



Fighting Okra 18-19 Fed No. 7H

Lea County, NM

June 18, 2018

Job No. LNM5164718

ORIGINAL

Survey Completion Report



PRODIRECTIONAL

Survey Certification Letter

June 18, 2018



Operator Name: Devon Energy Corp.
Well Name: Fighting Okra 18-19 Fed No. 7H
County/Parish: Lea County,
State: NM
Rig Name: ICD 205
Job Number: LNM5164718

This is to certify the surveys performed on the referenced well by Professional Directional Ent., Inc. are true and correct MWD Surveys, data provided as follows:

<u>Surveyor</u>	<u>Surveyed Depths</u>	<u>Projection to Bit</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
ProDirectional	183' MD – 22,930' MD	22,988' MD	02/12/18 – 05/20/18	MWD

Sincerely,

Mike Coats

Mike Coats
Regulatory Specialist
Professional Directional

850 Conroe Park West Drive | Conroe, TX 77303 | Phone: 936.441.7266

prodirectional.com

The Standard of Excellence in Directional Supervision



Devon Energy Corp.

**Lea County, NM
Fighting Okra 18-19 Fed
No. 7H
OH**

Survey: ProDirectional

Survey Report

18 June, 2018





ProDirectional
Survey Report



Company: Devon Energy Corp.
Project: Lea County, NM (NAD83)
Site: Fighting Okra 18-19 Fed
Well: 7H
Wellbore: OH
Design: Surveys 183-22988 MD

Local Co-ordinate Reference: Well 7H
TVD Reference: GL 3371'+KB 27' @ 3398.00usft (ICD 205)
MD Reference: GL 3371'+KB 27' @ 3398.00usft (ICD 205)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Project	Lea County, NM (NAD83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Fighting Okra 18-19 Fed		
Site Position:		Northing:	382,643.65 usft
From:	Map	Easting:	798,304.66 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32.049254
		Longitude:	-103.503944
		Grid Convergence:	0.44 °

Well	7H					
Well Position	+N/-S	0.00 usft	Northing:	382,819.23 usft	Latitude:	32.049789
	+E/-W	0.00 usft	Easting:	795,816.94 usft	Longitude:	-103.511969
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,372.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	5/7/2018	6.75	59.72	47,809.20

Design		Surveys 183-22988 MD			
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	179.58	

Survey Program	Date 6/18/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
183.00	22,988.00	Survey #1 (OH)	MWD+HDGM	OWSG MWD + HDGM



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MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	382,819.23	795,816.94
183.00	1.00	38.90	182.99	-1.24	1.24	1.00	1.60	38.90	382,820.47	795,817.94
Pro MWD First Survey: 183' MD										
277.00	1.40	42.60	276.97	-2.71	2.73	2.30	3.56	40.09	382,821.96	795,819.24
369.00	1.50	39.80	368.94	-4.45	4.48	3.83	5.89	40.51	382,823.71	795,820.77
461.00	1.50	43.00	460.91	-6.24	6.28	5.42	8.30	40.77	382,825.51	795,822.36
552.00	1.70	45.90	551.87	-8.04	8.10	7.20	10.83	41.65	382,827.33	795,824.14
644.00	1.40	53.50	643.84	-9.65	9.71	9.08	13.30	43.08	382,828.94	795,826.02
736.00	1.90	60.10	735.80	-11.06	11.14	11.31	15.88	45.43	382,830.37	795,828.25
874.00	1.90	60.40	873.73	-13.30	13.41	15.28	20.33	48.73	382,832.64	795,832.22
965.00	2.00	58.90	964.67	-14.85	14.98	17.95	23.38	50.16	382,834.21	795,834.89
1,057.00	2.10	62.10	1,056.61	-16.44	16.60	20.82	26.62	51.44	382,835.83	795,837.76
1,148.00	1.50	44.20	1,147.57	-18.06	18.23	23.12	29.44	51.75	382,837.46	795,840.06
1,239.00	1.00	9.90	1,238.55	-19.69	19.87	24.09	31.22	50.49	382,839.10	795,841.03
1,330.00	0.80	343.90	1,329.54	-21.08	21.26	24.05	32.10	48.52	382,840.49	795,840.99
1,422.00	0.90	339.10	1,421.53	-22.38	22.55	23.61	32.65	46.32	382,841.78	795,840.55
1,513.00	1.00	328.20	1,512.52	-23.72	23.89	22.94	33.12	43.83	382,843.12	795,839.88
1,604.00	0.60	325.20	1,603.51	-24.80	24.96	22.25	33.44	41.71	382,844.19	795,839.19
1,696.00	0.20	11.10	1,695.50	-25.35	25.51	22.00	33.69	40.78	382,844.74	795,838.94
1,790.00	0.20	343.90	1,789.50	-25.67	25.83	21.99	33.92	40.41	382,845.06	795,838.93
1,885.00	0.30	333.30	1,884.50	-26.05	26.21	21.83	34.11	39.79	382,845.44	795,838.77
1,980.00	0.30	311.10	1,979.50	-26.44	26.80	21.53	34.22	38.99	382,845.83	795,838.47
2,075.00	0.40	310.00	2,074.50	-26.82	26.97	21.09	34.24	38.02	382,846.20	795,838.03
2,169.00	0.40	311.50	2,168.50	-27.25	27.40	20.60	34.28	36.93	382,846.63	795,837.54
2,264.00	0.50	303.50	2,263.49	-27.70	27.85	20.00	34.29	35.68	382,847.08	795,836.94
2,358.00	0.40	349.90	2,357.49	-28.26	28.40	19.60	34.51	34.61	382,847.63	795,836.54
2,453.00	0.90	39.50	2,452.49	-29.16	29.30	20.02	35.49	34.34	382,848.53	795,836.96



ProDirectional
Survey Report



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2,548.00	1.10	41.30	2,547.47	-30.41	30.56	21.09	37.14	34.61	382,849.79	795,838.03	
2,643.00	1.90	55.40	2,642.44	-31.97	32.14	22.99	39.52	35.58	382,851.37	795,839.93	
2,738.00	2.20	58.80	2,737.38	-33.79	33.98	25.85	42.70	37.26	382,853.21	795,842.79	
2,832.00	2.00	59.00	2,831.31	-35.55	35.76	28.80	45.92	38.84	382,854.99	795,845.74	
2,927.00	2.30	60.70	2,926.25	-37.31	37.55	31.88	49.26	40.33	382,856.78	795,848.82	
3,021.00	2.50	66.90	3,020.16	-39.02	39.28	35.41	52.88	42.04	382,858.51	795,852.35	
3,116.00	3.00	72.90	3,115.06	-40.53	40.82	39.69	56.94	44.20	382,860.05	795,856.63	
3,211.00	3.60	79.30	3,209.90	-41.77	42.10	45.00	61.63	46.90	382,861.33	795,861.94	
3,305.00	3.80	82.30	3,303.70	-42.69	43.07	50.99	66.74	49.81	382,862.30	795,867.93	
3,400.00	4.00	84.20	3,398.48	-43.40	43.83	57.40	72.22	52.64	382,863.06	795,874.34	
3,495.00	4.40	85.80	3,493.23	-43.96	44.43	64.33	78.18	55.37	382,863.66	795,881.27	
3,590.00	4.80	82.30	3,587.92	-44.70	45.23	71.91	84.95	57.83	382,864.46	795,888.85	
3,685.00	5.00	79.90	3,682.57	-45.90	46.49	79.92	92.46	59.82	382,865.72	795,896.86	
3,780.00	5.40	79.00	3,777.18	-47.42	48.07	88.39	100.61	61.46	382,867.30	795,905.33	
3,875.00	5.70	79.70	3,871.74	-49.05	49.76	97.42	109.39	62.94	382,868.99	795,914.36	
3,970.00	6.20	76.60	3,966.22	-51.01	51.79	107.05	118.92	64.18	382,871.02	795,923.99	
4,065.00	6.40	72.90	4,060.65	-53.68	54.54	117.10	129.18	65.03	382,873.77	795,934.04	
4,160.00	6.60	71.20	4,155.04	-56.92	57.86	127.33	139.86	65.56	382,877.09	795,944.27	
4,255.00	7.00	70.10	4,249.37	-60.57	61.59	137.94	151.06	65.94	382,880.82	795,954.88	
4,350.00	7.30	69.50	4,343.63	-64.58	65.67	149.04	162.86	66.22	382,884.90	795,965.98	
4,445.00	7.30	68.80	4,437.86	-68.79	69.97	160.32	174.92	66.42	382,889.20	795,977.26	
4,540.00	7.30	66.60	4,532.09	-73.29	74.55	171.48	186.99	66.50	382,893.78	795,988.42	
4,635.00	7.60	67.00	4,626.29	-78.06	79.40	182.80	199.30	66.52	382,898.63	795,999.74	
4,730.00	7.60	67.90	4,720.46	-82.79	84.22	194.41	211.87	66.58	382,903.45	796,011.35	
4,824.00	7.60	69.90	4,813.63	-87.18	88.69	206.01	224.29	66.71	382,907.92	796,022.95	
4,919.00	7.80	72.70	4,907.78	-91.17	92.77	218.06	236.97	66.95	382,912.00	796,035.00	
5,014.00	7.70	73.60	5,001.91	-94.79	96.48	230.32	249.71	67.27	382,915.71	796,047.26	



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5,109.00	6.90	70.00		5,096.14	-98.45	100.23	241.79	261.74	67.48	382,919.46	796,058.73
5,204.00	5.90	65.80		5,190.54	-102.34	104.18	251.60	272.32	67.51	382,923.41	796,068.54
5,298.00	5.10	60.70		5,284.11	-106.30	108.21	259.65	281.30	67.38	382,927.44	796,076.59
5,393.00	5.00	60.70		5,378.74	-110.34	112.30	266.95	289.61	67.18	382,931.53	796,083.89
5,488.00	5.00	60.80		5,473.38	-114.33	116.35	274.17	297.84	67.01	382,935.58	796,091.11
5,583.00	5.10	61.50		5,568.01	-118.31	120.38	281.50	306.16	66.85	382,939.61	796,098.44
5,678.00	5.10	62.10		5,662.64	-122.25	124.37	288.94	314.57	66.71	382,943.60	796,105.88
5,773.00	4.80	60.60		5,757.28	-126.12	128.30	296.13	322.73	66.58	382,947.53	796,113.07
5,867.00	4.80	61.10		5,850.95	-129.90	132.13	303.00	330.56	66.44	382,951.36	796,119.94
5,962.00	4.50	61.30		5,945.64	-133.57	135.84	309.75	338.23	66.32	382,955.07	796,126.69
6,056.00	4.50	56.20		6,039.35	-137.34	139.66	316.05	345.53	66.16	382,958.89	796,132.99
6,151.00	4.60	54.30		6,134.05	-141.59	143.96	322.24	352.93	65.93	382,963.19	796,139.18
6,245.00	5.00	53.70		6,227.72	-146.17	148.58	328.60	360.63	65.67	382,967.81	796,145.54
6,340.00	4.90	53.10		6,322.37	-151.01	153.47	335.18	368.65	65.40	382,972.70	796,152.12
6,435.00	4.60	52.20		6,417.04	-155.73	158.24	341.44	376.32	65.13	382,977.47	796,158.38
6,530.00	4.30	53.20		6,511.75	-160.16	162.71	347.30	383.53	64.90	382,981.94	796,164.24
6,624.00	4.00	53.50		6,605.51	-164.18	166.77	352.76	390.19	64.70	382,986.00	796,169.70
6,719.00	4.80	50.30		6,700.23	-168.65	171.28	358.48	397.30	64.46	382,990.51	796,175.42
6,814.00	5.90	55.00		6,794.81	-173.94	176.62	365.54	405.97	64.21	382,995.85	796,182.48
6,909.00	6.20	54.20		6,889.28	-179.68	182.42	373.70	415.85	63.98	383,001.65	796,190.64
7,003.00	6.00	54.00		6,982.75	-185.47	188.28	381.79	425.69	63.75	383,007.51	796,198.73
7,098.00	5.90	53.40		7,077.24	-191.25	194.11	389.73	435.39	63.52	383,013.34	796,206.67
7,193.00	5.60	53.10		7,171.76	-196.88	199.80	397.35	444.76	63.31	383,019.03	796,214.29
7,288.00	5.30	52.90		7,266.33	-202.26	205.23	404.56	453.64	63.10	383,024.46	796,221.50
7,383.00	5.00	50.70		7,360.95	-207.48	210.50	411.26	462.00	62.89	383,029.73	796,228.20
7,477.00	5.10	54.60		7,454.58	-212.45	215.52	417.84	470.14	62.72	383,034.75	796,234.78
7,572.00	5.40	56.20		7,549.18	-217.33	220.45	424.99	478.77	62.58	383,039.68	796,241.93



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7,667.00	5.10	56.70	7,643.79	-222.08	225.25	432.24	487.41	62.47	383,044.48	796,249.18
7,762.00	4.80	56.10	7,738.43	-226.56	229.79	439.07	495.56	62.37	383,049.02	796,256.01
7,857.00	4.90	59.20	7,833.09	-230.81	234.08	445.85	503.56	62.30	383,053.31	796,262.79
7,952.00	4.80	60.90	7,927.75	-234.77	238.09	452.81	511.59	62.26	383,057.32	796,269.75
8,047.00	4.40	61.00	8,022.44	-238.42	241.79	459.47	519.21	62.24	383,061.02	796,276.41
8,142.00	4.80	59.60	8,117.14	-242.15	245.57	466.08	526.82	62.22	383,064.80	796,283.02
8,236.00	5.60	62.20	8,210.75	-246.22	249.70	473.53	535.34	62.20	383,068.93	796,290.47
8,332.00	6.20	63.60	8,306.24	-250.65	254.19	482.32	545.20	62.21	383,073.42	796,299.26
8,426.00	6.00	62.90	8,399.71	-255.08	258.68	491.24	555.19	62.23	383,077.91	796,308.18
8,521.00	5.70	62.50	8,494.22	-259.45	263.13	499.84	564.87	62.24	383,082.36	796,316.78
8,616.00	5.40	62.90	8,588.77	-263.61	267.34	508.01	574.06	62.24	383,086.57	796,324.95
8,711.00	5.00	62.30	8,683.38	-267.51	271.30	515.65	582.67	62.25	383,090.53	796,332.59
8,806.00	4.70	61.50	8,778.04	-271.24	275.08	522.74	590.70	62.25	383,094.31	796,339.68
8,900.00	4.20	63.00	8,871.75	-274.60	278.48	529.19	597.99	62.24	383,097.71	796,346.13
8,995.00	3.70	62.00	8,966.53	-277.57	281.50	535.00	604.54	62.25	383,100.73	796,351.94
9,090.00	3.30	60.90	9,061.35	-280.30	284.27	540.09	610.34	62.24	383,103.50	796,357.03
9,185.00	3.00	60.00	9,156.21	-282.84	286.84	544.63	615.55	62.23	383,106.07	796,361.57
9,279.00	2.70	60.10	9,250.09	-285.15	289.18	548.68	620.22	62.21	383,108.41	796,365.62
9,374.00	2.50	56.50	9,344.99	-287.38	291.44	552.35	624.52	62.18	383,110.67	796,369.29
9,469.00	2.20	54.40	9,439.91	-289.56	293.64	555.56	628.39	62.14	383,112.87	796,372.50
9,563.00	1.90	55.70	9,533.85	-291.47	295.57	558.32	631.73	62.10	383,114.80	796,375.26
9,658.00	1.30	45.00	9,628.82	-293.10	297.22	560.38	634.32	62.06	383,116.45	796,377.32
9,753.00	1.00	33.90	9,723.80	-294.54	298.67	561.60	636.08	62.00	383,117.90	796,378.54
9,860.00	1.40	16.50	9,830.77	-296.57	300.70	562.50	637.82	61.87	383,119.93	796,379.44
9,954.00	1.10	2.60	9,924.75	-298.56	302.70	562.86	639.09	61.73	383,121.93	796,379.80
10,049.00	1.40	344.20	10,019.73	-300.59	304.73	562.59	639.82	61.56	383,123.96	796,379.53
10,143.00	1.30	275.60	10,113.71	-301.81	305.94	561.21	639.19	61.40	383,125.17	796,378.15



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Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)	
10,238.00	1.00	249.20	10,208.69	-301.64	305.75	559.37	637.47	61.34	383,124.98	796,376.31	
10,333.00	0.90	243.10	10,303.68	-301.02	305.11	557.93	635.91	61.33	383,124.34	796,374.87	
10,428.00	1.80	241.80	10,398.65	-299.99	304.07	555.95	633.67	61.32	383,123.30	796,372.89	
10,523.00	2.60	249.30	10,493.58	-298.55	302.60	552.62	630.04	61.30	383,121.83	796,369.56	
10,618.00	1.50	249.90	10,588.52	-297.38	301.42	549.43	626.68	61.25	383,120.65	796,366.37	
10,713.00	0.80	291.50	10,683.50	-297.21	301.23	547.65	625.03	61.19	383,120.46	796,364.59	
10,808.00	0.70	358.80	10,778.49	-298.04	302.05	547.02	624.87	61.09	383,121.28	796,363.96	
10,903.00	0.60	343.10	10,873.49	-299.09	303.11	546.86	625.25	61.00	383,122.34	796,363.80	
10,998.00	0.60	345.30	10,968.48	-300.05	304.07	546.59	625.47	60.91	383,123.30	796,363.53	
11,093.00	1.00	339.30	11,063.47	-301.31	305.32	546.17	625.72	60.79	383,124.55	796,363.11	
11,187.00	1.00	0.40	11,157.46	-302.90	306.91	545.89	626.25	60.65	383,126.14	796,362.83	
11,282.00	1.30	9.90	11,252.44	-304.79	308.80	546.08	627.34	60.51	383,128.03	796,363.02	
11,377.00	0.90	26.50	11,347.42	-306.52	310.53	546.60	628.65	60.40	383,129.76	796,363.54	
11,471.00	0.30	118.60	11,441.42	-307.06	311.08	547.14	629.39	60.38	383,130.31	796,364.08	
11,566.00	0.60	162.70	11,536.41	-306.46	310.48	547.51	629.42	60.44	383,129.71	796,364.45	
11,661.00	0.70	176.40	11,631.41	-305.40	309.43	547.69	629.06	60.54	383,128.66	796,364.63	
11,755.00	0.30	190.70	11,725.40	-304.59	308.61	547.68	628.65	60.60	383,127.84	796,364.62	
11,850.00	0.30	296.60	11,820.40	-304.46	308.48	547.41	628.35	60.60	383,127.71	796,364.35	
11,944.00	0.70	317.00	11,914.40	-304.99	309.01	546.80	628.08	60.53	383,128.24	796,363.74	
12,039.00	0.50	296.90	12,009.39	-305.61	309.62	546.04	627.71	60.45	383,128.85	796,362.98	
12,134.00	0.50	299.50	12,104.39	-306.01	310.01	545.31	627.27	60.38	383,129.24	796,362.25	
12,213.00	0.10	328.60	12,183.39	-306.24	310.24	544.97	627.09	60.35	383,129.47	796,361.91	
12,323.00	4.90	176.10	12,293.26	-301.63	305.63	545.24	625.06	60.73	383,124.86	796,362.18	
12,374.00	9.10	176.90	12,343.87	-295.42	299.43	545.61	622.37	61.24	383,118.66	796,362.55	
12,418.00	12.40	177.90	12,387.09	-287.22	291.23	545.97	618.79	61.92	383,110.46	796,362.91	
12,464.00	16.10	175.90	12,431.67	-275.92	279.93	546.61	614.12	62.88	383,099.16	796,363.55	
12,512.00	21.80	175.80	12,477.04	-260.37	264.39	547.74	608.21	64.23	383,083.62	796,364.68	



ProDirectional
Survey Report



Company: Devon Energy Corp.
Project: Lea County, NM (NAD83)
Site: Fighting Okra 18-19 Fed
Well: 7H
Wellbore: OH
Design: Surveys 183-22988 MD

Local Co-ordinate Reference: Well 7H
TVD Reference: GL 3371'+KB 27' @ 3398.00usft (ICD 205)
MD Reference: GL 3371'+KB 27' @ 3398.00usft (ICD 205)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)	
12,559.00	27.10	176.60	12,519.81	-240.96	244.99	549.01	601.19	65.95	383,064.22	796,365.95	
12,607.00	32.80	178.40	12,561.39	-217.02	221.06	550.02	592.78	68.10	383,040.29	796,366.96	
12,654.00	37.30	179.40	12,599.86	-190.04	194.08	550.53	583.73	70.58	383,013.31	796,367.47	
12,701.00	41.50	179.90	12,636.17	-160.21	164.25	550.70	574.68	73.39	382,983.48	796,367.64	
12,748.00	45.00	180.10	12,670.39	-128.01	132.05	550.70	566.31	76.52	382,951.28	796,367.64	
12,796.00	48.20	179.60	12,703.37	-93.14	97.18	550.80	559.30	79.99	382,916.41	796,367.74	
12,884.00	57.10	179.20	12,756.70	-23.26	27.30	551.54	552.22	87.17	382,846.53	796,368.48	
12,943.00	59.10	179.90	12,787.88	26.83	-22.78	551.93	552.40	92.36	382,796.45	796,368.87	
13,038.00	67.50	179.10	12,830.53	111.62	-107.57	552.70	563.07	101.01	382,711.66	796,369.64	
13,133.00	71.70	177.40	12,863.64	200.61	-196.55	555.43	589.18	109.49	382,622.68	796,372.37	
13,227.00	75.40	176.70	12,890.25	290.66	-286.56	560.08	629.13	117.10	382,532.67	796,377.02	
13,322.00	76.30	177.50	12,913.48	382.69	-378.56	564.73	679.88	123.84	382,440.67	796,381.67	
13,416.00	83.00	177.20	12,930.36	475.04	-470.88	569.01	738.58	129.61	382,348.35	796,385.95	
13,510.00	88.70	179.10	12,937.16	568.72	-564.54	572.03	803.70	134.62	382,254.69	796,388.97	
13,605.00	94.70	182.30	12,934.34	663.60	-659.44	570.87	872.21	139.12	382,159.79	796,387.81	
13,699.00	95.40	182.40	12,926.06	757.13	-752.99	567.04	942.62	143.02	382,066.24	796,383.98	
13,794.00	91.60	183.80	12,920.26	851.75	-847.66	561.91	1,016.99	146.46	381,971.57	796,378.85	
13,888.00	88.20	180.90	12,920.43	945.62	-941.55	558.05	1,094.51	149.35	381,877.68	796,374.99	
13,983.00	89.00	181.30	12,922.75	1,040.56	-1,036.51	556.23	1,176.32	151.78	381,782.72	796,373.17	
14,077.00	88.40	180.50	12,924.88	1,134.51	-1,130.47	554.75	1,259.25	153.86	381,688.76	796,371.69	
14,172.00	88.00	180.70	12,927.87	1,229.44	-1,225.42	553.76	1,344.73	155.68	381,593.81	796,370.70	
14,266.00	90.00	180.20	12,929.51	1,323.41	-1,319.40	553.02	1,430.61	157.26	381,499.83	796,369.96	
14,361.00	90.30	179.40	12,929.26	1,418.41	-1,414.39	553.35	1,518.79	158.63	381,404.84	796,370.29	
14,455.00	88.70	177.30	12,930.08	1,512.38	-1,508.34	556.06	1,607.58	159.76	381,310.89	796,373.00	
14,550.00	93.40	176.20	12,928.34	1,607.22	-1,603.15	561.44	1,698.62	160.70	381,216.08	796,378.38	
14,645.00	93.70	176.50	12,922.46	1,701.89	-1,697.77	567.48	1,790.10	161.52	381,121.46	796,384.42	
14,739.00	90.00	175.70	12,919.42	1,795.65	-1,791.49	573.87	1,881.16	162.24	381,027.74	796,390.81	



ProDirectional
Survey Report



Company: Devon Energy Corp.
Project: Lea County, NM (NAD83)
Site: Fighting Okra 18-19 Fed
Well: 7H
Wellbore: OH
Design: Surveys 183-22988 MD

Local Co-ordinate Reference: Well 7H
TVD Reference: GL 3371'+KB 27' @ 3398.00usft (ICD 205)
MD Reference: GL 3371'+KB 27' @ 3398.00usft (ICD 205)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
14,834.00	90.60	180.00	12,918.92	1,890.58	-1,886.40	577.43	1,972.80	162.98	380,932.83	796,394.37
14,928.00	90.30	183.60	12,918.19	1,984.49	-1,980.33	574.48	2,061.98	163.82	380,838.90	796,391.42
15,023.00	91.00	184.30	12,917.11	2,079.21	-2,075.10	567.93	2,151.42	164.69	380,744.13	796,384.87
15,117.00	89.60	183.00	12,916.62	2,172.96	-2,168.90	561.95	2,240.52	165.47	380,650.33	796,378.89
15,212.00	90.90	184.60	12,916.20	2,267.70	-2,263.69	555.66	2,330.89	166.21	380,555.54	796,372.60
15,306.00	89.10	181.60	12,916.20	2,361.51	-2,357.54	550.57	2,420.97	166.85	380,461.69	796,367.51
15,401.00	93.10	181.10	12,914.38	2,456.43	-2,452.47	548.34	2,513.03	167.40	380,366.76	796,365.28
15,495.00	92.20	180.40	12,910.03	2,550.30	-2,546.36	547.11	2,604.47	167.87	380,272.87	796,364.05
15,590.00	87.50	180.60	12,910.28	2,645.27	-2,641.33	546.28	2,697.23	168.31	380,177.90	796,363.22
15,684.00	85.40	178.90	12,916.10	2,739.08	-2,735.14	546.69	2,789.24	168.70	380,084.09	796,363.63
15,779.00	87.60	176.10	12,921.90	2,833.82	-2,829.86	550.82	2,882.97	168.99	379,989.37	796,367.76
15,873.00	89.80	173.30	12,924.03	2,927.44	-2,923.42	559.50	2,976.48	169.17	379,895.81	796,376.44
15,968.00	90.60	172.40	12,923.70	3,021.78	-3,017.68	571.33	3,071.28	169.28	379,801.55	796,388.27
16,048.00	90.00	172.40	12,923.28	3,101.16	-3,096.97	581.91	3,151.17	169.36	379,722.26	796,398.85
16,142.00	86.60	177.40	12,926.07	3,194.76	-3,190.52	590.26	3,244.66	169.52	379,628.71	796,407.20
16,237.00	89.40	180.80	12,929.39	3,289.67	-3,285.42	591.75	3,338.29	169.79	379,533.81	796,408.69
16,332.00	93.50	180.60	12,926.99	3,384.60	-3,380.37	590.59	3,431.57	170.09	379,438.86	796,407.53
16,426.00	90.50	178.80	12,923.71	3,478.53	-3,474.29	591.08	3,524.21	170.34	379,344.94	796,408.02
16,520.00	88.20	177.10	12,924.77	3,572.48	-3,568.22	594.44	3,617.39	170.54	379,251.01	796,411.38
16,615.00	89.40	178.50	12,926.76	3,667.41	-3,663.12	598.09	3,711.63	170.73	379,156.11	796,415.03
16,709.00	95.20	182.00	12,922.99	3,761.27	-3,756.99	597.69	3,804.23	170.96	379,062.24	796,414.63
16,804.00	90.50	180.40	12,918.27	3,856.08	-3,851.82	595.70	3,897.61	171.21	378,967.41	796,412.64
16,898.00	86.60	177.90	12,920.65	3,950.03	-3,945.76	597.09	3,990.68	171.39	378,873.47	796,414.03
16,992.00	89.40	178.90	12,923.93	4,043.94	-4,039.65	599.72	4,083.92	171.56	378,779.58	796,416.66
17,087.00	91.90	180.10	12,922.85	4,138.92	-4,134.63	600.54	4,178.02	171.74	378,684.60	796,417.48
17,181.00	93.40	180.10	12,918.50	4,232.82	-4,228.53	600.38	4,270.94	171.92	378,590.70	796,417.32
17,276.00	89.80	180.00	12,915.85	4,327.76	-4,323.48	600.30	4,364.95	172.10	378,495.75	796,417.24



ProDirectional
Survey Report



Company: Devon Energy Corp.
Project: Lea County, NM (NAD83)
Site: Fighting Okra 18-19 Fed
Well: 7H
Wellbore: OH
Design: Surveys 183-22988 MD

Local Co-ordinate Reference: Well 7H
TVD Reference: GL 3371'+KB 27' @ 3398.00usft (ICD 205)
MD Reference: GL 3371'+KB 27' @ 3398.00usft (ICD 205)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
17,371.00	89.80	179.50	12,916.18	4,422.76	-4,418.47	600.71	4,459.12	172.26	378,400.76	796,417.65
17,465.00	91.30	180.20	12,915.28	4,516.75	-4,512.47	600.96	4,552.31	172.41	378,306.76	796,417.90
17,560.00	89.60	181.70	12,914.53	4,611.71	-4,607.44	599.38	4,646.27	172.59	378,211.79	796,416.32
17,655.00	89.60	175.50	12,915.20	4,706.65	-4,702.37	601.70	4,740.71	172.71	378,116.86	796,418.64
17,749.00	90.70	176.70	12,914.95	4,800.47	-4,796.15	608.10	4,834.54	172.77	378,023.08	796,425.04
17,844.00	89.80	182.80	12,914.54	4,895.43	-4,891.10	608.51	4,928.81	172.91	377,928.13	796,425.45
17,938.00	90.70	183.10	12,914.13	4,989.26	-4,984.97	603.67	5,021.39	173.10	377,834.26	796,420.61
18,033.00	87.90	180.50	12,915.29	5,084.17	-5,079.90	600.69	5,115.29	173.26	377,739.33	796,417.63
18,127.00	90.40	181.00	12,916.68	5,178.13	-5,173.87	599.46	5,208.49	173.39	377,645.36	796,416.40
18,222.00	90.90	180.80	12,915.60	5,273.10	-5,268.86	597.97	5,302.68	173.53	377,550.37	796,414.91
18,316.00	91.40	181.50	12,913.72	5,367.04	-5,362.82	596.08	5,395.84	173.66	377,456.41	796,413.02
18,411.00	91.10	182.70	12,911.64	5,461.93	-5,457.73	592.60	5,489.81	173.80	377,361.50	796,409.54
18,505.00	92.20	181.90	12,908.94	5,555.78	-5,551.61	588.83	5,582.75	173.95	377,267.62	796,405.77
18,600.00	89.30	181.20	12,907.89	5,650.70	-5,646.56	586.26	5,676.91	174.07	377,172.67	796,403.20
18,695.00	90.30	182.50	12,908.03	5,745.63	-5,741.51	583.19	5,771.05	174.20	377,077.72	796,400.13
18,789.00	88.50	181.20	12,909.01	5,839.54	-5,835.45	580.16	5,864.21	174.32	376,983.78	796,397.10
18,883.00	91.30	184.70	12,909.17	5,933.35	-5,929.30	575.32	5,957.14	174.46	376,889.93	796,392.26
18,978.00	90.60	181.00	12,907.60	6,028.17	-6,024.15	570.60	6,051.11	174.59	376,795.08	796,387.54
19,073.00	90.40	177.90	12,906.77	6,123.15	-6,119.13	571.51	6,145.76	174.66	376,700.10	796,388.45
19,168.00	89.10	178.00	12,907.18	6,218.11	-6,214.07	574.91	6,240.60	174.71	376,605.16	796,391.85
19,262.00	89.10	178.10	12,908.66	6,312.07	-6,308.00	578.11	6,334.44	174.76	376,511.23	796,395.05
19,357.00	89.60	177.70	12,909.74	6,407.02	-6,402.93	581.59	6,429.29	174.81	376,416.30	796,398.53
19,451.00	91.60	178.70	12,908.75	6,500.98	-6,496.87	584.54	6,523.12	174.86	376,322.36	796,401.48
19,545.00	92.30	179.20	12,905.56	6,594.92	-6,590.80	586.26	6,616.82	174.92	376,228.43	796,403.20
19,640.00	90.60	177.00	12,903.15	6,689.85	-6,685.71	589.41	6,711.64	174.96	376,133.52	796,406.35
19,734.00	90.50	174.50	12,902.25	6,783.63	-6,779.44	596.38	6,805.62	174.97	376,039.79	796,413.32
19,829.00	89.40	174.70	12,902.33	6,878.27	-6,874.02	605.32	6,900.62	174.97	375,945.21	796,422.26



ProDirectional
Survey Report



Company: Devon Energy Corp.
Project: Lea County, NM (NAD83)
Site: Fighting Okra 18-19 Fed
Well: 7H
Wellbore: OH
Design: Surveys 183-22988 MD

Local Co-ordinate Reference: Well 7H
TVD Reference: GL 3371'+KB 27' @ 3398.00usft (ICD 205)
MD Reference: GL 3371'+KB 27' @ 3398.00usft (ICD 205)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
19,923.00	90.90	179.80	12,902.09	6,972.16	-6,967.87	609.83	6,994.51	175.00	375,851.36	796,426.77
20,018.00	90.40	182.00	12,901.01	7,067.12	-7,062.85	608.34	7,089.00	175.08	375,756.38	796,425.28
20,112.00	91.60	184.20	12,899.37	7,160.92	-7,156.69	603.25	7,182.07	175.18	375,662.54	796,420.19
20,207.00	90.50	179.00	12,897.62	7,255.81	-7,251.60	600.60	7,276.43	175.27	375,567.83	796,417.54
20,301.00	89.40	173.90	12,897.71	7,349.64	-7,345.39	606.42	7,370.38	175.28	375,473.84	796,423.36
20,396.00	89.60	175.40	12,898.54	7,444.28	-7,439.97	615.28	7,465.37	175.27	375,379.26	796,432.22
20,491.00	89.90	180.20	12,898.95	7,539.21	-7,534.87	618.92	7,560.25	175.30	375,284.36	796,435.86
20,585.00	89.00	180.60	12,899.85	7,633.19	-7,628.86	618.27	7,653.88	175.37	375,190.37	796,435.21
20,680.00	89.90	181.40	12,900.77	7,728.15	-7,723.84	616.61	7,748.42	175.44	375,095.39	796,433.55
20,774.00	89.40	182.60	12,901.34	7,822.07	-7,817.78	613.33	7,841.80	175.51	375,001.45	796,430.27
20,869.00	89.20	184.20	12,902.50	7,916.85	-7,912.60	607.70	7,935.91	175.61	374,906.63	796,424.64
20,963.00	87.20	178.50	12,905.45	8,010.71	-8,006.49	605.48	8,029.35	175.68	374,812.74	796,422.42
21,057.00	89.80	177.70	12,907.92	8,104.64	-8,100.40	608.60	8,123.23	175.70	374,718.83	796,425.54
21,152.00	89.60	177.40	12,908.41	8,199.58	-8,195.31	612.66	8,218.18	175.72	374,623.92	796,429.60
21,246.00	89.80	178.20	12,908.90	8,293.53	-8,289.24	616.27	8,312.11	175.75	374,529.99	796,433.21
21,341.00	89.30	176.80	12,909.65	8,388.46	-8,384.14	620.41	8,407.06	175.77	374,435.09	796,437.35
21,435.00	91.10	180.30	12,909.32	8,482.43	-8,478.09	622.79	8,500.93	175.80	374,341.14	796,439.73
21,529.00	90.90	181.60	12,907.68	8,576.38	-8,572.06	621.23	8,594.54	175.85	374,247.17	796,438.17
21,624.00	89.90	180.60	12,907.02	8,671.35	-8,667.04	619.41	8,689.14	175.91	374,152.19	796,436.35
21,718.00	92.30	181.60	12,905.21	8,765.29	-8,761.00	617.60	8,782.74	175.97	374,058.23	796,434.54
21,813.00	89.50	179.40	12,903.72	8,860.25	-8,855.97	616.77	8,877.42	176.02	373,963.26	796,433.71
21,907.00	90.90	180.70	12,903.39	8,954.24	-8,949.96	616.69	8,971.18	176.06	373,869.27	796,433.63
22,002.00	88.50	178.50	12,903.89	9,049.23	-9,044.94	617.35	9,065.99	176.10	373,774.29	796,434.29
22,096.00	89.20	182.30	12,905.78	9,143.18	-9,138.91	616.70	9,159.69	176.14	373,680.32	796,433.64
22,190.00	90.20	187.30	12,906.27	9,236.76	-9,232.54	608.84	9,252.60	176.23	373,586.69	796,425.78
22,284.00	89.00	177.50	12,906.93	9,330.53	-9,326.34	604.90	9,345.94	176.29	373,492.89	796,421.84
22,379.00	88.80	173.40	12,908.75	9,425.24	-9,421.01	612.44	9,440.89	176.28	373,398.22	796,429.38



ProDirectional
Survey Report



Company: Devon Energy Corp.
Project: Lea County, NM (NAD83)
Site: Fighting Okra 18-19 Fed
Well: 7H
Wellbore: OH
Design: Surveys 183-22988 MD

Local Co-ordinate Reference: Well 7H
TVD Reference: GL 3371'+KB 27' @ 3398.00usft (ICD 205)
MD Reference: GL 3371'+KB 27' @ 3398.00usft (ICD 205)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Survey

MD (usft)	Inc (")	Azi (azimuth) (")	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (")	Northing (usft)	Easting (usft)
22,473.00	89.20	175.30	12,910.39	9,518.83	-9,514.53	621.69	9,534.82	176.26	373,304.70	796,438.63
22,567.00	91.90	181.40	12,909.49	9,612.75	-9,608.43	624.40	9,628.70	176.28	373,210.80	796,441.34
22,662.00	88.90	179.30	12,908.83	9,707.73	-9,703.41	623.82	9,723.44	176.32	373,115.82	796,440.76
22,756.00	88.80	178.80	12,910.71	9,801.70	-9,797.38	625.37	9,817.32	176.35	373,021.85	796,442.31
22,851.00	92.00	181.60	12,910.05	9,896.67	-9,892.36	625.04	9,912.08	176.38	372,926.87	796,441.98
22,930.00	88.70	180.10	12,909.57	9,975.64	-9,971.33	623.87	9,990.83	176.42	372,847.90	796,440.81
Final Survey: 22930' MD 22,988.00	88.70	180.10	12,910.88	10,033.62	-10,029.32	623.77	10,048.70	176.44	372,789.91	796,440.71
Final TD: 22988' MD										

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
183.00	182.99	1.24	1.00	Pro MWD First Survey: 183' MD
22,930.00	12,909.57	-9,971.33	623.87	Final Survey: 22930' MD
22,988.00	12,910.88	-10,029.32	623.77	Final TD: 22988' MD