

DEVON ENERGY

Project: Eddy County, NM (NAD-83)
Site: Cotton Draw Unit
Well: 215H
Wellbore: OH
Design: Plan #1



Azimuths to Grid North
True North: -0.32°
Magnetic North: 7.09°

Magnetic Field
Strength: 48368.6snT
Dip Angle: 60.07°
Date: 06/26/2013
Model: IGRF2010

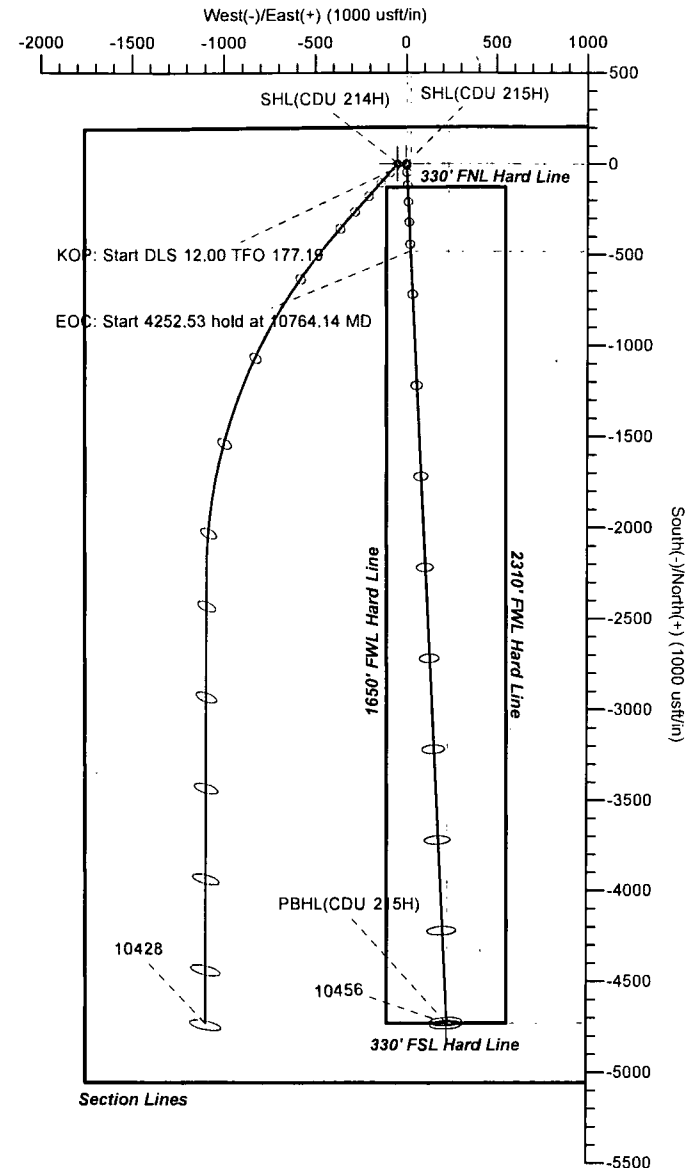
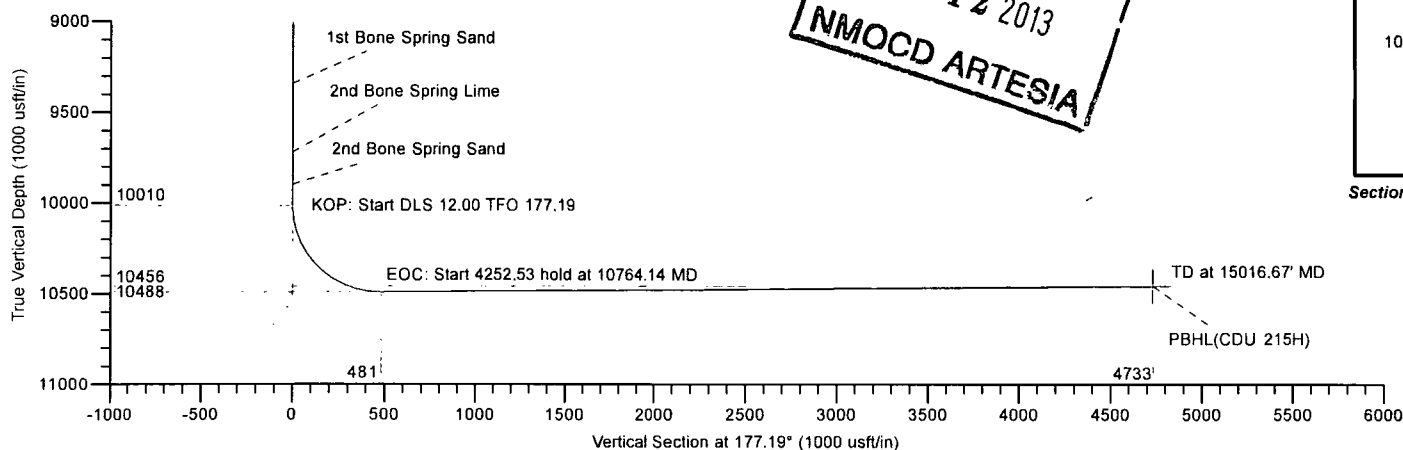
devon

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL(CDU 215H)	0.00	0.00	0.00	429929.79	726651.23 32° 10' 49.931 N	103° 44' 3.668 W	
PBHL(CDU 215H)	10456.00	-4727.78	231.84	425202.01	726883.07 32° 10' 3.134 N	103° 44' 1.277 W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSecl	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	10010.55	0.00	0.00	10010.55	0.00	0.00	0.00	0.00	0.00	KOP: Start DLS 12.00 TFO 177.19
3	10764.14	90.43	177.19	10488.00	-480.48	23.56	12.00	177.19	481.06	EOC: Start 4252.53 hold at 10764.14 MD
4	15016.67	90.43	177.19	10456.00	-4727.78	231.84	0.00	0.00	4733.46	TD at 15016.67 MD



30-015-41534



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

Plan: Plan #1 (215H/OH)
Cotton Draw Unit
Created By: Tyler Carlson Date: 16:00, June 26 2013
Date: _____
Approved: _____ Date: _____

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db.	Local Co-ordinate Reference:	Well 215H
Company:	DEVON ENERGY	TVD Reference:	GE3508' + KB 28' @ 3536.00usft (Cactus 105)
Project:	Eddy County, NM (NAD-83)	MD Reference:	GE3508' + KB 28' @ 3536.00usft (Cactus 105)
Site:	Cotton Draw Unit	North Reference:	Grid
Well:	215H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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

Site	Cotton Draw Unit		
Site Position:	From: Map	Northing: 419,194.51 usft	Latitude: 32° 9' 3.901 N
		Easting: 722,955.98 usft	Longitude: 103° 44' 47.345 W
Position Uncertainty:	0.00 usft	Slot Radius: 13-3/16 "	Grid Convergence: 0.31 °

Well	215H		
Well Position	+N/-S 10,735.28 usft	Northing: 429,929.79 usft	Latitude: 32° 10' 49.931 N
	+E/-W 3,695.25 usft	Easting: 726,651.23 usft	Longitude: 103° 44' 3.668 W
Position Uncertainty	0.00 usft	Wellhead Elevation:	Ground Level: 3,508.00 usft

Wellbore:	OH		
Magnetics	Model Name:	Sample Date	Declination (°)
	IGRF2010	06/26/13	7.41
			Dip Angle (°)
			60.07
			Field Strength (nT)
			48,369

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.00	0.00	0.00
			Direction (°)
			177.19

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	
10,010.55	0.00	0.00	10,010.55	0.00	0.00	0.00	0.00	0.00	0.00	
10,764.14	90.43	177.19	10,488.00	-480.48	23.56	12.00	12.00	23.51	177.19	
15,016.67	90.43	177.19	10,456.00	-4,727.78	231.84	0.00	0.00	0.00	0.00	PBHL(CDU 215H)

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Project:	Eddy County, NM (NAD-83)	MD Reference:	GE3508' + KB 28' @ 3536.00usft (Cactus 105)
Site:	Cotton Draw Unit	North Reference:	Grid
Well:	215H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
602.00	0.00	0.00	602.00	0.00	0.00	0.00	0.00	0.00	0.00
RUSTLER									
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
997.00	0.00	0.00	997.00	0.00	0.00	0.00	0.00	0.00	0.00
TOP SALT									
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,803.00	0.00	0.00	2,803.00	0.00	0.00	0.00	0.00	0.00	0.00
CASTILE									
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
4,410.00	0.00	0.00	4,410.00	0.00	0.00	0.00	0.00	0.00	0.00

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Well:	215H	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)
Bell Canyon									
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,299.00	0.00	0.00	5,299.00	0.00	0.00	0.00	0.00	0.00	0.00
Cherry Canyon									
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,624.00	0.00	0.00	6,624.00	0.00	0.00	0.00	0.00	0.00	0.00
Brushy Canyon									
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00
8,206.00	0.00	0.00	8,206.00	0.00	0.00	0.00	0.00	0.00	0.00
1st Bone Spring Lime									
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	0.00	0.00
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00	0.00	0.00

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8,900.00	0.00	0.00	8,900.00	0.00	0.00	0.00	0.00	0.00	0.00
9,000.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00	0.00	0.00
9,100.00	0.00	0.00	9,100.00	0.00	0.00	0.00	0.00	0.00	0.00
9,200.00	0.00	0.00	9,200.00	0.00	0.00	0.00	0.00	0.00	0.00
9,300.00	0.00	0.00	9,300.00	0.00	0.00	0.00	0.00	0.00	0.00
9,337.00	0.00	0.00	9,337.00	0.00	0.00	0.00	0.00	0.00	0.00
1st Bone Spring Sand									
9,400.00	0.00	0.00	9,400.00	0.00	0.00	0.00	0.00	0.00	0.00
9,500.00	0.00	0.00	9,500.00	0.00	0.00	0.00	0.00	0.00	0.00
9,600.00	0.00	0.00	9,600.00	0.00	0.00	0.00	0.00	0.00	0.00
9,700.00	0.00	0.00	9,700.00	0.00	0.00	0.00	0.00	0.00	0.00
9,714.00	0.00	0.00	9,714.00	0.00	0.00	0.00	0.00	0.00	0.00
2nd Bone Spring Lime									
9,800.00	0.00	0.00	9,800.00	0.00	0.00	0.00	0.00	0.00	0.00
9,893.00	0.00	0.00	9,893.00	0.00	0.00	0.00	0.00	0.00	0.00
2nd Bone Spring Sand									
9,900.00	0.00	0.00	9,900.00	0.00	0.00	0.00	0.00	0.00	0.00
10,000.00	0.00	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00
10,010.55	0.00	0.00	10,010.55	0.00	0.00	0.00	0.00	0.00	0.00
KOP: Start DLS 12.00 TFO 177.19									
10,025.00	1.73	177.19	10,025.00	-0.22	0.01	0.22	12.00	12.00	0.00
10,050.00	4.73	177.19	10,049.96	-1.63	0.08	1.63	12.00	12.00	0.00
10,075.00	7.73	177.19	10,074.80	-4.34	0.21	4.34	12.00	12.00	0.00
10,100.00	10.73	177.19	10,099.48	-8.34	0.41	8.35	12.00	12.00	0.00
10,125.00	13.73	177.19	10,123.91	-13.64	0.67	13.65	12.00	12.00	0.00
10,150.00	16.73	177.19	10,148.03	-20.20	0.99	20.22	12.00	12.00	0.00
10,175.00	19.73	177.19	10,171.77	-28.01	1.37	28.04	12.00	12.00	0.00
10,200.00	22.73	177.19	10,195.07	-37.05	1.82	37.09	12.00	12.00	0.00
10,225.00	25.73	177.19	10,217.86	-47.30	2.32	47.36	12.00	12.00	0.00
10,250.00	28.73	177.19	10,240.09	-58.72	2.88	58.79	12.00	12.00	0.00
10,275.00	31.73	177.19	10,261.69	-71.30	3.50	71.38	12.00	12.00	0.00
10,300.00	34.73	177.19	10,282.59	-84.98	4.17	85.08	12.00	12.00	0.00
10,325.00	37.73	177.19	10,302.76	-99.74	4.89	99.86	12.00	12.00	0.00
10,350.00	40.73	177.19	10,322.12	-115.53	5.67	115.67	12.00	12.00	0.00
10,375.00	43.73	177.19	10,340.63	-132.31	6.49	132.47	12.00	12.00	0.00
10,400.00	46.73	177.19	10,358.23	-150.04	7.36	150.22	12.00	12.00	0.00
10,425.00	49.73	177.19	10,374.88	-168.66	8.27	168.86	12.00	12.00	0.00
10,450.00	52.73	177.19	10,390.53	-188.13	9.23	188.35	12.00	12.00	0.00
10,475.00	55.73	177.19	10,405.14	-208.38	10.22	208.64	12.00	12.00	0.00
10,500.00	58.73	177.19	10,418.67	-229.38	11.25	229.65	12.00	12.00	0.00
10,525.00	61.73	177.19	10,431.08	-251.05	12.31	251.35	12.00	12.00	0.00
10,550.00	64.73	177.19	10,442.34	-273.34	13.40	273.67	12.00	12.00	0.00
10,575.00	67.73	177.19	10,452.41	-296.19	14.52	296.55	12.00	12.00	0.00
10,600.00	70.73	177.19	10,461.28	-319.54	15.67	319.92	12.00	12.00	0.00
10,625.00	73.73	177.19	10,468.90	-343.32	16.84	343.73	12.00	12.00	0.00
10,650.00	76.73	177.19	10,475.27	-367.46	18.02	367.90	12.00	12.00	0.00
10,675.00	79.73	177.19	10,480.37	-391.90	19.22	392.37	12.00	12.00	0.00
10,700.00	82.73	177.19	10,484.18	-416.58	20.43	417.08	12.00	12.00	0.00
10,725.00	85.73	177.19	10,486.69	-441.42	21.65	441.95	12.00	12.00	0.00
10,750.00	88.73	177.19	10,487.90	-466.36	22.87	466.92	12.00	12.00	0.00
10,764.14	90.43	177.19	10,488.00	-480.48	23.56	481.06	12.00	12.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 215H
Company:	DEVON ENERGY	TVD Reference:	GE3508' + KB 28' @ 3536.00usft (Cactus 105)
Project:	Eddy County, NM (NAD-83)	MD Reference:	GE3508' + KB 28' @ 3536.00usft (Cactus 105)
Site:	Cotton Draw Unit	North Reference:	Grid
Well:	215H	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)
EOC: Start 4252.53 hold at 10764.14 MD									
10,800.00	90.43	177.19	10,487.73	-516.29	25.32	516.91	0.00	0.00	0.00
10,900.00	90.43	177.19	10,486.98	-616.17	30.22	616.91	0.00	0.00	0.00
11,000.00	90.43	177.19	10,486.23	-716.05	35.11	716.91	0.00	0.00	0.00
11,100.00	90.43	177.19	10,485.47	-815.92	40.01	816.91	0.00	0.00	0.00
11,200.00	90.43	177.19	10,484.72	-915.80	44.91	916.90	0.00	0.00	0.00
11,300.00	90.43	177.19	10,483.97	-1,015.68	49.81	1,016.90	0.00	0.00	0.00
11,400.00	90.43	177.19	10,483.22	-1,115.56	54.71	1,116.90	0.00	0.00	0.00
11,500.00	90.43	177.19	10,482.46	-1,215.43	59.60	1,216.89	0.00	0.00	0.00
11,600.00	90.43	177.19	10,481.71	-1,315.31	64.50	1,316.89	0.00	0.00	0.00
11,700.00	90.43	177.19	10,480.96	-1,415.19	69.40	1,416.89	0.00	0.00	0.00
11,800.00	90.43	177.19	10,480.21	-1,515.06	74.30	1,516.89	0.00	0.00	0.00
11,900.00	90.43	177.19	10,479.45	-1,614.94	79.19	1,616.88	0.00	0.00	0.00
12,000.00	90.43	177.19	10,478.70	-1,714.82	84.09	1,716.88	0.00	0.00	0.00
12,100.00	90.43	177.19	10,477.95	-1,814.70	88.99	1,816.88	0.00	0.00	0.00
12,200.00	90.43	177.19	10,477.20	-1,914.57	93.89	1,916.87	0.00	0.00	0.00
12,300.00	90.43	177.19	10,476.44	-2,014.45	98.79	2,016.87	0.00	0.00	0.00
12,400.00	90.43	177.19	10,475.69	-2,114.33	103.68	2,116.87	0.00	0.00	0.00
12,500.00	90.43	177.19	10,474.94	-2,214.20	108.58	2,216.87	0.00	0.00	0.00
12,600.00	90.43	177.19	10,474.19	-2,314.08	113.48	2,316.86	0.00	0.00	0.00
12,700.00	90.43	177.19	10,473.43	-2,413.96	118.38	2,416.86	0.00	0.00	0.00
12,800.00	90.43	177.19	10,472.68	-2,513.84	123.28	2,516.86	0.00	0.00	0.00
12,900.00	90.43	177.19	10,471.93	-2,613.71	128.17	2,616.85	0.00	0.00	0.00
13,000.00	90.43	177.19	10,471.18	-2,713.59	133.07	2,716.85	0.00	0.00	0.00
13,100.00	90.43	177.19	10,470.42	-2,813.47	137.97	2,816.85	0.00	0.00	0.00
13,200.00	90.43	177.19	10,469.67	-2,913.35	142.87	2,916.85	0.00	0.00	0.00
13,300.00	90.43	177.19	10,468.92	-3,013.22	147.76	3,016.84	0.00	0.00	0.00
13,400.00	90.43	177.19	10,468.17	-3,113.10	152.66	3,116.84	0.00	0.00	0.00
13,500.00	90.43	177.19	10,467.41	-3,212.98	157.56	3,216.84	0.00	0.00	0.00
13,600.00	90.43	177.19	10,466.66	-3,312.85	162.46	3,316.83	0.00	0.00	0.00
13,700.00	90.43	177.19	10,465.91	-3,412.73	167.36	3,416.83	0.00	0.00	0.00
13,800.00	90.43	177.19	10,465.16	-3,512.61	172.25	3,516.83	0.00	0.00	0.00
13,900.00	90.43	177.19	10,464.40	-3,612.49	177.15	3,616.83	0.00	0.00	0.00
14,000.00	90.43	177.19	10,463.65	-3,712.36	182.05	3,716.82	0.00	0.00	0.00
14,100.00	90.43	177.19	10,462.90	-3,812.24	186.95	3,816.82	0.00	0.00	0.00
14,200.00	90.43	177.19	10,462.15	-3,912.12	191.84	3,916.82	0.00	0.00	0.00
14,300.00	90.43	177.19	10,461.39	-4,011.99	196.74	4,016.81	0.00	0.00	0.00
14,400.00	90.43	177.19	10,460.64	-4,111.87	201.64	4,116.81	0.00	0.00	0.00
14,500.00	90.43	177.19	10,459.89	-4,211.75	206.54	4,216.81	0.00	0.00	0.00
14,600.00	90.43	177.19	10,459.14	-4,311.63	211.44	4,316.81	0.00	0.00	0.00
14,700.00	90.43	177.19	10,458.38	-4,411.50	216.33	4,416.80	0.00	0.00	0.00
14,800.00	90.43	177.19	10,457.63	-4,511.38	221.23	4,516.80	0.00	0.00	0.00
14,900.00	90.43	177.19	10,456.88	-4,611.26	226.13	4,616.80	0.00	0.00	0.00
15,000.00	90.43	177.19	10,456.13	-4,711.13	231.03	4,716.79	0.00	0.00	0.00
15,016.67	90.43	177.19	10,456.00	-4,727.78	231.84	4,733.46	0.00	0.00	0.00
TD at 15016.67' MD									

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 215H
Company:	DEVON ENERGY	TVD Reference:	GE3508' + KB 28' @ 3536.00usft (Cactus 105)
Project:	Eddy County, NM (NAD-83)	MD Reference:	GE3508' + KB 28' @ 3536.00usft (Cactus 105)
Site:	Cotton Draw Unit	North Reference:	Grid
Well:	215H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Design-Targets

Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
Shape									
SHL(CDU 215H)	0.00	0.00	0.00	0.00	0.00	429,929.79	726,651.23	32° 10' 49.931 N	103° 44' 3.668 W
- plan hits target center									
- Point									
PBHL(CDU 215H)	0.00	0.00	10,456.00	-4,727.78	231.84	425,202.01	726,883.07	32° 10' 3.134 N	103° 44' 1.277 W
- plan hits target center									
- Point									

Formations

Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(usft)	(usft)			(°)	(°)
602.00	602.00	RUSTLER			
997.00	997.00	TOP SALT			
2,803.00	2,803.00	CASTILE			
4,410.00	4,410.00	Bell Canyon			
5,299.00	5,299.00	Cherry Canyon			
6,624.00	6,624.00	Brushy Canyon			
8,206.00	8,206.00	1st Bone Spring Lime			
9,337.00	9,337.00	1st Bone Spring Sand			
9,714.00	9,714.00	2nd Bone Spring Lime			
9,893.00	9,893.00	2nd Bone Spring Sand			

Plan Annotations

Measured Depth	Vertical Depth	Local Coordinates	Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)
10,010.55	10,010.55	0.00	0.00
10,764.14	10,488.00	-480.48	23.56
15,016.67	10,456.00	-4,727.78	231.84
			KOP: Start DLS 12.00 TFO 177.19
			EOC: Start 4252.53 hold at 10764.14 MD
			TD at 15016.67' MD

DEVON ENERGY

Eddy County, NM (NAD-83)
Cotton Draw Unit
215H

OH
Plan #1

Anticollision Report

26 June, 2013

LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 215H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE3508' + KB 28' @ 3536.00usft (Cactus 105)
Reference Site:	Cotton Draw Unit	MD Reference:	GE3508' + KB 28' @ 3536.00usft (Cactus 105)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	215H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Reference Datum

Reference:	Plan #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 100.00usft	Error Model:	ISCWSA
Depth Range:	0.00 to 15,016.67usft	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 2,000,000.00 usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	06/26/13		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	15,016.67	Plan #1 (OH)	LEAM MWD	MWD - Standard	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Separation Between Ellipses (usft)	Warning	
Offset Well - Wellbore - Design						
Cotton Draw Unit						
214H - OH - Plan #1	10,000.17	10,000.17	49.99	5.32	1.119	Level 2, CC
214H - OH - Plan #1	10,010.55	10,010.09	50.02	5.31	1.119	Level 2, ES, SF

Offset Design		Cotton Draw Unit - 214H - OH - Plan #1										Offset Site Error: 0.00 usft	
Survey Program: 0-LEAM-MWD												Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			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
0.00	0.00	0.00	0.00	0.00	0.00	-90.34	-0.30	-49.99	49.99				
100.00	100.00	100.00	100.00	0.08	0.08	-90.34	-0.30	-49.99	49.99	49.83	0.16	308.907	
200.00	200.00	200.00	200.00	0.31	0.31	-90.34	-0.30	-49.99	49.99	49.38	0.61	81.769	
300.00	300.00	300.00	300.00	0.53	0.53	-90.34	-0.30	-49.99	49.99	48.93	1.06	47.121	
400.00	400.00	400.00	400.00	0.76	0.76	-90.34	-0.30	-49.99	49.99	48.48	1.51	33.097	
500.00	500.00	500.00	500.00	0.98	0.98	-90.34	-0.30	-49.99	49.99	48.03	1.96	25.506	
600.00	600.00	600.00	600.00	1.20	1.20	-90.34	-0.30	-49.99	49.99	47.58	2.41	20.747	
700.00	700.00	700.00	700.00	1.43	1.43	-90.34	-0.30	-49.99	49.99	47.13	2.86	17.485	
800.00	800.00	800.00	800.00	1.65	1.65	-90.34	-0.30	-49.99	49.99	46.68	3.31	15.110	
900.00	900.00	900.00	900.00	1.88	1.88	-90.34	-0.30	-49.99	49.99	46.23	3.76	13.302	
1,000.00	1,000.00	1,000.00	1,000.00	2.10	2.10	-90.34	-0.30	-49.99	49.99	45.78	4.21	11.881	
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	-90.34	-0.30	-49.99	49.99	45.33	4.66	10.734	
1,200.00	1,200.00	1,200.00	1,200.00	2.55	2.55	-90.34	-0.30	-49.99	49.99	44.88	5.11	9.789	
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	-90.34	-0.30	-49.99	49.99	44.43	5.56	8.997	
1,400.00	1,400.00	1,400.00	1,400.00	3.00	3.00	-90.34	-0.30	-49.99	49.99	43.99	6.01	8.324	
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	-90.34	-0.30	-49.99	49.99	43.54	6.46	7.744	
1,600.00	1,600.00	1,600.00	1,600.00	3.45	3.45	-90.34	-0.30	-49.99	49.99	43.09	6.90	7.240	
1,700.00	1,700.00	1,700.00	1,700.00	3.68	3.68	-90.34	-0.30	-49.99	49.99	42.64	7.35	6.797	
1,800.00	1,800.00	1,800.00	1,800.00	3.90	3.90	-90.34	-0.30	-49.99	49.99	42.19	7.80	6.406	
1,900.00	1,900.00	1,900.00	1,900.00	4.13	4.13	-90.34	-0.30	-49.99	49.99	41.74	8.25	6.057	
2,000.00	2,000.00	2,000.00	2,000.00	4.35	4.35	-90.34	-0.30	-49.99	49.99	41.29	8.70	5.744	
2,100.00	2,100.00	2,100.00	2,100.00	4.58	4.58	-90.34	-0.30	-49.99	49.99	40.84	9.15	5.462	
2,200.00	2,200.00	2,200.00	2,200.00	4.80	4.80	-90.34	-0.30	-49.99	49.99	40.39	9.60	5.206	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 215H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE3508' + KB 28' @ 3536.00usft (Cactus 105)
Reference Site:	Cotton Draw Unit	MD Reference:	GE3508' + KB 28' @ 3536.00usft (Cactus 105)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	215H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Reference Datum

Offset Design													Cotton Draw Unit - 214H - OH - Plan #1		Offset Site Error: 0.00 usft	
Survey Program: 0-LEAM MWD														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				
2,300.00	2,300.00	2,300.00	2,300.00	5.03	5.03	-90.34	-0.30	-49.99	49.99	39.94	10.05	4.973				
2,400.00	2,400.00	2,400.00	2,400.00	5.25	5.25	-90.34	-0.30	-49.99	49.99	39.49	10.50	4.761				
2,500.00	2,500.00	2,500.00	2,500.00	5.48	5.48	-90.34	-0.30	-49.99	49.99	39.04	10.95	4.565				
2,600.00	2,600.00	2,600.00	2,600.00	5.70	5.70	-90.34	-0.30	-49.99	49.99	38.59	11.40	4.385				
2,700.00	2,700.00	2,700.00	2,700.00	5.92	5.92	-90.34	-0.30	-49.99	49.99	38.14	11.85	4.219				
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	-90.34	-0.30	-49.99	49.99	37.69	12.30	4.065				
2,900.00	2,900.00	2,900.00	2,900.00	6.37	6.37	-90.34	-0.30	-49.99	49.99	37.24	12.75	3.921				
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	-90.34	-0.30	-49.99	49.99	36.79	13.20	3.788				
3,100.00	3,100.00	3,100.00	3,100.00	6.82	6.82	-90.34	-0.30	-49.99	49.99	36.34	13.65	3.663				
3,200.00	3,200.00	3,200.00	3,200.00	7.05	7.05	-90.34	-0.30	-49.99	49.99	35.89	14.10	3.546				
3,300.00	3,300.00	3,300.00	3,300.00	7.27	7.27	-90.34	-0.30	-49.99	49.99	35.44	14.55	3.437				
3,400.00	3,400.00	3,400.00	3,400.00	7.50	7.50	-90.34	-0.30	-49.99	49.99	34.99	15.00	3.334				
3,500.00	3,500.00	3,500.00	3,500.00	7.72	7.72	-90.34	-0.30	-49.99	49.99	34.54	15.45	3.237				
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	-90.34	-0.30	-49.99	49.99	34.10	15.90	3.145				
3,700.00	3,700.00	3,700.00	3,700.00	8.17	8.17	-90.34	-0.30	-49.99	49.99	33.65	16.34	3.058				
3,800.00	3,800.00	3,800.00	3,800.00	8.40	8.40	-90.34	-0.30	-49.99	49.99	33.20	16.79	2.977				
3,900.00	3,900.00	3,900.00	3,900.00	8.62	8.62	-90.34	-0.30	-49.99	49.99	32.75	17.24	2.899				
4,000.00	4,000.00	4,000.00	4,000.00	8.85	8.85	-90.34	-0.30	-49.99	49.99	32.30	17.69	2.825				
4,100.00	4,100.00	4,100.00	4,100.00	9.07	9.07	-90.34	-0.30	-49.99	49.99	31.85	18.14	2.755				
4,200.00	4,200.00	4,200.00	4,200.00	9.30	9.30	-90.34	-0.30	-49.99	49.99	31.40	18.59	2.689				
4,300.00	4,300.00	4,300.00	4,300.00	9.52	9.52	-90.34	-0.30	-49.99	49.99	30.95	19.04	2.625				
4,400.00	4,400.00	4,400.00	4,400.00	9.75	9.75	-90.34	-0.30	-49.99	49.99	30.50	19.49	2.565				
4,500.00	4,500.00	4,500.00	4,500.00	9.97	9.97	-90.34	-0.30	-49.99	49.99	30.05	19.94	2.507				
4,600.00	4,600.00	4,600.00	4,600.00	10.20	10.20	-90.34	-0.30	-49.99	49.99	29.60	20.39	2.452				
4,700.00	4,700.00	4,700.00	4,700.00	10.42	10.42	-90.34	-0.30	-49.99	49.99	29.15	20.84	2.399				
4,800.00	4,800.00	4,800.00	4,800.00	10.64	10.64	-90.34	-0.30	-49.99	49.99	28.70	21.29	2.348				
4,900.00	4,900.00	4,900.00	4,900.00	10.87	10.87	-90.34	-0.30	-49.99	49.99	28.25	21.74	2.300				
5,000.00	5,000.00	5,000.00	5,000.00	11.09	11.09	-90.34	-0.30	-49.99	49.99	27.80	22.19	2.253				
5,100.00	5,100.00	5,100.00	5,100.00	11.32	11.32	-90.34	-0.30	-49.99	49.99	27.35	22.64	2.208				
5,200.00	5,200.00	5,200.00	5,200.00	11.54	11.54	-90.34	-0.30	-49.99	49.99	26.90	23.09	2.165				
5,300.00	5,300.00	5,300.00	5,300.00	11.77	11.77	-90.34	-0.30	-49.99	49.99	26.45	23.54	2.124				
5,400.00	5,400.00	5,400.00	5,400.00	11.99	11.99	-90.34	-0.30	-49.99	49.99	26.00	23.99	2.084				
5,500.00	5,500.00	5,500.00	5,500.00	12.22	12.22	-90.34	-0.30	-49.99	49.99	25.55	24.44	2.046				
5,600.00	5,600.00	5,600.00	5,600.00	12.44	12.44	-90.34	-0.30	-49.99	49.99	25.10	24.89	2.009				
5,700.00	5,700.00	5,700.00	5,700.00	12.67	12.67	-90.34	-0.30	-49.99	49.99	24.66	25.34	1.973				
5,800.00	5,800.00	5,800.00	5,800.00	12.89	12.89	-90.34	-0.30	-49.99	49.99	24.21	25.79	1.939				
5,900.00	5,900.00	5,900.00	5,900.00	13.12	13.12	-90.34	-0.30	-49.99	49.99	23.76	26.23	1.906				
6,000.00	6,000.00	6,000.00	6,000.00	13.34	13.34	-90.34	-0.30	-49.99	49.99	23.31	26.68	1.873				
6,100.00	6,100.00	6,100.00	6,100.00	13.57	13.57	-90.34	-0.30	-49.99	49.99	22.86	27.13	1.842				
6,200.00	6,200.00	6,200.00	6,200.00	13.79	13.79	-90.34	-0.30	-49.99	49.99	22.41	27.58	1.812				
6,300.00	6,300.00	6,300.00	6,300.00	14.02	14.02	-90.34	-0.30	-49.99	49.99	21.96	28.03	1.783				
6,400.00	6,400.00	6,400.00	6,400.00	14.24	14.24	-90.34	-0.30	-49.99	49.99	21.51	28.48	1.755				
6,500.00	6,500.00	6,500.00	6,500.00	14.47	14.47	-90.34	-0.30	-49.99	49.99	21.06	28.93	1.728				
6,600.00	6,600.00	6,600.00	6,600.00	14.69	14.69	-90.34	-0.30	-49.99	49.99	20.61	29.38	1.701				
6,700.00	6,700.00	6,700.00	6,700.00	14.92	14.92	-90.34	-0.30	-49.99	49.99	20.16	29.83	1.676				
6,800.00	6,800.00	6,800.00	6,800.00	15.14	15.14	-90.34	-0.30	-49.99	49.99	19.71	30.28	1.651				
6,900.00	6,900.00	6,900.00	6,900.00	15.37	15.37	-90.34	-0.30	-49.99	49.99	19.26	30.73	1.627				
7,000.00	7,000.00	7,000.00	7,000.00	15.59	15.59	-90.34	-0.30	-49.99	49.99	18.81	31.18	1.603				
7,100.00	7,100.00	7,100.00	7,100.00	15.81	15.81	-90.34	-0.30	-49.99	49.99	18.36	31.63	1.581				
7,200.00	7,200.00	7,200.00	7,200.00	16.04	16.04	-90.34	-0.30	-49.99	49.99	17.91	32.08	1.558				
7,300.00	7,300.00	7,300.00	7,300.00	16.26	16.26	-90.34	-0.30	-49.99	49.99	17.46	32.53	1.537				

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 215H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE3508' + KB 28' @ 3536.00usft (Cactus 105)
Reference Site:	Cotton Draw Unit	MD Reference:	GE3508' + KB 28' @ 3536.00usft (Cactus 105)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	215H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Reference Datum

Offset Design Cotton Draw Unit - 214H - OH - Plan #1														Offset Site Error:	0.00 usft
Survey Program: O-LEAM MWD														Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis 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		
7,400.00	7,400.00	7,400.00	7,400.00	16.49	16.49	-90.34	-0.30	-49.99	49.99	17.01	32.98	1.516			
7,500.00	7,500.00	7,500.00	7,500.00	16.71	16.71	-90.34	-0.30	-49.99	49.99	16.56	33.43	1.496 Level 3			
7,600.00	7,600.00	7,600.00	7,600.00	16.94	16.94	-90.34	-0.30	-49.99	49.99	16.11	33.88	1.476 Level 3			
7,700.00	7,700.00	7,700.00	7,700.00	17.16	17.16	-90.34	-0.30	-49.99	49.99	15.66	34.33	1.456 Level 3			
7,800.00	7,800.00	7,800.00	7,800.00	17.39	17.39	-90.34	-0.30	-49.99	49.99	15.22	34.78	1.438 Level 3			
7,900.00	7,900.00	7,900.00	7,900.00	17.61	17.61	-90.34	-0.30	-49.99	49.99	14.77	35.23	1.419 Level 3			
8,000.00	8,000.00	8,000.00	8,000.00	17.84	17.84	-90.34	-0.30	-49.99	49.99	14.32	35.67	1.401 Level 3			
8,100.00	8,100.00	8,100.00	8,100.00	18.06	18.06	-90.34	-0.30	-49.99	49.99	13.87	36.12	1.384 Level 3			
8,200.00	8,200.00	8,200.00	8,200.00	18.29	18.29	-90.34	-0.30	-49.99	49.99	13.42	36.57	1.367 Level 3			
8,300.00	8,300.00	8,300.00	8,300.00	18.51	18.51	-90.34	-0.30	-49.99	49.99	12.97	37.02	1.350 Level 3			
8,400.00	8,400.00	8,400.00	8,400.00	18.74	18.74	-90.34	-0.30	-49.99	49.99	12.52	37.47	1.334 Level 3			
8,500.00	8,500.00	8,500.00	8,500.00	18.96	18.96	-90.34	-0.30	-49.99	49.99	12.07	37.92	1.318 Level 3			
8,600.00	8,600.00	8,600.00	8,600.00	19.19	19.19	-90.34	-0.30	-49.99	49.99	11.62	38.37	1.303 Level 3			
8,700.00	8,700.00	8,700.00	8,700.00	19.41	19.41	-90.34	-0.30	-49.99	49.99	11.17	38.82	1.288 Level 3			
8,800.00	8,800.00	8,800.00	8,800.00	19.64	19.64	-90.34	-0.30	-49.99	49.99	10.72	39.27	1.273 Level 3			
8,900.00	8,900.00	8,900.00	8,900.00	19.86	19.86	-90.34	-0.30	-49.99	49.99	10.27	39.72	1.259 Level 3			
9,000.00	9,000.00	9,000.00	9,000.00	20.09	20.09	-90.34	-0.30	-49.99	49.99	9.82	40.17	1.244 Level 2			
9,100.00	9,100.00	9,100.00	9,100.00	20.31	20.31	-90.34	-0.30	-49.99	49.99	9.37	40.62	1.231 Level 2			
9,200.00	9,200.00	9,200.00	9,200.00	20.53	20.53	-90.34	-0.30	-49.99	49.99	8.92	41.07	1.217 Level 2			
9,300.00	9,300.00	9,300.00	9,300.00	20.76	20.76	-90.34	-0.30	-49.99	49.99	8.47	41.52	1.204 Level 2			
9,400.00	9,400.00	9,400.00	9,400.00	20.98	20.98	-90.34	-0.30	-49.99	49.99	8.02	41.97	1.191 Level 2			
9,500.00	9,500.00	9,500.00	9,500.00	21.21	21.21	-90.34	-0.30	-49.99	49.99	7.57	42.42	1.179 Level 2			
9,600.00	9,600.00	9,600.00	9,600.00	21.43	21.43	-90.34	-0.30	-49.99	49.99	7.12	42.87	1.166 Level 2			
9,700.00	9,700.00	9,700.00	9,700.00	21.66	21.66	-90.34	-0.30	-49.99	49.99	6.67	43.32	1.154 Level 2			
9,800.00	9,800.00	9,800.00	9,800.00	21.88	21.88	-90.34	-0.30	-49.99	49.99	6.22	43.77	1.142 Level 2			
9,900.00	9,900.00	9,900.00	9,900.00	22.11	22.11	-90.34	-0.30	-49.99	49.99	5.77	44.22	1.131 Level 2			
10,000.00	10,000.00	10,000.00	10,000.00	22.33	22.33	-90.34	-0.30	-49.99	49.99	5.33	44.67	1.119 Level 2			
10,000.17	10,000.17	10,000.17	10,000.17	22.33	22.33	-90.34	-0.30	-49.99	49.99	5.32	44.67	1.119 Level 2, CC			
10,010.55	10,010.55	10,010.09	10,010.09	22.36	22.35	-90.38	-0.33	-50.02	50.02	5.31	44.71	1.119 Level 2, ES, SF			
10,025.00	10,025.00	10,023.59	10,023.59	22.38	22.38	92.31	-0.61	-50.27	50.30	5.54	44.77	1.124 Level 2			
10,050.00	10,049.96	10,046.91	10,046.85	22.43	22.42	92.35	-1.77	-51.29	51.47	6.62	44.85	1.148 Level 2			
10,075.00	10,074.80	10,070.13	10,069.91	22.47	22.46	92.68	-3.77	-53.06	53.50	8.57	44.93	1.191 Level 2			
10,100.00	10,099.48	10,093.21	10,092.69	22.51	22.50	93.23	-6.59	-55.55	56.39	11.39	45.00	1.253 Level 3			
10,125.00	10,123.91	10,116.12	10,115.08	22.55	22.55	93.93	-10.19	-58.73	60.15	15.08	45.08	1.334 Level 3			
10,150.00	10,148.03	10,138.80	10,137.00	22.60	22.59	94.71	-14.55	-62.59	64.77	19.63	45.15	1.435 Level 3			
10,175.00	10,171.77	10,161.23	10,158.38	22.64	22.63	95.48	-19.63	-67.07	70.24	25.03	45.21	1.554			
10,200.00	10,195.07	10,183.38	10,179.16	22.68	22.67	96.19	-25.37	-72.15	76.55	31.28	45.27	1.691			
10,225.00	10,217.86	10,205.21	10,199.27	22.72	22.71	96.81	-31.73	-77.77	83.68	38.35	45.33	1.846			
10,250.00	10,240.09	10,226.71	10,218.68	22.76	22.75	97.32	-38.66	-83.90	91.60	46.22	45.38	2.019			
10,275.00	10,261.69	10,247.86	10,237.34	22.80	22.79	97.69	-46.11	-90.48	100.29	54.86	45.43	2.208			
10,300.00	10,282.59	10,268.64	10,255.23	22.84	22.83	97.92	-54.03	-97.48	109.72	64.24	45.48	2.412			
10,325.00	10,302.76	10,289.04	10,272.34	22.88	22.87	98.00	-62.36	-104.84	119.85	74.31	45.54	2.632			
10,350.00	10,322.12	10,309.07	10,288.65	22.92	22.91	97.96	-71.07	-112.54	130.65	85.04	45.60	2.865			
10,375.00	10,340.63	10,328.73	10,304.17	22.98	22.95	97.77	-80.10	-120.52	142.08	96.40	45.68	3.110			
10,400.00	10,358.23	10,348.00	10,318.90	23.03	23.00	97.46	-89.42	-128.76	154.10	108.34	45.76	3.367			
10,425.00	10,374.88	10,366.91	10,332.85	23.10	23.05	97.03	-98.99	-137.21	166.69	120.82	45.87	3.634			
10,450.00	10,390.53	10,385.47	10,346.03	23.16	23.10	96.49	-108.77	-145.85	179.80	133.80	46.00	3.909			
10,475.00	10,405.14	10,403.67	10,358.46	23.24	23.15	95.84	-118.73	-154.66	193.40	147.25	46.14	4.191			
10,500.00	10,418.67	10,421.55	10,370.17	23.31	23.20	95.08	-128.85	-163.61	207.44	161.13	46.31	4.480			
10,525.00	10,431.08	10,439.11	10,381.17	23.40	23.26	94.24	-139.11	-172.67	221.90	175.42	46.48	4.774			

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 215H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE3508' + KB 28' @ 3536.00usft (Cactus 105)
Reference Site:	Cotton Draw Unit	MD Reference:	GE3508' + KB 28' @ 3536.00usft (Cactus 105)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	215H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Reference Datum

Offset Design Cotton Draw Unit - 214H - OH - Plan #1														Offset Site Error:	0.00 usft
Survey Program: O-LEAM MWD														Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
10,550.00	10,442.34	10,456.38	10,391.49	23.49	23.32	93.30	-149.48	-181.84	236.74	190.08	46.66	5.073			
10,575.00	10,452.41	10,473.37	10,401.15	23.59	23.38	92.29	-159.96	-191.10	251.93	205.08	46.85	5.377			
10,600.00	10,461.28	10,490.12	10,410.18	23.69	23.44	91.20	-170.52	-200.43	267.43	220.38	47.05	5.685			
10,625.00	10,468.90	10,506.63	10,418.59	23.81	23.51	90.04	-181.17	-209.84	283.21	235.97	47.23	5.996			
10,650.00	10,475.27	10,522.94	10,426.41	23.93	23.57	88.83	-191.90	-219.32	299.24	251.82	47.42	6.311			
10,675.00	10,480.37	10,539.08	10,433.66	24.05	23.65	87.57	-202.69	-228.87	315.48	267.89	47.59	6.629			
10,700.00	10,484.18	10,555.06	10,440.36	24.19	23.72	86.27	-213.57	-238.48	331.91	284.17	47.74	6.952			
10,725.00	10,486.69	10,570.93	10,446.53	24.33	23.80	84.93	-224.53	-248.16	348.50	300.61	47.89	7.278			
10,750.00	10,487.90	10,586.71	10,452.17	24.47	23.88	83.57	-235.57	-257.92	365.22	317.20	48.01	7.607			
10,764.14	10,488.00	10,595.61	10,455.14	24.56	23.93	82.80	-241.85	-263.48	374.72	326.64	48.08	7.794			
10,800.00	10,487.73	10,618.53	10,462.07	24.78	24.05	84.55	-258.22	-277.94	399.03	350.46	48.58	8.214			
10,900.00	10,486.98	10,685.77	10,476.23	25.50	24.47	87.75	-307.43	-321.43	468.07	418.24	49.84	9.392			
11,000.00	10,486.23	10,756.03	10,481.03	26.32	24.96	88.81	-359.90	-367.81	537.79	486.66	51.12	10.520			
11,100.00	10,485.47	10,846.02	10,480.00	27.24	25.65	88.90	-426.20	-426.40	606.55	553.90	52.65	11.520			
11,200.00	10,484.72	10,942.34	10,478.88	28.24	26.47	88.98	-503.29	-486.71	672.92	618.55	54.37	12.377			
11,300.00	10,483.97	11,044.56	10,477.68	29.33	27.46	89.03	-585.14	-547.91	736.66	680.36	56.30	13.085			
11,400.00	10,483.22	11,152.93	10,476.40	30.49	28.60	89.07	-674.26	-609.56	797.52	739.08	58.44	13.648			
11,500.00	10,482.46	11,267.71	10,475.02	31.71	29.92	89.11	-771.11	-671.12	855.24	794.45	60.79	14.068			
11,600.00	10,481.71	11,389.06	10,473.56	32.99	31.39	89.13	-876.10	-731.94	909.56	846.19	63.36	14.354			
11,700.00	10,480.96	11,517.11	10,472.01	34.32	33.01	89.15	-989.57	-791.23	960.17	894.00	66.16	14.512			
11,800.00	10,480.21	11,651.86	10,470.37	35.70	34.78	89.16	-1,111.71	-848.09	1,006.77	937.59	69.18	14.553			
11,900.00	10,479.45	11,793.21	10,468.64	37.11	36.68	89.17	-1,242.56	-901.48	1,049.05	976.66	72.39	14.491			
12,000.00	10,478.70	11,940.92	10,466.83	38.56	38.69	89.17	-1,381.94	-950.31	1,086.71	1,010.91	75.81	14.336			
12,100.00	10,477.95	12,094.59	10,464.96	40.04	40.81	89.17	-1,529.41	-993.42	1,119.45	1,040.07	79.39	14.101			
12,200.00	10,477.20	12,253.66	10,463.04	41.55	43.00	89.16	-1,684.26	-1,029.65	1,146.99	1,063.86	83.12	13.798			
12,300.00	10,476.44	12,417.39	10,461.07	43.09	45.24	89.15	-1,845.50	-1,057.90	1,169.06	1,082.08	86.98	13.440			
12,400.00	10,475.69	12,584.87	10,459.09	44.64	47.53	89.13	-2,011.83	-1,077.22	1,185.46	1,094.52	90.94	13.035			
12,500.00	10,474.94	12,755.06	10,457.10	46.22	49.84	89.11	-2,181.71	-1,086.87	1,196.02	1,101.06	94.97	12.594			
12,600.00	10,474.19	12,887.24	10,455.59	47.82	51.59	89.09	-2,313.87	-1,087.91	1,201.53	1,103.08	98.45	12.204			
12,700.00	10,473.43	12,987.12	10,454.45	49.43	52.87	89.08	-2,413.74	-1,087.91	1,206.44	1,104.98	101.45	11.892			
12,800.00	10,472.68	13,086.99	10,453.30	51.05	54.17	89.06	-2,513.61	-1,087.91	1,211.34	1,106.85	104.48	11.593			
12,900.00	10,471.93	13,186.87	10,452.16	52.69	55.50	89.05	-2,613.49	-1,087.91	1,216.24	1,108.68	107.56	11.308			
13,000.00	10,471.18	13,286.75	10,451.02	54.35	56.86	89.03	-2,713.36	-1,087.91	1,221.15	1,110.48	110.67	11.034			
13,100.00	10,470.42	13,386.63	10,449.88	56.01	58.24	89.02	-2,813.23	-1,087.91	1,226.05	1,112.24	113.81	10.772			
13,200.00	10,469.67	13,486.51	10,448.74	57.68	59.64	89.00	-2,913.11	-1,087.91	1,230.95	1,113.96	116.99	10.522			
13,300.00	10,468.92	13,586.39	10,447.60	59.37	61.06	88.99	-3,012.98	-1,087.91	1,235.86	1,115.66	120.19	10.282			
13,400.00	10,468.17	13,686.27	10,446.46	61.06	62.50	88.98	-3,112.85	-1,087.91	1,240.76	1,117.34	123.42	10.053			
13,500.00	10,467.41	13,786.15	10,445.31	62.76	63.96	88.96	-3,212.72	-1,087.91	1,245.67	1,118.99	126.68	9.833			
13,600.00	10,466.66	13,886.03	10,444.17	64.47	65.44	88.95	-3,312.60	-1,087.91	1,250.57	1,120.61	129.96	9.623			
13,700.00	10,465.91	13,985.91	10,443.03	66.18	66.93	88.93	-3,412.47	-1,087.91	1,255.47	1,122.22	133.26	9.422			
13,800.00	10,465.16	14,085.79	10,441.89	67.90	68.45	88.92	-3,512.34	-1,087.91	1,260.38	1,123.80	136.57	9.229			
13,900.00	10,464.40	14,185.67	10,440.75	69.63	69.97	88.91	-3,612.21	-1,087.91	1,265.28	1,125.37	139.91	9.044			
14,000.00	10,463.65	14,285.55	10,439.61	71.36	71.51	88.89	-3,712.09	-1,087.91	1,270.19	1,126.93	143.26	8.866			
14,100.00	10,462.90	14,385.42	10,438.47	73.09	73.06	88.88	-3,811.96	-1,087.91	1,275.09	1,128.46	146.63	8.696			
14,200.00	10,462.15	14,485.30	10,437.33	74.84	74.62	88.87	-3,911.83	-1,087.91	1,280.00	1,129.98	150.01	8.533			
14,300.00	10,461.39	14,585.18	10,436.18	76.58	76.20	88.85	-4,011.71	-1,087.91	1,284.90	1,131.49	153.41	8.376			
14,400.00	10,460.64	14,685.06	10,435.04	78.33	77.78	88.84	-4,111.58	-1,087.91	1,289.80	1,132.99	156.81	8.225			
14,500.00	10,459.89	14,784.94	10,433.90	80.08	79.38	88.83	-4,211.45	-1,087.91	1,294.71	1,134.47	160.23	8.080			
14,600.00	10,459.14	14,884.82	10,432.76	81.84	80.98	88.81	-4,311.32	-1,087.91	1,299.61	1,135.95	163.67	7.941			
14,700.00	10,458.38	14,984.70	10,431.62	83.60	82.60	88.80	-4,411.20	-1,087.91	1,304.52	1,137.41	167.11	7.807			
14,800.00	10,457.63	15,084.58	10,430.48	85.36	84.22	88.79	-4,511.07	-1,087.91	1,309.42	1,138.87	170.56	7.677			

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 215H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE3508' + KB 28' @ 3536.00usft (Cactus 105)
Reference Site:	Cotton Draw Unit	MD Reference:	GE3508' + KB 28' @ 3536.00usft (Cactus 105)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	215H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at:	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset-TVD Reference:	Reference Datum

Offset Design: Cotton Draw Unit - 214H - OH - Plan #1												Offset Site Error:	0.00 usft
Survey Program: 0-LEAM-MWD												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	
14,900.00	10,456.88	15,184.46	10,429.34	87.13	85.85	88.78	-4,610.94	-1,087.91	1,314.33	1,140.31	174.02	7.553	
15,000.00	10,456.13	15,284.34	10,428.19	88.90	87.49	88.76	-4,710.81	-1,087.91	1,319.23	1,141.75	177.49	7.433	
15,016.67	10,456.00	15,300.99	10,428.00	89.19	87.76	88.76	-4,727.46	-1,087.91	1,320.05	1,141.99	178.06	7.413	