

CONFIDENTIAL

HOBBS OCD

15-591

OCT 01 2015

Form 3160-3
(March 2012)

OCD Hobbs
RECEIVED

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

[H]

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. BHL: NMNM113969	
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator Devon Energy Production Company, L.P. <6137>		7. If Unit or CA Agreement, Name and No.	
3a. Address 333 West Sheridan Avenue Oklahoma City, OK 73102-5010		8. Lease Name and Well No. North Thistle 35 Fed 1H <315296>	
3b. Phone No. (include area code) 405-552-6558		9. API Well No. 30025-42831	
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 505' FNL 2080 FEL, Lot 2, Sec 2-T23S-R33E (B2) PP: 930' FNL 2290' FEL At proposed prod. zone 330' FNL 2290' FEL, Unit B, Sec 35-T22S-R33E		10. Field and Pool, or Exploratory Brinninstool; Bone Spring (7320) ☒	
11. Sec., T. R. M. or Blk. and Survey or Area BHL: Sec 2-T23S-R33E/BHL: Sec 35-T22S-R33E		12. County or Parish Lca	
13. State NM		14. Distance in miles and direction from nearest town or post office* Approximately 23.5 miles SW of Eunice, NM.	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) See attached map		16. No. of acres in lease 600 Acres	
17. Spacing Unit dedicated to this well 160 Acres		18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. See attached map	
19. Proposed Depth 16,215' MD / 11,000' TVD		20. BLM/BIA Bond No. on file CO-1104; NBM-000801	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3515.2' GL		22. Approximate date work will start* 2/1/2016	
23. Estimated duration 45 Days		24. Attachments	

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, must be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the BLM.

25. Signature <i>Linda Good</i>	Name (Printed/Typed) Linda Good	Date 4/20/2015
Title Regulatory Compliance Specialist		
Approved by (Signature) Steve Caffey	Name (Printed/Typed)	SEP 28 2015
Title FIELD MANAGER		
Office CARLSBAD FIELD OFFICE		

Application approval 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.
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

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.

(Continued on page 2)

*(Instructions on page 2)

Carlsbad Controlled Water Basin

Ka
10/06/15

VLS 5 7 2012

Approval Subject to General Requirements
& Special Stipulations Attached

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

OCT 01 2015

1. Geologic Formations

RECEIVED

TVD of target	11,000'	Pilot hole depth	N/A
MD at TD:	16,215'	Deepest expected fresh water:	

Basin

[illegible]

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

Devon Energy, North Thistle 2-35 Fed 1H

2. Casing Program

See CWA

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
	From	To							
17.5"	0	1,350' / 1125'	13.375"	48	H-40	STC	1.28	2.87	8.35
12.25"	0	5,000'	9.625"	40	HCK-55	BTC	1.479	1.38	4.63
8.75"	0	10,427'	7"	29	P-110	BTC	1.73	2.11	2.99
8.75"	10,427'	16,215'	5.5"	17	P-110	BTC	1.61	2.00	3.04
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, North Thistle 2-35 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	640	12.9	9.81	1.85	14	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	550	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
9-5/8" Inter.	1030	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
7 x 5- 1/2" Prod	350	10.4	16.9	3.17	16	Lead: Tuned Light ® + 0.125 lb/sk Pol-E-Flake
	1530	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

Casing/String	TOC	% Excess
13-3/8" Surface	0'	100%
9-5/8" Intermediate	0'	75%
5-1/2" Production Casing	4500'	25%

Devon Energy, North Thistle 2-35 Fed 1H

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		50% testing pressure
			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, North Thistle 2-35 Fed 1H

See
COA

See
COA

Y	<u>A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold.</u> See attached for specs and hydrostatic test chart.
	Y Are anchors required by manufacturer?
Y	<u>A multibowl wellhead is being used.</u> 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 (FMC Uni-head). 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 FMC's representatives. • If the welding is performed by a third party, the FMC's representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal. • FMC representative will install the test plug for the initial BOP test. • FMC 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 FMC Uni-head 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 FMC Uni-head. 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, North Thistle 2-35 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.
	See attached schematic.

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	1,350' 1125	FW Gel	8.6-8.8	28-34	N/C
1125 1,350'	5,000'	Saturated Brine	10.0-10.2	28-34	N/C
5,000'	16,215'	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	

Devon Energy, North Thistle 2-35 Fed 1H

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	2900 psi
Abnormal Temperature	No

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

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

8. Other facets of operation

Is this a walking operation? No.

Will be pre-setting casing? No.

Attachments

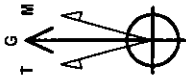
☒ Directional Plan

☐ Other, describe

DEVON ENERGY

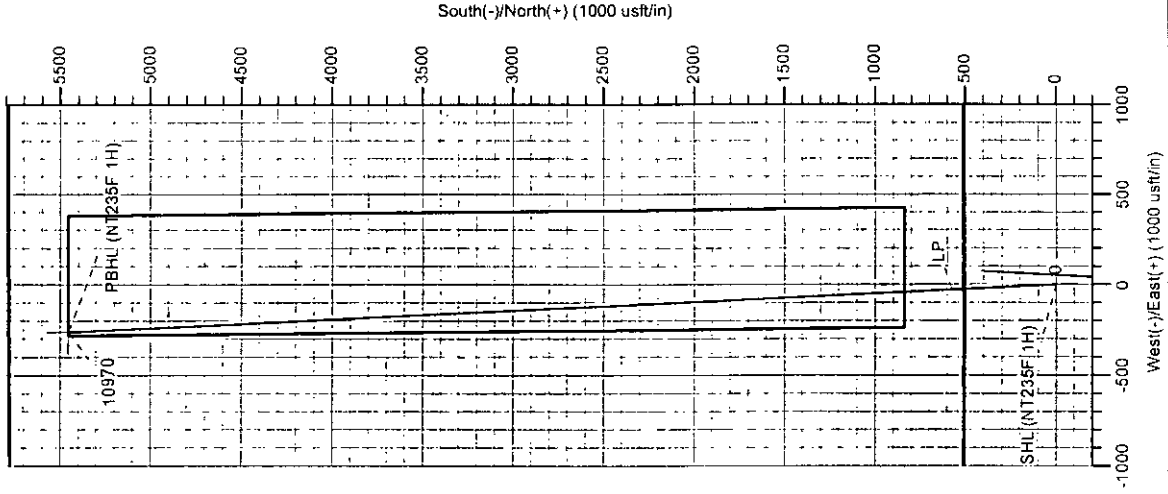
Project: Lea County, NM (NAD-83)
 Site: North Thistle 2-35 Fed
 Well: 1H
 Wellbore: OH
 Design: Plan #1

Azimuths to Grid North
 True North: -0.42°
 Magnetic North: 8.86°
 Magnetic Field
 Strength: 48263.3snT
 Dip Angle: 60.20°
 Date: 4/14/2015
 Model: BGGM2014



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

devon



SECTION DETAILS

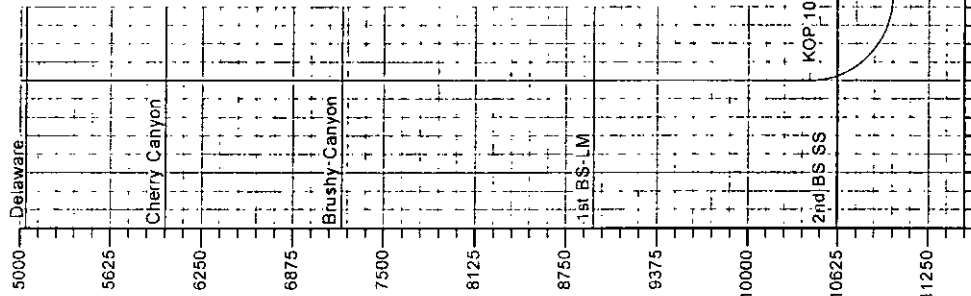
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSact	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	10427.05	0.00	0.00	10427.05	0.00	0.00	0.00	0.00	0.00	KOP 10° DLS
3	11330.57	90.35	357.25	11000.00	575.81	-27.61	10.00	357.25	576.48	LP
4	16215.28	90.35	357.25	10970.00	5454.83	-261.54	0.00	0.00	5461.10	TD

DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	North	East	Latitude	Longitude
SHL (NT235F 1H)	0.00	0.00	0.00	488158.96	785940.52	32° 20' 22.422 N	103° 32' 28.821 W
PBHL (NT235F 1H)	10970.00	5454.83	-261.54	483623.79	785678.98	32° 21' 16.417 N	103° 32' 31.399 W

FORMATION TOP DETAILS

Formation	DipAngle	DipDir
Rustler	0.00	
Top Salt	0.00	
Base Salt	0.00	
Delaware	0.00	
Cherry Canyon	0.00	
Brushy Canyon	0.00	
1st BS LM	0.00	
2nd BS SS	0.00	



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

Plan: Plan #1 (1H/OH)
 North Thistle 2-35 Fed
 Date: 14 29, April 14 2015
 Created By: Brady Deaver
 Date: _____
 Approved: _____
 Date: _____

DEVON ENERGY

Lea County, NM (NAD-83)

North Thistle 2-35 Fed

1H

OH

Plan: Plan #1

Standard Planning Report

14 April, 2015

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 1H
Company:	DEVON ENERGY	TVD Reference:	3515.2' GL + 25' RKB @ 3540.20usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3515.2' GL + 25' RKB @ 3540.20usft
Site:	North Thistle 2-35 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:	North Thistle 2-35 Fed		
Site Position:		Northing:	488,168.96 usft
From:	Map	Easting:	785,940.52 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 20' 22.422 N
		Longitude:	103° 32' 28.821 W
		Grid Convergence:	0.42 °

Well:	1H-2nd BS-SS					
Well Position	+N/-S	0.00 usft	Northing:	488,168.96 usft	Latitude:	32° 20' 22.422 N
	+E/-W	0.00 usft	Easting:	785,940.52 usft	Longitude:	103° 32' 28.821 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	3,540.20 usft	Ground Level:	3,515.20 usft

Wellbore:	OH		
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Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	BGGM2014	4/14/2015	7.28	60.20	48,253

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	357.25

Plan Sections	Measured	Inclination	Azimuth	Vertical	+N-S	+E-W	Dogleg	Build	Turn	TFO	Target
	Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
	(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	10,427.05	0.00	0.00	10,427.05	0.00	0.00	0.00	0.00	0.00	0.00	
	11,330.57	90.35	357.25	11,000.00	575.81	-27.61	10.00	10.00	-0.30	357.25	
	16,215.28	90.35	357.25	10,970.00	5,454.83	-261.54	0.00	0.00	0.00	0.00 PBHL (NT235F 1H)	

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 1H
Company:	DEVON ENERGY	TVD Reference:	3515.2' GL + 25' RKB @ 3540.20usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3515.2' GL + 25' RKB @ 3540.20usft
Site:	North Thistle 2-35 Fed	North Reference:	Grid
Well:	1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SHL (NT235F 1H)										
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	
925.00	0.00	0.00	925.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rustler										
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,630.00	0.00	0.00	1,630.00	0.00	0.00	0.00	0.00	0.00	0.00	
Top Salt										
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00	

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well-1H
Company:	DEVON ENERGY	TVD Reference:	3515.2' GL + 25' RKB @ 3540.20usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3515.2' GL + 25' RKB @ 3540.20usft
Site:	North Thistle 2-35 Fed.	North Reference:	Grid
Well:	1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,947.00	0.00	0.00	4,947.00	0.00	0.00	0.00	0.00	0.00	0.00
Base Salt									
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,040.00	0.00	0.00	5,040.00	0.00	0.00	0.00	0.00	0.00	0.00
Delaware									
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
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
Cherry Canyon									
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,210.00	0.00	0.00	7,210.00	0.00	0.00	0.00	0.00	0.00	0.00
Brushy Canyon									
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	0.00	0.00
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00	0.00	0.00
8,900.00	0.00	0.00	8,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,940.00	0.00	0.00	8,940.00	0.00	0.00	0.00	0.00	0.00	0.00
1st BS LM									
9,000.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00	0.00	0.00
9,100.00	0.00	0.00	9,100.00	0.00	0.00	0.00	0.00	0.00	0.00
9,200.00	0.00	0.00	9,200.00	0.00	0.00	0.00	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 1H
Company:	DEVON ENERGY	TVD Reference:	3515.2' GL + 25' RKB @ 3540.20usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3515.2' GL + 25' RKB @ 3540.20usft
Site:	North Thistle 2-35 Fed	North Reference:	Grid
Well:	1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,300.00	0.00	0.00	9,300.00	0.00	0.00	0.00	0.00	0.00	0.00
9,400.00	0.00	0.00	9,400.00	0.00	0.00	0.00	0.00	0.00	0.00
9,500.00	0.00	0.00	9,500.00	0.00	0.00	0.00	0.00	0.00	0.00
9,600.00	0.00	0.00	9,600.00	0.00	0.00	0.00	0.00	0.00	0.00
9,700.00	0.00	0.00	9,700.00	0.00	0.00	0.00	0.00	0.00	0.00
9,800.00	0.00	0.00	9,800.00	0.00	0.00	0.00	0.00	0.00	0.00
9,900.00	0.00	0.00	9,900.00	0.00	0.00	0.00	0.00	0.00	0.00
10,000.00	0.00	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00
10,100.00	0.00	0.00	10,100.00	0.00	0.00	0.00	0.00	0.00	0.00
10,200.00	0.00	0.00	10,200.00	0.00	0.00	0.00	0.00	0.00	0.00
10,300.00	0.00	0.00	10,300.00	0.00	0.00	0.00	0.00	0.00	0.00
10,400.00	0.00	0.00	10,400.00	0.00	0.00	0.00	0.00	0.00	0.00
10,427.05	0.00	0.00	10,427.05	0.00	0.00	0.00	0.00	0.00	0.00
KOP, 10° DLS									
10,450.00	2.30	357.25	10,449.99	0.46	-0.02	0.46	10.00	10.00	0.00
10,500.00	7.30	357.25	10,499.80	4.63	-0.22	4.64	10.00	10.00	0.00
10,550.00	12.30	357.25	10,549.06	13.13	-0.63	13.14	10.00	10.00	0.00
10,600.00	17.30	357.25	10,597.39	25.88	-1.24	25.91	10.00	10.00	0.00
10,620.66	19.36	357.25	10,617.00	32.37	-1.55	32.40	10.00	10.00	0.00
2nd BS SS									
10,650.00	22.30	357.25	10,644.42	42.78	-2.05	42.83	10.00	10.00	0.00
10,700.00	27.30	357.25	10,689.79	63.72	-3.06	63.79	10.00	10.00	0.00
10,750.00	32.30	357.25	10,733.17	88.53	-4.24	88.63	10.00	10.00	0.00
10,800.00	37.30	357.25	10,774.22	117.02	-5.61	117.15	10.00	10.00	0.00
10,850.00	42.30	357.25	10,812.62	148.98	-7.14	149.15	10.00	10.00	0.00
10,900.00	47.30	357.25	10,848.09	184.15	-8.83	184.36	10.00	10.00	0.00
10,950.00	52.30	357.25	10,880.36	222.28	-10.66	222.54	10.00	10.00	0.00
11,000.00	57.30	357.25	10,909.17	263.08	-12.61	263.38	10.00	10.00	0.00
11,050.00	62.30	357.25	10,934.32	306.23	-14.68	306.58	10.00	10.00	0.00
11,100.00	67.30	357.25	10,955.61	351.40	-16.85	351.80	10.00	10.00	0.00
11,150.00	72.30	357.25	10,972.87	398.25	-19.09	398.71	10.00	10.00	0.00
11,200.00	77.30	357.25	10,985.98	446.43	-21.40	446.95	10.00	10.00	0.00
11,250.00	82.30	357.25	10,994.84	495.57	-23.76	496.14	10.00	10.00	0.00
11,300.00	87.30	357.25	10,999.37	545.29	-26.14	545.92	10.00	10.00	0.00
11,330.57	90.35	357.25	11,000.00	575.81	-27.61	576.48	10.00	10.00	0.00
LP									
11,400.00	90.35	357.25	10,999.57	645.17	-30.93	645.91	0.00	0.00	0.00
11,500.00	90.35	357.25	10,998.96	745.05	-35.72	745.90	0.00	0.00	0.00
11,600.00	90.35	357.25	10,998.34	844.93	-40.51	845.90	0.00	0.00	0.00
11,700.00	90.35	357.25	10,997.73	944.82	-45.30	945.90	0.00	0.00	0.00
11,800.00	90.35	357.25	10,997.11	1,044.70	-50.09	1,045.90	0.00	0.00	0.00
11,900.00	90.35	357.25	10,996.50	1,144.58	-54.88	1,145.90	0.00	0.00	0.00
12,000.00	90.35	357.25	10,995.89	1,244.47	-59.67	1,245.90	0.00	0.00	0.00
12,100.00	90.35	357.25	10,995.27	1,344.35	-64.46	1,345.89	0.00	0.00	0.00
12,200.00	90.35	357.25	10,994.66	1,444.23	-69.25	1,445.89	0.00	0.00	0.00
12,300.00	90.35	357.25	10,994.04	1,544.12	-74.03	1,545.89	0.00	0.00	0.00
12,400.00	90.35	357.25	10,993.43	1,644.00	-78.82	1,645.89	0.00	0.00	0.00
12,500.00	90.35	357.25	10,992.82	1,743.88	-83.61	1,745.89	0.00	0.00	0.00
12,600.00	90.35	357.25	10,992.20	1,843.77	-88.40	1,845.88	0.00	0.00	0.00
12,700.00	90.35	357.25	10,991.59	1,943.65	-93.19	1,945.88	0.00	0.00	0.00
12,800.00	90.35	357.25	10,990.97	2,043.53	-97.98	2,045.88	0.00	0.00	0.00
12,900.00	90.35	357.25	10,990.36	2,143.42	-102.77	2,145.88	0.00	0.00	0.00
13,000.00	90.35	357.25	10,989.75	2,243.30	-107.56	2,245.88	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 1H
Company:	DEVON ENERGY	TVD Reference:	3515.2' GL + 25' RKB @ 3540.20usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3515.2' GL + 25' RKB @ 3540.20usft
Site:	North Thistle 2-35 Fed	North Reference:	Grid
Well:	1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	N/S (usft)	E/W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,100.00	90.35	357.25	10,989.13	2,343.18	-112.35	2,345.87	0.00	0.00	0.00
13,200.00	90.35	357.25	10,988.52	2,443.07	-117.14	2,445.87	0.00	0.00	0.00
13,300.00	90.35	357.25	10,987.90	2,542.95	-121.93	2,545.87	0.00	0.00	0.00
13,400.00	90.35	357.25	10,987.29	2,642.83	-126.71	2,645.87	0.00	0.00	0.00
13,500.00	90.35	357.25	10,986.67	2,742.72	-131.50	2,745.87	0.00	0.00	0.00
13,600.00	90.35	357.25	10,986.06	2,842.60	-136.29	2,845.87	0.00	0.00	0.00
13,700.00	90.35	357.25	10,985.45	2,942.48	-141.08	2,945.86	0.00	0.00	0.00
13,800.00	90.35	357.25	10,984.83	3,042.37	-145.87	3,045.86	0.00	0.00	0.00
13,900.00	90.35	357.25	10,984.22	3,142.25	-150.66	3,145.86	0.00	0.00	0.00
14,000.00	90.35	357.25	10,983.60	3,242.13	-155.45	3,245.86	0.00	0.00	0.00
14,100.00	90.35	357.25	10,982.99	3,342.02	-160.24	3,345.86	0.00	0.00	0.00
14,200.00	90.35	357.25	10,982.38	3,441.90	-165.03	3,445.85	0.00	0.00	0.00
14,300.00	90.35	357.25	10,981.76	3,541.78	-169.82	3,545.85	0.00	0.00	0.00
14,400.00	90.35	357.25	10,981.15	3,641.67	-174.61	3,645.85	0.00	0.00	0.00
14,500.00	90.35	357.25	10,980.53	3,741.55	-179.39	3,745.85	0.00	0.00	0.00
14,600.00	90.35	357.25	10,979.92	3,841.43	-184.18	3,845.85	0.00	0.00	0.00
14,700.00	90.35	357.25	10,979.31	3,941.32	-188.97	3,945.84	0.00	0.00	0.00
14,800.00	90.35	357.25	10,978.69	4,041.20	-193.76	4,045.84	0.00	0.00	0.00
14,900.00	90.35	357.25	10,978.08	4,141.08	-198.55	4,145.84	0.00	0.00	0.00
15,000.00	90.35	357.25	10,977.46	4,240.97	-203.34	4,245.84	0.00	0.00	0.00
15,100.00	90.35	357.25	10,976.85	4,340.85	-208.13	4,345.84	0.00	0.00	0.00
15,200.00	90.35	357.25	10,976.24	4,440.73	-212.92	4,445.83	0.00	0.00	0.00
15,300.00	90.35	357.25	10,975.62	4,540.62	-217.71	4,545.83	0.00	0.00	0.00
15,400.00	90.35	357.25	10,975.01	4,640.50	-222.50	4,645.83	0.00	0.00	0.00
15,500.00	90.35	357.25	10,974.39	4,740.38	-227.28	4,745.83	0.00	0.00	0.00
15,600.00	90.35	357.25	10,973.78	4,840.27	-232.07	4,845.83	0.00	0.00	0.00
15,700.00	90.35	357.25	10,973.16	4,940.15	-236.86	4,945.83	0.00	0.00	0.00
15,800.00	90.35	357.25	10,972.55	5,040.03	-241.65	5,045.82	0.00	0.00	0.00
15,900.00	90.35	357.25	10,971.94	5,139.92	-246.44	5,145.82	0.00	0.00	0.00
16,000.00	90.35	357.25	10,971.32	5,239.80	-251.23	5,245.82	0.00	0.00	0.00
16,100.00	90.35	357.25	10,970.71	5,339.68	-256.02	5,345.82	0.00	0.00	0.00
16,200.00	90.35	357.25	10,970.09	5,439.57	-260.81	5,445.82	0.00	0.00	0.00
16,215.28	90.35	357.25	10,970.00	5,454.83	-261.54	5,461.10	0.00	0.00	0.00
TD: PBHL (NT235F 1H)									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir (°)	TVD (usft)	N/S (usft)	E/W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL (NT235F 1H) - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	488,168.96	785,940.52	32° 20' 22.422 N	103° 32' 28.821 W
PBHL (NT235F 1H) - plan hits target center - Point	0.00	0.00	10,970.00	5,454.83	-261.54	493,623.79	785,678.98	32° 21' 16.417 N	103° 32' 31.399 W

LEAM Drilling Systems LLC

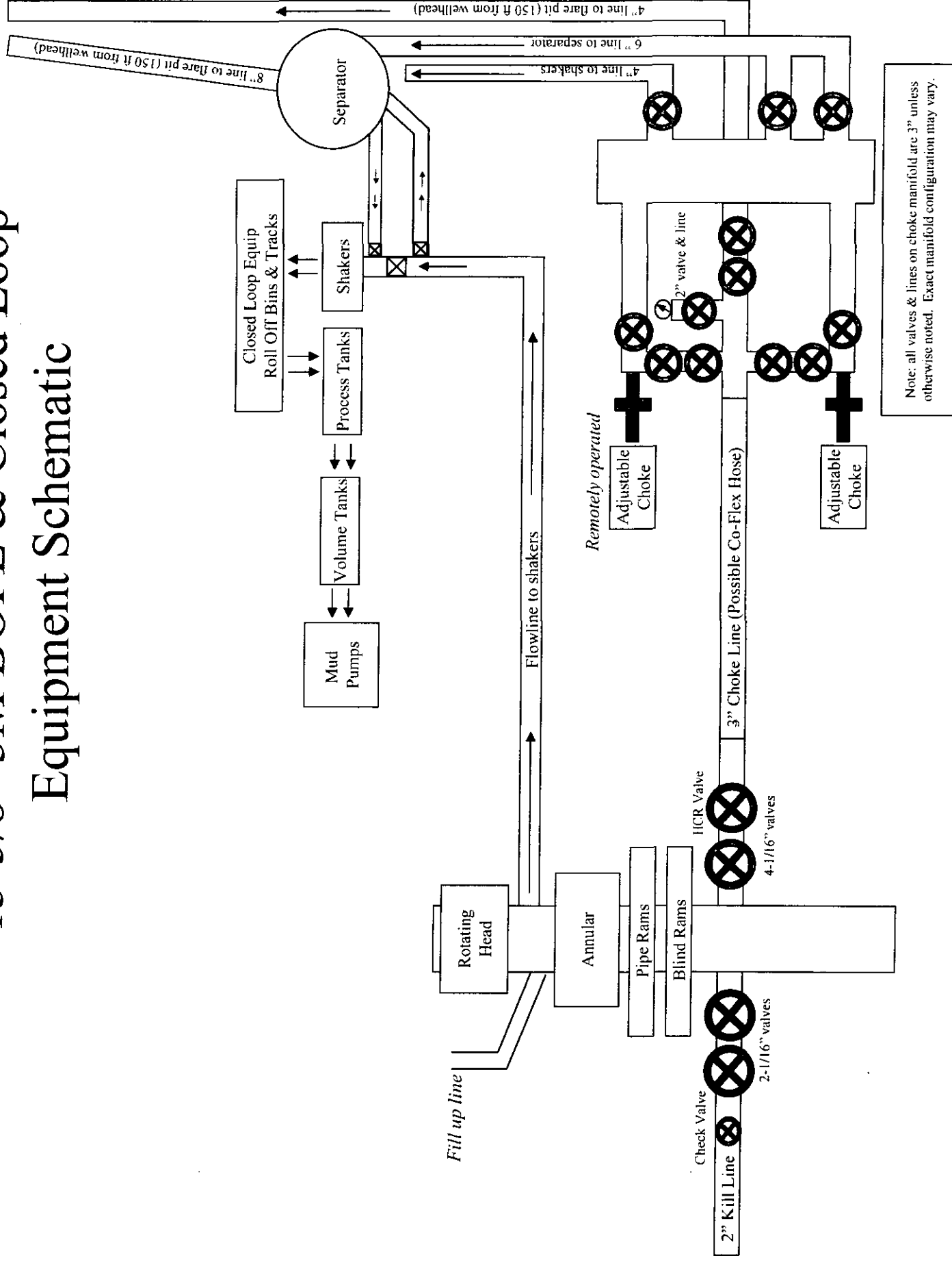
Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 1H
Company:	DEVON ENERGY	TVD Reference:	3515.2' GL + 25' RKB @ 3540.20usft
Project:	Lea County NM (NAD-83)	MD Reference:	3515.2' GL + 25' RKB @ 3540.20usft
Site:	North Thistle 2-35 Fed	North Reference:	Grid
Well:	1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
925.00	925.00	Rustler		0.00		
1,630.00	1,630.00	Top Salt		0.00		
4,947.00	4,947.00	Base Salt		0.00		
5,040.00	5,040.00	Delaware		0.00		
6,000.00	6,000.00	Cherry Canyon		0.00		
7,210.00	7,210.00	Brushy Canyon		0.00		
8,940.00	8,940.00	1st BS LM		0.00		
10,620.66	10,617.00	2nd BS SS		0.00		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		N/S (usft)	E/W (usft)	Comment	
10,427.05	10,427.05	0.00	0.00	KOP 10° DLS	
11,330.57	11,000.00	575.81	-27.61	LP	
16,215.28	10,970.00	5,454.83	-261.54	TD	

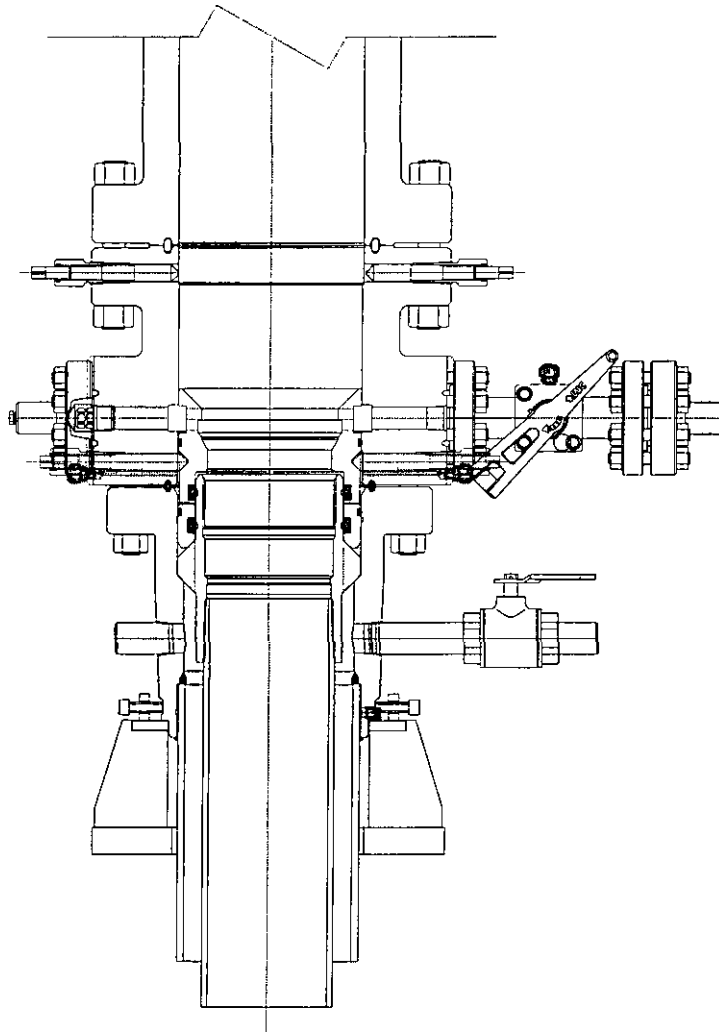
13-5/8" 3M BOPE & Closed Loop Equipment Schematic



NOTES REGARDING BLOWOUT PREVENTERS

Devon Energy Production Company, L.P.
NORTH THISTLE 2-35 FED 1H

1. Drilling Nipple will be constructed so it can be removed mechanically without the aid of a welder. The minimum internal diameter will equal BOP bore.
2. Wear ring will be properly installed in head.
3. Blowout preventer and all associated filings will be in operable condition to withstand a minimum of 3000psi working pressure.
4. All fittings will be flanged.
5. A fill bore safety valve tested to a minimum of 3000psi WP with proper thread connections will be available on the rotary rig floor at all times.
6. All choke lines will be anchored to prevent movement.
7. All BOP equipment will be equal to or larger in bore than the internal diameter of the last casing string.
8. Will maintain a kelly cock attached to the kelly.
9. Hand wheels and wrenches will be properly installed and tested for safe operation.
10. Hydraulic floor control for blowout preventer will be located as near in proximity to driller's controls as possible.
11. All BOP equipment will meet API standards and include a minimum 40 gallon accumulator having two independent means of power to initiate closing operation.



PRIMARY MODE

DEVON ENERGY

ARTESIA

S.E.N.M

13 3/8 X 9 5/8

QUOTE LAYOUT
F18648
REF: DM100161737
DM100151315

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REVISIONS	
A	05-08-13
B	1-22-14
C	5-13-14

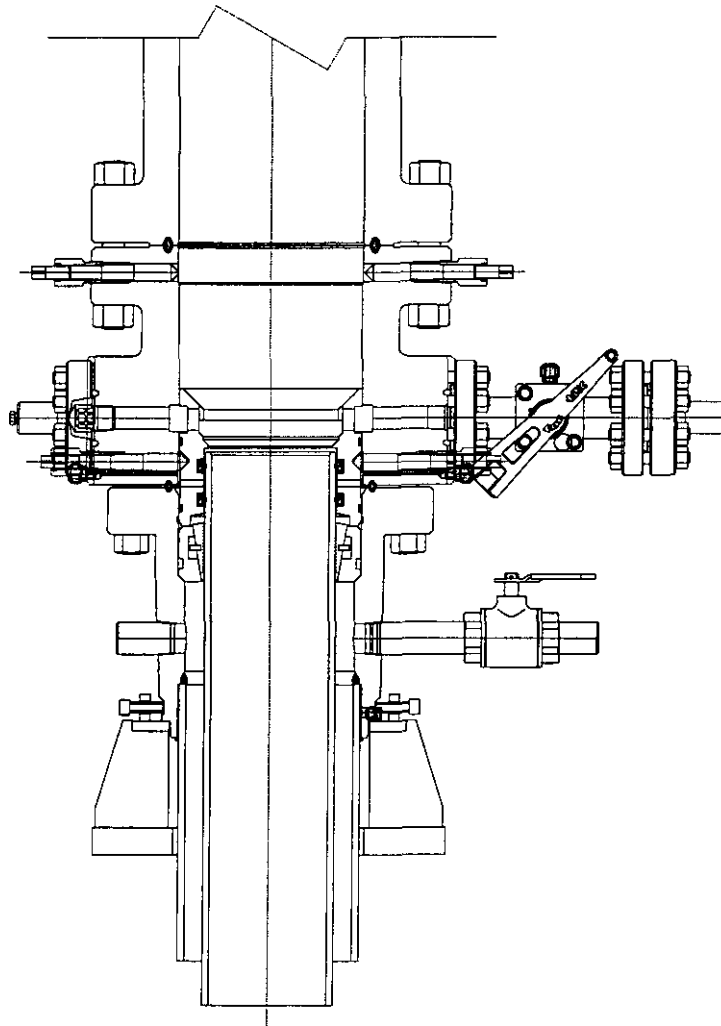
DESCRIPTION

SURFACE WELLHEAD LAYOUT
UNIHEAD, UH-1, SOW,
DEVON ENERGY, ODESSA

DRAWN BY	K. VU	05-08-13
DRAWING REVIEWER	Z. MARQUEZ	05-08-13
DESIGN REVIEW	K. TAHA	05-08-13
APPROVED BY	R. HAMILTON	05-08-13

FMCTechnologies

DRAWING NUMBER
DM100161771-2A



CONTINGENCY MODE

DEVON ENERGY

ARTESIA

S.E.N.M

13 3/8 X 9 5/8

QUOTE LAYOUT

F18648

REF: DM100161737

DM100151315

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REVISIONS

A	05-08-13
B	1-22-14
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DESCRIPTION

SURFACE WELLHEAD LAYOUT
UNIHEAD, UH-1, SOW,
DEVON ENERGY, ODESSA

DRAWN BY	K. VU	05-08-13
DRAFTING REVIEW	Z. MARQUEZ	05-08-13
DESIGN REVIEW	K. TAHA	05-08-13
APPROVED BY	R. HAMILTON	05-08-13

FMC Technologies

DRAWING NUMBER
DM100161771-2B



Fluid Technology

ContiTech Beattie Corp.
Website: www.contitechbeattie.com

Monday, June 14, 2010

RE: Drilling & Production Hoses
Lifting & Safety Equipment

To Halmerich & Payne,

A Continental ContiTech hose assembly can perform as intended and suitable for the application regardless of whether the hose is secured or unsecured in its configuration. As a manufacturer of High Pressure Hose Assemblies for use in Drilling & Production, we do offer the corresponding lifting and safety equipment, this has the added benefit of easing the lifting and handling of each hose assembly whilst affording hose longevity by ensuring correct handling methods and procedures as well as securing the hose in the unlikely event of a failure; but in no way does the lifting and safety equipment affect the performance of the hoses providing the hoses have been handled and installed correctly it is good practice to use lifting & safety equipment but not mandatory

Should you have any questions or require any additional information/clarifications then please do not hesitate to contact us.

ContiTech Beattie is part of the Continental AG Corporation and can offer the full support resources associated with a global organization.

Best regards,

Robin Hodgson
Sales Manager
ContiTech Beattie Corp

ContiTech Beattie Corp,
11535 Brittonmoore Park Drive,
Houston, TX 77041
Phone: +1 (832) 327-0141
Fax: +1 (832) 327-0148
www.contitechbeattie.com



RIG 212



QUALITY DOCUMENT

PHOENIX RUBBER
INDUSTRIAL LTD.

6728 Szeged, Budapest út 10. Hungary - H-6701 Szeged, P. O. Box 152
Phone: (3662) 556-737 • Fax: (3662) 556-738

SALES & MARKETING: H-1052 Budapest, Ráday u. 62-64. Hungary - H-1440 Budapest, P. O. Box 26
Phone: (361) 456-4200 • Fax: (361) 217-2972, 456-4273 • www.taurusermerge.hu

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°: 552	
PURCHASER: Phoenix Beattie Co.				P.O. N°: 1519FA-871	
PHOENIX RUBBER order N°: 170466		HOSE TYPE: 3" ID Choke and Kill Hose			
HOSE SERIAL N°: 34128		NOMINAL / ACTUAL LENGTH: 11,43 m			
W.P. 68,96 MPa 10000 psi		T.P. 103,4 MPa 15000 psi		Duration: 60 min.	
Pressure test with water at ambient temperature					
See attachment. (1 page)					
↑ 10 mm = 10 Min. → 10 mm = 25 MPa					
COUPLINGS					
Type	Serial N°		Quality	Heat N°	
3" coupling with 4 1/16" Flange end	720 719		AISI 4130	C7626	
			AISI 4130	47357	
API Spec 16 C Temperature rate: "B"					
All metal parts are flawless					
WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.					
Date: 29. April. 2002.		Inspector		Quality Control PHOENIX RUBBER Industrial Ltd. Hose Inspection and VERIFIED TRUE COPY PHOENIX RUBBER Q.C.	

40920-C-00015 N800C 14094-66

8	CN	+0.002	0	14.00
	RD	+0.000	0	14.00
	SL	+0.000	0	14.00
7	CN	+0.002	0	13.40
	RD	+0.000	0	13.40
	SL	+0.000	0	13.40
6	CN	+0.002	0	13.20
	RD	+0.000	0	13.20
	SL	+0.000	0	13.20
5	CN	+0.002	0	13.00
	RD	+0.000	0	13.00
	SL	+0.000	0	13.00
4	CN	+0.002	0	12.80
	RD	+0.000	0	12.80
	SL	+0.000	0	12.80
3	CN	+0.002	0	12.60
	RD	+0.000	0	12.60
	SL	+0.000	0	12.60
2	CN	+0.002	0	12.40
	RD	+0.000	0	12.40
	SL	+0.000	0	12.40

[Signature]
PHOENIX RUBBER
 Industrial Ltd.
 Hose Inspection and
 Certification Dept.

VERIFIED TRUE CO.
 PHOENIX RUBBER CO.

H&P Flex Rig Location Layout

2 Well Pad

