



Callon Petroleum Operating Co.

Reagan County, TX (NAD27 TC)

University 26-35

#15AH

OH

Design: OH

Standard Survey Report

02 May, 2014





Company:	Callon Petroleum Operating Co.	Local Co-ordinate Reference:	Well #15AH
Project:	Reagan County, TX (NAD27 TC)	TVD Reference:	KB= 24' @ 2663.44usft (Cactus 162)
Site:	University 26-35	MD Reference:	KB= 24' @ 2663.44usft (Cactus 162)
Well:	#15AH	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland District

Project	Reagan County, TX (NAD27 TC)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Texas Central 4203		

Site	University 26-35		
Site Position:		Northing:	586,756.88 usft
From:	Map	Easting:	1,576,946.40 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	31° 16' 22.609 N
		Longitude:	101° 41' 15.092 W
		Grid Convergence:	-0.70 °

Well	#15AH		
Well Position	+N/-S	0.00 usft	Northing: 587,059.90 usft
	+E/-W	0.00 usft	Easting: 1,574,947.68 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	31° 16' 25.366 N
		Longitude:	101° 41' 38.165 W
		Ground Level:	2,639.44 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination (°)
	BGGM2012	3/28/2014	6.36
			Dip Angle (°) 59.48
			Field Strength (nT) 47,916

Design	OH		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.00	0.00	0.00
			Direction (bearing) 1.16

Survey Program	Date	5/2/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
119.53	607.00	Gyro #1 (OH)	NSG-GYC_WL	Gyro in gyrocompassing mode on wireline
725.00	15,993.00	SDI MWD #1 (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	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	
119.53	0.85	158.22	119.53	-0.82	0.33	-0.82	0.71	0.71	0.00	
149.16	0.81	203.70	149.15	-1.22	0.33	-1.21	2.17	-0.13	153.49	
240.16	0.90	226.71	240.14	-2.30	-0.45	-2.31	0.39	0.10	25.29	
331.73	0.85	188.24	331.70	-3.46	-1.07	-3.48	0.63	-0.05	-42.01	
424.52	1.03	193.32	424.48	-4.96	-1.36	-4.98	0.21	0.19	5.47	
520.32	1.12	195.82	520.26	-6.69	-1.82	-6.73	0.11	0.09	2.61	
607.00	1.08	205.38	606.93	-8.25	-2.40	-8.30	0.22	-0.05	11.03	
725.00	0.53	200.82	724.92	-9.76	-3.07	-9.82	0.47	-0.47	-3.86	
914.00	0.79	321.15	913.91	-9.57	-4.20	-9.65	0.61	0.14	63.67	



Survey Report



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Design:	OH	Database:	Midland District

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,102.00	1.14	356.48	1,101.88	-6.69	-5.13	-6.79	0.36	0.19	18.79
1,291.00	1.41	357.62	1,290.84	-2.49	-5.34	-2.60	0.14	0.14	0.60
1,480.00	1.41	3.07	1,479.78	2.16	-5.31	2.05	0.07	0.00	2.88
1,668.00	1.41	3.95	1,667.72	6.77	-5.03	6.67	0.01	0.00	0.47
1,856.00	1.85	4.92	1,855.65	12.10	-4.61	12.01	0.23	0.23	0.52
2,044.00	2.02	326.24	2,043.55	17.88	-6.19	17.75	0.69	0.09	-20.57
2,233.00	1.58	279.40	2,232.46	21.08	-10.61	20.86	0.79	-0.23	-24.78
2,421.00	2.02	279.75	2,420.37	22.06	-16.43	21.72	0.23	0.23	0.19
2,609.00	0.70	339.34	2,608.32	23.70	-20.10	23.28	0.94	-0.70	31.70
2,796.00	0.79	353.75	2,795.30	26.05	-20.65	25.62	0.11	0.05	7.71
2,984.00	0.88	3.33	2,983.28	28.78	-20.70	28.35	0.09	0.05	5.10
3,172.00	1.06	3.86	3,171.26	31.95	-20.50	31.53	0.10	0.10	0.28
3,360.00	1.49	10.72	3,359.21	36.09	-19.93	35.68	0.24	0.23	3.65
3,547.00	1.58	24.34	3,546.14	40.83	-18.42	40.45	0.20	0.05	7.28
3,735.00	1.85	22.93	3,734.06	45.98	-16.17	45.65	0.15	0.14	-0.75
3,925.00	1.85	25.31	3,923.96	51.58	-13.66	51.29	0.04	0.00	1.25
4,111.00	1.93	27.33	4,109.86	57.08	-10.94	56.84	0.06	0.04	1.09
4,299.00	1.93	27.50	4,297.75	62.70	-8.02	62.52	0.00	0.00	0.09
4,488.00	1.41	24.16	4,486.67	67.64	-5.60	67.52	0.28	-0.28	-1.77
4,676.00	1.14	27.59	4,674.62	71.41	-3.79	71.32	0.15	-0.14	1.82
4,865.00	0.75	25.75	4,863.60	74.19	-2.38	74.13	0.21	-0.21	-0.97
5,052.00	0.70	18.19	5,050.58	76.38	-1.49	76.33	0.06	-0.03	-4.04
5,240.00	0.53	17.92	5,238.57	78.30	-0.87	78.26	0.09	-0.09	-0.14
5,429.00	0.44	22.58	5,427.57	79.80	-0.32	79.78	0.05	-0.05	2.47
5,617.00	0.70	28.82	5,615.56	81.47	0.51	81.47	0.14	0.14	3.32
5,806.00	1.23	175.34	5,804.54	80.46	1.23	80.47	0.98	0.28	77.52
5,994.00	1.49	83.31	5,992.51	78.74	3.83	78.80	1.05	0.14	-48.95
6,183.00	1.58	71.01	6,181.44	79.87	8.73	80.03	0.18	0.05	-6.51
6,372.00	1.32	69.60	6,370.38	81.48	13.23	81.73	0.14	-0.14	-0.75
6,559.00	0.97	78.57	6,557.34	82.54	16.80	82.86	0.21	-0.19	4.80
6,748.00	0.88	68.02	6,746.32	83.40	19.72	83.78	0.10	-0.05	-5.58
6,936.00	0.70	74.09	6,934.30	84.48	22.81	84.93	0.08	-0.08	2.55
7,124.00	0.88	53.96	7,122.29	84.74	23.32	85.20	0.78	0.43	-47.93
7,312.00	1.06	44.64	7,310.28	85.79	24.51	86.27	0.25	0.19	-9.91
7,500.00	2.02	47.45	7,498.24	87.54	26.36	88.06	1.01	1.01	2.96
7,688.00	2.11	49.83	7,686.18	89.76	28.88	90.33	0.13	0.10	2.56
7,876.00	1.58	37.87	7,874.13	91.92	31.02	92.53	0.69	-0.56	-12.59
8,064.00	2.46	29.96	8,062.08	94.66	32.80	95.31	0.99	0.95	-8.51
8,252.00	2.90	26.54	8,250.97	98.54	34.87	99.22	0.50	0.47	-3.64
8,440.00	2.64	23.46	8,438.89	101.55	36.29	102.27	0.43	-0.38	-4.46
8,628.00	2.73	26.80	8,626.80	104.99	37.90	105.74	0.22	0.11	4.12
8,816.00	3.87	19.15	8,814.75	106.63	38.57	107.40	3.93	3.68	-24.68
9,004.00	7.74	359.03	9,002.59	109.71	38.88	110.48	13.92	12.48	-64.90



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Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,835.00	11.70	354.81	7,832.14	114.93	38.56	115.69	12.97	12.77	-13.61
7,867.00	16.44	353.05	7,863.17	122.66	37.72	123.40	14.87	14.81	-5.50
7,898.00	20.84	352.87	7,892.54	132.49	36.51	133.21	14.19	14.19	-0.58
7,929.00	24.36	352.00	7,921.15	144.30	34.93	144.98	11.41	11.35	-2.81
7,961.00	27.87	351.82	7,949.88	158.24	32.95	158.88	10.97	10.97	-0.56
7,992.00	30.68	351.68	7,976.92	173.24	30.77	173.83	9.07	9.06	-0.45
8,023.00	33.94	350.24	8,003.12	189.60	28.16	190.13	10.80	10.52	-4.65
8,054.00	37.90	350.15	8,028.22	207.52	25.06	207.99	12.78	12.77	-0.29
8,086.00	43.53	353.05	8,052.46	228.16	22.04	228.56	18.56	17.59	9.06
8,118.00	49.24	357.36	8,074.53	251.23	20.15	251.59	20.33	17.84	13.47
8,149.00	56.37	1.66	8,093.27	275.90	19.98	276.25	25.51	23.00	13.87
8,180.00	63.58	3.86	8,108.77	302.69	21.29	303.06	24.05	23.26	7.10
8,211.00	68.85	4.83	8,121.27	330.96	23.45	331.37	17.24	17.00	3.13
8,243.00	74.74	6.94	8,131.26	361.18	26.57	361.65	19.44	18.41	6.59
8,274.00	80.55	7.64	8,137.89	391.21	30.41	391.74	18.87	18.74	2.26
8,346.00	86.35	9.13	8,146.10	461.94	40.85	462.67	8.31	8.06	2.07
8,438.00	89.78	7.90	8,149.21	552.86	54.46	553.85	3.96	3.73	-1.34
8,530.00	89.43	7.11	8,149.84	644.07	66.47	645.28	0.94	-0.38	-0.86
8,618.10	90.10	7.28	8,150.20	731.47	77.51	732.89	0.79	0.76	0.20
POP Per Callon (#15AH)									
8,622.00	90.13	7.29	8,150.20	735.34	78.00	736.77	0.79	0.76	0.20
8,715.00	90.48	5.62	8,149.70	827.74	88.46	829.37	1.83	0.38	-1.80
8,807.00	90.04	5.00	8,149.28	919.35	96.97	921.13	0.83	-0.48	-0.67
8,899.00	90.04	2.54	8,149.22	1,011.14	103.02	1,013.03	2.67	0.00	-2.67
8,991.00	89.96	1.05	8,149.22	1,103.09	105.90	1,105.02	1.62	-0.09	-1.62
9,083.00	90.13	0.71	8,149.15	1,195.08	107.31	1,197.02	0.42	0.18	-0.38
9,176.00	90.48	359.64	8,148.65	1,288.08	107.59	1,290.00	1.21	0.38	-1.15
9,269.00	89.96	359.29	8,148.29	1,381.07	106.72	1,382.96	0.67	-0.56	-0.38
9,335.70	90.77	358.73	8,147.87	1,447.76	105.57	1,449.60	1.48	1.21	-0.84
TGT 1 (#15AH)									
9,363.00	91.10	358.50	8,147.42	1,475.05	104.91	1,476.88	1.48	1.21	-0.84
9,458.00	89.96	359.73	8,146.55	1,570.03	103.44	1,571.81	1.77	-1.20	1.29
9,552.00	89.78	357.97	8,146.76	1,664.01	101.56	1,665.73	1.88	-0.19	-1.87
9,645.00	90.22	357.45	8,146.76	1,756.93	97.84	1,758.56	0.73	0.47	-0.56
9,739.00	91.36	357.97	8,145.46	1,850.85	94.09	1,852.38	1.33	1.21	0.55
9,833.00	88.11	354.90	8,145.90	1,944.64	88.24	1,946.03	4.76	-3.46	-3.27
9,927.00	89.69	356.48	8,147.70	2,038.35	81.18	2,039.58	2.38	1.68	1.68
10,022.00	91.71	356.39	8,146.54	2,133.16	75.27	2,134.25	2.13	2.13	-0.09
10,116.00	89.34	354.19	8,145.68	2,226.82	67.56	2,227.74	3.44	-2.52	-2.34
10,210.00	90.31	0.35	8,145.97	2,320.67	63.08	2,321.47	6.63	1.03	6.55
10,304.00	90.48	7.90	8,145.32	2,414.36	69.84	2,415.28	8.03	0.18	8.03
10,398.00	89.78	14.32	8,145.11	2,506.55	87.94	2,507.81	6.87	-0.74	6.83
10,492.00	90.13	20.65	8,145.18	2,596.16	116.17	2,597.98	6.74	0.37	6.73
10,586.00	90.04	23.37	8,145.04	2,683.30	151.40	2,685.82	2.90	-0.10	2.89



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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
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10,680.00	90.22	24.69	8,144.83	2,769.15	189.67	2,772.43	1.42	0.19	1.40
10,773.00	90.13	23.02	8,144.54	2,854.20	227.28	2,858.23	1.80	-0.10	-1.80
10,867.00	89.96	18.71	8,144.47	2,942.02	260.75	2,946.70	4.59	-0.18	-4.59
10,961.00	89.43	10.37	8,144.97	3,032.92	284.33	3,038.07	8.89	-0.56	-8.87
11,055.00	91.10	7.29	8,144.54	3,125.79	298.76	3,131.22	3.73	1.78	-3.28
11,149.00	88.20	2.37	8,145.11	3,219.42	306.67	3,224.98	6.08	-3.09	-5.23
11,242.00	87.58	1.93	8,148.53	3,312.29	310.16	3,317.91	0.82	-0.67	-0.47
11,337.00	89.87	3.69	8,150.65	3,407.14	314.81	3,412.83	3.04	2.41	1.85
11,431.00	89.60	5.97	8,151.08	3,500.80	322.73	3,506.63	2.44	-0.29	2.43
11,524.00	91.28	2.19	8,150.37	3,593.54	329.34	3,599.49	4.45	1.81	-4.06
11,618.00	91.36	0.17	8,148.20	3,687.49	331.28	3,693.46	2.15	0.09	-2.15
11,627.09	91.43	0.06	8,147.98	3,696.58	331.30	3,702.54	1.44	0.76	-1.23
TGT 2 (#15AH)									
11,711.00	92.07	359.03	8,145.42	3,780.45	330.63	3,786.38	1.44	0.76	-1.23
11,805.00	90.75	357.27	8,143.11	3,874.36	327.60	3,880.22	2.34	-1.40	-1.87
11,899.00	88.99	357.62	8,143.32	3,968.27	323.41	3,974.02	1.91	-1.87	0.37
11,993.00	88.72	0.43	8,145.20	4,062.22	321.81	4,067.92	3.00	-0.29	2.99
12,087.00	88.64	358.15	8,147.36	4,156.19	320.64	4,161.84	2.43	-0.09	-2.43
12,182.00	89.70	1.05	8,148.74	4,251.16	319.98	4,256.78	3.25	1.12	3.05
12,276.00	89.60	358.68	8,149.31	4,345.15	319.76	4,350.75	2.52	-0.11	-2.52
12,369.00	89.25	357.88	8,150.25	4,438.11	316.97	4,443.63	0.94	-0.38	-0.86
12,469.00	89.08	359.29	8,151.71	4,538.06	314.50	4,543.51	1.42	-0.17	1.41
12,557.00	88.64	357.27	8,153.46	4,626.00	311.86	4,631.38	2.35	-0.50	-2.30
12,652.00	88.37	359.82	8,155.94	4,720.93	309.45	4,726.24	2.70	-0.28	2.68
12,746.00	88.81	358.68	8,158.25	4,814.89	308.22	4,820.16	1.30	0.47	-1.21
12,840.00	87.93	354.81	8,160.92	4,908.68	302.88	4,913.82	4.22	-0.94	-4.12
12,935.00	89.43	355.86	8,163.11	5,003.34	295.16	5,008.30	1.93	1.58	1.11
13,029.00	88.76	355.49	8,164.60	5,097.06	288.07	5,101.86	0.81	-0.71	-0.39
13,123.00	88.37	355.86	8,166.95	5,190.76	280.98	5,195.40	0.57	-0.41	0.39
13,212.93	89.55	359.73	8,168.59	5,280.59	277.53	5,285.14	4.50	1.31	4.31
TGT 3 (#15AH)									
13,217.00	89.60	359.91	8,168.62	5,284.66	277.52	5,289.21	4.50	1.31	4.31
13,311.00	88.90	357.90	8,169.85	5,378.63	275.72	5,383.12	2.26	-0.74	-2.14
13,405.00	89.08	356.83	8,171.50	5,472.51	271.40	5,476.90	1.15	0.19	-1.14
13,500.00	88.81	357.18	8,173.25	5,567.37	266.44	5,571.63	0.47	-0.28	0.37
13,594.00	89.34	357.01	8,174.77	5,661.24	261.67	5,665.38	0.59	0.56	-0.18
13,689.00	89.43	357.27	8,175.79	5,756.11	256.93	5,760.14	0.29	0.09	0.27
13,784.00	89.34	357.45	8,176.81	5,851.01	252.56	5,854.93	0.21	-0.09	0.19
13,878.00	89.25	358.06	8,177.97	5,944.93	248.88	5,948.75	0.66	-0.10	0.65
13,972.00	89.60	358.06	8,178.91	6,038.87	245.70	6,042.61	0.37	0.37	0.00
14,067.00	89.78	359.38	8,179.42	6,133.84	243.57	6,137.52	1.40	0.19	1.39
14,161.00	89.60	0.43	8,179.93	6,227.84	243.42	6,231.50	1.13	-0.19	1.12
14,256.00	89.25	357.80	8,180.89	6,322.81	241.95	6,326.42	2.79	-0.37	-2.77



Survey Report



Company:	Callon Petroleum Operating Co.	Local Co-ordinate Reference:	Well #15AH
Project:	Reagan County, TX (NAD27 TC)	TVD Reference:	KB= 24' @ 2663.44usft (Cactus 162)
Site:	University 26-35	MD Reference:	KB= 24' @ 2663.44usft (Cactus 162)
Well:	#15AH	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland District

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,351.00	89.78	358.06	8,181.69	6,417.75	238.52	6,421.27	0.62	0.56	0.27
14,445.00	89.34	357.97	8,182.41	6,511.69	235.26	6,515.12	0.48	-0.47	-0.10
14,540.00	89.52	357.88	8,183.36	6,606.62	231.82	6,609.97	0.21	0.19	-0.09
14,634.00	89.69	357.53	8,184.00	6,700.54	228.06	6,703.79	0.41	0.18	-0.37
14,727.00	89.43	357.80	8,184.72	6,793.46	224.27	6,796.62	0.40	-0.28	0.29
14,822.00	89.69	0.78	8,185.45	6,888.44	223.09	6,891.55	3.15	0.27	3.14
14,916.00	90.22	1.66	8,185.52	6,982.42	225.09	6,985.55	1.09	0.56	0.94
14,981.37	89.86	2.87	8,185.48	7,047.74	227.68	7,050.91	1.93	-0.56	1.85
TGT 4 (#15AH)									
15,011.00	89.69	3.42	8,185.60	7,077.32	229.30	7,080.52	1.93	-0.56	1.85
15,105.00	90.13	2.45	8,185.74	7,171.20	234.12	7,174.47	1.13	0.47	-1.03
15,199.00	90.22	1.14	8,185.46	7,265.15	237.06	7,268.46	1.40	0.10	-1.39
15,294.00	90.04	359.47	8,185.24	7,360.14	237.57	7,363.45	1.77	-0.19	-1.76
15,388.00	90.04	354.55	8,185.18	7,453.99	232.67	7,457.17	5.23	0.00	-5.23
15,482.00	89.60	354.72	8,185.47	7,547.57	223.88	7,550.56	0.50	-0.47	0.18
15,576.00	89.52	354.46	8,186.19	7,641.15	215.02	7,643.94	0.29	-0.09	-0.28
15,670.00	89.96	355.34	8,186.62	7,734.78	206.66	7,737.38	1.05	0.47	0.94
15,764.00	89.69	355.95	8,186.91	7,828.51	199.52	7,830.94	0.71	-0.29	0.65
15,858.00	89.08	356.30	8,187.92	7,922.28	193.17	7,924.57	0.75	-0.65	0.37
15,944.00	89.60	356.21	8,188.91	8,008.09	187.55	8,010.25	0.61	0.60	-0.10
Final MWD Survey									
15,993.00	89.60	356.21	8,189.25	8,056.99	184.31	8,059.07	0.00	0.00	0.00
Final Projection to Bit - PBHL (#15AH)									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
15,944.00	8,188.91	8,008.09	187.55	Final MWD Survey
15,993.00	8,189.25	8,056.99	184.31	Final Projection to Bit

Checked By: _____ Approved By: _____ Date: _____