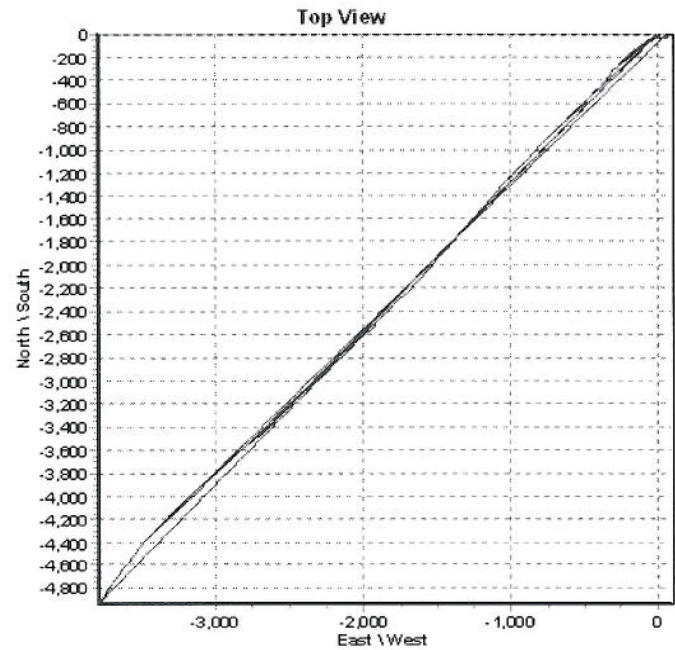


Directional Plot

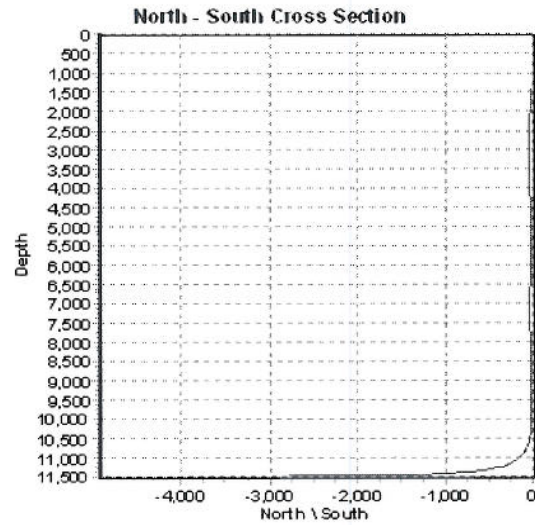
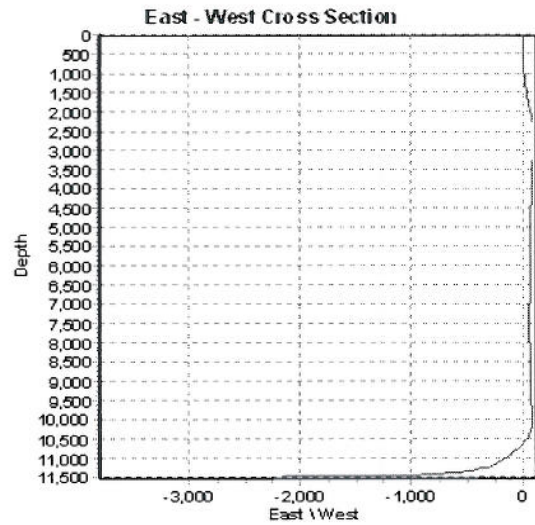
Well : Benzel 35-2HM (F 25NWB)  
Area : Mamm Creek

API # : 05045207790000



Survey Company : Sperry Sun

<u>TVD</u>	<u>Northings</u>	<u>Easting</u>
11514.78	-2440.76	-1867.49
11514.93	-2893.16	-2223.69
11515.29	-2918.01	-2243.85
11515.75	-2542.41	-1945.19
11515.90	-4405.70	-3489.34
11515.90	-2465.51	-1886.12
11516.51	-2517.38	-1925.27
11516.58	-2491.19	-1905.20
11516.87	-4432.39	-3506.97
11517.65	-4459.23	-3524.37
11518.15	-4485.31	-3541.12
11518.48	-4513.16	-3558.82
11518.51	-4585.82	-3591.54
11518.52	-4593.13	-3608.21
11518.60	-4539.42	-3575.29
11520.32	-4646.94	-3640.90
11521.91	-4674.39	-3657.27
11523.27	-4701.93	-3673.52
11524.36	-4729.55	-3689.64
11525.40	-4756.46	-3705.02
11526.36	-4785.07	-3721.43
11526.97	-4813.07	-3736.90
11527.55	-4840.30	-3751.70
11529.54	-4895.38	-3782.21
11531.51	-4933.26	-3802.46



## Survey Report for Benzel 35-2HM - Sperry MWD Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145.00	0.12	187.65	145.00	-0.15	-0.02	0.13	0.08
<b>Tie on to Casing Assumed Vertical @ 145</b>							
237.00	0.15	159.09	237.00	-0.36	0.01	0.28	0.08
297.00	0.23	153.29	297.00	-0.54	0.09	0.37	0.13
<b>First Sperry MWD Survey</b>							
329.00	0.27	151.58	329.00	-0.66	0.16	0.43	0.13
422.00	0.52	126.70	422.00	-1.11	0.60	0.50	0.32
514.00	0.72	108.48	513.99	-1.54	1.48	0.30	0.30
606.00	1.02	108.15	605.98	-1.98	2.81	-0.17	0.33
698.00	1.40	106.22	697.96	-2.55	4.67	-0.87	0.42
793.00	1.47	105.09	792.93	-3.19	6.96	-1.77	0.08
888.00	1.60	107.56	887.90	-3.91	9.40	-2.71	0.15
982.00	1.51	105.22	981.86	-4.63	11.84	-3.65	0.12
1,077.00	1.55	99.49	1,076.83	-5.17	14.32	-4.74	0.17
1,172.00	1.88	103.62	1,171.79	-5.75	17.10	-6.00	0.37
1,267.00	2.29	106.86	1,266.72	-6.66	20.43	-7.33	0.45
1,362.00	2.61	112.35	1,361.64	-8.04	24.25	-8.60	0.42
1,456.00	2.63	111.19	1,455.54	-9.63	28.24	-9.80	0.06
1,551.00	3.38	112.04	1,550.41	-11.47	32.87	-11.20	0.79
1,646.00	3.93	113.58	1,645.21	-13.82	38.45	-12.78	0.59
1,741.00	4.26	112.54	1,739.97	-16.48	44.69	-14.53	0.36
1,836.00	5.10	113.88	1,834.65	-19.54	51.81	-16.50	0.89
1,944.00	5.00	114.05	1,942.23	-23.40	60.50	-18.81	0.09
2,053.00	5.46	112.80	2,050.78	-27.34	69.61	-21.31	0.43
2,116.00	5.38	111.77	2,113.50	-29.60	75.12	-22.92	0.20
2,211.00	3.65	107.75	2,208.20	-32.18	82.14	-25.21	1.85
2,306.00	1.88	101.57	2,303.08	-33.41	86.54	-26.95	1.89
2,401.00	0.57	95.31	2,398.06	-33.77	88.54	-27.90	1.38
2,495.00	0.20	41.42	2,492.06	-33.69	89.11	-28.32	0.51
2,590.00	0.17	38.16	2,587.06	-33.45	89.31	-28.63	0.03
2,685.00	0.14	83.30	2,682.06	-33.33	89.51	-28.85	0.13
2,780.00	0.71	305.64	2,777.06	-32.97	89.15	-28.91	0.86
2,875.00	1.10	306.15	2,872.04	-32.09	87.94	-28.85	0.41
2,969.00	0.99	300.49	2,966.03	-31.15	86.51	-28.72	0.16
3,064.00	0.96	294.62	3,061.01	-30.40	85.08	-28.43	0.11
3,159.00	0.81	290.03	3,156.00	-29.84	83.72	-28.03	0.17
3,253.00	0.50	293.19	3,250.00	-29.45	82.72	-27.72	0.33
3,348.00	0.62	287.27	3,344.99	-29.13	81.85	-27.44	0.14
3,442.00	0.87	281.94	3,438.98	-28.83	80.67	-26.94	0.28
3,537.00	0.84	279.86	3,533.97	-28.56	79.27	-26.30	0.05
3,632.00	0.81	276.57	3,628.96	-28.37	77.92	-25.62	0.06
3,726.00	0.65	270.57	3,722.96	-28.29	76.73	-24.95	0.19
3,821.00	0.52	261.78	3,817.95	-28.34	75.76	-24.31	0.17
3,916.00	0.35	228.17	3,912.95	-28.60	75.12	-23.71	0.32
4,011.00	0.80	285.66	4,007.94	-28.61	74.26	-23.17	0.72
4,105.00	1.24	296.90	4,101.93	-27.98	72.73	-22.73	0.51
4,200.00	1.03	306.13	4,196.91	-27.01	71.12	-22.50	0.29
4,295.00	0.82	303.07	4,291.90	-26.13	69.86	-22.42	0.23
4,390.00	0.49	289.31	4,386.89	-25.63	68.91	-22.23	0.38

## Survey Report for Benzel 35-2HM - Sperry MWD Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
4,484.00	0.36	245.76	4,480.89	-25.62	68.26	-21.84	0.36
4,579.00	0.59	288.03	4,575.89	-25.59	67.52	-21.41	0.43
4,673.00	1.00	309.91	4,669.88	-24.91	66.43	-21.27	0.54
4,768.00	0.80	319.59	4,764.87	-23.87	65.37	-21.43	0.26
4,863.00	0.30	342.52	4,859.86	-23.13	64.86	-21.70	0.56
4,958.00	0.21	55.05	4,954.86	-22.79	64.93	-22.01	0.33
5,052.00	0.65	102.50	5,048.86	-22.81	65.59	-22.41	0.56
5,147.00	0.45	44.75	5,143.85	-22.66	66.38	-23.01	0.59
5,242.00	0.54	8.99	5,238.85	-21.96	66.71	-23.77	0.33
5,336.00	0.55	24.41	5,332.85	-21.11	66.97	-24.60	0.16
5,431.00	0.41	359.55	5,427.84	-20.35	67.15	-25.31	0.26
5,525.00	0.37	351.88	5,521.84	-19.72	67.11	-25.78	0.07
5,620.00	0.08	354.20	5,616.84	-19.35	67.06	-26.04	0.31
5,715.00	0.31	173.11	5,711.84	-19.54	67.08	-25.91	0.41
5,810.00	0.81	253.64	5,806.84	-19.98	66.47	-25.18	0.86
5,905.00	1.23	254.58	5,901.82	-20.44	64.84	-23.81	0.44
5,999.00	1.11	249.10	5,995.80	-21.03	63.02	-22.22	0.17
6,094.00	1.13	245.70	6,090.78	-21.75	61.31	-20.61	0.07
6,189.00	1.02	240.59	6,185.77	-22.55	59.71	-19.00	0.15
6,284.00	0.92	236.17	6,280.75	-23.39	58.34	-17.49	0.13
6,379.00	0.92	212.23	6,375.74	-24.46	57.30	-16.01	0.40
6,473.00	1.02	195.59	6,469.73	-25.90	56.68	-14.48	0.32
6,568.00	0.54	185.76	6,564.72	-27.16	56.40	-13.32	0.52
6,663.00	0.33	194.89	6,659.72	-27.87	56.29	-12.69	0.23
6,757.00	0.54	200.77	6,753.71	-28.55	56.06	-12.02	0.23
6,852.00	0.61	236.30	6,848.71	-29.25	55.48	-11.11	0.38
6,938.00	0.82	255.92	6,934.70	-29.65	54.51	-10.19	0.37
7,033.00	0.57	219.36	7,029.70	-30.18	53.55	-9.18	0.52
7,128.00	0.91	192.36	7,124.69	-31.28	53.09	-8.03	0.50
7,223.00	0.78	198.89	7,219.68	-32.63	52.71	-6.74	0.17
7,317.00	0.84	201.11	7,313.67	-33.88	52.26	-5.48	0.07
7,412.00	0.61	134.06	7,408.66	-34.88	52.37	-4.76	0.87
7,506.00	1.57	333.87	7,502.65	-34.07	52.16	-5.27	2.29
7,601.00	2.14	342.01	7,597.60	-31.22	51.04	-6.83	0.66
7,696.00	1.63	6.22	7,692.55	-28.19	50.64	-8.97	0.98
7,791.00	1.76	13.89	7,787.51	-25.43	51.14	-11.45	0.27
7,886.00	1.74	29.32	7,882.47	-22.75	52.20	-14.20	0.49
7,981.00	1.78	43.40	7,977.42	-20.42	53.92	-17.10	0.46
8,075.00	1.67	51.72	8,071.38	-18.51	55.99	-19.88	0.29
8,170.00	1.79	58.51	8,166.34	-16.88	58.35	-22.62	0.25
8,264.00	2.16	56.18	8,260.28	-15.13	61.07	-25.68	0.40
8,359.00	1.33	51.91	8,355.24	-13.45	63.42	-28.45	0.88
8,454.00	0.47	245.44	8,450.23	-12.93	63.94	-29.17	1.88
8,548.00	0.44	255.70	8,544.23	-13.18	63.24	-28.54	0.09
8,643.00	0.57	199.37	8,639.22	-13.72	62.73	-27.81	0.52
8,738.00	0.79	155.78	8,734.22	-14.76	62.84	-27.05	0.57
8,833.00	1.13	144.55	8,829.20	-16.12	63.65	-26.48	0.41
8,928.00	0.19	198.95	8,924.20	-17.04	64.14	-26.07	1.09
9,022.00	0.22	42.04	9,018.20	-17.05	64.21	-26.10	0.43
9,117.00	0.09	79.94	9,113.20	-16.90	64.41	-26.34	0.17
9,212.00	0.32	132.69	9,208.20	-17.07	64.68	-26.37	0.29

## Survey Report for Benzel 35-2HM - Sperry MWD Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
9,307.00	0.14	91.64	9,303.19	-17.25	64.99	-26.42	0.25
9,401.00	0.56	102.40	9,397.19	-17.35	65.55	-26.68	0.45
9,496.00	0.71	110.77	9,492.19	-17.66	66.56	-27.06	0.19
9,591.00	0.93	101.24	9,587.18	-18.02	67.86	-27.58	0.27
9,686.00	0.73	75.68	9,682.17	-18.02	69.20	-28.41	0.44
9,781.00	1.06	74.14	9,777.16	-17.63	70.64	-29.60	0.35
9,875.00	0.27	187.02	9,871.15	-17.61	71.45	-30.11	1.27
9,970.00	0.32	167.24	9,966.15	-18.09	71.48	-29.75	0.12
10,065.00	0.53	140.02	10,061.15	-18.69	71.82	-29.49	0.30
10,096.00	0.28	160.17	10,092.15	-18.87	71.94	-29.42	0.92
10,128.00	0.45	185.10	10,124.15	-19.07	71.95	-29.27	0.72
10,159.00	0.88	231.39	10,155.14	-19.34	71.75	-28.94	2.11
10,191.00	1.57	265.62	10,187.14	-19.53	71.12	-28.40	3.05
10,223.00	2.74	267.34	10,219.11	-19.59	69.92	-27.61	3.66
10,254.00	4.07	258.32	10,250.06	-19.85	68.11	-26.29	4.61
10,286.00	5.29	256.99	10,281.95	-20.41	65.56	-24.27	3.83
10,317.00	6.72	249.01	10,312.78	-21.38	62.47	-21.61	5.33
10,349.00	7.85	249.97	10,344.52	-22.80	58.67	-18.15	3.55
10,381.00	9.60	250.39	10,376.15	-24.45	54.10	-14.04	5.47
10,412.00	11.11	253.02	10,406.64	-26.19	48.81	-9.41	5.10
10,444.00	12.04	253.39	10,437.99	-28.04	42.66	-4.17	2.92
10,544.00	16.03	254.90	10,534.99	-34.62	19.33	15.38	4.01
10,576.00	16.49	253.67	10,565.71	-37.05	10.71	22.61	1.80
10,609.00	17.30	249.67	10,597.28	-40.07	1.61	30.59	4.29
10,640.00	18.46	246.44	10,626.79	-43.64	-7.21	38.83	4.92
10,672.00	20.56	245.35	10,656.95	-48.01	-16.96	48.27	6.66
10,704.00	22.67	243.87	10,686.70	-53.07	-27.61	58.81	6.81
10,735.00	23.67	243.60	10,715.20	-58.46	-38.55	69.80	3.24
10,768.00	25.42	241.57	10,745.21	-64.78	-50.71	82.27	5.89
10,800.00	27.40	238.22	10,773.87	-71.93	-63.01	95.48	7.74
10,832.00	28.04	234.56	10,802.20	-80.17	-75.40	109.60	5.68
10,865.00	29.09	232.79	10,831.19	-89.52	-88.11	124.79	4.09
10,897.00	30.48	232.23	10,858.96	-99.19	-100.72	140.18	4.43
10,928.00	30.51	230.35	10,885.67	-109.03	-112.99	155.48	3.08
10,960.00	29.84	228.73	10,913.34	-119.47	-125.23	171.24	3.30
10,992.00	30.70	227.53	10,940.97	-130.23	-137.24	187.12	3.29
11,023.00	33.10	225.84	10,967.29	-141.48	-149.15	203.31	8.26
11,055.00	35.06	224.12	10,993.79	-154.16	-161.82	221.11	6.82
11,087.00	36.73	222.80	11,019.72	-167.78	-174.72	239.78	5.75
11,119.00	38.28	222.92	11,045.10	-182.06	-187.97	259.20	4.85
11,151.00	39.82	223.88	11,069.95	-196.71	-201.83	279.27	5.17
11,182.00	41.19	223.62	11,093.52	-211.25	-215.75	299.30	4.45
11,214.00	43.67	222.94	11,117.14	-226.97	-230.55	320.80	7.88
11,245.00	48.08	219.61	11,138.72	-243.70	-245.20	343.00	16.18
11,278.00	52.25	216.20	11,159.86	-263.70	-260.74	368.33	14.92
11,310.00	53.78	215.54	11,179.11	-284.41	-275.72	393.87	5.06
11,341.00	55.69	214.21	11,197.01	-305.18	-290.19	419.14	7.09
11,373.00	58.38	213.70	11,214.42	-327.45	-305.18	445.92	8.51
11,404.00	60.96	211.74	11,230.07	-349.96	-319.64	472.56	9.95
11,436.00	63.63	211.15	11,244.95	-374.13	-334.41	500.70	8.50
11,468.00	65.98	211.88	11,258.57	-398.81	-349.55	529.47	7.63

## Survey Report for Benzel 35-2HM - Sperry MWD Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
11,500.00	68.30	212.51	11,271.00	-423.76	-365.26	558.81	7.47
11,531.00	69.90	214.54	11,282.06	-447.90	-381.26	587.67	8.00
11,563.00	69.94	215.91	11,293.05	-472.45	-398.59	617.69	4.02
11,594.00	69.96	216.68	11,303.67	-495.92	-415.83	646.80	2.33
11,626.00	70.22	217.45	11,314.57	-519.93	-433.96	676.88	2.40
11,657.00	71.97	218.36	11,324.62	-543.07	-451.98	706.21	6.29
11,689.00	73.73	218.95	11,334.05	-566.95	-471.08	736.78	5.78
11,720.00	74.06	219.24	11,342.65	-590.06	-489.86	766.56	1.39
11,751.00	74.38	219.66	11,351.08	-613.10	-508.82	796.38	1.66
11,784.00	74.79	219.81	11,359.85	-637.56	-529.15	828.18	1.32
11,815.00	77.42	220.27	11,367.30	-660.60	-548.51	858.25	8.61
11,847.00	80.12	220.00	11,373.53	-684.59	-568.74	889.62	8.48
11,879.00	81.70	218.63	11,378.58	-709.04	-588.76	921.20	6.50
11,910.00	82.46	217.91	11,382.85	-733.14	-607.78	951.91	3.36
11,942.00	83.29	217.54	11,386.82	-758.26	-627.20	983.66	2.84
11,973.00	83.70	217.56	11,390.34	-782.68	-645.98	1,014.46	1.32
12,036.00	84.13	217.51	11,397.01	-832.35	-684.14	1,077.10	0.69
12,068.00	84.81	217.76	11,400.10	-857.58	-703.59	1,108.95	2.26
12,130.00	85.31	218.46	11,405.44	-906.18	-741.71	1,170.72	1.38
12,163.00	85.31	217.69	11,408.14	-932.07	-762.00	1,203.61	2.33
12,226.00	83.23	216.35	11,414.43	-982.11	-799.74	1,266.28	3.92
12,289.00	84.59	216.45	11,421.11	-1,032.53	-836.91	1,328.90	2.16
12,321.00	85.40	216.40	11,423.90	-1,058.18	-855.84	1,360.77	2.54
12,385.00	83.94	216.74	11,429.85	-1,109.36	-893.80	1,424.47	2.34
12,417.00	84.44	217.02	11,433.08	-1,134.82	-912.91	1,456.30	1.79
12,481.00	85.83	217.74	11,438.51	-1,185.50	-951.62	1,520.06	2.44
12,512.00	86.33	218.21	11,440.63	-1,209.88	-970.65	1,550.99	2.21
12,544.00	85.09	218.20	11,443.03	-1,234.95	-990.39	1,582.90	3.88
12,608.00	86.51	217.00	11,447.71	-1,285.52	-1,029.33	1,646.72	2.90
12,672.00	86.45	215.61	11,451.64	-1,337.00	-1,067.15	1,710.57	2.17
12,703.00	86.39	215.48	11,453.58	-1,362.17	-1,085.14	1,741.48	0.46
12,736.00	84.04	215.08	11,456.33	-1,389.01	-1,104.13	1,774.33	7.22
12,767.00	83.60	214.88	11,459.67	-1,414.27	-1,121.80	1,805.10	1.56
12,798.00	84.19	215.21	11,462.96	-1,439.50	-1,139.50	1,835.89	2.18
12,830.00	85.16	214.84	11,465.93	-1,465.59	-1,157.78	1,867.71	3.24
12,862.00	85.86	214.62	11,468.44	-1,491.81	-1,175.96	1,899.56	2.29
12,894.00	86.51	214.91	11,470.57	-1,518.04	-1,194.17	1,931.43	2.22
12,925.00	87.35	214.24	11,472.23	-1,543.53	-1,211.73	1,962.33	3.46
12,957.00	87.81	214.14	11,473.58	-1,569.97	-1,229.70	1,994.23	1.47
12,990.00	88.37	214.30	11,474.68	-1,597.25	-1,248.25	2,027.14	1.76
13,023.00	89.13	213.63	11,475.40	-1,624.61	-1,266.68	2,060.05	3.07
13,088.00	87.31	214.40	11,477.42	-1,678.46	-1,303.02	2,124.86	3.04
13,119.00	87.25	214.10	11,478.89	-1,704.05	-1,320.45	2,155.76	0.99
13,151.00	87.75	214.04	11,480.29	-1,730.54	-1,338.36	2,187.66	1.57
13,184.00	88.24	213.69	11,481.44	-1,757.92	-1,356.73	2,220.55	1.82
13,247.00	88.18	214.85	11,483.41	-1,809.96	-1,392.19	2,283.38	1.84
13,279.00	88.26	214.34	11,484.40	-1,836.29	-1,410.35	2,315.31	1.61
13,341.00	86.63	215.62	11,487.17	-1,887.03	-1,445.86	2,377.16	3.34
13,372.00	86.26	215.61	11,489.09	-1,912.19	-1,463.87	2,408.07	1.19
13,404.00	85.71	215.16	11,491.33	-1,938.21	-1,482.36	2,439.96	2.22

## Survey Report for Benzel 35-2HM - Sperry MWD Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
13,435.00	85.55	215.79	11,493.69	-1,963.38	-1,500.30	2,470.84	2.09
13,467.00	85.92	215.03	11,496.07	-1,989.39	-1,518.79	2,502.72	2.64
13,499.00	86.01	216.09	11,498.32	-2,015.36	-1,537.35	2,534.61	3.32
13,530.00	85.71	216.47	11,500.56	-2,040.28	-1,555.65	2,565.52	1.56
13,562.00	85.56	217.55	11,503.00	-2,065.76	-1,574.85	2,597.42	3.40
13,593.00	86.94	216.27	11,505.02	-2,090.49	-1,593.43	2,628.35	6.07
13,625.00	87.00	216.58	11,506.72	-2,116.21	-1,612.40	2,660.29	0.99
13,657.00	86.26	216.31	11,508.60	-2,141.90	-1,631.38	2,692.22	2.46
13,688.00	87.25	216.37	11,510.35	-2,166.83	-1,649.72	2,723.16	3.20
13,720.00	88.33	217.03	11,511.59	-2,192.47	-1,668.83	2,755.13	3.95
13,753.00	88.77	219.05	11,512.42	-2,218.45	-1,689.16	2,788.11	6.26
13,783.00	88.92	218.83	11,513.02	-2,241.78	-1,708.01	2,818.10	0.89
13,815.00	90.25	219.11	11,513.26	-2,266.66	-1,728.13	2,850.10	4.25
13,846.00	90.00	219.80	11,513.19	-2,290.59	-1,747.83	2,881.09	2.37
13,878.00	89.10	218.82	11,513.44	-2,315.35	-1,768.10	2,913.08	4.16
13,910.00	89.91	218.89	11,513.72	-2,340.27	-1,788.18	2,945.07	2.54
13,941.00	89.41	218.43	11,513.90	-2,364.48	-1,807.54	2,976.07	2.19
13,973.00	89.13	217.56	11,514.31	-2,389.69	-1,827.24	3,008.07	2.86
14,005.00	89.48	218.02	11,514.70	-2,414.98	-1,846.85	3,040.06	1.81
14,038.00	88.03	217.45	11,515.41	-2,441.07	-1,867.04	3,073.05	4.72
14,069.00	87.84	216.51	11,516.53	-2,465.82	-1,885.67	3,104.03	3.09
14,101.00	89.72	216.72	11,517.21	-2,491.50	-1,904.75	3,136.01	5.91
14,134.00	90.53	218.20	11,517.14	-2,517.69	-1,924.82	3,169.01	5.11
14,166.00	92.19	218.83	11,516.38	-2,542.72	-1,944.75	3,201.00	5.55
14,198.00	92.01	218.80	11,515.21	-2,567.64	-1,964.79	3,232.97	0.57
14,229.00	91.10	218.68	11,514.37	-2,591.81	-1,984.18	3,263.96	2.96
14,262.00	90.77	219.19	11,513.83	-2,617.47	-2,004.92	3,296.95	1.84
14,293.00	90.92	218.16	11,513.37	-2,641.67	-2,024.29	3,327.94	3.36
14,326.00	90.49	217.87	11,512.96	-2,667.67	-2,044.61	3,360.94	1.57
14,357.00	89.60	216.83	11,512.94	-2,692.31	-2,063.42	3,391.94	4.42
14,389.00	90.09	216.95	11,513.03	-2,717.91	-2,082.62	3,423.93	1.58
14,422.00	89.75	217.36	11,513.07	-2,744.21	-2,102.56	3,456.93	1.61
14,454.00	89.08	218.03	11,513.40	-2,769.53	-2,122.12	3,488.92	2.96
14,517.00	90.03	220.14	11,513.89	-2,818.42	-2,161.84	3,551.91	3.67
14,550.00	88.86	219.14	11,514.21	-2,843.83	-2,182.89	3,584.89	4.66
14,581.00	88.70	219.03	11,514.87	-2,867.89	-2,202.43	3,615.88	0.63
14,614.00	88.95	219.29	11,515.55	-2,893.47	-2,223.26	3,648.86	1.09
14,646.00	89.75	218.80	11,515.91	-2,918.32	-2,243.42	3,680.86	2.93
14,710.00	91.39	218.23	11,515.27	-2,968.40	-2,283.27	3,744.85	2.71
14,742.00	90.53	218.45	11,514.74	-2,993.49	-2,303.12	3,776.84	2.77
14,774.00	88.74	217.83	11,514.94	-3,018.66	-2,322.88	3,808.84	5.92
14,806.00	89.69	217.72	11,515.38	-3,043.95	-2,342.48	3,840.84	2.99
14,838.00	92.02	218.46	11,514.90	-3,069.13	-2,362.22	3,872.83	7.64
14,870.00	91.60	218.10	11,513.89	-3,094.24	-2,382.03	3,904.81	1.73
14,903.00	91.76	216.90	11,512.92	-3,120.40	-2,402.11	3,937.80	3.67
14,935.00	92.41	218.00	11,511.76	-3,145.79	-2,421.55	3,969.78	3.99
14,968.00	93.24	216.96	11,510.13	-3,171.95	-2,441.61	4,002.73	4.03
15,031.00	90.99	216.54	11,507.81	-3,222.39	-2,479.28	4,065.67	3.63
15,062.00	92.84	218.86	11,506.77	-3,246.90	-2,498.22	4,096.65	9.57
15,095.00	93.28	219.72	11,505.01	-3,272.40	-2,519.09	4,129.59	2.92
15,126.00	94.02	219.26	11,503.04	-3,296.28	-2,538.76	4,160.52	2.81

## Survey Report for Benzel 35-2HM - Sperry MWD Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
15,158.00	93.37	219.20	11,500.97	-3,321.01	-2,558.96	4,192.45	2.04
15,190.00	95.19	219.36	11,498.59	-3,345.71	-2,579.16	4,224.35	5.71
15,222.00	96.05	221.53	11,495.45	-3,369.95	-2,599.82	4,256.16	7.26
15,255.00	95.12	222.30	11,492.24	-3,394.39	-2,621.76	4,288.93	3.65
15,287.00	94.35	223.16	11,489.60	-3,417.81	-2,643.40	4,320.71	3.60
15,319.00	94.86	224.27	11,487.03	-3,440.87	-2,665.44	4,352.45	3.81
15,350.00	95.50	225.52	11,484.23	-3,462.74	-2,687.23	4,383.10	4.52
15,382.00	95.60	225.70	11,481.14	-3,485.02	-2,709.99	4,414.67	0.64
15,412.00	94.05	225.07	11,478.61	-3,506.01	-2,731.27	4,444.31	5.57
15,444.00	91.82	225.35	11,476.97	-3,528.53	-2,753.95	4,476.01	7.02
15,476.00	89.54	224.97	11,476.59	-3,551.09	-2,776.63	4,507.76	7.22
15,509.00	88.18	225.63	11,477.25	-3,574.29	-2,800.08	4,540.49	4.58
15,541.00	87.68	224.31	11,478.41	-3,596.92	-2,822.68	4,572.23	4.41
15,573.00	86.63	225.00	11,479.99	-3,619.65	-2,845.15	4,603.97	3.92
15,605.00	85.37	223.78	11,482.23	-3,642.46	-2,867.48	4,635.69	5.47
15,636.00	87.29	222.28	11,484.21	-3,665.08	-2,888.59	4,666.51	7.85
15,667.00	88.43	222.88	11,485.37	-3,687.89	-2,909.55	4,697.39	4.16
15,699.00	88.03	222.81	11,486.36	-3,711.34	-2,931.30	4,729.26	1.27
15,732.00	86.89	221.92	11,487.82	-3,735.69	-2,953.51	4,762.13	4.38
15,764.00	87.01	220.95	11,489.52	-3,759.65	-2,974.66	4,794.03	3.05
15,795.00	88.95	220.07	11,490.61	-3,783.20	-2,994.78	4,824.98	6.87
15,827.00	88.58	218.05	11,491.30	-3,808.04	-3,014.94	4,856.96	6.42
15,859.00	89.32	219.46	11,491.89	-3,832.99	-3,034.97	4,888.95	4.98
15,923.00	92.69	218.44	11,490.77	-3,882.75	-3,075.19	4,952.92	5.50
15,955.00	91.43	218.25	11,489.62	-3,907.83	-3,095.03	4,984.90	3.98
16,018.00	90.49	219.25	11,488.56	-3,956.96	-3,134.45	5,047.89	2.18
16,051.00	92.16	216.60	11,487.80	-3,982.98	-3,154.73	5,080.87	9.49
16,083.00	94.00	220.33	11,486.08	-4,007.99	-3,174.60	5,112.82	12.98
16,115.00	91.02	220.36	11,484.68	-4,032.35	-3,195.29	5,144.76	9.31
16,147.00	88.60	221.42	11,484.78	-4,056.54	-3,216.24	5,176.71	8.26
16,180.00	87.89	222.24	11,485.80	-4,081.12	-3,238.24	5,209.62	3.29
16,211.00	86.57	220.12	11,487.29	-4,104.42	-3,258.62	5,240.54	8.05
16,243.00	84.83	220.36	11,489.69	-4,128.78	-3,279.24	5,272.42	5.49
16,306.00	84.52	218.41	11,495.54	-4,177.26	-3,319.04	5,335.13	3.12
16,338.00	84.46	218.98	11,498.61	-4,202.12	-3,338.95	5,366.98	1.78
16,369.00	84.90	217.34	11,501.49	-4,226.39	-3,358.02	5,397.84	5.46
16,402.00	85.77	217.63	11,504.17	-4,252.49	-3,378.04	5,430.73	2.78
16,432.00	85.58	217.57	11,506.43	-4,276.19	-3,396.29	5,460.65	0.66
16,465.00	85.40	216.73	11,509.03	-4,302.41	-3,416.15	5,493.54	2.60
16,496.00	86.11	215.55	11,511.32	-4,327.38	-3,434.39	5,524.44	4.43
16,528.00	86.36	215.25	11,513.42	-4,353.40	-3,452.88	5,556.34	1.22
16,559.00	87.13	214.34	11,515.18	-4,378.82	-3,470.54	5,587.24	3.84
16,592.00	88.21	213.77	11,516.53	-4,406.14	-3,489.01	5,620.13	3.70
16,624.00	88.33	213.13	11,517.49	-4,432.82	-3,506.64	5,652.02	2.03
16,656.00	88.89	212.77	11,518.27	-4,459.67	-3,524.04	5,683.88	2.08
16,687.00	89.26	212.65	11,518.77	-4,485.75	-3,540.79	5,714.75	1.25
16,720.00	89.60	212.23	11,519.10	-4,513.60	-3,558.49	5,747.59	1.64
16,751.00	89.94	211.72	11,519.22	-4,539.89	-3,574.91	5,778.42	1.98
16,782.00	90.40	211.31	11,519.13	-4,566.32	-3,591.11	5,809.22	1.99
16,814.00	89.57	211.48	11,519.14	-4,593.64	-3,607.78	5,841.01	2.65
16,877.00	87.16	211.07	11,520.94	-4,647.46	-3,640.47	5,903.54	3.88

## Survey Report for Benzel 35-2HM - Sperry MWD Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
16,909.00	87.16	210.54	11,522.52	-4,674.91	-3,656.84	5,935.25	1.65
16,941.00	87.96	210.28	11,523.88	-4,702.48	-3,673.02	5,966.94	2.63
16,973.00	88.12	210.00	11,524.98	-4,730.14	-3,689.08	5,998.62	1.01
17,004.00	88.02	209.51	11,526.02	-4,757.03	-3,704.46	6,029.28	1.61
17,037.00	88.64	210.14	11,526.98	-4,785.65	-3,720.86	6,061.94	2.68
17,069.00	89.19	207.71	11,527.59	-4,813.65	-3,736.33	6,093.53	7.78
17,100.00	88.67	209.33	11,528.17	-4,840.88	-3,751.13	6,124.10	5.49
17,131.00	88.49	209.73	11,528.94	-4,867.85	-3,766.41	6,154.75	1.41
17,163.00	87.71	208.64	11,530.00	-4,895.77	-3,782.00	6,186.35	4.19
17,206.00	87.03	207.63	11,531.97	-4,933.65	-3,802.26	6,228.67	2.83
<b>Last Sperry MWD Survey</b>							
17,258.00	87.03	207.63	11,534.66	-4,979.66	-3,826.34	6,279.75	0.00
<b>Straight Line Projection to TD</b>							

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
145.00	145.00	-0.15	-0.02	Tie on to Casing Assumed Vertical @ 145
297.00	297.00	-0.54	0.09	First Sperry MWD Survey
17,206.00	11,531.97	-4,933.65	-3,802.26	Last Sperry MWD Survey
17,258.00	11,534.66	-4,979.66	-3,826.34	Straight Line Projection to TD

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (ft)
				+N/-S (ft)	+E/-W (ft)	
Target		218.00	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
145.00	17,258.00	Sperry MWD Survey	MWD

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Benzel 35-2HM Plan	0.00	360.00	11,386.00	-4,943.38	-3,862.19	1,609,864.92	2,368,173.85	39° 29' 11.326 N	107° 44' 19.862 W
- survey misses target center by 155.45ft at 17234.80ft MD (11533.46 TVD, -4959.13 N, -3815.60 E)									
- Point									