

**SUMMARY OF BOTTOM HOLE LOCATIONS
NEWFIELD EXPLORATION MID-CONTINENT, INC.**

Mark 1H-27X
27&34-2N-4W
Stephens Co.

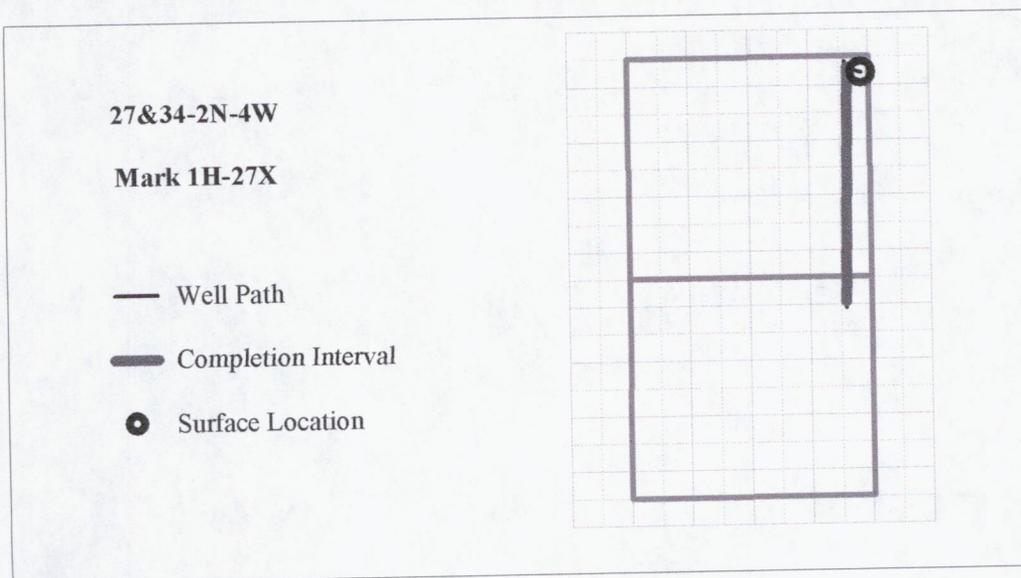
CD# 2016-4038-T (Multi Unit Hz) Int. Order 659664
CD 2016-4039-T (Loc. Exc.- sec. 27&34) Int. Order 658392

	MD	TVD	Location
Surface Location			386' FNL & 162' FEL of sec. 27-2N-4W
Springer	11,532'	11,494'	121' FNL & 534' FEL of sect. 27-2N-4W
First Perforation	13,342'	13,231'	273' FNL & 476' FEL of sect. 27-2N-4W
South line of sec. 27 / North line of sec. 34	18,369'	13,495'	0' FSL & 543' FEL of sect. 27-2N-4W
Last Perforation	18,978'	13,532'	607' FNL & 555' FEL of sect. 34-2N-4W
Terminus (BHL)	19,122'	13,534'	751' FNL & 564' FEL of sect. 34-2N-4W

Perforations in sections 27&34 are in the Springer only.

The completion interval (CI) is from first perforation 13,342' to last perforation 18,978' MD.

<u>Formation tops and entry points</u>	<u>MD</u>	<u>Length of CI in each unit (% of total)</u>
Springer	11,532	
First Perforation	13,342	
South line of sec. 27 / North line of sec. 34	18,369	5,027 ' in section 27 (89.1945%)
Last Perforation	18,978	609 ' in section 34 (10.8055%)
Total Depth (BHL) in Springer	19,122	5,636 ' total length of C.I. (100%)



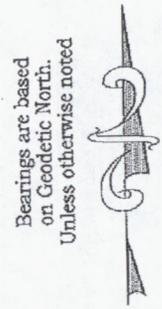
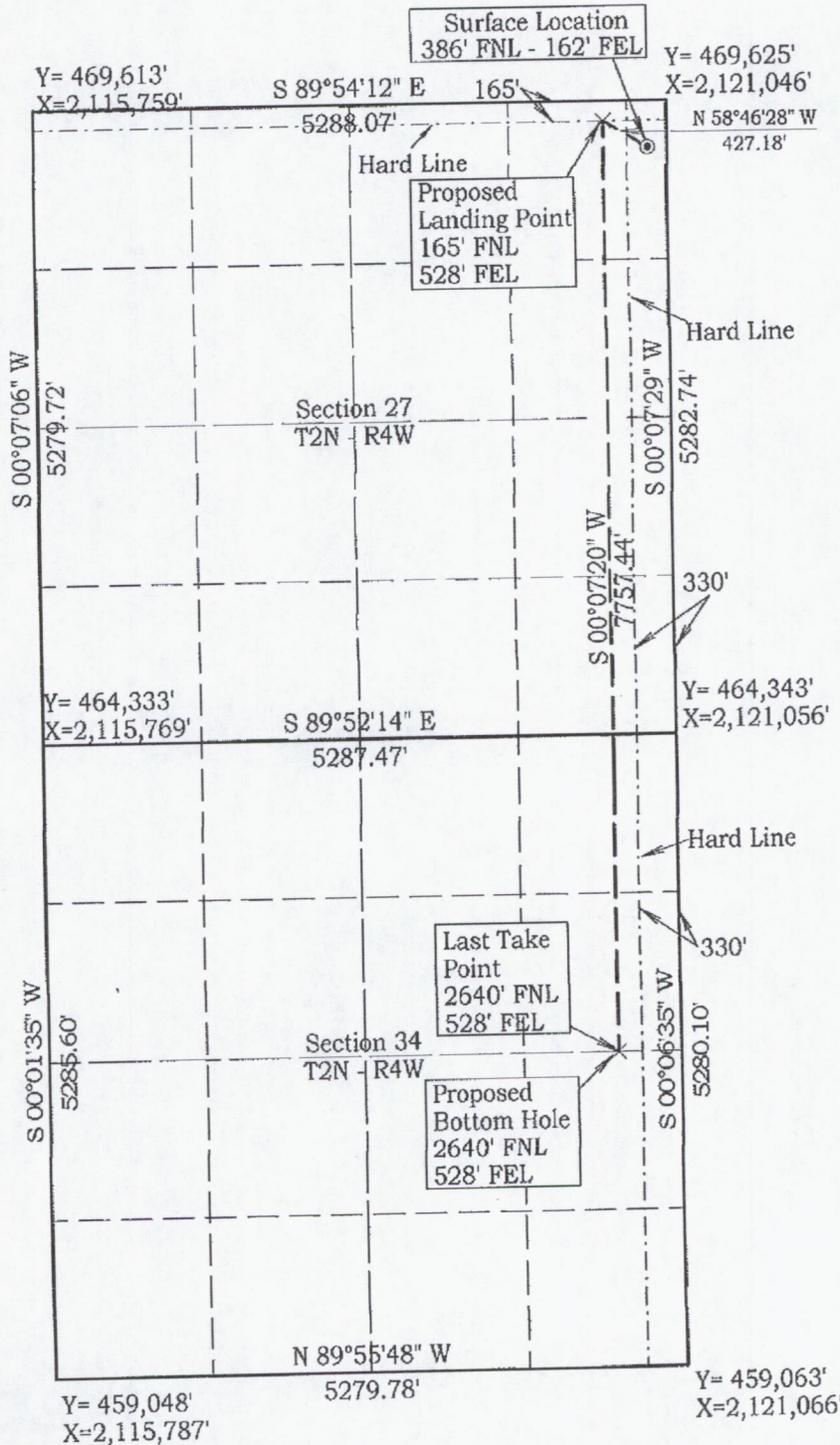
3-28-17

Permit Plat

M & M Land Surveying, Inc.

520 "E" Street NW. Ardmore, OK. 73401
 Office 580-226-0446 Mobile 580-221-4999 Fax 580-226-7158

Company Name: Newfield Exploration Mid-Continent, Inc. Lease Name: Mark #1H-27x
 Section 27 Township 2 North Range 4 West County Stephens Oklahoma
 Surface Location 386' FNL - 162' FEL Elevation 1188'
ALL SECTION CORNER COORDINATES ARE NAD 27



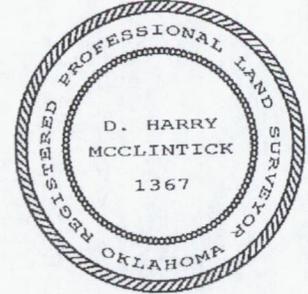
Scale: 1" = 1500'
 Invoice #16375
 Date 10/13/16

Location GPS NAD 27
 Oklahoma South
 Surface Location
 Latitude: 34.62209°
 Longitude: 97.59820°
 Y= 469,233'
 X= 2,120,885'

Location NAD 83
 Surface Location
 Latitude: 34.62217°
 Longitude: 97.59851°
 Y= 469,275'
 X= 2,089,290'

D. Harry McClintick
 D. Harry McClintick, R.P.L.S. # 1367, CA # 3093

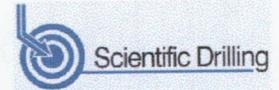
This location has been staked according to the best official survey records available to us, but its accuracy is not guaranteed. Please review this plat and notify us immediately of any discrepancy.





Scientific Drilling

Survey Report



Company:	Newfield Explor. Mid Continent, Inc.	Local Co-ordinate Reference:	Well Mark 1H-27X
Project:	Stephens County, Oklahoma	TVD Reference:	Cactus 165 1188 GL + 28 KB @ 1216.00ft
Site:	Section34/27/23/14-2N-4W	MD Reference:	Cactus 165 1188 GL + 28 KB @ 1216.00ft
Well:	Mark 1H-27X	North Reference:	True
Wellbore:	ST1 Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	ST1 As Drilled	Database:	Oklahoma District

Project	Stephens County, Oklahoma, Stephens County, Oklahoma		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Oklahoma South 3502		

Site	Section34/27/23/14-2N-4W, SHL Boles #6H-14X		
Site Position:		Northing:	469,325.00 usft
From:	Map	Easting:	2,120,827.00 usft
Position Uncertainty:	2.00 ft	Slot Radius:	13-3/16 "
		Latitude:	34.622344°N
		Longitude:	97.598392°W
		Grid Convergence:	0.23 "

Well	Mark 1H-27X, Black Marker		
Well Position	+N-S	0.00 ft	Northing: 469,233.00 usft
	+E-W	0.00 ft	Easting: 2,120,885.00 usft
Position Uncertainty		0.00 ft	Wellhead Elevation: 1,216.00 ft
			Latitude: 34.622091°N
			Longitude: 97.598200°W
			Ground Level: 1,188.00 ft

Wellbore	ST1 Wellpath				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2016	11/29/2016	4.02	62.97	50,085

Design	ST1 As Drilled				
Audit Notes:		Phase:	ACTUAL	Tie On Depth:	17,425.00
Version:	1.0				
Vertical Section:	Depth From (TVD) (ft)	+N-S (ft)	+E-W (ft)	Direction (°)	
	0.00	0.00	0.00	180.00	

Survey Program	Date	12/8/2016			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
239.00	730.00	Survey #1 Gyrodata (Original Wellpath)	MWD-POOR	MWD-POOR	
730.00	17,425.00	Survey #2 MWD (Original Wellpath)	SDI MWD	Scientific Drilling Intl. MWD - Standard ver 1.0.1	
17,477.00	19,122.00	MWD ST1 Surveys (ST1 Wellpath)	MWD	MWD - Standard	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
239.00	0.47	96.40	239.00	-0.11	0.97	0.11	0.20	0.20	0.00	
495.00	0.64	87.65	494.99	-0.17	3.45	0.17	0.07	0.07	-3.42	
730.00	0.52	84.94	729.97	-0.02	5.82	0.02	0.05	-0.05	-1.15	
974.00	0.62	26.88	973.96	1.26	7.52	-1.26	0.23	0.04	-23.80	
1,158.00	0.79	44.72	1,157.95	3.04	8.86	-3.04	0.15	0.09	9.70	
1,341.00	0.53	46.83	1,340.94	4.52	10.37	-4.52	0.14	-0.14	1.15	
1,532.00	0.53	113.01	1,531.93	4.78	11.82	-4.78	0.30	0.00	34.65	
1,722.00	0.35	255.83	1,721.93	4.29	12.07	-4.29	0.44	-0.09	75.17	

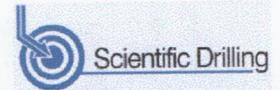
Company:	Newfield Explor. Mid Continent, Inc.	Local Co-ordinate Reference:	Well Mark 1H-27X
Project:	Stephens County, Oklahoma	TVD Reference:	Cactus 165 1188 GL + 28 KB @ 1216.00ft
Site:	Section34/27/23/14-2N-4W	MD Reference:	Cactus 165 1188 GL + 28 KB @ 1216.00ft
Well:	Mark 1H-27X	North Reference:	True
Wellbore:	ST1 Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	ST1 As Drilled	Database:	Oklahoma District

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
1,913.00	1.85	281.58	1,912.89	4.77	8.48	-4.77	0.81	0.79	13.48	
2,103.00	3.78	282.99	2,102.65	6.79	-0.62	-6.79	1.02	1.02	0.74	
2,293.00	4.92	288.62	2,292.10	10.80	-14.45	-10.80	0.64	0.60	2.96	
2,485.00	6.24	289.23	2,483.19	16.87	-32.10	-16.87	0.69	0.69	0.32	
2,675.00	7.74	284.22	2,671.77	23.41	-54.26	-23.41	0.85	0.79	-2.64	
2,866.00	8.35	283.78	2,860.89	29.88	-80.19	-29.88	0.32	0.32	-0.23	
3,057.00	8.35	283.43	3,049.86	36.40	-107.15	-36.40	0.03	0.00	-0.18	
3,248.00	8.44	285.54	3,238.82	43.38	-134.15	-43.38	0.17	0.05	1.10	
3,439.00	8.71	287.74	3,427.68	51.54	-161.43	-51.54	0.22	0.14	1.15	
3,630.00	8.18	286.77	3,616.61	59.87	-188.21	-59.87	0.29	-0.28	-0.51	
3,820.00	8.00	287.12	3,804.72	67.66	-213.79	-67.66	0.10	-0.09	0.18	
4,011.00	7.91	285.63	3,993.88	75.11	-239.15	-75.11	0.12	-0.05	-0.78	
4,202.00	7.56	289.06	4,183.15	82.76	-263.68	-82.76	0.30	-0.18	1.80	
4,393.00	8.18	286.59	4,372.35	90.74	-288.58	-90.74	0.37	0.32	-1.29	
4,584.00	7.91	292.31	4,561.47	99.61	-313.76	-99.61	0.44	-0.14	2.99	
4,774.00	7.65	290.64	4,749.72	109.03	-337.69	-109.03	0.18	-0.14	-0.88	
4,965.00	7.91	293.54	4,938.96	118.76	-361.63	-118.76	0.25	0.14	1.52	
5,156.00	7.48	287.87	5,128.25	127.82	-385.52	-127.82	0.46	-0.23	-2.97	
5,347.00	7.47	274.99	5,317.64	132.72	-409.72	-132.72	0.88	-0.01	-6.74	
5,539.00	6.24	277.89	5,508.26	135.24	-432.49	-135.24	0.67	-0.64	1.51	
5,730.00	4.48	272.00	5,698.42	136.92	-450.23	-136.92	0.96	-0.92	-3.08	
5,921.00	3.08	260.93	5,889.00	136.37	-462.75	-136.37	0.82	-0.73	-5.80	
6,112.00	2.73	245.46	6,079.76	133.67	-471.96	-133.67	0.45	-0.18	-8.10	
6,303.00	2.46	213.82	6,270.57	128.38	-478.37	-128.38	0.75	-0.14	-16.57	
6,494.00	3.08	188.95	6,461.36	119.90	-481.45	-119.90	0.70	0.32	-13.02	
6,685.00	2.81	169.00	6,652.11	110.24	-481.36	-110.24	0.55	-0.14	-10.45	
6,876.00	1.58	129.53	6,842.97	103.97	-478.43	-103.97	0.98	-0.64	-20.66	
7,067.00	1.23	91.04	7,033.92	102.25	-474.35	-102.25	0.51	-0.18	-20.15	
7,258.00	1.14	74.60	7,224.88	102.72	-470.47	-102.72	0.18	-0.05	-8.61	
7,449.00	1.23	60.54	7,415.84	104.23	-466.86	-104.23	0.16	0.05	-7.36	
7,640.00	1.14	56.41	7,606.80	106.29	-463.49	-106.29	0.06	-0.05	-2.16	
7,831.00	1.49	59.22	7,797.75	108.62	-459.77	-108.62	0.19	0.18	1.47	
8,021.00	1.41	68.19	7,987.69	110.75	-455.48	-110.75	0.13	-0.04	4.72	
8,212.00	1.85	63.09	8,178.61	113.02	-450.55	-113.02	0.24	0.23	-2.67	
8,403.00	2.29	60.45	8,369.49	116.29	-444.48	-116.29	0.24	0.23	-1.38	
8,498.00	2.81	43.93	8,464.39	118.91	-441.21	-118.91	0.94	0.55	-17.39	
8,593.00	2.99	44.54	8,559.27	122.35	-437.86	-122.35	0.19	0.19	0.64	
8,689.00	2.90	35.75	8,655.14	126.11	-434.68	-126.11	0.48	-0.09	-9.16	
8,784.00	2.81	35.40	8,750.03	129.95	-431.93	-129.95	0.10	-0.09	-0.37	
8,880.00	3.17	25.56	8,845.90	134.27	-429.42	-134.27	0.65	0.38	-10.25	
8,975.00	2.99	29.25	8,940.76	138.80	-427.08	-138.80	0.28	-0.19	3.88	
9,071.00	3.17	27.14	9,036.62	143.34	-424.65	-143.34	0.22	0.19	-2.20	
9,166.00	2.73	22.66	9,131.49	147.77	-422.58	-147.77	0.52	-0.46	-4.72	



Scientific Drilling

Survey Report



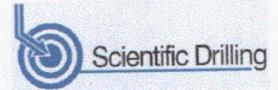
Company:	Newfield Explor. Mid Continent, Inc.	Local Co-ordinate Reference:	Well Mark 1H-27X
Project:	Stephens County, Oklahoma	TVD Reference:	Cactus 165 1188 GL + 28 KB @ 1216.00ft
Site:	Section34/27/23/14-2N-4W	MD Reference:	Cactus 165 1188 GL + 28 KB @ 1216.00ft
Well:	Mark 1H-27X	North Reference:	True
Wellbore:	ST1 Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	ST1 As Drilled	Database:	Oklahoma District

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
9,262.00	3.08	29.16	9,227.37	152.13	-420.44	-152.13	0.50	0.36	6.77	
9,358.00	2.99	26.35	9,323.24	156.63	-418.07	-156.63	0.18	-0.09	-2.93	
9,453.00	3.08	17.03	9,418.10	161.29	-416.22	-161.29	0.53	0.09	-9.81	
9,549.00	2.81	15.54	9,513.98	166.02	-414.84	-166.02	0.29	-0.28	-1.55	
9,644.00	3.08	16.42	9,608.85	170.71	-413.49	-170.71	0.29	0.28	0.93	
9,740.00	3.17	19.41	9,704.71	175.69	-411.88	-175.69	0.19	0.09	3.11	
9,836.00	3.43	19.93	9,800.55	180.89	-410.02	-180.89	0.27	0.27	0.54	
9,931.00	3.43	18.26	9,895.38	186.26	-408.16	-186.26	0.11	0.00	-1.76	
10,027.00	3.69	21.60	9,991.19	191.86	-406.12	-191.86	0.35	0.27	3.48	
10,122.00	3.87	21.34	10,085.99	197.69	-403.83	-197.69	0.19	0.19	-0.27	
10,218.00	3.96	20.11	10,181.76	203.82	-401.51	-203.82	0.13	0.09	-1.28	
10,312.00	3.96	20.37	10,275.54	209.91	-399.27	-209.91	0.02	0.00	0.28	
10,408.00	2.99	19.58	10,371.36	215.38	-397.27	-215.38	1.01	-1.01	-0.82	
10,503.00	3.25	23.63	10,466.22	220.18	-395.36	-220.18	0.36	0.27	4.26	
10,599.00	3.78	24.77	10,562.04	225.55	-392.95	-225.55	0.56	0.55	1.19	
10,694.00	3.43	23.19	10,656.85	231.00	-390.52	-231.00	0.38	-0.37	-1.66	
10,789.00	3.34	19.32	10,751.69	236.23	-388.48	-236.23	0.26	-0.09	-4.07	
10,884.00	2.99	20.73	10,846.54	241.16	-386.69	-241.16	0.38	-0.37	1.48	
10,980.00	2.37	28.37	10,942.44	245.24	-384.86	-245.24	0.74	-0.65	7.96	
11,075.00	2.37	34.26	11,037.35	248.60	-382.82	-248.60	0.26	0.00	6.20	
11,171.00	2.46	29.95	11,133.27	252.02	-380.67	-252.02	0.21	0.09	-4.49	
11,267.00	3.08	20.29	11,229.16	256.23	-378.75	-256.23	0.81	0.65	-10.06	
11,362.00	3.34	20.02	11,324.01	261.22	-376.92	-261.22	0.27	0.27	-0.28	
11,458.00	3.25	23.54	11,419.85	266.34	-374.88	-266.34	0.23	-0.09	3.67	
11,554.00	3.69	33.82	11,515.67	271.40	-372.07	-271.40	0.79	0.46	10.71	
11,649.00	3.17	44.81	11,610.50	275.81	-368.52	-275.81	0.88	-0.55	11.57	
11,745.00	3.87	51.84	11,706.32	279.69	-364.10	-279.69	0.86	0.73	7.32	
11,840.00	3.78	54.30	11,801.11	283.50	-359.03	-283.50	0.20	-0.09	2.59	
11,936.00	2.99	46.65	11,896.94	287.07	-354.64	-287.07	0.95	-0.82	-7.97	
12,031.00	2.99	53.16	11,991.81	290.25	-350.86	-290.25	0.36	0.00	6.85	
12,127.00	3.61	57.46	12,087.66	293.38	-346.31	-293.38	0.69	0.65	4.48	
12,222.00	4.48	59.66	12,182.42	296.86	-340.58	-296.86	0.93	0.92	2.32	
12,318.00	5.45	62.47	12,278.06	300.86	-333.31	-300.86	1.04	1.01	2.93	
12,405.00	6.07	61.15	12,364.62	304.99	-325.61	-304.99	0.73	0.71	-1.52	
12,502.00	6.51	53.95	12,461.03	310.70	-316.67	-310.70	0.93	0.45	-7.42	
12,597.00	3.43	52.89	12,555.67	315.59	-310.05	-315.59	3.24	-3.24	-1.12	
12,692.00	1.93	126.55	12,650.58	316.35	-306.50	-316.35	3.61	-1.58	77.54	
12,788.00	2.90	162.40	12,746.50	313.07	-304.47	-313.07	1.82	1.01	37.34	
12,883.00	3.08	179.98	12,841.37	308.23	-303.74	-308.23	0.98	0.19	18.51	
12,979.00	4.13	182.97	12,937.18	302.20	-303.92	-302.20	1.11	1.09	3.11	
13,027.00	10.73	184.47	12,984.75	296.01	-304.36	-296.01	13.75	13.75	3.13	
13,075.00	17.67	183.50	13,031.26	284.27	-305.15	-284.27	14.47	14.46	-2.02	
13,122.00	25.15	182.97	13,074.98	267.15	-306.10	-267.15	15.92	15.91	-1.13	



Scientific Drilling

Survey Report



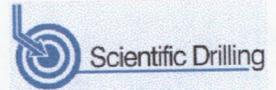
Company:	Newfield Explor. Mid Continent, Inc.	Local Co-ordinate Reference:	Well Mark 1H-27X
Project:	Stephens County, Oklahoma	TVD Reference:	Cactus 165 1188 GL + 28 KB @ 1216.00ft
Site:	Section34/27/23/14-2N-4W	MD Reference:	Cactus 165 1188 GL + 28 KB @ 1216.00ft
Well:	Mark 1H-27X	North Reference:	True
Wellbore:	ST1 Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	ST1 As Drilled	Database:	Oklahoma District

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,170.00	33.33	185.43	13,116.83	243.80	-307.88	-243.80	17.22	17.04	5.13
13,218.00	41.06	185.43	13,155.04	214.93	-310.63	-214.93	16.10	16.10	0.00
13,266.00	49.24	181.74	13,188.87	181.00	-312.67	-181.00	17.89	17.04	-7.69
13,314.00	57.86	181.39	13,217.36	142.45	-313.72	-142.45	17.97	17.96	-0.73
13,361.00	64.10	179.90	13,240.15	101.37	-314.17	-101.37	13.56	13.28	-3.17
13,409.00	70.35	178.84	13,258.72	57.14	-313.67	-57.14	13.18	13.02	-2.21
13,456.00	78.00	179.98	13,271.53	11.96	-313.22	-11.96	16.44	16.28	2.43
13,551.00	87.76	182.71	13,283.29	-82.16	-315.45	82.16	10.66	10.27	2.87
13,647.00	88.02	182.27	13,286.83	-178.01	-319.62	178.01	0.53	0.27	-0.46
13,677.00	88.40	181.82	13,287.77	-207.97	-320.69	207.97	1.96	1.27	-1.50
13,773.00	87.90	182.36	13,290.87	-303.86	-324.19	303.86	0.77	-0.52	0.56
13,868.00	86.24	182.62	13,295.72	-398.64	-328.31	398.64	1.77	-1.75	0.27
13,964.00	86.48	182.94	13,301.82	-494.33	-332.95	494.33	0.42	0.25	0.33
14,059.00	86.67	182.99	13,307.49	-589.04	-337.86	589.04	0.21	0.20	0.05
14,155.00	85.12	183.64	13,314.36	-684.63	-343.40	684.63	1.75	-1.61	0.68
14,250.00	86.11	183.03	13,321.63	-779.19	-348.91	779.19	1.22	1.04	-0.64
14,346.00	86.30	183.61	13,327.98	-874.81	-354.45	874.81	0.63	0.20	0.60
14,442.00	85.99	183.85	13,334.43	-970.39	-360.68	970.39	0.41	-0.32	0.25
14,537.00	87.29	182.33	13,340.00	-1,065.09	-365.80	1,065.09	2.10	1.37	-1.60
14,633.00	87.41	181.08	13,344.44	-1,160.94	-368.65	1,160.94	1.31	0.13	-1.30
14,728.00	87.16	181.57	13,348.94	-1,255.81	-370.84	1,255.81	0.58	-0.26	0.52
14,824.00	86.42	180.34	13,354.32	-1,351.64	-372.44	1,351.64	1.49	-0.77	-1.28
14,920.00	86.92	181.47	13,359.89	-1,447.47	-373.95	1,447.47	1.29	0.52	1.18
15,015.00	86.92	182.16	13,365.00	-1,542.28	-376.96	1,542.28	0.73	0.00	0.73
15,111.00	85.37	180.13	13,371.45	-1,638.04	-378.87	1,638.04	2.66	-1.61	-2.11
15,206.00	85.31	180.32	13,379.17	-1,732.72	-379.25	1,732.72	0.21	-0.06	0.20
15,302.00	86.61	179.10	13,385.93	-1,828.48	-378.76	1,828.48	1.85	1.35	-1.27
15,397.00	87.04	179.52	13,391.20	-1,923.33	-377.62	1,923.33	0.63	0.45	0.44
15,493.00	87.29	179.97	13,395.94	-2,019.21	-377.19	2,019.21	0.54	0.26	0.47
15,589.00	87.47	180.61	13,400.33	-2,115.10	-377.68	2,115.10	0.69	0.19	0.67
15,684.00	87.22	181.07	13,404.73	-2,209.99	-379.07	2,209.99	0.55	-0.26	0.48
15,779.00	87.10	182.19	13,409.44	-2,304.84	-381.77	2,304.84	1.18	-0.13	1.18
15,875.00	87.04	182.29	13,414.35	-2,400.64	-385.51	2,400.64	0.12	-0.06	0.10
15,969.00	86.56	182.44	13,419.60	-2,494.41	-389.39	2,494.41	0.53	-0.51	0.16
16,065.00	86.48	183.09	13,425.42	-2,590.12	-394.01	2,590.12	0.68	-0.08	0.68
16,090.00	86.42	183.01	13,426.97	-2,615.04	-395.34	2,615.04	0.40	-0.24	-0.32
16,185.00	86.30	180.37	13,433.00	-2,709.80	-398.13	2,709.80	2.78	-0.13	-2.78
16,280.00	87.60	179.05	13,438.06	-2,804.66	-397.65	2,804.66	1.95	1.37	-1.39
16,376.00	88.64	178.65	13,441.21	-2,900.58	-395.73	2,900.58	1.16	1.08	-0.42
16,471.00	87.53	177.51	13,444.38	-2,995.47	-392.55	2,995.47	1.67	-1.17	-1.20
16,566.00	87.78	175.04	13,448.27	-3,090.19	-386.38	3,090.19	2.61	0.26	-2.60
16,662.00	89.08	174.14	13,450.90	-3,185.72	-377.33	3,185.72	1.65	1.35	-0.94
16,757.00	89.69	175.78	13,451.92	-3,280.34	-368.99	3,280.34	1.84	0.64	1.73
16,853.00	90.19	179.83	13,452.02	-3,376.25	-365.31	3,376.25	4.25	0.52	4.22



Scientific Drilling

Survey Report



Company:	Newfield Explor. Mid Continent, Inc.	Local Co-ordinate Reference:	Well Mark 1H-27X
Project:	Stephens County, Oklahoma	TVD Reference:	Cactus 165 1188 GL + 28 KB @ 1216.00ft
Site:	Section34/27/23/14-2N-4W	MD Reference:	Cactus 165 1188 GL + 28 KB @ 1216.00ft
Well:	Mark 1H-27X	North Reference:	True
Wellbore:	ST1 Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	ST1 As Drilled	Database:	Oklahoma District

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
16,948.00	90.68	180.57	13,451.30	-3,471.25	-365.64	3,471.25	0.93	0.52	0.78
17,044.00	89.75	180.22	13,450.94	-3,567.24	-366.30	3,567.24	1.04	-0.97	-0.36
17,139.00	89.88	180.61	13,451.24	-3,662.24	-366.99	3,662.24	0.43	0.14	0.41
17,235.00	89.82	180.15	13,451.50	-3,758.24	-367.63	3,758.24	0.48	-0.06	-0.48
17,330.00	90.56	180.56	13,451.18	-3,853.24	-368.22	3,853.24	0.89	0.78	0.43
17,425.00	91.11	180.48	13,449.80	-3,948.22	-369.08	3,948.22	0.59	0.58	-0.08
17,477.00	88.15	180.34	13,450.13	-4,000.21	-369.45	4,000.21	5.70	-5.69	-0.27
17,520.00	85.37	179.65	13,452.56	-4,043.14	-369.45	4,043.14	6.66	-6.47	-1.60
17,616.00	84.50	179.30	13,461.04	-4,138.76	-368.57	4,138.76	0.98	-0.91	-0.36
17,711.00	86.36	179.24	13,468.61	-4,233.45	-367.37	4,233.45	1.96	1.96	-0.06
17,807.00	87.18	180.33	13,474.02	-4,329.29	-367.01	4,329.29	1.42	0.85	1.14
17,902.00	87.90	180.23	13,478.09	-4,424.20	-367.47	4,424.20	0.77	0.76	-0.11
17,997.00	88.77	180.77	13,480.85	-4,519.16	-368.30	4,519.16	1.08	0.92	0.57
18,093.00	89.38	181.03	13,482.40	-4,615.13	-369.81	4,615.13	0.69	0.64	0.27
18,188.00	88.21	180.83	13,484.40	-4,710.10	-371.35	4,710.10	1.25	-1.23	-0.21
18,283.00	86.12	179.93	13,489.10	-4,804.97	-371.98	4,804.97	2.39	-2.20	-0.95
18,343.00	85.93	179.95	13,493.26	-4,864.83	-371.92	4,864.83	0.32	-0.32	0.03
18,360.00	85.45	179.64	13,494.54	-4,881.78	-371.86	4,881.78	3.35	-2.83	-1.80
0'FNL & 523.30'FEL - From Sec 27 into Sec 34									
18,378.00	84.94	179.32	13,496.05	-4,899.71	-371.69	4,899.71	3.35	-2.83	-1.80
18,474.00	86.03	178.74	13,503.60	-4,995.40	-370.07	4,995.40	1.29	1.14	-0.60
18,569.00	86.48	179.57	13,509.81	-5,090.19	-368.68	5,090.19	0.99	0.47	0.87
18,665.00	86.61	180.55	13,515.59	-5,186.01	-368.78	5,186.01	1.03	0.14	1.02
18,760.00	86.61	181.53	13,521.21	-5,280.83	-370.50	5,280.83	1.03	0.00	1.03
18,856.00	86.73	183.38	13,526.79	-5,376.57	-374.60	5,376.57	1.93	0.13	1.93
18,951.00	88.03	184.10	13,531.13	-5,471.27	-380.79	5,471.27	1.56	1.37	0.76
19,047.00	89.56	183.15	13,533.15	-5,567.05	-386.86	5,567.05	1.88	1.59	-0.99
Last MWD SVY									
19,122.00	89.56	183.15	13,533.72	-5,641.94	-390.98	5,641.94	0.00	0.00	0.00
Actual BHL 19122'MD - 742.46'FNL & 540.95'FEL of Sec 34									

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
18,360.00	13,494.54	-4,881.78	-371.86	0'FNL & 523.30'FEL
18,360.00	13,494.54	-4,881.78	-371.86	From Sec 27 into Sec 34
19,047.00	13,533.15	-5,567.05	-386.86	Last MWD SVY
19,122.00	13,533.72	-5,641.94	-390.98	Actual BHL 19122'MD
19,122.00	13,533.72	-5,641.94	-390.98	742.46'FNL & 540.95'FEL of Sec 34

Checked By: _____ Approved By: _____ Date: _____

27

34

NEWFIELD EX MID-CON
YANDELL 1H-21X

NEWFIELD EX MID-CON
YANDELL 1H-27

NEWFIELD EX MID-CON
YANDELL 2H-27

NEWFIELD EX MID-CON
YANDELL 3H-27

NEWFIELD EX MID-CON
YANDELL 4H-27

NEWFIELD EX MID-CON
YANDELL 5H-27

NEWFIELD EX MID-CON
YANDELL 6H-27

NEWFIELD EX MID-CON
MARK 1H-27X

NEWFIELD

Newfield Exploration Mid-Continent

Mark 1H-27X

27&34-2N-4W

Stephens County, OK



ATTRIBUTE MAP

- Hunton Oil
- Hunton Gas
- Mississippian Oil
- Mississippian Gas
- Woodford Oil
- Woodford Gas
- Commingled Oil
- Commingled Gas

WELL SYMBOLS

- Dry Hole, With Show of Oil
- Dry Hole
- Location Only
- Oil Well
- Plugged Oil Well
- Producing

REMARKS

CD# 2016-4038-T MUH
CD# 2016-4039-T LE

March 7, 2017