

30-015-38611

Devon Energy, Inc.

Eddy County

Arcturus "18" Fed

4H

OH

Plan: Plan #1

Pathfinder X & Y Report

25 August, 2011

Pathfinder
Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H
Project:	Eddy County	TVD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Site:	Arcturus "18" Fed	MD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Project:	Eddy County		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site:	Arcturus "18" Fed				
Site Position:	From: Map	Northing:	609,833.520 usft	Latitude:	32° 40' 32.816 N
		Easting:	669,825.030 usft	Longitude:	103° 54' 56.704 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.23 °

Well:	4H					
Well Position	+N/-S	0.00 usft	Northing:	602,733.660 usft	Latitude:	32° 39' 22.563 N
	+E/-W	0.00 usft	Easting:	669,825.150 usft	Longitude:	103° 54' 57.030 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,410.40 usft

Wellbore:	OH
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	8/19/2011	7.74	60.55	48,858

Design:	Plan #1			
Audit Notes:				
Version:	Phase: PROTOTYPE Tie On Depth: 0.00			
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	99.13

Survey Tool Program	Date 8/25/2011			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	13,352.64	Plan #1 (OH)	Pathfinder	Pathfinder MWD

Pathfinder
Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H
Project:	Eddy County	TVD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Site:	Arcturus 18" Fed	MD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User.Db

Planned Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)		
0.00	0.00	0.00	0.00	-3,436.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
25.00	0.00	0.00	25.00	-3,411.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
50.00	0.00	0.00	50.00	-3,386.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
75.00	0.00	0.00	75.00	-3,361.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
100.00	0.00	0.00	100.00	-3,336.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
125.00	0.00	0.00	125.00	-3,311.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
150.00	0.00	0.00	150.00	-3,286.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
175.00	0.00	0.00	175.00	-3,261.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
200.00	0.00	0.00	200.00	-3,236.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
225.00	0.00	0.00	225.00	-3,211.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
250.00	0.00	0.00	250.00	-3,186.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
275.00	0.00	0.00	275.00	-3,161.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
300.00	0.00	0.00	300.00	-3,136.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
325.00	0.00	0.00	325.00	-3,111.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
350.00	0.00	0.00	350.00	-3,086.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
375.00	0.00	0.00	375.00	-3,061.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
400.00	0.00	0.00	400.00	-3,036.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
425.00	0.00	0.00	425.00	-3,011.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
450.00	0.00	0.00	450.00	-2,986.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
475.00	0.00	0.00	475.00	-2,961.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
500.00	0.00	0.00	500.00	-2,936.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
525.00	0.00	0.00	525.00	-2,911.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
550.00	0.00	0.00	550.00	-2,886.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
575.00	0.00	0.00	575.00	-2,861.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
600.00	0.00	0.00	600.00	-2,836.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
625.00	0.00	0.00	625.00	-2,811.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
650.00	0.00	0.00	650.00	-2,786.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		

Pathfinder
Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H
Project:	Eddy County	TVD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Site:	Arcturus 18" Fed	MD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1, Single User Db

Planned Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)		
675.00	0.00	0.00	675.00	-2,761.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
700.00	0.00	0.00	700.00	-2,736.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
725.00	0.00	0.00	725.00	-2,711.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
750.00	0.00	0.00	750.00	-2,686.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
775.00	0.00	0.00	775.00	-2,661.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
800.00	0.00	0.00	800.00	-2,636.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
825.00	0.00	0.00	825.00	-2,611.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
850.00	0.00	0.00	850.00	-2,586.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
875.00	0.00	0.00	875.00	-2,561.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
900.00	0.00	0.00	900.00	-2,536.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
925.00	0.00	0.00	925.00	-2,511.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
950.00	0.00	0.00	950.00	-2,486.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
975.00	0.00	0.00	975.00	-2,461.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
1,000.00	0.00	0.00	1,000.00	-2,436.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
1,025.00	0.00	0.00	1,025.00	-2,411.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
1,050.00	0.00	0.00	1,050.00	-2,386.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
1,075.00	0.00	0.00	1,075.00	-2,361.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
1,100.00	0.00	0.00	1,100.00	-2,336.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
1,125.00	0.00	0.00	1,125.00	-2,311.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
1,150.00	0.00	0.00	1,150.00	-2,286.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
1,175.00	0.00	0.00	1,175.00	-2,261.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
1,200.00	0.00	0.00	1,200.00	-2,236.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
1,225.00	0.00	0.00	1,225.00	-2,211.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
1,250.00	0.00	0.00	1,250.00	-2,186.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
1,275.00	0.00	0.00	1,275.00	-2,161.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
1,300.00	0.00	0.00	1,300.00	-2,136.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
1,325.00	0.00	0.00	1,325.00	-2,111.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		

Pathfinder
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Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H
Project:	Eddy County	TVD Reference:	KB = 26 @ 3436.40usft (H&P 300)
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Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
1,350.00	0.00	0.00	1,350.00	-2,086.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
1,375.00	0.00	0.00	1,375.00	-2,081.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
1,400.00	0.00	0.00	1,400.00	-2,036.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
1,425.00	0.00	0.00	1,425.00	-2,011.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
1,450.00	0.00	0.00	1,450.00	-1,986.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
1,475.00	0.00	0.00	1,475.00	-1,961.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
1,500.00	0.00	0.00	1,500.00	-1,936.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
1,525.00	0.00	0.00	1,525.00	-1,911.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
1,550.00	0.00	0.00	1,550.00	-1,886.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
1,575.00	0.00	0.00	1,575.00	-1,861.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
1,600.00	0.00	0.00	1,600.00	-1,836.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
1,625.00	0.00	0.00	1,625.00	-1,811.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
1,650.00	0.00	0.00	1,650.00	-1,786.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
1,675.00	0.00	0.00	1,675.00	-1,761.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
1,700.00	0.00	0.00	1,700.00	-1,736.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
1,725.00	0.00	0.00	1,725.00	-1,711.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
1,750.00	0.00	0.00	1,750.00	-1,686.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
1,775.00	0.00	0.00	1,775.00	-1,661.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
1,800.00	0.00	0.00	1,800.00	-1,636.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
1,825.00	0.00	0.00	1,825.00	-1,611.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
1,850.00	0.00	0.00	1,850.00	-1,586.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
1,875.00	0.00	0.00	1,875.00	-1,561.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
1,900.00	0.00	0.00	1,900.00	-1,536.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
1,925.00	0.00	0.00	1,925.00	-1,511.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
1,950.00	0.00	0.00	1,950.00	-1,486.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
1,975.00	0.00	0.00	1,975.00	-1,461.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
2,000.00	0.00	0.00	2,000.00	-1,436.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	

Pathfinder
Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H
Project:	Eddy County	TVD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Site:	Arcturus "18" Fed	MD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Well:	4H	North Reference:	Gnd
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLag (°/100usft)	Northing (usft)	Easting (usft)		
2,025.00	0.00	0.00	2,025.00	-1,411.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
2,050.00	0.00	0.00	2,050.00	-1,386.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
2,075.00	0.00	0.00	2,075.00	-1,361.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
2,100.00	0.00	0.00	2,100.00	-1,336.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
2,125.00	0.00	0.00	2,125.00	-1,311.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
2,150.00	0.00	0.00	2,150.00	-1,286.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
2,175.00	0.00	0.00	2,175.00	-1,261.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
2,200.00	0.00	0.00	2,200.00	-1,236.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
2,225.00	0.00	0.00	2,225.00	-1,211.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
2,250.00	0.00	0.00	2,250.00	-1,186.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
2,275.00	0.00	0.00	2,275.00	-1,161.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
2,300.00	0.00	0.00	2,300.00	-1,136.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
2,325.00	0.00	0.00	2,325.00	-1,111.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
2,350.00	0.00	0.00	2,350.00	-1,086.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
2,375.00	0.00	0.00	2,375.00	-1,061.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
2,400.00	0.00	0.00	2,400.00	-1,036.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
2,425.00	0.00	0.00	2,425.00	-1,011.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
2,450.00	0.00	0.00	2,450.00	-986.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
2,475.00	0.00	0.00	2,475.00	-961.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
2,500.00	0.00	0.00	2,500.00	-936.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
2,525.00	0.00	0.00	2,525.00	-911.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
2,550.00	0.00	0.00	2,550.00	-886.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
2,575.00	0.00	0.00	2,575.00	-861.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
2,600.00	0.00	0.00	2,600.00	-836.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
2,625.00	0.00	0.00	2,625.00	-811.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
2,650.00	0.00	0.00	2,650.00	-786.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
2,675.00	0.00	0.00	2,675.00	-761.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15		

Pathfinder
Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H
Project:	Eddy County	TVD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Site:	Arcturus "18" Fed	MD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
2,700.00	0.00	0.00	2,700.00	-736.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
2,725.00	0.00	0.00	2,725.00	-711.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
2,750.00	0.00	0.00	2,750.00	-686.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
2,775.00	0.00	0.00	2,775.00	-661.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
2,800.00	0.00	0.00	2,800.00	-636.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
2,825.00	0.00	0.00	2,825.00	-611.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
2,850.00	0.00	0.00	2,850.00	-586.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
2,875.00	0.00	0.00	2,875.00	-561.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
2,900.00	0.00	0.00	2,900.00	-536.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
2,925.00	0.00	0.00	2,925.00	-511.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
2,950.00	0.00	0.00	2,950.00	-486.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
2,975.00	0.00	0.00	2,975.00	-461.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,000.00	0.00	0.00	3,000.00	-436.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,025.00	0.00	0.00	3,025.00	-411.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,050.00	0.00	0.00	3,050.00	-386.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,075.00	0.00	0.00	3,075.00	-361.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,100.00	0.00	0.00	3,100.00	-336.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,125.00	0.00	0.00	3,125.00	-311.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,150.00	0.00	0.00	3,150.00	-286.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,175.00	0.00	0.00	3,175.00	-261.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,200.00	0.00	0.00	3,200.00	-236.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,225.00	0.00	0.00	3,225.00	-211.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,250.00	0.00	0.00	3,250.00	-186.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,275.00	0.00	0.00	3,275.00	-161.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,300.00	0.00	0.00	3,300.00	-136.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,325.00	0.00	0.00	3,325.00	-111.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,350.00	0.00	0.00	3,350.00	-86.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	

Pathfinder
Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H
Project:	Eddy County	TVD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Site:	Arcturus "18" Fed	MD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey/Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
3,375.00	0.00	0.00	3,375.00	-61.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,400.00	0.00	0.00	3,400.00	-36.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,425.00	0.00	0.00	3,425.00	-11.40	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,450.00	0.00	0.00	3,450.00	13.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,475.00	0.00	0.00	3,475.00	38.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,500.00	0.00	0.00	3,500.00	63.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,525.00	0.00	0.00	3,525.00	88.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,550.00	0.00	0.00	3,550.00	113.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,575.00	0.00	0.00	3,575.00	138.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,600.00	0.00	0.00	3,600.00	163.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,625.00	0.00	0.00	3,625.00	188.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,650.00	0.00	0.00	3,650.00	213.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,675.00	0.00	0.00	3,675.00	238.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,700.00	0.00	0.00	3,700.00	263.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,725.00	0.00	0.00	3,725.00	288.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,750.00	0.00	0.00	3,750.00	313.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,775.00	0.00	0.00	3,775.00	338.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,800.00	0.00	0.00	3,800.00	363.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,825.00	0.00	0.00	3,825.00	388.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,850.00	0.00	0.00	3,850.00	413.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,875.00	0.00	0.00	3,875.00	438.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,900.00	0.00	0.00	3,900.00	463.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,925.00	0.00	0.00	3,925.00	488.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,950.00	0.00	0.00	3,950.00	513.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
3,975.00	0.00	0.00	3,975.00	538.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
4,000.00	0.00	0.00	4,000.00	563.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
4,025.00	0.00	0.00	4,025.00	588.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	

Pathfinder
Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H
Project:	Eddy County	TVD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Site:	Arcturus "18" Fed	MD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)		
4,050.00	0.00	0.00	4,050.00	613.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
4,075.00	0.00	0.00	4,075.00	638.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
4,100.00	0.00	0.00	4,100.00	663.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
4,125.00	0.00	0.00	4,125.00	688.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
4,150.00	0.00	0.00	4,150.00	713.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
4,175.00	0.00	0.00	4,175.00	738.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
4,200.00	0.00	0.00	4,200.00	763.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
4,225.00	0.00	0.00	4,225.00	788.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
4,250.00	0.00	0.00	4,250.00	813.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
4,275.00	0.00	0.00	4,275.00	838.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
4,300.00	0.00	0.00	4,300.00	863.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
4,325.00	0.00	0.00	4,325.00	888.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
4,350.00	0.00	0.00	4,350.00	913.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
4,375.00	0.00	0.00	4,375.00	938.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
4,400.00	0.00	0.00	4,400.00	963.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
4,425.00	0.00	0.00	4,425.00	988.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
4,450.00	0.00	0.00	4,450.00	1,013.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
4,475.00	0.00	0.00	4,475.00	1,038.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
4,500.00	0.00	0.00	4,500.00	1,063.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
4,525.00	0.00	0.00	4,525.00	1,088.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
4,550.00	0.00	0.00	4,550.00	1,113.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
4,575.00	0.00	0.00	4,575.00	1,138.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
4,600.00	0.00	0.00	4,600.00	1,163.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
4,625.00	0.00	0.00	4,625.00	1,188.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
4,650.00	0.00	0.00	4,650.00	1,213.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
4,675.00	0.00	0.00	4,675.00	1,238.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
4,700.00	0.00	0.00	4,700.00	1,263.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		

Pathfinder
Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H
Project:	Eddy County	TVD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Site:	Arcturus "18" Fed	MD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
4,725.00	0.00	0.00	4,725.00	1,288.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
4,750.00	0.00	0.00	4,750.00	1,313.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
4,775.00	0.00	0.00	4,775.00	1,338.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
4,800.00	0.00	0.00	4,800.00	1,363.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
4,825.00	0.00	0.00	4,825.00	1,388.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
4,850.00	0.00	0.00	4,850.00	1,413.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
4,875.00	0.00	0.00	4,875.00	1,438.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
4,900.00	0.00	0.00	4,900.00	1,463.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
4,925.00	0.00	0.00	4,925.00	1,488.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
4,950.00	0.00	0.00	4,950.00	1,513.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
4,975.00	0.00	0.00	4,975.00	1,538.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,000.00	0.00	0.00	5,000.00	1,563.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,025.00	0.00	0.00	5,025.00	1,588.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,050.00	0.00	0.00	5,050.00	1,613.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,075.00	0.00	0.00	5,075.00	1,638.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,100.00	0.00	0.00	5,100.00	1,663.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,125.00	0.00	0.00	5,125.00	1,688.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,150.00	0.00	0.00	5,150.00	1,713.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,175.00	0.00	0.00	5,175.00	1,738.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,200.00	0.00	0.00	5,200.00	1,763.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,225.00	0.00	0.00	5,225.00	1,788.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,250.00	0.00	0.00	5,250.00	1,813.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,275.00	0.00	0.00	5,275.00	1,838.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,300.00	0.00	0.00	5,300.00	1,863.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,325.00	0.00	0.00	5,325.00	1,888.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,350.00	0.00	0.00	5,350.00	1,913.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,375.00	0.00	0.00	5,375.00	1,938.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	

Pathfinder
Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H:
Project:	Eddy County	TVD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Site:	Arcturus "18" Fed	MD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
5,400.00	0.00	0.00	5,400.00	1,963.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,425.00	0.00	0.00	5,425.00	1,988.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,450.00	0.00	0.00	5,450.00	2,013.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,475.00	0.00	0.00	5,475.00	2,038.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,500.00	0.00	0.00	5,500.00	2,063.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,525.00	0.00	0.00	5,525.00	2,088.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,550.00	0.00	0.00	5,550.00	2,113.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,575.00	0.00	0.00	5,575.00	2,138.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,600.00	0.00	0.00	5,600.00	2,163.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,625.00	0.00	0.00	5,625.00	2,188.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,650.00	0.00	0.00	5,650.00	2,213.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,675.00	0.00	0.00	5,675.00	2,238.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,700.00	0.00	0.00	5,700.00	2,263.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,725.00	0.00	0.00	5,725.00	2,288.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,750.00	0.00	0.00	5,750.00	2,313.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,775.00	0.00	0.00	5,775.00	2,338.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,800.00	0.00	0.00	5,800.00	2,363.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,825.00	0.00	0.00	5,825.00	2,388.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,850.00	0.00	0.00	5,850.00	2,413.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,875.00	0.00	0.00	5,875.00	2,438.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,900.00	0.00	0.00	5,900.00	2,463.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,925.00	0.00	0.00	5,925.00	2,488.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,950.00	0.00	0.00	5,950.00	2,513.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
5,975.00	0.00	0.00	5,975.00	2,538.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,000.00	0.00	0.00	6,000.00	2,563.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,025.00	0.00	0.00	6,025.00	2,588.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,050.00	0.00	0.00	6,050.00	2,613.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	

Pathfinder
Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H:
Project:	Eddy County	TVD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Site:	Arcturus "18" Fed	MD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Well:	4H	North Reference:	Grd
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
6,075.00	0.00	0.00	6,075.00	2,638.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,100.00	0.00	0.00	6,100.00	2,663.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,125.00	0.00	0.00	6,125.00	2,688.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,150.00	0.00	0.00	6,150.00	2,713.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,175.00	0.00	0.00	6,175.00	2,738.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,200.00	0.00	0.00	6,200.00	2,763.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,225.00	0.00	0.00	6,225.00	2,788.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,250.00	0.00	0.00	6,250.00	2,813.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,275.00	0.00	0.00	6,275.00	2,838.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,300.00	0.00	0.00	6,300.00	2,863.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,325.00	0.00	0.00	6,325.00	2,888.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,350.00	0.00	0.00	6,350.00	2,913.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,375.00	0.00	0.00	6,375.00	2,938.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,400.00	0.00	0.00	6,400.00	2,963.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,425.00	0.00	0.00	6,425.00	2,988.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,450.00	0.00	0.00	6,450.00	3,013.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,475.00	0.00	0.00	6,475.00	3,038.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,500.00	0.00	0.00	6,500.00	3,063.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,525.00	0.00	0.00	6,525.00	3,088.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,550.00	0.00	0.00	6,550.00	3,113.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,575.00	0.00	0.00	6,575.00	3,138.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,600.00	0.00	0.00	6,600.00	3,163.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,625.00	0.00	0.00	6,625.00	3,188.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,650.00	0.00	0.00	6,650.00	3,213.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,675.00	0.00	0.00	6,675.00	3,238.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,700.00	0.00	0.00	6,700.00	3,263.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,725.00	0.00	0.00	6,725.00	3,288.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	

Pathfinder
Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H
Project:	Eddy County	TVD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Site:	Arcturus "18" Fed	MD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
6,750.00	0.00	0.00	6,750.00	3,313.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,775.00	0.00	0.00	6,775.00	3,338.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,800.00	0.00	0.00	6,800.00	3,363.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,825.00	0.00	0.00	6,825.00	3,388.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,850.00	0.00	0.00	6,850.00	3,413.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,875.00	0.00	0.00	6,875.00	3,438.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,900.00	0.00	0.00	6,900.00	3,463.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,925.00	0.00	0.00	6,925.00	3,488.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,950.00	0.00	0.00	6,950.00	3,513.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
6,975.00	0.00	0.00	6,975.00	3,538.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,000.00	0.00	0.00	7,000.00	3,563.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,025.00	0.00	0.00	7,025.00	3,588.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,050.00	0.00	0.00	7,050.00	3,613.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,075.00	0.00	0.00	7,075.00	3,638.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,100.00	0.00	0.00	7,100.00	3,663.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,125.00	0.00	0.00	7,125.00	3,688.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,150.00	0.00	0.00	7,150.00	3,713.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,175.00	0.00	0.00	7,175.00	3,738.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,200.00	0.00	0.00	7,200.00	3,763.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,225.00	0.00	0.00	7,225.00	3,788.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,250.00	0.00	0.00	7,250.00	3,813.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,275.00	0.00	0.00	7,275.00	3,838.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,300.00	0.00	0.00	7,300.00	3,863.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,325.00	0.00	0.00	7,325.00	3,888.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,350.00	0.00	0.00	7,350.00	3,913.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,375.00	0.00	0.00	7,375.00	3,938.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,400.00	0.00	0.00	7,400.00	3,963.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	

Pathfinder
Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H
Project:	Eddy County	TVD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Site:	Arcturus "18" Fed	MD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Well:	4H	North Reference:	Gnd
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
7,425.00	0.00	0.00	7,425.00	3,988.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,450.00	0.00	0.00	7,450.00	4,013.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,475.00	0.00	0.00	7,475.00	4,038.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,500.00	0.00	0.00	7,500.00	4,063.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,525.00	0.00	0.00	7,525.00	4,088.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,550.00	0.00	0.00	7,550.00	4,113.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,575.00	0.00	0.00	7,575.00	4,138.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,600.00	0.00	0.00	7,600.00	4,163.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,625.00	0.00	0.00	7,625.00	4,188.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,650.00	0.00	0.00	7,650.00	4,213.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,675.00	0.00	0.00	7,675.00	4,238.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,700.00	0.00	0.00	7,700.00	4,263.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,725.00	0.00	0.00	7,725.00	4,288.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,750.00	0.00	0.00	7,750.00	4,313.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,775.00	0.00	0.00	7,775.00	4,338.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,800.00	0.00	0.00	7,800.00	4,363.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,825.00	0.00	0.00	7,825.00	4,388.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,850.00	0.00	0.00	7,850.00	4,413.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,875.00	0.00	0.00	7,875.00	4,438.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,900.00	0.00	0.00	7,900.00	4,463.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,925.00	0.00	0.00	7,925.00	4,488.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,950.00	0.00	0.00	7,950.00	4,513.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
7,975.00	0.00	0.00	7,975.00	4,538.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
8,000.00	0.00	0.00	8,000.00	4,563.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
8,025.00	0.00	0.00	8,025.00	4,588.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
8,050.00	0.00	0.00	8,050.00	4,613.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	
8,075.00	0.00	0.00	8,075.00	4,638.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15	

Pathfinder
Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H
Project:	Eddy County	TVD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Site:	Arcturus "18" Fed	MD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db.

Planned Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)		
8,100.00	0.00	0.00	8,100.00	4,663.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
8,125.00	0.00	0.00	8,125.00	4,688.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
8,150.00	0.00	0.00	8,150.00	4,713.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
8,175.00	0.00	0.00	8,175.00	4,738.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
8,200.00	0.00	0.00	8,200.00	4,763.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
8,225.00	0.00	0.00	8,225.00	4,788.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
8,250.00	0.00	0.00	8,250.00	4,813.60	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
8,262.04	0.00	0.00	8,262.04	4,825.64	0.00	0.00	0.00	0.00	602,733.66	669,825.15		
8,275.00	1.30	131.07	8,275.00	4,838.60	-0.10	0.11	0.12	10.00	602,733.56	669,825.26		
8,300.00	3.80	131.07	8,299.97	4,863.57	-0.83	0.95	1.07	10.00	602,732.83	669,826.10		
8,325.00	6.30	131.07	8,324.87	4,888.47	-2.27	2.61	2.93	10.00	602,731.39	669,827.76		
8,350.00	8.80	131.07	8,349.65	4,913.25	-4.43	5.08	5.72	10.00	602,729.23	669,830.23		
8,375.00	11.30	131.07	8,374.27	4,937.87	-7.29	8.37	9.42	10.00	602,726.37	669,833.52		
8,400.00	13.80	131.07	8,398.67	4,962.27	-10.86	12.46	14.03	10.00	602,722.80	669,837.61		
8,425.00	16.30	131.07	8,422.81	4,986.41	-15.12	17.35	19.53	10.00	602,718.54	669,842.50		
8,450.00	18.80	131.07	8,446.65	5,010.25	-20.07	23.04	25.93	10.00	602,713.59	669,848.19		
8,475.00	21.30	131.07	8,470.13	5,033.73	-25.70	29.50	33.20	10.00	602,707.96	669,854.65		
8,500.00	23.80	131.07	8,493.22	5,056.82	-32.00	36.72	41.33	10.00	602,701.66	669,861.87		
8,525.00	26.30	131.07	8,515.87	5,079.47	-38.95	44.70	50.31	10.00	602,694.71	669,869.85		
8,550.00	28.80	131.07	8,538.03	5,101.63	-46.55	53.42	60.12	10.00	602,687.11	669,878.57		
8,575.00	31.30	131.07	8,559.67	5,123.27	-54.77	62.85	70.75	10.00	602,678.89	669,888.00		
8,600.00	33.80	131.07	8,580.74	5,144.34	-63.61	72.99	82.16	10.00	602,670.05	669,898.14		
8,625.00	36.30	131.07	8,601.21	5,164.81	-73.04	83.81	94.34	10.00	602,660.62	669,908.96		
8,650.00	38.80	131.07	8,621.03	5,184.63	-83.05	95.30	107.27	10.00	602,650.61	669,920.45		
8,675.00	41.30	131.07	8,640.16	5,203.76	-93.61	107.42	120.92	10.00	602,640.05	669,932.57		
8,700.00	43.80	131.07	8,658.58	5,222.18	-104.72	120.17	135.26	10.00	602,628.94	669,945.32		
8,725.00	46.30	131.07	8,676.24	5,239.84	-116.34	133.50	150.27	10.00	602,617.32	669,958.65		

Pathfinder
Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H
Project:	Eddy County	TVD Reference:	KB = 26 @ 3436.40usft (H&P.300)
Site:	Arcturus "18" Fed	MD Reference:	KB = 26 @ 3436.40usft (H&P.300)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
8,750.00	48.80	131.07	8,693.12	5,256.72	-128.46	147.41	165.92	10.00	602,605.20	669,972.56
8,775.00	51.30	131.07	8,709.17	5,272.77	-141.05	161.86	182.19	10.00	602,592.61	669,987.01
8,800.00	53.80	131.07	8,724.37	5,287.97	-154.08	176.82	199.03	10.00	602,579.58	670,001.97
8,825.00	56.30	131.07	8,738.89	5,302.29	-167.54	192.26	216.41	10.00	602,566.12	670,017.41
8,850.00	58.80	131.07	8,752.11	5,315.71	-181.40	208.17	234.31	10.00	602,552.26	670,033.32
8,875.00	61.30	131.07	8,764.59	5,328.19	-195.63	224.49	252.69	10.00	602,538.03	670,049.64
8,900.00	63.80	131.07	8,776.11	5,339.71	-210.21	241.22	271.52	10.00	602,523.45	670,066.37
8,925.00	66.30	131.07	8,786.66	5,350.26	-225.10	258.31	290.75	10.00	602,508.56	670,083.46
8,950.00	68.80	131.07	8,796.21	5,359.81	-240.27	275.72	310.35	10.00	602,493.39	670,100.87
8,975.00	71.30	131.07	8,804.74	5,368.34	-255.71	293.44	330.29	10.00	602,477.95	670,118.59
9,000.00	73.80	131.07	8,812.24	5,375.84	-271.38	311.42	350.53	10.00	602,462.28	670,136.57
9,025.00	76.30	131.07	8,818.69	5,382.29	-287.25	329.62	371.03	10.00	602,446.41	670,154.77
9,050.00	78.80	131.07	8,824.08	5,387.68	-303.28	348.03	391.74	10.00	602,430.38	670,173.18
9,075.00	81.30	131.07	8,828.40	5,392.00	-319.46	366.59	412.63	10.00	602,414.20	670,191.74
9,100.00	83.80	131.07	8,831.64	5,395.24	-335.74	385.28	433.67	10.00	602,397.92	670,210.43
9,125.00	86.30	131.07	8,833.80	5,397.40	-352.10	404.05	454.80	10.00	602,381.56	670,229.20
9,150.00	88.80	131.07	8,834.87	5,398.47	-368.51	422.88	476.00	10.00	602,365.15	670,248.03
9,162.04	90.00	131.07	8,835.00	5,398.60	-376.42	431.96	486.21	10.00	602,357.24	670,257.11
9,175.00	89.99	130.55	8,835.00	5,398.60	-384.89	441.77	497.24	4.00	602,348.77	670,266.92
9,200.00	89.98	129.55	8,835.00	5,398.60	-400.98	460.90	518.69	4.00	602,332.68	670,286.05
9,225.00	89.96	128.55	8,835.02	5,398.62	-416.73	480.32	540.36	4.00	602,316.93	670,305.47
9,250.00	89.95	127.55	8,835.04	5,398.64	-432.14	500.00	562.24	4.00	602,301.52	670,325.15
9,275.00	89.94	126.55	8,835.06	5,398.66	-447.20	519.95	584.33	4.00	602,286.46	670,345.10
9,300.00	89.92	125.55	8,835.09	5,398.69	-461.91	540.17	606.62	4.00	602,271.75	670,365.32
9,325.00	89.91	124.55	8,835.13	5,398.73	-476.27	560.63	629.10	4.00	602,257.39	670,385.78
9,350.00	89.89	123.55	8,835.17	5,398.77	-490.27	581.34	651.77	4.00	602,243.39	670,406.49
9,375.00	89.88	122.55	8,835.22	5,398.82	-503.91	602.30	674.62	4.00	602,229.75	670,427.45

Pathfinder Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H
Project:	Eddy County	TVD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Site:	Arcturus "18" Fed.	MD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	D Leg (°/100usft)	Northing (usft)	Easting (usft)
9,400.00	89.87	121.55	8,835.28	5,398.88	-517.17	623.49	697.65	4.00	602,216.49	670,448.64
9,425.00	89.85	120.55	8,835.34	5,398.94	-530.07	644.90	720.84	4.00	602,203.59	670,470.05
9,450.00	89.84	119.55	8,835.40	5,399.00	-542.59	666.54	744.19	4.00	602,191.07	670,491.69
9,475.00	89.83	118.55	8,835.48	5,399.08	-554.73	688.40	767.70	4.00	602,178.93	670,513.55
9,500.00	89.81	117.55	8,835.56	5,399.16	-566.49	710.46	791.34	4.00	602,167.17	670,535.61
9,525.00	89.80	116.55	8,835.64	5,399.24	-577.86	732.72	815.13	4.00	602,155.80	670,557.87
9,550.00	89.78	115.55	8,835.73	5,399.33	-588.84	755.18	839.05	4.00	602,144.82	670,580.33
9,575.00	89.77	114.55	8,835.83	5,399.43	-599.42	777.83	863.09	4.00	602,134.24	670,602.98
9,600.00	89.76	113.55	8,835.93	5,399.53	-609.61	800.66	887.24	4.00	602,124.05	670,625.81
9,625.00	89.74	112.55	8,836.04	5,399.64	-619.40	823.66	911.51	4.00	602,114.26	670,648.81
9,650.00	89.73	111.55	8,836.16	5,399.76	-628.79	846.83	935.88	4.00	602,104.87	670,671.98
9,675.00	89.72	110.55	8,836.28	5,399.88	-637.77	870.16	960.34	4.00	602,095.89	670,695.31
9,700.00	89.70	109.55	8,836.40	5,400.00	-646.34	893.65	984.88	4.00	602,087.32	670,718.80
9,725.00	89.69	108.55	8,836.54	5,400.14	-654.50	917.28	1,009.51	4.00	602,079.16	670,742.43
9,750.00	89.68	107.55	8,836.67	5,400.27	-662.25	941.05	1,034.20	4.00	602,071.41	670,766.20
9,775.00	89.67	106.55	8,836.82	5,400.42	-669.58	964.95	1,058.96	4.00	602,064.08	670,790.10
9,800.00	89.65	105.55	8,836.97	5,400.57	-676.49	988.97	1,083.78	4.00	602,057.17	670,814.12
9,825.00	89.64	104.55	8,837.12	5,400.72	-682.99	1,013.11	1,108.65	4.00	602,050.67	670,838.26
9,850.00	89.63	103.55	8,837.28	5,400.88	-689.06	1,037.36	1,133.55	4.00	602,044.60	670,862.51
9,875.00	89.61	102.55	8,837.44	5,401.04	-694.70	1,061.72	1,158.49	4.00	602,038.96	670,886.87
9,900.00	89.60	101.55	8,837.62	5,401.22	-699.92	1,086.16	1,183.46	4.00	602,033.74	670,911.31
9,925.00	89.59	100.55	8,837.79	5,401.39	-704.72	1,110.70	1,208.45	4.00	602,028.94	670,935.85
9,950.00	89.58	99.55	8,837.97	5,401.57	-709.08	1,135.31	1,233.44	4.00	602,024.58	670,960.46
9,975.00	89.57	98.55	8,838.16	5,401.76	-713.02	1,160.00	1,258.44	4.00	602,020.64	670,985.15
10,000.00	89.55	97.55	8,838.35	5,401.95	-716.52	1,184.75	1,283.44	4.00	602,017.14	671,009.90
10,025.00	89.54	96.55	8,838.55	5,402.15	-719.59	1,209.56	1,308.42	4.00	602,014.07	671,034.71
10,050.00	89.53	95.55	8,838.75	5,402.35	-722.22	1,234.42	1,333.38	4.00	602,011.44	671,059.57

Pathfinder
Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H
Project:	Eddy County	TVD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Site:	Arcturus 18" Fed	MD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	D Leg (°/100usft)	Northing (usft)	Easting (usft)	
10,075.00	89.52	94.55	8,838.96	5,402.56	-724.43	1,259.32	1,358.32	4.00	602,009.23	671,084.47	
10,100.00	89.51	93.55	8,839.17	5,402.77	-726.19	1,284.26	1,383.22	4.00	602,007.47	671,109.41	
10,125.00	89.50	92.55	8,839.39	5,402.99	-727.53	1,309.22	1,408.08	4.00	602,006.13	671,134.37	
10,150.00	89.49	91.55	8,839.61	5,403.21	-728.42	1,334.21	1,432.88	4.00	602,005.24	671,159.36	
10,175.00	89.48	90.55	8,839.83	5,403.43	-728.88	1,359.20	1,457.63	4.00	602,004.78	671,184.35	
10,188.86	89.47	90.00	8,839.96	5,403.56	-728.95	1,373.06	1,471.33	4.00	602,004.71	671,198.21	
10,189.14	89.46	90.00	8,839.96	5,403.56	-728.95	1,373.34	1,471.61	2.00	602,004.71	671,198.49	
10,200.00	89.46	90.00	8,840.07	5,403.67	-728.95	1,384.20	1,482.33	0.00	602,004.71	671,209.35	
10,225.00	89.46	90.00	8,840.30	5,403.90	-728.95	1,409.20	1,507.01	0.00	602,004.71	671,234.35	
10,250.00	89.46	90.00	8,840.53	5,404.13	-728.95	1,434.20	1,531.69	0.00	602,004.71	671,259.35	
10,275.00	89.46	90.00	8,840.77	5,404.37	-728.95	1,459.20	1,556.37	0.00	602,004.71	671,284.35	
10,300.00	89.46	90.00	8,841.00	5,404.60	-728.95	1,484.19	1,581.06	0.00	602,004.71	671,309.34	
10,325.00	89.46	90.00	8,841.23	5,404.83	-728.95	1,509.19	1,605.74	0.00	602,004.71	671,334.34	
10,350.00	89.46	90.00	8,841.47	5,405.07	-728.96	1,534.19	1,630.42	0.00	602,004.70	671,359.34	
10,375.00	89.46	90.00	8,841.70	5,405.30	-728.96	1,559.19	1,655.10	0.00	602,004.70	671,384.34	
10,400.00	89.46	90.00	8,841.93	5,405.53	-728.96	1,584.19	1,679.79	0.00	602,004.70	671,409.34	
10,425.00	89.46	90.00	8,842.17	5,405.77	-728.96	1,609.19	1,704.47	0.00	602,004.70	671,434.34	
10,450.00	89.46	90.00	8,842.40	5,406.00	-728.96	1,634.19	1,729.15	0.00	602,004.70	671,459.34	
10,475.00	89.46	90.00	8,842.63	5,406.23	-728.96	1,659.19	1,753.83	0.00	602,004.70	671,484.34	
10,500.00	89.46	90.00	8,842.87	5,406.47	-728.96	1,684.19	1,778.52	0.00	602,004.70	671,509.34	
10,525.00	89.46	90.00	8,843.10	5,406.70	-728.96	1,709.18	1,803.20	0.00	602,004.70	671,534.33	
10,550.00	89.46	90.00	8,843.34	5,406.94	-728.96	1,734.18	1,827.88	0.00	602,004.70	671,559.33	
10,575.00	89.46	90.00	8,843.57	5,407.17	-728.96	1,759.18	1,852.56	0.00	602,004.70	671,584.33	
10,600.00	89.46	90.00	8,843.80	5,407.40	-728.96	1,784.18	1,877.24	0.00	602,004.70	671,609.33	
10,625.00	89.46	90.00	8,844.04	5,407.64	-728.96	1,809.18	1,901.93	0.00	602,004.70	671,634.33	
10,650.00	89.46	90.00	8,844.27	5,407.87	-728.96	1,834.18	1,926.61	0.00	602,004.70	671,659.33	
10,675.00	89.46	90.00	8,844.50	5,408.10	-728.97	1,859.18	1,951.29	0.00	602,004.69	671,684.33	

Pathfinder
Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H
Project:	Eddy County	TVD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Site:	Arcturus "18" Fed	MD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
10,700.00	89.46	90.00	8,844.74	5,408.34	-728.97	1,884.18	1,975.97	0.00	602,004.69	671,709.33	
10,725.00	89.46	90.00	8,844.97	5,408.57	-728.97	1,909.18	2,000.66	0.00	602,004.69	671,734.33	
10,750.00	89.46	90.00	8,845.20	5,408.80	-728.97	1,934.18	2,025.34	0.00	602,004.69	671,759.33	
10,775.00	89.46	90.00	8,845.44	5,409.04	-728.97	1,959.17	2,050.02	0.00	602,004.69	671,784.32	
10,800.00	89.46	90.00	8,845.67	5,409.27	-728.97	1,984.17	2,074.70	0.00	602,004.69	671,809.32	
10,825.00	89.46	90.00	8,845.91	5,409.51	-728.97	2,009.17	2,099.39	0.00	602,004.69	671,834.32	
10,850.00	89.46	90.00	8,846.14	5,409.74	-728.97	2,034.17	2,124.07	0.00	602,004.69	671,859.32	
10,875.00	89.46	90.00	8,846.37	5,409.97	-728.97	2,059.17	2,148.75	0.00	602,004.69	671,884.32	
10,900.00	89.46	90.00	8,846.61	5,410.21	-728.97	2,084.17	2,173.43	0.00	602,004.69	671,909.32	
10,925.00	89.46	90.00	8,846.84	5,410.44	-728.97	2,109.17	2,198.11	0.00	602,004.69	671,934.32	
10,950.00	89.46	90.00	8,847.07	5,410.67	-728.97	2,134.17	2,222.80	0.00	602,004.69	671,959.32	
10,975.00	89.46	90.00	8,847.31	5,410.91	-728.97	2,159.17	2,247.48	0.00	602,004.69	671,984.32	
11,000.00	89.46	90.00	8,847.54	5,411.14	-728.98	2,184.16	2,272.16	0.00	602,004.68	672,009.31	
11,025.00	89.46	90.00	8,847.77	5,411.37	-728.98	2,209.16	2,296.84	0.00	602,004.68	672,034.31	
11,050.00	89.46	90.00	8,848.01	5,411.61	-728.98	2,234.16	2,321.53	0.00	602,004.68	672,059.31	
11,075.00	89.46	90.00	8,848.24	5,411.84	-728.98	2,259.16	2,346.21	0.00	602,004.68	672,084.31	
11,100.00	89.46	90.00	8,848.47	5,412.07	-728.98	2,284.16	2,370.89	0.00	602,004.68	672,109.31	
11,125.00	89.46	90.00	8,848.71	5,412.31	-728.98	2,309.16	2,395.57	0.00	602,004.68	672,134.31	
11,150.00	89.46	90.00	8,848.94	5,412.54	-728.98	2,334.16	2,420.26	0.00	602,004.68	672,159.31	
11,175.00	89.46	90.00	8,849.18	5,412.78	-728.98	2,359.16	2,444.94	0.00	602,004.68	672,184.31	
11,200.00	89.46	90.00	8,849.41	5,413.01	-728.98	2,384.16	2,469.62	0.00	602,004.68	672,209.31	
11,225.00	89.46	90.00	8,849.64	5,413.24	-728.98	2,409.15	2,494.30	0.00	602,004.68	672,234.30	
11,250.00	89.46	90.00	8,849.88	5,413.48	-728.98	2,434.15	2,518.99	0.00	602,004.68	672,259.30	
11,275.00	89.46	90.00	8,850.11	5,413.71	-728.98	2,459.15	2,543.67	0.00	602,004.68	672,284.30	
11,300.00	89.46	90.00	8,850.34	5,413.94	-728.98	2,484.15	2,568.35	0.00	602,004.68	672,309.30	
11,325.00	89.46	90.00	8,850.58	5,414.18	-728.99	2,509.15	2,593.03	0.00	602,004.67	672,334.30	
11,350.00	89.46	90.00	8,850.81	5,414.41	-728.99	2,534.15	2,617.71	0.00	602,004.67	672,359.30	

Pathfinder
Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H
Project:	Eddy County	TVD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Site:	Arcturus "18" Fed	MD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
11,375.00	89.46	90.00	8,851.04	5,414.64	-728.99	2,559.15	2,642.40	0.00	602,004.67	672,384.30	
11,400.00	89.46	90.00	8,851.28	5,414.88	-728.99	2,584.15	2,667.08	0.00	602,004.67	672,409.30	
11,425.00	89.46	90.00	8,851.51	5,415.11	-728.99	2,609.15	2,691.76	0.00	602,004.67	672,434.30	
11,450.00	89.46	90.00	8,851.75	5,415.35	-728.99	2,634.14	2,716.44	0.00	602,004.67	672,459.29	
11,475.00	89.46	90.00	8,851.98	5,415.58	-728.99	2,659.14	2,741.13	0.00	602,004.67	672,484.29	
11,500.00	89.46	90.00	8,852.21	5,415.81	-728.99	2,684.14	2,765.81	0.00	602,004.67	672,509.29	
11,525.00	89.46	90.00	8,852.45	5,416.05	-728.99	2,709.14	2,790.49	0.00	602,004.67	672,534.29	
11,550.00	89.46	90.00	8,852.68	5,416.28	-728.99	2,734.14	2,815.17	0.00	602,004.67	672,559.29	
11,575.00	89.46	90.00	8,852.91	5,416.51	-728.99	2,759.14	2,839.86	0.00	602,004.67	672,584.29	
11,600.00	89.46	90.00	8,853.15	5,416.75	-728.99	2,784.14	2,864.54	0.00	602,004.67	672,609.29	
11,625.00	89.46	90.00	8,853.38	5,416.98	-728.99	2,809.14	2,889.22	0.00	602,004.67	672,634.29	
11,650.00	89.46	90.00	8,853.61	5,417.21	-729.00	2,834.14	2,913.90	0.00	602,004.66	672,659.29	
11,675.00	89.46	90.00	8,853.85	5,417.45	-729.00	2,859.13	2,938.58	0.00	602,004.66	672,684.28	
11,700.00	89.46	90.00	8,854.08	5,417.68	-729.00	2,884.13	2,963.27	0.00	602,004.66	672,709.28	
11,725.00	89.46	90.00	8,854.31	5,417.91	-729.00	2,909.13	2,987.95	0.00	602,004.66	672,734.28	
11,750.00	89.46	90.00	8,854.55	5,418.15	-729.00	2,934.13	3,012.63	0.00	602,004.66	672,759.28	
11,775.00	89.46	90.00	8,854.78	5,418.38	-729.00	2,959.13	3,037.31	0.00	602,004.66	672,784.28	
11,798.33	89.46	90.00	8,855.00	5,418.60	-729.00	2,982.46	3,060.35	0.00	602,004.66	672,807.61	
11,800.00	89.50	90.00	8,855.02	5,418.62	-729.00	2,984.13	3,062.00	2.00	602,004.66	672,809.28	
11,825.00	90.00	90.00	8,855.13	5,418.73	-729.00	3,009.13	3,086.68	2.00	602,004.66	672,834.28	
11,850.00	90.50	90.00	8,855.02	5,418.62	-729.00	3,034.13	3,111.36	2.00	602,004.66	672,859.28	
11,875.00	91.00	90.00	8,854.69	5,418.29	-729.00	3,059.13	3,136.04	2.00	602,004.66	672,884.28	
11,900.00	91.50	90.00	8,854.15	5,417.75	-729.00	3,084.12	3,160.72	2.00	602,004.66	672,909.27	
11,902.28	91.54	90.00	8,854.09	5,417.69	-729.00	3,086.40	3,162.98	2.00	602,004.66	672,911.55	
11,925.00	91.54	90.00	8,853.47	5,417.07	-729.01	3,109.11	3,185.40	0.00	602,004.65	672,934.26	
11,950.00	91.54	90.00	8,852.80	5,416.40	-729.01	3,134.10	3,210.07	0.00	602,004.65	672,959.25	
11,975.00	91.54	90.00	8,852.13	5,415.73	-729.01	3,159.09	3,234.75	0.00	602,004.65	672,984.24	

Pathfinder
Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H
Project:	Eddy County	TVD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Site:	Arcturus "18" Fed	MD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
12,000.00	91.54	90.00	8,851.45	5,415.05	-729.01	3,184.08	3,259.42	0.00	602,004.65	673,009.23	
12,025.00	91.54	90.00	8,850.78	5,414.38	-729.01	3,209.08	3,284.09	0.00	602,004.65	673,034.23	
12,050.00	91.54	90.00	8,850.11	5,413.71	-729.01	3,234.07	3,308.77	0.00	602,004.65	673,059.22	
12,075.00	91.54	90.00	8,849.43	5,413.03	-729.01	3,259.06	3,333.44	0.00	602,004.65	673,084.21	
12,100.00	91.54	90.00	8,848.76	5,412.36	-729.02	3,284.05	3,358.12	0.00	602,004.64	673,109.20	
12,125.00	91.54	90.00	8,848.09	5,411.69	-729.02	3,309.04	3,382.79	0.00	602,004.64	673,134.19	
12,150.00	91.54	90.00	8,847.41	5,411.01	-729.02	3,334.03	3,407.47	0.00	602,004.64	673,159.18	
12,175.00	91.54	90.00	8,846.74	5,410.34	-729.02	3,359.02	3,432.14	0.00	602,004.64	673,184.17	
12,200.00	91.54	90.00	8,846.07	5,409.67	-729.02	3,384.01	3,456.82	0.00	602,004.64	673,209.16	
12,225.00	91.54	90.00	8,845.39	5,408.99	-729.02	3,409.00	3,481.49	0.00	602,004.64	673,234.15	
12,250.00	91.54	90.00	8,844.72	5,408.32	-729.03	3,433.99	3,506.17	0.00	602,004.63	673,259.14	
12,275.00	91.54	90.00	8,844.04	5,407.64	-729.03	3,458.98	3,530.84	0.00	602,004.63	673,284.13	
12,300.00	91.54	90.00	8,843.37	5,406.97	-729.03	3,483.98	3,555.51	0.00	602,004.63	673,309.13	
12,325.00	91.54	90.00	8,842.70	5,406.30	-729.03	3,508.97	3,580.19	0.00	602,004.63	673,334.12	
12,350.00	91.54	90.00	8,842.02	5,405.62	-729.03	3,533.96	3,604.86	0.00	602,004.63	673,359.11	
12,375.00	91.54	90.00	8,841.35	5,404.95	-729.03	3,558.95	3,629.54	0.00	602,004.63	673,384.10	
12,400.00	91.54	90.00	8,840.68	5,404.28	-729.03	3,583.94	3,654.21	0.00	602,004.63	673,409.09	
12,425.00	91.54	90.00	8,840.00	5,403.60	-729.04	3,608.93	3,678.89	0.00	602,004.62	673,434.08	
12,450.00	91.54	90.00	8,839.33	5,402.93	-729.04	3,633.92	3,703.56	0.00	602,004.62	673,459.07	
12,475.00	91.54	90.00	8,838.66	5,402.26	-729.04	3,658.91	3,728.24	0.00	602,004.62	673,484.06	
12,500.00	91.54	90.00	8,837.98	5,401.58	-729.04	3,683.90	3,752.91	0.00	602,004.62	673,509.05	
12,525.00	91.54	90.00	8,837.31	5,400.91	-729.04	3,708.89	3,777.59	0.00	602,004.62	673,534.04	
12,550.00	91.54	90.00	8,836.64	5,400.24	-729.04	3,733.88	3,802.26	0.00	602,004.62	673,559.03	
12,575.00	91.54	90.00	8,835.96	5,399.56	-729.04	3,758.88	3,826.93	0.00	602,004.62	673,584.03	
12,600.00	91.54	90.00	8,835.29	5,398.89	-729.05	3,783.87	3,851.61	0.00	602,004.61	673,609.02	
12,625.00	91.54	90.00	8,834.62	5,398.22	-729.05	3,808.86	3,876.28	0.00	602,004.61	673,634.01	
12,650.00	91.54	90.00	8,833.94	5,397.54	-729.05	3,833.85	3,900.96	0.00	602,004.61	673,659.00	

Pathfinder
Pathfinder X & Y Report

Company:	Devon Energy, Inc.					Local Co-ordinate Reference:		Well 4H			
Project:	Eddy County					TVD Reference:		KB = 26 @ 3436.40usft (H&P.300)			
Site:	Arcturus "18" Fed					MD Reference:		KB = 26 @ 3436.40usft (H&P.300)			
Well:	4H					North Reference:		Grid			
Wellbore:	OH					Survey Calculation Method:		Minimum Curvature			
Design:	Plan #1					Database:		EDM 5000.1 Single User Db			
Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
12,675.00	91.54	90.00	8,833.27	5,396.87	-729.05	3,858.84	3,925.63	0.00	602,004.61	673,683.99	
12,700.00	91.54	90.00	8,832.60	5,396.20	-729.05	3,883.83	3,950.31	0.00	602,004.61	673,708.98	
12,725.00	91.54	90.00	8,831.92	5,395.52	-729.05	3,908.82	3,974.98	0.00	602,004.61	673,733.97	
12,750.00	91.54	90.00	8,831.25	5,394.85	-729.05	3,933.81	3,999.66	0.00	602,004.61	673,758.96	
12,775.00	91.54	90.00	8,830.57	5,394.17	-729.06	3,958.80	4,024.33	0.00	602,004.60	673,783.95	
12,800.00	91.54	90.00	8,829.90	5,393.50	-729.06	3,983.79	4,049.01	0.00	602,004.60	673,808.94	
12,825.00	91.54	90.00	8,829.23	5,392.83	-729.06	4,008.78	4,073.68	0.00	602,004.60	673,833.93	
12,850.00	91.54	90.00	8,828.55	5,392.15	-729.06	4,033.78	4,098.35	0.00	602,004.60	673,858.93	
12,875.00	91.54	90.00	8,827.88	5,391.48	-729.06	4,058.77	4,123.03	0.00	602,004.60	673,883.92	
12,900.00	91.54	90.00	8,827.21	5,390.81	-729.06	4,083.76	4,147.70	0.00	602,004.60	673,908.91	
12,925.00	91.54	90.00	8,826.53	5,390.13	-729.06	4,108.75	4,172.38	0.00	602,004.60	673,933.90	
12,950.00	91.54	90.00	8,825.86	5,389.46	-729.07	4,133.74	4,197.05	0.00	602,004.59	673,958.89	
12,975.00	91.54	90.00	8,825.19	5,388.79	-729.07	4,158.73	4,221.73	0.00	602,004.59	673,983.88	
13,000.00	91.54	90.00	8,824.51	5,388.11	-729.07	4,183.72	4,246.40	0.00	602,004.59	674,008.87	
13,025.00	91.54	90.00	8,823.84	5,387.44	-729.07	4,208.71	4,271.08	0.00	602,004.59	674,033.86	
13,050.00	91.54	90.00	8,823.17	5,386.77	-729.07	4,233.70	4,295.75	0.00	602,004.59	674,058.85	
13,075.00	91.54	90.00	8,822.49	5,386.09	-729.07	4,258.69	4,320.43	0.00	602,004.59	674,083.84	
13,100.00	91.54	90.00	8,821.82	5,385.42	-729.08	4,283.68	4,345.10	0.00	602,004.58	674,108.83	
13,125.00	91.54	90.00	8,821.15	5,384.75	-729.08	4,308.68	4,369.77	0.00	602,004.58	674,133.83	
13,150.00	91.54	90.00	8,820.47	5,384.07	-729.08	4,333.67	4,394.45	0.00	602,004.58	674,158.82	
13,175.00	91.54	90.00	8,819.80	5,383.40	-729.08	4,358.66	4,419.12	0.00	602,004.58	674,183.81	
13,200.00	91.54	90.00	8,819.13	5,382.73	-729.08	4,383.65	4,443.80	0.00	602,004.58	674,208.80	
13,225.00	91.54	90.00	8,818.45	5,382.05	-729.08	4,408.64	4,468.47	0.00	602,004.58	674,233.79	
13,250.00	91.54	90.00	8,817.78	5,381.38	-729.08	4,433.63	4,493.15	0.00	602,004.58	674,258.78	
13,275.00	91.54	90.00	8,817.10	5,380.70	-729.09	4,458.62	4,517.82	0.00	602,004.57	674,283.77	
13,300.00	91.54	90.00	8,816.43	5,380.03	-729.09	4,483.61	4,542.50	0.00	602,004.57	674,308.76	
13,325.00	91.54	90.00	8,815.76	5,379.36	-729.09	4,508.60	4,567.17	0.00	602,004.57	674,333.75	

Pathfinder
Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H
Project:	Eddy County	TVD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Site:	Arcturus "18" Fed	MD Reference:	KB = 26 @ 3436.40usft (H&P 300)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User.Db

Planned Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
13,350.00	91.54	90.00	8,815.08	5,378.68	-729.09	4,533.59	4,591.85	0.00	602,004.57	674,358.74
13,353.14	91.54	90.00	8,815.00	5,378.60	-729.09	4,536.73	4,594.94	0.00	602,004.57	674,361.88

Checked By: _____	Approved By: _____	Date: _____
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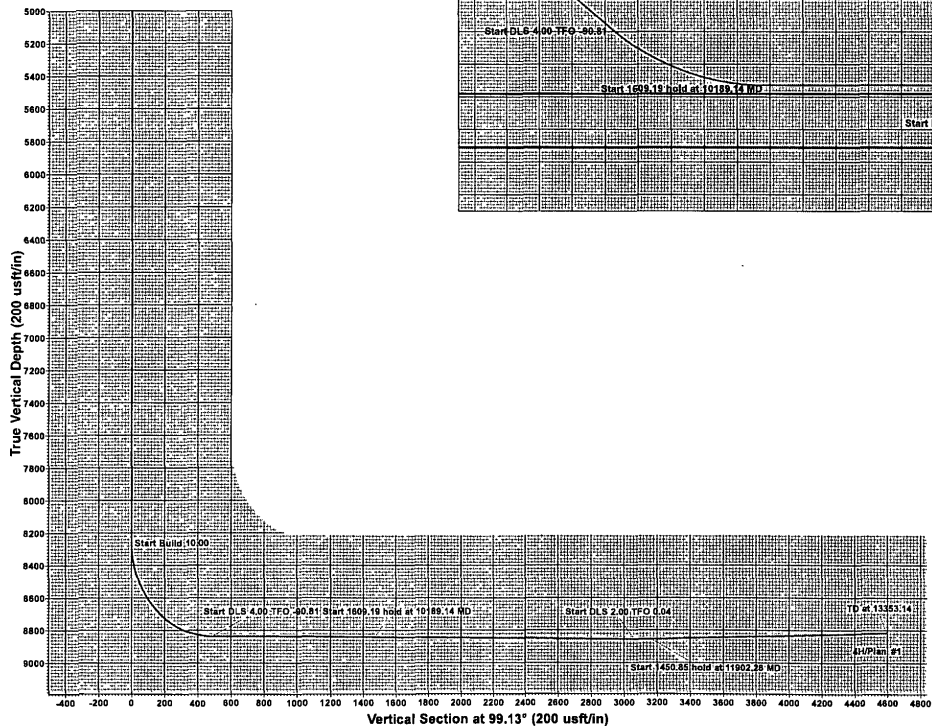
Project: Eddy County
Site: Arcturus "18" Fed
Well: 4H
Wellbore: OH
Plan: Plan #1 (4H/OH)



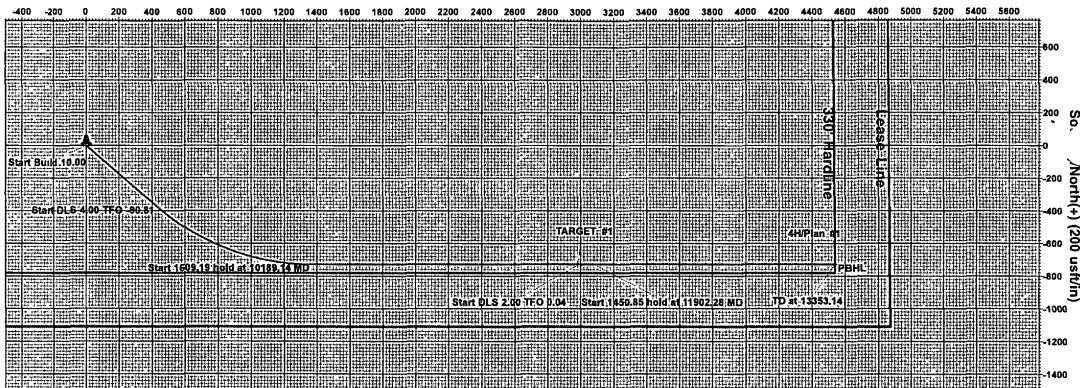
Azimuths to Grid North
True North: -0.23°
Magnetic North: 7.52°

Magnetic Field
Strength: 48857.8nT
Dip Angle: 60.55°
Date: 8/19/2011
Model: IGRF200510

PROJECT DETAILS, Eddy County
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level
Local North: Grid



West(-)/East(+) (200 usft/in)



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	8282.04	0.00	0.00	8282.04	0.00	0.00	0.00	0.00	0.00	
3	9162.04	90.00	131.07	8835.00	-375.42	431.96	10.00	131.07	486.21	
4	10186.66	86.47	90.00	8839.96	-728.95	1373.08	4.00	-80.81	1471.33	
5	10189.14	86.46	90.00	8839.96	-728.95	1373.34	2.00	161.68	1471.61	
6	11798.33	89.46	90.00	8855.00	-729.00	2982.46	0.00	0.00	3060.35	TARGET #1
7	11902.28	91.54	90.00	8854.09	-729.00	3086.40	2.00	0.04	3162.98	
8	13353.14	91.54	90.00	8815.00	-729.09	4536.73	0.00	0.00	4594.94	PBHL

WELL DETAILS- 4H

Ground Elevation: 3410.40
RKB Elevation: KB = 26 @ 3436.40uwt (H&P 300)
Rig Name: H&P 300

+N-S	+E-W	North	East	Latitude	Longitude	Slot
0.00	0.00	802733.880	868825.150	32° 39' 22.583 N	103° 54' 57.530 W	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	North	East	Shape
PBHL	8815.00	-729.09	4536.73	802804.570	874361.880	Point
TARGET #1	8855.00	-729.00	2982.46	802804.660	872807.610	Point

Plan Plan #1 (4H/OH)

Created By: Sam Bille Date: 14 11, August 28 2011
Checked: _____ Date: _____