

DEVON ENERGY

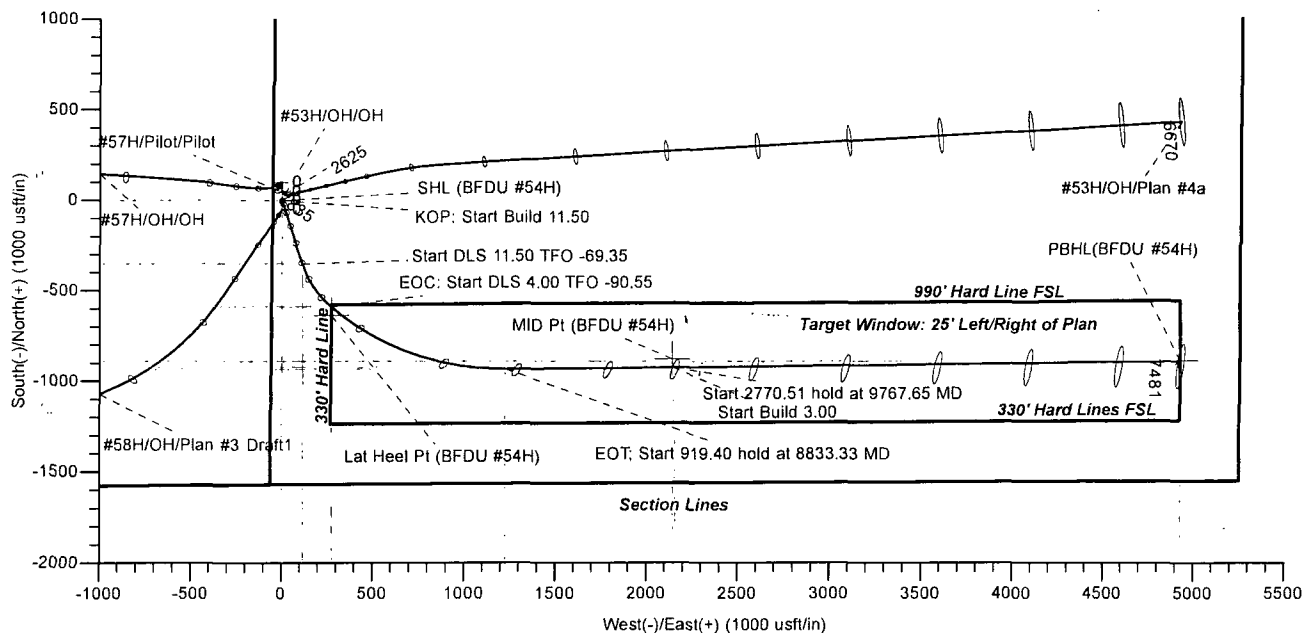
Project: Eddy County, NM (NAD-83)
Site: Burton Flat Deep Unit
Well: #54H
Wellbore: OH
Design: Plan #2

devon



Azimuths to Grid North
True North: -0.09°
Magnetic North: 7.63°

Magnetic Field
Strength: 48473.8nT
Dip Angle: 60.28°
Date: 09/27/2013
Model: BGGM2013



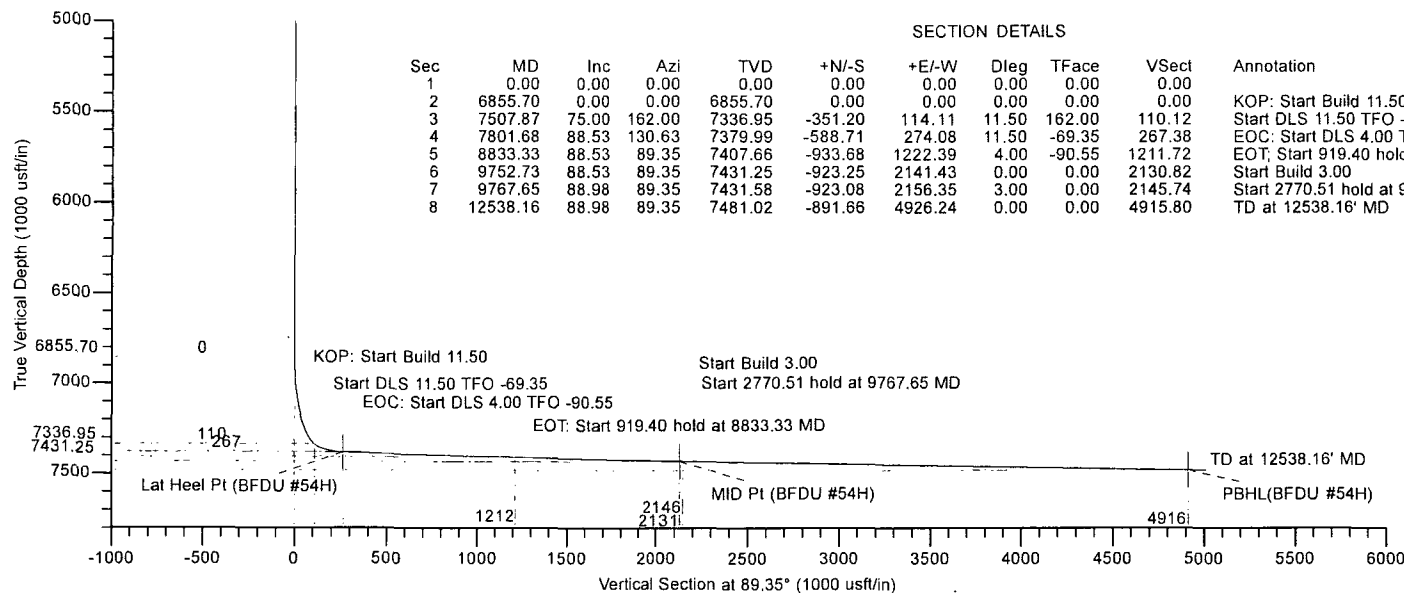
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL (BFDU #54H)	0.00	0.72	-0.27	547973.23	592065.49	32° 30' 22.793 N	104° 10' 7.600 W
Lat Heel Pt (BFDU #54H)	7380.00	-637.79	273.78	547334.72	592339.54	32° 30' 16.470 N	104° 10' 4.411 W
MID Pt (BFDU #54H)	7431.00	-877.09	2141.63	547095.42	594207.38	32° 30' 14.073 N	104° 9' 42.603 W
PBHL(BFDU #54H)	7481.00	-888.62	4926.25	547083.89	596992.01	32° 30' 13.913 N	104° 9' 10.086 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	KOP: Start Build 11.50
2	6855.70	0.00	0.00	6855.70	0.00	0.00	0.00	0.00	0.00	Start DLS 11.50 TFO -69.35
3	7507.87	75.00	162.00	7336.95	-351.20	114.11	11.50	162.00	110.12	EOC: Start DLS 4.00 TFO -90.55
4	7801.68	88.53	130.63	7379.99	-588.71	274.08	11.50	-69.35	267.38	EOT: Start 919.40 hold at 8833.33 MD
5	8833.33	88.53	89.35	7407.66	-933.68	1222.39	4.00	-90.55	1211.72	Start Build 3.00
6	9752.73	88.53	89.35	7431.25	-923.25	2141.43	0.00	0.00	2130.82	Start 2770.51 hold at 9767.65 MD
7	9767.65	88.98	89.35	7431.58	-923.08	2156.35	3.00	0.00	2145.74	TD at 12538.16' MD
8	12538.16	88.98	89.35	7481.02	-891.66	4926.24	0.00	0.00	4915.80	

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

Plan: Plan #2 (#54H/OH)
Burton Flat Deep Unit
Created By: Heber Claros
Date: 11:54, September 27 2013
Approved: _____ Date: _____

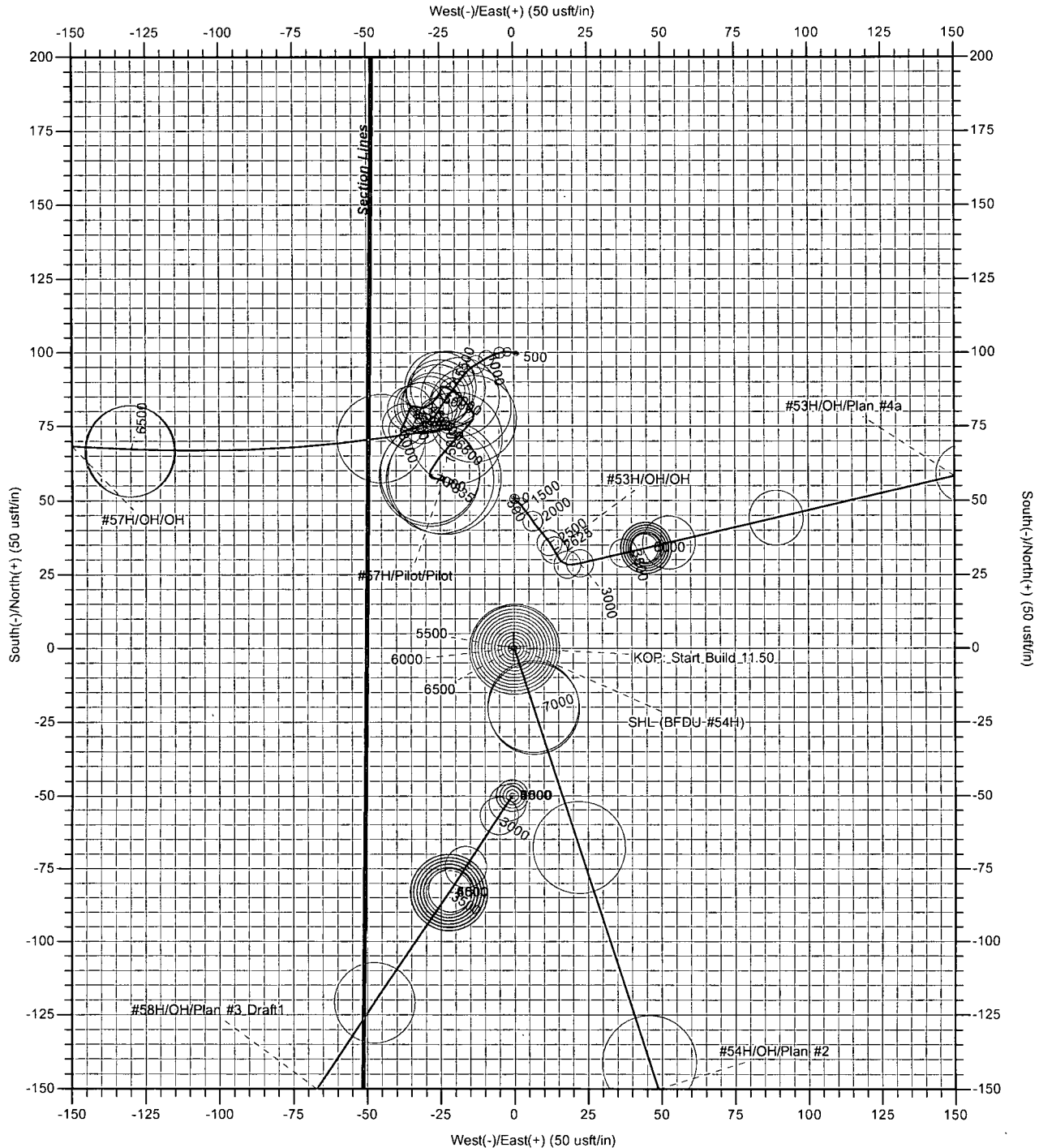
DEVON ENERGY

Project: Eddy County, NM (NAD-83)
 Site: Burton Flat Deep Unit
 Well: #54H
 Wellbore: OH
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Azimuths to Grid North
 True North: -0.09°
 Magnetic North: 7.63°

Magnetic Field
 Strength: 48473.8nT
 Dip Angle: 60.28°
 Date: 09/27/2013
 Model: BGGM2013



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Plan: Plan #2 (#54H/OH)
 Burton Flat Deep Unit
 Created By: Heber Claros
 Date: 11:55, September 27 2013
 Approved: _____
 Date: _____

Leam Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #54H
Company:	DEVON ENERGY	TVD Reference:	GE 3214' + KB 25' @ 3239.00usft (H&P 223)
Project:	Eddy County, NM (NAD-83)	MD Reference:	GE 3214' + KB 25' @ 3239.00usft (H&P 223)
Site:	Burton Flat Deep Unit	North Reference:	Grid
Well:	#54H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

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:	From: Map	Northing:	548,073.21 usft
		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	#54H		
Well Position	+N/-S	-100.70 usft	Northing:
	+E/-W	-0.67 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	Ground Level:
			3,214.00 usft

Wellbore	OH		
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	09/27/13	7.72	60.28	48,474

Design	Plan #2		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.00	0.00	0.00
			Direction (°)
			89.35

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,855.70	0.00	0.00	6,855.70	0.00	0.00	0.00	0.00	0.00	0.00	
7,507.87	75.00	162.00	7,336.95	-351.20	114.11	11.50	11.50	0.00	162.00	
7,801.69	88.53	130.63	7,379.99	-588.71	274.08	11.50	4.61	-10.68	-69.35	
8,833.33	88.53	89.35	7,407.67	-933.68	1,222.39	4.00	0.00	-4.00	-90.55	
9,752.73	88.53	89.35	7,431.25	-923.25	2,141.43	0.00	0.00	0.00	0.00	MID Pt (BFDU #54H)
9,767.65	88.98	89.35	7,431.58	-923.08	2,156.35	3.00	3.00	0.00	0.00	
12,538.16	88.98	89.35	7,481.02	-891.66	4,926.24	0.00	0.00	0.00	0.00	PBHL(BFBU #54H)

Leam Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #54H
Company:	DEVON ENERGY	TVD Reference:	GE 3214' + KB 25' @ 3239.00usft (H&P 223)
Project:	Eddy County, NM (NAD-83)	MD Reference:	GE 3214' + KB 25' @ 3239.00usft (H&P 223)
Site:	Burton Flat Deep Unit	North Reference:	Grid
Well:	#54H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

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)
6,855.70	0.00	0.00	6,855.70	0.00	0.00	0.00	0.00	0.00	0.00
KOP: Start Build 11.50									
6,875.00	2.22	162.00	6,875.00	-0.36	0.12	0.11	11.50	11.50	0.00
6,900.00	5.09	162.00	6,899.94	-1.87	0.61	0.59	11.50	11.50	0.00
6,925.00	7.97	162.00	6,924.78	-4.58	1.49	1.43	11.50	11.50	0.00
6,950.00	10.84	162.00	6,949.44	-8.46	2.75	2.65	11.50	11.50	0.00
6,975.00	13.72	162.00	6,973.86	-13.52	4.39	4.24	11.50	11.50	0.00
7,000.00	16.59	162.00	6,997.99	-19.74	6.41	6.19	11.50	11.50	0.00
7,025.00	19.47	162.00	7,021.76	-27.09	8.80	8.50	11.50	11.50	0.00
7,050.00	22.34	162.00	7,045.11	-35.58	11.56	11.16	11.50	11.50	0.00
7,075.00	25.22	162.00	7,067.99	-45.17	14.68	14.16	11.50	11.50	0.00
7,100.00	28.09	162.00	7,090.33	-55.83	18.14	17.51	11.50	11.50	0.00
7,125.00	30.97	162.00	7,112.08	-67.55	21.95	21.18	11.50	11.50	0.00
7,150.00	33.84	162.00	7,133.18	-80.29	26.09	25.18	11.50	11.50	0.00
7,175.00	36.72	162.00	7,153.59	-94.02	30.55	29.48	11.50	11.50	0.00
7,200.00	39.59	162.00	7,173.24	-108.71	35.32	34.09	11.50	11.50	0.00
7,225.00	42.47	162.00	7,192.10	-124.32	40.39	38.98	11.50	11.50	0.00
7,250.00	45.34	162.00	7,210.11	-140.80	45.75	44.15	11.50	11.50	0.00
7,275.00	48.22	162.00	7,227.23	-158.13	51.38	49.58	11.50	11.50	0.00
7,300.00	51.09	162.00	7,243.41	-176.25	57.27	55.26	11.50	11.50	0.00
7,325.00	53.97	162.00	7,258.62	-195.12	63.40	61.18	11.50	11.50	0.00
7,350.00	56.84	162.00	7,272.81	-214.69	69.76	67.32	11.50	11.50	0.00
7,375.00	59.72	162.00	7,285.95	-234.91	76.33	73.66	11.50	11.50	0.00
7,400.00	62.59	162.00	7,298.01	-255.74	83.09	80.19	11.50	11.50	0.00
7,425.00	65.47	162.00	7,308.95	-277.11	90.04	86.89	11.50	11.50	0.00
7,450.00	68.34	162.00	7,318.76	-298.98	97.14	93.75	11.50	11.50	0.00
7,475.00	71.22	162.00	7,327.40	-321.29	104.39	100.74	11.50	11.50	0.00
7,500.00	74.09	162.00	7,334.85	-343.98	111.77	107.86	11.50	11.50	0.00
7,507.87	75.00	162.00	7,336.95	-351.20	114.11	110.12	11.50	11.50	0.00
Start DLS 11.50 TFO -69.35									
7,525.00	75.70	160.10	7,341.28	-366.87	119.49	115.32	11.50	4.10	-11.10
7,550.00	76.75	157.34	7,347.23	-389.49	128.31	123.88	11.50	4.21	-11.02
7,575.00	77.84	154.61	7,352.73	-411.77	138.23	133.55	11.50	4.33	-10.92
7,600.00	78.94	151.90	7,357.76	-433.63	149.25	144.32	11.50	4.43	-10.83
7,625.00	80.08	149.22	7,362.32	-455.04	161.33	156.16	11.50	4.53	-10.75
7,650.00	81.23	146.55	7,366.38	-475.93	174.45	169.04	11.50	4.61	-10.68
7,675.00	82.40	143.89	7,369.94	-496.25	188.56	182.92	11.50	4.69	-10.61
7,700.00	83.59	141.26	7,372.99	-515.95	203.64	197.77	11.50	4.75	-10.55
7,725.00	84.79	138.63	7,375.52	-534.99	219.65	213.56	11.50	4.80	-10.50
7,750.00	86.00	136.02	7,377.53	-553.30	236.54	230.24	11.50	4.85	-10.46
7,775.00	87.22	133.41	7,379.00	-570.86	254.27	247.78	11.50	4.88	-10.43
7,801.69	88.53	130.63	7,379.99	-588.71	274.08	267.38	11.50	4.90	-10.41
EOC: Start DLS 4.00 TFO -90.55									
7,832.12	88.52	129.41	7,380.78	-608.27	297.37	290.45	4.00	-0.04	-4.00
Lat Heel Pt (BFDU #54H)									
7,900.00	88.50	126.70	7,382.55	-650.10	350.81	343.41	4.00	-0.03	-4.00
8,000.00	88.47	122.69	7,385.20	-706.99	432.98	424.93	4.00	-0.03	-4.00
8,100.00	88.45	118.69	7,387.89	-758.00	518.92	510.29	4.00	-0.02	-4.00
8,200.00	88.43	114.69	7,390.61	-802.90	608.21	599.06	4.00	-0.01	-4.00
8,300.00	88.43	110.69	7,393.35	-841.45	700.42	690.83	4.00	-0.01	-4.00
8,400.00	88.43	106.69	7,396.09	-873.48	795.09	785.13	4.00	0.00	-4.00
8,500.00	88.44	102.69	7,398.82	-898.82	891.77	881.51	4.00	0.01	-4.00
8,600.00	88.46	98.69	7,401.52	-917.35	989.98	979.51	4.00	0.02	-4.00

Leam Drilling Systems LLC

Planning Report

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Company:	DEVON ENERGY	TVD Reference:	GE 3214' + KB 25' @ 3239.00usft (H&P 223)
Project:	Eddy County, NM (NAD-83)	MD Reference:	GE 3214' + KB 25' @ 3239.00usft (H&P 223)
Site:	Burton Flat Deep Unit	North Reference:	Grid
Well:	#54H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

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)
8,700.00	88.48	94.68	7,404.19	-928.99	1,089.24	1,078.63	4.00	0.03	-4.00
8,800.00	88.52	90.68	7,406.81	-933.67	1,189.08	1,178.41	4.00	0.03	-4.00
8,833.33	88.53	89.35	7,407.67	-933.68	1,222.39	1,211.72	4.00	0.04	-4.00
EOT; Start 919.40 hold at 8833.33 MD									
8,900.00	88.53	89.35	7,409.38	-932.92	1,289.04	1,278.37	0.00	0.00	0.00
9,000.00	88.53	89.35	7,411.94	-931.79	1,389.00	1,378.34	0.00	0.00	0.00
9,100.00	88.53	89.35	7,414.51	-930.66	1,488.96	1,478.31	0.00	0.00	0.00
9,200.00	88.53	89.35	7,417.07	-929.52	1,588.92	1,578.27	0.00	0.00	0.00
9,300.00	88.53	89.35	7,419.64	-928.39	1,688.88	1,678.24	0.00	0.00	0.00
9,400.00	88.53	89.35	7,422.20	-927.25	1,788.84	1,778.21	0.00	0.00	0.00
9,500.00	88.53	89.35	7,424.77	-926.12	1,888.80	1,878.17	0.00	0.00	0.00
9,600.00	88.53	89.35	7,427.33	-924.98	1,988.76	1,978.14	0.00	0.00	0.00
9,700.00	88.53	89.35	7,429.90	-923.85	2,088.72	2,078.11	0.00	0.00	0.00
9,752.73	88.53	89.35	7,431.25	-923.25	2,141.43	2,130.82	0.00	0.00	0.00
Start Build 3.00									
9,753.44	88.55	89.35	7,431.27	-923.24	2,142.15	2,131.53	3.00	3.00	0.00
MID Pt (BFDU #54H)									
9,767.65	88.98	89.35	7,431.58	-923.08	2,156.35	2,145.74	3.00	3.00	0.00
Start 2770.51 hold at 9767.65 MD									
9,800.00	88.98	89.35	7,432.15	-922.72	2,188.69	2,178.08	0.00	0.00	0.00
9,900.00	88.98	89.35	7,433.94	-921.58	2,288.67	2,278.07	0.00	0.00	0.00
10,000.00	88.98	89.35	7,435.72	-920.45	2,388.65	2,378.05	0.00	0.00	0.00
10,100.00	88.98	89.35	7,437.51	-919.31	2,488.62	2,478.03	0.00	0.00	0.00
10,200.00	88.98	89.35	7,439.29	-918.18	2,588.60	2,578.02	0.00	0.00	0.00
10,300.00	88.98	89.35	7,441.08	-917.05	2,688.58	2,678.00	0.00	0.00	0.00
10,400.00	88.98	89.35	7,442.86	-915.91	2,788.56	2,777.99	0.00	0.00	0.00
10,500.00	88.98	89.35	7,444.64	-914.78	2,888.53	2,877.97	0.00	0.00	0.00
10,600.00	88.98	89.35	7,446.43	-913.64	2,988.51	2,977.96	0.00	0.00	0.00
10,700.00	88.98	89.35	7,448.21	-912.51	3,088.49	3,077.94	0.00	0.00	0.00
10,800.00	88.98	89.35	7,450.00	-911.37	3,188.47	3,177.92	0.00	0.00	0.00
10,900.00	88.98	89.35	7,451.78	-910.24	3,288.45	3,277.91	0.00	0.00	0.00
11,000.00	88.98	89.35	7,453.57	-909.11	3,388.42	3,377.89	0.00	0.00	0.00
11,100.00	88.98	89.35	7,455.35	-907.97	3,488.40	3,477.88	0.00	0.00	0.00
11,200.00	88.98	89.35	7,457.14	-906.84	3,588.38	3,577.86	0.00	0.00	0.00
11,300.00	88.98	89.35	7,458.92	-905.70	3,688.36	3,677.84	0.00	0.00	0.00
11,400.00	88.98	89.35	7,460.70	-904.57	3,788.33	3,777.83	0.00	0.00	0.00
11,500.00	88.98	89.35	7,462.49	-903.43	3,888.31	3,877.81	0.00	0.00	0.00
11,600.00	88.98	89.35	7,464.27	-902.30	3,988.29	3,977.80	0.00	0.00	0.00
11,700.00	88.98	89.35	7,466.06	-901.17	4,088.27	4,077.78	0.00	0.00	0.00
11,800.00	88.98	89.35	7,467.84	-900.03	4,188.24	4,177.76	0.00	0.00	0.00
11,900.00	88.98	89.35	7,469.63	-898.90	4,288.22	4,277.75	0.00	0.00	0.00
12,000.00	88.98	89.35	7,471.41	-897.76	4,388.20	4,377.73	0.00	0.00	0.00
12,100.00	88.98	89.35	7,473.20	-896.63	4,488.18	4,477.72	0.00	0.00	0.00
12,200.00	88.98	89.35	7,474.98	-895.49	4,588.15	4,577.70	0.00	0.00	0.00
12,300.00	88.98	89.35	7,476.77	-894.36	4,688.13	4,677.68	0.00	0.00	0.00
12,400.00	88.98	89.35	7,478.55	-893.23	4,788.11	4,777.67	0.00	0.00	0.00
12,500.00	88.98	89.35	7,480.33	-892.09	4,888.09	4,877.65	0.00	0.00	0.00
12,538.16	88.98	89.35	7,481.02	-891.66	4,926.24	4,915.80	0.00	0.00	0.00
TD at 12538.16' MD - PBHL(BFDU #54H)									

Leam Drilling Systems LLC

Planning Report

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Site:	Burton Flat Deep Unit	North Reference:	Grid
Well:	#54H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
SHL (BFDU #54H)	0.00	0.00	0.00	0.72	-0.27	547,973.23	592,065.49	32° 30' 22.793 N	104° 10' 7.600 W
- plan misses target center by 6855.70usft at 6855.70usft MD (6855.70 TVD, 0.00 N, 0.00 E)									
- Point									
Lat Heel Pt (BFDU #54H)	0.00	0.00	7,380.00	-637.79	273.78	547,334.72	592,339.54	32° 30' 16.470 N	104° 10' 4.411 W
- plan misses target center by 37.80usft at 7832.12usft MD (7380.78 TVD, -608.27 N, 297.37 E)									
- Point									
MID Pt (BFDU #54H)	0.00	0.00	7,431.00	-877.09	2,141.63	547,095.42	594,207.39	32° 30' 14.073 N	104° 9' 42.603 W
- plan misses target center by 46.16usft at 9753.44usft MD (7431.27 TVD, -923.24 N, 2142.14 E)									
- Point									
PBHL(BFDU #54H)	0.00	0.00	7,481.00	-888.62	4,926.25	547,083.90	596,992.01	32° 30' 13.913 N	104° 9' 10.086 W
- plan misses target center by 3.04usft at 12538.16usft MD (7481.02 TVD, -891.66 N, 4926.24 E)									
- Point									

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
6,855.70	6,855.70	0.00	0.00	KOP: Start Build 11.50
7,507.87	7,336.95	-351.20	114.11	Start DLS 11.50 TFO -69.35
7,801.69	7,379.99	-588.71	274.08	EOC: Start DLS 4.00 TFO -90.55
8,833.33	7,407.67	-933.68	1,222.39	EOT; Start 919.40 hold at 8833.33 MD
9,752.73	7,431.25	-923.25	2,141.43	Start Build 3.00
9,767.65	7,431.58	-923.08	2,156.35	Start 2770.51 hold at 9767.65 MD
12,538.16	7,481.02	-891.66	4,926.24	TD at 12538.16' MD