devon

Devon Energy

Lea County, NM (NAD 83 NME)
(Fighting Okra)SEC 18_T26S_R34E_NMPM
Fighting Okra 18-19 Fed #3H
API# 30-025-44172
ST01

Design: ST01 AWB

Standard Survey Report

04 April, 2018

INTREPID

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well Fighting Okra 18-19 Fed #3H
Project:	Lea County, NM (NAD 83 NME)	**TVD Reference:**	KB @ 3398.0usft
Site:	(Fighting Okra)SEC 18_T26S_R34E_NMPM	**MD Reference:**	KB @ 3398.0usft
Well:	Fighting Okra 18-19 Fed #3H	**North Reference:**	Grid
Wellbore:	ST01	**Survey Calculation Method:**	Minimum Curvature
Design:	ST01 AWB	**Database:**	EDM 5000.15 Single User Db

Project Lea County, NM (NAD 83 NME)

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)SEC 18_T26S_R34E_NMPM

Site Position:		**Northing:**	382,819.48 usft	**Latitude:**	32° 2' 59.241 N
From:	Map	**Easting:**	795,846.93 usft	**Longitude:**	103° 30' 42.738 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.44 °

Well Fighting Okra 18-19 Fed #3H

Well Position	**+N/-S**	0.0 usft	**Northing:**	382,819.48 usft	**Latitude:**	32° 2' 59.241 N
	+E/-W	0.0 usft	**Easting:**	795,846.93 usft	**Longitude:**	103° 30' 42.738 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,372.0 usft

Wellbore ST01

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	03/26/18	6.83	59.90	47,761.84270391

Design ST01 AWB

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	15,700.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	179.58

Survey Program **Date** 04/04/18

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
185.0	736.0	MWD (OWB)	MWD	OWSG MWD - Standard
869.0	15,700.0	Intrepid MWD (OWB)	MWD	OWSG MWD - Standard
15,794.0	22,596.0	ST01 INTREPID MWD (ST01)	MWD	OWSG MWD - Standard

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
185.0	0.70	8.60	185.0	1.1	0.2	-1.1	0.38	0.38	0.00
277.0	0.90	15.50	277.0	2.4	0.4	-2.4	0.24	0.22	7.50
369.0	1.10	23.00	369.0	3.9	1.0	-3.9	0.26	0.22	8.15
461.0	1.50	30.60	460.9	5.7	1.9	-5.7	0.47	0.43	8.26
552.0	1.50	36.70	551.9	7.7	3.3	-7.7	0.18	0.00	6.70
644.0	1.50	54.30	643.9	9.4	5.0	-9.3	0.50	0.00	19.13
736.0	1.90	60.80	735.8	10.8	7.3	-10.8	0.48	0.43	7.07
869.0	2.10	75.10	868.8	12.5	11.5	-12.4	0.40	0.15	10.75

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well Fighting Okra 18-19 Fed #3H
Project:	Lea County, NM (NAD 83 NME)	**TVD Reference:**	KB @ 3398.0usft
Site:	(Fighting Okra)SEC 18_T26S_R34E_NMPM	**MD Reference:**	KB @ 3398.0usft
Well:	Fighting Okra 18-19 Fed #3H	**North Reference:**	Grid
Wellbore:	ST01	**Survey Calculation Method:**	Minimum Curvature
Design:	ST01 AWB	**Database:**	EDM 5000.15 Single User Db

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)
960.0	2.10	73.30	959.7	13.4	14.8	-13.3	0.07	0.00	-1.98
1,052.0	1.90	71.00	1,051.6	14.4	17.8	-14.3	0.23	-0.22	-2.50
1,144.0	1.90	73.10	1,143.6	15.4	20.7	-15.2	0.08	0.00	2.28
1,235.0	1.80	77.10	1,234.6	16.1	23.5	-15.9	0.18	-0.11	4.40
1,326.0	1.80	78.50	1,325.5	16.7	26.3	-16.5	0.05	0.00	1.54
1,417.0	1.70	79.60	1,416.5	17.2	29.1	-17.0	0.12	-0.11	1.21
1,508.0	1.50	70.00	1,507.4	17.9	31.5	-17.7	0.37	-0.22	-10.55
1,600.0	1.40	65.80	1,599.4	18.8	33.7	-18.5	0.16	-0.11	-4.57
1,692.0	1.30	65.20	1,691.4	19.7	35.6	-19.4	0.11	-0.11	-0.65
1,786.0	1.10	55.30	1,785.4	20.6	37.4	-20.4	0.31	-0.21	-10.53
1,881.0	0.80	66.50	1,880.3	21.4	38.7	-21.1	0.37	-0.32	11.79
1,975.0	0.70	59.50	1,974.3	22.0	39.8	-21.7	0.14	-0.11	-7.45
2,070.0	0.70	54.10	2,069.3	22.6	40.8	-22.3	0.07	0.00	-5.68
2,165.0	0.90	78.90	2,164.3	23.1	42.0	-22.8	0.42	0.21	26.11
2,259.0	0.60	87.30	2,258.3	23.2	43.2	-22.9	0.34	-0.32	8.94
2,354.0	1.60	82.30	2,353.3	23.4	45.0	-23.1	1.06	1.05	-5.26
2,449.0	2.80	79.30	2,448.2	24.1	48.6	-23.7	1.27	1.26	-3.16
2,544.0	3.50	83.20	2,543.1	24.8	53.8	-24.4	0.77	0.74	4.11
2,639.0	4.00	89.30	2,637.9	25.2	60.0	-24.8	0.67	0.53	6.42
2,733.0	4.80	87.90	2,731.6	25.4	67.2	-24.9	0.86	0.85	-1.49
2,828.0	6.20	87.60	2,826.2	25.8	76.3	-25.2	1.47	1.47	-0.32
2,922.0	6.60	86.50	2,919.6	26.3	86.7	-25.7	0.45	0.43	-1.17
3,017.0	7.30	88.30	3,013.9	26.8	98.2	-26.1	0.77	0.74	1.89
3,112.0	8.00	90.00	3,108.0	27.0	110.9	-26.2	0.77	0.74	1.79
3,206.0	8.70	91.10	3,201.0	26.9	124.5	-25.9	0.76	0.74	1.17
3,301.0	9.20	94.10	3,294.9	26.2	139.3	-25.2	0.72	0.53	3.16
3,396.0	9.70	100.00	3,388.6	24.2	154.7	-23.1	1.15	0.53	6.21
3,491.0	9.30	100.50	3,482.3	21.5	170.1	-20.2	0.43	-0.42	0.53
3,586.0	8.00	98.30	3,576.2	19.1	184.2	-17.8	1.41	-1.37	-2.32
3,681.0	7.40	95.80	3,670.3	17.5	196.9	-16.1	0.72	-0.63	-2.63
3,776.0	7.60	90.30	3,764.5	16.9	209.2	-15.3	0.78	0.21	-5.79
3,871.0	7.70	90.20	3,858.7	16.8	221.9	-15.2	0.11	0.11	-0.11
3,966.0	7.70	88.70	3,952.8	16.9	234.6	-15.2	0.21	0.00	-1.58
4,061.0	7.30	89.50	4,047.0	17.1	247.0	-15.3	0.44	-0.42	0.84
4,156.0	7.20	90.40	4,141.3	17.2	259.0	-15.3	0.16	-0.11	0.95
4,251.0	5.50	91.70	4,235.7	17.0	269.5	-15.0	1.80	-1.79	1.37
4,346.0	4.40	76.50	4,330.3	17.7	277.6	-15.7	1.79	-1.16	-16.00
4,441.0	4.50	64.90	4,425.0	20.1	284.5	-18.0	0.95	0.11	-12.21
4,535.0	4.50	67.10	4,518.7	23.1	291.2	-21.0	0.18	0.00	2.34
4,631.0	5.10	67.90	4,614.4	26.2	298.7	-24.0	0.63	0.63	0.83
4,725.0	5.40	71.10	4,708.0	29.2	306.7	-26.9	0.45	0.32	3.40
4,820.0	5.80	75.70	4,802.6	31.8	315.6	-29.5	0.63	0.42	4.84
4,915.0	5.50	78.90	4,897.1	33.9	324.7	-31.5	0.46	-0.32	3.37

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well Fighting Okra 18-19 Fed #3H
Project:	Lea County, NM (NAD 83 NME)	**TVD Reference:**	KB @ 3398.0usft
Site:	(Fighting Okra)SEC 18_T26S_R34E_NMPM	**MD Reference:**	KB @ 3398.0usft
Well:	Fighting Okra 18-19 Fed #3H	**North Reference:**	Grid
Wellbore:	ST01	**Survey Calculation Method:**	Minimum Curvature
Design:	ST01 AWB	**Database:**	EDM 5000.15 Single User Db

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)
5,009.0	5.50	81.90	4,990.7	35.4	333.6	-32.9	0.31	0.00	3.19
5,105.0	5.10	78.00	5,086.3	36.9	342.3	-34.4	0.56	-0.42	-4.06
5,199.0	4.30	75.20	5,179.9	38.7	349.8	-36.1	0.89	-0.85	-2.98
5,294.0	3.30	72.20	5,274.7	40.4	355.9	-37.8	1.07	-1.05	-3.16
5,389.0	3.20	70.50	5,369.6	42.2	361.0	-39.5	0.15	-0.11	-1.79
5,484.0	4.10	75.10	5,464.4	43.9	366.8	-41.2	1.00	0.95	4.84
5,579.0	4.20	79.10	5,559.1	45.5	373.5	-42.7	0.32	0.11	4.21
5,674.0	4.30	80.60	5,653.9	46.7	380.4	-43.9	0.16	0.11	1.58
5,768.0	4.40	74.40	5,747.6	48.2	387.3	-45.4	0.51	0.11	-6.60
5,863.0	4.90	73.40	5,842.3	50.4	394.7	-47.5	0.53	0.53	-1.05
5,957.0	4.70	69.30	5,936.0	52.9	402.2	-49.9	0.42	-0.21	-4.36
6,052.0	4.80	68.90	6,030.6	55.7	409.5	-52.7	0.11	0.11	-0.42
6,146.0	4.50	78.20	6,124.3	57.9	416.8	-54.8	0.86	-0.32	9.89
6,241.0	4.00	73.20	6,219.1	59.6	423.6	-56.5	0.65	-0.53	-5.26
6,336.0	3.90	73.90	6,313.8	61.4	429.9	-58.3	0.12	-0.11	0.74
6,430.0	3.70	65.20	6,407.6	63.6	435.7	-60.4	0.65	-0.21	-9.26
6,525.0	3.90	64.10	6,502.4	66.3	441.4	-63.1	0.22	0.21	-1.16
6,620.0	4.00	63.70	6,597.2	69.2	447.3	-65.9	0.11	0.11	-0.42
6,715.0	4.20	67.30	6,692.0	72.0	453.5	-68.7	0.34	0.21	3.79
6,810.0	3.80	65.30	6,786.7	74.6	459.5	-71.3	0.45	-0.42	-2.11
6,904.0	4.00	72.80	6,880.5	76.9	465.5	-73.5	0.58	0.21	7.98
6,999.0	4.40	72.90	6,975.2	79.0	472.2	-75.5	0.42	0.42	0.11
7,094.0	4.40	76.80	7,070.0	80.9	479.2	-77.4	0.31	0.00	4.11
7,189.0	4.00	74.90	7,164.7	82.6	485.9	-79.0	0.45	-0.42	-2.00
7,283.0	3.90	74.00	7,258.5	84.3	492.2	-80.7	0.13	-0.11	-0.96
7,378.0	3.60	76.60	7,353.3	85.9	498.2	-82.2	0.36	-0.32	2.74
7,473.0	3.40	73.00	7,448.1	87.4	503.8	-83.7	0.31	-0.21	-3.79
7,567.0	3.10	80.00	7,542.0	88.7	508.9	-84.9	0.53	-0.32	7.45
7,662.0	2.90	78.90	7,636.8	89.6	513.8	-85.8	0.22	-0.21	-1.16
7,757.0	2.70	82.40	7,731.7	90.3	518.4	-86.5	0.28	-0.21	3.68
7,852.0	1.50	91.00	7,826.6	90.6	521.9	-86.8	1.30	-1.26	9.05
7,947.0	1.50	113.60	7,921.6	90.1	524.3	-86.2	0.62	0.00	23.79
8,042.0	1.20	104.70	8,016.6	89.3	526.4	-85.5	0.38	-0.32	-9.37
8,137.0	1.30	107.40	8,111.6	88.7	528.3	-84.9	0.12	0.11	2.84
8,232.0	1.20	121.90	8,206.5	87.9	530.2	-84.0	0.35	-0.11	15.26
8,327.0	0.90	116.80	8,301.5	87.0	531.7	-83.1	0.33	-0.32	-5.37
8,422.0	0.90	115.20	8,396.5	86.4	533.1	-82.5	0.03	0.00	-1.68
8,517.0	0.20	270.10	8,491.5	86.1	533.6	-82.2	1.14	-0.74	163.05
8,612.0	0.30	210.90	8,586.5	85.9	533.3	-81.9	0.28	0.11	-62.32
8,707.0	0.20	207.60	8,681.5	85.5	533.1	-81.6	0.11	-0.11	-3.47
8,801.0	0.60	219.20	8,775.5	85.0	532.7	-81.1	0.43	0.43	12.34
8,896.0	0.40	212.30	8,870.5	84.3	532.2	-80.4	0.22	-0.21	-7.26
8,990.0	0.70	215.70	8,964.5	83.6	531.7	-79.7	0.32	0.32	3.62

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well Fighting Okra 18-19 Fed #3H
Project:	Lea County, NM (NAD 83 NME)	**TVD Reference:**	KB @ 3398.0usft
Site:	(Fighting Okra)SEC 18_T26S_R34E_NMPM	**MD Reference:**	KB @ 3398.0usft
Well:	Fighting Okra 18-19 Fed #3H	**North Reference:**	Grid
Wellbore:	ST01	**Survey Calculation Method:**	Minimum Curvature
Design:	ST01 AWB	**Database:**	EDM 5000.15 Single User Db

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)
9,085.0	0.70	228.10	9,059.5	82.7	530.9	-78.8	0.16	0.00	13.05
9,180.0	0.50	233.10	9,154.5	82.1	530.2	-78.2	0.22	-0.21	5.26
9,275.0	0.70	207.70	9,249.5	81.3	529.6	-77.4	0.35	0.21	-26.74
9,369.0	0.70	244.10	9,343.5	80.5	528.8	-76.7	0.47	0.00	38.72
9,464.0	0.80	242.10	9,438.5	80.0	527.7	-76.1	0.11	0.11	-2.11
9,559.0	0.90	220.90	9,533.5	79.1	526.6	-75.2	0.35	0.11	-22.32
9,653.0	0.80	245.20	9,627.4	78.3	525.5	-74.4	0.39	-0.11	25.85
9,748.0	0.90	226.70	9,722.4	77.5	524.4	-73.6	0.31	0.11	-19.47
9,843.0	0.70	228.70	9,817.4	76.6	523.4	-72.7	0.21	-0.21	2.11
9,938.0	0.70	237.40	9,912.4	75.9	522.5	-72.1	0.11	0.00	9.16
10,033.0	1.00	220.20	10,007.4	74.9	521.4	-71.1	0.41	0.32	-18.11
10,127.0	1.60	241.40	10,101.4	73.7	519.8	-69.9	0.81	0.64	22.55
10,222.0	2.20	252.20	10,196.3	72.5	516.9	-68.7	0.73	0.63	11.37
10,317.0	2.10	239.60	10,291.3	71.1	513.6	-67.3	0.51	-0.11	-13.26
10,411.0	2.30	231.70	10,385.2	69.0	510.7	-65.3	0.39	0.21	-8.40
10,506.0	2.70	231.20	10,480.1	66.4	507.4	-62.7	0.42	0.42	-0.53
10,601.0	2.00	221.60	10,575.0	63.8	504.6	-60.1	0.84	-0.74	-10.11
10,696.0	1.50	228.50	10,670.0	61.7	502.5	-58.0	0.57	-0.53	7.26
10,791.0	1.40	233.60	10,765.0	60.2	500.7	-56.5	0.17	-0.11	5.37
10,886.0	1.40	250.60	10,859.9	59.1	498.6	-55.5	0.44	0.00	17.89
10,981.0	3.00	273.20	10,954.9	58.9	495.1	-55.3	1.88	1.68	23.79
11,076.0	1.40	260.50	11,049.8	58.8	491.4	-55.2	1.75	-1.68	-13.37
11,171.0	0.60	280.00	11,144.8	58.7	489.8	-55.1	0.90	-0.84	20.53
11,266.0	0.40	320.30	11,239.8	59.1	489.1	-55.5	0.41	-0.21	42.42
11,361.0	0.40	298.90	11,334.8	59.5	488.6	-55.9	0.16	0.00	-22.53
11,455.0	0.60	262.40	11,428.8	59.6	487.8	-56.0	0.39	0.21	-38.83
11,550.0	0.70	297.90	11,523.8	59.8	486.8	-56.2	0.43	0.11	37.37
11,645.0	1.00	271.10	11,618.7	60.1	485.5	-56.5	0.52	0.32	-28.21
11,739.0	1.60	280.40	11,712.7	60.3	483.4	-56.8	0.67	0.64	9.89
11,834.0	2.00	275.30	11,807.7	60.7	480.4	-57.2	0.45	0.42	-5.37
11,928.0	1.90	279.30	11,901.6	61.1	477.2	-57.6	0.18	-0.11	4.26
12,023.0	1.80	277.60	11,996.6	61.6	474.2	-58.1	0.12	-0.11	-1.79
12,131.0	0.90	221.50	12,104.5	61.2	472.0	-57.7	1.39	-0.83	-51.94
12,172.0	4.30	151.90	12,145.5	59.6	472.5	-56.1	9.94	8.29	-169.76
12,225.0	8.20	138.90	12,198.2	55.0	475.9	-51.5	7.78	7.36	-24.53
12,272.0	13.10	143.20	12,244.4	48.2	481.3	-44.6	10.55	10.43	9.15
12,319.0	17.90	150.20	12,289.6	37.6	488.1	-34.1	10.94	10.21	14.89
12,367.0	22.70	152.50	12,334.6	23.0	496.0	-19.4	10.14	10.00	4.79
12,414.0	27.30	149.50	12,377.2	5.7	505.7	-2.0	10.15	9.79	-6.38
12,461.0	31.80	149.80	12,418.1	-14.3	517.4	18.1	9.58	9.57	0.64
12,508.0	37.50	151.10	12,456.7	-37.6	530.6	41.5	12.23	12.13	2.77
12,555.0	42.40	155.50	12,492.8	-64.5	544.0	68.5	12.03	10.43	9.36
12,602.0	45.00	161.10	12,526.8	-94.7	556.0	98.8	9.91	5.53	11.91
12,649.0	47.60	166.40	12,559.2	-127.3	565.5	131.4	9.85	5.53	11.28

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well Fighting Okra 18-19 Fed #3H
Project:	Lea County, NM (NAD 83 NME)	**TVD Reference:**	KB @ 3398.0usft
Site:	(Fighting Okra)SEC 18_T26S_R34E_NMPM	**MD Reference:**	KB @ 3398.0usft
Well:	Fighting Okra 18-19 Fed #3H	**North Reference:**	Grid
Wellbore:	ST01	**Survey Calculation Method:**	Minimum Curvature
Design:	ST01 AWB	**Database:**	EDM 5000.15 Single User Db

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)
12,696.0	50.80	172.00	12,590.0	-162.2	572.1	166.4	11.30	6.81	11.91
12,791.0	60.70	176.30	12,643.4	-240.2	579.9	244.5	11.07	10.42	4.53
12,885.0	73.20	181.30	12,680.1	-326.5	581.5	330.8	14.16	13.30	5.32
12,988.0	86.90	186.60	12,697.9	-427.4	574.5	431.6	14.23	13.30	5.15
13,053.0	88.60	187.30	12,700.5	-491.9	566.6	496.0	2.83	2.62	1.08
13,148.0	91.00	186.80	12,700.8	-586.2	555.0	590.2	2.58	2.53	-0.53
13,242.0	91.00	185.70	12,699.1	-679.6	544.7	683.6	1.17	0.00	-1.17
13,337.0	88.40	184.60	12,699.6	-774.2	536.2	778.1	2.97	-2.74	-1.16
13,431.0	90.90	184.20	12,700.2	-867.9	529.0	871.8	2.69	2.66	-0.43
13,525.0	90.00	183.20	12,699.5	-961.7	522.9	965.5	1.43	-0.96	-1.06
13,620.0	88.80	182.80	12,700.5	-1,056.6	518.0	1,060.4	1.33	-1.26	-0.42
13,714.0	88.00	181.60	12,703.1	-1,150.5	514.3	1,154.2	1.53	-0.85	-1.28
13,809.0	91.10	182.90	12,703.8	-1,245.4	510.6	1,249.1	3.54	3.26	1.37
13,903.0	89.20	180.90	12,703.6	-1,339.3	507.5	1,343.0	2.93	-2.02	-2.13
13,998.0	88.40	179.70	12,705.6	-1,434.3	507.0	1,438.0	1.52	-0.84	-1.26
14,092.0	90.20	178.30	12,706.7	-1,528.3	508.6	1,532.0	2.43	1.91	-1.49
14,187.0	87.60	176.80	12,708.6	-1,623.2	512.7	1,626.9	3.16	-2.74	-1.58
14,282.0	91.10	176.50	12,709.6	-1,718.0	518.3	1,721.7	3.70	3.68	-0.32
14,376.0	90.40	176.40	12,708.4	-1,811.8	524.1	1,815.6	0.75	-0.74	-0.11
14,471.0	88.40	175.40	12,709.4	-1,906.5	530.9	1,910.4	2.35	-2.11	-1.05
14,565.0	90.00	176.20	12,710.7	-2,000.3	537.7	2,004.2	1.90	1.70	0.85
14,660.0	89.90	176.90	12,710.8	-2,095.1	543.5	2,099.0	0.74	-0.11	0.74
14,755.0	90.40	177.80	12,710.5	-2,190.0	547.9	2,193.9	1.08	0.53	0.95
14,849.0	88.70	180.10	12,711.3	-2,284.0	549.6	2,287.9	3.04	-1.81	2.45
14,943.0	90.10	180.70	12,712.3	-2,378.0	548.9	2,381.9	1.62	1.49	0.64
15,038.0	90.80	181.00	12,711.5	-2,472.9	547.5	2,476.9	0.80	0.74	0.32
15,133.0	88.50	180.70	12,712.1	-2,567.9	546.1	2,571.9	2.44	-2.42	-0.32
15,227.0	90.90	180.80	12,712.6	-2,661.9	544.9	2,665.8	2.56	2.55	0.11
15,321.0	90.70	180.40	12,711.3	-2,755.9	543.9	2,759.8	0.48	-0.21	-0.43
15,416.0	88.20	179.60	12,712.2	-2,850.9	543.9	2,854.8	2.76	-2.63	-0.84
15,511.0	90.30	180.20	12,713.4	-2,945.9	544.1	2,949.8	2.30	2.21	0.63
15,605.0	91.00	179.10	12,712.4	-3,039.9	544.6	3,043.8	1.39	0.74	-1.17
15,700.0	87.50	179.20	12,713.6	-3,134.8	546.0	3,138.7	3.69	-3.68	0.11
TIE TO OWB									
15,794.0	87.90	181.40	12,717.4	-3,228.7	545.5	3,232.6	2.38	0.43	2.34
15,888.0	90.90	181.30	12,718.4	-3,322.7	543.3	3,326.6	3.19	3.19	-0.11
15,983.0	92.00	182.70	12,716.0	-3,417.6	540.0	3,421.5	1.87	1.16	1.47
16,077.0	87.00	182.20	12,716.8	-3,511.5	536.0	3,515.3	5.35	-5.32	-0.53
16,172.0	91.50	180.60	12,718.0	-3,606.4	533.7	3,610.2	5.03	4.74	-1.68
16,267.0	90.00	180.40	12,716.8	-3,701.4	532.9	3,705.2	1.59	-1.58	-0.21
16,361.0	89.10	178.80	12,717.5	-3,795.4	533.5	3,799.2	1.95	-0.96	-1.70
16,456.0	91.60	177.30	12,716.9	-3,890.3	536.7	3,894.2	3.07	2.63	-1.58
16,550.0	92.10	175.90	12,713.9	-3,984.1	542.3	3,988.0	1.58	0.53	-1.49

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well Fighting Okra 18-19 Fed #3H
Project:	Lea County, NM (NAD 83 NME)	**TVD Reference:**	KB @ 3398.0usft
Site:	(Fighting Okra)SEC 18_T26S_R34E_NMPM	**MD Reference:**	KB @ 3398.0usft
Well:	Fighting Okra 18-19 Fed #3H	**North Reference:**	Grid
Wellbore:	ST01	**Survey Calculation Method:**	Minimum Curvature
Design:	ST01 AWB	**Database:**	EDM 5000.15 Single User Db

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)
16,645.0	94.20	174.90	12,708.7	-4,078.7	549.9	4,082.6	2.45	2.21	-1.05
16,739.0	95.30	176.00	12,700.9	-4,172.0	557.4	4,176.0	1.65	1.17	1.17
16,834.0	94.10	176.90	12,693.1	-4,266.5	563.2	4,270.5	1.58	-1.26	0.95
16,928.0	92.40	179.10	12,687.8	-4,360.3	566.5	4,364.3	2.95	-1.81	2.34
17,022.0	89.80	181.70	12,686.0	-4,454.3	565.8	4,458.3	3.91	-2.77	2.77
17,116.0	87.30	182.90	12,688.4	-4,548.2	562.1	4,552.2	2.95	-2.66	1.28
17,211.0	87.00	183.20	12,693.1	-4,642.9	557.0	4,646.9	0.45	-0.32	0.32
17,306.0	86.70	182.40	12,698.3	-4,737.7	552.4	4,741.6	0.90	-0.32	-0.84
17,401.0	90.30	181.70	12,700.8	-4,832.5	549.0	4,836.4	3.86	3.79	-0.74
17,495.0	90.40	182.70	12,700.2	-4,926.5	545.4	4,930.3	1.07	0.11	1.06
17,523.7	89.25	183.00	12,700.3	-4,955.1	543.9	4,959.0	4.14	-4.00	1.05
CROSS SSL @ 17523.7' MD, 3040' FEL									
17,590.0	86.60	183.70	12,702.7	-5,021.3	540.1	5,025.1	4.14	-4.00	1.05
17,684.0	86.40	181.70	12,708.5	-5,115.0	535.7	5,118.8	2.13	-0.21	-2.13
17,779.0	88.30	181.70	12,712.8	-5,209.8	532.8	5,213.6	2.00	2.00	0.00
17,873.0	89.00	181.40	12,715.1	-5,303.8	530.3	5,307.5	0.81	0.74	-0.32
17,968.0	89.80	181.70	12,716.1	-5,398.7	527.7	5,402.5	0.90	0.84	0.32
18,062.0	90.60	179.60	12,715.7	-5,492.7	526.7	5,496.4	2.39	0.85	-2.23
18,156.0	92.30	180.20	12,713.3	-5,586.7	526.8	5,590.4	1.92	1.81	0.64
18,251.0	89.40	177.40	12,711.9	-5,681.6	528.8	5,685.4	4.24	-3.05	-2.95
18,345.0	89.50	177.30	12,712.8	-5,775.5	533.2	5,779.3	0.15	0.11	-0.11
18,440.0	90.70	177.80	12,712.7	-5,870.4	537.2	5,874.2	1.37	1.26	0.53
18,534.0	91.70	177.70	12,710.7	-5,964.4	540.9	5,968.2	1.07	1.06	-0.11
18,629.0	88.90	176.10	12,710.2	-6,059.2	546.0	6,063.0	3.39	-2.95	-1.68
18,723.0	89.40	176.50	12,711.6	-6,153.0	552.1	6,156.9	0.68	0.53	0.43
18,818.0	91.20	177.50	12,711.1	-6,247.9	557.1	6,251.8	2.17	1.89	1.05
18,912.0	89.50	178.00	12,710.5	-6,341.8	560.8	6,345.7	1.89	-1.81	0.53
19,007.0	90.10	179.30	12,710.9	-6,436.7	563.0	6,440.7	1.51	0.63	1.37
19,102.0	90.10	180.20	12,710.7	-6,531.7	563.4	6,535.7	0.95	0.00	0.95
19,197.0	90.80	181.00	12,709.9	-6,626.7	562.4	6,630.7	1.12	0.74	0.84
19,291.0	91.00	180.80	12,708.5	-6,720.7	561.0	6,724.6	0.30	0.21	-0.21
19,386.0	90.40	177.60	12,707.3	-6,815.7	562.3	6,819.6	3.43	-0.63	-3.37
19,480.0	89.80	175.20	12,707.1	-6,909.5	568.2	6,913.5	2.63	-0.64	-2.55
19,574.0	88.60	172.40	12,708.5	-7,002.9	578.3	7,007.0	3.24	-1.28	-2.98
19,668.0	90.50	174.10	12,709.2	-7,096.3	589.4	7,100.4	2.71	2.02	1.81
19,763.0	92.10	175.90	12,707.0	-7,190.9	597.7	7,195.1	2.53	1.68	1.89
19,858.0	90.70	177.30	12,704.7	-7,285.7	603.3	7,289.9	2.08	-1.47	1.47
19,953.0	87.50	177.90	12,706.2	-7,380.6	607.3	7,384.8	3.43	-3.37	0.63
20,047.0	87.40	179.80	12,710.4	-7,474.4	609.2	7,478.7	2.02	-0.11	2.02
20,141.0	87.40	182.80	12,714.7	-7,568.3	607.0	7,572.6	3.19	0.00	3.19
20,160.6	88.02	183.11	12,715.4	-7,587.9	606.0	7,592.1	3.53	3.16	1.58
CROSS QTR SEC LN @ 20160.6' MD, 3001' FEL									
20,236.0	90.40	184.30	12,716.5	-7,663.1	601.1	7,667.3	3.53	3.16	1.58
20,331.0	90.70	183.00	12,715.6	-7,757.9	595.1	7,762.1	1.40	0.32	-1.37

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well Fighting Okra 18-19 Fed #3H
Project:	Lea County, NM (NAD 83 NME)	**TVD Reference:**	KB @ 3398.0usft
Site:	(Fighting Okra)SEC 18_T26S_R34E_NMPM	**MD Reference:**	KB @ 3398.0usft
Well:	Fighting Okra 18-19 Fed #3H	**North Reference:**	Grid
Wellbore:	ST01	**Survey Calculation Method:**	Minimum Curvature
Design:	ST01 AWB	**Database:**	EDM 5000.15 Single User Db

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)
20,425.0	90.60	182.40	12,714.5	-7,851.8	590.7	7,855.9	0.65	-0.11	-0.64
20,520.0	91.60	182.10	12,712.7	-7,946.7	586.9	7,950.8	1.10	1.05	-0.32
20,614.0	88.10	179.10	12,712.9	-8,040.7	586.0	8,044.7	4.90	-3.72	-3.19
20,709.0	89.70	178.90	12,714.8	-8,135.6	587.6	8,139.7	1.70	1.68	-0.21
20,803.0	88.90	178.80	12,715.9	-8,229.6	589.5	8,233.7	0.86	-0.85	-0.11
20,898.0	91.90	180.10	12,715.2	-8,324.6	590.4	8,328.7	3.44	3.16	1.37
20,992.0	91.10	178.60	12,712.8	-8,418.5	591.5	8,422.7	1.81	-0.85	-1.60
21,087.0	90.70	177.50	12,711.3	-8,513.5	594.7	8,517.6	1.23	-0.42	-1.16
21,181.0	91.40	180.60	12,709.6	-8,607.4	596.3	8,611.6	3.38	0.74	3.30
21,275.0	91.40	181.40	12,707.3	-8,701.4	594.6	8,705.5	0.85	0.00	0.85
21,370.0	91.00	180.00	12,705.3	-8,796.4	593.5	8,800.5	1.53	-0.42	-1.47
21,464.0	92.40	181.90	12,702.5	-8,890.3	591.9	8,894.4	2.51	1.49	2.02
21,558.0	86.50	181.10	12,703.4	-8,984.2	589.4	8,988.3	6.33	-6.28	-0.85
21,653.0	89.00	181.90	12,707.1	-9,079.1	587.0	9,083.2	2.76	2.63	0.84
21,747.0	91.20	183.00	12,707.0	-9,173.0	582.9	9,177.0	2.62	2.34	1.17
21,842.0	91.00	182.10	12,705.1	-9,267.9	578.7	9,271.9	0.97	-0.21	-0.95
21,936.0	89.00	181.30	12,705.1	-9,361.9	575.9	9,365.8	2.29	-2.13	-0.85
22,031.0	90.60	181.80	12,705.5	-9,456.8	573.4	9,460.8	1.76	1.68	0.53
22,125.0	88.70	181.00	12,706.0	-9,550.8	571.1	9,554.7	2.19	-2.02	-0.85
22,219.0	90.30	180.20	12,706.9	-9,644.8	570.1	9,648.7	1.90	1.70	-0.85
22,314.0	91.30	179.60	12,705.5	-9,739.8	570.2	9,743.7	1.23	1.05	-0.63
22,408.0	88.10	177.70	12,706.0	-9,833.7	572.5	9,837.6	3.96	-3.40	-2.02
22,472.7	88.10	176.60	12,708.2	-9,898.3	575.7	9,902.2	1.70	0.00	-1.70
CROSS S. 330' LINE @ 22472.7' MD, 3050' FEL									
22,502.0	88.10	176.10	12,709.1	-9,927.5	577.5	9,931.5	1.70	0.00	-1.70
22,533.0	87.80	175.50	12,710.2	-9,958.4	579.8	9,962.4	2.16	-0.97	-1.94
LAST SVY									
22,596.0	87.80	175.50	12,712.7	-10,021.2	584.7	10,025.2	0.00	0.00	0.00
PTD @ 22596' MD, 207' FSLL, 3042' FELL									

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
330 HARD LINE	0.07	359.35	12,706.0	-9,898.2	597.7	372,921.30	796,444.66	32° 1' 21.250 N	103° 30' 36.670 W
- actual wellpath misses target center by 22.1usft at 22473.9usft MD (12708.2 TVD, -9899.5 N, 575.7 E)									
- Rectangle (sides W60.0 H6,494.2 D20.0)									
PBHL (Fighting Okra	0.07	359.35	12,706.0	-9,898.2	597.7	372,921.30	796,444.66	32° 1' 21.250 N	103° 30' 36.670 W
- actual wellpath misses target center by 22.1usft at 22473.9usft MD (12708.2 TVD, -9899.5 N, 575.7 E)									
- Rectangle (sides W60.0 H6,494.2 D20.0)									

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well Fighting Okra 18-19 Fed #3H
Project:	Lea County, NM (NAD 83 NME)	**TVD Reference:**	KB @ 3398.0usft
Site:	(Fighting Okra)SEC 18_T26S_R34E_NMPM	**MD Reference:**	KB @ 3398.0usft
Well:	Fighting Okra 18-19 Fed #3H	**North Reference:**	Grid
Wellbore:	ST01	**Survey Calculation Method:**	Minimum Curvature
Design:	ST01 AWB	**Database:**	EDM 5000.15 Single User Db

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
15,700.0	12,713.6	-3,134.8	546.0	TIE TO OWB
17,523.7	12,700.3	-4,955.1	543.9	CROSS SSL @ 17523.7' MD, 3040' FEL
20,160.6	12,715.4	-7,587.9	606.0	CROSS QTR SEC LN @ 20160.6' MD, 3001' FEL
22,472.7	12,708.2	-9,898.3	575.7	CROSS S. 330' LINE @ 22472.7' MD, 3050' FEL
22,533.0	12,710.2	-9,958.4	579.8	LAST SVY
22,596.0	12,712.7	-10,021.2	584.7	PTD @ 22596' MD, 207' FSLL, 3042' FELL

Checked By: _____ Approved By: _____ Date: _____