Devon Energy

Project: Lea County, NM (NAD-83)
Site: Seawolf 1-12 Fed
Well: 81H
Wellbore: OH
Design: Plan #1

Azimuths to Grid North
True North: -0.42°
Magnetic North: 6.44°

Magnetic Field
Strength: 47999.8snT
Dip Angle: 59.82°
Date: 1/19/2017
Model: HDGM

PROJECT DETAILS: Lea County, NM (NAD-83)

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone

devon

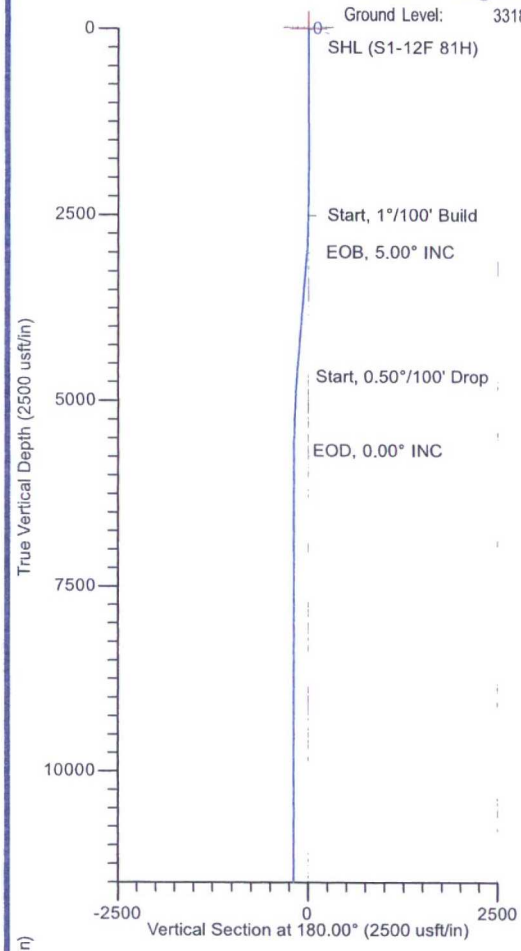
HOBBS OCD
APR 26 2017
RECEIVED

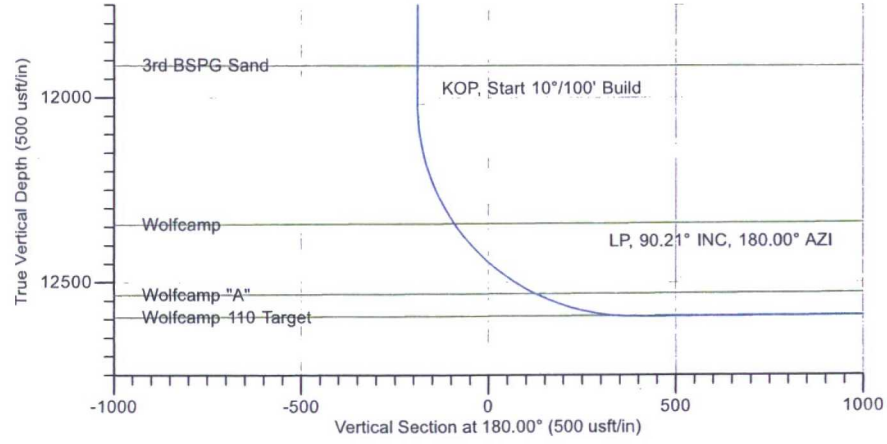
SECTION DETAILS

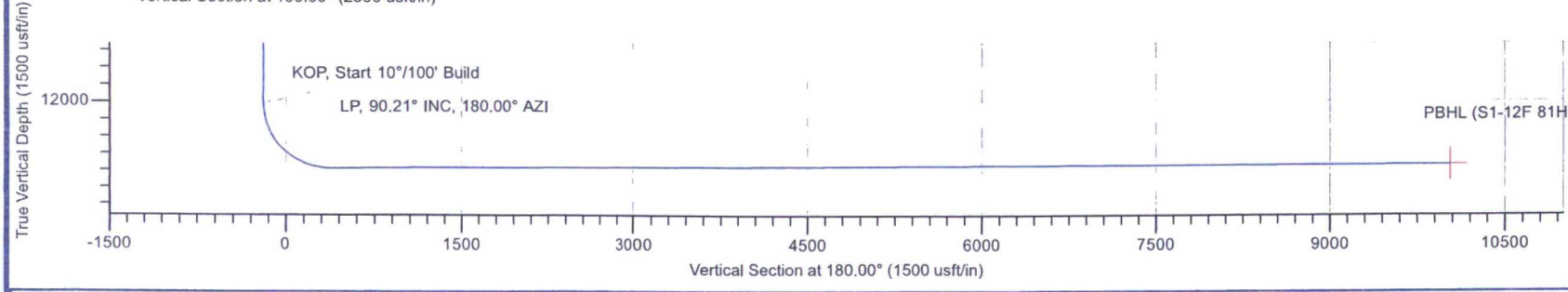
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	0.00	0.00	Start, 1°/100' Build
3	2999.70	5.00	26.57	2999.06	19.48	9.74	1.00	26.57	-19.48	EOB, 5.00° INC
4	4688.48	5.00	26.57	4681.42	151.05	75.52	0.00	0.00	-151.05	Start, 0.50°/100' Drop
5	5687.87	0.00	0.00	5679.55	190.00	95.00	0.50	180.00	-190.00	EOD, 0.00° INC
6	12027.87	0.00	0.00	12019.55	190.00	95.00	0.00	0.00	-190.00	KOP, Start 10°/100' Build
7	12929.95	90.21	180.00	12592.50	-385.04	94.95	10.00	180.00	385.04	LP, 90.21° INC, 180.00° AZI
8	22574.84	90.21	180.00	12557.50	-10029.87	94.17	0.00	0.00	10029.87	TD at 22574.84' MD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
PBHL (S1-12F 81H)	12557.50	-10029.87	94.17	32° 3' 5.815 N	103° 32' 0.117 W
SHL (S1-12F 81H)	0.00	0.00	0.00	32° 4' 45.071 N	103° 32' 0.348 W







LEAM Drilling Services

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

Plan: Plan #1 (81H/OH)
Seawolf 1-12 Fed
Created By: Brady Deaver Date: 8:33, January 23 2017
Date: _____
Approved: _____ Date: _____

Devon Energy

Project: Lea County, NM (NAD-83)
Site: Seawolf 1-12 Fed
Well: 81H
Wellbore: OH
Design: Plan #1

Azimuths to Grid North
True North: -0.42°
Magnetic North: 6.44°

Magnetic Field
Strength: 47999.8snT
Dip Angle: 59.82°
Date: 1/19/2017
Model: HDGM

devon

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

DESIGN TARGET DETAILS

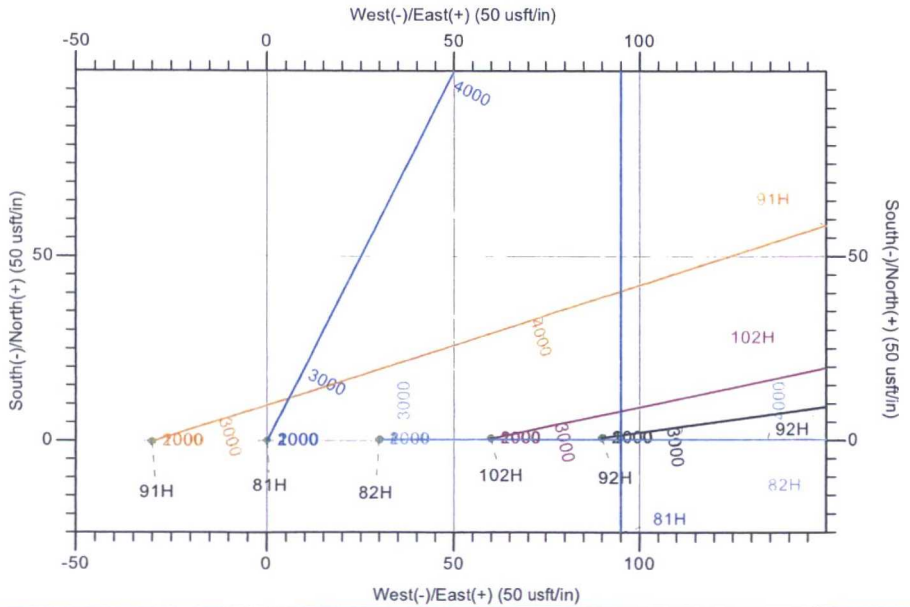
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL (S1-12F 81H)	12557.50	-10029.87	94.17	383433.82	789182.38	32° 3' 5.815 N	103° 32' 0.117 W
SHL (S1-12F 81H)	0.00	0.00	0.00	393463.69	789088.21	32° 4' 45.071 N	103° 32' 0.348 W

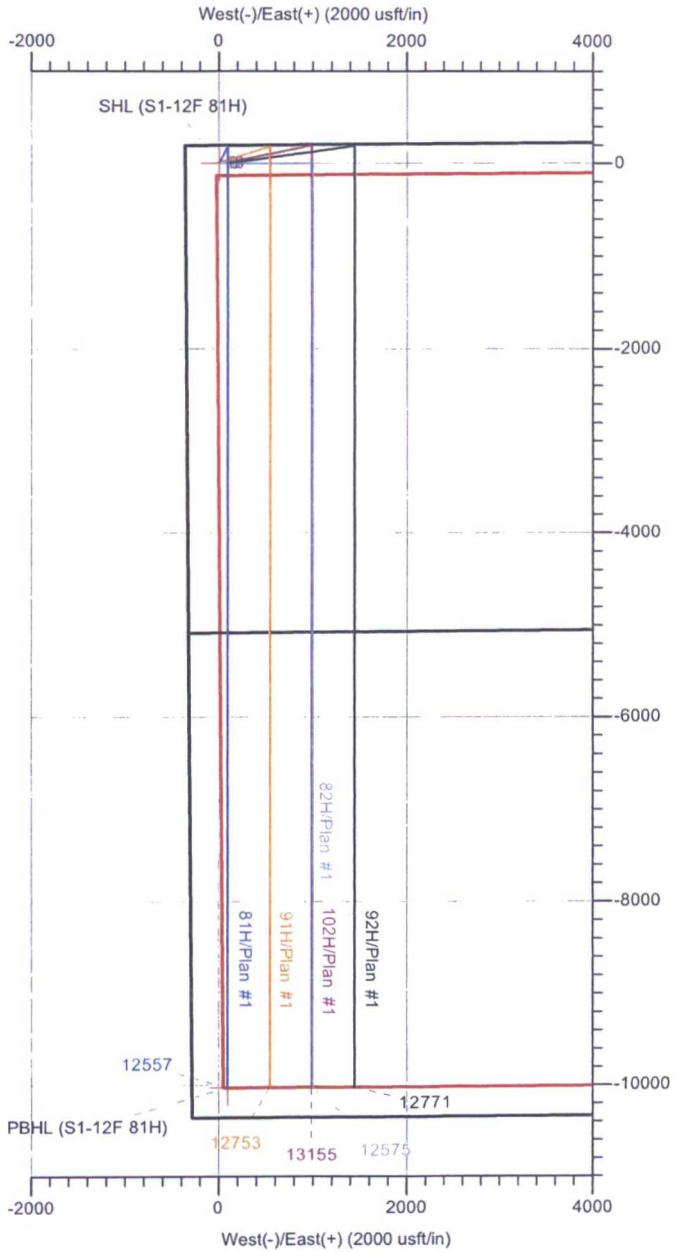
SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	0.00	0.00	Start, 1°/100' Build
3	2999.70	5.00	26.57	2999.06	19.48	9.74	1.00	26.57	-19.48	EOB, 5.00° INC
4	4688.48	5.00	26.57	4681.42	151.05	75.52	0.00	0.00	-151.05	Start, 0.50°/100' Drop
5	5687.87	0.00	0.00	5679.55	190.00	95.00	0.50	180.00	-190.00	EOD, 0.00° INC
6	12027.87	0.00	0.00	12019.55	190.00	95.00	0.00	0.00	-190.00	KOP, Start 10°/100' Build
7	12929.95	90.21	180.00	12592.50	-385.04	94.95	10.00	180.00	385.04	LP, 90.21° INC, 180.00° AZI
8	22574.84	90.21	180.00	12557.50	-10029.87	94.17	0.00	0.00	10029.87	TD at 22574.84' MD

LINE CALLS

KOP: 11' FNL, 456' FWL
POE: 110' FNL, 456' FWL





LEAM Drilling Services

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

Plan: Plan #1 (81H/OH)
Seawolf 1-12 Fed
Created By: Brady Deaver Date: 8:37, January 23 2017
Date: _____
Approved: _____ Date: _____

Devon Energy

Lea County, NM (NAD-83)
Seawolf 1-12 Fed
81H

OH

HOBBS OCD
APR 26 2017
RECEIVED

Plan: Plan #1

Standard Planning Report

23 January, 2017

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Multi User Db	**Local Co-ordinate Reference:**	Well 81H
Company:	Devon Energy	**TVD Reference:**	3318.5' GE + 21' KB @ 3339.50usft
Project:	Lea County, NM (NAD-83)	**MD Reference:**	3318.5' GE + 21' KB @ 3339.50usft
Site:	Seawolf 1-12 Fed	**North Reference:**	Grid
Well:	81H	**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	Seawolf 1-12 Fed				
Site Position:		**Northing:**	393,463.69 usft	**Latitude:**	32° 4' 45.071 N
From:	Map	**Easting:**	789,088.21 usft	**Longitude:**	103° 32' 0.348 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.42 °

Well	81H					
Well Position	**+N/-S**	0.00 usft	**Northing:**	393,463.69 usft	**Latitude:**	32° 4' 45.071 N
	+E/-W	0.00 usft	**Easting:**	789,088.21 usft	**Longitude:**	103° 32' 0.348 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	0.00 usft	**Ground Level:**	3,318.50 usft

Wellbore	OH				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	HDGM	1/19/2017	6.87	59.82	48,000

Design	Plan #1				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**	
	0.00	0.00	0.00	180.00	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,999.70	5.00	26.57	2,999.06	19.48	9.74	1.00	1.00	0.00	26.57	
4,688.48	5.00	26.57	4,681.42	151.05	75.52	0.00	0.00	0.00	0.00	
5,687.87	0.00	0.00	5,679.55	190.00	95.00	0.50	-0.50	0.00	180.00	
12,027.87	0.00	0.00	12,019.55	190.00	95.00	0.00	0.00	0.00	0.00	
12,929.95	90.21	180.00	12,592.50	-385.04	94.95	10.00	10.00	-19.95	180.00	
22,574.84	90.21	180.00	12,557.50	-10,029.87	94.17	0.00	0.00	0.00	0.00	PBHL (S1-12F 81H)

Database:	EDM 5000.1 Multi User Db	**Local Co-ordinate Reference:**	Well 81H
Company:	Devon Energy	**TVD Reference:**	3318.5' GE + 21' KB @ 3339.50usft
Project:	Lea County, NM (NAD-83)	**MD Reference:**	3318.5' GE + 21' KB @ 3339.50usft
Site:	Seawolf 1-12 Fed	**North Reference:**	Grid
Well:	81H	**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 (S1-12F 81H)									
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
959.50	0.00	0.00	959.50	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
1,328.50	0.00	0.00	1,328.50	0.00	0.00	0.00	0.00	0.00	0.00
Top of Salt									
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
Start, 1°/100' Build									
2,600.00	1.00	26.57	2,599.99	0.78	0.39	-0.78	1.00	1.00	0.00
2,700.00	2.00	26.57	2,699.96	3.12	1.56	-3.12	1.00	1.00	0.00
2,800.00	3.00	26.57	2,799.86	7.02	3.51	-7.02	1.00	1.00	0.00
2,900.00	4.00	26.57	2,899.68	12.48	6.24	-12.48	1.00	1.00	0.00
2,999.70	5.00	26.57	2,999.06	19.48	9.74	-19.48	1.00	1.00	0.00
EOB, 5.00° INC									
3,100.00	5.00	26.57	3,098.99	27.29	13.65	-27.29	0.00	0.00	0.00
3,200.00	5.00	26.57	3,198.61	35.08	17.54	-35.08	0.00	0.00	0.00
3,300.00	5.00	26.57	3,298.23	42.87	21.44	-42.87	0.00	0.00	0.00
3,400.00	5.00	26.57	3,397.85	50.66	25.33	-50.66	0.00	0.00	0.00
3,500.00	5.00	26.57	3,497.47	58.45	29.23	-58.45	0.00	0.00	0.00
3,600.00	5.00	26.57	3,597.09	66.25	33.12	-66.25	0.00	0.00	0.00
3,700.00	5.00	26.57	3,696.71	74.04	37.02	-74.04	0.00	0.00	0.00
3,800.00	5.00	26.57	3,796.33	81.83	40.91	-81.83	0.00	0.00	0.00
3,900.00	5.00	26.57	3,895.95	89.62	44.81	-89.62	0.00	0.00	0.00
4,000.00	5.00	26.57	3,995.57	97.41	48.70	-97.41	0.00	0.00	0.00
4,100.00	5.00	26.57	4,095.18	105.20	52.60	-105.20	0.00	0.00	0.00
4,200.00	5.00	26.57	4,194.80	112.99	56.49	-112.99	0.00	0.00	0.00
4,300.00	5.00	26.57	4,294.42	120.78	60.39	-120.78	0.00	0.00	0.00
4,400.00	5.00	26.57	4,394.04	128.57	64.29	-128.57	0.00	0.00	0.00
4,500.00	5.00	26.57	4,493.66	136.36	68.18	-136.36	0.00	0.00	0.00
4,600.00	5.00	26.57	4,593.28	144.15	72.08	-144.15	0.00	0.00	0.00

Database:	EDM 5000.1 Multi User Db	**Local Co-ordinate Reference:**	Well 81H
Company:	Devon Energy	**TVD Reference:**	3318.5' GE + 21' KB @ 3339.50usft
Project:	Lea County, NM (NAD-83)	**MD Reference:**	3318.5' GE + 21' KB @ 3339.50usft
Site:	Seawolf 1-12 Fed	**North Reference:**	Grid
Well:	81H	**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)
4,688.48	5.00	26.57	4,681.42	151.05	75.52	-151.05	0.00	0.00	0.00
Start, 0.50°/100' Drop									
4,700.00	4.94	26.57	4,692.91	151.94	75.97	-151.94	0.50	-0.50	0.00
4,800.00	4.44	26.57	4,792.57	159.25	79.63	-159.25	0.50	-0.50	0.00
4,883.16	4.02	26.57	4,875.50	164.74	82.37	-164.74	0.50	-0.50	0.00
Base of Salt									
4,900.00	3.94	26.57	4,892.30	165.78	82.89	-165.78	0.50	-0.50	0.00
5,000.00	3.44	26.57	4,992.09	171.54	85.77	-171.54	0.50	-0.50	0.00
5,100.00	2.94	26.57	5,091.94	176.52	88.26	-176.52	0.50	-0.50	0.00
5,125.59	2.81	26.57	5,117.50	177.66	88.83	-177.66	0.50	-0.50	0.00
Delaware									
5,200.00	2.44	26.57	5,191.83	180.71	90.36	-180.71	0.50	-0.50	0.00
5,300.00	1.94	26.57	5,291.76	184.13	92.06	-184.13	0.50	-0.50	0.00
5,400.00	1.44	26.57	5,391.71	186.77	93.38	-186.77	0.50	-0.50	0.00
5,500.00	0.94	26.57	5,491.69	188.62	94.31	-188.62	0.50	-0.50	0.00
5,600.00	0.44	26.57	5,591.68	189.70	94.85	-189.70	0.50	-0.50	0.00
5,687.87	0.00	0.00	5,679.55	190.00	95.00	-190.00	0.50	-0.50	-30.23
EOD, 0.00° INC									
5,700.00	0.00	0.00	5,691.68	190.00	95.00	-190.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,791.68	190.00	95.00	-190.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,891.68	190.00	95.00	-190.00	0.00	0.00	0.00
6,000.00	0.00	0.00	5,991.68	190.00	95.00	-190.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,091.68	190.00	95.00	-190.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,191.68	190.00	95.00	-190.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,291.68	190.00	95.00	-190.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,391.68	190.00	95.00	-190.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,491.68	190.00	95.00	-190.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,591.68	190.00	95.00	-190.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,691.68	190.00	95.00	-190.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,791.68	190.00	95.00	-190.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,891.68	190.00	95.00	-190.00	0.00	0.00	0.00
7,000.00	0.00	0.00	6,991.68	190.00	95.00	-190.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,091.68	190.00	95.00	-190.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,191.68	190.00	95.00	-190.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,291.68	190.00	95.00	-190.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,391.68	190.00	95.00	-190.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,491.68	190.00	95.00	-190.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,591.68	190.00	95.00	-190.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,691.68	190.00	95.00	-190.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,791.68	190.00	95.00	-190.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,891.68	190.00	95.00	-190.00	0.00	0.00	0.00
8,000.00	0.00	0.00	7,991.68	190.00	95.00	-190.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,091.68	190.00	95.00	-190.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,191.68	190.00	95.00	-190.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,291.68	190.00	95.00	-190.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,391.68	190.00	95.00	-190.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,491.68	190.00	95.00	-190.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,591.68	190.00	95.00	-190.00	0.00	0.00	0.00
8,700.00	0.00	0.00	8,691.68	190.00	95.00	-190.00	0.00	0.00	0.00
8,800.00	0.00	0.00	8,791.68	190.00	95.00	-190.00	0.00	0.00	0.00
8,900.00	0.00	0.00	8,891.68	190.00	95.00	-190.00	0.00	0.00	0.00
9,000.00	0.00	0.00	8,991.68	190.00	95.00	-190.00	0.00	0.00	0.00
9,100.00	0.00	0.00	9,091.68	190.00	95.00	-190.00	0.00	0.00	0.00

Database:	EDM 5000.1 Multi User Db	**Local Co-ordinate Reference:**	Well 81H
Company:	Devon Energy	**TVD Reference:**	3318.5' GE + 21' KB @ 3339.50usft
Project:	Lea County, NM (NAD-83)	**MD Reference:**	3318.5' GE + 21' KB @ 3339.50usft
Site:	Seawolf 1-12 Fed	**North Reference:**	Grid
Well:	81H	**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)
9,125.82	0.00	0.00	9,117.50	190.00	95.00	-190.00	0.00	0.00	0.00
Lower Brushy Canyon									
9,200.00	0.00	0.00	9,191.68	190.00	95.00	-190.00	0.00	0.00	0.00
9,296.82	0.00	0.00	9,288.50	190.00	95.00	-190.00	0.00	0.00	0.00
1st BSPG Lime									
9,300.00	0.00	0.00	9,291.68	190.00	95.00	-190.00	0.00	0.00	0.00
9,400.00	0.00	0.00	9,391.68	190.00	95.00	-190.00	0.00	0.00	0.00
9,500.00	0.00	0.00	9,491.68	190.00	95.00	-190.00	0.00	0.00	0.00
9,600.00	0.00	0.00	9,591.68	190.00	95.00	-190.00	0.00	0.00	0.00
9,700.00	0.00	0.00	9,691.68	190.00	95.00	-190.00	0.00	0.00	0.00
9,800.00	0.00	0.00	9,791.68	190.00	95.00	-190.00	0.00	0.00	0.00
9,900.00	0.00	0.00	9,891.68	190.00	95.00	-190.00	0.00	0.00	0.00
10,000.00	0.00	0.00	9,991.68	190.00	95.00	-190.00	0.00	0.00	0.00
10,100.00	0.00	0.00	10,091.68	190.00	95.00	-190.00	0.00	0.00	0.00
10,200.00	0.00	0.00	10,191.68	190.00	95.00	-190.00	0.00	0.00	0.00
10,251.82	0.00	0.00	10,243.50	190.00	95.00	-190.00	0.00	0.00	0.00
1st BSPG Sand									
10,300.00	0.00	0.00	10,291.68	190.00	95.00	-190.00	0.00	0.00	0.00
10,400.00	0.00	0.00	10,391.68	190.00	95.00	-190.00	0.00	0.00	0.00
10,500.00	0.00	0.00	10,491.68	190.00	95.00	-190.00	0.00	0.00	0.00
10,515.82	0.00	0.00	10,507.50	190.00	95.00	-190.00	0.00	0.00	0.00
2nd BSPG Lime									
10,600.00	0.00	0.00	10,591.68	190.00	95.00	-190.00	0.00	0.00	0.00
10,700.00	0.00	0.00	10,691.68	190.00	95.00	-190.00	0.00	0.00	0.00
10,800.00	0.00	0.00	10,791.68	190.00	95.00	-190.00	0.00	0.00	0.00
10,817.82	0.00	0.00	10,809.50	190.00	95.00	-190.00	0.00	0.00	0.00
2nd BSPG Sand									
10,900.00	0.00	0.00	10,891.68	190.00	95.00	-190.00	0.00	0.00	0.00
11,000.00	0.00	0.00	10,991.68	190.00	95.00	-190.00	0.00	0.00	0.00
11,100.00	0.00	0.00	11,091.68	190.00	95.00	-190.00	0.00	0.00	0.00
11,187.82	0.00	0.00	11,179.50	190.00	95.00	-190.00	0.00	0.00	0.00
3rd BSPG Lime									
11,200.00	0.00	0.00	11,191.68	190.00	95.00	-190.00	0.00	0.00	0.00
11,300.00	0.00	0.00	11,291.68	190.00	95.00	-190.00	0.00	0.00	0.00
11,400.00	0.00	0.00	11,391.68	190.00	95.00	-190.00	0.00	0.00	0.00
11,500.00	0.00	0.00	11,491.68	190.00	95.00	-190.00	0.00	0.00	0.00
11,600.00	0.00	0.00	11,591.68	190.00	95.00	-190.00	0.00	0.00	0.00
11,700.00	0.00	0.00	11,691.68	190.00	95.00	-190.00	0.00	0.00	0.00
11,800.00	0.00	0.00	11,791.68	190.00	95.00	-190.00	0.00	0.00	0.00
11,900.00	0.00	0.00	11,891.68	190.00	95.00	-190.00	0.00	0.00	0.00
11,922.82	0.00	0.00	11,914.50	190.00	95.00	-190.00	0.00	0.00	0.00
3rd BSPG Sand									
12,000.00	0.00	0.00	11,991.68	190.00	95.00	-190.00	0.00	0.00	0.00
12,027.87	0.00	0.00	12,019.55	190.00	95.00	-190.00	0.00	0.00	0.00
KOP, Start 10°/100' Build									
12,050.00	2.21	180.00	12,041.68	189.57	95.00	-189.57	10.00	10.00	0.00
12,100.00	7.21	180.00	12,091.49	185.47	95.00	-185.47	10.00	10.00	0.00
12,150.00	12.21	180.00	12,140.76	177.03	95.00	-177.03	10.00	10.00	0.00
12,200.00	17.21	180.00	12,189.10	164.34	95.00	-164.34	10.00	10.00	0.00
12,250.00	22.21	180.00	12,236.16	147.48	95.00	-147.48	10.00	10.00	0.00
12,300.00	27.21	180.00	12,281.57	126.58	94.99	-126.58	10.00	10.00	0.00
12,350.00	32.21	180.00	12,324.98	101.80	94.99	-101.80	10.00	10.00	0.00
12,370.15	34.23	180.00	12,341.83	90.77	94.99	-90.77	10.00	10.00	0.00

Database:	EDM 5000.1 Multi User Db	**Local Co-ordinate Reference:**	Well 81H
Company:	Devon Energy	**TVD Reference:**	3318.5' GE + 21' KB @ 3339.50usft
Project:	Lea County, NM (NAD-83)	**MD Reference:**	3318.5' GE + 21' KB @ 3339.50usft
Site:	Seawolf 1-12 Fed	**North Reference:**	Grid
Well:	81H	**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)
Wolfcamp									
12,400.00	37.21	180.00	12,366.07	73.34	94.99	-73.34	10.00	10.00	0.00
12,450.00	42.21	180.00	12,404.52	41.40	94.99	-41.40	10.00	10.00	0.00
12,500.00	47.21	180.00	12,440.04	6.24	94.99	-6.24	10.00	10.00	0.00
12,550.00	52.21	180.00	12,472.36	-31.89	94.98	31.89	10.00	10.00	0.00
12,600.00	57.21	180.00	12,501.23	-72.69	94.98	72.69	10.00	10.00	0.00
12,650.00	62.21	180.00	12,526.44	-115.85	94.98	115.85	10.00	10.00	0.00
12,660.04	63.22	180.00	12,531.04	-124.78	94.97	124.78	10.00	10.00	0.00
Wolfcamp "A"									
12,700.00	67.21	180.00	12,547.79	-161.05	94.97	161.05	10.00	10.00	0.00
12,750.00	72.21	180.00	12,565.12	-207.93	94.97	207.93	10.00	10.00	0.00
12,800.00	77.21	180.00	12,578.30	-256.15	94.96	256.15	10.00	10.00	0.00
12,850.00	82.21	180.00	12,587.22	-305.33	94.96	305.33	10.00	10.00	0.00
12,889.69	86.18	180.00	12,591.24	-344.81	94.96	344.81	10.00	10.00	0.00
Wolfcamp 110 Target									
12,900.00	87.21	180.00	12,591.83	-355.10	94.96	355.10	10.00	10.00	0.00
12,929.95	90.21	180.00	12,592.50	-385.04	94.95	385.04	10.00	10.00	0.00
LP, 90.21° INC, 180.00° AZI									
13,000.00	90.21	180.00	12,592.25	-455.09	94.95	455.09	0.00	0.00	0.00
13,100.00	90.21	180.00	12,591.89	-555.09	94.94	555.09	0.00	0.00	0.00
13,200.00	90.21	180.00	12,591.52	-655.09	94.93	655.09	0.00	0.00	0.00
13,300.00	90.21	180.00	12,591.16	-755.09	94.92	755.09	0.00	0.00	0.00
13,400.00	90.21	180.00	12,590.80	-855.09	94.92	855.09	0.00	0.00	0.00
13,500.00	90.21	180.00	12,590.44	-955.09	94.91	955.09	0.00	0.00	0.00
13,600.00	90.21	180.00	12,590.07	-1,055.09	94.90	1,055.09	0.00	0.00	0.00
13,700.00	90.21	180.00	12,589.71	-1,155.08	94.89	1,155.08	0.00	0.00	0.00
13,800.00	90.21	180.00	12,589.35	-1,255.08	94.88	1,255.08	0.00	0.00	0.00
13,900.00	90.21	180.00	12,588.98	-1,355.08	94.87	1,355.08	0.00	0.00	0.00
14,000.00	90.21	180.00	12,588.62	-1,455.08	94.87	1,455.08	0.00	0.00	0.00
14,100.00	90.21	180.00	12,588.26	-1,555.08	94.86	1,555.08	0.00	0.00	0.00
14,200.00	90.21	180.00	12,587.89	-1,655.08	94.85	1,655.08	0.00	0.00	0.00
14,300.00	90.21	180.00	12,587.53	-1,755.08	94.84	1,755.08	0.00	0.00	0.00
14,400.00	90.21	180.00	12,587.17	-1,855.08	94.83	1,855.08	0.00	0.00	0.00
14,500.00	90.21	180.00	12,586.81	-1,955.08	94.83	1,955.08	0.00	0.00	0.00
14,600.00	90.21	180.00	12,586.44	-2,055.08	94.82	2,055.08	0.00	0.00	0.00
14,700.00	90.21	180.00	12,586.08	-2,155.08	94.81	2,155.08	0.00	0.00	0.00
14,800.00	90.21	180.00	12,585.72	-2,255.08	94.80	2,255.08	0.00	0.00	0.00
14,900.00	90.21	180.00	12,585.35	-2,355.08	94.79	2,355.08	0.00	0.00	0.00
15,000.00	90.21	180.00	12,584.99	-2,455.08	94.79	2,455.08	0.00	0.00	0.00
15,100.00	90.21	180.00	12,584.63	-2,555.08	94.78	2,555.08	0.00	0.00	0.00
15,200.00	90.21	180.00	12,584.27	-2,655.07	94.77	2,655.07	0.00	0.00	0.00
15,300.00	90.21	180.00	12,583.90	-2,755.07	94.76	2,755.07	0.00	0.00	0.00
15,400.00	90.21	180.00	12,583.54	-2,855.07	94.75	2,855.07	0.00	0.00	0.00
15,500.00	90.21	180.00	12,583.18	-2,955.07	94.74	2,955.07	0.00	0.00	0.00
15,600.00	90.21	180.00	12,582.81	-3,055.07	94.74	3,055.07	0.00	0.00	0.00
15,700.00	90.21	180.00	12,582.45	-3,155.07	94.73	3,155.07	0.00	0.00	0.00
15,800.00	90.21	180.00	12,582.09	-3,255.07	94.72	3,255.07	0.00	0.00	0.00
15,900.00	90.21	180.00	12,581.73	-3,355.07	94.71	3,355.07	0.00	0.00	0.00
16,000.00	90.21	180.00	12,581.36	-3,455.07	94.70	3,455.07	0.00	0.00	0.00
16,100.00	90.21	180.00	12,581.00	-3,555.07	94.70	3,555.07	0.00	0.00	0.00
16,200.00	90.21	180.00	12,580.64	-3,655.07	94.69	3,655.07	0.00	0.00	0.00
16,300.00	90.21	180.00	12,580.27	-3,755.07	94.68	3,755.07	0.00	0.00	0.00
16,400.00	90.21	180.00	12,579.91	-3,855.07	94.67	3,855.07	0.00	0.00	0.00

Database:	EDM 5000.1 Multi User Db	**Local Co-ordinate Reference:**	Well 81H
Company:	Devon Energy	**TVD Reference:**	3318.5' GE + 21' KB @ 3339.50usft
Project:	Lea County, NM (NAD-83)	**MD Reference:**	3318.5' GE + 21' KB @ 3339.50usft
Site:	Seawolf 1-12 Fed	**North Reference:**	Grid
Well:	81H	**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)
16,500.00	90.21	180.00	12,579.55	-3,955.07	94.66	3,955.07	0.00	0.00	0.00
16,600.00	90.21	180.00	12,579.18	-4,055.07	94.66	4,055.07	0.00	0.00	0.00
16,700.00	90.21	180.00	12,578.82	-4,155.06	94.65	4,155.06	0.00	0.00	0.00
16,800.00	90.21	180.00	12,578.46	-4,255.06	94.64	4,255.06	0.00	0.00	0.00
16,900.00	90.21	180.00	12,578.10	-4,355.06	94.63	4,355.06	0.00	0.00	0.00
17,000.00	90.21	180.00	12,577.73	-4,455.06	94.62	4,455.06	0.00	0.00	0.00
17,100.00	90.21	180.00	12,577.37	-4,555.06	94.61	4,555.06	0.00	0.00	0.00
17,200.00	90.21	180.00	12,577.01	-4,655.06	94.61	4,655.06	0.00	0.00	0.00
17,300.00	90.21	180.00	12,576.64	-4,755.06	94.60	4,755.06	0.00	0.00	0.00
17,400.00	90.21	180.00	12,576.28	-4,855.06	94.59	4,855.06	0.00	0.00	0.00
17,500.00	90.21	180.00	12,575.92	-4,955.06	94.58	4,955.06	0.00	0.00	0.00
17,600.00	90.21	180.00	12,575.56	-5,055.06	94.57	5,055.06	0.00	0.00	0.00
17,700.00	90.21	180.00	12,575.19	-5,155.06	94.57	5,155.06	0.00	0.00	0.00
17,800.00	90.21	180.00	12,574.83	-5,255.06	94.56	5,255.06	0.00	0.00	0.00
17,900.00	90.21	180.00	12,574.47	-5,355.06	94.55	5,355.06	0.00	0.00	0.00
18,000.00	90.21	180.00	12,574.10	-5,455.06	94.54	5,455.06	0.00	0.00	0.00
18,100.00	90.21	180.00	12,573.74	-5,555.06	94.53	5,555.06	0.00	0.00	0.00
18,200.00	90.21	180.00	12,573.38	-5,655.06	94.53	5,655.06	0.00	0.00	0.00
18,300.00	90.21	180.00	12,573.01	-5,755.05	94.52	5,755.05	0.00	0.00	0.00
18,400.00	90.21	180.00	12,572.65	-5,855.05	94.51	5,855.05	0.00	0.00	0.00
18,500.00	90.21	180.00	12,572.29	-5,955.05	94.50	5,955.05	0.00	0.00	0.00
18,600.00	90.21	180.00	12,571.93	-6,055.05	94.49	6,055.05	0.00	0.00	0.00
18,700.00	90.21	180.00	12,571.56	-6,155.05	94.48	6,155.05	0.00	0.00	0.00
18,800.00	90.21	180.00	12,571.20	-6,255.05	94.48	6,255.05	0.00	0.00	0.00
18,900.00	90.21	180.00	12,570.84	-6,355.05	94.47	6,355.05	0.00	0.00	0.00
19,000.00	90.21	180.00	12,570.47	-6,455.05	94.46	6,455.05	0.00	0.00	0.00
19,100.00	90.21	180.00	12,570.11	-6,555.05	94.45	6,555.05	0.00	0.00	0.00
19,200.00	90.21	180.00	12,569.75	-6,655.05	94.44	6,655.05	0.00	0.00	0.00
19,300.00	90.21	180.00	12,569.39	-6,755.05	94.44	6,755.05	0.00	0.00	0.00
19,400.00	90.21	180.00	12,569.02	-6,855.05	94.43	6,855.05	0.00	0.00	0.00
19,500.00	90.21	180.00	12,568.66	-6,955.05	94.42	6,955.05	0.00	0.00	0.00
19,600.00	90.21	180.00	12,568.30	-7,055.05	94.41	7,055.05	0.00	0.00	0.00
19,700.00	90.21	180.00	12,567.93	-7,155.05	94.40	7,155.05	0.00	0.00	0.00
19,800.00	90.21	180.00	12,567.57	-7,255.04	94.40	7,255.04	0.00	0.00	0.00
19,900.00	90.21	180.00	12,567.21	-7,355.04	94.39	7,355.04	0.00	0.00	0.00
20,000.00	90.21	180.00	12,566.85	-7,455.04	94.38	7,455.04	0.00	0.00	0.00
20,100.00	90.21	180.00	12,566.48	-7,555.04	94.37	7,555.04	0.00	0.00	0.00
20,200.00	90.21	180.00	12,566.12	-7,655.04	94.36	7,655.04	0.00	0.00	0.00
20,300.00	90.21	180.00	12,565.76	-7,755.04	94.35	7,755.04	0.00	0.00	0.00
20,400.00	90.21	180.00	12,565.39	-7,855.04	94.35	7,855.04	0.00	0.00	0.00
20,500.00	90.21	180.00	12,565.03	-7,955.04	94.34	7,955.04	0.00	0.00	0.00
20,600.00	90.21	180.00	12,564.67	-8,055.04	94.33	8,055.04	0.00	0.00	0.00
20,700.00	90.21	180.00	12,564.30	-8,155.04	94.32	8,155.04	0.00	0.00	0.00
20,800.00	90.21	180.00	12,563.94	-8,255.04	94.31	8,255.04	0.00	0.00	0.00
20,900.00	90.21	180.00	12,563.58	-8,355.04	94.31	8,355.04	0.00	0.00	0.00
21,000.00	90.21	180.00	12,563.22	-8,455.04	94.30	8,455.04	0.00	0.00	0.00
21,100.00	90.21	180.00	12,562.85	-8,555.04	94.29	8,555.04	0.00	0.00	0.00
21,200.00	90.21	180.00	12,562.49	-8,655.04	94.28	8,655.04	0.00	0.00	0.00
21,300.00	90.21	180.00	12,562.13	-8,755.03	94.27	8,755.03	0.00	0.00	0.00
21,400.00	90.21	180.00	12,561.76	-8,855.03	94.27	8,855.03	0.00	0.00	0.00
21,500.00	90.21	180.00	12,561.40	-8,955.03	94.26	8,955.03	0.00	0.00	0.00
21,600.00	90.21	180.00	12,561.04	-9,055.03	94.25	9,055.03	0.00	0.00	0.00
21,700.00	90.21	180.00	12,560.68	-9,155.03	94.24	9,155.03	0.00	0.00	0.00
21,800.00	90.21	180.00	12,560.31	-9,255.03	94.23	9,255.03	0.00	0.00	0.00

Database:	EDM 5000.1 Multi User Db	**Local Co-ordinate Reference:**	Well 81H
Company:	Devon Energy	**TVD Reference:**	3318.5' GE + 21' KB @ 3339.50usft
Project:	Lea County, NM (NAD-83)	**MD Reference:**	3318.5' GE + 21' KB @ 3339.50usft
Site:	Seawolf 1-12 Fed	**North Reference:**	Grid
Well:	81H	**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)
21,900.00	90.21	180.00	12,559.95	-9,355.03	94.22	9,355.03	0.00	0.00	0.00
22,000.00	90.21	180.00	12,559.59	-9,455.03	94.22	9,455.03	0.00	0.00	0.00
22,100.00	90.21	180.00	12,559.22	-9,555.03	94.21	9,555.03	0.00	0.00	0.00
22,200.00	90.21	180.00	12,558.86	-9,655.03	94.20	9,655.03	0.00	0.00	0.00
22,300.00	90.21	180.00	12,558.50	-9,755.03	94.19	9,755.03	0.00	0.00	0.00
22,400.00	90.21	180.00	12,558.13	-9,855.03	94.18	9,855.03	0.00	0.00	0.00
22,500.00	90.21	180.00	12,557.77	-9,955.03	94.18	9,955.03	0.00	0.00	0.00
22,574.84	90.21	180.00	12,557.50	-10,029.87	94.17	10,029.87	0.00	0.00	0.00
TD at 22574.84' MD - PBHL (S1-12F 81H)									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL (S1-12F 81H) - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	393,463.69	789,088.21	32° 4' 45.071 N	103° 32' 0.348 W
PBHL (S1-12F 81H) - plan hits target center - Point	0.00	0.00	12,557.50	-10,029.87	94.17	383,433.82	789,182.38	32° 3' 5.815 N	103° 32' 0.117 W

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
959.50	960.00	Rustler		0.00	
1,328.50	1,329.00	Top of Salt		0.00	
4,883.16	4,876.00	Base of Salt		0.00	
5,125.59	5,118.00	Delaware		0.00	
9,125.82	9,118.00	Lower Brushy Canyon		0.00	
9,296.82	9,289.00	1st BSPG Lime		0.00	
10,251.82	10,244.00	1st BSPG Sand		0.00	
10,515.82	10,508.00	2nd BSPG Lime		0.00	
10,817.82	10,810.00	2nd BSPG Sand		0.00	
11,187.82	11,180.00	3rd BSPG Lime		0.00	
11,922.82	11,915.00	3rd BSPG Sand		0.00	
12,370.15	12,342.33	Wolfcamp		-0.21	180.00
12,660.04	12,531.54	Wolfcamp "A"		-0.21	180.00
12,889.69	12,591.74	Wolfcamp 110 Target		-0.21	180.00

Database:	EDM 5000.1 Multi User Db	**Local Co-ordinate Reference:**	Well 81H
Company:	Devon Energy	**TVD Reference:**	3318.5' GE + 21' KB @ 3339.50usft
Project:	Lea County, NM (NAD-83)	**MD Reference:**	3318.5' GE + 21' KB @ 3339.50usft
Site:	Seawolf 1-12 Fed	**North Reference:**	Grid
Well:	81H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
2,500.00	2,500.00	0.00	0.00	Start, 1°/100' Build
2,999.70	2,999.06	19.48	9.74	EOB, 5.00° INC
4,688.48	4,681.42	151.05	75.52	Start, 0.50°/100' Drop
5,687.87	5,679.55	190.00	95.00	EOD, 0.00° INC
12,027.87	12,019.55	190.00	95.00	KOP, Start 10°/100' Build
12,929.95	12,592.50	-385.04	94.95	LP, 90.21° INC, 180.00° AZI
22,574.84	12,557.50	-10,029.87	94.17	TD at 22574.84' MD