

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTCarlsbad Field Office
OCD Hobbs
FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an
abandoned well. Use form 3160-3 (APD) for such proposals.5. Lease Serial No.
NNNM144988

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

DEVON ENERGY PRODUCTION COMPANY

Contact: REBECCA DEAL

Email: Rebecca.Deal@devn.com

3a. Address

333 WEST SHERIDAN AVENUE
OKLAHOMA CITY, OK 73102

3b. Phone No. (include area code)

Ph: 405-228-8429

8. Well Name and No.

SEAWOLF 1-12 FED 95H

9. API Well No.

30-025-43790

10. Field and Pool or Exploratory Area

WC-025 G-09 S253336D;U WC

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 1 T26S R33E NENE 170FNL 750FEL

11. County or Parish, State

LEA COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

TYPE OF ACTION

☒ Notice of Intent☐ Subsequent Report☐ Final Abandonment Notice☐ Acidize☐ Alter Casing☐ Casing Repair☐ Change Plans☐ Convert to Injection☐ Deepen☐ Hydraulic Fracturing☐ New Construction☐ Plug and Abandon☐ Plug Back☐ Production (Start/Resume)☐ Reclamation☐ Recomplete☐ Temporarily Abandon☐ Water Disposal☐ Water Shut-Off☐ Well Integrity☒ Other
Change to Original A
PD

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

Devon Energy respectfully requests an annular variance and the following changes to the original APD:

Target TVD from 12,828' to 12,785'
Production Hole Size Change from 8 3/4" to 6 3/4"
Production Casing Connect Change

Please see attached revised Drilling Plan/Directional Plan, BOPE schematic, Production Hole Document and Annular Preventer Document.

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #392317 verified by the BLM Well Information System
For DEVON ENERGY PRODUCTION COMPANY, sent to the Hobbs
Committed to AFMSS for processing by PRISCILLA PEREZ on 11/08/2017 ()

Name (Printed/Typed) REBECCA DEAL

Title REGULATORY COMPLIANCE PROFESSI

Signature (Electronic Submission)

Date 10/18/2017

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By Mustafa Hagel

Title

PETROLEUM ENGINEER

Date 2/1/2018

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

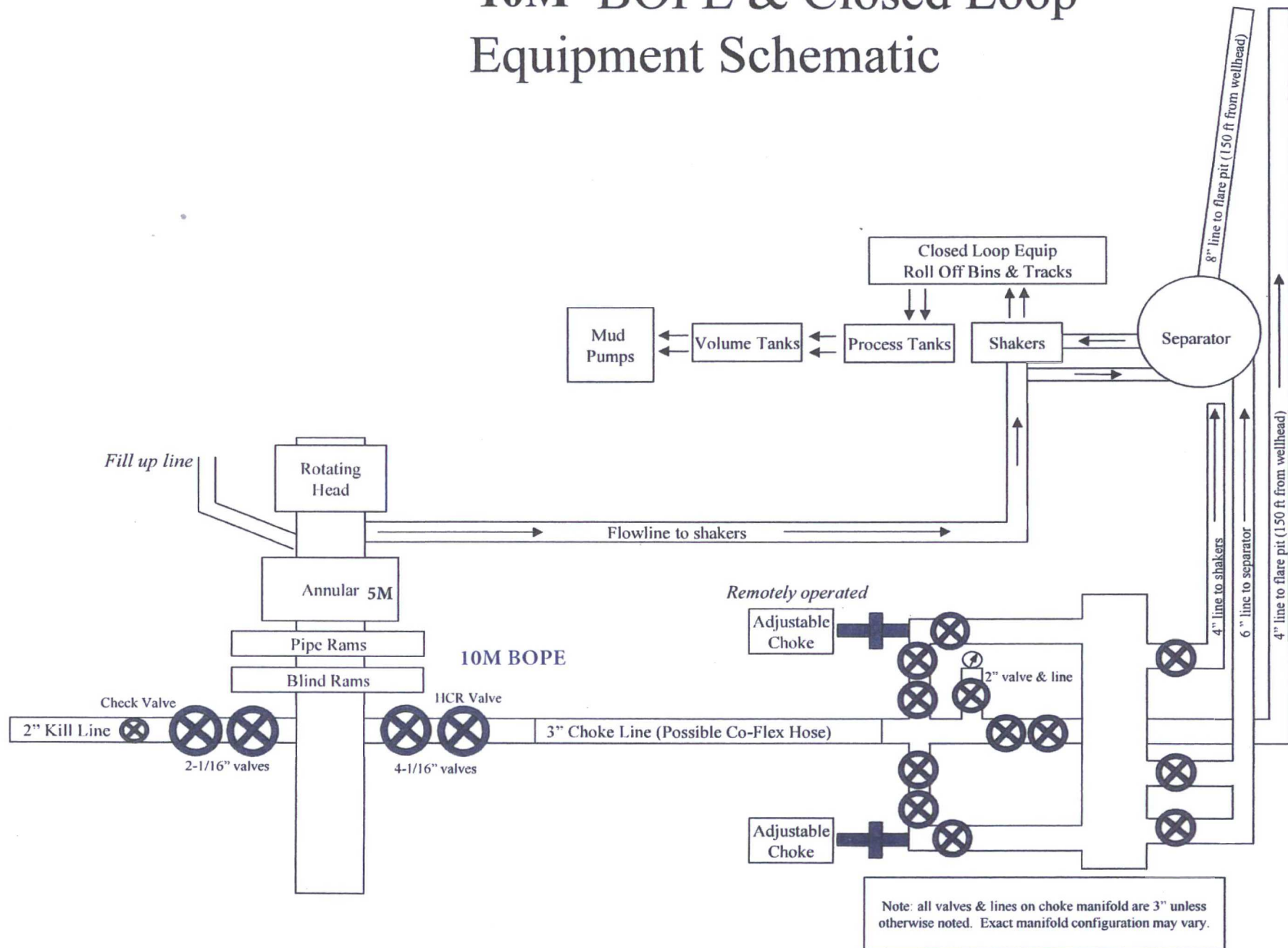
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

10M BOPE & Closed Loop Equipment Schematic



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1. Geologic Formations

TVD of target	12,785'	Pilot hole depth	N/A
MD at TD:	22,810'	Deepest expected fresh water:	746'

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Rustler	746		
Top of Salt	1094		
Base of Salt	4817		
Delaware	5059		
Lower Brushy Canyon	9112		
1st BSPG Lime	9292		
1st BSPG Sand	10230		
2nd BSPG Lime	10505		
2nd BSPG Sand	10778		
3rd BSPG Lime	11272		
3rd BSPG Sand	11856		
Wolfcamp	12342		
Wolfcamp X	12369		
Wolfcamp Y	12465		
Wolfcamp 100	12526		
Wolfcamp 110	12598		
Wolfcamp 120	12675		
Wolfcamp 130	12742		

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

Devon Energy, Seawolf 1-12 95H

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
	From	To							
6.75"	0	12,964'	5.5"	20	P110	Vam Top HT	1.125	1.25	1.6
6.75"	12,964'	22,810'	5.5"	20	P110	Vam SG	1.125	1.25	1.6

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

Rustler top will be validated via drilling parameters (i.e. reduction in ROP) and surface casing setting depth revised accordingly if needed.

A variance is requested to wave the centralizer requirement for 5-1/2" SF/Flush casing in the 6-3/4" hole.

	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?	

Devon Energy, Seawolf 1-12 95H

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	H ₂ O gal/sk	Yld ft ³ / sack	Slurry Description
5-1/2" Production	750	14.8	6.32	1.33	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake

If a DV tool is used, 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
5-1/2" Production Casing	12,964'	25%

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:
6-3/4"	13-5/8"	10M	Annular (5M)	X	70% of rated working pressure
			Blind Ram	X	10M
			Pipe Ram	X	
			Double Ram	X	
			Other *		
			Annular		
			Blind Ram		
			Pipe Ram		
			Double Ram		
			Other *		

*Specify if additional ram is utilized.

Devon Energy, Seawolf 1-12 95H

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 5000 (5M) psi 10,000 (10M) psi - Wellhead will be installed by wellhead 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 company 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 3M, 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.

Devon Energy, Seawolf 1-12 95H

After running the 10-3/4" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 5M will be installed on the wellhead system and will undergo a 250 psi low pressure test followed by a 5,000 psi high pressure test. The 5,000 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.

13-5/8" BOP/BOPE system will have been tested to 10M rating prior to drilling out 7 5/8" casing.

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's proposed wellhead manufactures will be FMC Technologies, Cactus Wellhead, or Cameron.

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.

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
13,164'	22,810'	Oil Based Mud	9.5-12	45-65	N/C - 6

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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Devon Energy, Seawolf 1-12 95H

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
X 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	7200 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

Attachments

 x Directional Plan
 Other, describe

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1. Component and Preventer Compatibility Table

The table below, which covers the drilling and casing of the 10M MASP portion of the well, outlines the tubulars and the compatible preventers in use. This table, combined with the mud program, documents that two barriers to flow can be maintained at all times, independent of the rating of the annular preventer.

6-3/4" Production hole section, 10M requirement

Component	OD	Preventer	RWP
Drillpipe	4.5"	Fixed lower 4.5" Upper 3.5-5.5" VBR	10M
HWDP	4.5"	Fixed lower 4.5" Upper 3.5-5.5" VBR	10M
Drill collars and MWD tools	4.75"	Upper 3.5-5.5" VBR	10M
Mud Motor	4.75"	Upper 3.5-5.5" VBR	10M
Production casing	5.5"	Upper 3.5-5.5" VBR	10M
ALL	0-13-5/8"	Annular	5M
Open-hole	-	Blind Rams	10M

VBR = Variable Bore Ram. Compatible range listed in chart.

2. Well Control Procedures

Well control procedures are specific to the rig equipment and the operation at the time the kick occurs. Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), and moving the BHA through the BOPs. The pressure at which control is swapped from the annular to another compatible ram is variable, but the operator will document in the submission their operating pressure limit. The operator may choose an operating pressure less than or equal to RWP, but in no case will it exceed the RWP of the annular preventer.

General Procedure While Drilling

1. Sound alarm (alert crew)
2. Space out drill string
3. Shut down pumps (stop pumps and rotary)
4. Shut-in Well (uppermost applicable BOP, typically annular preventer first. HCR and choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
 - a. SIDPP and SICP
 - b. Pit gain
 - c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach the RWP of the annular preventer, confirm spacing and swap to the upper pipe ram.

Devon Energy, Seawolf 1-12 Wells

General Procedure While Tripping

1. Sound alarm (alert crew)
2. Stab full opening safety valve and close
3. Space out drill string
4. Shut-in (uppermost applicable BOP, typically annular preventer first. HCR and choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
 - a. SIDPP and SICP
 - b. Pit gain
 - c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach the RWP of the annular preventer, confirm spacing and swap to the upper pipe ram.

General Procedure While Running Casing

1. Sound alarm (alert crew)
2. Stab crossover and full opening safety valve and close
3. Space out string
4. Shut-in (uppermost applicable BOP, typically annular preventer first. HCR and choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
 - a. SIDPP and SICP
 - b. Pit gain
 - c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach the RWP of the annular preventer, confirm spacing and swap to compatible pipe ram.

General Procedure With No Pipe In Hole (Open Hole)

1. Sound alarm (alert crew)
2. Shut-in with blind rams or BSR. (HCR and choke will already be in the closed position.)
3. Confirm shut-in
4. Notify toolpusher/company representative
5. Read and record the following:
 - a. SICP
 - b. Pit gain
 - c. Time
6. Regroup and identify forward plan

Devon Energy, Seawolf 1-12 Wells

General Procedures While Pulling BHA thru Stack

1. PRIOR to pulling last joint of drillpipe thru the stack.
 - a. Perform flowcheck, if flowing:
 - b. Sound alarm (alert crew)
 - c. Stab full opening safety valve and close
 - d. Space out drill string with tool joint just beneath the upper pipe ram.
 - e. Shut-in using upper pipe ram. (HCR and choke will already be in the closed position.)
 - f. Confirm shut-in
 - g. Notify toolpusher/company representative
 - h. Read and record the following:
 - i. SIDPP and SICP
 - ii. Pit gain
 - iii. Time
 - i. Regroup and identify forward plan
2. With BHA in the stack and compatible ram preventer and pipe combo immediately available.
 - a. Sound alarm (alert crew)
 - b. Stab crossover and full opening safety valve and close
 - c. Space out drill string with upset just beneath the compatible pipe ram.
 - d. Shut-in using compatible pipe ram. (HCR and choke will already be in the closed position.)
 - e. Confirm shut-in
 - f. Notify toolpusher/company representative
 - g. Read and record the following:
 - i. SIDPP and SICP
 - ii. Pit gain
 - iii. Time
 - h. Regroup and identify forward plan
3. With BHA in the stack and NO compatible ram preventer and pipe combo immediately available.
 - a. Sound alarm (alert crew)
 - b. If possible to pick up high enough, pull string clear of the stack and follow "Open Hole" scenario.
 - c. If impossible to pick up high enough to pull the string clear of the stack:
 - d. Stab crossover, make up one joint/stand of drillpipe, and full opening safety valve and close
 - e. Space out drill string with tooljoint just beneath the upper pipe ram.
 - f. Shut-in using upper pipe ram. (HCR and choke will already be in the closed position.)
 - g. Confirm shut-in
 - h. Notify toolpusher/company representative
 - i. Read and record the following:
 - i. SIDPP and SICP
 - ii. Pit gain
 - iii. Time
 - j. Regroup and identify forward plan

Devon Energy

Project: Lea County, NM (NAD-83)
Site: Seawolf 1-12 Fed
Well: 95H
Wellbore: OH
Design: Plan #1

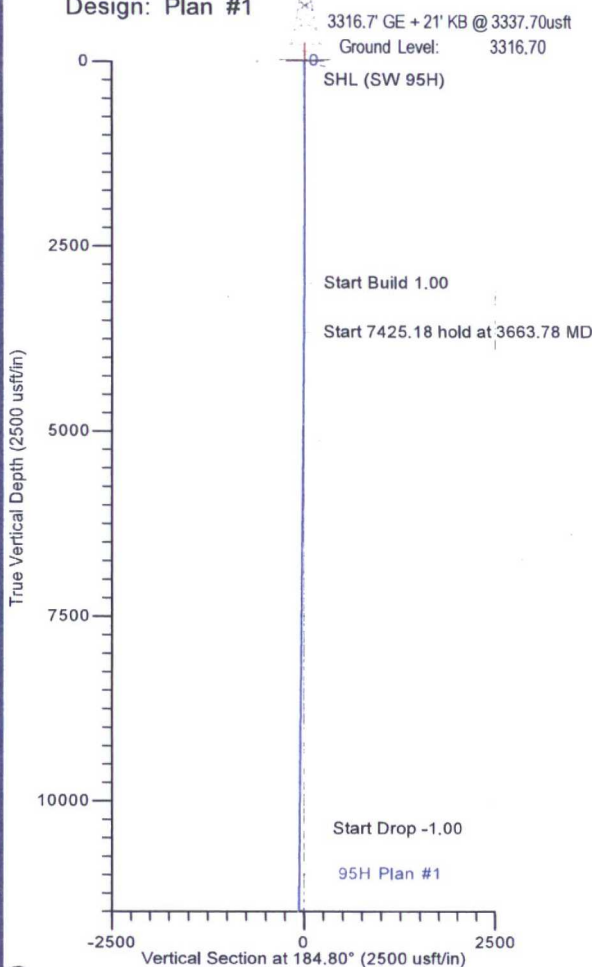


Azimuths to Grid North
True North: -0.43°
Magnetic North: 6.38°

Magnetic Field
Strength: 47949.1snT
Dip Angle: 59.80°
Date: 7/5/2017
Model: HDGM

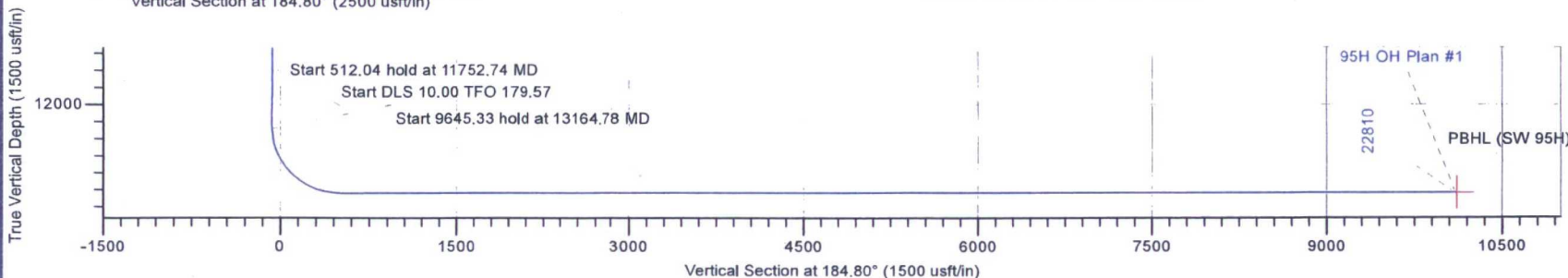
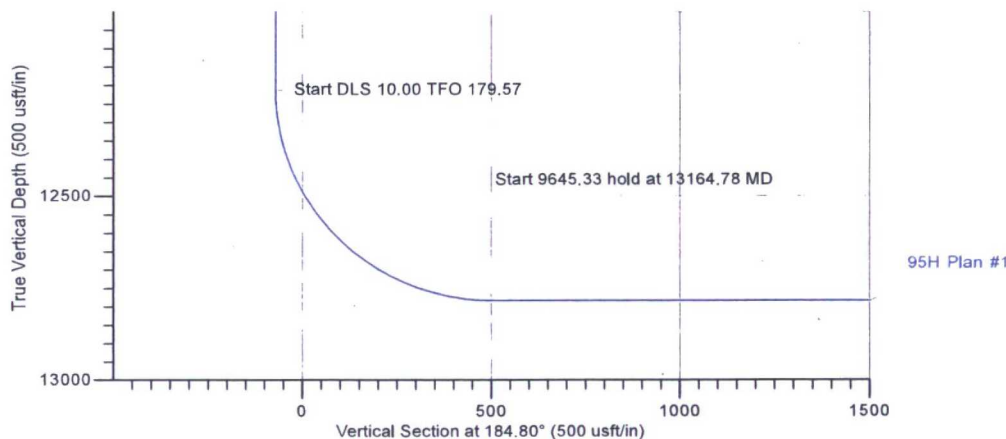
PROJECT DETAILS: Lea County, NM (NAD-83)

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone



SECTION DETAILS										
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 1.00	
3000.00	0.00	0.00	3000.00	0.00	0.00	0.00	0.00	0.00	Start 7425.18 hold at 3663.78 MD	
3663.78	6.64	279.23	3662.30	6.16	-37.91	1.00	279.23	-2.96	Start Drop -1.00	
11088.96	6.64	279.23	11037.70	143.84	-885.09	0.00	0.00	-69.22	Start 512.04 hold at 11752.74 MD	
11752.74	0.00	0.00	11700.00	150.00	-923.00	1.00	180.00	-72.19	Start DLS 10.00 TFO 179.57	
12264.78	0.00	0.00	12212.04	150.00	-923.00	0.00	0.00	-72.19	Start 9645.33 hold at 13164.78 MD	
13164.78	90.00	179.57	12785.00	-422.94	-918.68	10.00	179.57	498.38	TD at 22810.11	
22810.11	90.00	179.57	12785.00	-10068.00	-846.00	0.00	0.00	10103.48		

DESIGN TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	
PBHL (SW 95H)	12785.00	-10068.00	-846.00	32° 3' 5.793 N	103° 31' 22.534 W	
SHL (SW 95H)	0.00	0.00	0.00	32° 4' 45.356 N	103° 31' 11.823 W	



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

Plan: Plan #1 (95H/OH)
Seawolf 1-12 Fed
Created By: Brady Deaver
Date: 12:21, July 05 2017
Approved: _____
Date: _____

Devon Energy

Project: Lea County, NM (NAD-83)
Site: Seawolf 1-12 Fed
Well: 95H
Wellbore: OH
Design: Plan #1



Azimuths to Grid North
True North: -0.43°
Magnetic North: 6.38°

Magnetic Field
Strength: 47949.1snT
Dip Angle: 59.80°
Date: 7/5/2017
Model: HDGM



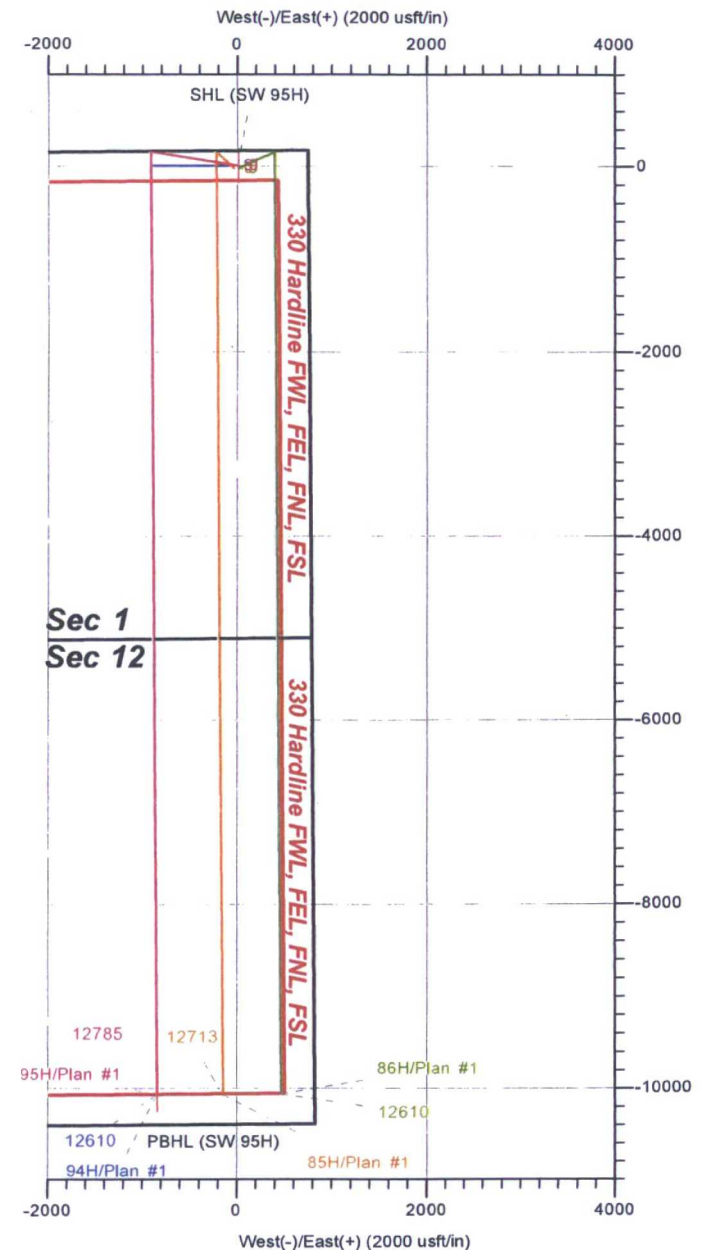
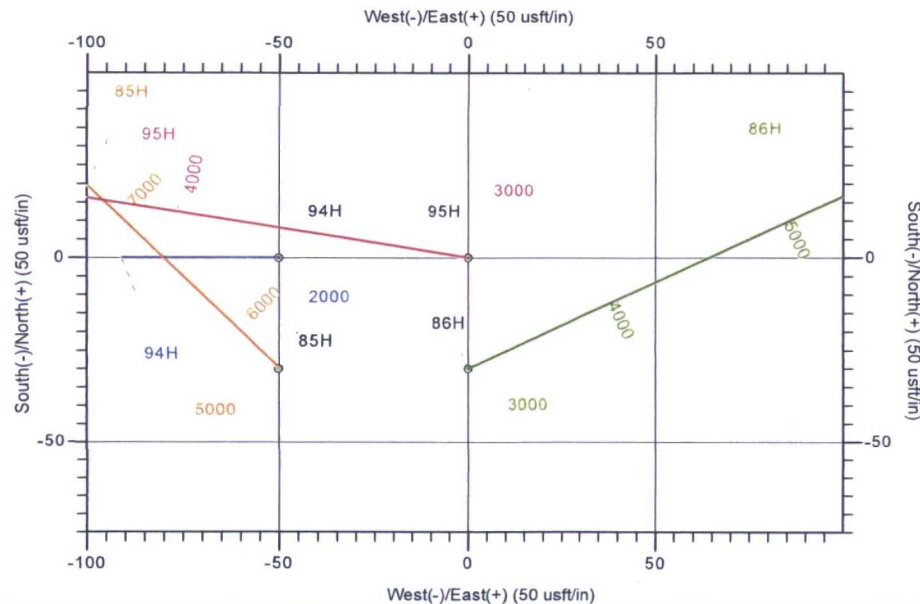
PROJECT DETAILS: Lea County, NM (NAD-83)
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL (SW 95H)	12785.00	-10068.00	-846.00	383455.75	792416.97	32° 3' 5.793 N	103° 31' 22.534 W
SHL (SW 95H)	0.00	0.00	0.00	393523.75	793262.97	32° 4' 45.356 N	103° 31' 11.823 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3000.00	0.00	0.00	3000.00	0.00	0.00	0.00	0.00	0.00	Start Build 1.00
3663.78	6.64	279.23	3662.30	6.16	-37.91	1.00	279.23	-2.96	Start 7425.18 hold at 3663.78 MD
11088.96	6.64	279.23	11037.70	143.84	-885.09	0.00	0.00	-69.22	Start Drop -1.00
11752.74	0.00	0.00	11700.00	150.00	-923.00	1.00	180.00	-72.19	Start 512.04 hold at 11752.74 MD
12264.78	0.00	0.00	12212.04	150.00	-923.00	0.00	0.00	-72.19	Start DLS 10.00 TFO 179.57
13164.78	90.00	179.57	12785.00	-422.94	-918.68	10.00	179.57	498.38	Start 9645.33 hold at 13164.78 MD
22810.11	90.00	179.57	12785.00	-10068.00	-846.00	0.00	0.00	10103.48	TD at 22810.11



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

Plan: Plan #1 (95H/OH)
Seawolf 1-12 Fed
Created By: Dustin Ault
Date: 12:22, July 05 2017
Approved: _____ Date: _____

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Devon Energy

Lea County, NM (NAD-83)

Seawolf 1-12 Fed

95H

OH

Plan: Plan #1

Standard Planning Report

05 July, 2017

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Multi User Db
Company: Devon Energy
Project: Lea County, NM (NAD-83)
Site: Seawolf 1-12 Fed
Well: 95H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well 95H
TVD Reference: 3316.7' GE + 21' KB @ 3337.70usft
MD Reference: 3316.7' GE + 21' KB @ 3337.70usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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	Seawolf 1-12 Fed		
Site Position:		Northing:	393,463.69 usft
From:	Map	Easting:	789,088.21 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 4' 45.071 N
		Longitude:	103° 32' 0.348 W
		Grid Convergence:	0.42 °

Well	95H		
Well Position	+N/-S	60.06 usft	Northing: 393,523.75 usft
	+E/-W	4,174.76 usft	Easting: 793,262.97 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	32° 4' 45.356 N
		Longitude:	103° 31' 11.823 W
		Ground Level:	3,316.70 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	HDGM	7/5/2017	(°) 6.82
			Dip Angle
			(°) 59.80
			Field Strength
			(nT) 47,949

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
			(°) 184.80

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	
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,663.78	6.64	279.23	3,662.30	6.16	-37.91	1.00	1.00	0.00	279.23	
11,088.96	6.64	279.23	11,037.70	143.84	-885.09	0.00	0.00	0.00	0.00	
11,752.74	0.00	0.00	11,700.00	150.00	-923.00	1.00	-1.00	0.00	180.00	
12,264.78	0.00	0.00	12,212.04	150.00	-923.00	0.00	0.00	0.00	0.00	
13,164.78	90.00	179.57	12,785.00	-422.94	-918.68	10.00	10.00	19.95	179.57	
22,810.11	90.00	179.57	12,785.00	-10,068.00	-846.00	0.00	0.00	0.00	0.00	PBHL (SW 95H)

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Multi User Db
Company: Devon Energy
Project: Lea County, NM (NAD-83)
Site: Seawolf 1-12 Fed
Well: 95H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well 95H
TVD Reference: 3316.7' GE + 21' KB @ 3337.70usft
MD Reference: 3316.7' GE + 21' KB @ 3337.70usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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 (SW 95H)									
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
1,400.00	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
1,700.00	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
Start Build 1.00									
3,100.00	1.00	279.23	3,099.99	0.14	-0.86	-0.07	1.00	1.00	0.00
3,200.00	2.00	279.23	3,199.96	0.56	-3.45	-0.27	1.00	1.00	0.00
3,300.00	3.00	279.23	3,299.86	1.26	-7.75	-0.61	1.00	1.00	0.00
3,400.00	4.00	279.23	3,399.68	2.24	-13.78	-1.08	1.00	1.00	0.00
3,500.00	5.00	279.23	3,499.37	3.50	-21.52	-1.68	1.00	1.00	0.00
3,600.00	6.00	279.23	3,598.90	5.03	-30.98	-2.42	1.00	1.00	0.00
3,663.78	6.64	279.23	3,662.30	6.16	-37.91	-2.96	1.00	1.00	0.00
Start 7425.18 hold at 3663.78 MD									
3,700.00	6.64	279.23	3,698.27	6.83	-42.04	-3.29	0.00	0.00	0.00
3,800.00	6.64	279.23	3,797.60	8.69	-53.45	-4.18	0.00	0.00	0.00
3,900.00	6.64	279.23	3,896.93	10.54	-64.86	-5.07	0.00	0.00	0.00
4,000.00	6.64	279.23	3,996.26	12.40	-76.27	-5.97	0.00	0.00	0.00
4,100.00	6.64	279.23	4,095.59	14.25	-87.68	-6.86	0.00	0.00	0.00
4,200.00	6.64	279.23	4,194.92	16.10	-99.09	-7.75	0.00	0.00	0.00
4,300.00	6.64	279.23	4,294.25	17.96	-110.50	-8.64	0.00	0.00	0.00
4,400.00	6.64	279.23	4,393.58	19.81	-121.91	-9.53	0.00	0.00	0.00
4,500.00	6.64	279.23	4,492.91	21.67	-133.32	-10.43	0.00	0.00	0.00
4,600.00	6.64	279.23	4,592.24	23.52	-144.73	-11.32	0.00	0.00	0.00
4,700.00	6.64	279.23	4,691.57	25.37	-156.14	-12.21	0.00	0.00	0.00
4,800.00	6.64	279.23	4,790.90	27.23	-167.55	-13.10	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Multi User Db
Company: Devon Energy
Project: Lea County, NM (NAD-83)
Site: Seawolf 1-12 Fed
Well: 95H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well 95H
3316.7' GE + 21' KB @ 3337.70usft
3316.7' GE + 21' KB @ 3337.70usft
Grid
Minimum Curvature

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)
4,900.00	6.64	279.23	4,890.23	29.08	-178.96	-14.00	0.00	0.00	0.00
5,000.00	6.64	279.23	4,989.56	30.94	-190.37	-14.89	0.00	0.00	0.00
5,100.00	6.64	279.23	5,088.89	32.79	-201.78	-15.78	0.00	0.00	0.00
5,200.00	6.64	279.23	5,188.22	34.65	-213.19	-16.67	0.00	0.00	0.00
5,300.00	6.64	279.23	5,287.55	36.50	-224.60	-17.57	0.00	0.00	0.00
5,400.00	6.64	279.23	5,386.88	38.35	-236.00	-18.46	0.00	0.00	0.00
5,500.00	6.64	279.23	5,486.21	40.21	-247.41	-19.35	0.00	0.00	0.00
5,600.00	6.64	279.23	5,585.54	42.06	-258.82	-20.24	0.00	0.00	0.00
5,700.00	6.64	279.23	5,684.87	43.92	-270.23	-21.13	0.00	0.00	0.00
5,800.00	6.64	279.23	5,784.20	45.77	-281.64	-22.03	0.00	0.00	0.00
5,900.00	6.64	279.23	5,883.53	47.63	-293.05	-22.92	0.00	0.00	0.00
6,000.00	6.64	279.23	5,982.86	49.48	-304.46	-23.81	0.00	0.00	0.00
6,100.00	6.64	279.23	6,082.19	51.33	-315.87	-24.70	0.00	0.00	0.00
6,200.00	6.64	279.23	6,181.52	53.19	-327.28	-25.60	0.00	0.00	0.00
6,300.00	6.64	279.23	6,280.84	55.04	-338.69	-26.49	0.00	0.00	0.00
6,400.00	6.64	279.23	6,380.17	56.90	-350.10	-27.38	0.00	0.00	0.00
6,500.00	6.64	279.23	6,479.50	58.75	-361.51	-28.27	0.00	0.00	0.00
6,600.00	6.64	279.23	6,578.83	60.60	-372.92	-29.17	0.00	0.00	0.00
6,700.00	6.64	279.23	6,678.16	62.46	-384.33	-30.06	0.00	0.00	0.00
6,800.00	6.64	279.23	6,777.49	64.31	-395.74	-30.95	0.00	0.00	0.00
6,900.00	6.64	279.23	6,876.82	66.17	-407.15	-31.84	0.00	0.00	0.00
7,000.00	6.64	279.23	6,976.15	68.02	-418.56	-32.74	0.00	0.00	0.00
7,100.00	6.64	279.23	7,075.48	69.88	-429.97	-33.63	0.00	0.00	0.00
7,200.00	6.64	279.23	7,174.81	71.73	-441.38	-34.52	0.00	0.00	0.00
7,300.00	6.64	279.23	7,274.14	73.58	-452.79	-35.41	0.00	0.00	0.00
7,400.00	6.64	279.23	7,373.47	75.44	-464.20	-36.30	0.00	0.00	0.00
7,500.00	6.64	279.23	7,472.80	77.29	-475.61	-37.20	0.00	0.00	0.00
7,600.00	6.64	279.23	7,572.13	79.15	-487.02	-38.09	0.00	0.00	0.00
7,700.00	6.64	279.23	7,671.46	81.00	-498.42	-38.98	0.00	0.00	0.00
7,800.00	6.64	279.23	7,770.79	82.85	-509.83	-39.87	0.00	0.00	0.00
7,900.00	6.64	279.23	7,870.12	84.71	-521.24	-40.77	0.00	0.00	0.00
8,000.00	6.64	279.23	7,969.45	86.56	-532.65	-41.66	0.00	0.00	0.00
8,100.00	6.64	279.23	8,068.78	88.42	-544.06	-42.55	0.00	0.00	0.00
8,200.00	6.64	279.23	8,168.11	90.27	-555.47	-43.44	0.00	0.00	0.00
8,300.00	6.64	279.23	8,267.44	92.13	-566.88	-44.34	0.00	0.00	0.00
8,400.00	6.64	279.23	8,366.77	93.98	-578.29	-45.23	0.00	0.00	0.00
8,500.00	6.64	279.23	8,466.10	95.83	-589.70	-46.12	0.00	0.00	0.00
8,600.00	6.64	279.23	8,565.43	97.69	-601.11	-47.01	0.00	0.00	0.00
8,700.00	6.64	279.23	8,664.76	99.54	-612.52	-47.90	0.00	0.00	0.00
8,800.00	6.64	279.23	8,764.09	101.40	-623.93	-48.80	0.00	0.00	0.00
8,900.00	6.64	279.23	8,863.42	103.25	-635.34	-49.69	0.00	0.00	0.00
9,000.00	6.64	279.23	8,962.75	105.11	-646.75	-50.58	0.00	0.00	0.00
9,100.00	6.64	279.23	9,062.08	106.96	-658.16	-51.47	0.00	0.00	0.00
9,200.00	6.64	279.23	9,161.41	108.81	-669.57	-52.37	0.00	0.00	0.00
9,300.00	6.64	279.23	9,260.74	110.67	-680.98	-53.26	0.00	0.00	0.00
9,400.00	6.64	279.23	9,360.06	112.52	-692.39	-54.15	0.00	0.00	0.00
9,500.00	6.64	279.23	9,459.39	114.38	-703.80	-55.04	0.00	0.00	0.00
9,600.00	6.64	279.23	9,558.72	116.23	-715.21	-55.94	0.00	0.00	0.00
9,700.00	6.64	279.23	9,658.05	118.08	-726.62	-56.83	0.00	0.00	0.00
9,800.00	6.64	279.23	9,757.38	119.94	-738.03	-57.72	0.00	0.00	0.00
9,900.00	6.64	279.23	9,856.71	121.79	-749.44	-58.61	0.00	0.00	0.00
10,000.00	6.64	279.23	9,956.04	123.65	-760.84	-59.51	0.00	0.00	0.00
10,100.00	6.64	279.23	10,055.37	125.50	-772.25	-60.40	0.00	0.00	0.00
10,200.00	6.64	279.23	10,154.70	127.36	-783.66	-61.29	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Multi User Db
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TVD Reference: 3316.7' GE + 21' KB @ 3337.70usft
MD Reference: 3316.7' GE + 21' KB @ 3337.70usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,300.00	6.64	279.23	10,254.03	129.21	-795.07	-62.18	0.00	0.00	0.00
10,400.00	6.64	279.23	10,353.36	131.06	-806.48	-63.07	0.00	0.00	0.00
10,500.00	6.64	279.23	10,452.69	132.92	-817.89	-63.97	0.00	0.00	0.00
10,600.00	6.64	279.23	10,552.02	134.77	-829.30	-64.86	0.00	0.00	0.00
10,700.00	6.64	279.23	10,651.35	136.63	-840.71	-65.75	0.00	0.00	0.00
10,800.00	6.64	279.23	10,750.68	138.48	-852.12	-66.64	0.00	0.00	0.00
10,900.00	6.64	279.23	10,850.01	140.34	-863.53	-67.54	0.00	0.00	0.00
11,000.00	6.64	279.23	10,949.34	142.19	-874.94	-68.43	0.00	0.00	0.00
11,088.96	6.64	279.23	11,037.70	143.84	-885.09	-69.22	0.00	0.00	0.00
Start Drop -1.00									
11,100.00	6.53	279.23	11,048.67	144.04	-886.34	-69.32	1.00	-1.00	0.00
11,200.00	5.53	279.23	11,148.12	145.73	-896.70	-70.13	1.00	-1.00	0.00
11,300.00	4.53	279.23	11,247.73	147.13	-905.35	-70.81	1.00	-1.00	0.00
11,400.00	3.53	279.23	11,347.48	148.26	-912.29	-71.35	1.00	-1.00	0.00
11,500.00	2.53	279.23	11,447.34	149.11	-917.50	-71.76	1.00	-1.00	0.00
11,600.00	1.53	279.23	11,547.28	149.67	-920.99	-72.03	1.00	-1.00	0.00
11,700.00	0.53	279.23	11,647.26	149.96	-922.76	-72.17	1.00	-1.00	0.00
11,752.74	0.00	0.00	11,700.00	150.00	-923.00	-72.19	1.00	-1.00	0.00
Start 512.04 hold at 11752.74 MD									
11,800.00	0.00	0.00	11,747.26	150.00	-923.00	-72.19	0.00	0.00	0.00
11,900.00	0.00	0.00	11,847.26	150.00	-923.00	-72.19	0.00	0.00	0.00
12,000.00	0.00	0.00	11,947.26	150.00	-923.00	-72.19	0.00	0.00	0.00
12,100.00	0.00	0.00	12,047.26	150.00	-923.00	-72.19	0.00	0.00	0.00
12,200.00	0.00	0.00	12,147.26	150.00	-923.00	-72.19	0.00	0.00	0.00
12,264.78	0.00	0.00	12,212.04	150.00	-923.00	-72.19	0.00	0.00	0.00
Start DLS 10.00 TFO 179.57									
12,300.00	3.52	179.57	12,247.24	148.92	-922.99	-71.11	10.00	10.00	0.00
12,350.00	8.52	179.57	12,296.95	143.67	-922.95	-65.89	10.00	10.00	0.00
12,400.00	13.52	179.57	12,346.01	134.12	-922.88	-56.37	10.00	10.00	0.00
12,450.00	18.52	179.57	12,394.05	120.32	-922.78	-42.63	10.00	10.00	0.00
12,500.00	23.52	179.57	12,440.71	102.39	-922.64	-24.78	10.00	10.00	0.00
12,550.00	28.52	179.57	12,485.62	80.46	-922.48	-2.94	10.00	10.00	0.00
12,600.00	33.52	179.57	12,528.46	54.71	-922.28	22.71	10.00	10.00	0.00
12,650.00	38.52	179.57	12,568.89	25.31	-922.06	51.99	10.00	10.00	0.00
12,700.00	43.52	179.57	12,606.60	-7.50	-921.81	84.66	10.00	10.00	0.00
12,750.00	48.52	179.57	12,641.31	-43.46	-921.54	120.47	10.00	10.00	0.00
12,800.00	53.52	179.57	12,672.75	-82.32	-921.25	159.17	10.00	10.00	0.00
12,850.00	58.52	179.57	12,700.68	-123.77	-920.94	200.45	10.00	10.00	0.00
12,900.00	63.52	179.57	12,724.90	-167.49	-920.61	243.99	10.00	10.00	0.00
12,950.00	68.52	179.57	12,745.21	-213.16	-920.26	289.47	10.00	10.00	0.00
13,000.00	73.52	179.57	12,761.47	-260.43	-919.91	336.54	10.00	10.00	0.00
13,050.00	78.52	179.57	12,773.54	-308.93	-919.54	384.84	10.00	10.00	0.00
13,100.00	83.52	179.57	12,781.34	-358.30	-919.17	434.01	10.00	10.00	0.00
13,150.00	88.52	179.57	12,784.81	-408.16	-918.79	483.66	10.00	10.00	0.00
13,164.78	90.00	179.57	12,785.00	-422.94	-918.68	498.38	10.00	10.00	0.00
Start 9645.33 hold at 13164.78 MD									
13,200.00	90.00	179.57	12,785.00	-458.16	-918.42	533.45	0.00	0.00	0.00
13,300.00	90.00	179.57	12,785.00	-558.16	-917.66	633.04	0.00	0.00	0.00
13,400.00	90.00	179.57	12,785.00	-658.15	-916.91	732.62	0.00	0.00	0.00
13,500.00	90.00	179.57	12,785.00	-758.15	-916.16	832.20	0.00	0.00	0.00
13,600.00	90.00	179.57	12,785.00	-858.15	-915.40	931.78	0.00	0.00	0.00
13,700.00	90.00	179.57	12,785.00	-958.15	-914.65	1,031.37	0.00	0.00	0.00
13,800.00	90.00	179.57	12,785.00	-1,058.14	-913.90	1,130.95	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Multi User Db
Company: Devon Energy
Project: Lea County, NM (NAD-83)
Site: Seawolf 1-12 Fed
Well: 95H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well 95H
3316.7' GE + 21' KB @ 3337.70usft
3316.7' GE + 21' KB @ 3337.70usft
Grid
Minimum Curvature

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)
13,900.00	90.00	179.57	12,785.00	-1,158.14	-913.14	1,230.53	0.00	0.00	0.00
14,000.00	90.00	179.57	12,785.00	-1,258.14	-912.39	1,330.12	0.00	0.00	0.00
14,100.00	90.00	179.57	12,785.00	-1,358.13	-911.64	1,429.70	0.00	0.00	0.00
14,200.00	90.00	179.57	12,785.00	-1,458.13	-910.88	1,529.28	0.00	0.00	0.00
14,300.00	90.00	179.57	12,785.00	-1,558.13	-910.13	1,628.86	0.00	0.00	0.00
14,400.00	90.00	179.57	12,785.00	-1,658.13	-909.37	1,728.45	0.00	0.00	0.00
14,500.00	90.00	179.57	12,785.00	-1,758.12	-908.62	1,828.03	0.00	0.00	0.00
14,600.00	90.00	179.57	12,785.00	-1,858.12	-907.87	1,927.61	0.00	0.00	0.00
14,700.00	90.00	179.57	12,785.00	-1,958.12	-907.11	2,027.20	0.00	0.00	0.00
14,800.00	90.00	179.57	12,785.00	-2,058.11	-906.36	2,126.78	0.00	0.00	0.00
14,900.00	90.00	179.57	12,785.00	-2,158.11	-905.61	2,226.36	0.00	0.00	0.00
15,000.00	90.00	179.57	12,785.00	-2,258.11	-904.85	2,325.95	0.00	0.00	0.00
15,100.00	90.00	179.57	12,785.00	-2,358.11	-904.10	2,425.53	0.00	0.00	0.00
15,200.00	90.00	179.57	12,785.00	-2,458.10	-903.35	2,525.11	0.00	0.00	0.00
15,300.00	90.00	179.57	12,785.00	-2,558.10	-902.59	2,624.69	0.00	0.00	0.00
15,400.00	90.00	179.57	12,785.00	-2,658.10	-901.84	2,724.28	0.00	0.00	0.00
15,500.00	90.00	179.57	12,785.00	-2,758.09	-901.09	2,823.86	0.00	0.00	0.00
15,600.00	90.00	179.57	12,785.00	-2,858.09	-900.33	2,923.44	0.00	0.00	0.00
15,700.00	90.00	179.57	12,785.00	-2,958.09	-899.58	3,023.03	0.00	0.00	0.00
15,800.00	90.00	179.57	12,785.00	-3,058.09	-898.82	3,122.61	0.00	0.00	0.00
15,900.00	90.00	179.57	12,785.00	-3,158.08	-898.07	3,222.19	0.00	0.00	0.00
16,000.00	90.00	179.57	12,785.00	-3,258.08	-897.32	3,321.77	0.00	0.00	0.00
16,100.00	90.00	179.57	12,785.00	-3,358.08	-896.56	3,421.36	0.00	0.00	0.00
16,200.00	90.00	179.57	12,785.00	-3,458.07	-895.81	3,520.94	0.00	0.00	0.00
16,300.00	90.00	179.57	12,785.00	-3,558.07	-895.06	3,620.52	0.00	0.00	0.00
16,400.00	90.00	179.57	12,785.00	-3,658.07	-894.30	3,720.11	0.00	0.00	0.00
16,500.00	90.00	179.57	12,785.00	-3,758.07	-893.55	3,819.69	0.00	0.00	0.00
16,600.00	90.00	179.57	12,785.00	-3,858.06	-892.80	3,919.27	0.00	0.00	0.00
16,700.00	90.00	179.57	12,785.00	-3,958.06	-892.04	4,018.85	0.00	0.00	0.00
16,800.00	90.00	179.57	12,785.00	-4,058.06	-891.29	4,118.44	0.00	0.00	0.00
16,900.00	90.00	179.57	12,785.00	-4,158.05	-890.54	4,218.02	0.00	0.00	0.00
17,000.00	90.00	179.57	12,785.00	-4,258.05	-889.78	4,317.60	0.00	0.00	0.00
17,100.00	90.00	179.57	12,785.00	-4,358.05	-889.03	4,417.19	0.00	0.00	0.00
17,200.00	90.00	179.57	12,785.00	-4,458.05	-888.28	4,516.77	0.00	0.00	0.00
17,300.00	90.00	179.57	12,785.00	-4,558.04	-887.52	4,616.35	0.00	0.00	0.00
17,400.00	90.00	179.57	12,785.00	-4,658.04	-886.77	4,715.93	0.00	0.00	0.00
17,500.00	90.00	179.57	12,785.00	-4,758.04	-886.01	4,815.52	0.00	0.00	0.00
17,600.00	90.00	179.57	12,785.00	-4,858.03	-885.26	4,915.10	0.00	0.00	0.00
17,700.00	90.00	179.57	12,785.00	-4,958.03	-884.51	5,014.68	0.00	0.00	0.00
17,800.00	90.00	179.57	12,785.00	-5,058.03	-883.75	5,114.27	0.00	0.00	0.00
17,900.00	90.00	179.57	12,785.00	-5,158.03	-883.00	5,213.85	0.00	0.00	0.00
18,000.00	90.00	179.57	12,785.00	-5,258.02	-882.25	5,313.43	0.00	0.00	0.00
18,100.00	90.00	179.57	12,785.00	-5,358.02	-881.49	5,413.01	0.00	0.00	0.00
18,200.00	90.00	179.57	12,785.00	-5,458.02	-880.74	5,512.60	0.00	0.00	0.00
18,300.00	90.00	179.57	12,785.00	-5,558.02	-879.99	5,612.18	0.00	0.00	0.00
18,400.00	90.00	179.57	12,785.00	-5,658.01	-879.23	5,711.76	0.00	0.00	0.00
18,500.00	90.00	179.57	12,785.00	-5,758.01	-878.48	5,811.35	0.00	0.00	0.00
18,600.00	90.00	179.57	12,785.00	-5,858.01	-877.73	5,910.93	0.00	0.00	0.00
18,700.00	90.00	179.57	12,785.00	-5,958.00	-876.97	6,010.51	0.00	0.00	0.00
18,800.00	90.00	179.57	12,785.00	-6,058.00	-876.22	6,110.10	0.00	0.00	0.00
18,900.00	90.00	179.57	12,785.00	-6,158.00	-875.46	6,209.68	0.00	0.00	0.00
19,000.00	90.00	179.57	12,785.00	-6,258.00	-874.71	6,309.26	0.00	0.00	0.00
19,100.00	90.00	179.57	12,785.00	-6,357.99	-873.96	6,408.84	0.00	0.00	0.00
19,200.00	90.00	179.57	12,785.00	-6,457.99	-873.20	6,508.43	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Multi User Db
Company: Devon Energy
Project: Lea County, NM (NAD-83)
Site: Seawolf 1-12 Fed
Well: 95H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well 95H
TVD Reference: 3316.7' GE + 21' KB @ 3337.70usft
MD Reference: 3316.7' GE + 21' KB @ 3337.70usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
19,300.00	90.00	179.57	12,785.00	-6,557.99	-872.45	6,608.01	0.00	0.00	0.00
19,400.00	90.00	179.57	12,785.00	-6,657.98	-871.70	6,707.59	0.00	0.00	0.00
19,500.00	90.00	179.57	12,785.00	-6,757.98	-870.94	6,807.18	0.00	0.00	0.00
19,600.00	90.00	179.57	12,785.00	-6,857.98	-870.19	6,906.76	0.00	0.00	0.00
19,700.00	90.00	179.57	12,785.00	-6,957.98	-869.44	7,006.34	0.00	0.00	0.00
19,800.00	90.00	179.57	12,785.00	-7,057.97	-868.68	7,105.92	0.00	0.00	0.00
19,900.00	90.00	179.57	12,785.00	-7,157.97	-867.93	7,205.51	0.00	0.00	0.00
20,000.00	90.00	179.57	12,785.00	-7,257.97	-867.18	7,305.09	0.00	0.00	0.00
20,100.00	90.00	179.57	12,785.00	-7,357.96	-866.42	7,404.67	0.00	0.00	0.00
20,200.00	90.00	179.57	12,785.00	-7,457.96	-865.67	7,504.26	0.00	0.00	0.00
20,300.00	90.00	179.57	12,785.00	-7,557.96	-864.91	7,603.84	0.00	0.00	0.00
20,400.00	90.00	179.57	12,785.00	-7,657.96	-864.16	7,703.42	0.00	0.00	0.00
20,500.00	90.00	179.57	12,785.00	-7,757.95	-863.41	7,803.00	0.00	0.00	0.00
20,600.00	90.00	179.57	12,785.00	-7,857.95	-862.65	7,902.59	0.00	0.00	0.00
20,700.00	90.00	179.57	12,785.00	-7,957.95	-861.90	8,002.17	0.00	0.00	0.00
20,800.00	90.00	179.57	12,785.00	-8,057.94	-861.15	8,101.75	0.00	0.00	0.00
20,900.00	90.00	179.57	12,785.00	-8,157.94	-860.39	8,201.34	0.00	0.00	0.00
21,000.00	90.00	179.57	12,785.00	-8,257.94	-859.64	8,300.92	0.00	0.00	0.00
21,100.00	90.00	179.57	12,785.00	-8,357.94	-858.89	8,400.50	0.00	0.00	0.00
21,200.00	90.00	179.57	12,785.00	-8,457.93	-858.13	8,500.08	0.00	0.00	0.00
21,300.00	90.00	179.57	12,785.00	-8,557.93	-857.38	8,599.67	0.00	0.00	0.00
21,400.00	90.00	179.57	12,785.00	-8,657.93	-856.63	8,699.25	0.00	0.00	0.00
21,500.00	90.00	179.57	12,785.00	-8,757.92	-855.87	8,798.83	0.00	0.00	0.00
21,600.00	90.00	179.57	12,785.00	-8,857.92	-855.12	8,898.42	0.00	0.00	0.00
21,700.00	90.00	179.57	12,785.00	-8,957.92	-854.37	8,998.00	0.00	0.00	0.00
21,800.00	90.00	179.57	12,785.00	-9,057.92	-853.61	9,097.58	0.00	0.00	0.00
21,900.00	90.00	179.57	12,785.00	-9,157.91	-852.86	9,197.16	0.00	0.00	0.00
22,000.00	90.00	179.57	12,785.00	-9,257.91	-852.10	9,296.75	0.00	0.00	0.00
22,100.00	90.00	179.57	12,785.00	-9,357.91	-851.35	9,396.33	0.00	0.00	0.00
22,200.00	90.00	179.57	12,785.00	-9,457.90	-850.60	9,495.91	0.00	0.00	0.00
22,300.00	90.00	179.57	12,785.00	-9,557.90	-849.84	9,595.50	0.00	0.00	0.00
22,400.00	90.00	179.57	12,785.00	-9,657.90	-849.09	9,695.08	0.00	0.00	0.00
22,500.00	90.00	179.57	12,785.00	-9,757.90	-848.34	9,794.66	0.00	0.00	0.00
22,600.00	90.00	179.57	12,785.00	-9,857.89	-847.58	9,894.25	0.00	0.00	0.00
22,700.00	90.00	179.57	12,785.00	-9,957.89	-846.83	9,993.83	0.00	0.00	0.00
22,800.00	90.00	179.57	12,785.00	-10,057.89	-846.08	10,093.41	0.00	0.00	0.00
22,810.11	90.00	179.57	12,785.00	-10,068.00	-846.00	10,103.48	0.00	0.00	0.00

TD at 22810.11 - PBHL (SW 95H)

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 (SW 95H)	0.00	0.00	0.00	0.00	0.00	393,523.75	793,262.97	32° 4' 45.356 N	103° 31' 11.823 W
- plan hits target center									
- Point									
PBHL (SW 95H)	0.00	0.00	12,785.00	-10,068.00	-846.00	383,455.75	792,416.97	32° 3' 5.793 N	103° 31' 22.534 W
- plan hits target center									
- Point									

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Multi User Db
Company: Devon Energy
Project: Lea County, NM (NAD-83)
Site: Seawolf 1-12 Fed
Well: 95H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well 95H
TVD Reference: 3316.7' GE + 21' KB @ 3337.70usft
MD Reference: 3316.7' GE + 21' KB @ 3337.70usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
3,000.00	3,000.00	0.00	0.00	Start Build 1.00
3,663.78	3,662.30	6.16	-37.91	Start 7425.18 hold at 3663.78 MD
11,088.96	11,037.70	143.84	-885.09	Start Drop -1.00
11,752.74	11,700.00	150.00	-923.00	Start 512.04 hold at 11752.74 MD
12,264.78	12,212.04	150.00	-923.00	Start DLS 10.00 TFO 179.57
13,164.78	12,785.00	-422.94	-918.68	Start 9645.33 hold at 13164.78 MD
22,810.11	12,785.00	-10,068.00	-846.00	TD at 22810.11

Devon Energy

Lea County, NM (NAD-83)

Seawolf 1-12 Fed

95H

OH

Plan #1

HOBBS OCD

FEB 06 2018

RECEIVED

Anticollision Report

05 July, 2017

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 95H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3316.7' GE + 21' KB @ 3337.70usft
Reference Site:	Seawolf 1-12 Fed	MD Reference:	3316.7' GE + 21' KB @ 3337.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	95H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi 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	7/5/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	22,809.71	Plan #1 (OH)	LEAM MWD+HDGM	MWD+HDGM	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft) Between Ellipses (usft)		Separation Factor	Warning
Offset Well - Wellbore - Design						
Seawolf 1-12 Fed						
85H - OH - Plan #1	3,716.84	3,715.00	37.63	21.29	2.303	CC, ES
85H - OH - Plan #1	22,810.11	22,685.71	693.74	361.86	2.090	SF
86H - OH - Plan #1	3,157.09	3,157.34	29.72	15.84	2.141	CC
86H - OH - Plan #1	3,200.00	3,200.22	29.83	15.77	2.122	ES, SF
94H - OH - Plan #1	2,000.00	2,000.00	50.00	41.28	5.735	CC
94H - OH - Plan #1	22,810.11	22,473.80	175.00	20.91	1.136	Level 2, ES, SF

Offset Design Seawolf 1-12 Fed - 85H - OH - Plan #1												Offset Site Error: 0.00 usft	
Survey Program: 0-LEAM MWD+HDGM												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	-120.96	-30.00	-50.00	58.31				
100.00	100.00	100.00	100.00	0.09	0.09	-120.96	-30.00	-50.00	58.31	58.13	0.18	328.383	
200.00	200.00	200.00	200.00	0.31	0.31	-120.96	-30.00	-50.00	58.31	57.68	0.63	92.983	
300.00	300.00	300.00	300.00	0.54	0.54	-120.96	-30.00	-50.00	58.31	57.23	1.08	54.159	
400.00	400.00	400.00	400.00	0.76	0.76	-120.96	-30.00	-50.00	58.31	56.78	1.53	38.207	
500.00	500.00	500.00	500.00	0.99	0.99	-120.96	-30.00	-50.00	58.31	56.33	1.98	29.513	
600.00	600.00	600.00	600.00	1.21	1.21	-120.96	-30.00	-50.00	58.31	55.88	2.43	24.043	
700.00	700.00	700.00	700.00	1.44	1.44	-120.96	-30.00	-50.00	58.31	55.43	2.87	20.283	
800.00	800.00	800.00	800.00	1.66	1.66	-120.96	-30.00	-50.00	58.31	54.99	3.32	17.540	
900.00	900.00	900.00	900.00	1.89	1.89	-120.96	-30.00	-50.00	58.31	54.54	3.77	15.451	
1,000.00	1,000.00	1,000.00	1,000.00	2.11	2.11	-120.96	-30.00	-50.00	58.31	54.09	4.22	13.806	
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	-120.96	-30.00	-50.00	58.31	53.64	4.67	12.478	
1,200.00	1,200.00	1,200.00	1,200.00	2.56	2.56	-120.96	-30.00	-50.00	58.31	53.19	5.12	11.383	
1,300.00	1,300.00	1,300.00	1,300.00	2.79	2.79	-120.96	-30.00	-50.00	58.31	52.74	5.57	10.465	
1,400.00	1,400.00	1,400.00	1,400.00	3.01	3.01	-120.96	-30.00	-50.00	58.31	52.29	6.02	9.684	
1,500.00	1,500.00	1,500.00	1,500.00	3.24	3.24	-120.96	-30.00	-50.00	58.31	51.84	6.47	9.011	
1,600.00	1,600.00	1,600.00	1,600.00	3.46	3.46	-120.96	-30.00	-50.00	58.31	51.39	6.92	8.426	
1,700.00	1,700.00	1,700.00	1,700.00	3.69	3.69	-120.96	-30.00	-50.00	58.31	50.94	7.37	7.912	
1,800.00	1,800.00	1,800.00	1,800.00	3.91	3.91	-120.96	-30.00	-50.00	58.31	50.49	7.82	7.457	
1,900.00	1,900.00	1,900.00	1,900.00	4.13	4.13	-120.96	-30.00	-50.00	58.31	50.04	8.27	7.051	
2,000.00	2,000.00	2,000.00	2,000.00	4.36	4.36	-120.96	-30.00	-50.00	58.31	49.59	8.72	6.688	

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
 Project: Lea County, NM (NAD-83)
 Reference Site: Seawolf 1-12 Fed
 Site Error: 0.00 usft
 Reference Well: 95H
 Well Error: 0.00 usft
 Reference Wellbore: OH
 Reference Design: Plan #1

Local Co-ordinate Reference: Well 95H
 TVD Reference: 3316.7' GE + 21' KB @ 3337.70usft
 MD Reference: 3316.7' GE + 21' KB @ 3337.70usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Multi User Db
 Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 85H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD+HDGM													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)					
2,100.00	2,100.00	2,100.00	2,100.00	4.58	4.58	-120.96	-30.00	-50.00	58.31	49.14	9.17	6.360	
2,200.00	2,200.00	2,200.00	2,200.00	4.81	4.81	-120.96	-30.00	-50.00	58.31	48.89	9.62	6.063	
2,300.00	2,300.00	2,300.00	2,300.00	5.03	5.03	-120.96	-30.00	-50.00	58.31	48.24	10.07	5.792	
2,400.00	2,400.00	2,400.00	2,400.00	5.26	5.26	-120.96	-30.00	-50.00	58.31	47.79	10.52	5.544	
2,500.00	2,500.00	2,500.00	2,500.00	5.48	5.48	-120.96	-30.00	-50.00	58.31	47.34	10.97	5.317	
2,600.00	2,600.00	2,600.00	2,600.00	5.71	5.71	-120.96	-30.00	-50.00	58.31	46.89	11.42	5.108	
2,700.00	2,700.00	2,700.00	2,700.00	5.93	5.93	-120.96	-30.00	-50.00	58.31	46.44	11.87	4.914	
2,800.00	2,800.00	2,800.00	2,800.00	6.16	6.16	-120.96	-30.00	-50.00	58.31	45.99	12.31	4.735	
2,900.00	2,900.00	2,900.00	2,900.00	6.38	6.38	-120.96	-30.00	-50.00	58.31	45.55	12.76	4.568	
3,000.00	3,000.00	3,000.00	3,000.00	6.61	6.61	-120.96	-30.00	-50.00	58.31	45.10	13.21	4.413	
3,100.00	3,099.99	3,099.99	3,099.99	6.82	6.83	-40.76	-30.00	-50.00	57.65	43.99	13.65	4.223	
3,200.00	3,199.96	3,199.96	3,199.96	7.02	7.06	-42.53	-30.00	-50.00	55.69	41.61	14.08	3.956	
3,300.00	3,299.86	3,299.86	3,299.86	7.23	7.28	-45.77	-30.00	-50.00	52.56	38.05	14.51	3.623	
3,400.00	3,399.68	3,399.68	3,399.68	7.44	7.51	-50.97	-30.00	-50.00	48.49	33.55	14.94	3.246	
3,500.00	3,499.37	3,499.37	3,499.37	7.65	7.73	-58.96	-30.00	-50.00	43.97	28.59	15.37	2.860	
3,600.00	3,598.90	3,598.90	3,598.90	7.87	7.95	-70.83	-30.00	-50.00	39.86	24.05	15.82	2.521	
3,663.78	3,662.30	3,662.30	3,662.30	8.01	8.10	-80.80	-30.00	-50.00	38.13	22.03	16.10	2.368	
3,700.00	3,698.27	3,698.27	3,698.27	8.09	8.18	-87.06	-30.00	-50.00	37.68	21.42	16.27	2.317	
3,716.84	3,715.00	3,715.00	3,715.00	8.13	8.21	-90.00	-30.00	-50.00	37.63	21.29	16.34	2.303 CC, ES	
3,800.00	3,797.60	3,797.60	3,797.60	8.32	8.40	-104.24	-30.00	-50.00	38.84	22.12	16.72	2.323	
3,900.00	3,896.93	3,896.93	3,896.93	8.55	8.62	-119.20	-30.00	-50.00	43.18	26.02	17.16	2.516	
4,000.00	3,996.26	3,996.26	3,996.26	8.79	8.85	-130.83	-30.00	-50.00	49.87	32.28	17.59	2.835	
4,100.00	4,095.59	4,095.59	4,095.59	9.03	9.07	-139.46	-30.00	-50.00	58.12	40.09	18.03	3.224	
4,200.00	4,194.92	4,194.92	4,194.92	9.27	9.29	-145.85	-30.00	-50.00	67.35	48.88	18.46	3.648	
4,300.00	4,294.25	4,294.25	4,294.25	9.51	9.52	-150.66	-30.00	-50.00	77.20	58.31	18.90	4.086	
4,400.00	4,393.58	4,393.58	4,393.58	9.76	9.74	-154.37	-30.00	-50.00	87.48	68.14	19.33	4.525	
4,500.00	4,492.91	4,492.91	4,492.91	10.01	9.96	-157.29	-30.00	-50.00	98.04	78.27	19.77	4.959	
4,600.00	4,592.24	4,592.24	4,592.24	10.26	10.19	-159.64	-30.00	-50.00	108.80	88.59	20.21	5.384	
4,700.00	4,691.57	4,691.57	4,691.57	10.52	10.41	-161.56	-30.00	-50.00	119.71	99.06	20.65	5.797	
4,800.00	4,790.90	4,790.90	4,790.90	10.77	10.63	-163.16	-30.00	-50.00	130.74	109.65	21.09	6.198	
4,900.00	4,890.23	4,890.23	4,890.23	11.03	10.86	-164.52	-30.00	-50.00	141.85	120.31	21.54	6.587	
5,000.00	4,989.56	4,989.56	4,989.56	11.29	11.08	-165.67	-30.00	-50.00	153.02	131.04	21.98	6.962	
5,100.00	5,088.89	5,088.89	5,088.89	11.55	11.30	-166.67	-30.00	-50.00	164.25	141.83	22.42	7.325	
5,200.00	5,188.22	5,188.22	5,188.22	11.81	11.53	-167.54	-30.00	-50.00	175.52	152.65	22.87	7.675	
5,300.00	5,287.55	5,287.55	5,287.55	12.08	11.75	-168.30	-30.00	-50.00	186.83	163.52	23.32	8.013	
5,400.00	5,386.88	5,386.88	5,386.88	12.34	11.97	-168.98	-30.00	-50.00	198.17	174.40	23.76	8.340	
5,500.00	5,486.21	5,486.21	5,486.21	12.61	12.20	-169.58	-30.00	-50.00	209.53	185.32	24.21	8.655	
5,600.00	5,585.54	5,585.54	5,585.54	12.88	12.42	-170.22	-29.52	-50.49	220.31	195.85	24.66	8.932	
5,700.00	5,684.87	5,691.78	5,691.74	13.15	12.65	-171.00	-27.74	-52.28	229.53	204.42	25.11	9.141	
5,800.00	5,784.20	5,793.47	5,793.35	13.42	12.87	-171.89	-24.84	-55.22	237.35	211.80	25.55	9.289	
5,900.00	5,883.53	5,893.11	5,892.90	13.69	13.08	-172.74	-21.80	-58.29	244.99	219.00	25.99	9.426	
6,000.00	5,982.86	5,992.76	5,992.45	13.96	13.30	-173.54	-18.76	-61.37	252.67	226.24	26.43	9.559	
6,100.00	6,082.19	6,092.40	6,092.00	14.23	13.52	-174.29	-15.71	-64.45	260.40	233.52	26.87	9.689	
6,200.00	6,181.52	6,192.05	6,191.55	14.50	13.74	-174.99	-12.67	-67.52	268.17	240.85	27.32	9.817	
6,300.00	6,280.84	6,291.69	6,291.10	14.78	13.96	-175.66	-9.63	-70.60	275.98	248.21	27.76	9.941	
6,400.00	6,380.17	6,391.34	6,390.65	15.05	14.18	-176.29	-6.59	-73.67	283.82	255.61	28.21	10.063	
6,500.00	6,479.50	6,490.98	6,490.21	15.33	14.40	-176.88	-3.55	-76.75	291.69	263.04	28.65	10.181	
6,600.00	6,578.83	6,590.63	6,589.76	15.60	14.62	-177.45	-0.51	-79.82	299.60	270.50	29.10	10.297	
6,700.00	6,678.16	6,690.27	6,689.31	15.88	14.84	-177.98	2.54	-82.90	307.53	277.99	29.54	10.410	
6,800.00	6,777.49	6,789.92	6,788.86	16.16	15.06	-178.49	5.58	-85.97	315.49	285.50	29.99	10.520	
6,900.00	6,876.82	6,889.56	6,888.41	16.44	15.28	-178.97	8.62	-89.05	323.47	293.03	30.44	10.627	
7,000.00	6,976.15	6,989.21	6,987.96	16.71	15.51	-179.43	11.66	-92.12	331.47	300.59	30.89	10.732	

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
 Project: Lea County, NM (NAD-83)
 Reference Site: Seawolf 1-12 Fed
 Site Error: 0.00 usft
 Reference Well: 95H
 Well Error: 0.00 usft
 Reference Wellbore: OH
 Reference Design: Plan #1

Local Co-ordinate Reference: Well 95H
 TVD Reference: 3316.7' GE + 21' KB @ 3337.70usft
 MD Reference: 3316.7' GE + 21' KB @ 3337.70usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Multi User Db
 Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 85H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD+HDGM													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Distance		Minimum Separation		Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,100.00	7,075.48	7,088.85	7,087.51	16.99	15.73	-179.87	14.70	-95.20	339.50	308.16	31.34	10.834	
7,200.00	7,174.81	7,188.50	7,187.06	17.27	15.95	179.71	17.75	-98.28	347.54	315.75	31.79	10.934	
7,300.00	7,274.14	7,288.14	7,286.61	17.55	16.17	179.31	20.79	-101.35	355.60	323.36	32.24	11.031	
7,400.00	7,373.47	7,387.79	7,386.16	17.83	16.40	178.93	23.83	-104.43	363.67	330.99	32.69	11.126	
7,500.00	7,472.80	7,487.43	7,485.71	18.11	16.62	178.57	26.87	-107.50	371.77	338.63	33.14	11.218	
7,600.00	7,572.13	7,587.08	7,585.26	18.39	16.84	178.22	29.91	-110.58	379.87	346.28	33.59	11.308	
7,700.00	7,671.46	7,686.72	7,684.82	18.67	17.07	177.88	32.95	-113.65	387.99	353.94	34.05	11.396	
7,800.00	7,770.79	7,786.37	7,784.37	18.95	17.29	177.56	36.00	-116.73	396.12	361.62	34.50	11.482	
7,900.00	7,870.12	7,886.01	7,883.92	19.24	17.52	177.25	39.04	-119.80	404.27	369.31	34.95	11.566	
8,000.00	7,969.45	7,985.65	7,983.47	19.52	17.74	176.96	42.08	-122.88	412.42	377.01	35.41	11.648	
8,100.00	8,068.78	8,085.30	8,083.02	19.80	17.97	176.67	45.12	-125.95	420.59	384.72	35.86	11.728	
8,200.00	8,168.11	8,184.94	8,182.57	20.08	18.19	176.40	48.16	-129.03	428.76	392.44	36.32	11.806	
8,300.00	8,267.44	8,284.59	8,282.12	20.37	18.42	176.14	51.20	-132.11	436.94	400.17	36.77	11.882	
8,400.00	8,366.77	8,384.23	8,381.67	20.65	18.64	175.88	54.25	-135.18	445.14	407.91	37.23	11.957	
8,500.00	8,466.10	8,483.88	8,481.22	20.93	18.87	175.64	57.29	-138.26	453.34	415.65	37.69	12.030	
8,600.00	8,565.43	8,583.52	8,580.77	21.22	19.09	175.40	60.33	-141.33	461.55	423.41	38.14	12.101	
8,700.00	8,664.76	8,683.17	8,680.32	21.50	19.32	175.17	63.37	-144.41	469.77	431.17	38.60	12.170	
8,800.00	8,764.09	8,782.81	8,779.87	21.79	19.55	174.95	66.41	-147.48	477.99	438.93	39.06	12.238	
8,900.00	8,863.42	8,882.46	8,879.43	22.07	19.77	174.74	69.45	-150.56	486.22	446.71	39.52	12.305	
9,000.00	8,962.75	8,982.10	8,978.98	22.35	20.00	174.54	72.50	-153.63	494.46	454.48	39.97	12.370	
9,100.00	9,062.08	9,081.75	9,078.53	22.64	20.23	174.34	75.54	-156.71	502.70	462.27	40.43	12.433	
9,200.00	9,161.41	9,181.39	9,178.08	22.92	20.45	174.15	78.58	-159.79	510.95	470.06	40.89	12.495	
9,300.00	9,260.74	9,281.04	9,277.63	23.21	20.68	173.96	81.62	-162.86	519.21	477.85	41.35	12.556	
9,400.00	9,360.06	9,380.68	9,377.18	23.49	20.91	173.78	84.66	-165.94	527.47	485.66	41.81	12.616	
9,500.00	9,459.39	9,480.33	9,476.73	23.78	21.13	173.61	87.70	-169.01	535.73	493.46	42.27	12.674	
9,600.00	9,558.72	9,579.97	9,576.28	24.07	21.36	173.44	90.75	-172.09	544.00	501.27	42.73	12.731	
9,700.00	9,658.05	9,679.62	9,675.83	24.35	21.59	173.27	93.79	-175.16	552.27	509.08	43.19	12.787	
9,800.00	9,757.38	9,779.26	9,775.38	24.64	21.82	173.11	96.83	-178.24	560.55	516.90	43.65	12.841	
9,900.00	9,856.71	9,878.91	9,874.93	24.92	22.04	172.96	99.87	-181.31	568.84	524.72	44.11	12.895	
10,000.00	9,956.04	9,978.55	9,974.49	25.21	22.27	172.81	102.91	-184.39	577.12	532.55	44.57	12.947	
10,100.00	10,055.37	10,078.20	10,074.04	25.50	22.50	172.66	105.95	-187.46	585.41	540.38	45.04	12.999	
10,200.00	10,154.70	10,177.84	10,173.59	25.78	22.73	172.52	109.00	-190.54	593.71	548.21	45.50	13.049	
10,300.00	10,254.03	10,277.48	10,273.14	26.07	22.96	172.38	112.04	-193.62	602.01	556.05	45.96	13.098	
10,400.00	10,353.36	10,377.13	10,372.69	26.36	23.19	172.25	115.08	-196.69	610.31	563.89	46.42	13.147	
10,500.00	10,452.69	10,476.77	10,472.24	26.64	23.41	172.12	118.12	-199.77	618.61	571.73	46.88	13.194	
10,600.00	10,552.02	10,576.42	10,571.79	26.93	23.64	171.99	121.16	-202.84	626.92	579.57	47.35	13.241	
10,700.00	10,651.35	10,676.06	10,671.34	27.22	23.87	171.87	124.20	-205.92	635.23	587.42	47.81	13.286	
10,800.00	10,750.68	10,775.71	10,770.89	27.51	24.10	171.75	127.25	-208.99	643.54	595.27	48.27	13.331	
10,900.00	10,850.01	10,875.35	10,870.44	27.79	24.33	171.63	130.29	-212.07	651.86	603.12	48.74	13.375	
11,000.00	10,949.34	10,975.00	10,969.99	28.08	24.56	171.51	133.33	-215.14	660.18	610.98	49.20	13.418	
11,088.96	11,037.70	11,063.64	11,058.55	28.34	24.76	171.41	136.03	-217.88	667.58	617.97	49.61	13.456	
11,100.00	11,048.67	11,074.64	11,069.55	28.36	24.79	171.40	136.37	-218.22	668.49	618.83	49.66	13.461	
11,200.00	11,148.12	11,174.37	11,169.18	28.58	25.02	171.29	139.41	-221.30	675.76	625.68	50.08	13.493	
11,300.00	11,247.73	11,274.20	11,268.91	28.78	25.25	171.16	142.46	-224.38	683.32	633.82	50.50	13.492	
11,400.00	11,347.48	11,374.10	11,368.72	28.98	25.47	171.00	145.51	-227.46	685.16	634.24	50.92	13.457	
11,500.00	11,447.34	11,467.97	11,462.52	29.16	25.65	170.86	148.07	-230.04	687.62	636.34	51.28	13.410	
11,600.00	11,547.28	11,560.07	11,554.59	29.34	25.81	170.78	149.55	-231.55	689.48	637.87	51.62	13.358	
11,700.00	11,647.26	11,652.74	11,647.26	29.50	25.98	170.77	150.00	-232.00	690.76	638.81	51.95	13.297	
11,752.74	11,700.00	11,705.48	11,700.00	29.59	26.08	90.00	150.00	-232.00	691.00	638.85	52.15	13.250	
11,800.00	11,747.26	11,752.74	11,747.26	29.67	26.19	90.00	150.00	-232.00	691.00	638.85	52.35	13.201	
11,900.00	11,847.26	11,852.74	11,847.26	29.85	26.41	90.00	150.00	-232.00	691.00	638.23	52.77	13.094	
12,000.00	11,947.26	11,952.74	11,947.26	30.04	26.63	90.00	150.00	-232.00	691.00	637.80	53.20	12.990	

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
 Project: Lea County, NM (NAD-83)
 Reference Site: Seawolf 1-12 Fed
 Site Error: 0.00 usft
 Reference Well: 95H
 Well Error: 0.00 usft
 Reference Wellbore: OH
 Reference Design: Plan #1

Local Co-ordinate Reference: Well 95H
 TVD Reference: 3316.7' GE + 21' KB @ 3337.70usft
 MD Reference: 3316.7' GE + 21' KB @ 3337.70usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Multi User Db
 Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 85H - OH - Plan #1												Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,100.00	12,047.26	12,052.74	12,047.26	30.23	26.85	90.00	150.00	-232.00	691.00	637.38	53.62	12.886	
12,114.09	12,061.34	12,066.82	12,061.34	30.25	26.88	90.00	150.00	-232.00	691.00	637.32	53.68	12.872	
12,200.00	12,147.26	12,152.88	12,147.19	30.41	27.06	90.00	149.96	-232.00	691.00	636.95	54.05	12.785	
12,264.78	12,212.04	12,216.51	12,210.85	30.53	27.17	90.36	145.61	-231.97	691.05	636.77	54.27	12.733	
12,300.00	12,247.24	12,250.76	12,244.69	30.60	27.22	-88.85	140.36	-231.93	691.12	636.74	54.38	12.708	
12,350.00	12,296.95	12,298.97	12,291.67	30.67	27.29	-88.35	129.57	-231.85	691.27	636.75	54.52	12.679	
12,400.00	12,346.01	12,346.72	12,337.13	30.74	27.35	-87.87	115.03	-231.74	691.46	636.82	54.65	12.654	
12,450.00	12,394.05	12,394.04	12,380.84	30.81	27.41	-87.41	96.94	-231.61	691.69	636.93	54.76	12.631	
12,500.00	12,440.71	12,440.95	12,422.56	30.87	27.47	-86.96	75.51	-231.45	691.96	637.09	54.87	12.611	
12,550.00	12,485.62	12,487.50	12,462.07	30.93	27.52	-86.54	50.94	-231.26	692.24	637.27	54.97	12.593	
12,600.00	12,528.46	12,533.69	12,499.19	30.99	27.57	-86.15	23.47	-231.06	692.55	637.47	55.07	12.575	
12,650.00	12,568.89	12,579.58	12,533.75	31.04	27.61	-85.78	-6.69	-230.83	692.86	637.68	55.18	12.557	
12,700.00	12,606.60	12,625.18	12,565.60	31.09	27.66	-85.44	-39.31	-230.59	693.17	637.88	55.29	12.537	
12,750.00	12,641.31	12,670.52	12,594.60	31.15	27.70	-85.14	-74.16	-230.33	693.47	638.06	55.41	12.515	
12,800.00	12,672.75	12,715.65	12,620.63	31.20	27.74	-84.87	-111.00	-230.06	693.75	638.20	55.54	12.490	
12,850.00	12,700.68	12,760.58	12,643.60	31.26	27.79	-84.63	-149.61	-229.77	694.00	638.30	55.70	12.460	
12,900.00	12,724.90	12,805.36	12,663.40	31.33	27.86	-84.44	-189.76	-229.47	694.22	638.35	55.87	12.426	
12,950.00	12,745.21	12,850.00	12,679.96	31.40	27.95	-84.28	-231.20	-229.16	694.41	638.34	56.06	12.386	
13,000.00	12,761.47	12,894.53	12,693.22	31.49	28.06	-84.16	-273.70	-228.85	694.55	638.26	56.29	12.339	
13,050.00	12,773.54	12,939.00	12,703.12	31.59	28.18	-84.08	-317.03	-228.53	694.64	638.11	56.54	12.287	
13,100.00	12,781.34	12,983.42	12,709.64	31.71	28.32	-84.04	-360.96	-228.20	694.69	637.87	56.81	12.228	
13,150.00	12,784.81	13,027.83	12,712.72	31.86	28.48	-84.04	-405.25	-227.87	694.68	637.57	57.12	12.163	
13,164.78	12,785.00	13,040.95	12,712.98	31.90	28.52	-84.05	-418.38	-227.77	694.67	637.46	57.21	12.143	
13,181.58	12,785.00	13,057.18	12,713.00	31.96	28.58	-84.05	-434.60	-227.65	694.67	637.33	57.33	12.116	
13,200.00	12,785.00	13,075.60	12,713.00	32.02	28.66	-84.05	-453.02	-227.51	694.66	637.19	57.48	12.086	
13,300.00	12,785.00	13,175.60	12,713.00	32.40	29.10	-84.05	-553.02	-226.77	694.65	636.29	58.36	11.903	
13,400.00	12,785.00	13,275.60	12,713.00	32.87	29.63	-84.05	-653.01	-226.03	694.64	635.24	59.40	11.694	
13,500.00	12,785.00	13,375.60	12,713.00	33.41	30.23	-84.05	-753.01	-225.28	694.63	634.03	60.61	11.461	
13,600.00	12,785.00	13,475.60	12,713.00	34.04	30.91	-84.05	-853.01	-224.54	694.63	632.67	61.96	11.212	
13,700.00	12,785.00	13,575.60	12,713.00	34.73	31.65	-84.05	-953.01	-223.79	694.62	631.17	63.45	10.948	
13,800.00	12,785.00	13,675.60	12,713.00	35.48	32.47	-84.05	-1,053.00	-223.05	694.61	629.54	65.06	10.676	
13,900.00	12,785.00	13,775.60	12,713.00	36.30	33.34	-84.05	-1,153.00	-222.31	694.60	627.79	66.80	10.398	
14,000.00	12,785.00	13,875.60	12,713.00	37.17	34.27	-84.05	-1,253.00	-221.56	694.59	625.94	68.65	10.118	
14,100.00	12,785.00	13,975.60	12,713.00	38.10	35.25	-84.05	-1,353.00	-220.82	694.58	623.97	70.60	9.838	
14,200.00	12,785.00	14,075.60	12,713.00	39.07	36.28	-84.05	-1,452.99	-220.07	694.57	621.92	72.65	9.561	
14,300.00	12,785.00	14,175.60	12,713.00	40.09	37.35	-84.05	-1,552.99	-219.33	694.56	619.78	74.78	9.288	
14,400.00	12,785.00	14,275.60	12,713.00	41.15	38.46	-84.05	-1,652.99	-218.59	694.55	617.56	76.99	9.021	
14,500.00	12,785.00	14,375.60	12,713.00	42.25	39.61	-84.05	-1,752.98	-217.84	694.54	615.27	79.27	8.761	
14,600.00	12,785.00	14,475.60	12,713.00	43.38	40.79	-84.05	-1,852.98	-217.10	694.53	612.91	81.62	8.509	
14,700.00	12,785.00	14,575.60	12,713.00	44.54	42.00	-84.05	-1,952.98	-216.36	694.52	610.49	84.03	8.265	
14,800.00	12,785.00	14,675.60	12,713.00	45.73	43.24	-84.05	-2,052.98	-215.61	694.51	608.01	86.50	8.029	
14,900.00	12,785.00	14,775.60	12,713.00	46.95	44.50	-84.05	-2,152.97	-214.87	694.50	605.49	89.01	7.802	
15,000.00	12,785.00	14,875.60	12,713.00	48.19	45.79	-84.05	-2,252.97	-214.12	694.49	602.91	91.58	7.584	
15,100.00	12,785.00	14,975.60	12,713.00	49.46	47.10	-84.05	-2,352.97	-213.38	694.48	600.30	94.19	7.374	
15,200.00	12,785.00	15,075.60	12,713.00	50.75	48.43	-84.05	-2,452.96	-212.64	694.47	597.64	96.83	7.172	
15,300.00	12,785.00	15,175.60	12,713.00	52.05	49.78	-84.05	-2,552.96	-211.89	694.46	594.95	99.51	6.979	
15,400.00	12,785.00	15,275.60	12,713.00	53.38	51.15	-84.05	-2,652.96	-211.15	694.45	592.22	102.23	6.793	
15,500.00	12,785.00	15,375.60	12,713.00	54.72	52.53	-84.05	-2,752.96	-210.40	694.44	589.47	104.98	6.615	
15,600.00	12,785.00	15,475.60	12,713.00	56.08	53.92	-84.05	-2,852.95	-209.66	694.43	586.68	107.75	6.445	
15,700.00	12,785.00	15,575.60	12,713.00	57.45	55.33	-84.05	-2,952.95	-208.92	694.42	583.87	110.55	6.281	
15,800.00	12,785.00	15,675.60	12,713.00	58.84	56.75	-84.05	-3,052.95	-208.17	694.41	581.03	113.38	6.125	
15,900.00	12,785.00	15,775.60	12,713.00	60.24	58.18	-84.05	-3,152.95	-207.43	694.40	578.17	116.23	5.974	

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
 Project: Lea County, NM (NAD-83)
 Reference Site: Seawolf 1-12 Fed
 Site Error: 0.00 usft
 Reference Well: 95H
 Well Error: 0.00 usft
 Reference Wellbore: OH
 Reference Design: Plan #1

Local Co-ordinate Reference: Well 95H
 TVD Reference: 3316.7' GE + 21' KB @ 3337.70usft
 MD Reference: 3316.7' GE + 21' KB @ 3337.70usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Multi User Db
 Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 85H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD+HDGM													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)					
16,000.00	12,785.00	15,875.60	12,713.00	61.85	59.62	-84.05	-3,252.94	-206.68	694.40	575.29	119.10	5.830	
16,100.00	12,785.00	15,975.60	12,713.00	63.07	61.08	-84.05	-3,352.94	-205.94	694.39	572.40	121.99	5.692	
16,200.00	12,785.00	16,075.60	12,713.00	64.50	62.54	-84.05	-3,452.94	-205.20	694.38	569.48	124.90	5.560	
16,300.00	12,785.00	16,175.60	12,713.00	65.94	64.01	-84.05	-3,552.93	-204.45	694.37	566.54	127.82	5.432	
16,400.00	12,785.00	16,275.60	12,713.00	67.39	65.48	-84.05	-3,652.93	-203.71	694.36	563.59	130.76	5.310	
16,500.00	12,785.00	16,375.60	12,713.00	68.85	66.97	-84.05	-3,752.93	-202.96	694.35	560.63	133.72	5.193	
16,600.00	12,785.00	16,475.60	12,713.00	70.32	68.46	-84.05	-3,852.93	-202.22	694.34	557.65	136.69	5.080	
16,700.00	12,785.00	16,575.60	12,713.00	71.79	69.96	-84.05	-3,952.92	-201.48	694.33	554.66	139.67	4.971	
16,800.00	12,785.00	16,675.60	12,713.00	73.27	71.46	-84.05	-4,052.92	-200.73	694.32	551.65	142.67	4.867	
16,900.00	12,785.00	16,775.60	12,713.00	74.76	72.97	-84.05	-4,152.92	-199.99	694.31	548.64	145.67	4.766	
17,000.00	12,785.00	16,875.60	12,713.00	76.25	74.49	-84.05	-4,252.91	-199.25	694.30	545.61	148.69	4.670	
17,100.00	12,785.00	16,975.60	12,713.00	77.75	76.01	-84.05	-4,352.91	-198.50	694.29	542.58	151.71	4.576	
17,200.00	12,785.00	17,075.60	12,713.00	79.25	77.54	-84.05	-4,452.91	-197.76	694.28	539.53	154.75	4.486	
17,300.00	12,785.00	17,175.60	12,713.00	80.76	79.07	-84.05	-4,552.91	-197.01	694.27	536.48	157.79	4.400	
17,400.00	12,785.00	17,275.60	12,713.00	82.28	80.60	-84.05	-4,652.90	-196.27	694.26	533.41	160.85	4.316	
17,500.00	12,785.00	17,375.60	12,713.00	83.80	82.14	-84.05	-4,752.90	-195.53	694.25	530.34	163.91	4.236	
17,600.00	12,785.00	17,475.60	12,713.00	85.32	83.68	-84.05	-4,852.90	-194.78	694.24	527.26	166.98	4.158	
17,700.00	12,785.00	17,575.60	12,713.00	86.85	85.22	-84.05	-4,952.90	-194.04	694.23	524.18	170.05	4.082	
17,800.00	12,785.00	17,675.60	12,713.00	88.38	86.77	-84.05	-5,052.89	-193.29	694.22	521.09	173.14	4.010	
17,900.00	12,785.00	17,775.60	12,713.00	89.92	88.32	-84.05	-5,152.89	-192.55	694.21	517.99	176.22	3.939	
18,000.00	12,785.00	17,875.60	12,713.00	91.45	89.88	-84.05	-5,252.89	-191.81	694.20	514.88	179.32	3.871	
18,100.00	12,785.00	17,975.60	12,713.00	93.00	91.44	-84.05	-5,352.88	-191.06	694.19	511.77	182.42	3.805	
18,200.00	12,785.00	18,075.60	12,713.00	94.54	93.00	-84.05	-5,452.88	-190.32	694.18	508.66	185.53	3.742	
18,300.00	12,785.00	18,175.60	12,713.00	96.09	94.56	-84.05	-5,552.88	-189.57	694.17	505.54	188.64	3.680	
18,400.00	12,785.00	18,275.60	12,713.00	97.64	96.13	-84.05	-5,652.88	-188.83	694.17	502.41	191.75	3.620	
18,500.00	12,785.00	18,375.60	12,713.00	99.19	97.69	-84.05	-5,752.87	-188.09	694.16	499.28	194.87	3.562	
18,600.00	12,785.00	18,475.60	12,713.00	100.75	99.26	-84.05	-5,852.87	-187.34	694.15	496.15	198.00	3.506	
18,700.00	12,785.00	18,575.60	12,713.00	102.31	100.84	-84.05	-5,952.87	-186.60	694.14	493.01	201.13	3.451	
18,800.00	12,785.00	18,675.60	12,713.00	103.87	102.41	-84.05	-6,052.87	-185.85	694.13	489.86	204.26	3.398	
18,900.00	12,785.00	18,775.60	12,713.00	105.43	103.99	-84.05	-6,152.86	-185.11	694.12	486.72	207.40	3.347	
19,000.00	12,785.00	18,875.60	12,713.00	107.00	105.56	-84.05	-6,252.86	-184.37	694.11	483.57	210.54	3.297	
19,100.00	12,785.00	18,975.60	12,713.00	108.57	107.14	-84.05	-6,352.86	-183.62	694.10	480.41	213.69	3.248	
19,200.00	12,785.00	19,075.60	12,713.00	110.14	108.72	-84.05	-6,452.85	-182.88	694.09	477.25	216.83	3.201	
19,300.00	12,785.00	19,175.60	12,713.00	111.71	110.31	-84.05	-6,552.85	-182.14	694.08	474.09	219.99	3.155	
19,400.00	12,785.00	19,275.60	12,713.00	113.28	111.89	-84.05	-6,652.85	-181.39	694.07	470.93	223.14	3.110	
19,500.00	12,785.00	19,375.60	12,713.00	114.86	113.48	-84.05	-6,752.85	-180.65	694.06	467.76	226.30	3.067	
19,600.00	12,785.00	19,475.60	12,713.00	116.44	115.06	-84.05	-6,852.84	-179.90	694.05	464.59	229.46	3.025	
19,700.00	12,785.00	19,575.60	12,713.00	118.01	116.65	-84.05	-6,952.84	-179.16	694.04	461.42	232.62	2.984	
19,800.00	12,785.00	19,675.60	12,713.00	119.59	118.24	-84.05	-7,052.84	-178.42	694.03	458.25	235.79	2.943	
19,900.00	12,785.00	19,775.60	12,713.00	121.18	119.83	-84.05	-7,152.83	-177.67	694.02	455.07	238.95	2.904	
20,000.00	12,785.00	19,875.60	12,713.00	122.76	121.43	-84.05	-7,252.83	-176.93	694.01	451.89	242.12	2.866	
20,100.00	12,785.00	19,975.60	12,713.00	124.34	123.02	-84.05	-7,352.83	-176.18	694.00	448.71	245.30	2.829	
20,200.00	12,785.00	20,075.60	12,713.00	125.93	124.62	-84.04	-7,452.83	-175.44	693.99	445.52	248.47	2.793	
20,300.00	12,785.00	20,175.60	12,713.00	127.52	126.21	-84.04	-7,552.82	-174.70	693.98	442.33	251.65	2.758	
20,400.00	12,785.00	20,275.60	12,713.00	129.11	127.81	-84.04	-7,652.82	-173.95	693.97	439.14	254.83	2.723	
20,500.00	12,785.00	20,375.60	12,713.00	130.70	129.41	-84.04	-7,752.82	-173.21	693.96	435.95	258.01	2.690	
20,600.00	12,785.00	20,475.60	12,713.00	132.29	131.00	-84.04	-7,852.82	-172.46	693.95	432.76	261.19	2.657	
20,700.00	12,785.00	20,575.60	12,713.00	133.88	132.60	-84.04	-7,952.81	-171.72	693.94	429.57	264.38	2.625	
20,800.00	12,785.00	20,675.60	12,713.00	135.47	134.20	-84.04	-8,052.81	-170.98	693.93	426.37	267.57	2.594	
20,900.00	12,785.00	20,775.60	12,713.00	137.06	135.81	-84.04	-8,152.81	-170.23	693.93	423.17	270.75	2.563	
21,000.00	12,785.00	20,875.60	12,713.00	138.66	137.41	-84.04	-8,252.80	-169.49	693.92	419.97	273.94	2.533	
21,100.00	12,785.00	20,975.60	12,713.00	140.26	139.01	-84.04	-8,352.80	-168.75	693.91	416.77	277.14	2.504	

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 95H
Project: Lea County, NM (NAD-83)	TVD Reference: 3316.7' GE + 21' KB @ 3337.70usft
Reference Site: Seawolf 1-12 Fed	MD Reference: 3316.7' GE + 21' KB @ 3337.70usft
Site Error: 0.00 usft	North Reference: Grid
Reference Well: 95H	Survey Calculation Method: Minimum Curvature
Well Error: 0.00 usft	Output errors are at 2.00 sigma
Reference Wellbore OH	Database: EDM 5000.1 Multi User Db
Reference Design: Plan #1	Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 85H - OH - Plan #1												Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM												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	
21,200.00	12,785.00	21,075.60	12,713.00	141.85	140.62	-84.04	-8,452.80	-168.00	693.90	413.57	280.33	2.475	
21,300.00	12,785.00	21,175.60	12,713.00	143.45	142.22	-84.04	-8,552.80	-167.26	693.89	410.36	283.52	2.447	
21,400.00	12,785.00	21,275.60	12,713.00	145.05	143.83	-84.04	-8,652.79	-166.51	693.88	407.16	286.72	2.420	
21,500.00	12,785.00	21,375.60	12,713.00	146.65	145.43	-84.04	-8,752.79	-165.77	693.87	403.95	289.92	2.393	
21,600.00	12,785.00	21,475.60	12,713.00	148.25	147.04	-84.04	-8,852.79	-165.03	693.86	400.74	293.12	2.367	
21,700.00	12,785.00	21,575.60	12,713.00	149.85	148.65	-84.04	-8,952.78	-164.28	693.85	397.53	296.32	2.342	
21,800.00	12,785.00	21,675.60	12,713.00	151.45	150.25	-84.04	-9,052.78	-163.54	693.84	394.32	299.52	2.317	
21,900.00	12,785.00	21,775.60	12,713.00	153.05	151.86	-84.04	-9,152.78	-162.79	693.83	391.11	302.72	2.292	
22,000.00	12,785.00	21,875.60	12,713.00	154.66	153.47	-84.04	-9,252.78	-162.05	693.82	387.89	305.93	2.268	
22,100.00	12,785.00	21,975.60	12,713.00	156.26	155.08	-84.04	-9,352.77	-161.31	693.81	384.68	309.13	2.244	
22,200.00	12,785.00	22,075.60	12,713.00	157.87	156.69	-84.04	-9,452.77	-160.56	693.80	381.46	312.34	2.221	
22,300.00	12,785.00	22,175.60	12,713.00	159.47	158.30	-84.04	-9,552.77	-159.82	693.79	378.25	315.55	2.199	
22,400.00	12,785.00	22,275.60	12,713.00	161.08	159.91	-84.04	-9,652.77	-159.07	693.78	375.03	318.75	2.177	
22,500.00	12,785.00	22,375.60	12,713.00	162.68	161.53	-84.04	-9,752.76	-158.33	693.77	371.81	321.96	2.155	
22,600.00	12,785.00	22,475.60	12,713.00	164.29	163.14	-84.04	-9,852.76	-157.59	693.76	368.59	325.17	2.134	
22,700.00	12,785.00	22,575.60	12,713.00	165.90	164.75	-84.04	-9,952.76	-156.84	693.75	365.37	328.39	2.113	
22,800.00	12,785.00	22,675.60	12,713.00	167.51	166.36	-84.04	-10,052.75	-156.10	693.74	362.15	331.60	2.092	
22,810.11	12,785.00	22,685.71	12,713.00	167.65	166.53	-84.04	-10,062.87	-156.02	693.74	361.86	331.89	2.090 SF	

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

LEAM Drilling Systems LLC

Anticollision Report

Company: Devon Energy
 Project: Lea County, NM (NAD-83)
 Reference Site: Seawolf 1-12 Fed
 Site Error: 0.00 usft
 Reference Well: 95H
 Well Error: 0.00 usft
 Reference Wellbore: OH
 Reference Design: Plan #1

Local Co-ordinate Reference: Well 95H
 TVD Reference: 3316.7' GE + 21' KB @ 3337.70usft
 MD Reference: 3316.7' GE + 21' KB @ 3337.70usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Multi User Db
 Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 86H - OH - Plan #1												Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM												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)					
0.00	0.00	0.00	0.00	0.00	0.00	180.00	-30.00	0.00	30.00				
100.00	100.00	100.00	100.00	0.09	0.09	180.00	-30.00	0.00	30.00	29.82	0.18	168.952	
200.00	200.00	200.00	200.00	0.31	0.31	180.00	-30.00	0.00	30.00	29.37	0.63	47.839	
300.00	300.00	300.00	300.00	0.54	0.54	180.00	-30.00	0.00	30.00	28.92	1.08	27.865	
400.00	400.00	400.00	400.00	0.76	0.76	180.00	-30.00	0.00	30.00	28.47	1.53	19.657	
500.00	500.00	500.00	500.00	0.99	0.99	180.00	-30.00	0.00	30.00	28.02	1.98	15.185	
600.00	600.00	600.00	600.00	1.21	1.21	180.00	-30.00	0.00	30.00	27.57	2.43	12.370	
700.00	700.00	700.00	700.00	1.44	1.44	180.00	-30.00	0.00	30.00	27.13	2.87	10.436	
800.00	800.00	800.00	800.00	1.66	1.66	180.00	-30.00	0.00	30.00	26.68	3.32	9.024	
900.00	900.00	900.00	900.00	1.89	1.89	180.00	-30.00	0.00	30.00	26.23	3.77	7.950	
1,000.00	1,000.00	1,000.00	1,000.00	2.11	2.11	180.00	-30.00	0.00	30.00	25.78	4.22	7.103	
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	180.00	-30.00	0.00	30.00	25.33	4.67	6.420	
1,200.00	1,200.00	1,200.00	1,200.00	2.56	2.56	180.00	-30.00	0.00	30.00	24.88	5.12	5.857	
1,300.00	1,300.00	1,300.00	1,300.00	2.79	2.79	180.00	-30.00	0.00	30.00	24.43	5.57	5.384	
1,400.00	1,400.00	1,400.00	1,400.00	3.01	3.01	180.00	-30.00	0.00	30.00	23.98	6.02	4.982	
1,500.00	1,500.00	1,500.00	1,500.00	3.24	3.24	180.00	-30.00	0.00	30.00	23.53	6.47	4.636	
1,600.00	1,600.00	1,600.00	1,600.00	3.46	3.46	180.00	-30.00	0.00	30.00	23.08	6.92	4.335	
1,700.00	1,700.00	1,700.00	1,700.00	3.69	3.69	180.00	-30.00	0.00	30.00	22.63	7.37	4.071	
1,800.00	1,800.00	1,800.00	1,800.00	3.91	3.91	180.00	-30.00	0.00	30.00	22.18	7.82	3.837	
1,900.00	1,900.00	1,900.00	1,900.00	4.13	4.13	180.00	-30.00	0.00	30.00	21.73	8.27	3.628	
2,000.00	2,000.00	2,000.00	2,000.00	4.36	4.36	180.00	-30.00	0.00	30.00	21.28	8.72	3.441	
2,100.00	2,100.00	2,100.00	2,100.00	4.58	4.58	180.00	-30.00	0.00	30.00	20.83	9.17	3.272	
2,200.00	2,200.00	2,200.00	2,200.00	4.81	4.81	180.00	-30.00	0.00	30.00	20.38	9.62	3.119	
2,300.00	2,300.00	2,300.00	2,300.00	5.03	5.03	180.00	-30.00	0.00	30.00	19.93	10.07	2.980	
2,400.00	2,400.00	2,400.00	2,400.00	5.26	5.26	180.00	-30.00	0.00	30.00	19.48	10.52	2.853	
2,500.00	2,500.00	2,500.00	2,500.00	5.48	5.48	180.00	-30.00	0.00	30.00	19.03	10.97	2.736	
2,600.00	2,600.00	2,600.00	2,600.00	5.71	5.71	180.00	-30.00	0.00	30.00	18.58	11.42	2.628	
2,700.00	2,700.00	2,700.00	2,700.00	5.93	5.93	180.00	-30.00	0.00	30.00	18.13	11.87	2.528	
2,800.00	2,800.00	2,800.00	2,800.00	6.16	6.16	180.00	-30.00	0.00	30.00	17.69	12.31	2.436	
2,900.00	2,900.00	2,900.00	2,900.00	6.38	6.38	180.00	-30.00	0.00	30.00	17.24	12.76	2.350	
3,000.00	3,000.00	3,000.00	3,000.00	6.61	6.61	180.00	-30.00	0.00	30.00	16.79	13.21	2.270	
3,100.00	3,099.99	3,100.19	3,100.19	6.82	6.82	-102.42	-29.63	0.79	29.82	16.17	13.64	2.185	
3,157.09	3,157.08	3,157.34	3,157.32	6.94	6.94	-107.14	-29.09	1.96	29.72	15.84	13.88	2.141 CC	
3,200.00	3,199.96	3,200.22	3,200.18	7.02	7.03	-112.05	-28.52	3.17	29.83	15.77	14.06	2.122 ES, SF	
3,300.00	3,299.86	3,299.91	3,299.78	7.23	7.25	-127.19	-26.68	7.11	31.65	17.18	14.47	2.187	
3,400.00	3,399.68	3,399.33	3,399.06	7.44	7.46	-142.79	-24.52	11.76	36.99	22.11	14.89	2.485	
3,500.00	3,499.37	3,498.56	3,498.15	7.65	7.67	-154.81	-22.35	16.40	45.91	30.61	15.30	3.001	
3,600.00	3,598.90	3,597.55	3,597.02	7.87	7.88	-163.21	-20.19	21.03	57.84	42.13	15.71	3.681	
3,663.78	3,662.30	3,660.56	3,659.94	8.01	8.02	-167.12	-18.82	23.98	66.78	50.81	15.98	4.180	
3,700.00	3,698.27	3,696.31	3,695.65	8.09	8.10	-168.94	-18.04	25.65	72.17	56.04	16.13	4.475	
3,800.00	3,797.60	3,795.02	3,794.22	8.32	8.32	-172.79	-15.88	30.27	87.32	70.77	16.54	5.278	
3,900.00	3,896.93	3,893.72	3,892.79	8.55	8.53	-175.50	-13.73	34.89	102.74	85.78	16.96	6.056	
4,000.00	3,996.26	3,992.42	3,991.36	8.79	8.75	-177.50	-11.58	39.50	118.33	100.95	17.39	6.806	
4,100.00	4,095.59	4,091.13	4,089.94	9.03	8.97	-179.04	-9.43	44.12	134.03	116.22	17.81	7.525	
4,200.00	4,194.92	4,189.83	4,188.51	9.27	9.19	179.75	-7.27	48.74	149.80	131.56	18.24	8.214	
4,300.00	4,294.25	4,288.54	4,287.08	9.51	9.41	178.77	-5.12	53.35	165.63	146.96	18.67	8.874	
4,400.00	4,393.58	4,387.24	4,385.65	9.76	9.63	177.96	-2.97	57.97	181.49	162.40	19.10	9.504	
4,500.00	4,492.91	4,485.94	4,484.23	10.01	9.85	177.28	-0.81	62.59	197.38	177.86	19.53	10.108	
4,600.00	4,592.24	4,584.65	4,582.80	10.26	10.07	176.71	1.34	67.21	213.30	193.34	19.96	10.686	
4,700.00	4,691.57	4,683.35	4,681.37	10.52	10.30	176.21	3.49	71.82	229.24	208.84	20.39	11.240	
4,800.00	4,790.90	4,782.06	4,779.94	10.77	10.52	175.77	5.65	76.44	245.18	224.35	20.83	11.771	
4,900.00	4,890.23	4,880.76	4,878.52	11.03	10.74	175.39	7.80	81.06	261.15	239.88	21.27	12.279	

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

LEAM Drilling Systems LLC

Anticollision Report

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Project: Lea County, NM (NAD-83)
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Site Error: 0.00 usft
Reference Well: 95H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 95H
TVD Reference: 3316.7' GE + 21' KB @ 3337.70usft
MD Reference: 3316.7' GE + 21' KB @ 3337.70usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 86H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM													Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		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		
5,000.00	4,989.56	4,979.46	4,977.09	11.29	10.97	175.06	9.95	85.67	277.12	255.41	21.71	12.767		
5,100.00	5,088.89	5,078.17	5,075.66	11.55	11.19	174.76	12.10	90.29	293.10	270.95	22.14	13.235		
5,200.00	5,188.22	5,176.87	5,174.23	11.81	11.42	174.49	14.26	94.91	309.08	286.50	22.59	13.685		
5,300.00	5,287.55	5,275.58	5,272.81	12.08	11.64	174.25	16.41	99.52	325.08	302.05	23.03	14.117		
5,400.00	5,386.88	5,374.28	5,371.38	12.34	11.87	174.03	18.56	104.14	341.07	317.60	23.47	14.533		
5,500.00	5,486.21	5,472.98	5,469.95	12.61	12.10	173.83	20.72	108.76	357.08	333.16	23.91	14.933		
5,600.00	5,585.54	5,571.69	5,568.52	12.88	12.32	173.65	22.87	113.38	373.08	348.73	24.36	15.318		
5,700.00	5,684.87	5,670.39	5,667.10	13.15	12.55	173.48	25.02	117.99	389.09	364.29	24.80	15.689		
5,800.00	5,784.20	5,769.10	5,765.67	13.42	12.78	173.32	27.18	122.61	405.10	379.86	25.25	16.047		
5,900.00	5,883.53	5,867.80	5,864.24	13.69	13.01	173.18	29.33	127.23	421.12	395.43	25.69	16.391		
6,000.00	5,982.86	5,966.50	5,962.81	13.96	13.23	173.05	31.48	131.84	437.14	411.00	26.14	16.724		
6,100.00	6,082.19	6,065.21	6,061.39	14.23	13.46	172.93	33.63	136.46	453.16	426.57	26.59	17.045		
6,200.00	6,181.52	6,163.91	6,159.96	14.50	13.69	172.81	35.79	141.08	469.18	442.14	27.03	17.355		
6,300.00	6,280.84	6,262.62	6,258.53	14.78	13.92	172.70	37.94	145.69	485.20	457.72	27.48	17.655		
6,400.00	6,380.17	6,361.32	6,357.10	15.05	14.15	172.60	40.09	150.31	501.22	473.29	27.93	17.945		
6,500.00	6,479.50	6,460.02	6,455.68	15.33	14.38	172.51	42.25	154.93	517.25	488.87	28.38	18.225		
6,600.00	6,578.83	6,558.73	6,554.25	15.60	14.61	172.42	44.40	159.54	533.28	504.45	28.83	18.497		
6,700.00	6,678.16	6,657.43	6,652.82	15.88	14.84	172.34	46.55	164.16	549.31	520.02	29.28	18.759		
6,800.00	6,777.49	6,756.14	6,751.39	16.16	15.06	172.26	48.71	168.78	565.34	535.60	29.73	19.014		
6,900.00	6,876.82	6,854.84	6,849.97	16.44	15.29	172.19	50.86	173.40	581.37	551.18	30.18	19.261		
7,000.00	6,976.15	6,953.54	6,948.54	16.71	15.52	172.12	53.01	178.01	597.40	566.76	30.64	19.500		
7,100.00	7,075.48	7,052.25	7,047.11	16.99	15.75	172.05	55.16	182.63	613.43	582.34	31.09	19.732		
7,200.00	7,174.81	7,150.95	7,145.68	17.27	15.99	171.99	57.32	187.25	629.46	597.92	31.54	19.957		
7,300.00	7,274.14	7,249.66	7,244.26	17.55	16.22	171.93	59.47	191.86	645.50	613.50	31.99	20.175		
7,400.00	7,373.47	7,348.36	7,342.83	17.83	16.45	171.87	61.62	196.48	661.53	629.08	32.45	20.388		
7,500.00	7,472.80	7,447.06	7,441.40	18.11	16.68	171.82	63.78	201.10	677.57	644.66	32.90	20.594		
7,600.00	7,572.13	7,545.77	7,539.97	18.39	16.91	171.76	65.93	205.71	693.60	660.25	33.36	20.794		
7,700.00	7,671.46	7,644.47	7,638.55	18.67	17.14	171.71	68.08	210.33	709.64	675.83	33.81	20.989		
7,800.00	7,770.79	7,743.18	7,737.12	18.95	17.37	171.67	70.23	214.95	725.67	691.41	34.27	21.178		
7,900.00	7,870.12	7,841.88	7,835.69	19.24	17.60	171.62	72.39	219.57	741.71	706.99	34.72	21.363		
8,000.00	7,969.45	7,940.59	7,934.26	19.52	17.83	171.58	74.54	224.18	757.75	722.57	35.18	21.542		
8,100.00	8,068.78	8,039.29	8,032.84	19.80	18.06	171.54	76.69	228.80	773.79	738.16	35.63	21.716		
8,200.00	8,168.11	8,137.99	8,131.41	20.08	18.30	171.50	78.85	233.42	789.82	753.74	36.09	21.887		
8,300.00	8,267.44	8,236.70	8,229.98	20.37	18.53	171.46	81.00	238.03	805.86	769.32	36.54	22.052		
8,400.00	8,366.77	8,335.40	8,328.55	20.65	18.76	171.42	83.15	242.65	821.90	784.90	37.00	22.214		
8,500.00	8,466.10	8,434.11	8,427.13	20.93	18.99	171.39	85.31	247.27	837.94	800.48	37.46	22.371		
8,600.00	8,565.43	8,532.81	8,525.70	21.22	19.22	171.35	87.46	251.88	853.98	816.07	37.91	22.524		
8,700.00	8,664.76	8,631.51	8,624.27	21.50	19.46	171.32	89.61	256.50	870.02	831.65	38.37	22.674		
8,800.00	8,764.09	8,730.22	8,722.84	21.79	19.69	171.29	91.76	261.12	886.06	847.23	38.83	22.820		
8,900.00	8,863.42	8,828.92	8,821.42	22.07	19.92	171.26	93.92	265.73	902.10	862.81	39.29	22.962		
9,000.00	8,962.75	8,927.63	8,919.99	22.35	20.15	171.23	96.07	270.35	918.14	878.40	39.74	23.101		
9,100.00	9,062.08	9,026.33	9,018.56	22.64	20.38	171.20	98.22	274.97	934.18	893.98	40.20	23.237		
9,200.00	9,161.41	9,125.03	9,117.13	22.92	20.62	171.17	100.38	279.59	950.22	909.56	40.66	23.369		
9,300.00	9,260.74	9,223.74	9,215.71	23.21	20.85	171.15	102.53	284.20	966.26	925.14	41.12	23.499		
9,400.00	9,360.06	9,322.44	9,314.28	23.49	21.08	171.12	104.68	288.82	982.31	940.73	41.58	23.625		
9,500.00	9,459.39	9,421.15	9,412.85	23.78	21.31	171.10	106.84	293.44	998.35	956.31	42.04	23.749		
9,600.00	9,558.72	9,519.85	9,511.42	24.07	21.55	171.07	108.99	298.05	1,014.39	971.89	42.50	23.870		
9,700.00	9,658.05	9,618.55	9,610.00	24.35	21.78	171.05	111.14	302.67	1,030.43	987.48	42.96	23.988		
9,800.00	9,757.38	9,717.26	9,708.57	24.64	22.01	171.03	113.29	307.29	1,046.47	1,003.06	43.42	24.104		
9,900.00	9,856.71	9,815.96	9,807.14	24.92	22.24	171.00	115.45	311.90	1,062.52	1,018.64	43.88	24.217		
10,000.00	9,956.04	9,914.67	9,905.71	25.21	22.48	170.98	117.60	316.52	1,078.56	1,034.22	44.34	24.327		
10,100.00	10,055.37	10,013.37	10,004.29	25.50	22.71	170.96	119.75	321.14	1,094.60	1,049.80	44.80	24.435		

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
Project: Lea County, NM (NAD-83)
Reference Site: Seawolf 1-12 Fed
Site Error: 0.00 usft
Reference Well: 95H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 95H
TVD Reference: 3316.7' GE + 21' KB @ 3337.70usft
MD Reference: 3316.7' GE + 21' KB @ 3337.70usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 86H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance		Minimum		Separation		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		
10,200.00	10,154.70	10,112.07	10,102.86	25.78	22.94	170.94	121.91	325.76	1,110.64	1,065.39	45.26	24.541		
10,300.00	10,254.03	10,210.78	10,201.43	26.07	23.18	170.92	124.06	330.37	1,126.69	1,080.97	45.72	24.645		
10,400.00	10,353.36	10,309.48	10,300.00	26.36	23.41	170.90	126.21	334.99	1,142.73	1,096.55	46.18	24.747		
10,500.00	10,452.69	10,408.19	10,398.58	26.64	23.64	170.89	128.37	339.61	1,158.77	1,112.13	46.64	24.846		
10,600.00	10,552.02	10,506.89	10,497.15	26.93	23.88	170.87	130.52	344.22	1,174.82	1,127.72	47.10	24.943		
10,700.00	10,651.35	10,605.59	10,595.72	27.22	24.11	170.85	132.67	348.84	1,190.86	1,143.30	47.56	25.039		
10,800.00	10,750.68	10,704.30	10,694.29	27.51	24.34	170.83	134.82	353.46	1,206.90	1,158.88	48.02	25.132		
10,900.00	10,850.01	10,803.00	10,792.87	27.79	24.58	170.82	136.98	358.07	1,222.95	1,174.46	48.48	25.224		
11,000.00	10,949.34	10,901.71	10,891.44	28.08	24.81	170.80	139.13	362.69	1,238.99	1,190.04	48.95	25.314		
11,088.96	11,037.70	10,989.51	10,979.13	28.34	25.02	170.79	141.05	366.80	1,253.26	1,203.91	49.36	25.392		
11,100.00	11,048.67	11,000.41	10,990.01	28.36	25.04	170.79	141.28	367.31	1,255.02	1,205.62	49.40	25.403		
11,200.00	11,148.12	11,099.28	11,088.75	28.58	25.28	170.79	143.44	371.93	1,270.03	1,220.20	49.82	25.491		
11,300.00	11,247.73	11,198.38	11,187.72	28.78	25.51	170.78	145.60	376.57	1,283.33	1,233.09	50.24	25.544		
11,400.00	11,347.48	11,309.46	11,298.66	28.98	25.75	170.75	147.90	381.50	1,294.71	1,244.03	50.68	25.547		
11,500.00	11,447.34	11,434.91	11,424.06	29.16	25.98	170.73	149.53	384.99	1,302.70	1,251.58	51.11	25.486		
11,600.00	11,547.28	11,558.14	11,547.28	29.34	26.19	170.75	150.00	386.00	1,306.99	1,255.46	51.53	25.364		
11,700.00	11,647.26	11,658.13	11,647.26	29.50	26.40	170.77	150.00	386.00	1,308.76	1,256.85	51.91	25.210		
11,752.74	11,700.00	11,710.87	11,700.00	29.59	26.51	90.00	150.00	386.00	1,309.00	1,256.88	52.12	25.115		
11,800.00	11,747.26	11,758.13	11,747.26	29.67	26.61	90.00	150.00	386.00	1,309.00	1,256.69	52.31	25.022		
11,900.00	11,847.26	11,858.13	11,847.26	29.85	26.82	90.00	150.00	386.00	1,309.00	1,256.27	52.73	24.824		
12,000.00	11,947.26	11,958.13	11,947.26	30.04	27.03	90.00	150.00	386.00	1,309.00	1,255.85	53.15	24.629		
12,012.89	11,960.15	11,971.02	11,960.15	30.06	27.05	90.00	150.00	386.00	1,309.00	1,255.80	53.20	24.604		
12,100.00	12,047.26	12,057.95	12,047.09	30.23	27.23	90.00	149.91	386.00	1,309.00	1,255.44	53.56	24.438		
12,200.00	12,147.26	12,155.02	12,143.53	30.41	27.39	90.44	140.02	386.07	1,309.12	1,255.19	53.92	24.277		
12,264.78	12,212.04	12,215.07	12,201.84	30.53	27.48	91.06	125.79	386.18	1,309.44	1,255.31	54.13	24.188		
12,300.00	12,247.24	12,246.61	12,231.78	30.60	27.53	-88.09	115.89	386.25	1,309.75	1,255.52	54.24	24.148		
12,350.00	12,296.95	12,290.63	12,272.57	30.67	27.58	-87.50	99.35	386.38	1,310.31	1,255.94	54.37	24.101		
12,400.00	12,346.01	12,333.85	12,311.26	30.74	27.64	-86.93	80.12	386.52	1,310.97	1,256.49	54.49	24.061		
12,450.00	12,394.05	12,376.35	12,347.79	30.81	27.69	-86.38	58.41	386.68	1,311.74	1,257.14	54.60	24.026		
12,500.00	12,440.71	12,418.21	12,382.10	30.87	27.73	-85.86	34.45	386.86	1,312.57	1,257.87	54.70	23.996		
12,550.00	12,485.62	12,459.49	12,414.13	30.93	27.78	-85.37	8.42	387.05	1,313.46	1,258.66	54.80	23.969		
12,600.00	12,528.46	12,500.00	12,443.66	30.99	27.82	-84.90	-19.29	387.26	1,314.37	1,259.47	54.90	23.942		
12,650.00	12,568.89	12,540.57	12,471.20	31.04	27.87	-84.47	-49.07	387.48	1,315.29	1,260.28	55.00	23.914		
12,700.00	12,606.60	12,580.48	12,496.17	31.09	27.92	-84.07	-80.19	387.71	1,316.18	1,261.07	55.11	23.882		
12,750.00	12,641.31	12,620.03	12,518.72	31.15	27.97	-83.71	-112.68	387.96	1,317.04	1,261.81	55.23	23.846		
12,800.00	12,672.75	12,659.29	12,538.83	31.20	28.03	-83.39	-146.38	388.21	1,317.84	1,262.48	55.36	23.803		
12,850.00	12,700.68	12,700.00	12,557.20	31.26	28.10	-83.10	-182.70	388.48	1,318.57	1,263.05	55.52	23.749		
12,900.00	12,724.90	12,737.07	12,571.64	31.33	28.17	-82.88	-216.84	388.73	1,319.20	1,263.51	55.69	23.689		
12,950.00	12,745.21	12,775.68	12,584.31	31.40	28.25	-82.68	-253.30	389.00	1,319.73	1,263.84	55.88	23.616		
13,000.00	12,761.47	12,814.15	12,594.46	31.49	28.35	-82.54	-290.40	389.28	1,320.13	1,264.03	56.10	23.530		
13,050.00	12,773.54	12,850.00	12,601.65	31.59	28.45	-82.44	-325.51	389.54	1,320.42	1,264.08	56.34	23.438		
13,100.00	12,781.34	12,890.84	12,607.16	31.71	28.58	-82.38	-365.97	389.84	1,320.57	1,263.95	56.62	23.322		
13,150.00	12,784.81	12,929.12	12,609.69	31.86	28.72	-82.38	-404.16	390.12	1,320.59	1,263.66	56.92	23.199		
13,164.78	12,785.00	12,940.44	12,609.95	31.90	28.76	-82.38	-415.48	390.21	1,320.57	1,263.55	57.02	23.161		
13,200.00	12,785.00	12,973.38	12,610.00	32.02	28.89	-82.38	-448.42	390.45	1,320.55	1,263.27	57.28	23.054		
13,200.56	12,785.00	12,973.95	12,610.00	32.02	28.89	-82.38	-448.98	390.46	1,320.55	1,263.27	57.29	23.052		
13,300.00	12,785.00	13,073.38	12,610.00	32.40	29.34	-82.38	-548.42	391.20	1,320.55	1,262.37	58.18	22.698		
13,400.00	12,785.00	13,173.38	12,610.00	32.87	29.86	-82.38	-648.41	391.94	1,320.54	1,261.30	59.24	22.292		
13,500.00	12,785.00	13,273.38	12,610.00	33.41	30.47	-82.38	-748.41	392.69	1,320.53	1,260.08	60.45	21.844		
13,600.00	12,785.00	13,373.38	12,610.00	34.04	31.15	-82.38	-848.41	393.43	1,320.52	1,258.70	61.81	21.363		
13,700.00	12,785.00	13,473.38	12,610.00	34.73	31.90	-82.38	-948.40	394.18	1,320.51	1,257.20	63.31	20.857		
13,800.00	12,785.00	13,573.38	12,610.00	35.48	32.71	-82.38	-1,048.40	394.92	1,320.50	1,255.56	64.94	20.334		

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
Project: Lea County, NM (NAD-83)
Reference Site: Seawolf 1-12 Fed
Site Error: 0.00 usft
Reference Well: 95H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 95H
TVD Reference: 3316.7' GE + 21' KB @ 3337.70usft
MD Reference: 3316.7' GE + 21' KB @ 3337.70usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 86H - OH - Plan #1														Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM														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)							
13,900.00	12,785.00	13,673.38	12,610.00	36.30	33.58	-82.38	-1,148.40	395.66	1,320.49	1,253.80	66.69	19.802			
14,000.00	12,785.00	13,773.38	12,610.00	37.17	34.51	-82.38	-1,248.40	396.41	1,320.48	1,251.94	68.54	19.266			
14,100.00	12,785.00	13,873.38	12,610.00	38.10	35.49	-82.38	-1,348.39	397.15	1,320.47	1,249.97	70.50	18.731			
14,200.00	12,785.00	13,973.38	12,610.00	39.07	36.52	-82.38	-1,448.39	397.90	1,320.46	1,247.91	72.55	18.201			
14,300.00	12,785.00	14,073.38	12,610.00	40.09	37.59	-82.38	-1,548.39	398.64	1,320.45	1,245.77	74.68	17.681			
14,400.00	12,785.00	14,173.38	12,610.00	41.15	38.70	-82.38	-1,648.38	399.39	1,320.44	1,243.55	76.90	17.172			
14,500.00	12,785.00	14,273.38	12,610.00	42.25	39.85	-82.38	-1,748.38	400.13	1,320.43	1,241.25	79.18	16.676			
14,600.00	12,785.00	14,373.38	12,610.00	43.38	41.02	-82.38	-1,848.38	400.87	1,320.43	1,238.89	81.53	16.195			
14,700.00	12,785.00	14,473.38	12,610.00	44.54	42.23	-82.38	-1,948.38	401.62	1,320.42	1,236.47	83.94	15.730			
14,800.00	12,785.00	14,573.38	12,610.00	45.73	43.47	-82.38	-2,048.37	402.36	1,320.41	1,234.00	86.41	15.281			
14,900.00	12,785.00	14,673.38	12,610.00	46.95	44.74	-82.38	-2,148.37	403.11	1,320.40	1,231.47	88.92	14.849			
15,000.00	12,785.00	14,773.38	12,610.00	48.19	46.02	-82.38	-2,248.37	403.85	1,320.39	1,228.90	91.49	14.433			
15,100.00	12,785.00	14,873.38	12,610.00	49.46	47.33	-82.38	-2,348.37	404.60	1,320.38	1,226.29	94.09	14.033			
15,200.00	12,785.00	14,973.38	12,610.00	50.75	48.66	-82.38	-2,448.36	405.34	1,320.37	1,223.64	96.73	13.649			
15,300.00	12,785.00	15,073.38	12,610.00	52.05	50.01	-82.38	-2,548.36	406.08	1,320.36	1,220.95	99.41	13.281			
15,400.00	12,785.00	15,173.38	12,610.00	53.38	51.37	-82.38	-2,648.36	406.83	1,320.35	1,218.22	102.13	12.928			
15,500.00	12,785.00	15,273.38	12,610.00	54.72	52.75	-82.38	-2,748.35	407.57	1,320.34	1,215.47	104.87	12.590			
15,600.00	12,785.00	15,373.38	12,610.00	56.08	54.14	-82.38	-2,848.35	408.32	1,320.33	1,212.69	107.64	12.266			
15,700.00	12,785.00	15,473.38	12,610.00	57.45	55.55	-82.38	-2,948.35	409.06	1,320.32	1,209.88	110.44	11.955			
15,800.00	12,785.00	15,573.38	12,610.00	58.84	56.97	-82.38	-3,048.35	409.81	1,320.32	1,207.05	113.26	11.657			
15,900.00	12,785.00	15,673.38	12,610.00	60.24	58.40	-82.38	-3,148.34	410.55	1,320.31	1,204.20	116.11	11.371			
16,000.00	12,785.00	15,773.38	12,610.00	61.65	59.84	-82.38	-3,248.34	411.29	1,320.30	1,201.32	118.97	11.097			
16,100.00	12,785.00	15,873.38	12,610.00	63.07	61.29	-82.38	-3,348.34	412.04	1,320.29	1,198.43	121.86	10.835			
16,200.00	12,785.00	15,973.38	12,610.00	64.50	62.75	-82.38	-3,448.33	412.78	1,320.28	1,195.52	124.76	10.583			
16,300.00	12,785.00	16,073.38	12,610.00	65.94	64.22	-82.38	-3,548.33	413.53	1,320.27	1,192.59	127.68	10.341			
16,400.00	12,785.00	16,173.38	12,610.00	67.39	65.69	-82.38	-3,648.33	414.27	1,320.26	1,189.65	130.61	10.108			
16,500.00	12,785.00	16,273.38	12,610.00	68.85	67.18	-82.38	-3,748.33	415.02	1,320.25	1,186.69	133.56	9.885			
16,600.00	12,785.00	16,373.38	12,610.00	70.32	68.67	-82.38	-3,848.32	415.76	1,320.24	1,183.71	136.53	9.670			
16,700.00	12,785.00	16,473.38	12,610.00	71.79	70.17	-82.38	-3,948.32	416.50	1,320.23	1,180.73	139.50	9.464			
16,800.00	12,785.00	16,573.38	12,610.00	73.27	71.67	-82.38	-4,048.32	417.25	1,320.22	1,177.73	142.49	9.265			
16,900.00	12,785.00	16,673.38	12,610.00	74.76	73.18	-82.38	-4,148.32	417.99	1,320.21	1,174.72	145.49	9.074			
17,000.00	12,785.00	16,773.38	12,610.00	76.25	74.69	-82.38	-4,248.31	418.74	1,320.20	1,171.70	148.50	8.890			
17,100.00	12,785.00	16,873.38	12,610.00	77.75	76.21	-82.38	-4,348.31	419.48	1,320.20	1,168.68	151.52	8.713			
17,200.00	12,785.00	16,973.38	12,610.00	79.25	77.74	-82.38	-4,448.31	420.22	1,320.19	1,165.64	154.55	8.542			
17,300.00	12,785.00	17,073.38	12,610.00	80.76	79.26	-82.38	-4,548.30	420.97	1,320.18	1,162.59	157.59	8.377			
17,400.00	12,785.00	17,173.38	12,610.00	82.28	80.80	-82.38	-4,648.30	421.71	1,320.17	1,159.53	160.63	8.219			
17,500.00	12,785.00	17,273.38	12,610.00	83.80	82.33	-82.38	-4,748.30	422.46	1,320.16	1,156.47	163.69	8.065			
17,600.00	12,785.00	17,373.38	12,610.00	85.32	83.87	-82.38	-4,848.30	423.20	1,320.15	1,153.40	166.75	7.917			
17,700.00	12,785.00	17,473.38	12,610.00	86.85	85.42	-82.38	-4,948.29	423.95	1,320.14	1,150.32	169.82	7.774			
17,800.00	12,785.00	17,573.38	12,610.00	88.38	86.97	-82.38	-5,048.29	424.69	1,320.13	1,147.24	172.89	7.636			
17,900.00	12,785.00	17,673.38	12,610.00	89.92	88.52	-82.38	-5,148.29	425.43	1,320.12	1,144.15	175.97	7.502			
18,000.00	12,785.00	17,773.38	12,610.00	91.45	90.07	-82.38	-5,248.29	426.18	1,320.11	1,141.05	179.06	7.372			
18,100.00	12,785.00	17,873.38	12,610.00	93.00	91.63	-82.38	-5,348.28	426.92	1,320.10	1,137.95	182.16	7.247			
18,200.00	12,785.00	17,973.38	12,610.00	94.54	93.19	-82.38	-5,448.28	427.67	1,320.09	1,134.84	185.25	7.126			
18,300.00	12,785.00	18,073.38	12,610.00	96.09	94.75	-82.38	-5,548.28	428.41	1,320.09	1,131.73	188.36	7.008			
18,400.00	12,785.00	18,173.38	12,610.00	97.64	96.31	-82.38	-5,648.27	429.16	1,320.08	1,128.61	191.47	6.895			
18,500.00	12,785.00	18,273.38	12,610.00	99.19	97.88	-82.38	-5,748.27	429.90	1,320.07	1,125.49	194.58	6.784			
18,600.00	12,785.00	18,373.38	12,610.00	100.75	99.45	-82.38	-5,848.27	430.64	1,320.06	1,122.36	197.70	6.677			
18,700.00	12,785.00	18,473.38	12,610.00	102.31	101.02	-82.38	-5,948.27	431.39	1,320.05	1,119.23	200.82	6.573			
18,800.00	12,785.00	18,573.38	12,610.00	103.87	102.59	-82.38	-6,048.26	432.13	1,320.04	1,116.10	203.94	6.473			
18,900.00	12,785.00	18,673.38	12,610.00	105.43	104.17	-82.38	-6,148.26	432.88	1,320.03	1,112.96	207.07	6.375			
19,000.00	12,785.00	18,773.38	12,610.00	107.00	105.75	-82.38	-6,248.26	433.62	1,320.02	1,109.81	210.21	6.280			

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 95H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3316.7' GE + 21' KB @ 3337.70usft
Reference Site:	Seawolf 1-12 Fed	MD Reference:	3316.7' GE + 21' KB @ 3337.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	95H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Seawolf 1-12 Fed - 86H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM													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		
19,100.00	12,785.00	18,873.38	12,610.00	108.57	107.33	-82.38	-6,348.25	434.37	1,320.01	1,106.67	213.34	6.187		
19,200.00	12,785.00	18,973.38	12,610.00	110.14	108.91	-82.38	-6,448.25	435.11	1,320.00	1,103.52	216.48	6.097		
19,300.00	12,785.00	19,073.38	12,610.00	111.71	110.49	-82.38	-6,548.25	435.85	1,319.99	1,100.37	219.63	6.010		
19,400.00	12,785.00	19,173.38	12,610.00	113.28	112.07	-82.38	-6,648.25	436.60	1,319.98	1,097.21	222.77	5.925		
19,500.00	12,785.00	19,273.38	12,610.00	114.86	113.66	-82.38	-6,748.24	437.34	1,319.97	1,094.05	225.92	5.843		
19,600.00	12,785.00	19,373.38	12,610.00	116.44	115.24	-82.38	-6,848.24	438.09	1,319.97	1,090.89	229.08	5.762		
19,700.00	12,785.00	19,473.38	12,610.00	118.01	116.83	-82.38	-6,948.24	438.83	1,319.96	1,087.73	232.23	5.684		
19,800.00	12,785.00	19,573.38	12,610.00	119.59	118.42	-82.38	-7,048.24	439.58	1,319.95	1,084.56	235.39	5.608		
19,900.00	12,785.00	19,673.38	12,610.00	121.18	120.01	-82.38	-7,148.23	440.32	1,319.94	1,081.39	238.55	5.533		
20,000.00	12,785.00	19,773.38	12,610.00	122.76	121.60	-82.38	-7,248.23	441.06	1,319.93	1,078.22	241.71	5.461		
20,100.00	12,785.00	19,873.38	12,610.00	124.34	123.20	-82.38	-7,348.23	441.81	1,319.92	1,075.05	244.87	5.390		
20,200.00	12,785.00	19,973.38	12,610.00	125.93	124.79	-82.38	-7,448.22	442.55	1,319.91	1,071.87	248.04	5.321		
20,300.00	12,785.00	20,073.38	12,610.00	127.52	126.39	-82.38	-7,548.22	443.30	1,319.90	1,068.69	251.21	5.254		
20,400.00	12,785.00	20,173.38	12,610.00	129.11	127.98	-82.38	-7,648.22	444.04	1,319.89	1,065.51	254.38	5.189		
20,500.00	12,785.00	20,273.38	12,610.00	130.70	129.58	-82.38	-7,748.22	444.79	1,319.88	1,062.33	257.55	5.125		
20,600.00	12,785.00	20,373.38	12,610.00	132.29	131.18	-82.38	-7,848.21	445.53	1,319.87	1,059.14	260.73	5.062		
20,700.00	12,785.00	20,473.38	12,610.00	133.88	132.78	-82.38	-7,948.21	446.27	1,319.86	1,055.96	263.91	5.001		
20,800.00	12,785.00	20,573.38	12,610.00	135.47	134.38	-82.38	-8,048.21	447.02	1,319.86	1,052.77	267.09	4.942		
20,900.00	12,785.00	20,673.38	12,610.00	137.06	135.98	-82.38	-8,148.20	447.76	1,319.85	1,049.58	270.27	4.884		
21,000.00	12,785.00	20,773.38	12,610.00	138.66	137.58	-82.38	-8,248.20	448.51	1,319.84	1,046.39	273.45	4.827		
21,100.00	12,785.00	20,873.38	12,610.00	140.26	139.18	-82.38	-8,348.20	449.25	1,319.83	1,043.20	276.63	4.771		
21,200.00	12,785.00	20,973.38	12,610.00	141.85	140.79	-82.38	-8,448.20	450.00	1,319.82	1,040.00	279.82	4.717		
21,300.00	12,785.00	21,073.38	12,610.00	143.45	142.39	-82.38	-8,548.19	450.74	1,319.81	1,036.81	283.00	4.664		
21,400.00	12,785.00	21,173.38	12,610.00	145.05	144.00	-82.38	-8,648.19	451.48	1,319.80	1,033.61	286.19	4.612		
21,500.00	12,785.00	21,273.38	12,610.00	146.65	145.60	-82.38	-8,748.19	452.23	1,319.79	1,030.41	289.38	4.561		
21,600.00	12,785.00	21,373.38	12,610.00	148.25	147.21	-82.38	-8,848.19	452.97	1,319.78	1,027.21	292.57	4.511		
21,700.00	12,785.00	21,473.38	12,610.00	149.85	148.82	-82.38	-8,948.18	453.72	1,319.77	1,024.01	295.76	4.462		
21,800.00	12,785.00	21,573.38	12,610.00	151.45	150.42	-82.38	-9,048.18	454.46	1,319.76	1,020.81	298.96	4.415		
21,900.00	12,785.00	21,673.38	12,610.00	153.05	152.03	-82.38	-9,148.18	455.21	1,319.75	1,017.60	302.15	4.368		
22,000.00	12,785.00	21,773.38	12,610.00	154.66	153.64	-82.38	-9,248.17	455.95	1,319.75	1,014.40	305.35	4.322		
22,100.00	12,785.00	21,873.38	12,610.00	156.26	155.25	-82.38	-9,348.17	456.69	1,319.74	1,011.19	308.54	4.277		
22,200.00	12,785.00	21,973.38	12,610.00	157.87	156.86	-82.38	-9,448.17	457.44	1,319.73	1,007.99	311.74	4.233		
22,300.00	12,785.00	22,073.38	12,610.00	159.47	158.47	-82.38	-9,548.17	458.18	1,319.72	1,004.78	314.94	4.190		
22,400.00	12,785.00	22,173.38	12,610.00	161.08	160.08	-82.38	-9,648.16	458.93	1,319.71	1,001.57	318.14	4.148		
22,500.00	12,785.00	22,273.38	12,610.00	162.68	161.69	-82.38	-9,748.16	459.67	1,319.70	998.36	321.34	4.107		
22,600.00	12,785.00	22,373.38	12,610.00	164.29	163.31	-82.38	-9,848.16	460.42	1,319.69	995.15	324.54	4.066		
22,700.00	12,785.00	22,473.38	12,610.00	165.90	164.92	-82.38	-9,948.16	461.16	1,319.68	991.94	327.75	4.027		
22,800.00	12,785.00	22,573.38	12,610.00	167.51	166.53	-82.38	-10,048.15	461.90	1,319.67	988.72	330.95	3.988		
22,810.11	12,785.00	22,583.50	12,610.00	167.65	166.69	-82.38	-10,058.27	461.98	1,319.67	988.43	331.24	3.984		

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
 Project: Lea County, NM (NAD-83)
 Reference Site: Seawolf 1-12 Fed
 Site Error: 0.00 usft
 Reference Well: 95H
 Well Error: 0.00 usft
 Reference Wellbore: OH
 Reference Design: Plan #1

Local Co-ordinate Reference: Well 95H
 TVD Reference: 3316.7' GE + 21' KB @ 3337.70usft
 MD Reference: 3316.7' GE + 21' KB @ 3337.70usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at 2.00 sigma
 Database: EDM 5000.1 Multi User Db
 Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 94H - OH - Plan #1												Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM												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)					
0.00	0.00	0.00	0.00	0.00	0.00	-90.00	0.00	-50.00	50.00				
100.00	100.00	100.00	100.00	0.09	0.09	-90.00	0.00	-50.00	50.00	49.82	0.18	281.586	
200.00	200.00	200.00	200.00	0.31	0.31	-90.00	0.00	-50.00	50.00	49.37	0.63	79.732	
300.00	300.00	300.00	300.00	0.54	0.54	-90.00	0.00	-50.00	50.00	48.92	1.08	46.441	
400.00	400.00	400.00	400.00	0.76	0.76	-90.00	0.00	-50.00	50.00	48.47	1.53	32.762	
500.00	500.00	500.00	500.00	0.99	0.99	-90.00	0.00	-50.00	50.00	48.02	1.98	25.308	
600.00	600.00	600.00	600.00	1.21	1.21	-90.00	0.00	-50.00	50.00	47.57	2.43	20.617	
700.00	700.00	700.00	700.00	1.44	1.44	-90.00	0.00	-50.00	50.00	47.13	2.87	17.393	
800.00	800.00	800.00	800.00	1.66	1.66	-90.00	0.00	-50.00	50.00	46.68	3.32	15.041	
900.00	900.00	900.00	900.00	1.89	1.89	-90.00	0.00	-50.00	50.00	46.23	3.77	13.249	
1,000.00	1,000.00	1,000.00	1,000.00	2.11	2.11	-90.00	0.00	-50.00	50.00	45.78	4.22	11.839	
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	-90.00	0.00	-50.00	50.00	45.33	4.67	10.700	
1,200.00	1,200.00	1,200.00	1,200.00	2.56	2.56	-90.00	0.00	-50.00	50.00	44.88	5.12	9.761	
1,300.00	1,300.00	1,300.00	1,300.00	2.79	2.79	-90.00	0.00	-50.00	50.00	44.43	5.57	8.974	
1,400.00	1,400.00	1,400.00	1,400.00	3.01	3.01	-90.00	0.00	-50.00	50.00	43.98	6.02	8.304	
1,500.00	1,500.00	1,500.00	1,500.00	3.24	3.24	-90.00	0.00	-50.00	50.00	43.53	6.47	7.727	
1,600.00	1,600.00	1,600.00	1,600.00	3.46	3.46	-90.00	0.00	-50.00	50.00	43.08	6.92	7.225	
1,700.00	1,700.00	1,700.00	1,700.00	3.69	3.69	-90.00	0.00	-50.00	50.00	42.63	7.37	6.784	
1,800.00	1,800.00	1,800.00	1,800.00	3.91	3.91	-90.00	0.00	-50.00	50.00	42.18	7.82	6.394	
1,900.00	1,900.00	1,900.00	1,900.00	4.13	4.13	-90.00	0.00	-50.00	50.00	41.73	8.27	6.047	
2,000.00	2,000.00	2,000.00	2,000.00	4.36	4.36	-90.00	0.00	-50.00	50.00	41.28	8.72	5.735 CC	
2,100.00	2,100.00	2,099.13	2,099.12	4.58	4.57	-90.00	0.00	-50.86	50.87	41.71	9.15	5.558	
2,200.00	2,200.00	2,198.19	2,198.15	4.81	4.77	-90.00	0.00	-53.43	53.46	43.89	9.57	5.587	
2,300.00	2,300.00	2,297.14	2,297.00	5.03	4.97	-90.00	0.00	-57.70	57.78	47.80	9.99	5.787	
2,400.00	2,400.00	2,395.91	2,395.59	5.26	5.17	-90.00	0.00	-63.67	63.83	53.42	10.40	6.137	
2,500.00	2,500.00	2,494.44	2,493.83	5.48	5.38	-90.00	0.00	-71.32	71.59	60.77	10.81	6.620	
2,600.00	2,600.00	2,593.20	2,592.15	5.71	5.60	-90.00	0.00	-80.56	80.94	69.71	11.23	7.206	
2,700.00	2,700.00	2,692.73	2,691.21	5.93	5.82	-90.00	0.00	-90.21	90.64	78.97	11.66	7.770	
2,800.00	2,800.00	2,792.26	2,790.27	6.16	6.05	-90.00	0.00	-99.86	100.33	88.23	12.10	8.293	
2,900.00	2,900.00	2,891.79	2,889.34	6.38	6.28	-90.00	0.00	-109.50	110.02	97.49	12.53	8.779	
3,000.00	3,000.00	2,991.32	2,988.40	6.61	6.51	-90.00	0.00	-119.15	119.72	106.75	12.97	9.231	
3,100.00	3,099.99	3,090.93	3,087.53	6.82	6.75	-9.28	0.00	-128.81	128.55	115.16	13.40	9.597	
3,200.00	3,199.96	3,190.67	3,186.81	7.02	6.99	-9.44	0.00	-138.48	135.67	121.86	13.81	9.823	
3,300.00	3,299.86	3,290.52	3,286.19	7.23	7.23	-9.71	0.00	-148.16	141.07	126.84	14.23	9.913	
3,400.00	3,399.68	3,390.45	3,385.64	7.44	7.48	-10.08	0.00	-157.84	144.76	130.11	14.65	9.879	
3,500.00	3,499.37	3,490.42	3,485.15	7.65	7.73	-10.55	0.00	-167.53	146.74	131.67	15.08	9.732	
3,600.00	3,598.90	3,590.40	3,584.66	7.87	7.98	-11.15	0.00	-177.22	147.02	131.51	15.51	9.482	
3,663.78	3,662.30	3,654.17	3,648.13	8.01	8.14	-11.60	0.00	-183.40	146.31	130.53	15.78	9.272	
3,700.00	3,698.27	3,690.38	3,684.16	8.09	8.23	-11.88	0.00	-186.91	145.72	129.78	15.94	9.143	
3,800.00	3,797.60	3,790.35	3,783.66	8.32	8.48	-12.64	0.00	-196.60	144.09	127.72	16.37	8.802	
3,900.00	3,896.93	3,890.31	3,883.16	8.55	8.73	-13.43	0.00	-206.29	142.49	125.69	16.81	8.479	
4,000.00	3,996.26	3,990.28	3,982.66	8.79	8.99	-14.23	0.00	-215.98	140.92	123.68	17.24	8.172	
4,100.00	4,095.59	4,090.25	4,082.15	9.03	9.24	-15.06	0.00	-225.67	139.38	121.69	17.69	7.881	
4,200.00	4,194.92	4,190.22	4,181.65	9.27	9.50	-15.90	0.00	-235.37	137.86	119.73	18.13	7.605	
4,300.00	4,294.25	4,290.19	4,281.15	9.51	9.76	-16.75	0.00	-245.06	136.38	117.80	18.58	7.342	
4,400.00	4,393.58	4,390.15	4,380.64	9.76	10.02	-17.63	0.00	-254.75	134.93	115.90	19.02	7.093	
4,500.00	4,492.91	4,490.12	4,480.14	10.01	10.28	-18.53	0.00	-264.44	133.51	114.03	19.48	6.855	
4,600.00	4,592.24	4,590.09	4,579.64	10.26	10.54	-19.44	0.00	-274.13	132.12	112.19	19.93	6.630	
4,700.00	4,691.57	4,690.06	4,679.14	10.52	10.80	-20.38	0.00	-283.82	130.77	110.38	20.39	6.415	
4,800.00	4,790.90	4,790.02	4,778.63	10.77	11.06	-21.33	0.00	-293.51	129.45	108.61	20.85	6.210	
4,900.00	4,890.23	4,889.99	4,878.13	11.03	11.32	-22.30	0.00	-303.20	128.17	106.86	21.31	6.015	
5,000.00	4,989.56	4,989.96	4,977.63	11.29	11.59	-23.29	0.00	-312.89	126.93	105.15	21.77	5.829	

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
Project: Lea County, NM (NAD-83)
Reference Site: Seawolf 1-12 Fed
Site Error: 0.00 usft
Reference Well: 95H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 95H
TVD Reference: 3316.7' GE + 21' KB @ 3337.70usft
MD Reference: 3316.7' GE + 21' KB @ 3337.70usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 94H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance		Minimum Separation		Separation Factor		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		
5,100.00	5,088.89	5,089.93	5,077.12	11.55	11.85	-24.31	0.00	-322.58	125.72	103.48	22.24	5.652		
5,200.00	5,188.22	5,189.90	5,176.62	11.81	12.11	-25.34	0.00	-332.27	124.56	101.84	22.72	5.484		
5,300.00	5,287.55	5,289.86	5,276.12	12.08	12.38	-26.39	0.00	-341.96	123.44	100.25	23.19	5.323		
5,400.00	5,386.88	5,389.83	5,375.62	12.34	12.64	-27.45	0.00	-351.65	122.36	98.68	23.67	5.169		
5,500.00	5,486.21	5,489.80	5,475.11	12.61	12.91	-28.54	0.00	-361.34	121.32	97.16	24.15	5.023		
5,600.00	5,585.54	5,589.77	5,574.61	12.88	13.17	-29.65	0.00	-371.03	120.33	95.68	24.64	4.883		
5,700.00	5,684.87	5,689.74	5,674.11	13.15	13.44	-30.77	0.00	-380.72	119.38	94.24	25.13	4.750		
5,800.00	5,784.20	5,789.70	5,773.60	13.42	13.71	-31.91	0.00	-390.41	118.48	92.85	25.63	4.622		
5,900.00	5,883.53	5,889.67	5,873.10	13.69	13.97	-33.07	0.00	-400.10	117.62	91.49	26.13	4.501		
6,000.00	5,982.86	5,989.64	5,972.60	13.96	14.24	-34.24	0.00	-409.79	116.82	90.18	26.64	4.385		
6,100.00	6,082.19	6,089.61	6,072.10	14.23	14.51	-35.43	0.00	-419.48	116.07	88.92	27.15	4.275		
6,200.00	6,181.52	6,189.58	6,171.59	14.50	14.77	-36.64	0.00	-429.17	115.36	87.70	27.66	4.170		
6,300.00	6,280.84	6,289.54	6,271.09	14.78	15.04	-37.86	0.00	-438.86	114.71	86.52	28.18	4.070		
6,400.00	6,380.17	6,389.51	6,370.59	15.05	15.31	-39.09	0.00	-448.55	114.11	85.40	28.71	3.974		
6,500.00	6,479.50	6,489.48	6,470.08	15.33	15.58	-40.34	0.00	-458.24	113.56	84.32	29.24	3.884		
6,600.00	6,578.83	6,589.45	6,569.58	15.60	15.85	-41.59	0.00	-467.93	113.07	83.29	29.78	3.797		
6,700.00	6,678.16	6,689.41	6,669.08	15.88	16.11	-42.86	0.00	-477.62	112.63	82.32	30.32	3.715		
6,800.00	6,777.49	6,789.38	6,768.58	16.16	16.38	-44.14	0.00	-487.31	112.25	81.39	30.87	3.637		
6,900.00	6,876.82	6,889.35	6,868.07	16.44	16.65	-45.42	0.00	-497.00	111.93	80.51	31.42	3.562		
7,000.00	6,976.15	6,989.32	6,967.57	16.71	16.92	-46.71	0.00	-506.69	111.66	79.68	31.98	3.492		
7,100.00	7,075.48	7,089.29	7,067.07	16.99	17.19	-48.01	0.00	-516.38	111.45	78.91	32.54	3.425		
7,200.00	7,174.81	7,189.25	7,166.56	17.27	17.46	-49.31	0.00	-526.07	111.29	78.19	33.11	3.362		
7,300.00	7,274.14	7,289.22	7,266.06	17.55	17.73	-50.61	0.00	-535.76	111.20	77.52	33.68	3.302		
7,400.00	7,373.47	7,389.19	7,365.56	17.83	18.00	-51.92	0.00	-545.45	111.16	76.90	34.25	3.245		
7,418.00	7,391.35	7,407.18	7,383.47	17.88	18.05	-52.15	0.00	-547.19	111.16	76.80	34.36	3.235		
7,500.00	7,472.80	7,489.16	7,465.06	18.11	18.27	-53.22	0.00	-555.14	111.17	76.34	34.83	3.192		
7,600.00	7,572.13	7,589.13	7,564.55	18.39	18.54	-54.53	0.00	-564.83	111.25	75.83	35.42	3.141		
7,700.00	7,671.46	7,689.09	7,664.05	18.67	18.81	-55.83	0.00	-574.52	111.38	75.38	36.01	3.093		
7,800.00	7,770.79	7,789.06	7,763.55	18.95	19.08	-57.13	0.00	-584.21	111.58	74.98	36.60	3.049		
7,900.00	7,870.12	7,889.03	7,863.04	19.24	19.35	-58.42	0.00	-593.90	111.82	74.63	37.19	3.007		
8,000.00	7,969.45	7,989.00	7,962.54	19.52	19.62	-59.71	0.00	-603.59	112.13	74.34	37.79	2.967		
8,100.00	8,068.78	8,088.97	8,062.04	19.80	19.89	-60.99	0.00	-613.28	112.49	74.10	38.39	2.930		
8,200.00	8,168.11	8,188.93	8,161.54	20.08	20.16	-62.26	0.00	-622.97	112.91	73.91	38.99	2.896		
8,300.00	8,267.44	8,288.90	8,261.03	20.37	20.43	-63.52	0.00	-632.66	113.38	73.78	39.60	2.863		
8,400.00	8,366.77	8,388.87	8,360.53	20.65	20.70	-64.77	0.00	-642.35	113.91	73.70	40.20	2.833		
8,500.00	8,466.10	8,488.84	8,460.03	20.93	20.98	-66.01	0.00	-652.04	114.49	73.68	40.81	2.805		
8,600.00	8,565.43	8,588.80	8,559.52	21.22	21.25	-67.23	0.00	-661.73	115.12	73.70	41.42	2.779		
8,700.00	8,664.76	8,688.77	8,659.02	21.50	21.52	-68.44	0.00	-671.42	115.81	73.78	42.03	2.755		
8,800.00	8,764.09	8,788.74	8,758.52	21.79	21.79	-69.64	0.00	-681.11	116.54	73.91	42.64	2.733		
8,900.00	8,863.42	8,888.71	8,858.01	22.07	22.06	-70.82	0.00	-690.80	117.33	74.08	43.25	2.713		
9,000.00	8,962.75	8,988.68	8,957.51	22.35	22.33	-71.98	0.00	-700.49	118.16	74.31	43.86	2.694		
9,100.00	9,062.08	9,088.64	9,057.01	22.64	22.60	-73.13	0.00	-710.18	119.05	74.58	44.46	2.677		
9,200.00	9,161.41	9,188.61	9,156.51	22.92	22.88	-74.26	0.00	-719.87	119.98	74.91	45.07	2.662		
9,300.00	9,260.74	9,288.58	9,256.00	23.21	23.15	-75.37	0.00	-729.56	120.96	75.28	45.68	2.648		
9,400.00	9,360.06	9,388.55	9,355.50	23.49	23.42	-76.46	0.00	-739.25	121.98	75.69	46.28	2.635		
9,500.00	9,459.39	9,488.52	9,455.00	23.78	23.69	-77.54	0.00	-748.94	123.04	76.15	46.89	2.624		
9,600.00	9,558.72	9,588.48	9,554.49	24.07	23.96	-78.60	0.00	-758.63	124.15	76.66	47.49	2.614		
9,700.00	9,658.05	9,688.45	9,653.99	24.35	24.23	-79.63	0.00	-768.32	125.30	77.21	48.09	2.605		
9,800.00	9,757.38	9,788.42	9,753.49	24.64	24.51	-80.65	0.00	-778.01	126.49	77.79	48.69	2.598		
9,900.00	9,856.71	9,888.39	9,852.99	24.92	24.78	-81.65	0.00	-787.70	127.72	78.43	49.29	2.591		
10,000.00	9,956.04	9,988.35	9,952.48	25.21	25.05	-82.63	0.00	-797.39	128.99	79.10	49.89	2.585		
10,100.00	10,055.37	10,088.32	10,051.98	25.50	25.32	-83.59	0.00	-807.08	130.29	79.80	50.48	2.581		

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
Project: Lea County, NM (NAD-83)
Reference Site: Seawolf 1-12 Fed
Site Error: 0.00 usft
Reference Well: 95H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 95H
TVD Reference: 3316.7' GE + 21' KB @ 3337.70usft
MD Reference: 3316.7' GE + 21' KB @ 3337.70usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 94H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD+HDGM													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	
10,200.00	10,154.70	10,188.29	10,151.48	25.78	25.60	-84.53	0.00	-816.77	131.63	80.55	51.08	2.577	
10,300.00	10,254.03	10,288.26	10,250.97	26.07	25.87	-85.45	0.00	-826.46	133.00	81.34	51.67	2.574	
10,400.00	10,353.36	10,388.23	10,350.47	26.36	26.14	-86.36	0.00	-836.15	134.41	82.15	52.26	2.572	
10,500.00	10,452.69	10,488.19	10,449.97	26.64	26.41	-87.24	0.00	-845.84	135.85	83.01	52.84	2.571	
10,600.00	10,552.02	10,588.16	10,549.47	26.93	26.68	-88.10	0.00	-855.53	137.33	83.90	53.43	2.570	
10,700.00	10,651.35	10,688.13	10,648.96	27.22	26.96	-88.95	0.00	-865.23	138.83	84.82	54.01	2.570	
10,800.00	10,750.68	10,788.10	10,748.46	27.51	27.23	-89.78	0.00	-874.92	140.36	85.77	54.59	2.571	
10,900.00	10,850.01	10,888.07	10,847.96	27.79	27.50	-90.59	0.00	-884.61	141.92	86.75	55.17	2.572	
11,000.00	10,949.34	10,988.04	10,947.46	28.08	27.77	-91.38	0.00	-894.30	143.51	87.77	55.75	2.574	
11,088.96	11,037.70	11,077.25	11,036.31	28.34	27.96	-92.36	0.00	-902.21	144.86	88.65	56.21	2.577	
11,100.00	11,048.67	11,088.31	11,047.34	28.36	27.98	-92.52	0.00	-903.09	145.02	88.76	56.26	2.578	
11,200.00	11,148.12	11,188.50	11,147.29	28.58	28.17	-93.92	0.00	-910.13	146.35	89.66	56.69	2.582	
11,300.00	11,247.73	11,288.64	11,247.29	28.78	28.35	-95.29	0.00	-915.42	147.48	90.39	57.09	2.583	
11,400.00	11,347.48	11,388.73	11,347.30	28.98	28.53	-96.63	0.00	-918.96	148.41	90.95	57.46	2.583	
11,500.00	11,447.34	11,488.75	11,447.31	29.16	28.69	-97.97	0.00	-920.76	149.14	91.33	57.81	2.580	
11,600.00	11,547.28	11,588.72	11,547.28	29.34	28.86	-99.22	0.00	-921.00	149.67	91.53	58.14	2.574	
11,700.00	11,647.26	11,688.70	11,647.26	29.50	29.04	-99.90	0.00	-921.00	149.97	91.49	58.48	2.564	
11,752.74	11,700.00	11,741.44	11,700.00	29.59	29.14	179.24	0.00	-921.00	150.01	91.35	58.66	2.557	
11,800.00	11,747.26	11,788.70	11,747.26	29.67	29.22	179.24	0.00	-921.00	150.01	91.18	58.83	2.550	
11,900.00	11,847.26	11,888.70	11,847.26	29.85	29.41	179.24	0.00	-921.00	150.01	90.81	59.20	2.534	
12,000.00	11,947.26	11,988.70	11,947.26	30.04	29.59	179.24	0.00	-921.00	150.01	90.44	59.57	2.518	
12,012.87	11,960.13	12,001.57	11,960.13	30.06	29.62	179.24	0.00	-921.00	150.01	90.39	59.62	2.516	
12,100.00	12,047.26	12,086.58	12,045.14	30.23	29.77	179.24	-0.06	-921.00	150.09	90.15	59.93	2.504	
12,200.00	12,147.26	12,185.16	12,123.39	30.41	29.91	179.25	-6.54	-920.95	158.37	98.56	59.81	2.648	
12,264.78	12,212.04	12,214.55	12,171.84	30.53	29.99	179.27	-16.08	-920.88	170.89	111.49	59.40	2.877	
12,300.00	12,247.24	12,240.82	12,197.22	30.60	30.04	-0.28	-22.85	-920.83	178.91	119.83	59.08	3.028	
12,350.00	12,296.95	12,277.82	12,232.39	30.67	30.10	-0.27	-34.33	-920.74	189.36	130.85	58.51	3.237	
12,400.00	12,346.01	12,314.51	12,266.45	30.74	30.16	-0.25	-47.93	-920.64	198.69	140.87	57.82	3.436	
12,450.00	12,394.05	12,350.00	12,298.51	30.81	30.23	-0.24	-63.14	-920.53	206.86	149.91	56.95	3.632	
12,500.00	12,440.71	12,387.15	12,331.00	30.87	30.29	-0.23	-81.15	-920.40	213.85	157.72	56.13	3.810	
12,550.00	12,485.62	12,423.18	12,361.32	30.93	30.35	-0.23	-100.59	-920.25	219.63	164.49	55.15	3.983	
12,600.00	12,528.46	12,459.06	12,390.25	30.99	30.42	-0.22	-121.82	-920.09	224.20	170.10	54.10	4.144	
12,650.00	12,568.89	12,500.00	12,421.55	31.04	30.50	-0.22	-148.18	-919.90	227.62	174.17	53.45	4.258	
12,700.00	12,606.60	12,530.54	12,443.64	31.09	30.55	-0.21	-169.27	-919.74	229.63	177.78	51.86	4.428	
12,750.00	12,641.31	12,566.21	12,467.96	31.15	30.62	-0.21	-195.35	-919.54	230.48	179.79	50.69	4.547	
12,800.00	12,672.75	12,600.00	12,489.47	31.20	30.69	-0.21	-221.40	-919.35	230.08	180.72	49.36	4.662	
12,850.00	12,700.68	12,637.55	12,511.53	31.26	30.78	-0.21	-251.79	-919.12	228.41	180.04	48.37	4.722	
12,900.00	12,724.90	12,673.30	12,530.63	31.33	30.86	-0.22	-282.00	-918.90	225.51	178.25	47.26	4.772	
12,950.00	12,745.21	12,709.14	12,547.85	31.40	30.95	-0.22	-313.42	-918.67	221.37	175.16	46.21	4.790	
13,000.00	12,761.47	12,750.00	12,565.04	31.49	31.06	-0.22	-350.48	-918.39	216.09	170.46	45.62	4.736	
13,050.00	12,773.54	12,781.26	12,578.39	31.59	31.15	-0.23	-379.60	-918.17	209.44	165.04	44.40	4.717	
13,100.00	12,781.34	12,817.61	12,587.56	31.71	31.27	-0.24	-414.18	-917.91	201.68	157.99	43.69	4.616	
13,150.00	12,784.81	12,850.00	12,595.65	31.86	31.38	-0.25	-445.54	-917.68	192.81	149.87	42.95	4.489	
13,164.78	12,785.00	12,865.07	12,598.81	31.90	31.43	-0.26	-460.28	-917.57	189.90	146.89	43.01	4.415	
13,200.00	12,785.00	12,891.23	12,603.37	32.02	31.53	-0.26	-486.03	-917.38	183.76	140.99	42.77	4.297	
13,300.00	12,785.00	12,967.15	12,609.89	32.40	31.85	-0.27	-561.61	-916.82	175.15	132.48	42.67	4.104	
13,339.12	12,785.00	13,002.81	12,610.00	32.57	32.01	-0.27	-597.27	-916.55	175.00	132.18	42.82	4.087	
13,400.00	12,785.00	13,063.69	12,610.00	32.87	32.31	-0.27	-658.15	-916.10	175.00	131.98	43.02	4.068	
13,500.00	12,785.00	13,163.69	12,610.00	33.41	32.87	-0.26	-758.15	-915.35	175.00	131.61	43.39	4.033	
13,600.00	12,785.00	13,263.69	12,610.00	34.04	33.50	-0.26	-858.14	-914.61	175.00	131.19	43.81	3.994	
13,700.00	12,785.00	13,363.69	12,610.00	34.73	34.20	-0.26	-958.14	-913.86	175.00	130.72	44.28	3.952	
13,800.00	12,785.00	13,463.69	12,610.00	35.48	34.96	-0.25	-1,058.14	-913.12	175.00	130.22	44.78	3.908	

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
Project: Lea County, NM (NAD-83)
Reference Site: Seawolf 1-12 Fed
Site Error: 0.00 usft
Reference Well: 95H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 95H
TVD Reference: 3316.7' GE + 21' KB @ 3337.70usft
MD Reference: 3316.7' GE + 21' KB @ 3337.70usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 94H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD+HDGM													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance				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)	Minimum Separation (usft)	Separation Factor	
13,900.00	12,785.00	13,563.69	12,610.00	36.30	35.78	-0.25	-1,158.13	-912.37	175.00	129.67	45.33	3.860	
14,000.00	12,785.00	13,663.69	12,610.00	37.17	36.66	-0.25	-1,258.13	-911.63	175.00	129.08	45.92	3.811	
14,100.00	12,785.00	13,763.69	12,610.00	38.10	37.59	-0.25	-1,358.13	-910.88	175.00	128.45	46.55	3.759	
14,200.00	12,785.00	13,863.69	12,610.00	39.07	38.57	-0.24	-1,458.13	-910.14	175.00	127.79	47.22	3.706	
14,300.00	12,785.00	13,963.69	12,610.00	40.09	39.59	-0.24	-1,558.12	-909.39	175.00	127.08	47.92	3.652	
14,400.00	12,785.00	14,063.69	12,610.00	41.15	40.65	-0.24	-1,658.12	-908.65	175.00	126.35	48.65	3.597	
14,500.00	12,785.00	14,163.69	12,610.00	42.25	41.75	-0.23	-1,758.12	-907.90	175.00	125.58	49.42	3.541	
14,600.00	12,785.00	14,263.69	12,610.00	43.38	42.88	-0.23	-1,858.11	-907.16	175.00	124.78	50.22	3.485	
14,700.00	12,785.00	14,363.69	12,610.00	44.54	44.05	-0.23	-1,958.11	-906.41	175.00	123.95	51.05	3.428	
14,800.00	12,785.00	14,463.69	12,610.00	45.73	45.24	-0.23	-2,058.11	-905.67	175.00	123.10	51.91	3.372	
14,900.00	12,785.00	14,563.69	12,610.00	46.95	46.46	-0.22	-2,158.11	-904.92	175.00	122.21	52.79	3.315	
15,000.00	12,785.00	14,663.69	12,610.00	48.19	47.71	-0.22	-2,258.10	-904.18	175.00	121.30	53.70	3.259	
15,100.00	12,785.00	14,763.69	12,610.00	49.46	48.98	-0.22	-2,358.10	-903.43	175.00	120.37	54.63	3.203	
15,200.00	12,785.00	14,863.69	12,610.00	50.75	50.27	-0.22	-2,458.10	-902.69	175.00	119.41	55.59	3.148	
15,300.00	12,785.00	14,963.69	12,610.00	52.05	51.58	-0.21	-2,558.10	-901.94	175.00	118.43	56.57	3.094	
15,400.00	12,785.00	15,063.69	12,610.00	53.38	52.90	-0.21	-2,658.09	-901.20	175.00	117.43	57.57	3.040	
15,500.00	12,785.00	15,163.69	12,610.00	54.72	54.25	-0.21	-2,758.09	-900.45	175.00	116.41	58.59	2.987	
15,600.00	12,785.00	15,263.69	12,610.00	56.08	55.61	-0.20	-2,858.09	-899.71	175.00	115.37	59.63	2.935	
15,700.00	12,785.00	15,363.69	12,610.00	57.45	56.98	-0.20	-2,958.08	-898.96	175.00	114.32	60.68	2.884	
15,800.00	12,785.00	15,463.69	12,610.00	58.84	58.37	-0.20	-3,058.08	-898.22	175.00	113.25	61.76	2.834	
15,900.00	12,785.00	15,563.69	12,610.00	60.24	59.77	-0.20	-3,158.08	-897.47	175.00	112.16	62.84	2.785	
16,000.00	12,785.00	15,663.69	12,610.00	61.65	61.19	-0.19	-3,258.08	-896.73	175.00	111.05	63.95	2.737	
16,100.00	12,785.00	15,763.69	12,610.00	63.07	62.61	-0.19	-3,358.07	-895.98	175.00	109.93	65.07	2.690	
16,200.00	12,785.00	15,863.69	12,610.00	64.50	64.05	-0.19	-3,458.07	-895.24	175.00	108.80	66.20	2.644	
16,300.00	12,785.00	15,963.69	12,610.00	65.94	65.49	-0.18	-3,558.07	-894.49	175.00	107.66	67.34	2.599	
16,400.00	12,785.00	16,063.69	12,610.00	67.39	66.94	-0.18	-3,658.06	-893.75	175.00	106.50	68.50	2.555	
16,500.00	12,785.00	16,163.69	12,610.00	68.85	68.40	-0.18	-3,758.06	-893.00	175.00	105.33	69.67	2.512	
16,600.00	12,785.00	16,263.69	12,610.00	70.32	69.87	-0.18	-3,858.06	-892.26	175.00	104.15	70.85	2.470	
16,700.00	12,785.00	16,363.69	12,610.00	71.79	71.35	-0.17	-3,958.06	-891.52	175.00	102.96	72.04	2.429	
16,800.00	12,785.00	16,463.69	12,610.00	73.27	72.83	-0.17	-4,058.05	-890.77	175.00	101.76	73.24	2.389	
16,900.00	12,785.00	16,563.69	12,610.00	74.76	74.32	-0.17	-4,158.05	-890.03	175.00	100.55	74.45	2.351	
17,000.00	12,785.00	16,663.69	12,610.00	76.25	75.81	-0.16	-4,258.05	-889.28	175.00	99.33	75.67	2.313	
17,100.00	12,785.00	16,763.69	12,610.00	77.75	77.31	-0.16	-4,358.05	-888.54	175.00	98.10	76.90	2.276	
17,200.00	12,785.00	16,863.69	12,610.00	79.25	78.82	-0.16	-4,458.04	-887.79	175.00	96.87	78.13	2.240	
17,300.00	12,785.00	16,963.69	12,610.00	80.76	80.33	-0.16	-4,558.04	-887.05	175.00	95.62	79.38	2.205	
17,400.00	12,785.00	17,063.69	12,610.00	82.28	81.85	-0.15	-4,658.04	-886.30	175.00	94.37	80.63	2.170	
17,500.00	12,785.00	17,163.69	12,610.00	83.80	83.37	-0.15	-4,758.03	-885.56	175.00	93.11	81.89	2.137	
17,600.00	12,785.00	17,263.69	12,610.00	85.32	84.89	-0.15	-4,858.03	-884.81	175.00	91.85	83.15	2.105	
17,700.00	12,785.00	17,363.69	12,610.00	86.85	86.42	-0.14	-4,958.03	-884.07	175.00	90.57	84.43	2.073	
17,800.00	12,785.00	17,463.69	12,610.00	88.38	87.96	-0.14	-5,058.03	-883.32	175.00	89.30	85.70	2.042	
17,900.00	12,785.00	17,563.69	12,610.00	89.92	89.49	-0.14	-5,158.02	-882.58	175.00	88.01	86.99	2.012	
18,000.00	12,785.00	17,663.69	12,610.00	91.45	91.03	-0.14	-5,258.02	-881.83	175.00	86.72	88.28	1.982	
18,100.00	12,785.00	17,763.69	12,610.00	93.00	92.58	-0.13	-5,358.02	-881.09	175.00	85.43	89.57	1.954	
18,200.00	12,785.00	17,863.69	12,610.00	94.54	94.12	-0.13	-5,458.02	-880.34	175.00	84.12	90.88	1.926	
18,300.00	12,785.00	17,963.69	12,610.00	96.09	95.67	-0.13	-5,558.01	-879.60	175.00	82.82	92.18	1.898	
18,400.00	12,785.00	18,063.69	12,610.00	97.64	97.23	-0.12	-5,658.01	-878.85	175.00	81.51	93.49	1.872	
18,500.00	12,785.00	18,163.69	12,610.00	99.19	98.78	-0.12	-5,758.01	-878.11	175.00	80.19	94.81	1.846	
18,600.00	12,785.00	18,263.69	12,610.00	100.75	100.34	-0.12	-5,858.00	-877.36	175.00	78.87	96.13	1.821	
18,700.00	12,785.00	18,363.69	12,610.00	102.31	101.90	-0.12	-5,958.00	-876.62	175.00	77.55	97.45	1.796	
18,800.00	12,785.00	18,463.69	12,610.00	103.87	103.46	-0.11	-6,058.00	-875.87	175.00	76.22	98.78	1.772	
18,900.00	12,785.00	18,563.69	12,610.00	105.43	105.03	-0.11	-6,158.00	-875.13	175.00	74.89	100.11	1.748	
19,000.00	12,785.00	18,663.69	12,610.00	107.00	106.59	-0.11	-6,257.99	-874.38	175.00	73.55	101.45	1.725	

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
 Project: Lea County, NM (NAD-83)
 Reference Site: Seawolf 1-12 Fed
 Site Error: 0.00 usft
 Reference Well: 95H
 Well Error: 0.00 usft
 Reference Wellbore: OH
 Reference Design: Plan #1

Local Co-ordinate Reference: Well 95H
 TVD Reference: 3316.7' GE + 21' KB @ 3337.70usft
 MD Reference: 3316.7' GE + 21' KB @ 3337.70usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Multi User Db
 Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 94H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD+HDGM													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)					
19,100.00	12,785.00	18,763.69	12,610.00	108.57	108.16	-0.10	-6,357.99	-873.64	175.00	72.22	102.78	1.703	
19,200.00	12,785.00	18,863.69	12,610.00	110.14	109.73	-0.10	-6,457.99	-872.89	175.00	70.87	104.13	1.681	
19,300.00	12,785.00	18,963.69	12,610.00	111.71	111.31	-0.10	-6,557.98	-872.15	175.00	69.53	105.47	1.659	
19,400.00	12,785.00	19,063.69	12,610.00	113.28	112.88	-0.10	-6,657.98	-871.40	175.00	68.18	106.82	1.638	
19,500.00	12,785.00	19,163.69	12,610.00	114.86	114.46	-0.09	-6,757.98	-870.66	175.00	66.83	108.17	1.618	
19,600.00	12,785.00	19,263.69	12,610.00	116.44	116.04	-0.09	-6,857.98	-869.91	175.00	65.47	109.53	1.598	
19,700.00	12,785.00	19,363.69	12,610.00	118.01	117.62	-0.09	-6,957.97	-869.17	175.00	64.11	110.89	1.578	
19,800.00	12,785.00	19,463.69	12,610.00	119.59	119.20	-0.09	-7,057.97	-868.42	175.00	62.75	112.25	1.559	
19,900.00	12,785.00	19,563.69	12,610.00	121.18	120.78	-0.08	-7,157.97	-867.68	175.00	61.39	113.61	1.540	
20,000.00	12,785.00	19,663.69	12,610.00	122.76	122.36	-0.08	-7,257.97	-866.93	175.00	60.02	114.98	1.522	
20,100.00	12,785.00	19,763.69	12,610.00	124.34	123.95	-0.08	-7,357.96	-866.19	175.00	58.65	116.35	1.504	
20,200.00	12,785.00	19,863.69	12,610.00	125.93	125.54	-0.07	-7,457.96	-865.44	175.00	57.28	117.72	1.487 Level 3	
20,300.00	12,785.00	19,963.69	12,610.00	127.52	127.12	-0.07	-7,557.96	-864.70	175.00	55.91	119.09	1.469 Level 3	
20,400.00	12,785.00	20,063.69	12,610.00	129.11	128.71	-0.07	-7,657.95	-863.95	175.00	54.53	120.47	1.453 Level 3	
20,500.00	12,785.00	20,163.69	12,610.00	130.70	130.30	-0.07	-7,757.95	-863.21	175.00	53.16	121.84	1.436 Level 3	
20,600.00	12,785.00	20,263.69	12,610.00	132.29	131.90	-0.06	-7,857.95	-862.46	175.00	51.78	123.22	1.420 Level 3	
20,700.00	12,785.00	20,363.69	12,610.00	133.88	133.49	-0.06	-7,957.95	-861.72	175.00	50.40	124.60	1.404 Level 3	
20,800.00	12,785.00	20,463.69	12,610.00	135.47	135.08	-0.06	-8,057.94	-860.97	175.00	49.01	125.99	1.389 Level 3	
20,900.00	12,785.00	20,563.69	12,610.00	137.06	136.68	-0.05	-8,157.94	-860.23	175.00	47.63	127.37	1.374 Level 3	
21,000.00	12,785.00	20,663.69	12,610.00	138.66	138.27	-0.05	-8,257.94	-859.48	175.00	46.24	128.76	1.359 Level 3	
21,100.00	12,785.00	20,763.69	12,610.00	140.26	139.87	-0.05	-8,357.93	-858.74	175.00	44.85	130.15	1.345 Level 3	
21,200.00	12,785.00	20,863.69	12,610.00	141.85	141.47	-0.05	-8,457.93	-857.99	175.00	43.46	131.54	1.330 Level 3	
21,300.00	12,785.00	20,963.69	12,610.00	143.45	143.07	-0.04	-8,557.93	-857.25	175.00	42.07	132.93	1.316 Level 3	
21,400.00	12,785.00	21,063.69	12,610.00	145.05	144.67	-0.04	-8,657.93	-856.50	175.00	40.67	134.33	1.303 Level 3	
21,500.00	12,785.00	21,163.69	12,610.00	146.65	146.27	-0.04	-8,757.92	-855.76	175.00	39.28	135.72	1.289 Level 3	
21,600.00	12,785.00	21,263.69	12,610.00	148.25	147.87	-0.03	-8,857.92	-855.01	175.00	37.88	137.12	1.276 Level 3	
21,700.00	12,785.00	21,363.69	12,610.00	149.85	149.47	-0.03	-8,957.92	-854.27	175.00	36.48	138.52	1.263 Level 3	
21,800.00	12,785.00	21,463.69	12,610.00	151.45	151.07	-0.03	-9,057.92	-853.52	175.00	35.08	139.92	1.251 Level 3	
21,900.00	12,785.00	21,563.69	12,610.00	153.05	152.67	-0.03	-9,157.91	-852.78	175.00	33.68	141.32	1.238 Level 2	
22,000.00	12,785.00	21,663.69	12,610.00	154.66	154.28	-0.02	-9,257.91	-852.03	175.00	32.28	142.72	1.226 Level 2	
22,100.00	12,785.00	21,763.69	12,610.00	156.26	155.88	-0.02	-9,357.91	-851.29	175.00	30.87	144.13	1.214 Level 2	
22,200.00	12,785.00	21,863.69	12,610.00	157.87	157.49	-0.02	-9,457.90	-850.54	175.00	29.47	145.53	1.202 Level 2	
22,300.00	12,785.00	21,963.69	12,610.00	159.47	159.09	-0.01	-9,557.90	-849.80	175.00	28.06	146.94	1.191 Level 2	
22,400.00	12,785.00	22,063.69	12,610.00	161.08	160.70	-0.01	-9,657.90	-849.06	175.00	26.66	148.34	1.180 Level 2	
22,500.00	12,785.00	22,163.69	12,610.00	162.68	162.31	-0.01	-9,757.90	-848.31	175.00	25.25	149.75	1.169 Level 2	
22,600.00	12,785.00	22,263.69	12,610.00	164.29	163.92	-0.01	-9,857.89	-847.57	175.00	23.84	151.16	1.158 Level 2	
22,700.00	12,785.00	22,363.69	12,610.00	165.90	165.52	0.00	-9,957.89	-846.82	175.00	22.43	152.57	1.147 Level 2	
22,800.00	12,785.00	22,463.69	12,610.00	167.51	167.13	0.00	-10,057.89	-846.08	175.00	21.01	153.99	1.136 Level 2	
22,806.82	12,785.00	22,470.51	12,610.00	167.60	167.24	0.00	-10,064.71	-846.02	175.00	20.94	154.06	1.136 Level 2	
22,810.11	12,785.00	22,473.80	12,610.00	167.65	167.29	0.00	-10,068.00	-846.00	175.00	20.91	154.09	1.136 Level 2, ES, SF	

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

LEAM Drilling Systems LLC

Anticollision Report

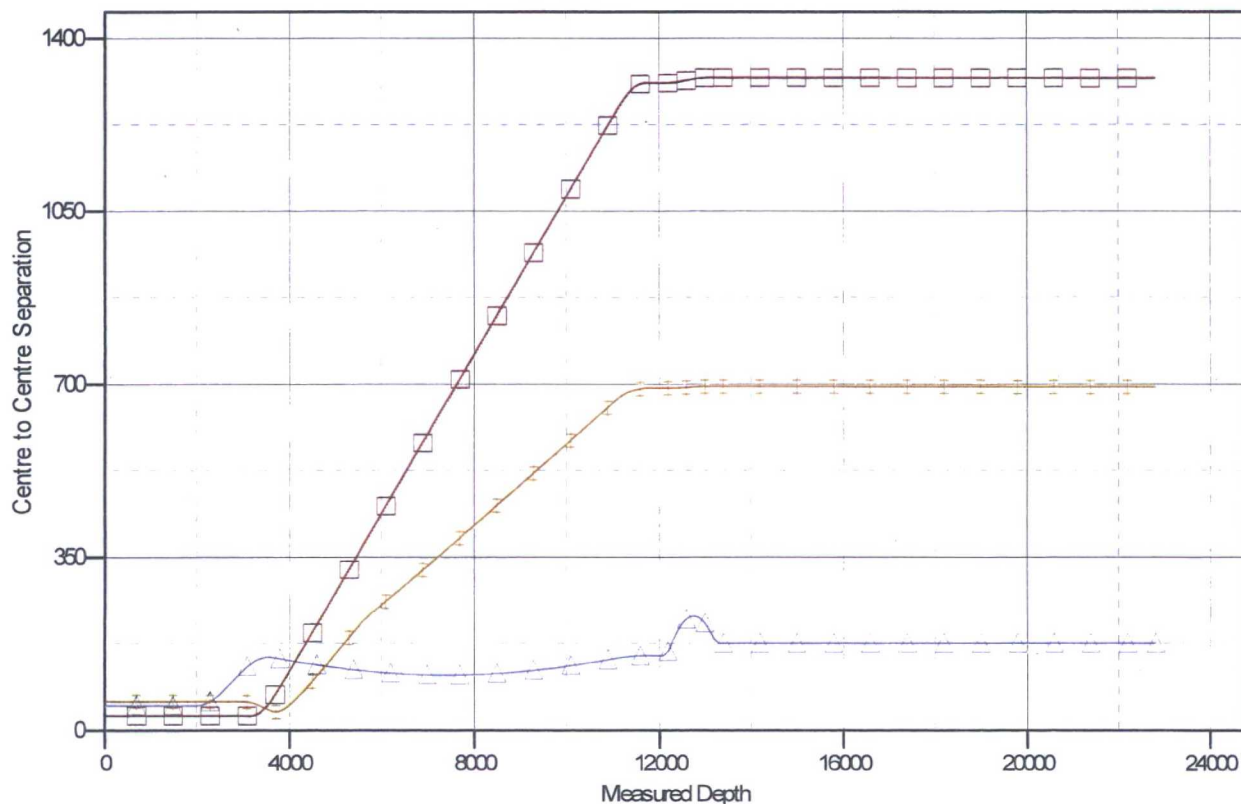
Company: Devon Energy
Project: Lea County, NM (NAD-83)
Reference Site: Seawolf 1-12 Fed
Site Error: 0.00 usft
Reference Well: 95H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 95H
TVD Reference: 3316.7' GE + 21' KB @ 3337.70usft
MD Reference: 3316.7' GE + 21' KB @ 3337.70usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Reference Depths are relative to 3316.7' GE + 21' KB @ 3337.70usft
 Offset Depths are relative to Offset Datum
 Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 95H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.43°

Ladder Plot



LEGEND

▲ 94H, OH, Plan#1 V0 + 85H, OH, Plan#1 V0 ■ 86H, OH, Plan#1 V0

LEAM Drilling Systems LLC

Anticollision Report

Company: Devon Energy
Project: Lea County, NM (NAD-83)
Reference Site: Seawolf 1-12 Fed
Site Error: 0.00 usft
Reference Well: 95H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 95H
TVD Reference: 3316.7' GE + 21' KB @ 3337.70usft
MD Reference: 3316.7' GE + 21' KB @ 3337.70usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Reference Depths are relative to 3316.7' GE + 21' KB @ 3337.70usft

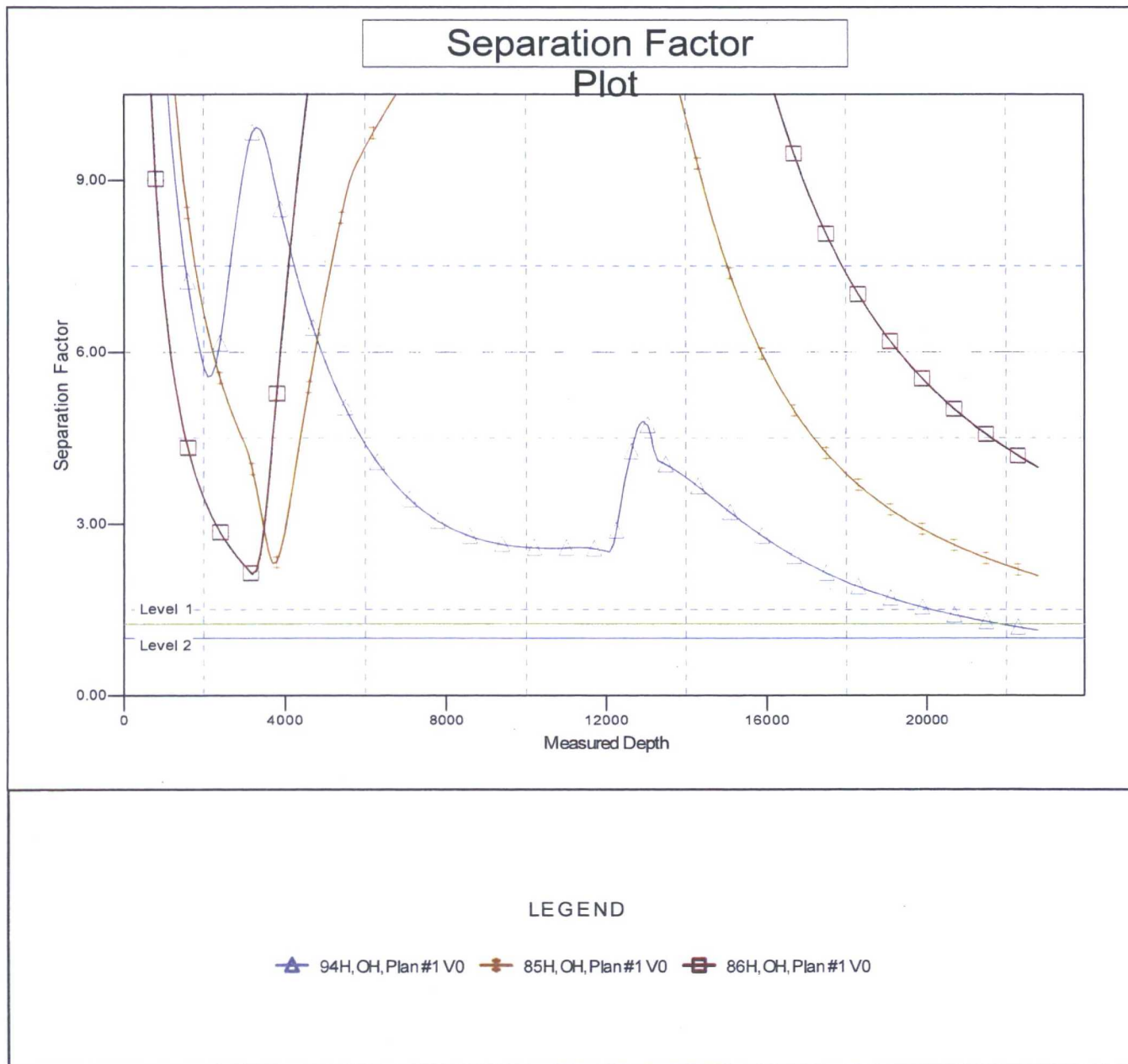
Offset Depths are relative to Offset Datum

Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 95H

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

Grid Convergence at Surface is: 0.43°



VAM SG

Connection Data Sheet

O.D (in)	WEIGHT (lb/ft)	WALL (in)	GRADE	DRIFT	CONNECTION
5.500	20.00	0.361	VST P110EC	4.653	VAM® SG

PIPE PROPERTIES

Material Grade	VST P110EC
Min. Yield Strength	125 ksi
Min. Tensile Strength	135 ksi
Nominal OD	5.500 in
Nominal ID	4.778 in
Nominal Area	5.828 sq. in
Yield Strength	729 kips
Ultimate Strength	787 kips
Min Internal Yield	14,360 psi
External Pressure	12,090 psi

CONNECTION PROPERTIES

Connection OD	5.697 in
Connection ID	4.711 in
Make up Loss	6.335 in
Connection Critical Area	5.071 sq. in
%PB Section Area	87.0%
Yield Strength	634 kips
Parting Load	685 kips
Min Internal Yield	14,360 psi
External Pressure	8,460 psi
Structural Collapse	12,090 psi
Working Compression	444 kips
Max. Bending w/ Sealability	40 °/100 ft

DOCUMENTATION

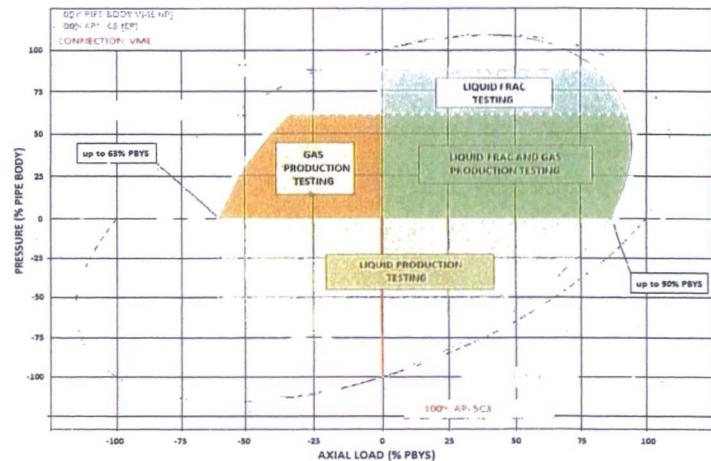
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Date	21-Jul-17
Time	3:19 PM
Email	tech.support@vam-usa.com

TORQUE VALUES

Min Make Up Torque	8,100 ft-lb
Opt Make Up Torque	9,800 ft-lb
Max Make Up Torque	11,500 ft-lb
Max Torque w/ Sealability	12,500 ft-lb

The single solution for Shale Play needs

VAM® SG brings VAM® premium sealing performance to a semi-flush connection with extremely high Tension performance and increased Torque capacity, validated to the specific Shale drilling requirements, while remaining highly competitive in North American Shale play economics.



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Connection Data Sheet

OD	Weight	Wall Th.	Grade	API Drift	Connection
5 1/2 in.	20.00 lb/ft	0.361 in.	P110 EC	4.653 in.	VAM® TOP HT

PIPE PROPERTIES

Nominal OD	5.500 in.
Nominal ID	4.719 in.
Nominal Cross Section Area	15.828 sq in.
Grade Type	High Grade
Min. Yield Strength	729 ksi
Max. Tensile Strength	1170 ksi
Min. Ultimate Tensile Strength	1170 ksi

CONNECTION PROPERTIES

Connection Type	Premium T&C
Connection Efficiency	100%
Connection ID (nom)	4.719 in.
Make-up Length	1.00 in.
Coupling Length	2.74 in.
Critical Cross Section	1.00 in.
Tension Efficiency	100% at pipe
Compression Efficiency	100% at pipe
Internal Pressure Efficiency	100% at pipe
External Pressure Efficiency	100% at pipe

CONNECTION PERFORMANCES

Tensile Yield Strength	729 klb
Compression Resistance	3 klb
Internal Yield Pressure	11700 psi
External Pressure Resistance	11700 psi
Max. Bending with heat treated Al. 3003	1000 ft/lb
Max. Load on Coupling	1000 ft/lb

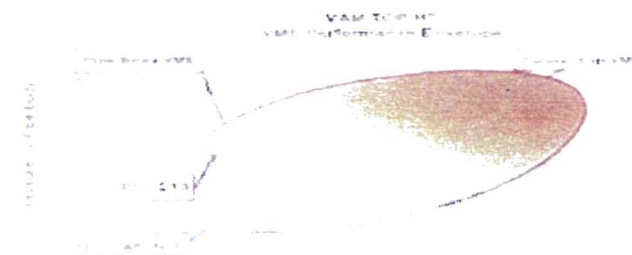
FIELD TORQUE VALUES

Min. Make-up torque	10850 ft lb
Min. Make-up torque	10850 ft lb
Max. Make-up torque	10850 ft lb
Min. Load Torq	10850 ft lb

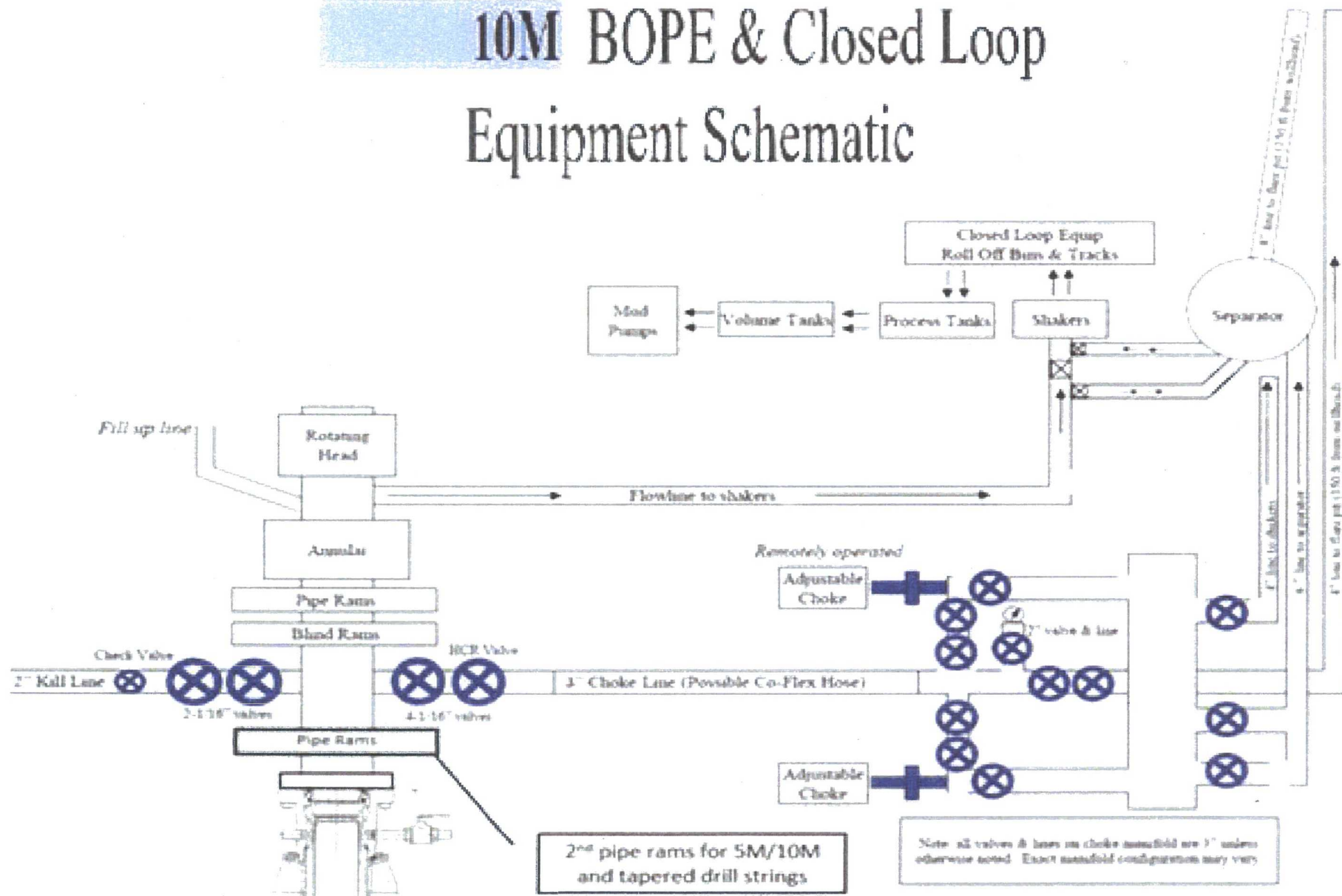
VAM® TOP HT (High Torque) is a T&C connection designed for the main features of the VAM® T&C connection.

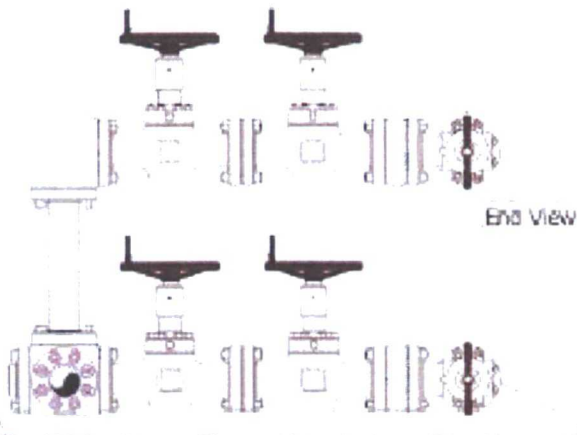
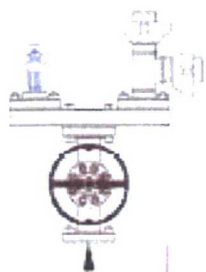
This connection provides a connection for pipe in applications where High Torque is anticipated due to time related during normal operations, transportation, loss of rotation, rotation, and other external forces, such as, for example, during (S) or (Z) or (R) requirements.

VAM® TOP HT is intended for use with VAM® Premium T&C and VAM® TOP HT.



10M BOPE & Closed Loop Equipment Schematic





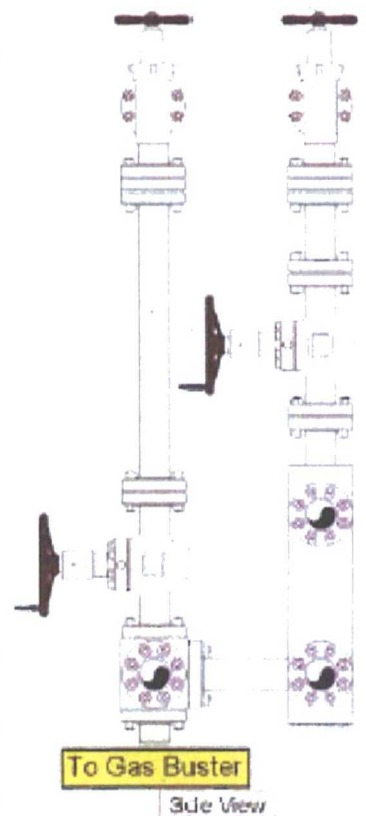
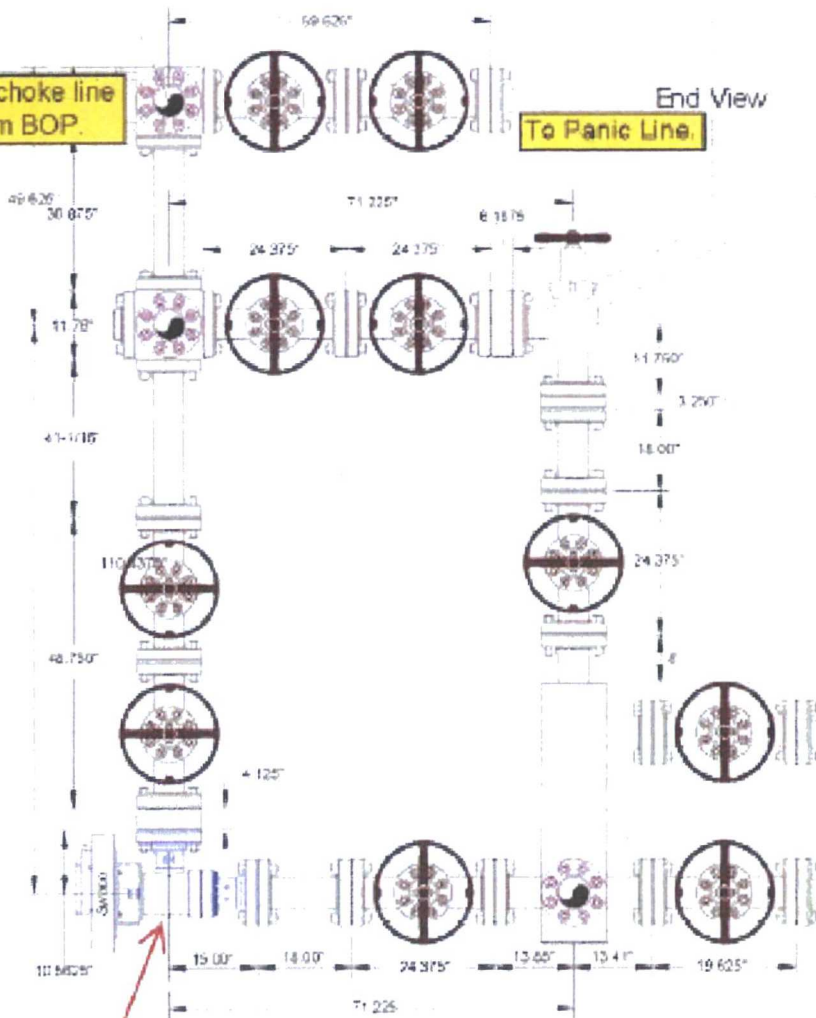
Top choke will be hydraulic

Bottom choke will be manu

Flexible choke line
input from BOP.

End View
To Panic Line.

Side View



FEB 06 2018

RECEIVED

**PECOS DISTRICT
DRILLING OPERATIONS
CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	Devon Energy Production Co, LP
LEASE NO.:	NMNM114988
WELL NAME & NO.:	95H-Seawolf 1 12 Fed
SURFACE HOLE FOOTAGE:	170'/N & 750'/E
BOTTOM HOLE FOOTAGE:	330'/S & 882'/E
LOCATION:	Section 1, T.26 S., R.33 E., NMPM
COUNTY:	Lea County, New Mexico

Potash	☒ None	☐ Secretary	☐ R-111-P
Cave/Karst Potential	☒ Low	☐ Medium	☐ High
Variance	☐ None	☒ Flex Hose	☐ Other
Wellhead	☐ Conventional	☒ Multibowl	
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP

All previous COAs still apply except for the following:

A. CASING

1. The minimum required fill of cement behind the 5 1/2 inch production casing is:

Option 1 (Single Stage):

- Cement should tie-back at least **200** feet into previous casing string. Operator shall provide method of verification. **Excess calculates to 20% - additional cement might be required.**

Option 2:

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- b. Second stage above DV tool:
 - Cement should tie-back at least **200** feet into previous casing string. Operator shall provide method of verification.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. Operator has proposed 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 **10,000 (10M) psi. Variance approved to use a 5M annular. The annular must be tested to full working pressure (5000 psi.)**
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
 - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

MHH 01192018

GENERAL REQUIREMENTS

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. 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. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
 - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin

after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

- b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.
- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.