

Diamondback E&P LLC

Andrews County, Tx

UL Mason Unit

#2LS

OH

Design: OH

Standard Survey Report

29 September, 2014

Survey Report

Company:	Diamondback E&P LLC	Local Co-ordinate Reference:	Well #2LS
Project:	Andrews County, Tx	TVD Reference:	RKB @ 2968.0usft (RKB = KB=25')
Site:	UL Mason Unit	MD Reference:	RKB @ 2968.0usft (RKB = KB=25')
Well:	#2LS	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Houston R5000 Database

Project	Andrews County, Tx		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Texas North Central 4202		

Site	UL Mason Unit		
Site Position:		Northing:	311,986.00 usft
From:	Map	Easting:	539,277.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 26' 1.368 N
		Longitude:	102° 14' 9.654 W
		Grid Convergence:	-2.58 °

Well	#2LS		
Well Position	+N/-S	0.0 usft	Northing: 312,135.00 usft
	+E/-W	0.0 usft	Easting: 540,131.00 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft
		Latitude:	32° 26' 3.222 N
		Longitude:	102° 13' 59.777 W
		Ground Level:	2,943.0 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2010	8/31/2014	6.56
			Dip Angle (°) 60.52
			Field Strength (nT) 48,560

Design	OH		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.0	0.0	0.0
			Direction (°) 167.49

Survey Program	Date	9/29/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
125.0	1,741.0	Survey #1 - Gyro (OH)	CB-GYRO-MS	Camera based gyro multishot
1,890.0	17,380.0	Survey #2 - Crescent MWD Surveys (OH)	MWD	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	
125.0	0.11	128.35	125.0	-0.1	0.1	0.1	0.09	0.09	0.00	
225.0	0.11	161.30	225.0	-0.2	0.2	0.3	0.06	0.00	32.95	
325.0	0.11	241.13	325.0	-0.4	0.1	0.4	0.14	0.00	79.83	
425.0	0.27	191.50	425.0	-0.6	0.0	0.6	0.22	0.16	-49.63	
525.0	0.41	200.82	525.0	-1.2	-0.2	1.1	0.15	0.14	9.32	
625.0	0.48	152.54	625.0	-1.9	-0.1	1.8	0.37	0.07	-48.28	
725.0	0.43	153.86	725.0	-2.6	0.3	2.6	0.05	-0.05	1.32	
825.0	0.41	146.32	825.0	-3.3	0.6	3.3	0.06	-0.02	-7.54	
925.0	0.63	142.69	925.0	-4.0	1.2	4.1	0.22	0.22	-3.63	

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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Houston R5000 Database

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)
1,025.0	0.79	166.81	1,025.0	-5.1	1.7	5.3	0.34	0.16	24.12
1,125.0	1.07	157.03	1,125.0	-6.6	2.2	6.9	0.32	0.28	-9.78
1,225.0	0.96	160.38	1,224.9	-8.3	2.8	8.7	0.12	-0.11	3.35
1,325.0	0.95	160.26	1,324.9	-9.8	3.4	10.3	0.01	-0.01	-0.12
1,425.0	0.78	153.09	1,424.9	-11.2	4.0	11.8	0.20	-0.17	-7.17
1,525.0	0.39	155.36	1,524.9	-12.1	4.4	12.8	0.39	-0.39	2.27
1,625.0	0.40	159.75	1,624.9	-12.8	4.7	13.5	0.03	0.01	4.39
1,741.0	0.51	137.51	1,740.9	-13.5	5.2	14.3	0.18	0.09	-19.17
1,890.0	0.10	13.20	1,889.9	-13.9	5.6	14.8	0.38	-0.28	-83.43
1,985.0	0.40	351.00	1,984.9	-13.5	5.6	14.4	0.33	0.32	-23.37
2,079.0	0.40	9.10	2,078.9	-12.9	5.6	13.8	0.13	0.00	19.26
2,173.0	0.40	267.40	2,172.9	-12.5	5.3	13.4	0.66	0.00	-108.19
2,268.0	0.50	263.60	2,267.9	-12.6	4.6	13.3	0.11	0.11	-4.00
2,362.0	0.70	260.20	2,361.9	-12.7	3.6	13.2	0.22	0.21	-3.62
2,456.0	0.70	282.20	2,455.9	-12.7	2.5	13.0	0.28	0.00	23.40
2,551.0	0.60	287.70	2,550.9	-12.5	1.5	12.5	0.12	-0.11	5.79
2,645.0	0.30	288.50	2,644.9	-12.2	0.8	12.1	0.32	-0.32	0.85
2,740.0	0.10	264.80	2,739.9	-12.2	0.4	12.0	0.22	-0.21	-24.95
2,834.0	0.10	170.00	2,833.9	-12.2	0.4	12.0	0.16	0.00	-100.85
2,929.0	0.20	187.10	2,928.9	-12.5	0.4	12.3	0.11	0.11	18.00
3,023.0	0.40	142.20	3,022.9	-12.9	0.5	12.7	0.31	0.21	-47.77
3,117.0	0.40	133.40	3,116.9	-13.4	1.0	13.3	0.07	0.00	-9.36
3,212.0	0.30	160.60	3,211.9	-13.9	1.3	13.8	0.20	-0.11	28.63
3,306.0	0.40	133.80	3,305.9	-14.3	1.6	14.3	0.20	0.11	-28.51
3,400.0	0.40	145.60	3,399.9	-14.8	2.0	14.9	0.09	0.00	12.55
3,495.0	0.35	125.10	3,494.9	-15.3	2.5	15.4	0.15	-0.05	-21.58
3,589.0	0.30	121.40	3,588.9	-15.5	2.9	15.8	0.06	-0.05	-3.94
3,684.0	0.26	156.70	3,683.9	-15.9	3.2	16.2	0.18	-0.04	37.16
3,778.0	0.40	115.60	3,777.9	-16.2	3.6	16.6	0.28	0.15	-43.72
3,872.0	0.44	97.80	3,871.9	-16.4	4.2	16.9	0.14	0.04	-18.94
3,967.0	0.40	108.70	3,966.9	-16.6	4.9	17.2	0.09	-0.04	11.47
4,061.0	0.35	88.90	4,060.9	-16.7	5.5	17.5	0.15	-0.05	-21.06
4,156.0	0.40	125.40	4,155.9	-16.8	6.1	17.8	0.25	0.05	38.42
4,251.0	0.44	116.50	4,250.9	-17.2	6.7	18.2	0.08	0.04	-9.37
4,345.0	0.40	114.30	4,344.9	-17.5	7.3	18.7	0.05	-0.04	-2.34
4,439.0	0.60	116.30	4,438.8	-17.8	8.0	19.2	0.21	0.21	2.13
4,533.0	0.60	111.20	4,532.8	-18.2	8.9	19.7	0.06	0.00	-5.43
4,628.0	0.70	113.70	4,627.8	-18.7	9.9	20.4	0.11	0.11	2.63
4,722.0	0.60	134.70	4,721.8	-19.2	10.8	21.1	0.27	-0.11	22.34
4,816.0	0.80	130.70	4,815.8	-20.0	11.7	22.1	0.22	0.21	-4.26
4,911.0	0.60	120.60	4,910.8	-20.7	12.6	22.9	0.25	-0.21	-10.63
5,005.0	0.70	137.30	5,004.8	-21.4	13.4	23.8	0.23	0.11	17.77
5,099.0	0.60	120.80	5,098.8	-22.0	14.2	24.6	0.22	-0.11	-17.55

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5,194.0	0.80	126.00	5,193.8	-22.7	15.2	25.4	0.22	0.21	5.47	
5,288.0	0.90	116.00	5,287.8	-23.4	16.4	26.4	0.19	0.11	-10.64	
5,382.0	0.70	118.00	5,381.8	-24.0	17.5	27.2	0.21	-0.21	2.13	
5,477.0	0.70	98.60	5,476.8	-24.3	18.6	27.8	0.25	0.00	-20.42	
5,571.0	0.70	111.40	5,570.8	-24.6	19.7	28.3	0.17	0.00	13.62	
5,666.0	0.60	97.60	5,665.8	-24.9	20.8	28.8	0.19	-0.11	-14.53	
5,760.0	0.80	107.80	5,759.8	-25.2	21.9	29.3	0.25	0.21	10.85	
5,855.0	0.80	103.90	5,854.7	-25.5	23.2	30.0	0.06	0.00	-4.11	
5,949.0	0.90	95.50	5,948.7	-25.8	24.5	30.5	0.17	0.11	-8.94	
6,044.0	0.88	106.50	6,043.7	-26.1	26.0	31.1	0.18	-0.02	11.58	
6,138.0	0.80	95.80	6,137.7	-26.3	27.3	31.6	0.19	-0.09	-11.38	
6,232.0	0.80	112.80	6,231.7	-26.6	28.6	32.2	0.25	0.00	18.09	
6,327.0	0.60	99.90	6,326.7	-27.0	29.7	32.8	0.27	-0.21	-13.58	
6,421.0	0.80	100.20	6,420.7	-27.2	30.8	33.2	0.21	0.21	0.32	
6,515.0	0.70	113.70	6,514.7	-27.5	32.0	33.8	0.22	-0.11	14.36	
6,609.0	0.50	96.60	6,608.7	-27.8	32.9	34.3	0.28	-0.21	-18.19	
6,704.0	1.00	81.50	6,703.7	-27.7	34.1	34.5	0.56	0.53	-15.89	
6,799.0	1.10	94.80	6,798.6	-27.7	35.9	34.8	0.28	0.11	14.00	
6,893.0	1.40	97.50	6,892.6	-27.9	37.9	35.5	0.33	0.32	2.87	
6,988.0	1.30	96.50	6,987.6	-28.2	40.1	36.2	0.11	-0.11	-1.05	
7,083.0	1.30	105.20	7,082.6	-28.6	42.2	37.1	0.21	0.00	9.16	
7,177.0	1.30	111.80	7,176.6	-29.3	44.3	38.2	0.16	0.00	7.02	
7,272.0	1.10	110.70	7,271.5	-30.0	46.1	39.3	0.21	-0.21	-1.16	
7,366.0	1.00	102.40	7,365.5	-30.5	47.8	40.1	0.19	-0.11	-8.83	
7,460.0	0.90	90.60	7,459.5	-30.7	49.3	40.6	0.23	-0.11	-12.55	
7,555.0	0.88	85.80	7,554.5	-30.6	50.8	40.9	0.08	-0.02	-5.05	
7,649.0	1.00	87.00	7,648.5	-30.5	52.3	41.1	0.13	0.13	1.28	
7,744.0	0.97	72.30	7,743.5	-30.2	53.9	41.2	0.27	-0.03	-15.47	
7,838.0	1.10	75.70	7,837.4	-29.8	55.5	41.1	0.15	0.14	3.62	
7,932.0	1.60	89.10	7,931.4	-29.5	57.7	41.3	0.63	0.53	14.26	
8,027.0	1.00	78.00	8,026.4	-29.3	59.9	41.6	0.68	-0.63	-11.68	
8,121.0	0.70	71.80	8,120.4	-29.0	61.2	41.6	0.33	-0.32	-6.60	
8,215.0	0.90	63.70	8,214.4	-28.5	62.4	41.3	0.24	0.21	-8.62	
8,310.0	0.90	70.00	8,309.4	-27.9	63.8	41.1	0.10	0.00	6.63	
8,404.0	0.88	59.80	8,403.4	-27.3	65.1	40.7	0.17	-0.02	-10.85	
8,499.0	1.10	58.90	8,498.3	-26.4	66.5	40.2	0.23	0.23	-0.95	
8,594.0	1.10	58.90	8,593.3	-25.5	68.1	39.6	0.00	0.00	0.00	
8,688.0	0.70	62.20	8,687.3	-24.8	69.4	39.2	0.43	-0.43	3.51	
8,758.0	0.60	50.10	8,757.3	-24.3	70.0	38.9	0.24	-0.14	-17.29	
8,825.0	0.60	81.30	8,824.3	-24.1	70.6	38.8	0.48	0.00	46.57	
KOP: 8825.0' MD, 8824.3' TVD										
8,888.0	4.70	166.90	8,887.2	-26.5	71.5	41.4	7.45	6.51	135.87	
8,920.0	9.80	166.80	8,919.0	-30.5	72.5	45.4	15.94	15.94	-0.31	

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8,951.0	15.70	163.70	8,949.2	-37.1	74.2	52.3	19.15	19.03	-10.00
8,983.0	20.00	158.50	8,979.6	-46.3	77.5	62.0	14.32	13.44	-16.25
9,014.0	22.50	156.90	9,008.5	-56.7	81.7	73.1	8.28	8.06	-5.16
9,045.0	23.70	161.30	9,037.0	-68.1	86.1	85.1	6.78	3.87	14.19
9,077.0	26.60	167.30	9,066.0	-81.1	89.7	98.6	12.06	9.06	18.75
9,109.0	30.50	167.50	9,094.1	-96.1	93.0	113.9	12.19	12.19	0.63
9,140.0	35.20	165.10	9,120.2	-112.4	97.0	130.7	15.73	15.16	-7.74
9,172.0	40.10	162.90	9,145.5	-131.2	102.4	150.2	15.88	15.31	-6.88
9,203.0	44.30	162.50	9,168.4	-151.0	108.6	171.0	13.58	13.55	-1.29
9,234.0	47.70	164.70	9,190.0	-172.4	114.9	193.2	12.10	10.97	7.10
9,266.0	50.30	168.00	9,211.0	-195.9	120.6	217.4	11.25	8.13	10.31
9,297.0	51.50	169.80	9,230.5	-219.5	125.2	241.4	5.94	3.87	5.81
9,329.0	54.10	171.50	9,249.9	-244.6	129.4	266.9	9.16	8.13	5.31
9,360.0	56.50	173.20	9,267.5	-269.9	132.7	292.3	8.96	7.74	5.48
9,392.0	58.00	174.50	9,284.8	-296.7	135.6	319.0	5.80	4.69	4.06
9,423.0	58.00	176.70	9,301.3	-322.9	137.6	345.0	6.02	0.00	7.10
9,455.0	59.00	179.60	9,318.0	-350.1	138.5	371.8	8.33	3.13	9.06
9,486.0	62.10	180.10	9,333.2	-377.1	138.6	398.2	10.10	10.00	1.61
9,488.3	62.44	179.96	9,334.3	-379.2	138.6	400.2	15.63	14.65	-6.16
Cross Lease Line:9488.3' MD, 9334.3' TVD, 62.44° INC									
9,518.0	66.80	178.20	9,347.0	-406.0	139.0	426.5	15.63	14.69	-5.92
9,549.0	71.50	175.80	9,358.1	-434.9	140.6	455.0	16.80	15.16	-7.74
9,581.0	73.40	174.00	9,367.7	-465.3	143.3	485.3	8.00	5.94	-5.63
9,596.6	73.60	174.25	9,372.1	-480.2	144.8	500.1	2.01	1.29	1.61
Cross 100' Offset:9596.6' MD, 9372.1' TVD, 73.60° INC									
9,612.0	73.80	174.50	9,376.5	-494.9	146.2	514.8	2.01	1.29	1.61
9,644.0	76.00	174.00	9,384.8	-525.6	149.3	545.5	7.04	6.88	-1.56
9,675.0	77.80	173.60	9,391.8	-555.6	152.6	575.5	5.94	5.81	-1.29
9,706.0	79.20	173.10	9,398.0	-585.8	156.1	605.7	4.78	4.52	-1.61
9,724.3	80.00	173.04	9,401.3	-603.7	158.3	623.6	4.39	4.37	-0.31
9724.3' MD, 80.00°INC, 9401.3' TVD									
9,738.0	80.60	173.00	9,403.6	-617.1	159.9	637.1	4.39	4.38	-0.31
9,769.0	81.10	173.70	9,408.5	-647.5	163.5	667.5	2.75	1.61	2.26
9,801.0	82.50	173.50	9,413.1	-679.0	167.0	699.0	4.42	4.38	-0.63
9,832.0	84.30	174.10	9,416.7	-709.6	170.3	729.6	6.12	5.81	1.94
9,864.0	87.00	172.90	9,419.1	-741.3	173.9	761.3	9.23	8.44	-3.75
9,895.0	87.70	171.80	9,420.5	-772.0	178.1	792.2	4.20	2.26	-3.55
EOC: 9895.0' MD, 9420.5' TVD, 87.70° INC, 171.80° AZ, 792.2' VS									
9,927.0	87.70	171.40	9,421.8	-803.6	182.7	824.1	1.25	0.00	-1.25
9,958.0	87.80	171.70	9,423.0	-834.2	187.3	855.0	1.02	0.32	0.97
10,052.0	88.40	170.90	9,426.1	-927.1	201.5	948.7	1.06	0.64	-0.85
10,147.0	87.90	170.70	9,429.2	-1,020.8	216.7	1,043.5	0.57	-0.53	-0.21
10,241.0	87.20	167.90	9,433.2	-1,113.1	234.1	1,137.4	3.07	-0.74	-2.98
10,335.0	87.60	166.50	9,437.5	-1,204.7	254.9	1,231.3	1.55	0.43	-1.49

Survey Report

Company:	Diamondback E&P LLC	Local Co-ordinate Reference:	Well #2LS
Project:	Andrews County, Tx	TVD Reference:	RKB @ 2968.0usft (RKB = KB=25')
Site:	UL Mason Unit	MD Reference:	RKB @ 2968.0usft (RKB = KB=25')
Well:	#2LS	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Houston R5000 Database

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)	
10,430.0	88.30	164.00	9,440.9	-1,296.5	279.1	1,326.1	2.73	0.74	-2.63	
10,524.0	89.60	162.80	9,442.6	-1,386.5	305.9	1,419.9	1.88	1.38	-1.28	
10,619.0	91.10	163.20	9,442.0	-1,477.4	333.7	1,514.6	1.63	1.58	0.42	
10,713.0	92.40	165.80	9,439.2	-1,567.9	358.8	1,608.4	3.09	1.38	2.77	
10,807.0	90.10	167.20	9,437.1	-1,659.3	380.8	1,702.4	2.86	-2.45	1.49	
10,902.0	91.30	167.00	9,436.0	-1,751.9	402.0	1,797.3	1.28	1.26	-0.21	
10,996.0	90.20	169.10	9,434.7	-1,843.8	421.4	1,891.3	2.52	-1.17	2.23	
11,090.0	89.60	167.50	9,434.9	-1,935.9	440.5	1,985.3	1.82	-0.64	-1.70	
11,185.0	88.70	164.50	9,436.3	-2,028.0	463.5	2,080.3	3.30	-0.95	-3.16	
11,279.0	92.20	167.10	9,435.6	-2,119.1	486.5	2,174.2	4.64	3.72	2.77	
11,374.0	93.80	167.40	9,430.6	-2,211.6	507.5	2,269.1	1.71	1.68	0.32	
11,468.0	91.60	168.00	9,426.2	-2,303.4	527.5	2,362.9	2.43	-2.34	0.64	
11,563.0	90.10	169.30	9,424.7	-2,396.5	546.1	2,457.9	2.09	-1.58	1.37	
11,657.0	90.70	172.00	9,424.1	-2,489.2	561.4	2,551.8	2.94	0.64	2.87	
11,751.0	86.90	170.50	9,426.1	-2,582.1	575.7	2,645.5	4.35	-4.04	-1.60	
11,768.0	87.10	170.70	9,426.9	-2,598.9	578.5	2,662.5	1.66	1.18	1.18	
11,862.0	88.20	170.90	9,430.8	-2,691.6	593.5	2,756.2	1.19	1.17	0.21	
11,956.0	88.50	168.80	9,433.5	-2,784.1	610.1	2,850.1	2.26	0.32	-2.23	
12,051.0	89.30	169.70	9,435.3	-2,877.4	627.8	2,945.0	1.27	0.84	0.95	
12,145.0	89.90	167.70	9,436.0	-2,969.5	646.2	3,039.0	2.22	0.64	-2.13	
12,239.0	89.90	167.90	9,436.2	-3,061.4	666.1	3,133.0	0.21	0.00	0.21	
12,334.0	89.30	166.00	9,436.8	-3,154.0	687.5	3,228.0	2.10	-0.63	-2.00	
12,428.0	90.80	167.90	9,436.7	-3,245.5	708.7	3,322.0	2.58	1.60	2.02	
12,523.0	90.60	168.00	9,435.6	-3,338.4	728.6	3,417.0	0.24	-0.21	0.11	
12,617.0	90.00	169.50	9,435.1	-3,430.6	746.9	3,510.9	1.72	-0.64	1.60	
12,712.0	88.70	168.50	9,436.2	-3,523.9	765.0	3,605.9	1.73	-1.37	-1.05	
12,806.0	91.30	168.40	9,436.2	-3,615.9	783.8	3,699.9	2.77	2.77	-0.11	
12,901.0	90.00	167.30	9,435.1	-3,708.8	803.8	3,794.9	1.79	-1.37	-1.16	
12,995.0	89.10	166.00	9,435.8	-3,800.3	825.5	3,888.9	1.68	-0.96	-1.38	
13,090.0	88.80	166.00	9,437.6	-3,892.4	848.5	3,983.8	0.32	-0.32	0.00	
13,184.0	87.80	165.40	9,440.4	-3,983.5	871.7	4,077.7	1.24	-1.06	-0.64	
13,279.0	88.20	165.10	9,443.7	-4,075.3	895.9	4,172.6	0.53	0.42	-0.32	
13,373.0	88.80	165.00	9,446.1	-4,166.1	920.1	4,266.5	0.65	0.64	-0.11	
13,467.0	88.60	165.80	9,448.3	-4,257.0	943.8	4,360.4	0.88	-0.21	0.85	
13,561.0	88.40	165.40	9,450.7	-4,348.0	967.2	4,454.3	0.48	-0.21	-0.43	
13,656.0	88.50	164.40	9,453.3	-4,439.7	991.9	4,549.2	1.06	0.11	-1.05	
13,750.0	91.20	165.30	9,453.5	-4,530.4	1,016.5	4,643.1	3.03	2.87	0.96	
13,844.0	91.10	165.90	9,451.6	-4,621.5	1,039.9	4,737.0	0.65	-0.11	0.64	
13,938.0	91.70	165.80	9,449.4	-4,712.6	1,062.8	4,830.9	0.65	0.64	-0.11	
14,033.0	90.60	166.40	9,447.4	-4,804.8	1,085.7	4,925.9	1.32	-1.16	0.63	
14,127.0	91.60	165.80	9,445.6	-4,896.0	1,108.2	5,019.8	1.24	1.06	-0.64	
14,221.0	90.50	167.40	9,443.9	-4,987.4	1,130.0	5,113.8	2.07	-1.17	1.70	
14,315.0	90.70	166.70	9,442.9	-5,079.0	1,151.1	5,207.8	0.77	0.21	-0.74	
14,410.0	89.60	165.60	9,442.7	-5,171.3	1,173.8	5,302.8	1.64	-1.16	-1.16	

Survey Report

Company:	Diamondback E&P LLC	Local Co-ordinate Reference:	Well #2LS
Project:	Andrews County, Tx	TVD Reference:	RKB @ 2968.0usft (RKB = KB=25')
Site:	UL Mason Unit	MD Reference:	RKB @ 2968.0usft (RKB = KB=25')
Well:	#2LS	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Houston R5000 Database


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)
14,504.0	88.90	162.40	9,443.9	-5,261.6	1,199.7	5,396.6	3.48	-0.74	-3.40
14,598.0	89.50	166.30	9,445.2	-5,352.1	1,225.1	5,490.4	4.20	0.64	4.15
14,693.0	90.70	169.30	9,445.1	-5,444.9	1,245.1	5,585.4	3.40	1.26	3.16
14,787.0	90.00	167.80	9,444.5	-5,537.1	1,263.8	5,679.4	1.76	-0.74	-1.60
14,882.0	89.40	168.00	9,445.0	-5,630.0	1,283.7	5,774.4	0.67	-0.63	0.21
14,976.0	89.80	168.00	9,445.6	-5,721.9	1,303.3	5,868.3	0.43	0.43	0.00
15,070.0	92.00	169.50	9,444.2	-5,814.1	1,321.6	5,962.3	2.83	2.34	1.60
15,164.0	90.70	170.00	9,442.0	-5,906.5	1,338.3	6,056.2	1.48	-1.38	0.53
15,258.0	89.30	170.30	9,442.0	-5,999.2	1,354.4	6,150.1	1.52	-1.49	0.32
15,353.0	88.40	168.80	9,443.9	-6,092.6	1,371.6	6,245.0	1.84	-0.95	-1.58
15,447.0	89.60	170.10	9,445.5	-6,184.9	1,388.8	6,338.9	1.88	1.28	1.38
15,542.0	89.90	170.10	9,445.9	-6,278.5	1,405.2	6,433.8	0.32	0.32	0.00
15,636.0	90.30	172.70	9,445.7	-6,371.5	1,419.2	6,527.6	2.80	0.43	2.77
15,730.0	89.20	171.00	9,446.2	-6,464.5	1,432.5	6,621.3	2.15	-1.17	-1.81
15,825.0	89.20	170.20	9,447.5	-6,558.2	1,448.1	6,716.2	0.84	0.00	-0.84
15,919.0	90.10	171.50	9,448.1	-6,651.0	1,463.0	6,810.0	1.68	0.96	1.38
16,023.0	87.50	168.30	9,450.2	-6,753.4	1,481.2	6,913.9	3.96	-2.50	-3.08
16,118.0	89.50	165.80	9,452.7	-6,845.9	1,502.5	7,008.8	3.37	2.11	-2.63
16,213.0	90.90	165.30	9,452.4	-6,937.9	1,526.2	7,103.8	1.56	1.47	-0.53
16,308.0	90.80	166.50	9,451.0	-7,030.0	1,549.4	7,198.7	1.27	-0.11	1.26
16,402.0	92.00	166.00	9,448.7	-7,121.3	1,571.7	7,292.7	1.38	1.28	-0.53
16,496.0	91.30	166.60	9,446.0	-7,212.6	1,593.9	7,386.6	0.98	-0.74	0.64
16,591.0	89.90	166.60	9,445.0	-7,305.0	1,616.0	7,481.6	1.47	-1.47	0.00
16,685.0	90.50	167.50	9,444.7	-7,396.6	1,637.0	7,575.6	1.15	0.64	0.96
16,780.0	89.80	167.20	9,444.4	-7,489.3	1,657.8	7,670.6	0.80	-0.74	-0.32
16,874.0	90.90	167.30	9,443.8	-7,581.0	1,678.6	7,764.6	1.18	1.17	0.11
16,968.0	89.40	166.80	9,443.6	-7,672.6	1,699.6	7,858.6	1.68	-1.60	-0.53
17,063.0	90.70	167.60	9,443.5	-7,765.2	1,720.7	7,953.6	1.61	1.37	0.84
17,157.0	88.20	167.90	9,444.4	-7,857.1	1,740.6	8,047.6	2.68	-2.66	0.32
17,251.0	88.90	168.00	9,446.8	-7,949.0	1,760.2	8,141.5	0.75	0.74	0.11
17,330.0	89.80	167.90	9,447.7	-8,026.2	1,776.7	8,220.5	1.15	1.14	-0.13
Final MWD Survey: 17330.0' MD, 9447.7' TVD, -8026.2' +N/-S, 1776.7' +E/-W									
17,380.0	89.80	167.90	9,447.9	-8,075.1	1,787.2	8,270.5	0.00	0.00	0.00
BHL: 17380.0' MD, 9447.9' TVD, 89.80° INC, 167.90° AZ, -8075.1' +N/-S, 1787.2' +E/-W, 8270.5' VS - TD: 17380.0' MD, 9447.9' TVD									

Survey Report

Company:	Diamondback E&P LLC	Local Co-ordinate Reference:	Well #2LS
Project:	Andrews County, Tx	TVD Reference:	RKB @ 2968.0usft (RKB = KB=25')
Site:	UL Mason Unit	MD Reference:	RKB @ 2968.0usft (RKB = KB=25')
Well:	#2LS	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Houston R5000 Database

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
8,825.0	8,824.3	-24.1	70.6	KOP: 8825.0' MD, 8824.3' TVD	
9,488.3	9,334.3	-379.2	138.6	Cross Lease Line:9488.3' MD, 9334.3' TVD, 62.44° INC	
9,596.6	9,372.1	-480.2	144.8	Cross 100' Offset:9596.6' MD, 9372.1' TVD, 73.60° INC	
9,724.3	9,401.3	-603.7	158.3	9724.3' MD, 80.00°INC, 9401.3' TVD	
9,895.0	9,420.5	-772.0	178.1	EOC: 9895.0' MD, 9420.5' TVD, 87.70° INC, 171.80° AZ, 792.2' VS	
17,330.0	9,447.7	-8,026.2	1,776.7	Final MWD Survey: 17330.0' MD, 9447.7' TVD, -8026.2' +N/-S, 1776.7' +E/-W	
17,380.0	9,447.9	-8,075.1	1,787.2	BHL: 17380.0' MD, 9447.9' TVD, 89.80° INC, 167.90° AZ, -8075.1' +N/-S, 1787.2' +E/-W	
17,380.0	9,447.9	-8,075.1	1,787.2	TD: 17380.0' MD, 9447.9' TVD	

Checked By: _____	Approved By: _____	Date: _____
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Diamondback E&P LLC
Project: Andrews County, Tx
Site: UL Mason Unit
Well: #2LS
Wellbore: OH
Plan: Plan #3 (#2LS/OH)

WELL DETAILS: #2LS

Ground Elevation:: 2943.0
RKB Elevation: RKB @ 2968.0usft (RKB = KB=25')
Rig Name: **HP393 - KB=25'**

Surface Hole Location

Northing

312135.00

Easting

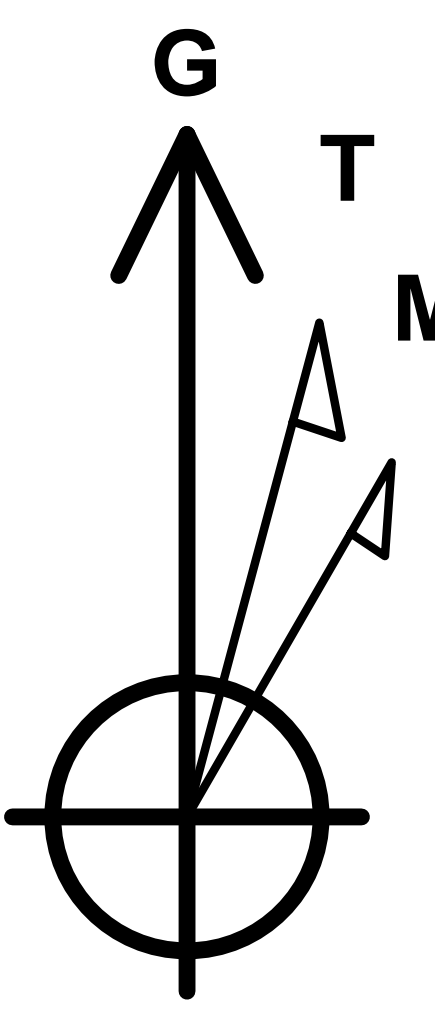
540131.00

Latitude

32° 26' 3.222 N

Longitude

102° 13' 59.777 W

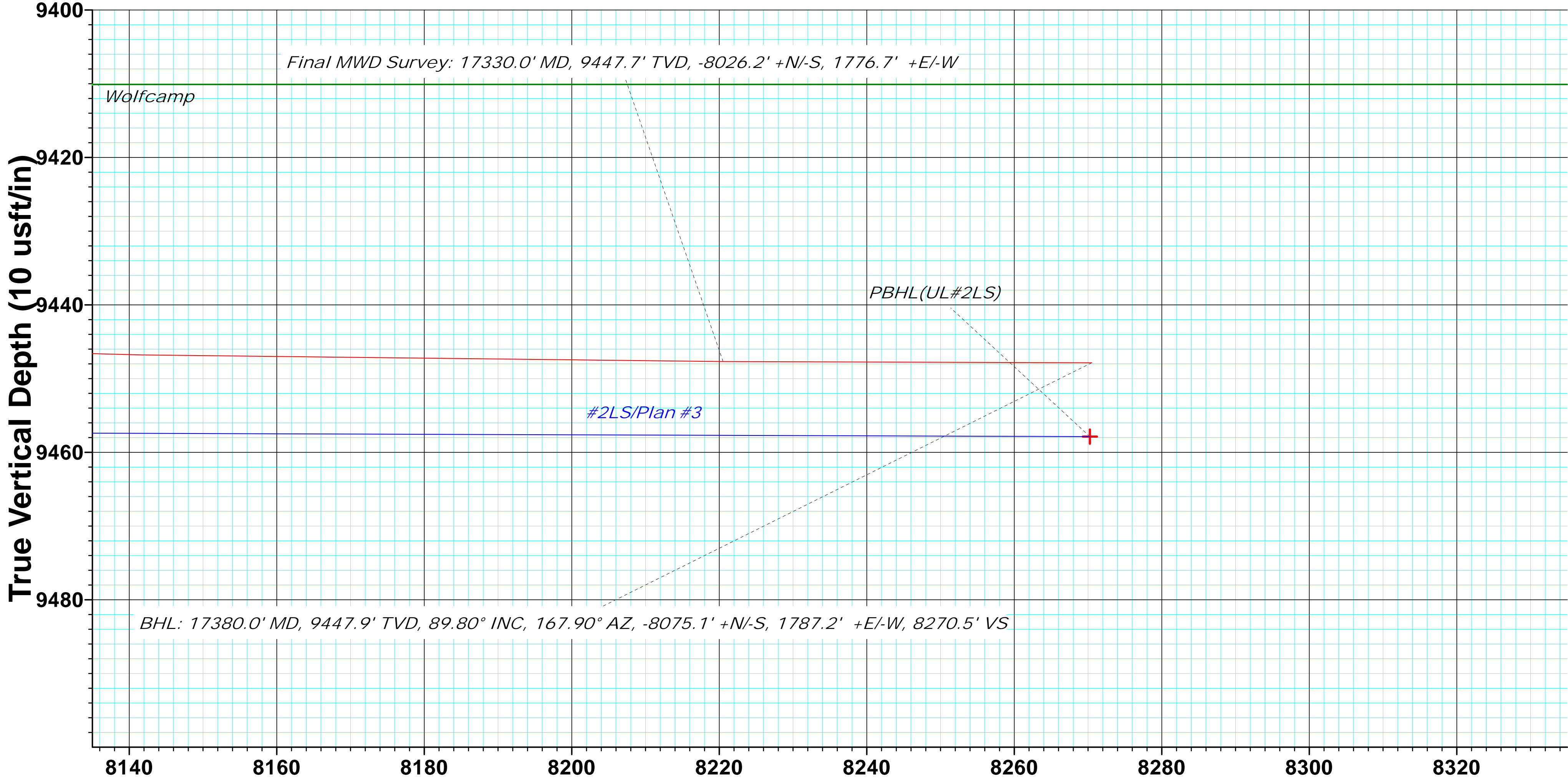
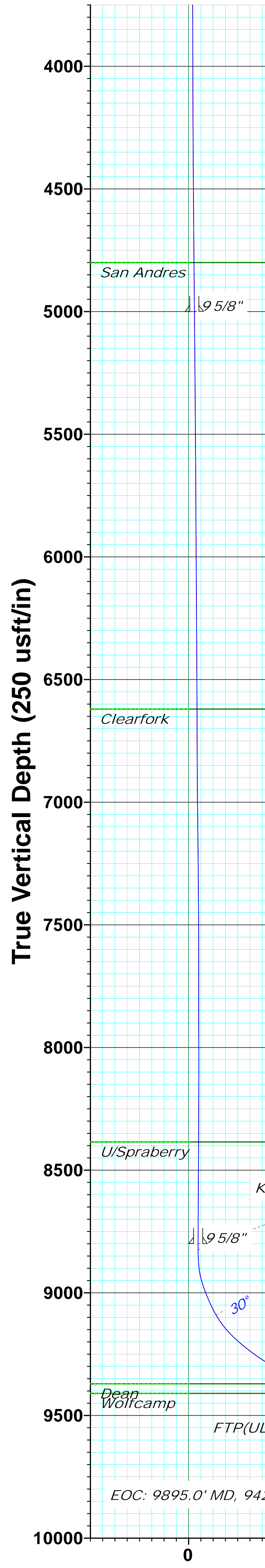


Azimuths to Grid North

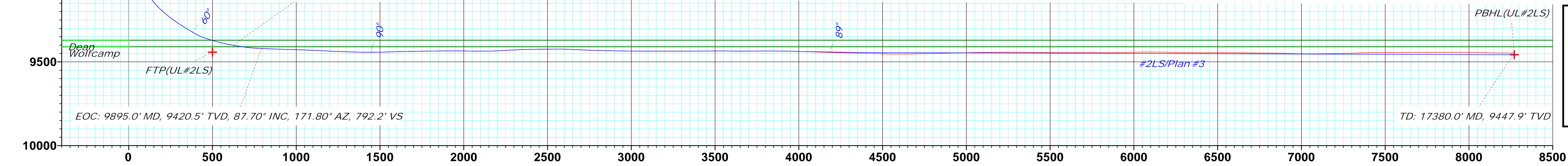
True North: 2.58°
Magnetic North: 9.14°

Magnetic Field

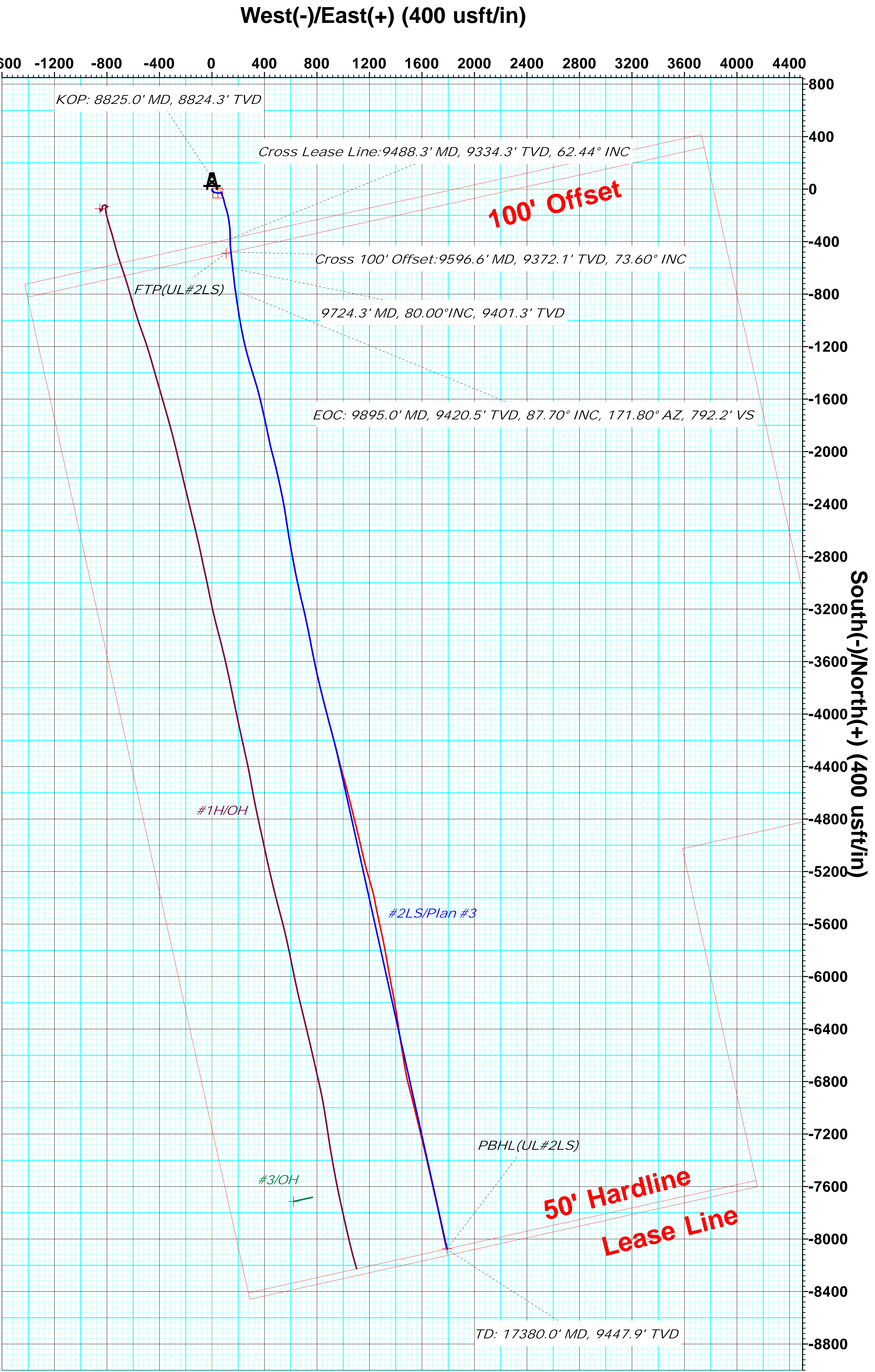
Strength: 48560.1snT
Dip Angle: 60.52°
Date: 8/31/2014
Model: IGRF2010



Vertical Section at 167.49° (10 usft/in)



Vertical Section at 167.49° (250 usft/in)



PROJECT DETAILS: Andrews County, Tx
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Texas North Central 4202
System Datum: Mean Sea Level
Local North: Grid



Crescent Directional Drilling
7715 West Industrial Ave. Midland, Tx 79706
Phone: 432-618-1135

Plan: Plan #3 (#2LS/OH)
Created By: Adrian Castro Date: 6:05, September 29 2014