Job# 901104134
C138 25'KB

Devon

Reagan County, TX (NAD-83) Sec. 1 BLK 49 University Lands
API# 383-38628

University 49-1 #6H (200' FSL & 380' FEL)

Wellbore #1

Design: Wellbore #1

Sperry Drilling Services

Combo Report

21 April, 2014

Well Coordinates:	31° 07' 52.93" N 101° 23' 24.78" W	North American Datum 1983 Texas Central Zone 10,376,779.71 N 1,965,924.21 E
Ground Level: 2,761.00 ft		
Local Coordinate Origin:		Centered on Well University 49-1 #6H
Viewing Datum:		WELL @ 2786.00ft (C138 25'KB)
TVDs to System:		N
North Reference:		**Grid**
Unit System:		API US Survey Feet

Version: 5000.1 Build: 65

Report Version: Midcon Combo v1.30

HALLIBURTON

Design Report for University 49-1 #6H - Wellbore #1

Measured Depth (ft)	Inclination (°)	Grid Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates Northing (ft)	Local Coordinates Easting (ft)	Map Coordinates Northing (usft)	Map Coordinates Easting (usft)	Dogleg Rate (°/100usft)	Vertical Section (ft)	Comments
0.00	0.00	0.00	-2,786.00	0.00	0.00 N	0.00 E	10,376,779.71	1,965,924.21	0.00	0.00	
100.00	0.22	286.53	-2,686.00	100.00	0.05 N	0.18 W	10,376,779.76	1,965,924.03	0.22	0.04	First Gyro Survey
200.00	0.42	229.83	-2,586.00	200.00	0.13 S	0.65 W	10,376,779.58	1,965,923.56	0.35	-0.19	
300.00	0.29	171.49	-2,486.00	300.00	0.61 S	0.89 W	10,376,779.10	1,965,923.32	0.36	-0.70	
400.00	0.28	187.67	-2,386.00	400.00	1.11 S	0.89 W	10,376,778.60	1,965,923.32	0.08	-1.19	
500.00	0.35	122.34	-2,286.01	499.99	1.51 S	0.66 W	10,376,778.20	1,965,923.55	0.35	-1.57	
600.00	0.21	252.99	-2,186.01	599.99	1.73 S	0.58 W	10,376,777.98	1,965,923.63	0.51	-1.78	
700.00	0.39	274.35	-2,086.01	699.99	1.76 S	1.09 W	10,376,777.95	1,965,923.12	0.21	-1.86	
800.00	0.63	253.54	-1,986.01	799.99	1.89 S	1.96 W	10,376,777.82	1,965,922.25	0.30	-2.08	
900.00	0.81	251.66	-1,886.02	899.98	2.26 S	3.16 W	10,376,777.45	1,965,921.05	0.18	-2.58	
974.00	0.86	259.80	-1,812.03	973.97	2.53 S	4.20 W	10,376,777.18	1,965,920.01	0.17	-2.95	Final Gyro Survey
1,132.00	0.57	235.45	-1,654.04	1,131.96	3.18 S	6.01 W	10,376,776.53	1,965,918.20	0.26	-3.79	First Sperry MWD Survey
1,163.00	0.48	219.42	-1,623.04	1,162.96	3.37 S	6.22 W	10,376,776.34	1,965,917.99	0.55	-4.00	
1,225.00	1.16	115.65	-1,561.05	1,224.95	3.84 S	5.82 W	10,376,775.87	1,965,918.39	2.19	-4.43	
1,256.00	1.38	112.05	-1,530.05	1,255.95	4.12 S	5.19 W	10,376,775.59	1,965,919.02	0.75	-4.64	
1,318.00	2.90	98.39	-1,468.10	1,317.90	4.63 S	2.95 W	10,376,775.08	1,965,921.26	2.57	-4.91	
1,349.00	3.23	97.52	-1,437.14	1,348.86	4.86 S	1.31 W	10,376,774.85	1,965,922.90	1.08	-4.97	
1,442.00	4.92	88.99	-1,344.38	1,441.62	5.13 S	5.28 E	10,376,774.58	1,965,929.49	1.93	-4.55	
1,535.00	5.45	88.09	-1,251.76	1,534.24	4.91 S	13.68 E	10,376,774.80	1,965,937.89	0.58	-3.46	
1,626.00	4.96	87.17	-1,161.14	1,624.86	4.57 S	21.93 E	10,376,775.14	1,965,946.14	0.55	-2.26	
1,719.00	4.34	86.99	-1,068.44	1,717.56	4.19 S	29.46 E	10,376,775.52	1,965,953.67	0.67	-1.09	
1,811.00	3.54	85.24	-976.66	1,809.34	3.77 S	35.76 E	10,376,775.94	1,965,959.97	0.88	-0.02	
1,919.00	4.76	99.69	-868.94	1,917.06	4.25 S	43.50 E	10,376,775.46	1,965,967.71	1.48	0.31	
2,013.00	5.05	103.41	-775.29	2,010.71	5.87 S	51.37 E	10,376,773.84	1,965,975.58	0.46	-0.47	
2,109.00	4.64	102.95	-679.63	2,106.37	7.72 S	59.27 E	10,376,771.99	1,965,983.48	0.43	-1.49	
2,204.00	4.49	102.07	-584.93	2,201.07	9.35 S	66.65 E	10,376,770.36	1,965,990.86	0.17	-2.35	
2,299.00	4.25	101.56	-490.21	2,295.79	10.84 S	73.73 E	10,376,768.87	1,965,997.94	0.26	-3.08	
2,395.00	4.81	92.02	-394.51	2,391.49	11.69 S	81.24 E	10,376,768.02	1,966,005.45	0.98	-3.15	
2,491.00	4.92	88.24	-298.85	2,487.15	11.71 S	89.38 E	10,376,768.00	1,966,013.59	0.35	-2.32	
2,585.00	4.32	90.34	-205.16	2,580.84	11.61 S	96.95 E	10,376,768.10	1,966,021.16	0.66	-1.42	
2,680.00	3.70	88.99	-110.39	2,675.61	11.57 S	103.59 E	10,376,768.14	1,966,027.80	0.66	-0.70	
2,774.00	5.13	87.14	-16.67	2,769.33	11.31 S	110.82 E	10,376,768.40	1,966,035.03	1.53	0.32	
2,869.00	5.74	88.35	77.90	2,863.90	10.96 S	119.81 E	10,376,768.75	1,966,044.02	0.65	1.60	
2,964.00	4.87	91.59	172.49	2,958.49	10.94 S	128.59 E	10,376,768.77	1,966,052.80	0.97	2.54	
3,059.00	4.57	92.67	267.17	3,053.17	11.22 S	136.40 E	10,376,768.49	1,966,060.61	0.33	3.07	
3,154.00	4.05	93.02	361.90	3,147.90	11.58 S	143.53 E	10,376,768.13	1,966,067.74	0.55	3.46	
3,249.00	3.74	91.23	456.68	3,242.68	11.82 S	149.98 E	10,376,767.89	1,966,074.19	0.35	3.90	
3,345.00	4.60	86.67	552.43	3,338.43	11.66 S	156.95 E	10,376,768.05	1,966,081.16	0.96	4.78	
3,440.00	4.76	85.45	647.11	3,433.11	11.13 S	164.69 E	10,376,768.58	1,966,088.90	0.20	6.12	
3,535.00	4.21	85.27	741.82	3,527.82	10.53 S	172.09 E	10,376,769.18	1,966,096.30	0.58	7.49	
3,630.00	3.78	83.76	836.59	3,622.59	9.90 S	178.68 E	10,376,769.81	1,966,102.89	0.47	8.80	

Design Report for University 49-1 #6H - Wellbore #1

Measured Depth (ft)	Inclination (°)	Grid Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates Northing (ft)	Local Coordinates Easting (ft)	Map Coordinates Northing (usft)	Map Coordinates Easting (usft)	Dogleg Rate (°/100usft)	Vertical Section (ft)	Comments
3,725.00	3.76	89.52	931.38	3,717.38	9.54 S	184.91 E	10,376,770.18	1,966,109.12	0.40	9.81	
3,821.00	3.63	90.84	1,027.18	3,813.18	9.55 S	191.09 E	10,376,770.16	1,966,115.30	0.16	10.44	
3,916.00	3.40	90.73	1,122.00	3,908.00	9.63 S	196.92 E	10,376,770.08	1,966,121.13	0.24	10.97	
4,010.00	4.02	93.92	1,215.81	4,001.81	9.89 S	202.99 E	10,376,769.82	1,966,127.20	0.69	11.34	
4,104.00	3.93	96.05	1,309.58	4,095.58	10.46 S	209.48 E	10,376,769.25	1,966,133.69	0.18	11.46	
4,199.00	2.91	96.26	1,404.41	4,190.41	11.06 S	215.12 E	10,376,768.65	1,966,139.33	1.07	11.44	
4,295.00	4.13	96.89	1,500.23	4,286.23	11.75 S	220.97 E	10,376,767.96	1,966,145.18	1.27	11.38	
4,390.00	4.52	100.37	1,594.96	4,380.96	12.83 S	228.05 E	10,376,766.88	1,966,152.26	0.49	11.04	
4,485.00	3.55	101.78	1,689.72	4,475.72	14.10 S	234.61 E	10,376,765.61	1,966,158.82	1.03	10.46	
4,555.00	3.13	100.72	1,759.60	4,545.60	14.90 S	238.61 E	10,376,764.81	1,966,162.82	0.61	10.08	
4,661.00	2.64	102.83	1,865.47	4,651.47	15.98 S	243.83 E	10,376,763.73	1,966,168.04	0.47	9.55	
4,756.00	3.88	75.22	1,960.32	4,746.32	15.65 S	249.08 E	10,376,764.06	1,966,173.28	2.07	10.43	
4,851.00	3.22	70.96	2,055.13	4,841.13	13.96 S	254.71 E	10,376,765.75	1,966,178.91	0.75	12.70	
4,946.00	5.49	65.49	2,149.85	4,935.85	11.20 S	261.36 E	10,376,768.51	1,966,185.57	2.43	16.13	
5,041.00	4.72	62.51	2,244.48	5,030.48	7.51 S	268.97 E	10,376,772.20	1,966,193.18	0.86	20.60	
5,133.00	4.30	75.43	2,336.19	5,122.19	4.90 S	275.66 E	10,376,774.81	1,966,199.87	1.19	23.90	
5,226.00	7.00	83.00	2,428.73	5,214.73	3.33 S	284.66 E	10,376,776.38	1,966,208.87	3.01	26.40	
5,319.00	6.26	83.36	2,521.11	5,307.11	2.05 S	295.32 E	10,376,777.66	1,966,219.53	0.80	28.78	
5,411.00	5.82	80.05	2,612.60	5,398.60	0.67 S	304.90 E	10,376,779.04	1,966,229.11	0.61	31.16	
5,504.00	4.98	89.46	2,705.19	5,491.19	0.19 N	313.58 E	10,376,779.90	1,966,237.79	1.31	32.91	
5,596.00	4.24	87.53	2,796.89	5,582.89	0.37 N	320.97 E	10,376,780.08	1,966,245.18	0.82	33.86	
5,688.00	3.80	90.13	2,888.66	5,674.66	0.51 N	327.42 E	10,376,780.22	1,966,251.63	0.52	34.68	
5,781.00	3.35	91.70	2,981.48	5,767.48	0.42 N	333.22 E	10,376,780.13	1,966,257.43	0.50	35.19	
5,874.00	2.99	89.46	3,074.34	5,860.34	0.37 N	338.36 E	10,376,780.08	1,966,262.57	0.41	35.67	
5,968.00	2.65	93.02	3,168.23	5,954.23	0.27 N	342.98 E	10,376,779.98	1,966,267.19	0.41	36.06	
6,060.00	4.72	81.71	3,260.03	6,046.03	0.71 N	348.85 E	10,376,780.42	1,966,273.06	2.37	37.11	
6,153.00	4.21	79.20	3,352.75	6,138.75	1.90 N	355.99 E	10,376,781.61	1,966,280.20	0.59	39.04	
6,244.00	3.69	81.60	3,443.53	6,229.53	2.95 N	362.17 E	10,376,782.66	1,966,286.38	0.60	40.73	
6,337.00	3.12	81.76	3,536.37	6,322.37	3.75 N	367.63 E	10,376,783.46	1,966,291.84	0.61	42.10	
6,430.00	2.66	84.73	3,629.25	6,415.25	4.31 N	372.29 E	10,376,784.02	1,966,296.50	0.52	43.14	
6,461.00	2.51	78.02	3,660.22	6,446.22	4.52 N	373.67 E	10,376,784.23	1,966,297.88	1.09	43.49	
6,493.00	4.50	34.30	3,692.16	6,478.16	5.70 N	375.06 E	10,376,785.41	1,966,299.27	9.99	44.81	
6,525.00	8.25	18.77	3,723.96	6,509.96	8.92 N	376.51 E	10,376,788.63	1,966,300.72	12.79	48.16	
6,557.00	11.76	20.05	3,755.47	6,541.47	14.15 N	378.36 E	10,376,793.86	1,966,302.57	10.99	53.56	
6,588.00	13.85	21.73	3,785.70	6,571.70	20.57 N	380.82 E	10,376,800.28	1,966,305.03	6.85	60.20	
6,620.00	16.58	21.46	3,816.57	6,602.57	28.38 N	383.91 E	10,376,808.09	1,966,308.12	8.53	68.29	
6,652.00	19.98	18.54	3,846.95	6,632.95	37.81 N	387.32 E	10,376,817.52	1,966,311.53	11.00	78.03	
6,683.00	22.86	14.89	3,875.81	6,661.81	48.66 N	390.55 E	10,376,828.37	1,966,314.76	10.23	89.15	
6,715.00	25.29	12.50	3,905.03	6,691.03	61.34 N	393.63 E	10,376,841.05	1,966,317.84	8.18	102.08	
6,747.00	28.23	10.16	3,933.60	6,719.60	75.47 N	396.44 E	10,376,855.18	1,966,320.65	9.76	116.42	
6,779.00	30.97	8.80	3,961.42	6,747.42	91.05 N	399.04 E	10,376,870.76	1,966,323.25	8.82	132.20	

Design Report for University 49-1 #6H - Wellbore #1

Measured Depth (ft)	Inclination (°)	Grid Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates Northing (ft)	Local Coordinates Easting (ft)	Map Coordinates Northing (usft)	Map Coordinates Easting (usft)	Dogleg Rate (°/100usft)	Vertical Section (ft)	Comments
6,811.00	33.52	7.71	3,988.48	6,774.48	107.95 N	401.49 E	10,376,887.66	1,966,325.69	8.17	149.26	
6,842.00	35.62	6.36	4,014.01	6,800.01	125.41 N	403.63 E	10,376,905.12	1,966,327.84	7.21	166.84	
6,873.00	37.70	5.35	4,038.87	6,824.87	143.82 N	405.52 E	10,376,923.53	1,966,329.73	6.99	185.35	
6,905.00	40.34	5.17	4,063.73	6,849.73	163.88 N	407.36 E	10,376,943.59	1,966,331.57	8.26	205.49	
6,937.00	44.28	4.25	4,087.39	6,873.39	185.34 N	409.13 E	10,376,965.05	1,966,333.33	12.46	227.02	
6,969.00	47.91	4.43	4,109.58	6,895.58	208.33 N	410.87 E	10,376,988.04	1,966,335.08	11.35	250.07	
7,001.00	50.46	2.25	4,130.50	6,916.50	232.50 N	412.27 E	10,377,012.21	1,966,336.48	9.49	274.25	
7,033.00	52.65	4.00	4,150.39	6,936.39	257.52 N	413.64 E	10,377,037.23	1,966,337.85	8.07	299.28	
7,065.00	55.34	5.29	4,169.20	6,955.20	283.32 N	415.75 E	10,377,063.03	1,966,339.95	9.02	325.16	
7,097.00	58.25	3.60	4,186.73	6,972.73	310.01 N	417.81 E	10,377,089.72	1,966,342.02	10.11	351.92	
7,128.00	60.87	0.64	4,202.43	6,988.43	336.71 N	418.79 E	10,377,116.42	1,966,343.00	11.80	378.58	
7,159.00	63.62	0.10	4,216.87	7,002.87	364.14 N	418.97 E	10,377,143.85	1,966,343.18	9.00	405.88	
7,191.00	66.11	0.64	4,230.46	7,016.46	393.11 N	419.16 E	10,377,172.82	1,966,343.37	7.93	434.70	
7,223.00	67.34	359.24	4,243.10	7,029.10	422.50 N	419.12 E	10,377,202.21	1,966,343.33	5.56	463.93	
7,254.00	70.18	359.40	4,254.33	7,040.33	451.39 N	418.78 E	10,377,231.10	1,966,342.99	9.17	492.63	
7,286.00	73.15	1.49	4,264.40	7,050.40	481.76 N	419.02 E	10,377,261.47	1,966,343.23	11.16	522.86	
7,315.00	75.67	2.00	4,272.19	7,058.19	509.68 N	419.87 E	10,377,289.39	1,966,344.08	8.85	550.71	
7,347.00	77.91	2.66	4,279.50	7,065.50	540.80 N	421.14 E	10,377,320.51	1,966,345.35	7.28	581.80	
7,379.00	80.92	1.72	4,285.38	7,071.38	572.23 N	422.34 E	10,377,351.94	1,966,346.55	9.84	613.18	
7,411.00	84.89	3.28	4,289.33	7,075.33	603.95 N	423.73 E	10,377,383.66	1,966,347.94	13.32	644.87	
7,442.00	88.02	2.99	4,291.25	7,077.25	634.84 N	425.42 E	10,377,414.55	1,966,349.63	10.14	675.77	
7,474.00	88.55	4.04	4,292.21	7,078.21	666.77 N	427.38 E	10,377,446.47	1,966,351.59	3.67	707.73	
7,556.00	89.33	2.58	4,293.73	7,079.73	748.61 N	432.11 E	10,377,528.32	1,966,356.32	2.02	789.62	
7,650.00	89.03	2.54	4,295.07	7,081.07	842.51 N	436.31 E	10,377,622.22	1,966,360.52	0.32	883.44	
7,746.00	90.20	3.92	4,295.72	7,081.72	938.35 N	441.72 E	10,377,718.06	1,966,365.93	1.88	979.32	
7,841.00	90.00	0.90	4,295.55	7,081.55	1,033.26 N	445.72 E	10,377,812.96	1,966,369.93	3.19	1,074.13	
7,936.00	89.87	4.34	4,295.66	7,081.66	1,128.14 N	450.06 E	10,377,907.85	1,966,374.27	3.62	1,168.95	
8,031.00	90.00	4.64	4,295.77	7,081.77	1,222.85 N	457.50 E	10,378,002.56	1,966,381.70	0.34	1,263.91	
8,126.00	89.26	2.36	4,296.38	7,082.38	1,317.66 N	463.29 E	10,378,097.37	1,966,387.50	2.52	1,358.82	
8,219.00	90.87	0.34	4,296.27	7,082.27	1,410.63 N	465.49 E	10,378,190.34	1,966,389.69	2.78	1,451.50	
8,312.00	89.53	356.88	4,295.95	7,081.95	1,503.59 N	463.23 E	10,378,283.29	1,966,387.44	3.99	1,543.72	
8,408.00	89.16	356.69	4,297.05	7,083.05	1,599.43 N	457.85 E	10,378,379.13	1,966,382.05	0.43	1,638.47	
8,502.00	92.59	359.45	4,295.61	7,081.61	1,693.34 N	454.68 E	10,378,473.05	1,966,378.89	4.68	1,731.54	
8,596.00	93.06	359.40	4,290.98	7,076.98	1,787.22 N	453.74 E	10,378,566.93	1,966,377.95	0.50	1,824.81	
8,691.00	92.35	1.13	4,286.49	7,072.49	1,882.11 N	454.18 E	10,378,661.82	1,966,378.39	1.97	1,919.23	
8,787.00	88.45	0.69	4,285.82	7,071.82	1,978.08 N	455.70 E	10,378,757.78	1,966,379.91	4.09	2,014.83	
8,882.00	88.12	0.78	4,288.67	7,074.67	2,073.03 N	456.92 E	10,378,852.73	1,966,381.13	0.36	2,109.39	
8,977.00	89.29	1.08	4,290.81	7,076.81	2,167.99 N	458.46 E	10,378,947.69	1,966,382.67	1.27	2,203.99	
9,071.00	88.22	0.05	4,292.86	7,078.86	2,261.96 N	459.39 E	10,379,041.66	1,966,383.60	1.58	2,297.55	
9,167.00	89.60	0.43	4,294.68	7,080.68	2,357.94 N	459.79 E	10,379,137.64	1,966,384.00	1.49	2,393.05	
9,261.00	89.33	357.89	4,295.56	7,081.56	2,451.92 N	458.41 E	10,379,231.62	1,966,382.62	2.72	2,486.37	

Design Report for University 49-1 #6H - Wellbore #1

Measured Depth (ft)	Inclination (°)	Grid Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates Northing (ft)	Local Coordinates Easting (ft)	Map Coordinates Northing (usft)	Map Coordinates Easting (usft)	Dogleg Rate (°/100usft)	Vertical Section (ft)	Comments
9,357.00	91.85	3.04	4,294.57	7,080.57	2,547.87 N	459.19 E	10,379,327.57	1,966,383.40	5.97	2,581.88	
9,451.00	91.71	3.09	4,291.65	7,077.65	2,641.69 N	464.21 E	10,379,421.39	1,966,388.42	0.16	2,675.71	
9,546.00	91.92	3.43	4,288.64	7,074.64	2,736.49 N	469.61 E	10,379,516.19	1,966,393.82	0.42	2,770.55	
9,640.00	90.84	1.75	4,286.38	7,072.38	2,830.36 N	473.86 E	10,379,610.06	1,966,398.07	2.12	2,864.35	
9,735.00	91.21	2.24	4,284.68	7,070.68	2,925.29 N	477.17 E	10,379,704.99	1,966,401.38	0.65	2,959.11	
9,830.00	90.77	1.60	4,283.04	7,069.04	3,020.22 N	480.35 E	10,379,799.92	1,966,404.56	0.82	3,053.85	
9,925.00	89.83	0.27	4,282.54	7,068.54	3,115.20 N	481.90 E	10,379,894.90	1,966,406.11	1.71	3,148.48	
10,019.00	88.86	359.70	4,283.62	7,069.62	3,209.19 N	481.87 E	10,379,988.90	1,966,406.08	1.20	3,241.96	
10,115.00	90.27	3.05	4,284.34	7,070.34	3,305.15 N	484.18 E	10,380,084.85	1,966,408.39	3.79	3,337.63	
10,210.00	89.43	3.55	4,284.59	7,070.59	3,399.99 N	489.65 E	10,380,179.69	1,966,413.85	1.03	3,432.52	
10,304.00	89.83	4.59	4,285.20	7,071.20	3,493.75 N	496.32 E	10,380,273.45	1,966,420.53	1.19	3,526.46	
10,399.00	87.65	3.47	4,287.29	7,073.29	3,588.48 N	502.99 E	10,380,368.18	1,966,427.20	2.58	3,621.38	
10,495.00	87.27	3.79	4,291.54	7,077.54	3,684.19 N	509.06 E	10,380,463.90	1,966,433.27	0.52	3,717.20	
10,591.00	87.38	1.01	4,296.02	7,082.02	3,780.00 N	513.08 E	10,380,559.70	1,966,437.29	2.89	3,812.90	
10,685.00	87.18	0.45	4,300.49	7,086.49	3,873.88 N	514.28 E	10,380,653.58	1,966,438.48	0.63	3,906.40	
10,780.00	89.56	0.33	4,303.19	7,089.19	3,968.83 N	514.92 E	10,380,748.54	1,966,439.13	2.51	4,000.90	
10,875.00	90.74	1.73	4,302.94	7,088.94	4,063.81 N	516.63 E	10,380,843.52	1,966,440.84	1.93	4,095.54	
10,970.00	89.33	0.36	4,302.88	7,088.88	4,158.79 N	518.36 E	10,380,938.50	1,966,442.57	2.07	4,190.18	
11,065.00	90.97	0.57	4,302.63	7,088.63	4,253.79 N	519.13 E	10,381,033.49	1,966,443.34	1.74	4,284.74	
11,160.00	89.80	357.33	4,301.99	7,087.99	4,348.76 N	517.39 E	10,381,128.46	1,966,441.60	3.63	4,379.00	
11,255.00	91.04	357.39	4,301.30	7,087.30	4,443.65 N	513.02 E	10,381,223.35	1,966,437.23	1.31	4,472.92	
11,350.00	92.32	359.86	4,298.51	7,084.51	4,538.57 N	510.74 E	10,381,318.27	1,966,434.95	2.93	4,567.09	
11,446.00	91.28	1.87	4,295.50	7,081.50	4,634.51 N	512.19 E	10,381,414.21	1,966,436.40	2.36	4,662.65	
11,541.00	91.41	4.12	4,293.27	7,079.27	4,729.35 N	517.15 E	10,381,509.05	1,966,441.36	2.37	4,757.49	
11,634.00	90.17	4.21	4,291.98	7,077.98	4,822.09 N	523.90 E	10,381,601.79	1,966,448.11	1.34	4,850.43	
11,729.00	88.79	1.87	4,292.85	7,078.85	4,916.94 N	528.94 E	10,381,696.64	1,966,453.15	2.86	4,945.29	
11,823.00	89.90	4.16	4,293.92	7,079.92	5,010.80 N	533.88 E	10,381,790.50	1,966,458.09	2.71	5,039.15	
11,918.00	90.00	4.18	4,294.00	7,080.00	5,105.55 N	540.79 E	10,381,885.25	1,966,465.00	0.11	5,134.11	
11,999.00	89.23	4.05	4,294.55	7,080.55	5,186.34 N	546.60 E	10,381,966.04	1,966,470.81	0.96	5,215.06	Final Sperry MWD Survey
12,062.00	89.23	4.05	4,295.39	7,081.39	5,249.17 N	551.05 E	10,382,028.87	1,966,475.26	0.00	5,278.02	Projection to TD

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
100.00	100.00	0.05	-0.18	First Gyro Survey
974.00	973.97	-2.53	-4.20	Final Gyro Survey
1,132.00	1,131.96	-3.18	-6.01	First Sperry MWD Survey
11,999.00	7,080.55	5,186.34	546.60	Final Sperry MWD Survey
12,062.00	7,081.39	5,249.17	551.05	Projection to TD

Design Report for University 49-1 #6H - Wellbore #1

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/_S (ft)	Origin +E/-W (ft)	Start TVD (ft)
User	No Target (Freehand)	5.99	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
100.00	974.00	VES GYROS	NS-Gyro-MS
1,132.00	12,062.00	Sperry MWD Surveys	MWD

Design Targets

Target Name - hit/miss target - Shape	Dip Angle ()	Dip Dir. ()	TVD ()	+N/-S ()	+E/-W ()	Northing ()	Easting ()	Latitude	Longitude
()									

Directional Difficulty Index

Average Dogleg over Survey:	1.91 °/100usft	Maximum Dogleg over Survey:	13.32 °/100usft at 7,411.00 ft
Net Tortousity applicable to Plans:	0.30 °/100usft	Directional Difficulty Index:	6.346

Audit Info

North Reference Sheet for Sec. 1 BLK 49 University Lands - University 49-1 #6H - Wellbore #1

All data is in Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.
Vertical Depths are relative to WELL @ 2786.00ft (C138 25'KB). Northing and Easting are relative to University 49-1 #6H

Coordinate System is US State Plane 1983, Texas Central Zone using datum North American Datum 1983, ellipsoid GRS 1980
Projection method is Lambert Conformal Conic (2 parallel)
Central Meridian is 100° 20' 0.000 W°, Longitude Origin:0° 0' 0.000 E°, Latitude Origin:31° 53' 0.000 N°
False Easting: 2,296,583.33usft, False Northing: 9,842,500.00usft, Scale Reduction: 0.99988431

Grid Coordinates of Well: 10,376,779.71 usft N, 1,965,924.21 usft E
Geographical Coordinates of Well: 31° 07' 52.93" N, 101° 23' 24.78" W
Grid Convergence at Surface is: -0.54°

Based upon Minimum Curvature type calculations, at a Measured Depth of 12,062.00ft
the Bottom Hole Displacement is 5,278.02ft in the Direction of 5.99° (Grid).

Magnetic Convergence at surface is: -6.71° (28 March 2014, , BGGM2013)