

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NMOOD

Hobbs

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

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.
NMLC063798

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.
BOOMSLANG 14-23 FED 1H9. API Well No.
30-025-42920-00-X110. Field and Pool, or Exploratory
RED HILLS11. County or Parish, and State
LEA COUNTY, NM

SUBMIT IN TRIPLICATE - Other instructions on reverse side 03 2016

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

RECEIVED

2. Name of Operator

DEVON ENERGY PRODUCTION CO LP

Contact: DAVID H COOK

Email: david.cook@devn.com

3a. Address

333 WEST SHERIDAN AVE
OKLAHOMA CITY, OK 73102

3b. Phone No. (include area code)

Ph: 405-552-7848

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

Sec 14 T24S R33E NWNE 200FNL 1980FEL

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

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

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 recomplete 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 shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall 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 approval to change the to change the bottom hole location from 330 FSL & 1700 FEL, Unit O, Section 23, T24S, R33E to 330 FSL & 2188 FEL, Unit O, Section 23, T24S, R33E; due to target change.

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

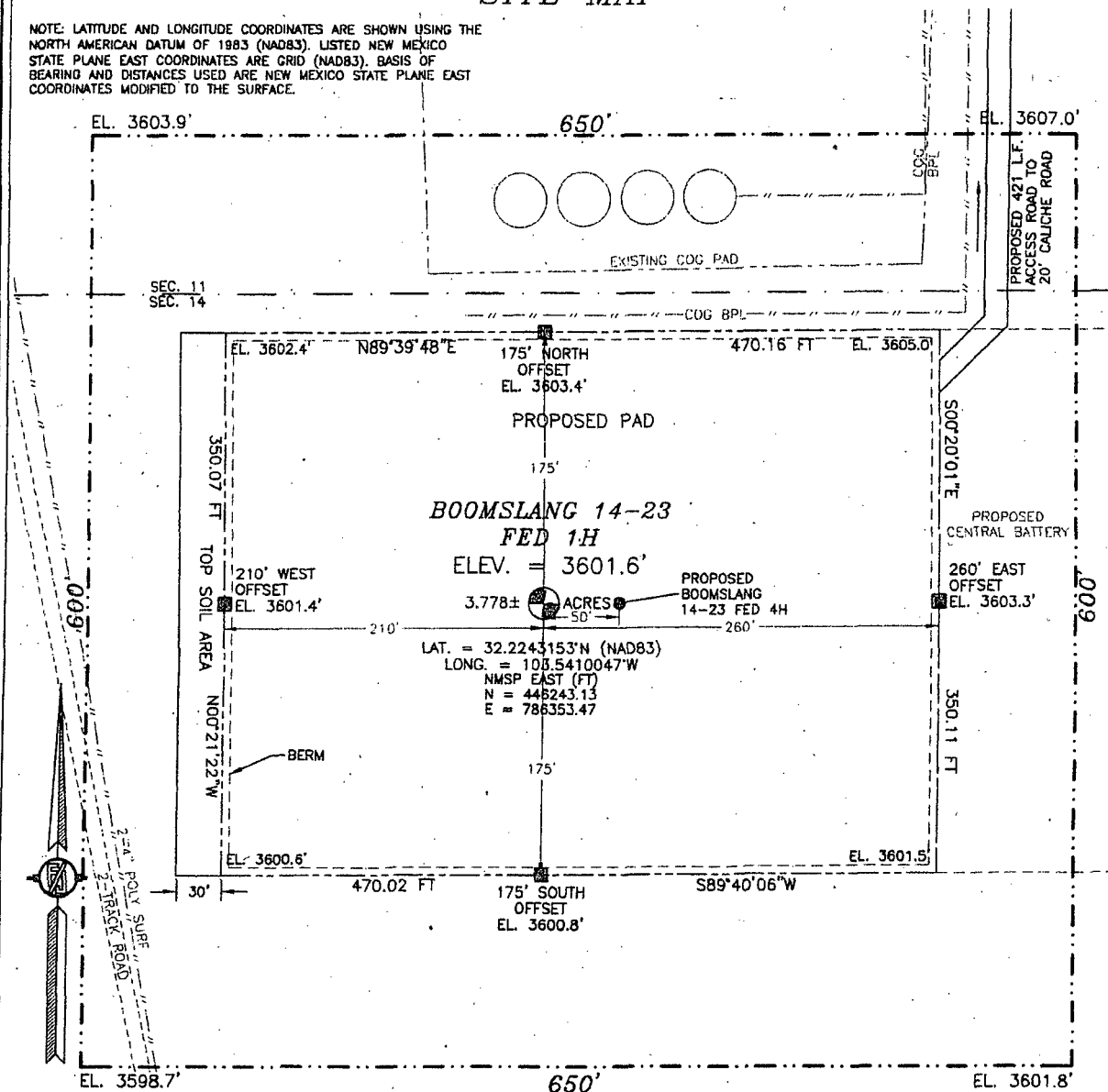
Original COAs Still Stand

14. I hereby certify that the foregoing is true and correct.	
Electronic Submission #343405 verified by the BLM Well Information System For DEVON ENERGY PRODUCTION CO LP, sent to the Hobbs Committed to AFMSS for processing by PRISCILLA PEREZ on 07/06/2016 (16PP0862SE)	
Name (Printed/Typed) DAVID H COOK	Title REGULATORY SPECIALIST
Signature (Electronic Submission)	Date 06/29/2016
THIS SPACE FOR FEDERAL OR STATE OFFICE USE	
Approved By	Title
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
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.	

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

**SECTION 14, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
SITE MAP**

NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83). LISTED NEW MEXICO STATE PLANE EAST COORDINATES ARE GRID (NAD83). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST COORDINATES MODIFIED TO THE SURFACE.



010 50 100 200

SCALE 1" = 100'

DIRECTIONS TO LOCATION

FROM STATE HWY. 128 AND CR. J2 (BRINNSTOOL) GO NORTH ON J2 0.85 MILES, TURN RIGHT AND GO EAST 0.5 MILES, BEND LEFT AND GO NORTH 0.25 MILES, TURN RIGHT AND GO EAST 1.15 MILES TO A PROPOSED ROAD SURVEY AND FOLLOW FLAGS SOUTH 370' THEN SOUTH-SOUTHWEST 51' TO THE PROPOSED NORTHEAST PAD CORNER FOR THIS LOCATION

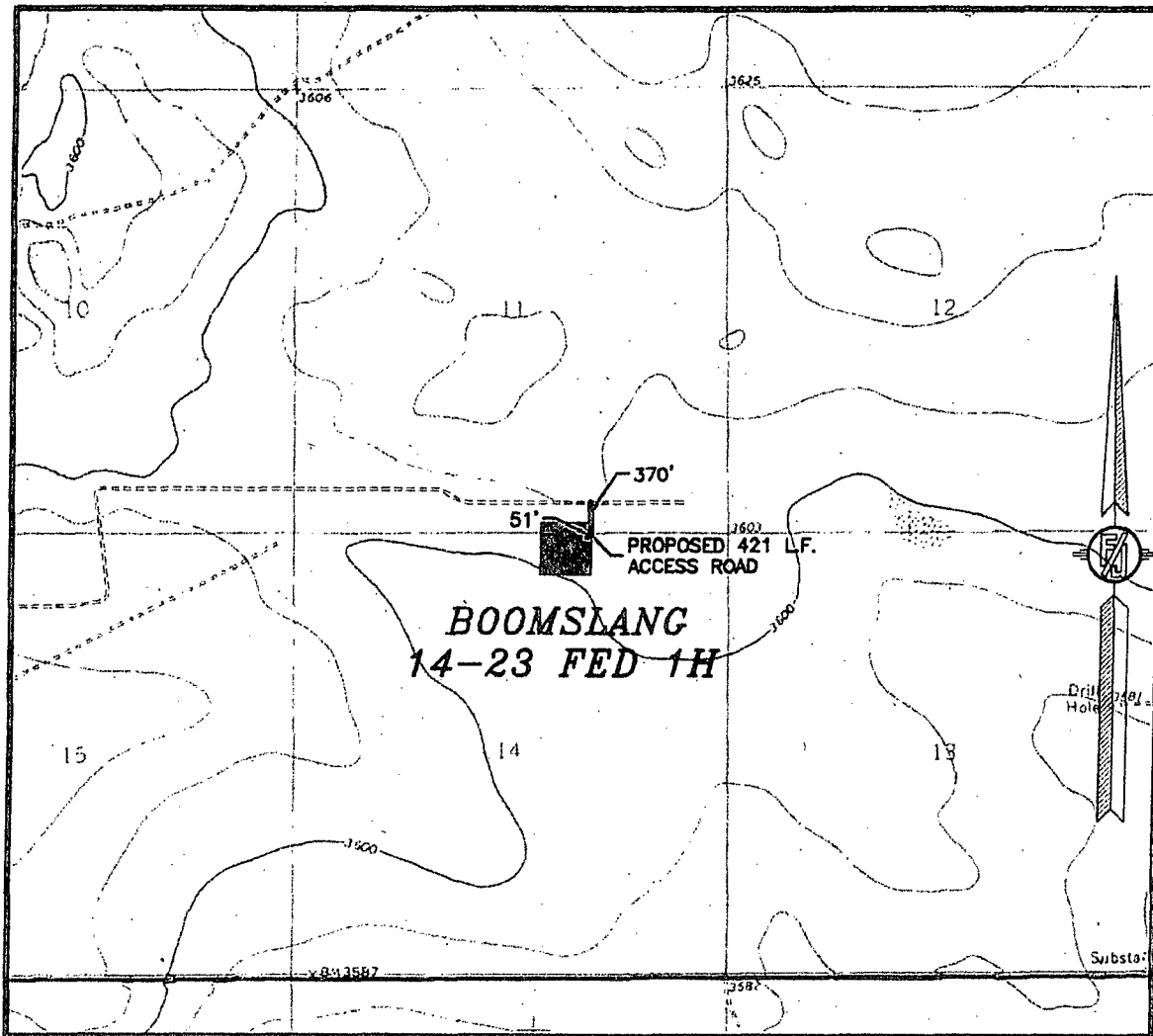
**DEVON ENERGY PRODUCTION COMPANY, L.P.
BOOMSLANG 14-23 FED 1H
LOCATED 200 FT. FROM THE NORTH LINE
AND 1980 FT. FROM THE EAST LINE OF
SECTION 14, TOWNSHIP 24 SOUTH,
RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO**

JUNE 8, 2016

SURVEY NO. 3460D

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

SECTION 14, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
LOCATION VERIFICATION MAP



USGS QUAD MAP:
BELL LAKE

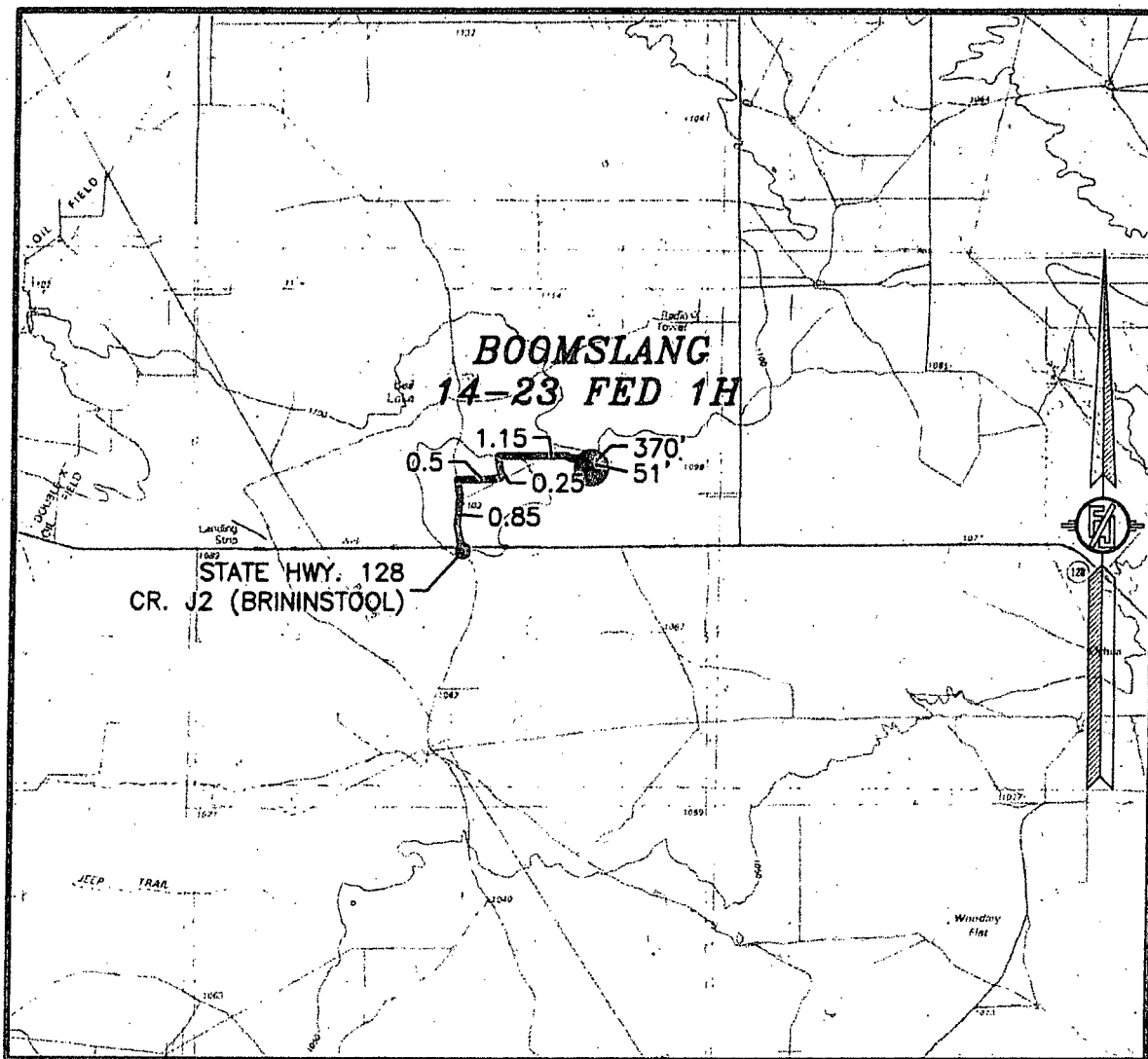
NOT TO SCALE

DEVON ENERGY PRODUCTION COMPANY, L.P.
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LEA COUNTY, STATE OF NEW MEXICO

JUNE 8, 2016

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO
SURVEY NO. 3460D

SECTION 14, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
VICINITY MAP



DISTANCES IN MILES

NOT TO SCALE

DIRECTIONS TO LOCATION

FROM STATE HWY. 128 AND CR. J2 (BRININSTOOL) GO NORTH ON J2 0.85 MILES, TURN RIGHT AND GO EAST 0.5 MILES, BEND LEFT AND GO NORTH 0.25 MILES, TURN RIGHT AND GO EAST 1.15 MILES TO A PROPOSED ROAD SURVEY AND FOLLOW FLAGS SOUTH 370' THEN SOUTH-SOUTHWEST 51' TO THE PROPOSED NORTHEAST PAD CORNER FOR THIS LOCATION

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

LEA COUNTY, STATE OF NEW MEXICO

JUNE 8, 2016

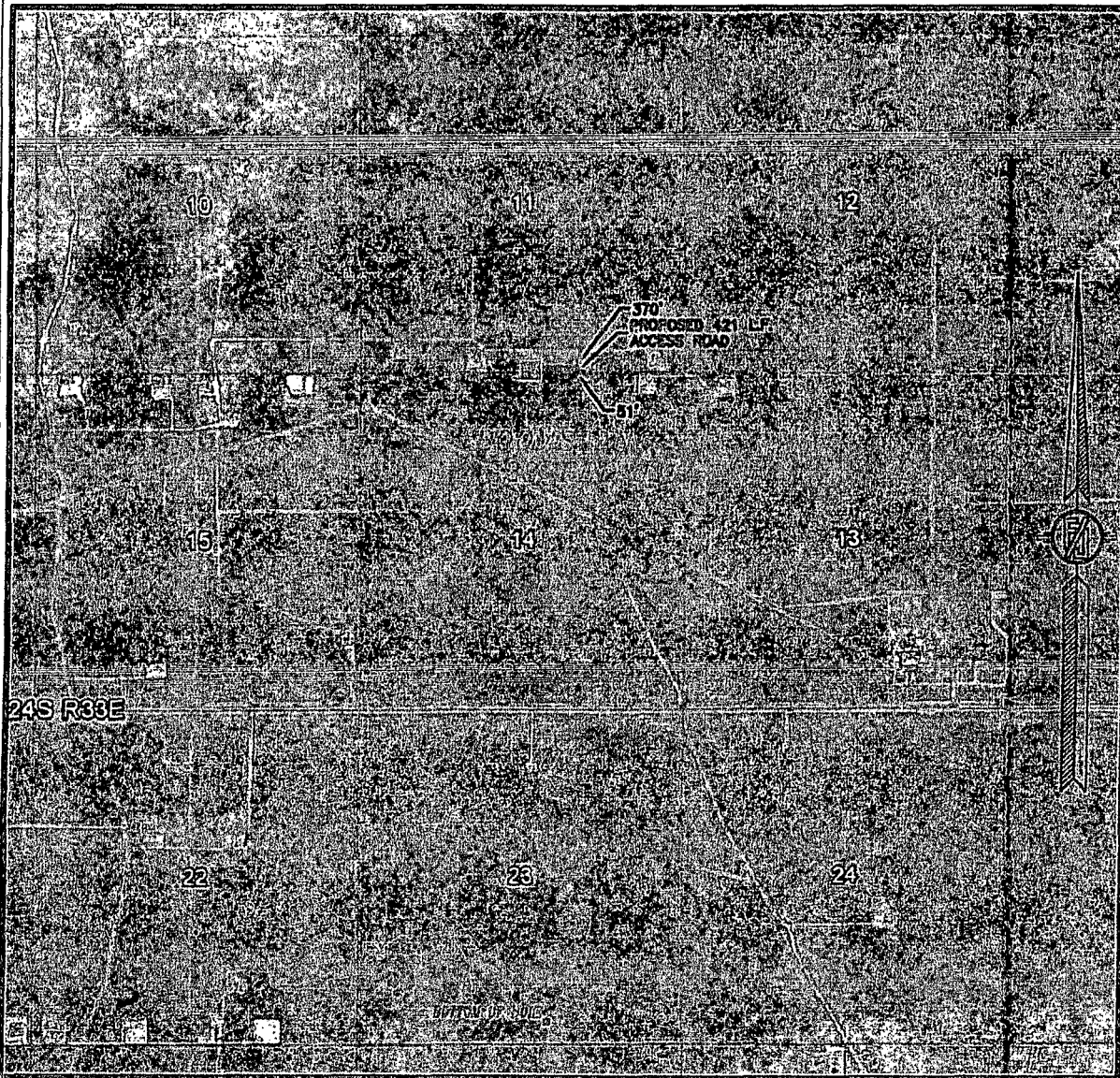
SURVEY NO. 3460D

MADRON SURVEYING, INC.

301 SOUTH CANAL
(575) 234-3341

CARLSBAD, NEW MEXICO

SECTION 14, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
AERIAL PHOTO



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
FEB. 2014

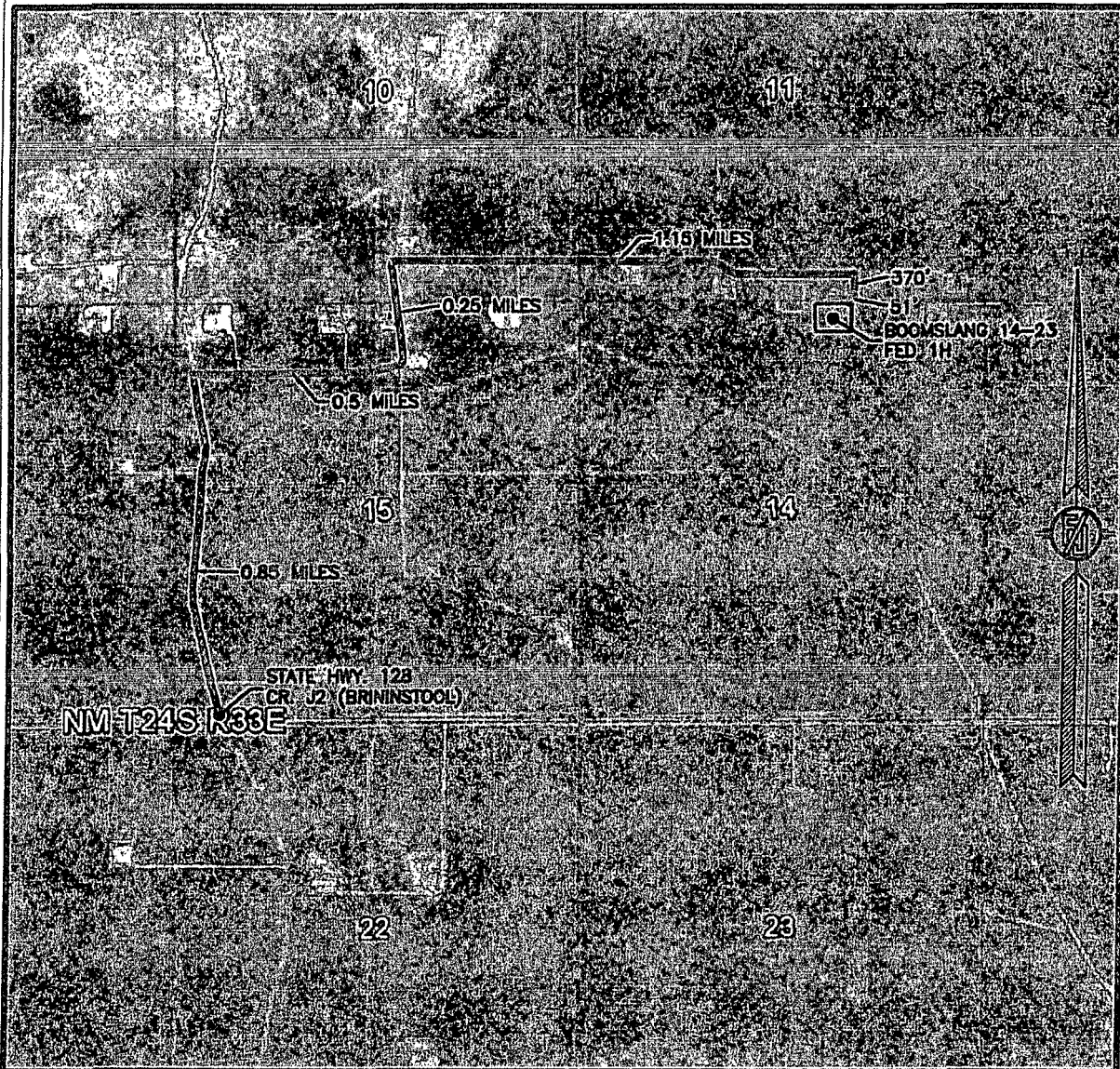
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LEA COUNTY, STATE OF NEW MEXICO

JUNE 8, 2016

SURVEY NO. 3460D

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3541 CARLSBAD, NEW MEXICO

SECTION 14, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
AERIAL ACCESS ROUTE MAP



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
FEB. 2014

DEVON ENERGY PRODUCTION COMPANY, L.P.
BOOMSLANG 14-23 FED 1H
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LEA COUNTY, STATE OF NEW MEXICO

JUNE 8, 2016

SURVEY NO. 3460D

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

RECEIVED

1. Geologic Formations

TVD of target	9,495'	Pilot hole depth	N/A
MD at TD:	19,143'	Deepest expected fresh water:	100'

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Rustler	1,098		
Top of Salt	1,619		
Base of Salt	5,045		
Delaware	5,148		
Lower Brushy Canyon	8,885		
1st BSPG Lime	9,047		
Leonard A	9,168		
Leonard A Mid Carbonate	9,238		
Leonard A Target Top	9,298		
Leonard A Target Base	9,390		
Leonard B	9,495		

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

2. Casing Program

See CWA

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17.5"	0	1,150' 1400'	13.375"	54.5	J-55	BTC	1.81	1.97	5.59
12.25"	0	4,300'	9.625"	40	J-55	BTC	1.38	1.15	1.88
12.25"	4,300'	5,190'	9.625"	40	HCK-55	BTC	2.02	1.15	8.43
8.75"	0	19,143'	5.5"	17	P-110RY	DWC/C	1.19	1.68	2.31
BLM Minimum Safety Factor							1.125	1.00	1.6 Dry 1.8 Wet

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

Must have table for contingency casing

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

Devon Energy, Boomslang 14-23 Fed 1H

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	270	13.5	9.28	1.74	10	Lead: Class C Cement + 4% Gel + 1% Calcium Chloride + 0.125 lbs/sack Poly-E-Flake
	550	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
13-3/8" Surface Two Stage Option	270	13.5	9.28	1.74	10	1 st Stage Lead: Class C Cement + 4% Gel + 1% Calcium Chloride + 0.125 lbs/sack Poly-E-Flake
	550	14.8	6.32	1.33	6	1 st Stage Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
	DV Tool = 500ft					
	530	14.8	6.32	1.33	6	2 nd Stage Primary: Class C Cement + 0.125 lbs/sack Poly-E-Flake
9-5/8" Inter.	1090	12.9	9.81	1.85	14	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	430	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
9-5/8" Inter. Two Stage Option	250	12.9	9.81	1.85	14	1 st Stage Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	220	14.8	6.32	1.33	6	1 st Stage Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
	DV Tool = 3850ft					
	850	12.9	9.81	1.85	14	2 nd Stage Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	210	14.8	6.32	1.33	6	2 nd Stage Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
5-1/2" Prod Single Stage	490	11.9	12.89	2.31	n/a	Lead: (50:50) Class H Cement: Poz (Fly Ash) + 10% BWOC Bentonite + 1 lb/sk of Kol-Seal + 0.3% BWOC HR-601 + 0.5lb/sk D-Air 5000
	2730	14.5	5.31	1.2	25	Tail: (50:50) Class H Cement: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite
5-1/2" Prod Two Stage Option	290	11.9	12.89	2.31	n/a	1 st Stage Lead: (50:50) Class H Cement: Poz (Fly Ash) + 10% BWOC Bentonite + 1 lb/sk of Kol-Seal + 0.3% BWOC HR-601 + 0.5lb/sk D-Air 5000
	2730	14.5	5.31	1.2	25	1 st Stage Tail: (50:50) Class H Cement: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite
	DV Tool = 6500ft					
	160	11	14.81	2.55	22	2 nd Stage Lead: Tuned Light® Cement + 0.125 lb/sk Pol-E-Flake
	50	14.8	6.32	1.33	6	2 nd Stage Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake

Devon Energy, Boomslang 14-23 Fed 1H

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 Single Stage Option	0'	100%
13-3/8" Surface Two Stage Option	1 st Stage = 500' / 2 nd Stage = 0'	100%
9-5/8" Intermediate Single Stage Option	0'	75%
9-5/8" Intermediate Casing Two Stage Option	1 st Stage = 3850' / 2 nd Stage = 0'	75%
5-1/2" Production Casing Single Stage Option	4990'	25%
5-1/2" Production Casing Two Stage Option	1 st Stage = 6500' / 2 nd Stage = 4990'	25%

4. Pressure Control Equipment

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.
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BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
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
			Pipe Ram		
			Double Ram	x	
			Other*		
			Annular		
			Blind Ram		
			Pipe Ram		
			Double Ram		
			Other*		

*Specify if additional ram is utilized.

Devon Energy, Boomslang 14-23 Fed 1H

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

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

Y	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
Y	Are anchors required by manufacturer?
Y	A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. Devon proposes using a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 3000 (3M) psi. - Wellhead will be installed by wellhead representatives. - If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal. - Wellhead representative will install the test plug for the initial BOP test. - Wellhead company will install a solid steel body pack-off to completely isolate the lower head after cementing intermediate casing. After installation of the pack-off, the pack-off and the lower flange will be tested to 3M, as shown on the attached schematic. Everything above the pack-off will not have been altered whatsoever from the initial nipple up. Therefore the BOP components will not be retested at that time. - If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head will be cut and top out operations will be conducted. - Devon will pressure test all seals above and below the mandrel (but still above the casing) to full working pressure rating. - Devon will test the casing to 0.22 psi/ft or 1500 psi, whichever is greater, as per Onshore Order #2.

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

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	1,315' / 1400	FW Gel	8.6-8.8	28-34	N/C
1,315'	5,190'	Saturated Brine	10.0-10.2	28-34	N/C
5,190'	19,143'	Cut Brine	8.5-9.3	28-34	N/C

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

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

6. Logging and Testing Procedures

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

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

Devon Energy, Boomslang 14-23 Fed 1H

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	4577 psi
Abnormal Temperature	No

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

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

N	H ₂ S is present
Y	H ₂ S Plan attached

8. Other facets of operation

Is this a walking operation? No.

Will be pre-setting casing? No.

Attachments

☒ Directional Plan

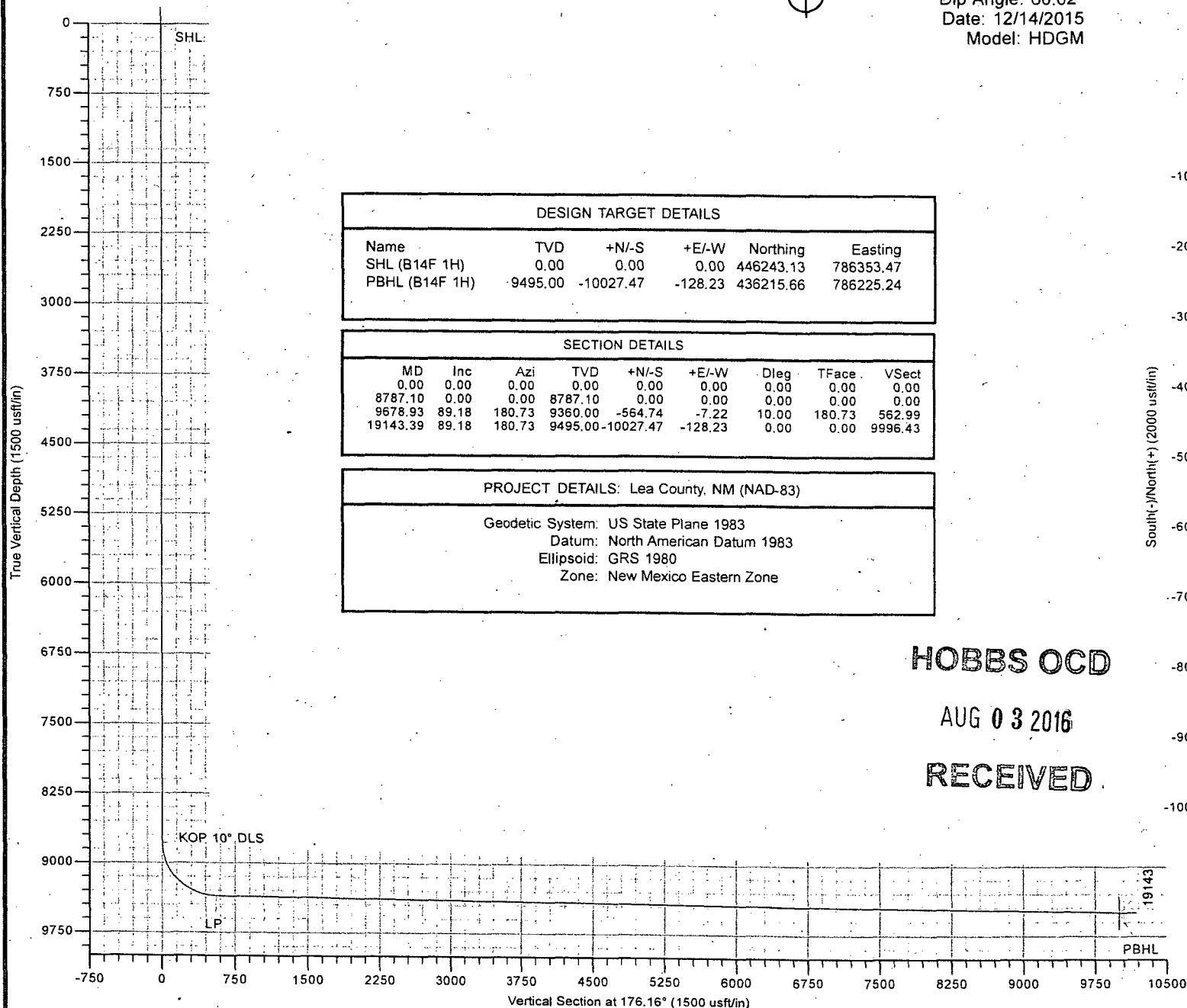
☐ Other, describe



Project: Lea County, NM (NAD-83)
 Site: Boomslang 14-23 Fed
 Well: 1H
 Wellbore: OH
 Design: Plan #1



Azimuths to Grid North
 True North: -0.42°
 Magnetic North: 6.56°
 Magnetic Field
 Strength: 48291.2snT
 Dip Angle: 60.02°
 Date: 12/14/2015
 Model: HDGM



DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting			
SHL (B14F 1H)	0.00	0.00	0.00	446243.13	786353.47			
PBHL (B14F 1H)	9495.00	-10027.47	-128.23	436215.66	786225.24			

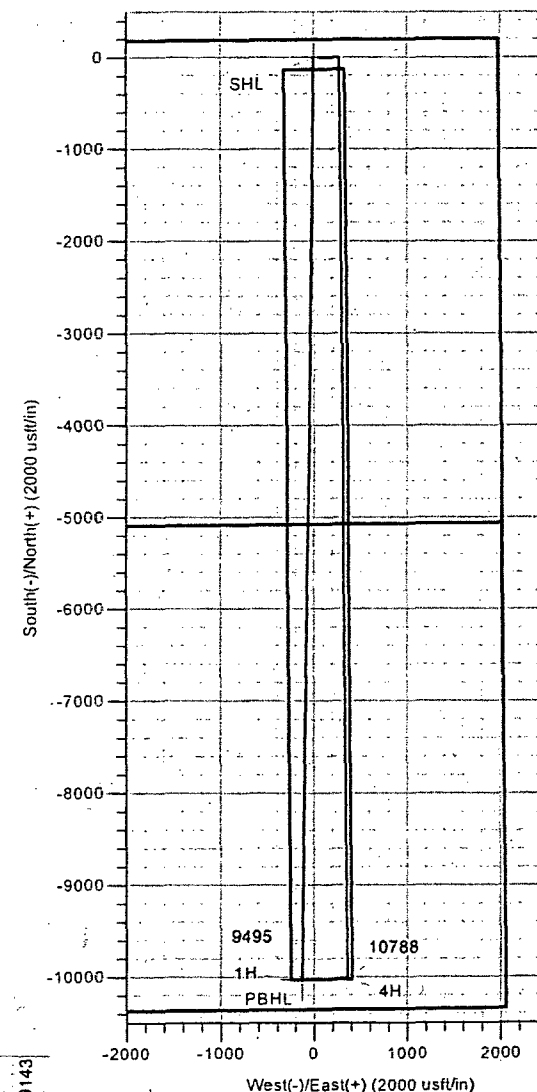
SECTION DETAILS								
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8787.10	0.00	0.00	8787.10	0.00	0.00	0.00	0.00	0.00
9678.93	89.18	180.73	9360.00	-564.74	-7.22	10.00	180.73	562.99
19143.39	89.18	180.73	9495.00	-10027.47	-128.23	0.00	0.00	9996.43

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								

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DEVON ENERGY

Lea County, NM (NAD-83)

Boomslang 14-23 Fed

1H

OH

Plan: Plan #1

Standard Planning Report

23 June, 2016

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LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 1H
Company:	DEVON ENERGY	TVD Reference:	3601.6' GL + 25' RKB @ 3626.60usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3601.6' GL + 25' RKB @ 3626.60usft
Site:	Boomslang 14-23 Fed	North Reference:	Grid
Well:	1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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

Site:	Boomslang 14-23 Fed		
Site Position:		Northing:	446,243.13 usft
From:	Map	Easting:	786,353.47 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 13' 27.535 N
		Longitude:	103° 32' 27.617 W
		Grid Convergence:	0.42 "

Well	1H, Leonard					
Well Position	+N/-S	0.00 usft	Northing:	446,243.13 usft	Latitude:	32° 13' 27.535 N
	+E/-W	0.00 usft	Easting:	786,353.47 usft	Longitude:	103° 32' 27.617 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	3,626.60 usft	Ground Level:	3,601.60 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	12/14/2015	6.98	60.02	48,291

Design		Plan #1		
Audit Notes:				
Version:		Phase:	PLAN	Tie On Depth: 0.00
Vertical/Section	Depth From (TVD)	+N-S	+E-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	176.16

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	
8,787.10	0.00	0.00	8,787.10	0.00	0.00	0.00	0.00	0.00	0.00	
9,678.93	89.18	180.73	9,360.00	-564.74	-7.22	10.00	10.00	-20.10	180.73	
19,143.40	89.18	180.73	9,495.00	-10,027.47	-128.23	0.00	0.00	0.00	0.00	PBHL (B14F 1H)

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 1H
Company:	DEVON ENERGY	TVD Reference:	3601.6' GL + 25' RKB @ 3626.60usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3601.6' GL + 25' RKB @ 3626.60usft
Site:	Boomslang 14-23 Fed	North Reference:	Grid
Well:	1H	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 (B14F 1H)									
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
1,098.00	0.00	0.00	1,098.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
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
1,619.00	0.00	0.00	1,619.00	0.00	0.00	0.00	0.00	0.00	0.00
Top of Salt									
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 1H
Company:	DEVON ENERGY	TVD Reference:	3601.6' GL + 25' RKB @ 3626.60usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3601.6' GL + 25' RKB @ 3626.60usft
Site:	Boomslog 14-23 Fed	North Reference:	Grid
Well:	1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/S (usft)	+E/W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,045.00	0.00	0.00	5,045.00	0.00	0.00	0.00	0.00	0.00	0.00
Base of Salt									
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,142.00	0.00	0.00	5,142.00	0.00	0.00	0.00	0.00	0.00	0.00
Delaware									
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	0.00	0.00
8,787.10	0.00	0.00	8,787.10	0.00	0.00	0.00	0.00	0.00	0.00
KOP 10" DLS									
8,800.00	1.29	180.73	8,800.00	-0.15	0.00	0.14	10.00	10.00	0.00
8,850.00	6.29	180.73	8,849.87	-3.45	-0.04	3.44	10.00	10.00	0.00
8,885.61	9.85	180.73	8,885.12	-8.45	-0.11	8.42	10.00	10.00	0.00
Lower Brushy Canyon									
8,900.00	11.29	180.73	8,899.27	-11.09	-0.14	11.05	10.00	10.00	0.00
8,950.00	16.29	180.73	8,947.81	-23.00	-0.29	22.93	10.00	10.00	0.00
9,000.00	21.29	180.73	8,995.13	-39.10	-0.50	38.98	10.00	10.00	0.00
9,050.00	26.29	180.73	9,040.87	-59.26	-0.76	59.08	10.00	10.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 1H
Company:	DEVON ENERGY	TVD Reference:	3601.6' GL + 25' RKB @ 3626.60usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3601.6' GL + 25' RKB @ 3626.60usft
Site:	Boomslang 14-23 Fed	North Reference:	Grid
Well:	1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/S (usft)	+E/W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,057.87	27.08	180.73	9,047.90	-62.79	-0.80	62.60	10.00	10.00	0.00
1st BSPG Lime									
9,100.00	31.29	180.73	9,084.68	-83.33	-1.07	83.07	10.00	10.00	0.00
9,150.00	36.29	180.73	9,126.22	-111.13	-1.42	110.78	10.00	10.00	0.00
9,200.00	41.29	180.73	9,165.18	-142.44	-1.82	142.00	10.00	10.00	0.00
9,206.59	41.95	180.73	9,170.10	-146.81	-1.88	146.36	10.00	10.00	0.00
Leonard A									
9,250.00	46.29	180.73	9,201.26	-177.02	-2.26	176.48	10.00	10.00	0.00
9,300.00	51.29	180.73	9,234.19	-214.62	-2.74	213.96	10.00	10.00	0.00
9,309.68	52.26	180.73	9,240.18	-222.23	-2.84	221.54	10.00	10.00	0.00
Leonard A Mid Carbonate									
9,350.00	56.29	180.73	9,263.72	-254.95	-3.26	254.16	10.00	10.00	0.00
9,400.00	61.29	180.73	9,289.62	-297.70	-3.81	296.78	10.00	10.00	0.00
9,428.36	64.13	180.73	9,302.62	-322.90	-4.13	321.90	10.00	10.00	0.00
Leonard A Target Top									
9,450.00	66.29	180.73	9,311.70	-342.54	-4.38	341.48	10.00	10.00	0.00
9,500.00	71.29	180.73	9,329.78	-389.13	-4.98	387.93	10.00	10.00	0.00
9,550.00	76.29	180.73	9,343.73	-437.13	-5.59	435.77	10.00	10.00	0.00
9,600.00	81.29	180.73	9,353.45	-486.15	-6.22	484.65	10.00	10.00	0.00
9,650.00	86.29	180.73	9,358.86	-535.84	-6.85	534.18	10.00	10.00	0.00
9,678.93	89.18	180.73	9,360.00	-564.74	-7.22	562.99	10.00	10.00	0.00
LP									
9,700.00	89.18	180.73	9,360.30	-585.81	-7.49	583.99	0.00	0.00	0.00
9,800.00	89.18	180.73	9,361.73	-685.79	-8.77	683.67	0.00	0.00	0.00
9,900.00	89.18	180.73	9,363.15	-785.77	-10.05	783.34	0.00	0.00	0.00
10,000.00	89.18	180.73	9,364.58	-885.75	-11.33	883.01	0.00	0.00	0.00
10,100.00	89.18	180.73	9,366.01	-985.73	-12.61	982.68	0.00	0.00	0.00
10,200.00	89.18	180.73	9,367.43	-1,085.72	-13.88	1,082.36	0.00	0.00	0.00
10,300.00	89.18	180.73	9,368.86	-1,185.70	-15.16	1,182.03	0.00	0.00	0.00
10,400.00	89.18	180.73	9,370.29	-1,285.68	-16.44	1,281.70	0.00	0.00	0.00
10,500.00	89.18	180.73	9,371.71	-1,385.66	-17.72	1,381.37	0.00	0.00	0.00
10,600.00	89.18	180.73	9,373.14	-1,485.64	-19.00	1,481.04	0.00	0.00	0.00
10,700.00	89.18	180.73	9,374.56	-1,585.62	-20.28	1,580.72	0.00	0.00	0.00
10,800.00	89.18	180.73	9,375.99	-1,685.61	-21.56	1,680.39	0.00	0.00	0.00
10,900.00	89.18	180.73	9,377.42	-1,785.59	-22.83	1,780.06	0.00	0.00	0.00
11,000.00	89.18	180.73	9,378.84	-1,885.57	-24.11	1,879.73	0.00	0.00	0.00
11,100.00	89.18	180.73	9,380.27	-1,985.55	-25.39	1,979.40	0.00	0.00	0.00
11,200.00	89.18	180.73	9,381.70	-2,085.53	-26.67	2,079.08	0.00	0.00	0.00
11,300.00	89.18	180.73	9,383.12	-2,185.51	-27.95	2,178.75	0.00	0.00	0.00
11,400.00	89.18	180.73	9,384.55	-2,285.50	-29.23	2,278.42	0.00	0.00	0.00
11,500.00	89.18	180.73	9,385.98	-2,385.48	-30.51	2,378.09	0.00	0.00	0.00
11,600.00	89.18	180.73	9,387.40	-2,485.46	-31.78	2,477.77	0.00	0.00	0.00
11,700.00	89.18	180.73	9,388.83	-2,585.44	-33.06	2,577.44	0.00	0.00	0.00
11,800.00	89.18	180.73	9,390.25	-2,685.42	-34.34	2,677.11	0.00	0.00	0.00
11,900.00	89.18	180.73	9,391.68	-2,785.40	-35.62	2,776.78	0.00	0.00	0.00
12,000.00	89.18	180.73	9,393.11	-2,885.39	-36.90	2,876.45	0.00	0.00	0.00
12,100.00	89.18	180.73	9,394.53	-2,985.37	-38.18	2,976.13	0.00	0.00	0.00
12,200.00	89.18	180.73	9,395.96	-3,085.35	-39.46	3,075.80	0.00	0.00	0.00
12,300.00	89.18	180.73	9,397.39	-3,185.33	-40.73	3,175.47	0.00	0.00	0.00
12,400.00	89.18	180.73	9,398.81	-3,285.31	-42.01	3,275.14	0.00	0.00	0.00
12,500.00	89.18	180.73	9,400.24	-3,385.29	-43.29	3,374.82	0.00	0.00	0.00
12,600.00	89.18	180.73	9,401.67	-3,485.28	-44.57	3,474.49	0.00	0.00	0.00
12,700.00	89.18	180.73	9,403.09	-3,585.26	-45.85	3,574.16	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 1H
Company:	DEVON ENERGY	TVD Reference:	3601.6' GL + 25' RKB @ 3626.60usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3601.6' GL + 25' RKB @ 3626.60usft
Site:	Boomslang 14-23 Fad	North Reference:	Grid
Well:	1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,800.00	89.18	180.73	9,404.52	-3,685.24	-47.13	3,673.83	0.00	0.00	0.00
12,900.00	89.18	180.73	9,405.94	-3,785.22	-48.40	3,773.50	0.00	0.00	0.00
13,000.00	89.18	180.73	9,407.37	-3,885.20	-49.68	3,873.18	0.00	0.00	0.00
13,100.00	89.18	180.73	9,408.80	-3,985.18	-50.96	3,972.85	0.00	0.00	0.00
13,200.00	89.18	180.73	9,410.22	-4,085.17	-52.24	4,072.52	0.00	0.00	0.00
13,300.00	89.18	180.73	9,411.65	-4,185.15	-53.52	4,172.19	0.00	0.00	0.00
13,400.00	89.18	180.73	9,413.08	-4,285.13	-54.80	4,271.86	0.00	0.00	0.00
13,500.00	89.18	180.73	9,414.50	-4,385.11	-56.08	4,371.54	0.00	0.00	0.00
13,600.00	89.18	180.73	9,415.93	-4,485.09	-57.35	4,471.21	0.00	0.00	0.00
13,700.00	89.18	180.73	9,417.36	-4,585.07	-58.63	4,570.88	0.00	0.00	0.00
13,800.00	89.18	180.73	9,418.78	-4,685.06	-59.91	4,670.55	0.00	0.00	0.00
13,900.00	89.18	180.73	9,420.21	-4,785.04	-61.19	4,770.23	0.00	0.00	0.00
14,000.00	89.18	180.73	9,421.64	-4,885.02	-62.47	4,869.90	0.00	0.00	0.00
14,100.00	89.18	180.73	9,423.06	-4,985.00	-63.75	4,969.57	0.00	0.00	0.00
14,200.00	89.18	180.73	9,424.49	-5,084.98	-65.03	5,069.24	0.00	0.00	0.00
14,300.00	89.18	180.73	9,425.91	-5,184.96	-66.30	5,168.91	0.00	0.00	0.00
14,400.00	89.18	180.73	9,427.34	-5,284.95	-67.58	5,268.59	0.00	0.00	0.00
14,500.00	89.18	180.73	9,428.77	-5,384.93	-68.86	5,368.26	0.00	0.00	0.00
14,600.00	89.18	180.73	9,430.19	-5,484.91	-70.14	5,467.93	0.00	0.00	0.00
14,700.00	89.18	180.73	9,431.62	-5,584.89	-71.42	5,567.60	0.00	0.00	0.00
14,800.00	89.18	180.73	9,433.05	-5,684.87	-72.70	5,667.27	0.00	0.00	0.00
14,900.00	89.18	180.73	9,434.47	-5,784.85	-73.98	5,766.95	0.00	0.00	0.00
15,000.00	89.18	180.73	9,435.90	-5,884.84	-75.25	5,866.62	0.00	0.00	0.00
15,100.00	89.18	180.73	9,437.33	-5,984.82	-76.53	5,966.29	0.00	0.00	0.00
15,200.00	89.18	180.73	9,438.75	-6,084.80	-77.81	6,065.96	0.00	0.00	0.00
15,300.00	89.18	180.73	9,440.18	-6,184.78	-79.09	6,165.64	0.00	0.00	0.00
15,400.00	89.18	180.73	9,441.60	-6,284.76	-80.37	6,265.31	0.00	0.00	0.00
15,500.00	89.18	180.73	9,443.03	-6,384.74	-81.65	6,364.98	0.00	0.00	0.00
15,600.00	89.18	180.73	9,444.46	-6,484.73	-82.93	6,464.65	0.00	0.00	0.00
15,700.00	89.18	180.73	9,445.88	-6,584.71	-84.20	6,564.32	0.00	0.00	0.00
15,800.00	89.18	180.73	9,447.31	-6,684.69	-85.48	6,664.00	0.00	0.00	0.00
15,900.00	89.18	180.73	9,448.74	-6,784.67	-86.76	6,763.67	0.00	0.00	0.00
16,000.00	89.18	180.73	9,450.16	-6,884.65	-88.04	6,863.34	0.00	0.00	0.00
16,100.00	89.18	180.73	9,451.59	-6,984.63	-89.32	6,963.01	0.00	0.00	0.00
16,200.00	89.18	180.73	9,453.02	-7,084.62	-90.60	7,062.69	0.00	0.00	0.00
16,300.00	89.18	180.73	9,454.44	-7,184.60	-91.88	7,162.36	0.00	0.00	0.00
16,400.00	89.18	180.73	9,455.87	-7,284.58	-93.15	7,262.03	0.00	0.00	0.00
16,500.00	89.18	180.73	9,457.30	-7,384.56	-94.43	7,361.70	0.00	0.00	0.00
16,600.00	89.18	180.73	9,458.72	-7,484.54	-95.71	7,461.37	0.00	0.00	0.00
16,700.00	89.18	180.73	9,460.15	-7,584.52	-96.99	7,561.05	0.00	0.00	0.00
16,800.00	89.18	180.73	9,461.57	-7,684.51	-98.27	7,660.72	0.00	0.00	0.00
16,900.00	89.18	180.73	9,463.00	-7,784.49	-99.55	7,760.39	0.00	0.00	0.00
17,000.00	89.18	180.73	9,464.43	-7,884.47	-100.83	7,860.06	0.00	0.00	0.00
17,100.00	89.18	180.73	9,465.85	-7,984.45	-102.10	7,959.73	0.00	0.00	0.00
17,200.00	89.18	180.73	9,467.28	-8,084.43	-103.38	8,059.41	0.00	0.00	0.00
17,300.00	89.18	180.73	9,468.71	-8,184.41	-104.66	8,159.08	0.00	0.00	0.00
17,400.00	89.18	180.73	9,470.13	-8,284.40	-105.94	8,258.75	0.00	0.00	0.00
17,500.00	89.18	180.73	9,471.56	-8,384.38	-107.22	8,358.42	0.00	0.00	0.00
17,600.00	89.18	180.73	9,472.99	-8,484.36	-108.50	8,458.10	0.00	0.00	0.00
17,700.00	89.18	180.73	9,474.41	-8,584.34	-109.78	8,557.77	0.00	0.00	0.00
17,800.00	89.18	180.73	9,475.84	-8,684.32	-111.05	8,657.44	0.00	0.00	0.00
17,900.00	89.18	180.73	9,477.26	-8,784.30	-112.33	8,757.11	0.00	0.00	0.00
18,000.00	89.18	180.73	9,478.69	-8,884.29	-113.61	8,856.78	0.00	0.00	0.00
18,100.00	89.18	180.73	9,480.12	-8,984.27	-114.89	8,956.46	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 1H
Company:	DEVON ENERGY	TVD Reference:	3601.6' GL + 25' RKB @ 3626.60usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3601.6' GL + 25' RKB @ 3626.60usft
Site:	Boomslang 14-23 Fed	North Reference:	Grid
Well:	1H	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)	
18,200.00	89.18	180.73	9,481.54	-9,084.25	-116.17	9,056.13	0.00	0.00	0.00	
18,300.00	89.18	180.73	9,482.97	-9,184.23	-117.45	9,155.80	0.00	0.00	0.00	
18,400.00	89.18	180.73	9,484.40	-9,284.21	-118.73	9,255.47	0.00	0.00	0.00	
18,500.00	89.18	180.73	9,485.82	-9,384.19	-120.00	9,355.14	0.00	0.00	0.00	
18,600.00	89.18	180.73	9,487.25	-9,484.18	-121.28	9,454.82	0.00	0.00	0.00	
18,700.00	89.18	180.73	9,488.68	-9,584.16	-122.56	9,554.49	0.00	0.00	0.00	
18,800.00	89.18	180.73	9,490.10	-9,684.14	-123.84	9,654.16	0.00	0.00	0.00	
18,900.00	89.18	180.73	9,491.53	-9,784.12	-125.12	9,753.83	0.00	0.00	0.00	
19,000.00	89.18	180.73	9,492.95	-9,884.10	-126.40	9,853.51	0.00	0.00	0.00	
19,100.00	89.18	180.73	9,494.38	-9,984.08	-127.68	9,953.18	0.00	0.00	0.00	
19,143.39	89.18	180.73	9,495.00	-10,027.47	-128.23	9,996.43	0.00	0.00	0.00	
TD - PBHL (B14F 1H)										

Design Targets										
Target Name	hit/miss target	Dip Angle (°)	Dip Dir (°)	TVD (usft)	+N/S (usft)	+E/W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL (B14F 1H)	- plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	446,243.13	786,353.47	32° 13' 27.535 N	103° 32' 27.617 W
PBHL (B14F 1H)	- plan hits target center - Point	0.00	0.00	9,495.00	-10,027.47	-128.23	436,215.66	786,225.24	32° 11' 48.321 N	103° 32' 29.969 W

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,098.00	1,098.00	Rustler		0.82	180.73	
1,619.00	1,619.00	Top of Salt		0.82	180.73	
5,045.00	5,045.00	Base of Salt		0.82	180.73	
5,142.00	5,142.00	Delaware		0.82	180.73	
8,885.61	8,885.12	Lower Brushy Canyon		0.82	180.73	
9,057.87	9,047.90	1st BSPG Lime		0.82	180.73	
9,206.59	9,170.10	Leonard A		0.82	180.73	
9,309.68	9,240.18	Leonard A Mid Carbonate		0.82	180.73	
9,428.36	9,302.62	Leonard A Target Top		0.82	180.73	

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/S (usft)	+E/W (usft)	Comment
8,787.10	8,787.10	0.00	0.00	KOP 10° DLS
9,678.93	9,360.00	-564.74	-7.22	LP
19,143.39	9,495.00	-10,027.47	-128.23	TD

DEVON ENERGY

Lea County, NM (NAD-83)

Boomslang 14-23 Fed

1H

OH

Plan #1

Anticollision Report

23 June, 2016

LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 1H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3601.6' GL + 25' RKB @ 3626.60usft
Reference Site:	Boomslang 14-23 Fed	MD Reference:	3601.6' GL + 25' RKB @ 3626.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at:	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference	Plan #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.00usft	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: 6/23/2016		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	19,143.40	Plan #1 (OH)	LEAM MWD-ADJ	MWD - Standard

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						
Boomslang 14-23 Fed						
4H - OH - Plan #1	5,166.57	5,166.87	49.94	27.00	2.177 CC	
4H - OH - Plan #1	5,200.00	5,200.00	49.94	26.85	2.162 ES	
4H - OH - Plan #1	5,300.00	5,299.42	50.81	27.28	2.160 SF	

Offset Design		Boomslang 14-23 Fed - 4H - OH - Plan #1										Offset Site Error: 0.00 usft			
Survey Program: 0-LEAM MWD-ADJ														Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Distance								
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	0.30	0.30	0.00	0.00	89.66	0.30	49.94	49.94						
100.00	100.00	100.30	100.30	0.08	0.08	89.66	0.30	49.94	49.94	49.77	0.17	295.073			
200.00	200.00	200.30	200.30	0.31	0.31	89.66	0.30	49.94	49.94	49.32	0.62	80.709			
300.00	300.00	300.30	300.30	0.53	0.53	89.66	0.30	49.94	49.94	48.87	1.07	46.747			
400.00	400.00	400.30	400.30	0.76	0.76	89.66	0.30	49.94	49.94	48.42	1.52	32.902			
500.00	500.00	500.30	500.30	0.98	0.98	89.66	0.30	49.94	49.94	47.97	1.97	25.385			
600.00	600.00	600.30	600.30	1.21	1.21	89.66	0.30	49.94	49.94	47.52	2.42	20.663			
700.00	700.00	700.30	700.30	1.43	1.43	89.66	0.30	49.94	49.94	47.07	2.87	17.423			
800.00	800.00	800.30	800.30	1.66	1.66	89.66	0.30	49.94	49.94	46.62	3.32	15.061			
900.00	900.00	900.30	900.30	1.88	1.88	89.66	0.30	49.94	49.94	46.18	3.77	13.263			
1,000.00	1,000.00	1,000.30	1,000.30	2.11	2.11	89.66	0.30	49.94	49.94	45.73	4.22	11.848			
1,100.00	1,100.00	1,100.30	1,100.30	2.33	2.33	89.66	0.30	49.94	49.94	45.28	4.66	10.706			
1,200.00	1,200.00	1,200.30	1,200.30	2.56	2.56	89.66	0.30	49.94	49.94	44.83	5.11	9.765			
1,300.00	1,300.00	1,300.30	1,300.30	2.78	2.78	89.66	0.30	49.94	49.94	44.38	5.56	8.976			
1,400.00	1,400.00	1,400.30	1,400.30	3.01	3.01	89.66	0.30	49.94	49.94	43.93	6.01	8.305			
1,500.00	1,500.00	1,500.30	1,500.30	3.23	3.23	89.66	0.30	49.94	49.94	43.48	6.46	7.728			
1,600.00	1,600.00	1,600.30	1,600.30	3.46	3.46	89.66	0.30	49.94	49.94	43.03	6.91	7.225			
1,700.00	1,700.00	1,700.30	1,700.30	3.68	3.68	89.66	0.30	49.94	49.94	42.58	7.36	6.784			
1,800.00	1,800.00	1,800.30	1,800.30	3.91	3.91	89.66	0.30	49.94	49.94	42.13	7.81	6.393			
1,900.00	1,900.00	1,900.30	1,900.30	4.13	4.13	89.66	0.30	49.94	49.94	41.68	8.26	6.046			
2,000.00	2,000.00	2,000.30	2,000.30	4.35	4.36	89.66	0.30	49.94	49.94	41.23	8.71	5.734			
2,100.00	2,100.00	2,100.30	2,100.30	4.58	4.58	89.66	0.30	49.94	49.94	40.78	9.16	5.452			
2,200.00	2,200.00	2,200.30	2,200.30	4.80	4.81	89.66	0.30	49.94	49.94	40.33	9.61	5.197			
2,300.00	2,300.00	2,300.30	2,300.30	5.03	5.03	89.66	0.30	49.94	49.94	39.88	10.06	4.965			

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 1H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3601.6' GL + 25' RKB @ 3626.60usft
Reference Site:	Boomslang 14-23 Fed	MD Reference:	3601.6' GL + 25' RKB @ 3626.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Boomslang 14-23 Fed - 4H - OH - Plan #1												Offset Site Error:	0.00 usft
Survey Program: O-LEAM MWD-ADJ												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis	Distance	Between	Between	Minimum	Separation						
Measured	Vertical	Measured	Vertical	Reference	Offset	Highside	Offset Wellbore Centre	Between	Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth	Reference	Offset	Footface	+N/S	+E/W	Centres	Ellipses	Separation	Factor	
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(")	(usft)	(usft)	(usft)	(usft)	(usft)		
2,400.00	2,400.00	2,400.30	2,400.30	5.25	5.25	89.66	0.30	49.94	49.94	39.43	10.51	4.752	
2,500.00	2,500.00	2,500.30	2,500.30	5.48	5.48	89.66	0.30	49.94	49.94	38.98	10.96	4.557	
2,600.00	2,600.00	2,600.30	2,600.30	5.70	5.70	89.66	0.30	49.94	49.94	38.53	11.41	4.378	
2,700.00	2,700.00	2,700.30	2,700.30	5.93	5.93	89.66	0.30	49.94	49.94	38.08	11.86	4.212	
2,800.00	2,800.00	2,800.30	2,800.30	6.15	6.15	89.66	0.30	49.94	49.94	37.63	12.31	4.058	
2,900.00	2,900.00	2,900.30	2,900.30	6.38	6.38	89.66	0.30	49.94	49.94	37.18	12.76	3.915	
3,000.00	3,000.00	3,000.30	3,000.30	6.60	6.60	89.66	0.30	49.94	49.94	36.74	13.21	3.782	
3,100.00	3,100.00	3,100.30	3,100.30	6.83	6.83	89.66	0.30	49.94	49.94	36.29	13.66	3.657	
3,200.00	3,200.00	3,200.30	3,200.30	7.05	7.05	89.66	0.30	49.94	49.94	35.84	14.10	3.541	
3,300.00	3,300.00	3,300.30	3,300.30	7.28	7.28	89.66	0.30	49.94	49.94	35.39	14.55	3.431	
3,400.00	3,400.00	3,400.30	3,400.30	7.50	7.50	89.66	0.30	49.94	49.94	34.94	15.00	3.329	
3,500.00	3,500.00	3,500.30	3,500.30	7.73	7.73	89.66	0.30	49.94	49.94	34.49	15.45	3.232	
3,600.00	3,600.00	3,600.30	3,600.30	7.95	7.95	89.66	0.30	49.94	49.94	34.04	15.90	3.140	
3,700.00	3,700.00	3,700.30	3,700.30	8.18	8.18	89.66	0.30	49.94	49.94	33.59	16.35	3.054	
3,800.00	3,800.00	3,800.30	3,800.30	8.40	8.40	89.66	0.30	49.94	49.94	33.14	16.80	2.972	
3,900.00	3,900.00	3,900.30	3,900.30	8.63	8.63	89.66	0.30	49.94	49.94	32.69	17.25	2.895	
4,000.00	4,000.00	4,000.30	4,000.30	8.85	8.85	89.66	0.30	49.94	49.94	32.24	17.70	2.821	
4,100.00	4,100.00	4,100.30	4,100.30	9.07	9.08	89.66	0.30	49.94	49.94	31.79	18.15	2.751	
4,200.00	4,200.00	4,200.30	4,200.30	9.30	9.30	89.66	0.30	49.94	49.94	31.34	18.60	2.685	
4,300.00	4,300.00	4,300.30	4,300.30	9.52	9.53	89.66	0.30	49.94	49.94	30.89	19.05	2.622	
4,400.00	4,400.00	4,400.30	4,400.30	9.75	9.75	89.66	0.30	49.94	49.94	30.44	19.50	2.561	
4,500.00	4,500.00	4,500.30	4,500.30	9.97	9.97	89.66	0.30	49.94	49.94	29.99	19.95	2.503	
4,600.00	4,600.00	4,600.30	4,600.30	10.20	10.20	89.66	0.30	49.94	49.94	29.54	20.40	2.448	
4,700.00	4,700.00	4,700.30	4,700.30	10.42	10.42	89.66	0.30	49.94	49.94	29.09	20.85	2.396	
4,800.00	4,800.00	4,800.30	4,800.30	10.65	10.65	89.66	0.30	49.94	49.94	28.64	21.30	2.345	
4,900.00	4,900.00	4,900.30	4,900.30	10.87	10.87	89.66	0.30	49.94	49.94	28.19	21.75	2.296	
5,000.00	5,000.00	5,000.30	5,000.30	11.10	11.10	89.66	0.30	49.94	49.94	27.74	22.20	2.250	
5,100.00	5,100.00	5,100.30	5,100.30	11.32	11.32	89.66	0.30	49.94	49.94	27.30	22.65	2.205	
5,166.57	5,166.57	5,166.87	5,166.87	11.47	11.47	89.66	0.30	49.94	49.94	27.00	22.95	2.177 CC	
5,200.00	5,200.00	5,200.00	5,200.00	11.55	11.55	89.66	0.30	49.94	49.94	26.85	23.09	2.162 ES	
5,300.00	5,300.00	5,299.42	5,299.42	11.77	11.76	89.66	0.30	50.80	50.81	27.28	23.53	2.160 SF	
5,400.00	5,400.00	5,398.49	5,398.45	12.00	11.95	89.68	0.30	53.38	53.41	29.46	23.95	2.230	
5,500.00	5,500.00	5,497.44	5,497.30	12.22	12.15	89.70	0.30	57.66	57.74	33.37	24.37	2.369	
5,600.00	5,600.00	5,596.21	5,595.89	12.45	12.35	89.73	0.30	63.63	63.79	39.00	24.79	2.573	
5,700.00	5,700.00	5,694.74	5,694.13	12.67	12.55	89.76	0.30	71.29	71.55	46.35	25.21	2.838	
5,800.00	5,800.00	5,794.30	5,793.30	12.90	12.76	89.79	0.30	79.96	80.27	54.63	25.63	3.131	
5,900.00	5,900.00	5,893.92	5,892.54	13.12	12.97	89.81	0.30	88.64	88.98	62.93	26.06	3.415	
6,000.00	6,000.00	5,993.54	5,991.79	13.35	13.18	89.82	0.30	97.33	97.70	71.22	26.48	3.689	
6,100.00	6,100.00	6,093.16	6,091.03	13.57	13.40	89.84	0.30	106.01	106.41	79.51	26.91	3.955	
6,200.00	6,200.00	6,192.78	6,190.27	13.80	13.61	89.85	0.30	114.69	115.13	87.79	27.34	4.212	
6,300.00	6,300.00	6,292.39	6,289.51	14.02	13.83	89.86	0.30	123.37	123.85	96.08	27.76	4.461	
6,400.00	6,400.00	6,392.01	6,388.75	14.24	14.05	89.87	0.30	132.06	132.56	104.37	28.19	4.702	
6,500.00	6,500.00	6,491.63	6,487.99	14.47	14.28	89.88	0.30	140.74	141.28	112.65	28.62	4.936	
6,600.00	6,600.00	6,591.25	6,587.23	14.69	14.50	89.88	0.30	149.42	149.99	120.94	29.05	5.162	
6,700.00	6,700.00	6,690.87	6,686.47	14.92	14.73	89.89	0.30	158.10	158.71	129.22	29.49	5.382	
6,800.00	6,800.00	6,790.49	6,785.71	15.14	14.95	89.90	0.30	166.79	167.42	137.50	29.92	5.596	
6,900.00	6,900.00	6,890.11	6,884.95	15.37	15.18	89.90	0.30	175.47	176.14	145.79	30.35	5.803	
7,000.00	7,000.00	6,989.73	6,984.19	15.59	15.41	89.91	0.30	184.15	184.85	154.07	30.79	6.004	
7,100.00	7,100.00	7,089.35	7,083.43	15.82	15.65	89.91	0.30	192.83	193.57	162.35	31.22	6.200	
7,200.00	7,200.00	7,188.97	7,182.67	16.04	15.88	89.91	0.30	201.52	202.29	170.63	31.66	6.390	
7,300.00	7,300.00	7,288.59	7,281.91	16.27	16.11	89.92	0.30	210.20	211.00	178.91	32.09	6.575	
7,400.00	7,400.00	7,388.21	7,381.15	16.49	16.35	89.92	0.30	218.88	219.72	187.19	32.53	6.755	

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 1H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3601.6' GL + 25' RKB @ 3626.60usft
Reference Site:	Boomslang 14-23 Fed	MD Reference:	3601.6' GL + 25' RKB @ 3626.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at:	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Boomslang 14-23 Fed - 4H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: O-LEAM MWD-AD													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)	Offset Wellbore Centre E/W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,500.00	7,500.00	7,487.83	7,480.39	16.72	16.59	89.92	0.30	227.56	228.43	195.47	32.96	6.930	
7,600.00	7,600.00	7,587.61	7,579.79	16.94	16.82	89.93	0.30	236.26	237.14	203.74	33.40	7.100	
7,700.00	7,700.00	7,689.41	7,681.25	17.17	17.04	89.93	0.30	244.61	245.35	211.53	33.83	7.253	
7,800.00	7,800.00	7,791.36	7,782.92	17.39	17.25	89.93	0.30	252.07	252.67	218.42	34.25	7.377	
7,900.00	7,900.00	7,893.43	7,884.79	17.62	17.46	89.93	0.30	258.64	259.10	224.43	34.68	7.472	
8,000.00	8,000.00	7,995.61	7,986.81	17.84	17.67	89.93	0.30	264.30	264.65	229.55	35.10	7.539	
8,100.00	8,100.00	8,097.89	8,088.97	18.07	17.87	89.94	0.30	269.06	269.30	233.77	35.53	7.580	
8,200.00	8,200.00	8,200.24	8,191.25	18.29	18.08	89.94	0.30	272.91	273.06	237.10	35.95	7.595	
8,300.00	8,300.00	8,302.65	8,293.62	18.52	18.29	89.94	0.30	275.84	275.93	239.54	36.38	7.584	
8,400.00	8,400.00	8,405.11	8,396.06	18.74	18.49	89.94	0.30	277.87	277.90	241.09	36.81	7.550	
8,500.00	8,500.00	8,507.59	8,498.54	18.96	18.69	89.94	0.30	278.97	278.98	241.74	37.24	7.492	
8,600.00	8,600.00	8,609.36	8,600.30	19.19	18.88	89.94	0.30	279.20	279.20	241.54	37.66	7.414	
8,700.00	8,700.00	8,709.36	8,700.30	19.41	19.10	89.94	0.30	279.20	279.20	241.10	38.11	7.327	
8,761.83	8,761.83	8,771.19	8,762.13	19.55	19.24	-90.88	0.30	279.20	279.21	240.83	38.38	7.275	
8,800.00	8,800.00	8,809.36	8,800.30	19.64	19.32	-90.82	0.30	279.20	279.20	240.66	38.55	7.243	
8,900.00	8,899.27	8,908.63	8,899.57	19.80	19.54	-93.01	0.30	279.20	279.57	240.65	38.92	7.182	
9,000.00	8,995.13	9,004.49	8,995.43	19.97	19.74	-98.16	0.30	279.20	282.46	243.21	39.25	7.196	
9,100.00	9,084.68	9,094.03	9,084.98	20.13	19.94	-104.95	0.30	279.20	292.48	253.09	39.39	7.426	
9,200.00	9,165.18	9,174.54	9,165.48	20.34	20.12	-111.49	0.30	279.20	315.19	276.05	39.14	8.052	
9,300.00	9,234.19	9,243.55	9,234.49	20.63	20.27	-116.08	0.30	279.20	354.52	315.90	38.62	9.179	
9,400.00	9,289.62	9,298.98	9,289.92	21.02	20.39	-117.43	0.30	279.20	410.97	372.62	38.35	10.715	
9,500.00	9,329.78	9,339.14	9,330.08	21.54	20.47	-114.30	0.30	279.20	482.09	443.00	39.10	12.331	
9,600.00	9,353.45	9,362.81	9,353.75	22.17	20.53	-104.89	0.30	279.20	564.00	522.79	41.22	13.684	
9,700.00	9,360.30	9,369.66	9,360.60	22.92	20.54	-91.73	0.30	279.20	652.47	609.41	43.05	15.155	
9,800.00	9,361.73	9,371.08	9,362.03	23.78	20.54	-92.02	0.30	279.20	744.07	700.16	43.91	16.945	
9,900.00	9,363.15	9,372.51	9,363.45	24.75	20.55	-92.31	0.30	279.20	837.60	792.73	44.87	18.667	
10,000.00	9,364.58	9,373.94	9,364.88	25.81	20.55	-92.60	0.30	279.20	932.47	886.55	45.92	20.306	
10,100.00	9,366.01	9,375.36	9,366.31	26.94	20.55	-92.89	0.30	279.20	1,028.31	981.26	47.05	21.855	
10,200.00	9,367.43	9,376.79	9,367.73	28.15	20.56	-93.19	0.30	279.20	1,124.87	1,076.62	48.25	23.313	
10,300.00	9,368.86	9,378.22	9,369.16	29.43	20.56	-93.48	0.30	279.20	1,221.98	1,172.47	49.51	24.680	
10,400.00	9,370.29	9,379.64	9,370.59	30.75	20.56	-93.77	0.30	279.20	1,319.53	1,268.70	50.83	25.961	
10,500.00	9,371.71	9,381.07	9,372.01	32.13	20.57	-94.06	0.30	279.20	1,417.41	1,365.22	52.19	27.159	
10,600.00	9,373.14	11,996.82	10,758.17	33.55	35.41	-167.38	-1,478.32	291.07	1,419.05	1,384.89	34.15	41.548	
10,700.00	9,374.56	12,096.79	10,758.52	35.00	36.81	-167.29	-1,578.29	291.87	1,418.45	1,383.15	35.30	40.185	
10,800.00	9,375.99	12,196.77	10,758.87	36.49	38.24	-167.20	-1,678.26	292.68	1,417.86	1,381.38	36.48	38.862	
10,900.00	9,377.42	12,296.74	10,759.22	38.01	39.71	-167.11	-1,778.22	293.48	1,417.27	1,379.56	37.71	37.581	
11,000.00	9,378.84	12,396.71	10,759.57	39.55	41.20	-167.02	-1,878.19	294.28	1,416.69	1,377.71	38.98	36.346	
11,100.00	9,380.27	12,496.68	10,759.92	41.12	42.72	-166.93	-1,978.16	295.08	1,416.11	1,375.83	40.28	35.158	
11,200.00	9,381.70	12,596.66	10,760.27	42.70	44.27	-166.83	-2,078.13	295.89	1,415.53	1,373.92	41.61	34.018	
11,300.00	9,383.12	12,696.63	10,760.62	44.31	45.83	-166.74	-2,178.10	296.69	1,414.96	1,371.99	42.97	32.927	
11,400.00	9,384.55	12,796.60	10,760.97	45.93	47.42	-166.65	-2,278.07	297.49	1,414.39	1,370.03	44.36	31.882	
11,500.00	9,385.98	12,896.57	10,761.32	47.56	49.02	-166.56	-2,378.04	298.29	1,413.83	1,368.05	45.78	30.884	
11,600.00	9,387.40	12,996.55	10,761.67	49.21	50.63	-166.46	-2,478.00	299.10	1,413.26	1,366.05	47.22	29.931	
11,700.00	9,388.83	13,096.52	10,762.02	50.87	52.26	-166.37	-2,577.97	299.90	1,412.71	1,364.03	48.68	29.020	
11,800.00	9,390.25	13,196.49	10,762.36	52.54	53.91	-166.28	-2,677.94	300.70	1,412.15	1,361.99	50.16	28.151	
11,900.00	9,391.68	13,296.46	10,762.71	54.21	55.56	-166.19	-2,777.91	301.50	1,411.60	1,359.93	51.67	27.321	
12,000.00	9,393.11	13,396.44	10,763.06	55.90	57.23	-166.10	-2,877.88	302.31	1,411.05	1,357.86	53.19	26.529	
12,100.00	9,394.53	13,496.41	10,763.41	57.60	58.90	-166.00	-2,977.85	303.11	1,410.51	1,355.78	54.73	25.773	
12,200.00	9,395.96	13,596.38	10,763.76	59.30	60.59	-165.91	-3,077.82	303.91	1,409.97	1,353.68	56.29	25.050	
12,300.00	9,397.39	13,696.35	10,764.11	61.01	62.28	-165.82	-3,177.79	304.71	1,409.43	1,351.57	57.86	24.360	
12,400.00	9,398.81	13,796.33	10,764.46	62.73	63.98	-165.72	-3,277.75	305.52	1,408.90	1,349.45	59.45	23.700	
12,500.00	9,400.24	13,896.30	10,764.81	64.45	65.68	-165.63	-3,377.72	306.32	1,408.37	1,347.32	61.05	23.069	

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 1H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3601.6' GL + 25' RKB @ 3626.60usft
Reference Site:	Boomslang 14-23 Fed	MD Reference:	3601.6' GL + 25' RKB @ 3626.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Boomslang 14-23 Fed - 4H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error:	0.00 usft
Reference		Offset		Semi-Major Axis			Distance		Between		Minimum	Separation	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre N/S (usft)	Offset Wellbore Centre E/W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)	Factor		
12,600.00	9,401.67	13,996.27	10,765.16	66.18	67.40	-165.54	-3,477.69	307.12	1,407.85	1,345.18	62.67	22.466		
12,700.00	9,403.09	14,096.24	10,765.51	67.91	69.12	-165.45	-3,577.66	307.92	1,407.33	1,343.03	64.30	21.888		
12,800.00	9,404.52	14,196.22	10,765.86	69.64	70.84	-165.35	-3,677.63	308.73	1,406.81	1,340.87	65.94	21.335		
12,900.00	9,405.94	14,296.19	10,766.20	71.39	72.57	-165.26	-3,777.60	309.53	1,406.29	1,338.70	67.60	20.804		
13,000.00	9,407.37	14,396.16	10,766.55	73.13	74.30	-165.17	-3,877.57	310.33	1,405.78	1,336.52	69.26	20.296		
13,100.00	9,408.80	14,496.13	10,766.90	74.88	76.04	-165.07	-3,977.54	311.13	1,405.28	1,334.33	70.94	19.808		
13,200.00	9,410.22	14,596.11	10,767.25	76.63	77.79	-164.98	-4,077.50	311.94	1,404.78	1,332.14	72.63	19.340		
13,300.00	9,411.65	14,696.08	10,767.60	78.38	79.53	-164.89	-4,177.47	312.74	1,404.28	1,329.94	74.34	18.891		
13,400.00	9,413.08	14,796.05	10,767.95	80.14	81.28	-164.79	-4,277.44	313.54	1,403.78	1,327.73	76.05	18.459		
13,500.00	9,414.50	14,896.02	10,768.30	81.90	83.04	-164.70	-4,377.41	314.34	1,403.29	1,325.52	77.77	18.043		
13,600.00	9,415.93	14,996.00	10,768.65	83.66	84.79	-164.61	-4,477.38	315.15	1,402.80	1,323.30	79.51	17.644		
13,700.00	9,417.36	15,095.97	10,769.00	85.43	86.55	-164.51	-4,577.35	315.95	1,402.32	1,321.07	81.25	17.259		
13,800.00	9,418.78	15,195.94	10,769.35	87.20	88.32	-164.42	-4,677.32	316.75	1,401.84	1,318.83	83.00	16.889		
13,900.00	9,420.21	15,295.91	10,769.70	88.96	90.08	-164.33	-4,777.29	317.55	1,401.36	1,316.59	84.77	16.532		
14,000.00	9,421.64	15,395.89	10,770.05	90.74	91.85	-164.23	-4,877.25	318.36	1,400.89	1,314.35	86.54	16.188		
14,100.00	9,423.06	15,495.86	10,770.39	92.51	93.62	-164.14	-4,977.22	319.16	1,400.42	1,312.10	88.32	15.856		
14,200.00	9,424.49	15,595.83	10,770.74	94.28	95.39	-164.04	-5,077.19	319.96	1,399.95	1,309.84	90.11	15.535		
14,300.00	9,425.91	15,695.80	10,771.09	96.06	97.17	-163.95	-5,177.16	320.76	1,399.49	1,307.58	91.91	15.226		
14,400.00	9,427.34	15,795.78	10,771.44	97.84	98.95	-163.86	-5,277.13	321.57	1,399.04	1,305.31	93.72	14.927		
14,500.00	9,428.77	15,895.75	10,771.79	99.62	100.72	-163.76	-5,377.10	322.37	1,398.58	1,303.04	95.54	14.638		
14,600.00	9,430.19	15,995.72	10,772.14	101.40	102.50	-163.67	-5,477.07	323.17	1,398.13	1,300.76	97.37	14.359		
14,700.00	9,431.62	16,095.69	10,772.49	103.18	104.29	-163.57	-5,577.03	323.97	1,397.68	1,298.48	99.20	14.089		
14,800.00	9,433.05	16,195.67	10,772.84	104.97	106.07	-163.48	-5,677.00	324.78	1,397.24	1,296.19	101.05	13.827		
14,900.00	9,434.47	16,295.64	10,773.19	106.75	107.86	-163.38	-5,776.97	325.58	1,396.80	1,293.90	102.90	13.574		
15,000.00	9,435.90	16,395.61	10,773.54	108.54	109.64	-163.29	-5,876.94	326.38	1,396.37	1,291.61	104.76	13.329		
15,100.00	9,437.33	16,495.58	10,773.89	110.32	111.43	-163.20	-5,976.91	327.18	1,395.94	1,289.31	106.63	13.091		
15,200.00	9,438.75	16,595.56	10,774.24	112.11	113.22	-163.10	-6,076.88	327.99	1,395.51	1,287.00	108.51	12.861		
15,300.00	9,440.18	16,695.53	10,774.58	113.90	115.01	-163.01	-6,176.85	328.79	1,395.09	1,284.69	110.40	12.637		
15,400.00	9,441.60	16,795.50	10,774.93	115.69	116.80	-162.91	-6,276.82	329.59	1,394.67	1,282.38	112.29	12.420		
15,500.00	9,443.03	16,895.47	10,775.28	117.48	118.59	-162.82	-6,376.78	330.39	1,394.25	1,280.06	114.19	12.210		
15,600.00	9,444.46	16,995.45	10,775.63	119.28	120.39	-162.72	-6,476.75	331.20	1,393.84	1,277.74	116.10	12.005		
15,700.00	9,445.88	17,095.42	10,775.98	121.07	122.18	-162.63	-6,576.72	332.00	1,393.43	1,275.41	118.02	11.807		
15,800.00	9,447.31	17,195.39	10,776.33	122.86	123.98	-162.53	-6,676.69	332.80	1,393.03	1,273.08	119.95	11.614		
15,900.00	9,448.74	17,295.37	10,776.68	124.66	125.78	-162.44	-6,776.66	333.60	1,392.63	1,270.74	121.88	11.426		
16,000.00	9,450.16	17,395.34	10,777.03	126.45	127.57	-162.34	-6,876.63	334.41	1,392.23	1,268.40	123.83	11.243		
16,100.00	9,451.59	17,495.31	10,777.38	128.25	129.37	-162.25	-6,976.60	335.21	1,391.84	1,266.06	125.78	11.066		
16,200.00	9,453.02	17,595.28	10,777.73	130.04	131.17	-162.15	-7,076.57	336.01	1,391.45	1,263.71	127.73	10.893		
16,300.00	9,454.44	17,695.26	10,778.08	131.84	132.97	-162.06	-7,176.53	336.81	1,391.06	1,261.36	129.70	10.725		
16,400.00	9,455.87	17,795.23	10,778.42	133.64	134.77	-161.96	-7,276.50	337.62	1,390.68	1,259.00	131.68	10.561		
16,500.00	9,457.30	17,895.20	10,778.77	135.44	136.58	-161.87	-7,376.47	338.42	1,390.30	1,256.64	133.66	10.402		
16,600.00	9,458.72	17,995.17	10,779.12	137.23	138.38	-161.77	-7,476.44	339.22	1,389.93	1,254.28	135.65	10.247		
16,700.00	9,460.15	18,095.15	10,779.47	139.03	140.18	-161.68	-7,576.41	340.02	1,389.56	1,251.91	137.65	10.095		
16,800.00	9,461.57	18,195.12	10,779.82	140.83	141.99	-161.58	-7,676.38	340.83	1,389.19	1,249.54	139.65	9.948		
16,900.00	9,463.00	18,295.09	10,780.17	142.63	143.79	-161.48	-7,776.35	341.63	1,388.83	1,247.16	141.67	9.804		
17,000.00	9,464.43	18,395.06	10,780.52	144.44	145.60	-161.39	-7,876.32	342.43	1,388.47	1,244.78	143.69	9.663		
17,100.00	9,465.85	18,495.04	10,780.87	146.24	147.40	-161.29	-7,976.28	343.23	1,388.12	1,242.40	145.72	9.526		
17,200.00	9,467.28	18,595.01	10,781.22	148.04	149.21	-161.20	-8,076.25	344.04	1,387.77	1,240.01	147.75	9.392		
17,300.00	9,468.71	18,694.98	10,781.57	149.84	151.02	-161.10	-8,176.22	344.84	1,387.42	1,237.62	149.80	9.262		
17,400.00	9,470.13	18,794.95	10,781.92	151.64	152.82	-161.01	-8,276.19	345.64	1,387.08	1,235.23	151.85	9.134		
17,500.00	9,471.56	18,894.93	10,782.27	153.45	154.63	-160.91	-8,376.16	346.44	1,386.74	1,232.83	153.91	9.010		
17,600.00	9,472.99	18,994.90	10,782.61	155.25	156.44	-160.81	-8,476.13	347.25	1,386.40	1,230.42	155.98	8.888		
17,700.00	9,474.41	19,094.87	10,782.96	157.05	158.25	-160.72	-8,576.10	348.05	1,386.07	1,228.02	158.06	8.770		

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 1H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3601.6' GL + 25' RKB @ 3626.60usft
Reference Site:	Boomslang 14-23 Fed	MD Reference:	3601.6' GL + 25' RKB @ 3626.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Boomslang 14-23 Fed - 4H - OH - Plan #1												Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							
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	Warning
17,800.00	9,475.84	19,194.84	10,783.31	158.86	160.06	-160.62	-8,676.06	348.85	1,385.74	1,225.60	160.14	8.653	
17,900.00	9,477.26	19,294.82	10,783.66	160.66	161.87	-160.53	-8,776.03	349.65	1,385.42	1,223.19	162.23	8.540	
18,000.00	9,478.69	19,394.79	10,784.01	162.47	163.68	-160.43	-8,876.00	350.46	1,385.10	1,220.77	164.33	8.429	
18,100.00	9,480.12	19,494.76	10,784.36	164.27	165.49	-160.34	-8,975.97	351.26	1,384.78	1,218.35	166.44	8.320	
18,200.00	9,481.54	19,594.73	10,784.71	166.08	167.30	-160.24	-9,075.94	352.06	1,384.47	1,215.92	168.55	8.214	
18,300.00	9,482.97	19,694.71	10,785.06	167.88	169.11	-160.14	-9,175.91	352.86	1,384.17	1,213.49	170.68	8.110	
18,400.00	9,484.40	19,794.68	10,785.41	169.69	170.92	-160.05	-9,275.88	353.67	1,383.86	1,211.06	172.81	8.008	
18,500.00	9,485.82	19,894.65	10,785.76	171.50	172.74	-159.95	-9,375.85	354.47	1,383.56	1,208.62	174.94	7.909	
18,600.00	9,487.25	19,994.62	10,786.11	173.30	174.55	-159.85	-9,475.81	355.27	1,383.26	1,206.17	177.09	7.811	
18,700.00	9,488.68	20,094.60	10,786.46	175.11	176.36	-159.76	-9,575.78	356.07	1,382.97	1,203.73	179.24	7.716	
18,800.00	9,490.10	20,194.57	10,786.80	176.92	178.17	-159.66	-9,675.75	356.88	1,382.68	1,201.28	181.41	7.622	
18,900.00	9,491.53	20,294.54	10,787.15	178.72	179.99	-159.57	-9,775.72	357.68	1,382.40	1,198.82	183.58	7.530	
19,000.00	9,492.95	20,394.51	10,787.50	180.53	181.80	-159.47	-9,875.69	358.48	1,382.12	1,196.37	185.75	7.441	
19,100.00	9,494.38	20,494.49	10,787.85	182.34	183.62	-159.37	-9,975.66	359.28	1,381.84	1,193.90	187.94	7.353	
19,143.40	9,495.00	20,537.87	10,788.00	183.12	184.40	-159.33	-10,019.04	359.63	1,381.72	1,192.83	188.89	7.315	

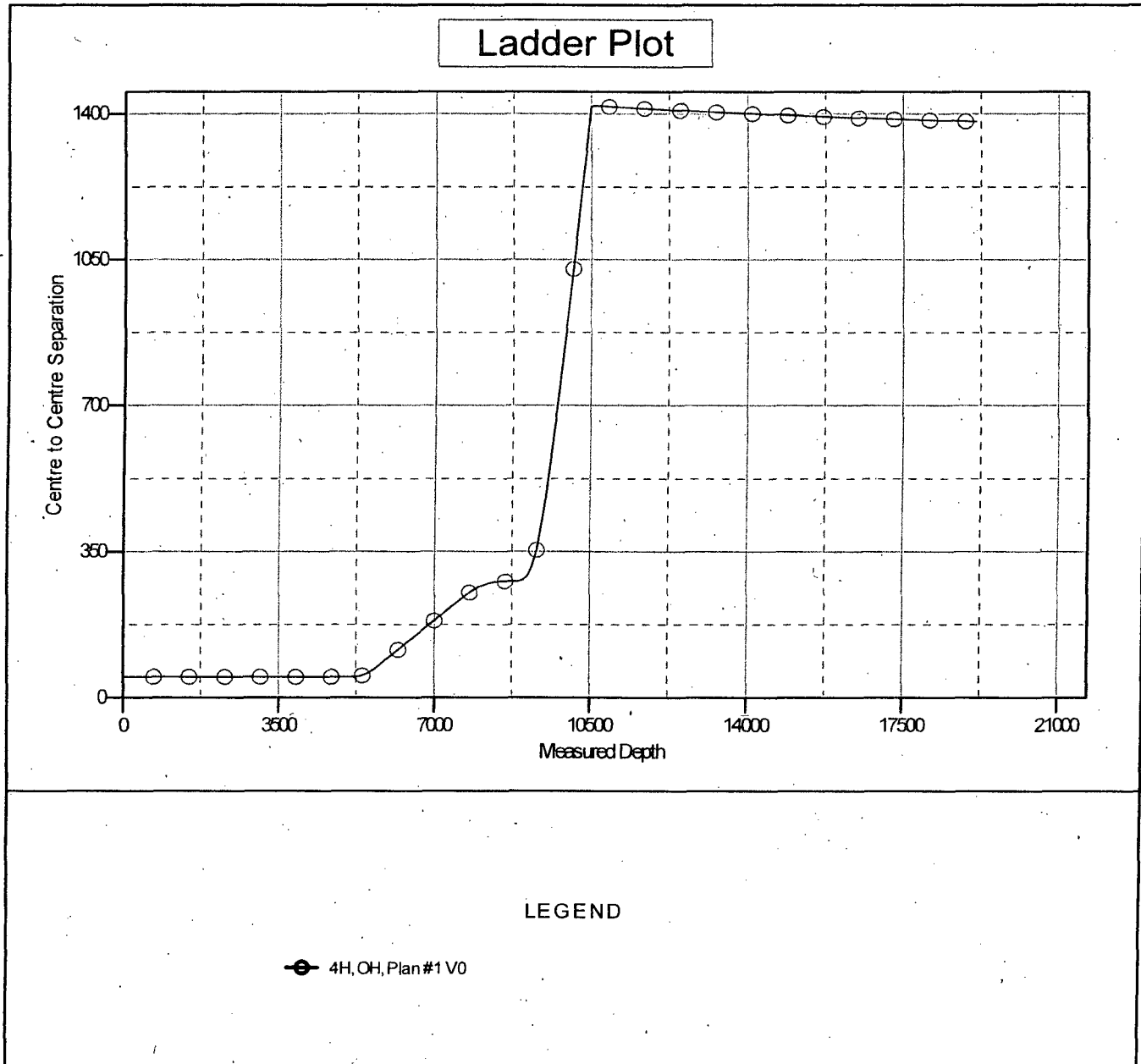
LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 1H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3601.6' GL + 25' RKB @ 3626.60usft
Reference Site:	Boomslang 14-23 Fed	MD Reference:	3601.6' GL + 25' RKB @ 3626.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at:	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to 3601.6' GL + 25' RKB @ 3626.60usft
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 1H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.42"



LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 1H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3601.6' GL + 25' RKB @ 3626.60usft
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Offset Depths are relative to Offset Datum

Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 1H

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

Grid Convergence at Surface is: 0.42°

