

devon
HOBBS OCD

AUG 18 2016

RECEIVED

Project: Lea County, NM (NAD-83)
Site: Gaucho Unit
Well: 66H
Wellbore: OH
Design: APD Plan #1



Azimuths to Grid North
True North: -0.44°
Magnetic North: 6.71°

Magnetic Field
Strength: 48256.5nT
Dip Angle: 60.30°
Date: 2/5/2016
Model: BGGM2015



DESIGN TARGET DETAILS					
Name	TVD	+N/-S	+E/-W	Northing	Easting
SHL (GU 66H)	0.00	0.00	0.00	504148.32	797363.82
PBHL (GU 66H)	11391.00	-9788.83	586.64	494359.49	797950.46

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	
0.00	0.00	0.00	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	
5700.00	5.00	55.00	5699.37	12.51	17.86	1.00	55.00	-12.08	
10100.00	5.00	55.00	10082.62	232.46	331.99	0.00	0.00	-224.58	
10600.00	0.00	0.00	10581.99	244.97	349.85	1.00	180.00	-236.66	
10803.06	0.00	0.00	10785.05	244.97	349.85	0.00	0.00	-236.66	
11701.07	89.80	178.65	11358.00	-325.83	363.32	10.00	178.65	334.30	
21166.76	89.80	178.65	11391.00	-9788.83	586.64	0.00	0.00	9799.93	

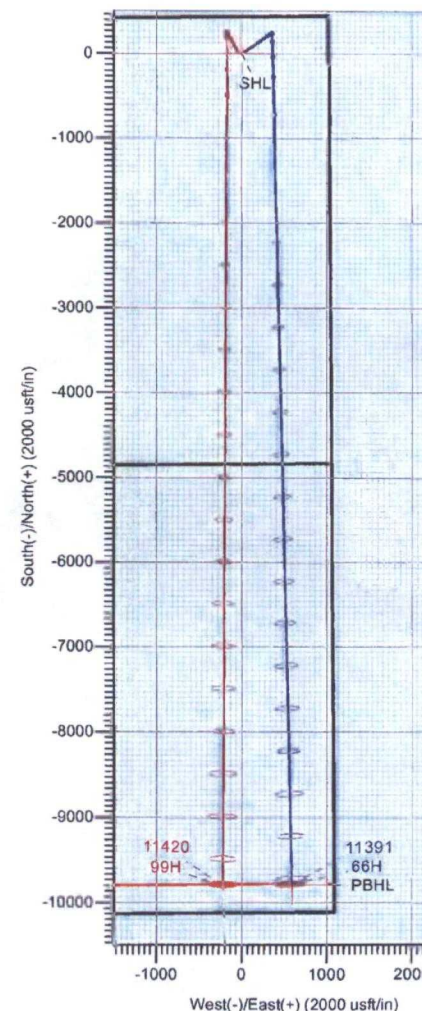
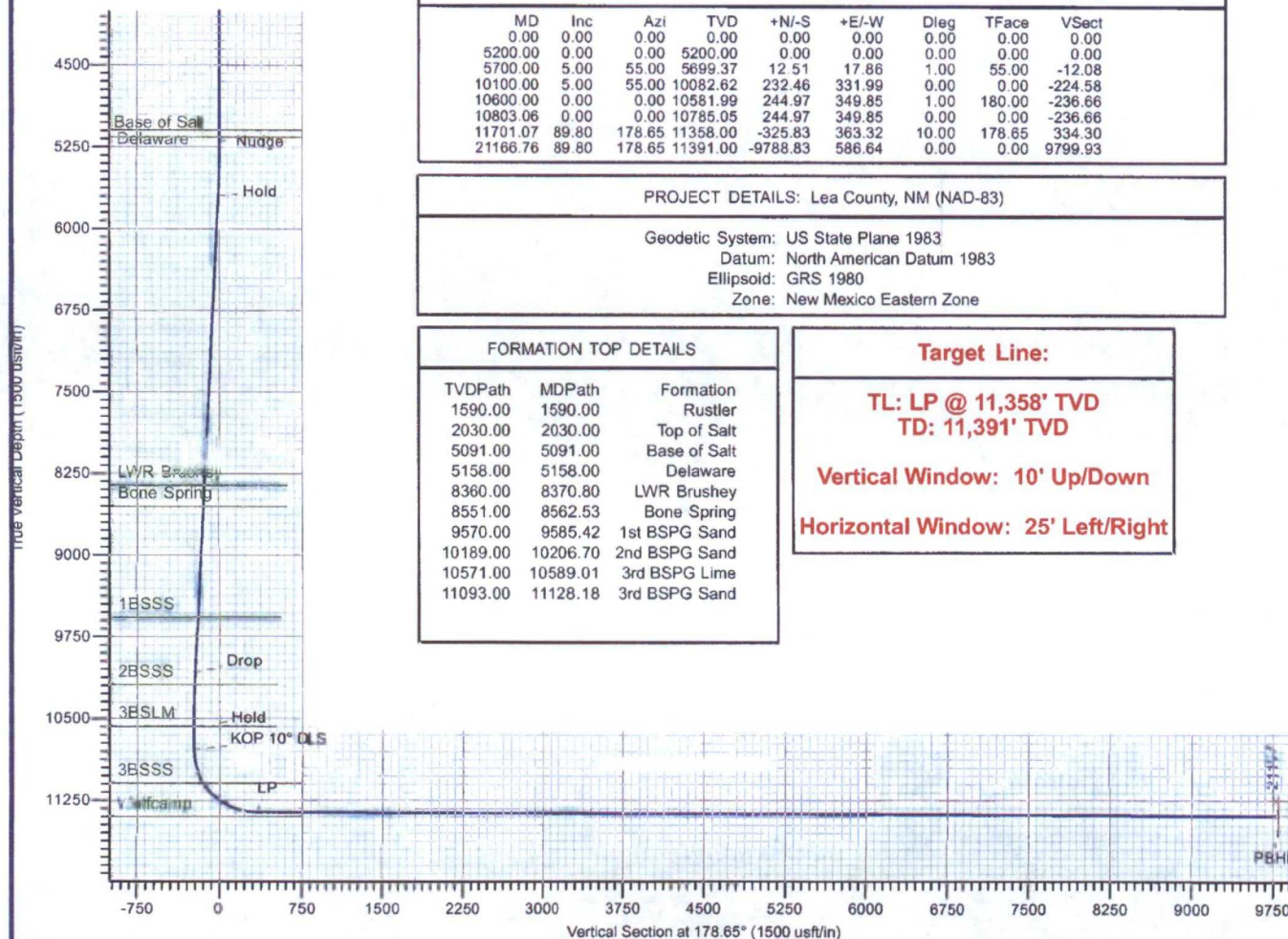
PROJECT DETAILS: Lea County, NM (NAD-83)	
Geodetic System: US State Plane 1983	
Datum: North American Datum 1983	
Ellipsoid: GRS 1980	
Zone: New Mexico Eastern Zone	

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1590.00	1590.00	Rustler
2030.00	2030.00	Top of Salt
5091.00	5091.00	Base of Salt
5158.00	5158.00	Delaware
8360.00	8370.80	LWR Brushey
8551.00	8562.53	Bone Spring
9570.00	9585.42	1st BSPG Sand
10189.00	10206.70	2nd BSPG Sand
10571.00	10589.01	3rd BSPG Lime
11093.00	11128.18	3rd BSPG Sand

Target Line:

TL: LP @ 11,358' TVD
TD: 11,391' TVD

Vertical Window: 10' Up/Down
Horizontal Window: 25' Left/Right



300 - 25.43384

DEVON ENERGY

Lea County, NM (NAD-83)

Gaucho Unit

66H

OH

Plan: APD Plan #1

Standard Planning Report

05 February, 2016

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LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Single User Db
 Company: DEVON ENERGY
 Project: Lea County, NM (NAD-83)
 Site: Gaucho Unit
 Well: 66H
 Wellbore: OH
 Design: APD Plan #1

Local Co-ordinate Reference: Well 66H
 TVD Reference: 3467.1' GE + 23.5' RKB @ 3490.60usft
 MD Reference: 3467.1' GE + 23.5' RKB @ 3490.60usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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	Gaucho Unit						
Site Position:		Northing:	504,450.40 usft	Latitude:	32° 23' 2.539 N		
From:	Map	Easting:	799,049.77 usft	Longitude:	103° 29' 54.548 W		
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.45 °		

Well	66H						
Well Position	+N/-S	-302.08 usft	Northing:	504,148.32 usft	Latitude:	32° 22' 59.680 N	
	+E/-W	-1,685.95 usft	Easting:	797,363.82 usft	Longitude:	103° 30' 14.235 W	
Position Uncertainty	0.00 usft		Wellhead Elevation:	3,490.60 usft	Ground Level:	3,467.10 usft	

Wellbore	OH					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)	
	BGGM2015	2/5/2016	7.16	60.30	48,256	

Design	APD 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	178.65		

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	
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,700.00	5.00	55.00	5,699.37	12.51	17.86	1.00	1.00	0.00	55.00	
10,100.00	5.00	55.00	10,082.62	232.46	331.99	0.00	0.00	0.00	0.00	
10,600.00	0.00	0.00	10,581.99	244.97	349.85	1.00	-1.00	0.00	180.00	
10,803.06	0.00	0.00	10,785.05	244.97	349.85	0.00	0.00	0.00	0.00	
11,701.07	89.80	178.65	11,358.01	-325.83	363.32	10.00	10.00	19.89	178.65	
21,166.76	89.80	178.65	11,391.00	-9,788.83	586.64	0.00	0.00	0.00	0.00	PBHL (GU 66H)

LEAM Drilling Systems LLC

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 Design: APD Plan #1

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 MD Reference: 3467.1' GE + 23.5' RKB @ 3490.60usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHL (GU 66H)									
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
1,590.00	0.00	0.00	1,590.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
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
2,030.00	0.00	0.00	2,030.00	0.00	0.00	0.00	0.00	0.00	0.00
Top of Salt									
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

LEAM Drilling Systems LLC

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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
5,091.00	0.00	0.00	5,091.00	0.00	0.00	0.00	0.00	0.00	0.00
Base of Salt									
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,158.00	0.00	0.00	5,158.00	0.00	0.00	0.00	0.00	0.00	0.00
Delaware									
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
Nudge									
5,300.00	1.00	55.00	5,300.00	0.50	0.71	-0.48	1.00	1.00	0.00
5,400.00	2.00	55.00	5,399.96	2.00	2.86	-1.93	1.00	1.00	0.00
5,500.00	3.00	55.00	5,499.86	4.50	6.43	-4.35	1.00	1.00	0.00
5,600.00	4.00	55.00	5,599.68	8.01	11.43	-7.73	1.00	1.00	0.00
5,700.00	5.00	55.00	5,699.37	12.51	17.86	-12.08	1.00	1.00	0.00
Hold									
5,800.00	5.00	55.00	5,798.99	17.50	25.00	-16.91	0.00	0.00	0.00
5,900.00	5.00	55.00	5,898.60	22.50	32.14	-21.74	0.00	0.00	0.00
6,000.00	5.00	55.00	5,998.22	27.50	39.28	-26.57	0.00	0.00	0.00
6,100.00	5.00	55.00	6,097.84	32.50	46.42	-31.40	0.00	0.00	0.00
6,200.00	5.00	55.00	6,197.46	37.50	53.56	-36.23	0.00	0.00	0.00
6,300.00	5.00	55.00	6,297.08	42.50	60.70	-41.06	0.00	0.00	0.00
6,400.00	5.00	55.00	6,396.70	47.50	67.84	-45.89	0.00	0.00	0.00
6,500.00	5.00	55.00	6,496.32	52.50	74.97	-50.72	0.00	0.00	0.00
6,600.00	5.00	55.00	6,595.94	57.50	82.11	-55.55	0.00	0.00	0.00
6,700.00	5.00	55.00	6,695.56	62.50	89.25	-60.38	0.00	0.00	0.00
6,800.00	5.00	55.00	6,795.18	67.50	96.39	-65.21	0.00	0.00	0.00
6,900.00	5.00	55.00	6,894.80	72.49	103.53	-70.03	0.00	0.00	0.00
7,000.00	5.00	55.00	6,994.42	77.49	110.67	-74.86	0.00	0.00	0.00
7,100.00	5.00	55.00	7,094.04	82.49	117.81	-79.69	0.00	0.00	0.00
7,200.00	5.00	55.00	7,193.66	87.49	124.95	-84.52	0.00	0.00	0.00
7,300.00	5.00	55.00	7,293.28	92.49	132.09	-89.35	0.00	0.00	0.00
7,400.00	5.00	55.00	7,392.90	97.49	139.23	-94.18	0.00	0.00	0.00
7,500.00	5.00	55.00	7,492.52	102.49	146.37	-99.01	0.00	0.00	0.00
7,600.00	5.00	55.00	7,592.14	107.49	153.51	-103.84	0.00	0.00	0.00
7,700.00	5.00	55.00	7,691.76	112.49	160.65	-108.67	0.00	0.00	0.00
7,800.00	5.00	55.00	7,791.37	117.49	167.79	-113.50	0.00	0.00	0.00
7,900.00	5.00	55.00	7,890.99	122.48	174.93	-118.33	0.00	0.00	0.00
8,000.00	5.00	55.00	7,990.61	127.48	182.07	-123.16	0.00	0.00	0.00
8,100.00	5.00	55.00	8,090.23	132.48	189.20	-127.99	0.00	0.00	0.00
8,200.00	5.00	55.00	8,189.85	137.48	196.34	-132.82	0.00	0.00	0.00
8,300.00	5.00	55.00	8,289.47	142.48	203.48	-137.65	0.00	0.00	0.00
8,370.80	5.00	55.00	8,360.00	146.02	208.54	-141.07	0.00	0.00	0.00
LWR Brushey									
8,400.00	5.00	55.00	8,389.09	147.48	210.62	-142.48	0.00	0.00	0.00
8,500.00	5.00	55.00	8,488.71	152.48	217.76	-147.31	0.00	0.00	0.00
8,562.53	5.00	55.00	8,551.00	155.60	222.23	-150.33	0.00	0.00	0.00
Bone Spring									
8,600.00	5.00	55.00	8,588.33	157.48	224.90	-152.14	0.00	0.00	0.00
8,700.00	5.00	55.00	8,687.95	162.48	232.04	-156.97	0.00	0.00	0.00
8,800.00	5.00	55.00	8,787.57	167.48	239.18	-161.79	0.00	0.00	0.00
8,900.00	5.00	55.00	8,887.19	172.48	246.32	-166.62	0.00	0.00	0.00
9,000.00	5.00	55.00	8,986.81	177.47	253.46	-171.45	0.00	0.00	0.00

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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)
9,100.00	5.00	55.00	9,086.43	182.47	260.60	-176.28	0.00	0.00	0.00
9,200.00	5.00	55.00	9,186.05	187.47	267.74	-181.11	0.00	0.00	0.00
9,300.00	5.00	55.00	9,285.67	192.47	274.88	-185.94	0.00	0.00	0.00
9,400.00	5.00	55.00	9,385.29	197.47	282.02	-190.77	0.00	0.00	0.00
9,500.00	5.00	55.00	9,484.91	202.47	289.16	-195.60	0.00	0.00	0.00
9,585.42	5.00	55.00	9,570.00	206.74	295.25	-199.73	0.00	0.00	0.00
1st BSPG Sand									
9,600.00	5.00	55.00	9,584.53	207.47	296.30	-200.43	0.00	0.00	0.00
9,700.00	5.00	55.00	9,684.14	212.47	303.44	-205.26	0.00	0.00	0.00
9,800.00	5.00	55.00	9,783.76	217.47	310.57	-210.09	0.00	0.00	0.00
9,900.00	5.00	55.00	9,883.38	222.47	317.71	-214.92	0.00	0.00	0.00
10,000.00	5.00	55.00	9,983.00	227.46	324.85	-219.75	0.00	0.00	0.00
10,100.00	5.00	55.00	10,082.62	232.46	331.99	-224.58	0.00	0.00	0.00
Drop									
10,200.00	4.00	55.00	10,182.31	236.96	338.42	-228.92	1.00	-1.00	0.00
10,206.70	3.93	55.00	10,189.00	237.23	338.80	-229.18	1.00	-1.00	0.00
2nd BSPG Sand									
10,300.00	3.00	55.00	10,282.13	240.47	343.42	-232.31	1.00	-1.00	0.00
10,400.00	2.00	55.00	10,382.03	242.97	346.99	-234.72	1.00	-1.00	0.00
10,500.00	1.00	55.00	10,481.99	244.47	349.14	-236.18	1.00	-1.00	0.00
10,589.01	0.11	55.00	10,571.00	244.96	349.84	-236.65	1.00	-1.00	0.00
3rd BSPG Lime									
10,600.00	0.00	0.00	10,581.99	244.97	349.85	-236.66	1.00	-1.00	0.00
Hold									
10,700.00	0.00	0.00	10,681.99	244.97	349.85	-236.66	0.00	0.00	0.00
10,803.06	0.00	0.00	10,785.05	244.97	349.85	-236.66	0.00	0.00	0.00
KOP 10° DLS									
10,850.00	4.69	178.65	10,831.94	243.05	349.90	-234.74	10.00	10.00	0.00
10,900.00	9.69	178.65	10,881.53	236.79	350.05	-228.48	10.00	10.00	0.00
10,950.00	14.69	178.65	10,930.38	226.24	350.29	-217.92	10.00	10.00	0.00
11,000.00	19.69	178.65	10,978.13	211.46	350.64	-203.14	10.00	10.00	0.00
11,050.00	24.69	178.65	11,024.41	192.59	351.09	-184.26	10.00	10.00	0.00
11,100.00	29.69	178.65	11,068.87	169.75	351.63	-161.42	10.00	10.00	0.00
11,128.18	32.51	178.65	11,093.00	155.20	351.97	-146.87	10.00	10.00	0.00
3rd BSPG Sand									
11,150.00	34.69	178.65	11,111.17	143.13	352.26	-134.79	10.00	10.00	0.00
11,200.00	39.69	178.65	11,150.99	112.92	352.97	-104.67	10.00	10.00	0.00
11,250.00	44.69	178.65	11,188.02	79.36	353.76	-71.00	10.00	10.00	0.00
11,300.00	49.69	178.65	11,221.99	42.70	354.63	-34.33	10.00	10.00	0.00
11,350.00	54.69	178.65	11,252.63	3.22	355.56	5.16	10.00	10.00	0.00
11,400.00	59.69	178.65	11,279.71	-38.78	356.55	47.17	10.00	10.00	0.00
11,450.00	64.69	178.65	11,303.03	-82.98	357.59	91.38	10.00	10.00	0.00
11,500.00	69.69	178.65	11,322.40	-129.05	358.68	137.46	10.00	10.00	0.00
11,550.00	74.69	178.65	11,337.68	-176.62	359.80	185.05	10.00	10.00	0.00
11,600.00	79.69	178.65	11,348.76	-225.35	360.95	233.79	10.00	10.00	0.00
11,650.00	84.69	178.65	11,355.55	-274.86	362.12	283.31	10.00	10.00	0.00
11,701.07	89.80	178.65	11,358.01	-325.83	363.32	334.30	10.00	10.00	0.00
LP									
11,800.00	89.80	178.65	11,358.35	-424.74	365.66	433.24	0.00	0.00	0.00
11,900.00	89.80	178.65	11,358.70	-524.71	368.02	533.24	0.00	0.00	0.00
12,000.00	89.80	178.65	11,359.05	-624.68	370.38	633.23	0.00	0.00	0.00
12,100.00	89.80	178.65	11,359.40	-724.65	372.73	733.23	0.00	0.00	0.00
12,200.00	89.80	178.65	11,359.74	-824.63	375.09	833.23	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Single User Db
 Company: DEVON ENERGY
 Project: Lea County, NM (NAD-83)
 Site: Gaucho Unit
 Well: 66H
 Wellbore: OH
 Design: APD Plan #1

Local Co-ordinate Reference: Well 66H
 TVD Reference: 3467.1' GE + 23.5' RKB @ 3490.60usft
 MD Reference: 3467.1' GE + 23.5' RKB @ 3490.60usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,300.00	89.80	178.65	11,360.09	-924.60	377.45	933.23	0.00	0.00	0.00
12,400.00	89.80	178.65	11,360.44	-1,024.57	379.81	1,033.23	0.00	0.00	0.00
12,500.00	89.80	178.65	11,360.79	-1,124.54	382.17	1,133.23	0.00	0.00	0.00
12,600.00	89.80	178.65	11,361.14	-1,224.51	384.53	1,233.23	0.00	0.00	0.00
12,700.00	89.80	178.65	11,361.49	-1,324.48	386.89	1,333.23	0.00	0.00	0.00
12,800.00	89.80	178.65	11,361.84	-1,424.45	389.25	1,433.23	0.00	0.00	0.00
12,900.00	89.80	178.65	11,362.18	-1,524.43	391.61	1,533.23	0.00	0.00	0.00
13,000.00	89.80	178.65	11,362.53	-1,624.40	393.97	1,633.23	0.00	0.00	0.00
13,100.00	89.80	178.65	11,362.88	-1,724.37	396.33	1,733.23	0.00	0.00	0.00
13,200.00	89.80	178.65	11,363.23	-1,824.34	398.69	1,833.23	0.00	0.00	0.00
13,300.00	89.80	178.65	11,363.58	-1,924.31	401.05	1,933.23	0.00	0.00	0.00
13,400.00	89.80	178.65	11,363.93	-2,024.28	403.40	2,033.23	0.00	0.00	0.00
13,500.00	89.80	178.65	11,364.28	-2,124.26	405.76	2,133.23	0.00	0.00	0.00
13,600.00	89.80	178.65	11,364.62	-2,224.23	408.12	2,233.22	0.00	0.00	0.00
13,700.00	89.80	178.65	11,364.97	-2,324.20	410.48	2,333.22	0.00	0.00	0.00
13,800.00	89.80	178.65	11,365.32	-2,424.17	412.84	2,433.22	0.00	0.00	0.00
13,900.00	89.80	178.65	11,365.67	-2,524.14	415.20	2,533.22	0.00	0.00	0.00
14,000.00	89.80	178.65	11,366.02	-2,624.11	417.56	2,633.22	0.00	0.00	0.00
14,100.00	89.80	178.65	11,366.37	-2,724.08	419.92	2,733.22	0.00	0.00	0.00
14,200.00	89.80	178.65	11,366.72	-2,824.06	422.28	2,833.22	0.00	0.00	0.00
14,300.00	89.80	178.65	11,367.06	-2,924.03	424.64	2,933.22	0.00	0.00	0.00
14,400.00	89.80	178.65	11,367.41	-3,024.00	427.00	3,033.22	0.00	0.00	0.00
14,500.00	89.80	178.65	11,367.76	-3,123.97	429.36	3,133.22	0.00	0.00	0.00
14,600.00	89.80	178.65	11,368.11	-3,223.94	431.72	3,233.22	0.00	0.00	0.00
14,700.00	89.80	178.65	11,368.46	-3,323.91	434.07	3,333.22	0.00	0.00	0.00
14,800.00	89.80	178.65	11,368.81	-3,423.89	436.43	3,433.22	0.00	0.00	0.00
14,900.00	89.80	178.65	11,369.16	-3,523.86	438.79	3,533.22	0.00	0.00	0.00
15,000.00	89.80	178.65	11,369.50	-3,623.83	441.15	3,633.22	0.00	0.00	0.00
15,100.00	89.80	178.65	11,369.85	-3,723.80	443.51	3,733.22	0.00	0.00	0.00
15,200.00	89.80	178.65	11,370.20	-3,823.77	445.87	3,833.22	0.00	0.00	0.00
15,300.00	89.80	178.65	11,370.55	-3,923.74	448.23	3,933.21	0.00	0.00	0.00
15,400.00	89.80	178.65	11,370.90	-4,023.72	450.59	4,033.21	0.00	0.00	0.00
15,500.00	89.80	178.65	11,371.25	-4,123.69	452.95	4,133.21	0.00	0.00	0.00
15,600.00	89.80	178.65	11,371.60	-4,223.66	455.31	4,233.21	0.00	0.00	0.00
15,700.00	89.80	178.65	11,371.94	-4,323.63	457.67	4,333.21	0.00	0.00	0.00
15,800.00	89.80	178.65	11,372.29	-4,423.60	460.03	4,433.21	0.00	0.00	0.00
15,900.00	89.80	178.65	11,372.64	-4,523.57	462.39	4,533.21	0.00	0.00	0.00
16,000.00	89.80	178.65	11,372.99	-4,623.54	464.74	4,633.21	0.00	0.00	0.00
16,100.00	89.80	178.65	11,373.34	-4,723.52	467.10	4,733.21	0.00	0.00	0.00
16,200.00	89.80	178.65	11,373.69	-4,823.49	469.46	4,833.21	0.00	0.00	0.00
16,300.00	89.80	178.65	11,374.04	-4,923.46	471.82	4,933.21	0.00	0.00	0.00
16,400.00	89.80	178.65	11,374.38	-5,023.43	474.18	5,033.21	0.00	0.00	0.00
16,500.00	89.80	178.65	11,374.73	-5,123.40	476.54	5,133.21	0.00	0.00	0.00
16,600.00	89.80	178.65	11,375.08	-5,223.37	478.90	5,233.21	0.00	0.00	0.00
16,700.00	89.80	178.65	11,375.43	-5,323.35	481.26	5,333.21	0.00	0.00	0.00
16,800.00	89.80	178.65	11,375.78	-5,423.32	483.62	5,433.21	0.00	0.00	0.00
16,900.00	89.80	178.65	11,376.13	-5,523.29	485.98	5,533.20	0.00	0.00	0.00
17,000.00	89.80	178.65	11,376.48	-5,623.26	488.34	5,633.20	0.00	0.00	0.00
17,100.00	89.80	178.65	11,376.82	-5,723.23	490.70	5,733.20	0.00	0.00	0.00
17,200.00	89.80	178.65	11,377.17	-5,823.20	493.06	5,833.20	0.00	0.00	0.00
17,300.00	89.80	178.65	11,377.52	-5,923.17	495.41	5,933.20	0.00	0.00	0.00
17,400.00	89.80	178.65	11,377.87	-6,023.15	497.77	6,033.20	0.00	0.00	0.00
17,500.00	89.80	178.65	11,378.22	-6,123.12	500.13	6,133.20	0.00	0.00	0.00
17,600.00	89.80	178.65	11,378.57	-6,223.09	502.49	6,233.20	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Single User Db
 Company: DEVON ENERGY
 Project: Lea County, NM (NAD-83)
 Site: Gaucho Unit
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 Wellbore: OH
 Design: APD Plan #1

Local Co-ordinate Reference: Well 66H
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 MD Reference: 3467.1' GE + 23.5' RKB @ 3490.60usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
17,700.00	89.80	178.65	11,378.92	-6,323.06	504.85	6,333.20	0.00	0.00	0.00
17,800.00	89.80	178.65	11,379.26	-6,423.03	507.21	6,433.20	0.00	0.00	0.00
17,900.00	89.80	178.65	11,379.61	-6,523.00	509.57	6,533.20	0.00	0.00	0.00
18,000.00	89.80	178.65	11,379.96	-6,622.98	511.93	6,633.20	0.00	0.00	0.00
18,100.00	89.80	178.65	11,380.31	-6,722.95	514.29	6,733.20	0.00	0.00	0.00
18,200.00	89.80	178.65	11,380.66	-6,822.92	516.65	6,833.20	0.00	0.00	0.00
18,300.00	89.80	178.65	11,381.01	-6,922.89	519.01	6,933.20	0.00	0.00	0.00
18,400.00	89.80	178.65	11,381.36	-7,022.86	521.37	7,033.20	0.00	0.00	0.00
18,500.00	89.80	178.65	11,381.70	-7,122.83	523.73	7,133.20	0.00	0.00	0.00
18,600.00	89.80	178.65	11,382.05	-7,222.81	526.08	7,233.19	0.00	0.00	0.00
18,700.00	89.80	178.65	11,382.40	-7,322.78	528.44	7,333.19	0.00	0.00	0.00
18,800.00	89.80	178.65	11,382.75	-7,422.75	530.80	7,433.19	0.00	0.00	0.00
18,900.00	89.80	178.65	11,383.10	-7,522.72	533.16	7,533.19	0.00	0.00	0.00
19,000.00	89.80	178.65	11,383.45	-7,622.69	535.52	7,633.19	0.00	0.00	0.00
19,100.00	89.80	178.65	11,383.80	-7,722.66	537.88	7,733.19	0.00	0.00	0.00
19,200.00	89.80	178.65	11,384.14	-7,822.63	540.24	7,833.19	0.00	0.00	0.00
19,300.00	89.80	178.65	11,384.49	-7,922.61	542.60	7,933.19	0.00	0.00	0.00
19,400.00	89.80	178.65	11,384.84	-8,022.58	544.96	8,033.19	0.00	0.00	0.00
19,500.00	89.80	178.65	11,385.19	-8,122.55	547.32	8,133.19	0.00	0.00	0.00
19,600.00	89.80	178.65	11,385.54	-8,222.52	549.68	8,233.19	0.00	0.00	0.00
19,700.00	89.80	178.65	11,385.89	-8,322.49	552.04	8,333.19	0.00	0.00	0.00
19,800.00	89.80	178.65	11,386.24	-8,422.46	554.40	8,433.19	0.00	0.00	0.00
19,900.00	89.80	178.65	11,386.58	-8,522.44	556.75	8,533.19	0.00	0.00	0.00
20,000.00	89.80	178.65	11,386.93	-8,622.41	559.11	8,633.19	0.00	0.00	0.00
20,100.00	89.80	178.65	11,387.28	-8,722.38	561.47	8,733.19	0.00	0.00	0.00
20,200.00	89.80	178.65	11,387.63	-8,822.35	563.83	8,833.19	0.00	0.00	0.00
20,300.00	89.80	178.65	11,387.98	-8,922.32	566.19	8,933.18	0.00	0.00	0.00
20,400.00	89.80	178.65	11,388.33	-9,022.29	568.55	9,033.18	0.00	0.00	0.00
20,500.00	89.80	178.65	11,388.68	-9,122.26	570.91	9,133.18	0.00	0.00	0.00
20,600.00	89.80	178.65	11,389.02	-9,222.24	573.27	9,233.18	0.00	0.00	0.00
20,700.00	89.80	178.65	11,389.37	-9,322.21	575.63	9,333.18	0.00	0.00	0.00
20,800.00	89.80	178.65	11,389.72	-9,422.18	577.99	9,433.18	0.00	0.00	0.00
20,900.00	89.80	178.65	11,390.07	-9,522.15	580.35	9,533.18	0.00	0.00	0.00
21,000.00	89.80	178.65	11,390.42	-9,622.12	582.71	9,633.18	0.00	0.00	0.00
21,100.00	89.80	178.65	11,390.77	-9,722.09	585.07	9,733.18	0.00	0.00	0.00
21,166.76	89.80	178.65	11,391.00	-9,788.83	586.64	9,799.93	0.00	0.00	0.00

TD - PBHL (GU 66H)

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL (GU 66H) - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	504,148.32	797,363.82	32° 22' 59.680 N	103° 30' 14.235 W
PBHL (GU 66H) - plan hits target center - Point	0.00	0.00	11,391.00	-9,788.83	586.64	494,359.49	797,950.46	32° 21' 22.776 N	103° 30' 8.281 W

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Single User Db
 Company: DEVON ENERGY
 Project: Lea County, NM (NAD-83)
 Site: Gaucho Unit
 Well: 66H
 Wellbore: OH
 Design: APD Plan #1

Local Co-ordinate Reference: Well 66H
 TVD Reference: 3467.1' GE + 23.5' RKB @ 3490.60usft
 MD Reference: 3467.1' GE + 23.5' RKB @ 3490.60usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,590.00	1,590.00	Rustler		0.00	
2,030.00	2,030.00	Top of Salt		0.00	
5,091.00	5,091.00	Base of Salt		0.00	
5,158.00	5,158.00	Delaware		0.00	
8,370.80	8,360.00	LWR Brushey		0.00	
8,562.53	8,551.00	Bone Spring		0.00	
9,585.42	9,570.00	1st BSPG Sand		0.00	
10,206.70	10,189.00	2nd BSPG Sand		0.00	
10,589.01	10,571.00	3rd BSPG Lime		0.00	
11,128.18	11,093.00	3rd BSPG Sand		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
5,700.00	5,699.37	12.51	17.86	Hold
10,100.00	10,082.62	232.46	331.99	Drop
10,600.00	10,581.99	244.97	349.85	Hold
10,803.06	10,785.05	244.97	349.85	KOP 10° DLS
11,701.07	11,358.01	-325.83	363.32	LP
21,166.76	11,391.00	-9,788.83	586.64	TD

DEVON ENERGY

Lea County, NM (NAD-83)

Gaucho Unit

99H

OH

APD Plan #1

Anticollision Report

05 February, 2016

LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3468' GE + 23.5' RKB @ 3491.50usft
Reference Site:	Gaucha Unit	MD Reference:	3468' GE + 23.5' RKB @ 3491.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	99H	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:	APD Plan #1	Offset TVD Reference:	Offset Datum

Reference	APD Plan #1
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method:	MD Interval 100.00usft
Depth Range:	Unlimited
Results Limited by:	Maximum center-center distance of 9,999.98 usft
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	ISCWSA
Scan Method:	Closest Approach 3D
Error Surface:	Elliptical Conic
Casing Method:	Not applied

Survey Tool Program	Date	2/5/2016
From (usft)	To (usft)	Survey (Wellbore)
0.00	21,203.66	APD Plan #1 (OH)
Tool Name	Description	
LEAM MWD-ADJ	MWD - Standard	

Summary	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Site Name						
Offset Well - Wellbore - Design						
Gaucha Unit						
66H - OH - APD Plan #1	5,200.00	5,199.10	50.71	27.62	2.196	CC, ES, SF

Offset Design												Offset Site Error:	0.00 usft
Gaucha Unit - 66H - OH - APD Plan #1												Offset Well Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													
Reference													
Offset													
Semi Major Axis													
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)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	125.67	-29.57	41.20	50.72				
100.00	100.00	99.10	99.10	0.09	0.09	125.67	-29.57	41.20	50.71	50.54	0.17	296.269	
200.00	200.00	199.10	199.10	0.31	0.31	125.67	-29.57	41.20	50.71	50.09	0.62	81.867	
300.00	300.00	299.10	299.10	0.54	0.53	125.67	-29.57	41.20	50.71	49.64	1.07	47.440	
400.00	400.00	399.10	399.10	0.76	0.76	125.67	-29.57	41.20	50.71	49.19	1.52	33.396	
500.00	500.00	499.10	499.10	0.99	0.98	125.67	-29.57	41.20	50.71	48.75	1.97	25.768	
600.00	600.00	599.10	599.10	1.21	1.21	125.67	-29.57	41.20	50.71	48.30	2.42	20.977	
700.00	700.00	699.10	699.10	1.43	1.43	125.67	-29.57	41.20	50.71	47.85	2.87	17.688	
800.00	800.00	799.10	799.10	1.66	1.66	125.67	-29.57	41.20	50.71	47.40	3.32	15.290	
900.00	900.00	899.10	899.10	1.88	1.88	125.67	-29.57	41.20	50.71	46.95	3.77	13.465	
1,000.00	1,000.00	999.10	999.10	2.11	2.11	125.67	-29.57	41.20	50.71	46.50	4.22	12.030	
1,100.00	1,100.00	1,099.10	1,099.10	2.33	2.33	125.67	-29.57	41.20	50.71	46.05	4.67	10.870	
1,200.00	1,200.00	1,199.10	1,199.10	2.56	2.56	125.67	-29.57	41.20	50.71	45.60	5.11	9.915	
1,300.00	1,300.00	1,299.10	1,299.10	2.78	2.78	125.67	-29.57	41.20	50.71	45.15	5.56	9.114	
1,400.00	1,400.00	1,399.10	1,399.10	3.01	3.01	125.67	-29.57	41.20	50.71	44.70	6.01	8.433	
1,500.00	1,500.00	1,499.10	1,499.10	3.23	3.23	125.67	-29.57	41.20	50.71	44.25	6.46	7.846	
1,600.00	1,600.00	1,599.10	1,599.10	3.46	3.46	125.67	-29.57	41.20	50.71	43.80	6.91	7.336	
1,700.00	1,700.00	1,699.10	1,699.10	3.68	3.68	125.67	-29.57	41.20	50.71	43.35	7.36	6.888	
1,800.00	1,800.00	1,799.10	1,799.10	3.91	3.90	125.67	-29.57	41.20	50.71	42.90	7.81	6.492	
1,900.00	1,900.00	1,899.10	1,899.10	4.13	4.13	125.67	-29.57	41.20	50.71	42.45	8.26	6.138	
2,000.00	2,000.00	1,999.10	1,999.10	4.36	4.35	125.67	-29.57	41.20	50.71	42.00	8.71	5.822	
2,100.00	2,100.00	2,099.10	2,099.10	4.58	4.58	125.67	-29.57	41.20	50.71	41.55	9.16	5.536	
2,200.00	2,200.00	2,199.10	2,199.10	4.81	4.80	125.67	-29.57	41.20	50.71	41.10	9.61	5.277	
2,300.00	2,300.00	2,299.10	2,299.10	5.03	5.03	125.67	-29.57	41.20	50.71	40.65	10.06	5.041	
2,400.00	2,400.00	2,399.10	2,399.10	5.26	5.25	125.67	-29.57	41.20	50.71	40.20	10.51	4.826	
2,500.00	2,500.00	2,499.10	2,499.10	5.48	5.48	125.67	-29.57	41.20	50.71	39.75	10.96	4.628	

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
Project: Lea County, NM (NAD-83)
Reference Site: Gaucho Unit
Site Error: 0.00 usft
Reference Well: 99H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: APD Plan #1

Local Co-ordinate Reference: Well 99H
TVD Reference: 3468' GE + 23.5' RKB @ 3491.50usft
MD Reference: 3468' GE + 23.5' RKB @ 3491.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design Gaucho Unit - 66H - OH - APD 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		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)							
2,800.00	2,800.00	2,599.10	2,599.10	5.71	5.70	125.67	-29.57	41.20	50.71	39.30	11.41	4.445			
2,700.00	2,700.00	2,599.10	2,599.10	5.93	5.93	125.67	-29.57	41.20	50.71	38.86	11.86	4.277			
2,800.00	2,800.00	2,799.10	2,799.10	6.15	6.15	125.67	-29.57	41.20	50.71	38.41	12.31	4.121			
2,900.00	2,900.00	2,899.10	2,899.10	6.38	6.38	125.67	-29.57	41.20	50.71	37.96	12.76	3.975			
3,000.00	3,000.00	2,999.10	2,999.10	6.60	6.60	125.67	-29.57	41.20	50.71	37.51	13.21	3.840			
3,100.00	3,100.00	3,099.10	3,099.10	6.83	6.83	125.67	-29.57	41.20	50.71	37.06	13.66	3.714			
3,200.00	3,200.00	3,199.10	3,199.10	7.05	7.05	125.67	-29.57	41.20	50.71	36.61	14.11	3.595			
3,300.00	3,300.00	3,299.10	3,299.10	7.28	7.28	125.67	-29.57	41.20	50.71	36.16	14.55	3.484			
3,400.00	3,400.00	3,399.10	3,399.10	7.50	7.50	125.67	-29.57	41.20	50.71	35.71	15.00	3.380			
3,500.00	3,500.00	3,499.10	3,499.10	7.73	7.73	125.67	-29.57	41.20	50.71	35.26	15.45	3.282			
3,600.00	3,600.00	3,599.10	3,599.10	7.95	7.95	125.67	-29.57	41.20	50.71	34.81	15.90	3.189			
3,700.00	3,700.00	3,699.10	3,699.10	8.18	8.18	125.67	-29.57	41.20	50.71	34.36	16.35	3.101			
3,800.00	3,800.00	3,799.10	3,799.10	8.40	8.40	125.67	-29.57	41.20	50.71	33.91	16.80	3.018			
3,900.00	3,900.00	3,899.10	3,899.10	8.63	8.63	125.67	-29.57	41.20	50.71	33.46	17.25	2.940			
4,000.00	4,000.00	3,999.10	3,999.10	8.85	8.85	125.67	-29.57	41.20	50.71	33.01	17.70	2.865			
4,100.00	4,100.00	4,099.10	4,099.10	9.08	9.07	125.67	-29.57	41.20	50.71	32.56	18.15	2.794			
4,200.00	4,200.00	4,199.10	4,199.10	9.30	9.30	125.67	-29.57	41.20	50.71	32.11	18.60	2.726			
4,300.00	4,300.00	4,299.10	4,299.10	9.53	9.52	125.67	-29.57	41.20	50.71	31.66	19.05	2.662			
4,400.00	4,400.00	4,399.10	4,399.10	9.75	9.75	125.67	-29.57	41.20	50.71	31.21	19.50	2.601			
4,500.00	4,500.00	4,499.10	4,499.10	9.98	9.97	125.67	-29.57	41.20	50.71	30.76	19.95	2.542			
4,600.00	4,600.00	4,599.10	4,599.10	10.20	10.20	125.67	-29.57	41.20	50.71	30.31	20.40	2.486			
4,700.00	4,700.00	4,699.10	4,699.10	10.43	10.42	125.67	-29.57	41.20	50.71	29.86	20.85	2.432			
4,800.00	4,800.00	4,799.10	4,799.10	10.65	10.65	125.67	-29.57	41.20	50.71	29.42	21.30	2.381			
4,900.00	4,900.00	4,899.10	4,899.10	10.87	10.87	125.67	-29.57	41.20	50.71	28.97	21.75	2.332			
5,000.00	5,000.00	4,999.10	4,999.10	11.10	11.10	125.67	-29.57	41.20	50.71	28.52	22.20	2.285			
5,100.00	5,100.00	5,099.10	5,099.10	11.32	11.32	125.67	-29.57	41.20	50.71	28.07	22.65	2.239			
5,200.00	5,200.00	5,199.10	5,199.10	11.55	11.55	125.67	-29.57	41.20	50.71	27.62	23.10	2.196	CC, ES, SF		
5,300.00	5,300.00	5,298.80	5,298.79	11.77	11.77	155.17	-29.08	41.90	51.79	28.26	23.53	2.201			
5,400.00	5,399.96	5,398.41	5,398.37	11.99	11.98	153.77	-27.60	44.01	55.06	31.11	23.96	2.298			
5,500.00	5,499.86	5,497.86	5,497.72	12.22	12.19	151.75	-25.13	47.54	60.58	36.20	24.38	2.485			
5,600.00	5,599.86	5,597.06	5,596.74	12.44	12.41	149.48	-21.88	52.47	68.40	43.80	24.79	2.759			
5,700.00	5,599.37	5,595.93	5,595.31	12.66	12.62	147.21	-17.27	58.77	78.55	53.35	25.20	3.117			
5,800.00	5,798.99	5,795.21	5,794.22	12.89	12.84	145.30	-12.30	65.86	89.97	64.33	25.64	3.509			
5,900.00	5,898.60	5,894.52	5,893.14	13.11	13.06	143.82	-7.34	72.95	101.47	75.39	26.08	3.891			
6,000.00	5,998.22	5,993.83	5,992.07	13.34	13.28	142.84	-2.38	80.04	113.02	86.50	26.52	4.262			
6,100.00	6,097.84	6,093.13	6,091.00	13.57	13.51	141.88	2.59	87.13	124.61	97.65	26.96	4.622			
6,200.00	6,197.46	6,192.44	6,189.93	13.80	13.73	140.88	7.55	94.22	136.22	108.82	27.41	4.971			
6,300.00	6,297.08	6,291.75	6,288.86	14.03	13.96	140.21	12.52	101.31	147.86	120.01	27.85	5.309			
6,400.00	6,396.70	6,391.05	6,387.79	14.27	14.19	139.63	17.48	108.40	159.52	131.22	28.30	5.637			
6,500.00	6,496.32	6,490.36	6,486.72	14.50	14.42	139.14	22.45	115.49	171.19	142.44	28.75	5.954			
6,600.00	6,595.94	6,589.67	6,585.65	14.74	14.65	138.70	27.41	122.58	182.87	153.67	29.20	6.262			
6,700.00	6,695.56	6,688.97	6,684.57	14.98	14.88	138.32	32.37	129.67	194.56	164.91	29.65	6.561			
6,800.00	6,795.18	6,788.28	6,783.50	15.22	15.12	137.99	37.34	136.76	206.26	176.15	30.11	6.850			
6,900.00	6,894.80	6,887.58	6,882.43	15.46	15.35	137.68	42.30	143.85	217.96	187.40	30.57	7.131			
7,000.00	6,994.42	6,986.89	6,981.36	15.70	15.59	137.41	47.27	150.94	229.67	198.65	31.02	7.403			
7,100.00	7,094.04	7,086.20	7,080.29	15.94	15.83	137.17	52.23	158.03	241.38	209.90	31.48	7.667			
7,200.00	7,193.66	7,185.50	7,179.22	16.18	16.06	136.95	57.20	165.12	253.10	221.16	31.94	7.923			
7,300.00	7,293.28	7,284.81	7,278.15	16.42	16.30	136.75	62.16	172.21	264.82	232.42	32.41	8.172			
7,400.00	7,392.90	7,384.12	7,377.07	16.67	16.54	136.56	67.13	179.30	276.55	243.68	32.87	8.414			
7,500.00	7,492.52	7,483.42	7,476.00	16.91	16.78	136.39	72.09	186.39	288.27	254.94	33.33	8.648			
7,600.00	7,592.14	7,582.73	7,574.93	17.16	17.03	136.23	77.05	193.48	300.00	266.20	33.80	8.876			
7,700.00	7,691.76	7,682.04	7,673.86	17.41	17.27	136.09	82.02	200.56	311.73	277.47	34.26	9.096			

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

LEAM Drilling Systems LLC

Anticollision Report

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Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: APD Plan #1

Local Co-ordinate Reference: Well 99H
TVD Reference: 3468' GE + 23.5' RKB @ 3491.50usft
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North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design Gaucho Unit - 66H - OH - APD 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		
7,800.00	7,791.37	7,781.34	7,772.79	17.66	17.51	135.96	86.98	207.85	323.46	288.73	34.73	9.313		
7,900.00	7,890.99	7,880.65	7,871.72	17.90	17.76	135.83	91.95	214.74	335.20	300.00	35.20	9.522		
8,000.00	7,990.81	7,979.96	7,970.65	18.15	18.00	135.71	96.91	221.83	346.93	311.26	35.67	9.726		
8,100.00	8,090.23	8,079.26	8,069.58	18.40	18.25	135.60	101.88	228.92	358.67	322.53	36.14	9.924		
8,200.00	8,189.85	8,178.57	8,168.50	18.65	18.50	135.50	106.84	236.01	370.41	333.80	36.61	10.117		
8,300.00	8,289.54	8,277.94	8,267.50	18.87	18.74	135.39	111.81	243.11	381.53	344.45	37.08	10.290		
8,400.00	8,389.36	8,377.42	8,366.60	19.06	18.99	135.10	116.78	250.21	391.43	353.91	37.51	10.434		
8,500.00	8,489.26	8,476.98	8,465.77	19.25	19.24	134.85	121.78	257.32	400.12	362.17	37.94	10.546		
8,600.00	8,589.22	8,576.58	8,565.00	19.42	19.49	134.03	126.74	264.43	407.63	369.27	38.36	10.626		
8,700.00	8,689.22	8,676.20	8,664.24	19.60	19.74	103.25	131.72	271.54	414.00	375.23	38.77	10.678		
8,800.00	8,789.22	8,775.62	8,763.48	19.79	19.99	102.37	136.70	278.65	419.86	380.66	39.20	10.710		
8,900.00	8,889.22	8,875.44	8,862.72	20.01	20.25	101.51	141.68	285.77	425.83	386.17	39.66	10.738		
9,000.00	8,989.22	8,975.06	8,961.96	20.23	20.50	100.67	146.66	292.88	431.88	391.77	40.11	10.768		
9,100.00	9,089.22	9,074.68	9,061.20	20.44	20.75	99.85	151.64	299.99	438.03	397.47	40.56	10.799		
9,200.00	9,189.22	9,174.30	9,160.44	20.66	21.00	99.06	156.62	307.10	444.26	403.25	41.02	10.831		
9,300.00	9,289.22	9,273.92	9,259.68	20.88	21.26	98.29	161.60	314.22	450.58	409.11	41.47	10.865		
9,400.00	9,389.22	9,373.54	9,358.92	21.10	21.51	97.55	166.58	321.33	456.97	415.05	41.92	10.901		
9,500.00	9,489.22	9,473.16	9,458.16	21.32	21.77	96.82	171.56	328.44	463.44	421.07	42.37	10.937		
9,600.00	9,589.22	9,572.78	9,557.41	21.54	22.02	96.11	176.54	335.55	469.98	427.16	42.83	10.974		
9,700.00	9,689.22	9,672.40	9,656.65	21.76	22.28	95.42	181.52	342.66	476.59	433.32	43.28	11.012		
9,800.00	9,789.22	9,772.02	9,755.89	21.98	22.53	94.75	186.50	349.78	483.27	439.54	43.73	11.051		
9,900.00	9,889.22	9,871.64	9,855.13	22.19	22.79	94.10	191.48	356.89	490.01	445.83	44.18	11.091		
10,000.00	9,989.22	9,971.25	9,954.37	22.41	23.04	93.47	196.46	364.00	496.82	452.19	44.63	11.131		
10,100.00	10,089.22	10,070.87	10,053.61	22.63	23.30	92.85	201.44	371.11	503.68	458.60	45.08	11.172		
10,200.00	10,189.22	10,175.88	10,158.25	22.85	23.55	92.26	206.40	378.20	510.23	464.70	45.53	11.207		
10,300.00	10,289.22	10,283.36	10,265.51	23.07	23.77	91.79	210.38	383.89	515.39	469.44	45.95	11.215		
10,400.00	10,389.22	10,391.06	10,373.09	23.29	23.97	91.46	213.21	387.93	519.07	472.70	46.37	11.194		
10,500.00	10,489.22	10,498.91	10,480.90	23.51	24.17	91.27	214.89	390.32	521.25	474.47	46.78	11.141		
10,600.00	10,589.22	10,606.33	10,588.32	23.73	24.35	91.21	215.40	391.05	521.92	474.72	47.20	11.058		
10,700.00	10,689.22	10,706.33	10,688.32	23.95	24.54	91.21	215.40	391.05	521.92	474.30	47.61	10.961		
10,765.54	10,754.76	10,771.87	10,753.86	24.10	24.68	91.21	215.40	391.05	521.92	474.02	47.90	10.896		
10,800.00	10,789.22	10,806.20	10,788.19	24.17	24.76	91.22	215.39	391.05	521.92	473.87	48.05	10.862		
10,900.00	10,889.01	10,901.89	10,883.39	24.35	24.91	-88.62	206.90	391.25	522.25	473.87	48.38	10.794		
11,000.00	10,986.55	10,996.92	10,975.23	24.47	25.01	-88.13	182.92	391.82	523.09	474.50	48.59	10.766		
11,100.00	11,078.87	11,091.44	11,081.40	24.55	25.08	-87.70	144.37	392.73	524.37	475.65	48.72	10.763		
11,200.00	11,163.18	11,185.58	11,139.78	24.62	25.14	-87.34	92.42	393.95	526.03	477.21	48.82	10.775		
11,300.00	11,236.92	11,279.51	11,208.46	24.69	25.18	-87.06	28.51	395.46	528.03	479.08	48.94	10.788		
11,400.00	11,297.83	11,373.37	11,285.74	24.75	25.24	-86.86	-45.69	397.21	530.28	481.13	49.16	10.788		
11,500.00	11,344.07	11,467.32	11,310.19	24.88	25.34	-86.76	-128.31	399.16	532.74	483.23	49.51	10.760		
11,600.00	11,374.24	11,561.51	11,340.61	25.18	25.53	-86.74	-217.32	401.26	535.32	485.27	50.05	10.696		
11,700.00	11,387.42	11,656.10	11,356.08	25.58	25.84	-86.82	-310.50	403.46	537.96	487.17	50.79	10.592		
11,800.00	11,388.27	11,753.70	11,358.19	26.08	26.29	-86.91	-408.02	405.76	540.75	488.99	51.75	10.448		
11,900.00	11,388.62	11,853.66	11,358.54	26.70	26.87	-86.93	-507.95	408.12	543.61	490.67	52.94	10.268		
12,000.00	11,388.96	11,953.62	11,358.89	27.43	27.56	-86.94	-607.88	410.48	546.48	492.12	54.36	10.054		
12,100.00	11,389.31	12,053.58	11,359.23	28.25	28.35	-86.96	-707.81	412.84	549.34	493.37	55.97	9.815		
12,200.00	11,389.66	12,153.53	11,359.58	29.16	29.24	-86.98	-807.74	415.20	552.21	494.43	57.77	9.559		
12,300.00	11,390.01	12,253.49	11,359.93	30.16	30.21	-86.99	-907.67	417.56	555.07	495.33	59.74	9.291		
12,400.00	11,390.36	12,353.45	11,360.28	31.23	31.25	-87.01	-1,007.60	419.91	557.94	496.07	61.87	9.018		
12,500.00	11,390.70	12,453.41	11,360.63	32.37	32.37	-87.02	-1,107.53	422.27	560.80	496.67	64.13	8.745		
12,600.00	11,391.05	12,553.37	11,360.98	33.57	33.55	-87.04	-1,207.46	424.63	563.67	497.15	66.52	8.474		
12,700.00	11,391.40	12,653.33	11,361.32	34.83	34.79	-87.05	-1,307.39	426.99	566.53	497.51	69.02	8.209		
12,800.00	11,391.75	12,753.29	11,361.67	36.13	36.08	-87.07	-1,407.32	429.35	569.40	497.78	71.62	7.951		

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
Project: Lea County, NM (NAD-83)
Reference Site: Gaucho Unit
Site Error: 0.00 usft
Reference Well: 99H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: APD Plan #1

Local Co-ordinate Reference: Well 99H
TVD Reference: 3468' GE + 23.5' RKB @ 3491.50usft
MD Reference: 3468' GE + 23.5' RKB @ 3491.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design Gaucho Unit - 66H - OH - APD Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error:	0.00 usft
Reference				Offset			Distance							
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	
12,900.00	11,392.10	12,853.25	11,362.02	37.48	37.41	-87.08	-1,507.25	431.71	572.26	497.96	74.30	7.702		
13,000.00	11,392.44	12,953.20	11,362.37	38.87	38.79	-87.10	-1,607.19	434.06	575.13	498.05	77.07	7.462		
13,100.00	11,392.79	13,053.16	11,362.72	40.29	40.20	-87.11	-1,707.12	436.42	577.99	498.08	79.91	7.233		
13,200.00	11,393.14	13,153.12	11,363.07	41.74	41.64	-87.13	-1,807.05	438.78	580.86	498.04	82.82	7.014		
13,300.00	11,393.49	13,253.08	11,363.42	43.22	43.12	-87.14	-1,906.98	441.14	583.72	497.94	85.78	6.805		
13,400.00	11,393.84	13,353.04	11,363.76	44.73	44.62	-87.15	-2,006.91	443.50	586.59	497.80	88.79	6.606		
13,500.00	11,394.18	13,453.00	11,364.11	46.26	46.14	-87.17	-2,106.84	445.85	589.45	497.80	91.85	6.417		
13,600.00	11,394.53	13,552.96	11,364.46	47.81	47.69	-87.18	-2,206.77	448.21	592.32	497.36	94.96	6.238		
13,700.00	11,394.88	13,652.92	11,364.81	49.38	49.25	-87.20	-2,306.70	450.57	595.18	497.09	98.10	6.067		
13,800.00	11,395.23	13,752.88	11,365.16	50.96	50.84	-87.21	-2,406.63	452.93	598.05	496.77	101.27	5.905		
13,900.00	11,395.58	13,852.83	11,365.51	52.57	52.44	-87.22	-2,506.56	455.29	600.91	496.43	104.48	5.751		
14,000.00	11,395.92	13,952.79	11,365.85	54.18	54.05	-87.24	-2,606.49	457.65	603.78	496.06	107.72	5.605		
14,100.00	11,396.27	14,052.75	11,366.20	55.81	55.68	-87.25	-2,706.42	460.00	606.64	495.56	110.98	5.466		
14,200.00	11,396.62	14,152.71	11,366.55	57.46	57.33	-87.26	-2,806.35	462.36	609.51	495.24	114.27	5.334		
14,300.00	11,396.97	14,252.67	11,366.90	59.11	58.98	-87.27	-2,906.28	464.72	612.38	494.80	117.58	5.208		
14,400.00	11,397.32	14,352.63	11,367.25	60.77	60.64	-87.29	-3,006.21	467.08	615.24	494.34	120.91	5.089		
14,500.00	11,397.67	14,452.59	11,367.60	62.44	62.32	-87.30	-3,106.14	469.44	618.11	493.85	124.25	4.975		
14,600.00	11,398.01	14,552.55	11,367.94	64.12	64.00	-87.31	-3,206.07	471.80	620.97	493.35	127.62	4.866		
14,700.00	11,398.36	14,652.50	11,368.29	65.81	65.69	-87.32	-3,306.00	474.15	623.84	492.84	131.00	4.762		
14,800.00	11,398.71	14,752.46	11,368.64	67.50	67.39	-87.34	-3,405.93	476.51	626.70	492.31	134.39	4.663		
14,900.00	11,399.06	14,852.42	11,368.99	69.21	69.09	-87.35	-3,505.86	478.87	629.57	491.77	137.80	4.569		
15,000.00	11,399.41	14,952.38	11,369.34	70.91	70.80	-87.36	-3,605.79	481.23	632.43	491.21	141.22	4.478		
15,100.00	11,399.75	15,052.34	11,369.69	72.63	72.52	-87.37	-3,705.72	483.59	635.30	490.64	144.66	4.392		
15,200.00	11,400.10	15,152.30	11,370.04	74.35	74.24	-87.39	-3,805.65	485.95	638.17	490.06	148.10	4.309		
15,300.00	11,400.45	15,252.26	11,370.38	76.07	75.97	-87.40	-3,905.58	488.30	641.03	489.48	151.56	4.230		
15,400.00	11,400.80	15,352.22	11,370.73	77.80	77.70	-87.41	-4,005.52	490.66	643.90	488.88	155.02	4.154		
15,500.00	11,401.15	15,452.18	11,371.08	79.53	79.44	-87.42	-4,105.45	493.02	646.76	488.27	158.49	4.081		
15,600.00	11,401.49	15,552.13	11,371.43	81.27	81.18	-87.43	-4,205.38	495.38	649.63	487.66	161.97	4.011		
15,700.00	11,401.84	15,652.09	11,371.78	83.01	82.93	-87.44	-4,305.31	497.74	652.50	487.03	165.46	3.944		
15,800.00	11,402.19	15,752.05	11,372.13	84.76	84.68	-87.45	-4,405.24	500.09	655.38	486.41	168.96	3.879		
15,900.00	11,402.54	15,852.01	11,372.47	86.51	86.43	-87.47	-4,505.17	502.45	658.23	485.77	172.46	3.817		
16,000.00	11,402.89	15,951.97	11,372.82	88.26	88.19	-87.48	-4,605.10	504.81	661.09	485.13	175.97	3.757		
16,100.00	11,403.23	16,051.93	11,373.17	90.01	89.95	-87.49	-4,705.03	507.17	663.96	484.48	179.48	3.699		
16,200.00	11,403.58	16,151.89	11,373.52	91.77	91.71	-87.50	-4,804.96	509.53	666.83	483.82	183.00	3.644		
16,300.00	11,403.93	16,251.85	11,373.87	93.53	93.48	-87.51	-4,904.89	511.89	669.69	483.16	186.53	3.590		
16,400.00	11,404.28	16,351.81	11,374.22	95.29	95.25	-87.52	-5,004.82	514.24	672.56	482.50	190.06	3.539		
16,500.00	11,404.63	16,451.76	11,374.56	97.06	97.02	-87.53	-5,104.75	516.60	675.42	481.83	193.60	3.489		
16,600.00	11,404.97	16,551.72	11,374.91	98.82	98.79	-87.54	-5,204.68	518.96	678.29	481.15	197.14	3.441		
16,700.00	11,405.32	16,651.68	11,375.26	100.59	100.56	-87.55	-5,304.61	521.32	681.16	480.47	200.68	3.394		
16,800.00	11,405.67	16,751.64	11,375.61	102.36	102.34	-87.56	-5,404.54	523.68	684.02	479.79	204.23	3.349		
16,900.00	11,406.02	16,851.60	11,375.96	104.14	104.12	-87.57	-5,504.47	526.04	686.89	479.10	207.78	3.306		
17,000.00	11,406.37	16,951.56	11,376.31	105.91	105.90	-87.58	-5,604.40	528.39	689.76	478.41	211.34	3.264		
17,100.00	11,406.71	17,051.52	11,376.66	107.69	107.69	-87.59	-5,704.33	530.75	692.62	477.72	214.90	3.223		
17,200.00	11,407.06	17,151.48	11,377.00	109.47	109.47	-87.60	-5,804.26	533.11	695.49	477.02	218.46	3.184		
17,300.00	11,407.41	17,251.43	11,377.35	111.25	111.26	-87.61	-5,904.19	535.47	698.35	476.32	222.03	3.145		
17,400.00	11,407.76	17,351.39	11,377.70	113.03	113.04	-87.62	-6,004.12	537.83	701.22	475.62	225.60	3.108		
17,500.00	11,408.11	17,451.35	11,378.05	114.81	114.83	-87.63	-6,104.05	540.19	704.09	474.91	229.17	3.072		
17,600.00	11,408.45	17,551.31	11,378.40	116.60	116.63	-87.64	-6,203.98	542.54	706.95	474.21	232.75	3.037		
17,700.00	11,408.80	17,651.27	11,378.75	118.38	118.42	-87.65	-6,303.91	544.90	709.82	473.49	236.33	3.004		
17,800.00	11,409.15	17,751.23	11,379.09	120.17	120.21	-87.66	-6,403.85	547.26	712.69	472.78	239.91	2.971		
17,900.00	11,409.50	17,851.19	11,379.44	121.96	122.01	-87.67	-6,503.78	549.62	715.55	472.06	243.49	2.939		
18,000.00	11,409.85	17,951.15	11,379.79	123.74	123.80	-87.68	-6,603.71	551.98	718.42	471.35	247.07	2.908		

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3468' GE + 23.5' RKB @ 3491.50usft
Reference Site:	Gaucha Unit	MD Reference:	3468' GE + 23.5' RKB @ 3491.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	99H	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:	APD Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Gaucha Unit - 66H - OH - APD 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		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)				Between Centres (usft)	Between Ellipses (usft)	
18,100.00	11,410.19	18,051.11	11,380.14	125.54	125.60	-87.69	-6,703.64	554.33	721.29	470.62	250.66	2.878		
18,200.00	11,410.54	18,151.06	11,380.49	127.33	127.40	-87.70	-6,803.57	556.69	724.15	469.90	254.25	2.848		
18,300.00	11,410.89	18,251.02	11,380.84	129.12	129.20	-87.71	-6,903.50	559.05	727.02	469.18	257.84	2.820		
18,400.00	11,411.24	18,350.98	11,381.19	130.91	131.00	-87.72	-7,003.43	561.41	729.89	468.45	261.43	2.792		
18,500.00	11,411.59	18,450.94	11,381.53	132.71	132.80	-87.72	-7,103.36	563.77	732.75	467.72	265.03	2.765		
18,600.00	11,411.94	18,550.90	11,381.88	134.50	134.60	-87.73	-7,203.29	566.13	735.62	466.99	268.63	2.738		
18,700.00	11,412.28	18,650.86	11,382.23	136.30	136.40	-87.74	-7,303.22	568.48	738.49	466.26	272.23	2.713		
18,800.00	11,412.63	18,750.82	11,382.58	138.09	138.21	-87.75	-7,403.15	570.84	741.35	465.53	275.83	2.688		
18,900.00	11,412.98	18,850.78	11,382.93	139.89	140.01	-87.76	-7,503.08	573.20	744.22	464.79	279.43	2.663		
19,000.00	11,413.33	18,950.74	11,383.28	141.69	141.82	-87.77	-7,603.01	575.56	747.09	464.05	283.03	2.640		
19,100.00	11,413.68	19,050.69	11,383.62	143.49	143.62	-87.78	-7,702.94	577.92	749.95	463.32	286.64	2.616		
19,200.00	11,414.02	19,150.65	11,383.97	145.29	145.43	-87.79	-7,802.87	580.28	752.82	462.58	290.24	2.594		
19,300.00	11,414.37	19,250.61	11,384.32	147.09	147.24	-87.79	-7,902.80	582.63	755.69	461.84	293.85	2.572		
19,400.00	11,414.72	19,350.57	11,384.67	148.89	149.05	-87.80	-8,002.73	584.99	758.55	461.09	297.46	2.550		
19,500.00	11,415.07	19,450.53	11,385.02	150.69	150.85	-87.81	-8,102.66	587.35	761.42	460.35	301.07	2.529		
19,600.00	11,415.42	19,550.49	11,385.37	152.49	152.66	-87.82	-8,202.59	589.71	764.29	459.61	304.68	2.508		
19,700.00	11,415.76	19,650.45	11,385.71	154.30	154.47	-87.83	-8,302.52	592.07	767.15	458.86	308.29	2.488		
19,800.00	11,416.11	19,750.41	11,386.06	156.10	156.29	-87.84	-8,402.45	594.43	770.02	458.11	311.91	2.469		
19,900.00	11,416.46	19,850.36	11,386.41	157.90	158.10	-87.84	-8,502.38	596.78	772.89	457.36	315.52	2.450		
20,000.00	11,416.81	19,950.32	11,386.76	159.71	159.91	-87.85	-8,602.31	599.14	775.75	456.62	319.14	2.431		
20,100.00	11,417.16	20,050.28	11,387.11	161.51	161.72	-87.86	-8,702.24	601.50	778.62	455.87	322.75	2.412		
20,200.00	11,417.50	20,150.24	11,387.46	163.32	163.53	-87.87	-8,802.18	603.86	781.49	455.11	326.37	2.394		
20,300.00	11,417.85	20,250.20	11,387.81	165.12	165.35	-87.88	-8,902.11	606.22	784.35	454.36	329.99	2.377		
20,400.00	11,418.20	20,350.16	11,388.15	166.93	167.16	-87.88	-9,002.04	608.57	787.22	453.61	333.61	2.360		
20,500.00	11,418.55	20,450.12	11,388.50	168.74	168.98	-87.89	-9,101.97	610.93	790.09	452.86	337.23	2.343		
20,600.00	11,418.90	20,550.08	11,388.85	170.54	170.79	-87.90	-9,201.90	613.29	792.95	452.10	340.85	2.326		
20,700.00	11,419.24	20,650.04	11,389.20	172.35	172.61	-87.91	-9,301.83	615.65	795.82	451.35	344.47	2.310		
20,800.00	11,419.59	20,749.99	11,389.55	174.16	174.42	-87.91	-9,401.76	618.01	798.69	450.59	348.10	2.294		
20,900.00	11,419.94	20,849.95	11,389.90	175.97	176.24	-87.92	-9,501.69	620.37	801.55	449.83	351.72	2.279		
21,000.00	11,420.29	20,949.91	11,390.24	177.78	178.05	-87.93	-9,601.62	622.72	804.42	449.07	355.35	2.264		
21,100.00	11,420.64	21,049.87	11,390.59	179.59	179.87	-87.94	-9,701.55	625.08	807.29	448.32	358.97	2.249		
21,200.00	11,420.98	21,149.83	11,390.94	181.06	181.69	-87.94	-9,801.48	627.44	810.16	447.59	362.59	2.236		
21,204.49	11,421.00	21,154.32	11,390.96	181.13	181.77	-87.94	-9,805.97	627.55	810.28	447.87	362.41	2.236		

LEAM Drilling Systems LLC

Anticollision Report

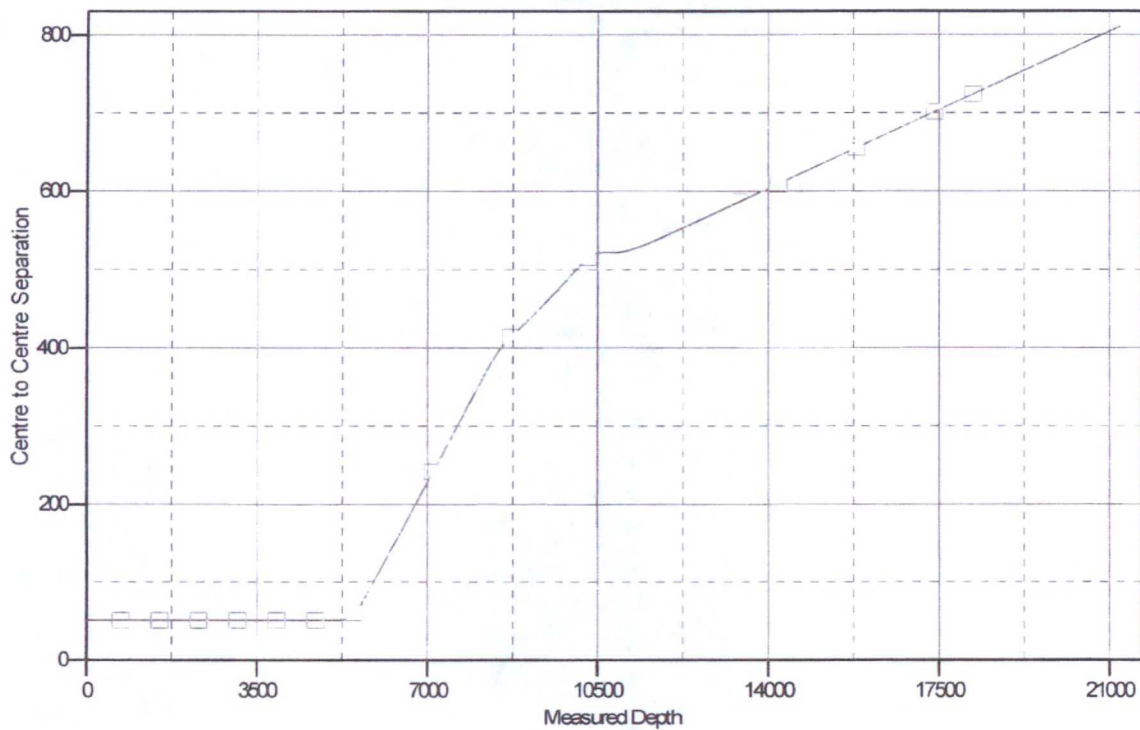
Company: DEVON ENERGY
Project: Lea County, NM (NAD-83)
Reference Site: Gaucho Unit
Site Error: 0.00 usft
Reference Well: 99H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: APD Plan #1

Local Co-ordinate Reference: Well 99H
TVD Reference: 3468' GE + 23.5' RKB @ 3491.50usft
MD Reference: 3468' GE + 23.5' RKB @ 3491.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Reference Depths are relative to 3468' GE + 23.5' RKB @ 3491.50usft
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 99H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.44°

Ladder Plot



LEGEND

66H, OH, APD Plan #1 V0

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
Project: Lea County, NM (NAD-83)
Reference Site: Gaucho Unit
Site Error: 0.00 usft
Reference Well: 99H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: APD Plan #1

Local Co-ordinate Reference: Well 99H
TVD Reference: 3468' GE + 23.5' RKB @ 3491.50usft
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Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Reference Depths are relative to 3468' GE + 23.5' RKB @ 3491.50usft
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 99H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.44°

