

Project: Weld County, CO (NAD 83)  
 Site: Sec. 33-T4N-R67W (Deering 33H Pad)  
 Well: Deering 33-6HX  
 Wellbore: Plan A  
 Design: Rev A0 (Permitting Plan Only)

# K.P. Kauffman Company, Inc.

**HALLIBURTON**  
 Sperry Drilling

## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	6337.68	0.00	0.00	6337.68	0.00	0.00	0.00	0.00	0.00	
3	7641.11	91.24	270.00	7156.00	0.00	-836.22	7.00	270.00	834.15	
4	7891.13	91.24	275.00	7150.58	10.90	-1085.87	2.00	89.89	1083.94	
5	11785.35	91.24	275.00	7066.00	350.33	-4964.35	0.00	0.00	4976.70	Deering 33-6H_RevA0_BHL Tgt

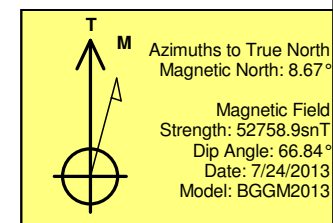
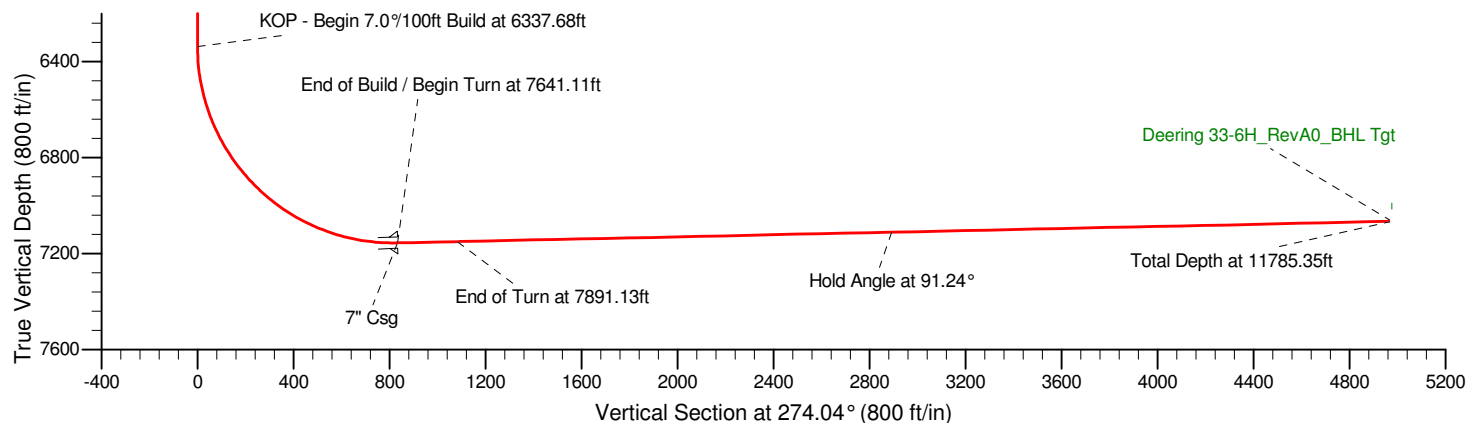
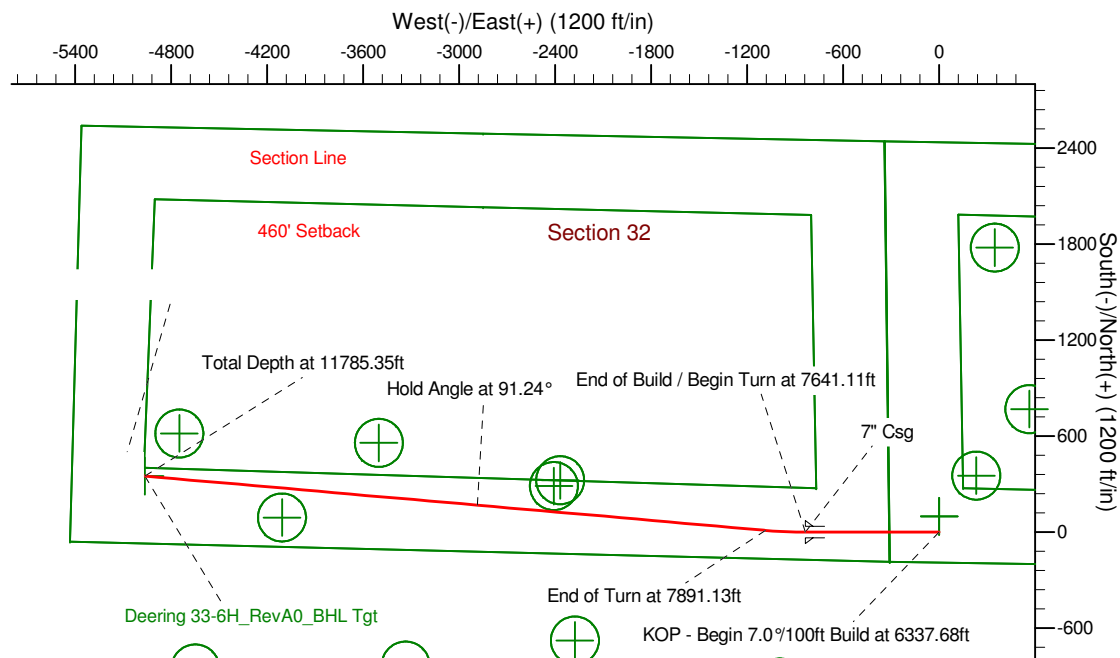
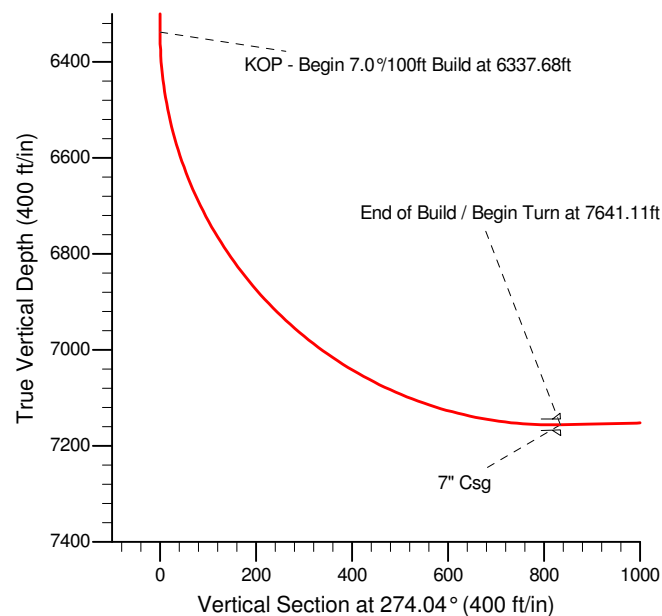
Plan: Rev A0 (Permitting Plan Only) (Deering 33-6HX/Plan A)

Created By: Jay Lantz Date: 13:42, July 25 2013

Approved: \_\_\_\_\_ Date: \_\_\_\_\_

## WELL DETAILS: Deering 33-6HX

Ground Level: 4903.00  
 Northing 1341772.50 Easting 3166345.42 Latitude 40° 16' 12.108 N Longitude 104° 54' 13.932 W



# **K.P. Kauffman Company, Inc.**

Weld County, CO (NAD 83)

Sec. 33-T4N-R67W (Deering 33H Pad)

Deering 33-6HX

Plan A

Rev A0 (Permitting Plan Only)

## **Sperry Drilling Services** **Ellipse Separation** **Anticollision Report**

25 July, 2013

Closest Approach 3D Proximity Scan on Current Survey Data (North Reference)

Reference Design: Sec. 33-T4N-R67W (Deering 33H Pad) - Deering 33-6HX - Plan A - Rev A0 (Permitting Plan Only)

Well Coordinates: 1,341,772.50 N, 3,166,345.42 E (40° 16' 12.11" N, 104° 54' 13.93" W)

Datum Height: GL @ 4903.00ft (Ground Level)

Scan Range: 0.00 to 11,785.35 ft. Measured Depth.

Scan Radius is 9,999.99 ft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Geodetic Scale Factor Applied

Version: 2003.16 Build: 43I

**HALLIBURTON**

# Anticollision Report for Deering 33-6HX - Rev A0 (Permitting Plan Only)

Closest Approach 3D Proximity Scan on Current Survey Data (North Reference)

Offset Design: Sec. 33-T4N-R67W (Deering 33H Pad) - Deering 33-4H - Plan A - Rev A0 (Permitting Plan Only)

Scan Range: 0.00 to 11,785.35 ft. Measured Depth.

Scan Radius is 9,999.99 ft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	+E/-W (ft)	Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	+E/-W (ft)	Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids ft	Relative North Bearing	Clearance Factor
0.00	0.00	0.00	0.00	0.00	1.00	0.00	40.07	0.00	0.00	40.07	39.42	0.00	60.940
200.00	200.00	0.00	0.00	0.34	201.00	200.00	40.07	0.00	0.34	40.07	38.74	0.00	30.067
400.00	400.00	0.00	0.00	0.79	401.00	400.00	40.07	0.00	0.79	40.07	37.84	0.00	17.955
600.00	600.00	0.00	0.00	1.24	601.00	600.00	40.07	0.00	1.24	40.07	36.94	0.00	12.799
800.00	800.00	0.00	0.00	1.69	801.00	800.00	40.07	0.00	1.69	40.07	36.04	0.00	9.944
933.00	933.00	0.00	0.00	1.98	934.00	933.00	40.07	0.00	1.99	40.07	35.44	0.00	8.659
1,000.00	1,000.00	0.00	0.00	2.14	1,000.98	999.98	40.07	0.00	2.14	40.07	35.14	0.00	8.130
1,200.00	1,200.00	0.00	0.00	2.58	1,197.46	1,196.22	47.55	-4.04	2.58	47.88	42.06	355.15	8.227
1,400.00	1,400.00	0.00	0.00	3.03	1,391.08	1,388.19	69.37	-15.81	3.06	72.12	65.36	347.16	10.673
1,600.00	1,600.00	0.00	0.00	3.48	1,587.77	1,581.89	99.41	-32.02	3.64	106.00	98.19	342.15	13.573
1,800.00	1,800.00	0.00	0.00	3.93	1,784.73	1,775.86	129.51	-48.26	4.29	140.30	131.38	339.56	15.718
2,000.00	2,000.00	0.00	0.00	4.38	1,981.70	1,969.83	159.61	-64.50	4.98	174.77	164.69	338.00	17.338
2,200.00	2,200.00	0.00	0.00	4.83	2,178.66	2,163.80	189.71	-80.74	5.68	209.33	198.07	336.95	18.592
2,400.00	2,400.00	0.00	0.00	5.28	2,375.62	2,357.77	219.81	-96.98	6.41	243.94	231.49	336.19	19.588
2,600.00	2,600.00	0.00	0.00	5.73	2,572.58	2,551.74	249.91	-113.22	7.14	278.58	264.92	335.63	20.395
2,800.00	2,800.00	0.00	0.00	6.18	2,769.54	2,745.71	280.01	-129.46	7.88	313.23	298.36	335.19	21.062
3,000.00	3,000.00	0.00	0.00	6.63	2,966.50	2,939.68	310.11	-145.71	8.63	347.91	331.82	334.83	21.621
3,200.00	3,200.00	0.00	0.00	7.08	3,163.47	3,133.65	340.21	-161.95	9.38	382.59	365.27	334.54	22.097
3,400.00	3,400.00	0.00	0.00	7.53	3,360.43	3,327.62	370.31	-178.19	10.14	417.28	398.74	334.30	22.506
3,600.00	3,600.00	0.00	0.00	7.98	3,557.39	3,521.58	400.41	-194.43	10.90	451.98	432.21	334.10	22.861
3,800.00	3,800.00	0.00	0.00	8.43	3,754.35	3,715.55	430.51	-210.67	11.66	486.68	465.67	333.93	23.173
4,000.00	4,000.00	0.00	0.00	8.88	3,951.31	3,909.52	460.61	-226.91	12.42	521.38	499.15	333.77	23.448
4,200.00	4,200.00	0.00	0.00	9.33	4,148.27	4,103.49	490.71	-243.15	13.18	556.09	532.62	333.64	23.693
4,400.00	4,400.00	0.00	0.00	9.78	4,345.23	4,297.46	520.81	-259.39	13.95	590.80	566.09	333.52	23.913
4,600.00	4,600.00	0.00	0.00	10.23	4,542.20	4,491.43	550.91	-275.63	14.72	625.51	599.57	333.42	24.110
4,800.00	4,800.00	0.00	0.00	10.68	4,780.21	4,726.51	583.41	-293.17	15.50	657.05	629.85	333.32	24.158
5,000.00	5,000.00	0.00	0.00	11.13	5,054.24	5,000.00	596.07	-300.00	15.99	667.31	639.16	333.28	23.708
5,200.00	5,200.00	0.00	0.00	11.58	5,254.24	5,200.00	596.07	-300.00	16.29	667.31	638.42	333.28	23.096
5,400.00	5,400.00	0.00	0.00	12.02	5,454.24	5,400.00	596.07	-300.00	16.60	667.31	637.66	333.28	22.506
5,600.00	5,600.00	0.00	0.00	12.47	5,654.24	5,600.00	596.07	-300.00	16.91	667.31	636.90	333.28	21.940
5,800.00	5,800.00	0.00	0.00	12.92	5,854.24	5,800.00	596.07	-300.00	17.23	667.31	636.13	333.28	21.399
6,000.00	6,000.00	0.00	0.00	13.37	6,054.24	6,000.00	596.07	-300.00	17.56	667.31	635.35	333.28	20.879
6,200.00	6,200.00	0.00	0.00	13.82	6,254.24	6,200.00	596.07	-300.00	17.89	667.31	634.57	333.28	20.381
6,400.00	6,399.94	0.00	-2.37	14.26	6,454.18	6,399.94	596.07	-300.00	18.23	666.25	636.63	333.47	22.496
6,600.00	6,595.53	0.00	-41.68	14.69	6,677.27	6,622.90	596.02	-296.16	18.58	648.65	618.11	336.88	21.238
6,800.00	6,775.81	0.00	-127.13	15.29	6,890.58	6,828.68	595.25	-243.06	18.68	608.73	576.80	348.98	19.063
6,944.57	6,890.47	0.00	-214.87	16.06	6,962.58	6,893.43	594.79	-211.64	18.67	594.81	561.85	0.31	18.046
7,000.00	6,930.05	0.00	-253.66	16.36	6,977.62	6,906.54	594.69	-204.26	18.66	597.20	563.93	4.75	17.949
7,200.00	7,049.11	0.00	-413.75	18.22	7,000.00	6,925.75	594.52	-192.79	18.66	646.14	611.01	20.39	18.392
7,400.00	7,125.89	0.00	-597.88	21.01	6,976.23	6,905.33	594.70	-204.96	18.66	746.12	708.58	33.45	19.875
7,600.00	7,155.86	0.00	-795.12	24.53	6,937.83	6,871.53	594.96	-223.17	18.68	872.89	834.27	43.87	22.603
7,800.00	7,152.55	4.41	-995.00	27.06	6,900.00	6,837.33	595.19	-239.32	18.68	1,009.68	969.66	51.98	25.229
8,000.00	7,148.21	20.39	-1,194.30	29.52	6,850.00	6,790.90	595.46	-257.85	18.68	1,155.56	1,114.13	58.45	27.893
8,200.00	7,143.87	37.82	-1,393.49	32.61	6,831.53	6,773.44	595.55	-263.86	18.68	1,313.14	1,269.45	63.72	30.058
8,400.00	7,139.52	55.26	-1,592.68	36.18	6,800.00	6,743.29	595.68	-273.09	18.67	1,479.99	1,434.06	67.73	32.222
8,600.00	7,135.18	72.69	-1,791.87	40.08	6,800.00	6,743.29	595.68	-273.09	18.67	1,653.42	1,604.15	71.00	33.560
8,800.00	7,130.84	90.12	-1,991.07	44.24	6,773.45	6,717.61	595.78	-279.82	18.66	1,831.61	1,779.63	73.54	35.240
9,000.00	7,126.49	107.55	-2,190.26	48.59	6,750.00	6,694.73	595.85	-284.98	18.65	2,013.69	1,958.87	75.63	36.731
9,200.00	7,122.15	124.99	-2,389.45	53.08	6,750.00	6,694.73	595.85	-284.98	18.65	2,198.45	2,139.91	77.39	37.551
9,400.00	7,117.81	142.42	-2,588.64	57.69	6,750.00	6,694.73	595.85	-284.98	18.65	2,385.68	2,323.32	78.86	38.257

**Anticollision Report for Deering 33-6HX - Rev A0 (Permitting Plan Only)**

Closest Approach 3D Proximity Scan on Current Survey Data (North Reference)

Offset Design: Sec. 33-T4N-R67W (Deering 33H Pad) - Deering 33-4H - Plan A - Rev A0 (Permitting Plan Only)

Scan Range: 0.00 to 11,785.35 ft. Measured Depth.

Scan Radius is 9,999.99 ft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids ft	Relative North Bearing	Clearance Factor
9,600.00	7,113.46	159.85	-2,787.83	62.37	6,728.22	6,673.35	595.91	-289.09	18.63	2,574.41	2,509.08	80.10	39.408
9,800.00	7,109.12	177.28	-2,987.02	67.13	6,720.12	6,665.36	595.93	-290.45	18.62	2,764.72	2,695.87	81.18	40.155
10,000.00	7,104.77	194.72	-3,186.21	71.93	6,700.00	6,645.47	595.98	-293.45	18.61	2,956.36	2,884.55	82.10	41.167
10,200.00	7,100.43	212.15	-3,385.41	76.78	6,700.00	6,645.47	595.98	-293.45	18.61	3,148.73	3,073.02	82.92	41.590
10,400.00	7,096.09	229.58	-3,584.60	81.67	6,700.00	6,645.47	595.98	-293.45	18.61	3,342.00	3,262.37	83.65	41.968
10,600.00	7,091.74	247.01	-3,783.79	86.59	6,700.00	6,645.47	595.98	-293.45	18.61	3,536.02	3,452.44	84.29	42.308
10,800.00	7,087.40	264.45	-3,982.98	91.53	6,700.00	6,645.47	595.98	-293.45	18.61	3,730.67	3,643.12	84.87	42.614
11,000.00	7,083.06	281.88	-4,182.17	96.49	6,700.00	6,645.47	595.98	-293.45	18.61	3,925.85	3,834.32	85.38	42.891
11,200.00	7,078.71	299.31	-4,381.36	101.47	6,700.00	6,645.47	595.98	-293.45	18.61	4,121.50	4,025.97	85.85	43.144
11,400.00	7,074.37	316.74	-4,580.55	106.47	6,678.16	6,623.78	596.02	-296.06	18.58	4,317.16	4,219.04	86.27	43.999
11,600.00	7,070.03	334.18	-4,779.75	111.48	6,674.70	6,620.34	596.02	-296.42	18.58	4,513.42	4,411.57	86.66	44.313
11,785.35	7,066.00	350.33	-4,964.35	116.13	6,671.72	6,617.38	596.02	-296.71	18.58	4,695.58	4,590.26	86.99	44.584

**Anticollision Report for Deering 33-6HX - Rev A0 (Permitting Plan Only)**

Closest Approach 3D Proximity Scan on Current Survey Data (North Reference)

Offset Design: Sec. 33-T4N-R67W (Deering 33H Pad) - Deering 33-9HX - Plan A - Rev A0 (Permitting Plan Only)

Scan Range: 0.00 to 11,785.35 ft. Measured Depth.

Scan Radius is 9,999.99 ft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids ft	Relative North Bearing	Clearance Factor
0.00	0.00	0.00	0.00	0.00	0.00	1.00	-61.92	0.00	0.00	61.93	61.28	180.00	94.344
200.00	200.00	0.00	0.00	0.34	199.00	200.00	-61.92	0.00	0.33	61.92	60.60	180.00	46.619
400.00	400.00	0.00	0.00	0.79	399.00	400.00	-61.92	0.00	0.78	61.92	59.70	180.00	27.802
600.00	600.00	0.00	0.00	1.24	599.00	600.00	-61.92	0.00	1.23	61.92	58.80	180.00	19.807
800.00	800.00	0.00	0.00	1.69	793.43	794.20	-69.89	-1.77	1.61	70.15	66.20	181.45	17.768
1,000.00	1,000.00	0.00	0.00	2.14	985.08	984.27	-93.43	-7.00	2.06	95.00	90.15	184.28	19.593
1,200.00	1,200.00	0.00	0.00	2.58	1,176.84	1,172.23	-130.47	-15.23	2.70	134.26	128.32	186.66	22.597
1,400.00	1,400.00	0.00	0.00	3.03	1,372.47	1,363.58	-170.17	-24.05	3.47	175.68	168.52	188.04	24.529
1,600.00	1,600.00	0.00	0.00	3.48	1,568.10	1,554.94	-209.88	-32.88	4.29	217.16	208.73	188.90	25.751
1,800.00	1,800.00	0.00	0.00	3.93	1,763.73	1,746.29	-249.58	-41.70	5.13	258.68	248.95	189.48	26.585
2,000.00	2,000.00	0.00	0.00	4.38	1,959.36	1,937.65	-289.29	-50.52	5.99	300.21	289.17	189.91	27.187
2,200.00	2,200.00	0.00	0.00	4.83	2,154.99	2,129.00	-328.99	-59.34	6.86	341.76	329.40	190.23	27.641
2,400.00	2,400.00	0.00	0.00	5.28	2,350.62	2,320.35	-368.70	-68.17	7.74	383.31	369.62	190.48	27.996
2,600.00	2,600.00	0.00	0.00	5.73	2,546.25	2,511.71	-408.40	-76.99	8.62	424.87	409.85	190.68	28.280
2,800.00	2,800.00	0.00	0.00	6.18	2,741.88	2,703.06	-448.11	-85.81	9.50	466.43	450.08	190.84	28.513
3,000.00	3,000.00	0.00	0.00	6.63	2,937.51	2,894.42	-487.81	-94.64	10.38	508.00	490.31	190.98	28.708
3,200.00	3,200.00	0.00	0.00	7.08	3,133.14	3,085.77	-527.52	-103.46	11.27	549.57	530.53	191.10	28.872
3,400.00	3,400.00	0.00	0.00	7.53	3,353.00	3,301.21	-570.29	-112.97	12.15	589.70	569.34	191.20	28.958
3,600.00	3,600.00	0.00	0.00	7.98	3,622.54	3,568.98	-599.04	-119.36	12.75	611.61	590.18	191.27	28.549
3,800.00	3,800.00	0.00	0.00	8.43	3,853.62	3,800.00	-601.92	-120.00	13.06	613.77	591.59	191.27	27.675
4,000.00	4,000.00	0.00	0.00	8.88	4,053.62	4,000.00	-601.92	-120.00	13.29	613.77	590.91	191.27	26.850
4,200.00	4,200.00	0.00	0.00	9.33	4,253.62	4,200.00	-601.92	-120.00	13.53	613.77	590.22	191.27	26.060
4,400.00	4,400.00	0.00	0.00	9.78	4,453.62	4,400.00	-601.92	-120.00	13.79	613.77	589.51	191.27	25.305
4,600.00	4,600.00	0.00	0.00	10.23	4,653.62	4,600.00	-601.92	-120.00	14.05	613.77	588.80	191.27	24.582
4,800.00	4,800.00	0.00	0.00	10.68	4,853.62	4,800.00	-601.92	-120.00	14.32	613.77	588.08	191.27	23.892
5,000.00	5,000.00	0.00	0.00	11.13	5,053.62	5,000.00	-601.92	-120.00	14.61	613.77	587.35	191.27	23.231
5,200.00	5,200.00	0.00	0.00	11.58	5,253.62	5,200.00	-601.92	-120.00	14.89	613.77	586.61	191.27	22.599
5,400.00	5,400.00	0.00	0.00	12.02	5,453.62	5,400.00	-601.92	-120.00	15.19	613.77	585.86	191.27	21.994
5,600.00	5,600.00	0.00	0.00	12.47	5,653.62	5,600.00	-601.92	-120.00	15.50	613.77	585.11	191.27	21.415
5,800.00	5,800.00	0.00	0.00	12.92	5,853.62	5,800.00	-601.92	-120.00	15.81	613.77	584.35	191.27	20.861
6,000.00	6,000.00	0.00	0.00	13.37	6,053.62	6,000.00	-601.92	-120.00	16.13	613.77	583.58	191.27	20.331
6,200.00	6,200.00	0.00	0.00	13.82	6,253.62	6,200.00	-601.92	-120.00	16.45	613.77	582.81	191.27	19.823
6,400.00	6,399.94	0.00	-2.37	14.26	6,453.56	6,399.94	-601.92	-120.00	16.78	613.31	584.54	191.06	21.319
6,600.00	6,595.53	0.00	-41.68	14.69	6,636.08	6,581.55	-601.41	-133.92	17.12	608.60	578.98	188.72	20.547
6,800.00	6,775.81	0.00	-127.13	15.29	6,819.49	6,754.85	-599.24	-192.39	17.58	603.14	572.37	186.22	19.597
7,000.00	6,930.05	0.00	-253.66	16.36	7,008.56	6,911.95	-595.37	-296.52	18.27	597.19	564.38	184.12	18.202
7,200.00	7,049.11	0.00	-413.75	18.22	7,202.64	7,039.19	-589.96	-442.18	19.48	590.73	554.27	182.76	16.203
7,400.00	7,125.89	0.00	-597.88	21.01	7,400.50	7,123.92	-583.36	-620.16	21.60	583.79	541.81	182.19	13.909
7,600.00	7,155.86	0.00	-795.12	24.53	7,600.35	7,156.91	-576.07	-816.48	24.70	576.47	527.48	182.12	11.769
7,755.20	7,157.26	3.34	-950.26	26.50	7,755.50	7,154.37	-570.32	-971.49	26.40	574.06	521.43	182.12	10.909
7,800.00	7,152.55	4.41	-995.00	27.06	7,800.34	7,153.39	-568.65	-1,016.29	26.87	573.45	520.13	182.13	10.754
8,000.00	7,148.21	20.39	-1,194.30	29.52	8,000.14	7,149.02	-561.24	-1,215.91	29.46	582.04	523.75	182.13	9.986
8,200.00	7,143.87	37.82	-1,393.49	32.61	8,199.89	7,144.65	-553.84	-1,415.47	32.64	592.07	527.34	182.13	9.148
8,400.00	7,139.52	55.26	-1,592.68	36.18	8,399.64	7,140.29	-546.43	-1,615.03	36.26	602.10	530.04	182.13	8.355
8,600.00	7,135.18	72.69	-1,791.87	40.08	8,599.39	7,135.92	-539.02	-1,814.60	40.22	612.13	532.08	182.13	7.647
8,800.00	7,130.84	90.12	-1,991.07	44.24	8,799.14	7,131.55	-531.61	-2,014.16	44.43	622.16	533.65	182.13	7.029
9,000.00	7,126.49	107.55	-2,190.26	48.59	8,998.88	7,127.19	-524.20	-2,213.72	48.82	632.19	534.86	182.13	6.495
9,200.00	7,122.15	124.99	-2,389.45	53.08	9,198.63	7,122.82	-516.80	-2,413.29	53.34	642.23	535.82	182.13	6.036
9,400.00	7,117.81	142.42	-2,588.64	57.69	9,398.38	7,118.45	-509.39	-2,612.85	57.97	652.26	536.57	182.13	5.638
9,600.00	7,113.46	159.85	-2,787.83	62.37	9,598.13	7,114.09	-501.98	-2,812.41	62.67	662.29	537.17	182.13	5.293
9,800.00	7,109.12	177.28	-2,987.02	67.13	9,797.88	7,109.72	-494.57	-3,011.98	67.44	672.32	537.65	182.13	4.992
10,000.00	7,104.77	194.72	-3,186.21	71.93	9,997.63	7,105.35	-487.16	-3,211.54	72.26	682.35	538.03	182.13	4.728

## Anticollision Report for Deering 33-6HX - Rev A0 (Permitting Plan Only)

Closest Approach 3D Proximity Scan on Current Survey Data (North Reference)

Offset Design: Sec. 33-T4N-R67W (Deering 33H Pad) - Deering 33-9HX - Plan A - Rev A0 (Permitting Plan Only)

Scan Range: 0.00 to 11,785.35 ft. Measured Depth.

Scan Radius is 9,999.99 ft . Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids ft	Relative North Bearing	Clearance Factor
10,200.00	7,100.43	212.15	-3,385.41	76.78	10,197.37	7,100.99	-479.76	-3,411.10	77.13	692.38	538.33	182.13	4.495
10,400.00	7,096.09	229.58	-3,584.60	81.67	10,397.12	7,096.62	-472.35	-3,610.66	82.02	702.41	538.57	182.13	4.287
10,600.00	7,091.74	247.01	-3,783.79	86.59	10,596.87	7,092.26	-464.94	-3,810.23	86.94	712.44	538.75	182.13	4.102
10,800.00	7,087.40	264.45	-3,982.98	91.53	10,796.62	7,087.89	-457.53	-4,009.79	91.89	722.48	538.88	182.13	3.935
11,000.00	7,083.06	281.88	-4,182.17	96.49	10,996.37	7,083.52	-450.12	-4,209.35	96.85	732.51	538.98	182.13	3.785
11,200.00	7,078.71	299.31	-4,381.36	101.47	11,196.12	7,079.16	-442.72	-4,408.92	101.83	742.54	539.04	182.13	3.649
11,400.00	7,074.37	316.74	-4,580.55	106.47	11,395.86	7,074.79	-435.31	-4,608.48	106.83	752.57	539.08	182.13	3.525
11,600.00	7,070.03	334.18	-4,779.75	111.48	11,595.61	7,070.42	-427.90	-4,808.04	111.83	762.60	539.09	182.13	3.412
11,785.35	7,066.00	350.33	-4,964.35	116.13	11,780.73	7,066.38	-421.03	-4,992.99	116.48	771.90	539.08	182.13	3.315

**Anticollision Report for Deering 33-6HX - Rev A0 (Permitting Plan Only)**

Closest Approach 3D Proximity Scan on Current Survey Data (North Reference)

Offset Design: Sec. 33-T4N-R67W (Deering 33H Pad) - Deering 33-8HX - Plan A - Rev A0 (Permitting Plan Only)

Scan Range: 0.00 to 11,785.35 ft. Measured Depth.

Scan Radius is 9,999.99 ft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids ft	Relative North Bearing	Clearance Factor
0.00	0.00	0.00	0.00	0.00	0.00	1.00	-40.07	0.00	0.00	40.09	39.43	180.00	61.064
200.00	200.00	0.00	0.00	0.34	199.00	200.00	-40.07	0.00	0.33	40.07	38.74	180.00	30.168
400.00	400.00	0.00	0.00	0.79	399.00	400.00	-40.07	0.00	0.78	40.07	37.85	180.00	17.991
600.00	600.00	0.00	0.00	1.24	599.00	600.00	-40.07	0.00	1.23	40.07	36.95	180.00	12.817
800.00	800.00	0.00	0.00	1.69	799.00	800.00	-40.07	0.00	1.68	40.07	36.05	180.00	9.955
1,000.00	1,000.00	0.00	0.00	2.14	995.31	996.08	-47.88	-2.88	2.06	48.12	43.27	183.44	9.928
1,200.00	1,200.00	0.00	0.00	2.58	1,189.69	1,188.84	-70.90	-11.38	2.49	72.67	66.94	189.12	12.681
1,400.00	1,400.00	0.00	0.00	3.03	1,387.22	1,383.95	-99.89	-22.08	3.05	103.55	96.81	192.47	15.353
1,600.00	1,600.00	0.00	0.00	3.48	1,584.76	1,579.05	-128.88	-32.79	3.68	134.62	126.80	194.27	17.203
1,800.00	1,800.00	0.00	0.00	3.93	1,782.30	1,774.16	-157.87	-43.49	4.34	165.77	156.83	195.40	18.534
2,000.00	2,000.00	0.00	0.00	4.38	1,979.84	1,969.26	-186.85	-54.20	5.03	196.97	186.88	196.17	19.528
2,200.00	2,200.00	0.00	0.00	4.83	2,177.37	2,164.37	-215.84	-64.90	5.73	228.19	216.95	196.73	20.297
2,400.00	2,400.00	0.00	0.00	5.28	2,374.91	2,359.47	-244.83	-75.60	6.44	259.42	247.02	197.16	20.907
2,600.00	2,600.00	0.00	0.00	5.73	2,572.45	2,554.58	-273.82	-86.31	7.16	290.67	277.09	197.49	21.402
2,800.00	2,800.00	0.00	0.00	6.18	2,769.99	2,749.69	-302.81	-97.01	7.88	321.93	307.17	197.76	21.812
3,000.00	3,000.00	0.00	0.00	6.63	2,967.52	2,944.79	-331.80	-107.71	8.61	353.19	337.25	197.99	22.156
3,200.00	3,200.00	0.00	0.00	7.08	3,195.13	3,170.53	-358.54	-117.59	9.25	378.48	361.43	198.16	22.210
3,400.00	3,400.00	0.00	0.00	7.53	3,424.78	3,400.00	-365.07	-120.00	9.65	384.29	366.40	198.20	21.488
3,600.00	3,600.00	0.00	0.00	7.98	3,624.78	3,600.00	-365.07	-120.00	9.94	384.29	365.67	198.20	20.636
3,800.00	3,800.00	0.00	0.00	8.43	3,824.78	3,800.00	-365.07	-120.00	10.24	384.29	364.92	198.20	19.837
4,000.00	4,000.00	0.00	0.00	8.88	4,024.78	4,000.00	-365.07	-120.00	10.55	384.29	364.16	198.20	19.088
4,200.00	4,200.00	0.00	0.00	9.33	4,224.78	4,200.00	-365.07	-120.00	10.87	384.29	363.39	198.20	18.385
4,400.00	4,400.00	0.00	0.00	9.78	4,424.78	4,400.00	-365.07	-120.00	11.20	384.29	362.61	198.20	17.725
4,600.00	4,600.00	0.00	0.00	10.23	4,624.78	4,600.00	-365.07	-120.00	11.54	384.29	361.82	198.20	17.104
4,800.00	4,800.00	0.00	0.00	10.68	4,824.78	4,800.00	-365.07	-120.00	11.88	384.29	361.03	198.20	16.520
5,000.00	5,000.00	0.00	0.00	11.13	5,024.78	5,000.00	-365.07	-120.00	12.23	384.29	360.23	198.20	15.970
5,200.00	5,200.00	0.00	0.00	11.58	5,224.78	5,200.00	-365.07	-120.00	12.59	384.29	359.42	198.20	15.451
5,400.00	5,400.00	0.00	0.00	12.02	5,424.78	5,400.00	-365.07	-120.00	12.95	384.29	358.60	198.20	14.962
5,600.00	5,600.00	0.00	0.00	12.47	5,624.78	5,600.00	-365.07	-120.00	13.32	384.29	357.79	198.20	14.500
5,800.00	5,800.00	0.00	0.00	12.92	5,824.78	5,800.00	-365.07	-120.00	13.70	384.29	356.96	198.20	14.063
6,000.00	6,000.00	0.00	0.00	13.37	6,024.78	6,000.00	-365.07	-120.00	14.07	384.29	356.14	198.20	13.650
6,200.00	6,200.00	0.00	0.00	13.82	6,224.78	6,200.00	-365.07	-120.00	14.46	384.29	355.30	198.20	13.258
6,400.00	6,399.94	0.00	-2.37	14.26	6,424.72	6,399.94	-365.07	-120.00	14.84	383.55	355.02	197.86	13.444
6,600.00	6,595.53	0.00	-41.68	14.69	6,604.55	6,578.90	-364.82	-133.40	15.23	376.54	347.20	194.11	12.833
6,800.00	6,775.81	0.00	-127.13	15.29	6,784.46	6,749.26	-363.74	-189.74	15.76	370.04	339.58	189.77	12.145
7,000.00	6,930.05	0.00	-253.66	16.36	6,970.18	6,904.72	-361.82	-290.38	16.59	364.57	331.95	185.80	11.178
7,200.00	7,049.11	0.00	-413.75	18.22	7,161.44	7,032.30	-359.12	-432.08	18.04	359.98	323.64	182.92	9.906
7,400.00	7,125.89	0.00	-597.88	21.01	7,357.37	7,119.48	-355.79	-606.83	20.43	355.96	314.10	181.44	8.503
7,600.00	7,155.86	0.00	-795.12	24.53	7,556.47	7,156.35	-352.08	-801.81	23.74	352.14	303.28	181.09	7.208
7,693.98	7,157.43	1.23	-889.08	25.72	7,650.46	7,156.03	-350.29	-895.75	25.28	351.58	299.45	181.09	6.745
7,800.00	7,152.55	4.41	-995.00	27.06	7,756.50	7,153.71	-348.26	-1,001.74	26.56	352.74	298.75	181.10	6.533
8,000.00	7,148.21	20.39	-1,194.30	29.52	7,956.12	7,149.35	-344.46	-1,201.28	28.98	364.92	306.20	181.10	6.215
8,200.00	7,143.87	37.82	-1,393.49	32.61	8,155.65	7,144.98	-340.66	-1,400.73	32.03	378.56	313.65	181.10	5.832
8,400.00	7,139.52	55.26	-1,592.68	36.18	8,355.19	7,140.62	-336.86	-1,600.18	35.55	392.19	320.15	181.10	5.444
8,600.00	7,135.18	72.69	-1,791.87	40.08	8,554.72	7,136.25	-333.06	-1,799.63	39.42	405.82	325.96	181.10	5.082
8,800.00	7,130.84	90.12	-1,991.07	44.24	8,754.25	7,131.89	-329.25	-1,999.08	43.56	419.45	331.26	181.10	4.756
9,000.00	7,126.49	107.55	-2,190.26	48.59	8,953.79	7,127.52	-325.45	-2,198.53	47.88	433.09	336.19	181.10	4.470
9,200.00	7,122.15	124.99	-2,389.45	53.08	9,153.32	7,123.16	-321.65	-2,397.98	52.35	446.72	340.85	181.09	4.219
9,400.00	7,117.81	142.42	-2,588.64	57.69	9,352.86	7,118.80	-317.85	-2,597.43	56.93	460.35	345.28	181.09	4.001
9,600.00	7,113.46	159.85	-2,787.83	62.37	9,552.39	7,114.43	-314.05	-2,796.89	61.60	473.99	349.55	181.09	3.809
9,800.00	7,109.12	177.28	-2,987.02	67.13	9,751.93	7,110.07	-310.24	-2,996.34	66.33	487.62	353.69	181.09	3.641
10,000.00	7,104.77	194.72	-3,186.21	71.93	9,951.46	7,105.70	-306.44	-3,195.79	71.12	501.25	357.73	181.09	3.492

**Anticollision Report for Deering 33-6HX - Rev A0 (Permitting Plan Only)**

Closest Approach 3D Proximity Scan on Current Survey Data (North Reference)

Offset Design: Sec. 33-T4N-R67W (Deering 33H Pad) - Deering 33-8HX - Plan A - Rev A0 (Permitting Plan Only)

Scan Range: 0.00 to 11,785.35 ft. Measured Depth.

Scan Radius is 9,999.99 ft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids ft	Relative North Bearing	Clearance Factor
10,200.00	7,100.43	212.15	-3,385.41	76.78	10,151.00	7,101.34	-302.64	-3,395.24	75.95	514.88	361.68	181.09	3.361
10,400.00	7,096.09	229.58	-3,584.60	81.67	10,350.53	7,096.97	-298.84	-3,594.69	80.82	528.52	365.56	181.09	3.243
10,600.00	7,091.74	247.01	-3,783.79	86.59	10,550.07	7,092.61	-295.04	-3,794.14	85.71	542.15	369.38	181.09	3.138
10,800.00	7,087.40	264.45	-3,982.98	91.53	10,749.60	7,088.24	-291.23	-3,993.59	90.63	555.78	373.15	181.09	3.043
11,000.00	7,083.06	281.88	-4,182.17	96.49	10,949.14	7,083.88	-287.43	-4,193.04	95.57	569.42	376.88	181.09	2.958
11,200.00	7,078.71	299.31	-4,381.36	101.47	11,148.67	7,079.52	-283.63	-4,392.49	100.53	583.05	380.58	181.09	2.880
11,400.00	7,074.37	316.74	-4,580.55	106.47	11,348.21	7,075.15	-279.83	-4,591.94	105.51	596.68	384.25	181.09	2.809
11,600.00	7,070.03	334.18	-4,779.75	111.48	11,547.74	7,070.79	-276.03	-4,791.39	110.49	610.31	387.89	181.09	2.744
11,785.35	7,066.00	350.33	-4,964.35	116.13	11,732.66	7,066.74	-272.50	-4,976.24	115.13	622.95	391.25	181.09	2.689



**Anticollision Report for Deering 33-6HX - Rev A0 (Permitting Plan Only)**

Closest Approach 3D Proximity Scan on Current Survey Data (North Reference)

Offset Design: Sec. 33-T4N-R67W (Deering 33H Pad) - Deering 33-3H - Plan A - Rev A0 (Permitting Plan Only)

Scan Range: 0.00 to 11,785.35 ft. Measured Depth.

Scan Radius is 9,999.99 ft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids ft	Relative North Bearing	Clearance Factor
0.00	0.00	0.00	0.00	0.00	2.00	0.00	58.29	0.00	0.00	58.29	57.64	0.00	88.499
200.00	200.00	0.00	0.00	0.34	202.00	200.00	58.29	0.00	0.34	58.29	56.96	0.00	43.664
400.00	400.00	0.00	0.00	0.79	402.00	400.00	58.29	0.00	0.79	58.29	56.06	0.00	26.093
600.00	600.00	0.00	0.00	1.24	602.00	600.00	58.29	0.00	1.24	58.29	55.16	0.00	18.605
732.66	732.66	0.00	0.00	1.53	734.66	732.66	58.29	0.00	1.54	58.29	54.56	0.00	15.630
800.00	800.00	0.00	0.00	1.69	801.95	799.95	58.29	0.00	1.69	58.29	54.26	0.00	14.458
1,000.00	1,000.00	0.00	0.00	2.14	996.77	994.52	66.28	-2.72	2.13	66.57	61.64	357.65	13.528
1,200.00	1,200.00	0.00	0.00	2.58	1,188.78	1,184.91	89.43	-10.61	2.61	91.31	85.45	353.23	15.579
1,400.00	1,400.00	0.00	0.00	3.03	1,378.61	1,370.66	126.37	-23.21	3.24	131.79	124.84	349.59	18.956
1,600.00	1,600.00	0.00	0.00	3.48	1,573.48	1,560.54	167.86	-37.35	4.00	176.44	168.25	347.46	21.548
1,800.00	1,800.00	0.00	0.00	3.93	1,768.36	1,750.42	209.35	-51.50	4.82	221.22	211.74	346.18	23.327
2,000.00	2,000.00	0.00	0.00	4.38	1,963.23	1,940.30	250.85	-65.64	5.67	266.08	255.27	345.34	24.608
2,200.00	2,200.00	0.00	0.00	4.83	2,158.11	2,130.17	292.34	-79.79	6.54	310.97	298.81	344.73	25.569
2,400.00	2,400.00	0.00	0.00	5.28	2,352.98	2,320.05	333.83	-93.93	7.43	355.89	342.37	344.28	26.313
2,600.00	2,600.00	0.00	0.00	5.73	2,547.85	2,509.93	375.32	-108.08	8.32	400.82	385.93	343.94	26.907
2,800.00	2,800.00	0.00	0.00	6.18	2,742.73	2,699.81	416.82	-122.22	9.22	445.77	429.50	343.66	27.390
3,000.00	3,000.00	0.00	0.00	6.63	2,937.60	2,889.69	458.31	-136.37	10.13	490.72	473.07	343.43	27.791
3,200.00	3,200.00	0.00	0.00	7.08	3,132.48	3,079.57	499.80	-150.51	11.04	535.68	516.64	343.24	28.129
3,400.00	3,400.00	0.00	0.00	7.53	3,327.35	3,269.45	541.29	-164.66	11.95	580.65	560.22	343.08	28.418
3,600.00	3,600.00	0.00	0.00	7.98	3,522.22	3,459.33	582.79	-178.80	12.87	625.62	603.79	342.94	28.668
3,800.00	3,800.00	0.00	0.00	8.43	3,717.10	3,649.21	624.28	-192.95	13.78	670.59	647.37	342.83	28.885
4,000.00	4,000.00	0.00	0.00	8.88	3,911.97	3,839.09	665.77	-207.09	14.70	715.56	690.95	342.72	29.077
4,200.00	4,200.00	0.00	0.00	9.33	4,106.85	4,028.97	707.26	-221.24	15.62	760.54	734.53	342.63	29.246
4,400.00	4,400.00	0.00	0.00	9.78	4,301.72	4,218.85	748.75	-235.38	16.54	805.51	778.11	342.55	29.398
4,600.00	4,600.00	0.00	0.00	10.23	4,496.59	4,408.73	790.25	-249.53	17.46	850.49	821.70	342.48	29.534
4,800.00	4,800.00	0.00	0.00	10.68	4,691.47	4,598.61	831.74	-263.67	18.38	895.47	865.28	342.41	29.657
5,000.00	5,000.00	0.00	0.00	11.13	4,886.34	4,788.49	873.23	-277.82	19.30	940.45	908.86	342.35	29.768
5,200.00	5,200.00	0.00	0.00	11.58	5,193.49	5,090.58	924.64	-295.34	20.34	976.81	943.69	342.29	29.498
5,400.00	5,400.00	0.00	0.00	12.02	5,503.44	5,400.00	938.29	-300.00	20.84	985.09	951.02	342.27	28.916
5,600.00	5,600.00	0.00	0.00	12.47	5,703.44	5,600.00	938.29	-300.00	21.09	985.09	950.32	342.27	28.337
5,800.00	5,800.00	0.00	0.00	12.92	5,903.44	5,800.00	938.29	-300.00	21.34	985.09	949.62	342.27	27.776
6,000.00	6,000.00	0.00	0.00	13.37	6,103.44	6,000.00	938.29	-300.00	21.60	985.09	948.91	342.27	27.231
6,200.00	6,200.00	0.00	0.00	13.82	6,303.44	6,200.00	938.29	-300.00	21.87	985.09	948.20	342.27	26.703
6,400.00	6,399.94	0.00	-2.37	14.26	6,503.38	6,399.94	938.29	-300.00	22.14	984.37	954.05	342.40	32.468
6,600.00	6,595.53	0.00	-41.68	14.69	6,782.39	6,674.43	937.98	-259.84	22.35	966.24	934.84	346.91	30.767
6,800.00	6,775.81	0.00	-127.13	15.29	6,944.25	6,819.90	937.42	-189.67	22.32	940.54	908.01	356.18	28.913
6,883.60	6,844.02	0.00	-175.41	15.74	6,976.44	6,846.73	937.28	-171.90	22.31	937.29	904.23	0.21	28.352
7,000.00	6,930.05	0.00	-253.66	16.36	7,000.00	6,865.86	937.17	-158.14	22.30	944.21	910.51	5.82	28.018
7,200.00	7,049.11	0.00	-413.75	18.22	7,000.00	6,865.86	937.17	-158.14	22.30	988.54	952.98	15.26	27.798
7,400.00	7,125.89	0.00	-597.88	21.01	6,970.77	6,842.07	937.31	-175.12	22.31	1,066.69	1,028.58	24.28	27.987
7,600.00	7,155.86	0.00	-795.12	24.53	6,926.52	6,804.79	937.49	-198.94	22.33	1,165.15	1,124.80	32.45	28.872
7,800.00	7,152.55	4.41	-995.00	27.06	6,878.64	6,762.88	937.68	-222.07	22.34	1,272.90	1,230.65	39.63	30.131
8,000.00	7,148.21	20.39	-1,194.30	29.52	6,850.00	6,737.10	937.78	-234.55	22.35	1,389.87	1,345.47	46.29	31.308
8,200.00	7,143.87	37.82	-1,393.49	32.61	6,800.00	6,690.97	937.93	-253.83	22.35	1,521.23	1,474.65	51.70	32.662
8,400.00	7,139.52	55.26	-1,592.68	36.18	6,782.84	6,674.84	937.98	-259.70	22.35	1,664.92	1,615.37	56.49	33.599
8,600.00	7,135.18	72.69	-1,791.87	40.08	6,750.00	6,643.62	938.06	-269.84	22.35	1,818.54	1,766.01	60.38	34.624
8,800.00	7,130.84	90.12	-1,991.07	44.24	6,750.00	6,643.62	938.06	-269.84	22.35	1,979.64	1,923.39	63.77	35.192
9,000.00	7,126.49	107.55	-2,190.26	48.59	6,726.84	6,621.33	938.11	-276.13	22.34	2,146.83	2,087.16	66.54	35.980
9,200.00	7,122.15	124.99	-2,389.45	53.08	6,700.00	6,595.26	938.16	-282.51	22.33	2,319.06	2,256.01	68.90	36.784
9,400.00	7,117.81	142.42	-2,588.64	57.69	6,700.00	6,595.26	938.16	-282.51	22.33	2,494.89	2,427.79	70.96	37.185
9,600.00	7,113.46	159.85	-2,787.83	62.37	6,700.00	6,595.26	938.16	-282.51	22.33	2,674.12	2,602.90	72.74	37.548
9,800.00	7,109.12	177.28	-2,987.02	67.13	6,700.00	6,595.26	938.16	-282.51	22.33	2,856.10	2,780.70	74.29	37.878

**Anticollision Report for Deering 33-6HX - Rev A0 (Permitting Plan Only)**

Closest Approach 3D Proximity Scan on Current Survey Data (North Reference)

Offset Design: Sec. 33-T4N-R67W (Deering 33H Pad) - Deering 33-3H - Plan A - Rev A0 (Permitting Plan Only)

Scan Range: 0.00 to 11,785.35 ft. Measured Depth.

Scan Radius is 9,999.99 ft . Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids ft	Relative North Bearing	Clearance Factor
10,000.00	7,104.77	194.72	-3,186.21	71.93	6,672.72	6,568.54	938.20	-288.00	22.31	3,039.73	2,960.92	75.61	38.568
10,200.00	7,100.43	212.15	-3,385.41	76.78	6,650.00	6,546.14	938.23	-291.78	22.30	3,225.67	3,143.36	76.79	39.190
10,400.00	7,096.09	229.58	-3,584.60	81.67	6,650.00	6,546.14	938.23	-291.78	22.30	3,412.81	3,326.28	77.85	39.442
10,600.00	7,091.74	247.01	-3,783.79	86.59	6,650.00	6,546.14	938.23	-291.78	22.30	3,601.33	3,510.56	78.80	39.675
10,800.00	7,087.40	264.45	-3,982.98	91.53	6,650.00	6,546.14	938.23	-291.78	22.30	3,791.03	3,695.99	79.66	39.891
11,000.00	7,083.06	281.88	-4,182.17	96.49	6,650.00	6,546.14	938.23	-291.78	22.30	3,981.73	3,882.41	80.42	40.091
11,200.00	7,078.71	299.31	-4,381.36	101.47	6,650.00	6,546.14	938.23	-291.78	22.30	4,173.31	4,069.69	81.12	40.276
11,400.00	7,074.37	316.74	-4,580.55	106.47	6,650.00	6,546.14	938.23	-291.78	22.30	4,365.64	4,257.71	81.75	40.449
11,600.00	7,070.03	334.18	-4,779.75	111.48	6,628.20	6,524.54	938.25	-294.75	22.28	4,558.25	4,446.97	82.33	40.962
11,785.35	7,066.00	350.33	-4,964.35	116.13	6,624.72	6,521.08	938.26	-295.16	22.28	4,737.50	4,622.40	82.82	41.161

**Anticollision Report for Deering 33-6HX - Rev A0 (Permitting Plan Only)**

Closest Approach 3D Proximity Scan on Current Survey Data (North Reference)

Offset Design: Sec. 33-T4N-R67W (Deering 33H Pad) - Deering 33-1H - Plan A - Rev A0 (Permitting Plan Only)

Scan Range: 0.00 to 11,785.35 ft. Measured Depth.

Scan Radius is 9,999.99 ft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre		Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre		Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids ft	Relative North Bearing	Clearance Factor
		+N/-S (ft)	+E/-W (ft)				+N/-S (ft)	+E/-W (ft)					
0.00	0.00	0.00	0.00	0.00	2.00	0.00	98.36	0.00	0.00	98.36	97.70	0.00	149.331
200.00	200.00	0.00	0.00	0.34	202.00	200.00	98.36	0.00	0.34	98.36	97.03	0.00	73.678
400.00	400.00	0.00	0.00	0.79	402.00	400.00	98.36	0.00	0.79	98.36	96.13	0.00	44.028
463.99	463.99	0.00	0.00	0.93	465.99	463.99	98.36	0.00	0.94	98.36	95.84	0.00	39.005
600.00	600.00	0.00	0.00	1.24	597.84	595.81	100.40	-0.45	1.23	100.49	97.37	359.74	32.177
800.00	800.00	0.00	0.00	1.69	788.33	785.57	116.04	-3.93	1.69	117.00	112.98	358.06	29.050
1,000.00	1,000.00	0.00	0.00	2.14	974.90	969.51	146.22	-10.63	2.25	149.75	144.69	355.84	29.647
1,200.00	1,200.00	0.00	0.00	2.58	1,155.31	1,144.42	189.20	-20.18	2.99	198.22	191.96	353.91	31.623
1,400.00	1,400.00	0.00	0.00	3.03	1,339.97	1,320.31	244.05	-32.37	3.97	258.77	251.04	352.44	33.506
1,600.00	1,600.00	0.00	0.00	3.48	1,530.18	1,501.21	301.43	-45.12	5.05	320.40	311.10	351.49	34.463
1,800.00	1,800.00	0.00	0.00	3.93	1,720.39	1,682.11	358.81	-57.87	6.17	382.09	371.18	350.84	35.034
2,000.00	2,000.00	0.00	0.00	4.38	1,910.60	1,863.01	416.19	-70.62	7.31	443.81	431.27	350.37	35.407
2,200.00	2,200.00	0.00	0.00	4.83	2,100.81	2,043.92	473.57	-83.37	8.46	505.55	491.37	350.01	35.667
2,400.00	2,400.00	0.00	0.00	5.28	2,291.02	2,224.82	530.95	-96.13	9.62	567.30	551.48	349.74	35.859
2,600.00	2,600.00	0.00	0.00	5.73	2,481.23	2,405.72	588.32	-108.88	10.78	629.07	611.59	349.52	36.005
2,800.00	2,800.00	0.00	0.00	6.18	2,671.45	2,586.62	645.70	-121.63	11.95	690.84	671.71	349.33	36.119
3,000.00	3,000.00	0.00	0.00	6.63	2,861.66	2,767.52	703.08	-134.38	13.12	752.61	731.83	349.18	36.212
3,200.00	3,200.00	0.00	0.00	7.08	3,051.87	2,948.42	760.46	-147.13	14.29	814.39	791.95	349.05	36.288
3,400.00	3,400.00	0.00	0.00	7.53	3,242.08	3,129.33	817.84	-159.88	15.46	876.18	852.08	348.94	36.352
3,600.00	3,600.00	0.00	0.00	7.98	3,432.29	3,310.23	875.22	-172.63	16.64	937.96	912.20	348.84	36.405
3,800.00	3,800.00	0.00	0.00	8.43	3,622.50	3,491.13	932.60	-185.38	17.81	999.75	972.33	348.76	36.452
4,000.00	4,000.00	0.00	0.00	8.88	3,812.71	3,672.03	989.98	-198.13	18.99	1,061.54	1,032.45	348.68	36.492
4,200.00	4,200.00	0.00	0.00	9.33	4,002.92	3,852.93	1,047.36	-210.88	20.16	1,123.34	1,092.58	348.62	36.527
4,400.00	4,400.00	0.00	0.00	9.78	4,193.14	4,033.83	1,104.73	-223.63	21.34	1,185.13	1,152.71	348.56	36.558
4,600.00	4,600.00	0.00	0.00	10.23	4,383.35	4,214.74	1,162.11	-236.39	22.51	1,246.92	1,212.84	348.50	36.586
4,800.00	4,800.00	0.00	0.00	10.68	4,573.56	4,395.64	1,219.49	-249.14	23.69	1,308.72	1,272.97	348.45	36.610
5,000.00	5,000.00	0.00	0.00	11.13	4,763.77	4,576.54	1,276.87	-261.89	24.87	1,370.51	1,333.10	348.41	36.632
5,200.00	5,200.00	0.00	0.00	11.58	4,953.98	4,757.44	1,334.25	-274.64	26.05	1,432.31	1,393.23	348.37	36.652
5,400.00	5,400.00	0.00	0.00	12.02	5,144.19	4,937.18	1,392.63	-287.39	27.23	1,494.10	1,453.75	348.33	36.673
5,600.00	5,600.00	0.00	0.00	12.47	5,334.40	5,112.37	1,450.91	-300.14	28.41	1,555.89	1,515.00	348.30	36.694
5,800.00	5,800.00	0.00	0.00	12.92	5,524.61	5,287.56	1,509.62	-312.89	29.59	1,617.68	1,576.33	348.30	36.715
6,000.00	6,000.00	0.00	0.00	13.37	5,714.82	5,467.81	1,568.33	-325.64	30.77	1,679.47	1,637.63	348.30	36.736
6,200.00	6,200.00	0.00	0.00	13.82	5,905.03	5,648.02	1,627.04	-338.39	31.95	1,741.26	1,698.94	348.30	36.757
6,400.00	6,399.94	0.00	-2.37	14.26	6,095.24	5,828.21	1,685.75	-351.14	33.13	1,803.05	1,760.53	348.39	36.778
6,600.00	6,595.53	0.00	-41.68	14.69	6,285.45	5,999.40	1,744.46	-363.89	34.31	1,864.84	1,822.02	348.39	36.799
6,800.00	6,775.81	0.00	-127.13	15.29	6,475.66	6,189.61	1,803.17	-376.64	35.49	1,926.63	1,883.50	348.39	36.820
6,886.83	6,846.55	0.00	-177.41	15.75	6,665.87	6,379.82	1,861.88	-389.39	36.67	1,988.42	1,944.78	348.39	36.841
7,000.00	6,930.05	0.00	-253.66	16.36	6,856.08	6,570.03	1,920.59	-402.14	37.85	2,050.21	2,006.07	348.39	36.862
7,200.00	7,049.11	0.00	-413.75	18.22	7,046.29	6,760.24	1,979.30	-414.89	39.03	2,112.00	2,067.56	348.39	36.883
7,400.00	7,125.89	0.00	-597.88	21.01	7,236.50	6,950.45	2,038.01	-427.64	40.21	2,173.79	2,128.91	348.39	36.904
7,600.00	7,155.86	0.00	-795.12	24.53	7,426.71	7,140.70	2,096.72	-440.39	41.39	2,235.58	2,190.42	348.39	36.925
7,800.00	7,152.55	4.41	-995.00	27.06	7,616.92	7,330.91	2,155.43	-453.14	42.57	2,297.37	2,252.03	348.39	36.946
8,000.00	7,148.21	20.39	-1,194.30	29.52	7,807.13	7,521.12	2,214.14	-465.89	43.75	2,359.16	2,313.59	348.39	36.967
8,200.00	7,143.87	37.82	-1,393.49	32.61	7,997.34	7,711.33	2,272.85	-478.64	44.93	2,420.95	2,375.18	348.39	36.988
8,400.00	7,139.52	55.26	-1,592.68	36.18	8,187.55	7,901.52	2,331.56	-491.39	46.11	2,482.74	2,436.97	348.39	37.009
8,600.00	7,135.18	72.69	-1,791.87	40.08	8,377.76	8,091.73	2,390.27	-504.14	47.29	2,544.53	2,498.16	348.39	37.030
8,800.00	7,130.84	90.12	-1,991.07	44.24	8,567.97	8,281.94	2,448.98	-516.89	48.47	2,606.32	2,560.35	348.39	37.051
9,000.00	7,126.49	107.55	-2,190.26	48.59	8,758.18	8,472.15	2,508.69	-529.64	49.65	2,668.11	2,622.58	348.39	37.072
9,200.00	7,122.15	124.99	-2,389.45	53.08	8,948.39	8,662.36	2,568.40	-542.39	50.83	2,729.90	2,683.77	348.39	37.093
9,400.00	7,117.81	142.42	-2,588.64	57.69	9,138.60	8,852.57	2,627.11	-555.14	52.01	2,791.69	2,745.94	348.39	37.114
9,600.00	7,113.46	159.85	-2,787.83	62.37	9,328.81	9,042.78	2,686.82	-567.89	53.19	2,853.48	2,807.19	348.39	37.135
9,800.00	7,109.12	177.28	-2,987.02	67.13	9,519.02	9,232.99	2,746.53	-580.64	54.37	2,915.27	2,868.98	348.39	37.156

**Anticollision Report for Deering 33-6HX - Rev A0 (Permitting Plan Only)**

Closest Approach 3D Proximity Scan on Current Survey Data (North Reference)

Offset Design: Sec. 33-T4N-R67W (Deering 33H Pad) - Deering 33-1H - Plan A - Rev A0 (Permitting Plan Only)

Scan Range: 0.00 to 11,785.35 ft. Measured Depth.

Scan Radius is 9,999.99 ft . Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids ft	Relative North Bearing	Clearance Factor
10,000.00	7,104.77	194.72	-3,186.21	71.93	6,778.95	6,569.13	1,448.15	-287.89	29.21	3,202.86	3,116.41	66.61	37.050
10,200.00	7,100.43	212.15	-3,385.41	76.78	6,771.33	6,561.64	1,448.17	-289.24	29.21	3,377.02	3,286.16	68.24	37.168
10,400.00	7,096.09	229.58	-3,584.60	81.67	6,750.00	6,540.57	1,448.23	-292.61	29.20	3,553.99	3,458.96	69.69	37.397
10,600.00	7,091.74	247.01	-3,783.79	86.59	6,750.00	6,540.57	1,448.23	-292.61	29.20	3,732.97	3,633.36	71.01	37.476
10,800.00	7,087.40	264.45	-3,982.98	91.53	6,750.00	6,540.57	1,448.23	-292.61	29.20	3,913.97	3,809.76	72.21	37.558
11,000.00	7,083.06	281.88	-4,182.17	96.49	6,750.00	6,540.57	1,448.23	-292.61	29.20	4,096.75	3,987.92	73.31	37.644
11,200.00	7,078.71	299.31	-4,381.36	101.47	6,750.00	6,540.57	1,448.23	-292.61	29.20	4,281.06	4,167.60	74.30	37.730
11,400.00	7,074.37	316.74	-4,580.55	106.47	6,750.00	6,540.57	1,448.23	-292.61	29.20	4,466.73	4,348.61	75.22	37.816
11,600.00	7,070.03	334.18	-4,779.75	111.48	6,750.00	6,540.57	1,448.23	-292.61	29.20	4,653.58	4,530.80	76.06	37.902
11,785.35	7,066.00	350.33	-4,964.35	116.13	6,750.00	6,540.57	1,448.23	-292.61	29.20	4,827.69	4,700.58	76.77	37.980

**Anticollision Report for Deering 33-6HX - Rev A0 (Permitting Plan Only)**

Closest Approach 3D Proximity Scan on Current Survey Data (North Reference)

Offset Design: Sec. 33-T4N-R67W (Deering 33H Pad) - Deering 33-5H - Plan A - Rev A0 (Permitting Plan Only)

Scan Range: 0.00 to 11,785.35 ft. Measured Depth.

Scan Radius is 9,999.99 ft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre		Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre		Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids ft	Relative North Bearing	Clearance Factor
+N/-S (ft)	+E/-W (ft)				+N/-S (ft)	+E/-W (ft)							
0.00	0.00	0.00	0.00	0.00	1.00	0.00	18.22	0.00	0.00	18.22	17.56	0.01	27.710
200.00	200.00	0.00	0.00	0.34	201.00	200.00	18.22	0.00	0.34	18.22	16.89	0.01	13.671
400.00	400.00	0.00	0.00	0.79	401.00	400.00	18.22	0.00	0.79	18.22	15.99	0.01	8.164
600.00	600.00	0.00	0.00	1.24	601.00	600.00	18.22	0.00	1.24	18.22	15.09	0.01	5.820
800.00	800.00	0.00	0.00	1.69	801.00	800.00	18.22	0.00	1.69	18.22	14.19	0.01	4.521
1,000.00	1,000.00	0.00	0.00	2.14	1,001.00	1,000.00	18.22	0.00	2.14	18.22	13.29	0.01	3.697
1,133.00	1,133.00	0.00	0.00	2.43	1,134.00	1,133.00	18.22	0.00	2.44	18.22	12.69	0.01	3.297
1,200.00	1,200.00	0.00	0.00	2.58	1,201.00	1,200.00	18.22	0.00	2.59	18.22	12.39	0.01	3.126
1,400.00	1,400.00	0.00	0.00	3.03	1,400.00	1,398.75	22.35	-7.68	3.02	23.66	16.95	341.03	3.525
1,600.00	1,600.00	0.00	0.00	3.48	1,596.94	1,594.15	33.83	-29.09	3.50	45.00	37.35	319.31	5.882
1,800.00	1,800.00	0.00	0.00	3.93	1,794.99	1,790.28	46.87	-53.37	4.04	71.69	63.03	311.29	8.279
2,000.00	2,000.00	0.00	0.00	4.38	1,993.04	1,986.40	59.90	-77.66	4.62	99.01	89.31	307.64	10.198
2,200.00	2,200.00	0.00	0.00	4.83	2,191.10	2,182.53	72.93	-101.95	5.22	126.56	115.78	305.58	11.735
2,400.00	2,400.00	0.00	0.00	5.28	2,389.15	2,378.65	85.97	-126.23	5.85	154.21	142.33	304.26	12.983
2,600.00	2,600.00	0.00	0.00	5.73	2,587.21	2,574.78	99.00	-150.52	6.48	181.92	168.93	303.33	14.012
2,800.00	2,800.00	0.00	0.00	6.18	2,785.26	2,770.91	112.04	-174.81	7.12	209.66	195.56	302.66	14.872
3,000.00	3,000.00	0.00	0.00	6.63	2,983.31	2,967.03	125.07	-199.10	7.77	237.42	222.20	302.14	15.600
3,200.00	3,200.00	0.00	0.00	7.08	3,181.37	3,163.16	138.10	-223.38	8.43	265.20	248.85	301.73	16.225
3,400.00	3,400.00	0.00	0.00	7.53	3,379.42	3,359.29	151.14	-247.67	9.09	292.99	275.51	301.39	16.766
3,600.00	3,600.00	0.00	0.00	7.98	3,577.47	3,555.41	164.17	-271.96	9.75	320.78	302.17	301.12	17.238
3,800.00	3,800.00	0.00	0.00	8.43	3,798.53	3,774.91	176.33	-294.62	10.35	344.27	324.59	300.90	17.494
4,000.00	4,000.00	0.00	0.00	8.88	4,023.77	4,000.00	179.22	-300.00	10.74	349.45	328.93	300.85	17.029
4,200.00	4,200.00	0.00	0.00	9.33	4,223.77	4,200.00	179.22	-300.00	11.10	349.45	328.12	300.85	16.383
4,400.00	4,400.00	0.00	0.00	9.78	4,423.77	4,400.00	179.22	-300.00	11.47	349.45	327.31	300.85	15.780
4,600.00	4,600.00	0.00	0.00	10.23	4,623.77	4,600.00	179.22	-300.00	11.84	349.45	326.49	300.85	15.216
4,800.00	4,800.00	0.00	0.00	10.68	4,823.77	4,800.00	179.22	-300.00	12.22	349.45	325.66	300.85	14.687
5,000.00	5,000.00	0.00	0.00	11.13	5,023.77	5,000.00	179.22	-300.00	12.60	349.45	324.83	300.85	14.192
5,200.00	5,200.00	0.00	0.00	11.58	5,223.77	5,200.00	179.22	-300.00	12.98	349.45	324.00	300.85	13.726
5,400.00	5,400.00	0.00	0.00	12.02	5,423.77	5,400.00	179.22	-300.00	13.37	349.45	323.16	300.85	13.288
5,600.00	5,600.00	0.00	0.00	12.47	5,623.77	5,600.00	179.22	-300.00	13.77	349.45	322.31	300.85	12.875
5,800.00	5,800.00	0.00	0.00	12.92	5,823.77	5,800.00	179.22	-300.00	14.16	349.45	321.47	300.85	12.486
6,000.00	6,000.00	0.00	0.00	13.37	6,023.77	6,000.00	179.22	-300.00	14.56	349.45	320.62	300.85	12.118
6,200.00	6,200.00	0.00	0.00	13.82	6,223.77	6,200.00	179.22	-300.00	14.97	349.45	319.77	300.85	11.770
6,400.00	6,399.94	0.00	-2.37	14.26	6,423.71	6,399.94	179.22	-300.00	15.37	347.42	318.42	301.06	11.978
6,600.00	6,595.53	0.00	-41.68	14.69	6,698.70	6,670.69	179.22	-261.48	15.70	293.40	263.89	309.19	9.943
6,800.00	6,775.81	0.00	-127.13	15.29	6,860.20	6,816.35	179.21	-192.51	15.76	195.03	163.62	339.96	6.209
6,882.79	6,843.38	0.00	-174.90	15.73	6,892.47	6,843.38	179.21	-174.90	15.78	179.21	147.20	0.00	5.599
7,000.00	6,930.05	0.00	-253.66	16.36	6,915.81	6,862.43	179.21	-161.41	15.80	212.60	179.99	27.24	6.519
7,200.00	7,049.11	0.00	-413.75	18.22	6,916.76	6,863.19	179.21	-160.85	15.80	361.44	327.38	54.68	10.612
7,400.00	7,125.89	0.00	-597.88	21.01	6,889.16	6,840.64	179.21	-176.76	15.78	539.28	509.83	66.95	18.311
7,600.00	7,155.86	0.00	-795.12	24.53	6,850.00	6,807.64	179.21	-197.83	15.76	714.24	692.15	73.30	32.346
7,800.00	7,152.55	4.41	-995.00	27.06	6,800.00	6,763.91	179.22	-222.05	15.74	882.64	859.62	77.26	38.344
8,000.00	7,148.21	20.39	-1,194.30	29.52	6,750.00	6,718.59	179.22	-243.16	15.72	1,055.68	1,031.55	80.52	43.752
8,200.00	7,143.87	37.82	-1,393.49	32.61	6,728.76	6,698.92	179.22	-251.16	15.71	1,234.05	1,209.03	82.94	49.322
8,400.00	7,139.52	55.26	-1,592.68	36.18	6,700.00	6,671.92	179.22	-261.06	15.70	1,416.77	1,390.88	84.68	54.719
8,600.00	7,135.18	72.69	-1,791.87	40.08	6,681.50	6,654.34	179.22	-266.85	15.69	1,602.58	1,575.35	86.00	58.859
8,800.00	7,130.84	90.12	-1,991.07	44.24	6,650.00	6,624.11	179.22	-275.66	15.67	1,790.90	1,762.67	87.03	63.425
9,000.00	7,126.49	107.55	-2,190.26	48.59	6,650.00	6,624.11	179.22	-275.66	15.67	1,980.71	1,950.40	87.86	65.344
9,200.00	7,122.15	124.99	-2,389.45	53.08	6,650.00	6,624.11	179.22	-275.66	15.67	2,172.35	2,139.89	88.53	66.920
9,400.00	7,117.81	142.42	-2,588.64	57.69	6,621.87	6,596.80	179.22	-282.39	15.65	2,364.65	2,331.01	89.09	70.287
9,600.00	7,113.46	159.85	-2,787.83	62.37	6,600.00	6,575.40	179.22	-286.89	15.64	2,558.24	2,523.20	89.56	72.993

**Anticollision Report for Deering 33-6HX - Rev A0 (Permitting Plan Only)**

Closest Approach 3D Proximity Scan on Current Survey Data (North Reference)

Offset Design: Sec. 33-T4N-R67W (Deering 33H Pad) - Deering 33-5H - Plan A - Rev A0 (Permitting Plan Only)

Scan Range: 0.00 to 11,785.35 ft. Measured Depth.

Scan Radius is 9,999.99 ft . Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids ft	Relative North Bearing	Clearance Factor
9,800.00	7,109.12	177.28	-2,987.02	67.13	6,600.00	6,575.40	179.22	-286.89	15.64	2,752.38	2,715.16	89.96	73.939
10,000.00	7,104.77	194.72	-3,186.21	71.93	6,600.00	6,575.40	179.22	-286.89	15.64	2,947.30	2,907.87	90.31	74.752
10,200.00	7,100.43	212.15	-3,385.41	76.78	6,600.00	6,575.40	179.22	-286.89	15.64	3,142.86	3,101.21	90.61	75.456
10,400.00	7,096.09	229.58	-3,584.60	81.67	6,579.34	6,555.06	179.22	-290.53	15.61	3,338.58	3,295.55	90.88	77.575
10,600.00	7,091.74	247.01	-3,783.79	86.59	6,573.17	6,548.97	179.22	-291.50	15.61	3,534.86	3,489.87	91.11	78.562
10,800.00	7,087.40	264.45	-3,982.98	91.53	6,550.00	6,526.02	179.22	-294.69	15.58	3,731.74	3,685.50	91.32	80.694
11,000.00	7,083.06	281.88	-4,182.17	96.49	6,550.00	6,526.02	179.22	-294.69	15.58	3,928.53	3,880.10	91.51	81.123
11,200.00	7,078.71	299.31	-4,381.36	101.47	6,550.00	6,526.02	179.22	-294.69	15.58	4,125.63	4,075.01	91.68	81.507
11,400.00	7,074.37	316.74	-4,580.55	106.47	6,550.00	6,526.02	179.22	-294.69	15.58	4,322.99	4,270.18	91.84	81.855
11,600.00	7,070.03	334.18	-4,779.75	111.48	6,550.00	6,526.02	179.22	-294.69	15.58	4,520.58	4,465.57	91.98	82.169
11,785.35	7,066.00	350.33	-4,964.35	116.13	6,550.00	6,526.02	179.22	-294.69	15.58	4,703.89	4,646.83	92.10	82.436

**Anticollision Report for Deering 33-6HX - Rev A0 (Permitting Plan Only)**

Closest Approach 3D Proximity Scan on Current Survey Data (North Reference)

Offset Design: Sec. 33-T4N-R67W (Deering 33H Pad) - Deering 33-7HX - Plan A - Rev A0 (Permitting Plan Only)

Scan Range: 0.00 to 11,785.35 ft. Measured Depth.

Scan Radius is 9,999.99 ft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids ft	Relative North Bearing	Clearance Factor
0.00	0.00	0.00	0.00	0.00	0.00	1.00	-21.86	0.00	0.00	21.88	21.23	179.99	33.337
200.00	200.00	0.00	0.00	0.34	199.00	200.00	-21.86	0.00	0.33	21.86	20.53	179.99	16.458
400.00	400.00	0.00	0.00	0.79	399.00	400.00	-21.86	0.00	0.78	21.86	19.63	179.99	9.815
600.00	600.00	0.00	0.00	1.24	599.00	600.00	-21.86	0.00	1.23	21.86	18.74	179.99	6.992
800.00	800.00	0.00	0.00	1.69	799.00	800.00	-21.86	0.00	1.68	21.86	17.84	179.99	5.431
1,000.00	1,000.00	0.00	0.00	2.14	999.00	1,000.00	-21.86	0.00	2.13	21.86	16.94	179.99	4.439
1,200.00	1,200.00	0.00	0.00	2.58	1,197.30	1,198.06	-27.30	-6.52	2.52	28.13	22.37	193.43	4.883
1,400.00	1,400.00	0.00	0.00	3.03	1,395.79	1,395.50	-40.32	-22.15	2.95	46.23	39.59	208.78	6.963
1,600.00	1,600.00	0.00	0.00	3.48	1,594.69	1,593.31	-53.63	-38.12	3.44	66.14	58.56	215.41	8.728
1,800.00	1,800.00	0.00	0.00	3.93	1,793.60	1,791.13	-66.94	-54.10	3.95	86.53	77.97	218.94	10.116
2,000.00	2,000.00	0.00	0.00	4.38	1,992.50	1,988.94	-80.25	-70.07	4.49	107.11	97.56	221.12	11.215
2,200.00	2,200.00	0.00	0.00	4.83	2,191.41	2,186.76	-93.57	-86.04	5.05	127.80	117.24	222.60	12.098
2,400.00	2,400.00	0.00	0.00	5.28	2,390.31	2,384.57	-106.88	-102.01	5.61	148.55	136.96	223.67	12.821
2,600.00	2,600.00	0.00	0.00	5.73	2,596.69	2,590.03	-119.22	-116.83	6.14	167.22	154.65	224.42	13.303
2,800.00	2,800.00	0.00	0.00	6.18	2,806.75	2,800.00	-121.86	-120.00	6.54	171.02	157.60	224.56	12.743
3,000.00	3,000.00	0.00	0.00	6.63	3,006.75	3,000.00	-121.86	-120.00	6.92	171.02	156.78	224.56	12.003
3,200.00	3,200.00	0.00	0.00	7.08	3,206.75	3,200.00	-121.86	-120.00	7.30	171.02	155.94	224.56	11.339
3,400.00	3,400.00	0.00	0.00	7.53	3,406.75	3,400.00	-121.86	-120.00	7.70	171.02	155.10	224.56	10.739
3,600.00	3,600.00	0.00	0.00	7.98	3,606.75	3,600.00	-121.86	-120.00	8.09	171.02	154.25	224.56	10.196
3,800.00	3,800.00	0.00	0.00	8.43	3,806.75	3,800.00	-121.86	-120.00	8.50	171.02	153.40	224.56	9.703
4,000.00	4,000.00	0.00	0.00	8.88	4,006.75	4,000.00	-121.86	-120.00	8.91	171.02	152.54	224.56	9.252
4,200.00	4,200.00	0.00	0.00	9.33	4,206.75	4,200.00	-121.86	-120.00	9.32	171.02	151.68	224.56	8.840
4,400.00	4,400.00	0.00	0.00	9.78	4,406.75	4,400.00	-121.86	-120.00	9.73	171.02	150.81	224.56	8.462
4,600.00	4,600.00	0.00	0.00	10.23	4,606.75	4,600.00	-121.86	-120.00	10.15	171.02	149.95	224.56	8.114
4,800.00	4,800.00	0.00	0.00	10.68	4,806.75	4,800.00	-121.86	-120.00	10.57	171.02	149.08	224.56	7.792
5,000.00	5,000.00	0.00	0.00	11.13	5,006.75	5,000.00	-121.86	-120.00	11.00	171.02	148.20	224.56	7.494
5,200.00	5,200.00	0.00	0.00	11.58	5,206.75	5,200.00	-121.86	-120.00	11.42	171.02	147.33	224.56	7.218
5,400.00	5,400.00	0.00	0.00	12.02	5,406.75	5,400.00	-121.86	-120.00	11.85	171.02	146.45	224.56	6.960
5,600.00	5,600.00	0.00	0.00	12.47	5,606.75	5,600.00	-121.86	-120.00	12.28	171.02	145.57	224.56	6.720
5,800.00	5,800.00	0.00	0.00	12.92	5,806.75	5,800.00	-121.86	-120.00	12.71	171.02	144.70	224.56	6.496
6,000.00	6,000.00	0.00	0.00	13.37	6,006.75	6,000.00	-121.86	-120.00	13.14	171.02	143.81	224.56	6.285
6,200.00	6,200.00	0.00	0.00	13.82	6,206.75	6,200.00	-121.86	-120.00	13.57	171.02	142.93	224.56	6.088
6,400.00	6,399.94	0.00	-2.37	14.26	6,406.69	6,399.94	-121.86	-120.00	14.01	169.37	140.76	223.99	5.919
6,600.00	6,595.53	0.00	-41.68	14.69	6,585.54	6,577.94	-121.73	-133.22	14.42	153.32	124.28	216.94	5.281
6,800.00	6,775.81	0.00	-127.13	15.29	6,764.18	6,747.23	-121.16	-188.78	15.02	138.91	109.13	206.97	4.664
7,000.00	6,930.05	0.00	-253.66	16.36	6,950.00	6,903.08	-120.13	-289.02	15.97	128.10	96.11	196.40	4.005
7,200.00	7,049.11	0.00	-413.75	18.22	7,138.87	7,029.73	-118.71	-428.38	17.58	121.17	85.02	187.03	3.352
7,400.00	7,125.89	0.00	-597.88	21.01	7,334.04	7,117.76	-116.94	-601.89	20.12	117.29	75.24	181.96	2.789
7,600.00	7,155.86	0.00	-795.12	24.53	7,532.82	7,156.06	-114.95	-796.28	23.51	114.96	65.84	180.58	2.340
7,657.82	7,157.09	0.46	-852.93	25.26	7,590.66	7,156.95	-114.36	-854.10	24.58	114.83	63.12	180.58	2.220
7,800.00	7,152.55	4.41	-995.00	27.06	7,732.83	7,153.84	-112.91	-996.22	26.01	117.33	63.29	180.60	2.171
8,000.00	7,148.21	20.39	-1,194.30	29.52	7,932.33	7,149.47	-110.87	-1,195.67	28.58	131.28	72.31	180.60	2.226
8,200.00	7,143.87	37.82	-1,393.49	32.61	8,131.74	7,145.11	-108.83	-1,395.02	31.77	146.67	81.42	180.60	2.248
8,400.00	7,139.52	55.26	-1,592.68	36.18	8,331.14	7,140.75	-106.80	-1,594.36	35.41	162.07	89.61	180.59	2.237
8,600.00	7,135.18	72.69	-1,791.87	40.08	8,530.55	7,136.38	-104.76	-1,793.71	39.38	177.46	97.12	180.59	2.209
8,800.00	7,130.84	90.12	-1,991.07	44.24	8,729.96	7,132.02	-102.72	-1,993.06	43.59	192.86	104.15	180.59	2.174
9,000.00	7,126.49	107.55	-2,190.26	48.59	8,929.36	7,127.66	-100.69	-2,192.41	47.98	208.25	110.81	180.59	2.137
9,200.00	7,122.15	124.99	-2,389.45	53.08	9,128.77	7,123.30	-98.65	-2,391.76	52.50	223.65	117.21	180.59	2.101
9,400.00	7,117.81	142.42	-2,588.64	57.69	9,328.18	7,118.94	-96.61	-2,591.11	57.11	239.05	123.39	180.59	2.067
9,600.00	7,113.46	159.85	-2,787.83	62.37	9,527.58	7,114.57	-94.57	-2,790.45	61.81	254.44	129.41	180.59	2.035
9,800.00	7,109.12	177.28	-2,987.02	67.13	9,726.99	7,110.21	-92.54	-2,989.80	66.57	269.84	135.30	180.59	2.006
10,000.00	7,104.77	194.72	-3,186.21	71.93	9,926.40	7,105.85	-90.50	-3,189.15	71.38	285.23	141.10	180.59	1.979

**Anticollision Report for Deering 33-6HX - Rev A0 (Permitting Plan Only)**

Closest Approach 3D Proximity Scan on Current Survey Data (North Reference)

Offset Design: Sec. 33-T4N-R67W (Deering 33H Pad) - Deering 33-7HX - Plan A - Rev A0 (Permitting Plan Only)

Scan Range: 0.00 to 11,785.35 ft. Measured Depth.

Scan Radius is 9,999.99 ft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids ft	Relative North Bearing	Clearance Factor
10,200.00	7,100.43	212.15	-3,385.41	76.78	10,125.80	7,101.49	-88.46	-3,388.50	76.22	300.63	146.81	180.59	1.954
10,400.00	7,096.09	229.58	-3,584.60	81.67	10,325.21	7,097.12	-86.43	-3,587.85	81.10	316.03	152.45	180.59	1.932
10,600.00	7,091.74	247.01	-3,783.79	86.59	10,524.62	7,092.76	-84.39	-3,787.20	86.01	331.42	158.03	180.59	1.911
10,800.00	7,087.40	264.45	-3,982.98	91.53	10,724.02	7,088.40	-82.35	-3,986.55	90.94	346.82	163.57	180.59	1.893
11,000.00	7,083.06	281.88	-4,182.17	96.49	10,923.43	7,084.04	-80.32	-4,185.89	95.88	362.22	169.06	180.59	1.875
11,200.00	7,078.71	299.31	-4,381.36	101.47	11,122.83	7,079.67	-78.28	-4,385.24	100.85	377.61	174.53	180.59	1.859
11,400.00	7,074.37	316.74	-4,580.55	106.47	11,322.24	7,075.31	-76.24	-4,584.59	105.83	393.01	179.96	180.59	1.845
11,600.00	7,070.03	334.18	-4,779.75	111.48	11,521.65	7,070.95	-74.21	-4,783.94	110.82	408.40	185.37	180.59	1.831
11,785.35	7,066.00	350.33	-4,964.35	116.13	11,706.45	7,066.91	-72.32	-4,968.69	115.45	422.67	190.36	180.59	1.819



**Anticollision Report for Deering 33-6HX - Rev A0 (Permitting Plan Only)**

Closest Approach 3D Proximity Scan on Current Survey Data (North Reference)

Offset Design: Sec. 33-T4N-R67W (Deering 33H Pad) - Deering 33-2H - Plan A - Rev A0 (Permitting Plan Only)

Scan Range: 0.00 to 11,785.35 ft. Measured Depth.

Scan Radius is 9,999.99 ft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre		Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre		Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids ft	Relative North Bearing	Clearance Factor
		+N/-S (ft)	+E/-W (ft)				+N/-S (ft)	+E/-W (ft)					
0.00	0.00	0.00	0.00	0.00	1.00	0.00	80.15	0.00	0.00	80.15	79.49	0.00	121.881
200.00	200.00	0.00	0.00	0.34	201.00	200.00	80.15	0.00	0.34	80.15	78.81	0.00	60.133
400.00	400.00	0.00	0.00	0.79	401.00	400.00	80.15	0.00	0.79	80.15	77.91	0.00	35.910
533.00	533.00	0.00	0.00	1.09	534.00	533.00	80.15	0.00	1.09	80.15	77.32	0.00	28.323
600.00	600.00	0.00	0.00	1.24	600.00	599.00	80.15	0.00	1.24	80.15	77.02	0.00	25.618
800.00	800.00	0.00	0.00	1.69	793.94	792.71	88.10	-1.99	1.68	88.42	84.41	358.71	22.015
1,000.00	1,000.00	0.00	0.00	2.14	984.20	981.41	111.31	-7.79	2.17	113.13	108.16	356.00	22.790
1,200.00	1,200.00	0.00	0.00	2.58	1,169.28	1,162.44	148.38	-17.06	2.81	154.01	147.94	353.44	25.377
1,400.00	1,400.00	0.00	0.00	3.03	1,360.41	1,347.12	196.18	-29.01	3.64	205.25	197.86	351.59	27.799
1,600.00	1,600.00	0.00	0.00	3.48	1,553.60	1,533.72	244.69	-41.14	4.57	256.83	248.04	350.46	29.229
1,800.00	1,800.00	0.00	0.00	3.93	1,746.78	1,720.32	293.20	-53.26	5.53	308.47	298.24	349.70	30.160
2,000.00	2,000.00	0.00	0.00	4.38	1,939.97	1,906.92	341.71	-65.39	6.51	360.14	348.45	349.17	30.809
2,200.00	2,200.00	0.00	0.00	4.83	2,133.15	2,093.53	390.21	-77.52	7.51	411.84	398.68	348.76	31.286
2,400.00	2,400.00	0.00	0.00	5.28	2,326.34	2,280.13	438.72	-89.64	8.51	463.55	448.91	348.45	31.651
2,600.00	2,600.00	0.00	0.00	5.73	2,519.52	2,466.73	487.23	-101.77	9.52	515.27	499.14	348.20	31.939
2,800.00	2,800.00	0.00	0.00	6.18	2,712.71	2,653.33	535.73	-113.90	10.53	567.00	549.38	348.00	32.171
3,000.00	3,000.00	0.00	0.00	6.63	2,905.89	2,839.94	584.24	-126.03	11.55	618.74	599.62	347.83	32.363
3,200.00	3,200.00	0.00	0.00	7.08	3,099.08	3,026.54	632.75	-138.15	12.56	670.48	649.86	347.68	32.523
3,400.00	3,400.00	0.00	0.00	7.53	3,292.27	3,213.14	681.25	-150.28	13.58	722.22	700.11	347.56	32.660
3,600.00	3,600.00	0.00	0.00	7.98	3,485.45	3,399.75	729.76	-162.41	14.60	773.97	750.36	347.45	32.777
3,800.00	3,800.00	0.00	0.00	8.43	3,678.64	3,586.35	778.27	-174.53	15.63	825.72	800.60	347.36	32.879
4,000.00	4,000.00	0.00	0.00	8.88	3,871.82	3,772.95	826.78	-186.66	16.65	877.47	850.85	347.28	32.969
4,200.00	4,200.00	0.00	0.00	9.33	4,065.01	3,959.55	875.28	-198.79	17.67	929.22	901.10	347.20	33.048
4,400.00	4,400.00	0.00	0.00	9.78	4,258.19	4,146.16	923.79	-210.91	18.69	980.97	951.35	347.14	33.119
4,600.00	4,600.00	0.00	0.00	10.23	4,451.38	4,332.76	972.30	-223.04	19.72	1,032.73	1,001.60	347.08	33.182
4,800.00	4,800.00	0.00	0.00	10.68	4,644.56	4,519.36	1,020.80	-235.17	20.74	1,084.48	1,051.86	347.03	33.239
5,000.00	5,000.00	0.00	0.00	11.13	4,837.75	4,705.96	1,069.31	-247.29	21.77	1,136.24	1,102.11	346.98	33.291
5,200.00	5,200.00	0.00	0.00	11.58	5,030.93	4,892.57	1,117.82	-259.42	22.79	1,187.99	1,152.36	346.93	33.338
5,400.00	5,400.00	0.00	0.00	12.02	5,224.12	5,079.17	1,166.33	-271.55	23.82	1,239.75	1,202.61	346.89	33.381
5,600.00	5,600.00	0.00	0.00	12.47	5,470.95	5,318.08	1,226.44	-286.58	25.00	1,290.64	1,251.84	346.85	33.257
5,800.00	5,800.00	0.00	0.00	12.92	5,931.72	5,774.78	1,279.74	-299.90	26.12	1,314.65	1,274.26	346.81	32.547
6,000.00	6,000.00	0.00	0.00	13.37	6,156.94	6,000.00	1,280.15	-300.00	26.36	1,314.83	1,273.75	346.81	32.008
6,200.00	6,200.00	0.00	0.00	13.82	6,356.94	6,200.00	1,280.15	-300.00	26.57	1,314.83	1,273.09	346.81	31.499
6,400.00	6,399.94	0.00	-2.37	14.26	6,556.88	6,399.94	1,280.15	-300.00	26.79	1,314.29	1,283.02	346.91	42.029
6,600.00	6,595.53	0.00	-41.68	14.69	6,840.66	6,678.98	1,279.57	-258.60	26.96	1,300.51	1,268.16	350.38	40.204
6,800.00	6,775.81	0.00	-127.13	15.29	7,004.08	6,825.40	1,278.58	-186.82	26.93	1,280.93	1,247.52	357.33	38.341
6,886.01	6,845.91	0.00	-176.90	15.75	7,036.79	6,852.53	1,278.32	-168.55	26.91	1,278.37	1,244.43	0.37	37.670
7,000.00	6,930.05	0.00	-253.66	16.36	7,058.18	6,869.80	1,278.15	-155.94	26.91	1,283.30	1,248.74	4.37	37.137
7,200.00	7,049.11	0.00	-413.75	18.22	7,050.00	6,863.24	1,278.22	-160.83	26.91	1,316.19	1,279.76	11.19	36.134
7,400.00	7,125.89	0.00	-597.88	21.01	7,028.23	6,845.51	1,278.39	-173.46	26.92	1,375.88	1,336.67	18.37	35.089
7,600.00	7,155.86	0.00	-795.12	24.53	6,983.30	6,807.74	1,278.73	-197.78	26.93	1,453.67	1,411.42	25.04	34.410
7,800.00	7,152.55	4.41	-995.00	27.06	6,934.88	6,765.42	1,279.06	-221.29	26.95	1,540.53	1,495.94	31.26	34.549
8,000.00	7,148.21	20.39	-1,194.30	29.52	6,900.00	6,734.00	1,279.26	-236.42	26.96	1,635.19	1,588.28	37.27	34.853
8,200.00	7,143.87	37.82	-1,393.49	32.61	6,850.00	6,687.76	1,279.53	-255.41	26.96	1,745.02	1,695.53	42.51	35.263
8,400.00	7,139.52	55.26	-1,592.68	36.18	6,850.00	6,687.76	1,279.53	-255.41	26.96	1,868.48	1,815.62	47.53	35.346
8,600.00	7,135.18	72.69	-1,791.87	40.08	6,800.00	6,640.31	1,279.75	-271.13	26.96	2,003.64	1,947.59	51.56	35.749
8,800.00	7,130.84	90.12	-1,991.07	44.24	6,800.00	6,640.31	1,279.75	-271.13	26.96	2,148.03	2,088.08	55.33	35.830
9,000.00	7,126.49	107.55	-2,190.26	48.59	6,800.00	6,640.31	1,279.75	-271.13	26.96	2,300.76	2,236.73	58.58	35.933
9,200.00	7,122.15	124.99	-2,389.45	53.08	6,750.00	6,591.87	1,279.92	-283.49	26.94	2,459.70	2,392.17	61.26	36.427
9,400.00	7,117.81	142.42	-2,588.64	57.69	6,750.00	6,591.87	1,279.92	-283.49	26.94	2,623.78	2,551.99	63.74	36.548
9,600.00	7,113.46	159.85	-2,787.83	62.37	6,750.00	6,591.87	1,279.92	-283.49	26.94	2,792.55	2,716.41	65.90	36.680
9,800.00	7,109.12	177.28	-2,987.02	67.13	6,750.00	6,591.87	1,279.92	-283.49	26.94	2,965.20	2,884.66	67.81	36.817

# Anticollision Report for Deering 33-6HX - Rev A0 (Permitting Plan Only)

Closest Approach 3D Proximity Scan on Current Survey Data (North Reference)  
Offset Design: Sec. 33-T4N-R67W (Deering 33H Pad) - Deering 33-2H - Plan A - Rev A0 (Permitting Plan Only)  
Scan Range: 0.00 to 11,785.35 ft. Measured Depth.  
Scan Radius is 9,999.99 ft . Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids ft	Relative North Bearing	Clearance Factor
10,000.00	7,104.77	194.72	-3,186.21	71.93	6,727.36	6,569.68	1,279.98	-287.98	26.93	3,140.69	3,056.13	69.47	37.146
10,200.00	7,100.43	212.15	-3,385.41	76.78	6,700.00	6,542.69	1,280.04	-292.45	26.92	3,319.31	3,230.87	70.95	37.532
10,400.00	7,096.09	229.58	-3,584.60	81.67	6,700.00	6,542.69	1,280.04	-292.45	26.92	3,499.70	3,406.79	72.30	37.667
10,600.00	7,091.74	247.01	-3,783.79	86.59	6,700.00	6,542.69	1,280.04	-292.45	26.92	3,682.12	3,584.71	73.52	37.799
10,800.00	7,087.40	264.45	-3,982.98	91.53	6,700.00	6,542.69	1,280.04	-292.45	26.92	3,866.28	3,764.35	74.61	37.929
11,000.00	7,083.06	281.88	-4,182.17	96.49	6,700.00	6,542.69	1,280.04	-292.45	26.92	4,051.94	3,945.46	75.61	38.054
11,200.00	7,078.71	299.31	-4,381.36	101.47	6,700.00	6,542.69	1,280.04	-292.45	26.92	4,238.91	4,127.87	76.51	38.176
11,400.00	7,074.37	316.74	-4,580.55	106.47	6,700.00	6,542.69	1,280.04	-292.45	26.92	4,427.01	4,311.40	77.34	38.293
11,600.00	7,070.03	334.18	-4,779.75	111.48	6,700.00	6,542.69	1,280.04	-292.45	26.92	4,616.12	4,495.92	78.10	38.405
11,785.35	7,066.00	350.33	-4,964.35	116.13	6,700.00	6,542.69	1,280.04	-292.45	26.92	4,792.16	4,667.71	78.75	38.506

## Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	7,641.11	Rev A0 (Permitting Plan Only)	MWD
7,641.11	11,785.35	Rev A0 (Permitting Plan Only)	MWD

Ellipse error terms are correlated across survey tool tie-on points.  
Calculated ellipses incorporate surface errors.  
Separation is the actual distance between ellipsoids.  
Distance Between centres is the straight line distance between wellbore centres.  
Clearance Factor = Distance Between Profiles / (Distance Between Profiles - Ellipse Separation).  
All station coordinates were calculated using the Minimum Curvature method.

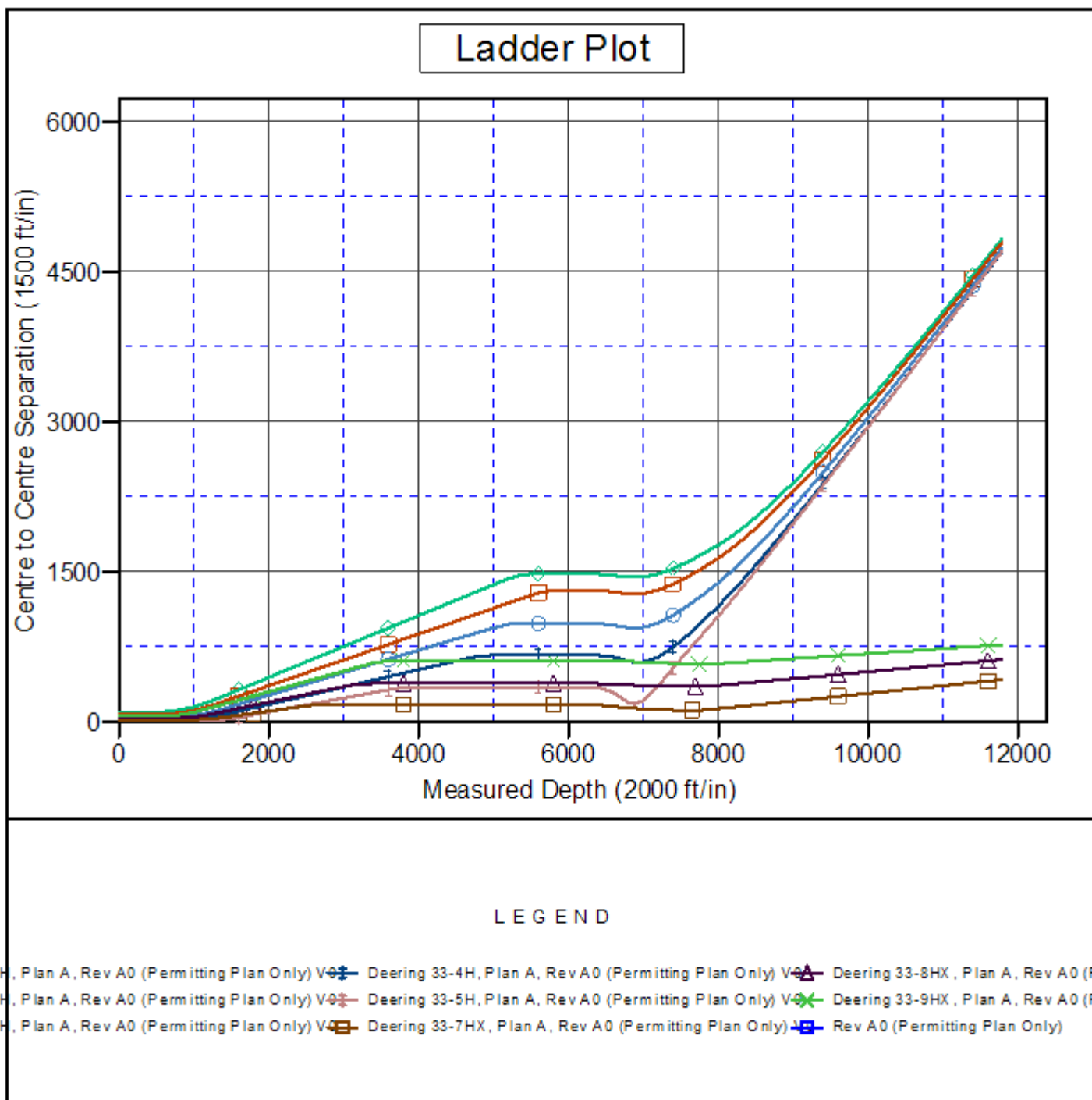
**Anticollision Report for Deering 33-6HX - Rev A0 (Permitting Plan Only)**

Direction and Coordinates are relative to True North Reference.

Vertical Depths are relative to GL @ 4903.00ft (Ground Level). Northing and Easting are relative to Deering 33-6HX - Slot A6

Coordinate System is US State Plane 1983, Colorado Northern Zone

Central Meridian is -105.00°, Grid Convergence at Surface is: 0.39°



# **K.P. Kauffman Company, Inc.**

**Weld County, CO (NAD 83)**

**Sec. 33-T4N-R67W (Deering 33H Pad)**

**Deering 33-6HX - A6**

**Plan A**

**Plan: Rev A0 (Permitting Plan Only)**

## **Sperry Drilling Services**

# **Proposal Report**

**25 July, 2013**

Well Coordinates: 1,341,772.50 N, 3,166,345.42 E (40° 16' 12.11" N, 104° 54' 13.93" W)

Ground Level: 4,903.00 ft

Local Coordinate Origin: Centered on Well Deering 33-6HX - Slot A6

Viewing Datum: GL @ 4903.00ft (Ground Level)

TVDs to System: N

North Reference: True

Unit System: API - US Survey Feet - Custom

Geodetic Scale Factor Applied

Version: 2003.16 Build: 431

**HALLIBURTON**

**Plan Report for Deering 33-6HX - Rev A0 (Permitting Plan Only)**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Toolface Azimuth (°)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Plan Report for Deering 33-6HX - Rev A0 (Permitting Plan Only)**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Toolface Azimuth (°)
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,337.68	0.00	0.00	6,337.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>KOP - Begin 7.0°/100ft Build at 6337.68ft</b>										
6,400.00	4.36	270.00	6,399.94	0.00	-2.37	2.37	7.00	7.00	0.00	270.00
6,500.00	11.36	270.00	6,498.94	0.00	-16.04	16.00	7.00	7.00	0.00	0.00
6,600.00	18.36	270.00	6,595.53	0.00	-41.68	41.57	7.00	7.00	0.00	0.00
6,700.00	25.36	270.00	6,688.28	0.00	-78.89	78.70	7.00	7.00	0.00	0.00
6,800.00	32.36	270.00	6,775.81	0.00	-127.13	126.82	7.00	7.00	0.00	0.00
6,900.00	39.36	270.00	6,856.80	0.00	-185.68	185.22	7.00	7.00	0.00	0.00
7,000.00	46.36	270.00	6,930.05	0.00	-253.66	253.03	7.00	7.00	0.00	0.00
7,100.00	53.36	270.00	6,994.47	0.00	-330.06	329.24	7.00	7.00	0.00	0.00
7,200.00	60.36	270.00	7,049.11	0.00	-413.75	412.72	7.00	7.00	0.00	0.00
7,300.00	67.36	270.00	7,093.13	0.00	-503.47	502.22	7.00	7.00	0.00	0.00
7,400.00	74.36	270.00	7,125.89	0.00	-597.88	596.40	7.00	7.00	0.00	0.00
7,500.00	81.36	270.00	7,146.91	0.00	-695.58	693.86	7.00	7.00	0.00	0.00
7,600.00	88.36	270.00	7,155.86	0.00	-795.12	793.15	7.00	7.00	0.00	0.00
7,641.11	91.24	270.00	7,156.00	0.00	-836.23	834.15	7.00	7.00	0.00	0.00
<b>End of Build / Begin Turn at 7641.11ft - 7" Csg</b>										
7,700.00	91.24	271.18	7,154.72	0.61	-895.10	892.92	2.00	0.00	2.00	89.89
7,800.00	91.24	273.18	7,152.55	4.41	-995.00	992.84	2.00	0.00	2.00	89.92
7,891.13	91.24	275.00	7,150.58	10.90	-1,085.87	1,083.94	2.00	0.00	2.00	89.96
<b>End of Turn at 7891.13ft</b>										
7,900.00	91.24	275.00	7,150.38	11.68	-1,094.70	1,092.81	0.00	0.00	0.00	0.00
8,000.00	91.24	275.00	7,148.21	20.39	-1,194.30	1,192.77	0.00	0.00	0.00	0.00
8,100.00	91.24	275.00	7,146.04	29.11	-1,293.89	1,292.73	0.00	0.00	0.00	0.00
8,200.00	91.24	275.00	7,143.87	37.82	-1,393.49	1,392.70	0.00	0.00	0.00	0.00
8,300.00	91.24	275.00	7,141.70	46.54	-1,493.09	1,492.66	0.00	0.00	0.00	0.00
8,400.00	91.24	275.00	7,139.52	55.26	-1,592.68	1,592.62	0.00	0.00	0.00	0.00
8,500.00	91.24	275.00	7,137.35	63.97	-1,692.28	1,692.58	0.00	0.00	0.00	0.00
8,600.00	91.24	275.00	7,135.18	72.69	-1,791.87	1,792.55	0.00	0.00	0.00	0.00
8,700.00	91.24	275.00	7,133.01	81.41	-1,891.47	1,892.51	0.00	0.00	0.00	0.00
8,800.00	91.24	275.00	7,130.84	90.12	-1,991.07	1,992.47	0.00	0.00	0.00	0.00
8,900.00	91.24	275.00	7,128.66	98.84	-2,090.66	2,092.43	0.00	0.00	0.00	0.00
9,000.00	91.24	275.00	7,126.49	107.55	-2,190.26	2,192.39	0.00	0.00	0.00	0.00
9,100.00	91.24	275.00	7,124.32	116.27	-2,289.85	2,292.36	0.00	0.00	0.00	0.00
9,200.00	91.24	275.00	7,122.15	124.99	-2,389.45	2,392.32	0.00	0.00	0.00	0.00
9,300.00	91.24	275.00	7,119.98	133.70	-2,489.04	2,492.28	0.00	0.00	0.00	0.00
9,400.00	91.24	275.00	7,117.81	142.42	-2,588.64	2,592.24	0.00	0.00	0.00	0.00
9,500.00	91.24	275.00	7,115.63	151.14	-2,688.24	2,692.21	0.00	0.00	0.00	0.00
9,600.00	91.24	275.00	7,113.46	159.85	-2,787.83	2,792.17	0.00	0.00	0.00	0.00
9,700.00	91.24	275.00	7,111.29	168.57	-2,887.43	2,892.13	0.00	0.00	0.00	0.00
<b>Hold Angle at 91.24°</b>										
9,800.00	91.24	275.00	7,109.12	177.28	-2,987.02	2,992.09	0.00	0.00	0.00	0.00
9,900.00	91.24	275.00	7,106.95	186.00	-3,086.62	3,092.05	0.00	0.00	0.00	0.00
10,000.00	91.24	275.00	7,104.77	194.72	-3,186.21	3,192.02	0.00	0.00	0.00	0.00
10,100.00	91.24	275.00	7,102.60	203.43	-3,285.81	3,291.98	0.00	0.00	0.00	0.00
10,200.00	91.24	275.00	7,100.43	212.15	-3,385.41	3,391.94	0.00	0.00	0.00	0.00
10,300.00	91.24	275.00	7,098.26	220.87	-3,485.00	3,491.90	0.00	0.00	0.00	0.00
10,400.00	91.24	275.00	7,096.09	229.58	-3,584.60	3,591.87	0.00	0.00	0.00	0.00
10,500.00	91.24	275.00	7,093.92	238.30	-3,684.19	3,691.83	0.00	0.00	0.00	0.00
10,600.00	91.24	275.00	7,091.74	247.01	-3,783.79	3,791.79	0.00	0.00	0.00	0.00
10,700.00	91.24	275.00	7,089.57	255.73	-3,883.38	3,891.75	0.00	0.00	0.00	0.00
10,800.00	91.24	275.00	7,087.40	264.45	-3,982.98	3,991.71	0.00	0.00	0.00	0.00
10,900.00	91.24	275.00	7,085.23	273.16	-4,082.58	4,091.68	0.00	0.00	0.00	0.00
11,000.00	91.24	275.00	7,083.06	281.88	-4,182.17	4,191.64	0.00	0.00	0.00	0.00

**Plan Report for Deering 33-6HX - Rev A0 (Permitting Plan Only)**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Toolface Azimuth (°)
11,100.00	91.24	275.00	7,080.88	290.60	-4,281.77	4,291.60	0.00	0.00	0.00	0.00
11,200.00	91.24	275.00	7,078.71	299.31	-4,381.36	4,391.56	0.00	0.00	0.00	0.00
11,300.00	91.24	275.00	7,076.54	308.03	-4,480.96	4,491.53	0.00	0.00	0.00	0.00
11,400.00	91.24	275.00	7,074.37	316.74	-4,580.55	4,591.49	0.00	0.00	0.00	0.00
11,500.00	91.24	275.00	7,072.20	325.46	-4,680.15	4,691.45	0.00	0.00	0.00	0.00
11,600.00	91.24	275.00	7,070.03	334.18	-4,779.75	4,791.41	0.00	0.00	0.00	0.00
11,700.00	91.24	275.00	7,067.85	342.89	-4,879.34	4,891.37	0.00	0.00	0.00	0.00
11,785.35	91.24	275.00	7,066.00	350.33	-4,964.35	4,976.69	0.00	0.00	0.00	0.00
<b>Total Depth at 11785.35ft</b>										

**Plan Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
6,337.68	6,337.68	0.00	0.00	KOP - Begin 7.0°/100ft Build at 6337.68ft
7,641.11	7,156.00	0.00	-836.23	End of Build / Begin Turn at 7641.11ft
7,891.13	7,150.58	10.90	-1,085.87	End of Turn at 7891.13ft
9,700.00	7,111.29	168.57	-2,887.43	Hold Angle at 91.24°
11,785.35	7,066.00	350.33	-4,964.35	Total Depth at 11785.35ft

**Vertical Section Information**

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (ft)
				+N/-S (ft)	+E/-W (ft)	
Target	Deering 33-6H_RevA0_BHL Tgt	274.04	Slot	0.00	0.00	0.00

**Survey tool program**

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	7,641.11	Rev A0 (Permitting Plan Only)	MWD
7,641.11	11,935.35	Rev A0 (Permitting Plan Only)	MWD

**Casing Details**

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,641.11	7,156.00	7" Csg	7	8-3/4

**Plan Report for Deering 33-6HX - Rev A0 (Permitting Plan Only)****Targets associated with this wellbore**

Target Name	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Shape
Deering_Camenisch 32-9	-2.00	-972.67	-1,021.38	Circle
Stroh_Sunmarke 19-28-11_BHL	-86.00	4,396.38	1,628.27	Circle
Stroh_Stroh 28-10	-33.00	4,371.82	2,971.43	Circle
Stroh_Stroh 23-28	-33.00	3,592.16	2,466.50	Circle
Stroh_Spaur 1	-33.00	4,377.16	1,608.48	Circle
Deering_Anderson 12-32	-2.00	-852.03	-4,649.23	Circle
Deering_Anderson 1	-2.00	-834.03	-3,334.83	Circle
Stroh_Frank 1 (B)	-33.00	1,189.82	4,271.03	Circle
Deering_Hepp 32-5	-2.00	616.13	-4,749.42	Circle
Deering_Stroh 7-33	-2.00	386.34	3,002.60	Circle
Stroh_Koester 18-33-6_BHL	-35.00	415.83	1,645.41	Circle
Stroh_Stroh 33-2	-33.00	1,723.34	2,980.12	Circle
Stroh_Koester 3-33-3_BHL	-66.00	1,701.57	1,683.45	Circle
Stroh_Sunmarke 15-28	-33.00	3,340.68	1,021.21	Circle
Deering 33-6H_RevA0_BHL Tgt	7,066.00	350.33	-4,964.35	Point
Deering_Stroh 33-4	-2.00	382.90	4,311.36	Circle
Stroh_Stroh 28-16	-33.00	3,017.01	5,320.96	Circle
Stroh_Stroh 2	-33.00	3,413.75	3,303.57	Circle
Deering_Camenisch 32-10	-2.00	-677.50	-2,277.16	Circle
Stroh_Sunmarke 19-28-14_BHL	-86.00	3,067.24	1,620.02	Circle
Stroh_Koester 18-33	-33.00	768.69	563.68	Circle
Stroh_Stroh 39-28R	-33.00	3,508.70	4,748.87	Circle
Stroh 28-1H_Sec. 33 Lines	-33.00	2,652.59	4,768.57	Polygon
Stroh_Sunmarke 19-28-12_BHL	-86.00	4,377.72	305.95	Circle
Deering_Hepp 22-32R	-2.00	91.42	-4,107.69	Circle
Deering 33-1H_Sec. 32 N Half 460' Setback	-2.00	98.36	0.00	Polygon
Stroh_Stroh 38-28R	-33.00	2,506.87	4,754.64	Circle
Stroh_Koester 3-33-21_BHL	-65.00	1,089.76	2,147.99	Circle
Stroh_Stroh 33-1	-33.00	1,719.86	4,171.61	Circle
Deering 33-1H_Sec. 32 N Half Lines	-2.00	98.36	0.00	Polygon
Deering_Camenisch 9-32-40R	-2.00	-939.88	-996.27	Circle
Stroh_Frank 1	-33.00	2,034.69	1,642.12	Circle
Stroh_Stroh 28-33R	-33.00	2,233.30	2,466.64	Circle
Stroh_Sunmarke 19-28-13_BHL	-86.00	3,069.14	269.99	Circle
Stroh_Koester 18-33-4_BHL	-33.00	1,778.31	347.46	Circle
Stroh 28-1H_Sec. 33 460' Setback	-33.00	2,652.59	4,768.57	Polygon
Stroh_Stroh 1	-33.00	696.04	3,298.36	Circle
Deering_Camenisch 7-32-25R	-2.00	287.92	-2,408.22	Circle
Stroh_Koester 18-33-5_BHL	-32.00	352.95	231.53	Circle
Stroh_Stroh 15-28	-33.00	3,012.97	2,943.69	Circle
Stroh_Koester 18-33-22_BHL	-33.00	-32.05	995.48	Circle
Stroh_Stroh 41-33R	-33.00	874.79	4,766.12	Circle
Stroh_Koester 3-33-29_BHL	-67.00	2,233.03	983.27	Circle
Deering_Hepp 32-6	-2.00	557.63	-3,502.07	Circle
Deering_Camenisch 41-32	-2.00	324.34	-2,369.15	Circle
Stroh_Stroh 28-9	-33.00	4,331.94	4,288.35	Circle



# North Reference Sheet for Sec. 33-T4N-R67W (Deering 33H Pad) - Deering 33-6HX - Plan A

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to True North Reference.

Vertical Depths are relative to GL @ 4903.00ft (Ground Level). Northing and Easting are relative to Deering 33-6HX - Slot A6

Coordinate System is US State Plane 1983, Colorado Northern Zone using datum North American Datum 1983, ellipsoid GRS 1980

Projection method is Lambert Conformal Conic (2 parallel)

Central Meridian is -105.50°, Longitude Origin:0° 0' 0.000 E°, Latitude Origin:40° 47' 0.000 N°

False Easting: 3,000,000.00ft, False Northing: 1,000,000.00ft, Scale Reduction: 0.99995690

Grid Coordinates of Well: 1,341,772.50 ft N, 3,166,345.42 ft E

Geographical Coordinates of Well: 40° 16' 12.11" N, 104° 54' 13.93" W

Grid Convergence at Surface is: 0.39°

Based upon Minimum Curvature type calculations, at a Measured Depth of 11,935.35ft

the Bottom Hole Displacement is 5,126.64ft in the Direction of 274.06° (True).

Magnetic Convergence at surface is: -8.29° (24 July 2013, , BGGM2013)

