

The logo for Devon Energy Corporation, featuring the word "devon" in a white, lowercase, sans-serif font on a black rectangular background.

HOBBS OCD

SEP 19 2018

RECEIVED

43768

Devon Energy Corporation

Lea Co., NM
SeaWolf 1-12
Fed 91H

OH

Design: Surveys

Standard Survey Report

01 August, 2018





Nabors
Survey Report



Company: Devon Energy Corporation
Project: Lea Co., NM
Site: SeaWolf 1-12
Well: Fed 91H
Wellbore: OH
Design: Surveys

Local Co-ordinate Reference: Well Fed 91H
TVD Reference: RT=32 @ 3350.60ft (Nabors X-04)
MD Reference: RT=32 @ 3350.60ft (Nabors X-04)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: RyanUSA_32Bit

Project: Lea Co., NM
Map System: US State Plane 1983
Geo Datum: North American Datum 1983
Map Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

Site: SeaWolf 1-12
Site Position: Northing: 393,463.690 usft Latitude: 32° 4' 45.070846 N
From: Map Easting: 789,088.210 usft Longitude: 103° 32' 0.347634 W
Position Uncertainty: 0.00 ft Slot Radius: 13-3/16 " Grid Convergence: 0.42 °

Well: Fed 91H
Well Position: +N/-S 0.00 ft Northing: 393,463.510 usft Latitude: 32° 4' 45.071267 N
+E/-W 0.00 ft Easting: 789,058.190 usft Longitude: 103° 32' 0.696548 W
Position Uncertainty: 2.00 ft Wellhead Elevation: ft Ground Level: 3,318.60 ft

Wellbore: OH
Magnetics: Model Name Sample Date Declination (°) Dip Angle (°) Field Strength (nT)
HDGM 2/22/2018 6.75 59.80 47,874.40000000

Design: Surveys
Audit Notes:
Version: 1.0 Phase: ACTUAL Tie On Depth: 0.00
Vertical Section: Depth From (TVD) +N/-S +E/-W Direction
(ft) (ft) (ft) (°)
0.00 0.00 0.00 179.41

Survey Program Date: 2/27/2018
From (ft) To (ft) Survey (Wellbore) Tool Name Description
190.10 1,004.10 Survey #1 (OH) MWD+IGRF OWSG MWD + IGRF or WMM
1,152.00 12,376.00 Survey #2 - NDS MWD (OH) MWD+HRGM OWSG MWD + HRGM
12,470.00 16,758.00 Survey #3 - SLB MWD (OH) MWD+HRGM OWSG MWD + HRGM
16,895.00 17,592.00 Survey #4 NDS Surveys (OH) MWD+HRGM OWSG MWD + HRGM

Survey
Measured Depth (ft) Inclination (°) Azimuth (°) Vertical Depth (ft) +N/-S (ft) +E/-W (ft) Vertical Section (ft) Dogleg Rate (°/100ft) Build Rate (°/100ft) Turn Rate (°/100ft)
0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
190.10 1.00 201.37 190.09 -1.54 -0.60 1.54 0.53 0.53 0.00
279.10 0.70 203.37 279.08 -2.77 -1.10 2.76 0.34 -0.34 2.25
407.10 0.50 218.37 407.07 -3.92 -1.76 3.90 0.20 -0.16 11.72
501.10 0.80 218.37 501.07 -4.76 -2.42 4.73 0.32 0.32 0.00
627.10 1.00 230.37 627.05 -6.15 -3.81 6.11 0.22 0.16 9.52
721.10 1.10 230.37 721.04 -7.25 -5.14 7.20 0.11 0.11 0.00
847.00 1.30 200.37 846.91 -9.36 -6.57 9.29 0.52 0.16 -23.83

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Survey

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909.10	1.10	204.37	909.00	-10.56	-7.06	10.49	0.35	-0.32	6.44
972.10	1.00	204.37	971.99	-11.61	-7.54	11.53	0.16	-0.16	0.00
1,004.10	1.10	205.37	1,003.98	-12.14	-7.78	12.06	0.32	0.31	3.13
1,152.00	1.00	226.62	1,151.86	-14.31	-9.33	14.22	0.27	-0.07	14.37
1,243.00	0.88	243.15	1,242.84	-15.18	-10.53	15.07	0.32	-0.13	18.16
1,335.00	0.75	247.54	1,334.83	-15.72	-11.72	15.60	0.16	-0.14	4.77
1,426.00	0.75	250.71	1,425.83	-16.15	-12.83	16.02	0.05	0.00	3.48
1,521.00	0.69	245.78	1,520.82	-16.59	-13.94	16.44	0.09	-0.06	-5.19
1,615.00	0.56	244.20	1,614.81	-17.02	-14.87	16.87	0.14	-0.14	-1.68
1,710.00	0.63	251.41	1,709.81	-17.39	-15.78	17.23	0.11	0.07	7.59
1,804.00	0.69	248.42	1,803.80	-17.76	-16.80	17.59	0.07	0.06	-3.18
1,898.00	0.44	270.22	1,897.80	-17.97	-17.68	17.79	0.35	-0.27	23.19
1,992.00	0.56	280.94	1,991.79	-17.88	-18.50	17.69	0.16	0.13	11.40
2,088.00	0.56	277.25	2,087.79	-17.73	-19.42	17.53	0.04	0.00	-3.84
2,182.00	0.44	291.49	2,181.79	-17.54	-20.21	17.33	0.18	-0.13	15.15
2,277.00	0.31	314.51	2,276.78	-17.23	-20.74	17.01	0.21	-0.14	24.23
2,372.00	0.25	336.49	2,371.78	-16.86	-21.00	16.64	0.13	-0.08	23.14
2,468.00	0.31	350.90	2,465.78	-16.42	-21.12	16.20	0.10	0.06	15.33
2,560.00	0.38	36.08	2,559.78	-15.92	-20.98	15.70	0.29	0.07	48.06
2,654.00	0.63	57.87	2,653.78	-15.39	-20.36	15.18	0.33	0.27	23.18
2,748.00	0.75	51.90	2,747.77	-14.73	-19.44	14.53	0.15	0.13	-6.35
2,843.00	0.63	48.21	2,842.76	-14.00	-18.56	13.81	0.13	-0.13	-3.88
2,938.00	0.75	38.01	2,937.76	-13.16	-17.79	12.98	0.18	0.13	-10.74
3,033.00	2.06	46.98	3,032.73	-11.51	-16.16	11.34	1.39	1.38	9.44
3,128.00	3.19	47.85	3,127.62	-8.57	-12.95	8.44	1.19	1.19	0.92
3,223.00	3.75	50.32	3,222.45	-4.81	-8.60	4.73	0.61	0.59	2.60
3,317.00	3.38	41.00	3,316.27	-0.76	-4.41	0.71	0.73	-0.39	-9.91
3,411.00	3.94	33.09	3,410.08	4.04	-0.83	-4.05	0.80	0.60	-8.41
3,506.00	4.44	30.63	3,504.82	9.94	2.82	-9.91	0.56	0.53	-2.59
3,600.00	4.38	28.87	3,598.54	16.21	6.41	-16.14	0.16	-0.06	-1.87
3,695.00	3.88	28.87	3,693.30	22.20	9.71	-22.10	0.53	-0.53	0.00
3,789.00	4.19	38.19	3,787.07	27.69	13.37	-27.55	0.77	0.33	9.91
3,883.00	3.94	36.43	3,880.83	32.98	17.41	-32.80	0.30	-0.27	-1.87
3,976.00	3.81	36.54	3,973.62	37.97	21.24	-37.75	0.21	-0.14	2.27
4,071.00	3.75	39.59	4,068.41	42.83	25.18	-42.57	0.10	-0.06	1.11
4,165.00	3.13	33.62	4,162.24	47.34	28.56	-47.04	0.76	-0.66	-6.35
4,260.00	3.56	23.60	4,257.08	52.20	31.18	-51.88	0.76	0.45	-10.55
4,355.00	4.38	21.14	4,351.85	58.29	33.67	-57.94	0.88	0.86	-2.59
4,449.00	3.94	28.17	4,445.60	64.48	36.49	-64.10	0.72	-0.47	7.48
4,544.00	3.88	35.20	4,540.38	69.99	39.88	-69.57	0.51	-0.06	7.40
4,638.00	4.50	32.91	4,634.13	75.68	43.72	-75.23	0.68	0.66	-2.44
4,733.00	4.50	39.42	4,728.84	81.69	48.11	-81.19	0.54	0.00	6.85
4,828.00	4.25	51.02	4,823.56	86.78	53.21	-86.23	0.97	-0.26	12.21

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4,922.00	4.13	58.05	4,917.31	90.77	58.79	-90.16	0.56	-0.13	7.48
5,016.00	3.88	43.64	5,011.09	94.86	63.86	-94.20	1.10	-0.27	-15.33
5,111.00	3.50	38.54	5,105.89	99.45	67.88	-98.75	0.53	-0.40	-5.37
5,205.00	3.75	35.55	5,199.70	104.20	71.46	-103.46	0.33	0.27	-3.18
5,299.00	3.88	33.79	5,293.49	109.34	75.01	-108.56	0.19	0.14	-1.87
5,383.00	3.50	27.82	5,387.30	114.52	78.12	-113.71	0.57	-0.40	-6.35
5,488.00	3.25	25.71	5,482.13	119.51	80.64	-118.68	0.29	-0.26	-2.22
5,581.00	3.06	27.46	5,574.99	124.09	82.93	-123.23	0.23	-0.20	1.88
5,676.00	2.81	26.58	5,669.87	128.42	85.14	-127.54	0.27	-0.26	-0.93
5,771.00	2.56	20.78	5,764.76	132.49	86.94	-131.59	0.39	-0.26	-6.11
5,866.00	2.56	19.20	5,859.67	136.48	88.39	-135.56	0.07	0.00	-1.66
5,960.00	2.81	18.50	5,953.56	140.64	89.81	-139.71	0.27	0.27	-0.74
6,054.00	2.50	15.69	6,047.46	144.80	91.10	-143.66	0.36	-0.33	-2.99
6,149.00	2.44	16.74	6,142.38	148.73	92.24	-147.78	0.08	-0.06	1.11
6,244.00	2.38	16.57	6,237.29	152.56	93.38	-151.59	0.06	-0.06	-0.18
6,339.00	2.31	14.96	6,332.21	156.30	94.44	-155.32	0.10	-0.07	-1.67
6,433.00	1.88	27.29	6,426.15	159.50	95.64	-158.51	0.66	-0.46	13.10
6,526.00	1.38	20.96	6,519.11	161.90	96.74	-160.90	0.57	-0.54	-6.81
6,621.00	0.88	8.48	6,614.09	163.69	97.25	-162.68	0.58	-0.53	-13.14
6,715.00	0.81	9.18	6,708.08	165.06	97.47	-164.05	0.08	-0.07	0.74
6,809.00	0.81	7.78	6,802.07	166.38	97.66	-165.36	0.02	0.00	-1.49
6,904.00	0.69	6.02	6,897.07	167.61	97.81	-166.60	0.13	-0.13	-1.85
6,997.00	0.38	357.23	6,990.06	168.48	97.86	-167.46	0.34	-0.33	-9.45
7,089.00	0.31	357.76	7,082.06	169.03	97.83	-168.01	0.08	-0.08	0.58
7,184.00	0.31	337.37	7,177.06	169.52	97.72	-168.51	0.12	0.00	-21.46
7,279.00	0.38	322.25	7,272.06	170.01	97.43	-169.00	0.12	0.07	-15.92
7,374.00	0.38	330.69	7,367.05	170.53	97.09	-169.53	0.06	0.00	8.88
7,469.00	0.50	209.75	7,462.05	170.45	96.73	-169.44	0.81	0.13	-127.31
7,564.00	0.56	190.76	7,557.05	169.63	96.43	-168.63	0.19	0.06	-19.99
7,659.00	0.81	183.38	7,652.04	168.51	96.31	-167.51	0.28	0.26	-7.77
7,752.00	0.94	193.93	7,745.03	167.11	96.08	-166.11	0.22	0.14	11.34
7,847.00	1.06	192.35	7,840.02	165.50	95.71	-164.50	0.13	0.13	-1.66
7,942.00	1.13	185.14	7,935.00	163.70	95.44	-162.71	0.16	0.07	-7.59
8,036.00	1.25	186.02	8,028.98	161.76	95.25	-160.77	0.13	0.13	0.94
8,130.00	1.25	187.25	8,122.96	159.72	95.01	-158.74	0.03	0.00	1.31
8,225.00	1.25	187.07	8,217.93	157.67	94.75	-156.68	0.00	0.00	-0.19
8,320.00	1.19	193.40	8,312.91	155.68	94.40	-154.70	0.16	-0.06	6.66
8,414.00	1.25	202.54	8,406.89	153.78	93.78	-152.81	0.22	0.06	9.72
8,509.00	1.38	202.19	8,501.87	151.77	92.95	-150.80	0.14	0.14	-0.37
8,602.00	1.44	203.07	8,594.84	149.66	92.07	-148.70	0.07	0.06	0.95
8,689.00	1.94	203.60	8,681.80	147.30	91.05	-146.36	0.57	0.57	0.61
8,784.00	0.69	206.94	8,776.77	145.32	90.14	-144.38	1.32	-1.32	3.52
8,879.00	0.63	209.75	8,871.77	144.35	89.63	-143.42	0.07	-0.06	2.96
8,973.00	1.06	213.26	8,965.76	143.18	88.89	-142.25	0.46	0.46	3.73

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9,067.00	1.06	220.12	9,059.74	141.79	87.86	-140.87	0.13	0.00	7.30
9,182.00	0.44	189.18	9,154.73	140.75	87.23	-139.85	0.76	-0.65	-32.57
9,256.00	0.44	226.27	9,248.73	140.15	86.91	-139.25	0.30	0.00	39.46
9,350.00	0.06	137.15	9,342.73	139.86	86.69	-138.96	0.47	-0.40	-94.81
9,445.00	0.25	337.19	9,437.73	140.02	86.64	-139.12	0.32	0.20	-168.38
9,540.00	0.13	111.84	9,532.73	140.17	86.66	-139.27	0.37	-0.13	141.74
9,634.00	0.19	303.62	9,626.73	140.21	86.63	-139.32	0.34	0.06	-178.96
9,729.00	0.50	11.99	9,721.73	140.71	86.58	-139.81	0.49	0.33	71.97
9,824.00	1.00	352.83	9,816.72	141.94	86.57	-141.04	0.58	0.53	-20.17
9,918.00	1.19	321.55	9,910.70	143.51	85.86	-142.62	0.66	0.20	-33.28
10,013.00	1.25	343.34	10,005.68	145.28	84.95	-144.40	0.49	0.06	22.94
10,107.00	1.89	16.74	10,099.65	147.59	85.05	-146.70	1.00	0.47	35.53
10,201.00	0.94	309.24	10,193.63	149.40	84.85	-148.52	1.69	-0.80	-71.81
10,296.00	1.38	289.73	10,288.61	150.28	83.17	-149.42	0.62	0.46	-20.54
10,328.00	1.44	281.47	10,320.60	150.49	82.42	-149.64	0.66	0.19	-25.81
10,391.00	1.13	283.40	10,383.59	150.79	81.04	-149.95	0.50	-0.49	3.06
10,485.00	0.63	315.92	10,477.57	151.38	79.77	-150.55	0.73	-0.53	34.60
10,674.00	0.00	343.69	10,666.57	152.13	79.05	-151.30	0.33	-0.33	0.00
10,789.00	0.13	105.51	10,781.57	152.10	79.16	-151.27	0.14	0.14	0.00
10,863.00	0.56	183.91	10,855.57	151.61	79.23	-150.79	0.58	0.46	83.40
10,957.00	0.69	186.19	10,949.56	150.59	79.14	-149.77	0.14	0.14	2.43
11,052.00	0.50	219.94	11,044.56	149.70	78.81	-148.88	0.41	-0.20	35.53
11,146.00	0.44	327.87	11,138.56	149.69	78.35	-148.88	0.81	-0.06	114.82
11,241.00	1.50	347.91	11,233.54	151.22	77.90	-150.41	1.15	1.12	21.09
11,335.00	1.00	325.24	11,327.52	153.10	77.17	-152.29	0.74	-0.53	-24.12
11,430.00	1.13	296.23	11,422.50	154.19	75.86	-153.40	0.58	0.14	-30.54
11,525.00	1.31	265.82	11,517.48	154.53	73.94	-153.76	0.70	0.19	-32.01
11,620.00	1.88	253.17	11,612.45	154.00	71.36	-153.25	0.70	0.60	-13.32
11,715.00	1.69	251.06	11,707.40	153.09	68.54	-152.38	0.21	-0.20	-2.22
11,809.00	1.56	242.62	11,801.36	152.05	66.10	-151.36	0.29	-0.14	-8.98
11,904.00	1.19	232.95	11,896.34	150.86	64.16	-150.19	0.46	-0.39	-10.18
11,999.00	1.00	234.89	11,991.32	149.79	62.70	-149.14	0.20	-0.20	2.04
12,093.00	0.94	229.08	12,085.30	148.81	61.44	-148.17	0.12	-0.06	-6.18
12,188.00	0.88	227.33	12,180.29	147.81	60.32	-147.18	0.07	-0.06	-1.84
12,282.00	0.88	215.73	12,274.28	146.73	59.37	-146.12	0.19	0.00	-12.34
12,376.00	0.83	214.32	12,368.27	145.72	58.65	-145.11	0.27	-0.27	-1.50
12,470.00	0.75	201.14	12,462.27	144.72	58.14	-144.12	0.21	0.13	-14.02
12,566.00	1.14	200.43	12,558.25	142.78	57.40	-142.18	0.31	0.31	-0.56
12,629.00	1.17	203.26	12,621.24	142.16	57.16	-141.56	0.20	0.09	8.58
12,661.00	0.85	196.61	12,653.24	141.63	56.96	-141.04	1.06	-1.00	-20.78
12,692.00	0.89	218.39	12,684.23	141.22	56.74	-140.63	1.07	0.13	70.26
12,724.00	2.68	190.61	12,716.22	140.29	56.45	-139.70	6.05	5.59	-86.81

Fed 91H As Drilled KOP || 50' FNL 385' FWL

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 Project: Lea Co., NM
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 Design: Surveys

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Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
12,755.00	6.58	184.91	12,747.11	137.81	56.17	-137.22	12.65	12.58	-18.39
12,787.00	11.28	183.76	12,778.71	132.86	55.80	-132.28	14.70	14.69	-3.59
12,812.65	14.40	187.04	12,803.72	127.19	55.25	-126.61	12.49	12.17	12.79
Fed 91H_KOP									
12,833.00	16.90	188.79	12,823.31	121.75	54.49	-121.18	12.49	12.28	8.60
12,881.00	21.38	192.31	12,868.65	106.30	51.55	-105.76	9.63	9.33	7.33
12,928.00	24.76	189.29	12,911.89	88.21	48.14	-87.71	7.62	7.19	-6.43
12,975.00	27.32	186.94	12,954.11	67.79	45.24	-67.32	5.87	5.45	-5.00
13,025.00	30.79	183.47	12,997.82	43.62	43.08	-43.17	7.71	6.94	-6.94
13,089.00	35.68	182.55	13,034.61	19.54	41.83	-19.11	11.17	11.11	-2.09
13,116.00	40.42	181.49	13,071.61	-9.40	40.82	9.82	10.18	10.09	-2.28
13,164.00	46.48	179.61	13,106.44	-42.39	40.54	42.81	12.91	12.63	-3.92
13,214.00	50.98	178.04	13,139.42	-78.95	41.32	80.37	9.30	9.00	-3.14
13,258.00	55.20	176.31	13,185.84	-115.08	43.07	115.52	10.09	9.59	-3.93
13,275.59	57.43	175.79	13,175.59	-129.68	44.08	130.12	12.91	12.68	-2.93
Fed 91H As Drilled FTP 330' FNL 370' FWL									
13,306.00	61.29	174.96	13,191.09	-155.75	46.19	156.22	12.91	12.69	-2.74
13,353.00	65.00	175.91	13,212.31	-197.55	49.52	198.05	8.10	7.89	2.02
13,400.00	66.83	176.38	13,231.49	-240.35	52.41	240.88	4.00	3.89	1.00
13,458.00	67.33	176.96	13,254.08	-293.69	55.51	294.24	1.26	0.86	1.00
13,490.00	69.34	177.51	13,265.90	-323.39	56.94	323.96	6.48	6.28	1.72
13,523.00	72.32	178.67	13,276.73	-354.54	57.98	355.12	9.62	9.03	3.52
13,553.00	74.82	179.29	13,285.22	-383.30	58.49	383.89	8.57	8.33	2.07
13,600.00	78.33	180.12	13,296.13	-429.01	58.72	429.59	7.66	7.47	1.77
13,612.36	79.36	180.32	13,298.52	-441.14	58.68	441.72	8.45	8.30	1.65
Fed 91H_EOC									
13,647.00	82.23	180.89	13,304.06	-475.33	58.31	475.90	8.45	8.30	1.63
13,702.00	86.11	180.99	13,309.65	-530.02	57.42	530.59	7.06	7.05	0.18
13,741.00	88.73	181.17	13,311.40	-588.97	56.68	589.53	6.73	6.72	0.46
13,835.00	88.18	180.86	13,313.94	-662.93	55.02	663.46	0.67	-0.59	-0.33
13,929.00	88.55	181.89	13,316.62	-756.86	52.76	757.36	1.16	0.39	1.10
14,024.00	89.21	180.59	13,318.47	-851.82	50.71	852.29	1.53	0.69	-1.37
14,118.00	89.31	180.93	13,319.69	-945.80	49.46	946.26	0.38	0.11	0.36
14,212.00	89.35	180.81	13,320.79	-1,039.78	48.03	1,040.22	0.13	0.04	-0.13
14,306.00	89.45	181.10	13,321.77	-1,133.76	46.47	1,134.18	0.33	0.11	0.31
14,401.00	89.59	181.20	13,322.57	-1,228.74	44.56	1,229.13	0.18	0.15	0.11
14,495.00	89.93	180.64	13,322.96	-1,322.73	43.05	1,323.10	0.70	0.36	-0.60
14,589.00	89.83	181.61	13,323.16	-1,416.71	41.21	1,417.06	1.04	-0.11	1.03
14,684.00	89.76	180.91	13,323.50	-1,511.68	39.12	1,512.01	0.74	-0.07	-0.74
14,778.00	89.90	179.57	13,323.78	-1,605.68	38.72	1,605.99	1.43	0.15	-1.43
14,872.00	89.62	177.90	13,324.17	-1,699.65	40.80	1,699.98	1.80	-0.30	-1.78
14,967.00	89.79	178.54	13,324.66	-1,794.61	43.75	1,794.96	0.70	0.18	0.67
15,061.00	89.97	179.01	13,324.86	-1,888.58	45.76	1,888.95	0.54	0.19	0.50
15,155.00	89.72	178.81	13,325.11	-1,982.57	47.55	1,982.95	0.34	-0.27	-0.21

Company: Devon Energy Corporation
 Project: Lea Co., NM
 Site: SeaWolf 1-12
 Well: Fed 91H
 Wellbore: OH
 Design: Surveys

Local Co-ordinate Reference: Well Fed 91H
 TVD Reference: RT=32 @ 3350.60ft (Nabors X-04)
 MD Reference: RT=32 @ 3350.60ft (Nabors X-04)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: RyanUSA_32Bit

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
15,250.00	89.79	178.67	13,325.52	-2,077.54	49.63	2,077.94	0.16	0.07	-0.15
15,344.00	89.76	178.79	13,325.89	-2,171.52	51.72	2,171.94	0.13	-0.03	0.13
15,438.00	89.72	178.64	13,326.31	-2,265.49	53.83	2,265.93	0.17	-0.04	-0.16
15,533.00	89.97	179.42	13,326.57	-2,360.48	55.43	2,360.92	0.86	0.26	0.82
15,627.00	89.86	178.82	13,326.71	-2,454.47	56.88	2,454.92	0.65	-0.12	-0.64
15,721.00	89.83	178.74	13,326.96	-2,548.45	58.88	2,548.92	0.09	-0.03	-0.09
15,815.00	89.69	178.73	13,327.36	-2,642.42	60.95	2,642.91	0.15	-0.15	-0.01
15,909.00	89.69	178.13	13,327.87	-2,736.39	63.53	2,736.89	0.64	0.00	-0.64
16,004.00	89.78	177.87	13,328.32	-2,831.33	66.85	2,831.86	0.28	0.07	-0.27
16,098.00	89.78	179.41	13,328.72	-2,925.30	69.08	2,925.85	1.64	0.00	1.64
16,192.00	89.55	180.12	13,329.28	-3,019.29	69.46	3,019.85	0.79	-0.22	0.76
16,287.00	86.87	178.04	13,332.25	-3,114.22	70.99	3,114.79	3.57	-2.82	-2.19
16,381.00	89.55	180.74	13,335.19	-3,208.15	71.98	3,208.72	4.05	2.85	2.87
16,475.00	88.69	181.09	13,336.63	-3,302.13	70.48	3,302.68	0.99	-0.91	0.37
16,570.00	88.31	182.35	13,339.12	-3,397.05	67.63	3,397.57	1.38	-0.40	1.33
16,664.00	89.14	182.69	13,341.21	-3,490.94	63.50	3,491.40	0.95	0.88	0.36
16,758.00	88.01	181.70	13,343.55	-3,584.83	59.90	3,585.26	1.60	-1.20	-1.05
16,895.00	90.00	180.53	13,345.93	-3,721.78	57.24	3,722.17	1.68	1.45	-0.85
16,990.00	89.75	178.24	13,346.13	-3,816.77	58.26	3,817.16	2.42	-0.26	-2.41
17,084.00	89.63	178.95	13,346.64	-3,910.74	60.56	3,911.15	0.77	-0.13	0.76
17,178.00	89.44	176.31	13,347.40	-4,004.64	64.45	4,005.10	2.82	-0.20	-2.81
17,230.66	90.38	175.63	13,347.49	-4,057.17	68.15	4,057.66	2.20	1.78	-1.29
Fed 91H_T1									
17,273.00	91.13	175.08	13,346.93	-4,099.37	71.58	4,099.89	2.20	1.78	-1.29
17,367.00	88.44	171.56	13,347.28	-4,192.71	82.51	4,193.34	4.71	-2.86	-3.74
17,461.00	88.13	173.85	13,350.10	-4,285.90	94.44	4,286.64	2.46	-0.33	2.44
17,527.00	87.88	175.61	13,352.40	-4,351.58	100.50	4,352.38	2.89	-0.38	2.87
17,592.00	87.88	175.61	13,354.80	-4,416.34	105.47	4,417.19	0.00	0.00	0.00
Fed 91H_BHL - Fed 91H_T2									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Fed 91H As Drilled KOP	0.00	0.00	12,716.2	140.29	56.45	393,603.804	789,114.642	32° 4' 46.455373 N	103° 32' 0.028357 W
- actual wellpath hits target center			2						
- Point									
Fed 91H As Drilled FTP	0.00	0.00	13,175.5	-129.68	44.08	393,333.831	789,102.270	32° 4' 43.784810 N	103° 32' 0.195408 W
- actual wellpath hits target center			9						
- Point									



Nabors
Survey Report



Company: Devon Energy Corporation
Project: Lea Co., NM
Site: SeaWolf 1-12
Well: Fed 91H
Wellbore: OH
Design: Surveys

Local Co-ordinate Reference: Well Fed 91H
TVD Reference: RT=32 @ 3350.60ft (Nabors X-04)
MD Reference: RT=32 @ 3350.60ft (Nabors X-04)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: RyanUSA_32Bit

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
17,592.00	13,354.80	-4,416.34	105.47	PTB

Checked By: _____ Approved By: _____ Date: _____