

NM OIL CONSERVATION

ARTESIA DISTRICT

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

OCT 06 2014

Form C-102
Revised August 1, 2011

Submit one copy to appropriate
District Office

RECEIVED

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-42706	² Pool Code 96144	³ Pool Name Carlsbad; Bone Spring, East
⁴ Property Code 40392	⁵ Property Name LONE TREE DRAW 14 STATE COM	⁶ Well Number 2H
⁷ OGRID No. 6137	⁸ Operator Name DEVON ENERGY PRODUCTION COMPANY, L.P.	⁹ Elevation 3220.5

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	14	21 S	27 E		150	NORTH	1875	EAST	EDDY

¹¹ Bottom Hole Location If Different From Surface

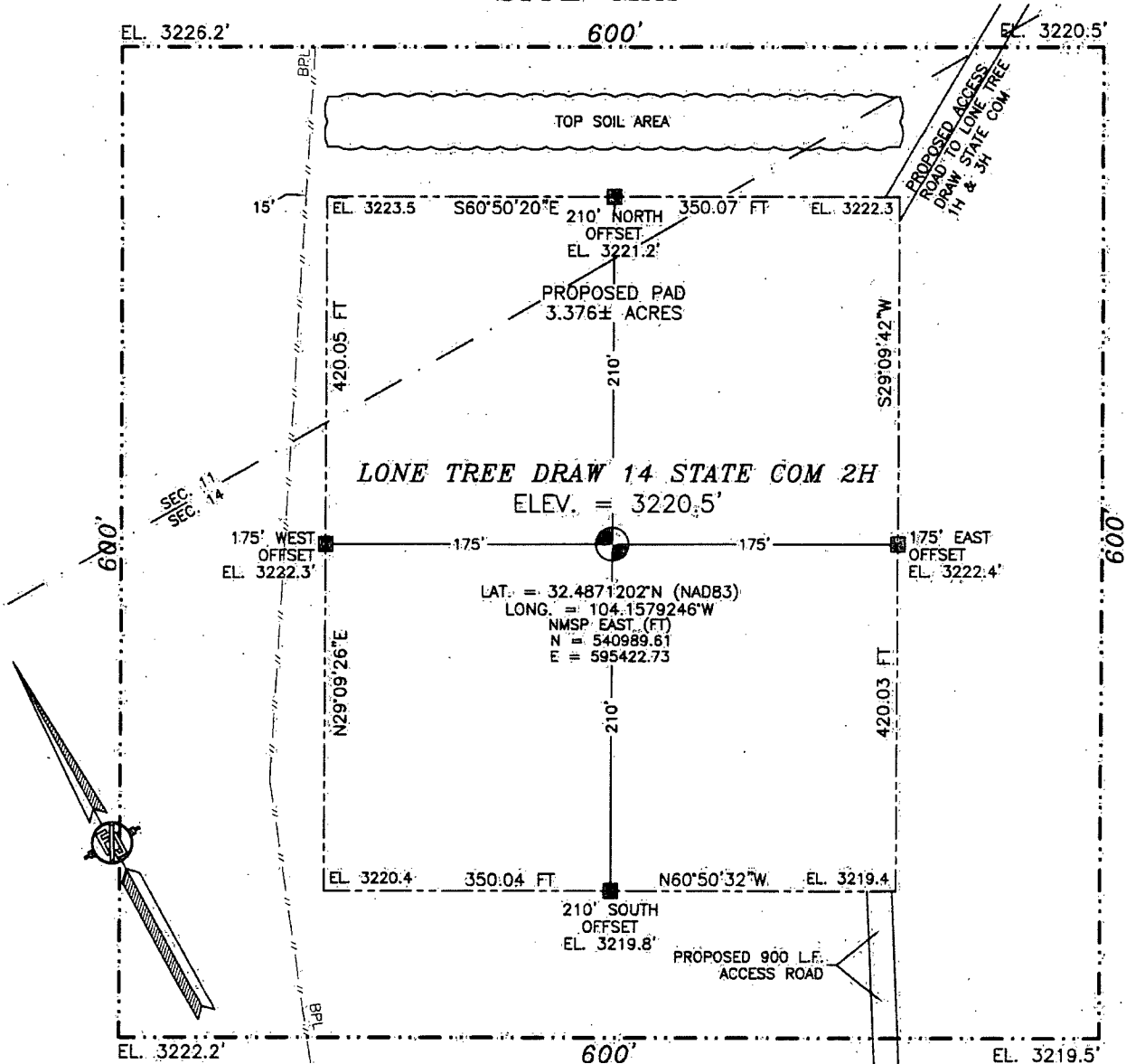
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	14	21 S	27 E		330	SOUTH	2200	EAST	EDDY

¹² Dedicated Acres 160.00	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

N89°39'59"E 2661.26 FT. NW CORNER SEC. 14 LAT. = 32.4874915°N LONG. = 104.1691038°W NMSP EAST (FT) N = 541119.20 E = 591975.53 N/4 CORNER SEC. 14 LAT. = 32.4875225°N LONG. = 104.1604750°W NMSP EAST (FT) N = 541134.6 E = 594636.10 LONE TREE DRAW 14 STATE COM 2H ELEV. = 3220.5 LAT. = 32.4871202°N (NAD83) LONG. = 104.1579246°W NMSP EAST (FT) N = 540989.6 E = 595422.7 Project Area → Lease Line → Completion Interval → W/4 CORNER SEC. 14 COMPUTED NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83). LISTED NEW MEXICO STATE PLANE EAST COORDINATES ARE GRID (NAD83) BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST COORDINATES MODIFIED TO THE SURFACE. S/4 CORNER SEC. 14 LAT. = 32.4729259°N LONG. = 104.1604404°W NMSP EAST (FT) N = 535824.4 E = 594655.3 SW CORNER SEC. 14 COMPUTED		N89°38'31"E 2661.28 FT. NE CORNER SEC. 14 LAT. = 32.4875561°N LONG. = 104.1518461°W NMSP EAST (FT) N = 541151.32 E = 597296.69 SURFACE LOCATION 17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Linda Good</i> 10/1/2014 Signature Date Linda Good Printed Name linda.good@dvn.com E-mail Address 18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. SEPTEMBER 30 2014 Date of Survey 12797 Signature and Seal of Professional Surveyor Certificate Number: ELIMON F. JARAMILLO, PLS 12797 SURVEY NO. 2184	
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SECTION 14, TOWNSHIP 21 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
SITE MAP



NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83). LISTED NEW MEXICO STATE PLANE EAST COORDINATES ARE GRID (NAD83). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST COORDINATES MODIFIED TO THE SURFACE.

010 50 100 200

SCALE 1" = 100'

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF CR 208 (ILLINOIS CAMP) AND SR 200 (GEORGE SHOUP, RELIEF ROUTE) GO NORTH ON CR 208 1.3 MILES TO CR 600 (RAINS ROAD) ON THE RIGHT (EAST) GO DOWN CR 600 2.1 MILES (RAMBO BOOSTER) PAVEMENT ENDS CONTINUE EAST AT 2.3 MILES CALICHE ROAD TO THE RIGHT (EAST) ACROSS FROM A GRAVEL PIT GO RIGHT ON CALICHE ROAD 2.4 MILES FOLLOW FLAG ON LEFT (NORTH) SIDE OF ROAD FOR 900 L.F. TO SE CORNER OF PAD

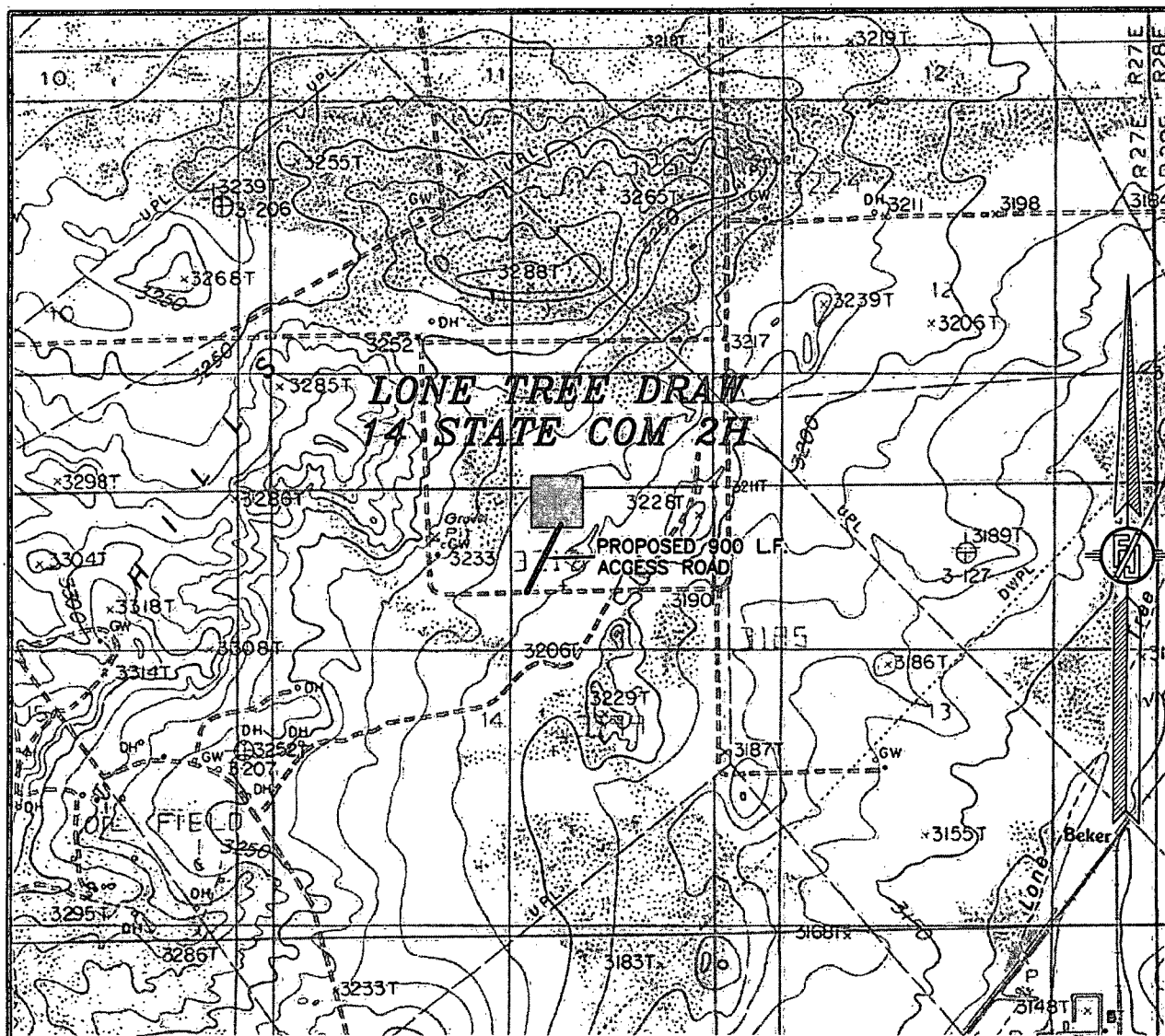
DEVON ENERGY PRODUCTION COMPANY, L.P.
LONE TREE DRAW 14 STATE COM 2H
LOCATED 150 FT. FROM THE NORTH LINE
AND 1875 FT. FROM THE EAST LINE OF
SECTION 14, TOWNSHIP 21 SOUTH,
RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

SEPTEMBER 26, 2013

SURVEY NO. 2184

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

SECTION 14, TOWNSHIP 21 SOUTH, RANGE 27 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO
 LOCATION VERIFICATION MAP



USGS QUAD MAP:
 CARLSBAD EAST

NOT TO SCALE

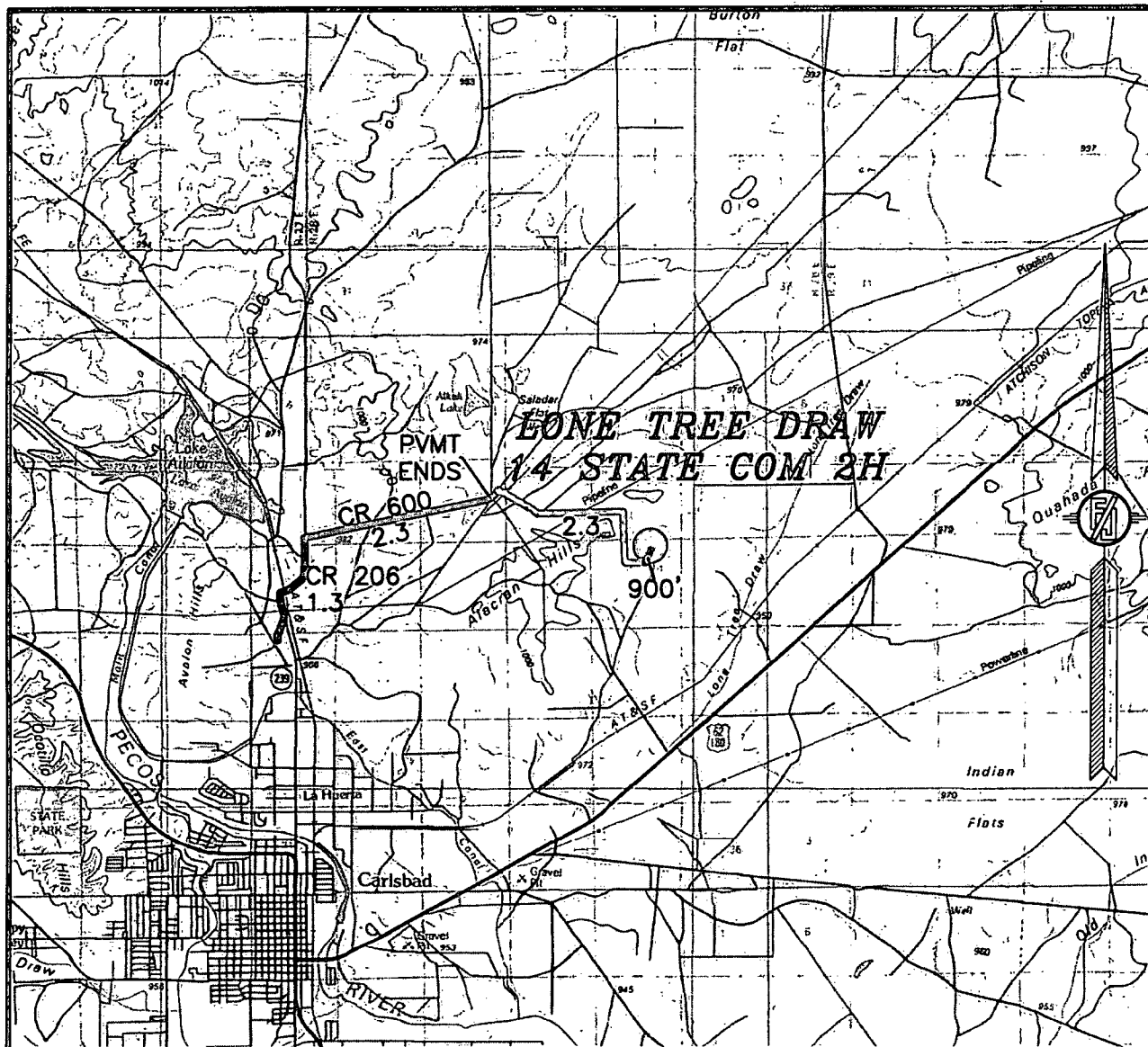
DEVON ENERGY PRODUCTION COMPANY, L.P.
 LONE TREE DRAW 14 STATE COM 2H
 LOCATED 150 FT. FROM THE NORTH LINE
 AND 1875 FT. FROM THE EAST LINE OF
 SECTION 14, TOWNSHIP 21 SOUTH,
 RANGE 27 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO

SEPTEMBER 26, 2013

SURVEY NO. 2184

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

SECTION 14, TOWNSHIP 21 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
VICINITY MAP



DISTANCES IN MILES

NOT TO SCALE

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF CR 206 (ILLINOIS CAMP) AND SR 200 (GEORGE SHOUP, RELIEF ROUTE) GO NORTH ON CR 206 1.3 MILES TO CR 600 (RAINS ROAD) ON THE RIGHT (EAST) GO DOWN CR 600 2.1 MILES (RAMBO BOOSTER) PAVEMENT ENDS CONTINUE EAST AT 2.3 MILES CALICHE ROAD TO THE RIGHT (EAST) ACROSS FROM A GRAVEL PIT GO RIGHT ON CALICHE ROAD 2.4 MILES FOLLOW FLAG ON LEFT (NORTH) SIDE OF ROAD FOR 900 L.F. TO SE CORNER OF PAD

DEVON ENERGY PRODUCTION COMPANY, L.P.

LONE TREE DRAW 14 STATE COM 2H

LOCATED 150 FT. FROM THE NORTH LINE

AND 1875 FT. FROM THE EAST LINE OF

SECTION 14, TOWNSHIP 21, SOUTH,

RANGE 27 EAST, N.M.P.M.

EDDY COUNTY, STATE OF NEW MEXICO

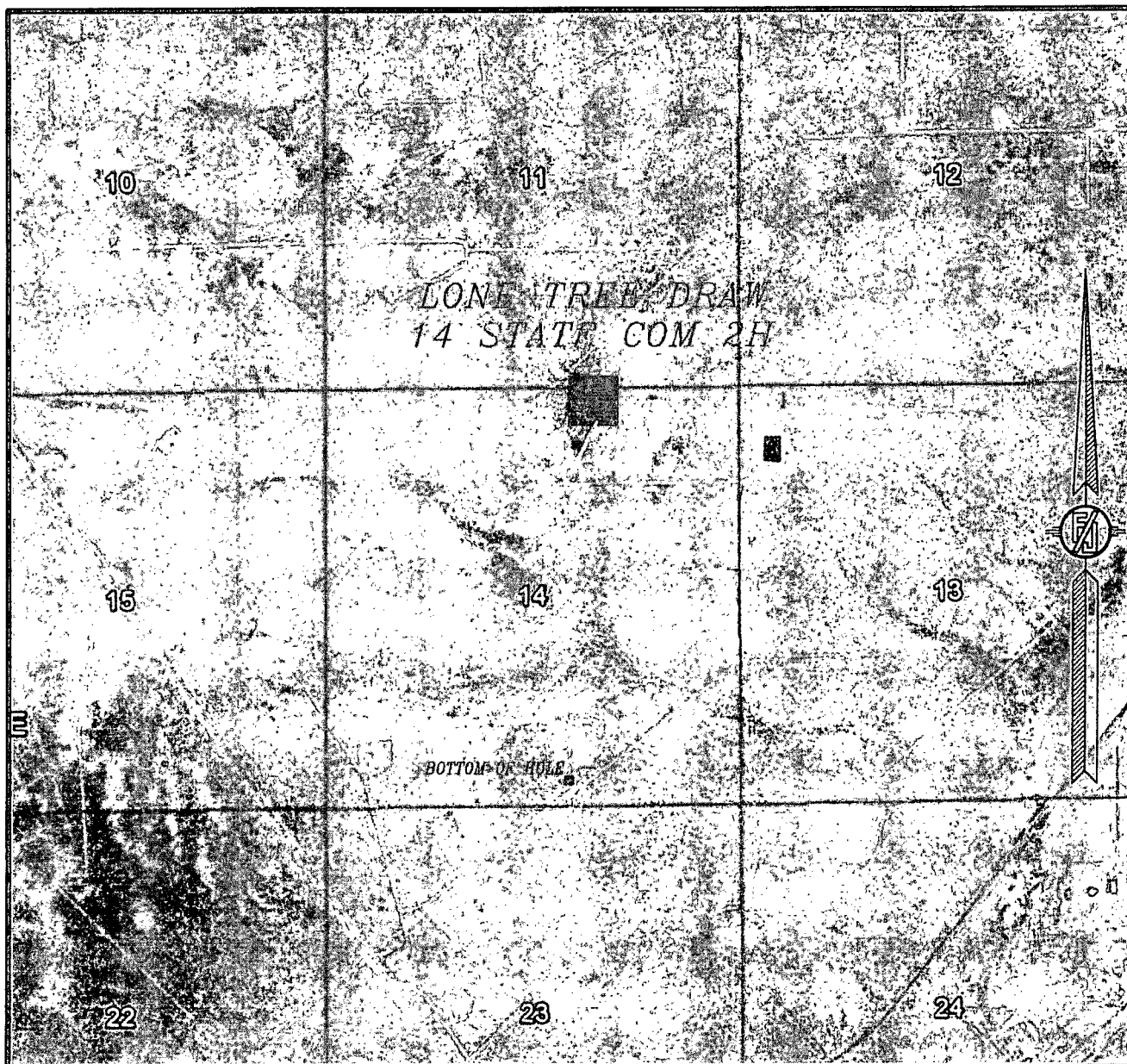
SEPTEMBER 26, 2013

SURVEY NO. 2184

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341

CARLSBAD, NEW MEXICO

SECTION 14, TOWNSHIP 21 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
AERIAL PHOTO



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
APRIL 2013

DEVON ENERGY PRODUCTION COMPANY, L.P.
LONE TREE DRAW 14 STATE COM 2H
LOCATED 150 FT. FROM THE NORTH LINE
AND 1875 FT. FROM THE EAST LINE OF
SECTION 14, TOWNSHIP 21 SOUTH,
RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

SEPTEMBER 26, 2013

SURVEY NO. 2184

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

DRILLING PROGRAM

Devon Energy Production Company, L.P./Lone Tree Draw 14 State/2H

1. Pressure Control Equipment:

A 3M 13-5/8" BOP system (Double Ram and Annular preventer) will be installed and tested prior to drilling out the surface casing shoe. The BOP system used to drill the intermediate hole will be tested per BLM Onshore Oil and Gas Order 2.

A 3M 13-5/8" BOP system (Double Ram and Annular preventer) will be installed and tested prior to drilling out the intermediate casing shoe. The BOP system used to drill the production hole will be tested per BLM Onshore Oil and Gas Order 2.

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. 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 requests a variance to use a flexible line with flanged ends between the BOP and the choke manifold (choke line); **if an H&P rig drills this well. Otherwise no flex line is needed.** The line will be kept as straight as possible with minimal turns.

Auxiliary Well Control and Monitoring Equipment:

- a. A Kelly cock will be in the drill string at all times.
- b. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.

2. Casing Program:

Hole Size	Hole Interval	Casing OD	Casing Interval	Weight (lb/ft)	Collar	Grade	Collapse Design Factor	Burst Design Factor	Tension Design Factor
17-1/2"	0 - 300'	13-3/8"	0 – 300'	48	STC	H-40	5.48	12.32	22.36
12-1/4"	300-2950'	9-5/8"	0-2950'	36	LTC	HCK-55	1.68	2.57	4.41
8-3/4"	2950-12290'	5-1/2"	0-12290'	17	BTC	P-110	2.38	2.95	6.36

Casing Notes:

- All casing is new and API approved

Maximum Lateral TVD: 7698'

3. Proposed mud Circulations System:

Depth	Mud Weight	Viscosity	Fluid Loss	Type System
0-300'	8.4-9.0	30-34	N/C	FW
300-2950'	9.8-10.0	28-32	N/C	Brine
2950-12290'	8.6-9.0	28-32	N/C	FW

The necessary mud products for weight addition and fluid loss control will be on location at all times. Visual mud monitoring equipment will be in place to detect volume changes indicating loss or gain of circulating fluid volume. If abnormal pressures are encountered, electronic/mechanical mud monitoring equipment will be installed.

4. Cementing Table:

String	Number of sx	Weight lbs/gal	Water Volume g/sx	Yield cf/sx	Stage; Lead/Tail	Slurry Description
13-3/8" Surface	350	14.8	6.32	1.33	Tail	Class C Cement + 63.5% Fresh Water
9-5/8" Intermediate Single Stage	550	12.9	9.81	1.85	Lead	(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
	430	14.8	6.32	1.33	Tail	Class C Cement + 0.125 lbs/sack Poly-E-Flake + 63.5% Fresh Water
9-5/8" Intermediate 2-Stage Option	210	12.9	9.81	1.85	Lead	(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
	220	14.8	6.32	1.33	Tail	Class C Cement + 0.125 lbs/sack Poly-E-Flake + 63.5% Fresh Water
	DV Tool @ 1750ft					
	550	13.7	8.66	1.67	Tail	Class C Cement + 0.4% BWOC LAP-1 + 0.2% BWOC HR-601 + 0.2 lb/sk D-Air 5000 + 4% BWOC Bentonite + 69.3% Fresh Water
5-1/2" Production Casing Single Stage	540	11.0	15.23	2.71	Lead	Tuned Light Blend + 0.125 lb/sk Pol-E-Flake + 76.3% Fresh Water
	1340	14.5	5.38	1.22	Tail	(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
5-1/2" Production Casing 2-Stage Option	430	12.5	10.86	1.96	Lead	(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
	1340	14.5	5.38	1.22	Tail	(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
	DV Tool @ 4500ft					
	210	11.9	12.89	2.26	Lead	(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
	120	14.8	6.32	1.33	Tail	Class C Cement + 0.125 lbs/sack Poly-E-Flake + 63.5% Fresh Water

TOC for all Strings:

Surface @ 0'
 Intermediate @ 0'
 Production @ 2450'

Notes:

- Cement volumes Surface 100%, Intermediate 75%, Production based on at least 25% excess
- Actual cement volumes will be adjusted based on fluid caliper and caliper log data
- If lost circulation is encountered while drilling the production and/or the intermediate wellbores, a DV tool will be installed a minimum of 50' below the previous casing shoe and of 200' above the current shoe. If the DV tool has to be moved, the cement volumes will be adjusted proportionately.

DEVON ENERGY

Project: Eddy County, NM (NAD-83)
Site: Lone Tree Draw "14" State
Well: 2H
Wellbore: OH
Design: Plan #1 Draft 1



Azimuths to Grid North
True North: -0.09°
Magnetic North: 7.58°

Magnetic Field
Strength: 48428.6nT
Dip Angle: 60.25°
Date: 01/15/2014
Model: BGGM2013

devon

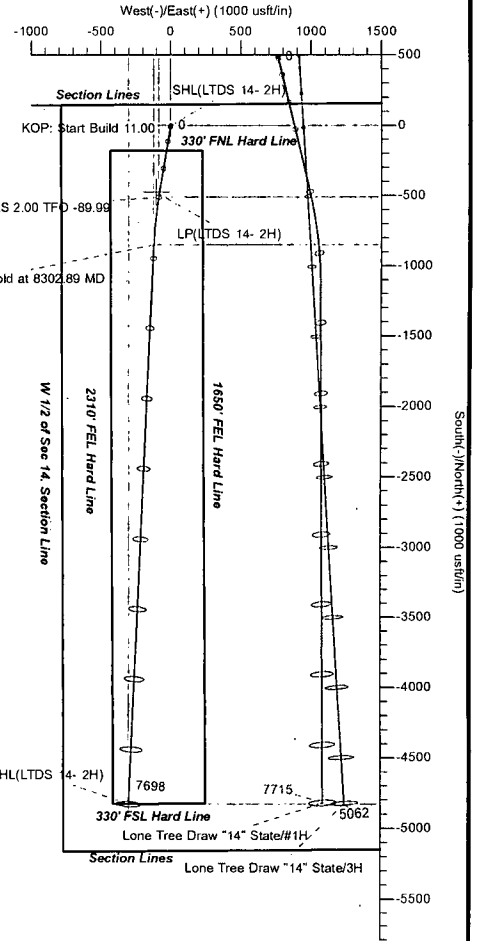
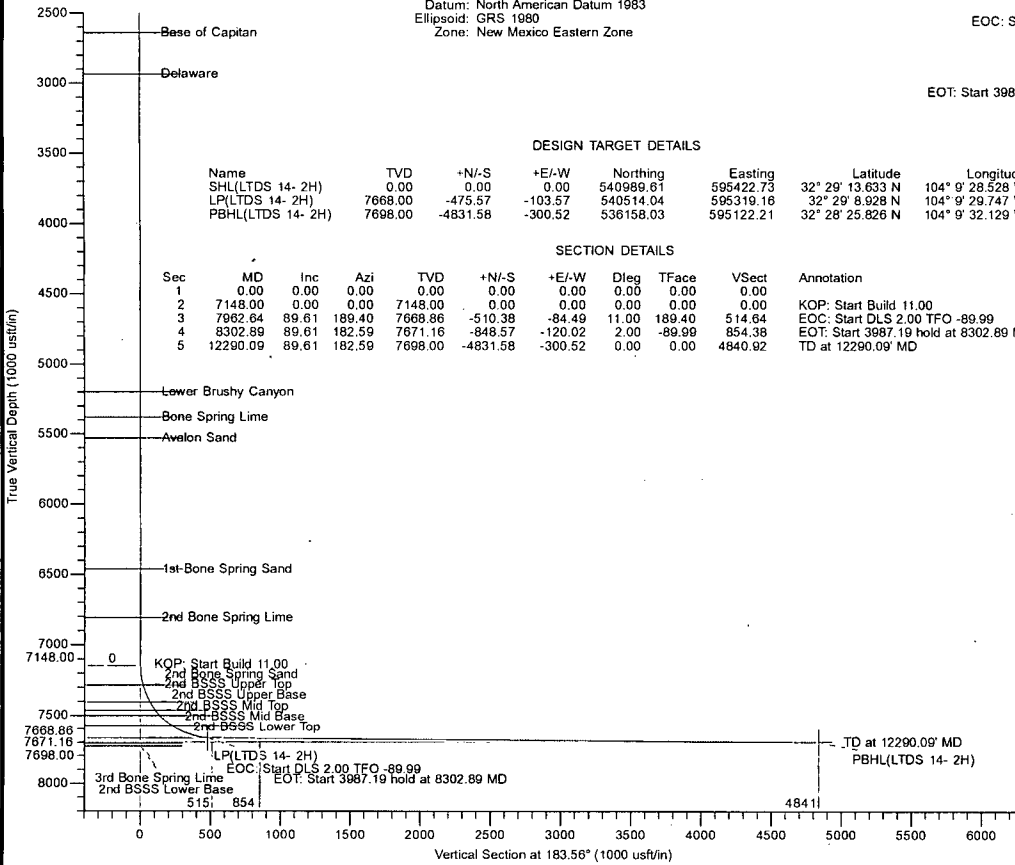
PROJECT DETAILS: Eddy County, NM (NAD-83)
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL(LTDS 14- 2H)	0.00	0.00	0.00	540989.61	595422.73	32° 29' 13.633 N	104° 9' 28.528 W
LP(LTDS 14- 2H)	7668.00	-475.57	-103.57	540514.04	595319.16	32° 29' 8.928 N	104° 9' 29.747 W
PBHL(LTDS 14- 2H)	7698.00	-4831.58	-300.52	536158.03	595122.21	32° 28' 25.826 N	104° 9' 32.129 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Annotation
1	7148.00	0.00	0.00	7148.00	0.00	0.00	0.00	0.00	0.00	KOP: Start Build 11.00
2	7982.64	89.61	189.40	7668.86	-510.38	-84.49	11.00	189.40	514.64	ECC: Start DLS 2.00 TFO -89.99
3	8302.89	89.61	182.59	7671.16	-848.57	-120.02	2.00	-89.99	854.38	EOT: Start 3987.19 hold at 8302.89 MD
4	12290.09	89.61	182.59	7698.00	-4831.58	-300.52	0.00	0.00	4840.92	TD at 12290.09 MD



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

Plan: Plan #1 Draft 1 (2H/CH)
Lone Tree Draw "14" State
Created By: Heber Claicos Date: 14/31, January 15 2014
Date: _____
Approved: _____ Date: _____

Leam Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 2H
Company:	DEVON ENERGY	TVD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Project:	Eddy County, NM (NAD-83)	MD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Site:	Lone Tree Draw "14" State	North Reference:	Grid
Well:	2H	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 "14" State					
Site Position:		Northing:	541,480.29 usft	Latitude:	32° 29' 18.473 N
From:	Lat/Long	Easting:	596,338.28 usft	Longitude:	104° 9' 17.829 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.10 °

Well	2H					
Well Position	+N/-S	-490.67 usft	Northing:	540,989.61 usft	Latitude:	32° 29' 13.633 N
	+E/-W	-915.55 usft	Easting:	595,422.73 usft	Longitude:	104° 9' 28.528 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,221.00 usft

Wellbore					
OH					
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	BGGM2013	01/15/14	7.68	60.25	48,429

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 (°)
	7,698.00	0.00	0.00	183.56

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	
7,148.00	0.00	0.00	7,148.00	0.00	0.00	0.00	0.00	0.00	0.00	
7,962.64	89.61	189.40	7,668.86	-510.38	-84.49	11.00	11.00	0.00	189.40	
8,302.89	89.61	182.59	7,671.16	-848.57	-120.02	2.00	0.00	-2.00	-89.99	
12,290.09	89.61	182.59	7,698.00	-4,831.58	-300.52	0.00	0.00	0.00	0.00	PBHL(LTDS 14- 2H)

Leam Drilling Systems LLC

Planning Report

Database:	EDM-5000.1 Single User Db	Local Co-ordinate Reference:	Well 2H
Company:	DEVON ENERGY	TVD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Project:	Eddy County, NM (NAD-83)	MD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Site:	Lone Tree Draw "14" State	North Reference:	Grid
Well:	2H	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)
7,148.00	0.00	0.00	7,148.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP: Start Build 11.00									
7,150.00	0.22	189.40	7,150.00	0.00	0.00	0.00	11.00	11.00	0.00
7,200.00	5.72	189.40	7,199.91	-2.56	-0.42	2.58	11.00	11.00	0.00
7,250.00	11.22	189.40	7,249.35	-9.82	-1.63	9.90	11.00	11.00	0.00
7,300.00	16.72	189.40	7,297.85	-21.73	-3.60	21.91	11.00	11.00	0.00
7,350.00	22.22	189.40	7,344.97	-38.16	-6.32	38.48	11.00	11.00	0.00
7,400.00	27.72	189.40	7,390.28	-58.98	-9.76	59.47	11.00	11.00	0.00
7,450.00	33.22	189.40	7,433.36	-83.98	-13.90	84.68	11.00	11.00	0.00
7,500.00	38.72	189.40	7,473.81	-112.94	-18.70	113.89	11.00	11.00	0.00
7,550.00	44.22	189.40	7,511.26	-145.60	-24.10	146.81	11.00	11.00	0.00
7,600.00	49.72	189.40	7,545.37	-181.64	-30.07	183.16	11.00	11.00	0.00
7,650.00	55.22	189.40	7,575.82	-220.75	-36.54	222.59	11.00	11.00	0.00
7,700.00	60.72	189.40	7,602.32	-262.55	-43.47	264.74	11.00	11.00	0.00
7,750.00	66.22	189.40	7,624.65	-306.67	-50.77	309.23	11.00	11.00	0.00
7,800.00	71.72	189.40	7,642.59	-352.69	-58.39	355.64	11.00	11.00	0.00
7,850.00	77.22	189.40	7,655.97	-400.20	-66.25	403.54	11.00	11.00	0.00
7,900.00	82.72	189.40	7,664.67	-448.76	-74.29	452.51	11.00	11.00	0.00
7,931.41	86.18	189.40	7,667.71	-479.60	-79.40	483.60	11.00	11.00	0.00
LP(LTDS 14- 2H)									
7,950.00	88.22	189.40	7,668.62	-497.91	-82.43	502.07	11.00	11.00	0.00
7,962.64	89.61	189.40	7,668.86	-510.38	-84.49	514.64	11.00	11.00	0.00
EOC: Start DLS 2.00 TFO -89.99									
8,000.00	89.61	188.65	7,669.11	-547.28	-90.35	551.83	2.00	0.00	-2.00
8,100.00	89.61	186.65	7,669.79	-646.38	-103.67	651.57	2.00	0.00	-2.00
8,200.00	89.61	184.65	7,670.47	-745.89	-113.52	751.50	2.00	0.00	-2.00
8,302.89	89.61	182.59	7,671.16	-848.57	-120.02	854.38	2.00	0.00	-2.00
EOT: Start 3987.19 hold at 8302.89 MD									
8,400.00	89.61	182.59	7,671.82	-945.57	-124.42	951.47	0.00	0.00	0.00
8,500.00	89.61	182.59	7,672.49	-1,045.47	-128.94	1,051.46	0.00	0.00	0.00
8,600.00	89.61	182.59	7,673.16	-1,145.36	-133.47	1,151.44	0.00	0.00	0.00
8,700.00	89.61	182.59	7,673.84	-1,245.26	-138.00	1,251.42	0.00	0.00	0.00
8,800.00	89.61	182.59	7,674.51	-1,345.15	-142.53	1,351.41	0.00	0.00	0.00
8,900.00	89.61	182.59	7,675.18	-1,445.05	-147.05	1,451.39	0.00	0.00	0.00
9,000.00	89.61	182.59	7,675.86	-1,544.94	-151.58	1,551.37	0.00	0.00	0.00
9,100.00	89.61	182.59	7,676.53	-1,644.84	-156.11	1,651.36	0.00	0.00	0.00
9,200.00	89.61	182.59	7,677.20	-1,744.73	-160.63	1,751.34	0.00	0.00	0.00
9,300.00	89.61	182.59	7,677.88	-1,844.63	-165.16	1,851.32	0.00	0.00	0.00
9,400.00	89.61	182.59	7,678.55	-1,944.52	-169.69	1,951.31	0.00	0.00	0.00
9,500.00	89.61	182.59	7,679.22	-2,044.42	-174.21	2,051.29	0.00	0.00	0.00
9,600.00	89.61	182.59	7,679.89	-2,144.31	-178.74	2,151.28	0.00	0.00	0.00
9,700.00	89.61	182.59	7,680.57	-2,244.21	-183.27	2,251.26	0.00	0.00	0.00
9,800.00	89.61	182.59	7,681.24	-2,344.10	-187.79	2,351.24	0.00	0.00	0.00
9,900.00	89.61	182.59	7,681.91	-2,444.00	-192.32	2,451.23	0.00	0.00	0.00
10,000.00	89.61	182.59	7,682.59	-2,543.90	-196.85	2,551.21	0.00	0.00	0.00
10,100.00	89.61	182.59	7,683.26	-2,643.79	-201.38	2,651.19	0.00	0.00	0.00
10,200.00	89.61	182.59	7,683.93	-2,743.69	-205.90	2,751.18	0.00	0.00	0.00
10,300.00	89.61	182.59	7,684.61	-2,843.58	-210.43	2,851.16	0.00	0.00	0.00
10,400.00	89.61	182.59	7,685.28	-2,943.48	-214.96	2,951.14	0.00	0.00	0.00
10,500.00	89.61	182.59	7,685.95	-3,043.37	-219.48	3,051.13	0.00	0.00	0.00
10,600.00	89.61	182.59	7,686.63	-3,143.27	-224.01	3,151.11	0.00	0.00	0.00
10,700.00	89.61	182.59	7,687.30	-3,243.16	-228.54	3,251.09	0.00	0.00	0.00

Leam Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 2H
Company:	DEVON ENERGY	TVD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Project:	Eddy County, NM (NAD-83)	MD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Site:	Lone Tree Draw "14" State	North Reference:	Grid
Well:	2H	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)
10,800.00	89.61	182.59	7,687.97	-3,343.06	-233.06	3,351.08	0.00	0.00	0.00
10,900.00	89.61	182.59	7,688.64	-3,442.95	-237.59	3,451.06	0.00	0.00	0.00
11,000.00	89.61	182.59	7,689.32	-3,542.85	-242.12	3,551.04	0.00	0.00	0.00
11,100.00	89.61	182.59	7,689.99	-3,642.74	-246.64	3,651.03	0.00	0.00	0.00
11,200.00	89.61	182.59	7,690.66	-3,742.64	-251.17	3,751.01	0.00	0.00	0.00
11,300.00	89.61	182.59	7,691.34	-3,842.53	-255.70	3,851.00	0.00	0.00	0.00
11,400.00	89.61	182.59	7,692.01	-3,942.43	-260.23	3,950.98	0.00	0.00	0.00
11,500.00	89.61	182.59	7,692.68	-4,042.32	-264.75	4,050.96	0.00	0.00	0.00
11,600.00	89.61	182.59	7,693.36	-4,142.22	-269.28	4,150.95	0.00	0.00	0.00
11,700.00	89.61	182.59	7,694.03	-4,242.11	-273.81	4,250.93	0.00	0.00	0.00
11,800.00	89.61	182.59	7,694.70	-4,342.01	-278.33	4,350.91	0.00	0.00	0.00
11,900.00	89.61	182.59	7,695.37	-4,441.90	-282.86	4,450.90	0.00	0.00	0.00
12,000.00	89.61	182.59	7,696.05	-4,541.80	-287.39	4,550.88	0.00	0.00	0.00
12,100.00	89.61	182.59	7,696.72	-4,641.69	-291.91	4,650.86	0.00	0.00	0.00
12,200.00	89.61	182.59	7,697.39	-4,741.59	-296.44	4,750.85	0.00	0.00	0.00
12,290.09	89.61	182.59	7,698.00	-4,831.58	-300.52	4,840.92	0.00	0.00	0.00
TD at 12290.09' MD - PBHL(LTDS 14- 2H)									

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 14- 2H)	0.00	0.00	0.00	0.00	0.00	540,989.61	595,422.73	32° 29' 13.633 N	104° 9' 28.528 W
- plan misses target center by 7148.00usft at 7148.00usft MD (7148.00 TVD, 0.00 N, 0.00 E)									
- Point									
LP(LTDS 14- 2H)	0.00	0.00	7,668.00	-475.57	-103.57	540,514.04	595,319.16	32° 29' 8.928 N	104° 9' 29.747 W
- plan misses target center by 24.51usft at 7931.41usft MD (7667.71 TVD, -479.60 N, -79.40 E)									
- Point									
PBHL(LTDS 14- 2H)	0.00	0.00	7,698.00	-4,831.58	-300.52	536,158.03	595,122.21	32° 28' 25.826 N	104° 9' 32.129 W
- plan hits target center									
- Point									

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
7,148.00	7,148.00	0.00	0.00	KOP: Start Build 11.00
7,962.64	7,668.86	-510.38	-84.49	EOC: Start DLS 2.00 TFO -89.99
8,302.89	7,671.16	-848.57	-120.02	EOT: Start 3987.19 hold at 8302.89 MD
12,290.09	7,698.00	-4,831.58	-300.52	TD at 12290.09' MD

DEVON ENERGY

Eddy County, NM (NAD-83)

Lone Tree Draw "14" State

2H

OH

Plan #1 Draft 1

Anticollision Report

15 January, 2014

Leam Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 2H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Reference Site:	Lone Tree Draw "14" State	MD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	2H	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	01/15/14		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	12,290.09	Plan #1 Draft 1 (OH)	LEAM MWD-ADJ	MWD - Standard	

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 "14" State						
#1H - OH - Plan #1 Draft 1	7,148.00	7,151.00	908.79	876.94	28.528	CC
#1H - OH - Plan #1 Draft 1	7,150.00	7,153.00	908.80	876.93	28.521	ES
#1H - OH - Plan #1 Draft 1	12,290.09	12,814.53	1,390.10	1,203.88	7.465	SF
3H - OH - Plan #1 Draft 1	4,916.81	5,131.61	944.02	920.02	39.331	CC, ES
3H - OH - Plan #1 Draft 1	12,290.09	10,013.39	3,054.87	2,940.94	26.814	SF
Lone Tree Draw Offsets						
Lone Tree #1 - OH - OH	10,363.75	7,631.08	4,035.54	3,964.23	56.594	CC
Lone Tree #1 - OH - OH	10,400.00	7,631.07	4,035.70	3,963.77	56.104	ES
Lone Tree #1 - OH - OH	12,290.09	7,630.20	4,471.73	4,366.50	42.497	SF
Lone Tree Draw 13 State #3H - OH - OH	4,770.63	4,746.93	3,647.10	3,626.21	174.594	CC, ES
Lone Tree Draw 13 State #3H - OH - OH	12,290.09	9,564.00	4,724.49	4,573.44	31.276	SF

Offset Design										Lone Tree Draw - "14" State - #1H - OH - Plan #1 Draft 1		Offset Site Error: 0.00 usft	
Survey Program: O-LEAM MWD-ADJ												Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Highside Toolface	Distance		Minimum Separation	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)
0.00	0.00	3.00	0.00	0.00	0.00	57.39	489.72	765.56	908.79				
100.00	100.00	103.00	100.00	0.08	0.09	57.39	489.72	765.56	908.79	908.62	0.17	5,251.022	
200.00	200.00	203.00	200.00	0.31	0.31	57.39	489.72	765.56	908.79	908.17	0.62	1,459.672	
300.00	300.00	303.00	300.00	0.53	0.54	57.39	489.72	765.56	908.79	907.72	1.07	847.650	
400.00	400.00	403.00	400.00	0.76	0.76	57.39	489.72	765.56	908.79	907.27	1.52	597.237	
500.00	500.00	503.00	500.00	0.98	0.99	57.39	489.72	765.56	908.79	906.82	1.97	461.037	
600.00	600.00	603.00	600.00	1.21	1.21	57.39	489.72	765.56	908.79	906.37	2.42	375.422	
700.00	700.00	703.00	700.00	1.43	1.44	57.39	489.72	765.56	908.79	905.92	2.87	316.624	
800.00	800.00	803.00	800.00	1.66	1.66	57.39	489.72	765.56	908.79	905.47	3.32	273.750	
900.00	900.00	903.00	900.00	1.88	1.89	57.39	489.72	765.56	908.79	905.03	3.77	241.103	
1,000.00	1,000.00	1,003.00	1,000.00	2.11	2.11	57.39	489.72	765.56	908.79	904.58	4.22	215.412	
1,100.00	1,100.00	1,103.00	1,100.00	2.33	2.34	57.39	489.72	765.56	908.79	904.13	4.67	194.670	
1,200.00	1,200.00	1,203.00	1,200.00	2.56	2.56	57.39	489.72	765.56	908.79	903.68	5.12	177.571	
1,300.00	1,300.00	1,303.00	1,300.00	2.78	2.79	57.39	489.72	765.56	908.79	903.23	5.57	163.233	

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 2H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Reference Site:	Lone Tree Draw "14" State	MD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	2H	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 "14" State - #1H - OH - Plan #1 Draft 1													Offset Site Error:	0.00 usft
Survey Program: O-LEAM MWD-ADJ													Offset Well Error:	0.00 usft
Reference	Vertical	Measured	Vertical	Semi Major Axis		Highside	Offset Wellbore Centre		Distance		Minimum	Separation	Warning	
Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	Reference (usft)	Offset (usft)	Toothface (")	+N-S (usft)	+E-W (usft)	Centres (usft)	Ellipses (usft)	Separation (usft)	Factor		
1,400.00	1,400.00	1,403.00	1,400.00	3.01	3.01	57.39	489.72	765.56	908.79	902.78	6.02	151.038		
1,500.00	1,500.00	1,503.00	1,500.00	3.23	3.24	57.39	489.72	765.56	908.79	902.33	6.47	140.538		
1,600.00	1,600.00	1,603.00	1,600.00	3.45	3.46	57.39	489.72	765.56	908.79	901.88	6.92	131.404		
1,700.00	1,700.00	1,703.00	1,700.00	3.68	3.69	57.39	489.72	765.56	908.79	901.43	7.37	123.384		
1,800.00	1,800.00	1,803.00	1,800.00	3.90	3.91	57.39	489.72	765.56	908.79	900.98	7.82	116.287		
1,900.00	1,900.00	1,903.00	1,900.00	4.13	4.14	57.39	489.72	765.56	908.79	900.53	8.26	109.962		
2,000.00	2,000.00	2,003.00	2,000.00	4.35	4.36	57.39	489.72	765.56	908.79	900.08	8.71	104.289		
2,100.00	2,100.00	2,103.00	2,100.00	4.58	4.59	57.39	489.72	765.56	908.79	899.63	9.16	99.173		
2,200.00	2,200.00	2,203.00	2,200.00	4.80	4.81	57.39	489.72	765.56	908.79	899.18	9.61	94.536		
2,300.00	2,300.00	2,303.00	2,300.00	5.03	5.03	57.39	489.72	765.56	908.79	898.73	10.06	90.313		
2,400.00	2,400.00	2,403.00	2,400.00	5.25	5.26	57.39	489.72	765.56	908.79	898.28	10.51	86.451		
2,500.00	2,500.00	2,503.00	2,500.00	5.48	5.48	57.39	489.72	765.56	908.79	897.83	10.96	82.905		
2,600.00	2,600.00	2,603.00	2,600.00	5.70	5.71	57.39	489.72	765.56	908.79	897.38	11.41	79.639		
2,700.00	2,700.00	2,703.00	2,700.00	5.93	5.93	57.39	489.72	765.56	908.79	896.93	11.86	76.621		
2,800.00	2,800.00	2,803.00	2,800.00	6.15	6.16	57.39	489.72	765.56	908.79	896.48	12.31	73.823		
2,900.00	2,900.00	2,903.00	2,900.00	6.38	6.38	57.39	489.72	765.56	908.79	896.03	12.76	71.222		
3,000.00	3,000.00	3,003.00	3,000.00	6.60	6.61	57.39	489.72	765.56	908.79	895.59	13.21	68.799		
3,100.00	3,100.00	3,103.00	3,100.00	6.83	6.83	57.39	489.72	765.56	908.79	895.14	13.66	66.534		
3,200.00	3,200.00	3,203.00	3,200.00	7.05	7.06	57.39	489.72	765.56	908.79	894.69	14.11	64.414		
3,300.00	3,300.00	3,303.00	3,300.00	7.28	7.28	57.39	489.72	765.56	908.79	894.24	14.56	62.425		
3,400.00	3,400.00	3,403.00	3,400.00	7.50	7.51	57.39	489.72	765.56	908.79	893.79	15.01	60.556		
3,500.00	3,500.00	3,503.00	3,500.00	7.73	7.73	57.39	489.72	765.56	908.79	893.34	15.46	58.794		
3,600.00	3,600.00	3,603.00	3,600.00	7.95	7.96	57.39	489.72	765.56	908.79	892.89	15.91	57.133		
3,700.00	3,700.00	3,703.00	3,700.00	8.17	8.18	57.39	489.72	765.56	908.79	892.44	16.36	55.563		
3,800.00	3,800.00	3,803.00	3,800.00	8.40	8.41	57.39	489.72	765.56	908.79	891.99	16.81	54.076		
3,900.00	3,900.00	3,903.00	3,900.00	8.62	8.63	57.39	489.72	765.56	908.79	891.54	17.26	52.668		
4,000.00	4,000.00	4,003.00	4,000.00	8.85	8.86	57.39	489.72	765.56	908.79	891.09	17.70	51.330		
4,100.00	4,100.00	4,103.00	4,100.00	9.07	9.08	57.39	489.72	765.56	908.79	890.64	18.15	50.059		
4,200.00	4,200.00	4,203.00	4,200.00	9.30	9.31	57.39	489.72	765.56	908.79	890.19	18.60	48.850		
4,300.00	4,300.00	4,303.00	4,300.00	9.52	9.53	57.39	489.72	765.56	908.79	889.74	19.05	47.697		
4,400.00	4,400.00	4,403.00	4,400.00	9.75	9.75	57.39	489.72	765.56	908.79	889.29	19.50	46.598		
4,500.00	4,500.00	4,503.00	4,500.00	9.97	9.98	57.39	489.72	765.56	908.79	888.84	19.95	45.548		
4,600.00	4,600.00	4,603.00	4,600.00	10.20	10.20	57.39	489.72	765.56	908.79	888.39	20.40	44.544		
4,700.00	4,700.00	4,703.00	4,700.00	10.42	10.43	57.39	489.72	765.56	908.79	887.94	20.85	43.584		
4,800.00	4,800.00	4,803.00	4,800.00	10.65	10.65	57.39	489.72	765.56	908.79	887.49	21.30	42.664		
4,900.00	4,900.00	4,903.00	4,900.00	10.87	10.88	57.39	489.72	765.56	908.79	887.04	21.75	41.782		
5,000.00	5,000.00	5,003.00	5,000.00	11.10	11.10	57.39	489.72	765.56	908.79	886.59	22.20	40.936		
5,100.00	5,100.00	5,103.00	5,100.00	11.32	11.33	57.39	489.72	765.56	908.79	886.15	22.65	40.124		
5,200.00	5,200.00	5,203.00	5,200.00	11.55	11.55	57.39	489.72	765.56	908.79	885.70	23.10	39.343		
5,300.00	5,300.00	5,303.00	5,300.00	11.77	11.78	57.39	489.72	765.56	908.79	885.25	23.55	38.592		
5,400.00	5,400.00	5,403.00	5,400.00	12.00	12.00	57.39	489.72	765.56	908.79	884.80	24.00	37.869		
5,500.00	5,500.00	5,503.00	5,500.00	12.22	12.23	57.39	489.72	765.56	908.79	884.35	24.45	37.173		
5,600.00	5,600.00	5,603.00	5,600.00	12.45	12.45	57.39	489.72	765.56	908.79	883.90	24.90	36.502		
5,700.00	5,700.00	5,703.00	5,700.00	12.67	12.68	57.39	489.72	765.56	908.79	883.45	25.35	35.854		
5,800.00	5,800.00	5,803.00	5,800.00	12.89	12.90	57.39	489.72	765.56	908.79	883.00	25.80	35.230		
5,900.00	5,900.00	5,903.00	5,900.00	13.12	13.13	57.39	489.72	765.56	908.79	882.55	26.25	34.626		
6,000.00	6,000.00	6,003.00	6,000.00	13.34	13.35	57.39	489.72	765.56	908.79	882.10	26.70	34.043		
6,100.00	6,100.00	6,103.00	6,100.00	13.57	13.58	57.39	489.72	765.56	908.79	881.65	27.14	33.479		
6,200.00	6,200.00	6,203.00	6,200.00	13.79	13.80	57.39	489.72	765.56	908.79	881.20	27.59	32.934		
6,300.00	6,300.00	6,303.00	6,300.00	14.02	14.03	57.39	489.72	765.56	908.79	880.75	28.04	32.406		
6,400.00	6,400.00	6,403.00	6,400.00	14.24	14.25	57.39	489.72	765.56	908.79	880.30	28.49	31.895		

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 2H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Reference Site:	Lone Tree Draw "14" State	MD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	2H	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 "14" State- #1H- OH- Plan #1 Draft-1												Offset Site Error	0.00 usft
Survey Program: O-LEAM MWD-ADJ												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
6,500.00	6,500.00	6,503.00	6,500.00	14.47	14.47	57.39	489.72	765.56	908.79	879.85	28.94	31.399	
6,600.00	6,600.00	6,603.00	6,600.00	14.69	14.70	57.39	489.72	765.56	908.79	879.40	29.39	30.919	
6,700.00	6,700.00	6,703.00	6,700.00	14.92	14.92	57.39	489.72	765.56	908.79	878.95	29.84	30.453	
6,800.00	6,800.00	6,803.00	6,800.00	15.14	15.15	57.39	489.72	765.56	908.79	878.50	30.29	30.001	
6,900.00	6,900.00	6,903.00	6,900.00	15.37	15.37	57.39	489.72	765.56	908.79	878.05	30.74	29.563	
7,000.00	7,000.00	7,003.00	7,000.00	15.59	15.60	57.39	489.72	765.56	908.79	877.60	31.19	29.137	
7,100.00	7,100.00	7,103.00	7,100.00	15.82	15.82	57.39	489.72	765.56	908.79	877.15	31.64	28.723	
7,148.00	7,148.00	7,151.00	7,148.00	15.92	15.93	57.39	489.72	765.56	908.79	876.94	31.86	28.528 CC	
7,150.00	7,150.00	7,153.00	7,150.00	15.93	15.94	-132.01	488.72	765.56	908.80	876.93	31.86	28.521 ES	
7,200.00	7,199.91	7,242.90	7,239.69	16.01	16.11	-131.90	485.27	766.61	909.89	877.84	32.05	28.385	
7,250.00	7,249.35	7,359.20	7,352.32	16.10	16.31	-130.95	457.96	773.07	910.81	878.64	32.17	28.317	
7,300.00	7,297.85	7,468.45	7,449.99	16.19	16.50	-129.17	410.78	784.22	911.52	879.30	32.22	28.292	
7,350.00	7,344.97	7,567.57	7,528.13	16.27	16.75	-126.84	351.66	798.20	912.55	880.26	32.29	28.262	
7,400.00	7,390.28	7,655.82	7,586.93	16.36	17.06	-124.20	287.75	813.30	914.51	882.07	32.44	28.194	
7,450.00	7,433.36	7,733.95	7,629.08	16.44	17.43	-121.39	223.82	828.42	917.90	885.20	32.70	28.069	
7,500.00	7,473.81	7,803.38	7,657.92	16.55	17.85	-118.49	162.41	842.93	923.11	890.01	33.09	27.895	
7,550.00	7,511.26	7,865.65	7,676.46	16.68	18.30	-115.51	104.60	856.60	930.34	896.72	33.62	27.676	
7,600.00	7,545.37	7,922.14	7,687.03	16.84	18.76	-112.46	50.62	869.36	939.67	905.42	34.26	27.430	
7,650.00	7,575.82	7,974.04	7,691.40	17.03	19.23	-109.32	0.31	881.25	951.09	916.09	35.00	27.173	
7,700.00	7,602.32	8,016.69	7,691.84	17.26	19.65	-106.33	-41.19	891.06	964.55	928.79	35.76	26.971	
7,750.00	7,624.65	8,058.05	7,692.04	17.52	20.08	-103.34	-81.44	900.58	979.96	943.37	36.59	26.782	
7,800.00	7,642.59	8,101.18	7,692.25	17.82	20.53	-100.35	-123.41	910.50	996.88	959.41	37.47	26.605	
7,850.00	7,659.97	8,145.67	7,692.47	18.15	21.05	-97.44	-166.71	920.73	1,014.89	976.47	38.42	26.417	
7,900.00	7,664.67	8,191.12	7,692.69	18.52	21.58	-94.70	-210.93	931.19	1,033.60	994.24	39.37	26.256	
7,950.00	7,668.62	8,237.10	7,692.91	18.93	22.16	-92.18	-255.68	941.77	1,052.73	1,012.39	40.34	26.096	
7,962.64	7,668.86	8,248.76	7,692.97	19.03	22.31	-91.58	-267.03	944.45	1,057.60	1,017.01	40.59	26.056	
8,000.00	7,669.11	8,283.32	7,693.14	19.35	22.75	-91.54	-300.66	952.40	1,071.79	1,030.45	41.34	25.926	
8,100.00	7,669.79	8,376.70	7,693.60	20.24	24.02	-91.45	-391.54	973.88	1,107.53	1,064.03	43.50	25.458	
8,200.00	7,670.47	8,478.75	7,694.10	21.25	25.46	-91.37	-490.86	997.30	1,139.96	1,093.98	45.98	24.794	
8,302.89	7,671.16	8,645.18	7,694.91	22.39	27.78	-91.28	-654.06	1,029.79	1,166.39	1,116.91	49.48	23.574	
8,400.00	7,671.82	8,807.04	7,695.70	23.55	30.11	-91.23	-814.34	1,052.25	1,184.20	1,131.28	52.92	22.377	
8,500.00	7,672.49	8,976.78	7,696.53	24.82	32.62	-91.19	-983.48	1,066.04	1,196.83	1,140.15	56.68	21.115	
8,600.00	7,673.16	9,132.24	7,697.28	26.16	34.94	-91.17	-1,138.88	1,069.95	1,203.68	1,143.33	60.35	19.945	
8,700.00	7,673.84	9,232.11	7,697.76	27.54	36.46	-91.15	-1,238.74	1,070.48	1,208.73	1,145.45	63.28	19.102	
8,800.00	7,674.51	9,331.98	7,698.24	28.98	38.02	-91.14	-1,338.61	1,071.01	1,213.78	1,147.50	66.28	18.312	
8,900.00	7,675.18	9,431.85	7,698.72	30.45	39.60	-91.13	-1,438.48	1,071.53	1,218.83	1,149.48	69.35	17.574	
9,000.00	7,675.86	9,531.72	7,699.20	31.97	41.20	-91.11	-1,538.35	1,072.06	1,223.88	1,151.41	72.48	16.886	
9,100.00	7,676.53	9,631.60	7,699.68	33.51	42.82	-91.10	-1,638.22	1,072.59	1,228.93	1,153.28	75.65	16.245	
9,200.00	7,677.20	9,731.47	7,700.16	35.08	44.46	-91.09	-1,738.09	1,073.12	1,233.99	1,155.12	78.86	15.647	
9,300.00	7,677.88	9,831.34	7,700.64	36.68	46.11	-91.07	-1,837.96	1,073.65	1,239.04	1,156.92	82.12	15.089	
9,400.00	7,678.55	9,931.21	7,701.12	38.29	47.77	-91.06	-1,937.83	1,074.18	1,244.09	1,158.69	85.40	14.568	
9,500.00	7,679.22	10,031.08	7,701.60	39.92	49.45	-91.05	-2,037.70	1,074.71	1,249.14	1,160.43	88.71	14.081	
9,600.00	7,679.89	10,130.96	7,702.08	41.56	51.13	-91.03	-2,137.57	1,075.24	1,254.19	1,162.14	92.05	13.625	
9,700.00	7,680.57	10,230.83	7,702.56	43.22	52.83	-91.02	-2,237.44	1,075.76	1,259.24	1,163.83	95.41	13.198	
9,800.00	7,681.24	10,330.70	7,703.05	44.89	54.53	-91.01	-2,337.31	1,076.29	1,264.29	1,165.50	98.79	12.797	
9,900.00	7,681.91	10,430.57	7,703.53	46.58	56.25	-91.00	-2,437.18	1,076.82	1,269.35	1,167.15	102.20	12.421	
10,000.00	7,682.59	10,530.44	7,704.01	48.27	57.97	-90.98	-2,537.05	1,077.35	1,274.40	1,168.79	105.61	12.067	
10,100.00	7,683.26	10,630.32	7,704.49	49.97	59.69	-90.97	-2,636.92	1,077.86	1,279.45	1,170.40	109.04	11.733	
10,200.00	7,683.93	10,730.19	7,704.97	51.68	61.42	-90.96	-2,736.79	1,078.41	1,284.50	1,172.01	112.49	11.419	
10,300.00	7,684.61	10,830.06	7,705.45	53.40	63.16	-90.95	-2,836.65	1,078.94	1,289.55	1,173.60	115.95	11.122	

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 2H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Reference Site:	Lone Tree Draw "14" State	MD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	2H	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 "14" State - #1H - OH - Plan #1 Draft 1														Offset Site Error:	0.00 usft
Survey Program: O-LEAM MWD-ADJ														Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis (usft)	Highside Toolface (°)	Offset Wellbore Centre N/S (usft)	Offset Wellbore Centre E/W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
10,400.00	7,685.28	10,929.93	7,705.93	55.12	64.90	-90.93	-2,936.52	1,079.47	1,294.61	1,175.19	119.42	10.841			
10,500.00	7,685.95	11,029.80	7,706.41	56.85	66.65	-90.92	-3,036.39	1,079.99	1,299.66	1,176.76	122.90	10.575			
10,600.00	7,686.63	11,129.68	7,706.89	58.58	68.40	-90.91	-3,136.26	1,080.52	1,304.71	1,178.32	126.39	10.323			
10,700.00	7,687.30	11,229.55	7,707.37	60.32	70.16	-90.90	-3,236.13	1,081.05	1,309.76	1,179.88	129.89	10.084			
10,800.00	7,687.97	11,329.42	7,707.85	62.07	71.92	-90.89	-3,336.00	1,081.58	1,314.81	1,181.42	133.39	9.857			
10,900.00	7,688.64	11,429.29	7,708.33	63.82	73.68	-90.88	-3,435.87	1,082.11	1,319.87	1,182.96	136.91	9.641			
11,000.00	7,689.32	11,529.16	7,708.81	65.57	75.45	-90.86	-3,535.74	1,082.64	1,324.92	1,184.49	140.43	9.435			
11,100.00	7,689.99	11,629.04	7,709.29	67.32	77.22	-90.85	-3,635.61	1,083.17	1,329.97	1,186.02	143.95	9.239			
11,200.00	7,690.66	11,728.91	7,709.78	69.08	78.99	-90.84	-3,735.48	1,083.70	1,335.02	1,187.54	147.49	9.052			
11,300.00	7,691.34	11,828.78	7,710.26	70.84	80.76	-90.83	-3,835.35	1,084.22	1,340.08	1,189.05	151.02	8.873			
11,400.00	7,692.01	11,928.65	7,710.74	72.61	82.54	-90.82	-3,935.22	1,084.75	1,345.13	1,190.56	154.57	8.703			
11,500.00	7,692.68	12,028.52	7,711.22	74.38	84.32	-90.81	-4,035.09	1,085.28	1,350.18	1,192.07	158.11	8.539			
11,600.00	7,693.36	12,128.40	7,711.70	76.14	86.10	-90.80	-4,134.96	1,085.81	1,355.23	1,193.57	161.67	8.383			
11,700.00	7,694.03	12,228.27	7,712.18	77.92	87.88	-90.79	-4,234.83	1,086.34	1,360.29	1,195.06	165.22	8.233			
11,800.00	7,694.70	12,328.14	7,712.66	79.69	89.67	-90.77	-4,334.70	1,086.87	1,365.34	1,196.55	168.78	8.089			
11,900.00	7,695.37	12,428.01	7,713.14	81.47	91.45	-90.76	-4,434.56	1,087.40	1,370.39	1,198.04	172.35	7.951			
12,000.00	7,696.05	12,527.88	7,713.62	83.24	93.24	-90.75	-4,534.43	1,087.92	1,375.44	1,199.53	175.91	7.819			
12,100.00	7,696.72	12,627.75	7,714.10	85.02	95.03	-90.74	-4,634.30	1,088.45	1,380.50	1,201.01	179.49	7.691			
12,200.00	7,697.39	12,727.63	7,714.58	86.80	96.82	-90.73	-4,734.17	1,088.98	1,385.55	1,202.49	183.06	7.569			
12,290.09	7,698.00	12,814.53	7,715.00	88.41	98.38	-90.72	-4,821.07	1,089.44	1,390.10	1,203.88	186.22	7.465 SF			

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 2H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Reference Site:	Lone Tree Draw "14" State	MD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	2H	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 "14" State - 3H - OH - Plan #1 Draft 1											Offset Site Error: 0.00 usft		
Survey Program: O-LEAM MWD-ADJ											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	2.00	0.00	0.00	61.81	490.67	915.55	1,038.74				
100.00	100.00	98.00	100.00	0.08	0.08	61.81	490.67	915.55	1,038.74	1,038.58	0.16	5,308.264	
200.00	200.00	198.00	200.00	0.31	0.30	61.81	490.67	915.55	1,038.74	1,038.13	0.61	1,699.058	
300.00	300.00	298.00	300.00	0.53	0.53	61.81	490.67	915.55	1,038.74	1,037.68	1.06	979.119	
400.00	400.00	398.00	400.00	0.76	0.75	61.81	490.67	915.55	1,038.74	1,037.23	1.51	687.714	
500.00	500.00	498.00	500.00	0.98	0.98	61.81	490.67	915.55	1,038.74	1,036.78	1.96	529.982	
600.00	600.00	598.00	600.00	1.21	1.20	61.81	490.67	915.55	1,038.74	1,036.33	2.41	431.104	
700.00	700.00	698.00	700.00	1.43	1.43	61.81	490.67	915.55	1,038.74	1,035.88	2.86	363.321	
800.00	800.00	798.00	800.00	1.66	1.65	61.81	490.67	915.55	1,038.74	1,035.43	3.31	313.957	
900.00	900.00	898.00	900.00	1.88	1.88	61.81	490.67	915.55	1,038.74	1,034.98	3.76	276.402	
1,000.00	1,000.00	998.00	1,000.00	2.11	2.10	61.81	490.67	915.55	1,038.74	1,034.54	4.21	246.872	
1,100.00	1,100.00	1,098.00	1,100.00	2.33	2.33	61.81	490.67	915.55	1,038.74	1,034.09	4.66	223.042	
1,200.00	1,200.00	1,198.00	1,200.00	2.56	2.55	61.81	490.67	915.55	1,038.74	1,033.64	5.11	203.408	
1,300.00	1,300.00	1,298.00	1,300.00	2.78	2.78	61.81	490.67	915.55	1,038.74	1,033.19	5.56	186.951	
1,400.00	1,400.00	1,398.00	1,400.00	3.01	3.00	61.81	490.67	915.55	1,038.74	1,032.74	6.01	172.958	
1,500.00	1,500.00	1,498.00	1,500.00	3.23	3.23	61.81	490.67	915.55	1,038.74	1,032.29	6.46	160.914	
1,600.00	1,600.00	1,598.00	1,600.00	3.45	3.45	61.81	490.67	915.55	1,038.74	1,031.84	6.90	150.438	
1,700.00	1,700.00	1,698.00	1,700.00	3.68	3.67	61.81	490.67	915.55	1,038.74	1,031.39	7.35	141.242	
1,800.00	1,800.00	1,798.00	1,800.00	3.90	3.90	61.81	490.67	915.55	1,038.74	1,030.94	7.80	133.106	
1,900.00	1,900.00	1,898.00	1,900.00	4.13	4.12	61.81	490.67	915.55	1,038.74	1,030.49	8.25	125.856	
2,000.00	2,000.00	1,998.00	2,000.00	4.35	4.35	61.81	490.67	915.55	1,038.74	1,030.04	8.70	119.355	
2,100.00	2,100.00	2,098.00	2,100.00	4.58	4.57	61.81	490.67	915.55	1,038.74	1,029.59	9.15	113.493	
2,200.00	2,200.00	2,198.00	2,200.00	4.80	4.80	61.81	490.67	915.55	1,038.74	1,029.14	9.60	108.180	
2,300.00	2,300.00	2,298.00	2,300.00	5.03	5.02	61.81	490.67	915.55	1,038.74	1,028.69	10.05	103.342	
2,400.00	2,400.00	2,398.00	2,400.00	5.25	5.25	61.81	490.67	915.55	1,038.74	1,028.24	10.50	98.918	
2,500.00	2,500.00	2,498.00	2,500.00	5.48	5.47	61.81	490.67	915.55	1,038.74	1,027.79	10.95	94.857	
2,600.00	2,600.00	2,598.00	2,600.00	5.70	5.70	61.81	490.67	915.55	1,038.74	1,027.34	11.40	91.117	
2,700.00	2,700.00	2,698.00	2,700.00	5.93	5.92	61.81	490.67	915.55	1,038.74	1,026.89	11.85	87.660	
2,800.00	2,800.00	2,798.00	2,800.00	6.15	6.15	61.81	490.67	915.55	1,038.74	1,026.44	12.30	84.456	
2,900.00	2,900.00	2,898.00	2,900.00	6.38	6.37	61.81	490.67	915.55	1,038.74	1,025.99	12.75	81.478	
3,000.00	3,000.00	2,998.00	3,000.00	6.60	6.60	61.81	490.67	915.55	1,038.74	1,025.54	13.20	78.703	
3,100.00	3,100.00	3,098.00	3,100.00	6.83	6.82	61.81	490.67	915.55	1,038.74	1,025.10	13.65	76.111	
3,200.00	3,200.00	3,198.00	3,200.00	7.05	7.05	61.81	490.67	915.55	1,038.74	1,024.65	14.10	73.684	
3,300.00	3,300.00	3,298.00	3,300.00	7.28	7.27	61.81	490.67	915.55	1,038.74	1,024.20	14.55	71.407	
3,400.00	3,400.00	3,398.00	3,400.00	7.50	7.50	61.81	490.67	915.55	1,038.74	1,023.75	15.00	69.266	
3,500.00	3,500.00	3,498.00	3,500.00	7.73	7.72	61.81	490.67	915.55	1,038.74	1,023.30	15.45	67.250	
3,600.00	3,600.00	3,598.00	3,600.00	7.95	7.95	61.81	490.67	915.55	1,038.74	1,022.85	15.90	65.348	
3,700.00	3,700.00	3,698.00	3,700.00	8.17	8.17	61.81	490.67	915.55	1,038.74	1,022.40	16.34	63.551	
3,800.00	3,800.00	3,798.00	3,800.00	8.40	8.40	61.81	490.67	915.55	1,038.74	1,021.95	16.79	61.850	
3,900.00	3,900.00	3,898.00	3,900.00	8.62	8.62	61.81	490.67	915.55	1,038.74	1,021.50	17.24	60.238	
4,000.00	4,000.00	3,998.00	4,000.00	8.85	8.84	61.81	490.67	915.55	1,038.74	1,021.05	17.69	58.707	
4,100.00	4,100.00	4,098.00	4,100.00	9.07	9.07	61.81	490.67	915.55	1,038.74	1,020.60	18.14	57.253	
4,200.00	4,200.00	4,198.00	4,200.00	9.30	9.29	61.81	490.67	915.55	1,038.74	1,020.15	18.59	55.868	
4,300.00	4,300.00	4,298.00	4,300.00	9.52	9.52	61.81	490.67	915.55	1,038.74	1,019.70	19.04	54.550	
4,400.00	4,400.00	4,398.00	4,400.00	9.75	9.74	61.81	490.67	915.55	1,038.74	1,019.25	19.49	53.292	
4,500.00	4,500.00	4,386.33	4,789.50	9.97	10.81	70.96	319.68	926.09	1,021.59	1,000.85	20.74	49.249	
4,600.00	4,600.00	5,001.48	4,879.24	10.20	11.88	78.97	182.12	934.58	992.26	970.26	21.99	45.113	
4,700.00	4,700.00	5,070.14	4,902.94	10.42	12.51	82.84	117.86	938.54	967.44	944.58	22.86	42.329	
4,800.00	4,800.00	5,106.44	4,911.98	10.65	12.87	84.97	82.77	940.71	950.96	927.50	23.46	40.540	
4,900.00	4,900.00	5,128.69	4,916.31	10.87	13.11	86.30	60.99	942.05	944.16	920.23	23.93	39.453	
4,916.81	4,916.81	5,131.61	4,916.81	10.91	13.14	86.47	58.12	942.23	944.02	920.02	24.00	39.331	CC, ES

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 2H:
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3221 + KB 26' @ 3247.00usft (Cactus 126)
Reference Site:	Lone Tree Draw "14" State	MD Reference:	GE 3221 + KB 26' @ 3247.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	2H	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 "14" State - 3H - OH - Plan #1 Draft 1														Offset Site Error:	0.00 usft
Survey Program: O-LEAM MWD-ADJ														Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum		Separation		Warning					
Measured	Vertical	Measured	Vertical	Reference	Offset	Highside	Offset Wellbore Centre	Between	Between	Minimum	Separation	Factor			
Depth	Depth	Depth	Depth	Reference	Offset	Tooface	N-S	E-W	Centres	Ellipses	Separation	Factor			
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)				
5,000.00	5,000.00	5,143.68	4,918.70	11.10	13.27	87.19	46.22	942.96	947.59	923.26	24.32	38.955			
5,100.00	5,100.00	5,150.00	4,919.58	11.32	13.34	87.57	39.98	943.35	961.28	936.56	24.62	39.043			
5,200.00	5,200.00	5,162.54	4,921.10	11.55	13.49	88.33	27.55	944.11	984.83	959.84	25.00	39.398			
5,300.00	5,300.00	5,168.86	4,921.75	11.77	13.56	88.71	21.28	944.50	1,017.65	992.35	25.30	40.226			
5,400.00	5,400.00	5,173.91	4,922.22	12.00	13.62	89.01	16.26	944.81	1,058.87	1,033.29	25.58	41.388			
5,500.00	5,500.00	5,178.05	4,922.56	12.22	13.67	89.26	12.14	945.06	1,107.58	1,081.72	25.86	42.831			
5,600.00	5,600.00	5,181.51	4,922.82	12.45	13.71	89.47	8.70	945.28	1,162.84	1,136.71	26.13	44.510			
5,700.00	5,700.00	5,184.43	4,923.03	12.67	13.74	89.65	5.79	945.46	1,223.77	1,197.38	26.39	46.380			
5,800.00	5,800.00	5,186.93	4,923.19	12.89	13.77	89.80	3.30	945.61	1,289.57	1,262.93	26.64	48.406			
5,900.00	5,900.00	5,204.61	4,924.00	13.12	13.98	90.87	-14.33	946.70	1,359.79	1,332.71	27.08	50.216			
6,000.00	6,000.00	5,204.61	4,924.00	13.34	13.98	90.87	-14.33	946.70	1,433.26	1,405.95	27.30	52.493			
6,100.00	6,100.00	5,204.61	4,924.00	13.57	13.98	90.87	-14.33	946.70	1,509.78	1,482.25	27.53	54.845			
6,200.00	6,200.00	5,204.61	4,924.00	13.79	13.98	90.87	-14.33	946.70	1,588.91	1,561.15	27.75	57.252			
6,300.00	6,300.00	5,204.61	4,924.00	14.02	13.98	90.87	-14.33	946.70	1,670.28	1,642.30	27.98	59.700			
6,400.00	6,400.00	5,204.61	4,924.00	14.24	13.98	90.87	-14.33	946.70	1,753.57	1,725.37	28.20	62.178			
6,500.00	6,500.00	5,204.61	4,924.00	14.47	13.98	90.87	-14.33	946.70	1,838.54	1,810.11	28.43	64.675			
6,600.00	6,600.00	5,204.61	4,924.00	14.69	13.98	90.87	-14.33	946.70	1,924.95	1,896.30	28.65	67.183			
6,700.00	6,700.00	5,204.61	4,924.00	14.92	13.98	90.87	-14.33	946.70	2,012.62	1,983.74	28.88	69.696			
6,800.00	6,800.00	5,204.61	4,924.00	15.14	13.98	90.87	-14.33	946.70	2,101.39	2,072.29	29.10	72.209			
6,900.00	6,900.00	5,204.61	4,924.00	15.37	13.98	90.87	-14.33	946.70	2,191.12	2,161.80	29.33	74.715			
7,000.00	7,000.00	5,204.61	4,924.00	15.59	13.98	90.87	-14.33	946.70	2,281.72	2,252.16	29.55	77.212			
7,100.00	7,100.00	5,204.61	4,924.00	15.82	13.98	90.87	-14.33	946.70	2,373.06	2,343.29	29.78	79.697			
7,148.00	7,148.00	5,204.61	4,924.00	15.92	13.98	90.87	-14.33	946.70	2,417.15	2,387.27	29.88	80.885			
7,150.00	7,150.00	5,204.61	4,924.00	15.93	13.98	-98.02	-14.33	946.70	2,418.99	2,389.11	29.88	80.946			
7,200.00	7,199.91	5,204.61	4,924.00	16.01	13.98	-84.85	-14.33	946.70	2,465.15	2,435.44	29.72	82.956			
7,250.00	7,249.35	5,208.30	4,924.10	16.10	14.02	-71.78	-18.01	946.92	2,511.29	2,481.96	29.33	85.623			
7,300.00	7,297.85	5,221.45	4,924.48	16.19	14.19	-59.99	-31.12	947.73	2,556.95	2,528.15	28.81	88.766			
7,350.00	7,344.97	5,239.02	4,924.98	16.27	14.41	-50.42	-48.66	948.81	2,601.68	2,573.53	28.15	92.422			
7,400.00	7,390.28	5,260.88	4,925.61	16.36	14.69	-43.00	-70.46	950.16	2,645.04	2,617.64	27.40	96.535			
7,450.00	7,433.36	5,286.80	4,926.35	16.44	15.02	-37.33	-96.33	951.76	2,686.59	2,660.01	26.58	101.094			
7,500.00	7,473.81	5,316.56	4,927.20	16.55	15.41	-33.02	-126.02	953.59	2,725.94	2,700.24	25.70	106.074			
7,550.00	7,511.26	5,349.88	4,928.15	16.68	15.87	-29.73	-159.26	955.64	2,762.70	2,737.91	24.79	111.443			
7,600.00	7,545.37	5,386.45	4,929.20	16.84	16.37	-27.21	-195.75	957.89	2,796.53	2,772.66	23.88	117.120			
7,650.00	7,575.82	5,425.94	4,930.33	17.03	16.94	-25.27	-235.14	960.32	2,827.11	2,804.10	23.01	122.878			
7,700.00	7,602.32	5,467.97	4,931.53	17.26	17.55	-23.80	-277.08	962.90	2,854.14	2,831.92	22.22	128.434			
7,750.00	7,624.65	5,512.18	4,932.80	17.52	18.20	-22.71	-321.19	965.63	2,877.38	2,855.81	21.57	133.377			
7,800.00	7,642.59	5,558.14	4,934.11	17.82	18.91	-21.92	-367.05	968.45	2,896.62	2,875.50	21.12	137.140			
7,850.00	7,655.97	5,605.44	4,935.47	18.15	19.63	-21.39	-414.24	971.36	2,911.69	2,890.78	20.91	139.242			
7,900.00	7,664.67	5,653.64	4,936.85	18.52	20.39	-21.11	-462.32	974.33	2,922.47	2,901.47	21.00	139.165			
7,950.00	7,668.62	5,702.30	4,938.24	18.93	21.16	-21.04	-510.86	977.33	2,928.86	2,907.45	21.41	136.828			
7,962.64	7,668.86	5,714.61	4,938.59	19.03	21.36	-21.05	-523.15	978.08	2,929.78	2,908.21	21.56	135.872			
8,000.00	7,669.11	5,751.07	4,939.64	19.35	21.95	-21.24	-559.53	980.33	2,931.99	2,909.93	22.06	132.911			
8,100.00	7,669.79	5,849.15	4,942.44	20.24	23.56	-21.68	-657.38	986.36	2,937.13	2,913.68	23.44	125.280			
8,200.00	7,670.47	5,947.84	4,945.27	21.25	25.20	-22.04	-755.84	992.44	2,941.08	2,916.17	24.91	118.067			
8,302.89	7,671.16	6,049.90	4,948.19	22.39	26.93	-22.32	-857.67	998.72	2,943.85	2,917.37	26.48	111.175			
8,400.00	7,671.82	6,146.43	4,950.95	23.55	28.58	-22.53	-953.97	1,004.66	2,945.84	2,917.84	28.00	105.195			
8,500.00	7,672.49	6,245.83	4,953.80	24.82	30.30	-22.73	-1,053.15	1,010.77	2,947.94	2,918.30	29.64	99.458			
8,600.00	7,673.16	6,345.24	4,956.64	26.16	32.03	-22.94	-1,152.33	1,016.89	2,950.07	2,918.73	31.34	94.138			
8,700.00	7,673.84	6,444.64	4,959.49	27.54	33.78	-23.14	-1,251.50	1,023.01	2,952.23	2,919.14	33.09	89.218			
8,800.00	7,674.51	6,544.05	4,962.33	28.98	35.53	-23.35	-1,350.68	1,029.13	2,954.44	2,919.55	34.89	84.675			

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 2H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Reference Site:	Lone Tree Draw "14" State	MD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	2H	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 "14" State - 3H - OH - Plan #1 Draft 1														Offset Site Error:	0.00 usft
Survey Program: O-LEAM MWD-ADJ														Offset Well Error:	0.00 usft
Reference	Vertical	Measured	Vertical	Reference	Offset	Semi-Major Axis	Highside	Offset Wellbore Centre	Between	Between	Minimum	Separation	Warning		
Depth	Depth	Depth	Depth	Reference	Offset	Reference	Toothface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(")	(usft)	(usft)	(usft)	(usft)	(usft)			
8,900.00	7,675.18	6,643.46	4,965.17	30.46	37.29	-23.56	-1,449.85	1,035.25	2,956.69	2,919.95	36.74	80.481			
9,000.00	7,675.86	6,742.86	4,968.02	31.97	39.07	-23.76	-1,549.03	1,041.36	2,958.97	2,920.35	38.62	76.610			
9,100.00	7,676.53	6,842.27	4,970.86	33.51	40.84	-23.97	-1,648.21	1,047.48	2,961.29	2,920.75	40.55	73.033			
9,200.00	7,677.20	6,941.67	4,973.71	35.08	42.62	-24.17	-1,747.38	1,053.60	2,963.65	2,921.15	42.50	69.725			
9,300.00	7,677.88	7,041.08	4,976.55	36.68	44.41	-24.37	-1,846.56	1,059.72	2,966.05	2,921.56	44.49	66.661			
9,400.00	7,678.55	7,140.48	4,979.40	38.29	46.20	-24.58	-1,945.74	1,065.83	2,968.49	2,921.97	46.51	63.820			
9,500.00	7,679.22	7,239.89	4,982.24	39.92	48.00	-24.78	-2,044.91	1,071.95	2,970.96	2,922.40	48.56	61.180			
9,600.00	7,679.89	7,339.29	4,985.09	41.56	49.80	-24.98	-2,144.09	1,078.07	2,973.47	2,922.84	50.63	58.724			
9,700.00	7,680.57	7,438.70	4,987.93	43.22	51.60	-25.19	-2,243.27	1,084.19	2,976.02	2,923.29	52.73	56.435			
9,800.00	7,681.24	7,538.11	4,990.78	44.89	53.41	-25.39	-2,342.44	1,090.30	2,978.61	2,923.75	54.86	54.297			
9,900.00	7,681.91	7,637.51	4,993.62	46.58	55.21	-25.59	-2,441.62	1,096.42	2,981.24	2,924.23	57.00	52.299			
10,000.00	7,682.59	7,736.92	4,996.47	48.27	57.02	-25.79	-2,540.79	1,102.54	2,983.90	2,924.73	59.17	50.427			
10,100.00	7,683.26	7,836.32	4,999.31	49.97	58.84	-25.99	-2,639.97	1,108.66	2,986.60	2,925.23	61.36	48.671			
10,200.00	7,683.93	7,935.73	5,002.16	51.68	60.65	-26.20	-2,739.15	1,114.77	2,989.34	2,925.76	63.58	47.020			
10,300.00	7,684.61	8,035.13	5,005.00	53.40	62.47	-26.40	-2,838.32	1,120.89	2,992.11	2,926.30	65.81	45.468			
10,400.00	7,685.28	8,134.54	5,007.85	55.12	64.28	-26.60	-2,937.50	1,127.01	2,994.92	2,926.86	68.06	44.005			
10,500.00	7,685.95	8,233.94	5,010.69	56.85	66.10	-26.80	-3,036.68	1,133.13	2,997.77	2,927.44	70.33	42.624			
10,600.00	7,686.63	8,333.35	5,013.54	58.58	67.92	-27.00	-3,135.85	1,139.24	3,000.65	2,928.03	72.62	41.320			
10,700.00	7,687.30	8,432.76	5,016.38	60.32	69.74	-27.20	-3,235.03	1,145.36	3,003.57	2,928.65	74.93	40.086			
10,800.00	7,687.97	8,532.16	5,019.23	62.07	71.57	-27.39	-3,334.21	1,151.48	3,006.53	2,929.28	77.26	38.917			
10,900.00	7,688.64	8,631.57	5,022.07	63.82	73.39	-27.59	-3,433.38	1,157.60	3,009.53	2,929.93	79.60	37.808			
11,000.00	7,689.32	8,730.97	5,024.92	65.57	75.22	-27.79	-3,532.56	1,163.71	3,012.56	2,930.59	81.96	36.755			
11,100.00	7,689.99	8,830.38	5,027.76	67.32	77.04	-27.99	-3,631.73	1,169.83	3,015.62	2,931.28	84.34	35.754			
11,200.00	7,690.66	8,929.78	5,030.61	69.08	78.87	-28.19	-3,730.91	1,175.95	3,018.73	2,931.99	86.74	34.802			
11,300.00	7,691.34	9,029.19	5,033.45	70.84	80.69	-28.38	-3,830.09	1,182.07	3,021.87	2,932.71	89.15	33.895			
11,400.00	7,692.01	9,128.59	5,036.30	72.61	82.52	-28.58	-3,929.26	1,188.18	3,025.04	2,933.46	91.59	33.030			
11,500.00	7,692.68	9,228.00	5,039.14	74.38	84.35	-28.77	-4,028.44	1,194.30	3,028.25	2,934.22	94.03	32.204			
11,600.00	7,693.36	9,327.41	5,041.98	76.14	86.18	-28.97	-4,127.62	1,200.42	3,031.50	2,935.00	96.50	31.416			
11,700.00	7,694.03	9,426.81	5,044.83	77.92	88.01	-29.17	-4,226.79	1,206.54	3,034.78	2,935.81	98.98	30.662			
11,800.00	7,694.70	9,526.22	5,047.67	79.69	89.84	-29.36	-4,325.97	1,212.65	3,038.10	2,936.63	101.47	29.940			
11,900.00	7,695.37	9,625.62	5,050.52	81.47	91.67	-29.55	-4,425.15	1,218.77	3,041.45	2,937.47	103.98	29.249			
12,000.00	7,696.05	9,725.03	5,053.36	83.24	93.50	-29.75	-4,524.32	1,224.89	3,044.84	2,938.33	106.51	28.587			
12,100.00	7,696.72	9,824.43	5,056.21	85.02	95.33	-29.94	-4,623.50	1,231.01	3,048.26	2,939.21	109.05	27.952			
12,200.00	7,697.39	9,923.84	5,059.05	86.80	97.17	-30.13	-4,722.67	1,237.12	3,051.72	2,940.11	111.61	27.342			
12,290.09	7,698.00	10,013.39	5,061.62	88.41	98.82	-30.31	-4,812.02	1,242.63	3,054.87	2,940.94	113.93	26.814 SF			

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 2H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Reference Site:	Lone Tree Draw "14" State	MD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	2H	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 #1 - OH - OH														Offset Site Error:
Survey Program: 100-NS-GYRO-MS														0.00 usft
Reference	Vertical	Offset	Vertical	Semi Major Axis		Highside	Offset Wellbore Centre		Distance		Minimum	Separation	Warning	Offset Well Error:
Measured Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	Reference (usft)	Offset (usft)	Tooface (')	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)	Factor		
0.00	0.00	0.00	69.00	0.00	0.00	129.02	-3,135.14	3,868.52	4,979.89					
100.00	100.00	35.37	104.37	0.08	0.04	129.02	-3,135.14	3,868.49	4,979.40	4,979.27	0.12	N/A		
200.00	200.00	150.40	219.40	0.31	0.25	129.03	-3,135.20	3,868.10	4,979.16	4,978.61	0.55	8,987.458		
300.00	300.00	253.56	322.56	0.53	0.52	129.03	-3,135.23	3,867.45	4,978.69	4,977.64	1.05	4,739.215		
400.00	400.00	345.74	414.73	0.76	0.76	129.04	-3,135.45	3,866.81	4,978.31	4,976.79	1.51	3,286.546		
500.00	500.00	436.32	505.31	0.98	0.99	129.05	-3,135.86	3,866.24	4,978.10	4,976.13	1.97	2,528.700		
553.42	553.42	484.43	553.42	1.10	1.11	129.05	-3,136.17	3,865.96	4,978.07	4,975.87	2.21	2,254.992		
600.00	600.00	529.75	598.74	1.21	1.22	129.05	-3,136.50	3,865.71	4,978.09	4,975.66	2.42	2,053.313		
700.00	700.00	624.49	693.47	1.43	1.44	129.06	-3,137.19	3,865.19	4,978.12	4,975.24	2.88	1,730.819		
800.00	800.00	707.18	776.16	1.66	1.62	129.07	-3,137.78	3,865.07	4,978.45	4,975.17	3.28	1,517.443		
900.00	900.00	828.29	897.27	1.88	1.90	129.08	-3,138.82	3,864.44	4,978.56	4,974.78	3.79	1,314.978		
1,000.00	1,000.00	900.00	968.97	2.11	2.08	129.09	-3,139.46	3,864.16	4,978.84	4,974.66	4.19	1,189.194		
1,100.00	1,100.00	991.97	1,060.94	2.33	2.29	129.10	-3,140.48	3,864.07	4,979.47	4,974.85	4.62	1,076.986		
1,200.00	1,200.00	1,111.47	1,180.42	2.56	2.59	129.12	-3,142.19	3,863.62	4,980.09	4,974.95	5.14	968.367		
1,300.00	1,300.00	1,227.00	1,295.93	2.78	2.89	129.15	-3,144.06	3,862.41	4,980.30	4,974.62	5.67	878.186		
1,400.00	1,400.00	1,326.99	1,395.90	3.01	3.16	129.17	-3,145.65	3,861.20	4,980.36	4,974.20	6.16	808.372		
1,500.00	1,500.00	1,455.55	1,524.44	3.23	3.49	129.20	-3,147.68	3,859.56	4,980.43	4,973.71	6.72	740.899		
1,600.00	1,600.00	1,600.00	1,668.85	3.45	3.85	129.23	-3,148.78	3,856.65	4,979.29	4,971.99	7.30	681.771		
1,700.00	1,700.00	1,696.19	1,765.02	3.68	4.08	129.25	-3,149.27	3,854.57	4,977.93	4,970.17	7.76	641.469		
1,800.00	1,800.00	1,796.76	1,865.56	3.90	4.33	129.27	-3,149.89	3,852.36	4,976.62	4,968.39	8.23	604.422		
1,900.00	1,900.00	1,899.82	1,968.59	4.13	4.58	129.29	-3,150.36	3,850.18	4,975.28	4,966.56	8.71	571.177		
2,000.00	2,000.00	1,987.58	2,056.35	4.35	4.79	129.30	-3,150.45	3,848.68	4,974.02	4,964.88	9.14	544.256		
2,100.00	2,100.00	2,109.36	2,178.11	4.58	5.05	129.31	-3,150.07	3,846.91	4,972.70	4,963.07	9.62	516.655		
2,200.00	2,200.00	2,210.81	2,279.54	4.80	5.25	129.32	-3,149.45	3,845.32	4,971.10	4,961.04	10.05	494.439		
2,300.00	2,300.00	2,300.00	2,368.72	5.03	5.44	129.32	-3,148.94	3,844.02	4,969.61	4,959.15	10.46	475.015		
2,400.00	2,400.00	2,412.73	2,481.44	5.25	5.67	129.33	-3,148.28	3,842.34	4,968.09	4,957.16	10.93	454.733		
2,500.00	2,500.00	2,507.05	2,575.75	5.48	5.88	129.34	-3,147.69	3,840.90	4,966.50	4,955.15	11.35	437.532		
2,600.00	2,600.00	2,600.00	2,668.69	5.70	6.07	129.34	-3,147.08	3,839.63	4,965.04	4,953.27	11.77	421.739		
2,700.00	2,700.00	2,677.73	2,746.41	5.93	6.24	129.34	-3,146.68	3,838.78	4,963.87	4,951.70	12.17	407.903		
2,800.00	2,800.00	2,789.49	2,858.17	6.15	6.49	129.35	-3,146.27	3,837.73	4,962.92	4,950.28	12.64	392.503		
2,900.00	2,900.00	2,879.23	2,947.90	6.38	6.69	129.35	-3,145.82	3,836.82	4,961.82	4,948.75	13.07	379.655		
3,000.00	3,000.00	2,971.42	3,040.09	6.60	6.89	129.35	-3,145.42	3,836.11	4,960.95	4,947.46	13.49	367.851		
3,100.00	3,100.00	3,078.22	3,146.88	6.83	7.10	129.35	-3,144.79	3,835.46	4,960.11	4,946.19	13.82	356.258		
3,200.00	3,200.00	3,179.25	3,247.90	7.05	7.28	129.35	-3,144.03	3,834.81	4,959.13	4,944.80	14.33	346.122		
3,300.00	3,300.00	3,294.18	3,362.82	7.28	7.46	129.34	-3,142.71	3,834.28	4,958.05	4,943.32	14.73	336.496		
3,400.00	3,400.00	3,379.73	3,448.37	7.50	7.58	129.33	-3,141.61	3,833.92	4,956.91	4,941.83	15.08	328.666		
3,500.00	3,500.00	3,490.86	3,559.49	7.73	7.74	129.32	-3,140.06	3,833.71	4,955.89	4,940.43	15.46	320.527		
3,600.00	3,600.00	3,602.99	3,671.60	7.95	7.92	129.31	-3,138.39	3,833.15	4,954.56	4,938.69	15.87	312.232		
3,700.00	3,700.00	3,700.00	3,768.60	8.17	8.07	129.29	-3,136.52	3,832.87	4,953.11	4,936.87	16.24	305.009		
3,800.00	3,800.00	3,790.73	3,859.30	8.40	8.19	129.28	-3,134.63	3,832.86	4,951.79	4,935.21	16.59	298.526		
3,900.00	3,900.00	3,900.00	3,968.55	8.62	8.35	129.26	-3,132.46	3,832.78	4,950.47	4,933.50	16.97	291.677		
4,000.00	4,000.00	3,992.88	4,061.42	8.85	8.50	129.24	-3,130.65	3,832.62	4,949.11	4,931.77	17.34	285.358		
4,100.00	4,100.00	4,100.00	4,168.52	9.07	8.67	129.23	-3,128.60	3,832.43	4,947.76	4,930.02	17.74	278.844		
4,200.00	4,200.00	4,194.86	4,263.36	9.30	8.85	129.21	-3,126.95	3,832.09	4,946.38	4,928.24	18.14	272.644		
4,300.00	4,300.00	4,285.22	4,353.71	9.52	9.02	129.20	-3,125.65	3,831.76	4,945.20	4,926.66	18.54	266.775		
4,400.00	4,400.00	4,395.85	4,464.33	9.75	9.23	129.19	-3,124.03	3,831.43	4,944.04	4,925.07	18.97	260.604		
4,500.00	4,500.00	4,500.00	4,568.46	9.97	9.43	129.18	-3,122.14	3,831.09	4,942.64	4,923.25	19.39	254.842		
4,600.00	4,600.00	4,588.65	4,657.10	10.20	9.61	129.17	-3,120.68	3,830.77	4,941.33	4,921.53	19.80	249.579		
4,700.00	4,700.00	4,681.38	4,749.82	10.42	9.79	129.16	-3,119.50	3,830.46	4,940.26	4,920.05	20.21	244.450		
4,800.00	4,800.00	4,800.00	4,868.43	10.65	10.04	129.15	-3,117.73	3,830.04	4,939.04	4,918.36	20.68	238.862		
4,900.00	4,900.00	4,881.35	4,949.77	10.87	10.21	129.14	-3,116.60	3,829.63	4,937.79	4,916.71	21.08	234.293		

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 2H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Reference Site:	Lone Tree Draw "14" State	MD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	2H	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 #1 - OH - OH														Offset Site Error:
Survey Program: 100-NS-GYRO-MS														Offset Well Error:
Reference	Vertical	Offset	Semi Major Axis	Reference	Offset	Highside	Offset Wellbore Centre	Distance	Between	Between	Minimum	Separation	Warning	
Measured Depth (usft)	Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	N-S (usft)	E-W (usft)	Centres (usft)	Ellipses (usft)	Separation (usft)	Factor		
5,000.00	5,000.00	4,988.73	5,057.14	11.10	10.45	129.13	-3,115.31	3,829.22	4,936.73	4,915.19	21.54	229.192		
5,100.00	5,100.00	5,087.90	5,156.30	11.32	10.69	129.12	-3,114.13	3,828.70	4,935.58	4,913.58	22.00	224.303		
5,200.00	5,200.00	5,187.07	5,255.46	11.55	10.93	129.12	-3,112.98	3,828.19	4,934.45	4,911.98	22.47	219.617		
5,300.00	5,300.00	5,286.24	5,354.63	11.77	11.17	129.11	-3,111.84	3,827.70	4,933.33	4,910.40	22.93	215.121		
5,400.00	5,400.00	5,385.41	5,453.79	12.00	11.41	129.10	-3,110.71	3,827.20	4,932.23	4,908.84	23.40	210.804		
5,500.00	5,500.00	5,484.58	5,552.95	12.22	11.65	129.10	-3,109.61	3,826.72	4,931.15	4,907.29	23.86	206.657		
5,600.00	5,600.00	5,583.75	5,652.11	12.45	11.89	129.09	-3,108.52	3,826.24	4,930.09	4,905.76	24.33	202.668		
5,700.00	5,700.00	5,682.92	5,751.28	12.67	12.13	129.08	-3,107.45	3,825.77	4,929.04	4,904.25	24.79	198.829		
5,800.00	5,800.00	5,782.09	5,850.44	12.89	12.37	129.08	-3,106.39	3,825.31	4,928.01	4,902.75	25.25	195.133		
5,900.00	5,900.00	5,881.27	5,949.61	13.12	12.60	129.07	-3,105.36	3,824.86	4,926.99	4,901.27	25.72	191.570		
6,000.00	6,000.00	5,980.44	6,048.77	13.34	12.84	129.07	-3,104.34	3,824.41	4,925.99	4,899.81	26.18	188.134		
6,100.00	6,100.00	6,079.61	6,147.94	13.57	13.08	129.06	-3,103.33	3,823.97	4,925.01	4,898.36	26.65	184.819		
6,200.00	6,200.00	6,178.78	6,247.11	13.79	13.32	129.06	-3,102.35	3,823.54	4,924.04	4,896.93	27.11	181.618		
6,300.00	6,300.00	6,277.96	6,346.28	14.02	13.56	129.05	-3,101.38	3,823.11	4,923.10	4,895.52	27.58	178.525		
6,400.00	6,400.00	6,377.13	6,445.44	14.24	13.80	129.04	-3,100.42	3,822.70	4,922.16	4,894.12	28.04	175.535		
6,500.00	6,500.00	6,476.31	6,544.61	14.47	14.04	129.04	-3,099.49	3,822.29	4,921.25	4,892.74	28.51	172.644		
6,600.00	6,600.00	6,575.48	6,643.78	14.69	14.28	129.03	-3,098.57	3,821.89	4,920.35	4,891.38	28.97	169.845		
6,700.00	6,700.00	6,674.65	6,742.95	14.92	14.52	129.03	-3,097.67	3,821.49	4,919.47	4,890.04	29.43	167.136		
6,800.00	6,800.00	6,773.83	6,842.12	15.14	14.76	129.02	-3,096.78	3,821.10	4,918.61	4,888.71	29.90	164.511		
6,900.00	6,900.00	6,873.01	6,941.29	15.37	15.00	129.02	-3,095.92	3,820.72	4,917.76	4,887.39	30.36	161.967		
7,000.00	7,000.00	6,972.18	7,040.47	15.59	15.24	129.01	-3,095.07	3,820.35	4,916.93	4,886.10	30.83	159.500		
7,100.00	7,100.00	7,071.36	7,139.64	15.82	15.48	129.01	-3,094.23	3,819.99	4,916.11	4,884.82	31.29	157.107		
7,148.00	7,148.00	7,118.96	7,187.24	15.92	15.60	129.01	-3,093.84	3,819.81	4,915.73	4,884.21	31.51	155.983		
7,150.00	7,150.00	7,120.95	7,189.23	15.93	15.60	-60.40	-3,093.82	3,819.81	4,915.71	4,884.19	31.52	155.942		
7,200.00	7,199.91	7,170.43	7,238.71	16.01	15.72	-60.59	-3,093.42	3,819.63	4,914.03	4,882.35	31.68	155.096		
7,250.00	7,249.35	7,219.41	7,287.68	16.10	15.84	-61.05	-3,093.02	3,819.46	4,910.02	4,878.23	31.79	154.476		
7,300.00	7,297.85	7,267.42	7,335.70	16.19	15.95	-61.78	-3,092.64	3,819.29	4,903.71	4,871.87	31.84	154.018		
7,350.00	7,344.97	7,314.04	7,382.31	16.27	16.07	-62.79	-3,092.27	3,819.12	4,895.20	4,863.33	31.86	153.627		
7,400.00	7,390.28	7,358.83	7,427.10	16.36	16.17	-64.06	-3,091.92	3,818.97	4,884.60	4,852.71	31.89	153.181		
7,450.00	7,433.36	7,401.38	7,469.65	16.44	16.28	-65.59	-3,091.58	3,818.83	4,872.04	4,840.11	31.94	152.547		
7,500.00	7,473.81	7,441.30	7,509.56	16.55	16.37	-67.37	-3,091.28	3,818.69	4,857.70	4,825.66	32.04	151.602		
7,550.00	7,511.26	7,478.22	7,546.48	16.68	16.46	-69.37	-3,090.99	3,818.57	4,841.77	4,809.55	32.22	150.259		
7,600.00	7,545.37	7,511.80	7,580.07	16.84	16.54	-71.58	-3,090.74	3,818.46	4,824.44	4,791.95	32.49	148.481		
7,650.00	7,575.82	7,541.74	7,610.00	17.03	16.62	-73.96	-3,090.51	3,818.36	4,805.93	4,773.08	32.85	146.302		
7,700.00	7,602.32	7,567.75	7,636.01	17.26	16.68	-76.49	-3,090.32	3,818.27	4,786.48	4,753.20	33.28	143.809		
7,750.00	7,624.65	7,589.60	7,657.86	17.52	16.73	-79.11	-3,090.16	3,818.20	4,766.32	4,732.55	33.77	141.132		
7,800.00	7,642.59	7,607.08	7,675.35	17.82	16.77	-81.78	-3,090.03	3,818.14	4,745.69	4,711.40	34.29	138.408		
7,850.00	7,655.97	7,620.04	7,688.30	18.15	16.81	-84.45	-3,089.93	3,818.10	4,724.82	4,690.02	34.80	135.757		
7,900.00	7,664.67	7,628.35	7,696.61	18.52	16.83	-87.08	-3,089.87	3,818.08	4,703.94	4,668.64	35.30	133.267		
7,950.00	7,668.62	7,631.94	7,700.20	18.93	16.83	-89.62	-3,089.85	3,818.06	4,683.26	4,647.51	35.75	130.984		
7,962.64	7,668.86	7,632.09	7,700.35	19.03	16.84	-90.25	-3,089.84	3,818.06	4,678.10	4,642.23	35.86	130.442		
8,000.00	7,669.11	7,632.09	7,700.35	19.35	16.84	-90.24	-3,089.84	3,818.06	4,662.76	4,626.58	36.18	128.888		
8,100.00	7,669.79	7,632.09	7,700.35	20.24	16.84	-90.24	-3,089.84	3,818.06	4,620.76	4,583.70	37.07	124.663		
8,200.00	7,670.47	7,632.07	7,700.33	21.25	16.84	-90.23	-3,089.84	3,818.06	4,577.38	4,539.31	38.06	120.255		
8,302.89	7,671.16	7,632.03	7,700.29	22.39	16.84	-90.22	-3,089.84	3,818.06	4,531.30	4,492.12	39.18	115.639		
8,400.00	7,671.82	7,631.98	7,700.24	23.55	16.83	-90.22	-3,089.84	3,818.06	4,487.97	4,447.62	40.35	111.232		
8,500.00	7,672.49	7,631.94	7,700.20	24.82	16.83	-90.22	-3,089.85	3,818.06	4,445.12	4,403.51	41.62	106.809		
8,600.00	7,673.16	7,631.89	7,700.15	26.16	16.83	-90.21	-3,089.85	3,818.06	4,404.13	4,361.18	42.95	102.535		
8,700.00	7,673.84	7,631.85	7,700.11	27.54	16.83	-90.21	-3,089.85	3,818.06	4,365.05	4,320.70	44.34	98.439		
8,800.00	7,674.51	7,631.80	7,700.06	28.98	16.83	-90.21	-3,089.85	3,818.06	4,327.92	4,282.14	45.78	94.537		

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 2H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Reference Site:	Lone Tree Draw "14" State	MD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	2H	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 #1 - OH - OH														Offset Site Error:	0.00 usft
Survey Program: 100-NS-GYRO-MS														Offset Well Error:	0.00 usft
Reference	Vertical	Measured	Vertical	Semi Major Axis		Highside	Offset Wellbore Centre		Distance		Minimum	Separation	Warning		
Measured Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	Reference (usft)	Offset (usft)	Tooface (ft)	+N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)	Factor			
8,900.00	7,675.18	7,631.76	7,700.02	30.46	16.83	-90.21	-3,089.85	3,818.06	4,292.80	4,245.54	47.26	90.836			
9,000.00	7,675.86	7,631.71	7,699.97	31.97	16.83	-90.21	-3,089.85	3,818.06	4,259.74	4,210.97	48.77	87.339			
9,100.00	7,676.53	7,631.66	7,699.92	33.51	16.83	-90.21	-3,089.85	3,818.07	4,228.79	4,178.47	50.32	84.044			
9,200.00	7,677.20	7,631.62	7,699.88	35.08	16.83	-90.21	-3,089.85	3,818.07	4,199.99	4,148.10	51.89	80.946			
9,300.00	7,677.88	7,631.57	7,699.83	36.68	16.83	-90.21	-3,089.85	3,818.07	4,173.38	4,119.90	53.48	78.037			
9,400.00	7,678.55	7,631.53	7,699.79	38.29	16.83	-90.21	-3,089.85	3,818.07	4,149.02	4,093.93	55.09	75.310			
9,500.00	7,679.22	7,631.48	7,699.74	39.92	16.83	-90.21	-3,089.85	3,818.07	4,126.94	4,070.22	56.72	72.755			
9,600.00	7,679.89	7,631.43	7,699.69	41.56	16.83	-90.21	-3,089.85	3,818.07	4,107.18	4,048.81	58.37	70.364			
9,700.00	7,680.57	7,631.39	7,699.65	43.22	16.83	-90.21	-3,089.85	3,818.07	4,089.76	4,029.73	60.03	68.128			
9,800.00	7,681.24	7,631.34	7,699.60	44.89	16.83	-90.21	-3,089.85	3,818.07	4,074.73	4,013.02	61.70	66.038			
9,900.00	7,681.91	7,631.30	7,699.56	46.58	16.83	-90.21	-3,089.85	3,818.07	4,062.10	3,998.71	63.39	64.085			
10,000.00	7,682.59	7,631.25	7,699.51	48.27	16.83	-90.21	-3,089.85	3,818.07	4,051.90	3,986.82	65.08	62.261			
10,100.00	7,683.26	7,631.21	7,699.46	49.97	16.83	-90.20	-3,089.85	3,818.07	4,044.15	3,977.37	66.78	60.558			
10,200.00	7,683.93	7,631.16	7,699.42	51.68	16.83	-90.20	-3,089.85	3,818.07	4,038.86	3,970.37	68.49	58.969			
10,300.00	7,684.61	7,631.11	7,699.37	53.40	16.83	-90.20	-3,089.85	3,818.07	4,036.04	3,965.84	70.21	57.487			
10,363.75	7,685.04	7,631.08	7,699.34	54.50	16.83	-90.20	-3,089.85	3,818.07	4,035.54	3,964.23	71.31	56.594 CC			
10,400.00	7,685.28	7,631.07	7,699.33	55.12	16.83	-90.20	-3,089.85	3,818.07	4,035.70	3,963.77	71.93	56.104 ES			
10,500.00	7,685.95	7,631.02	7,699.28	56.85	16.83	-90.20	-3,089.85	3,818.07	4,037.84	3,964.18	73.66	54.816			
10,600.00	7,686.63	7,630.98	7,699.24	58.58	16.83	-90.20	-3,089.85	3,818.07	4,042.45	3,967.05	75.40	53.616			
10,700.00	7,687.30	7,630.93	7,699.19	60.32	16.83	-90.20	-3,089.85	3,818.07	4,049.53	3,972.39	77.14	52.498			
10,800.00	7,687.97	7,630.88	7,699.14	62.07	16.83	-90.20	-3,089.85	3,818.07	4,059.05	3,980.17	78.88	51.458			
10,900.00	7,688.64	7,630.84	7,699.10	63.82	16.83	-90.20	-3,089.85	3,818.07	4,071.01	3,990.39	80.63	50.491			
11,000.00	7,689.32	7,630.79	7,699.05	65.57	16.83	-90.20	-3,089.85	3,818.07	4,085.39	4,003.01	82.38	49.591			
11,100.00	7,689.99	7,630.74	7,699.00	67.32	16.83	-90.20	-3,089.85	3,818.07	4,102.15	4,018.02	84.14	48.756			
11,200.00	7,690.66	7,630.70	7,698.96	69.08	16.83	-90.20	-3,089.85	3,818.07	4,121.28	4,035.38	85.90	47.980			
11,300.00	7,691.34	7,630.65	7,698.91	70.84	16.83	-90.20	-3,089.85	3,818.07	4,142.72	4,055.07	87.66	47.260			
11,400.00	7,692.01	7,630.61	7,698.87	72.61	16.83	-90.20	-3,089.86	3,818.07	4,166.46	4,077.04	89.42	46.593			
11,500.00	7,692.68	7,630.56	7,698.82	74.38	16.83	-90.20	-3,089.86	3,818.07	4,192.45	4,101.26	91.19	45.975			
11,600.00	7,693.36	7,630.51	7,698.77	76.14	16.83	-90.20	-3,089.86	3,818.07	4,220.65	4,127.69	92.96	45.403			
11,700.00	7,694.03	7,630.47	7,698.73	77.92	16.83	-90.19	-3,089.86	3,818.07	4,251.02	4,156.29	94.73	44.875			
11,800.00	7,694.70	7,630.42	7,698.68	79.69	16.83	-90.19	-3,089.86	3,818.07	4,283.50	4,187.00	96.51	44.386			
11,900.00	7,695.37	7,630.38	7,698.64	81.47	16.83	-90.19	-3,089.86	3,818.07	4,318.06	4,219.78	98.28	43.936			
12,000.00	7,696.05	7,630.33	7,698.59	83.24	16.83	-90.19	-3,089.86	3,818.07	4,354.64	4,254.58	100.06	43.521			
12,100.00	7,696.72	7,630.28	7,698.54	85.02	16.83	-90.19	-3,089.86	3,818.07	4,393.20	4,291.36	101.84	43.139			
12,200.00	7,697.39	7,630.24	7,698.50	86.80	16.83	-90.19	-3,089.86	3,818.07	4,433.67	4,330.05	103.62	42.788			
12,290.09	7,698.00	7,630.20	7,698.46	88.41	16.83	-90.19	-3,089.86	3,818.07	4,471.73	4,366.50	105.23	42.497 SF			

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 2H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Reference Site:	Lone Tree Draw "14" State	MD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	2H	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:
Survey Program: 100-NS-GYRO-MS-4452-MWD-ISCWSA-9564-Project													0.00 usft
Reference	Vertical	Offset	Vertical	Semi Major Axis	Offset	Highside	Offset Wellbore Centre	Distance	Between	Between	Minimum	Separation	Warning
Measured Depth (usft)	Depth (usft)	Measured Depth (usft)	Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Centres (usft)	Ellipses (usft)	Separation (usft)	Factor	
0.00	0.00	0.00	43.00	0.00	0.00	89.65	22.63	3,704.12	3,704.44				
100.00	100.00	49.49	92.49	0.08	0.05	89.65	22.74	3,704.17	3,704.24	3,704.11	0.14	N/A	
200.00	200.00	145.31	188.31	0.31	0.23	89.64	23.47	3,704.48	3,704.57	3,704.04	0.54	6,896.487	
300.00	300.00	248.14	291.13	0.53	0.50	89.63	24.23	3,704.72	3,704.81	3,703.78	1.03	3,582.513	
400.00	400.00	353.21	396.19	0.76	0.78	89.60	25.85	3,704.95	3,705.04	3,703.51	1.53	2,413.980	
500.00	500.00	457.96	500.92	0.98	1.05	89.57	27.49	3,704.93	3,705.03	3,703.00	2.03	1,822.271	
539.28	539.28	496.55	539.52	1.07	1.15	89.57	27.98	3,704.92	3,705.02	3,702.80	2.22	1,667.183	
600.00	600.00	550.10	593.06	1.21	1.29	89.58	28.65	3,704.96	3,705.08	3,702.58	2.50	1,481.923	
700.00	700.00	650.65	693.60	1.43	1.56	89.53	30.25	3,705.23	3,705.38	3,702.36	2.99	1,238.971	
800.00	800.00	755.56	798.48	1.66	1.84	89.50	32.31	3,705.25	3,705.39	3,701.90	3.49	1,060.884	
900.00	900.00	845.38	888.29	1.88	2.07	89.48	33.76	3,705.36	3,705.53	3,701.58	3.86	936.871	
1,000.00	1,000.00	955.87	998.76	2.11	2.36	89.44	35.94	3,705.76	3,705.93	3,701.46	4.47	829.023	
1,100.00	1,100.00	1,090.75	1,133.62	2.33	2.70	89.41	38.34	3,705.06	3,705.41	3,700.38	5.03	736.186	
1,200.00	1,200.00	1,210.14	1,252.99	2.56	2.97	89.38	40.11	3,703.62	3,704.22	3,698.89	5.53	669.889	
1,300.00	1,300.00	1,312.17	1,355.00	2.78	3.19	89.36	41.24	3,702.09	3,702.73	3,696.76	5.97	620.504	
1,400.00	1,400.00	1,400.00	1,442.82	3.01	3.36	89.35	41.90	3,700.93	3,701.42	3,695.05	6.37	581.108	
1,500.00	1,500.00	1,520.53	1,563.33	3.23	3.62	89.34	42.93	3,699.17	3,699.96	3,693.11	6.85	540.048	
1,600.00	1,600.00	1,624.87	1,667.65	3.45	3.86	89.32	44.18	3,697.28	3,698.16	3,690.85	7.31	505.795	
1,700.00	1,700.00	1,733.11	1,775.86	3.68	4.10	89.29	45.58	3,695.29	3,696.35	3,688.57	7.78	474.916	
1,800.00	1,800.00	1,844.45	1,887.17	3.90	4.34	89.28	46.34	3,692.58	3,693.90	3,685.65	8.24	448.109	
1,900.00	1,900.00	1,940.05	1,982.74	4.13	4.54	89.27	46.90	3,690.53	3,691.76	3,683.10	8.66	426.100	
2,000.00	2,000.00	2,037.95	2,080.61	4.35	4.74	89.27	47.19	3,688.13	3,689.32	3,680.23	9.09	405.841	
2,100.00	2,100.00	2,111.39	2,154.03	4.58	4.89	89.26	47.42	3,686.86	3,687.56	3,678.10	9.47	389.521	
2,200.00	2,200.00	2,227.48	2,270.11	4.80	5.13	89.26	47.37	3,684.73	3,685.70	3,675.77	9.93	371.276	
2,300.00	2,300.00	2,300.00	2,342.62	5.03	5.28	89.26	47.54	3,683.55	3,684.10	3,673.79	10.30	357.515	
2,400.00	2,400.00	2,386.29	2,428.90	5.25	5.47	89.26	47.81	3,682.62	3,683.05	3,672.32	10.72	343.416	
2,500.00	2,500.00	2,490.66	2,533.27	5.48	5.70	89.26	47.83	3,681.80	3,682.26	3,671.09	11.17	329.592	
2,600.00	2,600.00	2,619.12	2,661.72	5.70	5.96	89.26	47.68	3,680.10	3,680.92	3,669.26	11.66	315.668	
2,700.00	2,700.00	2,721.74	2,764.33	5.93	6.16	89.26	47.28	3,678.35	3,679.22	3,667.13	12.09	304.358	
2,800.00	2,800.00	2,823.79	2,866.35	6.15	6.37	89.27	46.87	3,676.51	3,677.41	3,664.89	12.52	293.777	
2,900.00	2,900.00	2,913.49	2,956.04	6.38	6.55	89.27	46.55	3,674.99	3,675.71	3,662.78	12.93	284.320	
3,000.00	3,000.00	3,000.00	3,042.54	6.60	6.74	89.28	46.34	3,673.99	3,674.53	3,661.20	13.33	275.562	
3,100.00	3,100.00	3,101.29	3,143.83	6.83	6.96	89.28	46.25	3,672.99	3,673.54	3,659.76	13.79	266.476	
3,200.00	3,200.00	3,218.61	3,261.14	7.05	7.24	89.28	46.35	3,671.26	3,672.06	3,657.77	14.29	256.981	
3,300.00	3,300.00	3,313.82	3,356.33	7.28	7.46	89.28	46.26	3,669.72	3,670.44	3,655.71	14.74	249.077	
3,400.00	3,400.00	3,400.94	3,443.45	7.50	7.66	89.28	46.05	3,668.54	3,669.08	3,653.93	15.16	242.075	
3,500.00	3,500.00	3,506.43	3,548.93	7.73	7.90	89.28	45.84	3,667.21	3,667.82	3,652.20	15.62	234.763	
3,600.00	3,600.00	3,604.75	3,647.24	7.95	8.14	89.28	45.75	3,665.92	3,666.51	3,650.43	16.08	227.984	
3,700.00	3,700.00	3,702.65	3,745.13	8.17	8.38	89.28	45.81	3,664.69	3,665.25	3,648.70	16.55	221.485	
3,800.00	3,800.00	3,804.85	3,847.32	8.40	8.63	89.28	45.82	3,663.40	3,663.99	3,646.96	17.02	215.214	
3,900.00	3,900.00	3,906.53	3,948.99	8.62	8.88	89.28	45.76	3,662.05	3,662.67	3,645.17	17.50	209.319	
4,000.00	4,000.00	4,003.49	4,045.94	8.85	9.12	89.28	45.82	3,660.80	3,661.38	3,643.41	17.97	203.800	
4,100.00	4,100.00	4,110.20	4,152.65	9.07	9.39	89.28	45.98	3,659.36	3,660.03	3,641.57	18.46	198.248	
4,200.00	4,200.00	4,218.23	4,260.66	9.30	9.67	89.28	46.21	3,657.70	3,658.49	3,639.53	18.96	192.927	
4,300.00	4,300.00	4,326.69	4,369.10	9.52	9.95	89.27	46.32	3,655.73	3,656.67	3,637.21	19.46	187.878	
4,400.00	4,400.00	4,422.72	4,465.11	9.75	10.12	89.28	45.82	3,653.97	3,654.84	3,634.98	19.86	184.050	
4,500.00	4,500.00	4,547.00	4,588.57	9.97	10.17	89.47	33.94	3,651.38	3,652.61	3,632.48	20.13	181.476	
4,600.00	4,600.00	4,694.72	4,726.40	10.20	10.24	90.28	-17.51	3,647.92	3,650.15	3,629.72	20.43	178.657	
4,700.00	4,700.00	4,736.00	4,761.62	10.42	10.29	90.61	-39.02	3,646.93	3,647.66	3,626.95	20.71	176.130	
4,770.63	4,770.63	4,746.93	4,770.63	10.58	10.31	90.71	-45.20	3,646.82	3,647.10	3,626.21	20.89	174.594 CC, ES	
4,800.00	4,800.00	4,755.47	4,777.59	10.65	10.33	90.79	-50.16	3,646.78	3,647.19	3,626.22	20.97	173.918	

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 2H
Project:	Eddy County, NM.(NAD-83)	TVD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Reference Site:	Lone Tree Draw "14" State	MD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	2H	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, 9584-Project													
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)	Offset Wellbore Centre E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,900.00	4,900.00	4,781.26	4,798.06	10.87	10.38	91.03	-65.82	3,646.86	3,648.88	3,627.63	21.25	171.710	
5,000.00	5,000.00	4,815.33	4,824.03	11.10	10.48	91.38	-87.87	3,647.48	3,652.78	3,631.22	21.56	169.385	
5,100.00	5,100.00	4,905.17	4,885.18	11.32	10.83	92.41	-153.51	3,648.28	3,657.82	3,635.68	22.14	165.214	
5,200.00	5,200.00	4,936.88	4,903.51	11.55	11.00	92.81	-179.37	3,648.37	3,664.79	3,642.26	22.53	162.628	
5,300.00	5,300.00	4,957.00	4,914.04	11.77	11.12	93.08	-196.51	3,648.43	3,674.05	3,651.17	22.88	160.588	
5,400.00	5,400.00	4,989.00	4,928.99	12.00	11.34	93.53	-224.79	3,648.60	3,685.74	3,662.42	23.32	158.043	
5,500.00	5,500.00	4,989.00	4,928.99	12.22	11.34	93.53	-224.79	3,648.60	3,689.85	3,676.30	23.55	157.133	
5,600.00	5,600.00	5,001.87	4,934.43	12.45	11.44	93.71	-236.46	3,648.76	3,716.49	3,692.62	23.87	155.703	
5,700.00	5,700.00	5,020.00	4,941.64	12.67	11.58	93.97	-253.08	3,649.16	3,735.71	3,711.48	24.23	154.160	
5,800.00	5,800.00	5,020.00	4,941.64	12.89	11.58	93.97	-253.08	3,649.16	3,757.29	3,732.83	24.46	153.626	
5,900.00	5,900.00	5,020.00	4,941.64	13.12	11.58	93.97	-253.08	3,649.16	3,781.38	3,756.70	24.68	153.203	
6,000.00	6,000.00	5,034.64	4,947.14	13.34	11.70	94.18	-266.64	3,649.65	3,807.83	3,782.80	25.03	152.128	
6,100.00	6,100.00	5,051.00	4,953.00	13.57	11.84	94.42	-281.90	3,650.36	3,836.69	3,811.30	25.39	151.090	
6,200.00	6,200.00	5,051.00	4,953.00	13.79	11.84	94.42	-281.90	3,650.36	3,867.76	3,842.14	25.62	150.977	
6,300.00	6,300.00	5,051.00	4,953.00	14.02	11.84	94.42	-281.90	3,650.36	3,901.15	3,875.31	25.84	150.956	
6,400.00	6,400.00	5,066.28	4,958.17	14.24	11.98	94.64	-296.26	3,651.13	3,936.68	3,910.47	26.21	150.207	
6,500.00	6,500.00	5,083.00	4,963.43	14.47	12.13	94.88	-312.10	3,652.05	3,974.41	3,947.82	26.59	149.487	
6,600.00	6,600.00	5,083.00	4,963.43	14.69	12.13	94.88	-312.10	3,652.05	4,014.13	3,987.31	26.81	149.715	
6,700.00	6,700.00	5,083.00	4,963.43	14.92	12.13	94.88	-312.10	3,652.05	4,055.92	4,028.89	27.04	150.016	
6,800.00	6,800.00	5,096.12	4,967.22	15.14	12.26	95.08	-324.64	3,652.76	4,099.65	4,072.26	27.39	149.673	
6,900.00	6,900.00	5,102.76	4,969.00	15.37	12.32	95.18	-331.03	3,653.11	4,145.30	4,117.62	27.68	149.752	
7,000.00	7,000.00	5,115.00	4,972.02	15.59	12.44	95.36	-342.88	3,653.69	4,192.82	4,164.79	28.03	149.601	
7,100.00	7,100.00	5,115.00	4,972.02	15.82	12.44	95.36	-342.88	3,653.69	4,242.09	4,213.84	28.25	150.154	
7,148.00	7,148.00	5,115.00	4,972.02	15.92	12.44	95.36	-342.88	3,653.69	4,266.37	4,238.01	28.36	150.439	
7,150.00	7,150.00	5,115.00	4,972.02	15.93	12.44	95.36	-342.88	3,653.69	4,267.39	4,238.79	28.60	149.208	
7,200.00	7,199.91	5,115.00	4,972.02	16.01	12.44	-90.59	-342.88	3,653.69	4,293.24	4,264.61	28.63	149.964	
7,250.00	7,249.35	5,115.00	4,972.02	16.10	12.44	-87.19	-342.88	3,653.69	4,319.55	4,290.87	28.68	150.630	
7,300.00	7,297.85	5,132.38	4,975.75	16.19	12.62	-83.53	-359.84	3,654.39	4,345.95	4,317.04	28.92	150.298	
7,350.00	7,344.97	5,147.00	4,978.38	16.27	12.78	-79.97	-374.21	3,654.80	4,372.36	4,343.24	29.12	150.139	
7,400.00	7,390.28	5,147.00	4,978.38	16.36	12.78	-76.69	-374.21	3,654.80	4,398.38	4,369.21	29.17	150.789	
7,450.00	7,433.36	5,147.00	4,978.38	16.44	12.78	-73.54	-374.21	3,654.80	4,423.86	4,394.68	29.19	151.561	
7,500.00	7,473.81	5,162.32	4,980.72	16.55	12.95	-70.44	-389.35	3,655.15	4,448.49	4,419.18	29.31	151.766	
7,550.00	7,511.26	5,179.00	4,982.86	16.68	13.13	-67.56	-405.89	3,655.48	4,472.13	4,442.74	29.39	152.170	
7,600.00	7,545.37	5,179.00	4,982.86	16.84	13.13	-65.05	-405.89	3,655.48	4,494.44	4,465.17	29.27	153.541	
7,650.00	7,575.82	5,179.00	4,982.86	17.03	13.13	-62.77	-405.89	3,655.48	4,515.39	4,486.27	29.12	155.049	
7,700.00	7,602.32	5,179.00	4,982.86	17.26	13.13	-60.73	-405.89	3,655.48	4,534.79	4,505.83	28.96	156.599	
7,750.00	7,624.65	5,203.08	4,985.19	17.52	13.41	-58.88	-429.85	3,655.97	4,552.13	4,523.09	29.04	156.780	
7,800.00	7,642.59	5,211.25	4,985.77	17.82	13.51	-57.33	-437.99	3,656.15	4,567.69	4,538.69	29.00	157.499	
7,850.00	7,655.97	5,237.00	4,986.87	18.15	13.82	-56.02	-463.71	3,656.78	4,581.38	4,552.17	29.22	156.814	
7,900.00	7,664.67	5,237.00	4,986.87	18.52	13.82	-54.98	-463.71	3,656.78	4,592.57	4,563.31	29.27	156.927	
7,950.00	7,668.62	5,237.00	4,986.87	18.93	13.82	-54.16	-463.71	3,656.78	4,601.59	4,572.17	29.42	156.391	
7,962.64	7,668.86	5,247.51	4,987.09	19.03	13.95	-54.00	-474.22	3,657.04	4,603.50	4,573.90	29.60	155.508	
8,000.00	7,669.11	5,290.43	4,987.81	19.35	14.49	-54.12	-517.12	3,657.93	4,608.68	4,578.30	30.38	151.679	
8,100.00	7,669.79	5,470.37	4,991.22	20.24	16.70	-54.45	-697.01	3,659.88	4,619.70	4,586.46	33.24	138.977	
8,200.00	7,670.47	5,580.70	4,995.18	21.25	18.10	-54.64	-807.26	3,661.00	4,626.88	4,591.43	35.45	130.535	
8,302.89	7,671.16	5,670.65	4,998.95	22.39	19.34	-54.76	-897.12	3,662.29	4,631.30	4,593.71	37.59	123.191	
8,400.00	7,671.82	5,811.24	5,003.64	23.55	21.44	-54.85	-1,037.62	3,663.39	4,634.12	4,593.63	40.49	114.440	
8,500.00	7,672.49	5,901.00	5,005.57	24.82	22.79	-54.88	-1,127.36	3,662.52	4,636.20	4,593.41	42.79	108.338	
8,600.00	7,673.16	5,976.46	5,007.28	26.16	23.95	-54.92	-1,202.80	3,662.20	4,638.68	4,593.70	44.98	103.136	
8,700.00	7,673.84	6,237.24	5,011.45	27.54	28.05	-54.98	-1,463.44	3,656.43	4,640.43	4,590.59	49.84	93.106	

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 2H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Reference Site:	Lone Tree Draw "14" State	MD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	2H	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	Vertical	Measured	Vertical	Semi Major Axis		Highside	Offset Wellbore Centre		Distance		Minimum	Separation	Warning		
Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	Reference (usft)	Offset (usft)	Tooface (")	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)	Factor			
8,800.00	7,674.51	6,315.79	5,013.37	28.98	29.29	-55.00	-1,541.89	3,653.18	4,639.80	4,587.63	52.17	88.939			
8,812.98	7,674.60	6,321.97	5,013.55	29.17	29.39	-55.00	-1,548.07	3,652.99	4,639.79	4,587.37	52.42	88.512			
8,900.00	7,675.18	6,374.00	5,015.21	30.46	30.21	-55.03	-1,600.06	3,651.94	4,640.24	4,585.99	54.26	85.522			
9,000.00	7,675.86	6,469.00	5,018.28	31.97	31.76	-55.07	-1,695.00	3,650.48	4,641.21	4,584.26	56.95	81.500			
9,100.00	7,676.53	6,544.83	5,020.71	33.51	33.01	-55.11	-1,770.78	3,649.35	4,642.28	4,582.89	59.39	78.167			
9,200.00	7,677.20	6,644.66	5,023.91	35.08	34.66	-55.16	-1,870.56	3,648.39	4,643.75	4,581.53	62.23	74.626			
9,300.00	7,677.88	6,747.61	5,026.49	36.68	36.40	-55.20	-1,973.47	3,646.74	4,645.10	4,579.95	65.15	71.299			
9,400.00	7,678.55	6,847.00	5,029.25	38.29	38.06	-55.24	-2,072.80	3,645.16	4,646.32	4,578.29	68.03	68.303			
9,500.00	7,679.22	6,901.59	5,030.72	39.92	38.97	-55.26	-2,127.37	3,644.59	4,648.08	4,577.84	70.24	66.175			
9,600.00	7,679.89	6,957.37	5,031.31	41.56	39.89	-55.28	-2,183.14	3,644.18	4,650.94	4,578.46	72.48	64.166			
9,700.00	7,680.57	7,045.71	5,031.72	43.22	41.38	-55.30	-2,271.48	3,643.70	4,654.34	4,579.10	75.24	61.863			
9,800.00	7,681.24	7,137.35	5,031.92	44.89	42.92	-55.32	-2,363.12	3,643.32	4,657.97	4,579.91	78.06	59.674			
9,900.00	7,681.91	7,263.88	5,031.80	46.58	45.05	-55.35	-2,489.84	3,642.07	4,661.31	4,579.90	81.41	57.258			
10,000.00	7,682.59	7,372.93	5,031.97	48.27	46.87	-55.37	-2,598.69	3,640.78	4,664.35	4,579.86	84.49	55.205			
10,100.00	7,683.26	7,461.96	5,032.12	49.97	48.37	-55.38	-2,687.70	3,639.63	4,667.31	4,580.02	87.29	53.467			
10,200.00	7,683.93	7,551.30	5,032.45	51.68	49.87	-55.40	-2,777.05	3,639.07	4,670.68	4,580.57	90.11	51.833			
10,300.00	7,684.61	7,640.87	5,032.95	53.40	51.37	-55.43	-2,866.62	3,638.63	4,674.09	4,581.15	92.94	50.293			
10,400.00	7,685.28	7,755.99	5,032.36	55.12	53.32	-55.44	-2,981.73	3,637.76	4,677.91	4,581.75	96.16	48.647			
10,500.00	7,685.95	7,878.68	5,031.47	56.85	55.39	-55.45	-3,104.38	3,635.27	4,680.72	4,581.23	99.49	47.049			
10,600.00	7,686.63	7,993.04	5,030.70	58.58	57.31	-55.45	-3,218.72	3,632.71	4,683.37	4,580.69	102.67	45.614			
10,700.00	7,687.30	8,080.00	5,030.34	60.32	58.77	-55.46	-3,305.66	3,630.91	4,686.01	4,580.55	105.46	44.432			
10,800.00	7,687.97	8,151.43	5,030.29	62.07	59.98	-55.47	-3,377.08	3,629.99	4,689.09	4,581.05	108.05	43.398			
10,900.00	7,688.64	8,233.62	5,030.50	63.82	61.39	-55.49	-3,459.26	3,629.65	4,692.71	4,581.89	110.82	42.347			
11,000.00	7,689.32	8,333.83	5,030.84	65.57	63.10	-55.51	-3,559.48	3,629.52	4,696.53	4,582.65	113.87	41.243			
11,100.00	7,689.99	8,434.87	5,031.12	67.32	64.83	-55.54	-3,660.52	3,629.23	4,700.25	4,583.30	116.95	40.191			
11,200.00	7,690.66	8,514.31	5,030.61	69.08	67.90	-55.55	-3,839.90	3,625.63	4,702.65	4,581.45	121.20	38.802			
11,300.00	7,691.34	8,706.13	5,029.96	70.84	69.47	-55.55	-3,931.68	3,623.04	4,704.83	4,580.74	124.09	37.914			
11,400.00	7,692.01	8,840.82	5,028.82	72.61	71.77	-55.54	-4,066.30	3,618.72	4,706.82	4,579.19	127.63	36.878			
11,500.00	7,692.68	8,961.91	5,026.94	74.38	73.85	-55.52	-4,187.24	3,613.16	4,708.01	4,577.07	130.95	35.953			
11,600.00	7,693.36	9,053.91	5,026.35	76.14	75.42	-55.51	-4,279.17	3,609.35	4,709.07	4,575.23	133.85	35.183			
11,700.00	7,694.03	9,131.04	5,026.29	77.92	76.75	-55.51	-4,356.25	3,606.83	4,710.54	4,574.01	136.53	34.501			
11,800.00	7,694.70	9,232.72	5,026.14	79.69	78.50	-55.51	-4,457.88	3,603.68	4,712.19	4,572.58	139.61	33.754			
11,900.00	7,695.37	9,314.00	5,025.83	81.47	79.88	-55.51	-4,539.13	3,601.19	4,714.00	4,571.64	142.36	33.114			
12,000.00	7,696.05	9,409.00	5,025.30	83.24	81.49	-55.51	-4,634.09	3,598.52	4,716.10	4,570.80	145.30	32.457			
12,100.00	7,696.72	9,502.51	5,024.55	85.02	83.00	-55.50	-4,727.56	3,595.92	4,718.38	4,570.22	148.16	31.846			
12,200.00	7,697.39	9,564.00	5,023.95	86.80	83.00	-55.50	-4,789.02	3,594.15	4,720.83	4,571.15	149.68	31.539			
12,290.09	7,698.00	9,564.00	5,023.95	88.41	83.00	-55.50	-4,789.02	3,594.15	4,724.49	4,573.44	151.06	31.276 SF			

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

Leam Drilling Systems LLC

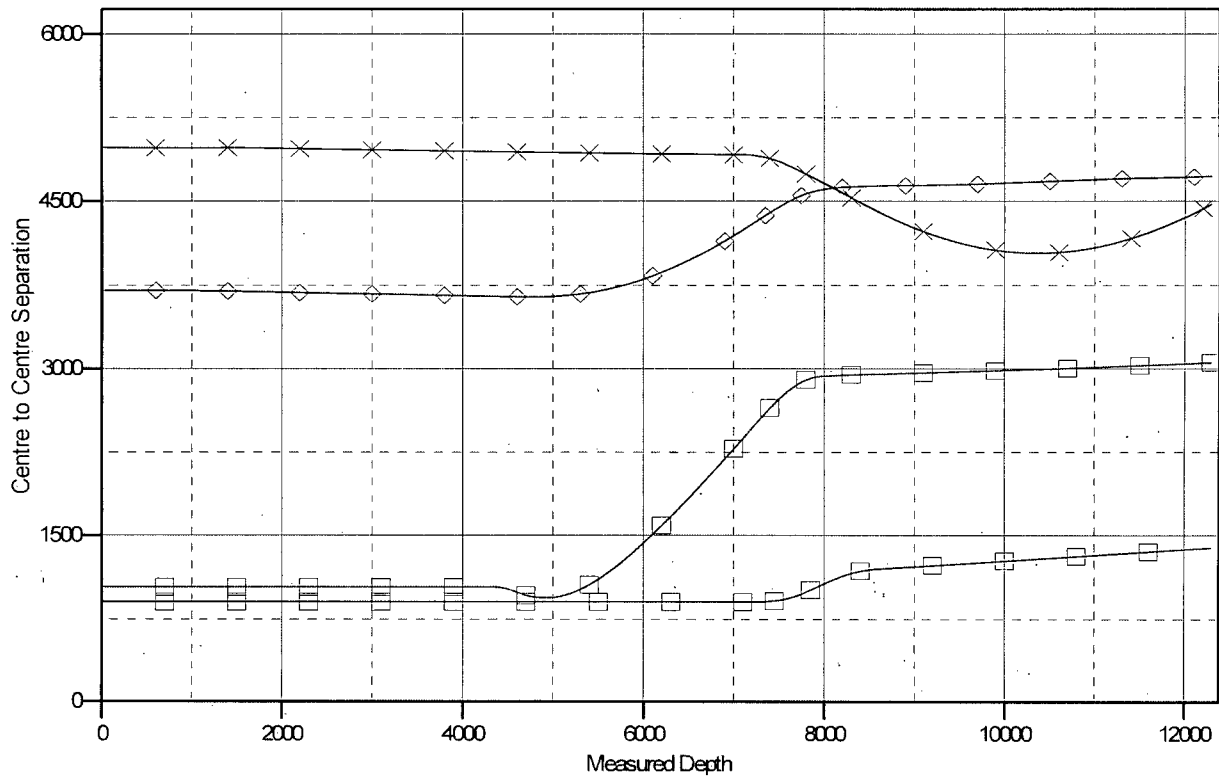
Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 2H:
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Reference Site:	Lone Tree Draw "14" State	MD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Site Error:	0.00' usft	North Reference:	Grid
Reference Well:	2H	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 3221' + KB 26' @ 3247.00usft (Ca
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 2H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.09°

Ladder Plot



LEGEND

- 3H, OH, Plan #1 Draft 1 V0
- ◆ #1H, OH, Plan #1 Draft 1 V0
- ✕ Lone Tree #1, OH, OHV0
- ◆ Lone Tree Draw 13 State #3H, OH, OHV0

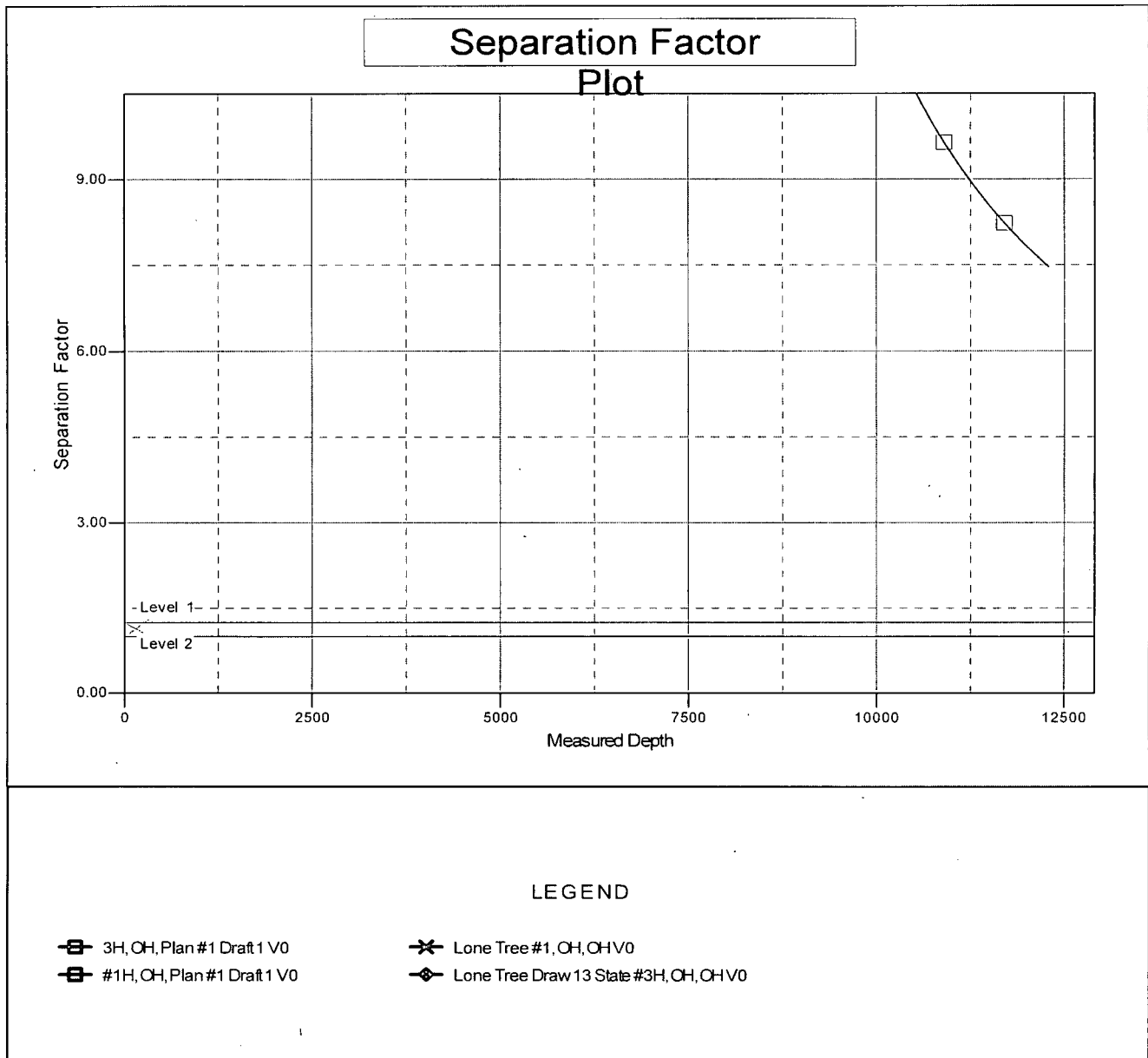
Leam Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 2H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Reference Site:	Lone Tree Draw "14" State	MD Reference:	GE 3221' + KB 26' @ 3247.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	2H	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 3221' + KB 26' @ 3247.00usft (Ca)
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 2H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.09°



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

MD	INC	AZI	TVD	NS	EW	DLS	BUILD	TURN	VSECT
	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
	200.00	0.00	0.00	200.00	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
	400.00	0.00	0.00	400.00	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
	600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00
	700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00
	800.00	0.00	0.00	800.00	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
	1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00
	1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	0.00
	1200.00	0.00	0.00	1200.00	0.00	0.00	0.00	0.00	0.00
	1300.00	0.00	0.00	1300.00	0.00	0.00	0.00	0.00	0.00
	1400.00	0.00	0.00	1400.00	0.00	0.00	0.00	0.00	0.00
	1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	0.00
	1600.00	0.00	0.00	1600.00	0.00	0.00	0.00	0.00	0.00
	1700.00	0.00	0.00	1700.00	0.00	0.00	0.00	0.00	0.00
	1800.00	0.00	0.00	1800.00	0.00	0.00	0.00	0.00	0.00
	1900.00	0.00	0.00	1900.00	0.00	0.00	0.00	0.00	0.00
	2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00
	2100.00	0.00	0.00	2100.00	0.00	0.00	0.00	0.00	0.00
	2200.00	0.00	0.00	2200.00	0.00	0.00	0.00	0.00	0.00
	2300.00	0.00	0.00	2300.00	0.00	0.00	0.00	0.00	0.00
	2400.00	0.00	0.00	2400.00	0.00	0.00	0.00	0.00	0.00
	2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	0.00	0.00
	2600.00	0.00	0.00	2600.00	0.00	0.00	0.00	0.00	0.00
	2700.00	0.00	0.00	2700.00	0.00	0.00	0.00	0.00	0.00
	2800.00	0.00	0.00	2800.00	0.00	0.00	0.00	0.00	0.00
	2900.00	0.00	0.00	2900.00	0.00	0.00	0.00	0.00	0.00
	3000.00	0.00	0.00	3000.00	0.00	0.00	0.00	0.00	0.00
	3100.00	0.00	0.00	3100.00	0.00	0.00	0.00	0.00	0.00
	3200.00	0.00	0.00	3200.00	0.00	0.00	0.00	0.00	0.00
	3300.00	0.00	0.00	3300.00	0.00	0.00	0.00	0.00	0.00
	3400.00	0.00	0.00	3400.00	0.00	0.00	0.00	0.00	0.00
	3500.00	0.00	0.00	3500.00	0.00	0.00	0.00	0.00	0.00
	3600.00	0.00	0.00	3600.00	0.00	0.00	0.00	0.00	0.00
	3700.00	0.00	0.00	3700.00	0.00	0.00	0.00	0.00	0.00
	3800.00	0.00	0.00	3800.00	0.00	0.00	0.00	0.00	0.00
	3900.00	0.00	0.00	3900.00	0.00	0.00	0.00	0.00	0.00
	4000.00	0.00	0.00	4000.00	0.00	0.00	0.00	0.00	0.00
	4100.00	0.00	0.00	4100.00	0.00	0.00	0.00	0.00	0.00
	4200.00	0.00	0.00	4200.00	0.00	0.00	0.00	0.00	0.00
	4300.00	0.00	0.00	4300.00	0.00	0.00	0.00	0.00	0.00
	4400.00	0.00	0.00	4400.00	0.00	0.00	0.00	0.00	0.00
	4500.00	0.00	0.00	4500.00	0.00	0.00	0.00	0.00	0.00

4600.00	0.00	0.00	4600.00	0.00	0.00	0.00	0.00	0.00	0.00
4700.00	0.00	0.00	4700.00	0.00	0.00	0.00	0.00	0.00	0.00
4800.00	0.00	0.00	4800.00	0.00	0.00	0.00	0.00	0.00	0.00
4900.00	0.00	0.00	4900.00	0.00	0.00	0.00	0.00	0.00	0.00
5000.00	0.00	0.00	5000.00	0.00	0.00	0.00	0.00	0.00	0.00
5100.00	0.00	0.00	5100.00	0.00	0.00	0.00	0.00	0.00	0.00
5200.00	0.00	0.00	5200.00	0.00	0.00	0.00	0.00	0.00	0.00
5300.00	0.00	0.00	5300.00	0.00	0.00	0.00	0.00	0.00	0.00
5400.00	0.00	0.00	5400.00	0.00	0.00	0.00	0.00	0.00	0.00
5500.00	0.00	0.00	5500.00	0.00	0.00	0.00	0.00	0.00	0.00
5600.00	0.00	0.00	5600.00	0.00	0.00	0.00	0.00	0.00	0.00
5700.00	0.00	0.00	5700.00	0.00	0.00	0.00	0.00	0.00	0.00
5800.00	0.00	0.00	5800.00	0.00	0.00	0.00	0.00	0.00	0.00
5900.00	0.00	0.00	5900.00	0.00	0.00	0.00	0.00	0.00	0.00
6000.00	0.00	0.00	6000.00	0.00	0.00	0.00	0.00	0.00	0.00
6100.00	0.00	0.00	6100.00	0.00	0.00	0.00	0.00	0.00	0.00
6200.00	0.00	0.00	6200.00	0.00	0.00	0.00	0.00	0.00	0.00
6300.00	0.00	0.00	6300.00	0.00	0.00	0.00	0.00	0.00	0.00
6400.00	0.00	0.00	6400.00	0.00	0.00	0.00	0.00	0.00	0.00
6500.00	0.00	0.00	6500.00	0.00	0.00	0.00	0.00	0.00	0.00
6600.00	0.00	0.00	6600.00	0.00	0.00	0.00	0.00	0.00	0.00
6700.00	0.00	0.00	6700.00	0.00	0.00	0.00	0.00	0.00	0.00
6800.00	0.00	0.00	6800.00	0.00	0.00	0.00	0.00	0.00	0.00
6900.00	0.00	0.00	6900.00	0.00	0.00	0.00	0.00	0.00	0.00
7000.00	0.00	0.00	7000.00	0.00	0.00	0.00	0.00	0.00	0.00
7100.00	0.00	0.00	7100.00	0.00	0.00	0.00	0.00	0.00	0.00
7148.00	0.00	0.00	7148.00	0.00	0.00	0.00	0.00	0.00	0.00
7150.00	0.22	189.40	7150.00	0.00	0.00	11.00	11.00	0.00	0.00
7200.00	5.72	189.40	7199.91	-2.56	-0.42	11.00	11.00	0.00	2.58
7250.00	11.22	189.40	7249.35	-9.82	-1.63	11.00	11.00	0.00	9.90
7300.00	16.72	189.40	7297.85	-21.73	-3.60	11.00	11.00	0.00	21.91
7350.00	22.22	189.40	7344.97	-38.16	-6.32	11.00	11.00	0.00	38.48
7400.00	27.72	189.40	7390.28	-58.98	-9.76	11.00	11.00	0.00	59.47
7450.00	33.22	189.40	7433.36	-83.98	-13.90	11.00	11.00	0.00	84.68
7500.00	38.72	189.40	7473.81	-112.94	-18.70	11.00	11.00	0.00	113.89
7550.00	44.22	189.40	7511.26	-145.60	-24.10	11.00	11.00	0.00	146.81
7600.00	49.72	189.40	7545.37	-181.64	-30.07	11.00	11.00	0.00	183.16
7650.00	55.22	189.40	7575.82	-220.75	-36.54	11.00	11.00	0.00	222.59
7700.00	60.72	189.40	7602.32	-262.55	-43.47	11.00	11.00	0.00	264.74
7750.00	66.22	189.40	7624.65	-306.67	-50.77	11.00	11.00	0.00	309.23
7800.00	71.72	189.40	7642.58	-352.69	-58.39	11.00	11.00	0.00	355.64
7850.00	77.22	189.40	7655.97	-400.20	-66.25	11.00	11.00	0.00	403.54
7900.00	82.72	189.40	7664.67	-448.76	-74.29	11.00	11.00	0.00	452.51
7950.00	88.22	189.40	7668.62	-497.91	-82.43	11.00	11.00	0.00	502.07
7962.64	89.61	189.40	7668.86	-510.38	-84.49	11.00	11.00	0.00	514.64
8000.00	89.61	188.65	7669.11	-547.28	-90.35	2.00	0.00	-2.00	551.83
8100.00	89.61	186.65	7669.79	-646.38	-103.67	2.00	0.00	-2.00	651.57

8200.00	89.61	184.65	7670.47	-745.89	-113.52	2.00	0.00	-2.00	751.50
8302.89	89.61	182.59	7671.16	-848.57	-120.02	2.00	0.00	-2.00	854.38
8400.00	89.61	182.59	7671.82	-945.57	-124.42	0.00	0.00	0.00	951.47
8500.00	89.61	182.59	7672.49	-1045.47	-128.94	0.00	0.00	0.00	1051.46
8600.00	89.61	182.59	7673.16	-1145.36	-133.47	0.00	0.00	0.00	1151.44
8700.00	89.61	182.59	7673.84	-1245.26	-138.00	0.00	0.00	0.00	1251.42
8800.00	89.61	182.59	7674.51	-1345.15	-142.53	0.00	0.00	0.00	1351.41
8900.00	89.61	182.59	7675.18	-1445.05	-147.05	0.00	0.00	0.00	1451.39
9000.00	89.61	182.59	7675.86	-1544.94	-151.58	0.00	0.00	0.00	1551.37
9100.00	89.61	182.59	7676.53	-1644.84	-156.11	0.00	0.00	0.00	1651.36
9200.00	89.61	182.59	7677.20	-1744.73	-160.63	0.00	0.00	0.00	1751.34
9300.00	89.61	182.59	7677.88	-1844.63	-165.16	0.00	0.00	0.00	1851.32
9400.00	89.61	182.59	7678.55	-1944.52	-169.69	0.00	0.00	0.00	1951.31
9500.00	89.61	182.59	7679.22	-2044.42	-174.21	0.00	0.00	0.00	2051.29
9600.00	89.61	182.59	7679.89	-2144.31	-178.74	0.00	0.00	0.00	2151.28
9700.00	89.61	182.59	7680.57	-2244.21	-183.27	0.00	0.00	0.00	2251.26
9800.00	89.61	182.59	7681.24	-2344.10	-187.79	0.00	0.00	0.00	2351.24
9900.00	89.61	182.59	7681.91	-2444.00	-192.32	0.00	0.00	0.00	2451.23
10000.00	89.61	182.59	7682.59	-2543.90	-196.85	0.00	0.00	0.00	2551.21
10100.00	89.61	182.59	7683.26	-2643.79	-201.38	0.00	0.00	0.00	2651.19
10200.00	89.61	182.59	7683.93	-2743.69	-205.90	0.00	0.00	0.00	2751.18
10300.00	89.61	182.59	7684.61	-2843.58	-210.43	0.00	0.00	0.00	2851.16
10400.00	89.61	182.59	7685.28	-2943.48	-214.96	0.00	0.00	0.00	2951.14
10500.00	89.61	182.59	7685.95	-3043.37	-219.48	0.00	0.00	0.00	3051.13
10600.00	89.61	182.59	7686.62	-3143.27	-224.01	0.00	0.00	0.00	3151.11
10700.00	89.61	182.59	7687.30	-3243.16	-228.54	0.00	0.00	0.00	3251.09
10800.00	89.61	182.59	7687.97	-3343.06	-233.06	0.00	0.00	0.00	3351.08
10900.00	89.61	182.59	7688.64	-3442.95	-237.59	0.00	0.00	0.00	3451.06
11000.00	89.61	182.59	7689.32	-3542.85	-242.12	0.00	0.00	0.00	3551.04
11100.00	89.61	182.59	7689.99	-3642.74	-246.64	0.00	0.00	0.00	3651.03
11200.00	89.61	182.59	7690.66	-3742.64	-251.17	0.00	0.00	0.00	3751.01
11300.00	89.61	182.59	7691.34	-3842.53	-255.70	0.00	0.00	0.00	3851.00
11400.00	89.61	182.59	7692.01	-3942.43	-260.23	0.00	0.00	0.00	3950.98
11500.00	89.61	182.59	7692.68	-4042.32	-264.75	0.00	0.00	0.00	4050.96
11600.00	89.61	182.59	7693.36	-4142.22	-269.28	0.00	0.00	0.00	4150.95
11700.00	89.61	182.59	7694.03	-4242.11	-273.81	0.00	0.00	0.00	4250.93
11800.00	89.61	182.59	7694.70	-4342.01	-278.33	0.00	0.00	0.00	4350.91
11900.00	89.61	182.59	7695.37	-4441.90	-282.86	0.00	0.00	0.00	4450.90
12000.00	89.61	182.59	7696.05	-4541.80	-287.39	0.00	0.00	0.00	4550.88
12100.00	89.61	182.59	7696.72	-4641.69	-291.91	0.00	0.00	0.00	4650.86
12200.00	89.61	182.59	7697.39	-4741.59	-296.44	0.00	0.00	0.00	4750.85
12290.09	89.61	182.59	7698.00	-4831.58	-300.52	0.00	0.00	0.00	4840.92