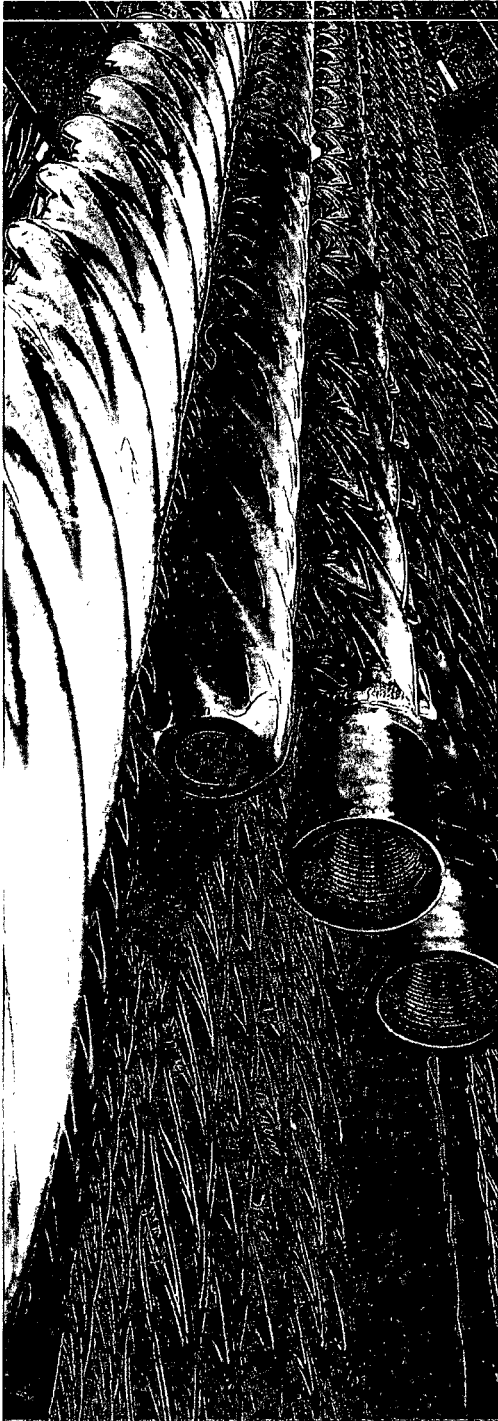




HOBBS OCD
OCT 15 2018
RECEIVED

Fighting Okra 18-19 Fed No. 31H

Lea County, NM

April 03, 2018

Job No. LNM5163618

Survey Completion Report



PRODIRECTIONAL

Survey Certification Letter

April 03, 2018



devon

Operator Name: Devon Energy Corp.
Well Name: Fighting Okra 18-19 Fed No. 31H
County/Parish: Lea County,
State: NM
Rig Name: Cactus 126
Job Number: LNM5163618

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	1,071' MD – 18,218' MD	18,270' MD	02/19/18 – 03/06/18	MWD

Sincerely,



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. 31H

OH

Survey: ProDirectional

Survey Report

03 April, 2018





ProDirectional
Survey Report



Company: Devon Energy Corp.
Project: Lea County, NM (NAD83)
Site: Fighting Okra 18-19 Fed
Well: 31H
Wellbore: OH
Design: Surveys 142-18270 MD

Local Co-ordinate Reference: Well 31H
TVD Reference: GL 3357.5'+KB 25.5' @ 3383.00usft (Cactus 126)
MD Reference: GL 3357.5'+KB 25.5' @ 3383.00usft (Cactus 126)
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° 2' 57.3148 N
		Longitude:	103° 30' 14.1990 W
		Grid Convergence:	0.44 °

Well	31H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 2' 39.6398 N
		Longitude:	103° 30' 59.2958 W
		Ground Level:	3,357.50 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	HDGM	1/31/2018	(°)
			6.78
			Dip Angle
			(°)
			59.72
			Field Strength
			(nT)
			47,832.60

Design	Surveys 142-18270 MD		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			179.58



ProDirectional
Survey Report



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Survey Program		Date 4/3/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
142.00	965.00	Survey #1 (OH)	NS-GYRO-MS	North sensing gyrocompassing m/s	
1,071.00	18,270.00	Survey #2 (OH)	MWD+HDGM	OWSG MWD + HDGM	

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	380,827.97	794,436.89
142.00	0.40	344.96		142.00	-0.48	0.48	-0.13	0.50	344.96	380,828.45	794,436.76
235.00	0.30	339.96		235.00	-1.02	1.02	-0.30	1.06	343.82	380,828.99	794,436.59
328.00	0.50	349.96		327.99	-1.65	1.65	-0.45	1.71	344.72	380,829.62	794,436.44
422.00	0.60	11.96		421.99	-2.54	2.53	-0.42	2.57	350.59	380,830.50	794,436.47
517.00	0.10	49.96		516.99	-3.08	3.07	-0.25	3.08	355.29	380,831.04	794,436.64
611.00	0.50	59.96		610.99	-3.33	3.33	0.16	3.34	2.82	380,831.30	794,437.05
799.00	0.30	326.00		798.98	-4.15	4.15	0.60	4.19	8.21	380,832.12	794,437.49
894.00	0.40	24.96		893.98	-4.65	4.66	0.60	4.70	7.34	380,832.63	794,437.49
965.00	0.60	12.96		964.98	-5.24	5.25	0.79	5.30	8.55	380,833.22	794,437.68
1,071.00	0.50	338.10		1,070.98	-6.21	6.22	0.74	6.26	6.79	380,834.19	794,437.63
First Pro Survey: 1071' MD											
1,163.00	0.50	340.00		1,162.97	-6.96	6.96	0.45	6.98	3.72	380,834.93	794,437.34
1,256.00	0.50	2.00		1,255.97	-7.75	7.75	0.33	7.76	2.43	380,835.72	794,437.22
1,348.00	0.30	308.20		1,347.97	-8.30	8.30	0.15	8.30	1.06	380,836.27	794,437.04
1,441.00	0.40	314.70		1,440.96	-8.68	8.68	-0.27	8.68	358.23	380,836.65	794,436.62
1,533.00	0.10	251.10		1,532.96	-8.88	8.88	-0.57	8.90	356.31	380,836.85	794,436.32
1,625.00	0.40	294.20		1,624.96	-8.99	8.99	-0.94	9.04	354.02	380,836.96	794,435.95
1,719.00	0.40	242.40		1,718.96	-8.98	8.97	-1.53	9.10	350.31	380,836.94	794,435.36
1,813.00	0.70	273.80		1,812.96	-8.87	8.85	-2.40	9.17	344.86	380,836.82	794,434.49
1,907.00	0.70	251.30		1,906.95	-8.73	8.71	-3.51	9.39	338.03	380,836.68	794,433.38



ProDirectional
Survey Report



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Wellbore: OH
Design: Surveys 142-18270 MD

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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)
2,001.00	0.30	282.60	2,000.95	-8.61	8.58	-4.30	9.59	333.39	380,836.55	794,432.59
2,095.00	0.40	284.30	2,094.94	-8.75	8.71	-4.85	9.97	330.87	380,836.68	794,432.04
2,189.00	0.30	317.20	2,188.94	-9.01	8.97	-5.34	10.44	329.25	380,836.94	794,431.55
2,283.00	0.50	313.80	2,282.94	-9.48	9.44	-5.80	11.08	328.42	380,837.41	794,431.09
2,378.00	0.40	294.60	2,377.94	-9.91	9.86	-6.40	11.76	327.01	380,837.83	794,430.49
2,472.00	0.40	16.20	2,471.94	-10.36	10.32	-6.61	12.25	327.35	380,838.29	794,430.28
2,566.00	0.10	338.60	2,565.93	-10.75	10.71	-6.55	12.55	328.55	380,838.68	794,430.34
2,660.00	0.60	25.20	2,659.93	-11.28	11.23	-6.37	12.91	330.44	380,839.20	794,430.52
2,754.00	0.80	12.00	2,753.93	-12.36	12.32	-6.02	13.71	333.94	380,840.29	794,430.87
2,848.00	0.80	32.80	2,847.92	-13.55	13.51	-5.53	14.60	337.73	380,841.48	794,431.36
2,942.00	0.80	57.60	2,941.91	-14.45	14.41	-4.62	15.14	342.22	380,842.38	794,432.27
3,037.00	1.10	52.20	3,036.89	-15.35	15.33	-3.34	15.69	347.70	380,843.30	794,433.55
3,131.00	0.70	46.60	3,130.88	-16.29	16.27	-2.21	16.42	352.26	380,844.24	794,434.68
3,225.00	1.00	73.80	3,224.87	-16.90	16.90	-1.01	16.93	356.59	380,844.87	794,435.88
3,319.00	0.90	75.30	3,318.86	-17.31	17.31	0.50	17.32	1.64	380,845.28	794,437.39
3,413.00	0.60	31.90	3,412.85	-17.91	17.92	1.47	17.98	4.69	380,845.89	794,438.36
3,507.00	1.60	337.00	3,506.84	-19.54	19.55	1.22	19.58	3.56	380,847.52	794,438.11
3,601.00	2.20	337.90	3,600.78	-22.42	22.42	0.03	22.42	0.06	380,850.39	794,436.92
3,695.00	1.90	345.70	3,694.72	-25.61	25.61	-1.04	25.63	357.68	380,853.58	794,435.85
3,789.00	2.50	359.70	3,788.65	-29.18	29.17	-1.43	29.20	357.19	380,857.14	794,435.46
3,884.00	3.50	359.60	3,883.52	-34.15	34.14	-1.47	34.17	357.54	380,862.11	794,435.42
3,978.00	4.00	0.00	3,977.32	-40.30	40.29	-1.48	40.31	357.89	380,868.26	794,435.41
4,072.00	4.30	4.70	4,071.08	-47.08	47.08	-1.20	47.09	358.54	380,875.05	794,435.69
4,166.00	5.10	358.40	4,164.76	-54.77	54.77	-1.02	54.78	358.93	380,882.74	794,435.87
4,260.00	5.80	347.50	4,258.34	-63.59	63.58	-2.17	63.62	358.05	380,891.55	794,434.72
4,354.00	6.10	343.70	4,351.83	-73.04	73.01	-4.60	73.16	356.40	380,900.98	794,432.29
4,448.00	5.80	343.20	4,445.32	-82.40	82.35	-7.37	82.68	354.88	380,910.32	794,429.52



ProDirectional
Survey Report



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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)
4,542.00	5.20	341.60	4,538.89	-91.01	90.94	-10.09	91.50	353.67	380,918.91	794,426.80
4,636.00	4.50	346.20	4,632.55	-98.65	98.56	-12.31	99.33	352.88	380,926.53	794,424.58
4,730.00	4.90	355.00	4,726.24	-106.24	106.14	-13.54	107.00	352.73	380,934.11	794,423.35
4,824.00	5.70	351.30	4,819.84	-114.86	114.76	-14.60	115.68	352.75	380,942.73	794,422.29
4,918.00	5.10	348.60	4,913.42	-123.58	123.47	-16.13	124.52	352.56	380,951.44	794,420.76
5,012.00	4.40	351.00	5,007.10	-131.25	131.12	-17.52	132.29	352.39	380,959.09	794,419.37
5,106.00	5.00	346.40	5,100.78	-138.80	138.67	-19.05	139.97	352.18	380,966.64	794,417.84
5,223.00	5.80	348.50	5,217.26	-149.57	149.42	-21.43	150.95	351.84	380,977.39	794,415.46
5,291.00	5.30	343.40	5,284.94	-155.96	155.79	-23.01	157.48	351.60	380,983.76	794,413.88
5,385.00	4.30	354.60	5,378.61	-163.64	163.46	-24.58	165.30	351.45	380,991.43	794,412.31
5,479.00	4.60	17.80	5,472.34	-170.73	170.56	-23.76	172.21	352.07	380,998.53	794,413.13
5,573.00	6.00	26.30	5,565.93	-178.70	178.55	-20.43	179.72	353.47	381,006.52	794,416.46
5,667.00	6.90	24.10	5,659.34	-188.22	188.11	-15.95	188.79	355.15	381,016.08	794,420.94
5,761.00	6.20	10.70	5,752.73	-198.34	198.26	-12.70	198.66	356.33	381,026.23	794,424.19
5,855.00	5.10	358.80	5,846.27	-207.50	207.42	-11.85	207.76	356.73	381,035.39	794,425.04
5,950.00	4.90	352.60	5,940.91	-215.75	215.67	-12.46	216.03	356.69	381,043.64	794,424.43
6,044.00	5.60	348.90	6,034.52	-224.24	224.15	-13.86	224.58	356.46	381,052.12	794,423.03
6,138.00	6.90	341.60	6,127.96	-234.12	234.01	-16.52	234.59	355.96	381,061.98	794,420.37
6,232.00	7.00	336.20	6,221.27	-244.75	244.61	-20.62	245.47	355.18	381,072.58	794,416.27
6,326.00	6.30	336.80	6,314.64	-254.76	254.59	-24.96	255.81	354.40	381,082.56	794,411.93
6,420.00	6.10	334.30	6,408.09	-264.03	263.83	-29.16	265.43	353.69	381,091.80	794,407.73
6,514.00	6.00	336.20	6,501.56	-273.06	272.82	-33.30	274.85	353.04	381,100.79	794,403.59
6,608.00	6.00	335.30	6,595.05	-282.05	281.78	-37.34	284.24	352.45	381,109.75	794,399.55
6,702.00	5.90	337.10	6,688.54	-290.99	290.70	-41.27	293.61	351.92	381,118.67	794,395.62
6,796.00	6.00	347.90	6,782.04	-300.27	299.95	-44.18	303.19	351.62	381,127.92	794,392.71
6,890.00	6.30	0.20	6,875.50	-310.23	309.91	-45.20	313.19	351.70	381,137.88	794,391.69
6,984.00	6.20	23.20	6,968.96	-320.04	319.74	-43.18	322.64	352.31	381,147.71	794,393.71



ProDirectional
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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)
7,079.00	7.80	44.80	7,063.26	-329.29	329.03	-36.61	331.06	353.65	381,157.00	794,400.28
7,173.00	6.40	36.50	7,156.54	-337.97	337.77	-29.00	339.01	355.09	381,165.74	794,407.89
7,267.00	5.60	32.70	7,250.03	-346.00	345.84	-23.41	346.63	356.13	381,173.81	794,413.48
7,361.00	4.20	30.30	7,343.68	-352.80	352.67	-19.19	353.19	356.89	381,180.64	794,417.70
7,455.00	2.70	21.40	7,437.51	-357.81	357.70	-16.65	358.09	357.34	381,185.67	794,420.24
7,549.00	1.70	335.30	7,531.44	-361.14	361.03	-16.42	361.40	357.40	381,189.00	794,420.47
7,643.00	1.30	249.20	7,625.42	-362.04	361.92	-18.00	362.37	357.15	381,189.89	794,418.89
7,737.00	1.50	231.80	7,719.39	-360.92	360.78	-19.97	361.33	356.83	381,188.75	794,416.92
7,831.00	1.30	232.80	7,813.37	-359.52	359.37	-21.78	360.03	356.53	381,187.34	794,415.11
7,925.00	1.80	227.80	7,907.33	-357.90	357.74	-23.72	358.52	356.21	381,185.71	794,413.17
8,019.00	1.70	232.90	8,001.29	-356.09	355.90	-25.93	356.85	355.83	381,183.87	794,410.96
8,113.00	1.80	228.40	8,095.24	-354.28	354.08	-28.15	355.20	355.46	381,182.05	794,408.74
8,207.00	1.70	230.40	8,189.20	-352.43	352.21	-30.32	353.52	355.08	381,180.18	794,406.57
8,301.00	2.00	224.40	8,283.15	-350.38	350.15	-32.55	351.66	354.69	381,178.12	794,404.34
8,395.00	1.80	232.80	8,377.10	-348.34	348.09	-34.87	349.83	354.28	381,176.06	794,402.02
8,489.00	2.20	226.10	8,471.04	-346.21	345.95	-37.35	347.96	353.84	381,173.92	794,399.54
8,583.00	1.50	232.80	8,564.99	-344.23	343.95	-39.63	346.23	353.43	381,171.92	794,397.26
8,677.00	1.40	219.60	8,658.96	-342.62	342.32	-41.34	344.81	353.11	381,170.29	794,395.55
8,771.00	1.50	231.10	8,752.93	-340.97	340.66	-43.03	343.37	352.80	381,168.63	794,393.86
8,865.00	1.50	208.10	8,846.90	-339.12	338.81	-44.56	341.73	352.51	381,166.78	794,392.33
8,959.00	1.70	183.70	8,940.87	-336.65	336.33	-45.23	339.36	352.34	381,164.30	794,391.66
9,053.00	1.90	196.10	9,034.82	-333.77	333.44	-45.76	336.57	352.19	381,161.41	794,391.13
9,146.00	1.90	202.10	9,127.77	-330.87	330.53	-46.76	333.82	351.95	381,158.50	794,390.13
9,240.00	2.40	190.90	9,221.70	-327.50	327.16	-47.72	330.62	351.70	381,155.13	794,389.17
9,334.00	2.20	192.60	9,315.63	-323.81	323.46	-48.49	327.08	351.47	381,151.43	794,388.40
9,428.00	2.00	203.60	9,409.56	-320.55	320.20	-49.54	324.01	351.21	381,148.17	794,387.35
9,523.00	1.90	210.80	9,504.51	-317.69	317.33	-51.01	321.40	350.87	381,145.30	794,385.88



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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)
9,568.00	2.00	218.70	9,549.48	-316.44	316.07	-51.88	320.30	350.68	381,144.04	794,385.01
9,617.00	2.00	220.30	9,598.45	-315.13	314.75	-52.97	319.18	350.45	381,142.72	794,383.92
9,711.00	13.40	174.20	9,691.49	-303.00	302.62	-52.93	307.21	350.08	381,130.59	794,383.96
9,805.00	23.40	156.00	9,780.64	-274.96	274.64	-44.21	278.17	350.86	381,102.61	794,392.68
9,899.00	35.90	153.60	9,862.17	-232.91	232.73	-24.28	234.00	354.04	381,060.70	794,412.61
9,979.00	49.43	156.07	9,920.87	-183.73	183.72	-1.42	183.73	359.56	381,011.69	794,435.47
330' FWL: 9979' MD										
9,993.00	51.80	156.40	9,929.75	-173.79	173.82	2.94	173.84	0.97	381,001.79	794,439.83
10,087.00	62.70	165.40	9,980.60	-99.01	99.22	28.37	103.20	15.95	380,927.19	794,465.26
10,181.00	66.80	175.20	10,020.77	-15.24	15.56	42.54	45.30	69.91	380,843.53	794,479.43
10,275.00	74.50	178.50	10,051.90	73.27	-72.92	47.35	86.95	147.00	380,755.05	794,484.24
10,299.00	77.10	177.60	10,057.79	96.52	-96.17	48.14	107.55	153.41	380,731.80	794,485.03
10,393.00	85.20	177.20	10,072.24	189.26	-188.88	52.36	196.00	164.51	380,639.09	794,489.25
10,487.00	88.20	177.10	10,077.65	283.01	-282.60	57.02	288.29	168.59	380,545.37	794,493.91
10,581.00	89.80	177.60	10,079.29	376.92	-376.48	61.37	381.45	170.74	380,451.49	794,498.26
10,675.00	89.80	177.50	10,079.62	470.86	-470.39	65.39	474.92	172.09	380,357.58	794,502.28
10,769.00	90.00	176.90	10,079.78	564.78	-564.28	69.98	568.60	172.93	380,263.69	794,506.87
10,863.00	88.40	177.70	10,081.09	658.69	-658.16	74.41	662.35	173.55	380,169.81	794,511.30
10,957.00	86.90	179.80	10,084.95	752.59	-752.05	76.45	755.93	174.20	380,075.92	794,513.34
11,051.00	88.30	181.80	10,088.88	846.48	-845.95	75.14	849.29	174.92	379,982.02	794,512.03
11,145.00	88.10	182.40	10,091.84	940.35	-939.84	71.70	942.58	175.64	379,888.13	794,508.59
11,239.00	91.60	182.40	10,092.08	1,034.22	-1,033.75	67.76	1,035.97	176.25	379,794.22	794,504.65
11,333.00	90.60	176.10	10,090.28	1,128.15	-1,127.67	68.99	1,129.78	176.50	379,700.30	794,505.88
11,427.00	88.80	171.80	10,090.77	1,221.67	-1,221.12	78.90	1,223.67	176.30	379,606.85	794,515.79
11,521.00	88.60	170.50	10,092.90	1,314.63	-1,313.98	93.36	1,317.29	175.94	379,513.99	794,530.25
11,616.00	88.30	171.60	10,095.47	1,408.54	-1,407.78	108.13	1,411.93	175.61	379,420.19	794,545.02
11,710.00	89.60	179.30	10,097.20	1,502.21	-1,501.40	115.58	1,505.84	175.60	379,326.57	794,552.47



ProDirectional
Survey Report



Company: Devon Energy Corp.
Project: Lea County, NM (NAD83)
Site: Fighting Okra 18-19 Fed
Well: 31H
Wellbore: OH
Design: Surveys 142-18270 MD

Local Co-ordinate Reference: Well 31H
TVD Reference: GL 3357.5'+KB 25.5' @ 3383.00usft (Cactus 126)
MD Reference: GL 3357.5'+KB 25.5' @ 3383.00usft (Cactus 126)
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)
11,804.00	91.00	179.10	10,096.70	1,596.20	-1,595.39	116.89	1,599.66	175.81	379,232.58	794,553.78
11,898.00	90.60	180.50	10,095.39	1,690.19	-1,689.38	117.22	1,693.44	176.03	379,138.59	794,554.11
11,992.00	89.40	179.40	10,095.39	1,784.18	-1,783.37	117.30	1,787.23	176.24	379,044.60	794,554.19
12,086.00	90.10	180.90	10,095.80	1,878.18	-1,877.37	117.06	1,881.01	176.43	378,950.60	794,553.95
12,180.00	89.70	180.00	10,095.97	1,972.16	-1,971.36	116.32	1,974.79	176.62	378,856.61	794,553.21
12,275.00	93.10	181.70	10,093.64	2,067.09	-2,066.31	114.91	2,069.50	176.82	378,761.66	794,551.80
12,369.00	93.40	182.50	10,088.32	2,160.85	-2,160.09	111.47	2,162.97	177.05	378,667.88	794,548.36
12,463.00	91.70	182.50	10,084.13	2,254.63	-2,253.91	107.37	2,256.46	177.27	378,574.06	794,544.26
12,557.00	88.90	181.90	10,083.64	2,348.52	-2,347.83	103.77	2,350.12	177.47	378,480.14	794,540.66
12,651.00	89.70	182.10	10,084.79	2,442.43	-2,441.76	100.49	2,443.83	177.64	378,386.21	794,537.38
12,745.00	88.30	182.40	10,086.43	2,536.31	-2,535.67	96.80	2,537.52	177.81	378,292.30	794,533.69
12,839.00	87.30	182.40	10,090.04	2,630.13	-2,629.52	92.86	2,631.16	177.98	378,198.45	794,529.75
12,933.00	87.70	182.10	10,094.14	2,723.94	-2,723.36	89.18	2,724.82	178.12	378,104.61	794,526.07
13,027.00	88.30	182.20	10,097.42	2,817.79	-2,817.23	85.65	2,818.53	178.26	378,010.74	794,522.54
13,121.00	87.40	182.40	10,100.95	2,911.61	-2,911.09	81.88	2,912.24	178.39	377,916.88	794,518.77
13,215.00	87.30	182.40	10,105.29	3,005.40	-3,004.91	77.95	3,005.92	178.51	377,823.06	794,514.84
13,309.00	91.00	182.60	10,106.69	3,099.25	-3,098.79	73.85	3,099.67	178.63	377,729.18	794,510.74
13,403.00	88.90	181.60	10,106.77	3,193.15	-3,192.72	70.41	3,193.50	178.74	377,635.25	794,507.30
13,497.00	89.10	181.50	10,108.41	3,287.08	-3,286.67	67.86	3,287.37	178.82	377,541.30	794,504.75
13,591.00	87.20	179.10	10,111.44	3,381.01	-3,380.61	67.37	3,381.28	178.86	377,447.36	794,504.26
13,685.00	87.70	179.60	10,115.63	3,474.92	-3,474.51	68.44	3,475.19	178.87	377,353.46	794,505.33
13,779.00	88.10	180.00	10,119.07	3,568.86	-3,568.45	68.76	3,569.11	178.90	377,259.52	794,505.65
13,873.00	89.00	180.40	10,121.45	3,662.82	-3,662.42	68.44	3,663.05	178.93	377,165.55	794,505.33
13,967.00	90.90	180.80	10,121.53	3,756.80	-3,756.41	67.45	3,757.01	178.97	377,071.56	794,504.34
14,062.00	89.50	180.60	10,121.20	3,851.78	-3,851.40	66.29	3,851.97	179.01	376,976.57	794,503.18
14,156.00	90.40	180.70	10,121.28	3,945.76	-3,945.39	65.23	3,945.93	179.05	376,882.58	794,502.12
14,250.00	89.60	179.90	10,121.28	4,039.75	-4,039.39	64.73	4,039.90	179.08	376,788.58	794,501.62



ProDirectional Survey Report



Company: Devon Energy Corp.
Project: Lea County, NM (NAD83)
Site: Fighting Okra 18-19 Fed
Well: 31H
Wellbore: OH
Design: Surveys 142-18270 MD

Local Co-ordinate Reference: Well 31H
TVD Reference: GL 3357.5'+KB 25.5' @ 3383.00usft (Cactus 126)
MD Reference: GL 3357.5'+KB 25.5' @ 3383.00usft (Cactus 126)
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)
14,344.00	89.40	178.90	10,122.10	4,133.75	-4,133.38	65.72	4,133.90	179.09	376,694.59	794,502.61
14,438.00	89.20	179.20	10,123.25	4,227.74	-4,227.36	67.28	4,227.89	179.09	376,600.61	794,504.17
14,532.00	88.80	178.50	10,124.89	4,321.71	-4,321.32	69.16	4,321.88	179.08	376,506.65	794,506.05
14,626.00	90.40	178.40	10,125.55	4,415.69	-4,415.28	71.70	4,415.86	179.07	376,412.69	794,508.59
14,720.00	90.70	178.20	10,124.64	4,509.66	-4,509.24	74.49	4,509.85	179.05	376,318.73	794,511.38
14,814.00	88.30	178.60	10,125.46	4,603.63	-4,603.19	77.12	4,603.83	179.04	376,224.78	794,514.01
14,908.00	89.20	180.00	10,127.52	4,697.60	-4,697.16	78.27	4,697.81	179.05	376,130.81	794,515.16
15,002.00	89.70	179.80	10,128.42	4,791.60	-4,791.15	78.43	4,791.79	179.06	376,036.82	794,515.32
15,096.00	87.60	179.80	10,130.63	4,885.57	-4,885.12	78.76	4,885.75	179.08	375,942.85	794,515.65
15,190.00	90.80	180.90	10,131.94	4,979.53	-4,979.09	78.18	4,979.71	179.10	375,848.88	794,515.07
15,284.00	91.50	180.10	10,130.06	5,073.50	-5,073.07	77.36	5,073.66	179.13	375,754.90	794,514.25
15,379.00	88.30	179.40	10,130.22	5,168.49	-5,168.06	77.78	5,168.64	179.14	375,659.91	794,514.67
15,473.00	89.40	177.60	10,132.11	5,262.45	-5,262.00	80.24	5,262.61	179.13	375,565.97	794,517.13
15,567.00	89.50	176.10	10,133.01	5,356.33	-5,355.85	85.40	5,356.53	179.09	375,472.12	794,522.29
15,661.00	90.60	175.80	10,132.93	5,450.14	-5,449.62	92.04	5,450.39	179.03	375,378.35	794,528.93
15,755.00	92.80	178.90	10,130.14	5,544.01	-5,543.46	96.39	5,544.29	179.00	375,284.51	794,533.28
15,849.00	92.60	179.70	10,125.71	5,637.91	-5,637.34	97.53	5,638.19	179.01	375,190.63	794,534.42
15,943.00	90.60	181.10	10,123.09	5,731.85	-5,731.30	96.88	5,732.12	179.03	375,096.67	794,533.77
16,037.00	91.10	181.20	10,121.69	5,825.81	-5,825.27	94.99	5,826.04	179.07	375,002.70	794,531.88
16,131.00	89.80	181.90	10,120.96	5,919.75	-5,919.23	92.45	5,919.95	179.11	374,908.74	794,529.34
16,225.00	91.00	182.20	10,120.30	6,013.66	-6,013.16	89.09	6,013.82	179.15	374,814.81	794,525.98
16,319.00	88.20	181.90	10,120.96	6,107.56	-6,107.09	85.72	6,107.69	179.20	374,720.88	794,522.61
16,413.00	88.70	181.90	10,123.50	6,201.44	-6,201.01	82.61	6,201.56	179.24	374,626.96	794,519.50
16,507.00	89.20	179.80	10,125.22	6,295.40	-6,294.97	81.21	6,295.50	179.26	374,533.00	794,518.10
16,601.00	88.80	178.90	10,126.86	6,389.38	-6,388.95	82.28	6,389.48	179.26	374,439.02	794,519.17
16,695.00	88.70	178.80	10,128.91	6,483.35	-6,482.91	84.17	6,483.46	179.26	374,345.06	794,521.06
16,789.00	89.40	180.40	10,130.47	6,577.34	-6,576.89	84.82	6,577.44	179.26	374,251.08	794,521.71



ProDirectional
Survey Report



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Project: Lea County, NM (NAD83)
Site: Fighting Okra 18-19 Fed
Well: 31H
Wellbore: OH
Design: Surveys 142-18270 MD

Local Co-ordinate Reference: Well 31H
TVD Reference: GL 3357.5'+KB 25.5' @ 3383.00usft (Cactus 126)
MD Reference: GL 3357.5'+KB 25.5' @ 3383.00usft (Cactus 126)
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)
16,883.00	87.80	181.00	10,132.77	6,671.29	-6,670.85	83.67	6,671.38	179.28	374,157.12	794,520.56
16,978.00	86.90	181.20	10,137.16	6,766.15	-6,765.73	81.85	6,766.23	179.31	374,062.24	794,518.74
17,072.00	87.40	180.70	10,141.83	6,860.01	-6,859.60	80.30	6,860.07	179.33	373,968.37	794,517.19
17,166.00	87.20	178.20	10,146.26	6,953.90	-6,953.49	81.20	6,953.96	179.33	373,874.48	794,518.09
17,260.00	88.20	175.70	10,150.04	7,047.71	-7,047.27	86.20	7,047.80	179.30	373,780.70	794,523.09
17,354.00	90.40	176.40	10,151.18	7,141.52	-7,141.03	92.67	7,141.63	179.26	373,686.94	794,529.56
17,448.00	91.20	176.50	10,149.87	7,235.37	-7,234.84	98.49	7,235.51	179.22	373,593.13	794,535.38
17,542.00	94.40	176.60	10,145.28	7,329.12	-7,328.55	104.14	7,329.29	179.19	373,499.42	794,541.03
17,636.00	88.70	177.50	10,142.74	7,422.95	-7,422.35	108.97	7,423.15	179.16	373,405.62	794,545.86
17,730.00	87.30	177.30	10,146.02	7,516.82	-7,516.19	113.23	7,517.05	179.14	373,311.78	794,550.12
17,824.00	88.80	178.10	10,149.22	7,610.71	-7,610.06	117.00	7,610.96	179.12	373,217.91	794,553.89
17,918.00	88.40	178.30	10,151.51	7,704.66	-7,703.99	119.95	7,704.92	179.11	373,123.98	794,556.84
18,012.00	91.00	178.50	10,152.01	7,798.63	-7,797.94	122.58	7,798.90	179.10	373,030.03	794,559.47
18,106.00	91.60	179.80	10,149.87	7,892.60	-7,891.90	123.97	7,892.88	179.10	372,936.07	794,560.86
18,138.00	92.01	180.21	10,148.87	7,924.58	-7,923.89	123.97	7,924.86	179.10	372,904.08	794,560.86
330' FSL: 18138' MD										
18,200.00	92.80	181.00	10,146.26	7,986.52	-7,985.83	123.32	7,986.78	179.12	372,842.14	794,560.21
18,218.00	92.80	181.00	10,145.39	8,004.49	-8,003.80	123.00	8,004.75	179.12	372,824.17	794,559.89
Final Survey: 18218' MD										
18,270.00	92.80	181.00	10,142.85	8,056.41	-8,055.73	122.10	8,056.66	179.13	372,772.24	794,558.99
Final PTB: 18270' MD										



ProDirectional
Survey Report



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Site: Fighting Okra 18-19 Fed
Well: 31H
Wellbore: OH
Design: Surveys 142-18270 MD

Local Co-ordinate Reference: Well 31H
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MD Reference: GL 3357.5'+KB 25.5' @ 3383.00usft (Cactus 126)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,071.00	1,070.98	6.22	0.74	First Pro Survey: 1071' MD
9,979.00	9,920.87	183.72	-1.42	330' FWL: 9979' MD
18,138.00	10,148.87	-7,923.89	123.97	330' FSL: 18138' MD
18,218.00	10,145.39	-8,003.80	123.00	Final Survey: 18218' MD
18,270.00	10,142.85	-8,055.73	122.10	Final PTB: 18270' MD