

Devon Energy, Sea Snake 35 State 8H

1. Geologic Formations

TVD of target	10,030'	Pilot hole depth	N/A
MD at TD:	14,492'	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.

AUG 31 2015

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2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
	From	To							
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	14,492'	5.5"	17	P-110	BTC	1.77	2.19	3.60
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 3 rd 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 2 nd 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?	

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3. Cementing Program

Casing	# Sk	Wt. lb/ gal	H ₂ O gal/sk	Yld ft ³ / 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	610	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
	1340	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	580	11.9	12.89	2.31	n/a	1 st 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
	1340	14.5	5.31	1.2	25	1 st 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	2 nd Stage Lead: Tuned Light® Cement + 0.125 lb/sk Pol-E-Flake
	30	14.8	6.32	1.33	6	2 nd 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	1 st Stage = 5250ft / 2 nd Stage = 5000'	25%

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4. Pressure Control Equipment

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

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	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'	14,492'	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
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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	

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7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	4,851 psi
Abnormal Temperature	No

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

Hydrogen Sulfide (H ₂ S) monitors will be installed prior to drilling out the surface shoe. If H ₂ S 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	H ₂ S is present
Y	H ₂ S Plan attached

8. Other facets of operation

Is this a walking operation? Yes.

Will be pre-setting casing? No.

Attachments

☒ Directional Plan

☐ Other, describe

DEVON ENERGY

Project: Lea County, NM (NAD-83)
Site: Sea Snake 35 State
Well: 8H
Wellbore: OH
Design: Plan #1

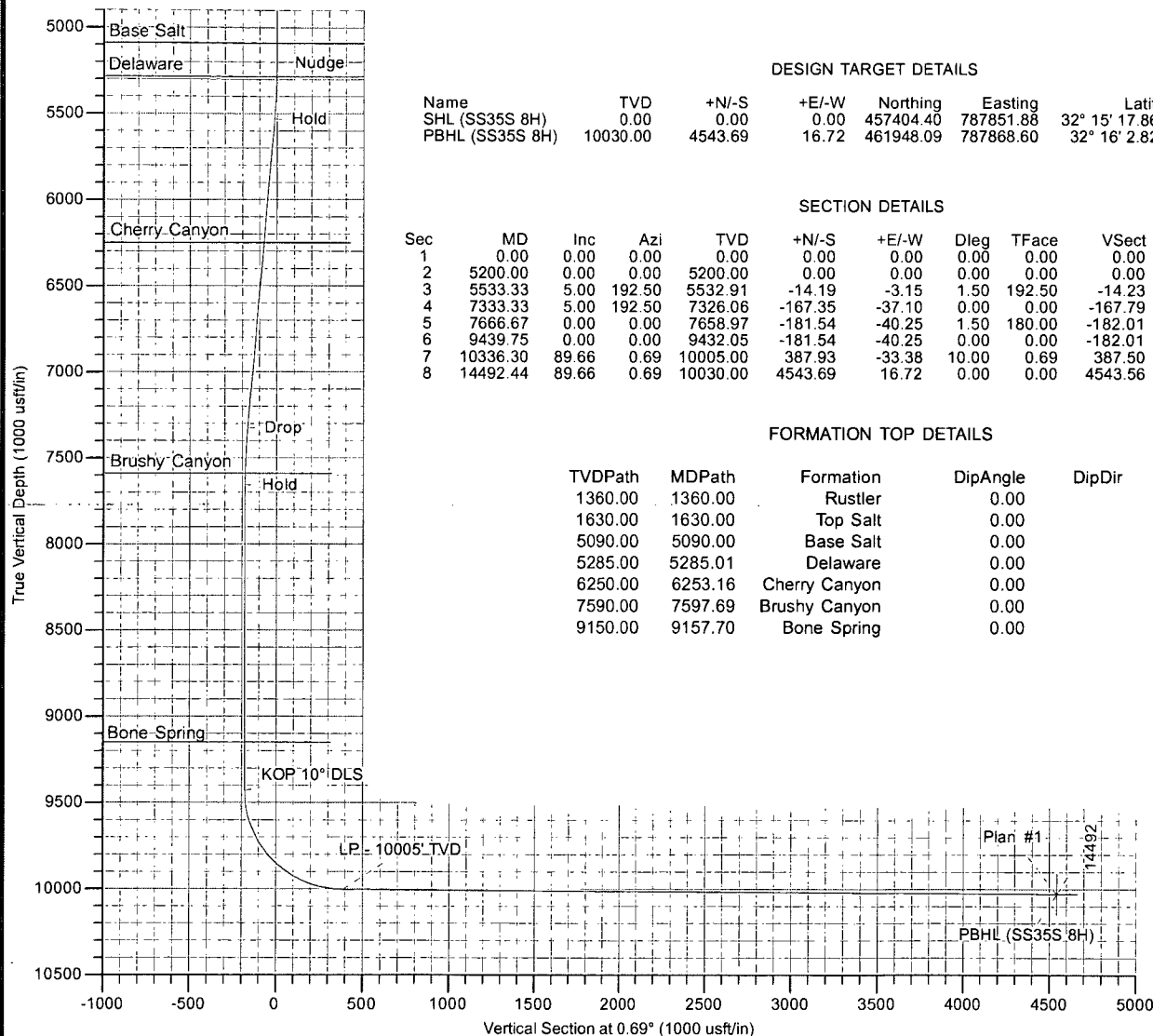


Azimuths to Grid North
True North: -0.43°
Magnetic North: 6.80°

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

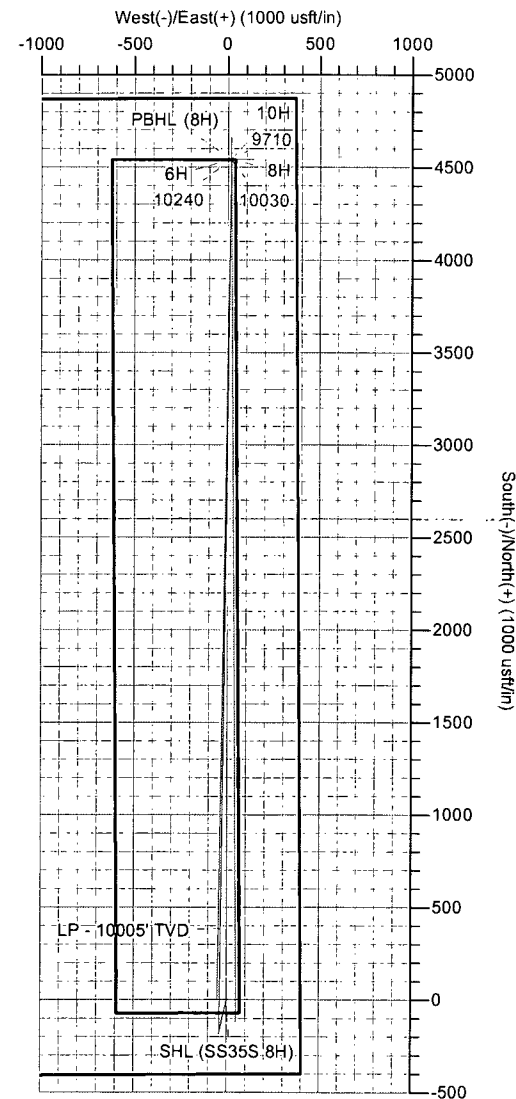
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL (SS35S 8H)	0.00	0.00	0.00	457404.40	787851.88	32° 15' 17.867 N	103° 32' 9.210 W
PBHL (SS35S 8H)	10030.00	4543.69	16.72	461948.09	787868.60	32° 16' 2.826 N	103° 32' 8.622 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	5200.00	0.00	0.00	5200.00	0.00	0.00	0.00	0.00	0.00	Nudge
3	5533.33	5.00	192.50	5532.91	-14.19	-3.15	1.50	192.50	-14.23	Hold
4	7333.33	5.00	192.50	7326.06	-167.35	-37.10	0.00	0.00	-167.79	Drop
5	7666.67	0.00	0.00	7658.97	-181.54	-40.25	1.50	180.00	-182.01	Hold
6	9439.75	0.00	0.00	9432.05	-181.54	-40.25	0.00	0.00	-182.01	KOP 10° DLS
7	10336.30	89.66	0.69	10005.00	387.93	-33.38	10.00	0.69	387.50	LP - 10005' TVD
8	14492.44	89.66	0.69	10030.00	4543.69	16.72	0.00	0.00	4543.56	TD - 10030' 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	5285.01	Delaware	0.00	
6250.00	6253.16	Cherry Canyon	0.00	
7590.00	7597.69	Brushy Canyon	0.00	
9150.00	9157.70	Bone Spring	0.00	



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

Plan: Plan #1 (8H/OH)
Sea Snake 35 State
Created By: Brady Deaver Date: 9/24, July 28 2015
Date: _____
Approved: _____ Date: _____

DEVON ENERGY

Lea County, NM (NAD-83)

Sea Snake 35 State

8H

OH

Plan: Plan #1

Standard Planning Report

28 July, 2015

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 8H
Company:	DEVON ENERGY	TVD Reference:	3645.2' + 25' RKB @ 3670.20usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3645.2' + 25' RKB @ 3670.20usft
Site:	Sea Snake 35 State	North Reference:	Grid
Well:	8H	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
From:	Map	Easting:	786,121.75 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 15' 15.916 N
		Longitude:	103° 32' 29.374 W
		Grid Convergence:	0.42 °

Well	8H		
Well Position	+N/-S	209.99 usft	Northing:
	+E/-W	1,730.13 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	3,670.20 usft
		Latitude:	32° 15' 17.867 N
		Longitude:	103° 32' 9.210 W
		Ground Level:	3,645.20 usft

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

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			0.69

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	
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,533.33	5.00	192.50	5,532.91	-14.19	-3.15	1.50	1.50	0.00	192.50	
7,333.33	5.00	192.50	7,326.06	-167.35	-37.10	0.00	0.00	0.00	0.00	
7,666.67	0.00	0.00	7,658.97	-181.54	-40.25	1.50	-1.50	0.00	180.00	
9,439.75	0.00	0.00	9,432.05	-181.54	-40.25	0.00	0.00	0.00	0.00	
10,336.30	89.66	0.69	10,005.00	387.93	-33.38	10.00	10.00	0.08	0.69	
14,492.44	89.66	0.69	10,030.00	4,543.69	16.72	0.00	0.00	0.00	0.00	PBHL (SS35S 8H)

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 8H
Company:	DEVON ENERGY	TVD Reference:	3645.2' + 25' RKB @ 3670.20usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3645.2' + 25' RKB @ 3670.20usft
Site:	Sea Snake 35 State	North Reference:	Grid
Well:	8H	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 8H)									
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

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 8H
Company:	DEVON ENERGY	TVD Reference:	3645.2' + 25' RKB @ 3670.20usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3645.2' + 25' RKB @ 3670.20usft
Site:	Sea Snake 35 State	North Reference:	Grid
Well:	8H	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
Nudge									
5,285.01	1.28	192.50	5,285.00	-0.92	-0.20	-0.93	1.50	1.50	0.00
Delaware									
5,300.00	1.50	192.50	5,299.99	-1.28	-0.28	-1.28	1.50	1.50	0.00
5,400.00	3.00	192.50	5,399.91	-5.11	-1.13	-5.12	1.50	1.50	0.00
5,500.00	4.50	192.50	5,499.69	-11.50	-2.55	-11.53	1.50	1.50	0.00
5,533.33	5.00	192.50	5,532.91	-14.19	-3.15	-14.23	1.50	1.50	0.00
Hold									
5,600.00	5.00	192.50	5,599.32	-19.86	-4.40	-19.91	0.00	0.00	0.00
5,700.00	5.00	192.50	5,698.94	-28.37	-6.29	-28.45	0.00	0.00	0.00
5,800.00	5.00	192.50	5,798.56	-36.88	-8.18	-36.98	0.00	0.00	0.00
5,900.00	5.00	192.50	5,898.18	-45.39	-10.06	-45.51	0.00	0.00	0.00
6,000.00	5.00	192.50	5,997.80	-53.90	-11.95	-54.04	0.00	0.00	0.00
6,100.00	5.00	192.50	6,097.42	-62.41	-13.84	-62.57	0.00	0.00	0.00
6,200.00	5.00	192.50	6,197.04	-70.92	-15.72	-71.10	0.00	0.00	0.00
6,253.16	5.00	192.50	6,250.00	-75.44	-16.72	-75.64	0.00	0.00	0.00
Cherry Canyon									
6,300.00	5.00	192.50	6,296.66	-79.43	-17.61	-79.63	0.00	0.00	0.00
6,400.00	5.00	192.50	6,396.28	-87.94	-19.49	-88.16	0.00	0.00	0.00
6,500.00	5.00	192.50	6,495.90	-96.44	-21.38	-96.69	0.00	0.00	0.00
6,600.00	5.00	192.50	6,595.52	-104.95	-23.27	-105.23	0.00	0.00	0.00
6,700.00	5.00	192.50	6,695.14	-113.46	-25.15	-113.76	0.00	0.00	0.00
6,800.00	5.00	192.50	6,794.76	-121.97	-27.04	-122.29	0.00	0.00	0.00
6,900.00	5.00	192.50	6,894.38	-130.48	-28.93	-130.82	0.00	0.00	0.00
7,000.00	5.00	192.50	6,994.00	-138.99	-30.81	-139.35	0.00	0.00	0.00
7,100.00	5.00	192.50	7,093.62	-147.50	-32.70	-147.88	0.00	0.00	0.00
7,200.00	5.00	192.50	7,193.24	-156.01	-34.59	-156.41	0.00	0.00	0.00
7,300.00	5.00	192.50	7,292.85	-164.52	-36.47	-164.94	0.00	0.00	0.00
7,333.33	5.00	192.50	7,326.06	-167.35	-37.10	-167.79	0.00	0.00	0.00
Drop									
7,400.00	4.00	192.50	7,392.52	-172.46	-38.23	-172.91	1.50	-1.50	0.00
7,500.00	2.50	192.50	7,492.36	-177.99	-39.46	-178.46	1.50	-1.50	0.00
7,597.69	1.03	192.50	7,590.00	-180.93	-40.11	-181.40	1.50	-1.50	0.00
Brushy Canyon									
7,600.00	1.00	192.50	7,592.31	-180.97	-40.12	-181.44	1.50	-1.50	0.00
7,666.67	0.00	0.00	7,658.97	-181.54	-40.25	-182.01	1.50	-1.50	0.00
Hold									
7,700.00	0.00	0.00	7,692.30	-181.54	-40.25	-182.01	0.00	0.00	0.00
7,800.00	0.00	0.00	7,792.30	-181.54	-40.25	-182.01	0.00	0.00	0.00
7,900.00	0.00	0.00	7,892.30	-181.54	-40.25	-182.01	0.00	0.00	0.00
8,000.00	0.00	0.00	7,992.30	-181.54	-40.25	-182.01	0.00	0.00	0.00
8,100.00	0.00	0.00	8,092.30	-181.54	-40.25	-182.01	0.00	0.00	0.00
8,200.00	0.00	0.00	8,192.30	-181.54	-40.25	-182.01	0.00	0.00	0.00
8,300.00	0.00	0.00	8,292.30	-181.54	-40.25	-182.01	0.00	0.00	0.00
8,400.00	0.00	0.00	8,392.30	-181.54	-40.25	-182.01	0.00	0.00	0.00
8,500.00	0.00	0.00	8,492.30	-181.54	-40.25	-182.01	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 8H
Company:	DEVON ENERGY	TVD Reference:	3645.2' + 25' RKB @ 3670.20usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3645.2' + 25' RKB @ 3670.20usft
Site:	Sea Snake 35 State	North Reference:	Grid
Well:	8H	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)
8,600.00	0.00	0.00	8,592.30	-181.54	-40.25	-182.01	0.00	0.00	0.00
8,700.00	0.00	0.00	8,692.30	-181.54	-40.25	-182.01	0.00	0.00	0.00
8,800.00	0.00	0.00	8,792.30	-181.54	-40.25	-182.01	0.00	0.00	0.00
8,900.00	0.00	0.00	8,892.30	-181.54	-40.25	-182.01	0.00	0.00	0.00
9,000.00	0.00	0.00	8,992.30	-181.54	-40.25	-182.01	0.00	0.00	0.00
9,100.00	0.00	0.00	9,092.30	-181.54	-40.25	-182.01	0.00	0.00	0.00
9,157.70	0.00	0.00	9,150.00	-181.54	-40.25	-182.01	0.00	0.00	0.00
Bone Spring									
9,200.00	0.00	0.00	9,192.30	-181.54	-40.25	-182.01	0.00	0.00	0.00
9,300.00	0.00	0.00	9,292.30	-181.54	-40.25	-182.01	0.00	0.00	0.00
9,400.00	0.00	0.00	9,392.30	-181.54	-40.25	-182.01	0.00	0.00	0.00
9,439.75	0.00	0.00	9,432.05	-181.54	-40.25	-182.01	0.00	0.00	0.00
KOP 10° DLS									
9,450.00	1.03	0.69	9,442.30	-181.45	-40.25	-181.92	10.00	10.00	0.00
9,500.00	6.03	0.69	9,492.19	-178.38	-40.21	-178.85	10.00	10.00	0.00
9,550.00	11.03	0.69	9,541.63	-170.97	-40.12	-171.44	10.00	10.00	0.00
9,600.00	16.03	0.69	9,590.22	-159.28	-39.98	-159.75	10.00	10.00	0.00
9,650.00	21.03	0.69	9,637.62	-143.40	-39.79	-143.87	10.00	10.00	0.00
9,700.00	26.03	0.69	9,683.45	-123.45	-39.55	-123.92	10.00	10.00	0.00
9,750.00	31.03	0.69	9,727.36	-99.58	-39.26	-100.05	10.00	10.00	0.00
9,800.00	36.03	0.69	9,769.03	-71.98	-38.93	-72.44	10.00	10.00	0.00
9,850.00	41.03	0.69	9,808.14	-40.85	-38.55	-41.31	10.00	10.00	0.00
9,900.00	46.03	0.69	9,844.38	-6.43	-38.14	-6.89	10.00	10.00	0.00
9,950.00	51.03	0.69	9,877.48	31.02	-37.68	30.57	10.00	10.00	0.00
10,000.00	56.03	0.69	9,907.20	71.21	-37.20	70.76	10.00	10.00	0.00
10,050.00	61.03	0.69	9,933.30	113.84	-36.69	113.39	10.00	10.00	0.00
10,100.00	66.03	0.69	9,955.58	158.58	-36.15	158.13	10.00	10.00	0.00
10,150.00	71.03	0.69	9,973.88	205.09	-35.59	204.64	10.00	10.00	0.00
10,200.00	76.03	0.69	9,988.05	253.02	-35.01	252.58	10.00	10.00	0.00
10,250.00	81.03	0.69	9,998.00	302.00	-34.42	301.56	10.00	10.00	0.00
10,300.00	86.03	0.69	10,003.63	351.66	-33.82	351.23	10.00	10.00	0.00
10,336.30	89.66	0.69	10,005.00	387.93	-33.38	387.50	10.00	10.00	0.00
LP - 10005' TVD									
10,400.00	89.66	0.69	10,005.38	451.62	-32.61	451.19	0.00	0.00	0.00
10,500.00	89.66	0.69	10,005.99	551.61	-31.41	551.19	0.00	0.00	0.00
10,600.00	89.66	0.69	10,006.59	651.60	-30.20	651.19	0.00	0.00	0.00
10,700.00	89.66	0.69	10,007.19	751.59	-29.00	751.19	0.00	0.00	0.00
10,800.00	89.66	0.69	10,007.79	851.58	-27.79	851.19	0.00	0.00	0.00
10,900.00	89.66	0.69	10,008.39	951.57	-26.59	951.18	0.00	0.00	0.00
11,000.00	89.66	0.69	10,008.99	1,051.57	-25.38	1,051.18	0.00	0.00	0.00
11,100.00	89.66	0.69	10,009.59	1,151.56	-24.18	1,151.18	0.00	0.00	0.00
11,200.00	89.66	0.69	10,010.20	1,251.55	-22.97	1,251.18	0.00	0.00	0.00
11,300.00	89.66	0.69	10,010.80	1,351.54	-21.76	1,351.18	0.00	0.00	0.00
11,400.00	89.66	0.69	10,011.40	1,451.53	-20.56	1,451.18	0.00	0.00	0.00
11,500.00	89.66	0.69	10,012.00	1,551.52	-19.35	1,551.17	0.00	0.00	0.00
11,600.00	89.66	0.69	10,012.60	1,651.51	-18.15	1,651.17	0.00	0.00	0.00
11,700.00	89.66	0.69	10,013.20	1,751.50	-16.94	1,751.17	0.00	0.00	0.00
11,800.00	89.66	0.69	10,013.80	1,851.49	-15.74	1,851.17	0.00	0.00	0.00
11,900.00	89.66	0.69	10,014.41	1,951.48	-14.53	1,951.17	0.00	0.00	0.00
12,000.00	89.66	0.69	10,015.01	2,051.47	-13.33	2,051.17	0.00	0.00	0.00
12,100.00	89.66	0.69	10,015.61	2,151.47	-12.12	2,151.16	0.00	0.00	0.00
12,200.00	89.66	0.69	10,016.21	2,251.46	-10.92	2,251.16	0.00	0.00	0.00
12,300.00	89.66	0.69	10,016.81	2,351.45	-9.71	2,351.16	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 8H
Company:	DEVON ENERGY	TVD Reference:	3645.2' + 25' RKB @ 3670.20usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3645.2' + 25' RKB @ 3670.20usft
Site:	Sea Snake 35 State	North Reference:	Grid
Well:	8H	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)	
12,400.00	89.66	0.69	10,017.41	2,451.44	-8.50	2,451.16	0.00	0.00	0.00	
12,500.00	89.66	0.69	10,018.02	2,551.43	-7.30	2,551.16	0.00	0.00	0.00	
12,600.00	89.66	0.69	10,018.62	2,651.42	-6.09	2,651.15	0.00	0.00	0.00	
12,700.00	89.66	0.69	10,019.22	2,751.41	-4.89	2,751.15	0.00	0.00	0.00	
12,800.00	89.66	0.69	10,019.82	2,851.40	-3.68	2,851.15	0.00	0.00	0.00	
12,900.00	89.66	0.69	10,020.42	2,951.39	-2.48	2,951.15	0.00	0.00	0.00	
13,000.00	89.66	0.69	10,021.02	3,051.38	-1.27	3,051.15	0.00	0.00	0.00	
13,100.00	89.66	0.69	10,021.62	3,151.37	-0.07	3,151.15	0.00	0.00	0.00	
13,200.00	89.66	0.69	10,022.23	3,251.37	1.14	3,251.14	0.00	0.00	0.00	
13,300.00	89.66	0.69	10,022.83	3,351.36	2.35	3,351.14	0.00	0.00	0.00	
13,400.00	89.66	0.69	10,023.43	3,451.35	3.55	3,451.14	0.00	0.00	0.00	
13,500.00	89.66	0.69	10,024.03	3,551.34	4.76	3,551.14	0.00	0.00	0.00	
13,600.00	89.66	0.69	10,024.63	3,651.33	5.96	3,651.14	0.00	0.00	0.00	
13,700.00	89.66	0.69	10,025.23	3,751.32	7.17	3,751.13	0.00	0.00	0.00	
13,800.00	89.66	0.69	10,025.84	3,851.31	8.37	3,851.13	0.00	0.00	0.00	
13,900.00	89.66	0.69	10,026.44	3,951.30	9.58	3,951.13	0.00	0.00	0.00	
14,000.00	89.66	0.69	10,027.04	4,051.29	10.78	4,051.13	0.00	0.00	0.00	
14,100.00	89.66	0.69	10,027.64	4,151.28	11.99	4,151.13	0.00	0.00	0.00	
14,200.00	89.66	0.69	10,028.24	4,251.27	13.19	4,251.13	0.00	0.00	0.00	
14,300.00	89.66	0.69	10,028.84	4,351.27	14.40	4,351.12	0.00	0.00	0.00	
14,400.00	89.66	0.69	10,029.44	4,451.26	15.61	4,451.12	0.00	0.00	0.00	
14,492.44	89.66	0.69	10,030.00	4,543.69	16.72	4,543.56	0.00	0.00	0.00	
TD - 10030' TVD - PBHL (SS35S 8H)										

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
SHL (SS35S 8H)	0.00	0.00	0.00	0.00	0.00	457,404.40	787,851.88	32° 15' 17.867 N	103° 32' 9.210 W
- plan hits target center									
- Point									
PBHL (SS35S 8H)	0.00	0.00	10,030.00	4,543.69	16.72	461,948.09	787,868.60	32° 16' 2.826 N	103° 32' 8.622 W
- plan hits target center									
- Point									

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		
5,285.01	5,285.00	Delaware		0.00		
6,253.16	6,250.00	Cherry Canyon		0.00		
7,597.69	7,590.00	Brushy Canyon		0.00		
9,157.70	9,150.00	Bone Spring		0.00		

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 8H
Company:	DEVON ENERGY	TVD Reference:	3645.2' + 25' RKB @ 3670.20usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3645.2' + 25' RKB @ 3670.20usft
Site:	Sea Snake 35 State	North Reference:	Grid
Well:	8H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,200.00	5,200.00	0.00	0.00	Nudge
5,533.33	5,532.91	-14.19	-3.15	Hold
7,333.33	7,326.06	-167.35	-37.10	Drop
7,666.67	7,658.97	-181.54	-40.25	Hold
9,439.75	9,432.05	-181.54	-40.25	KOP 10° DLS
10,336.30	10,005.00	387.93	-33.38	LP - 10005' TVD
14,492.44	10,030.00	4,543.69	16.72	TD - 10030' TVD

DEVON ENERGY

Lea County, NM (NAD-83)

Sea Snake 35 State

8H

OH

Plan #1

Anticollision Report

28 July, 2015

LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 8H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3645.2' + 25' RKB @ 3670.20usft
Reference Site:	Sea Snake 35 State	MD Reference:	3645.2' + 25' RKB @ 3670.20usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	8H	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	14,492.10	Plan #1 (OH)	LEAM MWD-ADJ	MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Sea Snake 35 State						
10H - OH - Plan #1	5,491.21	5,490.73	48.75	24.49	2.009	CC
10H - OH - Plan #1	5,533.33	5,532.71	48.88	24.45	2.001	ES, SF
6H - OH - Plan #1	5,200.00	5,200.00	49.94	26.85	2.162	CC
6H - OH - Plan #1	5,300.00	5,300.00	50.23	26.75	2.139	ES, SF

Sea Snake 35 State - 10H - OH - Plan #1												Offset Site Error:	0.00 usft
Survey Program:		0-LEAM MWD-ADJ										Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		Separation Factor
0.00	0.00	0.00	0.00	0.00	0.00	-90.32	-0.28	-50.00	50.00				
100.00	100.00	99.80	99.80	0.08	0.08	-90.32	-0.28	-50.00	50.00	49.83	0.17	296.906	
200.00	200.00	199.80	199.80	0.31	0.31	-90.32	-0.28	-50.00	50.00	49.38	0.62	80.952	
300.00	300.00	299.80	299.80	0.53	0.53	-90.32	-0.28	-50.00	50.00	48.93	1.07	46.853	
400.00	400.00	399.80	399.80	0.76	0.76	-90.32	-0.28	-50.00	50.00	48.48	1.52	32.966	
500.00	500.00	499.80	499.80	0.98	0.98	-90.32	-0.28	-50.00	50.00	48.03	1.97	25.429	
600.00	600.00	599.80	599.80	1.21	1.21	-90.32	-0.28	-50.00	50.00	47.58	2.42	20.698	
700.00	700.00	699.80	699.80	1.43	1.43	-90.32	-0.28	-50.00	50.00	47.14	2.87	17.450	
800.00	800.00	799.80	799.80	1.66	1.66	-90.32	-0.28	-50.00	50.00	46.69	3.31	15.084	
900.00	900.00	899.80	899.80	1.88	1.88	-90.32	-0.28	-50.00	50.00	46.24	3.76	13.283	
1,000.00	1,000.00	999.80	999.80	2.11	2.11	-90.32	-0.28	-50.00	50.00	45.79	4.21	11.866	
1,100.00	1,100.00	1,099.80	1,099.80	2.33	2.33	-90.32	-0.28	-50.00	50.00	45.34	4.66	10.722	
1,200.00	1,200.00	1,199.80	1,199.80	2.56	2.56	-90.32	-0.28	-50.00	50.00	44.89	5.11	9.779	
1,300.00	1,300.00	1,299.80	1,299.80	2.78	2.78	-90.32	-0.28	-50.00	50.00	44.44	5.56	8.989	
1,400.00	1,400.00	1,399.80	1,399.80	3.01	3.01	-90.32	-0.28	-50.00	50.00	43.99	6.01	8.317	
1,500.00	1,500.00	1,499.80	1,499.80	3.23	3.23	-90.32	-0.28	-50.00	50.00	43.54	6.46	7.738	
1,600.00	1,600.00	1,599.80	1,599.80	3.46	3.46	-90.32	-0.28	-50.00	50.00	43.09	6.91	7.235	
1,700.00	1,700.00	1,699.80	1,699.80	3.68	3.68	-90.32	-0.28	-50.00	50.00	42.64	7.36	6.793	
1,800.00	1,800.00	1,799.80	1,799.80	3.91	3.90	-90.32	-0.28	-50.00	50.00	42.19	7.81	6.402	
1,900.00	1,900.00	1,899.80	1,899.80	4.13	4.13	-90.32	-0.28	-50.00	50.00	41.74	8.26	6.054	
2,000.00	2,000.00	1,999.80	1,999.80	4.35	4.35	-90.32	-0.28	-50.00	50.00	41.29	8.71	5.741	
2,100.00	2,100.00	2,099.80	2,099.80	4.58	4.58	-90.32	-0.28	-50.00	50.00	40.84	9.16	5.459	
2,200.00	2,200.00	2,199.80	2,199.80	4.80	4.80	-90.32	-0.28	-50.00	50.00	40.39	9.61	5.204	

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 8H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3645.2' + 25' RKB @ 3670.20usft
Reference Site:	Sea Snake 35 State	MD Reference:	3645.2' + 25' RKB @ 3670.20usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	8H	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 - 10H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		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)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
2,300.00	2,300.00	2,299.80	2,299.80	5.03	5.03	-90.32	-0.28	-50.00	50.00	39.94	10.06	4.971		
2,400.00	2,400.00	2,399.80	2,399.80	5.25	5.25	-90.32	-0.28	-50.00	50.00	39.49	10.51	4.759		
2,500.00	2,500.00	2,499.80	2,499.80	5.48	5.48	-90.32	-0.28	-50.00	50.00	39.04	10.96	4.563		
2,600.00	2,600.00	2,599.80	2,599.80	5.70	5.70	-90.32	-0.28	-50.00	50.00	38.59	11.41	4.384		
2,700.00	2,700.00	2,699.80	2,699.80	5.93	5.93	-90.32	-0.28	-50.00	50.00	38.14	11.86	4.217		
2,800.00	2,800.00	2,799.80	2,799.80	6.15	6.15	-90.32	-0.28	-50.00	50.00	37.70	12.31	4.063		
2,900.00	2,900.00	2,899.80	2,899.80	6.38	6.38	-90.32	-0.28	-50.00	50.00	37.25	12.76	3.920		
3,000.00	3,000.00	2,999.80	2,999.80	6.60	6.60	-90.32	-0.28	-50.00	50.00	36.80	13.20	3.787		
3,100.00	3,100.00	3,099.80	3,099.80	6.83	6.83	-90.32	-0.28	-50.00	50.00	36.35	13.65	3.662		
3,200.00	3,200.00	3,199.80	3,199.80	7.05	7.05	-90.32	-0.28	-50.00	50.00	35.90	14.10	3.545		
3,300.00	3,300.00	3,299.80	3,299.80	7.28	7.28	-90.32	-0.28	-50.00	50.00	35.45	14.55	3.436		
3,400.00	3,400.00	3,399.80	3,399.80	7.50	7.50	-90.32	-0.28	-50.00	50.00	35.00	15.00	3.333		
3,500.00	3,500.00	3,499.80	3,499.80	7.73	7.73	-90.32	-0.28	-50.00	50.00	34.55	15.45	3.236		
3,600.00	3,600.00	3,599.80	3,599.80	7.95	7.95	-90.32	-0.28	-50.00	50.00	34.10	15.90	3.144		
3,700.00	3,700.00	3,699.80	3,699.80	8.18	8.18	-90.32	-0.28	-50.00	50.00	33.65	16.35	3.058		
3,800.00	3,800.00	3,799.80	3,799.80	8.40	8.40	-90.32	-0.28	-50.00	50.00	33.20	16.80	2.976		
3,900.00	3,900.00	3,899.80	3,899.80	8.63	8.62	-90.32	-0.28	-50.00	50.00	32.75	17.25	2.899		
4,000.00	4,000.00	3,999.80	3,999.80	8.85	8.85	-90.32	-0.28	-50.00	50.00	32.30	17.70	2.825		
4,100.00	4,100.00	4,099.80	4,099.80	9.07	9.07	-90.32	-0.28	-50.00	50.00	31.85	18.15	2.755		
4,200.00	4,200.00	4,199.80	4,199.80	9.30	9.30	-90.32	-0.28	-50.00	50.00	31.40	18.60	2.688		
4,300.00	4,300.00	4,299.80	4,299.80	9.52	9.52	-90.32	-0.28	-50.00	50.00	30.95	19.05	2.625		
4,400.00	4,400.00	4,399.80	4,399.80	9.75	9.75	-90.32	-0.28	-50.00	50.00	30.50	19.50	2.564		
4,500.00	4,500.00	4,499.80	4,499.80	9.97	9.97	-90.32	-0.28	-50.00	50.00	30.05	19.95	2.507		
4,600.00	4,600.00	4,599.80	4,599.80	10.20	10.20	-90.32	-0.28	-50.00	50.00	29.60	20.40	2.451		
4,700.00	4,700.00	4,699.80	4,699.80	10.42	10.42	-90.32	-0.28	-50.00	50.00	29.15	20.85	2.399		
4,800.00	4,800.00	4,799.80	4,799.80	10.65	10.65	-90.32	-0.28	-50.00	50.00	28.70	21.30	2.348		
4,900.00	4,900.00	4,899.80	4,899.80	10.87	10.87	-90.32	-0.28	-50.00	50.00	28.26	21.75	2.299		
5,000.00	5,000.00	4,999.80	4,999.80	11.10	11.10	-90.32	-0.28	-50.00	50.00	27.81	22.20	2.253		
5,100.00	5,100.00	5,099.80	5,099.80	11.32	11.32	-90.32	-0.28	-50.00	50.00	27.36	22.64	2.208		
5,200.00	5,200.00	5,199.80	5,199.80	11.55	11.55	-90.32	-0.28	-50.00	50.00	26.91	23.09	2.165		
5,300.00	5,299.99	5,299.79	5,299.79	11.74	11.77	78.65	-0.28	-50.00	49.73	26.21	23.51	2.115		
5,400.00	5,399.91	5,399.71	5,399.71	11.91	12.00	83.15	-0.28	-50.00	49.11	25.20	23.90	2.054		
5,491.21	5,490.93	5,490.73	5,490.73	12.07	12.20	90.00	-0.28	-50.00	48.75	24.49	24.26	2.009 CC		
5,500.00	5,499.69	5,499.49	5,499.49	12.08	12.22	90.80	-0.28	-50.00	48.76	24.46	24.30	2.007		
5,533.33	5,532.91	5,532.71	5,532.71	12.14	12.30	94.02	-0.28	-50.00	48.88	24.45	24.43	2.001 ES, SF		
5,600.00	5,599.32	5,599.12	5,599.12	12.25	12.44	100.70	-0.28	-50.00	49.62	24.93	24.69	2.010		
5,700.00	5,698.94	5,698.74	5,698.74	12.43	12.67	110.16	-0.28	-50.00	51.96	26.88	25.08	2.071		
5,800.00	5,798.56	5,798.36	5,798.36	12.60	12.89	118.60	-0.28	-50.00	55.58	30.10	25.48	2.181		
5,900.00	5,898.18	5,897.98	5,897.98	12.79	13.12	125.88	-0.28	-50.00	60.25	34.38	25.87	2.329		
6,000.00	5,997.80	5,997.60	5,997.60	12.97	13.34	132.03	-0.28	-50.00	65.75	39.48	26.27	2.503		
6,100.00	6,097.42	6,097.22	6,097.22	13.16	13.56	137.19	-0.28	-50.00	71.89	45.22	26.67	2.696		
6,200.00	6,197.04	6,196.84	6,196.84	13.35	13.79	141.51	-0.28	-50.00	78.51	51.44	27.07	2.900		
6,300.00	6,296.66	6,296.46	6,296.46	13.55	14.01	145.14	-0.28	-50.00	85.52	58.04	27.48	3.113		
6,400.00	6,396.28	6,396.08	6,396.08	13.74	14.24	148.21	-0.28	-50.00	92.81	64.93	27.88	3.329		
6,500.00	6,495.90	6,495.70	6,495.70	13.94	14.46	150.83	-0.28	-50.00	100.33	72.04	28.29	3.547		
6,600.00	6,595.52	6,595.32	6,595.32	14.15	14.68	153.09	-0.28	-50.00	108.03	79.33	28.70	3.764		
6,700.00	6,695.14	6,694.94	6,694.94	14.35	14.91	155.04	-0.28	-50.00	115.88	86.77	29.11	3.980		
6,800.00	6,794.76	6,794.56	6,794.56	14.56	15.13	156.74	-0.28	-50.00	123.84	94.31	29.52	4.194		
6,900.00	6,894.38	6,894.18	6,894.18	14.77	15.36	158.23	-0.28	-50.00	131.89	101.96	29.94	4.405		
7,000.00	6,994.00	6,993.80	6,993.80	14.98	15.58	159.55	-0.28	-50.00	140.03	109.68	30.35	4.613		
7,100.00	7,093.62	7,093.42	7,093.42	15.20	15.80	160.73	-0.28	-50.00	148.23	117.46	30.77	4.817		
7,200.00	7,193.24	7,193.04	7,193.04	15.42	16.03	161.78	-0.28	-50.00	156.49	125.30	31.19	5.017		

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 8H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3645.2' + 25' RKB @ 3670.20usft
Reference Site:	Sea Snake 35 State	MD Reference:	3645.2' + 25' RKB @ 3670.20usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	8H	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 - 10H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													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)						
7,300.00	7,292.85	7,292.65	7,292.65	15.63	16.25	162.73	-0.28	-50.00	164.79	133.18	31.61	5.213		
7,333.33	7,326.06	7,325.86	7,325.86	15.71	16.33	163.02	-0.28	-50.00	167.57	135.82	31.75	5.278		
7,400.00	7,392.52	7,392.32	7,392.32	15.86	16.47	163.55	-0.28	-50.00	172.58	140.51	32.07	5.382		
7,500.00	7,492.36	7,492.16	7,492.16	16.09	16.70	164.09	-0.28	-50.00	178.03	145.48	32.55	5.470		
7,600.00	7,592.31	7,592.11	7,592.11	16.31	16.92	164.37	-0.28	-50.00	180.96	147.96	33.01	5.483		
7,666.67	7,658.97	7,658.77	7,658.77	16.45	17.07	-3.08	-0.28	-50.00	181.53	148.23	33.29	5.452		
7,700.00	7,692.30	7,692.10	7,692.10	16.52	17.15	-3.08	-0.28	-50.00	181.53	148.09	33.44	5.429		
7,800.00	7,792.30	7,792.10	7,792.10	16.73	17.37	-3.08	-0.28	-50.00	181.53	147.64	33.88	5.358		
7,900.00	7,892.30	7,892.10	7,892.10	16.95	17.60	-3.08	-0.28	-50.00	181.53	147.20	34.32	5.288		
8,000.00	7,992.30	7,992.10	7,992.10	17.16	17.82	-3.08	-0.28	-50.00	181.53	146.76	34.77	5.221		
8,100.00	8,092.30	8,092.10	8,092.10	17.38	18.05	-3.08	-0.28	-50.00	181.53	146.31	35.21	5.155		
8,200.00	8,192.30	8,192.10	8,192.10	17.60	18.27	-3.08	-0.28	-50.00	181.53	145.87	35.66	5.091		
8,300.00	8,292.30	8,292.10	8,292.10	17.81	18.50	-3.08	-0.28	-50.00	181.53	145.42	36.10	5.028		
8,400.00	8,392.30	8,392.10	8,392.10	18.03	18.72	-3.08	-0.28	-50.00	181.53	144.98	36.55	4.967		
8,500.00	8,492.30	8,492.10	8,492.10	18.25	18.95	-3.08	-0.28	-50.00	181.53	144.53	36.99	4.907		
8,600.00	8,592.30	8,592.10	8,592.10	18.46	19.17	-3.08	-0.28	-50.00	181.53	144.09	37.44	4.849		
8,700.00	8,692.30	8,692.10	8,692.10	18.68	19.40	-3.08	-0.28	-50.00	181.53	143.64	37.88	4.792		
8,800.00	8,792.30	8,792.10	8,792.10	18.90	19.62	-3.08	-0.28	-50.00	181.53	143.20	38.33	4.736		
8,900.00	8,892.30	8,892.10	8,892.10	19.11	19.85	-3.08	-0.28	-50.00	181.53	142.75	38.77	4.682		
9,000.00	8,992.30	8,992.10	8,992.10	19.33	20.07	-3.08	-0.28	-50.00	181.53	142.31	39.22	4.629		
9,100.00	9,092.30	9,092.10	9,092.10	19.55	20.30	-3.08	-0.28	-50.00	181.53	141.86	39.66	4.577		
9,200.00	9,192.30	9,171.41	9,171.27	19.77	20.47	-3.00	3.33	-49.95	186.29	146.23	40.06	4.650		
9,300.00	9,292.30	9,250.00	9,248.52	19.99	20.65	-2.73	17.46	-49.74	203.94	163.48	40.46	5.041		
9,400.00	9,392.30	9,314.13	9,309.65	20.20	20.79	-2.42	36.73	-49.46	233.51	192.69	40.82	5.720		
9,439.75	9,432.05	9,340.09	9,333.72	20.29	20.85	-2.28	46.45	-49.31	248.38	207.42	40.96	6.064		
9,450.00	9,442.30	9,350.00	9,342.79	20.31	20.87	-2.89	50.45	-49.26	252.44	211.44	41.00	6.158		
9,500.00	9,492.19	9,378.47	9,368.44	20.41	20.93	-2.67	62.80	-49.07	271.14	230.15	40.98	6.616		
9,550.00	9,541.63	9,410.01	9,396.09	20.50	20.99	-2.47	77.95	-48.85	288.38	247.63	40.75	7.078		
9,600.00	9,590.22	9,441.30	9,422.66	20.58	21.06	-2.31	94.47	-48.61	304.09	263.81	40.28	7.549		
9,650.00	9,637.62	9,472.38	9,448.12	20.66	21.14	-2.18	112.28	-48.35	318.24	278.64	39.60	8.037		
9,700.00	9,683.45	9,500.00	9,469.91	20.72	21.21	-2.07	129.25	-48.10	330.82	292.11	38.70	8.548		
9,750.00	9,727.36	9,534.02	9,495.59	20.78	21.30	-1.98	151.56	-47.77	341.72	304.09	37.63	9.081		
9,800.00	9,769.03	9,564.64	9,517.53	20.85	21.40	-1.90	172.91	-47.46	351.00	314.61	36.39	9.647		
9,850.00	9,808.14	9,600.00	9,541.40	20.91	21.51	-1.84	198.99	-47.07	358.66	323.65	35.01	10.245		
9,900.00	9,844.38	9,625.60	9,557.66	20.98	21.60	-1.80	218.76	-46.78	364.52	331.02	33.50	10.880		
9,950.00	9,877.48	9,650.00	9,572.31	21.06	21.69	-1.76	238.26	-46.50	368.82	336.90	31.93	11.552		
10,000.00	9,907.20	9,686.32	9,592.57	21.17	21.83	-1.73	268.40	-46.05	371.26	340.91	30.34	12.235		
10,050.00	9,933.30	9,716.65	9,607.98	21.30	21.97	-1.72	294.51	-45.67	372.05	343.27	28.78	12.927		
10,100.00	9,955.58	9,750.00	9,623.31	21.46	22.12	-1.71	324.12	-45.24	371.15	343.84	27.32	13.588		
10,150.00	9,973.88	9,777.32	9,634.57	21.64	22.26	-1.72	349.00	-44.87	368.50	342.50	26.00	14.173		
10,200.00	9,988.05	9,800.00	9,643.01	21.85	22.38	-1.73	370.06	-44.56	364.29	339.38	24.91	14.623		
10,250.00	9,998.00	9,838.14	9,655.30	22.09	22.59	-1.76	406.15	-44.03	358.11	333.95	24.16	14.822		
10,300.00	10,003.63	9,868.67	9,663.39	22.36	22.78	-1.79	435.58	-43.60	350.39	326.62	23.77	14.743		
10,336.30	10,005.00	9,900.00	9,670.04	22.57	22.97	-1.83	468.19	-43.15	343.92	320.17	23.75	14.482		
10,400.00	10,005.38	9,930.42	9,674.90	22.98	23.18	-1.84	496.22	-42.71	333.43	309.49	23.94	13.926		
10,500.00	10,005.99	10,002.74	9,680.00	23.72	23.69	-1.84	568.29	-41.65	326.37	302.04	24.33	13.412		
10,541.26	10,006.23	10,029.93	9,680.21	24.07	23.91	-1.82	595.48	-41.25	326.00	301.49	24.51	13.299		
10,600.00	10,006.59	10,088.66	9,680.65	24.57	24.39	-1.80	654.21	-40.39	325.91	301.09	24.81	13.134		
10,700.00	10,007.19	10,188.66	9,681.40	25.53	25.28	-1.75	754.19	-38.92	325.75	300.35	25.40	12.827		
10,800.00	10,007.79	10,288.66	9,682.16	26.58	26.27	-1.71	854.18	-37.45	325.58	299.54	26.05	12.500		
10,900.00	10,008.39	10,388.66	9,682.91	27.70	27.35	-1.66	954.17	-35.99	325.42	298.66	26.76	12.159		
11,000.00	10,008.99	10,488.66	9,683.67	28.90	28.51	-1.62	1,054.15	-34.52	325.26	297.72	27.54	11.810		

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 8H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3645.2' + 25' RKB @ 3670.20usft
Reference Site:	Sea Snake 35 State	MD Reference:	3645.2' + 25' RKB @ 3670.20usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	8H	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													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		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)		+N/-S (usft)	+E/-W (usft)						
11,100.00	10,009.59	10,588.66	9,684.42	30.16	29.73	-1.57	1,154.14	-33.05	325.10	296.73	28.37	11.459		
11,200.00	10,010.20	10,688.66	9,685.18	31.48	31.01	-1.52	1,254.12	-31.58	324.94	295.69	29.25	11.108		
11,300.00	10,010.80	10,788.66	9,685.93	32.85	32.34	-1.48	1,354.11	-30.11	324.78	294.60	30.18	10.762		
11,400.00	10,011.40	10,888.66	9,686.69	34.25	33.72	-1.43	1,454.10	-28.65	324.62	293.48	31.15	10.422		
11,500.00	10,012.00	10,988.66	9,687.44	35.70	35.14	-1.39	1,554.08	-27.18	324.46	292.31	32.15	10.091		
11,600.00	10,012.60	11,088.66	9,688.20	37.18	36.59	-1.34	1,654.07	-25.71	324.31	291.11	33.20	9.770		
11,700.00	10,013.20	11,188.66	9,688.95	38.69	38.08	-1.30	1,754.05	-24.24	324.15	289.88	34.27	9.459		
11,800.00	10,013.80	11,288.66	9,689.70	40.22	39.60	-1.25	1,854.04	-22.77	323.99	288.62	35.37	9.161		
11,900.00	10,014.41	11,388.66	9,690.46	41.78	41.14	-1.20	1,954.03	-21.30	323.83	287.34	36.49	8.874		
12,000.00	10,015.01	11,488.66	9,691.21	43.36	42.70	-1.16	2,054.01	-19.84	323.67	286.03	37.64	8.599		
12,100.00	10,015.61	11,588.66	9,691.97	44.95	44.28	-1.11	2,154.00	-18.37	323.51	284.70	38.81	8.335		
12,200.00	10,016.21	11,688.66	9,692.72	46.57	45.88	-1.07	2,253.98	-16.90	323.35	283.35	40.00	8.083		
12,300.00	10,016.81	11,788.66	9,693.48	48.20	47.50	-1.02	2,353.97	-15.43	323.20	281.99	41.21	7.843		
12,400.00	10,017.41	11,888.66	9,694.23	49.84	49.13	-0.97	2,453.96	-13.96	323.04	280.61	42.43	7.613		
12,500.00	10,018.02	11,988.66	9,694.99	51.49	50.77	-0.93	2,553.94	-12.50	322.88	279.21	43.67	7.393		
12,600.00	10,018.62	12,088.66	9,695.74	53.16	52.43	-0.88	2,653.93	-11.03	322.72	277.80	44.92	7.184		
12,700.00	10,019.22	12,188.65	9,696.49	54.83	54.09	-0.84	2,753.91	-9.56	322.57	276.38	46.19	6.984		
12,800.00	10,019.82	12,288.65	9,697.25	56.52	55.77	-0.79	2,853.90	-8.09	322.41	274.95	47.47	6.793		
12,900.00	10,020.42	12,388.65	9,698.00	58.21	57.46	-0.74	2,953.89	-6.62	322.25	273.50	48.75	6.610		
13,000.00	10,021.02	12,488.65	9,698.76	59.91	59.15	-0.70	3,053.87	-5.16	322.10	272.05	50.05	6.436		
13,100.00	10,021.62	12,588.65	9,699.51	61.62	60.85	-0.65	3,153.86	-3.69	321.94	270.59	51.35	6.269		
13,200.00	10,022.23	12,688.65	9,700.27	63.34	62.56	-0.60	3,253.84	-2.22	321.79	269.12	52.67	6.110		
13,300.00	10,022.83	12,788.65	9,701.02	65.06	64.27	-0.56	3,353.83	-0.75	321.63	267.64	53.99	5.957		
13,400.00	10,023.43	12,888.65	9,701.78	66.78	65.99	-0.51	3,453.81	0.72	321.48	266.16	55.32	5.811		
13,500.00	10,024.03	12,988.65	9,702.53	68.51	67.72	-0.46	3,553.80	2.19	321.32	264.66	56.66	5.671		
13,600.00	10,024.63	13,088.65	9,703.28	70.25	69.45	-0.42	3,653.79	3.65	321.16	263.17	58.00	5.538		
13,700.00	10,025.23	13,188.65	9,704.04	71.99	71.18	-0.37	3,753.77	5.12	321.01	261.66	59.35	5.409		
13,800.00	10,025.84	13,288.65	9,704.79	73.73	72.92	-0.32	3,853.76	6.59	320.86	260.16	60.70	5.286		
13,900.00	10,026.44	13,388.65	9,705.55	75.48	74.67	-0.28	3,953.74	8.06	320.70	258.64	62.06	5.168		
14,000.00	10,027.04	13,488.65	9,706.30	77.23	76.41	-0.23	4,053.73	9.53	320.55	257.12	63.42	5.054		
14,100.00	10,027.64	13,588.65	9,707.06	78.99	78.16	-0.18	4,153.72	10.99	320.39	255.60	64.79	4.945		
14,200.00	10,028.24	13,688.65	9,707.81	80.74	79.92	-0.14	4,253.70	12.46	320.24	254.07	66.16	4.840		
14,300.00	10,028.84	13,788.65	9,708.57	82.50	81.67	-0.09	4,353.69	13.93	320.09	252.54	67.54	4.739		
14,400.00	10,029.44	13,888.65	9,709.32	84.27	83.43	-0.04	4,453.67	15.40	319.93	251.01	68.92	4.642		
14,469.36	10,029.86	13,958.00	9,709.84	85.27	84.66	-0.01	4,523.02	16.42	319.83	250.18	69.64	4.592		
14,492.44	10,030.00	13,978.68	9,710.00	85.60	85.02	0.00	4,543.69	16.72	319.80	249.93	69.87	4.577		

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 8H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3645.2' + 25' RKB @ 3670.20usft
Reference Site:	Sea Snake 35 State	MD Reference:	3645.2' + 25' RKB @ 3670.20usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	8H	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		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance				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)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	89.76	0.21	49.94	49.94					
100.00	100.00	100.00	100.00	0.08	0.08	89.76	0.21	49.94	49.94	49.77	0.17	296.251		
200.00	200.00	200.00	200.00	0.31	0.31	89.76	0.21	49.94	49.94	49.32	0.62	80.796		
300.00	300.00	300.00	300.00	0.53	0.53	89.76	0.21	49.94	49.94	48.87	1.07	46.777		
400.00	400.00	400.00	400.00	0.76	0.76	89.76	0.21	49.94	49.94	48.42	1.52	32.917		
500.00	500.00	500.00	500.00	0.98	0.98	89.76	0.21	49.94	49.94	47.97	1.97	25.393		
600.00	600.00	600.00	600.00	1.21	1.21	89.76	0.21	49.94	49.94	47.52	2.42	20.669		
700.00	700.00	700.00	700.00	1.43	1.43	89.76	0.21	49.94	49.94	47.07	2.87	17.427		
800.00	800.00	800.00	800.00	1.66	1.66	89.76	0.21	49.94	49.94	46.63	3.32	15.064		
900.00	900.00	900.00	900.00	1.88	1.88	89.76	0.21	49.94	49.94	46.18	3.76	13.265		
1,000.00	1,000.00	1,000.00	1,000.00	2.11	2.11	89.76	0.21	49.94	49.94	45.73	4.21	11.850		
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	89.76	0.21	49.94	49.94	45.28	4.66	10.708		
1,200.00	1,200.00	1,200.00	1,200.00	2.56	2.56	89.76	0.21	49.94	49.94	44.83	5.11	9.767		
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	89.76	0.21	49.94	49.94	44.38	5.56	8.977		
1,400.00	1,400.00	1,400.00	1,400.00	3.01	3.01	89.76	0.21	49.94	49.94	43.93	6.01	8.306		
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	89.76	0.21	49.94	49.94	43.48	6.46	7.728		
1,600.00	1,600.00	1,600.00	1,600.00	3.46	3.46	89.76	0.21	49.94	49.94	43.03	6.91	7.226		
1,700.00	1,700.00	1,700.00	1,700.00	3.68	3.68	89.76	0.21	49.94	49.94	42.58	7.36	6.784		
1,800.00	1,800.00	1,800.00	1,800.00	3.91	3.91	89.76	0.21	49.94	49.94	42.13	7.81	6.394		
1,900.00	1,900.00	1,900.00	1,900.00	4.13	4.13	89.76	0.21	49.94	49.94	41.68	8.26	6.046		
2,000.00	2,000.00	2,000.00	2,000.00	4.35	4.35	89.76	0.21	49.94	49.94	41.23	8.71	5.734		
2,100.00	2,100.00	2,100.00	2,100.00	4.58	4.58	89.76	0.21	49.94	49.94	40.78	9.16	5.452		
2,200.00	2,200.00	2,200.00	2,200.00	4.80	4.80	89.76	0.21	49.94	49.94	40.33	9.61	5.197		
2,300.00	2,300.00	2,300.00	2,300.00	5.03	5.03	89.76	0.21	49.94	49.94	39.88	10.06	4.965		
2,400.00	2,400.00	2,400.00	2,400.00	5.25	5.25	89.76	0.21	49.94	49.94	39.43	10.51	4.753		
2,500.00	2,500.00	2,500.00	2,500.00	5.48	5.48	89.76	0.21	49.94	49.94	38.98	10.96	4.558		
2,600.00	2,600.00	2,600.00	2,600.00	5.70	5.70	89.76	0.21	49.94	49.94	38.53	11.41	4.378		
2,700.00	2,700.00	2,700.00	2,700.00	5.93	5.93	89.76	0.21	49.94	49.94	38.08	11.86	4.212		
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	89.76	0.21	49.94	49.94	37.63	12.31	4.058		
2,900.00	2,900.00	2,900.00	2,900.00	6.38	6.38	89.76	0.21	49.94	49.94	37.18	12.76	3.915		
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	89.76	0.21	49.94	49.94	36.74	13.21	3.782		
3,100.00	3,100.00	3,100.00	3,100.00	6.83	6.83	89.76	0.21	49.94	49.94	36.29	13.65	3.657		
3,200.00	3,200.00	3,200.00	3,200.00	7.05	7.05	89.76	0.21	49.94	49.94	35.84	14.10	3.541		
3,300.00	3,300.00	3,300.00	3,300.00	7.28	7.28	89.76	0.21	49.94	49.94	35.39	14.55	3.431		
3,400.00	3,400.00	3,400.00	3,400.00	7.50	7.50	89.76	0.21	49.94	49.94	34.94	15.00	3.329		
3,500.00	3,500.00	3,500.00	3,500.00	7.73	7.73	89.76	0.21	49.94	49.94	34.49	15.45	3.232		
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	89.76	0.21	49.94	49.94	34.04	15.90	3.140		
3,700.00	3,700.00	3,700.00	3,700.00	8.18	8.18	89.76	0.21	49.94	49.94	33.59	16.35	3.054		
3,800.00	3,800.00	3,800.00	3,800.00	8.40	8.40	89.76	0.21	49.94	49.94	33.14	16.80	2.972		
3,900.00	3,900.00	3,900.00	3,900.00	8.63	8.63	89.76	0.21	49.94	49.94	32.69	17.25	2.895		
4,000.00	4,000.00	4,000.00	4,000.00	8.85	8.85	89.76	0.21	49.94	49.94	32.24	17.70	2.821		
4,100.00	4,100.00	4,100.00	4,100.00	9.07	9.07	89.76	0.21	49.94	49.94	31.79	18.15	2.752		
4,200.00	4,200.00	4,200.00	4,200.00	9.30	9.30	89.76	0.21	49.94	49.94	31.34	18.60	2.685		
4,300.00	4,300.00	4,300.00	4,300.00	9.52	9.52	89.76	0.21	49.94	49.94	30.89	19.05	2.622		
4,400.00	4,400.00	4,400.00	4,400.00	9.75	9.75	89.76	0.21	49.94	49.94	30.44	19.50	2.561		
4,500.00	4,500.00	4,500.00	4,500.00	9.97	9.97	89.76	0.21	49.94	49.94	29.99	19.95	2.504		
4,600.00	4,600.00	4,600.00	4,600.00	10.20	10.20	89.76	0.21	49.94	49.94	29.54	20.40	2.448		
4,700.00	4,700.00	4,700.00	4,700.00	10.42	10.42	89.76	0.21	49.94	49.94	29.09	20.85	2.396		
4,800.00	4,800.00	4,800.00	4,800.00	10.65	10.65	89.76	0.21	49.94	49.94	28.64	21.30	2.345		
4,900.00	4,900.00	4,900.00	4,900.00	10.87	10.87	89.76	0.21	49.94	49.94	28.19	21.75	2.297		
5,000.00	5,000.00	5,000.00	5,000.00	11.10	11.10	89.76	0.21	49.94	49.94	27.74	22.20	2.250		
5,100.00	5,100.00	5,100.00	5,100.00	11.32	11.32	89.76	0.21	49.94	49.94	27.30	22.65	2.205		

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 8H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3645.2' + 25' RKB @ 3670.20usft
Reference Site:	Sea Snake 35 State	MD Reference:	3645.2' + 25' RKB @ 3670.20usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	8H	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		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)						
5,200.00	5,200.00	5,200.00	5,200.00	11.55	11.55	89.76	0.21	49.94	49.94	26.85	23.09	2.162	CC	
5,300.00	5,299.99	5,300.00	5,299.98	11.74	11.74	-102.70	-1.10	49.95	50.23	26.75	23.48	2.139	ES, SF	
5,400.00	5,399.91	5,399.99	5,399.89	11.91	11.91	-102.58	-5.02	49.98	51.11	27.30	23.82	2.146		
5,500.00	5,499.69	5,499.96	5,499.66	12.08	12.08	-102.39	-11.56	50.03	52.57	28.43	24.15	2.177		
5,533.33	5,532.91	5,533.29	5,532.87	12.14	12.14	-102.31	-14.32	50.05	53.19	28.93	24.26	2.192		
5,600.00	5,599.32	5,599.94	5,599.27	12.25	12.25	-102.17	-20.13	50.09	54.49	30.00	24.49	2.225		
5,700.00	5,698.94	5,699.92	5,698.87	12.43	12.42	-101.97	-28.84	50.15	56.44	31.61	24.84	2.272		
5,800.00	5,798.56	5,799.90	5,798.47	12.60	12.60	-101.78	-37.56	50.22	58.40	33.20	25.20	2.318		
5,900.00	5,898.18	5,899.88	5,898.07	12.79	12.78	-101.61	-46.27	50.28	60.35	34.79	25.56	2.361		
6,000.00	5,997.80	5,999.86	5,997.67	12.97	12.96	-101.45	-54.98	50.34	62.30	36.37	25.93	2.403		
6,100.00	6,097.42	6,099.85	6,097.27	13.16	13.15	-101.30	-63.70	50.41	64.26	37.95	26.31	2.443		
6,200.00	6,197.04	6,199.83	6,196.87	13.35	13.34	-101.15	-72.41	50.47	66.21	39.52	26.69	2.481		
6,300.00	6,296.66	6,299.81	6,296.47	13.55	13.54	-101.02	-81.13	50.54	68.17	41.09	27.08	2.517		
6,400.00	6,396.28	6,399.79	6,396.07	13.74	13.74	-100.89	-89.84	50.60	70.12	42.65	27.47	2.552		
6,500.00	6,495.90	6,499.77	6,495.67	13.94	13.93	-100.77	-98.55	50.66	72.08	44.21	27.87	2.586		
6,600.00	6,595.52	6,599.79	6,595.36	14.15	14.15	-101.10	-106.69	50.72	74.01	45.73	28.29	2.617		
6,700.00	6,695.14	6,699.76	6,695.16	14.35	14.38	-103.28	-112.37	50.77	75.93	47.21	28.72	2.644		
6,800.00	6,794.76	6,799.51	6,794.86	14.56	14.61	-107.25	-115.42	50.79	78.10	48.96	29.15	2.680		
6,900.00	6,894.38	6,899.03	6,894.38	14.77	14.81	-112.71	-116.01	50.79	81.02	51.48	29.54	2.743		
7,000.00	6,994.00	6,998.65	6,994.00	14.98	15.03	-118.13	-116.01	50.79	84.78	54.83	29.95	2.831		
7,100.00	7,093.62	7,098.27	7,093.62	15.20	15.25	-123.06	-116.01	50.79	89.23	58.88	30.36	2.940		
7,200.00	7,193.24	7,197.89	7,193.24	15.42	15.47	-127.49	-116.01	50.79	94.28	63.52	30.76	3.065		
7,300.00	7,292.85	7,297.51	7,292.85	15.63	15.69	-131.46	-116.01	50.79	99.84	68.67	31.17	3.203		
7,333.33	7,326.06	7,330.71	7,326.06	15.71	15.76	-132.88	-116.01	50.79	101.79	70.49	31.30	3.252		
7,400.00	7,392.52	7,397.17	7,392.52	15.86	15.91	-134.81	-116.01	50.79	105.41	73.82	31.60	3.336		
7,500.00	7,492.36	7,497.01	7,492.36	16.09	16.13	-136.95	-116.01	50.79	109.49	77.44	32.05	3.417		
7,600.00	7,592.31	7,596.96	7,592.31	16.31	16.35	-138.04	-116.01	50.79	111.74	79.25	32.49	3.439		
7,666.67	7,658.97	7,663.62	7,658.97	16.45	16.50	54.25	-116.01	50.79	112.17	79.40	32.77	3.423		
7,700.00	7,692.30	7,696.96	7,692.30	16.52	16.57	54.25	-116.01	50.79	112.17	79.26	32.91	3.408		
7,800.00	7,792.30	7,796.96	7,792.30	16.73	16.79	54.25	-116.01	50.79	112.17	78.82	33.35	3.364		
7,900.00	7,892.30	7,896.96	7,892.30	16.95	17.01	54.25	-116.01	50.79	112.17	78.38	33.79	3.320		
8,000.00	7,992.30	7,996.96	7,992.30	17.16	17.23	54.25	-116.01	50.79	112.17	77.94	34.23	3.277		
8,100.00	8,092.30	8,096.96	8,092.30	17.38	17.46	54.25	-116.01	50.79	112.17	77.50	34.67	3.236		
8,200.00	8,192.30	8,196.96	8,192.30	17.60	17.68	54.25	-116.01	50.79	112.17	77.06	35.11	3.195		
8,300.00	8,292.30	8,296.96	8,292.30	17.81	17.90	54.25	-116.01	50.79	112.17	76.62	35.55	3.155		
8,400.00	8,392.30	8,396.96	8,392.30	18.03	18.12	54.25	-116.01	50.79	112.17	76.18	35.99	3.117		
8,500.00	8,492.30	8,496.96	8,492.30	18.25	18.34	54.25	-116.01	50.79	112.17	75.74	36.43	3.079		
8,600.00	8,592.30	8,596.96	8,592.30	18.46	18.56	54.25	-116.01	50.79	112.17	75.30	36.87	3.042		
8,700.00	8,692.30	8,696.96	8,692.30	18.68	18.78	54.25	-116.01	50.79	112.17	74.86	37.31	3.006		
8,800.00	8,792.30	8,796.96	8,792.30	18.90	19.01	54.25	-116.01	50.79	112.17	74.42	37.75	2.971		
8,900.00	8,892.30	8,896.96	8,892.30	19.11	19.23	54.25	-116.01	50.79	112.17	73.98	38.20	2.937		
9,000.00	8,992.30	8,996.96	8,992.30	19.33	19.45	54.25	-116.01	50.79	112.17	73.53	38.64	2.903		
9,100.00	9,092.30	9,096.96	9,092.30	19.55	19.67	54.25	-116.01	50.79	112.17	73.09	39.08	2.870		
9,200.00	9,192.30	9,196.96	9,192.30	19.77	19.90	54.25	-116.01	50.79	112.17	72.65	39.52	2.838		
9,300.00	9,292.30	9,296.96	9,292.30	19.99	20.12	54.25	-116.01	50.79	112.17	72.21	39.96	2.807		
9,400.00	9,392.30	9,396.96	9,392.30	20.20	20.34	54.25	-116.01	50.79	112.17	71.76	40.41	2.776		
9,439.75	9,432.05	9,436.70	9,432.05	20.29	20.43	54.25	-116.01	50.79	112.17	71.59	40.58	2.764		
9,450.00	9,442.30	9,446.96	9,442.30	20.31	20.45	53.81	-116.01	50.79	112.12	71.49	40.83	2.760		
9,500.00	9,492.19	9,496.84	9,492.19	20.41	20.56	55.03	-116.01	50.79	110.32	69.53	40.79	2.705		
9,550.00	9,541.63	9,546.28	9,541.63	20.50	20.67	58.63	-116.01	50.79	108.23	65.32	40.91	2.597		
9,600.00	9,590.22	9,594.87	9,590.22	20.58	20.78	64.71	-116.01	50.79	100.56	59.49	41.07	2.449		
9,650.00	9,637.62	9,642.27	9,637.62	20.66	20.89	73.59	-116.01	50.79	94.63	53.30	41.33	2.289		

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 8H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3645.2' + 25' RKB @ 3670.20usft
Reference Site:	Sea Snake 35 State	MD Reference:	3645.2' + 25' RKB @ 3670.20usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	8H	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		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)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
9,700.00	9,683.45	9,688.10	9,683.45	20.72	20.99	85.15	-116.01	50.79	90.64	48.98	41.66	2.176		
9,719.33	9,700.67	9,705.36	9,700.71	20.75	21.02	90.06	-115.85	50.79	90.24	48.49	41.75	2.161		
9,750.00	9,727.36	9,733.18	9,728.49	20.78	21.08	97.85	-114.51	50.78	91.28	49.49	41.78	2.185		
9,800.00	9,769.03	9,779.92	9,774.92	20.85	21.18	109.95	-109.24	50.74	97.28	55.87	41.41	2.349		
9,850.00	9,808.14	9,828.59	9,822.64	20.91	21.27	120.58	-99.74	50.67	107.89	67.42	40.47	2.666		
9,900.00	9,844.38	9,879.48	9,871.49	20.98	21.36	129.41	-85.52	50.57	121.90	82.80	39.09	3.118		
9,950.00	9,877.48	9,932.92	9,921.21	21.06	21.46	136.58	-65.98	50.43	138.15	100.69	37.46	3.688		
10,000.00	9,907.20	9,989.25	9,971.41	21.17	21.56	142.35	-40.47	50.24	155.70	119.99	35.71	4.360		
10,050.00	9,933.30	10,048.87	10,021.53	21.30	21.67	147.01	-8.25	50.00	173.80	139.84	33.96	5.118		
10,100.00	9,955.58	10,112.17	10,070.78	21.46	21.77	150.82	31.46	49.71	191.84	159.54	32.30	5.939		
10,150.00	9,973.88	10,179.55	10,118.05	21.64	21.90	153.95	79.42	49.36	209.27	178.46	30.81	6.791		
10,200.00	9,988.05	10,251.33	10,161.85	21.85	22.08	156.53	136.24	48.95	225.59	196.02	29.57	7.628		
10,250.00	9,998.00	10,327.73	10,200.27	22.09	22.33	158.66	202.21	48.47	240.30	211.65	28.65	8.388		
10,300.00	10,003.63	10,408.74	10,231.04	22.36	22.66	160.39	277.06	47.92	252.90	224.80	28.10	8.999		
10,336.30	10,005.00	10,470.27	10,247.19	22.57	22.96	161.43	336.40	47.48	260.48	232.51	27.97	9.313		
10,400.00	10,005.38	10,583.19	10,259.94	22.98	23.61	162.70	448.42	46.66	266.64	238.57	28.07	9.500		
10,500.00	10,005.99	10,688.19	10,259.54	23.72	24.35	163.05	553.42	45.90	265.09	236.52	28.57	9.278		
10,600.00	10,006.59	10,788.17	10,259.05	24.57	25.16	163.38	653.39	45.17	263.48	234.33	29.15	9.039		
10,700.00	10,007.19	10,888.14	10,258.56	25.53	26.07	163.72	753.36	44.44	261.89	232.08	29.81	8.786		
10,800.00	10,007.79	10,988.12	10,258.07	26.58	27.08	164.06	853.33	43.70	260.30	229.77	30.53	8.526		
10,900.00	10,008.39	11,088.09	10,257.58	27.70	28.17	164.41	953.30	42.97	258.72	227.41	31.31	8.263		
11,000.00	10,008.99	11,188.07	10,257.09	28.90	29.33	164.76	1,053.27	42.24	257.16	225.01	32.15	7.999		
11,100.00	10,009.59	11,288.04	10,256.60	30.16	30.56	165.11	1,153.25	41.51	255.60	222.57	33.03	7.738		
11,200.00	10,010.20	11,388.02	10,256.12	31.48	31.85	165.47	1,253.22	40.78	254.05	220.10	33.95	7.482		
11,300.00	10,010.80	11,488.00	10,255.63	32.85	33.19	165.83	1,353.19	40.05	252.52	217.61	34.91	7.233		
11,400.00	10,011.40	11,587.97	10,255.14	34.25	34.57	166.20	1,453.16	39.32	250.99	215.09	35.89	6.992		
11,500.00	10,012.00	11,687.95	10,254.65	35.70	35.99	166.57	1,553.13	38.59	249.47	212.57	36.90	6.760		
11,600.00	10,012.60	11,787.92	10,254.16	37.18	37.45	166.95	1,653.10	37.86	247.97	210.03	37.93	6.537		
11,700.00	10,013.20	11,887.90	10,253.67	38.69	38.94	167.33	1,753.07	37.13	246.47	207.49	38.98	6.323		
11,800.00	10,013.80	11,987.87	10,253.18	40.22	40.46	167.72	1,853.05	36.39	244.99	204.94	40.04	6.118		
11,900.00	10,014.41	12,087.85	10,252.69	41.78	42.00	168.11	1,953.02	35.66	243.52	202.40	41.12	5.922		
12,000.00	10,015.01	12,187.82	10,252.20	43.36	43.56	168.50	2,052.99	34.93	242.05	199.85	42.20	5.736		
12,100.00	10,015.61	12,287.80	10,251.71	44.95	45.15	168.90	2,152.96	34.20	240.61	197.31	43.29	5.558		
12,200.00	10,016.21	12,387.77	10,251.22	46.57	46.75	169.31	2,252.93	33.47	239.17	194.78	44.39	5.388		
12,300.00	10,016.81	12,487.75	10,250.73	48.20	48.37	169.72	2,352.90	32.74	237.74	192.25	45.49	5.226		
12,400.00	10,017.41	12,587.72	10,250.24	49.84	50.00	170.13	2,452.87	32.01	236.33	189.73	46.60	5.071		
12,500.00	10,018.02	12,687.70	10,249.75	51.49	51.85	170.55	2,552.85	31.28	234.93	187.22	47.71	4.924		
12,600.00	10,018.62	12,787.67	10,249.26	53.16	53.31	170.98	2,652.82	30.55	233.54	184.71	48.83	4.783		
12,700.00	10,019.22	12,887.65	10,248.77	54.83	54.97	171.41	2,752.79	29.82	232.16	182.22	49.94	4.649		
12,800.00	10,019.82	12,987.62	10,248.28	56.52	56.65	171.84	2,852.76	29.08	230.80	179.74	51.06	4.520		
12,900.00	10,020.42	13,087.60	10,247.79	58.21	58.34	172.28	2,952.73	28.35	229.45	177.26	52.19	4.397		
13,000.00	10,021.02	13,187.58	10,247.30	59.91	60.04	172.73	3,052.70	27.62	228.12	174.80	53.32	4.278		
13,100.00	10,021.62	13,287.55	10,246.81	61.62	61.74	173.18	3,152.67	26.89	226.80	172.35	54.45	4.165		
13,200.00	10,022.23	13,387.53	10,246.32	63.34	63.45	173.63	3,252.65	26.16	225.49	169.90	55.59	4.056		
13,300.00	10,022.83	13,487.50	10,245.83	65.06	65.17	174.09	3,352.62	25.43	224.20	167.46	56.74	3.951		
13,400.00	10,023.43	13,587.48	10,245.34	66.78	66.89	174.56	3,452.59	24.70	222.92	165.03	57.90	3.850		
13,500.00	10,024.03	13,687.45	10,244.85	68.51	68.62	175.03	3,552.56	23.97	221.66	162.60	59.06	3.753		
13,600.00	10,024.63	13,787.43	10,244.36	70.25	70.35	175.51	3,652.53	23.24	220.41	160.18	60.24	3.659		
13,700.00	10,025.23	13,887.40	10,243.88	71.99	72.09	175.99	3,752.50	22.51	219.18	157.76	61.43	3.568		
13,800.00	10,025.84	13,987.38	10,243.39	73.73	73.83	176.48	3,852.47	21.77	217.97	155.34	62.63	3.480		
13,900.00	10,026.44	14,087.35	10,242.90	75.48	75.58	176.97	3,952.45	21.04	216.77	152.92	63.85	3.395		
14,000.00	10,027.04	14,187.33	10,242.41	77.23	77.33	177.47	4,052.42	20.31	215.58	150.50	65.09	3.312		

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 8H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3645.2' + 25' RKB @ 3670.20usft
Reference Site:	Sea Snake 35 State	MD Reference:	3645.2' + 25' RKB @ 3670.20usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	8H	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		Offset		Semi Major Axis			Offset Wellbore Centre		Distance		Minimum	Separation	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)	Factor	
14,100.00	10,027.64	14,287.30	10,241.92	78.99	79.09	177.97	4,152.39	19.58	214.41	148.07	66.34	3.232	
14,200.00	10,028.24	14,387.28	10,241.43	80.74	80.84	178.48	4,252.36	18.85	213.26	145.64	67.62	3.154	
14,300.00	10,028.84	14,487.25	10,240.94	82.50	82.60	179.00	4,352.33	18.12	212.13	143.20	68.93	3.077	
14,400.00	10,029.44	14,587.23	10,240.45	84.27	84.37	179.52	4,452.30	17.39	211.01	140.75	70.26	3.003	
14,492.44	10,030.00	14,678.62	10,240.00	85.60	85.98	180.00	4,543.69	16.72	210.00	138.80	71.20	2.949	

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

LEAM Drilling Systems LLC

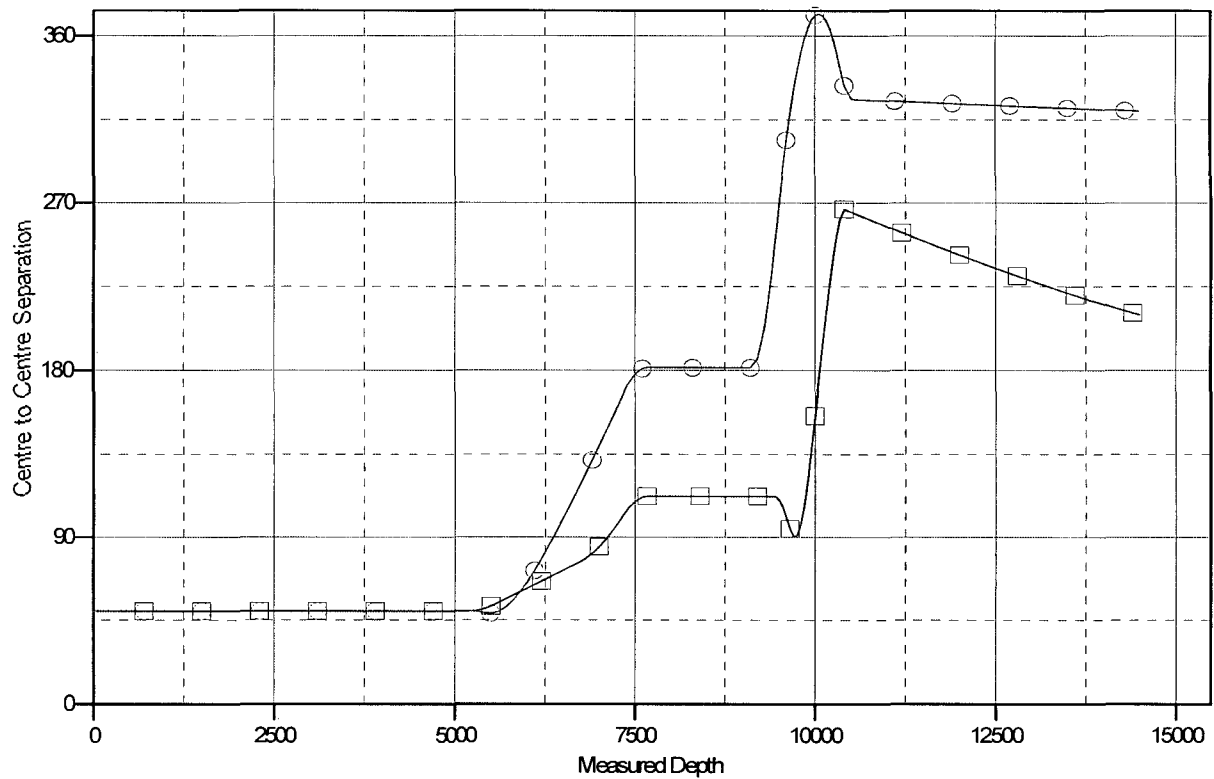
Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 8H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3645.2' + 25' RKB @ 3670.20usft
Reference Site:	Sea Snake 35 State	MD Reference:	3645.2' + 25' RKB @ 3670.20usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	8H	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 3645.2' + 25' RKB @ 3670.20usft
 Offset Depths are relative to Offset Datum
 Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 8H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.43°

Ladder Plot



LEGEND

6H, OH, Plan #1 V0
 10H, OH, Plan #1 V0

LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 8H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3645.2' + 25' RKB @ 3670.20usft
Reference Site:	Sea Snake 35 State	MD Reference:	3645.2' + 25' RKB @ 3670.20usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	8H	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 3645.2' + 25' RKB @ 3670.20usft

Offset Depths are relative to Offset Datum

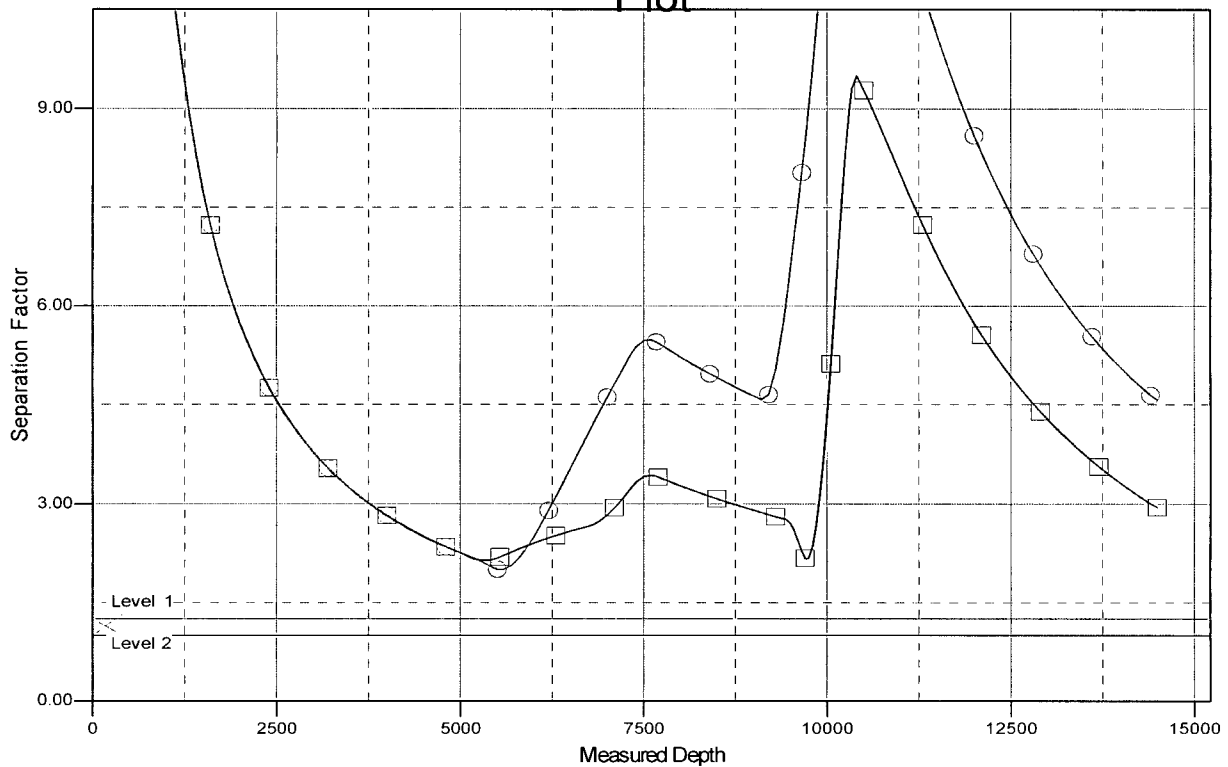
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 8H

Coordinate System is US State Plane 1983, New Mexico Eastern Zone

Grid Convergence at Surface is: 0.43°

Separation Factor Plot



LEGEND

6H, OH, Plan #1 V0
 10H, OH, Plan #1 V0