

Submit 1 Copy To Appropriate District Office
District I - (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II - (575) 748-1283
811 S. First St., Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV - (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
Revised July 18, 2013

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.) 1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐		WELL API NO. 30-015-41650 5. Indicate Type of Lease STATE ☒ FEE ☐ 6. State Oil & Gas Lease No.
2. Name of Operator Devon Energy Production Company, LP 405-228-7203	7. Lease Name or Unit Agreement Name Lone Tree Draw 13 State 8. Well Number 7H	
3. Address of Operator 333 West. Sheridan Avenue Oklahoma City, OK 73102-5015 405-228-7203	9. OGRID Number 6137 10. Pool name or Wildcat Carlsbad; Bone Spring, East	
4. Well Location Unit Letter <u>C</u> : <u>150</u> feet from the <u>North</u> line and <u>1980</u> feet from the <u>West</u> line Section <u>13</u> Township <u>21S</u> Range <u>27E</u> NMPM Eddy County		
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3186.9		

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐
CLOSED-LOOP SYSTEM ☐

OTHER: Change Csg and Cmt ☒

SUBSEQUENT REPORT OF:

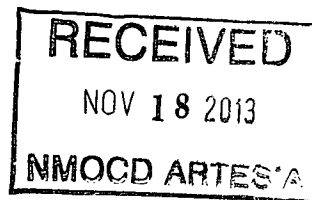
REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Devon Energy Production Company, L.P. respectfully requests a change in the casing and cement design from a 5.5" production long string to a 7" x 5.5" production string with the cross-over from 7" to 5.5" set at the KOP (7200').

Attachments:
Drilling Plan
Directional Survey



I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE

Trina C. Couch

TITLE: Regulatory Associate

DATE 11/15/2013

Type or print name: Trina C. Couch

E-mail address: trina.couch@devon.com

PHONE: 405-228-7203

For State Use Only

APPROVED BY:

Dr. Dade

TITLE

Dr. H. Sepulveda

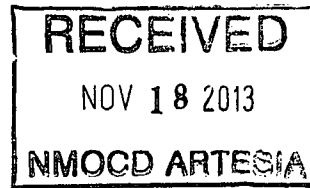
DATE 11/20/2013

Conditions of Approval (if any):

LONE TREE DRAW 13 STATE-7H – APD DRILLING PLAN

SKS 9-08-2013

Revised SKS11-15-2013



Casing Program:

Hole Size	Hole Interval	OD Csg	Casing Interval	Weight	Collar	Grade
17-1/2"	0 - 290	13-3/8"	0 - 290	48#	ST&C	H-40
12-1/4"	290 - 2760	9-5/8"	0 - 2760	40#	LT&C	J-55
8-3/4"	2760 - 6980	7"	0 - 7200	26#	BT&C	P-110
8-3/4"	6980 - 12307	5-1/2"	7200 - 12307	17#	BT&C	P-110

Mud Program:

Depth	Mud Wt.	Visc.	Fluid Loss	Type System (Fluid)
0 - 290	8.4 - 9.0	30 - 34	N/C	FW
290 - 2760	9.8 - 10.0	28 - 32	N/C	Brine
2760 - 12307	8.6 - 9.0	28 - 32	N/C-12	FW

Pressure Control Equipment:

The BOP system used to drill the intermediate hole will consist of a 13-5/8" 3M Double Ram and Annular preventer. The BOP system will be tested as a 3M system prior to drilling out the surface casing shoe.

The BOP system used to drill the production hole will consist of a 13-5/8" 3M Double Ram and Annular preventer. The BOP system will be tested as a 3M system prior to drilling out the intermediate casing shoe.

In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 3,000 psi WP.

Devon

Lone Tree Draw 13 State 7H

Cementing Program (cement volumes based on at least Surface 100% excess, Intermediate 75% excess and Production is 25% excess)

13-3/8" Surface

Tail: 340 sacks Class C Cement + 0.125 lbs/sack Poly-E-Flake + 63.5% Fresh Water, 14.8 ppg

Yield: 1.33 cf/sk

Water Requirement: 6.32 gal/sk

Mix Water Volume: 52 bbls

TOC @ surface

9-5/8" Intermediate

Lead: 500 sacks (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake + 70.9 % Fresh Water, 12.9 ppg

Yield: 1.85 cf/sk

Water Requirement: 9.81 gal/sk

Mix Water Volume: 117 bbls

TOC @ surface

Tail: 430 sacks Class C Cement + 0.125 lbs/sack Poly-E-Flake + 63.5% Fresh Water, 14.8 ppg

Yield: 1.33 cf/sk

Water Requirement: 6.32 gal/sk

Mix Water Volume: 65 bbls

7 x 5-1/2" Production

Lead #1: 200 sacks (50:50) Class H Cement: Poz (Fly Ash) + 10% BWOC Bentonite + 1 lb/sk of Kol-Seal + 0.3% BWOC HR-601 + 0.5lb/sk D-Air 5000 + 76.4% Fresh Water, 11.9 ppg

Yield: 2.26 cf/sk

Water Requirement: 12.89 gal/sk

Mix Water Volume: 62 bbls

TOC @ 2260ft

Lead #2: 195 sacks (65:35) Class H Cement: Poz (Fly Ash) + 6% BWOC Bentonite + 0.25% BWOC HR-601 + 0.125 lbs/sack Poly-E-Flake + 74.1 % Fresh Water, 12.5 ppg

Yield: 1.96 cf/sk

Water Requirement: 10.79 gal/sk

Mix Water Volume: 50 bbls

TOC @ 4700ft

Tail: 1410 sacks (50:50) Class H Cement: Poz (Fly Ash) + 1 lb/sk Sodium Chloride + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% bwoc HR-601 + 2% bwoc Bentonite + 58.8% Fresh Water, 14.5 ppg

Yield: 1.22 cf/sk

Water Requirement: 5.38 gal/sk

Mix Water Volume: 181bbls

TOC for All Strings:

Surface: 290ft	0ft (290ft of fill of Tail)
Intermediate: 2760ft	0ft (1760ft of fill of Lead & 1000 ft of fill of Tail)
5-1/2" Production: 12352ft	2260ft (2260ft of fill of Lead #1 & 2000ft of Lead #2 & 5652ft of fill of Tail)
7 x 5-1/2" Production 12352ft	2260ft (2440ft of fill of Lead #1 & 2000ft of Lead #2 5652ft of fill of Tail)

ACTUAL CEMENT VOLUMES WILL BE ADJUSTED BASED ON FLUID CALIPER AND CALIPER LOG DATA.

DEVON ENERGY

Project: Eddy County, NM (NAD-83)
Site: Lone Tree Draw "13" State
Well: 7H
Wellbore: OH
Design: Plan #1 Draft 1



Azimuths to Grid North
True North: -0.10°
Magnetic North: 7.59°

Magnetic Field
Strength: 48450.8snT
Dip Angle: 60.26°
Date: 11/12/2013
Model: BGGM2013



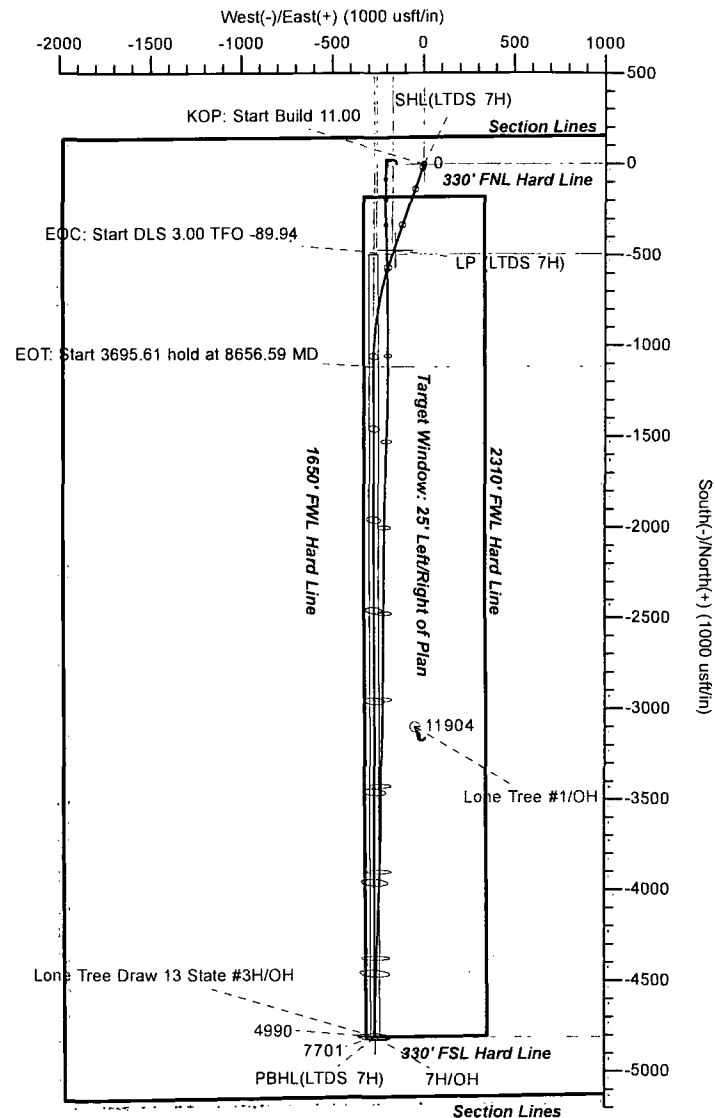
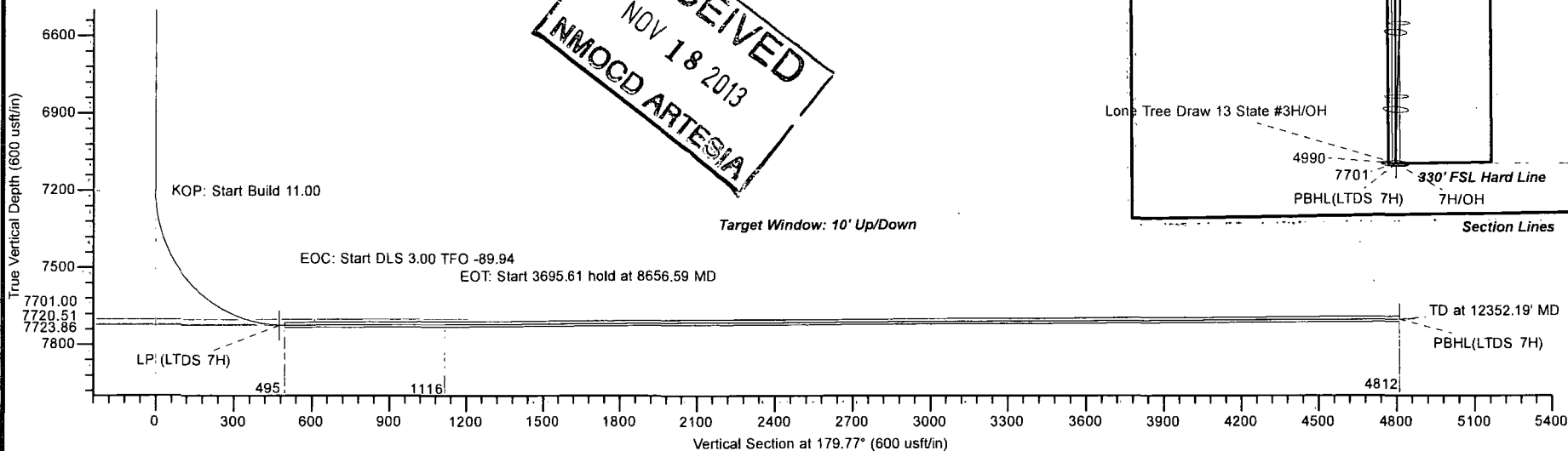
PROJECT DETAILS: Eddy County, NM (NAD-83)
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL(LTDS 7H)	0.00	0.00	0.00	541013.16	599276.79	32° 29' 13.801 N	104° 8' 43.530 W
PBHL(LTDS 7H)	7701.00	-4812.91	-254.77	536200.25	599022.02	32° 28' 26.179 N	104° 8' 46.603 W
LP (LTDS 7H)	7724.00	-475.92	-152.68	540537.23	599124.11	32° 29' 9.094 N	104° 8' 45.322 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	7203.00	0.00	0.00	7203.00	0.00	0.00	0.00	0.00	0.00	KOP: Start Build 11.00
3	8023.91	90.30	198.75	7723.86	-495.81	-168.31	11.00	198.75	495.13	EOC: Start DLS 3.00 TFO -89.94
4	8656.59	90.30	179.77	7720.51	-1117.38	-269.64	3.00	-89.94	1116.29	EOT: Start 3695.61 hold at 8656.59 MD
5	12352.19	90.30	179.77	7701.00	-4812.91	-254.77	0.00	0.00	4811.85	TD at 12352.19' MD



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

Plan: Plan #1 Draft 1 (7H/OH)
Lone Tree Draw "13" State
Created By: Heber, Carlos Date: 12:25, November 12 2013
Approved: _____ Date: _____

DEVON ENERGY

Project: Eddy County, NM (NAD-83)

Site: Lone Tree Draw "13" State

Well: 7H

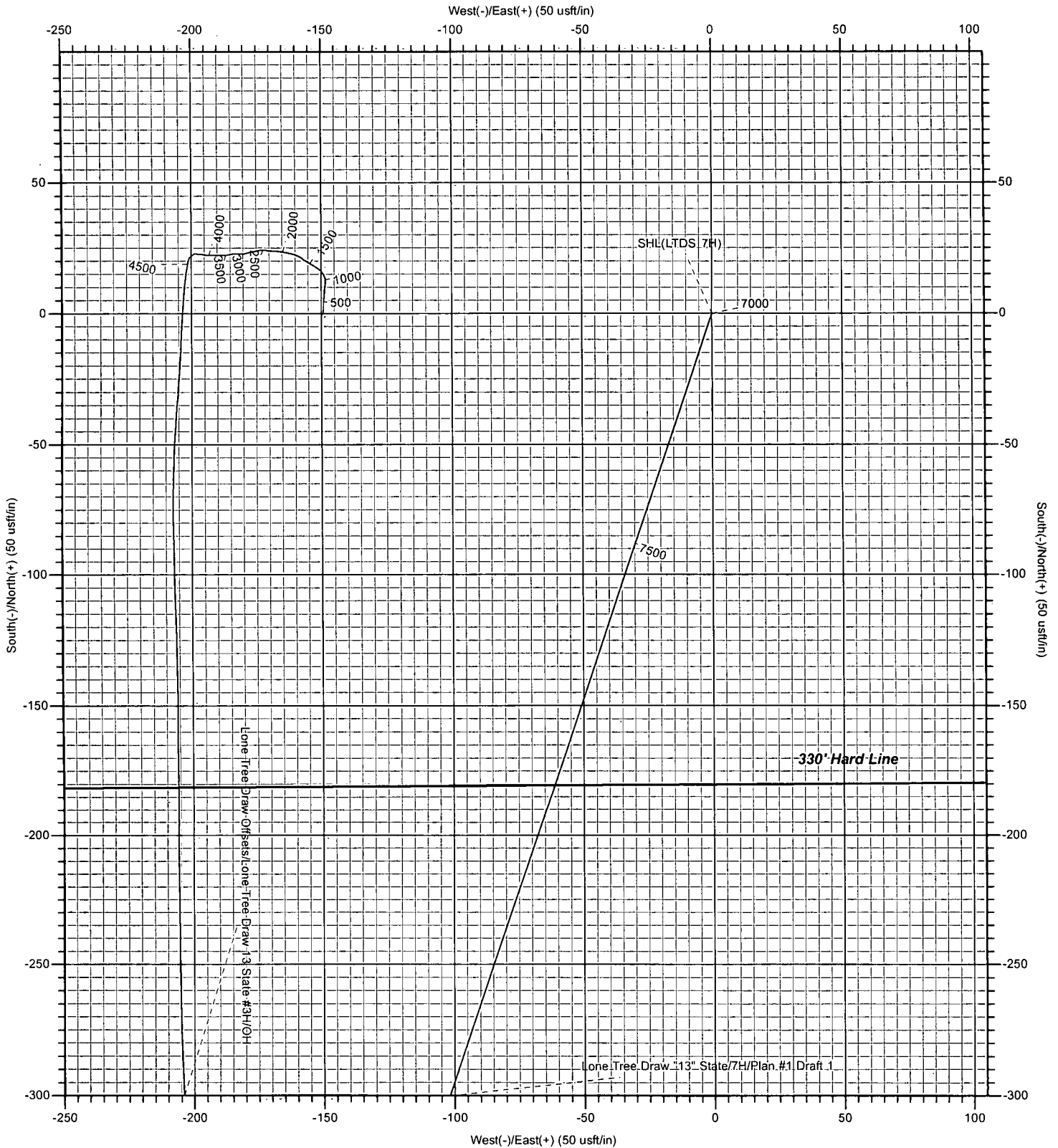
Wellbore: OH

Design: Plan #1 Draft 1



Azimuths to Grid North
True North: -0.10°
Magnetic North: 7.59°

Magnetic Field
Strength: 48450.8snT
Dip Angle: 60.26°
Date: 11/12/2013
Model: BGGM2013



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Phone: 936/756-7577, Fax 936/756-7595

Plan: Plan #1 Draft 1 (7H/OH)
Lone Tree Draw "13" State
Created By: Heber Claros Date: 12:25, November 12 2013
Approved: _____ Date: _____

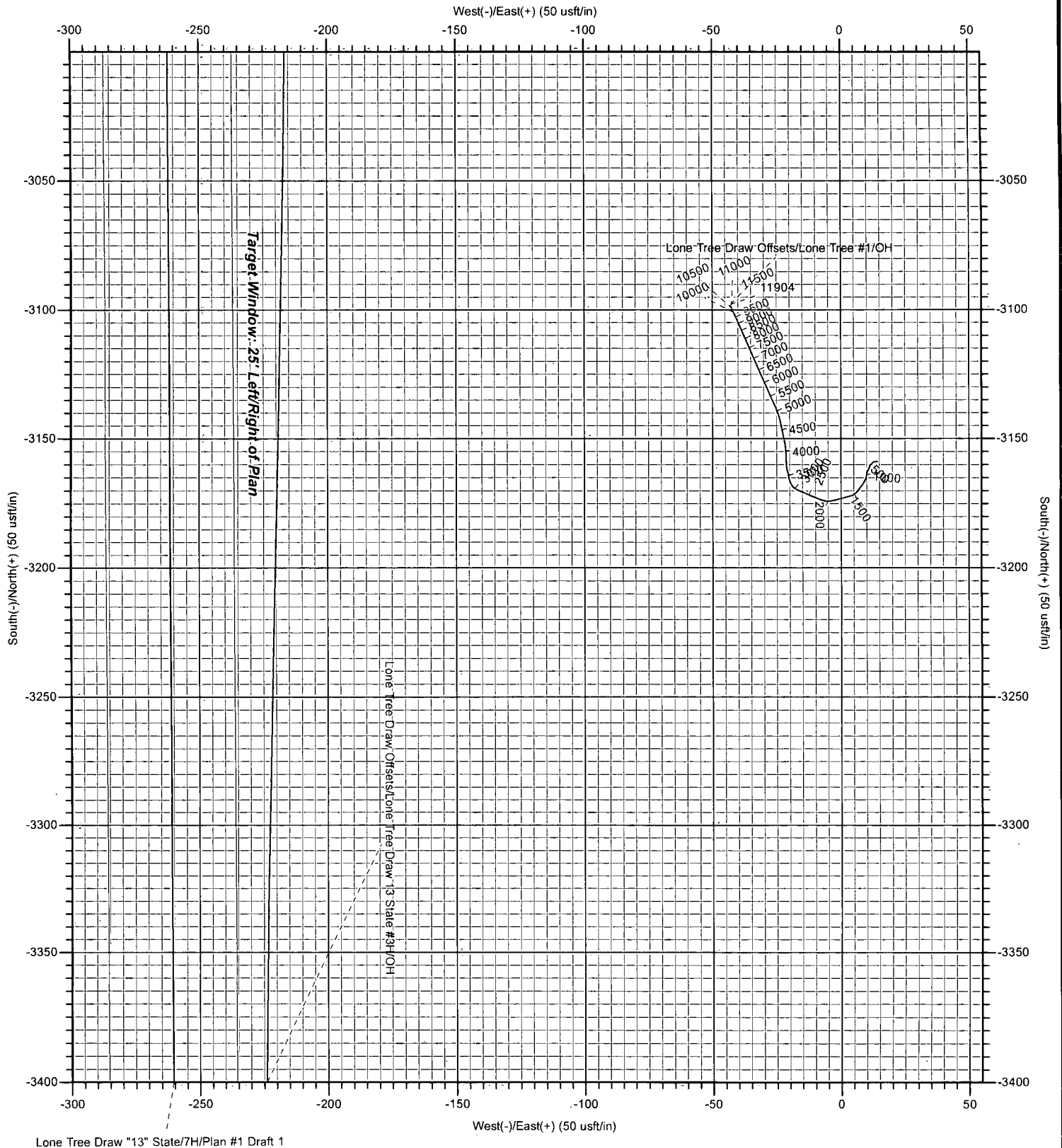
DEVON ENERGY

Project: Eddy County, NM (NAD-83)
Site: Lone Tree Draw "13" State
Well: 7H
Wellbore: OH
Design: Plan #1 Draft 1



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Date: 11/12/2013
Model: BGM2013



Lone Tree Draw "13" State/7H/Plan #1 Draft 1



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

Plan: Plan #1 Draft 1 (7H/OH)
Lone Tree Draw "13" State
Created By: Heber Claros Date: 12/34, November 12 2013
Approved: _____ Date: _____

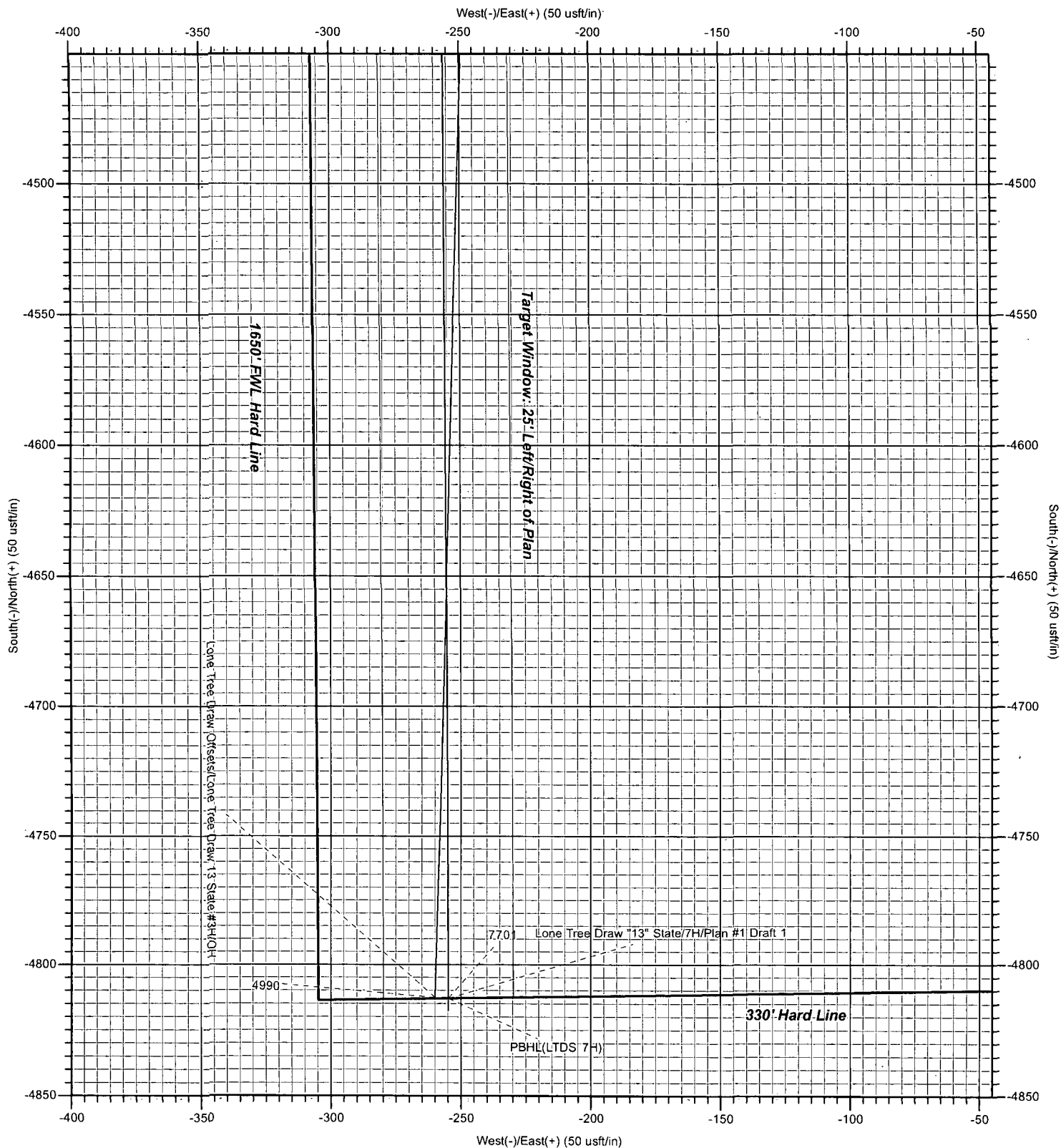
DEVON ENERGY

Project: Eddy County, NM (NAD-83)
Site: Lone Tree Draw "13" State
Well: 7H
Wellbore: OH
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True North: -0.10°
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Magnetic Field
Strength: 48450.8nT
Dip Angle: 60.26°
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Model: BGGM2013



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

Plan: Plan #1 Draft 1 (7H/OH)
Lone Tree Draw "13" State
Created By: Heber Claros Date: 12:33, November 12 2013
Approved: _____ Date: _____

Leam Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 7H
Company:	DEVON ENERGY	TVD Reference:	GE 3187' + KB 26' @ 3213.00usft (Cactus 126)
Project:	Eddy County, NM (NAD-83)	MD Reference:	GE 3187' + KB 26' @ 3213.00usft (Cactus 126)
Site:	Lone Tree Draw "13" State	North Reference:	Grid
Well:	7H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 Draft 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	Lone Tree Draw "13" State			
Site Position:		Northing:	541,005.87 usft	Latitude: 32° 29' 13.750 N
From:	Map	Easting:	598,047.12 usft	Longitude: 104° 8' 57.887 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.10 °

Well	7H			
Well Position	+N/-S	7.29 usft	Northing:	541,013.16 usft
	+E/-W	1,229.67 usft	Easting:	599,276.80 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	0.00 usft
			Ground Level:	3,187.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	11/12/13	7.69	60.26	48,451

Design	Plan #1 Draft 1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	179.77

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	
7,203.00	0.00	0.00	7,203.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,023.91	90.30	198.75	7,723.86	-495.81	-168.31	11.00	11.00	0.00	198.75	
8,656.59	90.30	179.77	7,720.51	-1,117.38	-269.64	3.00	0.00	-3.00	-89.94	
12,352.19	90.30	179.77	7,701.00	-4,812.91	-254.77	0.00	0.00	0.00	0.00	PBHL(LTDS 7H)

Leam Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 7H
Company:	DEVON ENERGY	TVD Reference:	GE 3187' + KB 26' @ 3213.00usft (Cactus 126)
Project:	Eddy County, NM (NAD-83)	MD Reference:	GE 3187' + KB 26' @ 3213.00usft (Cactus 126)
Site:	Lone Tree Draw "13" State	North Reference:	Grid
Well:	7H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 Draft 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)
7,203.00	0.00	0.00	7,203.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP: Start Build 11.00									
7,250.00	5.17	198.75	7,249.94	-2.01	-0.68	2.00	11.00	11.00	0.00
7,300.00	10.67	198.75	7,299.44	-8.53	-2.89	8.52	11.00	11.00	0.00
7,350.00	16.17	198.75	7,348.06	-19.51	-6.62	19.49	11.00	11.00	0.00
7,400.00	21.67	198.75	7,395.34	-34.86	-11.83	34.81	11.00	11.00	0.00
7,450.00	27.17	198.75	7,440.85	-54.42	-18.47	54.35	11.00	11.00	0.00
7,500.00	32.67	198.75	7,484.17	-78.03	-26.49	77.92	11.00	11.00	0.00
7,550.00	38.17	198.75	7,524.90	-105.46	-35.80	105.32	11.00	11.00	0.00
7,600.00	43.67	198.75	7,562.66	-136.46	-46.32	136.27	11.00	11.00	0.00
7,650.00	49.17	198.75	7,597.12	-170.75	-57.96	170.51	11.00	11.00	0.00
7,700.00	54.67	198.75	7,627.94	-208.00	-70.61	207.72	11.00	11.00	0.00
7,750.00	60.17	198.75	7,654.86	-247.88	-84.14	247.54	11.00	11.00	0.00
7,800.00	65.67	198.75	7,677.61	-290.02	-98.45	289.62	11.00	11.00	0.00
7,850.00	71.17	198.75	7,695.99	-334.03	-113.39	333.58	11.00	11.00	0.00
7,900.00	76.67	198.75	7,709.84	-379.51	-128.83	378.99	11.00	11.00	0.00
7,950.00	82.17	198.75	7,719.01	-426.03	-144.62	425.45	11.00	11.00	0.00
8,000.00	87.67	198.75	7,723.44	-473.18	-160.62	472.53	11.00	11.00	0.00
8,000.06	87.67	198.75	7,723.44	-473.23	-160.64	472.58	0.00	0.00	0.00
LP (LTDS 7H)									
8,023.91	90.30	198.75	7,723.86	-495.81	-168.31	495.13	11.03	11.03	0.00
EQC: Start DLS 3.00 TFO -89.94									
8,100.00	90.30	196.47	7,723.46	-568.33	-191.32	567.56	3.00	0.00	-3.00
8,200.00	90.30	193.47	7,722.93	-664.93	-217.15	664.05	3.00	0.00	-3.00
8,300.00	90.31	190.47	7,722.40	-762.74	-237.88	761.78	3.00	0.00	-3.00
8,400.00	90.31	187.47	7,721.87	-861.50	-253.46	860.48	3.00	0.00	-3.00
8,500.00	90.30	184.47	7,721.34	-960.95	-263.86	959.88	3.00	0.00	-3.00
8,600.00	90.30	181.47	7,720.81	-1,060.80	-269.03	1,059.71	3.00	0.00	-3.00
8,656.59	90.30	179.77	7,720.51	-1,117.38	-269.64	1,116.29	3.00	0.00	-3.00
EOT: Start 3695.61 hold at 8656.59 MD									
8,700.00	90.30	179.77	7,720.28	-1,160.80	-269.47	1,159.71	0.00	0.00	0.00
8,800.00	90.30	179.77	7,719.75	-1,260.79	-269.07	1,259.70	0.00	0.00	0.00
8,900.00	90.30	179.77	7,719.22	-1,360.79	-268.66	1,359.70	0.00	0.00	0.00
9,000.00	90.30	179.77	7,718.69	-1,460.79	-268.26	1,459.70	0.00	0.00	0.00
9,100.00	90.30	179.77	7,718.17	-1,560.79	-267.86	1,559.70	0.00	0.00	0.00
9,200.00	90.30	179.77	7,717.64	-1,660.79	-267.46	1,659.70	0.00	0.00	0.00
9,300.00	90.30	179.77	7,717.11	-1,760.78	-267.05	1,759.70	0.00	0.00	0.00
9,400.00	90.30	179.77	7,716.58	-1,860.78	-266.65	1,859.70	0.00	0.00	0.00
9,500.00	90.30	179.77	7,716.06	-1,960.78	-266.25	1,959.69	0.00	0.00	0.00
9,600.00	90.30	179.77	7,715.53	-2,060.78	-265.85	2,059.69	0.00	0.00	0.00
9,700.00	90.30	179.77	7,715.00	-2,160.77	-265.44	2,159.69	0.00	0.00	0.00
9,800.00	90.30	179.77	7,714.47	-2,260.77	-265.04	2,259.69	0.00	0.00	0.00
9,900.00	90.30	179.77	7,713.94	-2,360.77	-264.64	2,359.69	0.00	0.00	0.00
10,000.00	90.30	179.77	7,713.42	-2,460.77	-264.24	2,459.69	0.00	0.00	0.00
10,100.00	90.30	179.77	7,712.89	-2,560.77	-263.83	2,559.69	0.00	0.00	0.00
10,200.00	90.30	179.77	7,712.36	-2,660.76	-263.43	2,659.68	0.00	0.00	0.00
10,300.00	90.30	179.77	7,711.83	-2,760.76	-263.03	2,759.68	0.00	0.00	0.00
10,400.00	90.30	179.77	7,711.30	-2,860.76	-262.63	2,859.68	0.00	0.00	0.00
10,500.00	90.30	179.77	7,710.78	-2,960.76	-262.22	2,959.68	0.00	0.00	0.00
10,600.00	90.30	179.77	7,710.25	-3,060.75	-261.82	3,059.68	0.00	0.00	0.00
10,700.00	90.30	179.77	7,709.72	-3,160.75	-261.42	3,159.68	0.00	0.00	0.00
10,800.00	90.30	179.77	7,709.19	-3,260.75	-261.02	3,259.68	0.00	0.00	0.00

Leam Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 7H
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Project:	Eddy County, NM (NAD-83)	MD Reference:	GE 3187' + KB 26' @ 3213.00usft (Cactus 126)
Site:	Lone Tree Draw "13" State	North Reference:	Grid
Well:	7H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 Draft 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)	
10,900.00	90.30	179.77	7,708.67	-3,360.75	-260.62	3,359.67	0.00	0.00	0.00	
11,000.00	90.30	179.77	7,708.14	-3,460.75	-260.21	3,459.67	0.00	0.00	0.00	
11,100.00	90.30	179.77	7,707.61	-3,560.74	-259.81	3,559.67	0.00	0.00	0.00	
11,200.00	90.30	179.77	7,707.08	-3,660.74	-259.41	3,659.67	0.00	0.00	0.00	
11,300.00	90.30	179.77	7,706.55	-3,760.74	-259.01	3,759.67	0.00	0.00	0.00	
11,400.00	90.30	179.77	7,706.03	-3,860.74	-258.60	3,859.67	0.00	0.00	0.00	
11,500.00	90.30	179.77	7,705.50	-3,960.73	-258.20	3,959.67	0.00	0.00	0.00	
11,600.00	90.30	179.77	7,704.97	-4,060.73	-257.80	4,059.66	0.00	0.00	0.00	
11,700.00	90.30	179.77	7,704.44	-4,160.73	-257.40	4,159.66	0.00	0.00	0.00	
11,800.00	90.30	179.77	7,703.91	-4,260.73	-256.99	4,259.66	0.00	0.00	0.00	
11,900.00	90.30	179.77	7,703.39	-4,360.73	-256.59	4,359.66	0.00	0.00	0.00	
12,000.00	90.30	179.77	7,702.86	-4,460.72	-256.19	4,459.66	0.00	0.00	0.00	
12,100.00	90.30	179.77	7,702.33	-4,560.72	-255.79	4,559.66	0.00	0.00	0.00	
12,200.00	90.30	179.77	7,701.80	-4,660.72	-255.38	4,659.66	0.00	0.00	0.00	
12,300.00	90.30	179.77	7,701.28	-4,760.72	-254.98	4,759.66	0.00	0.00	0.00	
12,352.19	90.30	179.77	7,701.00	-4,812.91	-254.77	4,811.85	0.00	0.00	0.00	
TD at 12352.19' MD - PBHL(LTDS 7H)										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
SHL(LTDS 7H)	0.00	0.00	0.00	0.00	0.00	541,013.16	599,276.80	32° 29' 13.801 N	104° 8' 43.530 W	
- plan misses target center by 7203.00usft at 7203.00usft MD (7203.00 TVD, 0.00 N, 0.00 E)										
- Point										
PBHL(LTDS 7H)	-0.30	179.77	7,701.00	-4,812.91	-254.77	536,200.25	599,022.02	32° 28' 26.179 N	104° 8' 46.603 W	
- plan hits target center										
- Rectangle (sides W50.00 H4,315.64 D20.00)										
LP (LTDS 7H)	0.00	0.00	7,724.00	-475.92	-152.68	540,537.23	599,124.11	32° 29' 9.094 N	104° 8' 45.322 W	
- plan misses target center by 8.42usft at 8000.06usft MD (7723.44 TVD, -473.23 N, -160.64 E)										
- Point										

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
7,203.00	7,203.00	0.00	0.00	KOP: Start Build 11.00	
8,023.91	7,723.86	-495.81	-168.31	EOC: Start DLS 3.00 TFO -89.94	
8,656.59	7,720.51	-1,117.38	-269.64	EOT: Start 3695.61 hold at 8656.59 MD	
12,352.19	7,701.00	-4,812.91	-254.77	TD at 12352.19' MD	

DEVON ENERGY

**Eddy County, NM (NAD-83)
Lone Tree Draw "13" State
7H**

**OH
Plan #1 Draft 1**

Anticollision Report

12 November, 2013

Leam Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 7H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3187' + KB 26' @ 3213.00usft (Cactus 126)
Reference Site:	Lone Tree Draw "13" State	MD Reference:	GE 3187' + KB 26' @ 3213.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	7H	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 Draft 1	Offset TVD Reference:	Reference Datum

Reference	Plan #1 Draft 1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.00 usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date 11/12/13		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	12,352.19	Plan #1 Draft 1 (OH)	LEAM MWD-ADJ	MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Lone Tree Draw Offsets						
Lone Tree #1 - OH - OH	10,653.22	7,676.42	225.47	150.93	3.025	CC, ES, SF
Lone Tree Draw 13 State #3H - OH - OH	949.70	940.80	148.81	144.49	34.464	CC
Lone Tree Draw 13 State #3H - OH - OH	1,000.00	990.39	148.93	144.37	32.661	ES
Lone Tree Draw 13 State #3H - OH - OH	4,600.00	4,589.69	203.54	183.11	9.961	SF

Offset Design		Lone Tree Draw Offsets - Lone Tree #1 - OH - OH								Offset Site Error:		0.00 usft	
Survey Program:		100-NS-GYRO-MS								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
0.00	0.00	0.00	35.00	0.00	0.00	179.74	-3,158.68	14.46	3,158.91				
100.00	100.00	63.60	98.60	0.08	0.07	179.74	-3,158.70	14.38	3,158.73	3,158.58	0.15	N/A	
200.00	200.00	164.73	199.73	0.31	0.28	179.75	-3,158.75	13.96	3,158.78	3,158.19	0.59	5,337.131	
300.00	300.00	260.49	295.49	0.53	0.54	179.76	-3,158.78	13.34	3,158.81	3,157.75	1.07	2,955.655	
400.00	400.00	353.55	388.55	0.76	0.78	179.77	-3,159.03	12.70	3,159.07	3,157.54	1.53	2,058.205	
500.00	500.00	446.25	481.25	0.98	1.01	179.78	-3,159.46	12.12	3,159.54	3,157.55	1.99	1,585.115	
600.00	600.00	541.89	576.87	1.21	1.25	179.79	-3,160.14	11.57	3,160.24	3,157.79	2.45	1,287.502	
700.00	700.00	642.42	677.40	1.43	1.48	179.80	-3,160.86	11.06	3,160.96	3,158.04	2.92	1,084.356	
800.00	800.00	739.49	774.47	1.66	1.70	179.80	-3,161.58	10.96	3,161.70	3,158.35	3.35	942.584	
900.00	900.00	836.37	871.35	1.88	1.92	179.81	-3,162.44	10.32	3,162.59	3,158.78	3.81	830.982	
1,000.00	1,000.00	932.26	967.23	2.11	2.16	179.82	-3,163.31	10.06	3,163.50	3,159.23	4.26	742.427	
1,100.00	1,100.00	1,020.44	1,055.41	2.33	2.36	179.82	-3,164.42	9.97	3,164.75	3,160.06	4.69	674.476	
1,200.00	1,200.00	1,117.28	1,152.23	2.56	2.60	179.83	-3,165.82	9.52	3,166.20	3,161.04	5.16	613.874	
1,300.00	1,300.00	1,212.01	1,246.95	2.78	2.85	179.85	-3,167.35	8.54	3,167.81	3,162.18	5.63	562.566	
1,400.00	1,400.00	1,315.39	1,350.31	3.01	3.13	179.87	-3,169.01	7.28	3,169.41	3,163.28	6.13	517.056	
1,500.00	1,500.00	1,414.49	1,449.38	3.23	3.39	179.89	-3,170.64	6.10	3,171.05	3,164.44	6.62	479.308	
1,600.00	1,600.00	1,544.48	1,579.34	3.45	3.71	179.93	-3,172.05	3.75	3,172.12	3,164.95	7.17	442.519	
1,700.00	1,700.00	1,649.19	1,684.03	3.68	3.97	179.97	-3,172.54	1.53	3,172.58	3,164.94	7.65	414.916	
1,800.00	1,800.00	1,745.36	1,780.17	3.90	4.20	-179.99	-3,173.12	-0.58	3,173.19	3,165.08	8.11	391.457	
1,900.00	1,900.00	1,851.17	1,885.95	4.13	4.46	-179.95	-3,173.72	-2.87	3,173.75	3,165.16	8.59	369.409	
2,000.00	2,000.00	1,964.28	1,999.04	4.35	4.73	-179.91	-3,174.00	-5.04	3,174.01	3,164.92	9.09	349.364	

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 7H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3187' + KB 26' @ 3213.00usft (Cactus 126)
Reference Site:	Lone Tree Draw "13" State	MD Reference:	GE 3187' + KB 26' @ 3213.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	7H	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 Draft 1	Offset TVD Reference:	Reference Datum

Offset Design											Offset Site Error: 0.00 usft		
Survey Program: 100-NS-GYRO-MS											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
2,100.00	2,100.00	2,079.20	2,113.95	4.58	4.98	-179.88	-3,173.77	-6.68	3,173.80	3,164.24	9.56	331.919	
2,200.00	2,200.00	2,185.90	2,220.64	4.80	5.20	-179.85	-3,173.16	-8.36	3,173.23	3,163.23	10.00	317.193	
2,300.00	2,300.00	2,281.61	2,316.34	5.03	5.40	-179.82	-3,172.58	-9.78	3,172.63	3,162.21	10.43	304.324	
2,400.00	2,400.00	2,385.34	2,420.05	5.25	5.62	-179.80	-3,172.00	-11.29	3,172.09	3,161.22	10.87	291.865	
2,500.00	2,500.00	2,484.62	2,519.32	5.48	5.83	-179.77	-3,171.37	-12.83	3,171.45	3,160.15	11.30	280.538	
2,600.00	2,600.00	2,586.60	2,621.29	5.70	6.04	-179.74	-3,170.72	-14.26	3,170.82	3,159.08	11.75	269.946	
2,700.00	2,700.00	2,676.11	2,710.79	5.93	6.24	-179.72	-3,170.23	-15.26	3,170.29	3,158.12	12.17	260.552	
2,800.00	2,800.00	2,781.69	2,816.37	6.15	6.48	-179.71	-3,169.85	-16.25	3,169.94	3,157.31	12.63	251.009	
2,900.00	2,900.00	2,877.99	2,912.66	6.38	6.69	-179.69	-3,169.37	-17.23	3,169.44	3,156.37	13.07	242.521	
3,000.00	3,000.00	2,983.01	3,017.67	6.60	6.91	-179.67	-3,168.90	-18.02	3,169.00	3,155.49	13.51	234.528	
3,100.00	3,100.00	3,084.03	3,118.69	6.83	7.11	-179.66	-3,168.30	-18.64	3,168.41	3,154.48	13.94	227.345	
3,200.00	3,200.00	3,200.96	3,235.61	7.05	7.32	-179.65	-3,167.34	-19.33	3,167.60	3,153.23	14.37	220.466	
3,300.00	3,300.00	3,303.46	3,338.11	7.28	7.48	-179.64	-3,166.14	-19.84	3,166.44	3,151.68	14.75	214.680	
3,400.00	3,400.00	3,410.37	3,445.00	7.50	7.63	-179.64	-3,164.72	-20.16	3,165.11	3,149.98	15.13	209.222	
3,500.00	3,500.00	3,508.65	3,543.27	7.73	7.77	-179.63	-3,163.36	-20.44	3,163.73	3,148.24	15.49	204.224	
3,600.00	3,600.00	3,621.09	3,655.70	7.95	7.95	-179.62	-3,161.63	-21.00	3,162.19	3,146.29	15.90	198.899	
3,700.00	3,700.00	3,732.19	3,766.78	8.17	8.11	-179.62	-3,159.37	-21.21	3,160.15	3,143.86	16.29	194.040	
3,800.00	3,800.00	3,827.50	3,862.07	8.40	8.24	-179.62	-3,157.46	-21.19	3,158.14	3,141.50	16.64	189.750	
3,900.00	3,900.00	3,928.18	3,962.73	8.62	8.40	-179.61	-3,155.44	-21.35	3,156.13	3,139.11	17.02	185.438	
4,000.00	4,000.00	4,024.82	4,059.35	8.85	8.55	-179.61	-3,153.60	-21.47	3,154.23	3,136.83	17.40	181.293	
4,100.00	4,100.00	4,124.09	4,158.60	9.07	8.72	-179.61	-3,151.68	-21.70	3,152.30	3,134.51	17.79	177.186	
4,200.00	4,200.00	4,211.44	4,245.94	9.30	8.88	-179.60	-3,150.25	-22.05	3,150.66	3,132.48	18.18	173.340	
4,300.00	4,300.00	4,309.42	4,343.91	9.52	9.06	-179.59	-3,148.86	-22.36	3,149.25	3,130.66	18.59	169.445	
4,400.00	4,400.00	4,418.15	4,452.62	9.75	9.27	-179.59	-3,147.21	-22.72	3,147.73	3,128.71	19.02	165.523	
4,500.00	4,500.00	4,523.27	4,557.73	9.97	9.47	-179.58	-3,145.24	-23.04	3,145.85	3,126.41	19.44	161.784	
4,600.00	4,600.00	4,601.95	4,636.40	10.20	9.63	-179.57	-3,144.07	-23.35	3,144.36	3,124.53	19.83	158.580	
4,700.00	4,700.00	4,712.20	4,746.64	10.42	9.85	-179.57	-3,142.59	-23.64	3,143.02	3,122.75	20.27	155.021	
4,800.00	4,800.00	4,811.62	4,846.04	10.65	10.06	-179.56	-3,141.10	-24.10	3,141.53	3,120.83	20.70	151.730	
4,900.00	4,900.00	4,903.53	4,937.95	10.87	10.26	-179.55	-3,139.88	-24.48	3,140.20	3,119.08	21.13	148.648	
5,000.00	5,000.00	5,002.81	5,037.22	11.10	10.48	-179.55	-3,138.69	-24.92	3,139.00	3,117.43	21.58	145.484	
5,100.00	5,100.00	5,102.26	5,136.66	11.32	10.72	-179.54	-3,137.51	-25.43	3,137.83	3,115.79	22.04	142.361	
5,200.00	5,200.00	5,201.72	5,236.11	11.55	10.96	-179.53	-3,136.35	-25.94	3,136.67	3,114.16	22.51	139.368	
5,300.00	5,300.00	5,301.17	5,335.56	11.77	11.20	-179.52	-3,135.21	-26.44	3,135.53	3,112.55	22.97	136.497	
5,400.00	5,400.00	5,400.63	5,435.00	12.00	11.44	-179.51	-3,134.09	-26.93	3,134.40	3,110.96	23.44	133.741	
5,500.00	5,500.00	5,500.08	5,534.45	12.22	11.68	-179.50	-3,132.98	-27.42	3,133.29	3,109.39	23.90	131.092	
5,600.00	5,600.00	5,599.54	5,633.90	12.45	11.92	-179.49	-3,131.89	-27.89	3,132.20	3,107.83	24.37	128.546	
5,700.00	5,700.00	5,698.99	5,733.35	12.67	12.16	-179.48	-3,130.82	-28.36	3,131.13	3,106.30	24.83	126.095	
5,800.00	5,800.00	5,798.45	5,832.80	12.89	12.40	-179.47	-3,129.77	-28.83	3,130.07	3,104.77	25.30	123.735	
5,900.00	5,900.00	5,897.90	5,932.25	13.12	12.64	-179.46	-3,128.73	-29.28	3,129.03	3,103.27	25.76	121.461	
6,000.00	6,000.00	5,897.36	6,031.70	13.34	12.89	-179.46	-3,127.71	-29.73	3,128.01	3,101.78	26.23	119.269	
6,100.00	6,100.00	6,096.82	6,131.15	13.57	13.13	-179.45	-3,126.70	-30.17	3,127.01	3,100.31	26.69	117.153	
6,200.00	6,200.00	6,196.28	6,230.60	13.79	13.37	-179.44	-3,125.72	-30.60	3,126.02	3,098.86	27.16	115.111	
6,300.00	6,300.00	6,295.73	6,330.05	14.02	13.61	-179.43	-3,124.75	-31.02	3,125.05	3,097.43	27.62	113.138	
6,400.00	6,400.00	6,395.19	6,429.50	14.24	13.85	-179.42	-3,123.80	-31.44	3,124.09	3,096.01	28.09	111.230	
6,500.00	6,500.00	6,494.65	6,528.96	14.47	14.09	-179.42	-3,122.86	-31.85	3,123.16	3,094.61	28.55	109.386	
6,600.00	6,600.00	6,594.11	6,628.41	14.69	14.33	-179.41	-3,121.94	-32.25	3,122.24	3,093.22	29.02	107.601	
6,700.00	6,700.00	6,693.57	6,727.87	14.92	14.57	-179.40	-3,121.04	-32.65	3,121.34	3,091.86	29.48	105.874	
6,800.00	6,800.00	6,793.03	6,827.32	15.14	14.81	-179.39	-3,120.16	-33.03	3,120.45	3,090.51	29.95	104.200	
6,900.00	6,900.00	6,892.49	6,926.78	15.37	15.05	-179.39	-3,119.29	-33.41	3,119.59	3,089.18	30.41	102.578	
7,000.00	7,000.00	6,891.95	7,026.23	15.59	15.29	-179.38	-3,118.44	-33.78	3,118.74	3,087.86	30.88	101.006	
7,100.00	7,100.00	7,091.41	7,125.69	15.82	15.53	-179.37	-3,117.61	-34.15	3,117.91	3,086.56	31.34	99.480	

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 7H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3187' + KB 26' @ 3213.00usft (Cactus 126)
Reference Site:	Lone Tree Draw "13" State	MD Reference:	GE 3187' + KB 26' @ 3213.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	7H	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 Draft 1	Offset TVD Reference:	Reference Datum

Offset Design													Offset Site Error:
Lone Tree Draw Offsets - Lone Tree #1 - OH - OH													0.00 usft
Survey Program: 100-NS-GYRO-MS													Offset Well Error:
Reference													0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Tooface (')	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,203.00	7,203.00	7,193.86	7,228.13	16.05	15.78	-179.37	-3,116.77	-34.52	3,117.07	3,085.25	31.82	97.957	
7,250.00	7,249.94	7,240.53	7,274.80	16.14	15.89	-18.21	-3,116.40	-34.68	3,114.68	3,082.74	31.94	97.526	
7,300.00	7,299.44	7,289.72	7,323.99	16.23	16.01	-18.49	-3,116.00	-34.85	3,107.74	3,075.87	31.86	97.533	
7,350.00	7,348.06	7,338.00	7,372.27	16.31	16.12	-18.96	-3,115.62	-35.02	3,096.34	3,064.73	31.61	97.960	
7,400.00	7,395.34	7,384.93	7,419.20	16.40	16.24	-19.66	-3,115.26	-35.18	3,080.58	3,049.40	31.18	98.789	
7,450.00	7,440.85	7,430.07	7,464.34	16.49	16.35	-20.62	-3,114.91	-35.33	3,060.62	3,030.01	30.61	99.982	
7,500.00	7,484.17	7,473.01	7,507.27	16.58	16.45	-21.87	-3,114.58	-35.48	3,036.65	3,006.72	29.93	101.471	
7,550.00	7,524.90	7,513.35	7,547.61	16.69	16.55	-23.49	-3,114.27	-35.61	3,008.90	2,979.72	29.18	103.123	
7,600.00	7,562.66	7,550.72	7,584.98	16.82	16.64	-25.57	-3,113.99	-35.73	2,977.63	2,949.19	28.44	104.703	
7,650.00	7,597.12	7,584.78	7,619.04	16.98	16.72	-28.23	-3,113.74	-35.85	2,943.16	2,915.34	27.81	105.815	
7,700.00	7,627.94	7,615.22	7,649.48	17.17	16.79	-31.67	-3,113.51	-35.94	2,905.80	2,878.35	27.45	105.861	
7,750.00	7,654.86	7,641.75	7,676.01	17.39	16.86	-36.14	-3,113.32	-36.03	2,865.92	2,838.39	27.53	104.098	
7,800.00	7,677.61	7,664.13	7,698.38	17.66	16.91	-41.98	-3,113.15	-36.10	2,823.90	2,795.63	28.26	99.914	
7,850.00	7,695.99	7,682.15	7,716.41	17.96	16.96	-49.62	-3,113.02	-36.16	2,780.14	2,750.36	29.78	93.352	
7,900.00	7,709.84	7,695.64	7,729.90	18.30	16.99	-59.45	-3,112.93	-36.20	2,735.06	2,703.07	31.99	85.505	
7,950.00	7,719.01	7,704.49	7,738.75	18.68	17.01	-71.55	-3,112.86	-36.23	2,689.09	2,654.73	34.36	78.262	
8,000.00	7,723.44	7,708.61	7,742.87	19.09	17.02	-85.23	-3,112.83	-36.24	2,642.66	2,606.65	36.00	73.402	
8,023.91	7,723.86	7,708.89	7,743.15	19.30	17.02	-91.90	-3,112.83	-36.24	2,620.42	2,584.11	36.31	72.174	
8,100.00	7,723.46	7,708.05	7,742.30	19.98	17.02	-92.07	-3,112.84	-36.24	2,549.30	2,512.33	36.97	68.953	
8,200.00	7,722.93	7,706.91	7,741.17	20.92	17.02	-92.35	-3,112.84	-36.24	2,454.66	2,416.77	37.89	64.784	
8,300.00	7,722.40	7,705.74	7,740.00	21.96	17.01	-92.72	-3,112.85	-36.23	2,358.81	2,319.93	38.88	60.664	
8,400.00	7,721.87	7,704.55	7,738.81	23.08	17.01	-93.23	-3,112.86	-36.23	2,261.88	2,221.95	39.93	56.652	
8,500.00	7,721.34	7,703.34	7,737.59	24.27	17.01	-94.00	-3,112.87	-36.23	2,163.99	2,122.99	40.99	52.789	
8,600.00	7,720.81	7,702.11	7,736.36	25.50	17.00	-95.29	-3,112.88	-36.22	2,065.30	2,023.25	42.05	49.114	
8,656.59	7,720.51	7,701.40	7,735.66	26.22	17.00	-96.50	-3,112.88	-36.22	2,009.16	1,966.55	42.62	47.145	
8,700.00	7,720.28	7,700.86	7,735.12	26.78	17.00	-96.37	-3,112.89	-36.22	1,966.03	1,922.85	43.19	45.522	
8,800.00	7,719.75	7,699.61	7,733.87	28.10	17.00	-96.05	-3,112.90	-36.21	1,866.74	1,822.21	44.53	41.920	
8,900.00	7,719.22	7,698.37	7,732.62	29.47	17.00	-95.74	-3,112.91	-36.21	1,767.52	1,721.59	45.93	38.485	
9,000.00	7,718.69	7,697.12	7,731.38	30.89	16.99	-95.42	-3,112.92	-36.21	1,668.39	1,621.02	47.37	35.219	
9,100.00	7,718.17	7,695.87	7,730.13	32.34	16.99	-95.11	-3,112.92	-36.20	1,569.37	1,520.52	48.86	32.122	
9,200.00	7,717.64	7,694.62	7,728.88	33.84	16.99	-94.80	-3,112.93	-36.20	1,470.49	1,420.11	50.38	29.190	
9,300.00	7,717.11	7,693.37	7,727.63	35.37	16.98	-94.48	-3,112.94	-36.19	1,371.77	1,319.84	51.93	26.418	
9,400.00	7,716.58	7,692.12	7,726.38	36.92	16.98	-94.16	-3,112.95	-36.19	1,273.24	1,219.74	53.50	23.798	
9,500.00	7,716.06	7,690.87	7,725.13	38.50	16.98	-93.85	-3,112.96	-36.19	1,174.96	1,119.86	55.10	21.323	
9,600.00	7,715.53	7,689.62	7,723.88	40.10	16.97	-93.53	-3,112.97	-36.18	1,077.00	1,020.27	56.72	18.987	
9,700.00	7,715.00	7,688.37	7,722.63	41.72	16.97	-93.21	-3,112.98	-36.18	979.45	921.08	58.36	16.782	
9,800.00	7,714.47	7,687.12	7,721.37	43.35	16.97	-92.90	-3,112.99	-36.17	882.44	822.42	60.02	14.703	
9,900.00	7,713.94	7,685.86	7,720.12	45.00	16.97	-92.58	-3,113.00	-36.17	786.18	724.50	61.68	12.745	
10,000.00	7,713.42	7,684.61	7,718.87	46.67	16.96	-92.26	-3,113.01	-36.17	690.99	627.92	63.36	10.905	
10,100.00	7,712.89	7,683.36	7,717.62	48.35	16.96	-91.94	-3,113.01	-36.16	597.36	532.30	65.05	9.183	
10,200.00	7,712.36	7,682.11	7,716.36	50.03	16.96	-91.63	-3,113.02	-36.16	506.17	439.42	66.75	7.583	
10,300.00	7,711.83	7,680.85	7,715.11	51.73	16.95	-91.31	-3,113.03	-36.15	419.02	350.56	68.46	6.121	
10,400.00	7,711.30	7,679.60	7,713.86	53.44	16.95	-90.99	-3,113.04	-36.15	339.04	268.86	70.18	4.831	
10,500.00	7,710.78	7,678.34	7,712.60	55.15	16.95	-90.67	-3,113.05	-36.15	272.60	200.70	71.90	3.792	
10,600.00	7,710.25	7,677.09	7,711.35	56.87	16.94	-90.35	-3,113.06	-36.14	231.66	158.04	73.62	3.147	
10,653.22	7,709.97	7,676.42	7,710.68	57.79	16.94	-90.18	-3,113.07	-36.14	225.47	150.93	74.54	3.025 CC, ES, SF	
10,700.00	7,709.72	7,675.83	7,710.09	58.60	16.94	-90.03	-3,113.07	-36.14	230.27	154.92	75.35	3.056	
10,800.00	7,709.19	7,674.58	7,709.84	60.34	16.94	-89.71	-3,113.08	-36.13	269.03	191.95	77.09	3.490	
10,900.00	7,708.67	7,673.32	7,707.58	62.08	16.93	-89.39	-3,113.09	-36.13	334.26	255.44	78.82	4.241	
11,000.00	7,708.14	7,672.06	7,706.32	63.82	16.93	-89.07	-3,113.10	-36.13	413.82	333.05	80.56	5.134	

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 7H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3187' + KB 26' @ 3213.00usft (Cactus 126)
Reference Site:	Lone Tree Draw "13" State	MD Reference:	GE 3187' + KB 26' @ 3213.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	7H	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 Draft 1	Offset TVD Reference:	Reference Datum

Offset Design														Offset Site Error:	0.00 usft
Lone Tree Draw Offsets - Lone Tree #1 - OH - OH														Offset Well Error:	0.00 usft
Survey Program: 100-NS-GYRO-MS															
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
11,100.00	7,707.61	7,670.81	7,705.07	65.57	16.93	-88.75	-3,113.11	-36.12	500.42	418.11	82.31	6.080			
11,200.00	7,707.08	7,669.55	7,703.81	67.33	16.93	-88.44	-3,113.12	-36.12	591.41	507.36	84.05	7.036			
11,300.00	7,706.55	7,668.29	7,702.55	69.08	16.92	-88.12	-3,113.12	-36.11	684.91	599.11	85.80	7.983			
11,400.00	7,706.03	7,667.03	7,701.29	70.85	16.92	-87.80	-3,113.13	-36.11	780.02	692.48	87.54	8.910			
11,500.00	7,705.50	7,665.77	7,700.03	72.61	16.92	-87.48	-3,113.14	-36.11	876.22	786.93	89.29	9.813			
11,600.00	7,704.97	7,664.51	7,698.77	74.38	16.91	-87.16	-3,113.15	-36.10	973.19	882.15	91.04	10.690			
11,700.00	7,704.44	7,663.25	7,697.51	76.15	16.91	-86.84	-3,113.16	-36.10	1,070.71	977.93	92.78	11.540			
11,800.00	7,703.91	7,661.99	7,696.25	77.93	16.91	-86.52	-3,113.17	-36.09	1,168.65	1,074.12	94.53	12.363			
11,900.00	7,703.39	7,660.73	7,694.99	79.70	16.90	-86.20	-3,113.18	-36.09	1,266.91	1,170.64	96.27	13.160			
12,000.00	7,702.86	7,659.47	7,693.73	81.48	16.90	-85.88	-3,113.19	-36.09	1,365.42	1,267.41	98.01	13.931			
12,100.00	7,702.33	7,658.21	7,692.47	83.27	16.90	-85.56	-3,113.20	-36.08	1,464.14	1,364.38	99.76	14.677			
12,200.00	7,701.80	7,656.95	7,691.21	85.05	16.90	-85.25	-3,113.21	-36.08	1,563.01	1,461.52	101.50	15.400			
12,300.00	7,701.28	7,655.69	7,689.94	86.84	16.89	-84.93	-3,113.22	-36.07	1,662.02	1,558.79	103.23	16.100			
12,352.19	7,701.00	7,655.03	7,689.29	87.77	16.89	-84.76	-3,113.22	-36.07	1,713.74	1,609.60	104.14	16.456			

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 7H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3187' + KB 26' @ 3213.00usft (Cactus 126)
Reference Site:	Lone Tree Draw "13" State	MD Reference:	GE 3187' + KB 26' @ 3213.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	7H	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 Draft 1	Offset TVD Reference:	Reference Datum

Offset Design														Offset Site Error:	0.00 usft
Lone Tree Draw Offsets - Lone Tree Draw 13 State #3H - OH - OH														Offset Well Error:	0.00 usft
Survey Program: 100-NS-GYRO-MS; 4452-MWD-ISCWSA, 8564-Project															
Reference	Offset	Semi-Major Axis		Highside		Offset Wellbore Centre		Distance		Minimum	Separation	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Topface (")	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)				
0.00	0.00	0.00	9.00	0.00	0.00	-90.35	-0.92	-149.94	150.22						
100.00	100.00	91.56	100.56	0.08	0.10	-90.20	-0.53	-149.77	149.78	149.59	0.18			817.663	
200.00	200.00	191.33	200.32	0.31	0.35	-89.91	0.24	-149.46	149.46	148.80	0.66			226.716	
300.00	300.00	291.38	300.37	0.53	0.62	-89.51	1.27	-149.23	149.24	148.09	1.15			129.958	
380.85	380.85	371.88	380.85	0.71	0.83	-89.00	2.62	-149.10	149.12	147.58	1.54			96.802	
400.00	400.00	390.93	399.90	0.76	0.88	-88.87	2.93	-149.10	149.13	147.50	1.63			91.307	
500.00	500.00	490.96	499.92	0.98	1.14	-88.32	4.37	-149.14	149.21	147.09	2.12			70.402	
600.00	600.00	591.45	600.41	1.21	1.40	-87.81	5.71	-149.00	149.11	146.50	2.61			57.143	
675.72	675.72	666.78	675.72	1.38	1.60	-87.30	7.01	-148.82	148.98	146.00	2.98			50.016	
700.00	700.00	690.89	699.83	1.43	1.66	-87.12	7.50	-148.81	148.99	145.90	3.10			48.110	
800.00	800.00	791.04	799.96	1.66	1.93	-86.41	9.35	-148.80	149.09	145.50	3.59			41.570	
900.00	900.00	891.64	900.55	1.88	2.20	-85.73	11.10	-148.51	148.93	144.85	4.08			36.522	
949.70	949.70	940.80	949.70	1.99	2.33	-85.34	12.10	-148.32	148.81	144.49	4.32			34.464 CC	
1,000.00	1,000.00	990.39	999.28	2.11	2.45	-84.97	13.05	-148.36	148.93	144.37	4.56			32.661 ES	
1,100.00	1,100.00	1,089.53	1,098.40	2.33	2.70	-84.34	14.77	-148.99	149.73	144.70	5.03			29.767	
1,200.00	1,200.00	1,188.64	1,197.69	2.56	2.93	-83.82	16.27	-150.14	151.04	145.55	5.48			27.547	
1,300.00	1,300.00	1,288.67	1,297.51	2.78	3.14	-83.42	17.48	-151.61	152.64	146.72	5.92			25.788	
1,400.00	1,400.00	1,389.25	1,398.07	3.01	3.34	-83.19	18.28	-153.00	154.10	147.76	6.35			24.277	
1,500.00	1,500.00	1,488.50	1,497.31	3.23	3.55	-82.96	19.05	-154.35	155.55	148.76	6.78			22.938	
1,600.00	1,600.00	1,588.07	1,596.86	3.45	3.77	-82.64	20.17	-156.10	157.43	150.20	7.23			21.784	
1,700.00	1,700.00	1,688.16	1,696.92	3.68	4.00	-82.26	21.47	-157.93	159.41	151.73	7.68			20.745	
1,800.00	1,800.00	1,787.01	1,795.75	3.90	4.22	-82.00	22.49	-160.02	161.65	153.52	8.12			19.897	
1,900.00	1,900.00	1,887.83	1,896.53	4.13	4.43	-81.92	23.05	-162.44	164.11	155.55	8.56			19.178	
2,000.00	2,000.00	1,987.00	1,995.68	4.35	4.63	-81.87	23.52	-164.66	166.39	157.40	8.99			18.518	
2,100.00	2,100.00	2,088.71	2,097.36	4.58	4.84	-81.88	23.80	-166.87	168.58	159.16	9.42			17.895	
2,200.00	2,200.00	2,188.00	2,196.64	4.80	5.04	-81.93	23.90	-168.54	170.26	160.41	9.85			17.293	
2,300.00	2,300.00	2,288.83	2,297.45	5.03	5.25	-82.00	23.94	-170.36	172.05	161.77	10.28			16.735	
2,400.00	2,400.00	2,390.06	2,398.67	5.25	5.48	-81.94	24.27	-171.47	173.18	162.45	10.73			16.135	
2,500.00	2,500.00	2,489.84	2,498.45	5.48	5.69	-81.97	24.29	-172.26	173.97	162.80	11.17			15.574	
2,600.00	2,600.00	2,588.70	2,597.30	5.70	5.90	-82.06	24.19	-173.46	175.16	163.58	11.60			15.101	
2,700.00	2,700.00	2,688.53	2,697.12	5.93	6.10	-82.23	23.89	-175.14	176.78	164.76	12.02			14.704	
2,800.00	2,800.00	2,788.27	2,796.84	6.15	6.30	-82.45	23.46	-176.90	178.48	166.03	12.45			14.341	
2,900.00	2,900.00	2,888.56	2,897.12	6.38	6.50	-82.63	23.10	-178.67	180.18	167.30	12.88			13.993	
3,000.00	3,000.00	2,989.92	2,998.47	6.60	6.72	-82.78	22.81	-179.99	181.43	168.12	13.31			13.628	
3,100.00	3,100.00	3,089.40	3,097.94	6.83	6.94	-82.85	22.71	-180.93	182.36	168.61	13.76			13.254	
3,200.00	3,200.00	3,188.47	3,197.00	7.05	7.17	-82.88	22.76	-182.30	183.74	169.52	14.22			12.923	
3,300.00	3,300.00	3,288.58	3,297.10	7.28	7.41	-82.94	22.77	-183.95	185.37	170.69	14.68			12.629	
3,400.00	3,400.00	3,389.28	3,397.79	7.50	7.63	-83.07	22.53	-185.38	186.76	171.63	15.13			12.343	
3,500.00	3,500.00	3,489.08	3,497.58	7.73	7.86	-83.18	22.33	-186.63	187.97	172.39	15.58			12.062	
3,600.00	3,600.00	3,589.09	3,597.58	7.95	8.10	-83.26	22.22	-187.94	189.27	173.22	16.04			11.796	
3,700.00	3,700.00	3,689.15	3,697.63	8.17	8.34	-83.29	22.24	-189.21	190.53	174.01	16.52			11.536	
3,800.00	3,800.00	3,789.10	3,797.57	8.40	8.59	-83.33	22.29	-190.46	191.78	174.79	16.99			11.290	
3,900.00	3,900.00	3,888.98	3,897.44	8.62	8.84	-83.39	22.22	-191.77	193.07	175.62	17.46			11.061	
4,000.00	4,000.00	3,989.08	3,997.54	8.85	9.09	-83.42	22.26	-193.08	194.37	176.44	17.93			10.841	
4,100.00	4,100.00	4,088.79	4,097.24	9.07	9.34	-83.43	22.40	-194.39	195.70	177.29	18.41			10.632	
4,200.00	4,200.00	4,188.41	4,196.85	9.30	9.59	-83.42	22.59	-195.88	197.21	178.32	18.89			10.441	
4,300.00	4,300.00	4,287.85	4,296.27	9.52	9.85	-83.43	22.76	-197.60	198.94	179.57	19.37			10.273	
4,400.00	4,400.00	4,388.14	4,396.54	9.75	10.07	-83.50	22.72	-199.48	200.79	180.97	19.83			10.127	
4,500.00	4,500.00	4,489.21	4,497.50	9.97	10.16	-84.55	19.21	-201.32	202.25	182.07	20.18			10.023	
4,600.00	4,600.00	4,589.69	4,595.91	10.20	10.18	-90.05	-0.18	-203.50	203.54	183.11	20.43			9.961 SF	
4,700.00	4,700.00	4,675.59	4,675.52	10.42	10.23	-98.88	-32.11	-205.48	209.41	188.68	20.74			10.098	

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 7H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3187' + KB 26' @ 3213.00usft (Cactus 126)
Reference Site:	Lone Tree Draw "13" State	MD Reference:	GE 3187' + KB 26' @ 3213.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	7H	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 Draft 1	Offset TVD Reference:	Reference Datum

Offset Design Lone Tree Draw Offsets - Lone Tree Draw 13 State #3H - OH - OH														Offset Site Error:	0.00 usft
Survey Program: 100-NS-GYRO-MS: 4452-MWD-HSCWSA: 9564-Project														Offset Well Error:	0.00 usft
Reference	Vertical	Measured	Vertical	Semi Major Axis	Reference	Offset	Highside	Offset Wellbore Centre	Between	Between	Minimum	Separation	Warning		
Depth	Depth	Depth	Depth	Reference	Offset	Toolface	(°)	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)			(usft)	(usft)	(usft)	(usft)	(usft)			
4,800.00	4,800.00	4,757.01	4,744.82	10.65	10.33	-109.80		-74.61	-207.29	227.11	206.00	21.11	10.761		
4,900.00	4,900.00	4,823.90	4,796.36	10.87	10.50	-119.59		-117.20	-208.42	259.01	237.52	21.48	12.056		
5,000.00	5,000.00	4,872.49	4,830.36	11.10	10.68	-126.42		-151.88	-205.88	306.97	285.14	21.83	14.063		
5,100.00	5,100.00	4,811.85	4,855.19	11.32	10.86	-131.55		-182.39	-205.77	368.15	346.00	22.15	16.624		
5,200.00	5,200.00	4,942.38	4,872.47	11.55	11.03	-135.26		-207.54	-205.67	438.92	416.48	22.44	19.562		
5,300.00	5,300.00	4,966.79	4,884.85	11.77	11.19	-138.03		-228.58	-205.59	516.59	493.88	22.71	22.746		
5,400.00	5,400.00	4,989.00	4,894.99	12.00	11.34	-140.40		-248.34	-205.46	599.10	576.12	22.98	26.074		
5,500.00	5,500.00	5,008.73	4,903.22	12.22	11.49	-142.38		-266.27	-205.18	684.94	661.70	23.23	29.481		
5,600.00	5,600.00	5,029.12	4,911.09	12.45	11.65	-144.33		-285.06	-204.61	773.12	749.64	23.49	32.917		
5,700.00	5,700.00	5,051.00	4,919.00	12.67	11.84	-146.30		-305.45	-203.70	862.99	839.25	23.74	36.355		
5,800.00	5,800.00	5,064.36	4,923.54	12.89	11.96	-147.44		-317.99	-203.03	954.22	930.24	23.98	39.794		
5,900.00	5,900.00	5,083.00	4,929.43	13.12	12.13	-148.96		-335.65	-202.01	1,046.65	1,022.42	24.22	43.208		
6,000.00	6,000.00	5,083.00	4,929.43	13.34	12.13	-148.96		-335.65	-202.01	1,139.99	1,115.54	24.45	46.629		
6,100.00	6,100.00	5,095.22	4,932.97	13.57	12.25	-149.90		-347.33	-201.34	1,234.15	1,209.46	24.69	49.994		
6,200.00	6,200.00	5,102.10	4,934.82	13.79	12.32	-150.41		-353.94	-200.99	1,329.04	1,304.12	24.92	53.336		
6,300.00	6,300.00	5,115.00	4,938.02	14.02	12.44	-151.33		-366.42	-200.37	1,424.57	1,399.42	25.16	56.630		
6,400.00	6,400.00	5,115.00	4,938.02	14.24	12.44	-151.33		-366.42	-200.37	1,520.46	1,495.08	25.38	59.907		
6,500.00	6,500.00	5,115.00	4,938.02	14.47	12.44	-151.33		-366.42	-200.37	1,616.85	1,591.24	25.61	63.145		
6,600.00	6,600.00	5,115.00	4,938.02	14.69	12.44	-151.33		-366.42	-200.37	1,713.65	1,687.82	25.83	66.344		
6,700.00	6,700.00	5,115.00	4,938.02	14.92	12.44	-151.33		-366.42	-200.37	1,810.80	1,784.74	26.05	69.500		
6,800.00	6,800.00	5,131.44	4,941.57	15.14	12.62	-152.43		-382.46	-199.71	1,907.86	1,881.57	26.29	72.558		
6,900.00	6,900.00	5,147.00	4,944.38	15.37	12.78	-153.39		-397.76	-199.26	2,005.58	1,979.05	26.53	75.592		
7,000.00	7,000.00	5,147.00	4,944.38	15.59	12.78	-153.39		-397.76	-199.26	2,103.21	2,076.45	26.76	78.606		
7,100.00	7,100.00	5,147.00	4,944.38	15.82	12.78	-153.39		-397.76	-199.26	2,201.05	2,174.07	26.98	81.577		
7,203.00	7,203.00	5,147.00	4,944.38	16.05	12.78	-153.39		-397.76	-199.26	2,302.02	2,274.80	27.21	84.593		
7,250.00	7,249.94	5,147.00	4,944.38	16.14	12.78	5.39		-397.76	-199.26	2,347.69	2,320.59	27.09	86.648		
7,300.00	7,299.44	5,147.00	4,944.38	16.23	12.78	4.04		-397.76	-199.26	2,395.07	2,368.10	26.97	88.790		
7,350.00	7,348.06	5,147.00	4,944.38	16.31	12.78	3.25		-397.76	-199.26	2,440.87	2,413.89	26.98	90.472		
7,400.00	7,395.34	5,147.00	4,944.38	16.40	12.78	2.72		-397.76	-199.26	2,484.76	2,457.92	26.83	92.594		
7,450.00	7,440.85	5,162.49	4,946.74	16.49	12.95	2.13		-413.07	-198.91	2,526.21	2,499.64	26.57	95.070		
7,500.00	7,484.17	5,179.00	4,948.86	16.58	13.13	1.69		-429.43	-198.58	2,565.32	2,539.13	26.19	97.962		
7,550.00	7,524.90	5,179.00	4,948.86	16.69	13.13	1.53		-429.43	-198.58	2,601.42	2,575.78	25.65	101.437		
7,600.00	7,562.66	5,179.00	4,948.86	16.82	13.13	1.40		-429.43	-198.58	2,634.57	2,609.57	25.00	105.392		
7,650.00	7,587.12	5,179.00	4,948.86	16.98	13.13	1.31		-429.43	-198.58	2,664.57	2,640.31	24.26	109.815		
7,700.00	7,627.94	5,179.00	4,948.86	17.17	13.13	1.23		-429.43	-198.58	2,691.26	2,667.79	23.47	114.667		
7,750.00	7,654.86	5,204.23	4,951.28	17.39	13.43	0.96		-454.53	-198.07	2,713.86	2,691.13	22.73	119.369		
7,800.00	7,677.61	5,212.21	4,951.83	17.66	13.52	0.87		-462.50	-197.89	2,733.05	2,711.09	21.96	124.466		
7,850.00	7,695.99	5,237.00	4,952.87	17.96	13.82	0.65		-487.26	-197.28	2,748.68	2,727.37	21.31	128.970		
7,900.00	7,709.84	5,237.00	4,952.87	18.30	13.82	0.64		-487.26	-197.28	2,759.92	2,739.25	20.67	133.537		
7,950.00	7,719.01	5,237.00	4,952.87	18.68	13.82	0.63		-487.26	-197.28	2,767.32	2,747.14	20.19	137.085		
8,000.00	7,723.44	5,269.54	4,953.50	19.09	14.23	0.39		-519.78	-196.53	2,770.57	2,750.44	20.13	137.651		
8,023.91	7,723.86	5,284.85	4,953.73	19.30	14.42	0.29		-535.09	-196.23	2,770.55	2,750.35	20.20	137.155		
8,100.00	7,723.46	5,341.47	4,954.27	19.98	15.13	-0.06		-591.70	-195.44	2,769.29	2,748.61	20.68	133.931		
8,200.00	7,722.93	5,510.48	4,958.56	20.92	17.19	-0.93		-760.64	-193.80	2,766.13	2,744.14	21.99	125.803		
8,300.00	7,722.40	5,629.64	4,963.22	21.96	18.76	-1.37		-879.70	-192.42	2,762.04	2,738.98	23.06	119.796		
8,400.00	7,721.87	5,711.00	4,966.64	23.08	19.92	-1.56		-960.88	-191.04	2,757.73	2,733.82	23.91	115.334		
8,500.00	7,721.34	5,780.98	4,968.98	24.27	20.98	-1.64		-1,030.91	-190.46	2,754.23	2,729.51	24.72	111.407		
8,600.00	7,720.81	5,872.44	4,970.92	25.50	22.36	-1.65		-1,122.35	-191.28	2,751.67	2,725.96	25.71	107.012		
8,656.59	7,720.51	5,930.65	4,972.25	26.22	23.24	-1.62		-1,180.54	-191.75	2,750.08	2,723.75	26.33	104.435		
8,700.00	7,720.28	5,972.16	4,973.19	26.78	23.88	-1.61		-1,222.04	-191.86	2,748.87	2,722.07	26.79	102.590		

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 7H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3187' + KB 26' @ 3213.00usft (Cactus 126)
Reference Site:	Lone Tree Draw "13" State	MD Reference:	GE 3187' + KB 26' @ 3213.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	7H	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 Draft 1	Offset TVD Reference:	Reference Datum

Offset Design: Lone Tree Draw Offsets - Lone Tree Draw 13 State #3H - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 100-NS-GYRO-MS, 4452-MWD-ISCWSA, 9564-Project												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	Warning
8,800.00	7,719.75	6,060.50	4,975.00	28.10	25.26	-1.60	-1,310.36	-192.06	2,746.28	2,718.45	27.83	98.687	
8,900.00	7,719.22	6,146.98	4,976.29	29.47	26.63	-1.56	-1,396.81	-193.82	2,744.19	2,715.31	28.87	95.044	
9,000.00	7,718.69	6,285.83	4,978.55	30.89	28.82	-1.43	-1,535.51	-199.78	2,742.02	2,711.71	30.31	90.462	
9,100.00	7,718.17	6,402.70	4,982.17	32.34	30.68	-1.36	-1,652.29	-202.47	2,738.30	2,706.68	31.62	86.594	
9,200.00	7,717.64	6,498.92	4,985.21	33.84	32.25	-1.32	-1,748.44	-204.12	2,734.56	2,701.76	32.81	83.355	
9,300.00	7,717.11	6,599.07	4,988.52	35.37	33.91	-1.29	-1,848.54	-205.16	2,730.70	2,696.67	34.04	80.226	
9,400.00	7,716.58	6,683.53	4,990.98	36.92	35.32	-1.26	-1,932.95	-206.22	2,727.23	2,692.06	35.17	77.540	
9,500.00	7,716.06	6,780.77	4,993.24	38.50	36.96	-1.22	-2,030.15	-207.94	2,724.32	2,687.91	36.41	74.817	
9,600.00	7,715.53	6,880.37	4,996.26	40.10	38.61	-1.19	-2,129.70	-209.27	2,720.73	2,683.04	37.69	72.196	
9,700.00	7,715.00	6,942.00	4,997.22	41.72	39.64	-1.17	-2,191.32	-209.78	2,718.52	2,679.82	38.70	70.254	
9,800.00	7,714.47	7,022.64	4,997.63	43.35	40.99	-1.15	-2,271.95	-210.25	2,717.42	2,677.56	39.85	68.184	
9,900.00	7,713.94	7,116.03	4,997.89	45.00	42.56	-1.14	-2,365.34	-210.67	2,716.59	2,675.48	41.12	66.071	
10,000.00	7,713.42	7,207.29	4,997.89	46.67	44.11	-1.12	-2,456.60	-211.29	2,716.04	2,673.67	42.37	64.100	
10,100.00	7,712.89	7,318.61	4,997.85	48.35	45.97	-1.08	-2,567.92	-212.63	2,715.53	2,671.74	43.78	62.024	
10,200.00	7,712.36	7,415.68	4,998.03	50.03	47.59	-1.05	-2,664.97	-213.88	2,714.78	2,669.69	45.10	60.201	
10,300.00	7,711.83	7,523.26	4,998.32	51.73	49.41	-1.02	-2,772.55	-214.85	2,713.97	2,667.47	46.49	58.372	
10,400.00	7,711.30	7,623.21	4,998.90	53.44	51.08	-1.00	-2,872.50	-215.34	2,712.84	2,665.00	47.85	56.700	
10,500.00	7,710.78	7,699.00	4,998.78	55.15	52.35	-0.98	-2,948.29	-215.73	2,712.42	2,663.39	49.03	55.325	
10,502.60	7,710.76	7,699.00	4,998.78	55.20	52.35	-0.98	-2,948.29	-215.73	2,712.42	2,663.38	49.04	55.307	
10,600.00	7,710.25	7,792.55	4,998.10	56.87	53.94	-0.95	-3,041.82	-216.96	2,712.59	2,662.25	50.34	53.884	
10,700.00	7,709.72	7,892.59	4,997.36	58.60	55.63	-0.90	-3,141.84	-219.08	2,712.75	2,661.05	51.71	52.464	
10,800.00	7,709.19	7,997.15	4,996.67	60.34	57.38	-0.84	-3,246.37	-221.45	2,712.85	2,659.74	53.11	51.080	
10,900.00	7,708.67	8,109.55	4,996.29	62.08	59.27	-0.78	-3,358.75	-223.62	2,712.63	2,658.06	54.58	49.704	
11,000.00	7,708.14	8,219.84	4,996.46	63.82	61.15	-0.76	-3,469.03	-224.38	2,711.93	2,655.89	56.03	48.399	
11,100.00	7,707.61	8,319.82	4,996.79	65.57	62.86	-0.75	-3,569.01	-224.52	2,711.06	2,653.64	57.42	47.214	
11,200.00	7,707.08	8,420.16	4,997.07	67.33	64.58	-0.73	-3,669.35	-224.79	2,710.24	2,651.43	58.81	46.081	
11,300.00	7,706.55	8,507.49	4,997.26	69.08	66.08	-0.71	-3,756.68	-225.34	2,709.51	2,649.39	60.12	45.071	
11,344.56	7,706.32	8,541.68	4,997.13	69.87	66.66	-0.69	-3,790.86	-226.13	2,709.42	2,648.76	60.66	44.664	
11,400.00	7,706.03	8,592.68	4,996.77	70.85	67.53	-0.65	-3,841.84	-227.77	2,709.50	2,648.10	61.40	44.128	
11,500.00	7,705.50	8,694.07	4,996.04	72.61	69.26	-0.58	-3,943.18	-230.69	2,709.66	2,646.85	62.81	43.143	
11,600.00	7,704.97	8,788.14	4,995.38	74.38	70.87	-0.52	-4,037.21	-233.40	2,709.80	2,645.64	64.16	42.234	
11,700.00	7,704.44	8,873.33	4,994.38	76.15	72.33	-0.44	-4,122.33	-236.71	2,710.41	2,644.96	65.45	41.410	
11,800.00	7,703.91	8,987.07	4,992.66	77.93	74.28	-0.32	-4,235.92	-242.04	2,711.41	2,644.46	66.95	40.497	
11,900.00	7,703.39	9,111.38	4,992.29	79.70	76.41	-0.21	-4,360.15	-246.65	2,711.11	2,642.58	68.54	39.558	
12,000.00	7,702.86	9,206.46	4,992.20	81.48	78.05	-0.14	-4,455.18	-249.54	2,710.67	2,640.76	69.91	38.774	
12,100.00	7,702.33	9,299.88	4,991.89	83.27	79.64	-0.07	-4,548.55	-252.45	2,710.47	2,639.19	71.27	38.029	
12,148.20	7,702.08	9,345.95	4,991.66	84.13	80.43	-0.04	-4,594.60	-253.81	2,710.45	2,638.51	71.94	37.677	
12,200.00	7,701.80	9,395.98	4,991.38	85.05	81.27	-0.01	-4,644.62	-255.20	2,710.47	2,637.81	72.66	37.304	
12,300.00	7,701.28	9,486.70	4,990.70	86.84	82.83	0.05	-4,735.30	-257.68	2,710.69	2,636.68	74.01	36.627	
12,352.19	7,701.00	9,537.70	4,990.21	87.77	83.00	0.09	-4,786.27	-259.15	2,710.93	2,636.48	74.44	36.416	

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

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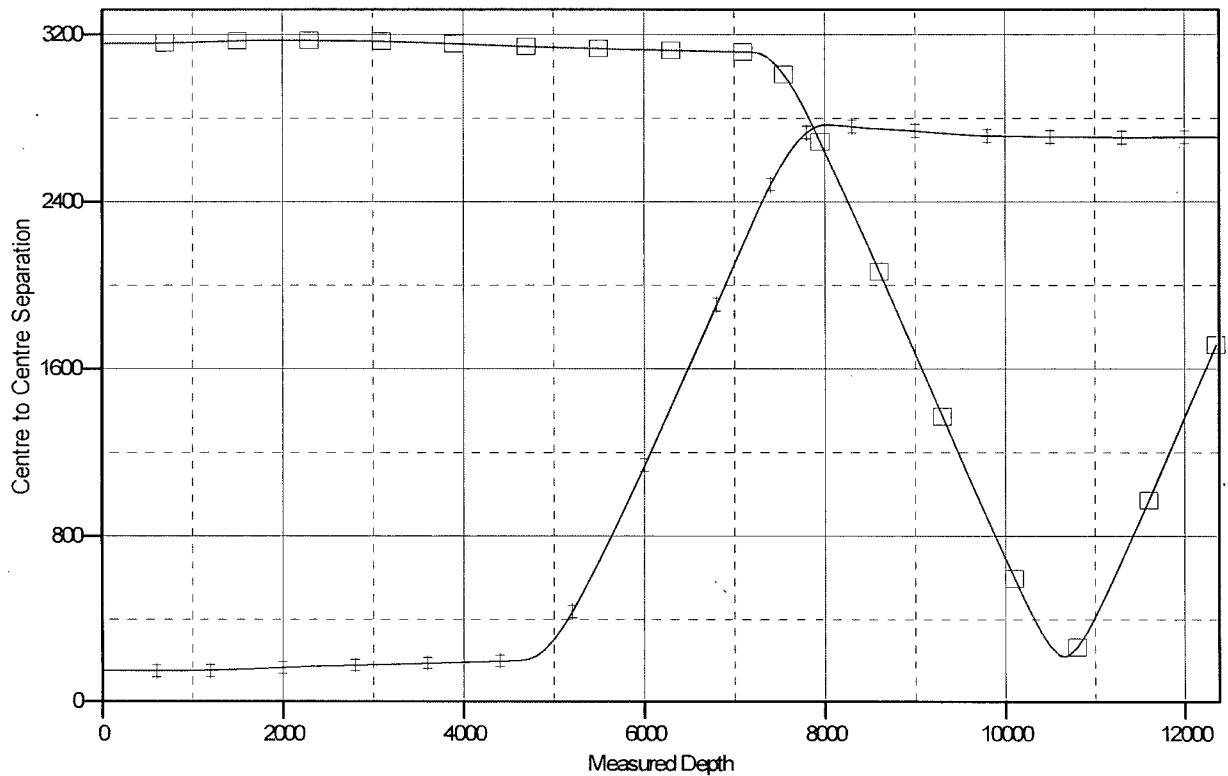
Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 7H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3187' + KB 26' @ 3213.00usft (Cactus 126)
Reference Site:	Lone Tree Draw "13" State	MD Reference:	GE 3187' + KB 26' @ 3213.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	7H	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 Draft 1	Offset TVD Reference:	Reference Datum

Reference Depths are relative to GE 3187' + KB 26' @ 3213.00usft (Ca
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 7H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.10°

Ladder Plot



LEGEND

—□— Lone Tree #1, OH, OHV0

—+— Lone Tree Draw 13 State #3H, OH, OHV0

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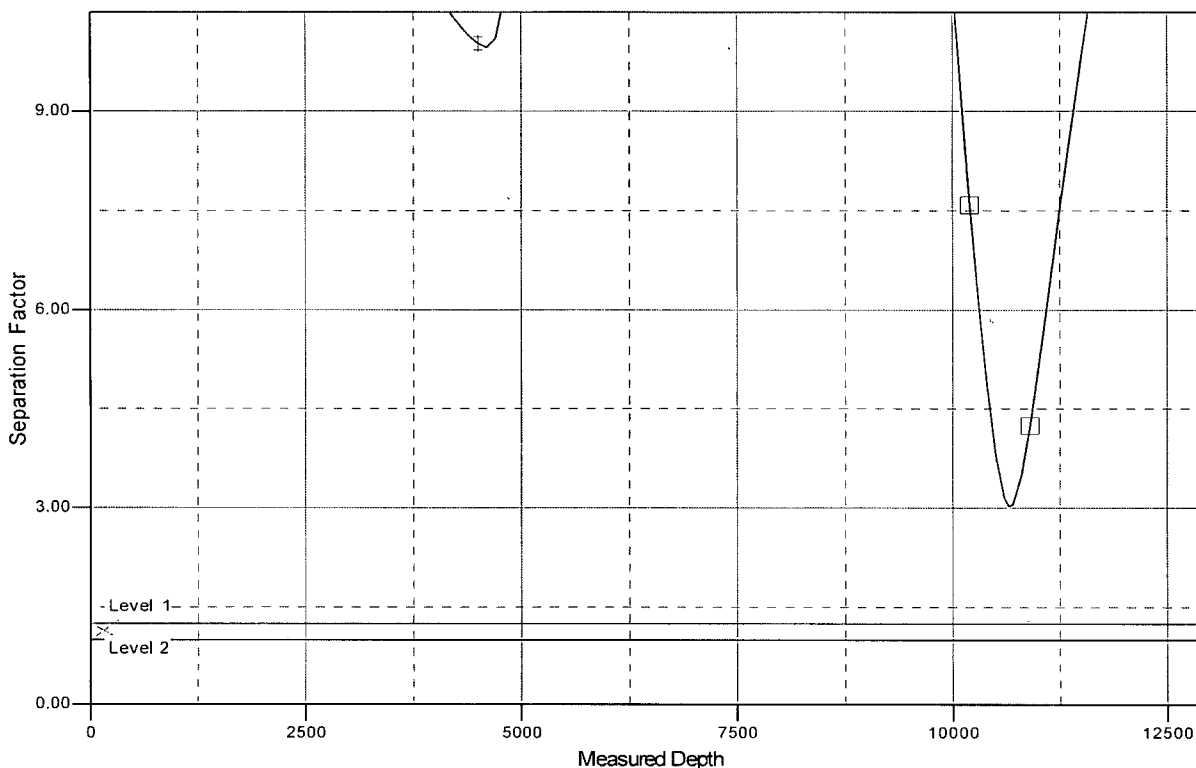
Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 7H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3187' + KB 26' @ 3213.00usft (Cactus 126)
Reference Site:	Lone Tree Draw "13" State	MD Reference:	GE 3187' + KB 26' @ 3213.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	7H	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 Draft 1	Offset TVD Reference:	Reference Datum

Reference Depths are relative to GE 3187' + KB 26' @ 3213.00usft (Ca
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 7H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.10°

Separation Factor Plot



LEGEND

☐ Lone Tree #1, OH, OH V0

⊕ Lone Tree Draw 13 State #3H, OH, OH V0