Devon Energy, Sea Snake 35 State 10H

1. Geologic Formations

TVD of target	9,710'	Pilot hole depth	N/A
MD at TD:	13,979'	Deepest expected fresh water:	

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Rustler	1,360		
Top of Salt	1,630		
Base of Salt	5,090		
Delaware	5,285		
Cherry Canyon	6,250		
Brushy Canyon	7,590		
Bone Spring	9,150		

*H2S, water flows, loss of circulation, abnormal pressures, etc.

2. Casing Program

Hole Size	Casing Interval From	Casing Interval To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17.5"	0	1400'	13.375"	48	H-40	STC	1.23	2.76	8.05
12.25"	0	4,000'	9.625"	40	J-55	BTC	1.13	1.73	4.46
12.25"	4,000'	5,200'	9.625"	40	HCK-55	BTC	1.42	1.33	19.29
8.75"	0	13,979'	5.5"	17	P-110	BTC	1.83	2.27	3.81
				BLM Minimum Safety Factor			1.125	1.00	1.6 Dry 1.8 Wet

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Must have table for contingency casing

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	H_2O gal/sk	Yld ft3/ sack	500# Comp. Strength (hours)	Slurry Description
13-3/8" Surface	680	12.9	9.81	1.85	14	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	550	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
9-5/8" Inter.	1090	12.9	9.81	1.85	14	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	430	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
5-1/2" Prod Single Stage	560	11.9	12.89	2.31	n/a	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
	1290	14.5	5.31	1.2	25	Tail: (50:50) Class H Cement: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite
5-1/2" Prod Two Stage	530	11.9	12.89	2.31	n/a	1st Stage 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
	1290	14.5	5.31	1.2	25	1st Stage Tail: (50:50) Class H Cement: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite
	DV Tool = 5250ft					
	20	11	14.81	2.55	22	2nd Stage Lead: Tuned Light® Cement + 0.125 lb/sk Pol-E-Flake
	30	14.8	6.32	1.33	6	2nd Stage Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake

DV tool depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Casing String	TOC	% Excess
13-3/8" Surface	0'	100%
9-5/8" Intermediate	0'	75%
5-1/2" Production Casing Single Stage Option	5000'	25%
5-1/2" Production Casing Two Stage Option	1St Stage = 5250ft / 2nd Stage = 5000'	25%

4. Pressure Control Equipment

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
12-1/4"	13-5/8"	3M	Annular	x	50% of working pressure
			Blind Ram		3M
			Pipe Ram		
			Double Ram	x	
			Other*		
8-3/4"	13-5/8"	3M	Annular	x	50% of working pressure
			Blind Ram		3M
			Pipe Ram		
			Double Ram	x	
			Other *		
			Annular		
			Blind Ram		
			Pipe Ram		
			Double Ram		
			Other *		

*Specify if additional ram is utilized.

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

Y	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.

Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.	
	Y	Are anchors required by manufacturer?
Y	A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. Devon proposes using a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 3000 (3M) psi. • Wellhead will be installed by wellhead vendor representatives. • If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal. • Wellhead representative will install the test plug for the initial BOP test. • Wellhead will install a solid steel body pack-off to completely isolate the lower head after cementing intermediate casing. After installation of the pack-off, the pack-off and the lower flange will be tested to 5M, as shown on the attached schematic. Everything above the pack-off will not have been altered whatsoever from the initial nipple up. Therefore the BOP components will not be retested at that time. • If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head will be cut and top out operations will be conducted. • Devon will pressure test all seals above and below the mandrel (but still above the casing) to full working pressure rating. • Devon will test the casing to 0.22 psi/ft or 1500 psi, whichever is greater, as per Onshore Order #2. After running the 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed on the wellhead system and will undergo a 250 psi low pressure test followed by a 3,000 psi high pressure test. The 3,000 psi high and 250 psi low test will cover testing requirements a maximum of 30 days, as per Onshore Order #2. If the well is not complete within 30 days of this BOP test, another full BOP test will be conducted, as per Onshore Order #2. After running the 9-5/8' intermediate casing with a mandrel hanger, the 13-5/8" BOP/BOPE system with a minimum rating of 3M will already be installed on the wellhead. 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). The line will be kept as straight as possible with minimal turns See attached schematic.

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	1,400'	FW Gel	8.6-8.8	28-34	N/C
1,400'	5,200'	Saturated Brine	10.0-10.2	28-34	N/C
5,200'	13,979'	Cut Brine	8.5-9.3	28-34	N/C

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring

6. Logging and Testing Procedures

Logging, Coring and Testing.	
x	Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
	No Logs are planned based on well control or offset log information.
	Drill stem test? If yes, explain
	Coring? If yes, explain

Additional logs planned		Interval
	Resistivity	Int. shoe to KOP
	Density	Int. shoe to KOP
	CBL	Production casing
X	Mud log	Intermediate shoe to TD
	PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	4,696 psi
Abnormal Temperature	No

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers.

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
N	H2S is present
Y	H2S Plan attached

8. Other facets of operation

Is this a walking operation? Yes.
Will be pre-setting casing? No.

Attachments
_x_ Directional Plan
___ Other, describe

DEVON ENERGY

Project: Lea County, NM (NAD-83)
Site: Sea Snake 35 State
Well: 10H
Wellbore: OH
Design: Plan #1

Azimuths to Grid North
True North: -0.43°
Magnetic North: 6.80°

Magnetic Field
Strength: 48229.8snT
Dip Angle: 60.18°
Date: 7/28/2015
Model: BGGM2015

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

devon

DESIGN TARGET DETAILS

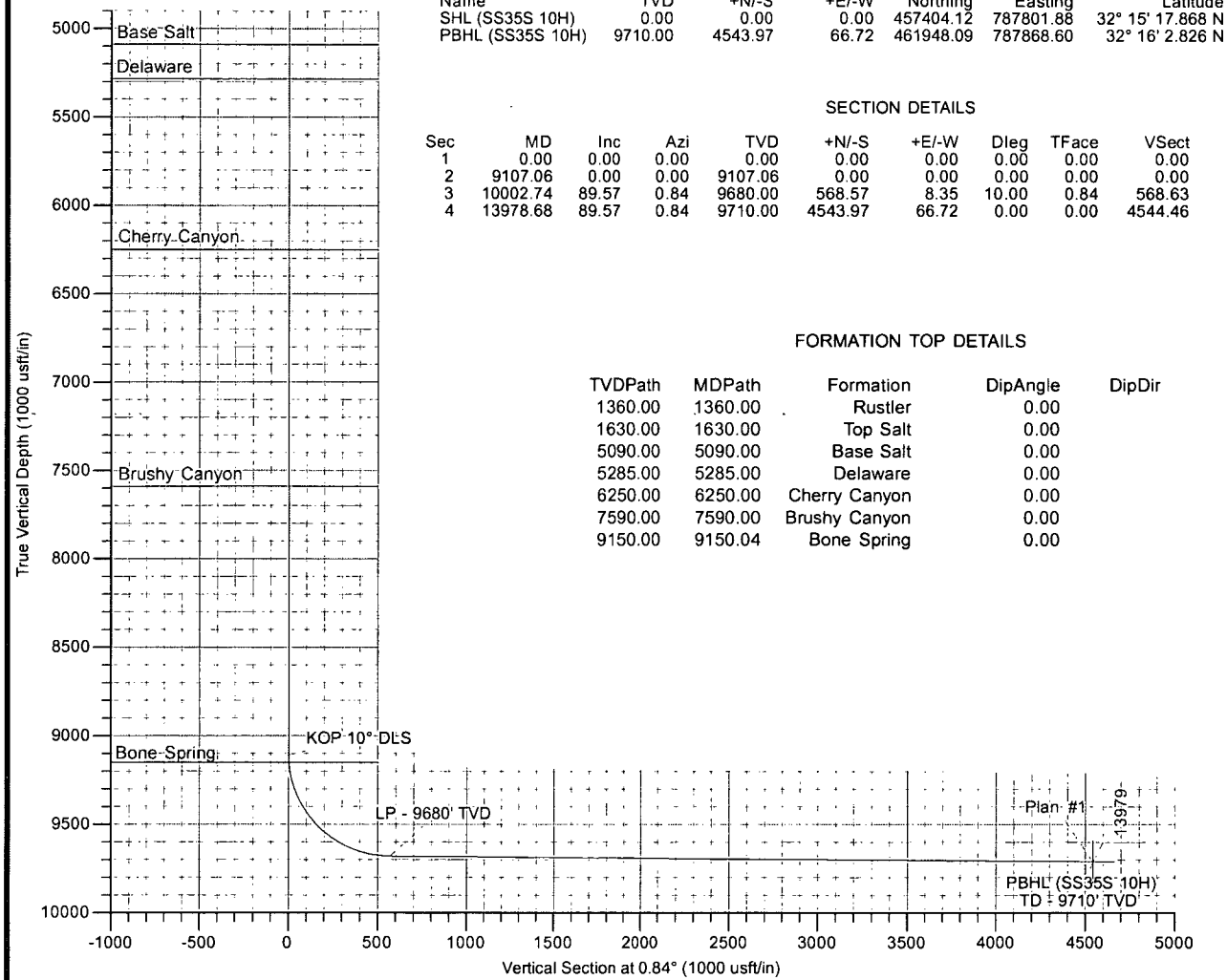
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL (SS35S 10H)	0.00	0.00	0.00	457404.12	787801.88	32° 15' 17.868 N	103° 32' 9.792 W
PBHL (SS35S 10H)	9710.00	4543.97	66.72	461948.09	787868.60	32° 16' 2.826 N	103° 32' 8.622 W

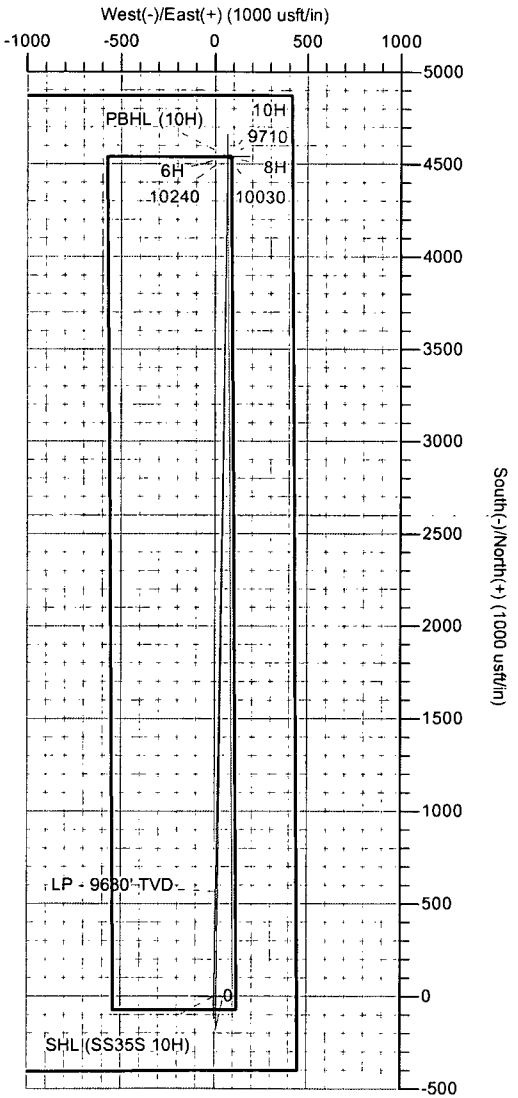
SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	9107.06	0.00	0.00	9107.06	0.00	0.00	0.00	0.00	0.00	KOP 10° DLS
3	10002.74	89.57	0.84	9680.00	568.57	8.35	10.00	0.84	568.63	LP - 9680' TVD
4	13978.68	89.57	0.84	9710.00	4543.97	66.72	0.00	0.00	4544.46	TD - 9710' TVD

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
1360.00	1360.00	Rustler	0.00	
1630.00	1630.00	Top Salt	0.00	
5090.00	5090.00	Base Salt	0.00	
5285.00	5285.00	Delaware	0.00	
6250.00	6250.00	Cherry Canyon	0.00	
7590.00	7590.00	Brushy Canyon	0.00	
9150.00	9150.04	Bone Spring	0.00	





LEAM Drilling Systems, Inc.

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

Plan: Plan #1 (10H/OH)
Sea Snake 35 State
Created By: Brady Deaver Date: 9:22, July 28 2015
Date: _____
Approved: _____ Date: _____

DEVON ENERGY

Lea County, NM (NAD-83)
Sea Snake 35 State
10H

OH

Plan: Plan #1

Standard Planning Report

28 July, 2015

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 10H
Company:	DEVON ENERGY	**TVD Reference:**	3645' GL + 25' RKB @ 3670.00usft
Project:	Lea County, NM (NAD-83)	**MD Reference:**	3645' GL + 25' RKB @ 3670.00usft
Site:	Sea Snake 35 State	**North Reference:**	Grid
Well:	10H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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

Site	Sea Snake 35 State				
Site Position:		**Northing:**	457,194.41 usft	**Latitude:**	32° 15' 15.916 N
From:	Map	**Easting:**	786,121.75 usft	**Longitude:**	103° 32' 29.374 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.42 °

Well	10H					
Well Position	**+N/-S**	209.71 usft	**Northing:**	457,404.12 usft	**Latitude:**	32° 15' 17.868 N
	+E/-W	1,680.13 usft	**Easting:**	787,801.88 usft	**Longitude:**	103° 32' 9.792 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	3,670.00 usft	**Ground Level:**	3,645.00 usft

Wellbore	OH				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	BGGM2015	7/28/2015	7.23	60.18	48,230

Design	Plan #1				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**	
	0.00	0.00	0.00	0.84	

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	
9,107.06	0.00	0.00	9,107.06	0.00	0.00	0.00	0.00	0.00	0.00	
10,002.74	89.57	0.84	9,680.00	568.57	8.35	10.00	10.00	0.09	0.84	
13,978.68	89.57	0.84	9,710.00	4,543.97	66.72	0.00	0.00	0.00	0.00	PBHL (SS35S 10H)

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 10H
Company:	DEVON ENERGY	**TVD Reference:**	3645' GL + 25' RKB @ 3670.00usft
Project:	Lea County, NM (NAD-83)	**MD Reference:**	3645' GL + 25' RKB @ 3670.00usft
Site:	Sea Snake 35 State	**North Reference:**	Grid
Well:	10H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHL (SS35S 10H)									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,360.00	0.00	0.00	1,360.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,630.00	0.00	0.00	1,630.00	0.00	0.00	0.00	0.00	0.00	0.00
Top Salt									
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00

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Site:	Sea Snake 35 State	**North Reference:**	Grid
Well:	10H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,090.00	0.00	0.00	5,090.00	0.00	0.00	0.00	0.00	0.00	0.00
Base Salt									
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,285.00	0.00	0.00	5,285.00	0.00	0.00	0.00	0.00	0.00	0.00
Delaware									
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,250.00	0.00	0.00	6,250.00	0.00	0.00	0.00	0.00	0.00	0.00
Cherry Canyon									
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,590.00	0.00	0.00	7,590.00	0.00	0.00	0.00	0.00	0.00	0.00
Brushy Canyon									
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	0.00	0.00
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00	0.00	0.00
8,900.00	0.00	0.00	8,900.00	0.00	0.00	0.00	0.00	0.00	0.00
9,000.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00	0.00	0.00
9,107.06	0.00	0.00	9,107.06	0.00	0.00	0.00	0.00	0.00	0.00
KOP 10° DLS									
9,150.00	4.29	0.84	9,149.96	1.61	0.02	1.61	10.00	10.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 10H
Company:	DEVON ENERGY	**TVD Reference:**	3645' GL + 25' RKB @ 3670.00usft
Project:	Lea County, NM (NAD-83)	**MD Reference:**	3645' GL + 25' RKB @ 3670.00usft
Site:	Sea Snake 35 State	**North Reference:**	Grid
Well:	10H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,150.04	4.29	0.84	9,150.00	1.61	0.02	1.61	0.00	0.00	0.00
Bone Spring									
9,200.00	9.29	0.84	9,199.59	7.52	0.11	7.52	10.01	10.01	0.00
9,250.00	14.29	0.84	9,248.52	17.74	0.26	17.74	10.00	10.00	0.00
9,300.00	19.29	0.84	9,296.37	32.18	0.47	32.18	10.00	10.00	0.00
9,350.00	24.29	0.84	9,342.79	50.73	0.74	50.74	10.00	10.00	0.00
9,400.00	29.29	0.84	9,387.40	73.26	1.08	73.27	10.00	10.00	0.00
9,450.00	34.29	0.84	9,429.89	99.59	1.46	99.60	10.00	10.00	0.00
9,500.00	39.29	0.84	9,469.91	129.53	1.90	129.54	10.00	10.00	0.00
9,550.00	44.29	0.84	9,507.18	162.84	2.39	162.85	10.00	10.00	0.00
9,600.00	49.29	0.84	9,541.40	199.27	2.93	199.29	10.00	10.00	0.00
9,650.00	54.29	0.84	9,572.31	238.54	3.50	238.56	10.00	10.00	0.00
9,700.00	59.29	0.84	9,599.69	280.36	4.12	280.39	10.00	10.00	0.00
9,750.00	64.29	0.84	9,623.31	324.40	4.76	324.44	10.00	10.00	0.00
9,800.00	69.29	0.84	9,643.01	370.34	5.44	370.38	10.00	10.00	0.00
9,850.00	74.29	0.84	9,658.63	417.81	6.13	417.86	10.00	10.00	0.00
9,900.00	79.29	0.84	9,670.04	466.47	6.85	466.52	10.00	10.00	0.00
9,950.00	84.29	0.84	9,677.18	515.94	7.58	515.99	10.00	10.00	0.00
10,002.74	89.57	0.84	9,680.00	568.58	8.35	568.64	10.00	10.00	0.00
LP - 9680' TVD									
10,100.00	89.57	0.84	9,680.74	665.82	9.78	665.90	0.00	0.00	0.00
10,200.00	89.57	0.84	9,681.49	765.81	11.24	765.89	0.00	0.00	0.00
10,300.00	89.57	0.84	9,682.24	865.80	12.71	865.89	0.00	0.00	0.00
10,400.00	89.57	0.84	9,683.00	965.78	14.18	965.89	0.00	0.00	0.00
10,500.00	89.57	0.84	9,683.75	1,065.77	15.65	1,065.88	0.00	0.00	0.00
10,600.00	89.57	0.84	9,684.51	1,165.76	17.12	1,165.88	0.00	0.00	0.00
10,700.00	89.57	0.84	9,685.26	1,265.74	18.59	1,265.88	0.00	0.00	0.00
10,800.00	89.57	0.84	9,686.02	1,365.73	20.05	1,365.88	0.00	0.00	0.00
10,900.00	89.57	0.84	9,686.77	1,465.71	21.52	1,465.87	0.00	0.00	0.00
11,000.00	89.57	0.84	9,687.53	1,565.70	22.99	1,565.87	0.00	0.00	0.00
11,100.00	89.57	0.84	9,688.28	1,665.69	24.46	1,665.87	0.00	0.00	0.00
11,200.00	89.57	0.84	9,689.04	1,765.67	25.93	1,765.86	0.00	0.00	0.00
11,300.00	89.57	0.84	9,689.79	1,865.66	27.39	1,865.86	0.00	0.00	0.00
11,400.00	89.57	0.84	9,690.54	1,965.65	28.86	1,965.86	0.00	0.00	0.00
11,500.00	89.57	0.84	9,691.30	2,065.63	30.33	2,065.86	0.00	0.00	0.00
11,600.00	89.57	0.84	9,692.05	2,165.62	31.80	2,165.85	0.00	0.00	0.00
11,700.00	89.57	0.84	9,692.81	2,265.61	33.27	2,265.85	0.00	0.00	0.00
11,800.00	89.57	0.84	9,693.56	2,365.59	34.73	2,365.85	0.00	0.00	0.00
11,900.00	89.57	0.84	9,694.32	2,465.58	36.20	2,465.84	0.00	0.00	0.00
12,000.00	89.57	0.84	9,695.07	2,565.56	37.67	2,565.84	0.00	0.00	0.00
12,100.00	89.57	0.84	9,695.83	2,665.55	39.14	2,665.84	0.00	0.00	0.00
12,200.00	89.57	0.84	9,696.58	2,765.54	40.61	2,765.84	0.00	0.00	0.00
12,300.00	89.57	0.84	9,697.33	2,865.52	42.08	2,865.83	0.00	0.00	0.00
12,400.00	89.57	0.84	9,698.09	2,965.51	43.54	2,965.83	0.00	0.00	0.00
12,500.00	89.57	0.84	9,698.84	3,065.50	45.01	3,065.83	0.00	0.00	0.00
12,600.00	89.57	0.84	9,699.60	3,165.48	46.48	3,165.82	0.00	0.00	0.00
12,700.00	89.57	0.84	9,700.35	3,265.47	47.95	3,265.82	0.00	0.00	0.00
12,800.00	89.57	0.84	9,701.11	3,365.46	49.42	3,365.82	0.00	0.00	0.00
12,900.00	89.57	0.84	9,701.86	3,465.44	50.88	3,465.82	0.00	0.00	0.00
13,000.00	89.57	0.84	9,702.62	3,565.43	52.35	3,565.81	0.00	0.00	0.00
13,100.00	89.57	0.84	9,703.37	3,665.41	53.82	3,665.81	0.00	0.00	0.00
13,200.00	89.57	0.84	9,704.13	3,765.40	55.29	3,765.81	0.00	0.00	0.00
13,300.00	89.57	0.84	9,704.88	3,865.39	56.76	3,865.80	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 10H
Company:	DEVON ENERGY	**TVD Reference:**	3645' GL + 25' RKB @ 3670.00usft
Project:	Lea County, NM (NAD-83)	**MD Reference:**	3645' GL + 25' RKB @ 3670.00usft
Site:	Sea Snake 35 State	**North Reference:**	Grid
Well:	10H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,400.00	89.57	0.84	9,705.63	3,965.37	58.22	3,965.80	0.00	0.00	0.00
13,500.00	89.57	0.84	9,706.39	4,065.36	59.69	4,065.80	0.00	0.00	0.00
13,600.00	89.57	0.84	9,707.14	4,165.35	61.16	4,165.80	0.00	0.00	0.00
13,700.00	89.57	0.84	9,707.90	4,265.33	62.63	4,265.79	0.00	0.00	0.00
13,800.00	89.57	0.84	9,708.65	4,365.32	64.10	4,365.79	0.00	0.00	0.00
13,900.00	89.57	0.84	9,709.41	4,465.31	65.56	4,465.79	0.00	0.00	0.00
13,978.68	89.57	0.84	9,710.00	4,543.97	66.72	4,544.46	0.00	0.00	0.00
TD - 9710' TVD - PBHL (SS35S 10H)									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL (SS35S 10H) - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	457,404.12	787,801.88	32° 15' 17.868 N	103° 32' 9.792 W
PBHL (SS35S 10H) - plan hits target center - Point	0.00	0.00	9,710.00	4,543.97	66.72	461,948.09	787,868.60	32° 16' 2.826 N	103° 32' 8.622 W

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,360.00	1,360.00	Rustler		0.00	
1,630.00	1,630.00	Top Salt		0.00	
5,090.00	5,090.00	Base Salt		0.00	
5,285.00	5,285.00	Delaware		0.00	
6,250.00	6,250.00	Cherry Canyon		0.00	
7,590.00	7,590.00	Brushy Canyon		0.00	
9,150.04	9,150.00	Bone Spring		0.00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
9,107.06	9,107.06	0.00	0.00	KOP 10° DLS
10,002.74	9,680.00	568.58	8.35	LP - 9680' TVD
13,978.68	9,710.00	4,543.97	66.72	TD - 9710' TVD

DEVON ENERGY

Lea County, NM (NAD-83)
Sea Snake 35 State
10H

OH
Plan #1

Anticollision Report

28 July, 2015

LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	**Local Co-ordinate Reference:**	Well 10H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3645' GL + 25' RKB @ 3670.00usft
Reference Site:	Sea Snake 35 State	**MD Reference:**	3645' GL + 25' RKB @ 3670.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference	Plan #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 9,999.98 usft	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 7/28/2015

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	13,978.68	Plan #1 (OH)	LEAM MWD-ADJ	MWD - Standard

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Sea Snake 35 State						
6H - OH - Plan #1	5,166.60	5,166.80	99.94	77.00	4.356	CC
6H - OH - Plan #1	5,400.00	5,400.00	100.09	76.19	4.187	ES
6H - OH - Plan #1	9,107.06	9,111.91	153.47	113.47	3.837	SF
8H - OH - Plan #1	5,490.73	5,491.21	48.75	24.49	2.009	CC
8H - OH - Plan #1	5,500.00	5,500.45	48.76	24.46	2.007	ES, SF

Offset Design Sea Snake 35 State - 6H - OH - Plan #1 — Offset Site Error: 0.00 usft

Survey Program: 0-LEAM MWD-ADJ — Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.20	0.20	0.00	0.00	89.72	0.49	99.94	99.94				
100.00	100.00	100.20	100.20	0.08	0.08	89.72	0.49	99.94	99.94	99.77	0.17	591.283	
200.00	200.00	200.20	200.20	0.31	0.31	89.72	0.49	99.94	99.94	99.32	0.62	161.572	
300.00	300.00	300.20	300.20	0.53	0.53	89.72	0.49	99.94	99.94	98.87	1.07	93.570	
400.00	400.00	400.20	400.20	0.76	0.76	89.72	0.49	99.94	99.94	98.42	1.52	65.854	
500.00	500.00	500.20	500.20	0.98	0.98	89.72	0.49	99.94	99.94	97.97	1.97	50.805	
600.00	600.00	600.20	600.20	1.21	1.21	89.72	0.49	99.94	99.94	97.52	2.42	41.355	
700.00	700.00	700.20	700.20	1.43	1.43	89.72	0.49	99.94	99.94	97.07	2.87	34.869	
800.00	800.00	800.20	800.20	1.66	1.66	89.72	0.49	99.94	99.94	96.63	3.32	30.141	
900.00	900.00	900.20	900.20	1.88	1.88	89.72	0.49	99.94	99.94	96.18	3.77	26.543	
1,000.00	1,000.00	1,000.20	1,000.20	2.11	2.11	89.72	0.49	99.94	99.94	95.73	4.21	23.712	
1,100.00	1,100.00	1,100.20	1,100.20	2.33	2.33	89.72	0.49	99.94	99.94	95.28	4.66	21.427	
1,200.00	1,200.00	1,200.20	1,200.20	2.56	2.56	89.72	0.49	99.94	99.94	94.83	5.11	19.543	
1,300.00	1,300.00	1,300.20	1,300.20	2.78	2.78	89.72	0.49	99.94	99.94	94.38	5.56	17.964	
1,400.00	1,400.00	1,400.20	1,400.20	3.01	3.01	89.72	0.49	99.94	99.94	93.93	6.01	16.621	
1,500.00	1,500.00	1,500.20	1,500.20	3.23	3.23	89.72	0.49	99.94	99.94	93.48	6.46	15.465	
1,600.00	1,600.00	1,600.20	1,600.20	3.46	3.46	89.72	0.49	99.94	99.94	93.03	6.91	14.459	
1,700.00	1,700.00	1,700.20	1,700.20	3.68	3.68	89.72	0.49	99.94	99.94	92.58	7.36	13.576	
1,800.00	1,800.00	1,800.20	1,800.20	3.91	3.91	89.72	0.49	99.94	99.94	92.13	7.81	12.795	
1,900.00	1,900.00	1,900.20	1,900.20	4.13	4.13	89.72	0.49	99.94	99.94	91.68	8.26	12.099	
2,000.00	2,000.00	2,000.20	2,000.20	4.35	4.36	89.72	0.49	99.94	99.94	91.23	8.71	11.474	
2,100.00	2,100.00	2,100.20	2,100.20	4.58	4.58	89.72	0.49	99.94	99.94	90.78	9.16	10.911	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	**Local Co-ordinate Reference:**	Well 10H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3645' GL + 25' RKB @ 3670.00usft
Reference Site:	Sea Snake 35 State	**MD Reference:**	3645' GL + 25' RKB @ 3670.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Sea Snake 35 State - 6H - OH - Plan #1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-LEAM MWD-ADJ — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,200.00	2,200.00	2,200.20	2,200.20	4.80	4.80	89.72	0.49	99.94	99.94	90.33	9.61	10.401	
2,300.00	2,300.00	2,300.20	2,300.20	5.03	5.03	89.72	0.49	99.94	99.94	89.88	10.06	9.936	
2,400.00	2,400.00	2,400.20	2,400.20	5.25	5.25	89.72	0.49	99.94	99.94	89.43	10.51	9.511	
2,500.00	2,500.00	2,500.20	2,500.20	5.48	5.48	89.72	0.49	99.94	99.94	88.98	10.96	9.121	
2,600.00	2,600.00	2,600.20	2,600.20	5.70	5.70	89.72	0.49	99.94	99.94	88.53	11.41	8.761	
2,700.00	2,700.00	2,700.20	2,700.20	5.93	5.93	89.72	0.49	99.94	99.94	88.08	11.86	8.429	
2,800.00	2,800.00	2,800.20	2,800.20	6.15	6.15	89.72	0.49	99.94	99.94	87.63	12.31	8.121	
2,900.00	2,900.00	2,900.20	2,900.20	6.38	6.38	89.72	0.49	99.94	99.94	87.19	12.76	7.835	
3,000.00	3,000.00	3,000.20	3,000.20	6.60	6.60	89.72	0.49	99.94	99.94	86.74	13.21	7.568	
3,100.00	3,100.00	3,100.20	3,100.20	6.83	6.83	89.72	0.49	99.94	99.94	86.29	13.65	7.319	
3,200.00	3,200.00	3,200.20	3,200.20	7.05	7.05	89.72	0.49	99.94	99.94	85.84	14.10	7.086	
3,300.00	3,300.00	3,300.20	3,300.20	7.28	7.28	89.72	0.49	99.94	99.94	85.39	14.55	6.867	
3,400.00	3,400.00	3,400.20	3,400.20	7.50	7.50	89.72	0.49	99.94	99.94	84.94	15.00	6.661	
3,500.00	3,500.00	3,500.20	3,500.20	7.73	7.73	89.72	0.49	99.94	99.94	84.49	15.45	6.467	
3,600.00	3,600.00	3,600.20	3,600.20	7.95	7.95	89.72	0.49	99.94	99.94	84.04	15.90	6.285	
3,700.00	3,700.00	3,700.20	3,700.20	8.18	8.18	89.72	0.49	99.94	99.94	83.59	16.35	6.112	
3,800.00	3,800.00	3,800.20	3,800.20	8.40	8.40	89.72	0.49	99.94	99.94	83.14	16.80	5.948	
3,900.00	3,900.00	3,900.20	3,900.20	8.63	8.63	89.72	0.49	99.94	99.94	82.69	17.25	5.793	
4,000.00	4,000.00	4,000.20	4,000.20	8.85	8.85	89.72	0.49	99.94	99.94	82.24	17.70	5.646	
4,100.00	4,100.00	4,100.20	4,100.20	9.07	9.08	89.72	0.49	99.94	99.94	81.79	18.15	5.506	
4,200.00	4,200.00	4,200.20	4,200.20	9.30	9.30	89.72	0.49	99.94	99.94	81.34	18.60	5.373	
4,300.00	4,300.00	4,300.20	4,300.20	9.52	9.52	89.72	0.49	99.94	99.94	80.89	19.05	5.246	
4,400.00	4,400.00	4,400.20	4,400.20	9.75	9.75	89.72	0.49	99.94	99.94	80.44	19.50	5.125	
4,500.00	4,500.00	4,500.20	4,500.20	9.97	9.97	89.72	0.49	99.94	99.94	79.99	19.95	5.010	
4,600.00	4,600.00	4,600.20	4,600.20	10.20	10.20	89.72	0.49	99.94	99.94	79.54	20.40	4.900	
4,700.00	4,700.00	4,700.20	4,700.20	10.42	10.42	89.72	0.49	99.94	99.94	79.09	20.85	4.794	
4,800.00	4,800.00	4,800.20	4,800.20	10.65	10.65	89.72	0.49	99.94	99.94	78.64	21.30	4.693	
4,900.00	4,900.00	4,900.20	4,900.20	10.87	10.87	89.72	0.49	99.94	99.94	78.19	21.75	4.596	
5,000.00	5,000.00	5,000.20	5,000.20	11.10	11.10	89.72	0.49	99.94	99.94	77.75	22.20	4.503	
5,100.00	5,100.00	5,100.20	5,100.20	11.32	11.32	89.72	0.49	99.94	99.94	77.30	22.65	4.413	
5,166.60	5,166.60	5,166.80	5,166.80	11.47	11.47	89.72	0.49	99.94	99.94	77.00	22.95	4.356 CC	
5,200.00	5,200.00	5,200.20	5,200.20	11.55	11.55	89.72	0.49	99.94	99.94	76.85	23.10	4.327	
5,215.19	5,215.19	5,215.39	5,215.39	11.58	11.58	89.74	0.46	99.94	99.94	76.78	23.16	4.315	
5,300.00	5,300.00	5,300.17	5,300.16	11.77	11.74	90.47	-0.82	99.95	99.95	76.44	23.51	4.251	
5,400.00	5,400.00	5,400.00	5,399.91	12.00	11.91	92.72	-4.74	99.98	100.09	76.19	23.90	4.187 ES	
5,500.00	5,500.00	5,499.57	5,499.26	12.22	12.08	96.42	-11.25	100.03	100.66	76.36	24.30	4.143	
5,600.00	5,600.00	5,599.08	5,598.41	12.45	12.25	101.18	-19.77	100.09	102.04	77.35	24.69	4.133	
5,700.00	5,700.00	5,698.70	5,697.65	12.67	12.42	105.86	-28.46	100.15	104.15	79.06	25.09	4.151	
5,800.00	5,800.00	5,798.32	5,796.89	12.90	12.60	110.33	-37.14	100.22	106.93	81.44	25.49	4.195	
5,900.00	5,900.00	5,897.94	5,896.13	13.12	12.78	114.56	-45.82	100.28	110.33	84.43	25.89	4.261	
6,000.00	6,000.00	5,997.56	5,995.37	13.35	12.96	118.51	-54.50	100.34	114.29	87.99	26.30	4.345	
6,100.00	6,100.00	6,097.18	6,094.61	13.57	13.15	122.18	-63.19	100.41	118.77	92.05	26.71	4.446	
6,200.00	6,200.00	6,196.80	6,193.85	13.80	13.34	125.58	-71.87	100.47	123.69	96.57	27.12	4.561	
6,300.00	6,300.00	6,296.42	6,293.09	14.02	13.53	128.70	-80.55	100.53	129.02	101.49	27.53	4.686	
6,400.00	6,400.00	6,396.03	6,392.33	14.24	13.73	131.57	-89.23	100.60	134.70	106.75	27.95	4.820	
6,500.00	6,500.00	6,495.65	6,491.57	14.47	13.93	134.21	-97.91	100.66	140.69	112.33	28.36	4.961	
6,600.00	6,600.00	6,597.07	6,592.64	14.69	14.14	136.52	-106.22	100.72	146.58	117.79	28.79	5.091	
6,700.00	6,700.00	6,699.87	6,695.27	14.92	14.38	138.05	-112.09	100.77	150.81	121.56	29.25	5.156	
6,800.00	6,800.00	6,802.91	6,798.26	15.14	14.61	138.82	-115.20	100.79	153.08	123.38	29.70	5.154	
6,900.00	6,900.00	6,904.85	6,900.20	15.37	14.82	138.95	-115.73	100.79	153.47	123.33	30.14	5.093	
7,000.00	7,000.00	7,004.85	7,000.20	15.59	15.04	138.95	-115.73	100.79	153.47	122.89	30.58	5.018	
7,100.00	7,100.00	7,104.85	7,100.20	15.82	15.26	138.95	-115.73	100.79	153.47	122.44	31.03	4.946	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	**Local Co-ordinate Reference:**	Well 10H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3645' GL + 25' RKB @ 3670.00usft
Reference Site:	Sea Snake 35 State	**MD Reference:**	3645' GL + 25' RKB @ 3670.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Sea Snake 35 State - 6H - OH - Plan #1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-LEAM MWD-ADJ — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,200.00	7,200.00	7,204.85	7,200.20	16.04	15.48	138.95	-115.73	100.79	153.47	122.00	31.47	4.876	
7,300.00	7,300.00	7,304.85	7,300.20	16.27	15.70	138.95	-115.73	100.79	153.47	121.55	31.92	4.808	
7,400.00	7,400.00	7,404.85	7,400.20	16.49	15.93	138.95	-115.73	100.79	153.47	121.10	32.37	4.742	
7,500.00	7,500.00	7,504.85	7,500.20	16.72	16.15	138.95	-115.73	100.79	153.47	120.66	32.81	4.677	
7,600.00	7,600.00	7,604.85	7,600.20	16.94	16.37	138.95	-115.73	100.79	153.47	120.21	33.26	4.614	
7,700.00	7,700.00	7,704.85	7,700.20	17.17	16.59	138.95	-115.73	100.79	153.47	119.76	33.71	4.553	
7,800.00	7,800.00	7,804.85	7,800.20	17.39	16.81	138.95	-115.73	100.79	153.47	119.32	34.15	4.494	
7,900.00	7,900.00	7,904.85	7,900.20	17.62	17.03	138.95	-115.73	100.79	153.47	118.87	34.60	4.436	
8,000.00	8,000.00	8,004.85	8,000.20	17.84	17.25	138.95	-115.73	100.79	153.47	118.42	35.05	4.379	
8,100.00	8,100.00	8,104.85	8,100.20	18.07	17.47	138.95	-115.73	100.79	153.47	117.98	35.49	4.324	
8,200.00	8,200.00	8,204.85	8,200.20	18.29	17.69	138.95	-115.73	100.79	153.47	117.53	35.94	4.270	
8,300.00	8,300.00	8,304.85	8,300.20	18.52	17.92	138.95	-115.73	100.79	153.47	117.08	36.39	4.218	
8,400.00	8,400.00	8,404.85	8,400.20	18.74	18.14	138.95	-115.73	100.79	153.47	116.64	36.84	4.166	
8,500.00	8,500.00	8,504.85	8,500.20	18.96	18.36	138.95	-115.73	100.79	153.47	116.19	37.28	4.116	
8,600.00	8,600.00	8,604.85	8,600.20	19.19	18.58	138.95	-115.73	100.79	153.47	115.74	37.73	4.068	
8,700.00	8,700.00	8,704.85	8,700.20	19.41	18.80	138.95	-115.73	100.79	153.47	115.29	38.18	4.020	
8,800.00	8,800.00	8,804.85	8,800.20	19.64	19.02	138.95	-115.73	100.79	153.47	114.85	38.62	3.973	
8,900.00	8,900.00	8,904.85	8,900.20	19.86	19.25	138.95	-115.73	100.79	153.47	114.40	39.07	3.928	
9,000.00	9,000.00	9,004.85	9,000.20	20.09	19.47	138.95	-115.73	100.79	153.47	113.95	39.52	3.883	
9,107.06	9,107.06	9,111.91	9,107.26	20.33	19.71	138.95	-115.73	100.79	153.47	113.47	40.00	3.837 SF	
9,150.00	9,149.96	9,154.81	9,150.16	20.43	19.80	138.42	-115.73	100.79	154.67	114.54	40.14	3.854	
9,200.00	9,199.59	9,204.44	9,199.79	20.54	19.91	139.54	-115.73	100.79	159.15	118.98	40.17	3.962	
9,250.00	9,248.52	9,253.37	9,248.72	20.65	20.02	141.29	-115.73	100.79	167.09	127.05	40.04	4.173	
9,300.00	9,296.37	9,301.23	9,296.57	20.76	20.13	143.44	-115.73	100.79	178.72	138.99	39.73	4.499	
9,350.00	9,342.79	9,347.64	9,342.99	20.87	20.23	145.72	-115.73	100.79	194.22	155.00	39.22	4.952	
9,400.00	9,387.40	9,392.25	9,387.60	20.97	20.33	147.93	-115.73	100.79	213.69	175.18	38.51	5.549	
9,450.00	9,429.89	9,434.74	9,430.09	21.08	20.42	149.88	-115.73	100.79	237.13	199.52	37.61	6.304	
9,500.00	9,469.91	9,474.77	9,470.11	21.21	20.51	151.49	-115.73	100.79	264.45	227.88	36.57	7.231	
9,550.00	9,507.18	9,512.03	9,507.38	21.35	20.60	152.67	-115.73	100.79	295.44	260.01	35.43	8.340	
9,600.00	9,541.40	9,546.25	9,541.60	21.51	20.67	153.38	-115.73	100.79	329.85	295.61	34.24	9.633	
9,650.00	9,572.31	9,577.17	9,572.51	21.69	20.74	153.54	-115.73	100.79	367.39	334.28	33.10	11.098	
9,700.00	9,599.69	9,604.54	9,599.89	21.89	20.80	153.04	-115.73	100.79	407.72	375.59	32.12	12.692	
9,750.00	9,623.31	9,628.16	9,623.51	22.12	20.85	151.69	-115.73	100.79	450.49	419.02	31.47	14.316	
9,800.00	9,643.01	9,647.86	9,643.21	22.38	20.90	149.12	-115.73	100.79	495.33	463.95	31.38	15.786	
9,850.00	9,658.63	9,663.48	9,658.83	22.66	20.93	144.57	-115.73	100.79	541.88	509.61	32.26	16.795	
9,900.00	9,670.04	9,674.90	9,670.24	22.97	20.96	136.47	-115.73	100.79	589.73	554.94	34.79	16.952	
9,950.00	9,677.18	10,653.93	10,259.71	23.31	24.10	171.31	519.44	96.15	589.04	563.41	25.63	22.982	
10,002.74	9,680.00	10,706.55	10,259.45	23.69	24.49	171.42	572.05	95.76	585.82	560.26	25.56	22.915	
10,100.00	9,680.74	10,803.78	10,258.98	24.48	25.29	171.61	669.28	95.05	584.31	558.27	26.04	22.441	
10,200.00	9,681.49	10,903.75	10,258.49	25.38	26.22	171.81	769.24	94.32	582.76	556.16	26.60	21.909	
10,300.00	9,682.24	11,003.71	10,258.00	26.39	27.24	172.01	869.21	93.59	581.22	553.99	27.23	21.344	
10,400.00	9,683.00	11,103.68	10,257.51	27.48	28.34	172.20	969.17	92.86	579.68	551.75	27.93	20.756	
10,500.00	9,683.75	11,203.65	10,257.02	28.64	29.52	172.40	1,069.13	92.13	578.16	549.47	28.69	20.155	
10,600.00	9,684.51	11,303.62	10,256.53	29.87	30.76	172.60	1,169.10	91.40	576.63	547.14	29.50	19.550	
10,700.00	9,685.26	11,403.59	10,256.04	31.16	32.05	172.80	1,269.06	90.67	575.12	544.77	30.35	18.947	
10,800.00	9,686.02	11,503.55	10,255.55	32.49	33.40	173.01	1,369.03	89.94	573.61	542.36	31.26	18.351	
10,900.00	9,686.77	11,603.52	10,255.06	33.88	34.79	173.21	1,468.99	89.20	572.12	539.91	32.20	17.767	
11,000.00	9,687.53	11,703.49	10,254.57	35.30	36.22	173.42	1,568.96	88.47	570.62	537.44	33.18	17.198	
11,100.00	9,688.28	11,803.46	10,254.08	36.76	37.68	173.62	1,668.92	87.74	569.14	534.95	34.19	16.646	
11,200.00	9,689.04	11,903.43	10,253.59	38.25	39.17	173.83	1,768.88	87.01	567.66	532.43	35.23	16.113	
11,300.00	9,689.79	12,003.39	10,253.10	39.77	40.69	174.03	1,868.85	86.28	566.19	529.89	36.30	15.599	
11,400.00	9,690.54	12,103.36	10,252.61	41.31	42.24	174.24	1,968.81	85.55	564.73	527.34	37.39	15.105	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	**Local Co-ordinate Reference:**	Well 10H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3645' GL + 25' RKB @ 3670.00usft
Reference Site:	Sea Snake 35 State	**MD Reference:**	3645' GL + 25' RKB @ 3670.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Sea Snake 35 State - 6H - OH - Plan #1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-LEAM MWD-ADJ — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
11,500.00	9,691.30	12,203.33	10,252.12	42.88	43.81	174.45	2,068.78	84.82	563.27	524.78	38.50	14.631	
11,600.00	9,692.05	12,303.30	10,251.63	44.46	45.39	174.66	2,168.74	84.09	561.83	522.20	39.63	14.178	
11,700.00	9,692.81	12,403.27	10,251.14	46.06	47.00	174.88	2,268.71	83.36	560.39	519.61	40.78	13.743	
11,800.00	9,693.56	12,503.24	10,250.65	47.68	48.62	175.09	2,368.67	82.63	558.96	517.02	41.94	13.328	
11,900.00	9,694.32	12,603.20	10,250.16	49.31	50.25	175.30	2,468.63	81.89	557.53	514.41	43.12	12.930	
12,000.00	9,695.07	12,703.17	10,249.67	50.96	51.90	175.52	2,568.60	81.16	556.12	511.80	44.31	12.550	
12,100.00	9,695.83	12,803.14	10,249.18	52.62	53.56	175.74	2,668.56	80.43	554.71	509.19	45.52	12.187	
12,200.00	9,696.58	12,903.11	10,248.70	54.28	55.23	175.95	2,768.53	79.70	553.31	506.57	46.73	11.840	
12,300.00	9,697.33	13,003.08	10,248.21	55.96	56.91	176.17	2,868.49	78.97	551.91	503.95	47.96	11.508	
12,400.00	9,698.09	13,103.04	10,247.72	57.65	58.60	176.39	2,968.45	78.24	550.53	501.33	49.20	11.190	
12,500.00	9,698.84	13,203.01	10,247.23	59.34	60.30	176.61	3,068.42	77.51	549.15	498.71	50.45	10.886	
12,600.00	9,699.60	13,302.98	10,246.74	61.04	62.00	176.83	3,168.38	76.78	547.79	496.08	51.70	10.595	
12,700.00	9,700.35	13,402.95	10,246.25	62.75	63.71	177.06	3,268.35	76.05	546.43	493.46	52.97	10.316	
12,800.00	9,701.11	13,502.92	10,245.76	64.47	65.43	177.28	3,368.31	75.32	545.07	490.83	54.24	10.049	
12,900.00	9,701.86	13,602.88	10,245.27	66.19	67.16	177.51	3,468.28	74.59	543.73	488.20	55.53	9.792	
13,000.00	9,702.62	13,702.85	10,244.78	67.91	68.89	177.73	3,568.24	73.85	542.40	485.58	56.82	9.546	
13,100.00	9,703.37	13,802.82	10,244.29	69.64	70.62	177.96	3,668.20	73.12	541.07	482.95	58.12	9.310	
13,200.00	9,704.13	13,902.79	10,243.80	71.38	72.36	178.19	3,768.17	72.39	539.75	480.32	59.43	9.082	
13,300.00	9,704.88	14,002.76	10,243.31	73.12	74.10	178.42	3,868.13	71.66	538.44	477.70	60.74	8.864	
13,400.00	9,705.63	14,102.72	10,242.82	74.86	75.85	178.65	3,968.10	70.93	537.14	475.07	62.07	8.654	
13,500.00	9,706.39	14,202.69	10,242.33	76.61	77.60	178.88	4,068.06	70.20	535.85	472.45	63.40	8.451	
13,600.00	9,707.14	14,302.66	10,241.84	78.36	79.36	179.11	4,168.02	69.47	534.57	469.82	64.75	8.256	
13,700.00	9,707.90	14,402.63	10,241.35	80.12	81.11	179.35	4,267.99	68.74	533.30	467.20	66.10	8.068	
13,800.00	9,708.65	14,502.60	10,240.86	81.87	82.87	179.58	4,367.95	68.01	532.03	464.57	67.46	7.887	
13,900.00	9,709.41	14,602.56	10,240.37	83.63	84.64	179.82	4,467.92	67.28	530.78	461.95	68.83	7.712	
13,978.68	9,710.00	14,678.62	10,240.00	85.02	85.98	180.00	4,543.97	66.72	529.80	459.91	69.89	7.580	

LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	**Local Co-ordinate Reference:**	Well 10H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3645' GL + 25' RKB @ 3670.00usft
Reference Site:	Sea Snake 35 State	**MD Reference:**	3645' GL + 25' RKB @ 3670.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Sea Snake 35 State - 8H - OH - Plan #1

Survey Program: 0-LEAM MWD-ADJ

Offset Site Error: 0.00 usft

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.20	0.20	0.00	0.00	89.68	0.28	50.00	50.00				
100.00	100.00	100.20	100.20	0.08	0.08	89.68	0.28	50.00	50.00	49.83	0.17	295.820	
200.00	200.00	200.20	200.20	0.31	0.31	89.68	0.28	50.00	50.00	49.38	0.62	80.835	
300.00	300.00	300.20	300.20	0.53	0.53	89.68	0.28	50.00	50.00	48.93	1.07	46.813	
400.00	400.00	400.20	400.20	0.76	0.76	89.68	0.28	50.00	50.00	48.48	1.52	32.947	
500.00	500.00	500.20	500.20	0.98	0.98	89.68	0.28	50.00	50.00	48.03	1.97	25.418	
600.00	600.00	600.20	600.20	1.21	1.21	89.68	0.28	50.00	50.00	47.58	2.42	20.690	
700.00	700.00	700.20	700.20	1.43	1.43	89.68	0.28	50.00	50.00	47.13	2.87	17.445	
800.00	800.00	800.20	800.20	1.66	1.66	89.68	0.28	50.00	50.00	46.69	3.32	15.080	
900.00	900.00	900.20	900.20	1.88	1.88	89.68	0.28	50.00	50.00	46.24	3.77	13.279	
1,000.00	1,000.00	1,000.20	1,000.20	2.11	2.11	89.68	0.28	50.00	50.00	45.79	4.21	11.863	
1,100.00	1,100.00	1,100.20	1,100.20	2.33	2.33	89.68	0.28	50.00	50.00	45.34	4.66	10.720	
1,200.00	1,200.00	1,200.20	1,200.20	2.56	2.56	89.68	0.28	50.00	50.00	44.89	5.11	9.777	
1,300.00	1,300.00	1,300.20	1,300.20	2.78	2.78	89.68	0.28	50.00	50.00	44.44	5.56	8.987	
1,400.00	1,400.00	1,400.20	1,400.20	3.01	3.01	89.68	0.28	50.00	50.00	43.99	6.01	8.316	
1,500.00	1,500.00	1,500.20	1,500.20	3.23	3.23	89.68	0.28	50.00	50.00	43.54	6.46	7.737	
1,600.00	1,600.00	1,600.20	1,600.20	3.46	3.46	89.68	0.28	50.00	50.00	43.09	6.91	7.234	
1,700.00	1,700.00	1,700.20	1,700.20	3.68	3.68	89.68	0.28	50.00	50.00	42.64	7.36	6.792	
1,800.00	1,800.00	1,800.20	1,800.20	3.91	3.91	89.68	0.28	50.00	50.00	42.19	7.81	6.401	
1,900.00	1,900.00	1,900.20	1,900.20	4.13	4.13	89.68	0.28	50.00	50.00	41.74	8.26	6.053	
2,000.00	2,000.00	2,000.20	2,000.20	4.35	4.36	89.68	0.28	50.00	50.00	41.29	8.71	5.741	
2,100.00	2,100.00	2,100.20	2,100.20	4.58	4.58	89.68	0.28	50.00	50.00	40.84	9.16	5.459	
2,200.00	2,200.00	2,200.20	2,200.20	4.80	4.80	89.68	0.28	50.00	50.00	40.39	9.61	5.203	
2,300.00	2,300.00	2,300.20	2,300.20	5.03	5.03	89.68	0.28	50.00	50.00	39.94	10.06	4.971	
2,400.00	2,400.00	2,400.20	2,400.20	5.25	5.25	89.68	0.28	50.00	50.00	39.49	10.51	4.758	
2,500.00	2,500.00	2,500.20	2,500.20	5.48	5.48	89.68	0.28	50.00	50.00	39.04	10.96	4.563	
2,600.00	2,600.00	2,600.20	2,600.20	5.70	5.70	89.68	0.28	50.00	50.00	38.59	11.41	4.383	
2,700.00	2,700.00	2,700.20	2,700.20	5.93	5.93	89.68	0.28	50.00	50.00	38.14	11.86	4.217	
2,800.00	2,800.00	2,800.20	2,800.20	6.15	6.15	89.68	0.28	50.00	50.00	37.69	12.31	4.063	
2,900.00	2,900.00	2,900.20	2,900.20	6.38	6.38	89.68	0.28	50.00	50.00	37.24	12.76	3.920	
3,000.00	3,000.00	3,000.20	3,000.20	6.60	6.60	89.68	0.28	50.00	50.00	36.80	13.21	3.786	
3,100.00	3,100.00	3,100.20	3,100.20	6.83	6.83	89.68	0.28	50.00	50.00	36.35	13.65	3.662	
3,200.00	3,200.00	3,200.20	3,200.20	7.05	7.05	89.68	0.28	50.00	50.00	35.90	14.10	3.545	
3,300.00	3,300.00	3,300.20	3,300.20	7.28	7.28	89.68	0.28	50.00	50.00	35.45	14.55	3.436	
3,400.00	3,400.00	3,400.20	3,400.20	7.50	7.50	89.68	0.28	50.00	50.00	35.00	15.00	3.333	
3,500.00	3,500.00	3,500.20	3,500.20	7.73	7.73	89.68	0.28	50.00	50.00	34.55	15.45	3.236	
3,600.00	3,600.00	3,600.20	3,600.20	7.95	7.95	89.68	0.28	50.00	50.00	34.10	15.90	3.144	
3,700.00	3,700.00	3,700.20	3,700.20	8.18	8.18	89.68	0.28	50.00	50.00	33.65	16.35	3.058	
3,800.00	3,800.00	3,800.20	3,800.20	8.40	8.40	89.68	0.28	50.00	50.00	33.20	16.80	2.976	
3,900.00	3,900.00	3,900.20	3,900.20	8.63	8.63	89.68	0.28	50.00	50.00	32.75	17.25	2.898	
4,000.00	4,000.00	4,000.20	4,000.20	8.85	8.85	89.68	0.28	50.00	50.00	32.30	17.70	2.825	
4,100.00	4,100.00	4,100.20	4,100.20	9.07	9.08	89.68	0.28	50.00	50.00	31.85	18.15	2.755	
4,200.00	4,200.00	4,200.20	4,200.20	9.30	9.30	89.68	0.28	50.00	50.00	31.40	18.60	2.688	
4,300.00	4,300.00	4,300.20	4,300.20	9.52	9.52	89.68	0.28	50.00	50.00	30.95	19.05	2.625	
4,400.00	4,400.00	4,400.20	4,400.20	9.75	9.75	89.68	0.28	50.00	50.00	30.50	19.50	2.564	
4,500.00	4,500.00	4,500.20	4,500.20	9.97	9.97	89.68	0.28	50.00	50.00	30.05	19.95	2.507	
4,600.00	4,600.00	4,600.20	4,600.20	10.20	10.20	89.68	0.28	50.00	50.00	29.60	20.40	2.451	
4,700.00	4,700.00	4,700.20	4,700.20	10.42	10.42	89.68	0.28	50.00	50.00	29.15	20.85	2.398	
4,800.00	4,800.00	4,800.20	4,800.20	10.65	10.65	89.68	0.28	50.00	50.00	28.70	21.30	2.348	
4,900.00	4,900.00	4,900.20	4,900.20	10.87	10.87	89.68	0.28	50.00	50.00	28.25	21.75	2.299	
5,000.00	5,000.00	5,000.20	5,000.20	11.10	11.10	89.68	0.28	50.00	50.00	27.80	22.20	2.253	
5,100.00	5,100.00	5,100.20	5,100.20	11.32	11.32	89.68	0.28	50.00	50.00	27.36	22.65	2.208	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	**Local Co-ordinate Reference:**	Well 10H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3645' GL + 25' RKB @ 3670.00usft
Reference Site:	Sea Snake 35 State	**MD Reference:**	3645' GL + 25' RKB @ 3670.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Sea Snake 35 State - 8H - OH - Plan #1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-LEAM MWD-ADJ — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,200.00	5,200.00	5,200.20	5,200.20	11.55	11.55	89.68	0.28	50.00	50.00	26.91	23.10	2.165	
5,300.00	5,300.00	5,300.47	5,300.46	11.77	11.74	91.16	-1.01	49.71	49.72	26.21	23.52	2.115	
5,400.00	5,400.00	5,400.60	5,400.51	12.00	11.91	95.68	-4.86	48.86	49.10	25.20	23.91	2.054	
5,490.73	5,490.73	5,491.21	5,490.93	12.20	12.07	102.50	-10.55	47.60	48.75	24.49	24.26	2.009	CC
5,500.00	5,500.00	5,500.45	5,500.14	12.22	12.08	103.34	-11.25	47.44	48.76	24.46	24.30	2.007	ES, SF
5,600.00	5,600.00	5,600.07	5,599.39	12.45	12.25	113.25	-19.59	45.60	49.63	24.94	24.70	2.010	
5,700.00	5,700.00	5,699.69	5,698.63	12.67	12.43	122.70	-28.07	43.72	51.97	26.88	25.10	2.071	
5,800.00	5,800.00	5,799.31	5,797.87	12.90	12.60	131.14	-36.54	41.84	55.60	30.10	25.50	2.180	
5,900.00	5,900.00	5,898.93	5,897.11	13.12	12.78	138.41	-45.02	39.96	60.27	34.37	25.90	2.327	
6,000.00	6,000.00	5,998.55	5,996.35	13.35	12.97	144.56	-53.50	38.08	65.78	39.47	26.31	2.500	
6,100.00	6,100.00	6,098.16	6,095.59	13.57	13.16	149.71	-61.97	36.20	71.92	45.20	26.72	2.692	
6,200.00	6,200.00	6,197.78	6,194.83	13.80	13.35	154.03	-70.45	34.32	78.55	51.42	27.13	2.895	
6,300.00	6,300.00	6,297.40	6,294.07	14.02	13.54	157.66	-78.93	32.44	85.55	58.01	27.54	3.107	
6,400.00	6,400.00	6,397.02	6,393.31	14.24	13.74	160.73	-87.40	30.56	92.85	64.90	27.95	3.322	
6,500.00	6,500.00	6,496.64	6,492.55	14.47	13.94	163.35	-95.88	28.68	100.37	72.01	28.36	3.539	
6,600.00	6,600.00	6,596.26	6,591.79	14.69	14.14	165.60	-104.36	26.80	108.07	79.30	28.77	3.756	
6,700.00	6,700.00	6,695.88	6,691.03	14.92	14.35	167.54	-112.83	24.92	115.91	86.73	29.19	3.971	
6,800.00	6,800.00	6,795.50	6,790.28	15.14	14.55	169.24	-121.31	23.04	123.88	94.27	29.60	4.185	
6,900.00	6,900.00	6,895.12	6,889.52	15.37	14.76	170.74	-129.78	21.17	131.93	101.91	30.02	4.395	
7,000.00	7,000.00	6,994.74	6,988.76	15.59	14.97	172.06	-138.26	19.29	140.07	109.63	30.44	4.602	
7,100.00	7,100.00	7,094.36	7,088.00	15.82	15.19	173.23	-146.74	17.41	148.27	117.42	30.85	4.806	
7,200.00	7,200.00	7,193.98	7,187.24	16.04	15.40	174.29	-155.21	15.53	156.53	125.25	31.27	5.005	
7,300.00	7,300.00	7,293.60	7,286.48	16.27	15.62	175.23	-163.69	13.65	164.83	133.14	31.69	5.201	
7,400.00	7,400.00	7,395.94	7,388.47	16.49	15.85	176.06	-171.90	11.83	172.71	140.58	32.13	5.376	
7,500.00	7,500.00	7,500.38	7,492.74	16.72	16.09	176.61	-177.73	10.54	178.20	145.62	32.58	5.469	
7,600.00	7,600.00	7,605.08	7,597.39	16.94	16.32	176.88	-180.78	9.86	181.07	148.03	33.04	5.481	
7,700.00	7,700.00	7,707.90	7,700.20	17.17	16.53	176.92	-181.26	9.75	181.53	148.05	33.47	5.423	
7,800.00	7,800.00	7,807.90	7,800.20	17.39	16.75	176.92	-181.26	9.75	181.53	147.61	33.92	5.352	
7,900.00	7,900.00	7,907.90	7,900.20	17.62	16.97	176.92	-181.26	9.75	181.53	147.16	34.36	5.283	
8,000.00	8,000.00	8,007.90	8,000.20	17.84	17.18	176.92	-181.26	9.75	181.53	146.72	34.80	5.216	
8,100.00	8,100.00	8,107.90	8,100.20	18.07	17.40	176.92	-181.26	9.75	181.53	146.28	35.25	5.150	
8,200.00	8,200.00	8,207.90	8,200.20	18.29	17.61	176.92	-181.26	9.75	181.53	145.83	35.69	5.086	
8,300.00	8,300.00	8,307.90	8,300.20	18.52	17.83	176.92	-181.26	9.75	181.53	145.39	36.14	5.023	
8,400.00	8,400.00	8,407.90	8,400.20	18.74	18.05	176.92	-181.26	9.75	181.53	144.94	36.58	4.962	
8,500.00	8,500.00	8,507.90	8,500.20	18.96	18.26	176.92	-181.26	9.75	181.53	144.50	37.03	4.902	
8,600.00	8,600.00	8,607.90	8,600.20	19.19	18.48	176.92	-181.26	9.75	181.53	144.05	37.47	4.844	
8,700.00	8,700.00	8,707.90	8,700.20	19.41	18.70	176.92	-181.26	9.75	181.53	143.61	37.92	4.787	
8,800.00	8,800.00	8,807.90	8,800.20	19.64	18.91	176.92	-181.26	9.75	181.53	143.16	38.36	4.732	
8,900.00	8,900.00	8,907.90	8,900.20	19.86	19.13	176.92	-181.26	9.75	181.53	142.72	38.81	4.678	
9,000.00	9,000.00	9,007.90	9,000.20	20.09	19.35	176.92	-181.26	9.75	181.53	142.27	39.25	4.624	
9,107.06	9,107.06	9,114.96	9,107.26	20.33	19.58	176.92	-181.26	9.75	181.53	141.80	39.73	4.569	
9,150.00	9,149.96	9,157.86	9,150.16	20.43	19.68	176.10	-181.26	9.75	183.13	143.31	39.82	4.599	
9,200.00	9,199.59	9,207.49	9,199.79	20.54	19.78	176.18	-181.26	9.75	189.03	149.31	39.72	4.759	
9,250.00	9,248.52	9,256.42	9,248.72	20.65	19.89	176.31	-181.26	9.75	199.23	159.83	39.39	5.057	
9,300.00	9,296.37	9,304.27	9,296.57	20.76	20.00	176.47	-181.26	9.75	213.64	174.80	38.85	5.500	
9,350.00	9,342.79	9,350.68	9,342.99	20.87	20.10	176.64	-181.26	9.75	232.17	194.08	38.09	6.095	
9,400.00	9,387.40	9,395.30	9,387.60	20.97	20.19	176.80	-181.26	9.75	254.67	217.54	37.14	6.858	
9,450.00	9,429.89	9,437.78	9,430.09	21.08	20.29	176.94	-181.26	9.75	280.98	244.98	36.00	7.804	
9,500.00	9,469.91	9,522.32	9,514.34	21.21	20.45	177.31	-175.32	9.82	308.14	273.35	34.80	8.856	
9,550.00	9,507.18	9,621.85	9,611.10	21.35	20.62	177.63	-152.57	10.10	332.11	298.63	33.48	9.918	
9,600.00	9,541.40	9,736.13	9,715.39	21.51	20.77	177.89	-106.31	10.66	351.62	319.52	32.10	10.953	
9,650.00	9,572.31	9,864.80	9,819.17	21.69	20.93	178.07	-30.71	11.57	365.24	334.56	30.68	11.904	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	**Local Co-ordinate Reference:**	Well 10H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3645' GL + 25' RKB @ 3670.00usft
Reference Site:	Sea Snake 35 State	**MD Reference:**	3645' GL + 25' RKB @ 3670.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Sea Snake 35 State - 8H - OH - Plan #1 — **Offset Site Error:** 0.00 usft

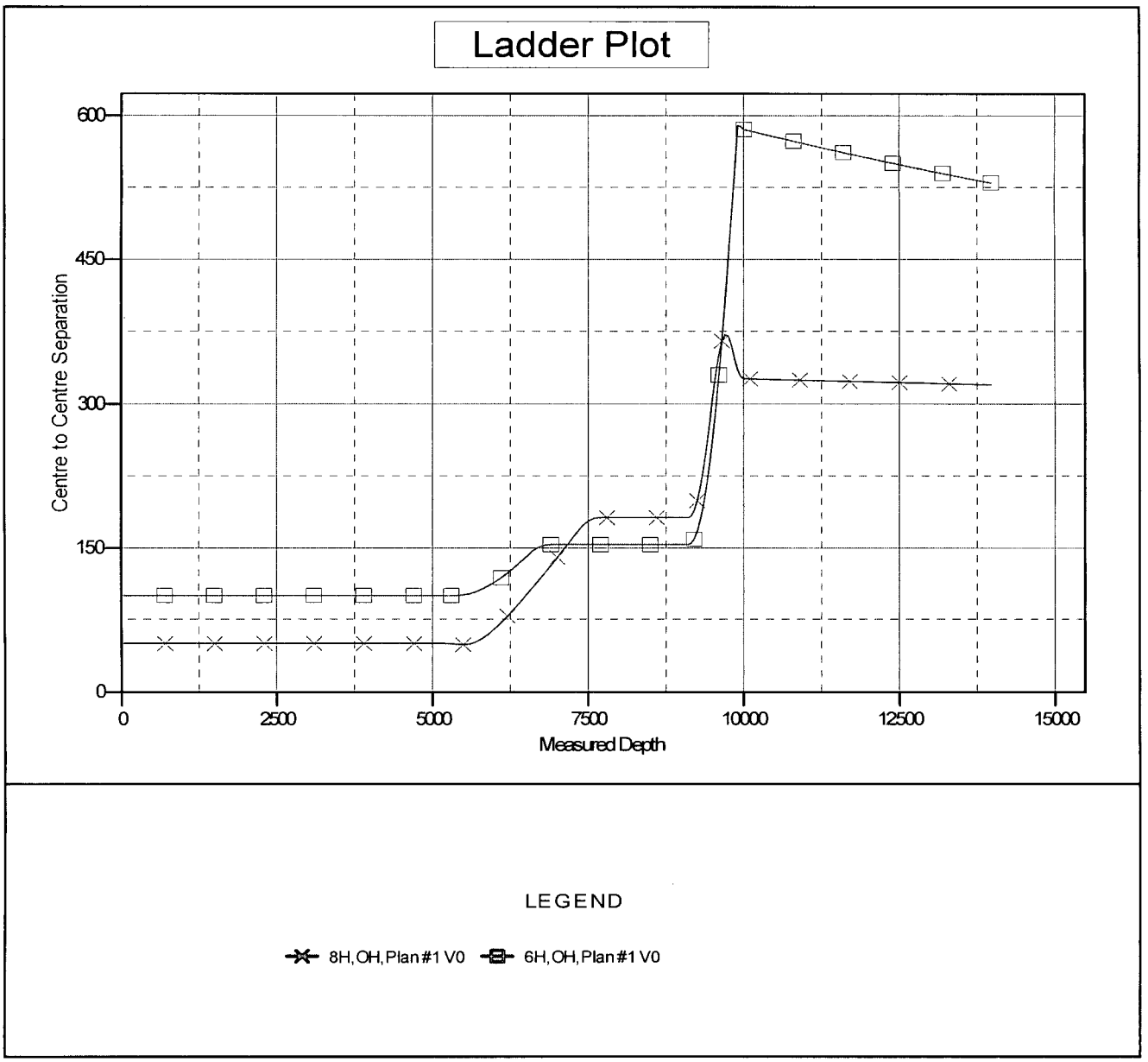
Survey Program: 0-LEAM MWD-ADJ — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,700.00	9,599.69	10,003.91	9,909.37	21.89	21.18	178.19	74.74	12.84	371.66	342.40	29.27	12.699	
9,750.00	9,623.31	10,145.83	9,972.51	22.12	21.63	178.22	201.43	14.37	370.15	342.23	27.92	13.258	
9,800.00	9,643.01	10,281.74	10,002.08	22.38	22.26	178.18	333.75	15.96	360.88	334.17	26.71	13.510	
9,850.00	9,658.63	10,363.70	10,005.17	22.66	22.75	178.14	415.60	16.95	346.52	320.86	25.66	13.505	
9,900.00	9,670.04	10,412.43	10,005.46	22.97	23.07	178.14	464.32	17.54	335.39	310.54	24.85	13.497	
9,950.00	9,677.18	10,461.94	10,005.76	23.31	23.44	178.15	513.83	18.13	328.55	304.15	24.41	13.461	
10,002.74	9,680.00	10,514.60	10,006.07	23.69	23.84	178.16	566.49	18.77	326.04	301.67	24.38	13.375	
10,100.00	9,680.74	10,611.86	10,006.66	24.48	24.69	178.21	663.74	19.94	325.89	301.01	24.88	13.099	
10,200.00	9,681.49	10,711.86	10,007.26	25.38	25.65	178.25	763.73	21.15	325.73	300.26	25.47	12.790	
10,300.00	9,682.24	10,811.86	10,007.86	26.39	26.71	178.30	863.72	22.35	325.57	299.44	26.13	12.461	
10,400.00	9,683.00	10,911.86	10,008.46	27.48	27.85	178.34	963.71	23.56	325.41	298.55	26.85	12.119	
10,500.00	9,683.75	11,011.86	10,009.06	28.64	29.05	178.39	1,063.70	24.76	325.24	297.61	27.63	11.770	
10,600.00	9,684.51	11,111.86	10,009.67	29.87	30.32	178.43	1,163.69	25.97	325.08	296.61	28.47	11.418	
10,700.00	9,685.26	11,211.86	10,010.27	31.16	31.64	178.48	1,263.68	27.17	324.92	295.57	29.36	11.068	
10,800.00	9,686.02	11,311.86	10,010.87	32.49	33.01	178.53	1,363.67	28.38	324.76	294.48	30.29	10.722	
10,900.00	9,686.77	11,411.86	10,011.47	33.88	34.42	178.57	1,463.67	29.58	324.61	293.34	31.26	10.383	
11,000.00	9,687.53	11,511.86	10,012.07	35.30	35.87	178.62	1,563.66	30.79	324.45	292.17	32.27	10.053	
11,100.00	9,688.28	11,611.86	10,012.67	36.76	37.36	178.66	1,663.65	32.00	324.29	290.97	33.32	9.734	
11,200.00	9,689.04	11,711.86	10,013.27	38.25	38.87	178.71	1,763.64	33.20	324.13	289.74	34.39	9.425	
11,300.00	9,689.79	11,811.86	10,013.88	39.77	40.40	178.75	1,863.63	34.41	323.97	288.47	35.49	9.127	
11,400.00	9,690.54	11,911.86	10,014.48	41.31	41.96	178.80	1,963.62	35.61	323.81	287.19	36.62	8.842	
11,500.00	9,691.30	12,011.85	10,015.08	42.88	43.55	178.85	2,063.61	36.82	323.65	285.88	37.77	8.568	
11,600.00	9,692.05	12,111.85	10,015.68	44.46	45.14	178.89	2,163.60	38.02	323.49	284.55	38.95	8.306	
11,700.00	9,692.81	12,211.85	10,016.28	46.06	46.76	178.94	2,263.59	39.23	323.34	283.20	40.14	8.055	
11,800.00	9,693.56	12,311.85	10,016.88	47.68	48.39	178.98	2,363.58	40.43	323.18	281.83	41.35	7.816	
11,900.00	9,694.32	12,411.85	10,017.49	49.31	50.03	179.03	2,463.57	41.64	323.02	280.45	42.57	7.587	
12,000.00	9,695.07	12,511.85	10,018.09	50.96	51.69	179.08	2,563.56	42.84	322.86	279.05	43.81	7.369	
12,100.00	9,695.83	12,611.85	10,018.69	52.62	53.36	179.12	2,663.55	44.05	322.71	277.64	45.07	7.161	
12,200.00	9,696.58	12,711.85	10,019.29	54.28	55.03	179.17	2,763.54	45.26	322.55	276.22	46.33	6.961	
12,300.00	9,697.33	12,811.85	10,019.89	55.96	56.72	179.22	2,863.53	46.46	322.39	274.78	47.61	6.771	
12,400.00	9,698.09	12,911.85	10,020.49	57.65	58.41	179.26	2,963.52	47.67	322.24	273.34	48.90	6.590	
12,500.00	9,698.84	13,011.85	10,021.09	59.34	60.12	179.31	3,063.51	48.87	322.08	271.88	50.20	6.416	
12,600.00	9,699.60	13,111.85	10,021.70	61.04	61.82	179.35	3,163.50	50.08	321.92	270.42	51.50	6.251	
12,700.00	9,700.35	13,211.85	10,022.30	62.75	63.54	179.40	3,263.49	51.28	321.77	268.95	52.82	6.092	
12,800.00	9,701.11	13,311.85	10,022.90	64.47	65.26	179.45	3,363.48	52.49	321.61	267.47	54.14	5.940	
12,900.00	9,701.86	13,411.85	10,023.50	66.19	66.99	179.49	3,463.47	53.69	321.46	265.99	55.47	5.795	
13,000.00	9,702.62	13,511.85	10,024.10	67.91	68.72	179.54	3,563.46	54.90	321.30	264.49	56.81	5.656	
13,100.00	9,703.37	13,611.85	10,024.70	69.64	70.45	179.59	3,663.46	56.10	321.15	263.00	58.15	5.523	
13,200.00	9,704.13	13,711.85	10,025.30	71.38	72.19	179.63	3,763.45	57.31	320.99	261.49	59.50	5.395	
13,300.00	9,704.88	13,811.85	10,025.91	73.12	73.94	179.68	3,863.44	58.52	320.84	259.98	60.85	5.272	
13,400.00	9,705.63	13,911.85	10,026.51	74.86	75.69	179.73	3,963.43	59.72	320.68	258.47	62.21	5.155	
13,500.00	9,706.39	14,011.85	10,027.11	76.61	77.44	179.77	4,063.42	60.93	320.53	256.95	63.58	5.041	
13,600.00	9,707.14	14,111.85	10,027.71	78.36	79.19	179.82	4,163.41	62.13	320.38	255.43	64.95	4.933	
13,700.00	9,707.90	14,211.84	10,028.31	80.12	80.95	179.87	4,263.40	63.34	320.22	253.90	66.32	4.828	
13,800.00	9,708.65	14,311.84	10,028.91	81.87	82.71	179.92	4,363.39	64.54	320.07	252.37	67.70	4.728	
13,900.00	9,709.41	14,411.84	10,029.52	83.63	84.44	179.96	4,463.38	65.75	319.91	250.87	69.04	4.634	
13,978.68	9,710.00	14,490.52	10,029.99	85.02	85.57	180.00	4,542.05	66.70	319.79	249.93	69.86	4.578	

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

Company:	DEVON ENERGY	**Local Co-ordinate Reference:**	Well 10H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3645' GL + 25' RKB @ 3670.00usft
Reference Site:	Sea Snake 35 State	**MD Reference:**	3645' GL + 25' RKB @ 3670.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to 3645' GL + 25' RKB @ 3670.00usft	Coordinates are relative to: 10H
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Central Meridian is 104° 20' 0.000 W	Grid Convergence at Surface is: 0.43°



Company:	DEVON ENERGY	**Local Co-ordinate Reference:**	Well 10H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3645' GL + 25' RKB @ 3670.00usft
Reference Site:	Sea Snake 35 State	**MD Reference:**	3645' GL + 25' RKB @ 3670.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to 3645' GL + 25' RKB @ 3670.00usft	Coordinates are relative to: 10H
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Central Meridian is 104° 20' 0.000 W	Grid Convergence at Surface is: 0.43°