66	50.20	-4.52	3,223.05	3,193.65	29.40	109.618		
9,700.00	6,622.62	6,200.00	6,201.74	82.36	13.78	-7.66	50.20	-4.52	3,322.38	3,292.19	30.19	110.032		
9,800.00	6,624.03	6,188.07	6,189.93	84.81	13.76	-7.40	50.13	-2.83	3,421.56	3,390.74	30.82	111.031		
9,900.00	6,625.44	6,188.89	6,188.76	87.27	13.76	-7.38	50.13	-2.69	3,520.93	3,489.34	31.59	111.460		
10,000.00	6,626.84	6,175.00	6,176.94	89.73	13.73	-7.15	50.07	-1.38	3,620.48	3,588.26	32.22	112.373		

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 55H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3204 + KB 25 @ 3229.00usft (Cactus 126)
Reference Site:	Burton Flat Deep Unit	MD Reference:	GE 3204 + KB 25 @ 3229.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Gnd
Reference Well:	55H	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:	Reference Datum

Offset Design Burton Flat Deep Unit - 51H - OH - Plan #2												Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD												Offset Well Error:	0.00 usft
Reference Measured Depth (usft)	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre N-S (usft)	Offset Wellbore Centre E-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,100.00	6,628.25	6,175.00	6,176.94	92.19	13.73	-7.15	50.07	-1.38	3,719.88	3,686.87	33.00	112.708	
10,200.00	6,629.65	6,175.00	6,176.94	94.65	13.73	-7.15	50.07	-1.38	3,819.31	3,785.52	33.79	113.028	
10,300.00	6,631.06	6,175.00	6,176.94	97.12	13.73	-7.15	50.07	-1.38	3,918.76	3,884.19	34.58	113.333	
10,400.00	6,632.47	6,175.00	6,176.94	99.58	13.73	-7.15	50.07	-1.38	4,018.25	3,982.88	35.36	113.624	
10,500.00	6,633.87	6,175.00	6,176.94	102.05	13.73	-7.15	50.07	-1.38	4,117.76	4,081.61	36.15	113.902	
10,600.00	6,635.28	6,175.00	6,176.94	104.52	13.73	-7.15	50.07	-1.38	4,217.29	4,180.35	36.94	114.168	
10,700.00	6,636.68	6,175.00	6,176.94	106.99	13.73	-7.15	50.07	-1.38	4,316.84	4,279.12	37.73	114.423	
10,800.00	6,638.09	6,175.00	6,176.94	109.46	13.73	-7.15	50.07	-1.38	4,416.42	4,377.90	38.52	114.667	
10,900.00	6,639.49	6,175.00	6,176.94	111.93	13.73	-7.15	50.07	-1.38	4,516.01	4,476.71	39.30	114.902	
11,000.00	6,640.90	6,175.00	6,176.94	114.40	13.73	-7.15	50.07	-1.38	4,615.62	4,575.53	40.09	115.127	
11,100.00	6,642.31	6,175.00	6,176.94	116.88	13.73	-7.15	50.07	-1.38	4,715.25	4,674.37	40.88	115.343	
11,200.00	6,643.71	6,175.00	6,176.94	119.35	13.73	-7.15	50.07	-1.38	4,814.89	4,773.22	41.67	115.550	
11,300.00	6,645.12	6,175.00	6,176.94	121.83	13.73	-7.15	50.07	-1.38	4,914.55	4,872.09	42.46	115.750	
11,400.00	6,646.52	6,175.00	6,176.94	124.30	13.73	-7.15	50.07	-1.38	5,014.22	4,970.97	43.25	115.943	
11,433.90	6,647.00	6,175.00	6,176.94	125.14	13.73	-7.15	50.07	-1.38	5,048.01	5,004.50	43.51	116.007	

MD	INC	AZI	TVD	NS	EW	DLS	BUILD	TURN	VSECT
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00
1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	0.00	0.00
1200.00	0.00	0.00	1200.00	0.00	0.00	0.00	0.00	0.00	0.00
1300.00	0.00	0.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00
1400.00	0.00	0.00	1400.00	0.00	0.00	0.00	0.00	0.00	0.00
1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	0.00	0.00
1600.00	0.00	0.00	1600.00	0.00	0.00	0.00	0.00	0.00	0.00
1700.00	0.00	0.00	1700.00	0.00	0.00	0.00	0.00	0.00	0.00
1800.00	0.00	0.00	1800.00	0.00	0.00	0.00	0.00	0.00	0.00
1900.00	0.00	0.00	1900.00	0.00	0.00	0.00	0.00	0.00	0.00
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00
2100.00	0.00	0.00	2100.00	0.00	0.00	0.00	0.00	0.00	0.00
2200.00	0.00	0.00	2200.00	0.00	0.00	0.00	0.00	0.00	0.00
2300.00	0.00	0.00	2300.00	0.00	0.00	0.00	0.00	0.00	0.00
2400.00	0.00	0.00	2400.00	0.00	0.00	0.00	0.00	0.00	0.00
2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	0.00	0.00	0.00
2600.00	0.00	0.00	2600.00	0.00	0.00	0.00	0.00	0.00	0.00
2700.00	0.00	0.00	2700.00	0.00	0.00	0.00	0.00	0.00	0.00
2800.00	0.00	0.00	2800.00	0.00	0.00	0.00	0.00	0.00	0.00
2900.00	0.00	0.00	2900.00	0.00	0.00	0.00	0.00	0.00	0.00
3000.00	0.00	0.00	3000.00	0.00	0.00	0.00	0.00	0.00	0.00
3100.00	0.00	0.00	3100.00	0.00	0.00	0.00	0.00	0.00	0.00
3200.00	0.00	0.00	3200.00	0.00	0.00	0.00	0.00	0.00	0.00
3300.00	0.00	0.00	3300.00	0.00	0.00	0.00	0.00	0.00	0.00
3400.00	0.00	0.00	3400.00	0.00	0.00	0.00	0.00	0.00	0.00
3500.00	0.00	0.00	3500.00	0.00	0.00	0.00	0.00	0.00	0.00
3600.00	0.00	0.00	3600.00	0.00	0.00	0.00	0.00	0.00	0.00
3700.00	0.00	0.00	3700.00	0.00	0.00	0.00	0.00	0.00	0.00
3800.00	0.00	0.00	3800.00	0.00	0.00	0.00	0.00	0.00	0.00
3900.00	0.00	0.00	3900.00	0.00	0.00	0.00	0.00	0.00	0.00
4000.00	0.00	0.00	4000.00	0.00	0.00	0.00	0.00	0.00	0.00
4100.00	0.00	0.00	4100.00	0.00	0.00	0.00	0.00	0.00	0.00
4200.00	0.00	0.00	4200.00	0.00	0.00	0.00	0.00	0.00	0.00
4300.00	0.00	0.00	4300.00	0.00	0.00	0.00	0.00	0.00	0.00
4400.00	0.00	0.00	4400.00	0.00	0.00	0.00	0.00	0.00	0.00
4500.00	0.00	0.00	4500.00	0.00	0.00	0.00	0.00	0.00	0.00

4600.00	0.00	0.00	4600.00	0.00	0.00	0.00	0.00	0.00	0.00
4700.00	0.00	0.00	4700.00	0.00	0.00	0.00	0.00	0.00	0.00
4800.00	0.00	0.00	4800.00	0.00	0.00	0.00	0.00	0.00	0.00
4900.00	0.00	0.00	4900.00	0.00	0.00	0.00	0.00	0.00	0.00
5000.00	0.00	0.00	5000.00	0.00	0.00	0.00	0.00	0.00	0.00
5100.00	0.00	0.00	5100.00	0.00	0.00	0.00	0.00	0.00	0.00
5200.00	0.00	0.00	5200.00	0.00	0.00	0.00	0.00	0.00	0.00
5300.00	0.00	0.00	5300.00	0.00	0.00	0.00	0.00	0.00	0.00
5400.00	0.00	0.00	5400.00	0.00	0.00	0.00	0.00	0.00	0.00
5500.00	0.00	0.00	5500.00	0.00	0.00	0.00	0.00	0.00	0.00
5600.00	0.00	0.00	5600.00	0.00	0.00	0.00	0.00	0.00	0.00
5700.00	0.00	0.00	5700.00	0.00	0.00	0.00	0.00	0.00	0.00
5800.00	0.00	0.00	5800.00	0.00	0.00	0.00	0.00	0.00	0.00
5900.00	0.00	0.00	5900.00	0.00	0.00	0.00	0.00	0.00	0.00
6000.00	0.00	0.00	6000.00	0.00	0.00	0.00	0.00	0.00	0.00
6100.00	0.00	0.00	6100.00	0.00	0.00	0.00	0.00	0.00	0.00
6172.78	0.00	0.00	6172.78	0.00	0.00	0.00	0.00	0.00	0.00
6175.00	0.31	87.01	6175.00	0.00	0.01	14.00	14.00	0.00	0.01
6200.00	3.81	87.01	6199.98	0.05	0.90	14.00	14.00	0.00	0.90
6225.00	7.31	87.01	6224.86	0.17	3.32	14.00	14.00	0.00	3.33
6250.00	10.81	87.01	6249.54	0.38	7.25	14.00	14.00	0.00	7.26
6275.00	14.31	87.01	6273.94	0.66	12.68	14.00	14.00	0.00	12.70
6300.00	17.81	87.01	6297.96	1.02	19.59	14.00	14.00	0.00	19.61
6325.00	21.31	87.01	6321.51	1.46	27.95	14.00	14.00	0.00	27.98
6350.00	24.81	87.01	6344.51	1.97	37.72	14.00	14.00	0.00	37.77
6375.00	28.31	87.01	6366.87	2.55	48.89	14.00	14.00	0.00	48.95
6400.00	31.81	87.01	6388.51	3.21	61.39	14.00	14.00	0.00	61.47
6425.00	35.31	87.01	6409.33	3.93	75.19	14.00	14.00	0.00	75.29
6450.00	38.81	87.01	6429.28	4.71	90.23	14.00	14.00	0.00	90.36
6475.00	42.31	87.01	6448.27	5.56	106.46	14.00	14.00	0.00	106.61
6500.00	45.81	87.01	6466.23	6.47	123.82	14.00	14.00	0.00	123.99
6525.00	49.31	87.01	6483.10	7.43	142.25	14.00	14.00	0.00	142.44
6550.00	52.81	87.01	6498.81	8.44	161.66	14.00	14.00	0.00	161.88
6575.00	56.31	87.01	6513.30	9.50	182.00	14.00	14.00	0.00	182.25
6600.00	59.81	87.01	6526.53	10.61	203.18	14.00	14.00	0.00	203.46
6625.00	63.31	87.01	6538.43	11.76	225.13	14.00	14.00	0.00	225.44
6650.00	66.81	87.01	6548.97	12.94	247.77	14.00	14.00	0.00	248.10
6675.00	70.31	87.01	6558.11	14.15	271.00	14.00	14.00	0.00	271.37
6700.00	73.81	87.01	6565.81	15.39	294.75	14.00	14.00	0.00	295.15
6725.00	77.31	87.01	6572.04	16.65	318.92	14.00	14.00	0.00	319.36
6750.00	80.81	87.01	6576.78	17.93	343.43	14.00	14.00	0.00	343.90
6775.00	84.31	87.01	6580.02	19.22	368.18	14.00	14.00	0.00	368.69
6800.00	87.81	87.01	6581.74	20.52	393.09	14.00	14.00	0.00	393.62
6809.88	89.19	87.01	6582.00	21.04	402.95	14.00	14.00	0.00	403.50
6900.00	89.19	87.01	6583.26	25.74	492.94	0.00	0.00	0.00	493.61
7000.00	89.19	87.01	6584.67	30.95	592.79	0.00	0.00	0.00	593.60
7100.00	89.19	87.01	6586.07	36.17	692.65	0.00	0.00	0.00	693.59

7200.00	89.19	87.01	6587.48	41.38	792.50	0.00	0.00	0.00	793.58
7300.00	89.19	87.01	6588.89	46.59	892.35	0.00	0.00	0.00	893.57
7400.00	89.19	87.01	6590.29	51.81	992.21	0.00	0.00	0.00	993.56
7500.00	89.19	87.01	6591.70	57.02	1092.06	0.00	0.00	0.00	1093.55
7600.00	89.19	87.01	6593.10	62.23	1191.92	0.00	0.00	0.00	1193.54
7700.00	89.19	87.01	6594.51	67.45	1291.77	0.00	0.00	0.00	1293.53
7800.00	89.19	87.01	6595.91	72.66	1391.63	0.00	0.00	0.00	1393.52
7900.00	89.19	87.01	6597.32	77.88	1491.48	0.00	0.00	0.00	1493.51
8000.00	89.19	87.01	6598.73	83.09	1591.33	0.00	0.00	0.00	1593.50
8100.00	89.19	87.01	6600.13	88.30	1691.19	0.00	0.00	0.00	1693.49
8200.00	89.19	87.01	6601.54	93.52	1791.04	0.00	0.00	0.00	1793.48
8300.00	89.19	87.01	6602.94	98.73	1890.90	0.00	0.00	0.00	1893.47
8400.00	89.19	87.01	6604.35	103.95	1990.75	0.00	0.00	0.00	1993.46
8500.00	89.19	87.01	6605.75	109.16	2090.60	0.00	0.00	0.00	2093.45
8600.00	89.19	87.01	6607.16	114.37	2190.46	0.00	0.00	0.00	2193.44
8700.00	89.19	87.01	6608.57	119.59	2290.31	0.00	0.00	0.00	2293.43
8800.00	89.19	87.01	6609.97	124.80	2390.17	0.00	0.00	0.00	2393.42
8900.00	89.19	87.01	6611.38	130.01	2490.02	0.00	0.00	0.00	2493.41
9000.00	89.19	87.01	6612.78	135.23	2589.87	0.00	0.00	0.00	2593.40
9100.00	89.19	87.01	6614.19	140.44	2689.73	0.00	0.00	0.00	2693.39
9200.00	89.19	87.01	6615.60	145.66	2789.58	0.00	0.00	0.00	2793.38
9300.00	89.19	87.01	6617.00	150.87	2889.44	0.00	0.00	0.00	2893.37
9400.00	89.19	87.01	6618.41	156.08	2989.29	0.00	0.00	0.00	2993.36
9500.00	89.19	87.01	6619.81	161.30	3089.14	0.00	0.00	0.00	3093.35
9600.00	89.19	87.01	6621.22	166.51	3189.00	0.00	0.00	0.00	3193.34
9700.00	89.19	87.01	6622.62	171.72	3288.85	0.00	0.00	0.00	3293.33
9800.00	89.19	87.01	6624.03	176.94	3388.71	0.00	0.00	0.00	3393.32
9900.00	89.19	87.01	6625.44	182.15	3488.56	0.00	0.00	0.00	3493.31
10000.00	89.19	87.01	6626.84	187.37	3588.42	0.00	0.00	0.00	3593.30
10100.00	89.19	87.01	6628.25	192.58	3688.27	0.00	0.00	0.00	3693.29
10200.00	89.19	87.01	6629.65	197.79	3788.12	0.00	0.00	0.00	3793.28
10300.00	89.19	87.01	6631.06	203.01	3887.98	0.00	0.00	0.00	3893.27
10400.00	89.19	87.01	6632.47	208.22	3987.83	0.00	0.00	0.00	3993.26
10500.00	89.19	87.01	6633.87	213.44	4087.69	0.00	0.00	0.00	4093.25
10600.00	89.19	87.01	6635.28	218.65	4187.54	0.00	0.00	0.00	4193.24
10700.00	89.19	87.01	6636.68	223.86	4287.39	0.00	0.00	0.00	4293.23
10800.00	89.19	87.01	6638.09	229.08	4387.25	0.00	0.00	0.00	4393.22
10900.00	89.19	87.01	6639.49	234.29	4487.10	0.00	0.00	0.00	4493.21
11000.00	89.19	87.01	6640.90	239.50	4586.96	0.00	0.00	0.00	4593.20
11100.00	89.19	87.01	6642.31	244.72	4686.81	0.00	0.00	0.00	4693.19
11200.00	89.19	87.01	6643.71	249.93	4786.66	0.00	0.00	0.00	4793.18
11300.00	89.19	87.01	6645.12	255.15	4886.52	0.00	0.00	0.00	4893.17
11400.00	89.19	87.01	6646.52	260.36	4986.37	0.00	0.00	0.00	4993.17
11433.90	89.19	87.01	6647.00	262.13	5020.22	0.00	0.00	0.00	5027.06