



DEVON ENERGY

Lea County, NM (NAD-83)

Boomslang 14 Fed

9H

OH

Plan: Plan #1

Standard Planning Report

11 November, 2015



JAN 27 2016

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well: 9H
Company:	DEVON ENERGY	TVD Reference:	3602.1' GE + 25' KB @ 3627.10usft
Project:	Lea County, NM (NAD:83)	MD Reference:	3602.1' GE + 25' KB @ 3627.10usft
Site:	Boomslang 14 Fed	North Reference:	Grid
Well:	9H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project:	Lea 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	Boomslang 14 Fed				
Site Position:		Northing:	446,243.13 usft	Latitude:	32° 13' 27.535 N
From:	Map	Easting:	786,353.47 usft	Longitude:	103° 32' 27.617 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.42 °

Well	9H					
Well Position	+N/-S	-23.04 usft	Northing:	446,220.09 usft	Latitude:	32° 13' 27.526 N
	+E/-W	-3,011.34 usft	Easting:	783,342.13 usft	Longitude:	103° 33' 2.673 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	3,627.10 usft	Ground Level:	3,602.10 usft

Wellbore:		OH			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2015	11/10/2015	7.21	60.14	48,180

Design					Plan #1				
Audit Notes:									
Version:		Phase:		PLAN		Tie On Depth:		0.00	
Vertical Section:		Depth From (TVD)		+N-S		+E-W		Direction	
		(usft)		(usft)		(usft)		(°)	
		0.00		0.00		0.00		178.93	

Plan Sections										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)	(°)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,666.67	7.00	90.00	5,665.51	0.00	28.47	1.50	1.50	0.00	90.00	
9,666.67	7.00	90.00	9,635.69	0.00	515.95	0.00	0.00	0.00	0.00	
10,133.33	0.00	0.00	10,101.20	0.00	544.42	1.50	-1.50	0.00	180.00	
10,430.22	0.00	0.00	10,398.08	0.00	544.42	0.00	0.00	0.00	0.00	
11,324.04	89.38	178.93	10,971.00	-566.69	555.05	10.00	10.00	20.02	178.93	
15,501.51	89.38	178.93	11,016.00	-4,743.18	633.36	0.00	0.00	0.00	0.00	PBHL (B14F 9H)



LEAM Drilling Systems LLC
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 9H
Company:	DEVON ENERGY	TVD Reference:	3602.1 GE + 25' KB @ 3627.10usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3602.1 GE + 25' KB @ 3627.10usft
Site:	Boomsiang 14 Fed	North Reference:	Grid
Well:	9H	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
SHL (B14F 9H)									
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
1,297.00	0.00	0.00	1,297.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
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
1,557.00	0.00	0.00	1,557.00	0.00	0.00	0.00	0.00	0.00	0.00
Top Salt									
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



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Planned Survey									
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4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,192.00	0.00	0.00	5,192.00	0.00	0.00	0.00	0.00	0.00	0.00
Base Salt									
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
Nudge:									
5,260.00	0.90	90.00	5,260.00	0.00	0.47	0.01	1.50	1.50	0.00
Delaware									
5,300.00	1.50	90.00	5,299.99	0.00	1.31	0.02	1.50	1.50	0.00
5,400.00	3.00	90.00	5,399.91	0.00	5.23	0.10	1.50	1.50	0.00
5,500.00	4.50	90.00	5,499.69	0.00	11.77	0.22	1.50	1.50	0.00
5,600.00	6.00	90.00	5,599.27	0.00	20.92	0.39	1.50	1.50	0.00
5,666.67	7.00	90.00	5,665.51	0.00	28.47	0.53	1.50	1.50	0.00
Hold									
5,700.00	7.00	90.00	5,698.59	0.00	32.53	0.61	0.00	0.00	0.00
5,800.00	7.00	90.00	5,797.85	0.00	44.72	0.84	0.00	0.00	0.00
5,900.00	7.00	90.00	5,897.10	0.00	56.91	1.06	0.00	0.00	0.00
6,000.00	7.00	90.00	5,996.36	0.00	69.09	1.29	0.00	0.00	0.00
6,054.05	7.00	90.00	6,050.00	0.00	75.68	1.41	0.00	0.00	0.00
Cherry Canyon									
6,100.00	7.00	90.00	6,095.61	0.00	81.28	1.52	0.00	0.00	0.00
6,200.00	7.00	90.00	6,194.86	0.00	93.47	1.75	0.00	0.00	0.00
6,300.00	7.00	90.00	6,294.12	0.00	105.66	1.97	0.00	0.00	0.00
6,400.00	7.00	90.00	6,393.37	0.00	117.84	2.20	0.00	0.00	0.00
6,500.00	7.00	90.00	6,492.63	0.00	130.03	2.43	0.00	0.00	0.00
6,600.00	7.00	90.00	6,591.88	0.00	142.22	2.66	0.00	0.00	0.00
6,700.00	7.00	90.00	6,691.14	0.00	154.40	2.88	0.00	0.00	0.00
6,800.00	7.00	90.00	6,790.39	0.00	166.59	3.11	0.00	0.00	0.00
6,900.00	7.00	90.00	6,889.65	0.00	178.78	3.34	0.00	0.00	0.00
7,000.00	7.00	90.00	6,988.90	0.00	190.96	3.57	0.00	0.00	0.00
7,100.00	7.00	90.00	7,088.16	0.00	203.15	3.79	0.00	0.00	0.00
7,200.00	7.00	90.00	7,187.41	0.00	215.34	4.02	0.00	0.00	0.00
7,300.00	7.00	90.00	7,286.67	0.00	227.52	4.25	0.00	0.00	0.00
7,400.00	7.00	90.00	7,385.92	0.00	239.71	4.48	0.00	0.00	0.00
7,500.00	7.00	90.00	7,485.17	0.00	251.90	4.70	0.00	0.00	0.00
7,600.00	7.00	90.00	7,584.43	0.00	264.09	4.93	0.00	0.00	0.00
7,700.00	7.00	90.00	7,683.68	0.00	276.27	5.16	0.00	0.00	0.00
7,800.00	7.00	90.00	7,782.94	0.00	288.46	5.39	0.00	0.00	0.00
7,900.00	7.00	90.00	7,882.19	0.00	300.65	5.61	0.00	0.00	0.00
8,000.00	7.00	90.00	7,981.45	0.00	312.83	5.84	0.00	0.00	0.00
8,100.00	7.00	90.00	8,080.70	0.00	325.02	6.07	0.00	0.00	0.00
8,200.00	7.00	90.00	8,179.96	0.00	337.21	6.30	0.00	0.00	0.00
8,300.00	7.00	90.00	8,279.21	0.00	349.39	6.52	0.00	0.00	0.00
8,400.00	7.00	90.00	8,378.47	0.00	361.58	6.75	0.00	0.00	0.00
8,500.00	7.00	90.00	8,477.72	0.00	373.77	6.98	0.00	0.00	0.00
8,600.00	7.00	90.00	8,576.98	0.00	385.96	7.21	0.00	0.00	0.00
8,700.00	7.00	90.00	8,676.23	0.00	398.14	7.43	0.00	0.00	0.00
8,800.00	7.00	90.00	8,775.48	0.00	410.33	7.66	0.00	0.00	0.00
8,900.00	7.00	90.00	8,874.74	0.00	422.52	7.89	0.00	0.00	0.00
8,978.85	7.00	90.00	8,953.00	0.00	432.13	8.07	0.00	0.00	0.00
Lwr Brushy									



LEAM Drilling Systems LLC
Planning Report



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Company:	DEVON ENERGY	TVD Reference:	3602.1 GE + 25 KB @ 3627.10usft
Project:	Lea County, NM (NAD 83)	MD Reference:	3602.1 GE + 25 KB @ 3627.10usft
Site:	Boomsiang-14 Fed	North Reference:	Grid
Well:	9H	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)
9,000.00	7.00	90.00	8,973.99	0.00	434.70	8.12	0.00	0.00	0.00
9,100.00	7.00	90.00	9,073.25	0.00	446.89	8.35	0.00	0.00	0.00
9,142.07	7.00	90.00	9,115.00	0.00	452.02	8.44	0.00	0.00	0.00
1st BS LM									
9,200.00	7.00	90.00	9,172.50	0.00	459.08	8.57	0.00	0.00	0.00
9,300.00	7.00	90.00	9,271.76	0.00	471.26	8.80	0.00	0.00	0.00
9,400.00	7.00	90.00	9,371.01	0.00	483.45	9.03	0.00	0.00	0.00
9,500.00	7.00	90.00	9,470.27	0.00	495.64	9.26	0.00	0.00	0.00
9,600.00	7.00	90.00	9,569.52	0.00	507.82	9.48	0.00	0.00	0.00
9,666.67	7.00	90.00	9,635.69	0.00	515.95	9.63	0.00	0.00	0.00
Drop									
9,700.00	6.50	90.00	9,668.79	0.00	519.87	9.71	1.50	-1.50	0.00
9,800.00	5.00	90.00	9,768.29	0.00	529.89	9.90	1.50	-1.50	0.00
9,900.00	3.50	90.00	9,868.01	0.00	537.30	10.03	1.50	-1.50	0.00
10,000.00	2.00	90.00	9,967.89	0.00	542.09	10.12	1.50	-1.50	0.00
10,100.00	0.50	90.00	10,067.87	0.00	544.28	10.16	1.50	-1.50	0.00
10,133.33	0.00	0.00	10,101.20	0.00	544.42	10.17	1.50	-1.50	0.00
Hold									
10,200.00	0.00	0.00	10,167.86	0.00	544.42	10.17	0.00	0.00	0.00
10,300.00	0.00	0.00	10,267.86	0.00	544.42	10.17	0.00	0.00	0.00
10,400.00	0.00	0.00	10,367.86	0.00	544.42	10.17	0.00	0.00	0.00
10,430.22	0.00	0.00	10,398.08	0.00	544.42	10.17	0.00	0.00	0.00
KOP 10° DLS									
10,450.00	1.98	178.93	10,417.86	-0.34	544.43	10.51	10.00	10.00	0.00
10,500.00	6.98	178.93	10,467.69	-4.24	544.50	14.41	10.00	10.00	0.00
10,550.00	11.98	178.93	10,516.99	-12.47	544.65	22.64	10.00	10.00	0.00
10,600.00	16.98	178.93	10,565.39	-24.97	544.89	35.14	10.00	10.00	0.00
10,650.00	21.98	178.93	10,612.51	-41.63	545.20	51.81	10.00	10.00	0.00
10,700.00	26.98	178.93	10,658.01	-62.34	545.59	72.52	10.00	10.00	0.00
10,750.00	31.98	178.93	10,701.52	-86.93	546.05	97.11	10.00	10.00	0.00
10,800.00	36.98	178.93	10,742.72	-115.22	546.58	125.41	10.00	10.00	0.00
10,850.00	41.98	178.93	10,781.30	-147.00	547.18	157.19	10.00	10.00	0.00
10,900.00	46.98	178.93	10,816.97	-182.01	547.83	192.21	10.00	10.00	0.00
10,942.84	51.26	178.93	10,845.00	-214.39	548.44	224.60	10.00	10.00	0.00
2nd BS SS									
10,950.00	51.98	178.93	10,849.44	-220.00	548.55	230.21	10.00	10.00	0.00
11,000.00	56.98	178.93	10,878.49	-260.68	549.31	270.89	10.00	10.00	0.00
11,050.00	61.98	178.93	10,903.87	-303.73	550.12	313.95	10.00	10.00	0.00
11,100.00	66.98	178.93	10,925.41	-348.83	550.96	359.05	10.00	10.00	0.00
11,150.00	71.98	178.93	10,942.93	-395.63	551.84	405.87	10.00	10.00	0.00
11,200.00	76.98	178.93	10,956.30	-443.78	552.74	454.03	10.00	10.00	0.00
11,250.00	81.98	178.93	10,965.43	-492.92	553.66	503.17	10.00	10.00	0.00
11,300.00	86.98	178.93	10,970.24	-542.66	554.60	552.92	10.00	10.00	0.00
11,324.04	89.38	178.93	10,971.00	-566.68	555.05	576.95	10.00	10.00	0.00
LP									
11,400.00	89.38	178.93	10,971.82	-642.63	556.47	652.90	0.00	0.00	0.00
11,500.00	89.38	178.93	10,972.90	-742.60	558.35	752.90	0.00	0.00	0.00
11,600.00	89.38	178.93	10,973.98	-842.58	560.22	852.89	0.00	0.00	0.00
11,700.00	89.38	178.93	10,975.05	-942.55	562.09	952.89	0.00	0.00	0.00
11,800.00	89.38	178.93	10,976.13	-1,042.53	563.97	1,052.88	0.00	0.00	0.00
11,900.00	89.38	178.93	10,977.21	-1,142.51	565.84	1,152.88	0.00	0.00	0.00
12,000.00	89.38	178.93	10,978.29	-1,242.48	567.72	1,252.87	0.00	0.00	0.00
12,100.00	89.38	178.93	10,979.36	-1,342.46	569.59	1,352.86	0.00	0.00	0.00



LEAM Drilling Systems LLC
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 9H
Company:	DEVON ENERGY	TVD Reference:	3602.1' GE + 25' KB @ 3627' 10usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3602.1' GE + 25' KB @ 3627' 10usft
Site:	Boomslang-14 Fed	North Reference:	Grid
Well:	9H	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)
12,200.00	89.38	178.93	10,980.44	-1,442.44	571.47	1,452.86	0.00	0.00	0.00
12,300.00	89.38	178.93	10,981.52	-1,542.41	573.34	1,552.85	0.00	0.00	0.00
12,400.00	89.38	178.93	10,982.59	-1,642.39	575.22	1,652.85	0.00	0.00	0.00
12,500.00	89.38	178.93	10,983.67	-1,742.37	577.09	1,752.84	0.00	0.00	0.00
12,600.00	89.38	178.93	10,984.75	-1,842.34	578.97	1,852.83	0.00	0.00	0.00
12,700.00	89.38	178.93	10,985.83	-1,942.32	580.84	1,952.83	0.00	0.00	0.00
12,800.00	89.38	178.93	10,986.90	-2,042.30	582.72	2,052.82	0.00	0.00	0.00
12,900.00	89.38	178.93	10,987.98	-2,142.27	584.59	2,152.82	0.00	0.00	0.00
13,000.00	89.38	178.93	10,989.06	-2,242.25	586.47	2,252.81	0.00	0.00	0.00
13,100.00	89.38	178.93	10,990.13	-2,342.23	588.34	2,352.81	0.00	0.00	0.00
13,200.00	89.38	178.93	10,991.21	-2,442.20	590.21	2,452.80	0.00	0.00	0.00
13,300.00	89.38	178.93	10,992.29	-2,542.18	592.09	2,552.79	0.00	0.00	0.00
13,400.00	89.38	178.93	10,993.36	-2,642.16	593.96	2,652.79	0.00	0.00	0.00
13,500.00	89.38	178.93	10,994.44	-2,742.13	595.84	2,752.78	0.00	0.00	0.00
13,600.00	89.38	178.93	10,995.52	-2,842.11	597.71	2,852.78	0.00	0.00	0.00
13,700.00	89.38	178.93	10,996.60	-2,942.09	599.59	2,952.77	0.00	0.00	0.00
13,800.00	89.38	178.93	10,997.67	-3,042.06	601.46	3,052.77	0.00	0.00	0.00
13,900.00	89.38	178.93	10,998.75	-3,142.04	603.34	3,152.76	0.00	0.00	0.00
14,000.00	89.38	178.93	10,999.83	-3,242.02	605.21	3,252.75	0.00	0.00	0.00
14,100.00	89.38	178.93	11,000.90	-3,341.99	607.09	3,352.75	0.00	0.00	0.00
14,200.00	89.38	178.93	11,001.98	-3,441.97	608.96	3,452.74	0.00	0.00	0.00
14,300.00	89.38	178.93	11,003.06	-3,541.95	610.84	3,552.74	0.00	0.00	0.00
14,400.00	89.38	178.93	11,004.14	-3,641.92	612.71	3,652.73	0.00	0.00	0.00
14,500.00	89.38	178.93	11,005.21	-3,741.90	614.59	3,752.72	0.00	0.00	0.00
14,600.00	89.38	178.93	11,006.29	-3,841.88	616.46	3,852.72	0.00	0.00	0.00
14,700.00	89.38	178.93	11,007.37	-3,941.85	618.33	3,952.71	0.00	0.00	0.00
14,800.00	89.38	178.93	11,008.44	-4,041.83	620.21	4,052.71	0.00	0.00	0.00
14,900.00	89.38	178.93	11,009.52	-4,141.81	622.08	4,152.70	0.00	0.00	0.00
15,000.00	89.38	178.93	11,010.60	-4,241.78	623.96	4,252.70	0.00	0.00	0.00
15,100.00	89.38	178.93	11,011.68	-4,341.76	625.83	4,352.69	0.00	0.00	0.00
15,200.00	89.38	178.93	11,012.75	-4,441.74	627.71	4,452.68	0.00	0.00	0.00
15,300.00	89.38	178.93	11,013.83	-4,541.71	629.58	4,552.68	0.00	0.00	0.00
15,400.00	89.38	178.93	11,014.91	-4,641.69	631.46	4,652.67	0.00	0.00	0.00
15,501.51	89.38	178.93	11,016.00	-4,743.18	633.36	4,754.18	0.00	0.00	0.00
TD - PBHL (B14F 9H)									

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 (B14F 9H)	0.00	0.00	0.00	0.00	0.00	446,220.09	783,342.13	32° 13' 27.526 N	103° 33' 2.673 W
- plan hits target center									
- Point									
PBHL (B14F 9H)	0.00	0.00	11,016.00	-4,743.18	633.36	441,476.91	783,975.49	32° 12' 40.545 N	103° 32' 55.703 W
- plan hits target center									
- Point									



LEAM Drilling Systems LLC
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 9H
Company:	DEVON ENERGY	TVD Reference:	3602.1' GE + 25' KB @ 3627.10usft
Project:	Lea County NM (NAD-83)	MD Reference:	3602.1' GE + 25' KB @ 3627.10usft
Site:	Boomslang 14 Fed	North Reference:	Grid
Well:	9H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,297.00	1,297.00	Rustler		0.00		
1,557.00	1,557.00	Top Salt		0.00		
5,192.00	5,192.00	Base Salt		0.00		
5,260.00	5,260.00	Delaware		0.00		
6,054.05	6,050.00	Cherry Canyon		0.00		
8,978.85	8,953.00	Lwr Brushy		0.00		
9,142.07	9,115.00	1st BS LM		0.00		
10,942.84	10,845.00	2nd BS SS		0.00		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
5,200.00	5,200.00	0.00	0.00	Nudge
5,666.67	5,665.51	0.00	28.47	Hold
9,666.67	9,635.69	0.00	515.95	Drop
10,133.33	10,101.20	0.00	544.42	Hold
10,430.22	10,398.08	0.00	544.42	KOP 10° DLS
11,324.04	10,971.00	-566.68	555.05	LP
15,501.51	11,016.00	-4,743.18	633.36	TD



DEVON ENERGY

Lea County, NM (NAD-83)

Boomslang 14 Fed

9H

OH

Plan #1

Anticollision Report

11 November, 2015





LEAM Drilling Systems LLC

Anticollision Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 9H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3602.1' GE + 25' KB @ 3627.10usft
Reference Site:	Boomslang-14 Fed	MD Reference:	3602.1' GE + 25' KB @ 3627.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	9H	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	11/11/2015		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	15,501.43	Plan #1 (OH)	LEAM MWD-ADJ	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							
Boomslang-14 Fed							
3H - OH - Plan #1	5,200.00	5,200.60	50.03	26.94	2.166	CC, ES, SF	

Offset Design	Boomslang-14 Fed - 3H - OH - Plan #1										Offset Site Error:	0.00 usft
Survey Program:	0-LEAM MWD-ADJ										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)	Separation Factor	Warning
0.00	0.00	0.60	0.60	0.00	0.00	-90.49	-0.43	-50.03	50.03			
100.00	100.00	100.60	100.60	0.08	0.09	-90.49	-0.43	-50.03	50.03	49.86	0.17	294.438
200.00	200.00	200.60	200.60	0.31	0.31	-90.49	-0.43	-50.03	50.03	49.41	0.62	80.767
300.00	300.00	300.60	300.60	0.53	0.54	-90.49	-0.43	-50.03	50.03	48.96	1.07	46.803
400.00	400.00	400.60	400.60	0.76	0.76	-90.49	-0.43	-50.03	50.03	48.51	1.52	32.948
500.00	500.00	500.60	500.60	0.98	0.98	-90.49	-0.43	-50.03	50.03	48.06	1.97	25.422
600.00	600.00	600.60	600.60	1.21	1.21	-90.49	-0.43	-50.03	50.03	47.61	2.42	20.695
700.00	700.00	700.60	700.60	1.43	1.43	-90.49	-0.43	-50.03	50.03	47.16	2.87	17.450
800.00	800.00	800.60	800.60	1.66	1.66	-90.49	-0.43	-50.03	50.03	46.72	3.32	15.085
900.00	900.00	900.60	900.60	1.88	1.88	-90.49	-0.43	-50.03	50.03	46.27	3.77	13.285
1,000.00	1,000.00	1,000.60	1,000.60	2.11	2.11	-90.49	-0.43	-50.03	50.03	45.82	4.22	11.868
1,100.00	1,100.00	1,100.60	1,100.60	2.33	2.33	-90.49	-0.43	-50.03	50.03	45.37	4.67	10.724
1,200.00	1,200.00	1,200.60	1,200.60	2.56	2.56	-90.49	-0.43	-50.03	50.03	44.92	5.11	9.782
1,300.00	1,300.00	1,300.60	1,300.60	2.78	2.78	-90.49	-0.43	-50.03	50.03	44.47	5.56	8.992
1,400.00	1,400.00	1,400.60	1,400.60	3.01	3.01	-90.49	-0.43	-50.03	50.03	44.02	6.01	8.319
1,500.00	1,500.00	1,500.60	1,500.60	3.23	3.23	-90.49	-0.43	-50.03	50.03	43.57	6.46	7.741
1,600.00	1,600.00	1,600.60	1,600.60	3.46	3.46	-90.49	-0.43	-50.03	50.03	43.12	6.91	7.237
1,700.00	1,700.00	1,700.60	1,700.60	3.68	3.68	-90.49	-0.43	-50.03	50.03	42.67	7.36	6.796
1,800.00	1,800.00	1,800.60	1,800.60	3.91	3.91	-90.49	-0.43	-50.03	50.03	42.22	7.81	6.405
1,900.00	1,900.00	1,900.60	1,900.60	4.13	4.13	-90.49	-0.43	-50.03	50.03	41.77	8.26	6.056
2,000.00	2,000.00	2,000.60	2,000.60	4.35	4.36	-90.49	-0.43	-50.03	50.03	41.32	8.71	5.744
2,100.00	2,100.00	2,100.60	2,100.60	4.58	4.58	-90.49	-0.43	-50.03	50.03	40.87	9.16	5.462
2,200.00	2,200.00	2,200.60	2,200.60	4.80	4.81	-90.49	-0.43	-50.03	50.03	40.42	9.61	5.206
2,300.00	2,300.00	2,300.60	2,300.60	5.03	5.03	-90.49	-0.43	-50.03	50.03	39.97	10.06	4.974
2,400.00	2,400.00	2,400.60	2,400.60	5.25	5.26	-90.49	-0.43	-50.03	50.03	39.52	10.51	4.761
2,500.00	2,500.00	2,500.60	2,500.60	5.48	5.48	-90.49	-0.43	-50.03	50.03	39.07	10.96	4.565

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 9H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3602.1' GE + 25' KB @ 3627.10usft
Reference Site:	Boomslang 14 Fed	MD Reference:	3602.1' GE + 25' KB @ 3627.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	9H	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 - Boomslang 14 Fed - 3H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi-Major Axis (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
2,800.00	2,800.00	2,800.80	2,800.80	5.70	5.70	-90.49		-0.43	-50.03	50.03	38.82	11.41	4.386	
2,700.00	2,700.00	2,700.60	2,700.60	5.93	5.93	-90.49		-0.43	-50.03	50.03	38.17	11.88	4.219	
2,800.00	2,800.00	2,800.60	2,800.60	6.15	6.15	-90.49		-0.43	-50.03	50.03	37.72	12.31	4.065	
2,900.00	2,900.00	2,900.80	2,900.80	6.38	6.38	-90.49		-0.43	-50.03	50.03	37.28	12.76	3.922	
3,000.00	3,000.00	3,000.60	3,000.60	6.60	6.60	-90.49		-0.43	-50.03	50.03	36.83	13.21	3.788	
3,100.00	3,100.00	3,100.60	3,100.60	6.83	6.83	-90.49		-0.43	-50.03	50.03	36.38	13.66	3.664	
3,200.00	3,200.00	3,200.80	3,200.80	7.05	7.05	-90.49		-0.43	-50.03	50.03	35.93	14.11	3.547	
3,300.00	3,300.00	3,300.60	3,300.60	7.28	7.28	-90.49		-0.43	-50.03	50.03	35.48	14.55	3.437	
3,400.00	3,400.00	3,400.60	3,400.60	7.50	7.50	-90.49		-0.43	-50.03	50.03	35.03	15.00	3.334	
3,500.00	3,500.00	3,500.60	3,500.60	7.73	7.73	-90.49		-0.43	-50.03	50.03	34.58	15.45	3.237	
3,600.00	3,600.00	3,600.60	3,600.60	7.95	7.95	-90.49		-0.43	-50.03	50.03	34.13	15.90	3.146	
3,700.00	3,700.00	3,700.60	3,700.60	8.18	8.18	-90.49		-0.43	-50.03	50.03	33.68	16.35	3.059	
3,800.00	3,800.00	3,800.60	3,800.60	8.40	8.40	-90.49		-0.43	-50.03	50.03	33.23	16.80	2.978	
3,900.00	3,900.00	3,900.60	3,900.60	8.63	8.63	-90.49		-0.43	-50.03	50.03	32.78	17.25	2.900	
4,000.00	4,000.00	4,000.60	4,000.60	8.85	8.85	-90.49		-0.43	-50.03	50.03	32.33	17.70	2.826	
4,100.00	4,100.00	4,100.60	4,100.60	9.07	9.08	-90.49		-0.43	-50.03	50.03	31.88	18.15	2.756	
4,200.00	4,200.00	4,200.60	4,200.60	9.30	9.30	-90.49		-0.43	-50.03	50.03	31.43	18.60	2.690	
4,300.00	4,300.00	4,300.60	4,300.60	9.52	9.53	-90.49		-0.43	-50.03	50.03	30.98	19.05	2.626	
4,400.00	4,400.00	4,400.60	4,400.60	9.75	9.75	-90.49		-0.43	-50.03	50.03	30.53	19.50	2.566	
4,500.00	4,500.00	4,500.60	4,500.60	9.97	9.98	-90.49		-0.43	-50.03	50.03	30.08	19.95	2.508	
4,600.00	4,600.00	4,600.60	4,600.60	10.20	10.20	-90.49		-0.43	-50.03	50.03	29.63	20.40	2.453	
4,700.00	4,700.00	4,700.60	4,700.60	10.42	10.42	-90.49		-0.43	-50.03	50.03	29.18	20.85	2.400	
4,800.00	4,800.00	4,800.60	4,800.60	10.65	10.65	-90.49		-0.43	-50.03	50.03	28.73	21.30	2.349	
4,900.00	4,900.00	4,900.60	4,900.60	10.87	10.87	-90.49		-0.43	-50.03	50.03	28.28	21.75	2.301	
5,000.00	5,000.00	5,000.60	5,000.60	11.10	11.10	-90.49		-0.43	-50.03	50.03	27.83	22.20	2.254	
5,100.00	5,100.00	5,100.60	5,100.60	11.32	11.32	-90.49		-0.43	-50.03	50.03	27.39	22.65	2.209	
5,200.00	5,200.00	5,200.60	5,200.60	11.55	11.55	-90.49		-0.43	-50.03	50.03	26.94	23.10	2.166 CC, ES, SF	
5,300.00	5,299.99	5,300.59	5,300.59	11.76	11.77	179.52		-0.43	-50.03	51.34	27.82	23.52	2.183	
5,400.00	5,399.91	5,400.51	5,400.51	11.96	12.00	179.55		-0.43	-50.03	55.27	31.35	23.92	2.310	
5,500.00	5,499.69	5,500.29	5,500.29	12.16	12.22	179.60		-0.43	-50.03	61.81	37.50	24.30	2.543	
5,600.00	5,599.27	5,599.87	5,599.87	12.36	12.45	179.65		-0.43	-50.03	70.96	46.29	24.67	2.876	
5,666.67	5,665.51	5,666.11	5,666.11	12.50	12.60	179.68		-0.43	-50.03	78.50	53.60	24.91	3.152	
5,700.00	5,698.59	5,699.19	5,699.19	12.57	12.67	179.70		-0.43	-50.03	82.57	57.52	25.05	3.296	
5,800.00	5,797.85	5,798.45	5,798.45	12.79	12.89	179.74		-0.43	-50.03	94.75	69.28	25.47	3.720	
5,900.00	5,897.10	5,897.70	5,897.70	13.01	13.12	179.77		-0.43	-50.03	106.94	81.05	25.89	4.130	
6,000.00	5,996.36	5,996.96	5,996.96	13.23	13.34	179.79		-0.43	-50.03	119.13	92.81	26.32	4.526	
6,100.00	6,095.61	6,096.21	6,096.21	13.46	13.56	179.81		-0.43	-50.03	131.31	104.57	26.74	4.910	
6,200.00	6,194.86	6,195.46	6,195.46	13.69	13.78	179.83		-0.43	-50.03	143.50	116.33	27.17	5.281	
6,300.00	6,294.12	6,294.72	6,294.72	13.93	14.01	179.84		-0.43	-50.03	155.69	128.09	27.60	5.641	
6,400.00	6,393.37	6,393.97	6,393.97	14.16	14.23	179.85		-0.43	-50.03	167.87	139.84	28.03	5.989	
6,500.00	6,492.63	6,493.23	6,493.23	14.40	14.45	179.86		-0.43	-50.03	180.06	151.60	28.46	6.327	
6,600.00	6,591.88	6,592.48	6,592.48	14.65	14.68	179.87		-0.43	-50.03	192.25	163.35	28.89	6.654	
6,700.00	6,691.14	6,691.74	6,691.74	14.89	14.90	179.88		-0.43	-50.03	204.43	175.11	29.33	6.971	
6,800.00	6,790.39	6,790.99	6,790.99	15.14	15.12	179.89		-0.43	-50.03	216.62	186.86	29.76	7.279	
6,900.00	6,889.65	6,890.25	6,890.25	15.39	15.35	179.89		-0.43	-50.03	228.81	198.61	30.19	7.578	
7,000.00	6,988.90	6,989.50	6,989.50	15.64	15.57	179.90		-0.43	-50.03	240.99	210.36	30.63	7.868	
7,100.00	7,088.16	7,088.76	7,088.76	15.90	15.79	179.90		-0.43	-50.03	253.18	222.12	31.07	8.150	
7,200.00	7,187.41	7,188.01	7,188.01	16.16	16.02	179.91		-0.43	-50.03	265.37	233.86	31.50	8.424	
7,300.00	7,286.67	7,287.27	7,287.27	16.42	16.24	179.91		-0.43	-50.03	277.56	245.61	31.94	8.690	
7,400.00	7,385.92	7,386.52	7,386.52	16.68	16.46	179.91		-0.43	-50.03	289.74	257.36	32.38	8.948	
7,500.00	7,485.17	7,485.77	7,485.77	16.94	16.68	179.92		-0.43	-50.03	301.93	269.11	32.82	9.200	
7,600.00	7,584.43	7,585.03	7,585.03	17.21	16.91	179.92		-0.43	-50.03	314.12	280.86	33.26	9.444	

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 9H
Project:	Lea County: NM (NAD:83)	TVD Reference:	3602.1' GE + 25' KB @ 3627.10usft
Reference Site:	Boomslang 14 Fed	MD Reference:	3602.1' GE + 25' KB @ 3627.10usft
Site Error:	0.00 usft	North Reference:	Gnd
Reference Well:	9H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Boomslang 14 Fed - 3H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD-ADJ													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	Warning
7,700.00	7,683.68	7,684.28	7,684.28	17.47	17.13	179.92	-0.43	-50.03	326.30	292.60	33.70	9.682	
7,800.00	7,782.94	7,783.54	7,783.54	17.74	17.35	179.93	-0.43	-50.03	338.49	304.35	34.14	9.914	
7,900.00	7,882.19	7,882.79	7,882.79	18.01	17.58	179.93	-0.43	-50.03	350.68	316.09	34.58	10.140	
8,000.00	7,981.45	7,982.05	7,982.05	18.28	17.80	179.93	-0.43	-50.03	362.86	327.84	35.03	10.360	
8,100.00	8,080.70	8,081.30	8,081.30	18.55	18.02	179.93	-0.43	-50.03	375.05	339.58	35.47	10.574	
8,200.00	8,179.96	8,180.56	8,180.56	18.83	18.25	179.94	-0.43	-50.03	387.24	351.32	35.91	10.782	
8,300.00	8,279.21	8,279.81	8,279.81	19.10	18.47	179.94	-0.43	-50.03	399.42	363.07	36.36	10.986	
8,400.00	8,378.47	8,379.07	8,379.07	19.38	18.69	179.94	-0.43	-50.03	411.61	374.81	36.80	11.184	
8,500.00	8,477.72	8,478.32	8,478.32	19.66	18.92	179.94	-0.43	-50.03	423.80	386.55	37.25	11.378	
8,600.00	8,576.98	8,577.58	8,577.58	19.93	19.14	179.94	-0.43	-50.03	435.99	398.29	37.69	11.566	
8,700.00	8,676.23	8,676.83	8,676.83	20.21	19.36	179.94	-0.43	-50.03	448.17	410.03	38.14	11.751	
8,800.00	8,775.48	8,776.08	8,776.08	20.49	19.59	179.95	-0.43	-50.03	460.36	421.77	38.59	11.930	
8,900.00	8,874.74	8,875.34	8,875.34	20.78	19.81	179.95	-0.43	-50.03	472.55	433.51	39.03	12.106	
9,000.00	8,973.99	8,974.59	8,974.59	21.06	20.03	179.95	-0.43	-50.03	484.73	445.25	39.48	12.277	
9,100.00	9,073.25	9,073.85	9,073.85	21.34	20.25	179.95	-0.43	-50.03	496.92	456.99	39.93	12.445	
9,200.00	9,172.50	9,173.10	9,173.10	21.63	20.48	179.95	-0.43	-50.03	509.11	468.73	40.38	12.608	
9,300.00	9,271.76	9,272.36	9,272.36	21.91	20.70	179.95	-0.43	-50.03	521.29	480.47	40.83	12.768	
9,400.00	9,371.01	9,371.61	9,371.61	22.20	20.92	179.95	-0.43	-50.03	533.48	492.20	41.28	12.925	
9,500.00	9,470.27	9,470.87	9,470.87	22.48	21.15	179.95	-0.43	-50.03	545.67	503.94	41.73	13.077	
9,600.00	9,569.52	9,570.12	9,570.12	22.77	21.37	179.96	-0.43	-50.03	557.85	515.68	42.18	13.227	
9,666.67	9,635.69	9,636.29	9,636.29	22.96	21.52	179.96	-0.43	-50.03	565.98	523.50	42.48	13.325	
9,700.00	9,668.79	9,669.39	9,669.39	23.05	21.59	179.96	-0.43	-50.03	569.90	527.25	42.65	13.363	
9,800.00	9,768.29	9,768.89	9,768.89	23.28	21.82	179.96	-0.43	-50.03	579.92	536.78	43.13	13.444	
9,900.00	9,868.01	9,868.61	9,868.61	23.49	22.04	179.96	-0.43	-50.03	587.33	543.73	43.60	13.472	
10,000.00	9,967.89	9,968.49	9,968.49	23.69	22.27	179.96	-0.43	-50.03	592.12	548.09	44.04	13.448	
10,100.00	10,067.87	10,068.47	10,068.47	23.88	22.49	179.96	-0.43	-50.03	594.31	549.85	44.45	13.369	
10,133.33	10,101.20	10,101.80	10,101.80	23.93	22.56	-90.04	-0.43	-50.03	594.45	549.86	44.59	13.333	
10,200.00	10,187.86	10,188.46	10,188.46	24.06	22.71	-90.04	-0.43	-50.03	594.45	549.58	44.87	13.249	
10,300.00	10,267.86	10,268.46	10,268.46	24.26	22.94	-90.04	-0.43	-50.03	594.45	549.14	45.31	13.120	
10,400.00	10,367.86	10,368.46	10,368.46	24.46	23.16	-90.04	-0.43	-50.03	594.45	548.70	45.75	12.994	
10,430.22	10,398.08	10,398.68	10,398.68	24.52	23.23	-90.04	-0.43	-50.03	594.45	548.57	45.88	12.956	
10,450.00	10,417.86	10,418.46	10,418.46	24.56	23.28	91.07	-0.43	-50.03	594.46	548.49	45.97	12.932	
10,500.00	10,467.69	10,468.29	10,468.29	24.64	23.39	91.43	-0.43	-50.03	594.54	548.37	46.17	12.877	
10,550.00	10,516.99	10,517.59	10,517.59	24.73	23.50	92.19	-0.43	-50.03	594.81	548.43	46.37	12.827	
10,600.00	10,565.39	10,565.99	10,565.99	24.82	23.61	93.29	-0.43	-50.03	595.42	548.86	46.57	12.786	
10,650.00	10,612.51	10,613.11	10,613.11	24.91	23.71	94.67	-0.43	-50.03	596.66	549.90	46.76	12.761	
10,700.00	10,658.01	10,658.61	10,658.61	25.00	23.82	96.25	-0.43	-50.03	598.83	551.90	46.93	12.760	
10,750.00	10,701.52	10,702.12	10,702.12	25.10	23.91	97.93	-0.43	-50.03	602.32	555.24	47.08	12.793	
10,800.00	10,742.72	10,860.84	10,858.82	25.21	24.20	104.93	-18.11	-39.62	605.31	558.12	47.19	12.827	
10,850.00	10,781.30	11,153.71	11,096.82	25.32	24.83	112.51	-158.55	43.11	594.36	547.18	47.18	12.599	
10,900.00	10,816.97	11,315.95	11,173.15	25.44	25.53	114.49	-281.13	115.16	568.75	521.49	47.26	12.036	
10,950.00	10,849.44	11,350.00	11,183.79	25.58	25.71	116.82	-309.86	129.99	542.82	495.88	48.93	11.566	
11,000.00	10,878.48	11,379.73	11,192.08	25.74	25.87	118.87	-335.97	141.55	519.52	472.93	46.59	11.152	
11,050.00	10,903.87	11,413.61	11,200.36	25.91	26.07	120.56	-366.72	153.09	499.15	452.85	46.30	10.781	
11,100.00	10,925.41	11,450.00	11,207.80	26.11	26.29	121.91	-400.78	163.47	481.93	435.81	48.11	10.451	
11,150.00	10,942.93	11,484.73	11,213.48	26.34	26.51	122.95	-434.10	171.39	468.07	422.01	46.07	10.160	
11,200.00	10,956.30	11,521.59	11,217.95	26.60	26.74	123.65	-470.15	177.62	457.77	411.55	46.22	9.903	
11,250.00	10,965.43	11,558.98	11,220.81	26.88	26.98	124.02	-507.21	181.61	451.15	404.55	46.60	9.681	
11,300.00	10,970.24	11,596.64	11,221.97	27.19	27.22	124.06	-544.80	183.24	448.31	401.09	47.22	9.495	
11,314.34	10,970.82	11,608.85	11,222.00	27.29	27.30	124.01	-557.01	183.27	448.18	400.74	47.45	9.448	
11,324.04	10,971.00	11,618.55	11,222.00	27.35	27.37	123.97	-566.71	183.27	448.23	400.61	47.62	9.413	
11,400.00	10,971.82	11,694.48	11,222.00	27.90	27.89	123.78	-642.65	183.28	448.95	400.31	48.64	9.230	

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 9H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3602.1' GE + 25' KB @ 3627.10usft
Reference Site:	Boomslang 14 Fed	MD Reference:	3602.1' GE + 25' KB @ 3627.10usft
Site Error:	0.00 usft	North Reference:	Gnd
Reference Well:	9H	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 Boomslang 14 Fed - 3H - OH - Plan #1													Offset Site Error: 0.00 usft	
Survey Program: 0-LEAM MWD-ADJ													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		
11,500.00	10,972.90	11,794.46	11,222.00	28.70	28.66	123.54	-742.63	183.29	449.91	399.78	50.14	8.974		
11,600.00	10,973.98	11,894.44	11,222.00	29.60	29.53	123.29	-842.60	183.29	450.88	399.09	51.79	8.706		
11,700.00	10,975.05	11,994.41	11,222.00	30.58	30.49	123.05	-942.58	183.30	451.85	398.26	53.60	8.431		
11,800.00	10,976.13	12,094.39	11,222.00	31.64	31.52	122.81	-1,042.56	183.30	452.84	397.30	55.54	8.154		
11,900.00	10,977.21	12,194.37	11,222.00	32.77	32.62	122.56	-1,142.53	183.31	453.83	396.23	57.60	7.879		
12,000.00	10,978.29	12,294.34	11,222.00	33.96	33.78	122.32	-1,242.51	183.32	454.83	395.05	59.78	7.609		
12,100.00	10,979.36	12,394.32	11,222.00	35.21	35.00	122.08	-1,342.49	183.32	455.83	393.78	62.06	7.345		
12,200.00	10,980.44	12,494.30	11,222.00	36.50	36.28	121.84	-1,442.46	183.33	456.85	392.42	64.43	7.090		
12,300.00	10,981.52	12,594.27	11,222.00	37.84	37.59	121.61	-1,542.44	183.34	457.87	390.98	66.89	6.845		
12,400.00	10,982.59	12,694.25	11,222.00	39.22	38.95	121.37	-1,642.42	183.34	458.90	389.47	69.43	6.609		
12,500.00	10,983.67	12,794.23	11,222.00	40.64	40.35	121.13	-1,742.39	183.35	459.94	387.90	72.05	6.384		
12,600.00	10,984.75	12,894.20	11,222.00	42.09	41.78	120.90	-1,842.37	183.36	460.99	386.27	74.72	6.169		
12,700.00	10,985.83	12,994.18	11,222.00	43.56	43.24	120.67	-1,942.35	183.36	462.04	384.59	77.46	5.965		
12,800.00	10,986.90	13,094.16	11,222.00	45.07	44.73	120.43	-2,042.32	183.37	463.11	382.86	80.25	5.771		
12,900.00	10,987.98	13,194.13	11,222.00	46.60	46.24	120.20	-2,142.30	183.37	464.17	381.08	83.09	5.586		
13,000.00	10,989.06	13,294.11	11,222.00	48.14	47.77	119.97	-2,242.28	183.38	465.25	379.27	85.98	5.411		
13,100.00	10,990.13	13,394.09	11,222.00	49.71	49.32	119.74	-2,342.25	183.39	466.34	377.43	88.91	5.245		
13,200.00	10,991.21	13,494.06	11,222.00	51.30	50.89	119.51	-2,442.23	183.39	467.43	375.55	91.88	5.087		
13,300.00	10,992.29	13,594.04	11,222.00	52.90	52.48	119.29	-2,542.21	183.40	468.53	373.64	94.89	4.937		
13,400.00	10,993.36	13,694.02	11,222.00	54.52	54.09	119.06	-2,642.18	183.41	469.63	371.70	97.94	4.795		
13,500.00	10,994.44	13,793.99	11,222.00	56.15	55.70	118.84	-2,742.16	183.41	470.75	369.74	101.01	4.660		
13,600.00	10,995.52	13,893.97	11,222.00	57.79	57.33	118.61	-2,842.14	183.42	471.87	367.75	104.12	4.532		
13,700.00	10,996.60	13,993.95	11,222.00	59.44	58.97	118.39	-2,942.11	183.43	473.00	365.74	107.25	4.410		
13,800.00	10,997.67	14,093.93	11,222.00	61.10	60.63	118.17	-3,042.09	183.43	474.13	363.72	110.42	4.294		
13,900.00	10,998.75	14,193.90	11,222.00	62.78	62.29	117.95	-3,142.07	183.44	475.28	361.67	113.60	4.184		
14,000.00	10,999.83	14,293.88	11,222.00	64.46	63.96	117.73	-3,242.04	183.44	476.43	359.61	116.81	4.078		
14,100.00	11,000.90	14,393.86	11,222.00	66.15	65.64	117.51	-3,342.02	183.45	477.58	357.53	120.05	3.978		
14,200.00	11,001.98	14,493.83	11,222.00	67.85	67.32	117.29	-3,442.00	183.46	478.75	355.44	123.30	3.883		
14,300.00	11,003.06	14,593.81	11,222.00	69.55	69.02	117.07	-3,541.97	183.46	479.92	353.34	126.58	3.791		
14,400.00	11,004.14	14,693.79	11,222.00	71.26	70.72	116.86	-3,641.95	183.47	481.09	351.22	129.87	3.704		
14,500.00	11,005.21	14,793.76	11,222.00	72.98	72.42	116.64	-3,741.93	183.48	482.28	349.09	133.18	3.621		
14,600.00	11,006.29	14,893.74	11,222.00	74.70	74.14	116.43	-3,841.90	183.48	483.47	346.95	136.51	3.542		
14,700.00	11,007.37	14,993.72	11,222.00	76.42	75.85	116.22	-3,941.88	183.49	484.67	344.80	139.86	3.465		
14,800.00	11,008.44	15,093.69	11,222.00	78.16	77.58	116.01	-4,041.86	183.50	485.87	342.65	143.22	3.392		
14,900.00	11,009.52	15,193.67	11,222.00	79.89	79.30	115.80	-4,141.83	183.50	487.08	340.48	146.60	3.323		
15,000.00	11,010.60	15,293.65	11,222.00	81.63	81.04	115.59	-4,241.81	183.51	488.30	338.30	149.99	3.255		
15,100.00	11,011.68	15,393.62	11,222.00	83.38	82.77	115.38	-4,341.79	183.51	489.52	336.12	153.40	3.191		
15,200.00	11,012.75	15,493.60	11,222.00	85.13	84.51	115.17	-4,441.76	183.52	490.75	333.93	156.82	3.129		
15,300.00	11,013.83	15,593.58	11,222.00	86.88	86.25	114.97	-4,541.74	183.53	491.99	331.74	160.25	3.070		
15,400.00	11,014.91	15,693.55	11,222.00	88.63	88.00	114.76	-4,641.72	183.53	493.23	329.54	163.69	3.013		
15,501.51	11,016.00	15,795.04	11,222.00	90.42	89.78	114.55	-4,743.21	183.54	494.50	327.30	167.20	2.958		

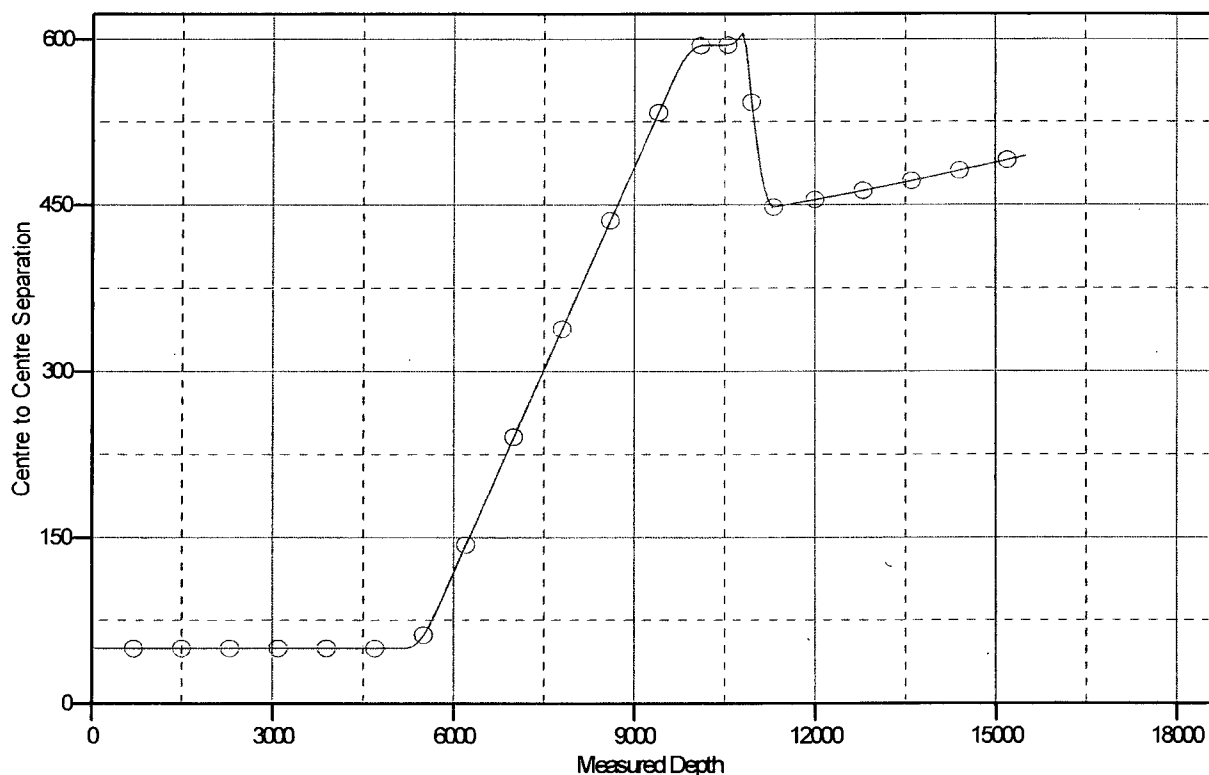
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well: 9H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3602.1' GE + 25' KB @ 3627.10usft
Reference Site:	Boomslang 14 Fed	MD Reference:	3602.1' GE + 25' KB @ 3627.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	9H	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 3602.1' GE + 25' KB @ 3627.10usft
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 9H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.42°

Ladder Plot



LEGEND

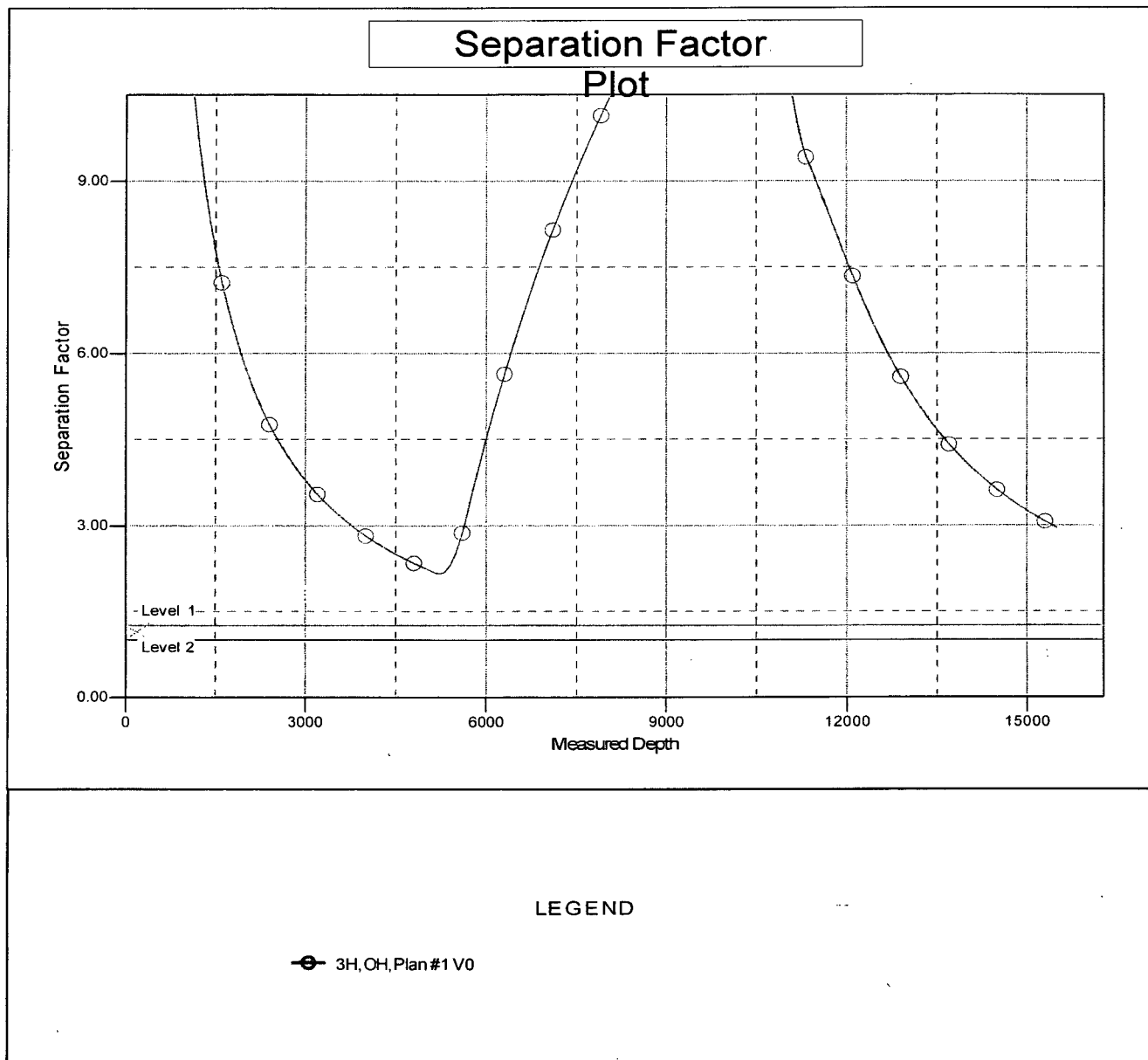
—●— 3H, OH, Plan #1 V0



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well: 9H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3602.1' GE + 25' KB @ 3627.10usft
Reference Site:	Boomsiang 14 Fed	MD Reference:	3602.1' GE + 25' KB @ 3627.10usft
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Reference Wellbore:	OH	Database:	EDM-5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to 3602.1' GE + 25' KB @ 3627.10usft
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 9H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.42°



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