

AUG 22 2016

RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTNMOCD
HobbsFORM 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.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other	2. Name of Operator DEVON ENERGY PRODUCTION CO Contact: DAVID H COOK Email: david.cook@devn.com	5. Lease Serial No. NMLC063798
3a. Address 333 WEST SHERIDAN AVE OKLAHOMA CITY, OK 73102	3b. Phone No. (include area code) Ph: 405-552-7848	6. If Indian, Allottee or Tribe Name
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 23 T24S R33E SWSW 200FSL 610FWL	10. Field and Pool, or Exploratory RED HILLS	7. If Unit or CA/Agreement, Name and/or No.
11. County or Parish, and State LEA COUNTY, NM		8. Well Name and No. BLUE KRAIT 23-14 FED 1H
9. API Well No. 30-025-43014-00-X1		

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	PD

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 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 Production Co., L.P. respectfully requests approval to change the bottom hole location from 330 FNL & 380 FWL, Unit D, Section 23, T24S, R33E to 330 FNL & 380 FWL, Unit D, Section 14, T24S, R33E.

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

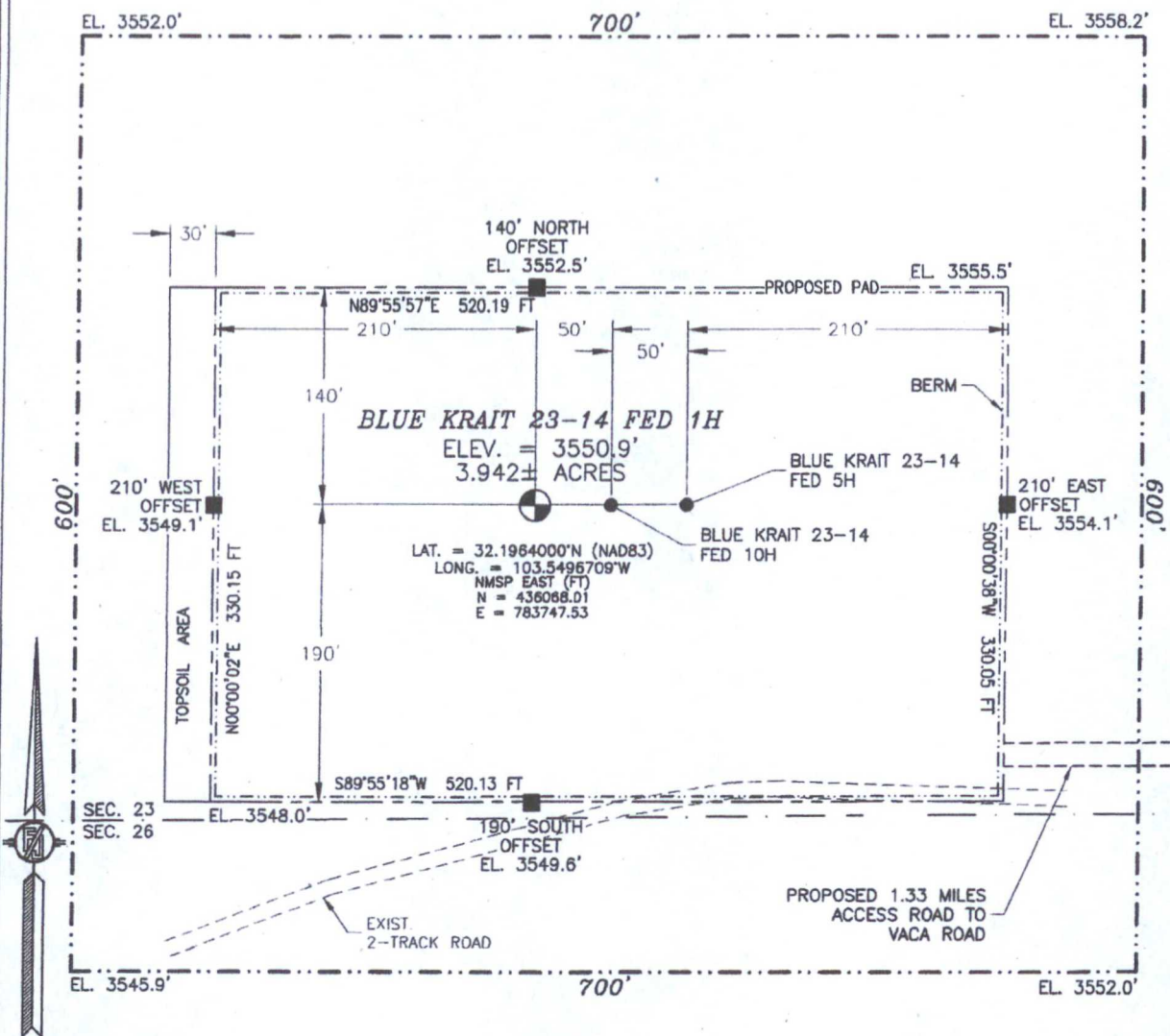
SEE ATTACHED FOR
CONDITIONS OF APPROVAL(Original (offset) stand w/ the
following changes)

14. I hereby certify that the foregoing is true and correct. Electronic Submission #343584 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 07/08/2016 (16PP0872SE)	
Name (Printed/Typed) DAVID H COOK	Title REGULATORY SPECIALIST
Signature (Electronic Submission)	Date 06/30/2016
THIS SPACE FOR FEDERAL OR STATE OFFICE USE	
Approved By _____	Title _____ Date _____
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 23, 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



0 10 50 100 200

SCALE 1" = 100'

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF STATE HIGHWAY 128 AND VACA ROAD GO SOUTHEAST ON VACA ROAD FOR APPROX. 1.1 MILES. GO WEST ON 2-TRACK ROAD FOR APPROX. 1.33 MILES TO SOUTHEAST PAD CORNER.

DEVON ENERGY PRODUCTION COMPANY, L.P.
BLUE KRAIT 23-14 FED 1H

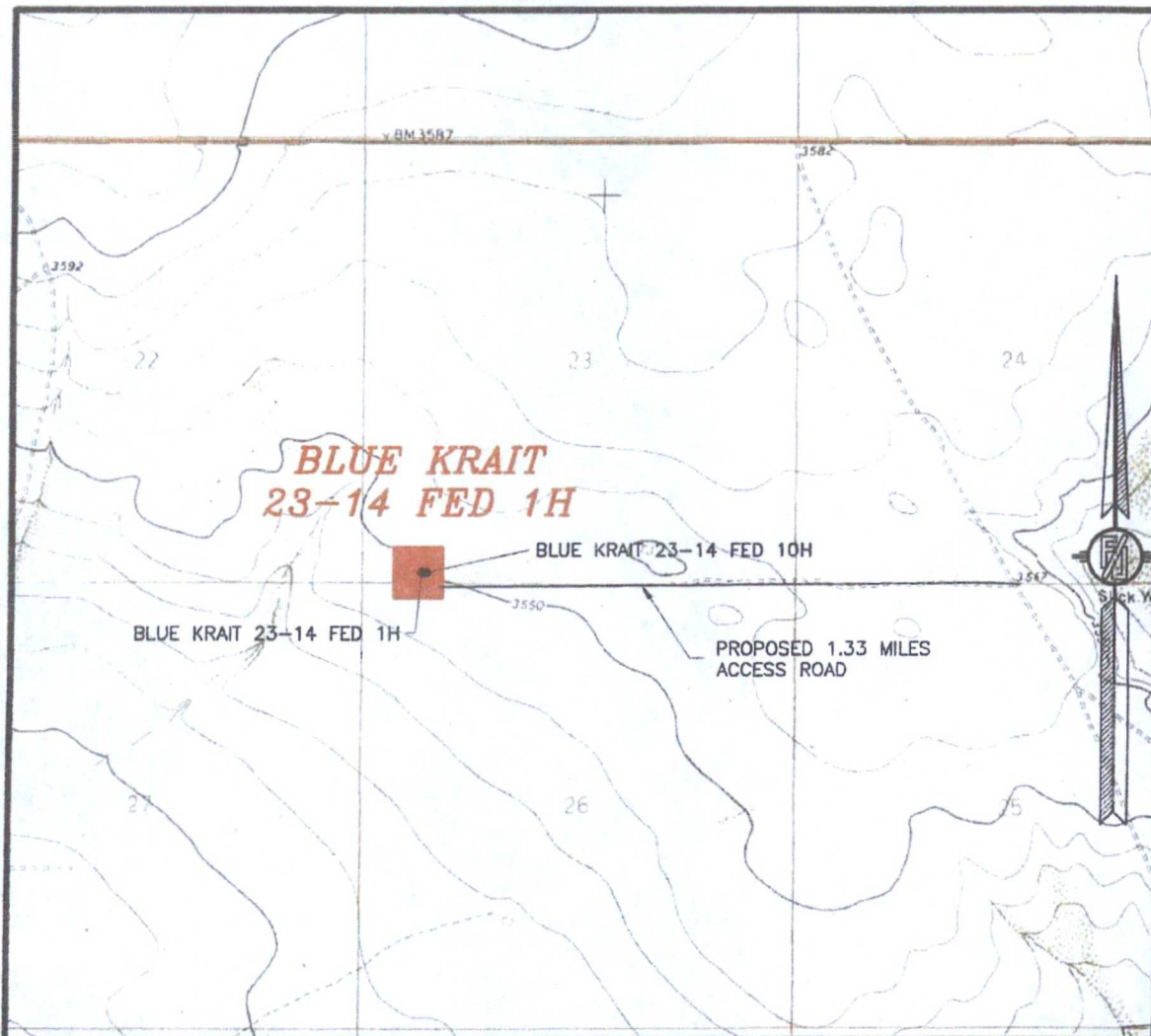
LOCATED 200 FT. FROM THE SOUTH LINE
AND 610 FT. FROM THE WEST LINE OF
SECTION 23, TOWNSHIP 24 SOUTH,
RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

JUNE 15, 2016

SURVEY NO. 3464G

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

SECTION 23, 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

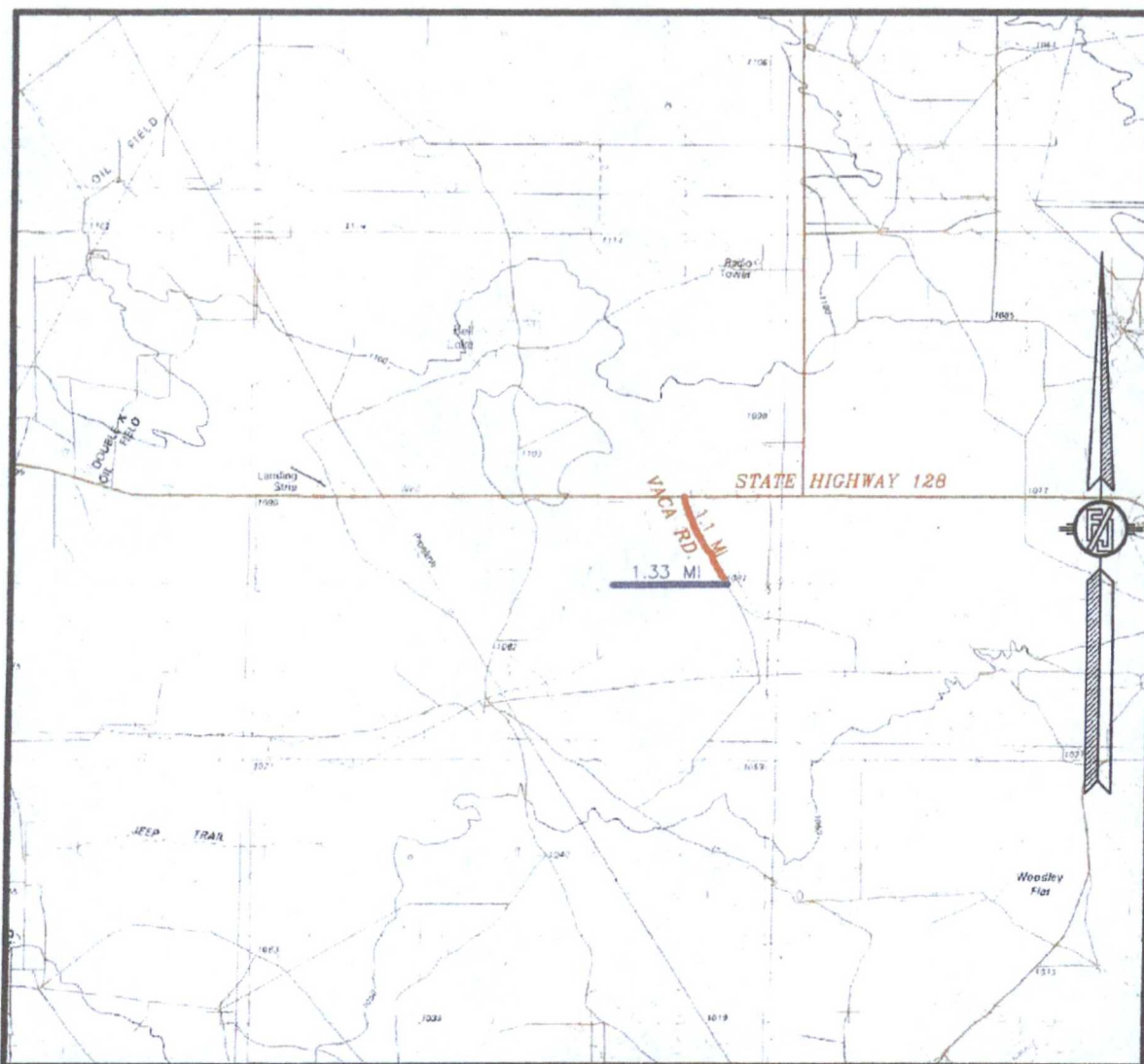
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LEA COUNTY, STATE OF NEW MEXICO
VICINITY MAP



DISTANCES IN MILES

NOT TO SCALE

DEVON ENERGY PRODUCTION COMPANY, L.P.

BLUE KRAIT 23-14 FED 1H

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AND 610 FT. FROM THE WEST LINE OF

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

LEA COUNTY, STATE OF NEW MEXICO

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FROM THE INTERSECTION OF STATE HIGHWAY 128 AND VACA ROAD GO
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CORNER.

JUNE 15, 2016

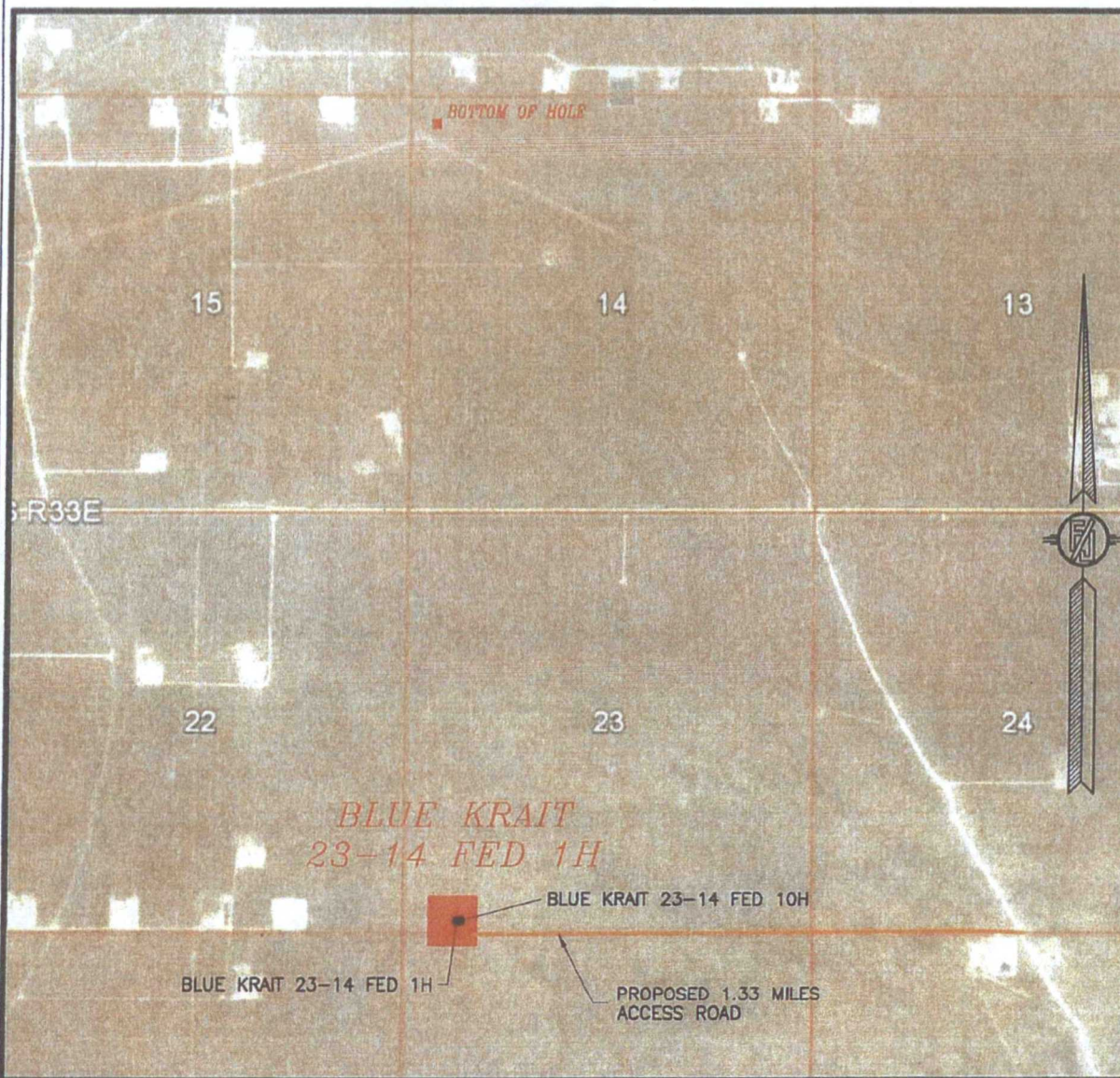
SURVEY NO. 3464G

MADRON SURVEYING, INC.

301 SOUTH CANAL
(575) 234-5341

CARLSBAD, NEW MEXICO

SECTION 23, 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
FEBRUARY 2014

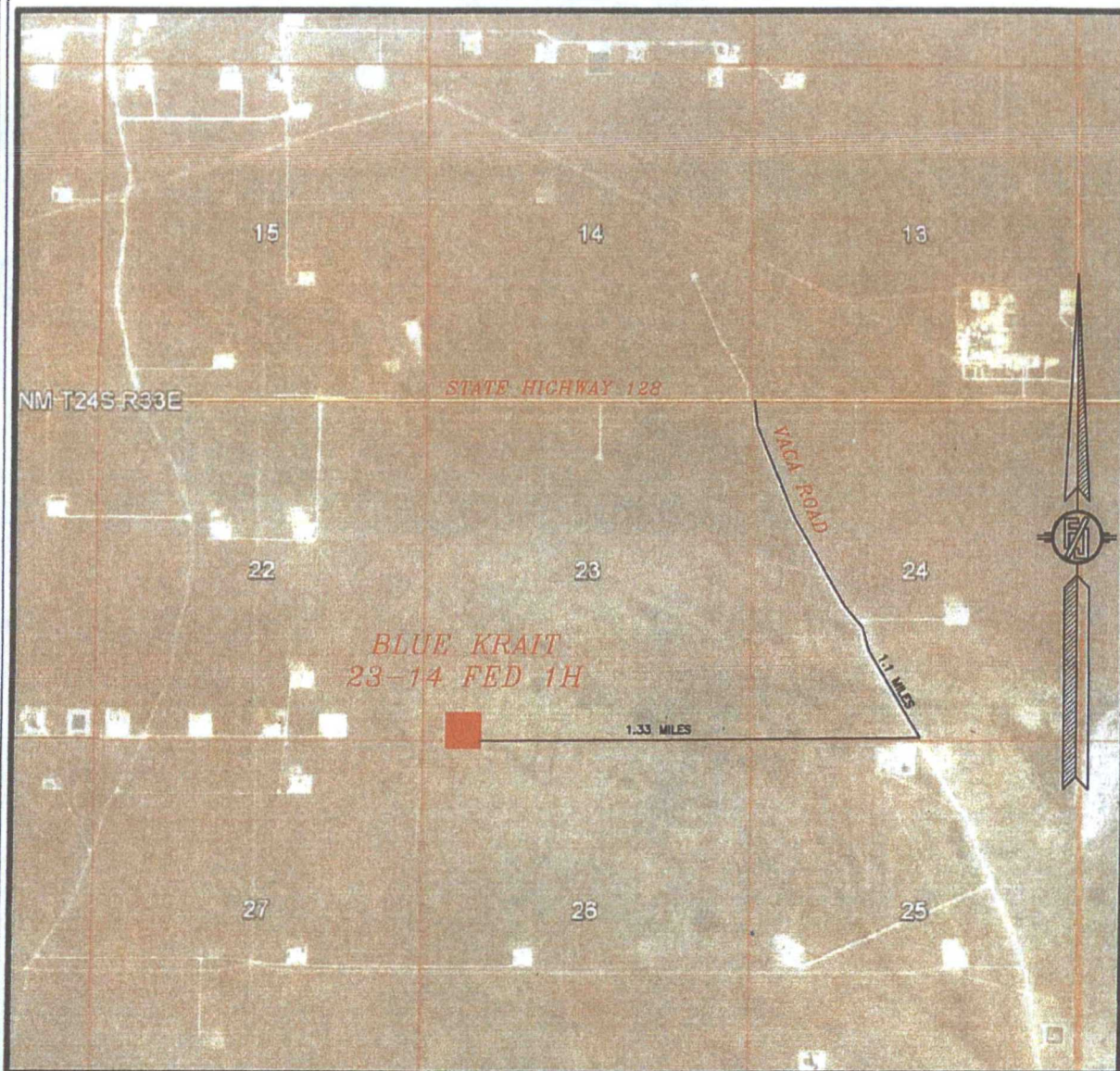
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RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

JUNE 15, 2016

SURVEY NO. 3464G

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

SECTION 23, TOWNSHIP 24 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
FEBRUARY 2014

DEVON ENERGY PRODUCTION COMPANY, L.P.
BLUE KRAIT 23-14 FED 1H
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AND 610 FT. FROM THE WEST LINE OF
SECTION 23, TOWNSHIP 24 SOUTH,
RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

JUNE 15, 2016

SURVEY NO. 3464G

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

Devon Energy, Blue Krait 23-14 Fed 1H

1. Geologic Formations

TVD of target	9,463'	Pilot hole depth	N/A
MD at TD:	19,251'	Deepest expected fresh water:	100'

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Rustler	1,093		
Top of Salt	1,614		
Base of Salt	5,040		
Delaware	5,264		
Lower Brushy Canyon	9,007		
1 st Bone Spring Lime	9,196		
Leonard A	9,273		
Leonard A Mid Carbonate	9,353		
Leonard A Target Top	9,399		
Leonard A Target Base	9,493		
Leonard B	9,615		

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

Devon Energy, Blue Krait 23-14 Fed 1H

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn	SF Collapse	SF Burst	SF Tension
	From	To							
17.5"	0	1,400'	13.375"	48	H-40	STC	1.18	2.64	8.05
12.25"	0	4,300'	9.625"	40	J-55	BTC	1.15	1.77	4.15
12.25"	4,300'	5,200'	9.625"	40	HCK-55	BTC	1.58	1.47	4.50
8.75"	0	19,251'	5.5"	17	P-110	BTC	1.56	1.93	2.09
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, Blue Krait 23-14 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	730	13.5	9.07	1.72	12	Lead: Class C Cement + 4% Bentonite Gel + 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	490	13.5	9.07	1.72	12	1 st Stage Lead: Class C Cement + 4% Bentonite Gel + 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 = 300ft					
	320	14.8	6.32	1.33	6	2 nd Stage Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
9-5/8" Inter.	1090	12.9	9.81	1.85	14	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	430	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
9-5/8" Surface Two Stage	970	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 = 1450ft					
	180	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
	140	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	370	10.9	20.6	3.31	24	Lead: (50:40:10) Class C: Silicalite: Enhancer 923 + 10% BWOC Bentonite + 0.05% BWOC SA-1015 + 0.3% BWOC HR-800 + 0.2% BWOC FE-2 + 0.125 lb/sk Pol-E-Flake + 0.5 lb/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

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

Casing String	TOC	% Excess
13-3/8" Surface	0'	100%
13-3/8" Surface – Two Stage Option	1 st Stage = 300' / 2 nd Stage = 0'	100%
9-5/8" Intermediate	0'	75%
9-5/8" Intermediate – Two Stage Option	1 st Stage = 1450' / 2 nd Stage = 0'	75%
5-1/2" Production Casing	5000'	25%

4. Pressure Control Equipment

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

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

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

Y	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
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Devon Energy, Blue Krait 23-14 Fed 1H

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 Energy, Blue Krait 23-14 Fed 1H

	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
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5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	1,400'	FW Gel	8.6-8.8	28-34	N/C
1,400'	5,200'	Saturated Brine	10.0-10.2	28-34	N/C
5,200'	19,251'	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?
BH Pressure at deepest TVD	4576 psi
Abnormal Temperature	No

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

Hydrogen Sulfide (H ₂ S) monitors will be installed prior to drilling out the surface shoe. If H ₂ S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
N	H ₂ S is present
Y	H ₂ S Plan attached

8. Other facets of operation

Is this a walking operation? No.

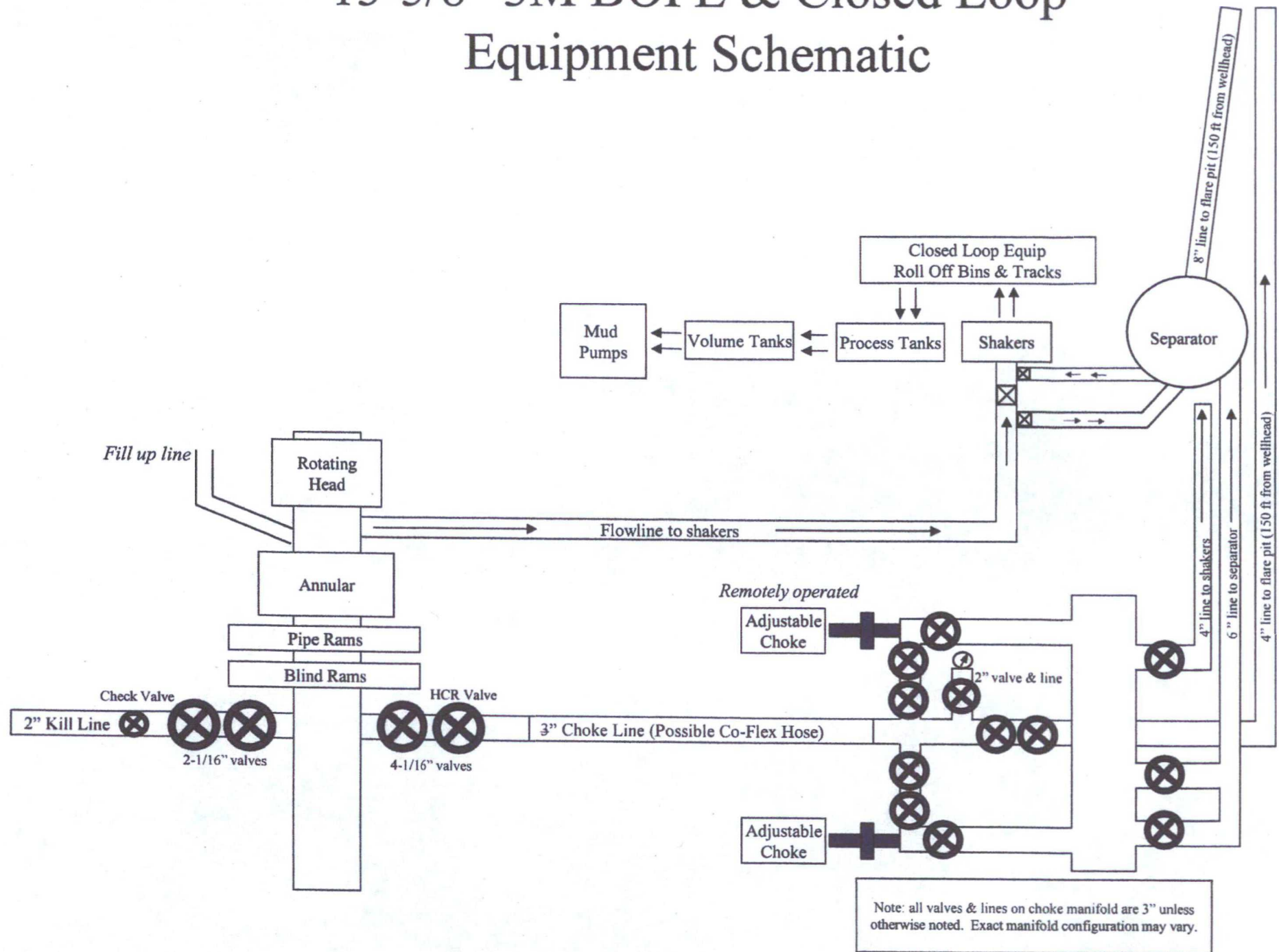
Will be pre-setting casing? No.

Attachments

☒ Directional Plan

☐ Other, describe

13-5/8" 3M BOPE & Closed Loop Equipment Schematic



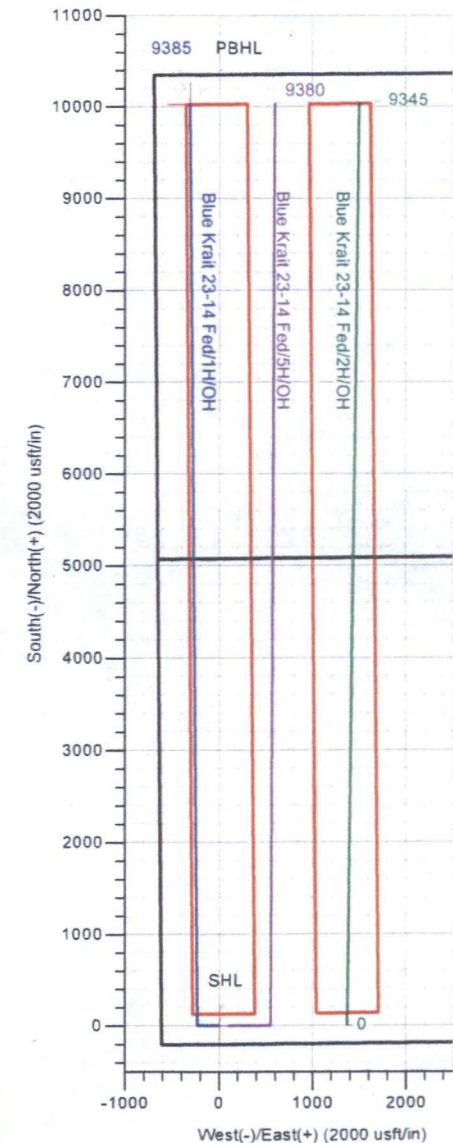
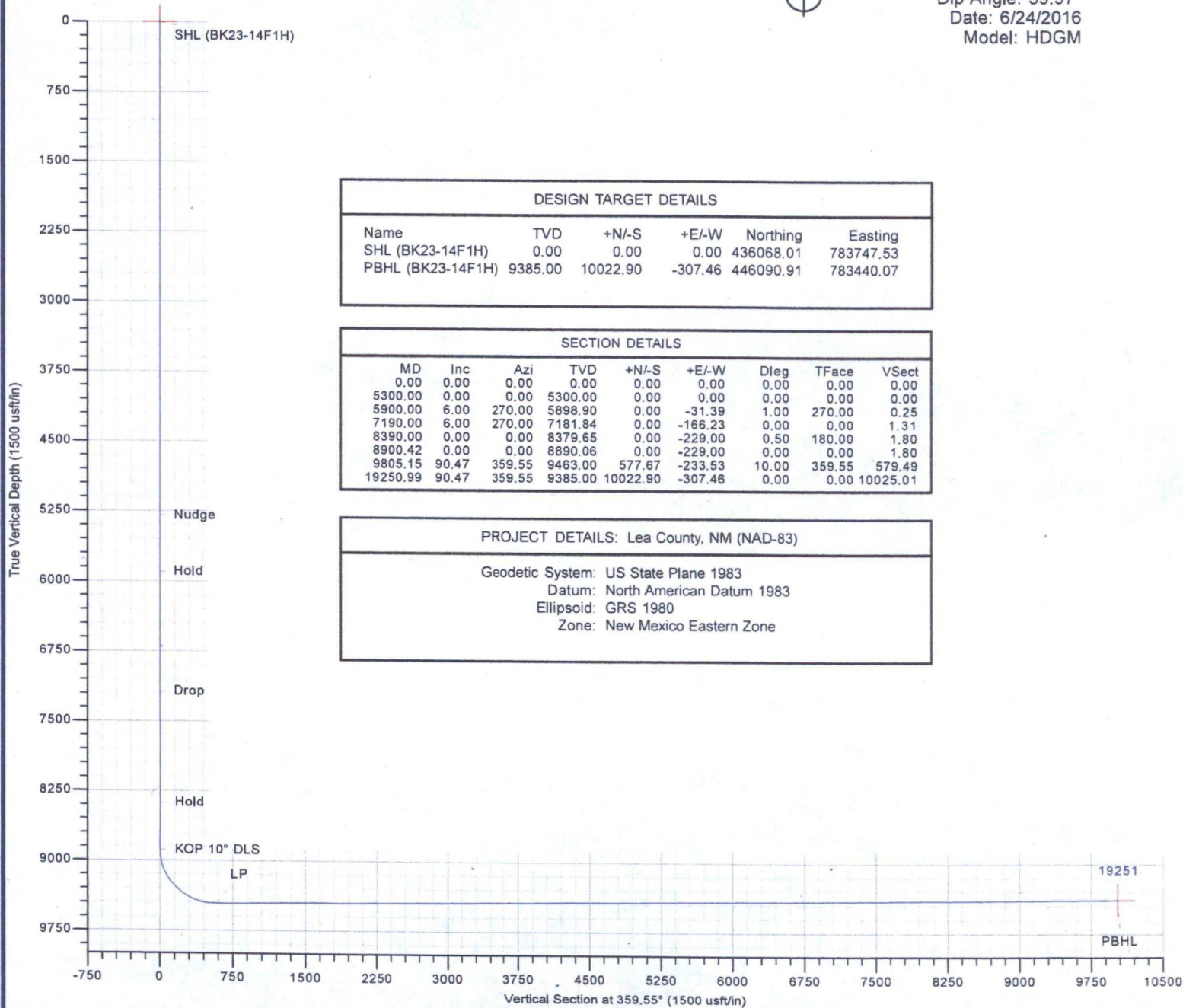


Project: Lea County, NM (NAD-83)
 Site: Blue Krait 23-14 Fed
 Well: 1H
 Wellbore: OH
 Design: Plan #1



Azimuths to Grid North
 True North: -0.42°
 Magnetic North: 6.51°

Magnetic Field
 Strength: 48203.5snT
 Dip Angle: 59.97°
 Date: 6/24/2016
 Model: HDGM



DEVON ENERGY

Lea County, NM (NAD-83)

Blue Krait 23-14 Fed

1H

OH

Plan: Plan #1

Standard Planning Report

27 June, 2016

LEAM Drilling Systems LLC
Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 1H
Company:	DEVON ENERGY	TVD Reference:	3550.9' GE + 25' KB @ 3575.90usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3550.9' GE + 25' KB @ 3575.90usft
Site:	Blue Krait 23-14 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	Blue Krait 23-14 Fed		
Site Position:		Northing:	436,068.01 usft
From:	Map	Easting:	783,747.53 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 11' 47.040 N
		Longitude:	103° 32' 58.815 W
		Grid Convergence:	0.42 "

Well	1H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	3,575.90 usft
		Latitude:	32° 11' 47.040 N
		Longitude:	103° 32' 58.815 W
		Ground Level:	3,550.90 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	6/24/2016	6.93	59.97	48,204

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	359.55

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,900.00	6.00	270.00	5,898.90	0.00	-31.39	1.00	1.00	0.00	270.00	
7,190.00	6.00	270.00	7,181.84	0.00	-166.23	0.00	0.00	0.00	0.00	
8,390.00	0.00	0.00	8,379.65	0.00	-229.00	0.50	-0.50	0.00	180.00	
8,900.42	0.00	0.00	8,890.06	0.00	-229.00	0.00	0.00	0.00	0.00	
9,805.15	90.47	359.55	9,463.00	577.67	-233.53	10.00	10.00	-0.05	359.55	
19,250.99	90.47	359.55	9,385.00	10,022.90	-307.46	0.00	0.00	0.00	0.00	PBHL (BK23-14F1H)

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Single User Db
 Company: DEVON ENERGY
 Project: Lea County, NM (NAD-83)
 Site: Blue Krait 23-14 Fed
 Well: 1H
 Wellbore: OH
 Design: Plan #1

Local Co-ordinate Reference: Well 1H
 TVD Reference: 3550.9' GE + 25' KB @ 3575.90usft
 MD Reference: 3550.9' GE + 25' KB @ 3575.90usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHL (BK23-14F1H)									
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
1,093.90	0.00	0.00	1,093.90	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
1,614.90	0.00	0.00	1,614.90	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

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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
5,040.90	0.00	0.00	5,040.90	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
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,264.90	0.00	0.00	5,264.90	0.00	0.00	0.00	0.00	0.00	0.00
Delaware									
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
Nudge									
5,400.00	1.00	270.00	5,400.00	0.00	-0.87	0.01	1.00	1.00	0.00
5,500.00	2.00	270.00	5,499.96	0.00	-3.49	0.03	1.00	1.00	0.00
5,600.00	3.00	270.00	5,599.86	0.00	-7.85	0.06	1.00	1.00	0.00
5,700.00	4.00	270.00	5,699.68	0.00	-13.96	0.11	1.00	1.00	0.00
5,800.00	5.00	270.00	5,799.37	0.00	-21.80	0.17	1.00	1.00	0.00
5,900.00	6.00	270.00	5,898.90	0.00	-31.39	0.25	1.00	1.00	0.00
Hold									
6,000.00	6.00	270.00	5,998.36	0.00	-41.84	0.33	0.00	0.00	0.00
6,100.00	6.00	270.00	6,097.81	0.00	-52.29	0.41	0.00	0.00	0.00
6,200.00	6.00	270.00	6,197.26	0.00	-62.75	0.49	0.00	0.00	0.00
6,300.00	6.00	270.00	6,296.71	0.00	-73.20	0.57	0.00	0.00	0.00
6,400.00	6.00	270.00	6,396.17	0.00	-83.65	0.66	0.00	0.00	0.00
6,500.00	6.00	270.00	6,495.62	0.00	-94.10	0.74	0.00	0.00	0.00
6,600.00	6.00	270.00	6,595.07	0.00	-104.56	0.82	0.00	0.00	0.00
6,700.00	6.00	270.00	6,694.52	0.00	-115.01	0.90	0.00	0.00	0.00
6,800.00	6.00	270.00	6,793.97	0.00	-125.46	0.99	0.00	0.00	0.00
6,900.00	6.00	270.00	6,893.43	0.00	-135.92	1.07	0.00	0.00	0.00
7,000.00	6.00	270.00	6,992.88	0.00	-146.37	1.15	0.00	0.00	0.00
7,100.00	6.00	270.00	7,092.33	0.00	-156.82	1.23	0.00	0.00	0.00
7,190.00	6.00	270.00	7,181.84	0.00	-166.23	1.31	0.00	0.00	0.00
Drop									
7,200.00	5.95	270.00	7,191.78	0.00	-167.27	1.31	0.50	-0.50	0.00
7,300.00	5.45	270.00	7,291.29	0.00	-177.20	1.39	0.50	-0.50	0.00
7,400.00	4.95	270.00	7,390.88	0.00	-186.27	1.46	0.50	-0.50	0.00
7,500.00	4.45	270.00	7,490.54	0.00	-194.46	1.53	0.50	-0.50	0.00
7,600.00	3.95	270.00	7,590.27	0.00	-201.78	1.58	0.50	-0.50	0.00
7,700.00	3.45	270.00	7,690.06	0.00	-208.24	1.64	0.50	-0.50	0.00
7,800.00	2.95	270.00	7,789.91	0.00	-213.82	1.68	0.50	-0.50	0.00
7,900.00	2.45	270.00	7,889.79	0.00	-218.53	1.72	0.50	-0.50	0.00
8,000.00	1.95	270.00	7,989.72	0.00	-222.37	1.75	0.50	-0.50	0.00
8,100.00	1.45	270.00	8,089.68	0.00	-225.33	1.77	0.50	-0.50	0.00
8,200.00	0.95	270.00	8,189.65	0.00	-227.43	1.79	0.50	-0.50	0.00
8,300.00	0.45	270.00	8,289.65	0.00	-228.65	1.80	0.50	-0.50	0.00
8,390.00	0.00	0.00	8,379.65	0.00	-229.00	1.80	0.50	-0.50	0.00
Hold									
8,400.00	0.00	0.00	8,389.65	0.00	-229.00	1.80	0.00	0.00	0.00
8,500.00	0.00	0.00	8,489.65	0.00	-229.00	1.80	0.00	0.00	0.00
8,600.00	0.00	0.00	8,589.65	0.00	-229.00	1.80	0.00	0.00	0.00
8,700.00	0.00	0.00	8,689.65	0.00	-229.00	1.80	0.00	0.00	0.00
8,800.00	0.00	0.00	8,789.65	0.00	-229.00	1.80	0.00	0.00	0.00
8,900.42	0.00	0.00	8,890.07	0.00	-229.00	1.80	0.00	0.00	0.00
KOP 10° DLS									

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Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,950.00	4.96	359.55	8,939.58	2.14	-229.02	3.94	10.00	10.00	0.00
9,000.00	9.96	359.55	8,989.14	8.63	-229.07	10.43	10.00	10.00	0.00
9,019.10	11.87	359.55	9,007.90	12.25	-229.10	14.05	10.00	10.00	0.00
Lower Brushy Canyon									
9,050.00	14.96	359.55	9,037.95	19.41	-229.16	21.21	10.00	10.00	0.00
9,100.00	19.96	359.55	9,085.63	34.41	-229.27	36.21	10.00	10.00	0.00
9,150.00	24.96	359.55	9,131.83	53.50	-229.42	55.30	10.00	10.00	0.00
9,200.00	29.96	359.55	9,176.18	76.55	-229.60	78.35	10.00	10.00	0.00
9,224.22	32.38	359.55	9,196.90	89.08	-229.70	90.88	10.00	10.00	0.00
1st BSPG Lime									
9,250.00	34.96	359.55	9,218.36	103.38	-229.81	105.18	10.00	10.00	0.00
9,300.00	39.96	359.55	9,258.03	133.77	-230.05	135.58	10.00	10.00	0.00
9,321.03	42.06	359.55	9,273.90	147.57	-230.16	149.37	10.00	10.00	0.00
Leonard A									
9,350.00	44.96	359.55	9,294.91	167.51	-230.31	169.32	10.00	10.00	0.00
9,400.00	49.96	359.55	9,328.71	204.34	-230.60	206.15	10.00	10.00	0.00
9,440.94	54.05	359.55	9,353.90	236.59	-230.86	238.40	10.00	10.00	0.00
Leonard A Mid Carbonate									
9,450.00	54.96	359.55	9,359.16	243.97	-230.91	245.78	10.00	10.00	0.00
9,500.00	59.96	359.55	9,386.05	286.11	-231.24	287.92	10.00	10.00	0.00
9,528.94	62.85	359.55	9,399.90	311.52	-231.44	313.32	10.00	10.00	0.00
Leonard A Target Top									
9,550.00	64.96	359.55	9,409.16	330.43	-231.59	332.24	10.00	10.00	0.00
9,600.00	69.96	359.55	9,428.32	376.59	-231.95	378.40	10.00	10.00	0.00
9,650.00	74.96	359.55	9,443.39	424.25	-232.32	426.06	10.00	10.00	0.00
9,700.00	79.96	359.55	9,454.24	473.04	-232.71	474.85	10.00	10.00	0.00
9,750.00	84.96	359.55	9,460.80	522.59	-233.09	524.40	10.00	10.00	0.00
9,800.00	89.96	359.55	9,463.02	572.52	-233.48	574.34	10.00	10.00	0.00
9,805.15	90.47	359.55	9,463.00	577.67	-233.53	579.49	10.00	10.00	0.00
LP									
9,900.00	90.47	359.55	9,462.22	672.52	-234.27	674.34	0.00	0.00	0.00
10,000.00	90.47	359.55	9,461.39	772.51	-235.05	774.33	0.00	0.00	0.00
10,100.00	90.47	359.55	9,460.57	872.50	-235.83	874.33	0.00	0.00	0.00
10,200.00	90.47	359.55	9,459.74	972.50	-236.62	974.32	0.00	0.00	0.00
10,300.00	90.47	359.55	9,458.92	1,072.49	-237.40	1,074.32	0.00	0.00	0.00
10,400.00	90.47	359.55	9,458.09	1,172.48	-238.18	1,174.32	0.00	0.00	0.00
10,500.00	90.47	359.55	9,457.26	1,272.48	-238.96	1,274.31	0.00	0.00	0.00
10,600.00	90.47	359.55	9,456.44	1,372.47	-239.75	1,374.31	0.00	0.00	0.00
10,700.00	90.47	359.55	9,455.61	1,472.46	-240.53	1,474.31	0.00	0.00	0.00
10,800.00	90.47	359.55	9,454.79	1,572.46	-241.31	1,574.30	0.00	0.00	0.00
10,900.00	90.47	359.55	9,453.96	1,672.45	-242.09	1,674.30	0.00	0.00	0.00
11,000.00	90.47	359.55	9,453.13	1,772.44	-242.88	1,774.30	0.00	0.00	0.00
11,100.00	90.47	359.55	9,452.31	1,872.44	-243.66	1,874.29	0.00	0.00	0.00
11,200.00	90.47	359.55	9,451.48	1,972.43	-244.44	1,974.29	0.00	0.00	0.00
11,300.00	90.47	359.55	9,450.66	2,072.43	-245.23	2,074.29	0.00	0.00	0.00
11,400.00	90.47	359.55	9,449.83	2,172.42	-246.01	2,174.28	0.00	0.00	0.00
11,500.00	90.47	359.55	9,449.01	2,272.41	-246.79	2,274.28	0.00	0.00	0.00
11,600.00	90.47	359.55	9,448.18	2,372.41	-247.57	2,374.28	0.00	0.00	0.00
11,700.00	90.47	359.55	9,447.35	2,472.40	-248.36	2,474.27	0.00	0.00	0.00
11,800.00	90.47	359.55	9,446.53	2,572.39	-249.14	2,574.27	0.00	0.00	0.00
11,900.00	90.47	359.55	9,445.70	2,672.39	-249.92	2,674.27	0.00	0.00	0.00
12,000.00	90.47	359.55	9,444.88	2,772.38	-250.70	2,774.26	0.00	0.00	0.00
12,100.00	90.47	359.55	9,444.05	2,872.37	-251.49	2,874.26	0.00	0.00	0.00

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12,200.00	90.47	359.55	9,443.23	2,972.37	-252.27	2,974.26	0.00	0.00	0.00
12,300.00	90.47	359.55	9,442.40	3,072.36	-253.05	3,074.25	0.00	0.00	0.00
12,400.00	90.47	359.55	9,441.57	3,172.35	-253.84	3,174.25	0.00	0.00	0.00
12,500.00	90.47	359.55	9,440.75	3,272.35	-254.62	3,274.25	0.00	0.00	0.00
12,600.00	90.47	359.55	9,439.92	3,372.34	-255.40	3,374.24	0.00	0.00	0.00
12,700.00	90.47	359.55	9,439.10	3,472.33	-256.18	3,474.24	0.00	0.00	0.00
12,800.00	90.47	359.55	9,438.27	3,572.33	-256.97	3,574.24	0.00	0.00	0.00
12,900.00	90.47	359.55	9,437.45	3,672.32	-257.75	3,674.23	0.00	0.00	0.00
13,000.00	90.47	359.55	9,436.62	3,772.32	-258.53	3,774.23	0.00	0.00	0.00
13,100.00	90.47	359.55	9,435.79	3,872.31	-259.31	3,874.23	0.00	0.00	0.00
13,200.00	90.47	359.55	9,434.97	3,972.30	-260.10	3,974.22	0.00	0.00	0.00
13,300.00	90.47	359.55	9,434.14	4,072.30	-260.88	4,074.22	0.00	0.00	0.00
13,400.00	90.47	359.55	9,433.32	4,172.29	-261.66	4,174.22	0.00	0.00	0.00
13,500.00	90.47	359.55	9,432.49	4,272.28	-262.45	4,274.21	0.00	0.00	0.00
13,600.00	90.47	359.55	9,431.66	4,372.28	-263.23	4,374.21	0.00	0.00	0.00
13,700.00	90.47	359.55	9,430.84	4,472.27	-264.01	4,474.21	0.00	0.00	0.00
13,800.00	90.47	359.55	9,430.01	4,572.26	-264.79	4,574.20	0.00	0.00	0.00
13,900.00	90.47	359.55	9,429.19	4,672.26	-265.58	4,674.20	0.00	0.00	0.00
14,000.00	90.47	359.55	9,428.36	4,772.25	-266.36	4,774.20	0.00	0.00	0.00
14,100.00	90.47	359.55	9,427.54	4,872.24	-267.14	4,874.19	0.00	0.00	0.00
14,200.00	90.47	359.55	9,426.71	4,972.24	-267.92	4,974.19	0.00	0.00	0.00
14,300.00	90.47	359.55	9,425.88	5,072.23	-268.71	5,074.19	0.00	0.00	0.00
14,400.00	90.47	359.55	9,425.06	5,172.22	-269.49	5,174.18	0.00	0.00	0.00
14,500.00	90.47	359.55	9,424.23	5,272.22	-270.27	5,274.18	0.00	0.00	0.00
14,600.00	90.47	359.55	9,423.41	5,372.21	-271.06	5,374.17	0.00	0.00	0.00
14,700.00	90.47	359.55	9,422.58	5,472.21	-271.84	5,474.17	0.00	0.00	0.00
14,800.00	90.47	359.55	9,421.76	5,572.20	-272.62	5,574.17	0.00	0.00	0.00
14,900.00	90.47	359.55	9,420.93	5,672.19	-273.40	5,674.16	0.00	0.00	0.00
15,000.00	90.47	359.55	9,420.10	5,772.19	-274.19	5,774.16	0.00	0.00	0.00
15,100.00	90.47	359.55	9,419.28	5,872.18	-274.97	5,874.16	0.00	0.00	0.00
15,200.00	90.47	359.55	9,418.45	5,972.17	-275.75	5,974.15	0.00	0.00	0.00
15,300.00	90.47	359.55	9,417.63	6,072.17	-276.53	6,074.15	0.00	0.00	0.00
15,400.00	90.47	359.55	9,416.80	6,172.16	-277.32	6,174.15	0.00	0.00	0.00
15,500.00	90.47	359.55	9,415.97	6,272.15	-278.10	6,274.14	0.00	0.00	0.00
15,600.00	90.47	359.55	9,415.15	6,372.15	-278.88	6,374.14	0.00	0.00	0.00
15,700.00	90.47	359.55	9,414.32	6,472.14	-279.67	6,474.14	0.00	0.00	0.00
15,800.00	90.47	359.55	9,413.50	6,572.13	-280.45	6,574.13	0.00	0.00	0.00
15,900.00	90.47	359.55	9,412.67	6,672.13	-281.23	6,674.13	0.00	0.00	0.00
16,000.00	90.47	359.55	9,411.85	6,772.12	-282.01	6,774.13	0.00	0.00	0.00
16,100.00	90.47	359.55	9,411.02	6,872.11	-282.80	6,874.12	0.00	0.00	0.00
16,200.00	90.47	359.55	9,410.19	6,972.11	-283.58	6,974.12	0.00	0.00	0.00
16,300.00	90.47	359.55	9,409.37	7,072.10	-284.36	7,074.12	0.00	0.00	0.00
16,400.00	90.47	359.55	9,408.54	7,172.10	-285.14	7,174.11	0.00	0.00	0.00
16,500.00	90.47	359.55	9,407.72	7,272.09	-285.93	7,274.11	0.00	0.00	0.00
16,600.00	90.47	359.55	9,406.89	7,372.08	-286.71	7,374.11	0.00	0.00	0.00
16,700.00	90.47	359.55	9,406.07	7,472.08	-287.49	7,474.10	0.00	0.00	0.00
16,800.00	90.47	359.55	9,405.24	7,572.07	-288.28	7,574.10	0.00	0.00	0.00
16,900.00	90.47	359.55	9,404.41	7,672.06	-289.06	7,674.10	0.00	0.00	0.00
17,000.00	90.47	359.55	9,403.59	7,772.06	-289.84	7,774.09	0.00	0.00	0.00
17,100.00	90.47	359.55	9,402.76	7,872.05	-290.62	7,874.09	0.00	0.00	0.00
17,200.00	90.47	359.55	9,401.94	7,972.04	-291.41	7,974.09	0.00	0.00	0.00
17,300.00	90.47	359.55	9,401.11	8,072.04	-292.19	8,074.08	0.00	0.00	0.00
17,400.00	90.47	359.55	9,400.29	8,172.03	-292.97	8,174.08	0.00	0.00	0.00
17,500.00	90.47	359.55	9,399.46	8,272.02	-293.75	8,274.08	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Single User Db
 Company: DEVON ENERGY
 Project: Lea County, NM (NAD-83)
 Site: Blue Krait 23-14 Fed
 Well: 1H
 Wellbore: OH
 Design: Plan #1

Local Co-ordinate Reference: Well 1H
 TVD Reference: 3550.9' GE + 25' KB @ 3575.90usft
 MD Reference: 3550.9' GE + 25' KB @ 3575.90usft
 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)
17,600.00	90.47	359.55	9,398.63	8,372.02	-294.54	8,374.07	0.00	0.00	0.00
17,700.00	90.47	359.55	9,397.81	8,472.01	-295.32	8,474.07	0.00	0.00	0.00
17,800.00	90.47	359.55	9,396.98	8,572.00	-296.10	8,574.07	0.00	0.00	0.00
17,900.00	90.47	359.55	9,396.16	8,672.00	-296.89	8,674.06	0.00	0.00	0.00
18,000.00	90.47	359.55	9,395.33	8,771.99	-297.67	8,774.06	0.00	0.00	0.00
18,100.00	90.47	359.55	9,394.50	8,871.99	-298.45	8,874.06	0.00	0.00	0.00
18,200.00	90.47	359.55	9,393.68	8,971.98	-299.23	8,974.05	0.00	0.00	0.00
18,300.00	90.47	359.55	9,392.85	9,071.97	-300.02	9,074.05	0.00	0.00	0.00
18,400.00	90.47	359.55	9,392.03	9,171.97	-300.80	9,174.05	0.00	0.00	0.00
18,500.00	90.47	359.55	9,391.20	9,271.96	-301.58	9,274.04	0.00	0.00	0.00
18,600.00	90.47	359.55	9,390.38	9,371.95	-302.36	9,374.04	0.00	0.00	0.00
18,700.00	90.47	359.55	9,389.55	9,471.95	-303.15	9,474.04	0.00	0.00	0.00
18,800.00	90.47	359.55	9,388.72	9,571.94	-303.93	9,574.03	0.00	0.00	0.00
18,900.00	90.47	359.55	9,387.90	9,671.93	-304.71	9,674.03	0.00	0.00	0.00
19,000.00	90.47	359.55	9,387.07	9,771.93	-305.50	9,774.03	0.00	0.00	0.00
19,100.00	90.47	359.55	9,386.25	9,871.92	-306.28	9,874.02	0.00	0.00	0.00
19,200.00	90.47	359.55	9,385.42	9,971.91	-307.06	9,974.02	0.00	0.00	0.00
19,250.99	90.47	359.55	9,385.00	10,022.90	-307.46	10,025.01	0.00	0.00	0.00

TD - PBHL (BK23-14F1H)

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
SHL (BK23-14F1H)	0.00	0.01	0.00	0.00	0.00	436,068.01	783,747.53	32° 11' 47.040 N	103° 32' 58.815 W
- plan hits target center									
- Point									
PBHL (BK23-14F1H)	0.00	0.00	9,385.00	10,022.90	-307.46	446,090.91	783,440.07	32° 13' 26.240 N	103° 33' 1.544 W
- plan hits target center									
- Point									

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,093.90	1,105.40	Rustler		0.00	
1,614.90	1,626.40	Top of Salt		0.00	
5,040.90	5,052.40	Base of Salt		0.00	
5,264.90	5,276.40	Delaware		0.00	
9,019.10	9,019.40	Lower Brushy Canyon		0.00	
9,224.22	9,208.40	1st BSPG Lime		0.00	
9,321.03	9,285.40	Leonard A		0.00	
9,440.94	9,365.40	Leonard A Mid Carbonate		0.00	
9,528.94	9,411.40	Leonard A Target Top		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:	3550.9' GE + 25' KB @ 3575.90usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3550.9' GE + 25' KB @ 3575.90usft
Site:	Blue Krait 23-14 Fed	North Reference:	Grid
Well:	1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,300.00	5,300.00	0.00	0.00	Nudge
5,900.00	5,898.90	0.00	-31.39	Hold
7,190.00	7,181.84	0.00	-166.23	Drop
8,390.00	8,379.65	0.00	-229.00	Hold
8,900.42	8,890.07	0.00	-229.00	KOP 10" DLS
9,805.15	9,463.00	577.67	-233.53	LP
19,250.99	9,385.00	10,022.90	-307.46	TD

DEVON ENERGY

Lea County, NM (NAD-83)

Blue Krait 23-14 Fed

1H

OH

Plan #1

Anticollision Report

27 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:	3550.9' GE + 25' KB @ 3575.90usft
Reference Site:	Blue Krait 23-14 Fed	MD Reference:	3550.9' GE + 25' KB @ 3575.90usft
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
Depth Range:	Unlimited
Results Limited by:	Maximum center-center distance of 9,999.98 usft
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	ISCWSA
Scan Method:	Closest Approach 3D
Error Surface:	Elliptical Conic
Casing Method:	Not applied

Survey Tool Program		Date	6/27/2016		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	19,250.99	Plan #1 (OH)	LEAM MWD-ADJ	MWD - Standard	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Blue Krait 23 Fed						
6H - OH - Plan #1	5,248.35	5,259.85	4,006.39	3,983.06	171.669	CC
6H - OH - Plan #1	5,300.00	5,300.00	4,006.44	3,982.90	170.188	ES
6H - OH - Plan #1	16,000.00	13,974.62	4,949.84	4,736.25	23.174	SF
Blue Krait 23-14 Fed						
2H - OH - Plan #1	5,300.00	5,305.20	1,369.69	1,346.14	58.146	CC, ES
2H - OH - Plan #1	19,250.99	19,203.71	1,807.68	1,441.71	4.939	SF
5H - OH - Plan #1	3,500.00	3,500.60	99.97	84.52	6.469	CC, ES
5H - OH - Plan #1	19,250.99	19,253.45	903.76	536.76	2.463	SF

Offset Design Blue Krait 23 Fed - 6H - OH - Plan #1													
Survey Program: 0-LEAM MWD-ADJ													
Offset Site Error: 0.00 usft													
Offset Well Error: 0.00 usft													
Reference	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	11.50	11.50	0.00	0.01	89.59	28.74	4,006.29	4,006.39				
100.00	100.00	111.50	111.50	0.08	0.11	89.59	28.74	4,006.29	4,006.39	4,006.20	0.19	N/A	
200.00	200.00	211.50	211.50	0.31	0.33	89.59	28.74	4,006.29	4,006.39	4,005.75	0.64	6,221.543	
300.00	300.00	311.50	311.50	0.53	0.56	89.59	28.74	4,006.29	4,006.39	4,005.30	1.09	3,663.869	
400.00	400.00	411.50	411.50	0.76	0.78	89.59	28.74	4,006.29	4,006.39	4,004.85	1.54	2,596.464	
500.00	500.00	511.50	511.50	0.98	1.01	89.59	28.74	4,006.29	4,006.39	4,004.40	1.99	2,010.685	
600.00	600.00	611.50	611.50	1.21	1.23	89.59	28.74	4,006.29	4,006.39	4,003.95	2.44	1,640.564	
700.00	700.00	711.50	711.50	1.43	1.46	89.59	28.74	4,006.29	4,006.39	4,003.50	2.89	1,385.521	
800.00	800.00	811.50	811.50	1.66	1.68	89.59	28.74	4,006.29	4,006.39	4,003.05	3.34	1,199.107	
900.00	900.00	911.50	911.50	1.88	1.91	89.59	28.74	4,006.29	4,006.39	4,002.60	3.79	1,056.906	
1,000.00	1,000.00	1,011.50	1,011.50	2.11	2.13	89.59	28.74	4,006.29	4,006.39	4,002.15	4.24	944.857	
1,100.00	1,100.00	1,111.50	1,111.50	2.33	2.36	89.59	28.74	4,006.29	4,006.39	4,001.70	4.69	854.288	
1,200.00	1,200.00	1,211.50	1,211.50	2.56	2.58	89.59	28.74	4,006.29	4,006.39	4,001.25	5.14	779.564	
1,300.00	1,300.00	1,311.50	1,311.50	2.78	2.81	89.59	28.74	4,006.29	4,006.39	4,000.80	5.59	716.860	
1,400.00	1,400.00	1,411.50	1,411.50	3.01	3.03	89.59	28.74	4,006.29	4,006.39	4,000.35	6.04	663.493	
1,500.00	1,500.00	1,511.50	1,511.50	3.23	3.26	89.59	28.74	4,006.29	4,006.39	3,999.91	6.49	617.520	
1,600.00	1,600.00	1,611.50	1,611.50	3.46	3.48	89.59	28.74	4,006.29	4,006.39	3,999.46	6.94	577.506	
1,700.00	1,700.00	1,711.50	1,711.50	3.68	3.71	89.59	28.74	4,006.29	4,006.39	3,999.01	7.39	542.362	
1,800.00	1,800.00	1,811.50	1,811.50	3.91	3.93	89.59	28.74	4,006.29	4,006.39	3,998.56	7.84	511.250	

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:	3550.9' GE + 25' KB @ 3575.90usft
Reference Site:	Blue Krait 23-14 Fed	MD Reference:	3550.9' GE + 25' KB @ 3575.90usft
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 Blue Krait 23 Fed - 6H - OH - Plan #1														Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		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)					
1,900.00	1,900.00	1,911.50	1,911.50	4.13	4.16	89.59	28.74	4,006.29	4,006.39	3,998.11	8.29	483.514			
2,000.00	2,000.00	2,011.50	2,011.50	4.35	4.38	89.59	28.74	4,006.29	4,006.39	3,997.66	8.74	458.632			
2,100.00	2,100.00	2,111.50	2,111.50	4.58	4.61	89.59	28.74	4,006.29	4,006.39	3,997.21	9.19	436.186			
2,200.00	2,200.00	2,211.50	2,211.50	4.80	4.83	89.59	28.74	4,006.29	4,006.39	3,996.76	9.63	415.834			
2,300.00	2,300.00	2,311.50	2,311.50	5.03	5.05	89.59	28.74	4,006.29	4,006.39	3,996.31	10.08	397.297			
2,400.00	2,400.00	2,411.50	2,411.50	5.25	5.28	89.59	28.74	4,006.29	4,006.39	3,995.86	10.53	380.342			
2,500.00	2,500.00	2,511.50	2,511.50	5.48	5.50	89.59	28.74	4,006.29	4,006.39	3,995.41	10.98	364.775			
2,600.00	2,600.00	2,611.50	2,611.50	5.70	5.73	89.59	28.74	4,006.29	4,006.39	3,994.96	11.43	350.432			
2,700.00	2,700.00	2,711.50	2,711.50	5.93	5.95	89.59	28.74	4,006.29	4,006.39	3,994.51	11.88	337.174			
2,800.00	2,800.00	2,811.50	2,811.50	6.15	6.18	89.59	28.74	4,006.29	4,006.39	3,994.06	12.33	324.883			
2,900.00	2,900.00	2,911.50	2,911.50	6.38	6.40	89.59	28.74	4,006.29	4,006.39	3,993.61	12.78	313.457			
3,000.00	3,000.00	3,011.50	3,011.50	6.60	6.63	89.59	28.74	4,006.29	4,006.39	3,993.16	13.23	302.807			
3,100.00	3,100.00	3,111.50	3,111.50	6.83	6.85	89.59	28.74	4,006.29	4,006.39	3,992.71	13.68	292.857			
3,200.00	3,200.00	3,211.50	3,211.50	7.05	7.08	89.59	28.74	4,006.29	4,006.39	3,992.26	14.13	283.540			
3,300.00	3,300.00	3,311.50	3,311.50	7.28	7.30	89.59	28.74	4,006.29	4,006.39	3,991.81	14.58	274.797			
3,400.00	3,400.00	3,411.50	3,411.50	7.50	7.53	89.59	28.74	4,006.29	4,006.39	3,991.36	15.03	266.578			
3,500.00	3,500.00	3,511.50	3,511.50	7.73	7.75	89.59	28.74	4,006.29	4,006.39	3,990.91	15.48	258.836			
3,600.00	3,600.00	3,611.50	3,611.50	7.95	7.98	89.59	28.74	4,006.29	4,006.39	3,990.47	15.93	251.531			
3,700.00	3,700.00	3,711.50	3,711.50	8.18	8.20	89.59	28.74	4,006.29	4,006.39	3,990.02	16.38	244.627			
3,800.00	3,800.00	3,811.50	3,811.50	8.40	8.43	89.59	28.74	4,006.29	4,006.39	3,989.57	16.83	238.092			
3,900.00	3,900.00	3,911.50	3,911.50	8.63	8.65	89.59	28.74	4,006.29	4,006.39	3,989.12	17.28	231.897			
4,000.00	4,000.00	4,011.50	4,011.50	8.85	8.88	89.59	28.74	4,006.29	4,006.39	3,988.67	17.73	226.016			
4,100.00	4,100.00	4,111.50	4,111.50	9.07	9.10	89.59	28.74	4,006.29	4,006.39	3,988.22	18.18	220.426			
4,200.00	4,200.00	4,211.50	4,211.50	9.30	9.33	89.59	28.74	4,006.29	4,006.39	3,987.77	18.63	215.106			
4,300.00	4,300.00	4,311.50	4,311.50	9.52	9.55	89.59	28.74	4,006.29	4,006.39	3,987.32	19.07	210.036			
4,400.00	4,400.00	4,411.50	4,411.50	9.75	9.78	89.59	28.74	4,006.29	4,006.39	3,986.87	19.52	205.200			
4,500.00	4,500.00	4,511.50	4,511.50	9.97	10.00	89.59	28.74	4,006.29	4,006.39	3,986.42	19.97	200.582			
4,600.00	4,600.00	4,611.50	4,611.50	10.20	10.22	89.59	28.74	4,006.29	4,006.39	3,985.97	20.42	196.167			
4,700.00	4,700.00	4,711.50	4,711.50	10.42	10.45	89.59	28.74	4,006.29	4,006.39	3,985.52	20.87	191.942			
4,800.00	4,800.00	4,811.50	4,811.50	10.65	10.67	89.59	28.74	4,006.29	4,006.39	3,985.07	21.32	187.896			
4,900.00	4,900.00	4,911.50	4,911.50	10.87	10.90	89.59	28.74	4,006.29	4,006.39	3,984.62	21.77	184.016			
5,000.00	5,000.00	5,011.50	5,011.50	11.10	11.12	89.59	28.74	4,006.29	4,006.39	3,984.17	22.22	180.294			
5,100.00	5,100.00	5,111.50	5,111.50	11.32	11.35	89.59	28.74	4,006.29	4,006.39	3,983.72	22.67	176.719			
5,200.00	5,200.00	5,211.50	5,211.50	11.55	11.57	89.59	28.74	4,006.29	4,006.39	3,983.27	23.12	173.283			
5,248.35	5,248.35	5,259.85	5,259.85	11.66	11.68	89.59	28.74	4,006.29	4,006.39	3,983.06	23.34	171.669 CC			
5,300.00	5,300.00	5,300.00	5,300.00	11.77	11.77	89.59	28.74	4,006.32	4,006.44	3,982.90	23.54	170.188 ES			
5,400.00	5,400.00	5,357.44	5,357.43	11.98	11.88	179.59	28.74	4,006.81	4,008.15	3,984.29	23.86	167.983			
5,500.00	5,499.96	5,400.00	5,399.99	12.18	11.97	179.59	28.74	4,007.54	4,012.69	3,988.56	24.13	166.295			
5,600.00	5,599.86	5,474.84	5,474.80	12.38	12.11	179.59	28.74	4,009.60	4,019.87	3,995.42	24.46	164.363			
5,700.00	5,699.68	5,533.28	5,533.20	12.58	12.23	179.59	28.74	4,011.88	4,029.87	4,005.13	24.75	162.846			
5,800.00	5,799.37	5,600.00	5,599.83	12.79	12.36	179.59	28.74	4,015.22	4,042.63	4,017.59	25.05	161.409			
5,900.00	5,898.90	5,649.35	5,649.10	13.00	12.46	179.59	28.74	4,018.18	4,058.09	4,032.79	25.31	160.366			
6,000.00	5,898.36	5,700.00	5,699.62	13.21	12.57	179.59	28.74	4,021.67	4,075.43	4,049.83	25.61	159.158			
6,100.00	6,097.81	5,764.35	5,763.77	13.43	12.70	179.59	28.74	4,026.74	4,093.74	4,067.80	25.94	157.840			
6,200.00	6,197.26	5,821.52	5,820.72	13.65	12.82	179.59	28.74	4,031.85	4,113.04	4,086.79	26.25	156.671			
6,300.00	6,296.71	5,878.47	5,877.38	13.87	12.94	179.59	28.74	4,037.50	4,133.32	4,106.75	26.57	155.562			
6,400.00	6,396.17	5,935.17	5,933.75	14.09	13.06	179.59	28.74	4,043.69	4,154.56	4,127.67	26.89	154.511			
6,500.00	6,495.62	6,000.00	5,998.11	14.32	13.20	179.60	28.74	4,051.42	4,176.75	4,149.53	27.22	153.420			
6,600.00	6,595.07	6,097.44	6,094.82	14.55	13.42	179.60	28.74	4,063.29	4,199.25	4,171.62	27.63	152.008			
6,700.00	6,694.52	6,194.87	6,191.53	14.78	13.63	179.60	28.74	4,075.17	4,221.74	4,193.71	28.03	150.624			
6,800.00	6,793.97	6,292.31	6,288.24	15.02	13.86	179.60	28.74	4,087.04	4,244.24	4,215.80	28.43	149.270			
6,900.00	6,893.43	6,389.75	6,384.95	15.25	14.08	179.60	28.74	4,098.91	4,266.73	4,237.89	28.84	147.943			

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:	3550.9' GE + 25' KB @ 3575.90usft
Reference Site:	Blue Krait 23-14 Fed	MD Reference:	3550.9' GE + 25' KB @ 3575.90usft
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 Blue Krait 23 Fed - 6H - OH - Plan #1														Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)							
7,000.00	6,992.88	6,487.18	6,481.66	15.49	14.31	179.61	28.74	4,110.79	4,289.22	4,259.98	29.25	146.644			
7,100.00	7,092.33	6,584.62	6,578.38	15.73	14.54	179.61	28.74	4,122.66	4,311.72	4,282.06	29.66	145.371			
7,200.00	7,191.78	6,682.06	6,675.09	15.97	14.77	179.61	28.74	4,134.54	4,334.21	4,304.14	30.07	144.118			
7,300.00	7,291.29	6,779.61	6,771.91	16.18	15.01	179.61	28.74	4,146.43	4,356.19	4,325.70	30.50	142.849			
7,400.00	7,390.88	6,877.35	6,868.93	16.40	15.25	179.62	28.74	4,158.34	4,377.33	4,346.41	30.92	141.585			
7,500.00	7,490.54	6,975.28	6,966.12	16.61	15.49	179.62	28.74	4,170.27	4,397.60	4,366.27	31.34	140.327			
7,600.00	7,590.27	7,073.37	7,063.48	16.82	15.74	179.62	28.74	4,182.23	4,417.03	4,385.27	31.76	139.075			
7,700.00	7,690.06	7,171.63	7,161.01	17.03	15.98	179.62	28.74	4,194.20	4,435.59	4,403.41	32.18	137.830			
7,800.00	7,789.91	7,270.05	7,258.70	17.24	16.23	179.62	28.74	4,206.20	4,453.30	4,420.70	32.60	136.592			
7,900.00	7,889.79	7,415.61	7,403.24	17.44	16.56	179.63	28.74	4,223.31	4,469.76	4,436.66	33.10	135.018			
8,000.00	7,989.72	7,578.05	7,564.80	17.65	16.92	179.63	28.74	4,240.26	4,484.01	4,450.38	33.64	133.310			
8,100.00	8,089.68	7,741.29	7,727.37	17.85	17.28	179.63	28.74	4,254.99	4,495.99	4,461.82	34.17	131.582			
8,200.00	8,189.65	7,905.20	7,890.80	18.05	17.63	179.63	28.74	4,267.45	4,505.67	4,470.97	34.70	129.839			
8,300.00	8,289.65	8,069.63	8,054.92	18.25	17.98	179.63	28.74	4,277.60	4,513.07	4,477.83	35.24	128.084			
8,400.00	8,389.65	8,234.45	8,219.55	18.44	18.33	89.64	28.74	4,285.41	4,518.16	4,482.40	35.76	126.347			
8,500.00	8,489.65	8,399.49	8,384.50	18.65	18.67	89.64	28.74	4,290.86	4,521.46	4,485.14	36.31	124.514			
8,600.00	8,589.65	8,564.66	8,549.64	18.87	19.00	89.64	28.74	4,293.93	4,523.32	4,486.45	36.87	122.696			
8,700.00	8,689.65	8,716.17	8,701.15	19.09	19.29	89.64	28.74	4,294.67	4,523.77	4,486.38	37.39	120.998			
8,800.00	8,789.65	8,816.17	8,801.15	19.31	19.51	89.64	28.74	4,294.67	4,523.77	4,485.94	37.83	119.582			
8,900.00	8,889.65	8,916.71	8,901.68	19.53	19.72	89.63	29.15	4,294.67	4,523.76	4,485.49	38.27	118.195			
9,000.00	8,989.14	9,018.79	9,002.82	19.75	19.94	90.03	42.03	4,294.54	4,523.74	4,485.02	38.71	116.853			
9,100.00	9,085.63	9,120.12	9,099.36	19.97	20.16	89.98	72.34	4,294.25	4,523.69	4,484.54	39.15	115.560			
9,200.00	9,176.18	9,220.64	9,188.39	20.20	20.38	89.93	118.73	4,293.81	4,523.61	4,484.00	39.60	114.222			
9,300.00	9,258.03	9,320.38	9,267.38	20.44	20.63	89.88	179.41	4,293.23	4,523.51	4,483.37	40.14	112.700			
9,400.00	9,328.71	9,419.35	9,334.20	20.73	20.92	89.84	252.26	4,292.53	4,523.39	4,482.59	40.81	110.853			
9,500.00	9,386.05	9,517.61	9,387.17	21.12	21.31	89.80	334.86	4,291.74	4,523.26	4,481.60	41.66	108.580			
9,600.00	9,428.32	9,615.21	9,425.06	21.63	21.81	89.77	424.68	4,290.88	4,523.11	4,480.38	42.73	105.851			
9,700.00	9,454.24	9,712.23	9,447.10	22.26	22.44	89.74	519.05	4,289.98	4,522.96	4,478.93	44.03	102.723			
9,800.00	9,463.02	9,808.92	9,452.94	23.01	23.18	89.73	615.44	4,289.05	4,522.79	4,477.26	45.54	99.321			
9,900.00	9,462.22	9,908.92	9,451.21	23.87	24.05	89.72	715.41	4,288.10	4,522.63	4,475.34	47.28	95.651			
10,000.00	9,461.39	10,008.91	9,449.48	24.83	25.02	89.70	815.39	4,287.14	4,522.46	4,473.22	49.24	91.854			
10,100.00	9,460.57	10,108.91	9,447.76	25.88	26.08	89.69	915.37	4,286.18	4,522.29	4,470.91	51.37	88.028			
10,200.00	9,459.74	10,208.90	9,446.03	27.01	27.23	89.68	1,015.34	4,285.23	4,522.12	4,468.44	53.67	84.250			
10,300.00	9,458.92	10,308.90	9,444.30	28.22	28.44	89.67	1,115.32	4,284.27	4,521.95	4,465.83	56.12	80.577			
10,400.00	9,458.09	10,408.90	9,442.58	29.49	29.72	89.66	1,215.30	4,283.31	4,521.78	4,463.09	58.69	77.045			
10,500.00	9,457.26	10,508.89	9,440.85	30.82	31.05	89.65	1,315.27	4,282.36	4,521.61	4,460.24	61.37	73.678			
10,600.00	9,456.44	10,608.89	9,439.12	32.20	32.43	89.64	1,415.25	4,281.40	4,521.44	4,457.29	64.15	70.487			
10,700.00	9,455.61	10,708.88	9,437.40	33.61	33.85	89.62	1,515.22	4,280.44	4,521.27	4,454.27	67.01	67.476			
10,800.00	9,454.79	10,808.88	9,435.67	35.07	35.31	89.61	1,615.20	4,279.49	4,521.10	4,451.16	69.94	64.644			
10,900.00	9,453.96	10,908.87	9,433.94	36.56	36.80	89.60	1,715.18	4,278.53	4,520.94	4,448.00	72.94	61.984			
11,000.00	9,453.13	11,008.87	9,432.21	38.08	38.33	89.59	1,815.15	4,277.57	4,520.77	4,444.77	75.99	59.490			
11,100.00	9,452.31	11,108.87	9,430.49	39.62	39.87	89.58	1,915.13	4,276.61	4,520.60	4,441.50	79.10	57.151			
11,200.00	9,451.48	11,208.86	9,428.76	41.19	41.44	89.57	2,015.11	4,275.66	4,520.43	4,438.18	82.25	54.960			
11,300.00	9,450.66	11,308.86	9,427.03	42.78	43.03	89.56	2,115.08	4,274.70	4,520.26	4,434.82	85.44	52.906			
11,400.00	9,449.83	11,408.85	9,425.31	44.38	44.64	89.54	2,215.06	4,273.74	4,520.10	4,431.43	88.67	50.979			
11,500.00	9,449.01	11,508.85	9,423.58	46.01	46.26	89.53	2,315.03	4,272.79	4,519.93	4,428.01	91.92	49.170			
11,600.00	9,448.18	11,608.84	9,421.85	47.64	47.90	89.52	2,415.01	4,271.83	4,519.76	4,424.55	95.21	47.471			
11,700.00	9,447.35	11,708.84	9,420.13	49.29	49.55	89.51	2,514.99	4,270.87	4,519.60	4,421.07	98.52	45.874			
11,800.00	9,446.53	11,808.84	9,418.40	50.96	51.21	89.50	2,614.96	4,269.92	4,519.43	4,417.57	101.86	44.370			
11,900.00	9,445.70	11,908.83	9,416.67	52.63	52.88	89.49	2,714.94	4,268.96	4,519.26	4,414.05	105.21	42.953			
12,000.00	9,444.88	12,008.83	9,414.95	54.31	54.57	89.48	2,814.92	4,268.00	4,519.10	4,410.51	108.59	41.617			
12,100.00	9,444.05	12,108.82	9,413.22	56.00	56.26	89.46	2,914.89	4,267.05	4,518.93	4,406.95	111.98	40.355			

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:	3550.9' GE + 25' KB @ 3575.90usft
Reference Site:	Blue Krait 23-14 Fed	MD Reference:	3550.9' GE + 25' KB @ 3575.90usft
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 Blue Krait 23 Fed - 6H - OH - Plan #1														Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		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)					
12,200.00	9,443.23	12,208.82	9,411.49	57.70	57.96	89.45	3,014.87	4,266.09	4,518.77	4,403.38	115.39	39.161			
12,300.00	9,442.40	12,308.82	9,409.77	59.41	59.67	89.44	3,114.84	4,265.13	4,518.60	4,399.79	118.81	38.032			
12,400.00	9,441.57	12,408.81	9,408.04	61.12	61.38	89.43	3,214.82	4,264.17	4,518.43	4,396.19	122.25	36.961			
12,500.00	9,440.75	12,508.81	9,406.31	62.84	63.10	89.42	3,314.80	4,263.22	4,518.27	4,392.57	125.70	35.946			
12,600.00	9,439.92	12,608.80	9,404.59	64.57	64.83	89.41	3,414.77	4,262.26	4,518.10	4,388.95	129.15	34.982			
12,700.00	9,439.10	12,708.80	9,402.86	66.30	66.56	89.40	3,514.75	4,261.30	4,517.94	4,385.32	132.62	34.066			
12,800.00	9,438.27	12,808.79	9,401.13	68.04	68.30	89.38	3,614.73	4,260.35	4,517.77	4,381.67	136.10	33.194			
12,900.00	9,437.45	12,908.79	9,399.41	69.78	70.04	89.37	3,714.70	4,259.39	4,517.61	4,378.02	139.59	32.364			
13,000.00	9,436.62	13,008.79	9,397.68	71.52	71.78	89.36	3,814.68	4,258.43	4,517.45	4,374.36	143.09	31.572			
13,100.00	9,435.79	13,108.78	9,395.95	73.27	73.53	89.35	3,914.66	4,257.48	4,517.28	4,370.69	146.59	30.816			
13,200.00	9,434.97	13,208.78	9,394.23	75.03	75.29	89.34	4,014.63	4,256.52	4,517.12	4,367.02	150.10	30.094			
13,300.00	9,434.14	13,308.77	9,392.50	76.78	77.04	89.33	4,114.61	4,255.56	4,516.95	4,363.34	153.62	29.404			
13,400.00	9,433.32	13,408.77	9,390.77	78.54	78.80	89.32	4,214.58	4,254.61	4,516.79	4,359.65	157.14	28.744			
13,500.00	9,432.49	13,508.76	9,389.04	80.30	80.56	89.30	4,314.56	4,253.65	4,516.63	4,355.96	160.67	28.112			
13,600.00	9,431.66	13,608.76	9,387.32	82.07	82.33	89.29	4,414.54	4,252.69	4,516.46	4,352.26	164.20	27.506			
13,700.00	9,430.84	13,708.76	9,385.59	83.84	84.10	89.28	4,514.51	4,251.73	4,516.30	4,348.56	167.74	26.925			
13,800.00	9,430.01	13,808.75	9,383.86	85.61	85.87	89.27	4,614.49	4,250.78	4,516.14	4,344.85	171.28	26.367			
13,900.00	9,429.19	13,908.75	9,382.14	87.38	87.64	89.26	4,714.47	4,249.82	4,515.97	4,341.14	174.83	25.831			
13,970.95	9,428.60	13,974.62	9,381.00	88.64	88.81	89.25	4,780.32	4,249.19	4,515.86	4,338.60	177.26	25.476			
14,000.00	9,428.36	13,974.62	9,381.00	89.15	88.81	89.25	4,780.32	4,249.19	4,515.94	4,338.16	177.78	25.402			
14,100.00	9,427.54	13,974.62	9,381.00	90.93	88.81	89.25	4,780.32	4,249.19	4,517.64	4,338.09	179.55	25.160			
14,200.00	9,426.71	13,974.62	9,381.00	92.71	88.81	89.25	4,780.32	4,249.19	4,521.55	4,340.22	181.33	24.935			
14,300.00	9,425.88	13,974.62	9,381.00	94.49	88.81	89.25	4,780.32	4,249.19	4,527.67	4,344.56	183.11	24.726			
14,400.00	9,425.06	13,974.62	9,381.00	96.27	88.81	89.25	4,780.32	4,249.19	4,535.98	4,351.09	184.90	24.533			
14,500.00	9,424.23	13,974.62	9,381.00	98.05	88.81	89.25	4,780.32	4,249.19	4,546.48	4,359.80	186.68	24.354			
14,600.00	9,423.41	13,974.62	9,381.00	99.84	88.81	89.25	4,780.32	4,249.19	4,559.15	4,370.68	188.47	24.191			
14,700.00	9,422.58	13,974.62	9,381.00	101.62	88.81	89.25	4,780.32	4,249.19	4,573.97	4,383.72	190.25	24.041			
14,800.00	9,421.76	13,974.62	9,381.00	103.41	88.81	89.25	4,780.32	4,249.19	4,590.92	4,398.88	192.04	23.906			
14,900.00	9,420.93	13,974.62	9,381.00	105.20	88.81	89.25	4,780.32	4,249.19	4,609.98	4,416.15	193.83	23.783			
15,000.00	9,420.10	13,974.62	9,381.00	106.99	88.81	89.25	4,780.32	4,249.19	4,631.32	4,435.50	195.62	23.674			
15,100.00	9,419.28	13,974.62	9,381.00	108.78	88.81	89.25	4,780.32	4,249.19	4,654.32	4,456.90	197.42	23.576			
15,200.00	9,418.45	13,974.62	9,381.00	110.57	88.81	89.25	4,780.32	4,249.19	4,679.53	4,480.32	199.21	23.490			
15,300.00	9,417.63	13,974.62	9,381.00	112.37	88.81	89.25	4,780.32	4,249.19	4,706.74	4,505.73	201.00	23.416			
15,400.00	9,416.80	13,974.62	9,381.00	114.16	88.81	89.25	4,780.32	4,249.19	4,735.90	4,533.10	202.80	23.353			
15,500.00	9,415.97	13,974.62	9,381.00	115.96	88.81	89.25	4,780.32	4,249.19	4,766.98	4,562.38	204.60	23.299			
15,600.00	9,415.15	13,974.62	9,381.00	117.75	88.81	89.25	4,780.32	4,249.19	4,799.94	4,593.55	206.39	23.256			
15,700.00	9,414.32	13,974.62	9,381.00	119.55	88.81	89.25	4,780.32	4,249.19	4,834.75	4,626.56	208.19	23.223			
15,800.00	9,413.50	13,974.62	9,381.00	121.35	88.81	89.25	4,780.32	4,249.19	4,871.36	4,661.37	209.99	23.198			
15,900.00	9,412.67	13,974.62	9,381.00	123.15	88.81	89.25	4,780.32	4,249.19	4,909.74	4,697.95	211.79	23.182			
16,000.00	9,411.85	13,974.62	9,381.00	124.95	88.81	89.25	4,780.32	4,249.19	4,949.84	4,736.25	213.59	23.174 SF			
16,100.00	9,411.02	13,974.62	9,381.00	126.75	88.81	89.25	4,780.32	4,249.19	4,991.62	4,776.23	215.39	23.175			
16,200.00	9,410.19	13,974.62	9,381.00	128.55	88.81	89.25	4,780.32	4,249.19	5,035.04	4,817.84	217.19	23.182			
16,300.00	9,409.37	13,974.62	9,381.00	130.35	88.81	89.25	4,780.32	4,249.19	5,080.05	4,861.06	219.00	23.197			
16,400.00	9,408.54	13,974.62	9,381.00	132.15	88.81	89.25	4,780.32	4,249.19	5,126.63	4,905.83	220.80	23.219			
16,500.00	9,407.72	13,974.62	9,381.00	133.96	88.81	89.25	4,780.32	4,249.19	5,174.71	4,952.11	222.60	23.247			
16,600.00	9,406.89	13,974.62	9,381.00	135.76	88.81	89.25	4,780.32	4,249.19	5,224.27	4,999.87	224.41	23.280			
16,700.00	9,406.07	13,974.62	9,381.00	137.57	88.81	89.25	4,780.32	4,249.19	5,275.26	5,049.05	226.21	23.320			
16,800.00	9,405.24	13,974.62	9,381.00	139.37	88.81	89.25	4,780.32	4,249.19	5,327.64	5,099.62	228.02	23.365			
16,900.00	9,404.41	13,974.62	9,381.00	141.18	88.81	89.25	4,780.32	4,249.19	5,381.37	5,151.54	229.82	23.415			
17,000.00	9,403.59	13,974.62	9,381.00	142.98	88.81	89.25	4,780.32	4,249.19	5,436.40	5,204.77	231.63	23.470			
17,100.00	9,402.76	13,974.62	9,381.00	144.79	88.81	89.25	4,780.32	4,249.19	5,492.71	5,259.27	233.43	23.530			
17,200.00	9,401.94	13,974.62	9,381.00	146.59	88.81	89.25	4,780.32	4,249.19	5,550.24	5,315.00	235.24	23.594			

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:	3550.9' GE + 25' KB @ 3575.90usft
Reference Site:	Blue Krait 23-14 Fed	MD Reference:	3550.9' GE + 25' KB @ 3575.90usft
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 Blue Krait 23 Fed - 6H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: O-LEAM MWD-ADU													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)					
17,300.00	9,401.11	13,974.62	9,381.00	148.40	88.81	89.25	4,780.32	4,249.19	5,608.97	5,371.92	237.05	23.662	
17,400.00	9,400.29	13,974.62	9,381.00	150.21	88.81	89.25	4,780.32	4,249.19	5,668.85	5,429.99	238.86	23.733	
17,500.00	9,399.46	13,974.62	9,381.00	152.02	88.81	89.25	4,780.32	4,249.19	5,729.86	5,489.19	240.67	23.808	
17,600.00	9,398.63	13,974.62	9,381.00	153.83	88.81	89.25	4,780.32	4,249.19	5,791.94	5,549.47	242.48	23.887	
17,700.00	9,397.81	13,974.62	9,381.00	155.64	88.81	89.25	4,780.32	4,249.19	5,855.08	5,610.79	244.28	23.968	
17,800.00	9,396.98	13,974.62	9,381.00	157.44	88.81	89.25	4,780.32	4,249.19	5,919.23	5,673.14	246.09	24.053	
17,900.00	9,396.16	13,974.62	9,381.00	159.25	88.81	89.25	4,780.32	4,249.19	5,984.37	5,736.46	247.90	24.140	
18,000.00	9,395.33	13,974.62	9,381.00	161.06	88.81	89.25	4,780.32	4,249.19	6,050.46	5,800.74	249.71	24.229	
18,100.00	9,394.50	13,974.62	9,381.00	162.87	88.81	89.25	4,780.32	4,249.19	6,117.47	5,865.94	251.53	24.321	
18,200.00	9,393.68	13,974.62	9,381.00	164.69	88.81	89.25	4,780.32	4,249.19	6,185.37	5,932.03	253.34	24.416	
18,300.00	9,392.85	13,974.62	9,381.00	166.50	88.81	89.25	4,780.32	4,249.19	6,254.13	5,998.98	255.15	24.512	
18,400.00	9,392.03	13,974.62	9,381.00	168.31	88.81	89.25	4,780.32	4,249.19	6,323.72	6,066.76	256.96	24.610	
18,500.00	9,391.20	13,974.62	9,381.00	170.12	88.81	89.25	4,780.32	4,249.19	6,394.12	6,135.35	258.77	24.710	
18,600.00	9,390.38	13,974.62	9,381.00	171.93	88.81	89.25	4,780.32	4,249.19	6,465.31	6,204.72	260.58	24.811	
18,700.00	9,389.55	13,974.62	9,381.00	173.74	88.81	89.25	4,780.32	4,249.19	6,537.24	6,274.85	262.40	24.914	
18,800.00	9,388.72	13,974.62	9,381.00	175.56	88.81	89.25	4,780.32	4,249.19	6,609.91	6,345.70	264.21	25.018	
18,900.00	9,387.90	13,974.62	9,381.00	177.37	88.81	89.25	4,780.32	4,249.19	6,683.28	6,417.26	266.02	25.123	
19,000.00	9,387.07	13,974.62	9,381.00	179.18	88.81	89.25	4,780.32	4,249.19	6,757.34	6,489.50	267.83	25.230	
19,100.00	9,386.25	13,974.62	9,381.00	180.99	88.81	89.25	4,780.32	4,249.19	6,832.05	6,562.41	269.65	25.337	
19,200.00	9,385.42	13,974.62	9,381.00	182.81	88.81	89.25	4,780.32	4,249.19	6,907.41	6,635.95	271.46	25.445	
19,250.99	9,385.00	13,974.62	9,381.00	183.73	88.81	89.25	4,780.32	4,249.19	6,946.07	6,673.69	272.39	25.501	

LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 1H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3550.9' GE + 25' KB @ 3575.90usft
Reference Site:	Blue Krait 23-14 Fed	MD Reference:	3550.9' GE + 25' KB @ 3575.90usft
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 Blue Krait 23-14 Fed - 2H - 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							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	5.20	5.20	0.00	0.00	89.60	9.67	1,369.66	1,369.69					
100.00	100.00	105.20	105.20	0.08	0.10	89.60	9.67	1,369.66	1,369.69	1,369.51	0.18	7,598.327		
200.00	200.00	205.20	205.20	0.31	0.32	89.60	9.67	1,369.66	1,369.69	1,369.06	0.63	2,174.827		
300.00	300.00	305.20	305.20	0.53	0.55	89.60	9.67	1,369.66	1,369.69	1,368.61	1.08	1,269.026		
400.00	400.00	405.20	405.20	0.76	0.77	89.60	9.67	1,369.66	1,369.69	1,368.17	1.53	895.893		
500.00	500.00	505.20	505.20	0.98	1.00	89.60	9.67	1,369.66	1,369.69	1,367.72	1.98	692.327		
600.00	600.00	605.20	605.20	1.21	1.22	89.60	9.67	1,369.66	1,369.69	1,367.27	2.43	564.142		
700.00	700.00	705.20	705.20	1.43	1.44	89.60	9.67	1,369.66	1,369.69	1,366.82	2.88	476.009		
800.00	800.00	805.20	805.20	1.66	1.67	89.60	9.67	1,369.66	1,369.69	1,366.37	3.33	411.692		
900.00	900.00	905.20	905.20	1.88	1.89	89.60	9.67	1,369.66	1,369.69	1,365.92	3.78	362.687		
1,000.00	1,000.00	1,005.20	1,005.20	2.11	2.12	89.60	9.67	1,369.66	1,369.69	1,365.47	4.23	324.107		
1,100.00	1,100.00	1,105.20	1,105.20	2.33	2.34	89.60	9.67	1,369.66	1,369.69	1,365.02	4.68	292.946		
1,200.00	1,200.00	1,205.20	1,205.20	2.56	2.57	89.60	9.67	1,369.66	1,369.69	1,364.57	5.13	267.251		
1,300.00	1,300.00	1,305.20	1,305.20	2.78	2.79	89.60	9.67	1,369.66	1,369.69	1,364.12	5.57	245.701		
1,400.00	1,400.00	1,405.20	1,405.20	3.01	3.02	89.60	9.67	1,369.66	1,369.69	1,363.67	6.02	227.366		
1,500.00	1,500.00	1,505.20	1,505.20	3.23	3.24	89.60	9.67	1,369.66	1,369.69	1,363.22	6.47	211.578		
1,600.00	1,600.00	1,605.20	1,605.20	3.46	3.47	89.60	9.67	1,369.66	1,369.69	1,362.77	6.92	197.840		
1,700.00	1,700.00	1,705.20	1,705.20	3.68	3.69	89.60	9.67	1,369.66	1,369.69	1,362.32	7.37	185.777		
1,800.00	1,800.00	1,805.20	1,805.20	3.91	3.92	89.60	9.67	1,369.66	1,369.69	1,361.87	7.82	175.101		
1,900.00	1,900.00	1,905.20	1,905.20	4.13	4.14	89.60	9.67	1,369.66	1,369.69	1,361.42	8.27	165.585		
2,000.00	2,000.00	2,005.20	2,005.20	4.35	4.37	89.60	9.67	1,369.66	1,369.69	1,360.97	8.72	157.050		
2,100.00	2,100.00	2,105.20	2,105.20	4.58	4.59	89.60	9.67	1,369.66	1,369.69	1,360.52	9.17	149.352		
2,200.00	2,200.00	2,205.20	2,205.20	4.80	4.82	89.60	9.67	1,369.66	1,369.69	1,360.07	9.62	142.373		
2,300.00	2,300.00	2,305.20	2,305.20	5.03	5.04	89.60	9.67	1,369.66	1,369.69	1,359.62	10.07	136.018		
2,400.00	2,400.00	2,405.20	2,405.20	5.25	5.27	89.60	9.67	1,369.66	1,369.69	1,359.17	10.52	130.205		
2,500.00	2,500.00	2,505.20	2,505.20	5.48	5.49	89.60	9.67	1,369.66	1,369.69	1,358.73	10.97	124.869		
2,600.00	2,600.00	2,605.20	2,605.20	5.70	5.72	89.60	9.67	1,369.66	1,369.69	1,358.28	11.42	119.953		
2,700.00	2,700.00	2,705.20	2,705.20	5.93	5.94	89.60	9.67	1,369.66	1,369.69	1,357.83	11.87	115.410		
2,800.00	2,800.00	2,805.20	2,805.20	6.15	6.16	89.60	9.67	1,369.66	1,369.69	1,357.38	12.32	111.198		
2,900.00	2,900.00	2,905.20	2,905.20	6.38	6.39	89.60	9.67	1,369.66	1,369.69	1,356.93	12.77	107.283		
3,000.00	3,000.00	3,005.20	3,005.20	6.60	6.61	89.60	9.67	1,369.66	1,369.69	1,356.48	13.22	103.634		
3,100.00	3,100.00	3,105.20	3,105.20	6.83	6.84	89.60	9.67	1,369.66	1,369.69	1,356.03	13.67	100.225		
3,200.00	3,200.00	3,205.20	3,205.20	7.05	7.06	89.60	9.67	1,369.66	1,369.69	1,355.58	14.12	97.033		
3,300.00	3,300.00	3,305.20	3,305.20	7.28	7.29	89.60	9.67	1,369.66	1,369.69	1,355.13	14.57	94.038		
3,400.00	3,400.00	3,405.20	3,405.20	7.50	7.51	89.60	9.67	1,369.66	1,369.69	1,354.68	15.01	91.223		
3,500.00	3,500.00	3,505.20	3,505.20	7.73	7.74	89.60	9.67	1,369.66	1,369.69	1,354.23	15.46	88.571		
3,600.00	3,600.00	3,605.20	3,605.20	7.95	7.96	89.60	9.67	1,369.66	1,369.69	1,353.78	15.91	86.069		
3,700.00	3,700.00	3,705.20	3,705.20	8.18	8.19	89.60	9.67	1,369.66	1,369.69	1,353.33	16.36	83.705		
3,800.00	3,800.00	3,805.20	3,805.20	8.40	8.41	89.60	9.67	1,369.66	1,369.69	1,352.88	16.81	81.467		
3,900.00	3,900.00	3,905.20	3,905.20	8.63	8.64	89.60	9.67	1,369.66	1,369.69	1,352.43	17.26	79.345		
4,000.00	4,000.00	4,005.20	4,005.20	8.85	8.86	89.60	9.67	1,369.66	1,369.69	1,351.98	17.71	77.331		
4,100.00	4,100.00	4,105.20	4,105.20	9.07	9.09	89.60	9.67	1,369.66	1,369.69	1,351.53	18.16	75.417		
4,200.00	4,200.00	4,205.20	4,205.20	9.30	9.31	89.60	9.67	1,369.66	1,369.69	1,351.08	18.61	73.596		
4,300.00	4,300.00	4,305.20	4,305.20	9.52	9.54	89.60	9.67	1,369.66	1,369.69	1,350.63	19.06	71.860		
4,400.00	4,400.00	4,405.20	4,405.20	9.75	9.76	89.60	9.67	1,369.66	1,369.69	1,350.18	19.51	70.204		
4,500.00	4,500.00	4,505.20	4,505.20	9.97	9.99	89.60	9.67	1,369.66	1,369.69	1,349.73	19.96	68.623		
4,600.00	4,600.00	4,605.20	4,605.20	10.20	10.21	89.60	9.67	1,369.66	1,369.69	1,349.28	20.41	67.112		
4,700.00	4,700.00	4,705.20	4,705.20	10.42	10.44	89.60	9.67	1,369.66	1,369.69	1,348.84	20.86	65.665		
4,800.00	4,800.00	4,805.20	4,805.20	10.65	10.66	89.60	9.67	1,369.66	1,369.69	1,348.39	21.31	64.280		
4,900.00	4,900.00	4,905.20	4,905.20	10.87	10.88	89.60	9.67	1,369.66	1,369.69	1,347.94	21.76	62.952		
5,000.00	5,000.00	5,005.20	5,005.20	11.10	11.11	89.60	9.67	1,369.66	1,369.69	1,347.49	22.21	61.678		
5,100.00	5,100.00	5,105.20	5,105.20	11.32	11.33	89.60	9.67	1,369.66	1,369.69	1,347.04	22.66	60.454		

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:	3550.9' GE + 25' KB @ 3575.90usft
Reference Site:	Blue Krait 23-14 Fed	MD Reference:	3550.9' GE + 25' KB @ 3575.90usft
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 Blue Krait 23-14 Fed - 2H - 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			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)				
5,200.00	5,200.00	5,205.20	5,205.20	11.55	11.56	89.60	9.67	1,369.66	1,369.69	1,346.59	23.11	59.278		
5,300.00	5,300.00	5,305.20	5,305.20	11.77	11.78	89.60	9.67	1,369.66	1,369.69	1,346.14	23.56	58.146	CC, ES	
5,400.00	5,400.00	5,405.20	5,405.20	11.98	12.01	179.60	9.67	1,369.66	1,370.57	1,346.58	23.99	57.137		
5,500.00	5,499.96	5,505.16	5,505.16	12.18	12.23	179.60	9.67	1,369.66	1,373.18	1,348.79	24.40	56.283		
5,600.00	5,599.86	5,605.06	5,605.06	12.38	12.46	179.60	9.67	1,369.66	1,377.55	1,352.74	24.80	55.542		
5,700.00	5,699.68	5,704.88	5,704.88	12.58	12.68	179.60	9.67	1,369.66	1,383.65	1,358.45	25.20	54.908		
5,800.00	5,799.37	5,804.57	5,804.57	12.79	12.91	179.60	9.67	1,369.66	1,391.50	1,365.91	25.59	54.376		
5,900.00	5,898.90	5,904.10	5,904.10	13.00	13.13	179.60	9.67	1,369.66	1,401.08	1,375.11	25.97	53.941		
6,000.00	5,998.36	6,003.56	6,003.56	13.21	13.35	179.61	9.67	1,369.66	1,411.53	1,385.14	26.40	53.471		
6,100.00	6,097.81	6,103.01	6,103.01	13.43	13.58	179.61	9.67	1,369.66	1,421.99	1,395.16	26.82	53.014		
6,200.00	6,197.26	6,202.46	6,202.46	13.65	13.80	179.61	9.67	1,369.66	1,432.44	1,405.19	27.25	52.569		
6,300.00	6,296.71	6,301.91	6,301.91	13.87	14.02	179.61	9.67	1,369.66	1,442.89	1,415.22	27.68	52.135		
6,400.00	6,396.17	6,401.37	6,401.37	14.09	14.25	179.62	9.67	1,369.66	1,453.34	1,425.24	28.10	51.713		
6,500.00	6,495.62	6,500.82	6,500.82	14.32	14.47	179.62	9.67	1,369.66	1,463.80	1,435.26	28.53	51.301		
6,600.00	6,595.07	6,600.27	6,600.27	14.55	14.69	179.62	9.67	1,369.66	1,474.25	1,445.29	28.96	50.900		
6,700.00	6,694.52	6,699.72	6,699.72	14.78	14.92	179.62	9.67	1,369.66	1,484.70	1,455.31	29.39	50.510		
6,800.00	6,793.97	6,799.17	6,799.17	15.02	15.14	179.63	9.67	1,369.66	1,495.15	1,465.33	29.83	50.129		
6,900.00	6,893.43	6,898.63	6,898.63	15.25	15.37	179.63	9.67	1,369.66	1,505.61	1,475.35	30.26	49.757		
7,000.00	6,992.88	6,998.08	6,998.08	15.49	15.59	179.63	9.67	1,369.66	1,516.06	1,485.37	30.69	49.395		
7,100.00	7,092.33	7,097.53	7,097.53	15.73	15.81	179.64	9.67	1,369.66	1,526.51	1,495.38	31.13	49.041		
7,200.00	7,191.78	7,196.98	7,196.98	15.97	16.04	179.64	9.67	1,369.66	1,536.96	1,505.40	31.56	48.694		
7,300.00	7,291.29	7,296.49	7,296.49	16.18	16.26	179.64	9.67	1,369.66	1,546.89	1,514.89	32.01	48.332		
7,400.00	7,390.88	7,396.08	7,396.08	16.40	16.48	179.64	9.67	1,369.66	1,555.96	1,523.51	32.45	47.954		
7,500.00	7,490.54	7,495.74	7,495.74	16.61	16.71	179.64	9.67	1,369.66	1,564.15	1,531.26	32.89	47.562		
7,600.00	7,590.27	7,595.47	7,595.47	16.82	16.93	179.65	9.67	1,369.66	1,571.47	1,538.15	33.32	47.157		
7,700.00	7,690.06	7,695.26	7,695.26	17.03	17.16	179.65	9.67	1,369.66	1,577.93	1,544.16	33.76	46.738		
7,800.00	7,789.91	7,795.11	7,795.11	17.24	17.38	179.65	9.67	1,369.66	1,583.51	1,549.31	34.20	46.306		
7,900.00	7,889.79	7,894.99	7,894.99	17.44	17.60	179.65	9.67	1,369.66	1,588.22	1,553.59	34.63	45.863		
8,000.00	7,989.72	7,994.92	7,994.92	17.65	17.83	179.65	9.67	1,369.66	1,592.06	1,557.00	35.06	45.408		
8,100.00	8,089.68	8,094.88	8,094.88	17.85	18.05	179.65	9.67	1,369.66	1,595.02	1,559.53	35.49	44.942		
8,200.00	8,189.65	8,194.85	8,194.85	18.05	18.28	179.65	9.67	1,369.66	1,597.12	1,561.20	35.92	44.466		
8,300.00	8,289.65	8,294.85	8,294.85	18.25	18.50	179.65	9.67	1,369.66	1,598.34	1,562.00	36.34	43.979		
8,400.00	8,389.65	8,394.85	8,394.85	18.44	18.73	89.65	9.67	1,369.66	1,598.69	1,561.93	36.76	43.491		
8,500.00	8,489.65	8,494.85	8,494.85	18.65	18.95	89.65	9.67	1,369.66	1,598.69	1,561.49	37.21	42.969		
8,600.00	8,589.65	8,594.85	8,594.85	18.87	19.18	89.65	9.67	1,369.66	1,598.69	1,561.04	37.65	42.460		
8,700.00	8,689.65	8,694.85	8,694.85	19.09	19.40	89.65	9.67	1,369.66	1,598.69	1,560.59	38.10	41.962		
8,800.00	8,789.65	8,794.85	8,794.85	19.31	19.63	89.65	9.67	1,369.66	1,598.69	1,560.15	38.55	41.476		
8,863.41	8,853.06	8,858.26	8,858.26	19.45	19.77	89.65	9.67	1,369.66	1,598.69	1,559.86	38.83	41.173		
8,900.00	8,889.65	8,894.39	8,894.39	19.53	19.85	89.65	9.73	1,369.66	1,598.69	1,559.70	38.99	41.002		
9,000.00	8,989.14	8,989.23	8,988.67	19.75	20.07	90.04	18.96	1,369.78	1,598.90	1,559.48	39.42	40.563		
9,100.00	9,085.63	9,083.97	9,080.05	19.97	20.28	89.98	43.55	1,370.10	1,599.44	1,559.60	39.83	40.153		
9,200.00	9,176.18	9,178.74	9,166.16	20.20	20.47	89.92	82.87	1,370.61	1,600.30	1,560.03	40.27	39.742		
9,300.00	9,258.03	9,273.69	9,244.76	20.44	20.70	89.86	135.94	1,371.30	1,601.46	1,560.70	40.76	39.288		
9,400.00	9,328.71	9,368.94	9,313.73	20.73	20.99	89.80	201.47	1,372.16	1,602.89	1,561.51	41.37	38.742		
9,500.00	9,386.05	9,464.62	9,371.13	21.12	21.35	89.75	277.87	1,373.15	1,604.54	1,562.39	42.15	38.066		
9,600.00	9,428.32	9,560.86	9,415.25	21.63	21.81	89.70	363.27	1,374.26	1,606.37	1,563.23	43.14	37.237		
9,700.00	9,454.24	9,657.77	9,444.62	22.26	22.37	89.67	455.49	1,375.46	1,608.33	1,563.98	44.35	36.261		
9,800.00	9,463.02	9,755.45	9,458.08	23.01	23.05	89.64	552.11	1,376.72	1,610.36	1,564.58	45.78	35.173		
9,900.00	9,462.22	9,854.80	9,458.14	23.87	23.84	89.66	651.43	1,378.01	1,612.44	1,565.00	47.45	33.985		
10,000.00	9,461.39	9,954.78	9,456.99	24.83	24.74	89.65	751.40	1,379.31	1,614.53	1,565.22	49.31	32.743		
10,100.00	9,460.57	10,054.76	9,455.84	25.88	25.73	89.64	851.36	1,380.61	1,616.61	1,565.25	51.36	31.473		
10,200.00	9,459.74	10,154.73	9,454.68	27.01	26.81	89.63	951.32	1,381.91	1,618.70	1,565.11	53.59	30.206		

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:	3550.9' GE + 25' KB @ 3575.90usft
Reference Site:	Blue Krait 23-14 Fed	MD Reference:	3550.9' GE + 25' KB @ 3575.90usft
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 Blue Krait 23-14 Fed - 2H - OH - Plan #1														Offset Site Error:	0.00 usft
Survey Program: O-LEAM MWD-AJ														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)					
10,300.00	9,458.92	10,254.71	9,453.53	28.22	27.97	89.62	1,051.28	1,383.21	1,620.78	1,564.82	55.96	28.962			
10,400.00	9,458.09	10,354.69	9,452.38	29.49	29.20	89.60	1,151.25	1,384.51	1,622.87	1,564.40	58.47	27.757			
10,500.00	9,457.26	10,454.67	9,451.23	30.82	30.48	89.59	1,251.21	1,385.81	1,624.95	1,563.87	61.09	26.601			
10,600.00	9,456.44	10,554.64	9,450.08	32.20	31.82	89.58	1,351.17	1,387.11	1,627.04	1,563.23	63.81	25.500			
10,700.00	9,455.61	10,654.62	9,448.93	33.61	33.20	89.57	1,451.13	1,388.41	1,629.13	1,562.51	66.61	24.456			
10,800.00	9,454.79	10,754.60	9,447.77	35.07	34.62	89.56	1,551.10	1,389.71	1,631.21	1,561.71	69.50	23.471			
10,900.00	9,453.96	10,854.58	9,446.62	36.56	36.08	89.55	1,651.06	1,391.01	1,633.30	1,560.84	72.45	22.542			
11,000.00	9,453.13	10,954.56	9,445.47	38.08	37.57	89.54	1,751.02	1,392.32	1,635.38	1,559.92	75.47	21.670			
11,100.00	9,452.31	11,054.53	9,444.32	39.62	39.09	89.53	1,850.98	1,393.62	1,637.47	1,558.93	78.54	20.850			
11,200.00	9,451.48	11,154.51	9,443.17	41.19	40.63	89.52	1,950.95	1,394.92	1,639.56	1,557.90	81.65	20.080			
11,300.00	9,450.66	11,254.49	9,442.02	42.78	42.20	89.51	2,050.91	1,396.22	1,641.64	1,556.83	84.81	19.357			
11,400.00	9,449.83	11,354.47	9,440.86	44.38	43.78	89.50	2,150.87	1,397.52	1,643.73	1,555.72	88.00	18.678			
11,500.00	9,449.01	11,454.44	9,439.71	46.01	45.38	89.49	2,250.84	1,398.82	1,645.81	1,554.58	91.23	18.040			
11,600.00	9,448.18	11,554.42	9,438.56	47.64	47.00	89.47	2,350.80	1,400.12	1,647.90	1,553.41	94.49	17.440			
11,700.00	9,447.35	11,654.40	9,437.41	49.29	48.63	89.46	2,450.76	1,401.42	1,649.99	1,552.21	97.78	16.875			
11,800.00	9,446.53	11,754.38	9,436.26	50.96	50.28	89.45	2,550.72	1,402.72	1,652.07	1,550.99	101.09	16.343			
11,900.00	9,445.70	11,854.36	9,435.11	52.63	51.94	89.44	2,650.69	1,404.02	1,654.16	1,549.74	104.42	15.841			
12,000.00	9,444.88	11,954.33	9,433.95	54.31	53.60	89.43	2,750.65	1,405.32	1,656.25	1,548.47	107.77	15.368			
12,100.00	9,444.05	12,054.31	9,432.80	56.00	55.28	89.42	2,850.61	1,406.62	1,658.33	1,547.19	111.15	14.920			
12,200.00	9,443.23	12,154.29	9,431.65	57.70	56.97	89.41	2,950.57	1,407.92	1,660.42	1,545.89	114.53	14.497			
12,300.00	9,442.40	12,254.27	9,430.50	59.41	58.66	89.40	3,050.54	1,409.22	1,662.51	1,544.57	117.94	14.097			
12,400.00	9,441.57	12,354.24	9,429.35	61.12	60.36	89.39	3,150.50	1,410.52	1,664.59	1,543.24	121.35	13.717			
12,500.00	9,440.75	12,454.22	9,428.20	62.84	62.07	89.38	3,250.46	1,411.82	1,666.68	1,541.90	124.78	13.357			
12,600.00	9,439.92	12,554.20	9,427.04	64.57	63.78	89.37	3,350.43	1,413.12	1,668.77	1,540.54	128.22	13.014			
12,700.00	9,439.10	12,654.18	9,425.89	66.30	65.50	89.36	3,450.39	1,414.42	1,670.85	1,539.18	131.68	12.689			
12,800.00	9,438.27	12,754.15	9,424.74	68.04	67.22	89.35	3,550.35	1,415.73	1,672.94	1,537.80	135.14	12.379			
12,900.00	9,437.45	12,854.13	9,423.59	69.78	68.95	89.34	3,650.31	1,417.03	1,675.03	1,536.42	138.61	12.084			
13,000.00	9,436.62	12,954.11	9,422.44	71.52	70.69	89.33	3,750.28	1,418.33	1,677.12	1,535.02	142.09	11.803			
13,100.00	9,435.79	13,054.09	9,421.29	73.27	72.43	89.32	3,850.24	1,419.63	1,679.20	1,533.62	145.58	11.535			
13,200.00	9,434.97	13,154.07	9,420.13	75.03	74.17	89.31	3,950.20	1,420.93	1,681.29	1,532.21	149.08	11.278			
13,300.00	9,434.14	13,254.04	9,418.98	76.78	75.91	89.30	4,050.16	1,422.23	1,683.38	1,530.80	152.58	11.033			
13,400.00	9,433.32	13,354.02	9,417.83	78.54	77.66	89.29	4,150.13	1,423.53	1,685.46	1,529.38	156.09	10.798			
13,500.00	9,432.49	13,454.00	9,416.68	80.30	79.42	89.28	4,250.09	1,424.83	1,687.55	1,527.95	159.60	10.573			
13,600.00	9,431.66	13,553.98	9,415.53	82.07	81.17	89.27	4,350.05	1,426.13	1,689.64	1,526.52	163.12	10.358			
13,700.00	9,430.84	13,653.95	9,414.38	83.84	82.93	89.26	4,450.01	1,427.43	1,691.73	1,525.08	166.65	10.151			
13,800.00	9,430.01	13,753.93	9,413.22	85.61	84.69	89.25	4,549.98	1,428.73	1,693.81	1,523.63	170.18	9.953			
13,900.00	9,429.19	13,853.91	9,412.07	87.38	86.45	89.24	4,649.94	1,430.03	1,695.90	1,522.19	173.72	9.762			
14,000.00	9,428.36	13,953.89	9,410.92	89.15	88.22	89.23	4,749.90	1,431.33	1,697.99	1,520.73	177.26	9.579			
14,100.00	9,427.54	14,053.87	9,409.77	90.93	89.98	89.22	4,849.87	1,432.63	1,700.08	1,519.28	180.80	9.403			
14,200.00	9,426.71	14,153.84	9,408.62	92.71	91.75	89.21	4,949.83	1,433.93	1,702.16	1,517.82	184.35	9.233			
14,300.00	9,425.88	14,253.82	9,407.47	94.49	93.52	89.20	5,049.79	1,435.23	1,704.25	1,516.35	187.90	9.070			
14,400.00	9,425.06	14,353.80	9,406.32	96.27	95.30	89.19	5,149.75	1,436.53	1,706.34	1,514.89	191.45	8.913			
14,500.00	9,424.23	14,453.78	9,405.16	98.05	97.07	89.18	5,249.72	1,437.83	1,708.43	1,513.42	195.01	8.761			
14,600.00	9,423.41	14,553.75	9,404.01	99.84	98.85	89.17	5,349.68	1,439.13	1,710.52	1,511.94	198.57	8.614			
14,700.00	9,422.58	14,653.73	9,402.86	101.62	100.63	89.16	5,449.64	1,440.44	1,712.60	1,510.47	202.14	8.472			
14,800.00	9,421.76	14,753.71	9,401.71	103.41	102.41	89.15	5,549.60	1,441.74	1,714.69	1,508.99	205.70	8.336			
14,900.00	9,420.93	14,853.69	9,400.56	105.20	104.19	89.14	5,649.57	1,443.04	1,716.78	1,507.51	209.27	8.203			
15,000.00	9,420.10	14,953.67	9,399.41	106.99	105.97	89.13	5,749.53	1,444.34	1,718.87	1,506.02	212.85	8.076			
15,100.00	9,419.28	15,053.64	9,398.25	108.78	107.75	89.12	5,849.49	1,445.64	1,720.96	1,504.54	216.42	7.952			
15,200.00	9,418.45	15,153.62	9,397.10	110.57	109.54	89.11	5,949.45	1,446.94	1,723.04	1,503.05	220.00	7.832			
15,300.00	9,417.63	15,253.60	9,395.95	112.37	111.32	89.10	6,049.42	1,448.24	1,725.13	1,501.56	223.58	7.716			
15,400.00	9,416.80	15,353.58	9,394.80	114.16	113.11	89.09	6,149.38	1,449.54	1,727.22	1,500.06	227.16	7.604			

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:	3550.9' GE + 25' KB @ 3575.90usft
Reference Site:	Blue Krait 23-14 Fed	MD Reference:	3550.9' GE + 25' KB @ 3575.90usft
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 Blue Krait 23-14 Fed - 2H - OH - Plan #1														Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
15,500.00	9,415.97	15,453.55	9,393.65	115.96	114.90	89.08	6,249.34	1,450.84	1,729.31	1,498.57	230.74	7.495			
15,600.00	9,415.15	15,553.53	9,392.50	117.75	116.69	89.07	6,349.31	1,452.14	1,731.40	1,497.07	234.32	7.389			
15,700.00	9,414.32	15,653.51	9,391.34	119.55	118.48	89.06	6,449.27	1,453.44	1,733.49	1,495.58	237.91	7.286			
15,800.00	9,413.50	15,753.49	9,390.19	121.35	120.27	89.05	6,549.23	1,454.74	1,735.57	1,494.08	241.50	7.187			
15,900.00	9,412.67	15,853.47	9,389.04	123.15	122.06	89.04	6,649.19	1,456.04	1,737.66	1,492.58	245.09	7.090			
16,000.00	9,411.85	15,953.44	9,387.89	124.95	123.85	89.03	6,749.16	1,457.34	1,739.75	1,491.07	248.68	6.996			
16,100.00	9,411.02	16,053.42	9,386.74	126.75	125.64	89.02	6,849.12	1,458.64	1,741.84	1,489.57	252.27	6.905			
16,200.00	9,410.19	16,153.40	9,385.59	128.55	127.44	89.01	6,949.08	1,459.94	1,743.93	1,488.06	255.87	6.816			
16,300.00	9,409.37	16,253.38	9,384.43	130.35	129.23	89.00	7,049.04	1,461.24	1,746.02	1,486.56	259.46	6.729			
16,400.00	9,408.54	16,353.35	9,383.28	132.15	131.03	88.99	7,149.01	1,462.54	1,748.11	1,485.05	263.06	6.645			
16,500.00	9,407.72	16,453.33	9,382.13	133.96	132.82	88.98	7,248.97	1,463.85	1,750.20	1,483.54	266.66	6.564			
16,600.00	9,406.89	16,553.31	9,380.98	135.76	134.62	88.97	7,348.93	1,465.15	1,752.28	1,482.03	270.25	6.484			
16,700.00	9,406.07	16,653.29	9,379.83	137.57	136.41	88.96	7,448.89	1,466.45	1,754.37	1,480.52	273.85	6.406			
16,800.00	9,405.24	16,753.27	9,378.68	139.37	138.21	88.95	7,548.86	1,467.75	1,756.46	1,479.01	277.46	6.331			
16,900.00	9,404.41	16,853.24	9,377.52	141.18	140.01	88.94	7,648.82	1,469.05	1,758.55	1,477.49	281.06	6.257			
17,000.00	9,403.59	16,953.22	9,376.37	142.98	141.81	88.93	7,748.78	1,470.35	1,760.64	1,475.98	284.66	6.185			
17,100.00	9,402.76	17,053.20	9,375.22	144.79	143.61	88.93	7,848.75	1,471.65	1,762.73	1,474.46	288.27	6.115			
17,200.00	9,401.94	17,153.18	9,374.07	146.59	145.41	88.92	7,948.71	1,472.95	1,764.82	1,472.95	291.87	6.047			
17,300.00	9,401.11	17,253.15	9,372.92	148.40	147.21	88.91	8,048.67	1,474.25	1,766.91	1,471.43	295.48	5.980			
17,400.00	9,400.29	17,353.13	9,371.77	150.21	149.01	88.90	8,148.63	1,475.55	1,769.00	1,469.91	299.08	5.915			
17,500.00	9,399.46	17,453.11	9,370.61	152.02	150.81	88.89	8,248.60	1,476.85	1,771.09	1,468.40	302.69	5.851			
17,600.00	9,398.63	17,553.09	9,369.46	153.83	152.61	88.88	8,348.56	1,478.15	1,773.18	1,466.88	306.30	5.789			
17,700.00	9,397.81	17,653.07	9,368.31	155.64	154.41	88.87	8,448.52	1,479.45	1,775.27	1,465.36	309.91	5.728			
17,800.00	9,396.98	17,753.04	9,367.16	157.44	156.21	88.86	8,548.48	1,480.75	1,777.36	1,463.84	313.52	5.669			
17,900.00	9,396.16	17,853.02	9,366.01	159.25	158.02	88.85	8,648.45	1,482.05	1,779.45	1,462.31	317.13	5.611			
18,000.00	9,395.33	17,953.00	9,364.86	161.06	159.82	88.84	8,748.41	1,483.35	1,781.53	1,460.79	320.74	5.554			
18,100.00	9,394.50	18,052.98	9,363.70	162.87	161.62	88.83	8,848.37	1,484.65	1,783.62	1,459.27	324.35	5.499			
18,200.00	9,393.68	18,152.95	9,362.55	164.69	163.43	88.82	8,948.33	1,485.95	1,785.71	1,457.75	327.97	5.445			
18,300.00	9,392.85	18,252.93	9,361.40	166.50	165.23	88.82	9,048.30	1,487.25	1,787.80	1,456.22	331.58	5.392			
18,400.00	9,392.03	18,352.91	9,360.25	168.31	167.04	88.81	9,148.26	1,488.56	1,789.89	1,454.70	335.20	5.340			
18,500.00	9,391.20	18,452.89	9,359.10	170.12	168.84	88.80	9,248.22	1,489.86	1,791.98	1,453.17	338.81	5.289			
18,600.00	9,390.38	18,552.87	9,357.95	171.93	170.65	88.79	9,348.19	1,491.16	1,794.07	1,451.65	342.43	5.239			
18,700.00	9,389.55	18,652.84	9,356.79	173.74	172.45	88.78	9,448.15	1,492.46	1,796.16	1,450.12	346.04	5.191			
18,800.00	9,388.72	18,752.82	9,355.64	175.56	174.26	88.77	9,548.11	1,493.76	1,798.25	1,448.60	349.66	5.143			
18,900.00	9,387.90	18,852.80	9,354.49	177.37	176.06	88.76	9,648.07	1,495.06	1,800.34	1,447.07	353.27	5.096			
19,000.00	9,387.07	18,952.78	9,353.34	179.18	177.87	88.75	9,748.04	1,496.36	1,802.43	1,445.54	356.89	5.050			
19,100.00	9,386.25	19,052.75	9,352.19	180.99	179.67	88.74	9,848.00	1,497.66	1,804.52	1,444.01	360.51	5.005			
19,200.00	9,385.42	19,152.73	9,351.04	182.81	181.48	88.73	9,947.96	1,498.96	1,806.61	1,442.49	364.13	4.961			
19,250.99	9,385.00	19,203.71	9,350.45	183.73	182.40	88.73	9,998.93	1,499.62	1,807.68	1,441.71	365.97	4.939 SF			

LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 1H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3550.9' GE + 25' KB @ 3575.90usft
Reference Site:	Blue Krait 23-14 Fed	MD Reference:	3550.9' GE + 25' KB @ 3575.90usft
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 Blue Krait 23-14 Fed - 5H - OH - Plan #1														Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ														Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	0.60	0.60	0.00	0.00	89.62	0.67	99.97	99.97						
100.00	100.00	100.60	100.60	0.08	0.09	89.62	0.67	99.97	99.97	99.80	0.17	588.337			
200.00	200.00	200.60	200.60	0.31	0.31	89.62	0.67	99.97	99.97	99.35	0.62	161.387			
300.00	300.00	300.60	300.60	0.53	0.54	89.62	0.67	99.97	99.97	98.90	1.07	93.521			
400.00	400.00	400.60	400.60	0.76	0.76	89.62	0.67	99.97	99.97	98.45	1.52	65.835			
500.00	500.00	500.60	500.60	0.98	0.98	89.62	0.67	99.97	99.97	98.00	1.97	50.798			
600.00	600.00	600.60	600.60	1.21	1.21	89.62	0.67	99.97	99.97	97.55	2.42	41.352			
700.00	700.00	700.60	700.60	1.43	1.43	89.62	0.67	99.97	99.97	97.11	2.87	34.869			
800.00	800.00	800.60	800.60	1.66	1.66	89.62	0.67	99.97	99.97	96.66	3.32	30.143			
900.00	900.00	900.60	900.60	1.88	1.88	89.62	0.67	99.97	99.97	96.21	3.77	26.545			
1,000.00	1,000.00	1,000.60	1,000.60	2.11	2.11	89.62	0.67	99.97	99.97	95.76	4.22	23.714			
1,100.00	1,100.00	1,100.60	1,100.60	2.33	2.33	89.62	0.67	99.97	99.97	95.31	4.67	21.429			
1,200.00	1,200.00	1,200.60	1,200.60	2.56	2.56	89.62	0.67	99.97	99.97	94.86	5.11	19.546			
1,300.00	1,300.00	1,300.60	1,300.60	2.78	2.78	89.62	0.67	99.97	99.97	94.41	5.56	17.967			
1,400.00	1,400.00	1,400.60	1,400.60	3.01	3.01	89.62	0.67	99.97	99.97	93.96	6.01	16.624			
1,500.00	1,500.00	1,500.60	1,500.60	3.23	3.23	89.62	0.67	99.97	99.97	93.51	6.46	15.468			
1,600.00	1,600.00	1,600.60	1,600.60	3.46	3.46	89.62	0.67	99.97	99.97	93.06	6.91	14.462			
1,700.00	1,700.00	1,700.60	1,700.60	3.68	3.68	89.62	0.67	99.97	99.97	92.61	7.36	13.579			
1,800.00	1,800.00	1,800.60	1,800.60	3.91	3.91	89.62	0.67	99.97	99.97	92.16	7.81	12.797			
1,900.00	1,900.00	1,900.60	1,900.60	4.13	4.13	89.62	0.67	99.97	99.97	91.71	8.26	12.101			
2,000.00	2,000.00	2,000.60	2,000.60	4.35	4.36	89.62	0.67	99.97	99.97	91.26	8.71	11.477			
2,100.00	2,100.00	2,100.60	2,100.60	4.58	4.58	89.62	0.67	99.97	99.97	90.81	9.16	10.913			
2,200.00	2,200.00	2,200.60	2,200.60	4.80	4.81	89.62	0.67	99.97	99.97	90.36	9.61	10.403			
2,300.00	2,300.00	2,300.60	2,300.60	5.03	5.03	89.62	0.67	99.97	99.97	89.91	10.06	9.938			
2,400.00	2,400.00	2,400.60	2,400.60	5.25	5.26	89.62	0.67	99.97	99.97	89.46	10.51	9.513			
2,500.00	2,500.00	2,500.60	2,500.60	5.48	5.48	89.62	0.67	99.97	99.97	89.01	10.96	9.123			
2,600.00	2,600.00	2,600.60	2,600.60	5.70	5.70	89.62	0.67	99.97	99.97	88.56	11.41	8.763			
2,700.00	2,700.00	2,700.60	2,700.60	5.93	5.93	89.62	0.67	99.97	99.97	88.11	11.86	8.431			
2,800.00	2,800.00	2,800.60	2,800.60	6.15	6.15	89.62	0.67	99.97	99.97	87.66	12.31	8.123			
2,900.00	2,900.00	2,900.60	2,900.60	6.38	6.38	89.62	0.67	99.97	99.97	87.22	12.76	7.837			
3,000.00	3,000.00	3,000.60	3,000.60	6.60	6.60	89.62	0.67	99.97	99.97	86.77	13.21	7.570			
3,100.00	3,100.00	3,100.60	3,100.60	6.83	6.83	89.62	0.67	99.97	99.97	86.32	13.66	7.321			
3,200.00	3,200.00	3,200.60	3,200.60	7.05	7.05	89.62	0.67	99.97	99.97	85.87	14.11	7.088			
3,300.00	3,300.00	3,300.60	3,300.60	7.28	7.28	89.62	0.67	99.97	99.97	85.42	14.55	6.869			
3,400.00	3,400.00	3,400.60	3,400.60	7.50	7.50	89.62	0.67	99.97	99.97	84.97	15.00	6.663			
3,500.00	3,500.00	3,500.60	3,500.60	7.73	7.73	89.62	0.67	99.97	99.97	84.52	15.45	6.469 CC, ES			
3,600.00	3,600.00	3,599.00	3,599.00	7.95	7.94	89.62	0.67	100.69	100.71	84.82	15.89	6.339			
3,700.00	3,700.00	3,697.23	3,697.19	8.18	8.13	89.63	0.67	103.09	103.15	86.85	16.31	6.326			
3,800.00	3,800.00	3,795.34	3,795.22	8.40	8.33	89.64	0.67	107.17	107.31	90.58	16.73	6.415			
3,900.00	3,900.00	3,893.29	3,893.00	8.63	8.53	89.66	0.67	112.92	113.18	96.02	17.15	6.598			
4,000.00	4,000.00	3,991.01	3,990.43	8.85	8.73	89.68	0.67	120.32	120.75	103.17	17.58	6.868			
4,100.00	4,100.00	4,088.44	4,087.45	9.07	8.94	89.70	0.67	129.35	130.01	112.00	18.01	7.218			
4,200.00	4,200.00	4,187.45	4,185.92	9.30	9.15	89.73	0.67	139.66	140.43	121.98	18.45	7.610			
4,300.00	4,300.00	4,286.90	4,284.83	9.52	9.38	89.74	0.67	150.06	150.89	131.99	18.90	7.984			
4,400.00	4,400.00	4,386.36	4,383.74	9.75	9.60	89.76	0.67	160.45	161.34	141.99	19.35	8.338			
4,500.00	4,500.00	4,485.81	4,482.64	9.97	9.83	89.78	0.67	170.85	171.79	151.99	19.80	8.675			
4,600.00	4,600.00	4,585.26	4,581.55	10.20	10.06	89.79	0.67	181.24	182.24	161.99	20.26	8.996			
4,700.00	4,700.00	4,684.71	4,680.46	10.42	10.30	89.80	0.67	191.64	192.70	171.98	20.72	9.301			
4,800.00	4,800.00	4,784.17	4,779.37	10.65	10.53	89.81	0.67	202.04	203.15	181.97	21.18	9.591			
4,900.00	4,900.00	4,883.62	4,878.27	10.87	10.77	89.82	0.67	212.43	213.60	191.96	21.65	9.868			
5,000.00	5,000.00	4,983.07	4,977.18	11.10	11.02	89.83	0.67	222.83	224.06	201.94	22.11	10.132			
5,100.00	5,100.00	5,082.52	5,076.09	11.32	11.26	89.84	0.67	233.22	234.51	211.93	22.58	10.384			

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:	3550.9' GE + 25' KB @ 3575.90usft
Reference Site:	Blue Krait 23-14 Fed	MD Reference:	3550.9' GE + 25' KB @ 3575.90usft
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 Blue Krait 23-14 Fed - 5H - OH - Plan #1													Offset Site Error:
Survey Program: O-LEAM MWD-ADJ													Offset Well Error:
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
5,200.00	5,200.00	5,181.97	5,174.99	11.55	11.51	89.84	0.67	243.62	244.96	221.91	23.06	10.625	
5,300.00	5,300.00	5,281.43	5,273.90	11.77	11.76	89.85	0.67	254.01	255.41	231.88	23.53	10.855	
5,400.00	5,400.00	5,380.78	5,372.71	11.98	12.01	179.86	0.67	264.40	266.73	243.13	23.60	11.301	
5,500.00	5,499.96	5,479.93	5,471.31	12.18	12.26	179.86	0.67	274.76	279.79	255.79	24.00	11.658	
5,600.00	5,599.86	5,578.83	5,569.67	12.38	12.51	179.87	0.67	285.10	294.57	270.18	24.39	12.078	
5,700.00	5,699.68	5,677.45	5,667.76	12.58	12.77	179.87	0.67	295.41	311.07	286.30	24.77	12.558	
5,800.00	5,799.37	5,775.78	5,765.55	12.79	13.02	179.88	0.67	305.69	329.29	304.15	25.15	13.095	
5,900.00	5,898.90	5,873.77	5,863.00	13.00	13.28	179.89	0.67	315.93	349.23	323.72	25.51	13.687	
6,000.00	5,998.36	5,971.58	5,960.28	13.21	13.53	179.89	0.67	326.15	370.02	344.09	25.93	14.271	
6,100.00	6,097.81	6,069.40	6,057.56	13.43	13.79	179.90	0.67	336.38	390.81	364.47	26.34	14.835	
6,200.00	6,197.26	6,167.21	6,154.84	13.65	14.05	179.90	0.67	346.60	411.60	384.84	26.76	15.381	
6,300.00	6,296.71	6,265.03	6,252.12	13.87	14.31	179.91	0.67	356.83	432.40	405.22	27.18	15.909	
6,400.00	6,396.17	6,362.84	6,349.39	14.09	14.57	179.91	0.67	367.05	453.19	425.59	27.60	16.420	
6,500.00	6,495.62	6,460.66	6,446.67	14.32	14.83	179.92	0.67	377.28	473.98	445.96	28.02	16.915	
6,600.00	6,595.07	6,558.47	6,543.95	14.55	15.09	179.92	0.67	387.50	494.77	466.32	28.45	17.394	
6,700.00	6,694.52	6,656.29	6,641.23	14.78	15.36	179.92	0.67	397.73	515.56	486.69	28.87	17.858	
6,800.00	6,793.97	6,754.10	6,738.51	15.02	15.62	179.93	0.67	407.95	536.35	507.06	29.30	18.308	
6,900.00	6,893.43	6,851.92	6,835.79	15.25	15.89	179.93	0.67	418.17	557.14	527.42	29.72	18.745	
7,000.00	6,992.88	6,949.73	6,933.07	15.49	16.15	179.93	0.67	428.40	577.93	547.78	30.15	19.168	
7,100.00	7,092.33	7,047.55	7,030.35	15.73	16.42	179.93	0.67	438.62	598.73	568.14	30.58	19.579	
7,200.00	7,191.78	7,145.36	7,127.63	15.97	16.69	179.94	0.67	448.85	619.51	588.50	31.01	19.976	
7,300.00	7,291.29	7,243.28	7,225.01	16.18	16.95	179.94	0.67	459.08	639.79	608.34	31.46	20.340	
7,400.00	7,390.88	7,341.38	7,322.57	16.40	17.22	179.94	0.67	469.34	659.21	627.32	31.90	20.667	
7,500.00	7,490.54	7,439.64	7,420.29	16.61	17.49	179.94	0.67	479.61	677.78	645.44	32.34	20.959	
7,600.00	7,590.27	7,540.00	7,520.11	16.82	17.76	179.94	0.67	490.05	695.45	662.67	32.78	21.216	
7,700.00	7,690.06	7,645.15	7,624.76	17.03	18.01	179.95	0.67	500.27	711.57	678.36	33.21	21.426	
7,800.00	7,789.91	7,750.74	7,729.94	17.24	18.24	179.95	0.67	509.57	725.92	692.29	33.63	21.585	
7,900.00	7,889.79	7,856.71	7,835.58	17.44	18.47	179.95	0.67	517.92	738.49	704.44	34.05	21.688	
8,000.00	7,989.72	7,963.03	7,941.64	17.65	18.70	179.95	0.67	525.32	749.27	714.80	34.47	21.737	
8,100.00	8,089.68	8,069.64	8,048.06	17.85	18.92	179.95	0.67	531.75	758.26	723.38	34.89	21.735	
8,200.00	8,189.65	8,176.49	8,154.76	18.05	19.13	179.95	0.67	537.20	765.46	730.15	35.30	21.683	
8,300.00	8,289.65	8,283.51	8,261.70	18.25	19.35	179.95	0.67	541.67	770.85	735.13	35.72	21.583	
8,400.00	8,389.65	8,390.68	8,368.80	18.44	19.56	89.95	0.67	545.14	774.44	738.32	36.12	21.441	
8,500.00	8,489.65	8,497.91	8,476.01	18.65	19.76	89.95	0.67	547.60	776.74	740.19	36.55	21.253	
8,600.00	8,589.65	8,605.18	8,583.26	18.87	19.96	89.95	0.67	549.07	778.10	741.13	36.98	21.043	
8,700.00	8,689.65	8,712.16	8,690.25	19.09	20.15	89.95	0.67	549.53	778.53	741.13	37.40	20.815	
8,800.00	8,789.65	8,812.16	8,790.25	19.31	20.34	89.95	0.67	549.53	778.53	740.70	37.83	20.581	
8,865.22	8,854.87	8,877.38	8,855.47	19.45	20.47	89.95	0.67	549.53	778.53	740.42	38.11	20.427	
8,900.00	8,889.65	8,912.13	8,890.21	19.53	20.54	89.95	0.68	549.53	778.53	740.27	38.26	20.346	
9,000.00	8,989.14	9,011.31	8,988.84	19.75	20.74	90.33	9.96	549.57	778.64	739.95	38.69	20.124	
9,100.00	9,085.63	9,110.39	9,084.29	19.97	20.94	90.26	36.04	549.69	778.97	739.85	39.12	19.914	
9,200.00	9,176.18	9,209.38	9,173.76	20.20	21.15	90.18	78.12	549.89	779.50	739.94	39.56	19.702	
9,300.00	9,258.03	9,308.31	9,254.62	20.44	21.37	90.09	134.92	550.15	780.22	740.13	40.08	19.464	
9,400.00	9,328.71	9,407.22	9,324.50	20.73	21.62	90.00	204.74	550.48	781.10	740.37	40.73	19.176	
9,500.00	9,386.05	9,506.14	9,381.35	21.12	21.95	89.91	285.54	550.86	782.12	740.55	41.57	18.816	
9,600.00	9,428.32	9,605.11	9,423.49	21.63	22.39	89.82	374.94	551.27	783.25	740.62	42.62	18.376	
9,700.00	9,454.24	9,704.14	9,449.66	22.26	22.96	89.74	470.33	551.72	784.45	740.53	43.92	17.862	
9,800.00	9,463.02	9,803.27	9,459.02	23.01	23.67	89.67	568.89	552.18	785.69	740.26	45.43	17.296	
9,900.00	9,462.22	9,903.19	9,458.28	23.87	24.50	89.66	668.81	552.65	786.94	739.78	47.15	16.690	
10,000.00	9,461.39	10,003.18	9,457.45	24.83	25.44	89.66	768.79	553.11	788.18	739.10	49.09	16.057	
10,100.00	9,460.57	10,103.17	9,456.63	25.88	26.47	89.66	868.78	553.58	789.43	738.23	51.21	15.416	
10,200.00	9,459.74	10,203.17	9,455.80	27.01	27.58	89.67	968.77	554.05	790.68	737.19	53.50	14.780	

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:	3550.9' GE + 25' KB @ 3575.90usft
Reference Site:	Blue Krait 23-14 Fed	MD Reference:	3550.9' GE + 25' KB @ 3575.90usft
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 Blue Krait 23-14 Fed - 5H - 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		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		
10,300.00	9,458.92	10,303.16	9,454.98	28.22	28.77	89.67	1,068.76	554.51	791.93	736.01	55.93	14.160		
10,400.00	9,458.09	10,403.15	9,454.15	29.49	30.02	89.67	1,168.74	554.98	793.18	734.70	58.48	13.562		
10,500.00	9,457.26	10,503.14	9,453.33	30.82	31.32	89.67	1,268.73	555.45	794.43	733.28	61.15	12.991		
10,600.00	9,456.44	10,603.13	9,452.50	32.20	32.68	89.67	1,368.72	555.91	795.68	731.76	63.92	12.449		
10,700.00	9,455.61	10,703.13	9,451.68	33.61	34.07	89.67	1,468.71	556.38	796.93	730.16	66.77	11.936		
10,800.00	9,454.79	10,803.12	9,450.85	35.07	35.51	89.67	1,568.70	556.85	798.18	728.49	69.69	11.453		
10,900.00	9,453.96	10,903.11	9,450.02	36.56	36.98	89.67	1,668.68	557.31	799.43	726.75	72.68	10.999		
11,000.00	9,453.13	11,003.10	9,449.20	38.08	38.48	89.67	1,768.67	557.78	800.68	724.95	75.73	10.573		
11,100.00	9,452.31	11,103.10	9,448.37	39.62	40.01	89.67	1,868.66	558.25	801.93	723.10	78.83	10.173		
11,200.00	9,451.48	11,203.09	9,447.55	41.19	41.56	89.67	1,968.65	558.71	803.18	721.21	81.97	9.799		
11,300.00	9,450.66	11,303.08	9,446.72	42.78	43.13	89.67	2,068.63	559.18	804.43	719.27	85.15	9.447		
11,400.00	9,449.83	11,403.07	9,445.90	44.38	44.72	89.67	2,168.62	559.64	805.67	717.30	88.37	9.117		
11,500.00	9,449.01	11,503.06	9,445.07	46.01	46.33	89.67	2,268.61	560.11	806.92	715.30	91.62	8.807		
11,600.00	9,448.18	11,603.06	9,444.25	47.64	47.95	89.67	2,368.60	560.58	808.17	713.27	94.90	8.516		
11,700.00	9,447.35	11,703.05	9,443.42	49.29	49.59	89.67	2,468.59	561.04	809.42	711.21	98.21	8.242		
11,800.00	9,446.53	11,803.04	9,442.60	50.95	51.24	89.67	2,568.57	561.51	810.67	709.13	101.54	7.984		
11,900.00	9,445.70	11,903.03	9,441.77	52.63	52.90	89.67	2,668.56	561.98	811.92	707.03	104.89	7.741		
12,000.00	9,444.88	12,003.03	9,440.95	54.31	54.57	89.67	2,768.55	562.44	813.17	704.91	108.26	7.511		
12,100.00	9,444.05	12,103.02	9,440.12	56.00	56.25	89.68	2,868.54	562.91	814.42	702.77	111.64	7.295		
12,200.00	9,443.23	12,203.01	9,439.29	57.70	57.94	89.68	2,968.52	563.38	815.67	700.62	115.05	7.090		
12,300.00	9,442.40	12,303.00	9,438.47	59.41	59.63	89.68	3,068.51	563.84	816.92	698.45	118.47	6.896		
12,400.00	9,441.57	12,402.99	9,437.64	61.12	61.34	89.68	3,168.50	564.31	818.17	696.27	121.90	6.712		
12,500.00	9,440.75	12,502.99	9,436.82	62.84	63.05	89.68	3,268.49	564.78	819.42	694.08	125.34	6.538		
12,600.00	9,439.92	12,602.98	9,435.99	64.57	64.76	89.68	3,368.47	565.24	820.67	691.87	128.79	6.372		
12,700.00	9,439.10	12,702.97	9,435.17	66.30	66.48	89.68	3,468.46	565.71	821.92	689.66	132.26	6.215		
12,800.00	9,438.27	12,802.96	9,434.34	68.04	68.21	89.68	3,568.45	566.18	823.16	687.43	135.73	6.065		
12,900.00	9,437.45	12,902.96	9,433.52	69.78	69.94	89.68	3,668.44	566.64	824.41	685.20	139.21	5.922		
13,000.00	9,436.62	13,002.95	9,432.69	71.52	71.68	89.68	3,768.43	567.11	825.66	682.96	142.70	5.786		
13,100.00	9,435.79	13,102.94	9,431.87	73.27	73.42	89.68	3,868.41	567.58	826.91	680.71	146.20	5.656		
13,200.00	9,434.97	13,202.93	9,431.04	75.03	75.16	89.68	3,968.40	568.04	828.16	678.45	149.71	5.532		
13,300.00	9,434.14	13,302.92	9,430.22	76.78	76.91	89.68	4,068.39	568.51	829.41	676.19	153.22	5.413		
13,400.00	9,433.32	13,402.92	9,429.39	78.54	78.66	89.68	4,168.38	568.98	830.66	673.92	156.74	5.300		
13,500.00	9,432.49	13,502.91	9,428.56	80.30	80.42	89.68	4,268.36	569.44	831.91	671.65	160.26	5.191		
13,600.00	9,431.66	13,602.90	9,427.74	82.07	82.17	89.68	4,368.35	569.91	833.16	669.37	163.79	5.087		
13,700.00	9,430.84	13,702.89	9,426.91	83.84	83.93	89.68	4,468.34	570.38	834.41	667.08	167.33	4.987		
13,800.00	9,430.01	13,802.89	9,426.09	85.61	85.70	89.68	4,568.33	570.84	835.66	664.79	170.87	4.891		
13,900.00	9,429.19	13,902.88	9,425.26	87.38	87.46	89.68	4,668.31	571.31	836.91	662.50	174.41	4.796		
14,000.00	9,428.36	14,002.87	9,424.44	89.15	89.23	89.68	4,768.30	571.78	838.16	660.20	177.96	4.710		
14,100.00	9,427.54	14,102.86	9,423.61	90.93	91.00	89.69	4,868.29	572.24	839.41	657.89	181.51	4.625		
14,200.00	9,426.71	14,202.85	9,422.79	92.71	92.77	89.69	4,968.28	572.71	840.65	655.59	185.07	4.542		
14,300.00	9,425.88	14,302.85	9,421.96	94.49	94.54	89.69	5,068.27	573.18	841.90	653.28	188.63	4.463		
14,400.00	9,425.06	14,402.84	9,421.14	96.27	96.32	89.69	5,168.25	573.64	843.15	650.97	192.19	4.387		
14,500.00	9,424.23	14,502.83	9,420.31	98.05	98.09	89.69	5,268.24	574.11	844.40	648.65	195.75	4.314		
14,600.00	9,423.41	14,602.82	9,419.49	99.84	99.87	89.69	5,368.23	574.57	845.65	646.33	199.32	4.243		
14,700.00	9,422.58	14,702.81	9,418.66	101.62	101.65	89.69	5,468.22	575.04	846.90	644.01	202.89	4.174		
14,800.00	9,421.76	14,802.81	9,417.83	103.41	103.43	89.69	5,568.20	575.51	848.15	641.68	206.47	4.108		
14,900.00	9,420.93	14,902.80	9,417.01	105.20	105.22	89.69	5,668.19	575.97	849.40	639.36	210.04	4.044		
15,000.00	9,420.10	15,002.79	9,416.18	106.99	107.00	89.69	5,768.18	576.44	850.65	637.03	213.62	3.982		
15,100.00	9,419.28	15,102.78	9,415.36	108.78	108.79	89.69	5,868.17	576.91	851.90	634.70	217.20	3.922		
15,200.00	9,418.45	15,202.78	9,414.53	110.57	110.57	89.69	5,968.15	577.37	853.15	632.36	220.79	3.864		
15,300.00	9,417.63	15,302.77	9,413.71	112.37	112.36	89.69	6,068.14	577.84	854.40	630.03	224.37	3.808		
15,400.00	9,416.80	15,402.76	9,412.88	114.16	114.15	89.69	6,168.13	578.31	855.65	627.69	227.96	3.754		

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:	3550.9' GE + 25' KB @ 3575.90usft
Reference Site:	Blue Krait 23-14 Fed	MD Reference:	3550.9' GE + 25' KB @ 3575.90usft
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		Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Blue Krait 23-14 Fed - 5H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: D-LEAM MWD-ADJ													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance				Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
15,500.00	9,415.97	15,502.75	9,412.06	115.96	115.94	89.69	6,268.12	578.77	856.90	625.35	231.55	3.701		
15,600.00	9,415.15	15,602.74	9,411.23	117.75	117.73	89.69	6,368.11	579.24	858.14	623.01	235.14	3.650		
15,700.00	9,414.32	15,702.74	9,410.41	119.55	119.52	89.69	6,468.09	579.71	859.39	620.66	238.73	3.600		
15,800.00	9,413.50	15,802.73	9,409.58	121.35	121.31	89.69	6,568.08	580.17	860.64	618.32	242.32	3.552		
15,900.00	9,412.67	15,902.72	9,408.76	123.15	123.11	89.69	6,668.07	580.64	861.89	615.97	245.92	3.505		
16,000.00	9,411.85	16,002.71	9,407.93	124.95	124.90	89.69	6,768.06	581.11	863.14	613.63	249.52	3.459		
16,100.00	9,411.02	16,102.71	9,407.10	126.75	126.70	89.69	6,868.04	581.57	864.39	611.28	253.11	3.415		
16,200.00	9,410.19	16,202.70	9,406.28	128.55	128.49	89.70	6,968.03	582.04	865.64	608.93	256.71	3.372		
16,300.00	9,409.37	16,302.69	9,405.45	130.35	130.29	89.70	7,068.02	582.51	866.89	606.57	260.32	3.330		
16,400.00	9,408.54	16,402.68	9,404.63	132.15	132.08	89.70	7,168.01	582.97	868.14	604.22	263.92	3.289		
16,500.00	9,407.72	16,502.67	9,403.80	133.96	133.88	89.70	7,267.99	583.44	869.39	601.87	267.52	3.250		
16,600.00	9,406.89	16,602.67	9,402.98	135.76	135.68	89.70	7,367.98	583.91	870.64	599.51	271.13	3.211		
16,700.00	9,406.07	16,702.66	9,402.15	137.57	137.48	89.70	7,467.97	584.37	871.89	597.15	274.73	3.174		
16,800.00	9,405.24	16,802.65	9,401.33	139.37	139.28	89.70	7,567.96	584.84	873.14	594.80	278.34	3.137		
16,900.00	9,404.41	16,902.64	9,400.50	141.18	141.08	89.70	7,667.95	585.31	874.39	592.44	281.95	3.101		
17,000.00	9,403.59	17,002.64	9,399.68	142.98	142.88	89.70	7,767.93	585.77	875.64	590.08	285.56	3.066		
17,100.00	9,402.76	17,102.63	9,398.85	144.79	144.68	89.70	7,867.92	586.24	876.88	587.72	289.17	3.032		
17,200.00	9,401.94	17,202.62	9,398.03	146.59	146.48	89.70	7,967.91	586.71	878.13	585.36	292.78	2.999		
17,300.00	9,401.11	17,302.61	9,397.20	148.40	148.29	89.70	8,067.90	587.17	879.38	582.99	296.39	2.967		
17,400.00	9,400.29	17,402.60	9,396.37	150.21	150.09	89.70	8,167.88	587.64	880.63	580.63	300.00	2.935		
17,500.00	9,399.46	17,502.60	9,395.55	152.02	151.89	89.70	8,267.87	588.11	881.88	578.27	303.62	2.905		
17,600.00	9,398.63	17,602.59	9,394.72	153.83	153.69	89.70	8,367.86	588.57	883.13	575.90	307.23	2.874		
17,700.00	9,397.81	17,702.58	9,393.90	155.64	155.50	89.70	8,467.85	589.04	884.38	573.54	310.84	2.845		
17,800.00	9,396.98	17,802.57	9,393.07	157.44	157.30	89.70	8,567.84	589.51	885.63	571.17	314.46	2.816		
17,900.00	9,396.16	17,902.57	9,392.25	159.25	159.11	89.70	8,667.82	589.97	886.88	568.80	318.08	2.788		
18,000.00	9,395.33	18,002.56	9,391.42	161.06	160.91	89.70	8,767.81	590.44	888.13	566.43	321.69	2.761		
18,100.00	9,394.50	18,102.55	9,390.60	162.87	162.72	89.70	8,867.80	590.90	889.38	564.07	325.31	2.734		
18,200.00	9,393.68	18,202.54	9,389.77	164.69	164.52	89.70	8,967.79	591.37	890.63	561.70	328.93	2.708		
18,300.00	9,392.85	18,302.53	9,388.95	166.50	166.33	89.70	9,067.77	591.84	891.88	559.33	332.55	2.682		
18,400.00	9,392.03	18,402.53	9,388.12	168.31	168.14	89.70	9,167.76	592.30	893.13	556.96	336.17	2.657		
18,500.00	9,391.20	18,502.52	9,387.30	170.12	169.94	89.71	9,267.75	592.77	894.37	554.59	339.79	2.632		
18,600.00	9,390.38	18,602.51	9,386.47	171.93	171.75	89.71	9,367.74	593.24	895.62	552.21	343.41	2.608		
18,700.00	9,389.55	18,702.50	9,385.65	173.74	173.56	89.71	9,467.72	593.70	896.87	549.84	347.03	2.584		
18,800.00	9,388.72	18,802.49	9,384.82	175.56	175.37	89.71	9,567.71	594.17	898.12	547.47	350.65	2.561		
18,900.00	9,387.90	18,902.49	9,383.99	177.37	177.17	89.71	9,667.70	594.64	899.37	545.10	354.27	2.539		
19,000.00	9,387.07	19,002.48	9,383.17	179.18	178.98	89.71	9,767.69	595.10	900.62	542.72	357.90	2.516		
19,100.00	9,386.25	19,102.47	9,382.34	180.99	180.79	89.71	9,867.68	595.57	901.87	540.35	361.52	2.495		
19,200.00	9,385.42	19,202.46	9,381.52	182.81	182.60	89.71	9,967.66	596.04	903.12	537.97	365.14	2.473		
19,250.99	9,385.00	19,253.45	9,381.10	183.73	183.52	89.71	10,018.65	596.28	903.76	536.76	366.99	2.463 SF		

LEAM Drilling Systems LLC

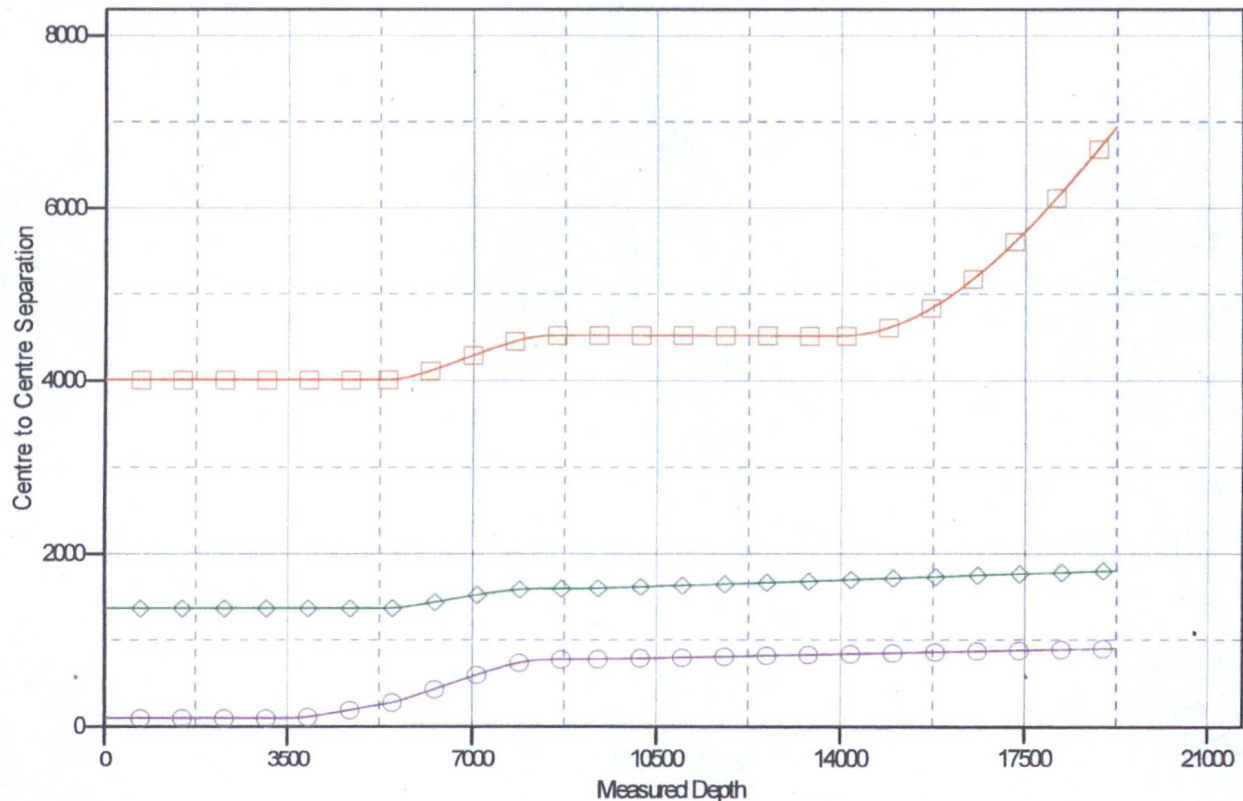
Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 1H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3550.9' GE + 25' KB @ 3575.90usft
Reference Site:	Blue Krait 23-14 Fed	MD Reference:	3550.9' GE + 25' KB @ 3575.90usft
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 3550.9' GE + 25' KB @ 3575.90usft
 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"

Ladder Plot



LEGEND

■ 6H, OH, Plan #1 V0
 ● 5H, OH, Plan #1 V0
 ◆ 2H, OH, Plan #1 V0

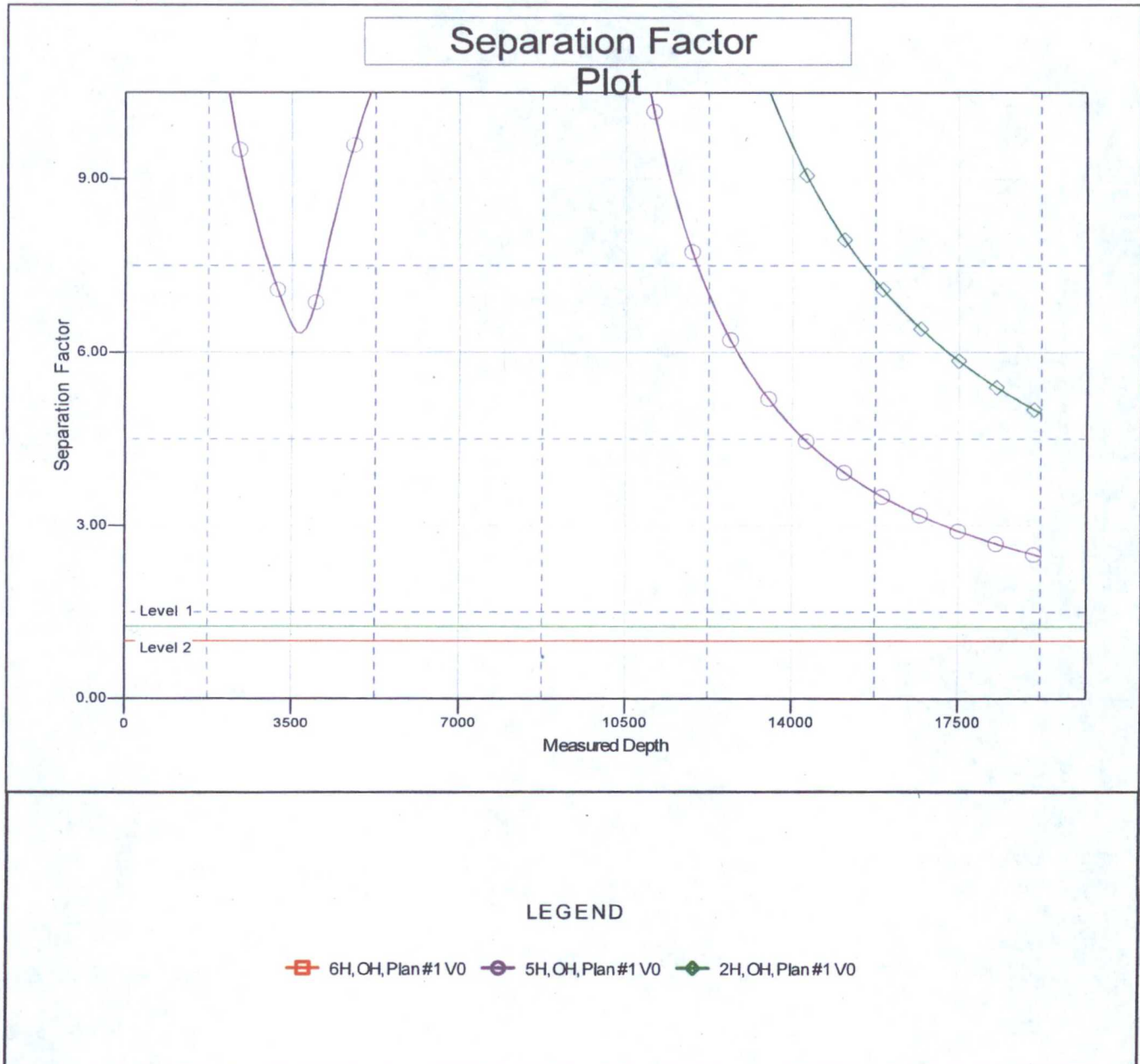
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PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Devon Energy Prod Co
LEASE NO.:	LC063798
WELL NAME & NO.:	1H-Blue Krait 23-14 Fed
SURFACE HOLE FOOTAGE:	200'/S & 610'/W
BOTTOM HOLE FOOTAGE:	330'/N & 380'/W Sec. 14, T. 24 S., R. 33 E.
LOCATION:	Section 23, T. 24 S., R. 33 E., NMPM
COUNTY:	Lea County, New Mexico

I. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

☒ **Lea County**

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 393-3612

1. **Hydrogen Sulfide (H₂S) monitors shall be installed prior to drilling out the surface shoe. H₂S has been reported within one mile of proposed project. If H₂S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.

4. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) for Water Basin:

After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements.

Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Possibility of water flows from the Castile and the Salado.

Possibility of lost circulation from the Rustler, the Red Beds, and the Delaware.

1. The **13-3/8** inch surface casing shall be set at approximately **1400** feet (**a minimum of 25 feet into the Rustler Anhydrite and above the salt**) and cemented to the surface.

Option 1:

- a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
- b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
- d. If cement falls back, remedial cementing will be done prior to drilling out that string.

Option 2:

DV tool option: Operator is to submit sundry if DV tool depth varies by more than 100 feet from approved depth.

- a. First stage to DV tool:
 - ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.
- b. Second stage above DV tool:
 - ☒ See Option 1.a-d above.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

Option 1:

☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.

Option 2:

DV tool shall be set a minimum of 50 feet below previous shoe and a minimum of 200 feet above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range.

c. First stage to DV tool:

☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.

d. Second stage above DV tool:

☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Excess calculates to negative 4% - Additional cement will be required.**

Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.

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

☒ Cement should tie-back at least **200** feet into previous casing string. Operator shall provide method of verification.

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API 53.

2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).
3. **Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 3000 (3M) psi.**
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. Operator shall perform the intermediate casing integrity test to 70% of the casing burst. This will test the multi-bowl seals.
 - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer.**

- c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- d. The results of the test shall be reported to the appropriate BLM office.
- e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
- f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

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