

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**SUNDRY 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.
NMNM114988

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.
SEAWOLF 1-12 FED 93H9. API Well No.
30-025-43770-00-X110. Field and Pool or Exploratory Area
WC025G09S253336D-UPPER WC11. County or Parish, State
LEA COUNTY, NM**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator
DEVON ENERGY PRODUCTION COMPANYContact: REBECCA DEAL
Email: Rebecca.Deal@devon.com3a. Address
333 WEST SHERIDAN AVENUE
OKLAHOMA CITY, OK 731023b. Phone No. (include area code)
Ph: 405-228-8429

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

Sec 1 T26S R33E NENW 160FNL 2497FWL
32.079296 N Lat, 103.526535 W Lon**12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION

- ☒
- Notice of Intent
-
- ☐
- Subsequent Report
-
- ☐
- Final Abandonment Notice

TYPE OF ACTION

- | | | | |
|---|---|--|---|
| ☐ Acidize | ☐ Deepen | ☐ Production (Start/Resume) | ☐ Water Shut-Off |
| ☐ Alter Casing | ☐ Hydraulic Fracturing | ☐ Reclamation | ☐ Well Integrity |
| ☐ Casing Repair | ☐ New Construction | ☐ Recomplete | ☒ Other |
| ☐ Change Plans | ☐ Plug and Abandon | ☐ Temporarily Abandon | Change to Original APD |
| ☐ Convert to Injection | ☐ Plug Back | ☐ Water Disposal | |

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 recomple 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 recomple 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 the following changes to the original APD:

? Change BHL from 330' FSL & 2630' FWL to 330' FSL & 2300' FEL of Sec 12-26S-33E.

? Change surface casing set depth from 1,000' to 850'.

? Change intermediate casing set depth from 11,400' to 4950'.

? Change of TVD from 12,788' to 12,460'.

? Change of MD at TD from 22,748' to 22,299'.

SMBOP Required before
drilling 8 3/4" hole

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

**Electronic Submission #380735 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 07/17/2017 (17PP0436SE)**

Name (Printed/Typed) REBECCA DEAL

Title REGULATORY COMPLIANCE PROFESSOR

Signature (Electronic Submission)

Date 07/07/2017

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By CHARLES NIMMER

Title PETROLEUM ENGINEER

Date 10/11/2017

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 Hobbs

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)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Additional data for EC transaction #380735 that would not fit on the form

32. Additional remarks, continued

Please see the attached revised C-102, Drill Plan & Directional Survey.

Devon Energy, Seawolf 1-12 93H

1. Geologic Formations

TVD of target	12,460'	Pilot hole depth	n/a
MD at TD:	22,299'	Deepest expected fresh water:	786

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Rustler	786		
Top of Salt	1134		
Base of Salt	4857		
Delaware	5099		
Lower Brushy Canyon	9152		
1st BSPG Lime	9332		
1st BSPG Sand	10270		
2nd BSPG Lime	10545		
2nd BSPG Sand	10818		
3rd BSPG Lime	11312		
3rd BSPG Sand	11896		
Wolfcamp 100	12566		

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

Devon Energy, Seawolf 1-12 93H

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn	SF Collapse	SF Burst	SF Tension
	From	To							
17.5"	0	850'	13.375"	48	H-40	STC	1.125	1.25	1.6
12.25"	0	4,950'	9.625"	40	J-55	BTC	1.125	1.25	1.6
8.75"	0	22,299'	5.5"	17	P-110	BTC	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

Must have table for contingency casing

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

Devon Energy, Seawolf 1-12 93H

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	H ₂ O gal/sk	Yld ft ³ / sack	500# Comp. Strength (hours)	Slurry Description
13-3/8" Surface	666	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
9-5/8" Inter.	1186	12.9	9.81	1.85	14	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	430	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
5-1/2" Prod	825	11	17.38	2.81	n/a	1 st Lead: (50:50) Class H Cement: Poz (Fly Ash) + 10% BWOC Bentonite + 1 lb/sk of Kol-Seal + 0.3% BWOC HR-601 + 0.5lb/sk D-Air 5000
	2152	13.2	7.44	1.46	25	Tail: (50:50) Class H Cement: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite

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

Casing String	TOC	% Excess
13-3/8" Surface	0'	50%
9-5/8" Intermediate	0'	30%
5-1/2" Production Casing	4750'	25%

Devon Energy, Seawolf 1-12 93H

4. Pressure Control Equipment

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.
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BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
12-1/4"	13-5/8"	3M	Annular	x	50% of working pressure
			Blind Ram		3M
			Pipe Ram		
			Double Ram	x	
			Other*		
8-3/4"	13-5/8"	3M	Annular	x	50% testing pressure
			Blind Ram		3M 5M
			Pipe Ram		
			Double Ram	x	
			Other*		

*Specify if additional ram is utilized.

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

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

Y	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.

Devon Energy, Seawolf 1-12 93H

	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 the option of using a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 3000 (3M) psi. • Wellhead will be installed by vendor's representatives. • If the welding is performed by a third party, the vendor's representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal. • Vendor representative will install the test plug for the initial BOP test. • Vendor 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. After running the 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed on the wellhead system and will undergo a 250 psi low pressure test followed by a 3,000 psi high pressure test. The 3,000 psi high and 250 psi low test will cover testing requirements a maximum of 30 days, as per Onshore Order #2. If the well is not complete within 30 days of this BOP test, another full BOP test will be conducted, as per Onshore Order #2. After running the 9-5/8' intermediate casing with a mandrel hanger, the 13-5/8" BOP/BOPE system with a minimum rating of 3M will already be installed on the wellhead. The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 3,000 psi WP. Devon requests a variance to use a flexible line with flanged ends between the BOP and the choke manifold (choke line). The line will be kept as straight as possible with minimal turns.

Devon Energy, Seawolf 1-12 93H

	See attached schematic.
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5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	850'	FW Gel	8.6-8.8	28-34	N/C
850'	4,950'	Saturated Brine	10.0-10.2	28-34	N/C
4,950'	22,299'	Cut Brine	8.5-9.3	28-34	N/C

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

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring
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6. Logging and Testing Procedures

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

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

7. Drilling Conditions

Condition	Specify what type and where?
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Devon Energy, Seawolf 1-12 93H

BH Pressure at deepest TVD	6800 psi
Abnormal Temperature	No

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

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

8. Other facets of operation

Is this a walking operation? Yes

1. In the event the spudder rig is unable to drill the surface holes the drilling rig will batch drill the surface holes and run/cement surface casing; walking the rig to next wells on the pad.
2. The drilling rig will then batch drill the intermediate sections with either OBM or cut brine and run/cement intermediate casing; the wellbore will be isolated with a blind flange and pressure gauge installed for monitoring the well before walking to the next well.
3. The drilling rig will then batch drill the production hole sections on the wells with OBM or cut brine, run/cement production casing, and install TA caps or tubing heads for completions.

NOTE: During batch operations the drilling rig will be moved from well to well however, it will not be removed from the pad until all wells have production casing run/cemented.

Will be pre-setting casing? Yes

1. Spudder rig will move in and drill surface hole.
 - a. Rig will utilize fresh water based mud to drill 17 1/2" surface hole to TD. Solids control will be handled entirely on a closed loop basis.
2. After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
3. The wellhead will be installed and tested once the 13-3/8" surface casing is cut off and the WOC time has been reached.
4. A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with a pressure gauge installed on the wellhead.
5. Spudder rig operations is expected to take 4-5 days per well on a multi well pad.
6. The NMOCD will be contacted and notified 24 hours prior to commencing spudder rig operations.
7. Drilling operations will be performed with the drilling rig. At that time an approved BOP stack will be nipped up and tested on the wellhead before drilling operations commences on each well.
 - a. The NMOCD will be contacted / notified 24 hours before the drilling rig moves back on to the pad with the pre-set surface casing.

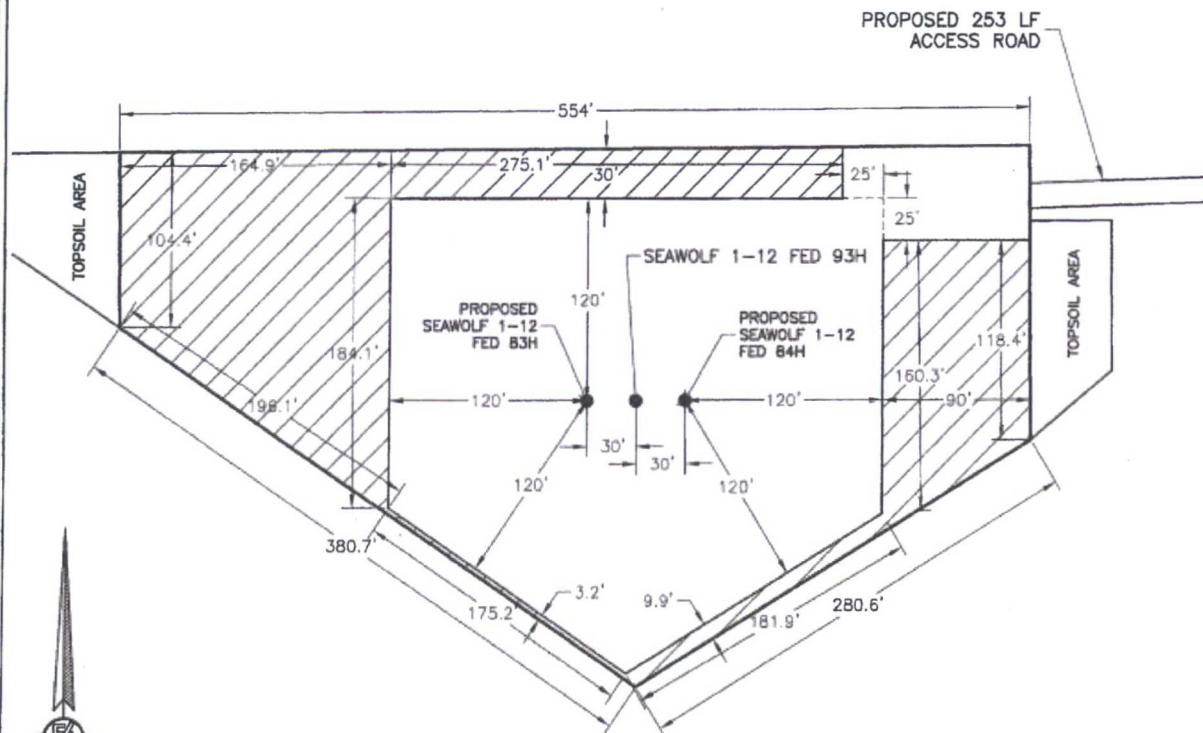
Devon Energy, Seawolf 1-12 93H

Attachments

☒ Directional Plan

☐ Other, describe

**PROPOSED INTERIM SITE RECLAMATION
FOR SEAWOLF 1-12 FED 93H
SECTION 1, TOWNSHIP 26 SOUTH, RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO**



 DENOTES
RECLAMATION AREA
1.149± ACRES RECLAMATION AREA



0 10 50 100 200
SCALE 1" = 100'

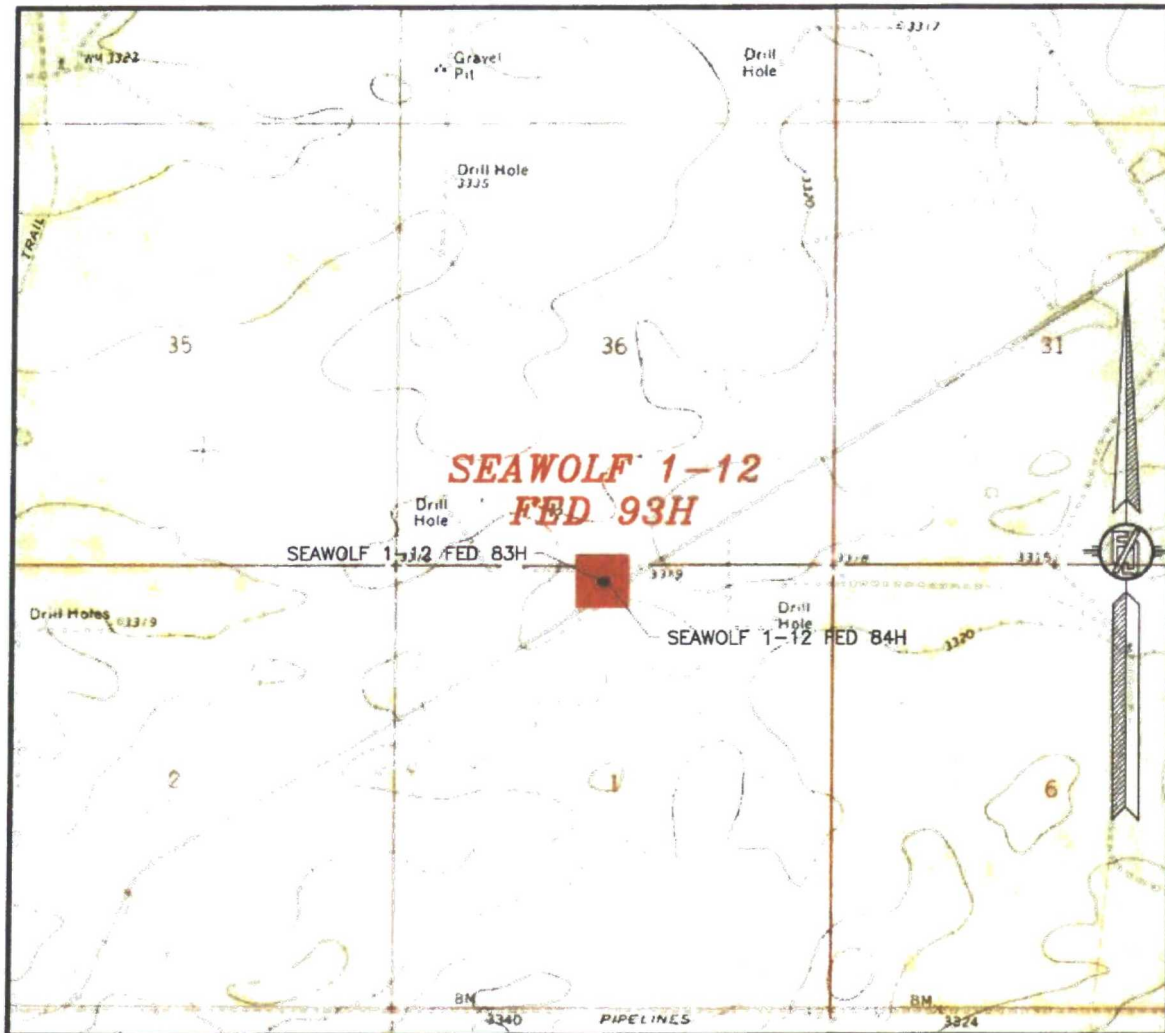
**DEVON ENERGY PRODUCTION COMPANY, L.P.
SEAWOLF 1-12 FED 93H
LOCATED 160 FT. FROM THE NORTH LINE
AND 2497 FT. FROM THE WEST LINE OF
SECTION 1, TOWNSHIP 26 SOUTH,
RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO**

JUNE 14, 2017

SURVEY NO. 4931C

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

SECTION 1, TOWNSHIP 26 SOUTH, RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
LOCATION VERIFICATION MAP



USGS QUAD MAP:
PADUCA BREAKS EAST

NOT TO SCALE

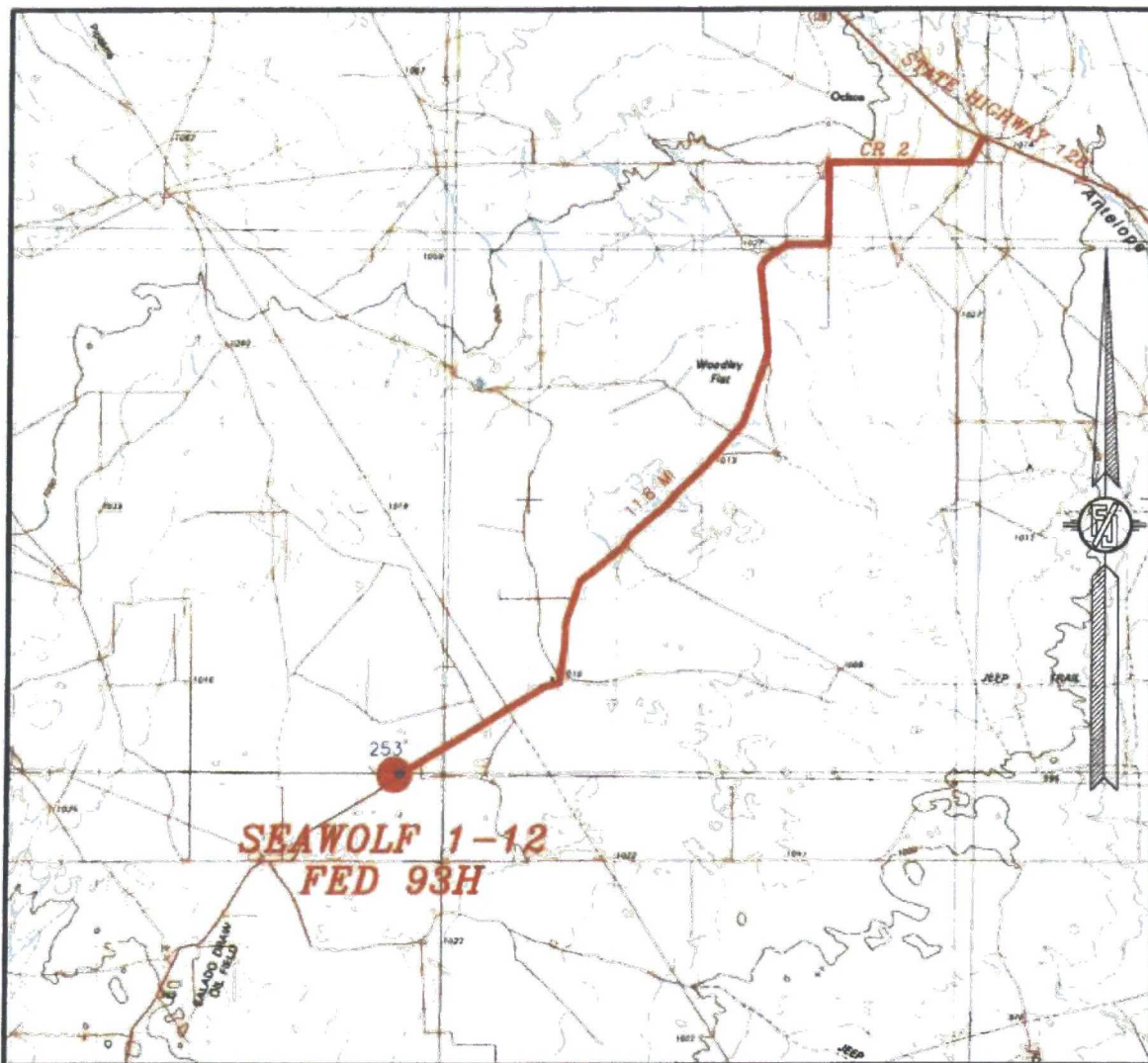
DEVON ENERGY PRODUCTION COMPANY, L.P.
SEAWOLF 1-12 FED 93H
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RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

JUNE 14, 2017

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

SURVEY NO. 4931C

SECTION 1, TOWNSHIP 26 SOUTH, RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
VICINITY MAP



DISTANCES IN MILES

NOT TO SCALE

DEVON ENERGY PRODUCTION COMPANY, L.P.

SEAWOLF 1-12 FED 93H

LOCATED 160 FT. FROM THE NORTH LINE

AND 2497 FT. FROM THE WEST LINE OF

SECTION 1, TOWNSHIP 26 SOUTH,

RANGE 33 EAST, N.M.P.M.

LEA COUNTY, STATE OF NEW MEXICO

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF STATE HIGHWAY 128 AND CR 2 (BATTLE AXE ROAD) GO SOUTH ON CR 2 APPROX. 11.8 MILES, ROAD TURNS WEST AND FOLLOW ROAD SOUTHWEST GO BY RANCH HOUSE (GO APPROX. 2.0 MILES) CROSS CATTLE GUARD TO A 2-TRACK ROAD AND RED & WHITE LATH ON RIGHT. TURN RIGHT GO ON 2-TRACK ROAD APPROX. 253' TO THE NORTHEAST PAD CORNER FOR THIS LOCATION.

JUNE 14, 2017

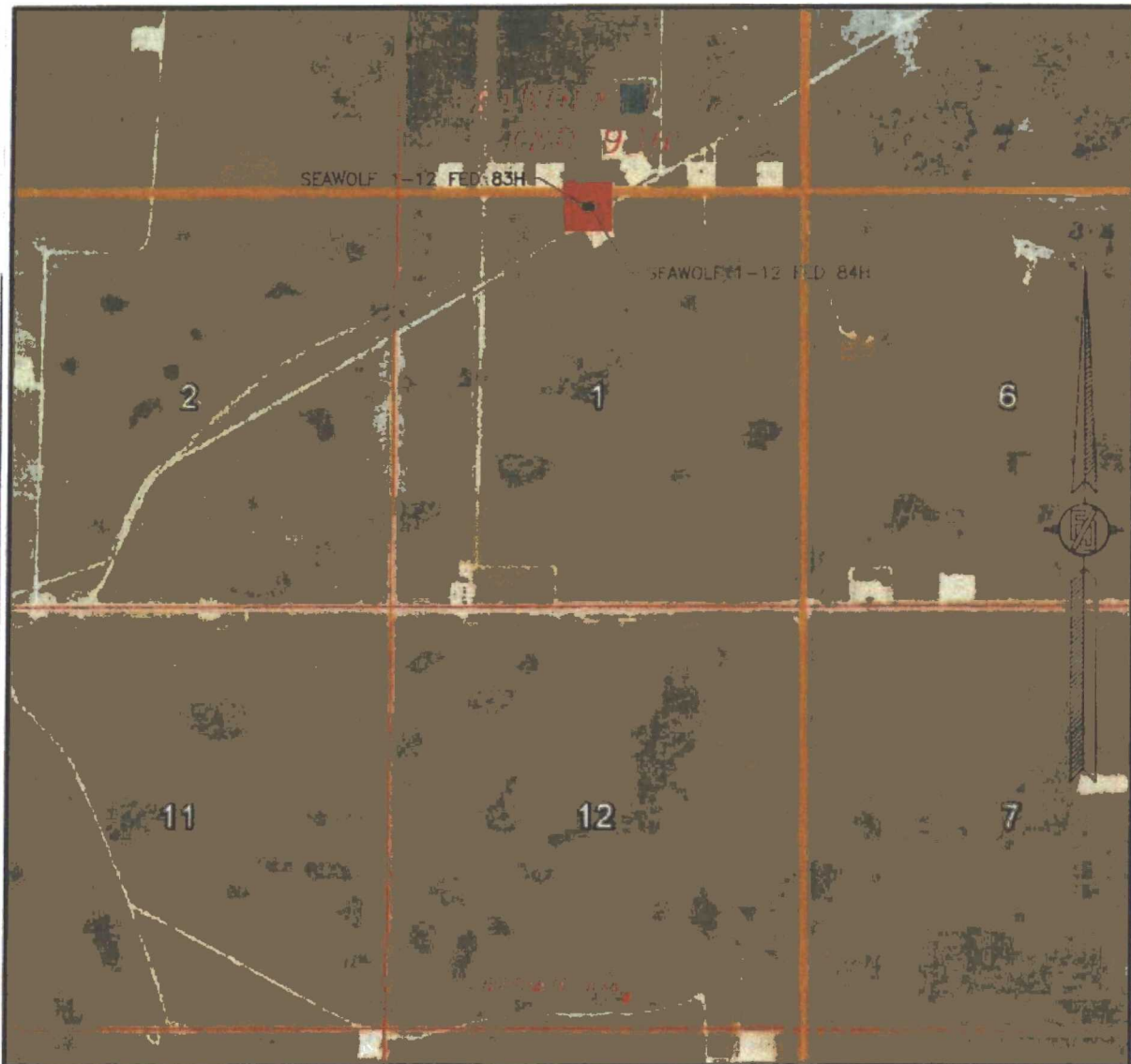
SURVEY NO. 4931C

MADRON SURVEYING, INC.

301 SOUTH CANAL
(575) 234-3341

CARLSBAD, NEW MEXICO

SECTION 1, TOWNSHIP 26 SOUTH, RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
AERIAL PHOTO



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
NOVEMBER 2015

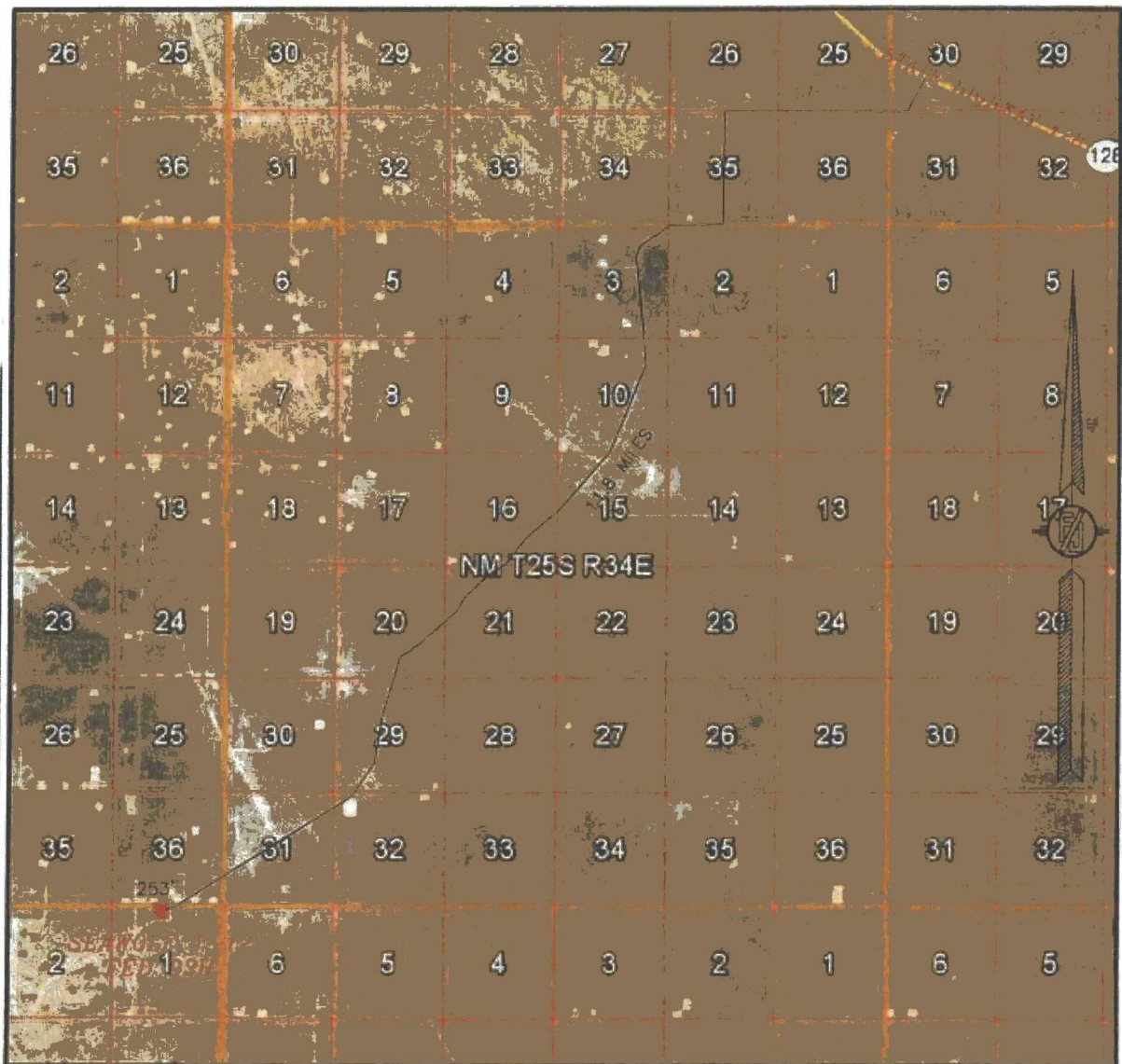
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RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

JUNE 14, 2017

SURVEY NO. 4931C

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

SECTION 1, TOWNSHIP 26 SOUTH, RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
ACCESS AERIAL ROUTE MAP



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
NOVEMBER 2015

DEVON ENERGY PRODUCTION COMPANY, L.P.
SEAWOLF 1-12 FED 93H

LOCATED 160 FT. FROM THE NORTH LINE
AND 2497 FT. FROM THE WEST LINE OF
SECTION 1, TOWNSHIP 26 SOUTH,
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LEA COUNTY, STATE OF NEW MEXICO

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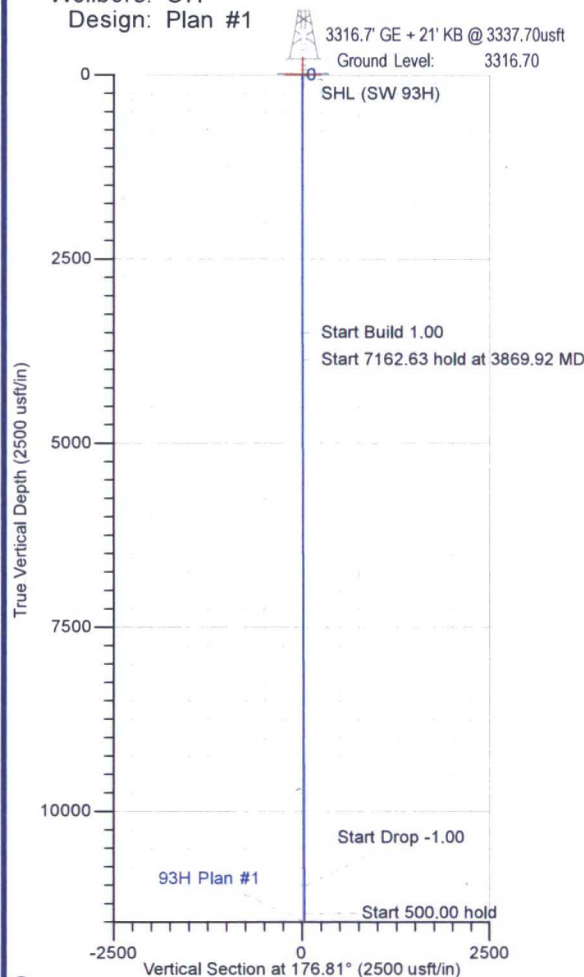
Devon Energy

Project: Lea County, NM (NAD-83)
Site: Seawolf 1-12 Fed
Well: 93H
Wellbore: OH
Design: Plan #1



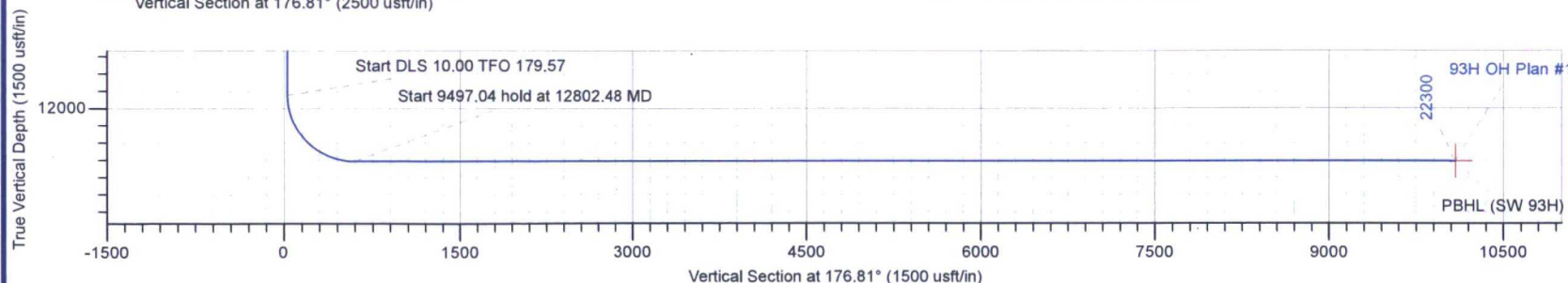
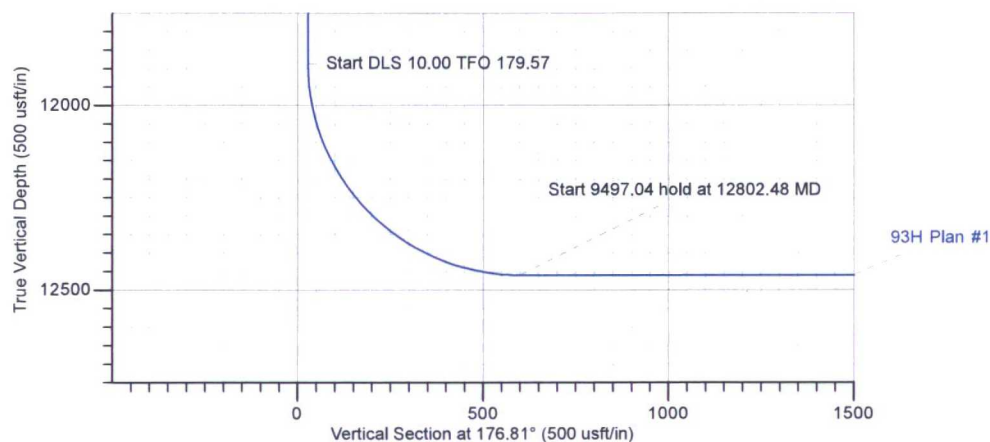
Azimuths to Grid North
True North: -0.43°
Magnetic North: 6.39°
Magnetic Field
Strength: 47949.6snT
Dip Angle: 59.80°
Date: 7/5/2017
Model: HDGM

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										Annotation
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
3500.00	0.00	0.00	3500.00	0.00	0.00	0.00	0.00	0.00		Start Build 1.00
3869.92	3.70	90.00	3869.67	0.00	11.94	1.00	90.00	0.66		Start 7162.63 hold at 3869.92 MD
11032.55	3.70	90.00	11017.37	0.00	474.06	0.00	0.00	26.40		Start Drop -1.00
11402.48	0.00	0.00	11387.04	0.00	486.00	1.00	180.00	27.06		Start 500.00 hold at 11402.48 MD
11902.48	0.00	0.00	11887.04	0.00	486.00	0.00	0.00	27.06		Start DLS 10.00 TFO 179.57
12802.48	90.00	179.57	12460.00	-572.94	490.30	10.00	179.57	599.36		Start 9497.04 hold at 12802.48 MD
22299.51	90.00	179.57	12460.00	-10069.71	561.64	0.00	0.00	10085.36		TD at 22299.51

DESIGN TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	
PBHL (SW 93H)	12460.00	-10069.71	561.64	32° 3' 5.783 N	103° 31' 29.864 W	
SHL (SW 93H)	0.00	0.00	0.00	32° 4' 45.468 N	103° 31' 35.515 W	



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

Plan: Plan #1 (93H/OH)
Seawolf 1-12 Fed
Created By: Brady Deaver
Date: 10:15, July 05 2017
Approved: _____ Date: _____

Devon Energy

Project: Lea County, NM (NAD-83)
Site: Seawolf 1-12 Fed
Well: 93H
Wellbore: OH
Design: Plan #1



Azimuths to Grid North
True North: -0.43°
Magnetic North: 6.39°

Magnetic Field
Strength: 47949.6snT
Dip Angle: 59.80°
Date: 7/5/2017
Model: HDGM



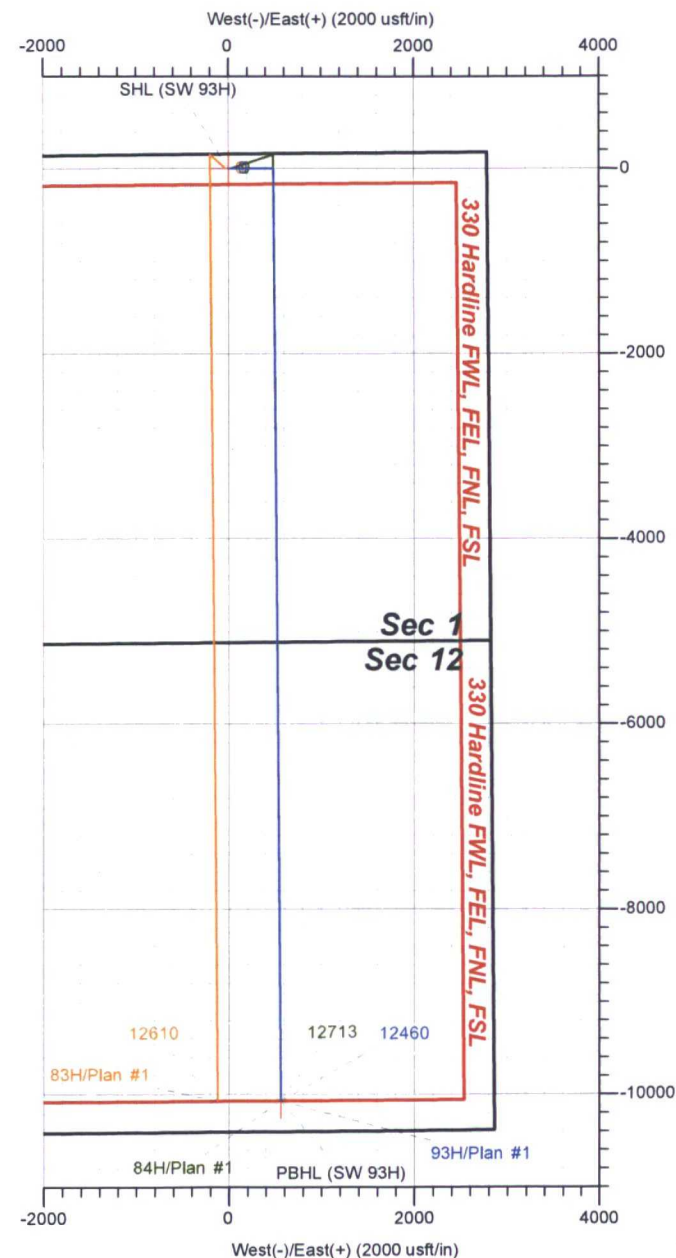
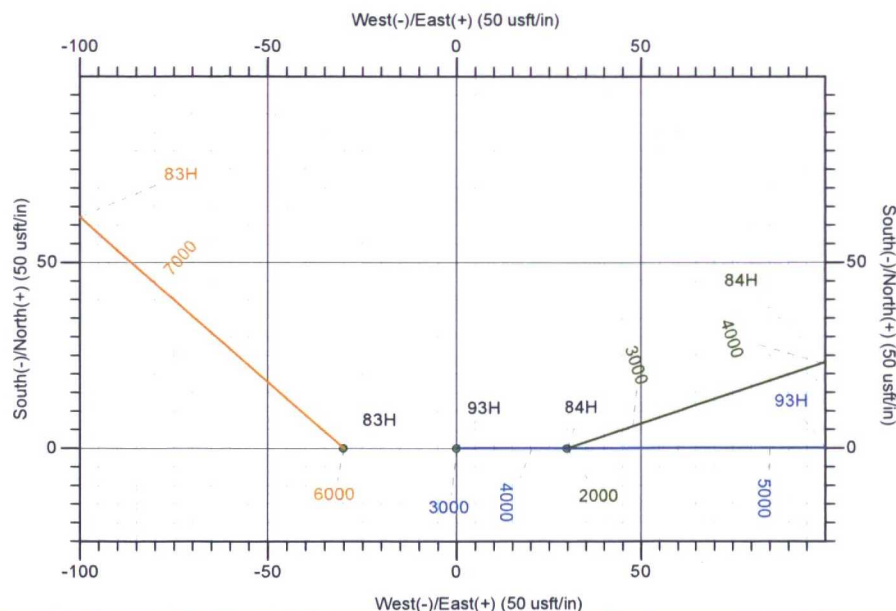
PROJECT DETAILS: Lea County, NM (NAD-83)
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL (SW 93H)	12460.00	-10069.71	561.64	383450.00	791786.07	32° 3' 5.783 N	103° 31' 29.864 W
SHL (SW 93H)	0.00	0.00	0.00	393519.71	791224.43	32° 4' 45.468 N	103° 31' 35.515 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	
3500.00	0.00	0.00	3500.00	0.00	0.00	0.00	0.00	0.00	Start Build 1.00
3869.92	3.70	90.00	3869.67	0.00	11.94	1.00	90.00	0.66	Start 7162.63 hold at 3869.92 MD
11032.55	3.70	90.00	11017.37	0.00	474.06	0.00	0.00	26.40	Start Drop -1.00
11402.48	0.00	0.00	11387.04	0.00	486.00	1.00	180.00	27.06	Start 500.00 hold at 11402.48 MD
11902.48	0.00	0.00	11887.04	0.00	486.00	0.00	0.00	27.06	Start DLS 10.00 TFO 179.57
12802.48	90.00	179.57	12460.00	-572.94	490.30	10.00	179.57	599.36	Start 9497.04 hold at 12802.48 MD
22299.51	90.00	179.57	12460.00	-10069.71	561.64	0.00	0.00	10085.36	TD at 22299.51



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

Plan: Plan #1 (93H/OH)
Seawolf 1-12 Fed
Created By: Brady Deaver
Date: 10:17, July 05 2017
Approved: _____
Date: _____

Devon Energy

Lea County, NM (NAD-83)

Seawolf 1-12 Fed

93H

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: 93H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well 93H
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 Latitude: 32° 4' 45.071 N
From: Map Easting: 789,088.21 usft Longitude: 103° 32' 0.348 W
Position Uncertainty: 0.00 usft Slot Radius: 13-3/16" Grid Convergence: 0.42°

Well 93H

Well Position +N/-S 56.02 usft Northing: 393,519.71 usft Latitude: 32° 4' 45.468 N
+E/-W 2,136.22 usft Easting: 791,224.43 usft Longitude: 103° 31' 35.515 W
Position Uncertainty 0.00 usft Wellhead Elevation: 0.00 usft Ground Level: 3,316.70 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	7/5/2017	6.82	59.80	47,950

Design Plan #1

Audit Notes:

Version: Phase: PLAN Tie On Depth: 0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	176.81

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	
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,869.92	3.70	90.00	3,869.67	0.00	11.94	1.00	1.00	0.00	90.00	
11,032.55	3.70	90.00	11,017.37	0.00	474.06	0.00	0.00	0.00	0.00	
11,402.48	0.00	0.00	11,387.04	0.00	486.00	1.00	-1.00	0.00	180.00	
11,902.48	0.00	0.00	11,887.04	0.00	486.00	0.00	0.00	0.00	0.00	
12,802.48	90.00	179.57	12,460.00	-572.94	490.30	10.00	10.00	19.95	179.57	
22,299.51	90.00	179.57	12,460.00	-10,069.71	561.64	0.00	0.00	0.00	0.00	PBHL (SW 93H)

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Multi User Db	Local Co-ordinate Reference:	Well 93H
Company:	Devon Energy	TVD Reference:	3316.7' GE + 21' KB @ 3337.70usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3316.7' GE + 21' KB @ 3337.70usft
Site:	Seawolf 1-12 Fed	North Reference:	Grid
Well:	93H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHL (SW 93H)									
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
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 1.00									
3,600.00	1.00	90.00	3,600.00	0.00	0.87	0.05	1.00	1.00	0.00
3,700.00	2.00	90.00	3,699.96	0.00	3.49	0.19	1.00	1.00	0.00
3,800.00	3.00	90.00	3,799.86	0.00	7.85	0.44	1.00	1.00	0.00
3,869.92	3.70	90.00	3,869.67	0.00	11.94	0.66	1.00	1.00	0.00
Start 7162.63 hold at 3869.92 MD									
3,900.00	3.70	90.00	3,899.68	0.00	13.88	0.77	0.00	0.00	0.00
4,000.00	3.70	90.00	3,999.47	0.00	20.33	1.13	0.00	0.00	0.00
4,100.00	3.70	90.00	4,099.26	0.00	26.78	1.49	0.00	0.00	0.00
4,200.00	3.70	90.00	4,199.06	0.00	33.23	1.85	0.00	0.00	0.00
4,300.00	3.70	90.00	4,298.85	0.00	39.69	2.21	0.00	0.00	0.00
4,400.00	3.70	90.00	4,398.64	0.00	46.14	2.57	0.00	0.00	0.00
4,500.00	3.70	90.00	4,498.43	0.00	52.59	2.93	0.00	0.00	0.00
4,600.00	3.70	90.00	4,598.22	0.00	59.04	3.29	0.00	0.00	0.00
4,700.00	3.70	90.00	4,698.01	0.00	65.49	3.65	0.00	0.00	0.00
4,800.00	3.70	90.00	4,797.81	0.00	71.95	4.01	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: 93H
Wellbore: OH
Design: Plan #1

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

Well 93H
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	3.70	90.00	4,897.60	0.00	78.40	4.37	0.00	0.00	0.00
5,000.00	3.70	90.00	4,997.39	0.00	84.85	4.73	0.00	0.00	0.00
5,100.00	3.70	90.00	5,097.18	0.00	91.30	5.08	0.00	0.00	0.00
5,200.00	3.70	90.00	5,196.97	0.00	97.75	5.44	0.00	0.00	0.00
5,300.00	3.70	90.00	5,296.76	0.00	104.20	5.80	0.00	0.00	0.00
5,400.00	3.70	90.00	5,396.56	0.00	110.66	6.16	0.00	0.00	0.00
5,500.00	3.70	90.00	5,496.35	0.00	117.11	6.52	0.00	0.00	0.00
5,600.00	3.70	90.00	5,596.14	0.00	123.56	6.88	0.00	0.00	0.00
5,700.00	3.70	90.00	5,695.93	0.00	130.01	7.24	0.00	0.00	0.00
5,800.00	3.70	90.00	5,795.72	0.00	136.46	7.60	0.00	0.00	0.00
5,900.00	3.70	90.00	5,895.51	0.00	142.92	7.96	0.00	0.00	0.00
6,000.00	3.70	90.00	5,995.31	0.00	149.37	8.32	0.00	0.00	0.00
6,100.00	3.70	90.00	6,095.10	0.00	155.82	8.68	0.00	0.00	0.00
6,200.00	3.70	90.00	6,194.89	0.00	162.27	9.04	0.00	0.00	0.00
6,300.00	3.70	90.00	6,294.68	0.00	168.72	9.40	0.00	0.00	0.00
6,400.00	3.70	90.00	6,394.47	0.00	175.18	9.76	0.00	0.00	0.00
6,500.00	3.70	90.00	6,494.26	0.00	181.63	10.11	0.00	0.00	0.00
6,600.00	3.70	90.00	6,594.06	0.00	188.08	10.47	0.00	0.00	0.00
6,700.00	3.70	90.00	6,693.85	0.00	194.53	10.83	0.00	0.00	0.00
6,800.00	3.70	90.00	6,793.64	0.00	200.98	11.19	0.00	0.00	0.00
6,900.00	3.70	90.00	6,893.43	0.00	207.43	11.55	0.00	0.00	0.00
7,000.00	3.70	90.00	6,993.22	0.00	213.89	11.91	0.00	0.00	0.00
7,100.00	3.70	90.00	7,093.01	0.00	220.34	12.27	0.00	0.00	0.00
7,200.00	3.70	90.00	7,192.80	0.00	226.79	12.63	0.00	0.00	0.00
7,300.00	3.70	90.00	7,292.60	0.00	233.24	12.99	0.00	0.00	0.00
7,400.00	3.70	90.00	7,392.39	0.00	239.69	13.35	0.00	0.00	0.00
7,500.00	3.70	90.00	7,492.18	0.00	246.15	13.71	0.00	0.00	0.00
7,600.00	3.70	90.00	7,591.97	0.00	252.60	14.07	0.00	0.00	0.00
7,700.00	3.70	90.00	7,691.76	0.00	259.05	14.43	0.00	0.00	0.00
7,800.00	3.70	90.00	7,791.55	0.00	265.50	14.79	0.00	0.00	0.00
7,900.00	3.70	90.00	7,891.35	0.00	271.95	15.14	0.00	0.00	0.00
8,000.00	3.70	90.00	7,991.14	0.00	278.41	15.50	0.00	0.00	0.00
8,100.00	3.70	90.00	8,090.93	0.00	284.86	15.86	0.00	0.00	0.00
8,200.00	3.70	90.00	8,190.72	0.00	291.31	16.22	0.00	0.00	0.00
8,300.00	3.70	90.00	8,290.51	0.00	297.76	16.58	0.00	0.00	0.00
8,400.00	3.70	90.00	8,390.30	0.00	304.21	16.94	0.00	0.00	0.00
8,500.00	3.70	90.00	8,490.10	0.00	310.66	17.30	0.00	0.00	0.00
8,600.00	3.70	90.00	8,589.89	0.00	317.12	17.66	0.00	0.00	0.00
8,700.00	3.70	90.00	8,689.68	0.00	323.57	18.02	0.00	0.00	0.00
8,800.00	3.70	90.00	8,789.47	0.00	330.02	18.38	0.00	0.00	0.00
8,900.00	3.70	90.00	8,889.26	0.00	336.47	18.74	0.00	0.00	0.00
9,000.00	3.70	90.00	8,989.05	0.00	342.92	19.10	0.00	0.00	0.00
9,100.00	3.70	90.00	9,088.85	0.00	349.38	19.46	0.00	0.00	0.00
9,200.00	3.70	90.00	9,188.64	0.00	355.83	19.82	0.00	0.00	0.00
9,300.00	3.70	90.00	9,288.43	0.00	362.28	20.17	0.00	0.00	0.00
9,400.00	3.70	90.00	9,388.22	0.00	368.73	20.53	0.00	0.00	0.00
9,500.00	3.70	90.00	9,488.01	0.00	375.18	20.89	0.00	0.00	0.00
9,600.00	3.70	90.00	9,587.80	0.00	381.64	21.25	0.00	0.00	0.00
9,700.00	3.70	90.00	9,687.60	0.00	388.09	21.61	0.00	0.00	0.00
9,800.00	3.70	90.00	9,787.39	0.00	394.54	21.97	0.00	0.00	0.00
9,900.00	3.70	90.00	9,887.18	0.00	400.99	22.33	0.00	0.00	0.00
10,000.00	3.70	90.00	9,986.97	0.00	407.44	22.69	0.00	0.00	0.00
10,100.00	3.70	90.00	10,086.76	0.00	413.90	23.05	0.00	0.00	0.00
10,200.00	3.70	90.00	10,186.55	0.00	420.35	23.41	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Multi User Db	Local Co-ordinate Reference:	Well 93H
Company:	Devon Energy	TVD Reference:	3316.7' GE + 21' KB @ 3337.70usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3316.7' GE + 21' KB @ 3337.70usft
Site:	Seawolf 1-12 Fed	North Reference:	Grid
Well:	93H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,300.00	3.70	90.00	10,286.35	0.00	426.80	23.77	0.00	0.00	0.00
10,400.00	3.70	90.00	10,386.14	0.00	433.25	24.13	0.00	0.00	0.00
10,500.00	3.70	90.00	10,485.93	0.00	439.70	24.49	0.00	0.00	0.00
10,600.00	3.70	90.00	10,585.72	0.00	446.15	24.85	0.00	0.00	0.00
10,700.00	3.70	90.00	10,685.51	0.00	452.61	25.21	0.00	0.00	0.00
10,800.00	3.70	90.00	10,785.30	0.00	459.06	25.56	0.00	0.00	0.00
10,900.00	3.70	90.00	10,885.10	0.00	465.51	25.92	0.00	0.00	0.00
11,000.00	3.70	90.00	10,984.89	0.00	471.96	26.28	0.00	0.00	0.00
11,032.55	3.70	90.00	11,017.37	0.00	474.06	26.40	0.00	0.00	0.00
Start Drop -1.00									
11,100.00	3.02	90.00	11,084.70	0.00	478.02	26.62	1.00	-1.00	0.00
11,200.00	2.02	90.00	11,184.60	0.00	482.42	26.87	1.00	-1.00	0.00
11,300.00	1.02	90.00	11,284.57	0.00	485.08	27.01	1.00	-1.00	0.00
11,402.48	0.00	0.00	11,387.04	0.00	486.00	27.06	1.00	-1.00	-87.82
Start 500.00 hold at 11402.48 MD									
11,500.00	0.00	0.00	11,484.56	0.00	486.00	27.06	0.00	0.00	0.00
11,600.00	0.00	0.00	11,584.56	0.00	486.00	27.06	0.00	0.00	0.00
11,700.00	0.00	0.00	11,684.56	0.00	486.00	27.06	0.00	0.00	0.00
11,800.00	0.00	0.00	11,784.56	0.00	486.00	27.06	0.00	0.00	0.00
11,902.48	0.00	0.00	11,887.04	0.00	486.00	27.06	0.00	0.00	0.00
Start DLS 10.00 TFO 179.57									
11,950.00	4.75	179.57	11,934.51	-1.97	486.01	29.03	10.00	10.00	0.00
12,000.00	9.75	179.57	11,984.09	-8.28	486.06	35.33	10.00	10.00	0.00
12,050.00	14.75	179.57	12,032.94	-18.89	486.14	45.93	10.00	10.00	0.00
12,100.00	19.75	179.57	12,080.67	-33.71	486.25	60.74	10.00	10.00	0.00
12,150.00	24.75	179.57	12,126.94	-52.64	486.40	79.64	10.00	10.00	0.00
12,200.00	29.75	179.57	12,171.37	-75.53	486.57	102.50	10.00	10.00	0.00
12,250.00	34.75	179.57	12,213.64	-102.20	486.77	129.15	10.00	10.00	0.00
12,300.00	39.75	179.57	12,253.43	-132.45	486.99	159.37	10.00	10.00	0.00
12,350.00	44.75	179.57	12,290.43	-166.06	487.25	192.94	10.00	10.00	0.00
12,400.00	49.75	179.57	12,324.35	-202.77	487.52	229.60	10.00	10.00	0.00
12,450.00	54.75	179.57	12,354.95	-242.29	487.82	269.08	10.00	10.00	0.00
12,500.00	59.75	179.57	12,381.99	-284.33	488.14	311.07	10.00	10.00	0.00
12,550.00	64.75	179.57	12,405.26	-328.56	488.47	355.26	10.00	10.00	0.00
12,600.00	69.75	179.57	12,424.59	-374.66	488.81	401.30	10.00	10.00	0.00
12,650.00	74.75	179.57	12,439.83	-422.26	489.17	448.85	10.00	10.00	0.00
12,700.00	79.75	179.57	12,450.86	-471.01	489.54	497.54	10.00	10.00	0.00
12,750.00	84.75	179.57	12,457.60	-520.54	489.91	547.01	10.00	10.00	0.00
12,802.48	90.00	179.57	12,460.00	-572.94	490.30	599.36	10.00	10.00	0.00
Start 9497.04 hold at 12802.48 MD									
12,900.00	90.00	179.57	12,460.00	-670.46	491.04	696.77	0.00	0.00	0.00
13,000.00	90.00	179.57	12,460.00	-770.46	491.79	796.65	0.00	0.00	0.00
13,100.00	90.00	179.57	12,460.00	-870.46	492.54	896.53	0.00	0.00	0.00
13,200.00	90.00	179.57	12,460.00	-970.45	493.29	996.42	0.00	0.00	0.00
13,300.00	90.00	179.57	12,460.00	-1,070.45	494.04	1,096.30	0.00	0.00	0.00
13,400.00	90.00	179.57	12,460.00	-1,170.45	494.79	1,196.19	0.00	0.00	0.00
13,500.00	90.00	179.57	12,460.00	-1,270.44	495.54	1,296.07	0.00	0.00	0.00
13,600.00	90.00	179.57	12,460.00	-1,370.44	496.29	1,395.95	0.00	0.00	0.00
13,700.00	90.00	179.57	12,460.00	-1,470.44	497.05	1,495.84	0.00	0.00	0.00
13,800.00	90.00	179.57	12,460.00	-1,570.44	497.80	1,595.72	0.00	0.00	0.00
13,900.00	90.00	179.57	12,460.00	-1,670.43	498.55	1,695.60	0.00	0.00	0.00
14,000.00	90.00	179.57	12,460.00	-1,770.43	499.30	1,795.49	0.00	0.00	0.00
14,100.00	90.00	179.57	12,460.00	-1,870.43	500.05	1,895.37	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: 93H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well 93H
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)
14,200.00	90.00	179.57	12,460.00	-1,970.42	500.80	1,995.26	0.00	0.00	0.00
14,300.00	90.00	179.57	12,460.00	-2,070.42	501.55	2,095.14	0.00	0.00	0.00
14,400.00	90.00	179.57	12,460.00	-2,170.42	502.30	2,195.02	0.00	0.00	0.00
14,500.00	90.00	179.57	12,460.00	-2,270.42	503.05	2,294.91	0.00	0.00	0.00
14,600.00	90.00	179.57	12,460.00	-2,370.41	503.81	2,394.79	0.00	0.00	0.00
14,700.00	90.00	179.57	12,460.00	-2,470.41	504.56	2,494.68	0.00	0.00	0.00
14,800.00	90.00	179.57	12,460.00	-2,570.41	505.31	2,594.56	0.00	0.00	0.00
14,900.00	90.00	179.57	12,460.00	-2,670.41	506.06	2,694.44	0.00	0.00	0.00
15,000.00	90.00	179.57	12,460.00	-2,770.40	506.81	2,794.33	0.00	0.00	0.00
15,100.00	90.00	179.57	12,460.00	-2,870.40	507.56	2,894.21	0.00	0.00	0.00
15,200.00	90.00	179.57	12,460.00	-2,970.40	508.31	2,994.09	0.00	0.00	0.00
15,300.00	90.00	179.57	12,460.00	-3,070.39	509.06	3,093.98	0.00	0.00	0.00
15,400.00	90.00	179.57	12,460.00	-3,170.39	509.81	3,193.86	0.00	0.00	0.00
15,500.00	90.00	179.57	12,460.00	-3,270.39	510.57	3,293.75	0.00	0.00	0.00
15,600.00	90.00	179.57	12,460.00	-3,370.39	511.32	3,393.63	0.00	0.00	0.00
15,700.00	90.00	179.57	12,460.00	-3,470.38	512.07	3,493.51	0.00	0.00	0.00
15,800.00	90.00	179.57	12,460.00	-3,570.38	512.82	3,593.40	0.00	0.00	0.00
15,900.00	90.00	179.57	12,460.00	-3,670.38	513.57	3,693.28	0.00	0.00	0.00
16,000.00	90.00	179.57	12,460.00	-3,770.37	514.32	3,793.17	0.00	0.00	0.00
16,100.00	90.00	179.57	12,460.00	-3,870.37	515.07	3,893.05	0.00	0.00	0.00
16,200.00	90.00	179.57	12,460.00	-3,970.37	515.82	3,992.93	0.00	0.00	0.00
16,300.00	90.00	179.57	12,460.00	-4,070.37	516.58	4,092.82	0.00	0.00	0.00
16,400.00	90.00	179.57	12,460.00	-4,170.36	517.33	4,192.70	0.00	0.00	0.00
16,500.00	90.00	179.57	12,460.00	-4,270.36	518.08	4,292.58	0.00	0.00	0.00
16,600.00	90.00	179.57	12,460.00	-4,370.36	518.83	4,392.47	0.00	0.00	0.00
16,700.00	90.00	179.57	12,460.00	-4,470.35	519.58	4,492.35	0.00	0.00	0.00
16,800.00	90.00	179.57	12,460.00	-4,570.35	520.33	4,592.24	0.00	0.00	0.00
16,900.00	90.00	179.57	12,460.00	-4,670.35	521.08	4,692.12	0.00	0.00	0.00
17,000.00	90.00	179.57	12,460.00	-4,770.35	521.83	4,792.00	0.00	0.00	0.00
17,100.00	90.00	179.57	12,460.00	-4,870.34	522.58	4,891.89	0.00	0.00	0.00
17,200.00	90.00	179.57	12,460.00	-4,970.34	523.34	4,991.77	0.00	0.00	0.00
17,300.00	90.00	179.57	12,460.00	-5,070.34	524.09	5,091.65	0.00	0.00	0.00
17,400.00	90.00	179.57	12,460.00	-5,170.33	524.84	5,191.54	0.00	0.00	0.00
17,500.00	90.00	179.57	12,460.00	-5,270.33	525.59	5,291.42	0.00	0.00	0.00
17,600.00	90.00	179.57	12,460.00	-5,370.33	526.34	5,391.31	0.00	0.00	0.00
17,700.00	90.00	179.57	12,460.00	-5,470.33	527.09	5,491.19	0.00	0.00	0.00
17,800.00	90.00	179.57	12,460.00	-5,570.32	527.84	5,591.07	0.00	0.00	0.00
17,900.00	90.00	179.57	12,460.00	-5,670.32	528.59	5,690.96	0.00	0.00	0.00
18,000.00	90.00	179.57	12,460.00	-5,770.32	529.34	5,790.84	0.00	0.00	0.00
18,100.00	90.00	179.57	12,460.00	-5,870.31	530.10	5,890.73	0.00	0.00	0.00
18,200.00	90.00	179.57	12,460.00	-5,970.31	530.85	5,990.61	0.00	0.00	0.00
18,300.00	90.00	179.57	12,460.00	-6,070.31	531.60	6,090.49	0.00	0.00	0.00
18,400.00	90.00	179.57	12,460.00	-6,170.31	532.35	6,190.38	0.00	0.00	0.00
18,500.00	90.00	179.57	12,460.00	-6,270.30	533.10	6,290.26	0.00	0.00	0.00
18,600.00	90.00	179.57	12,460.00	-6,370.30	533.85	6,390.14	0.00	0.00	0.00
18,700.00	90.00	179.57	12,460.00	-6,470.30	534.60	6,490.03	0.00	0.00	0.00
18,800.00	90.00	179.57	12,460.00	-6,570.30	535.35	6,589.91	0.00	0.00	0.00
18,900.00	90.00	179.57	12,460.00	-6,670.29	536.10	6,689.80	0.00	0.00	0.00
19,000.00	90.00	179.57	12,460.00	-6,770.29	536.86	6,789.68	0.00	0.00	0.00
19,100.00	90.00	179.57	12,460.00	-6,870.29	537.61	6,889.56	0.00	0.00	0.00
19,200.00	90.00	179.57	12,460.00	-6,970.28	538.36	6,989.45	0.00	0.00	0.00
19,300.00	90.00	179.57	12,460.00	-7,070.28	539.11	7,089.33	0.00	0.00	0.00
19,400.00	90.00	179.57	12,460.00	-7,170.28	539.86	7,189.22	0.00	0.00	0.00
19,500.00	90.00	179.57	12,460.00	-7,270.28	540.61	7,289.10	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: 93H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well 93H
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)
19,600.00	90.00	179.57	12,460.00	-7,370.27	541.36	7,388.98	0.00	0.00	0.00
19,700.00	90.00	179.57	12,460.00	-7,470.27	542.11	7,488.87	0.00	0.00	0.00
19,800.00	90.00	179.57	12,460.00	-7,570.27	542.87	7,588.75	0.00	0.00	0.00
19,900.00	90.00	179.57	12,460.00	-7,670.26	543.62	7,688.63	0.00	0.00	0.00
20,000.00	90.00	179.57	12,460.00	-7,770.26	544.37	7,788.52	0.00	0.00	0.00
20,100.00	90.00	179.57	12,460.00	-7,870.26	545.12	7,888.40	0.00	0.00	0.00
20,200.00	90.00	179.57	12,460.00	-7,970.26	545.87	7,988.29	0.00	0.00	0.00
20,300.00	90.00	179.57	12,460.00	-8,070.25	546.62	8,088.17	0.00	0.00	0.00
20,400.00	90.00	179.57	12,460.00	-8,170.25	547.37	8,188.05	0.00	0.00	0.00
20,500.00	90.00	179.57	12,460.00	-8,270.25	548.12	8,287.94	0.00	0.00	0.00
20,600.00	90.00	179.57	12,460.00	-8,370.24	548.87	8,387.82	0.00	0.00	0.00
20,700.00	90.00	179.57	12,460.00	-8,470.24	549.63	8,487.71	0.00	0.00	0.00
20,800.00	90.00	179.57	12,460.00	-8,570.24	550.38	8,587.59	0.00	0.00	0.00
20,900.00	90.00	179.57	12,460.00	-8,670.24	551.13	8,687.47	0.00	0.00	0.00
21,000.00	90.00	179.57	12,460.00	-8,770.23	551.88	8,787.36	0.00	0.00	0.00
21,100.00	90.00	179.57	12,460.00	-8,870.23	552.63	8,887.24	0.00	0.00	0.00
21,200.00	90.00	179.57	12,460.00	-8,970.23	553.38	8,987.12	0.00	0.00	0.00
21,300.00	90.00	179.57	12,460.00	-9,070.22	554.13	9,087.01	0.00	0.00	0.00
21,400.00	90.00	179.57	12,460.00	-9,170.22	554.88	9,186.89	0.00	0.00	0.00
21,500.00	90.00	179.57	12,460.00	-9,270.22	555.63	9,286.78	0.00	0.00	0.00
21,600.00	90.00	179.57	12,460.00	-9,370.22	556.39	9,386.66	0.00	0.00	0.00
21,700.00	90.00	179.57	12,460.00	-9,470.21	557.14	9,486.54	0.00	0.00	0.00
21,800.00	90.00	179.57	12,460.00	-9,570.21	557.89	9,586.43	0.00	0.00	0.00
21,900.00	90.00	179.57	12,460.00	-9,670.21	558.64	9,686.31	0.00	0.00	0.00
22,000.00	90.00	179.57	12,460.00	-9,770.20	559.39	9,786.20	0.00	0.00	0.00
22,100.00	90.00	179.57	12,460.00	-9,870.20	560.14	9,886.08	0.00	0.00	0.00
22,200.00	90.00	179.57	12,460.00	-9,970.20	560.89	9,985.96	0.00	0.00	0.00
22,299.51	90.00	179.57	12,460.00	-10,069.71	561.64	10,085.36	0.00	0.00	0.00

TD at 22299.51 - PBHL (SW 93H)

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL (SW 93H) - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	393,519.71	791,224.43	32° 4' 45.468 N	103° 31' 35.515 W
PBHL (SW 93H) - plan hits target center - Point	0.00	0.00	12,460.00	-10,069.71	561.64	383,450.00	791,786.07	32° 3' 5.783 N	103° 31' 29.864 W

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: 93H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well 93H
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)	
3,500.00	3,500.00	0.00	0.00	Start Build 1.00
3,869.92	3,869.67	0.00	11.94	Start 7162.63 hold at 3869.92 MD
11,032.55	11,017.37	0.00	474.06	Start Drop -1.00
11,402.48	11,387.04	0.00	486.00	Start 500.00 hold at 11402.48 MD
11,902.48	11,887.04	0.00	486.00	Start DLS 10.00 TFO 179.57
12,802.48	12,460.00	-572.94	490.30	Start 9497.04 hold at 12802.48 MD
22,299.51	12,460.00	-10,069.71	561.64	TD at 22299.51

Devon Energy

Lea County, NM (NAD-83)

Seawolf 1-12 Fed

93H

OH

Plan #1

Anticollision Report

05 July, 2017

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 93H
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:	93H	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	22,299.01	Plan #1 (OH)	LEAM MWD+HDGM	MWD+HDGM	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Seawolf 1-12 Fed						
83H - OH - Plan #1	3,500.00	3,500.00	30.00	14.54	1.940	CC, ES, SF
84H - OH - Plan #1	2,500.00	2,500.00	30.00	19.03	2.736	CC, ES
84H - OH - Plan #1	22,299.51	22,699.92	253.00	100.37	1.658	SF

Offset Design		Seawolf 1-12 Fed - 83H - 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								
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
0.00	0.00	0.00	0.00	0.00	0.00	-90.00	0.00	-30.00	30.00						
100.00	100.00	100.00	100.00	0.09	0.09	-90.00	0.00	-30.00	30.00	29.82	0.18	168.952			
200.00	200.00	200.00	200.00	0.31	0.31	-90.00	0.00	-30.00	30.00	29.37	0.63	47.839			
300.00	300.00	300.00	300.00	0.54	0.54	-90.00	0.00	-30.00	30.00	28.92	1.08	27.865			
400.00	400.00	400.00	400.00	0.76	0.76	-90.00	0.00	-30.00	30.00	28.47	1.53	19.657			
500.00	500.00	500.00	500.00	0.99	0.99	-90.00	0.00	-30.00	30.00	28.02	1.98	15.185			
600.00	600.00	600.00	600.00	1.21	1.21	-90.00	0.00	-30.00	30.00	27.57	2.43	12.370			
700.00	700.00	700.00	700.00	1.44	1.44	-90.00	0.00	-30.00	30.00	27.13	2.87	10.436			
800.00	800.00	800.00	800.00	1.66	1.66	-90.00	0.00	-30.00	30.00	26.68	3.32	9.024			
900.00	900.00	900.00	900.00	1.89	1.89	-90.00	0.00	-30.00	30.00	26.23	3.77	7.950			
1,000.00	1,000.00	1,000.00	1,000.00	2.11	2.11	-90.00	0.00	-30.00	30.00	25.78	4.22	7.103			
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	-90.00	0.00	-30.00	30.00	25.33	4.67	6.420			
1,200.00	1,200.00	1,200.00	1,200.00	2.56	2.56	-90.00	0.00	-30.00	30.00	24.88	5.12	5.857			
1,300.00	1,300.00	1,300.00	1,300.00	2.79	2.79	-90.00	0.00	-30.00	30.00	24.43	5.57	5.384			
1,400.00	1,400.00	1,400.00	1,400.00	3.01	3.01	-90.00	0.00	-30.00	30.00	23.98	6.02	4.982			
1,500.00	1,500.00	1,500.00	1,500.00	3.24	3.24	-90.00	0.00	-30.00	30.00	23.53	6.47	4.636			
1,600.00	1,600.00	1,600.00	1,600.00	3.46	3.46	-90.00	0.00	-30.00	30.00	23.08	6.92	4.335			
1,700.00	1,700.00	1,700.00	1,700.00	3.69	3.69	-90.00	0.00	-30.00	30.00	22.63	7.37	4.071			
1,800.00	1,800.00	1,800.00	1,800.00	3.91	3.91	-90.00	0.00	-30.00	30.00	22.18	7.82	3.837			
1,900.00	1,900.00	1,900.00	1,900.00	4.13	4.13	-90.00	0.00	-30.00	30.00	21.73	8.27	3.628			
2,000.00	2,000.00	2,000.00	2,000.00	4.36	4.36	-90.00	0.00	-30.00	30.00	21.28	8.72	3.441			
2,100.00	2,100.00	2,100.00	2,100.00	4.58	4.58	-90.00	0.00	-30.00	30.00	20.83	9.17	3.272			
2,200.00	2,200.00	2,200.00	2,200.00	4.81	4.81	-90.00	0.00	-30.00	30.00	20.38	9.62	3.119			
2,300.00	2,300.00	2,300.00	2,300.00	5.03	5.03	-90.00	0.00	-30.00	30.00	19.93	10.07	2.980			

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 93H
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:	93H	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													Offset Site Error:	0.00 usft
Seawolf 1-12 Fed - 83H - OH - Plan #1													Offset Well Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM														
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)						
2,400.00	2,400.00	2,400.00	2,400.00	5.26	5.26	-90.00	0.00	-30.00	30.00	19.48	10.52	2.853		
2,500.00	2,500.00	2,500.00	2,500.00	5.48	5.48	-90.00	0.00	-30.00	30.00	19.03	10.97	2.736		
2,600.00	2,600.00	2,600.00	2,600.00	5.71	5.71	-90.00	0.00	-30.00	30.00	18.58	11.42	2.628		
2,700.00	2,700.00	2,700.00	2,700.00	5.93	5.93	-90.00	0.00	-30.00	30.00	18.13	11.87	2.528		
2,800.00	2,800.00	2,800.00	2,800.00	6.16	6.16	-90.00	0.00	-30.00	30.00	17.69	12.31	2.436		
2,900.00	2,900.00	2,900.00	2,900.00	6.38	6.38	-90.00	0.00	-30.00	30.00	17.24	12.76	2.350		
3,000.00	3,000.00	3,000.00	3,000.00	6.61	6.61	-90.00	0.00	-30.00	30.00	16.79	13.21	2.270		
3,100.00	3,100.00	3,100.00	3,100.00	6.83	6.83	-90.00	0.00	-30.00	30.00	16.34	13.66	2.196		
3,200.00	3,200.00	3,200.00	3,200.00	7.06	7.06	-90.00	0.00	-30.00	30.00	15.89	14.11	2.126		
3,300.00	3,300.00	3,300.00	3,300.00	7.28	7.28	-90.00	0.00	-30.00	30.00	15.44	14.56	2.060		
3,400.00	3,400.00	3,400.00	3,400.00	7.51	7.51	-90.00	0.00	-30.00	30.00	14.99	15.01	1.998		
3,500.00	3,500.00	3,500.00	3,500.00	7.73	7.73	-90.00	0.00	-30.00	30.00	14.54	15.46	1.940	CC, ES, SF	
3,600.00	3,600.00	3,600.00	3,600.00	7.94	7.96	180.00	0.00	-30.00	30.87	14.98	15.90	1.942		
3,700.00	3,699.96	3,699.96	3,699.96	8.14	8.18	180.00	0.00	-30.00	33.49	17.17	16.32	2.052		
3,800.00	3,799.86	3,799.86	3,799.86	8.34	8.40	180.00	0.00	-30.00	37.85	21.11	16.74	2.261		
3,869.92	3,869.67	3,869.67	3,869.67	8.48	8.56	180.00	0.00	-30.00	41.94	24.90	17.04	2.461		
3,900.00	3,899.68	3,899.68	3,899.68	8.54	8.63	180.00	0.00	-30.00	43.88	26.71	17.17	2.556		
4,000.00	3,999.47	3,999.47	3,999.47	8.75	8.85	180.00	0.00	-30.00	50.33	32.74	17.59	2.861		
4,100.00	4,099.26	4,099.26	4,099.26	8.96	9.08	180.00	0.00	-30.00	56.78	38.77	18.02	3.152		
4,200.00	4,199.06	4,199.06	4,199.06	9.17	9.30	180.00	0.00	-30.00	63.23	44.79	18.44	3.428		
4,300.00	4,298.85	4,298.85	4,298.85	9.38	9.53	180.00	0.00	-30.00	69.69	50.81	18.87	3.692		
4,400.00	4,398.64	4,398.64	4,398.64	9.59	9.75	180.00	0.00	-30.00	76.14	56.84	19.30	3.945		
4,500.00	4,498.43	4,498.43	4,498.43	9.81	9.97	180.00	0.00	-30.00	82.59	62.86	19.73	4.185		
4,600.00	4,598.22	4,598.22	4,598.22	10.03	10.20	180.00	0.00	-30.00	89.04	68.88	20.16	4.416		
4,700.00	4,698.01	4,698.01	4,698.01	10.24	10.42	180.00	0.00	-30.00	95.49	74.90	20.60	4.636		
4,800.00	4,797.81	4,797.81	4,797.81	10.46	10.65	180.00	0.00	-30.00	101.95	80.91	21.03	4.847		
4,900.00	4,897.60	4,897.60	4,897.60	10.68	10.87	180.00	0.00	-30.00	108.40	86.93	21.47	5.050		
5,000.00	4,997.39	4,997.39	4,997.39	10.91	11.10	180.00	0.00	-30.00	114.85	92.95	21.90	5.244		
5,100.00	5,097.18	5,097.18	5,097.18	11.13	11.32	180.00	0.00	-30.00	121.30	98.96	22.34	5.431		
5,200.00	5,196.97	5,196.97	5,196.97	11.35	11.55	180.00	0.00	-30.00	127.75	104.98	22.77	5.610		
5,300.00	5,296.76	5,296.76	5,296.76	11.58	11.77	180.00	0.00	-30.00	134.20	110.99	23.21	5.782		
5,400.00	5,396.56	5,396.56	5,396.56	11.80	11.99	180.00	0.00	-30.00	140.66	117.01	23.65	5.948		
5,500.00	5,496.35	5,496.35	5,496.35	12.03	12.22	180.00	0.00	-30.00	147.11	123.02	24.09	6.107		
5,600.00	5,596.14	5,596.14	5,596.14	12.26	12.44	180.00	0.00	-30.00	153.56	129.03	24.53	6.261		
5,700.00	5,695.93	5,695.93	5,695.93	12.49	12.67	180.00	0.00	-30.00	160.01	135.05	24.97	6.409		
5,800.00	5,795.72	5,795.72	5,795.72	12.72	12.89	180.00	0.00	-30.00	166.46	141.06	25.41	6.552		
5,900.00	5,895.51	5,895.51	5,895.51	12.94	13.12	180.00	0.00	-30.00	172.92	147.07	25.85	6.690		
6,000.00	5,995.31	5,995.31	5,995.31	13.18	13.34	180.00	0.00	-30.00	179.37	153.08	26.29	6.823		
6,100.00	6,095.10	6,092.84	6,092.83	13.41	13.55	-179.85	0.50	-30.56	186.40	159.68	26.71	6.978		
6,200.00	6,194.89	6,190.05	6,190.01	13.64	13.76	-179.38	2.09	-32.36	194.70	167.57	27.13	7.176		
6,300.00	6,294.68	6,286.99	6,286.87	13.87	13.97	-178.66	4.77	-35.37	204.30	176.76	27.54	7.418		
6,400.00	6,394.47	6,383.61	6,383.32	14.10	14.19	-177.72	8.52	-39.60	215.23	187.29	27.95	7.701		
6,500.00	6,494.26	6,479.85	6,479.29	14.33	14.40	-176.61	13.33	-45.02	227.53	199.18	28.35	8.026		
6,600.00	6,594.06	6,577.51	6,576.56	14.57	14.61	-175.41	19.12	-51.54	241.02	212.25	28.76	8.379		
6,700.00	6,693.85	6,676.45	6,675.09	14.80	14.83	-174.29	25.08	-58.26	254.72	225.53	29.19	8.725		
6,800.00	6,793.64	6,775.40	6,773.63	15.04	15.05	-173.30	31.04	-64.98	268.51	238.89	29.62	9.064		
6,900.00	6,893.43	6,874.34	6,872.16	15.27	15.27	-172.40	37.01	-71.69	282.37	252.32	30.06	9.394		
7,000.00	6,993.22	6,973.28	6,970.69	15.51	15.50	-171.58	42.97	-78.41	296.30	265.81	30.49	9.717		
7,100.00	7,093.01	7,072.22	7,069.23	15.74	15.72	-170.84	48.93	-85.13	310.28	279.35	30.93	10.032		
7,200.00	7,192.80	7,171.16	7,167.76	15.98	15.95	-170.16	54.89	-91.85	324.30	292.94	31.36	10.340		
7,300.00	7,292.60	7,270.10	7,266.29	16.21	16.18	-169.53	60.86	-98.57	338.37	306.57	31.80	10.640		
7,400.00	7,392.39	7,369.04	7,364.82	16.45	16.40	-168.96	66.82	-105.28	352.47	320.23	32.24	10.933		

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 93H
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:	93H	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 - 83H - 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				
7,500.00	7,492.18	7,467.99	7,463.36	16.69	16.63	-168.43	72.78	-112.00	366.60	333.93	32.68	11.219				
7,600.00	7,591.97	7,566.93	7,561.89	16.92	16.86	-167.94	78.75	-118.72	380.77	347.65	33.12	11.497				
7,700.00	7,691.76	7,665.87	7,660.42	17.16	17.09	-167.49	84.71	-125.44	394.95	361.39	33.56	11.769				
7,800.00	7,791.55	7,764.81	7,758.96	17.40	17.33	-167.06	90.67	-132.16	409.16	375.16	34.00	12.034				
7,900.00	7,891.35	7,863.75	7,857.49	17.64	17.56	-166.67	96.63	-138.87	423.39	388.95	34.44	12.293				
8,000.00	7,991.14	7,962.69	7,956.02	17.88	17.79	-166.30	102.60	-145.59	437.64	402.76	34.89	12.545				
8,100.00	8,090.93	8,061.63	8,054.55	18.11	18.03	-165.95	108.56	-152.31	451.91	416.58	35.33	12.792				
8,200.00	8,190.72	8,160.58	8,153.09	18.35	18.26	-165.63	114.52	-159.03	466.19	430.42	35.77	13.032				
8,300.00	8,290.51	8,259.52	8,251.62	18.59	18.50	-165.32	120.48	-165.74	480.49	444.27	36.22	13.267				
8,400.00	8,390.30	8,358.46	8,350.15	18.83	18.74	-165.04	126.45	-172.46	494.79	458.13	36.66	13.496				
8,500.00	8,490.10	8,457.40	8,448.69	19.07	18.97	-164.76	132.41	-179.18	509.11	472.00	37.11	13.720				
8,600.00	8,589.89	8,562.38	8,553.28	19.31	19.19	-164.52	138.42	-185.96	523.05	485.49	37.57	13.923				
8,700.00	8,689.68	8,670.59	8,661.23	19.55	19.39	-164.36	143.35	-191.50	535.40	497.38	38.02	14.082				
8,800.00	8,789.47	8,779.24	8,769.74	19.79	19.59	-164.31	146.93	-195.54	546.07	507.60	38.47	14.196				
8,900.00	8,889.26	8,888.25	8,878.70	20.03	19.79	-164.36	149.15	-198.04	555.03	516.13	38.90	14.266				
9,000.00	8,989.05	8,997.56	8,988.00	20.27	19.98	-164.50	149.99	-198.99	562.29	522.96	39.33	14.296				
9,100.00	9,088.85	9,098.41	9,088.85	20.51	20.18	-164.67	150.00	-199.00	568.52	528.77	39.75	14.301				
9,200.00	9,188.64	9,198.20	9,188.64	20.75	20.40	-164.84	150.00	-199.00	574.75	534.55	40.20	14.297				
9,300.00	9,288.43	9,297.99	9,288.43	20.99	20.62	-165.01	150.00	-199.00	580.98	540.33	40.65	14.293				
9,400.00	9,388.22	9,397.78	9,388.22	21.23	20.84	-165.17	150.00	-199.00	587.21	546.12	41.09	14.290				
9,500.00	9,488.01	9,497.57	9,488.01	21.47	21.06	-165.33	150.00	-199.00	593.45	551.91	41.54	14.286				
9,600.00	9,587.80	9,597.36	9,587.80	21.72	21.28	-165.49	150.00	-199.00	599.70	557.71	41.99	14.283				
9,700.00	9,687.60	9,697.16	9,687.60	21.96	21.50	-165.64	150.00	-199.00	605.95	563.51	42.43	14.280				
9,800.00	9,787.39	9,796.95	9,787.39	22.20	21.72	-165.79	150.00	-199.00	612.20	569.32	42.88	14.277				
9,900.00	9,887.18	9,896.74	9,887.18	22.44	21.94	-165.94	150.00	-199.00	618.46	575.13	43.33	14.274				
10,000.00	9,986.97	9,996.53	9,986.97	22.68	22.16	-166.08	150.00	-199.00	624.72	580.94	43.78	14.271				
10,100.00	10,086.76	10,096.32	10,086.76	22.92	22.38	-166.22	150.00	-199.00	630.98	586.76	44.22	14.268				
10,200.00	10,186.55	10,196.11	10,186.55	23.17	22.60	-166.36	150.00	-199.00	637.25	592.58	44.67	14.265				
10,300.00	10,286.35	10,295.91	10,286.35	23.41	22.83	-166.49	150.00	-199.00	643.52	598.41	45.12	14.263				
10,400.00	10,386.14	10,395.70	10,386.14	23.65	23.05	-166.63	150.00	-199.00	649.80	604.23	45.57	14.260				
10,500.00	10,485.93	10,495.49	10,485.93	23.89	23.27	-166.76	150.00	-199.00	656.08	610.07	46.01	14.258				
10,600.00	10,585.72	10,595.28	10,585.72	24.13	23.49	-166.88	150.00	-199.00	662.36	615.90	46.46	14.256				
10,700.00	10,685.51	10,695.07	10,685.51	24.38	23.71	-167.01	150.00	-199.00	668.65	621.74	46.91	14.253				
10,800.00	10,785.30	10,794.86	10,785.30	24.62	23.93	-167.13	150.00	-199.00	674.94	627.58	47.36	14.251				
10,900.00	10,885.10	10,894.66	10,885.10	24.86	24.15	-167.25	150.00	-199.00	681.23	633.42	47.81	14.249				
11,000.00	10,984.89	10,994.45	10,984.89	25.10	24.37	-167.37	150.00	-199.00	687.52	639.27	48.26	14.247				
11,032.55	11,017.37	11,026.93	11,017.37	25.18	24.45	-167.41	150.00	-199.00	689.57	641.17	48.40	14.247				
11,100.00	11,084.70	11,094.26	11,084.70	25.33	24.60	-167.49	150.00	-199.00	693.44	644.74	48.69	14.241				
11,200.00	11,184.60	11,194.17	11,184.60	25.52	24.82	-167.58	150.00	-199.00	697.74	648.64	49.10	14.211				
11,300.00	11,284.57	11,294.13	11,284.57	25.70	25.04	-167.63	150.00	-199.00	700.34	650.83	49.51	14.147				
11,402.48	11,387.04	11,396.60	11,387.04	25.88	25.27	-77.65	150.00	-199.00	701.23	651.31	49.93	14.046				
11,500.00	11,484.56	11,494.12	11,484.56	26.07	25.48	-77.65	150.00	-199.00	701.23	650.89	50.34	13.931				
11,600.00	11,584.56	11,594.12	11,584.56	26.27	25.71	-77.65	150.00	-199.00	701.23	650.46	50.77	13.812				
11,700.00	11,684.56	11,694.12	11,684.56	26.48	25.93	-77.65	150.00	-199.00	701.23	650.03	51.20	13.695				
11,800.00	11,784.56	11,794.12	11,784.56	26.68	26.15	-77.65	150.00	-199.00	701.23	649.60	51.64	13.581				
11,902.48	11,887.04	11,896.60	11,887.04	26.89	26.38	-77.65	150.00	-199.00	701.23	649.15	52.08	13.465				
11,950.00	11,934.51	11,944.07	11,934.51	26.98	26.48	102.90	150.00	-199.00	701.67	649.39	52.28	13.422				
12,000.00	11,984.09	11,993.65	11,984.09	27.08	26.59	103.25	150.00	-199.00	703.11	650.63	52.48	13.398				
12,050.00	12,032.94	12,042.50	12,032.94	27.17	26.70	103.83	150.00	-199.00	705.65	652.97	52.68	13.396				
12,100.00	12,080.67	12,111.41	12,101.71	27.27	26.82	104.86	146.34	-198.97	708.80	655.93	52.87	13.406				
12,150.00	12,126.94	12,184.89	12,173.99	27.36	26.93	105.78	133.39	-198.88	711.63	658.61	53.02	13.421				
12,200.00	12,171.37	12,260.87	12,246.35	27.46	27.04	106.54	110.40	-198.70	713.99	660.87	53.13	13.440				

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 93H
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:	93H	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 - 83H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: O-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)						
12,250.00	12,213.64	12,338.88	12,316.81	27.56	27.14	107.09	77.05	-198.45	715.75	662.56	53.19	13.457		
12,300.00	12,253.43	12,418.32	12,383.23	27.66	27.23	107.42	33.59	-198.13	716.81	663.58	53.23	13.466		
12,350.00	12,290.43	12,498.45	12,443.49	27.77	27.31	107.51	-19.12	-197.73	717.09	663.80	53.29	13.458		
12,400.00	12,324.35	12,578.45	12,495.74	27.88	27.39	107.35	-79.62	-197.28	716.58	663.19	53.39	13.422		
12,450.00	12,354.95	12,657.56	12,538.62	28.01	27.47	106.96	-146.01	-196.78	715.32	661.74	53.58	13.351		
12,500.00	12,381.99	12,735.04	12,571.38	28.15	27.62	106.34	-216.17	-196.26	713.38	659.50	53.87	13.242		
12,550.00	12,405.26	12,810.35	12,593.87	28.30	27.83	105.53	-287.97	-195.72	710.87	656.58	54.28	13.096		
12,600.00	12,424.59	12,883.06	12,606.48	28.48	28.06	104.56	-359.53	-195.18	707.93	653.13	54.79	12.920		
12,650.00	12,439.83	12,951.05	12,610.00	28.67	28.32	103.50	-427.39	-194.67	704.72	649.34	55.38	12.726		
12,700.00	12,450.86	12,999.80	12,610.00	28.88	28.52	102.90	-476.14	-194.31	702.14	646.25	55.88	12.564		
12,750.00	12,457.60	13,049.33	12,610.00	29.11	28.76	102.51	-525.67	-193.94	700.64	644.23	56.41	12.421		
12,802.44	12,460.00	13,101.69	12,610.00	29.37	29.02	102.37	-578.03	-193.54	700.12	643.19	56.94	12.297		
12,802.48	12,460.00	13,101.73	12,610.00	29.37	29.02	102.37	-578.07	-193.54	700.12	643.19	56.94	12.296		
12,900.00	12,460.00	13,199.25	12,610.00	29.91	29.57	102.37	-675.59	-192.81	700.12	642.10	58.02	12.067		
13,000.00	12,460.00	13,299.25	12,610.00	30.54	30.21	102.37	-775.58	-192.06	700.13	640.84	59.28	11.810		
13,100.00	12,460.00	13,399.25	12,610.00	31.24	30.92	102.37	-875.58	-191.31	700.13	639.44	60.69	11.536		
13,200.00	12,460.00	13,499.25	12,610.00	32.01	31.71	102.37	-975.58	-190.56	700.13	637.90	62.23	11.251		
13,300.00	12,460.00	13,599.25	12,610.00	32.84	32.55	102.37	-1,075.58	-189.81	700.13	636.24	63.89	10.958		
13,400.00	12,460.00	13,699.25	12,610.00	33.73	33.46	102.37	-1,175.57	-189.06	700.13	634.46	65.67	10.661		
13,500.00	12,460.00	13,799.25	12,610.00	34.68	34.42	102.37	-1,275.57	-188.31	700.13	632.57	67.56	10.363		
13,600.00	12,460.00	13,899.25	12,610.00	35.67	35.43	102.37	-1,375.57	-187.56	700.13	630.59	69.54	10.067		
13,700.00	12,460.00	13,999.25	12,610.00	36.71	36.48	102.37	-1,475.57	-186.81	700.14	628.52	71.62	9.776		
13,800.00	12,460.00	14,099.25	12,610.00	37.80	37.58	102.37	-1,575.56	-186.07	700.14	626.37	73.77	9.491		
13,900.00	12,460.00	14,199.25	12,610.00	38.92	38.71	102.37	-1,675.56	-185.32	700.14	624.14	76.00	9.212		
14,000.00	12,460.00	14,299.25	12,610.00	40.08	39.88	102.37	-1,775.56	-184.57	700.14	621.84	78.30	8.942		
14,100.00	12,460.00	14,399.25	12,610.00	41.27	41.08	102.37	-1,875.55	-183.82	700.14	619.48	80.66	8.680		
14,200.00	12,460.00	14,499.25	12,610.00	42.49	42.31	102.37	-1,975.55	-183.07	700.14	617.07	83.08	8.428		
14,300.00	12,460.00	14,599.25	12,610.00	43.73	43.57	102.37	-2,075.55	-182.32	700.15	614.60	85.55	8.184		
14,400.00	12,460.00	14,699.25	12,610.00	45.00	44.85	102.37	-2,175.55	-181.57	700.15	612.08	88.06	7.950		
14,500.00	12,460.00	14,799.25	12,610.00	46.30	46.15	102.37	-2,275.54	-180.82	700.15	609.52	90.63	7.726		
14,600.00	12,460.00	14,899.25	12,610.00	47.61	47.48	102.37	-2,375.54	-180.07	700.15	606.92	93.23	7.510		
14,700.00	12,460.00	14,999.25	12,610.00	48.95	48.82	102.37	-2,475.54	-179.32	700.15	604.28	95.87	7.303		
14,800.00	12,460.00	15,099.25	12,610.00	50.30	50.18	102.37	-2,575.53	-178.57	700.15	601.61	98.54	7.105		
14,900.00	12,460.00	15,199.25	12,610.00	51.67	51.56	102.37	-2,675.53	-177.82	700.15	598.91	101.25	6.915		
15,000.00	12,460.00	15,299.25	12,610.00	53.06	52.95	102.37	-2,775.53	-177.07	700.16	596.18	103.98	6.734		
15,100.00	12,460.00	15,399.25	12,610.00	54.45	54.35	102.37	-2,875.53	-176.32	700.16	593.42	106.74	6.559		
15,200.00	12,460.00	15,499.25	12,610.00	55.87	55.77	102.37	-2,975.52	-175.57	700.16	590.63	109.52	6.393		
15,300.00	12,460.00	15,599.25	12,610.00	57.29	57.20	102.37	-3,075.52	-174.82	700.16	587.83	112.33	6.233		
15,400.00	12,460.00	15,699.25	12,610.00	58.72	58.64	102.37	-3,175.52	-174.07	700.16	585.00	115.16	6.080		
15,500.00	12,460.00	15,799.25	12,610.00	60.17	60.09	102.37	-3,275.51	-173.32	700.16	582.15	118.01	5.933		
15,600.00	12,460.00	15,899.25	12,610.00	61.62	61.55	102.37	-3,375.51	-172.57	700.17	579.29	120.88	5.792		
15,700.00	12,460.00	15,999.25	12,610.00	63.09	63.02	102.37	-3,475.51	-171.82	700.17	576.41	123.76	5.657		
15,800.00	12,460.00	16,099.25	12,610.00	64.56	64.50	102.37	-3,575.51	-171.07	700.17	573.51	126.66	5.528		
15,900.00	12,460.00	16,199.25	12,610.00	66.04	65.98	102.37	-3,675.50	-170.32	700.17	570.59	129.58	5.404		
16,000.00	12,460.00	16,299.25	12,610.00	67.52	67.47	102.37	-3,775.50	-169.57	700.17	567.67	132.50	5.284		
16,100.00	12,460.00	16,399.25	12,610.00	69.02	68.97	102.37	-3,875.50	-168.82	700.17	564.73	135.45	5.169		
16,200.00	12,460.00	16,499.25	12,610.00	70.52	70.47	102.37	-3,975.49	-168.08	700.17	561.78	138.40	5.059		
16,300.00	12,460.00	16,599.25	12,610.00	72.02	71.98	102.37	-4,075.49	-167.33	700.18	558.81	141.36	4.953		
16,400.00	12,460.00	16,699.25	12,610.00	73.53	73.50	102.37	-4,175.49	-166.58	700.18	555.84	144.34	4.851		
16,500.00	12,460.00	16,799.25	12,610.00	75.05	75.02	102.37	-4,275.49	-165.83	700.18	552.85	147.32	4.753		
16,600.00	12,460.00	16,899.25	12,610.00	76.57	76.54	102.37	-4,375.48	-165.08	700.18	549.86	150.32	4.658		
16,700.00	12,460.00	16,999.25	12,610.00	78.10	78.07	102.37	-4,475.48	-164.33	700.18	546.86	153.32	4.567		

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 93H
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:	93H	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 - 83H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: O-LEAM MWD+HDGM													Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Semi Major Axis (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
16,800.00	12,460.00	17,099.25	12,610.00	79.63	79.61	102.37		-4,575.48	-163.58	700.18	543.85	156.33	4.479	
16,900.00	12,460.00	17,199.25	12,610.00	81.16	81.14	102.37		-4,675.48	-162.83	700.19	540.83	159.35	4.394	
17,000.00	12,460.00	17,299.25	12,610.00	82.70	82.69	102.37		-4,775.47	-162.08	700.19	537.81	162.38	4.312	
17,100.00	12,460.00	17,399.25	12,610.00	84.24	84.23	102.37		-4,875.47	-161.33	700.19	534.77	165.42	4.233	
17,200.00	12,460.00	17,499.25	12,610.00	85.79	85.78	102.37		-4,975.47	-160.58	700.19	531.73	168.46	4.157	
17,300.00	12,460.00	17,599.25	12,610.00	87.34	87.33	102.37		-5,075.46	-159.83	700.19	528.69	171.50	4.083	
17,400.00	12,460.00	17,699.25	12,610.00	88.89	88.89	102.37		-5,175.46	-159.08	700.19	525.64	174.56	4.011	
17,500.00	12,460.00	17,799.25	12,610.00	90.45	90.44	102.37		-5,275.46	-158.33	700.19	522.58	177.62	3.942	
17,600.00	12,460.00	17,899.25	12,610.00	92.00	92.00	102.37		-5,375.46	-157.58	700.20	519.52	180.68	3.875	
17,700.00	12,460.00	17,999.25	12,610.00	93.56	93.57	102.37		-5,475.45	-156.83	700.20	516.45	183.75	3.811	
17,800.00	12,460.00	18,099.25	12,610.00	95.13	95.13	102.37		-5,575.45	-156.08	700.20	513.38	186.82	3.748	
17,900.00	12,460.00	18,199.25	12,610.00	96.69	96.70	102.37		-5,675.45	-155.33	700.20	510.30	189.90	3.687	
18,000.00	12,460.00	18,299.25	12,610.00	98.26	98.27	102.37		-5,775.44	-154.58	700.20	507.22	192.98	3.628	
18,100.00	12,460.00	18,399.25	12,610.00	99.83	99.84	102.37		-5,875.44	-153.83	700.20	504.13	196.07	3.571	
18,200.00	12,460.00	18,499.25	12,610.00	101.40	101.42	102.37		-5,975.44	-153.08	700.20	501.04	199.16	3.516	
18,300.00	12,460.00	18,599.25	12,610.00	102.98	102.99	102.37		-6,075.44	-152.33	700.21	497.95	202.26	3.462	
18,400.00	12,460.00	18,699.25	12,610.00	104.55	104.57	102.37		-6,175.43	-151.58	700.21	494.85	205.36	3.410	
18,500.00	12,460.00	18,799.25	12,610.00	106.13	106.15	102.37		-6,275.43	-150.83	700.21	491.75	208.46	3.359	
18,600.00	12,460.00	18,899.25	12,610.00	107.71	107.73	102.37		-6,375.43	-150.09	700.21	488.65	211.56	3.310	
18,700.00	12,460.00	18,999.25	12,610.00	109.29	109.32	102.37		-6,475.42	-149.34	700.21	485.54	214.67	3.262	
18,800.00	12,460.00	19,099.25	12,610.00	110.88	110.90	102.37		-6,575.42	-148.59	700.21	482.43	217.78	3.215	
18,900.00	12,460.00	19,199.25	12,610.00	112.46	112.49	102.37		-6,675.42	-147.84	700.22	479.32	220.90	3.170	
19,000.00	12,460.00	19,299.25	12,610.00	114.05	114.08	102.37		-6,775.42	-147.09	700.22	476.20	224.01	3.126	
19,100.00	12,460.00	19,399.25	12,610.00	115.63	115.66	102.37		-6,875.41	-146.34	700.22	473.08	227.13	3.083	
19,200.00	12,460.00	19,499.25	12,610.00	117.22	117.25	102.37		-6,975.41	-145.59	700.22	469.96	230.26	3.041	
19,300.00	12,460.00	19,599.25	12,610.00	118.81	118.85	102.37		-7,075.41	-144.84	700.22	466.84	233.38	3.000	
19,400.00	12,460.00	19,699.25	12,610.00	120.41	120.44	102.37		-7,175.41	-144.09	700.22	463.71	236.51	2.961	
19,500.00	12,460.00	19,799.25	12,610.00	122.00	122.03	102.37		-7,275.40	-143.34	700.22	460.59	239.64	2.922	
19,600.00	12,460.00	19,899.25	12,610.00	123.59	123.63	102.37		-7,375.40	-142.59	700.23	457.46	242.77	2.884	
19,700.00	12,460.00	19,999.25	12,610.00	125.19	125.22	102.37		-7,475.40	-141.84	700.23	454.32	245.90	2.848	
19,800.00	12,460.00	20,099.25	12,610.00	126.78	126.82	102.37		-7,575.39	-141.09	700.23	451.19	249.04	2.812	
19,900.00	12,460.00	20,199.25	12,610.00	128.38	128.42	102.37		-7,675.39	-140.34	700.23	448.05	252.18	2.777	
20,000.00	12,460.00	20,299.25	12,610.00	129.98	130.02	102.37		-7,775.39	-139.59	700.23	444.91	255.32	2.743	
20,100.00	12,460.00	20,399.25	12,610.00	131.58	131.62	102.37		-7,875.39	-138.84	700.23	441.77	258.46	2.709	
20,200.00	12,460.00	20,499.25	12,610.00	133.18	133.22	102.37		-7,975.38	-138.09	700.24	438.63	261.60	2.677	
20,300.00	12,460.00	20,599.25	12,610.00	134.78	134.82	102.37		-8,075.38	-137.34	700.24	435.49	264.75	2.645	
20,400.00	12,460.00	20,699.25	12,610.00	136.38	136.42	102.37		-8,175.38	-136.59	700.24	432.34	267.89	2.614	
20,500.00	12,460.00	20,799.25	12,610.00	137.98	138.03	102.37		-8,275.37	-135.84	700.24	429.20	271.04	2.584	
20,600.00	12,460.00	20,899.25	12,610.00	139.58	139.63	102.37		-8,375.37	-135.09	700.24	426.05	274.19	2.554	
20,700.00	12,460.00	20,999.25	12,610.00	141.19	141.24	102.37		-8,475.37	-134.34	700.24	422.90	277.34	2.525	
20,800.00	12,460.00	21,099.25	12,610.00	142.79	142.84	102.37		-8,575.37	-133.59	700.24	419.75	280.49	2.496	
20,900.00	12,460.00	21,199.25	12,610.00	144.40	144.45	102.37		-8,675.36	-132.84	700.25	416.60	283.65	2.469	
21,000.00	12,460.00	21,299.25	12,610.00	146.00	146.05	102.37		-8,775.36	-132.10	700.25	413.44	286.80	2.442	
21,100.00	12,460.00	21,399.25	12,610.00	147.61	147.66	102.37		-8,875.36	-131.35	700.25	410.29	289.96	2.415	
21,200.00	12,460.00	21,499.25	12,610.00	149.22	149.27	102.37		-8,975.35	-130.60	700.25	407.13	293.12	2.389	
21,300.00	12,460.00	21,599.25	12,610.00	150.83	150.88	102.37		-9,075.35	-129.85	700.25	403.98	296.28	2.364	
21,400.00	12,460.00	21,699.25	12,610.00	152.43	152.49	102.37		-9,175.35	-129.10	700.25	400.82	299.44	2.339	
21,500.00	12,460.00	21,799.25	12,610.00	154.04	154.10	102.37		-9,275.35	-128.35	700.26	397.66	302.60	2.314	
21,600.00	12,460.00	21,899.25	12,610.00	155.65	155.71	102.37		-9,375.34	-127.60	700.26	394.50	305.76	2.290	
21,700.00	12,460.00	21,999.25	12,610.00	157.26	157.32	102.37		-9,475.34	-126.85	700.26	391.34	308.92	2.267	
21,800.00	12,460.00	22,099.25	12,610.00	158.87	158.93	102.37		-9,575.34	-126.10	700.26	388.17	312.09	2.244	
21,900.00	12,460.00	22,199.25	12,610.00	160.49	160.54	102.37		-9,675.33	-125.35	700.26	385.01	315.25	2.221	

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 93H
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:	93H	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 - 83H - 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		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
22,000.00	12,460.00	22,299.25	12,610.00	162.10	162.16	102.37	-9,775.33	-124.60	700.26	381.84	318.42	2.199	
22,100.00	12,460.00	22,399.25	12,610.00	163.71	163.77	102.37	-9,875.33	-123.85	700.26	378.68	321.59	2.178	
22,200.00	12,460.00	22,499.25	12,610.00	165.32	165.38	102.37	-9,975.33	-123.10	700.27	375.51	324.75	2.156	
22,210.10	12,460.00	22,509.36	12,610.00	165.45	165.55	102.37	-9,985.43	-123.02	700.27	375.23	325.04	2.154	
22,299.51	12,460.00	22,597.98	12,610.00	166.57	166.98	102.37	-10,074.05	-122.36	700.27	372.74	327.52	2.138	

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 93H
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:	93H	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													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 +N/-S (usft)	Centre +E/-W (usft)						
0.00	0.00	0.00	0.00	0.00	0.00	90.00	0.00	30.00	30.00					
100.00	100.00	100.00	100.00	0.09	0.09	90.00	0.00	30.00	30.00	29.82	0.18	168.952		
200.00	200.00	200.00	200.00	0.31	0.31	90.00	0.00	30.00	30.00	29.37	0.63	47.839		
300.00	300.00	300.00	300.00	0.54	0.54	90.00	0.00	30.00	30.00	28.92	1.08	27.865		
400.00	400.00	400.00	400.00	0.76	0.76	90.00	0.00	30.00	30.00	28.47	1.53	19.657		
500.00	500.00	500.00	500.00	0.99	0.99	90.00	0.00	30.00	30.00	28.02	1.98	15.185		
600.00	600.00	600.00	600.00	1.21	1.21	90.00	0.00	30.00	30.00	27.57	2.43	12.370		
700.00	700.00	700.00	700.00	1.44	1.44	90.00	0.00	30.00	30.00	27.13	2.87	10.436		
800.00	800.00	800.00	800.00	1.66	1.66	90.00	0.00	30.00	30.00	26.68	3.32	9.024		
900.00	900.00	900.00	900.00	1.89	1.89	90.00	0.00	30.00	30.00	26.23	3.77	7.950		
1,000.00	1,000.00	1,000.00	1,000.00	2.11	2.11	90.00	0.00	30.00	30.00	25.78	4.22	7.103		
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	90.00	0.00	30.00	30.00	25.33	4.67	6.420		
1,200.00	1,200.00	1,200.00	1,200.00	2.56	2.56	90.00	0.00	30.00	30.00	24.88	5.12	5.857		
1,300.00	1,300.00	1,300.00	1,300.00	2.79	2.79	90.00	0.00	30.00	30.00	24.43	5.57	5.384		
1,400.00	1,400.00	1,400.00	1,400.00	3.01	3.01	90.00	0.00	30.00	30.00	23.98	6.02	4.982		
1,500.00	1,500.00	1,500.00	1,500.00	3.24	3.24	90.00	0.00	30.00	30.00	23.53	6.47	4.636		
1,600.00	1,600.00	1,600.00	1,600.00	3.46	3.46	90.00	0.00	30.00	30.00	23.08	6.92	4.335		
1,700.00	1,700.00	1,700.00	1,700.00	3.69	3.69	90.00	0.00	30.00	30.00	22.63	7.37	4.071		
1,800.00	1,800.00	1,800.00	1,800.00	3.91	3.91	90.00	0.00	30.00	30.00	22.18	7.82	3.837		
1,900.00	1,900.00	1,900.00	1,900.00	4.13	4.13	90.00	0.00	30.00	30.00	21.73	8.27	3.628		
2,000.00	2,000.00	2,000.00	2,000.00	4.36	4.36	90.00	0.00	30.00	30.00	21.28	8.72	3.441		
2,100.00	2,100.00	2,100.00	2,100.00	4.58	4.58	90.00	0.00	30.00	30.00	20.83	9.17	3.272		
2,200.00	2,200.00	2,200.00	2,200.00	4.81	4.81	90.00	0.00	30.00	30.00	20.38	9.62	3.119		
2,300.00	2,300.00	2,300.00	2,300.00	5.03	5.03	90.00	0.00	30.00	30.00	19.93	10.07	2.980		
2,400.00	2,400.00	2,400.00	2,400.00	5.26	5.26	90.00	0.00	30.00	30.00	19.48	10.52	2.853		
2,500.00	2,500.00	2,500.00	2,500.00	5.48	5.48	90.00	0.00	30.00	30.00	19.03	10.97	2.736	CC, ES	
2,600.00	2,600.00	2,599.50	2,599.49	5.71	5.70	89.50	0.27	30.82	30.83	19.42	11.40	2.703		
2,700.00	2,700.00	2,698.93	2,698.89	5.93	5.90	88.14	1.08	33.32	33.32	21.49	11.83	2.817		
2,800.00	2,800.00	2,798.25	2,798.11	6.16	6.11	86.28	2.43	37.37	37.50	25.25	12.25	3.061		
2,900.00	2,900.00	2,898.02	2,897.74	6.38	6.32	84.46	4.12	42.49	42.75	30.07	12.68	3.371		
3,000.00	3,000.00	2,997.87	2,997.45	6.61	6.54	83.04	5.81	47.63	48.05	34.94	13.12	3.664		
3,100.00	3,100.00	3,097.73	3,097.15	6.83	6.75	81.90	7.51	52.77	53.38	39.83	13.55	3.939		
3,200.00	3,200.00	3,197.58	3,196.86	7.06	6.97	80.97	9.20	57.91	58.72	44.73	13.99	4.198		
3,300.00	3,300.00	3,297.43	3,296.57	7.28	7.19	80.20	10.89	63.04	64.07	49.65	14.42	4.442		
3,400.00	3,400.00	3,397.29	3,396.27	7.51	7.41	79.54	12.59	68.18	69.43	54.57	14.86	4.672		
3,500.00	3,500.00	3,497.14	3,495.98	7.73	7.63	78.98	14.28	73.32	74.81	59.51	15.30	4.889		
3,600.00	3,600.00	3,597.03	3,595.73	7.94	7.85	-11.63	15.98	78.46	79.33	63.61	15.72	5.045		
3,700.00	3,699.96	3,696.98	3,695.53	8.14	8.07	-12.42	17.67	83.60	82.16	66.02	16.14	5.091		
3,800.00	3,799.86	3,796.97	3,795.37	8.34	8.30	-13.44	19.37	88.75	83.30	66.75	16.55	5.033		
3,869.92	3,869.67	3,866.88	3,865.17	8.48	8.46	-14.32	20.55	92.35	83.12	66.27	16.84	4.934		
3,900.00	3,899.68	3,896.95	3,895.20	8.54	8.52	-14.73	21.06	93.89	82.86	65.89	16.97	4.883		
4,000.00	3,999.47	3,996.92	3,995.03	8.75	8.75	-16.10	22.76	99.04	82.05	64.66	17.39	4.718		
4,100.00	4,099.26	4,096.90	4,094.86	8.96	8.98	-17.51	24.46	104.18	81.29	63.48	17.81	4.564		
4,200.00	4,199.06	4,196.88	4,194.69	9.17	9.20	-18.94	26.15	109.33	80.58	62.34	18.24	4.418		
4,300.00	4,298.85	4,296.86	4,294.52	9.38	9.43	-20.39	27.85	114.47	79.92	61.26	18.66	4.282		
4,400.00	4,398.64	4,396.83	4,394.35	9.59	9.66	-21.87	29.54	119.62	79.31	60.22	19.09	4.154		
4,500.00	4,498.43	4,496.81	4,494.18	9.81	9.89	-23.37	31.24	124.76	78.76	59.23	19.53	4.034		
4,600.00	4,498.22	4,496.79	4,494.01	10.03	10.12	-24.89	32.94	129.91	78.26	58.30	19.96	3.921		
4,700.00	4,498.01	4,496.76	4,493.84	10.24	10.35	-26.43	34.63	135.05	77.81	57.42	20.40	3.815		
4,800.00	4,497.81	4,496.74	4,493.67	10.46	10.58	-27.98	36.33	140.19	77.43	56.59	20.83	3.716		
4,900.00	4,497.60	4,496.72	4,493.50	10.68	10.81	-29.55	38.02	145.34	77.10	55.82	21.28	3.624		
5,000.00	4,497.39	4,496.69	4,493.33	10.91	11.04	-31.13	39.72	150.48	76.82	55.11	21.72	3.537		

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 93H
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:	93H	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 - 84H - 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		Minimum Separation (usft)	Separation Factor	Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)				Between Centres (usft)	Between Ellipses (usft)		
5,100.00	5,097.18	5,096.67	5,093.16	11.13	11.27	-32.72	41.42	155.63	76.61	54.45	22.16	3.457			
5,200.00	5,196.97	5,196.65	5,192.99	11.35	11.51	-34.32	43.11	160.77	76.46	53.85	22.61	3.381			
5,300.00	5,296.76	5,296.63	5,292.82	11.58	11.74	-35.93	44.81	165.92	76.37	53.30	23.06	3.311			
5,400.00	5,396.56	5,396.60	5,392.65	11.80	11.97	-37.53	46.50	171.06	76.33	52.82	23.51	3.246			
5,405.51	5,402.05	5,402.11	5,398.15	11.82	11.98	-37.62	46.60	171.34	76.33	52.79	23.54	3.243			
5,500.00	5,496.35	5,496.58	5,492.48	12.03	12.21	-39.14	48.20	176.21	76.36	52.39	23.97	3.186			
5,600.00	5,596.14	5,596.56	5,592.31	12.26	12.44	-40.75	49.90	181.35	76.45	52.02	24.43	3.130			
5,700.00	5,695.93	5,696.53	5,692.14	12.49	12.67	-42.34	51.59	186.49	76.59	51.71	24.89	3.078			
5,800.00	5,795.72	5,796.51	5,791.97	12.72	12.91	-43.94	53.29	191.64	76.80	51.45	25.35	3.030			
5,900.00	5,895.51	5,896.49	5,891.80	12.94	13.14	-45.52	54.98	196.78	77.06	51.25	25.81	2.986			
6,000.00	5,995.31	5,996.47	5,991.63	13.18	13.37	-47.09	56.68	201.93	77.39	51.11	26.28	2.945			
6,100.00	6,095.10	6,096.44	6,091.46	13.41	13.61	-48.65	58.38	207.07	77.77	51.02	26.74	2.908			
6,200.00	6,194.89	6,196.42	6,191.29	13.64	13.84	-50.19	60.07	212.22	78.21	50.99	27.21	2.874			
6,300.00	6,294.68	6,296.40	6,291.12	13.87	14.08	-51.71	61.77	217.36	78.70	51.02	27.68	2.843			
6,400.00	6,394.47	6,396.37	6,390.95	14.10	14.31	-53.21	63.46	222.51	79.25	51.09	28.16	2.815			
6,500.00	6,494.26	6,496.35	6,490.78	14.33	14.55	-54.69	65.16	227.65	79.85	51.22	28.63	2.789			
6,600.00	6,594.06	6,596.33	6,590.61	14.57	14.78	-56.15	66.86	232.80	80.50	51.40	29.10	2.766			
6,700.00	6,693.85	6,696.30	6,690.45	14.80	15.02	-57.58	68.55	237.94	81.21	51.63	29.58	2.745			
6,800.00	6,793.64	6,796.28	6,790.28	15.04	15.25	-58.99	70.25	243.08	81.97	51.91	30.06	2.727			
6,900.00	6,893.43	6,896.26	6,890.11	15.27	15.49	-60.37	71.94	248.23	82.77	52.23	30.54	2.711			
7,000.00	6,993.22	6,996.24	6,989.94	15.51	15.73	-61.72	73.64	253.37	83.62	52.61	31.02	2.696			
7,100.00	7,093.01	7,096.21	7,089.77	15.74	15.96	-63.05	75.34	258.52	84.52	53.02	31.50	2.684			
7,200.00	7,192.80	7,196.19	7,189.60	15.98	16.20	-64.34	77.03	263.66	85.46	53.48	31.98	2.673			
7,300.00	7,292.60	7,296.17	7,289.43	16.21	16.43	-65.61	78.73	268.81	86.45	53.99	32.46	2.663			
7,400.00	7,392.39	7,396.14	7,389.26	16.45	16.67	-66.85	80.42	273.95	87.47	54.53	32.94	2.655			
7,500.00	7,492.18	7,496.12	7,489.09	16.69	16.91	-68.06	82.12	279.10	88.54	55.11	33.42	2.649			
7,600.00	7,591.97	7,596.10	7,588.92	16.92	17.14	-69.24	83.82	284.24	89.64	55.74	33.91	2.644			
7,700.00	7,691.76	7,696.08	7,688.75	17.16	17.38	-70.39	85.51	289.38	90.78	56.39	34.39	2.640			
7,800.00	7,791.55	7,796.05	7,788.58	17.40	17.62	-71.51	87.21	294.53	91.96	57.09	34.87	2.637			
7,900.00	7,891.35	7,896.03	7,888.41	17.64	17.85	-72.61	88.90	299.67	93.17	57.82	35.35	2.635			
8,000.00	7,991.14	7,996.01	7,988.24	17.88	18.09	-73.67	90.60	304.82	94.42	58.58	35.84	2.635			
8,100.00	8,090.93	8,095.98	8,088.07	18.11	18.33	-74.71	92.30	309.96	95.69	59.37	36.32	2.635			
8,200.00	8,190.72	8,195.96	8,187.90	18.35	18.57	-75.72	93.99	315.11	97.00	60.19	36.81	2.635			
8,300.00	8,290.51	8,295.94	8,287.73	18.59	18.80	-76.70	95.69	320.25	98.33	61.05	37.29	2.637			
8,400.00	8,390.30	8,395.91	8,387.56	18.83	19.04	-77.65	97.38	325.40	99.70	61.93	37.77	2.639			
8,500.00	8,490.10	8,495.89	8,487.39	19.07	19.28	-78.58	99.08	330.54	101.09	62.83	38.26	2.642			
8,600.00	8,589.89	8,595.87	8,587.22	19.31	19.51	-79.49	100.78	335.69	102.51	63.77	38.74	2.646			
8,700.00	8,689.68	8,695.85	8,687.05	19.55	19.75	-80.37	102.47	340.83	103.95	64.73	39.22	2.650			
8,800.00	8,789.47	8,795.82	8,786.88	19.79	19.99	-81.22	104.17	345.97	105.41	65.71	39.71	2.655			
8,900.00	8,889.26	8,895.80	8,886.71	20.03	20.23	-82.05	105.86	351.12	106.90	66.71	40.19	2.660			
9,000.00	8,989.05	8,995.78	8,986.54	20.27	20.46	-82.86	107.56	356.26	108.41	67.74	40.67	2.666			
9,100.00	9,088.85	9,095.75	9,086.37	20.51	20.70	-83.65	109.26	361.41	109.94	68.79	41.15	2.672			
9,200.00	9,188.64	9,195.73	9,186.20	20.75	20.94	-84.41	110.95	366.55	111.49	69.86	41.64	2.678			
9,300.00	9,288.43	9,295.71	9,286.03	20.99	21.18	-85.15	112.65	371.70	113.07	70.95	42.12	2.684			
9,400.00	9,388.22	9,395.69	9,385.86	21.23	21.42	-85.88	114.34	376.84	114.65	72.05	42.60	2.691			
9,500.00	9,488.01	9,495.66	9,485.69	21.47	21.65	-86.58	116.04	381.99	116.26	73.18	43.08	2.699			
9,600.00	9,587.80	9,595.64	9,585.52	21.72	21.89	-87.26	117.74	387.13	117.89	74.32	43.56	2.706			
9,700.00	9,687.60	9,695.62	9,685.35	21.96	22.13	-87.93	119.43	392.27	119.53	75.48	44.05	2.714			
9,800.00	9,787.39	9,795.59	9,785.18	22.20	22.37	-88.57	121.13	397.42	121.18	76.65	44.53	2.722			
9,900.00	9,887.18	9,895.57	9,885.01	22.44	22.61	-89.20	122.82	402.56	122.85	77.84	45.01	2.730			
10,000.00	9,986.97	9,995.55	9,984.84	22.68	22.84	-89.82	124.52	407.71	124.54	79.05	45.49	2.738			
10,100.00	10,086.76	10,095.53	10,084.67	22.92	23.08	-90.41	126.22	412.85	126.24	80.27	45.97	2.746			

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 93H
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:	93H	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													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		
10,200.00	10,186.55	10,195.50	10,184.50	23.17	23.32	-90.99	127.91	418.00	127.95	81.50	46.45	2.755		
10,300.00	10,286.35	10,295.48	10,284.33	23.41	23.56	-91.56	129.61	423.14	129.67	82.74	46.93	2.763		
10,400.00	10,386.14	10,395.46	10,384.16	23.65	23.80	-92.11	131.30	428.29	131.41	84.00	47.41	2.772		
10,500.00	10,485.93	10,495.43	10,483.99	23.89	24.04	-92.64	133.00	433.43	133.16	85.27	47.89	2.780		
10,600.00	10,585.72	10,595.41	10,583.82	24.13	24.27	-93.16	134.70	438.58	134.92	86.55	48.37	2.789		
10,700.00	10,685.51	10,695.39	10,683.65	24.38	24.51	-93.67	136.39	443.72	136.69	87.84	48.85	2.798		
10,800.00	10,785.30	10,795.36	10,783.48	24.62	24.75	-94.16	138.09	448.86	138.47	89.14	49.33	2.807		
10,900.00	10,885.10	10,895.34	10,883.31	24.86	24.99	-94.65	139.78	454.01	140.27	90.46	49.81	2.816		
11,000.00	10,984.89	10,995.32	10,983.14	25.10	25.23	-95.12	141.48	459.15	142.07	91.78	50.29	2.825		
11,032.55	11,017.37	11,027.87	11,015.64	25.18	25.30	-95.27	142.03	460.83	142.66	92.21	50.45	2.828		
11,100.00	11,084.70	11,095.30	11,082.98	25.33	25.47	-95.43	143.18	464.30	143.84	93.09	50.75	2.834		
11,200.00	11,184.60	11,195.28	11,182.81	25.52	25.70	-95.09	144.87	469.44	145.46	94.28	51.18	2.842		
11,300.00	11,284.57	11,295.23	11,282.62	25.70	25.94	-94.08	146.57	474.59	146.96	95.35	51.60	2.848		
11,402.48	11,387.04	11,398.00	11,385.24	25.88	26.17	-2.47	148.23	479.62	148.37	96.36	52.02	2.852		
11,500.00	11,484.56	11,496.18	11,483.36	26.07	26.35	-1.16	149.33	482.97	149.36	96.99	52.38	2.852		
11,600.00	11,584.56	11,596.95	11,584.12	26.27	26.52	-0.48	149.91	484.74	149.92	97.17	52.75	2.842		
11,700.00	11,684.56	11,697.40	11,684.56	26.48	26.71	-0.38	150.00	485.00	150.00	96.86	53.14	2.823		
11,800.00	11,784.56	11,797.40	11,784.56	26.68	26.91	-0.38	150.00	485.00	150.00	96.45	53.55	2.801		
11,902.48	11,887.04	11,899.88	11,887.04	26.89	27.12	-0.38	150.00	485.00	150.00	96.03	53.97	2.779		
11,950.00	11,934.51	11,947.34	11,934.51	26.98	27.22	-179.95	150.00	485.00	151.97	97.81	54.16	2.806		
12,000.00	11,984.09	11,996.93	11,984.09	27.08	27.32	-179.95	150.00	485.00	158.28	103.93	54.35	2.912		
12,050.00	12,032.94	12,045.77	12,032.94	27.17	27.42	-179.96	150.00	485.00	168.89	114.35	54.54	3.096		
12,100.00	12,080.67	12,093.51	12,080.67	27.27	27.52	-179.96	150.00	485.00	183.71	128.98	54.73	3.357		
12,150.00	12,126.94	12,139.77	12,126.94	27.36	27.62	-179.96	150.00	485.00	202.64	147.73	54.91	3.690		
12,200.00	12,171.37	12,204.41	12,191.50	27.46	27.74	-179.96	147.68	485.02	224.12	169.14	54.98	4.077		
12,250.00	12,213.64	12,282.11	12,268.19	27.56	27.87	-179.97	135.49	485.11	243.87	189.32	54.55	4.471		
12,300.00	12,253.43	12,366.10	12,348.37	27.66	27.99	-179.97	110.78	485.29	261.12	207.58	53.53	4.878		
12,350.00	12,290.43	12,456.33	12,429.51	27.77	28.12	-179.97	71.50	485.59	275.29	223.40	51.89	5.305		
12,400.00	12,324.35	12,552.20	12,507.82	27.88	28.24	-179.97	16.39	486.00	285.81	236.12	49.69	5.752		
12,450.00	12,354.95	12,652.37	12,578.63	28.01	28.37	-179.98	-54.27	486.53	292.20	245.07	47.13	6.200		
12,500.00	12,381.99	12,754.79	12,637.19	28.15	28.53	-179.98	-138.13	487.16	294.11	249.52	44.59	6.596		
12,550.00	12,405.26	12,856.99	12,679.84	28.30	28.74	-179.98	-230.86	487.86	291.44	248.91	42.54	6.852		
12,600.00	12,424.59	12,956.57	12,704.92	28.48	29.03	-179.98	-327.09	488.58	284.34	242.97	41.36	6.874		
12,650.00	12,439.83	13,051.58	12,713.00	28.67	29.37	-179.97	-421.64	489.29	273.17	231.93	41.24	6.624		
12,700.00	12,450.86	13,100.95	12,713.00	28.88	29.57	-179.97	-471.01	489.66	262.14	220.77	41.37	6.336		
12,750.00	12,457.60	13,150.48	12,713.00	29.11	29.80	-179.97	-520.54	490.03	255.40	213.89	41.51	6.152		
12,802.48	12,460.00	13,202.88	12,713.00	29.37	30.06	-179.97	-572.94	490.42	253.00	211.34	41.66	6.073		
12,900.00	12,460.00	13,300.40	12,713.00	29.91	30.60	-179.97	-670.46	491.15	253.00	211.04	41.96	6.030		
13,000.00	12,460.00	13,400.40	12,713.00	30.54	31.24	-179.97	-770.46	491.90	253.00	210.69	42.31	5.979		
13,100.00	12,460.00	13,500.40	12,713.00	31.24	31.94	-179.97	-870.45	492.65	253.00	210.28	42.72	5.922		
13,200.00	12,460.00	13,600.40	12,713.00	32.01	32.71	-179.97	-970.45	493.40	253.00	209.83	43.17	5.861		
13,300.00	12,460.00	13,700.40	12,713.00	32.84	33.54	-179.97	-1,070.45	494.15	253.00	209.33	43.67	5.794		
13,400.00	12,460.00	13,800.40	12,713.00	33.73	34.43	-179.98	-1,170.45	494.90	253.00	208.80	44.20	5.724		
13,500.00	12,460.00	13,900.40	12,713.00	34.68	35.38	-179.98	-1,270.44	495.65	253.00	208.22	44.78	5.649		
13,600.00	12,460.00	14,000.40	12,713.00	35.67	36.37	-179.98	-1,370.44	496.40	253.00	207.60	45.40	5.572		
13,700.00	12,460.00	14,100.40	12,713.00	36.71	37.41	-179.98	-1,470.44	497.15	253.00	206.94	46.06	5.493		
13,800.00	12,460.00	14,200.40	12,713.00	37.80	38.49	-179.98	-1,570.44	497.90	253.00	206.24	46.76	5.411		
13,900.00	12,460.00	14,300.40	12,713.00	38.92	39.60	-179.98	-1,670.43	498.65	253.00	205.51	47.49	5.328		
14,000.00	12,460.00	14,400.40	12,713.00	40.08	40.76	-179.98	-1,770.43	499.40	253.00	204.75	48.25	5.243		
14,100.00	12,460.00	14,500.40	12,713.00	41.27	41.94	-179.98	-1,870.43	500.15	253.00	203.95	49.05	5.158		
14,200.00	12,460.00	14,600.40	12,713.00	42.49	43.16	-179.98	-1,970.42	500.90	253.00	203.13	49.87	5.073		
14,300.00	12,460.00	14,700.40	12,713.00	43.73	44.40	-179.98	-2,070.42	501.65	253.00	202.27	50.73	4.987		

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 93H
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:	93H	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													Offset Site Error:	0.00 usft
Seawolf 1-12 Fed - 84H - OH - Plan #1													Offset Well Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM														
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		
14,400.00	12,460.00	14,800.40	12,713.00	45.00	45.66	-179.98	-2,170.42	502.40	253.00	201.39	51.61	4.902		
14,500.00	12,460.00	14,900.40	12,713.00	46.30	46.95	-179.98	-2,270.42	503.15	253.00	200.48	52.52	4.817		
14,600.00	12,460.00	15,000.40	12,713.00	47.61	48.26	-179.98	-2,370.41	503.90	253.00	199.54	53.46	4.733		
14,700.00	12,460.00	15,100.40	12,713.00	48.95	49.59	-179.98	-2,470.41	504.65	253.00	198.59	54.41	4.650		
14,800.00	12,460.00	15,200.40	12,713.00	50.30	50.94	-179.98	-2,570.41	505.40	253.00	197.61	55.39	4.567		
14,900.00	12,460.00	15,300.40	12,713.00	51.67	52.31	-179.98	-2,670.40	506.15	253.00	196.60	56.40	4.486		
15,000.00	12,460.00	15,400.40	12,713.00	53.06	53.68	-179.98	-2,770.40	506.90	253.00	195.58	57.42	4.406		
15,100.00	12,460.00	15,500.40	12,713.00	54.45	55.08	-179.98	-2,870.40	507.65	253.00	194.54	58.46	4.328		
15,200.00	12,460.00	15,600.40	12,713.00	55.87	56.48	-179.98	-2,970.40	508.40	253.00	193.49	59.51	4.251		
15,300.00	12,460.00	15,700.40	12,713.00	57.29	57.90	-179.98	-3,070.39	509.15	253.00	192.41	60.59	4.176		
15,400.00	12,460.00	15,800.40	12,713.00	58.72	59.33	-179.98	-3,170.39	509.90	253.00	191.32	61.68	4.102		
15,500.00	12,460.00	15,900.40	12,713.00	60.17	60.77	-179.98	-3,270.39	510.65	253.00	190.21	62.79	4.029		
15,600.00	12,460.00	16,000.40	12,713.00	61.62	62.22	-179.98	-3,370.38	511.40	253.00	189.09	63.91	3.959		
15,700.00	12,460.00	16,100.40	12,713.00	63.09	63.68	-179.98	-3,470.38	512.15	253.00	187.96	65.04	3.890		
15,800.00	12,460.00	16,200.40	12,713.00	64.56	65.15	-179.98	-3,570.38	512.90	253.00	186.81	66.19	3.822		
15,900.00	12,460.00	16,300.40	12,713.00	66.04	66.62	-179.98	-3,670.38	513.65	253.00	185.65	67.35	3.756		
16,000.00	12,460.00	16,400.40	12,713.00	67.52	68.11	-179.98	-3,770.37	514.40	253.00	184.48	68.52	3.692		
16,100.00	12,460.00	16,500.40	12,713.00	69.02	69.60	-179.98	-3,870.37	515.15	253.00	183.29	69.71	3.629		
16,200.00	12,460.00	16,600.40	12,713.00	70.52	71.09	-179.98	-3,970.37	515.90	253.00	182.10	70.90	3.568		
16,300.00	12,460.00	16,700.40	12,713.00	72.02	72.59	-179.98	-4,070.37	516.65	253.00	180.90	72.10	3.509		
16,400.00	12,460.00	16,800.40	12,713.00	73.53	74.10	-179.98	-4,170.36	517.40	253.00	179.68	73.32	3.451		
16,500.00	12,460.00	16,900.40	12,713.00	75.05	75.62	-179.98	-4,270.36	518.15	253.00	178.46	74.54	3.394		
16,600.00	12,460.00	17,000.40	12,713.00	76.57	77.13	-179.98	-4,370.36	518.90	253.00	177.23	75.77	3.339		
16,700.00	12,460.00	17,100.40	12,713.00	78.10	78.66	-179.98	-4,470.35	519.65	253.00	175.99	77.01	3.285		
16,800.00	12,460.00	17,200.40	12,713.00	79.63	80.18	-179.98	-4,570.35	520.40	253.00	174.74	78.26	3.233		
16,900.00	12,460.00	17,300.40	12,713.00	81.16	81.72	-179.98	-4,670.35	521.15	253.00	173.49	79.51	3.182		
17,000.00	12,460.00	17,400.40	12,713.00	82.70	83.25	-179.99	-4,770.35	521.90	253.00	172.22	80.78	3.132		
17,100.00	12,460.00	17,500.40	12,713.00	84.24	84.79	-179.99	-4,870.34	522.65	253.00	170.96	82.04	3.084		
17,200.00	12,460.00	17,600.40	12,713.00	85.79	86.33	-179.99	-4,970.34	523.40	253.00	169.68	83.32	3.036		
17,300.00	12,460.00	17,700.40	12,713.00	87.34	87.88	-179.99	-5,070.34	524.15	253.00	168.40	84.60	2.990		
17,400.00	12,460.00	17,800.40	12,713.00	88.89	89.43	-179.99	-5,170.33	524.90	253.00	167.11	85.89	2.946		
17,500.00	12,460.00	17,900.40	12,713.00	90.45	90.98	-179.99	-5,270.33	525.65	253.00	165.82	87.18	2.902		
17,600.00	12,460.00	18,000.40	12,713.00	92.00	92.54	-179.99	-5,370.33	526.40	253.00	164.52	88.48	2.859		
17,700.00	12,460.00	18,100.40	12,713.00	93.56	94.10	-179.99	-5,470.33	527.15	253.00	163.22	89.78	2.818		
17,800.00	12,460.00	18,200.40	12,713.00	95.13	95.66	-179.99	-5,570.32	527.90	253.00	161.91	91.09	2.777		
17,900.00	12,460.00	18,300.40	12,713.00	96.69	97.22	-179.99	-5,670.32	528.65	253.00	160.59	92.41	2.738		
18,000.00	12,460.00	18,400.40	12,713.00	98.26	98.79	-179.99	-5,770.32	529.40	253.00	159.28	93.72	2.699		
18,100.00	12,460.00	18,500.40	12,713.00	99.83	100.35	-179.99	-5,870.31	530.15	253.00	157.95	95.05	2.662		
18,200.00	12,460.00	18,600.40	12,713.00	101.40	101.92	-179.99	-5,970.31	530.90	253.00	156.63	96.37	2.625		
18,300.00	12,460.00	18,700.40	12,713.00	102.98	103.50	-179.99	-6,070.31	531.65	253.00	155.30	97.70	2.589		
18,400.00	12,460.00	18,800.40	12,713.00	104.55	105.07	-179.99	-6,170.31	532.40	253.00	153.96	99.04	2.555		
18,500.00	12,460.00	18,900.40	12,713.00	106.13	106.65	-179.99	-6,270.30	533.15	253.00	152.62	100.38	2.521		
18,600.00	12,460.00	19,000.40	12,713.00	107.71	108.22	-179.99	-6,370.30	533.90	253.00	151.28	101.72	2.487		
18,700.00	12,460.00	19,100.40	12,713.00	109.29	109.80	-179.99	-6,470.30	534.65	253.00	149.94	103.06	2.455		
18,800.00	12,460.00	19,200.40	12,713.00	110.88	111.39	-179.99	-6,570.29	535.40	253.00	148.59	104.41	2.423		
18,900.00	12,460.00	19,300.40	12,713.00	112.46	112.97	-179.99	-6,670.29	536.15	253.00	147.24	105.76	2.392		
19,000.00	12,460.00	19,400.40	12,713.00	114.05	114.55	-179.99	-6,770.29	536.90	253.00	145.88	107.12	2.362		
19,100.00	12,460.00	19,500.40	12,713.00	115.63	116.14	-179.99	-6,870.29	537.65	253.00	144.52	108.48	2.332		
19,200.00	12,460.00	19,600.40	12,713.00	117.22	117.73	-179.99	-6,970.28	538.40	253.00	143.16	109.84	2.303		
19,300.00	12,460.00	19,700.40	12,713.00	118.81	119.31	-179.99	-7,070.28	539.15	253.00	141.80	111.20	2.275		
19,400.00	12,460.00	19,800.40	12,713.00	120.41	120.90	-179.99	-7,170.28	539.90	253.00	140.44	112.56	2.248		
19,500.00	12,460.00	19,900.40	12,713.00	122.00	122.50	-179.99	-7,270.28	540.65	253.00	139.07	113.93	2.221		

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 93H
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:	93H	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 - 84H - 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		
19,600.00	12,460.00	20,000.40	12,713.00	123.59	124.09	-179.99	-7,370.27	541.40	253.00	137.70	115.30	2.194		
19,700.00	12,460.00	20,100.40	12,713.00	125.19	125.68	-179.99	-7,470.27	542.15	253.00	136.32	116.68	2.168		
19,800.00	12,460.00	20,200.40	12,713.00	126.78	127.28	-179.99	-7,570.27	542.90	253.00	134.95	118.05	2.143		
19,900.00	12,460.00	20,300.40	12,713.00	128.38	128.87	-179.99	-7,670.26	543.65	253.00	133.57	119.43	2.118		
20,000.00	12,460.00	20,400.40	12,713.00	129.98	130.47	-179.99	-7,770.26	544.40	253.00	132.19	120.81	2.094		
20,100.00	12,460.00	20,500.40	12,713.00	131.58	132.06	-179.99	-7,870.26	545.15	253.00	130.81	122.19	2.071		
20,200.00	12,460.00	20,600.40	12,713.00	133.18	133.66	-179.99	-7,970.26	545.90	253.00	129.43	123.57	2.047		
20,300.00	12,460.00	20,700.40	12,713.00	134.78	135.26	-179.99	-8,070.25	546.65	253.00	128.04	124.96	2.025		
20,400.00	12,460.00	20,800.40	12,713.00	136.38	136.86	-179.99	-8,170.25	547.40	253.00	126.65	126.35	2.002		
20,500.00	12,460.00	20,900.40	12,713.00	137.98	138.46	-179.99	-8,270.25	548.15	253.00	125.27	127.73	1.981		
20,600.00	12,460.00	21,000.40	12,713.00	139.58	140.07	-180.00	-8,370.24	548.90	253.00	123.87	129.13	1.959		
20,700.00	12,460.00	21,100.40	12,713.00	141.19	141.67	-180.00	-8,470.24	549.65	253.00	122.48	130.52	1.938		
20,800.00	12,460.00	21,200.40	12,713.00	142.79	143.27	-180.00	-8,570.24	550.40	253.00	121.09	131.91	1.918		
20,900.00	12,460.00	21,300.40	12,713.00	144.40	144.88	-180.00	-8,670.24	551.15	253.00	119.69	133.31	1.898		
21,000.00	12,460.00	21,400.40	12,713.00	146.00	146.48	-180.00	-8,770.23	551.89	253.00	118.30	134.70	1.878		
21,100.00	12,460.00	21,500.40	12,713.00	147.61	148.09	-180.00	-8,870.23	552.64	253.00	116.90	136.10	1.859		
21,200.00	12,460.00	21,600.40	12,713.00	149.22	149.69	-180.00	-8,970.23	553.39	253.00	115.50	137.50	1.840		
21,300.00	12,460.00	21,700.40	12,713.00	150.83	151.30	-180.00	-9,070.22	554.14	253.00	114.10	138.90	1.821		
21,400.00	12,460.00	21,800.40	12,713.00	152.43	152.91	-180.00	-9,170.22	554.89	253.00	112.69	140.31	1.803		
21,500.00	12,460.00	21,900.40	12,713.00	154.04	154.52	-180.00	-9,270.22	555.64	253.00	111.29	141.71	1.785		
21,600.00	12,460.00	22,000.40	12,713.00	155.65	156.12	-180.00	-9,370.22	556.39	253.00	109.88	143.12	1.768		
21,700.00	12,460.00	22,100.40	12,713.00	157.26	157.73	-180.00	-9,470.21	557.14	253.00	108.48	144.52	1.751		
21,800.00	12,460.00	22,200.40	12,713.00	158.87	159.34	-180.00	-9,570.21	557.89	253.00	107.07	145.93	1.734		
21,900.00	12,460.00	22,300.40	12,713.00	160.49	160.95	-180.00	-9,670.21	558.64	253.00	105.66	147.34	1.717		
22,000.00	12,460.00	22,400.40	12,713.00	162.10	162.57	-180.00	-9,770.20	559.39	253.00	104.25	148.75	1.701		
22,100.00	12,460.00	22,500.40	12,713.00	163.71	164.18	-180.00	-9,870.20	560.14	253.00	102.84	150.16	1.685		
22,200.00	12,460.00	22,600.40	12,713.00	165.32	165.79	-180.00	-9,970.20	560.89	253.00	101.43	151.57	1.669		
22,299.51	12,460.00	22,699.92	12,713.00	166.57	167.39	-180.00	-10,069.71	561.64	253.00	100.37	152.63	1.658 SF		

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

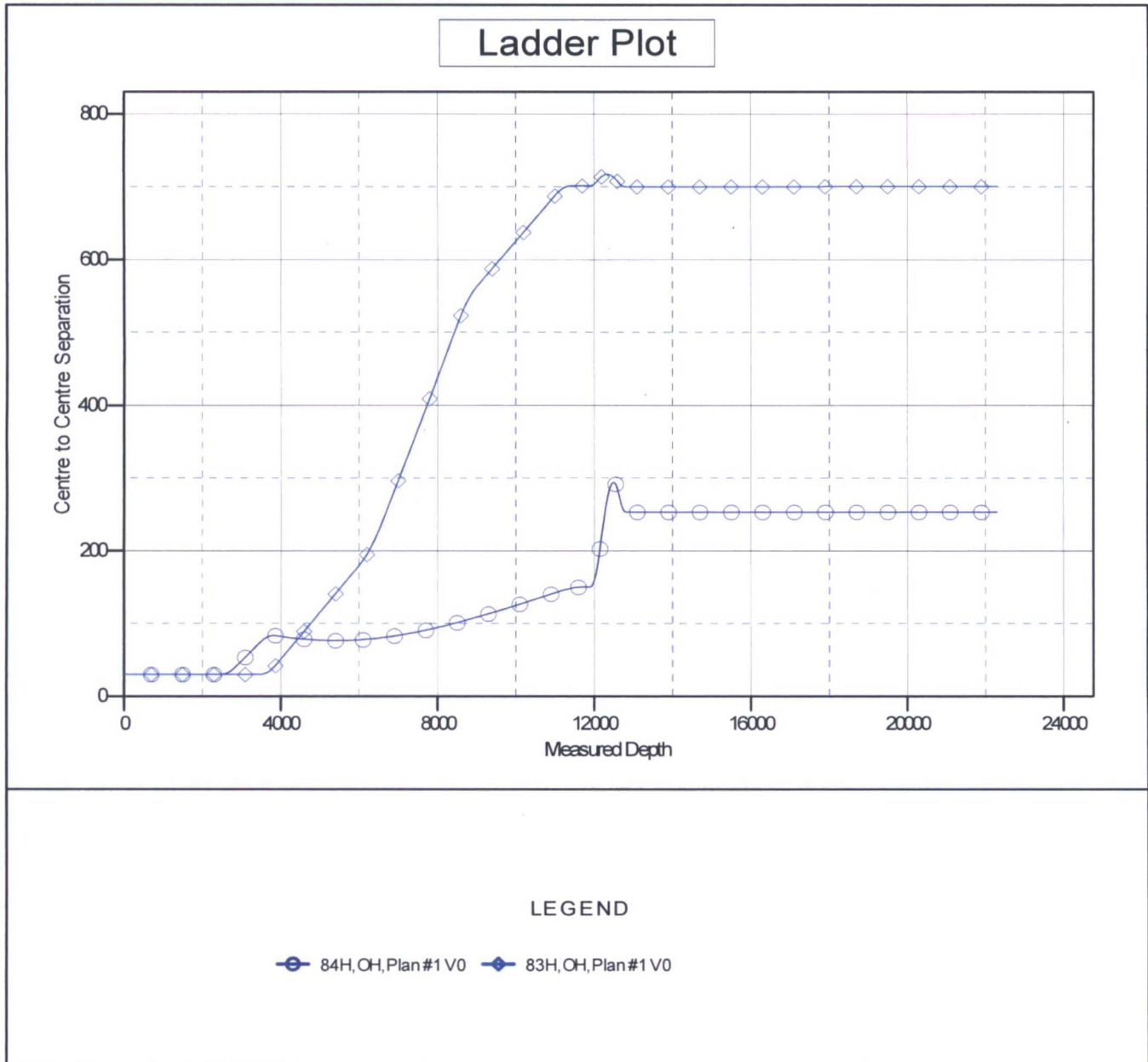
LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 93H
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:	93H	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 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: 93H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.43°



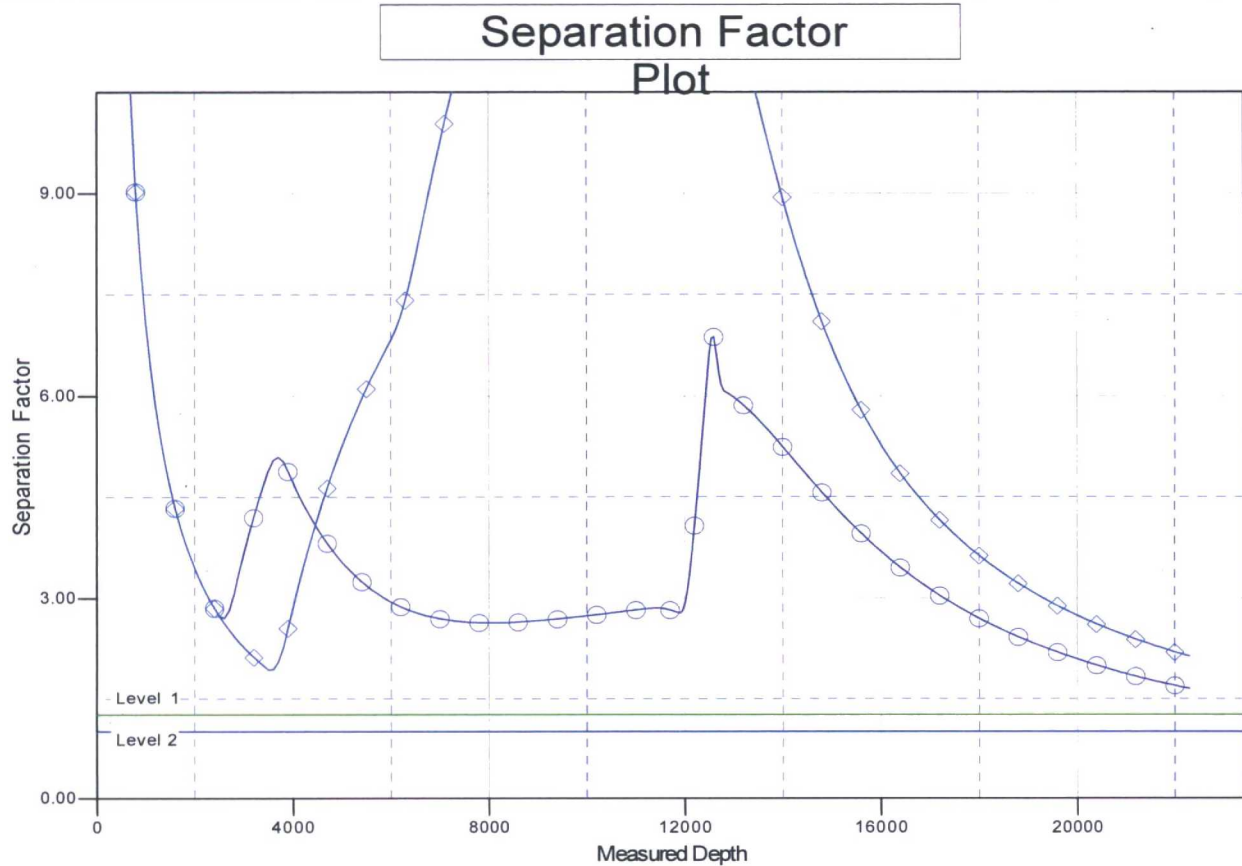
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LEGEND

—○— 84H, OH, Plan #1 V0 —◇— 83H, OH, Plan #1 V0

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