

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

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
Revised July 18, 2013

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

WELL API NO. 30-015-41240
5. Indicate Type of Lease STATE ☒ FEE ☐
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Lone Ranger 33 State
8. Well Number 2H
9. OGRID Number 6137
10. Pool name or Wildcat Forehand Ranch; Bone Spring
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3111'

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐

2. Name of Operator
Devon Energy Production Company, LP 405-228-7203

3. Address of Operator
333 West. Sheridan Avenue
Oklahoma City, OK 73102-5015 405-228-7203

4. Well Location
Unit Letter I : 1895 feet from the SOUTH line and 50 feet from the EAST line
Section 33 Township 23S Range 27E NMPM Eddy County

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

NOTICE OF INTENTION TO:

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

OTHER: Casing Change ☒

SUBSEQUENT REPORT OF:

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

OTHER: ☐

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

Devon Energy Production Company, L.P. requests to change the production casing on the Lone Ranger 33 State 2H from 17# HCP-110 LTC and BTC to 17# L-80 BTC due to the occasional H2S at bottoms up after trips. Please see the attached Directional Survey.

Casing Size	Collapse Design Factor	Burst Design Factor	Tension Design Factor
5-1/2" 17# L-80 BTC	1.81	2.23	1.91

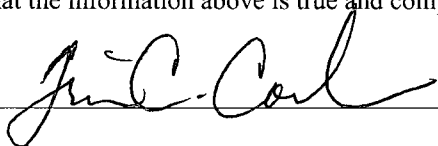
RECEIVED

JAN 28 2014

NMOCD ARTESIA

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

SIGNATURE



TITLE: Regulatory Associate

DATE 1/27/2014

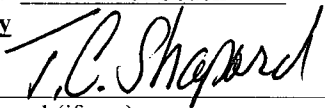
Type or print name: Trina C. Couch

E-mail address: trina.couch@dmr.nm.gov

PHONE: 405-228-7203

For State Use Only

APPROVED BY:



TITLE

"Geologist"

DATE

1-28-2014

Conditions of Approval (if any):

DEVON ENERGY

Project: Eddy County, NM (NAD-83)
 Site: Lone Ranger
 Well: 33 State 2H
 Wellbore: ST01
 Design: Plan #1

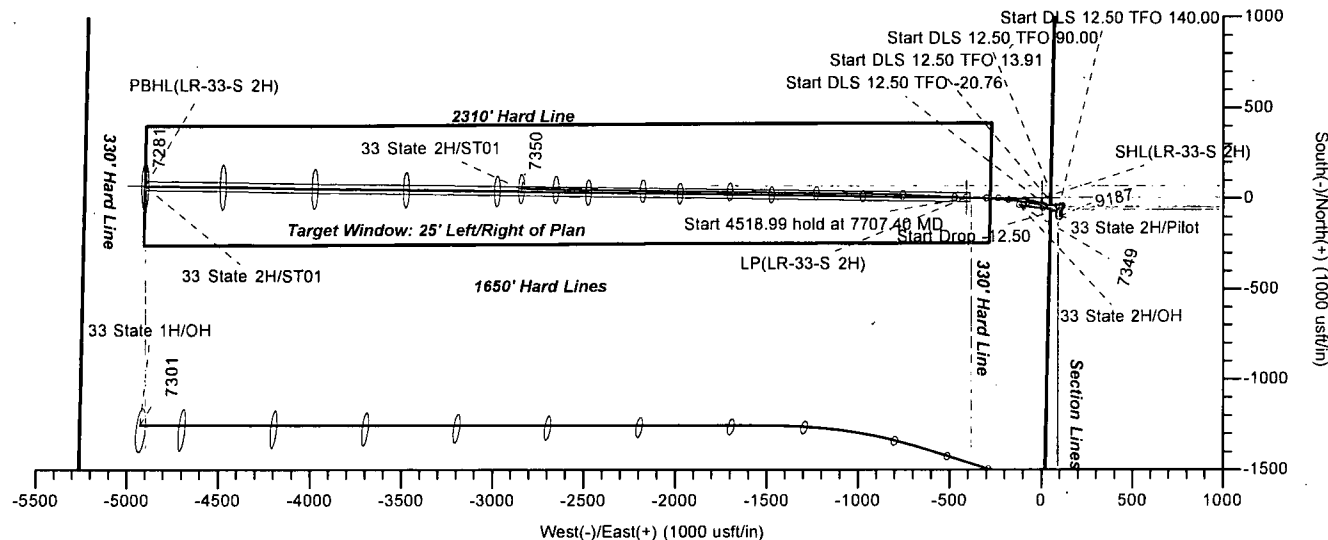
devon



Azimuths to Grid North
 True North: -0.08°
 Magnetic North: 7.59°

Magnetic Field
 Strength: 48286.0snT
 Dip Angle: 60.03°
 Date: 01/19/2014
 Model: BGGM2013

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



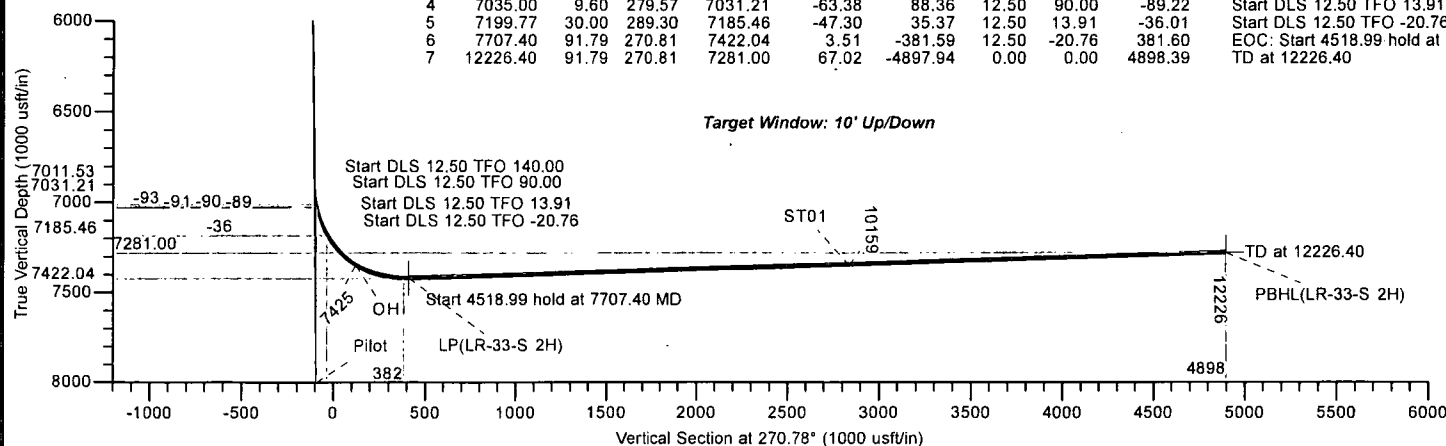
RECEIVED
 JAN 28 2014
 NMOCD ARTESIA

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL(LR-33-S 2H)	0.00	0.00	0.00	458049.65	586633.96	32° 15' 33.007 N	104° 11' 12.467 W
PBHL(LR-33-S 2H)	7281.00	67.02	-4897.94	458116.67	581736.02	32° 15' 33.733 N	104° 12' 9.509 W
LP(LR-33-S 2H)	7421.00	3.93	-409.02	458053.58	586224.94	32° 15' 33.051 N	104° 11' 17.231 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Annotation
1	7015.00	11.30	273.40	7011.53	-63.67	91.89	0.00	0.00	-92.75	Tie into MWD; Start ST: Drop 12.50°/100'
2	7025.00	10.05	273.40	7021.35	-63.56	90.04	12.50	180.00	-90.90	Start DLS 12.50 TFO 140.00
3	7030.00	9.58	275.81	7026.28	-63.49	89.19	12.50	140.00	-90.05	Start DLS 12.50 TFO 90.00
4	7035.00	9.60	279.57	7031.21	-63.38	88.36	12.50	90.00	-89.22	Start DLS 12.50 TFO 13.91
5	7199.77	30.00	289.30	7185.46	-47.30	35.37	12.50	13.91	-36.01	Start DLS 12.50 TFO -20.76
6	7707.40	91.79	270.81	7422.04	3.51	-381.59	12.50	-20.76	381.60	EOC: Start 4518.99 hold at 7707.40 MD
7	12226.40	91.79	270.81	7281.00	67.02	-4897.94	0.00	0.00	4898.39	TD at 12226.40



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

Plan: Plan #1 (33 State 2H/ST01)
 Lone Ranger
 Created By: Heber Claros Date: 9:38, January 25 2014
 Date: _____
 Approved: _____ Date: _____

DEVON ENERGY

Eddy County, NM (NAD-83)

Lone Ranger

33 State 2H

ST01

Design: ST01

Standard Survey Report

25 January, 2014

Leam Drilling Systems LLC

Survey Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 33 State 2H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3193' + KB 25' @ 3218.00usft (Cactus 126)
Site:	Lone Ranger	MD Reference:	GE 3193' + KB 25' @ 3218.00usft (Cactus 126)
Well:	33 State 2H	North Reference:	Grid
Wellbore:	ST01	Survey Calculation Method:	Minimum Curvature
Design:	ST01	Database:	EDM 5000.1 Single User Db

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 Ranger		
Site Position:		Northing:	456,469.86 usft
From:	Map	Easting:	586,603.37 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 15' 17.374 N
		Longitude:	104° 11' 12.849 W
		Grid Convergence:	0.08 °

Well	33 State 2H		
Well Position	+N/-S	0.00 usft	Northing: 458,049.65 usft
	+E/-W	0.00 usft	Easting: 586,633.96 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	32° 15' 33.007 N
		Longitude:	104° 11' 12.467 W
		Ground Level:	3,192.00 usft

Wellbore	ST01		
Magnetics	Model Name	Sample Date	Declination (°)
	BGGM2013	01/19/14	7.67
			Dip Angle (°) 60.03
			Field Strength (nT) 48,286

Design	ST01		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	7,015.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.00	0.00	0.00
			Direction (°) 159.58

Survey Program	Date	01/25/14			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.00	6,800.00	Survey #1 (Pilot)	NS-GYRO-MS	North sensing gyrocompassing m/s	
6,889.00	7,015.00	Survey #1 (OH)	LEAM MWD-ADJ	MWD - Standard	
7,046.00	10,159.00	Survey #1 (ST01)	LEAM MWD-ADJ	MWD - Standard	

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SHL(LR-33-S 2H)										
100.00	0.83	169.15	100.00	-0.71	0.14	0.71	0.83	0.83	0.00	
200.00	0.64	177.59	199.99	-1.98	0.30	1.96	0.22	-0.19	8.44	
300.00	0.86	160.19	299.98	-3.24	0.57	3.24	0.31	0.22	-17.40	
400.00	1.03	175.30	399.97	-4.85	0.90	4.86	0.30	0.17	15.11	
500.00	1.11	180.49	499.95	-6.71	0.97	6.63	0.13	0.08	5.19	
600.00	1.32	182.12	599.93	-8.83	0.92	8.60	0.21	0.21	1.63	
700.00	1.03	207.68	699.91	-10.78	0.46	10.26	0.59	-0.29	25.56	

Leam Drilling Systems LLC

Survey Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 33 State 2H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3193' + KB 25' @ 3218.00usft (Cactus 126)
Site:	Lone Ranger	MD Reference:	GE 3193' + KB 25' @ 3218.00usft (Cactus 126)
Well:	33 State 2H	North Reference:	Grid
Wellbore:	ST01	Survey Calculation Method:	Minimum Curvature
Design:	ST01	Database:	EDM 5000.1 Single User Db

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)
800.00	0.69	201.54	799.89	-12.13	-0.18	11.31	0.35	-0.34	-6.14
900.00	0.68	183.91	899.89	-13.29	-0.44	12.30	0.21	-0.01	-17.63
1,000.00	1.13	170.42	999.87	-14.85	-0.32	13.80	0.49	0.45	-13.49
1,100.00	0.84	177.37	1,099.86	-16.55	-0.12	15.47	0.31	-0.29	6.95
1,200.00	1.11	188.27	1,199.85	-18.25	-0.23	17.02	0.33	0.27	10.90
1,300.00	1.25	181.60	1,299.82	-20.29	-0.40	18.88	0.20	0.14	-6.67
1,400.00	1.77	149.50	1,399.79	-22.72	0.36	21.41	0.97	0.52	-32.10
1,500.00	2.50	132.28	1,499.72	-25.51	2.75	24.87	0.96	0.73	-17.22
1,600.00	2.99	122.21	1,599.61	-28.37	6.57	28.88	0.69	0.49	-10.07
1,700.00	2.99	123.44	1,699.47	-31.20	10.96	33.06	0.06	0.00	1.23
1,800.00	3.54	115.56	1,799.31	-33.97	15.92	37.39	0.71	0.55	-7.88
1,900.00	3.66	110.77	1,899.11	-36.43	21.69	41.71	0.32	0.12	-4.79
2,000.00	3.30	108.32	1,998.93	-38.47	27.40	45.61	0.39	-0.36	-2.45
2,100.00	3.30	104.92	2,098.76	-40.11	32.92	49.08	0.20	0.00	-3.40
2,200.00	2.45	95.52	2,198.64	-41.06	37.83	51.68	0.97	-0.85	-9.40
2,300.00	2.16	86.84	2,298.55	-41.16	41.84	53.17	0.45	-0.29	-8.68
2,400.00	2.01	103.08	2,398.49	-41.45	45.43	54.70	0.61	-0.15	16.24
2,500.00	1.94	94.11	2,498.43	-41.97	48.82	56.37	0.32	-0.07	-8.97
2,600.00	1.94	94.26	2,598.37	-42.22	52.20	57.78	0.01	0.00	0.15
2,700.00	1.97	93.35	2,698.31	-42.45	55.60	59.18	0.04	0.03	-0.91
2,800.00	2.32	89.95	2,798.24	-42.54	59.34	60.58	0.37	0.35	-3.40
2,900.00	1.74	94.78	2,898.18	-42.67	62.88	61.93	0.60	-0.58	4.83
3,000.00	1.70	89.17	2,998.14	-42.77	65.87	63.07	0.17	-0.04	-5.61
3,100.00	1.55	77.95	3,098.10	-42.47	68.68	63.77	0.35	-0.15	-11.22
3,200.00	1.44	79.10	3,198.06	-41.95	71.24	64.17	0.11	-0.11	1.15
3,300.00	1.47	90.77	3,298.03	-41.73	73.75	64.84	0.30	0.03	11.67
3,400.00	1.35	91.24	3,398.00	-41.77	76.21	65.74	0.12	-0.12	0.47
3,500.00	1.90	91.58	3,497.96	-41.84	79.05	66.80	0.55	0.55	0.34
3,600.00	1.51	79.69	3,597.92	-41.65	82.00	67.65	0.52	-0.39	-11.89
3,700.00	1.50	79.00	3,697.88	-41.17	84.58	68.10	0.02	-0.01	-0.69
3,800.00	1.46	77.71	3,797.85	-40.65	87.11	68.49	0.05	-0.04	-1.29
3,900.00	1.42	78.14	3,897.82	-40.12	89.57	68.86	0.04	-0.04	0.43
4,000.00	1.59	87.80	3,997.78	-39.81	92.17	69.47	0.30	0.17	9.66
4,100.00	1.41	79.63	4,097.75	-39.54	94.77	70.12	0.28	-0.18	-8.17
4,200.00	1.08	60.09	4,197.72	-38.85	96.79	70.18	0.53	-0.33	-19.54
4,300.00	1.08	76.73	4,297.71	-38.16	98.53	70.14	0.31	0.00	16.64
4,400.00	1.15	81.47	4,397.69	-37.80	100.44	70.47	0.12	0.07	4.74
4,500.00	0.69	114.74	4,497.68	-37.90	101.98	71.10	0.69	-0.46	33.27
4,600.00	0.70	107.12	4,597.67	-38.33	103.11	71.90	0.09	0.01	-7.62
4,700.00	1.00	80.00	4,697.66	-38.36	104.55	72.43	0.49	0.30	-27.12
4,800.00	1.05	93.38	4,797.64	-38.26	106.32	72.96	0.24	0.05	13.38
4,900.00	0.73	114.62	4,897.63	-38.58	107.82	73.78	0.45	-0.32	21.24
5,000.00	0.86	71.81	4,997.62	-38.61	109.11	74.26	0.59	0.13	-42.81

Leam Drilling Systems LLC

Survey Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 33 State 2H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3193' + KB 25' @ 3218.00usft (Cactus 126)
Site:	Lone Ranger	MD Reference:	GE 3193' + KB 25' @ 3218.00usft (Cactus 126)
Well:	33 State 2H	North Reference:	Grid
Wellbore:	ST01	Survey Calculation Method:	Minimum Curvature
Design:	ST01	Database:	EDM 5000.1 Single User Db

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)
5,100.00	0.52	32.99	5,097.61	-38.00	110.07	74.02	0.56	-0.34	-38.82
5,200.00	0.66	43.88	5,197.61	-37.20	110.72	73.50	0.18	0.14	10.89
5,300.00	0.58	104.83	5,297.60	-36.92	111.60	73.54	0.63	-0.08	60.95
5,400.00	0.60	115.95	5,397.60	-37.28	112.56	74.21	0.12	0.02	11.12
5,500.00	0.34	44.49	5,497.60	-37.29	113.24	74.47	0.59	-0.26	-71.46
5,600.00	0.95	102.20	5,597.59	-37.26	114.26	74.79	0.82	0.61	57.71
5,700.00	1.03	129.77	5,697.58	-38.01	115.76	76.01	0.48	0.08	27.57
5,800.00	1.14	161.84	5,797.56	-39.53	116.76	77.79	0.61	0.11	32.07
5,900.00	1.10	193.95	5,897.54	-41.40	116.84	79.57	0.62	-0.04	32.11
6,000.00	1.22	220.65	5,997.52	-43.14	115.92	80.88	0.55	0.12	26.70
6,100.00	1.63	223.54	6,097.49	-44.98	114.24	82.02	0.42	0.41	2.89
6,200.00	1.23	210.95	6,197.46	-46.93	112.71	83.31	0.51	-0.40	-12.59
6,300.00	1.24	223.34	6,297.43	-48.64	111.42	84.46	0.27	0.01	12.39
6,400.00	1.63	235.62	6,397.40	-50.23	109.50	85.28	0.49	0.39	12.28
6,500.00	1.64	224.42	6,497.36	-52.06	107.33	86.24	0.32	0.01	-11.20
6,600.00	1.58	203.91	6,597.32	-54.34	105.77	87.83	0.58	-0.06	-20.51
6,700.00	1.69	203.98	6,697.28	-56.95	104.61	89.87	0.11	0.11	0.07
6,800.00	1.57	212.68	6,797.24	-59.45	103.27	91.75	0.27	-0.12	8.70
6,889.00	1.30	223.10	6,886.22	-61.21	101.92	92.93	0.42	-0.30	11.71
6,921.00	1.40	232.60	6,918.21	-61.71	101.36	93.20	0.76	0.31	29.69
6,952.00	4.60	220.60	6,949.16	-62.89	100.25	93.92	10.46	10.32	-38.71
6,984.00	8.20	270.20	6,980.98	-63.85	97.13	93.73	19.62	11.25	155.00
7,015.00	11.30	273.40	7,011.53	-63.67	91.89	91.73	10.15	10.00	10.32
7,046.00	11.20	288.90	7,041.94	-62.51	86.01	88.59	9.73	-0.32	50.00
7,077.00	16.20	289.70	7,072.05	-60.08	79.08	83.90	16.14	16.13	2.58
7,109.00	20.90	290.60	7,102.37	-56.56	69.53	77.27	14.71	14.69	2.81
7,140.00	25.20	291.00	7,130.89	-52.25	58.19	69.27	13.88	13.87	1.29
7,172.00	28.80	290.60	7,159.40	-47.09	44.61	59.70	11.26	11.25	-1.25
7,203.00	32.20	290.30	7,186.11	-41.60	29.87	49.41	10.98	10.97	-0.97
7,235.00	35.50	290.60	7,212.68	-35.37	13.17	37.74	10.33	10.31	0.94
7,267.00	39.20	289.00	7,238.11	-28.81	-5.10	25.22	11.95	11.56	-5.00
7,298.00	43.30	287.40	7,261.42	-22.43	-24.51	12.47	13.66	13.23	-5.16
7,330.00	47.60	284.60	7,283.86	-16.17	-46.43	-1.05	14.81	13.44	-8.75
7,361.00	50.60	280.20	7,304.16	-11.16	-69.30	-13.72	14.44	9.68	-14.19
7,393.00	54.30	277.70	7,323.66	-7.23	-94.36	-26.15	13.12	11.56	-7.81
7,424.00	59.00	274.80	7,340.70	-4.43	-120.09	-37.76	17.05	15.16	-9.35
7,456.00	63.50	273.20	7,356.09	-2.48	-148.07	-49.34	14.73	14.06	-5.00
7,487.00	67.50	271.40	7,368.95	-1.36	-176.25	-60.23	13.94	12.90	-5.81
7,519.00	70.60	271.30	7,380.39	-0.65	-206.12	-71.32	9.69	9.69	-0.31
7,551.00	74.30	270.70	7,390.03	-0.12	-236.62	-82.46	11.70	11.56	-1.88
7,582.00	77.20	270.70	7,397.66	0.24	-266.66	-93.28	9.35	9.35	0.00
7,614.00	79.10	270.70	7,404.24	0.63	-297.98	-104.57	5.94	5.94	0.00
7,645.00	80.50	270.40	7,409.72	0.92	-328.49	-115.49	4.62	4.52	-0.97
7,676.00	83.50	271.10	7,414.04	1.32	-359.18	-126.58	9.93	9.68	2.26

Leam Drilling Systems LLC

Survey Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 33 State 2H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3193' + KB 25' @ 3218.00usft (Cactus 126)
Site:	Lone Ranger	MD Reference:	GE 3193' + KB 25' @ 3218.00usft (Cactus 126)
Well:	33 State 2H	North Reference:	Grid
Wellbore:	ST01	Survey Calculation Method:	Minimum Curvature
Design:	ST01	Database:	EDM 5000.1 Single User Db

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)
7,726.24	89.47	271.38	7,417.12	2.41	-409.28	-145.08	11.90	11.89	0.57
LP(LR-33-S 2H)									
7,729.00	89.80	271.40	7,417.13	2.48	-412.05	-146.11	11.90	11.89	0.56
7,761.00	90.10	270.80	7,417.16	3.09	-444.04	-157.85	2.10	0.94	-1.88
7,792.00	90.40	272.30	7,417.03	3.93	-475.03	-169.45	4.93	0.97	4.84
7,886.00	91.20	272.70	7,415.71	8.03	-568.93	-206.06	0.95	0.85	0.43
7,980.00	92.10	273.20	7,413.01	12.86	-662.76	-243.33	1.10	0.96	0.53
8,074.00	92.00	272.30	7,409.65	17.37	-756.59	-280.30	0.96	-0.11	-0.96
8,169.00	92.00	272.00	7,406.33	20.93	-851.47	-316.74	0.32	0.00	-0.32
8,264.00	91.50	271.10	7,403.43	23.50	-946.39	-352.27	1.08	-0.53	-0.95
8,358.00	91.10	270.00	7,401.30	24.40	-1,040.36	-385.91	1.24	-0.43	-1.17
8,453.00	91.60	270.40	7,399.06	24.73	-1,135.33	-419.36	0.67	0.53	0.42
8,548.00	92.40	270.40	7,395.74	25.40	-1,230.27	-453.11	0.84	0.84	0.00
8,643.00	93.00	270.90	7,391.27	26.47	-1,325.16	-487.24	0.82	0.63	0.53
8,737.00	93.60	271.40	7,385.86	28.36	-1,418.98	-521.74	0.83	0.64	0.53
8,832.00	91.90	271.30	7,381.30	30.59	-1,513.84	-556.94	1.79	-1.79	-0.11
8,927.00	90.70	270.60	7,379.14	32.17	-1,608.80	-591.55	1.46	-1.26	-0.74
9,020.00	90.30	270.20	7,378.33	32.82	-1,701.80	-624.61	0.61	-0.43	-0.43
9,114.00	90.60	270.70	7,377.59	33.55	-1,795.79	-658.10	0.62	0.32	0.53
9,210.00	90.90	271.30	7,376.34	35.23	-1,891.77	-693.16	0.70	0.31	0.63
9,304.00	90.20	270.40	7,375.43	36.62	-1,985.75	-727.27	1.21	-0.74	-0.96
9,399.00	90.70	270.20	7,374.69	37.12	-2,080.75	-760.88	0.57	0.53	-0.21
9,494.00	91.10	271.10	7,373.20	38.20	-2,175.73	-795.04	1.04	0.42	0.95
9,589.00	91.40	272.00	7,371.12	40.77	-2,270.67	-830.58	1.00	0.32	0.95
9,684.00	91.30	270.70	7,368.89	43.01	-2,365.62	-865.80	1.37	-0.11	-1.37
9,779.00	92.10	271.10	7,366.07	44.50	-2,460.56	-900.33	0.94	0.84	0.42
9,874.00	93.20	271.10	7,361.67	46.32	-2,555.44	-935.15	1.16	1.16	0.00
9,969.00	92.00	270.70	7,357.37	47.81	-2,650.33	-969.66	1.33	-1.26	-0.42
10,074.00	92.20	271.10	7,353.52	49.46	-2,755.25	-1,007.82	0.43	0.19	0.38
10,159.00	92.00	271.60	7,350.40	51.46	-2,840.16	-1,039.32	0.63	-0.24	0.59
PBHL(LR-33-S 2H)									

Checked By: _____ Approved By: _____ Date: _____

DEVON ENERGY

Eddy County, NM (NAD-83)

Lone Ranger

33 State 2H

ST01

ST01

Anticollision Report

25 January, 2014

Leam Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 33 State 2H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3193' + KB 25' @ 3218.00usft (Cactus 126)
Reference Site:	Lone Ranger	MD Reference:	GE 3193' + KB 25' @ 3218.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	33 State 2H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ST01	Database:	EDM 5000.1 Single User Db
Reference Design:	ST01	Offset TVD Reference:	Reference Datum

Reference	ST01		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 100.00usft	Error Model:	ISCWSA
Depth Range:	7,015.00 to 10,159.00usft	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 Program		Date	01/25/14		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.00	6,800.00	Survey #1 (Pilot)	NS-GYRO-MS	North sensing gyrocompassing m/s	
6,889.00	7,015.00	Survey #1 (OH)	LEAM MWD-ADJ	MWD - Standard	
7,046.00	10,159.00	Survey #1 (ST01)	LEAM MWD-ADJ	MWD - Standard	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Lone Ranger						
33 State 2H - OH - OH	7,015.00	7,015.00	0.00	0.00	0.000	Level 1, CC, ES, SF
33 State 2H - Pilot - Pilot	7,015.00	7,014.43	9.14	8.05	8.367	CC, ES, SF

Offset Design													Offset Site Error:	
Survey Program: 100-NS-GYRO-MS, 6889-LEAM MWD-ADJ													Offset Well Error:	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
7,015.00	7,011.53	7,015.00	7,011.53	0.00	0.00	0.00	-63.67	91.89	0.00	0.00	0.00	0.000	Level 1, CC, ES, SF	
7,030.07	7,026.30	7,030.06	7,026.25	0.25	0.01	-46.19	-63.48	88.74	0.30	0.03	0.28	1.092	Level 2	
7,046.00	7,041.94	7,045.95	7,041.69	0.51	0.01	-54.01	-63.26	84.99	1.28	0.72	0.56	2.278		
7,077.00	7,072.05	7,076.74	7,071.26	0.81	0.03	-62.71	-62.71	76.46	3.80	2.91	0.89	4.273		
7,109.00	7,102.37	7,108.46	7,101.17	0.93	0.05	-73.73	-61.89	65.93	6.54	5.56	0.99	6.643		
7,115.00	7,107.96	7,114.39	7,106.69	0.94	0.05	-75.51	-61.70	63.77	7.10	6.11	0.99	7.206		
7,140.00	7,130.89	7,139.12	7,129.39	0.98	0.07	-81.44	-60.73	54.01	9.57	8.59	0.98	9.787		
7,172.00	7,159.40	7,170.77	7,157.70	0.94	0.09	-85.93	-59.12	39.97	13.00	12.14	0.86	15.114		
7,203.00	7,186.11	7,201.39	7,184.27	0.57	0.10	-88.79	-57.26	24.87	16.54	16.01	0.53	31.313		
7,215.00	7,196.19	7,213.23	7,194.32	0.41	0.11	-89.83	-56.47	18.64	17.98	17.57	0.41	43.829		
7,235.00	7,212.68	7,232.96	7,210.78	0.17	0.14	-91.42	-55.11	7.86	20.53	20.34	0.19	106.552		
7,267.00	7,238.11	7,264.45	7,236.24	0.24	0.21	-92.10	-52.80	-10.52	24.67	24.25	0.42	59.090		
7,298.00	7,261.42	7,294.98	7,259.81	0.51	0.31	-92.71	-50.43	-29.77	28.53	27.82	0.71	39.944		
7,315.00	7,273.55	7,311.72	7,272.25	0.68	0.39	-92.80	-49.10	-40.88	30.50	29.61	0.89	34.290		
7,330.00	7,283.86	7,326.50	7,282.95	0.83	0.46	-93.11	-47.92	-51.01	32.09	31.06	1.04	30.995		
7,361.00	7,304.16	7,357.31	7,304.23	1.15	0.64	-92.50	-45.40	-73.14	34.45	33.14	1.31	26.297		
7,393.00	7,323.66	7,390.74	7,325.85	1.48	0.86	-93.53	-41.92	-98.40	34.99	33.40	1.59	22.050		
7,415.00	7,335.98	7,413.48	7,340.63	1.69	1.03	-97.03	-38.67	-115.35	33.99	32.36	1.63	20.867		
7,424.00	7,340.70	7,422.50	7,346.86	1.78	1.10	-100.11	-37.22	-121.72	33.40	31.86	1.54	21.688		
7,428.66	7,343.08	7,425.00	7,348.62	1.82	1.12	-101.15	-36.80	-123.44	33.17	31.65	1.52	21.799		
7,456.00	7,356.09	7,425.00	7,348.62	2.08	1.12	-98.88	-36.80	-123.44	42.89	41.11	1.78	24.114		

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 33 State 2H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3193' + KB 25' @ 3218.00usft (Cactus 126)
Reference Site:	Lone Ranger	MD Reference:	GE 3193' + KB 25' @ 3218.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	33 State 2H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ST01	Database:	EDM 5000.1 Single User Db
Reference Design:	ST01	Offset TVD Reference:	Reference Datum

Offset Design													Offset Site Error:	0.00 usft
Lone Ranger - 33 State 2H - OH - OH													Offset Well Error:	0.00 usft
Survey Program: 100-NS-GYRO-MS, 6889-LEAM MWD-ADJ														
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)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,487.00	7,368.95	7,425.00	7,348.62	2.36	1.12	-92.94	-36.80	-123.44	66.76	64.59	2.17	30.760		
7,515.00	7,379.05	7,425.00	7,348.62	2.62	1.12	-87.25	-36.80	-123.44	91.94	89.34	2.60	35.313		
7,519.00	7,380.39	7,425.00	7,348.62	2.66	1.12	-86.27	-36.80	-123.44	95.66	93.00	2.66	35.925		
7,551.00	7,390.03	7,425.00	7,348.62	2.97	1.12	-75.50	-36.80	-123.44	125.97	122.89	3.08	40.838		
7,582.00	7,397.66	7,425.00	7,348.62	3.29	1.12	-65.61	-36.80	-123.44	155.85	152.48	3.37	46.247		
7,614.00	7,404.24	7,425.00	7,348.62	3.65	1.12	-58.62	-36.80	-123.44	186.96	183.37	3.59	52.025		
7,615.00	7,404.42	7,425.00	7,348.62	3.67	1.12	-58.47	-36.80	-123.44	187.94	184.34	3.60	52.189		
7,645.00	7,409.72	7,425.00	7,348.62	4.04	1.12	-53.98	-36.80	-123.44	217.25	213.46	3.79	57.268		
7,676.00	7,414.04	7,425.00	7,348.62	4.45	1.12	-41.30	-36.80	-123.44	247.59	244.05	3.54	69.860		
7,715.00	7,416.88	7,425.00	7,348.62	5.03	1.12	-28.81	-36.80	-123.44	285.63	282.62	3.01	94.843		
7,729.00	7,417.13	7,425.00	7,348.62	5.24	1.12	-25.51	-36.80	-123.44	299.21	296.38	2.83	105.584		
7,761.00	7,417.16	7,425.00	7,348.62	5.76	1.12	-27.13	-36.80	-123.44	330.26	327.06	3.20	103.084		
7,792.00	7,417.03	7,425.00	7,348.62	6.30	1.12	-20.56	-36.80	-123.44	360.49	357.57	2.92	123.582		
7,815.00	7,416.83	7,425.00	7,348.62	6.73	1.12	-19.80	-36.80	-123.44	383.00	379.98	3.02	126.857		
7,886.00	7,415.71	7,425.00	7,348.62	8.08	1.12	-17.29	-36.80	-123.44	452.73	449.47	3.26	138.887		
7,915.00	7,415.04	7,425.00	7,348.62	8.68	1.12	-15.99	-36.80	-123.44	481.29	477.98	3.32	145.100		
7,980.00	7,413.01	7,425.00	7,348.62	10.03	1.12	-13.03	-36.80	-123.44	545.42	542.04	3.38	161.505		
8,015.00	7,411.74	7,425.00	7,348.62	10.80	1.12	-15.18	-36.80	-123.44	580.00	576.09	3.90	148.530		
8,074.00	7,409.65	7,425.00	7,348.62	12.10	1.12	-19.05	-36.80	-123.44	638.39	633.43	4.96	128.677		
8,115.00	7,408.21	7,425.00	7,348.62	13.03	1.12	-19.96	-36.80	-123.44	679.02	673.53	5.48	123.823		
8,169.00	7,406.33	7,425.00	7,348.62	14.26	1.12	-21.22	-36.80	-123.44	732.59	726.37	6.22	117.735		
8,215.00	7,404.82	7,425.00	7,348.62	15.34	1.12	-25.43	-36.80	-123.44	778.27	770.69	7.58	102.645		
8,264.00	7,403.43	7,425.00	7,348.62	16.50	1.12	-30.23	-36.80	-123.44	826.97	817.73	9.24	89.517		
8,315.00	7,402.19	7,425.00	7,348.62	17.72	1.12	-36.10	-36.80	-123.44	877.69	866.39	11.30	77.656		
8,358.00	7,401.30	7,425.00	7,348.62	18.76	1.12	-41.05	-36.80	-123.44	920.46	907.34	13.12	70.136		
8,415.00	7,400.05	7,425.00	7,348.62	20.16	1.12	-37.27	-36.80	-123.44	977.18	964.14	13.05	74.903		
8,453.00	7,399.06	7,425.00	7,348.62	21.09	1.12	-34.69	-36.80	-123.44	1,015.01	1,002.14	12.87	78.876		
8,515.00	7,397.04	7,425.00	7,348.62	22.64	1.12	-31.71	-36.80	-123.44	1,076.73	1,063.88	12.84	83.831		
8,548.00	7,395.74	7,425.00	7,348.62	23.46	1.12	-30.24	-36.80	-123.44	1,109.57	1,096.76	12.81	86.599		
8,615.00	7,392.89	7,425.00	7,348.62	25.16	1.12	-24.98	-36.80	-123.44	1,176.26	1,164.38	11.88	98.992		
8,643.00	7,391.27	7,425.00	7,348.62	25.87	1.12	-22.81	-36.80	-123.44	1,204.13	1,192.70	11.44	105.299		
8,715.00	7,387.21	7,425.00	7,348.62	27.71	1.12	-17.37	-36.80	-123.44	1,275.81	1,265.60	10.21	124.999		
8,737.00	7,385.86	7,425.00	7,348.62	28.28	1.12	-15.77	-36.80	-123.44	1,297.71	1,287.88	9.83	131.996		
8,815.00	7,381.91	7,425.00	7,348.62	30.29	1.12	-22.34	-36.80	-123.44	1,375.45	1,362.22	13.23	103.936		
8,832.00	7,381.30	7,425.00	7,348.62	30.73	1.12	-24.45	-36.80	-123.44	1,392.42	1,378.09	14.33	97.176		
8,915.00	7,379.31	7,425.00	7,348.62	32.89	1.12	-44.19	-36.80	-123.44	1,475.29	1,451.39	23.90	61.724		
8,927.00	7,379.14	7,425.00	7,348.62	33.20	1.12	-47.65	-36.80	-123.44	1,487.27	1,461.81	25.46	58.418		
9,015.00	7,378.36	7,425.00	7,348.62	35.50	1.12	-58.73	-36.80	-123.44	1,575.17	1,544.02	31.15	50.567		
9,020.00	7,378.33	7,425.00	7,348.62	35.63	1.12	-59.36	-36.80	-123.44	1,580.17	1,548.71	31.46	50.233		
9,114.00	7,377.59	7,425.00	7,348.62	38.11	1.12	-47.03	-36.80	-123.44	1,674.08	1,645.16	28.92	57.896		
9,115.00	7,377.58	7,425.00	7,348.62	38.13	1.12	-46.87	-36.80	-123.44	1,675.08	1,646.21	28.87	58.030		
9,210.00	7,376.34	7,425.00	7,348.62	40.65	1.12	-29.88	-36.80	-123.44	1,770.01	1,747.98	22.03	80.357		
9,215.00	7,376.26	7,425.00	7,348.62	40.78	1.12	-31.55	-36.80	-123.44	1,775.00	1,751.88	23.02	77.110		
9,304.00	7,375.43	7,425.00	7,348.62	43.14	1.12	-61.13	-36.80	-123.44	1,863.95	1,825.31	38.64	48.240		
9,315.00	7,375.39	7,425.00	7,348.62	43.44	1.12	-60.08	-36.80	-123.44	1,874.94	1,836.42	38.52	48.676		
9,399.00	7,374.69	7,425.00	7,348.62	45.67	1.12	-53.31	-36.80	-123.44	1,958.87	1,921.26	37.61	52.079		
9,415.00	7,374.48	7,425.00	7,348.62	46.10	1.12	-49.80	-36.80	-123.44	1,974.86	1,938.56	36.29	54.412		
9,494.00	7,373.20	7,425.00	7,348.62	48.20	1.12	-29.08	-36.80	-123.44	2,053.80	2,028.20	25.60	80.237		
9,515.00	7,372.78	7,425.00	7,348.62	48.77	1.12	-23.18	-36.80	-123.44	2,074.79	2,052.79	22.00	94.325		
9,589.00	7,371.12	7,425.00	7,348.62	50.75	1.12	-1.97	-36.80	-123.44	2,148.74	2,136.56	12.19	176.299		
9,615.00	7,370.49	7,425.00	7,348.62	51.45	1.12	-12.21	-36.80	-123.44	2,174.73	2,158.61	16.11	134.963		

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 33 State 2H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3193' + KB 25' @ 3218.00usft (Cactus 126)
Reference Site:	Lone Ranger	MD Reference:	GE 3193' + KB 25' @ 3218.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	33 State 2H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ST01	Database:	EDM 5000.1 Single User Db
Reference Design:	ST01	Offset TVD Reference:	Reference Datum

Offset Design Lone Ranger - 33 State 2H - OH - OH														Offset Site Error:	0.00 usft
Survey Program: 100-NS-GYRO-MS, 6889-LEAM MWD-ADJ														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
9,684.00	7,368.89	7,425.00	7,348.62	53.30	1.12	-36.37	-36.80	-123.44	2,243.68	2,210.25	33.43	67.113			
9,715.00	7,368.11	7,425.00	7,348.62	54.13	1.12	-30.13	-36.80	-123.44	2,274.66	2,245.16	29.50	77.114			
9,779.00	7,366.07	7,425.00	7,348.62	55.85	1.12	-19.45	-36.80	-123.44	2,338.60	2,316.16	22.44	104.229			
9,815.00	7,364.62	7,425.00	7,348.62	56.82	1.12	-16.85	-36.80	-123.44	2,374.55	2,353.62	20.93	113.446			
9,874.00	7,361.67	7,425.00	7,348.62	58.41	1.12	-13.75	-36.80	-123.44	2,433.45	2,414.12	19.33	125.887			
9,915.00	7,359.57	7,425.00	7,348.62	59.51	1.12	-19.07	-36.80	-123.44	2,474.38	2,450.76	23.62	104.749			
9,969.00	7,357.37	7,425.00	7,348.62	60.97	1.12	-28.99	-36.80	-123.44	2,528.32	2,496.03	32.29	78.299			
10,015.00	7,355.72	7,425.00	7,348.62	62.21	1.12	-24.48	-36.80	-123.44	2,574.27	2,545.09	29.19	88.200			
10,074.00	7,353.52	7,425.00	7,348.62	63.80	1.12	-18.63	-36.80	-123.44	2,633.22	2,608.20	25.02	105.249			
10,115.00	7,351.98	7,425.00	7,348.62	64.91	1.12	-13.59	-36.80	-123.44	2,674.18	2,652.70	21.49	124.442			
10,159.00	7,350.40	7,425.00	7,348.62	66.10	1.12	-7.29	-36.80	-123.44	2,718.15	2,700.29	17.87	152.131			

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 33 State 2H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3193' + KB 25' @ 3218.00usft (Cactus 126)
Reference Site:	Lone Ranger	MD Reference:	GE 3193' + KB 25' @ 3218.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	33 State 2H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ST01	Database:	EDM 5000.1 Single User Db
Reference Design:	ST01	Offset TVD Reference:	Reference Datum

Offset Design														Offset Site Error: 0.00 usft	
Survey Program: 100-NS-GYRO-MS														Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)				Between Centres (usft)	Between Ellipses (usft)		
7,015.00	7,011.53	7,014.43	7,011.62	0.07	0.33	175.76	-63.54	101.03	9.14	8.05	1.09	8.367	CC, ES, SF		
7,029.87	7,026.11	7,029.03	7,026.22	0.27	0.35	171.13	-63.74	100.89	11.87	10.84	1.03	11.483			
7,046.00	7,041.94	7,044.86	7,042.05	0.53	0.38	166.41	-63.94	100.74	14.81	13.86	0.95	15.600			
7,077.00	7,072.05	7,074.97	7,072.15	0.83	0.42	171.05	-64.27	100.51	21.83	20.42	1.42	15.404			
7,109.00	7,102.37	7,105.29	7,102.47	0.94	0.47	173.54	-64.56	100.32	31.81	30.03	1.78	17.844			
7,115.00	7,107.96	7,110.87	7,108.06	0.96	0.48	173.94	-64.61	100.29	33.97	32.12	1.84	18.416			
7,140.00	7,130.89	7,133.77	7,130.95	1.00	0.52	175.28	-64.86	100.17	43.83	41.74	2.09	20.940			
7,172.00	7,159.40	7,162.21	7,159.38	0.96	0.57	177.21	-65.26	100.03	58.32	55.99	2.33	24.977			
7,203.00	7,186.11	7,188.80	7,185.87	0.59	0.61	178.46	-65.72	99.90	74.07	71.56	2.51	29.554			
7,215.00	7,196.19	7,198.83	7,196.00	0.44	0.63	178.60	-65.91	99.86	80.59	78.02	2.58	31.271			
7,235.00	7,212.68	7,215.35	7,212.52	0.23	0.66	178.79	-66.24	99.78	91.95	89.24	2.71	33.932			
7,267.00	7,238.11	7,240.89	7,238.05	0.28	0.71	-178.80	-66.77	99.62	111.38	108.42	2.96	37.633			
7,298.00	7,261.42	7,264.35	7,261.50	0.54	0.75	-176.58	-67.28	99.44	131.81	128.60	3.20	41.135			
7,315.00	7,273.55	7,276.60	7,273.75	0.70	0.77	-174.48	-67.55	99.32	143.68	140.35	3.33	43.205			
7,330.00	7,283.86	7,287.02	7,284.17	0.84	0.79	-172.75	-67.79	99.22	154.52	151.10	3.42	45.129			
7,361.00	7,304.16	7,307.51	7,304.66	1.17	0.83	-166.73	-68.26	99.00	177.73	174.21	3.52	50.477			
7,393.00	7,323.66	7,327.06	7,324.20	1.49	0.87	-163.32	-68.70	98.80	202.71	199.06	3.65	55.540			
7,415.00	7,335.98	7,339.41	7,336.54	1.70	0.89	-159.76	-68.97	98.68	220.59	216.86	3.73	59.094			
7,424.00	7,340.70	7,344.16	7,341.29	1.79	0.90	-158.24	-69.07	98.64	228.08	224.33	3.76	60.689			
7,456.00	7,356.09	7,359.61	7,356.74	2.09	0.92	-154.67	-69.40	98.51	255.50	251.63	3.87	66.080			
7,487.00	7,368.95	7,372.54	7,369.67	2.38	0.95	-149.93	-69.67	98.40	283.02	279.11	3.91	72.356			
7,515.00	7,379.05	7,382.71	7,379.83	2.64	0.97	-148.87	-69.87	98.33	308.53	304.50	4.03	76.547			
7,519.00	7,380.39	7,384.06	7,381.19	2.68	0.97	-148.67	-69.90	98.32	312.22	308.17	4.05	77.159			
7,551.00	7,390.03	7,393.79	7,390.91	3.00	0.99	-144.30	-70.09	98.25	342.10	337.97	4.13	82.744			
7,582.00	7,397.66	7,401.57	7,398.69	3.32	1.00	-141.17	-70.24	98.20	371.61	367.34	4.27	86.983			
7,614.00	7,404.24	7,408.58	7,405.70	3.69	1.01	-139.15	-70.38	98.15	402.44	397.98	4.46	90.249			
7,615.00	7,404.42	7,408.78	7,405.90	3.70	1.01	-139.07	-70.38	98.15	403.41	398.95	4.47	90.342			
7,645.00	7,409.72	7,414.50	7,411.61	4.07	1.02	-136.60	-70.49	98.11	432.53	427.87	4.66	92.764			
7,676.00	7,414.04	7,419.23	7,416.34	4.48	1.03	-130.65	-70.58	98.07	462.87	457.89	4.98	93.000			
7,715.00	7,416.88	7,422.50	7,419.62	5.08	1.04	-107.15	-70.64	98.04	501.42	495.84	5.57	89.954			
7,729.00	7,417.13	7,422.88	7,420.00	5.29	1.04	-94.38	-70.65	98.04	515.31	509.46	5.85	88.070			
7,761.00	7,417.16	7,423.18	7,420.29	5.82	1.04	-91.89	-70.66	98.04	547.08	540.68	6.41	85.414			
7,792.00	7,417.03	7,423.29	7,420.41	6.35	1.04	-89.29	-70.66	98.04	577.91	570.86	7.05	82.020			
7,815.00	7,416.83	7,423.27	7,420.38	6.78	1.04	-86.97	-70.66	98.04	600.82	593.32	7.50	80.076			
7,886.00	7,415.71	7,422.65	7,419.77	8.14	1.04	-78.06	-70.65	98.04	671.61	662.78	8.82	76.118			
7,915.00	7,415.04	7,422.16	7,419.28	8.74	1.04	-73.08	-70.64	98.05	700.54	691.23	9.31	75.273			
7,980.00	7,413.01	7,420.50	7,417.61	10.10	1.03	-60.20	-70.60	98.06	765.40	755.40	10.00	76.555			
8,015.00	7,411.74	7,419.40	7,416.51	10.86	1.03	-62.16	-70.58	98.07	800.33	789.55	10.78	74.234			
8,074.00	7,409.65	7,417.60	7,414.71	12.16	1.03	-65.10	-70.55	98.08	859.20	847.08	12.12	70.879			
8,115.00	7,408.21	7,416.37	7,413.48	13.09	1.03	-64.83	-70.53	98.09	900.11	887.16	12.95	69.504			
8,169.00	7,406.33	7,414.73	7,411.85	14.33	1.02	-64.55	-70.49	98.11	953.98	939.94	14.04	67.932			
8,215.00	7,404.82	7,413.44	7,410.55	15.41	1.02	-69.24	-70.47	98.12	999.87	984.45	15.42	64.833			
8,264.00	7,403.43	7,412.29	7,409.40	16.57	1.02	-73.84	-70.45	98.12	1,048.75	1,031.90	16.85	62.239			
8,315.00	7,402.19	7,411.32	7,408.44	17.79	1.02	-77.85	-70.43	98.13	1,099.60	1,081.32	18.28	60.159			
8,358.00	7,401.30	7,410.68	7,407.80	18.83	1.02	-80.80	-70.42	98.14	1,142.46	1,123.02	19.44	58.782			
8,415.00	7,400.05	7,409.76	7,406.87	20.22	1.01	-76.01	-70.40	98.14	1,199.27	1,178.75	20.52	58.451			
8,453.00	7,399.06	7,408.95	7,406.06	21.16	1.01	-72.39	-70.38	98.15	1,237.16	1,216.07	21.09	58.664			
8,515.00	7,397.04	7,407.17	7,404.29	22.71	1.01	-64.76	-70.35	98.16	1,299.00	1,277.43	21.56	60.245			
8,548.00	7,395.74	7,405.96	7,403.07	23.53	1.01	-60.79	-70.33	98.17	1,331.90	1,310.27	21.63	61.564			
8,615.00	7,392.69	7,403.00	7,400.12	25.23	1.00	-51.81	-70.27	98.19	1,398.73	1,377.54	21.19	66.023			
8,643.00	7,391.27	7,401.58	7,398.70	25.94	1.00	-47.92	-70.24	98.20	1,426.66	1,405.90	20.76	68.717			

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 33 State 2H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3193' + KB 25' @ 3218.00usft (Cactus 126)
Reference Site:	Lone Ranger	MD Reference:	GE 3193' + KB 25' @ 3218.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	33 State 2H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ST01	Database:	EDM 5000.1 Single User Db
Reference Design:	ST01	Offset TVD Reference:	Reference Datum

Offset Design														Offset Site Error:	0.00 usft
Survey Program: 100-NS-GYRO-MS														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)										
8,715.00	7,387.21	7,400.00	7,397.12	27.78	1.00	-38.74	-70.21	98.21	-70.21	98.21	1,498.48	1,479.08	19.41	77.210	
8,737.00	7,385.86	7,396.76	7,393.88	28.34	0.99	-35.10	-70.15	98.23	-70.15	98.23	1,520.43	1,501.84	18.59	81.801	
8,815.00	7,381.91	7,393.52	7,390.64	30.36	0.99	-50.34	-70.09	98.25	-70.09	98.25	1,598.28	1,573.43	24.86	64.299	
8,832.00	7,381.30	7,393.05	7,390.17	30.80	0.99	-55.13	-70.08	98.25	-70.08	98.25	1,615.26	1,588.67	26.59	60.752	
8,915.00	7,379.31	7,391.69	7,388.81	32.96	0.98	-79.12	-70.05	98.26	-70.05	98.26	1,698.17	1,664.90	33.27	51.048	
8,927.00	7,379.14	7,391.61	7,388.73	33.27	0.98	-82.38	-70.05	98.26	-70.05	98.26	1,710.15	1,676.29	33.86	50.499	
9,015.00	7,378.36	7,391.42	7,388.54	35.57	0.98	-90.07	-70.05	98.27	-70.05	98.27	1,798.04	1,761.57	36.47	49.307	
9,020.00	7,378.33	7,391.43	7,388.55	35.70	0.98	-90.47	-70.05	98.27	-70.05	98.27	1,803.03	1,766.43	36.60	49.266	
9,114.00	7,377.59	7,391.32	7,388.44	38.18	0.98	-83.62	-70.04	98.27	-70.04	98.27	1,896.92	1,858.08	38.84	48.836	
9,115.00	7,377.58	7,391.32	7,388.44	38.20	0.98	-83.53	-70.04	98.27	-70.04	98.27	1,897.92	1,859.06	38.86	48.837	
9,210.00	7,376.34	7,390.74	7,387.86	40.72	0.98	-71.79	-70.03	98.27	-70.03	98.27	1,992.85	1,953.16	39.69	50.209	
9,215.00	7,376.26	7,390.70	7,387.82	40.85	0.98	-73.31	-70.03	98.27	-70.03	98.27	1,997.85	1,957.73	40.12	49.795	
9,304.00	7,375.43	7,390.48	7,387.60	43.21	0.98	-93.04	-70.03	98.27	-70.03	98.27	2,086.79	2,042.70	44.09	47.334	
9,315.00	7,375.39	7,390.50	7,387.62	43.51	0.98	-91.73	-70.03	98.27	-70.03	98.27	2,097.78	2,053.37	44.41	47.238	
9,399.00	7,374.69	7,390.38	7,387.50	45.74	0.98	-82.10	-70.03	98.27	-70.03	98.27	2,181.69	2,135.49	46.20	47.222	
9,415.00	7,374.48	7,390.29	7,387.41	46.17	0.98	-80.03	-70.02	98.27	-70.02	98.27	2,197.67	2,151.29	46.38	47.384	
9,494.00	7,373.20	7,389.60	7,386.72	48.27	0.98	-64.95	-70.01	98.28	-70.01	98.28	2,276.62	2,231.71	44.91	50.693	
9,515.00	7,372.78	7,389.34	7,386.46	48.84	0.98	-59.70	-70.00	98.28	-70.00	98.28	2,297.61	2,254.10	43.51	52.801	
9,589.00	7,371.12	7,388.27	7,385.39	50.82	0.98	-32.67	-69.98	98.29	-69.98	98.29	2,371.59	2,340.82	30.77	77.072	
9,615.00	7,370.49	7,387.85	7,384.97	51.52	0.98	-44.90	-69.98	98.29	-69.98	98.29	2,397.58	2,359.04	38.54	62.217	
9,684.00	7,368.89	7,386.81	7,383.93	53.37	0.97	-63.73	-69.95	98.30	-69.95	98.30	2,466.55	2,417.46	49.08	50.253	
9,715.00	7,368.11	7,386.30	7,383.42	54.20	0.97	-55.68	-69.94	98.30	-69.94	98.30	2,497.52	2,451.22	46.31	53.934	
9,779.00	7,366.07	7,384.85	7,381.98	55.92	0.97	-39.95	-69.92	98.31	-69.92	98.31	2,561.48	2,522.92	38.56	66.426	
9,815.00	7,364.62	7,383.77	7,380.90	56.89	0.97	-33.72	-69.89	98.32	-69.89	98.32	2,597.45	2,562.49	34.96	74.305	
9,874.00	7,361.67	7,381.50	7,378.63	58.48	0.96	-26.41	-69.85	98.33	-69.85	98.33	2,656.37	2,625.77	30.60	86.814	
9,915.00	7,359.57	7,379.88	7,377.00	59.58	0.96	-33.96	-69.82	98.35	-69.82	98.35	2,697.32	2,660.61	36.71	73.484	
9,969.00	7,357.37	7,378.26	7,375.38	61.04	0.96	-47.14	-69.78	98.36	-69.78	98.36	2,751.26	2,704.39	46.87	58.697	
10,015.00	7,355.72	7,377.09	7,374.22	62.28	0.96	-42.16	-69.76	98.37	-69.76	98.37	2,797.22	2,752.83	44.39	63.010	
10,074.00	7,353.52	7,375.51	7,372.64	63.87	0.95	-35.43	-69.73	98.38	-69.73	98.38	2,856.18	2,815.75	40.43	70.651	
10,115.00	7,351.98	7,374.41	7,371.53	64.98	0.95	-31.05	-69.71	98.39	-69.71	98.39	2,897.15	2,859.52	37.63	76.999	
10,159.00	7,350.40	7,373.29	7,370.42	66.17	0.95	-25.29	-69.68	98.40	-69.68	98.40	2,941.12	2,907.55	33.57	87.612	

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

Leam Drilling Systems LLC

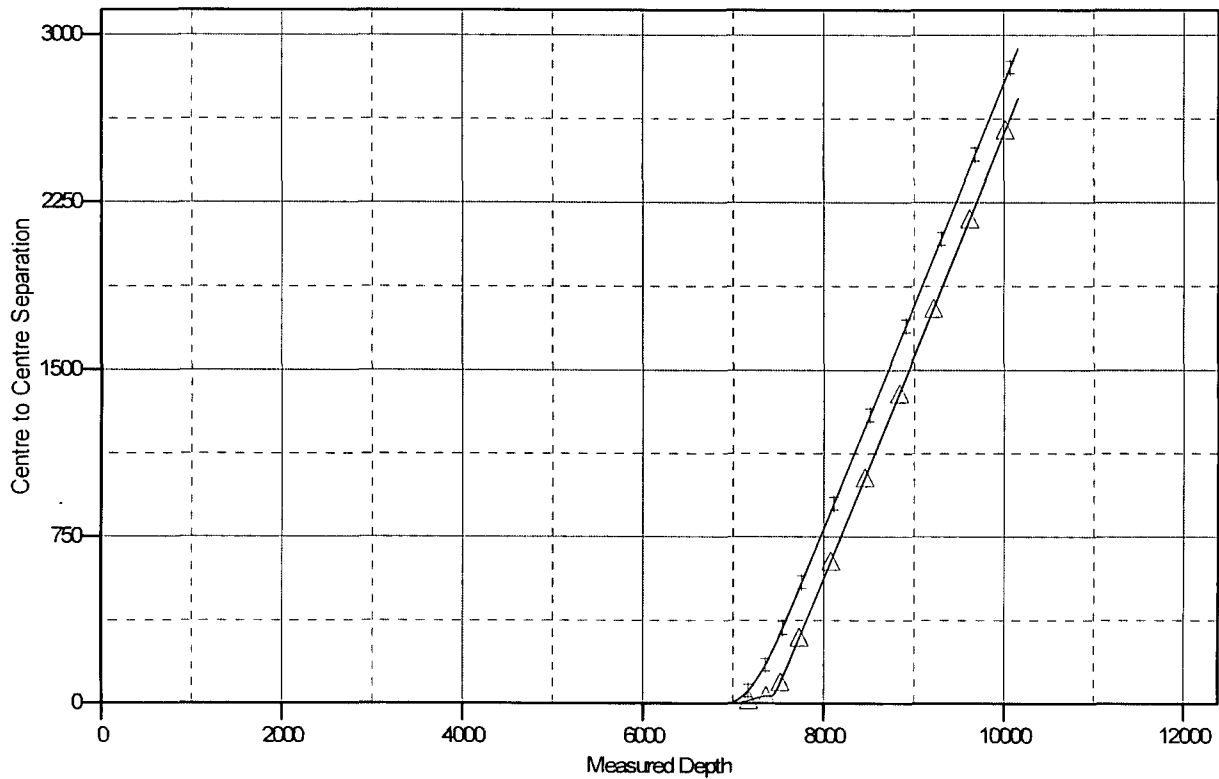
Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 33 State 2H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3193' + KB 25' @ 3218.00usft (Cactus 126)
Reference Site:	Lone Ranger	MD Reference:	GE 3193' + KB 25' @ 3218.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	33 State 2H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ST01	Database:	EDM 5000.1 Single User Db
Reference Design:	ST01	Offset TVD Reference:	Reference Datum

Reference Depths are relative to GE 3193' + KB 25' @ 3218.00usft (Ca
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 33 State 2H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.08°

Ladder Plot



LEGEND

△ 33 State 2H, OH, OH V0 ✕ 33 State 2H, Pilot, Pilot V0

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

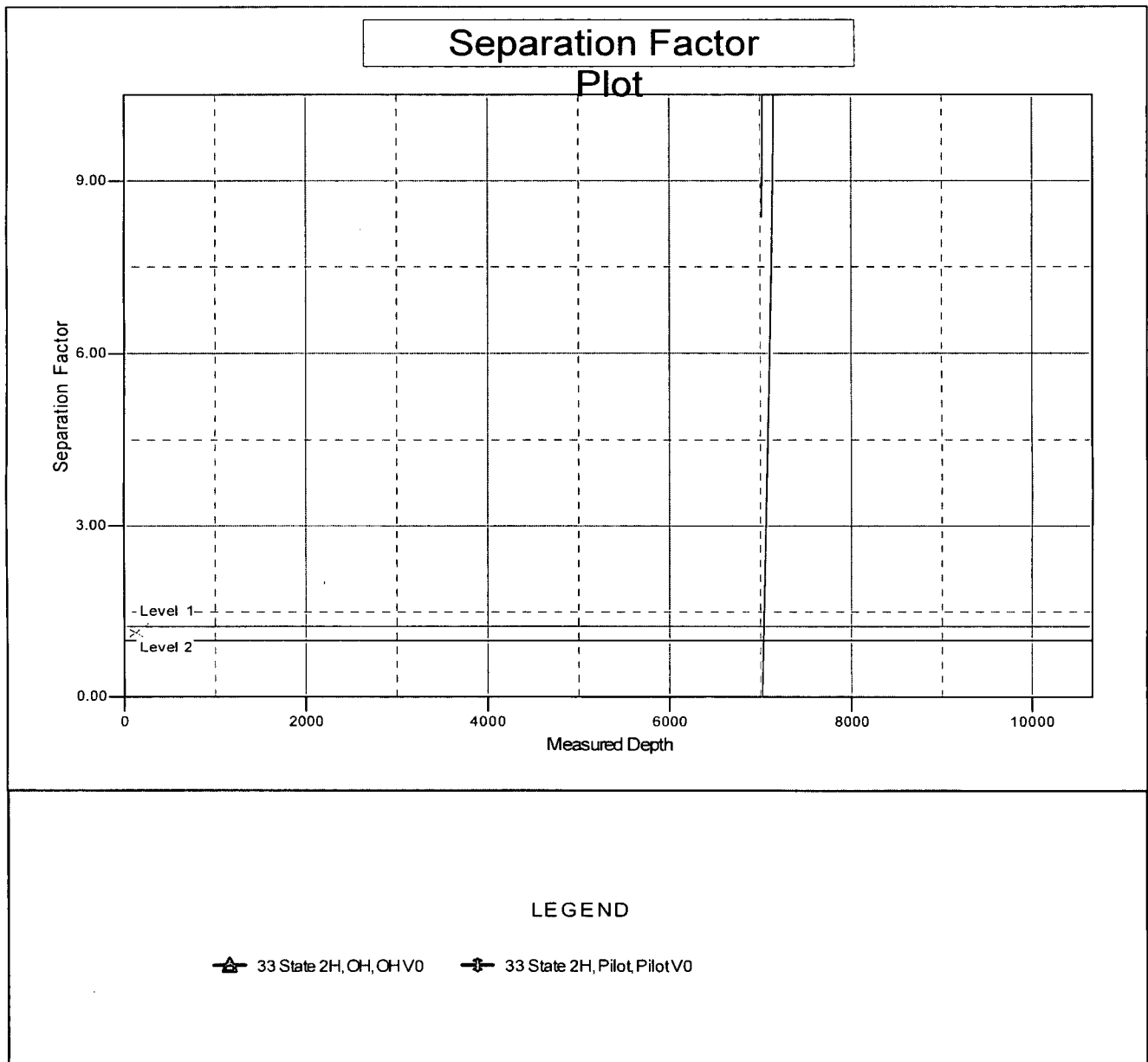
Leam Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 33 State 2H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	GE 3193' + KB 25' @ 3218.00usft (Cactus 126)
Reference Site:	Lone Ranger	MD Reference:	GE 3193' + KB 25' @ 3218.00usft (Cactus 126)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	33 State 2H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ST01	Database:	EDM 5000.1 Single User Db
Reference Design:	ST01	Offset TVD Reference:	Reference Datum

Reference Depths are relative to GE 3193' + KB 25' @ 3218.00usft (Ca
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 33 State 2H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.08°



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