

Project: Weld County, CO (NAD 83)
 Site: Sec. 33-T4N-R67W (Deering 33H Pad)
 Well: Deering 33-9HX
 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	600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	
3	1080.00	12.00	192.53	1076.50	-48.89	-10.86	2.50	192.53	14.37	
4	3258.87	12.00	192.53	3207.75	-491.11	-109.14	0.00	0.00	144.39	
5	3738.87	0.00	0.00	3684.25	-540.00	-120.00	2.50	180.00	158.76	
6	6494.59	0.00	0.00	6439.97	-540.00	-120.00	0.00	0.00	158.76	
7	7635.24	91.25	272.13	7156.00	-512.85	-851.35	8.00	272.13	886.23	
8	11752.21	91.25	272.13	7066.00	-360.17	-4964.50	0.00	0.00	4977.54	Deering 33-9HX_RevA0_BHL Tgt

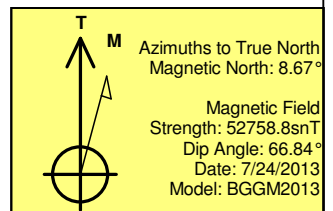
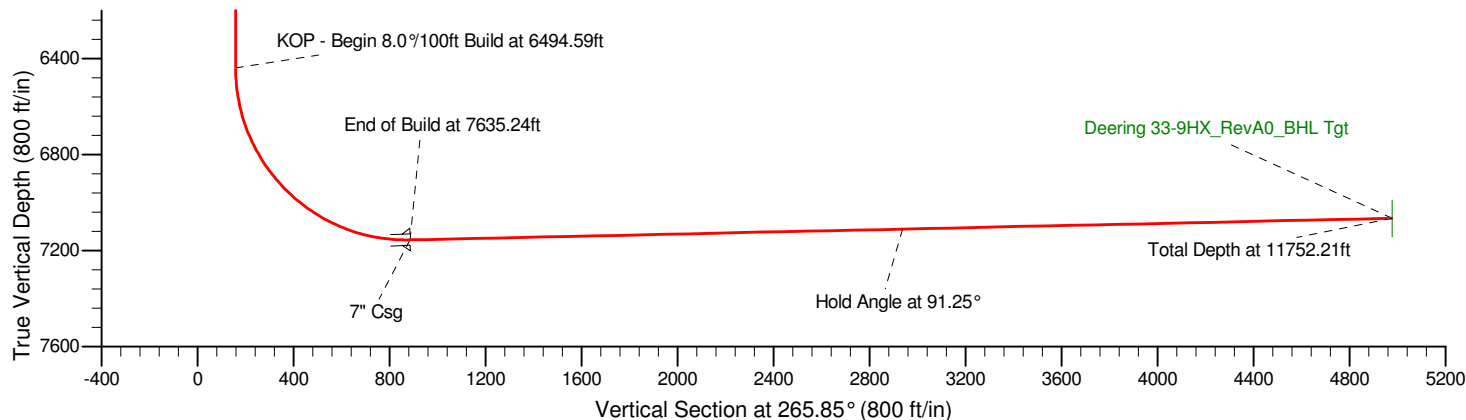
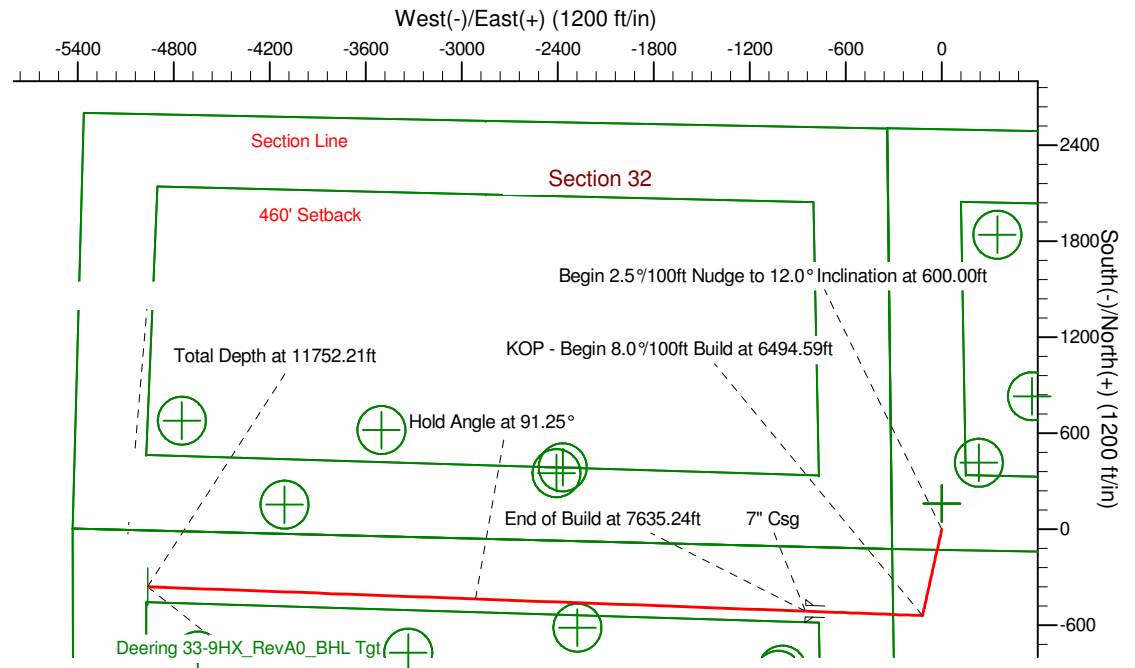
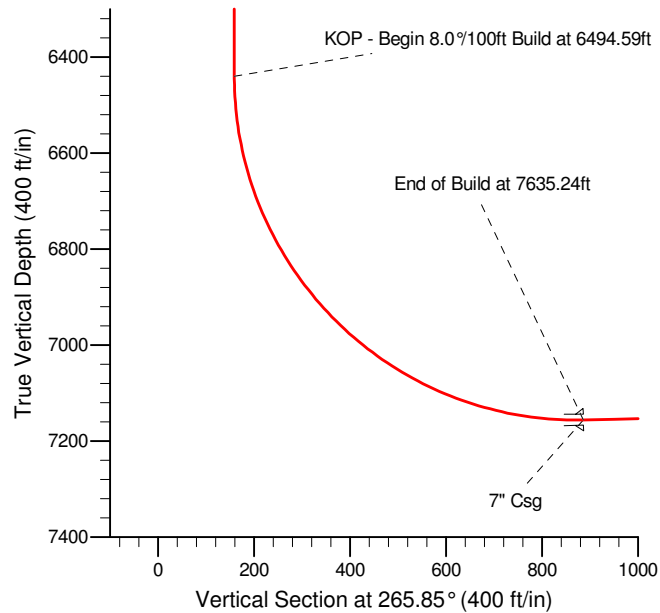
Plan: Rev A0 (Permitting Plan Only) (Deering 33-9HX/Plan A)

Created By: Jay Lantz Date: 14:39, July 25 2013

Approved: _____ Date: _____

WELL DETAILS: Deering 33-9HX

Ground Level: 4902.00
 Northing 1341710.58 Easting 3166345.84 Latitude 40° 16' 11.496 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 33-9HX

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 33-9HX - Plan A - Rev A0 (Permitting Plan Only)

Well Coordinates: 1,341,710.58 N, 3,166,345.84 E (40° 16' 11.50" N, 104° 54' 13.93" W)

Datum Height: GL @ 4902.00ft (Ground Level)

Scan Range: 0.00 to 11,902.21 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 33-9HX - 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 11,902.21 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	2.00	0.00	142.07	0.00	0.00	142.07	141.41	0.00	215.684
200.00	200.00	0.00	0.00	0.34	202.00	200.00	142.07	0.00	0.34	142.07	140.73	0.00	106.416
400.00	400.00	0.00	0.00	0.79	402.00	400.00	142.07	0.00	0.79	142.07	139.84	0.00	63.591
532.66	532.66	0.00	0.00	1.08	534.66	532.66	142.07	0.00	1.09	142.07	139.24	0.00	50.193
600.00	600.00	0.00	0.00	1.24	600.00	598.00	142.07	0.00	1.24	142.08	138.95	0.00	45.413
800.00	799.75	-8.51	-1.89	1.63	789.26	787.05	149.65	-1.90	1.67	158.67	154.71	0.00	40.057
1,000.00	997.97	-33.99	-7.55	2.10	969.28	965.68	170.87	-7.20	2.12	207.39	202.57	0.10	43.035
1,200.00	1,193.88	-73.24	-16.28	2.79	1,136.92	1,130.02	202.81	-15.19	2.68	283.34	277.65	0.23	49.748
1,400.00	1,389.51	-113.84	-25.30	3.58	1,308.70	1,296.16	245.12	-25.77	3.40	370.90	364.28	359.92	56.061
1,600.00	1,585.14	-154.43	-34.32	4.42	1,488.04	1,469.39	290.15	-37.03	4.25	459.41	451.85	359.65	60.763
1,800.00	1,780.76	-195.02	-43.34	5.29	1,667.37	1,642.62	335.18	-48.28	5.13	547.93	539.39	359.47	64.165
2,000.00	1,976.39	-235.61	-52.36	6.17	1,846.71	1,815.84	380.21	-59.54	6.04	636.45	626.91	359.33	66.744
2,200.00	2,172.02	-276.20	-61.38	7.06	2,026.05	1,989.07	425.24	-70.80	6.96	724.97	714.43	359.23	68.741
2,400.00	2,367.65	-316.80	-70.40	7.96	2,205.39	2,162.30	470.27	-82.06	7.88	813.50	801.93	359.15	70.326
2,600.00	2,563.28	-357.39	-79.42	8.86	2,384.72	2,335.53	515.30	-93.31	8.82	902.03	889.43	359.09	71.608
2,800.00	2,758.91	-397.98	-88.44	9.76	2,564.06	2,508.75	560.33	-104.57	9.75	990.56	976.93	359.04	72.665
3,000.00	2,954.54	-438.57	-97.46	10.67	2,743.40	2,681.98	605.36	-115.83	10.69	1,079.09	1,064.42	358.99	73.551
3,200.00	3,150.17	-479.16	-106.48	11.57	2,922.74	2,855.21	650.39	-127.09	11.64	1,167.62	1,151.90	358.95	74.302
3,400.00	3,346.62	-515.59	-114.58	12.28	3,103.85	3,030.15	695.87	-138.46	12.59	1,252.34	1,235.48	358.87	74.283
3,600.00	3,545.47	-535.89	-119.09	12.72	3,291.11	3,211.03	742.89	-150.21	13.58	1,322.16	1,304.22	358.61	73.698
3,800.00	3,745.38	-540.00	-120.00	13.00	3,483.24	3,396.61	791.13	-162.27	14.59	1,376.71	1,348.54	358.18	48.861
4,000.00	3,945.38	-540.00	-120.00	13.23	3,676.43	3,583.21	839.64	-174.40	15.61	1,427.42	1,397.97	357.74	48.471
4,200.00	4,145.38	-540.00	-120.00	13.47	3,869.61	3,769.82	888.15	-186.52	16.64	1,478.20	1,447.46	357.33	48.093
4,400.00	4,345.38	-540.00	-120.00	13.72	4,062.80	3,956.42	936.65	-198.65	17.66	1,529.05	1,497.01	356.95	47.729
4,600.00	4,545.38	-540.00	-120.00	13.98	4,255.98	4,143.02	985.16	-210.78	18.68	1,579.95	1,546.60	356.59	47.378
4,800.00	4,745.38	-540.00	-120.00	14.25	4,449.17	4,329.62	1,033.67	-222.90	19.71	1,630.91	1,596.24	356.26	47.039
5,000.00	4,945.38	-540.00	-120.00	14.53	4,642.35	4,516.23	1,082.17	-235.03	20.73	1,681.92	1,645.91	355.94	46.713
5,200.00	5,145.38	-540.00	-120.00	14.82	4,835.54	4,702.83	1,130.68	-247.16	21.76	1,732.97	1,695.62	355.65	46.400
5,400.00	5,345.38	-540.00	-120.00	15.11	5,028.72	4,889.43	1,179.19	-259.28	22.78	1,784.07	1,745.37	355.37	46.099
5,600.00	5,545.38	-540.00	-120.00	15.41	5,221.91	5,076.03	1,227.69	-271.41	23.81	1,835.20	1,795.14	355.10	45.809
5,800.00	5,745.38	-540.00	-120.00	15.72	5,586.74	5,430.66	1,310.13	-292.02	25.39	1,884.57	1,842.56	354.69	44.860
6,000.00	5,945.38	-540.00	-120.00	16.04	6,103.33	5,945.38	1,342.07	-300.00	26.30	1,890.66	1,847.41	354.54	43.715
6,200.00	6,145.38	-540.00	-120.00	16.36	6,303.33	6,145.38	1,342.07	-300.00	26.51	1,890.66	1,846.87	354.54	43.173
6,400.00	6,345.38	-540.00	-120.00	16.69	6,503.33	6,345.38	1,342.07	-300.00	26.73	1,890.66	1,846.31	354.54	42.634
6,600.00	6,545.00	-539.71	-127.74	17.04	6,741.87	6,582.92	1,341.86	-285.19	26.94	1,888.53	1,856.43	355.22	58.824
6,800.00	6,736.21	-537.62	-184.10	17.52	6,938.97	6,768.06	1,340.95	-219.41	26.95	1,879.18	1,846.13	358.92	56.866
6,911.72	6,833.92	-535.62	-238.00	17.89	6,998.70	6,819.86	1,340.54	-189.71	26.93	1,876.84	1,843.18	1.47	55.761
7,000.00	6,904.47	-533.65	-290.94	18.23	7,025.99	6,842.66	1,340.33	-174.73	26.92	1,878.61	1,844.51	3.55	55.103
7,200.00	7,036.74	-528.12	-439.98	19.46	7,050.00	6,862.24	1,340.14	-160.83	26.91	1,897.05	1,861.29	8.50	53.051
7,400.00	7,122.77	-521.45	-619.69	21.59	7,022.63	6,839.88	1,340.36	-176.62	26.92	1,934.60	1,896.21	13.39	50.393
7,600.00	7,155.90	-514.16	-816.13	24.69	6,980.34	6,804.20	1,340.67	-199.30	26.94	1,986.10	1,944.59	18.39	47.844
7,800.00	7,152.39	-506.74	-1,015.95	26.86	6,932.53	6,762.33	1,340.99	-222.36	26.95	2,048.43	2,005.02	23.24	47.191
8,000.00	7,148.02	-499.32	-1,215.77	29.46	6,900.00	6,733.00	1,341.19	-236.42	26.96	2,125.76	2,079.75	28.02	46.201
8,200.00	7,143.65	-491.91	-1,415.58	32.64	6,850.00	6,686.76	1,341.45	-255.41	26.96	2,217.19	2,168.10	32.33	45.164
8,400.00	7,139.28	-484.49	-1,615.40	36.27	6,850.00	6,686.76	1,341.45	-255.41	26.96	2,321.29	2,268.50	36.68	43.968
8,600.00	7,134.91	-477.07	-1,815.21	40.24	6,800.00	6,639.31	1,341.67	-271.13	26.96	2,436.73	2,380.23	40.33	43.130
8,800.00	7,130.53	-469.66	-2,015.03	44.45	6,800.00	6,639.31	1,341.67	-271.13	26.96	2,561.91	2,501.23	43.91	42.219
9,000.00	7,126.16	-462.24	-2,214.84	48.84	6,800.84	6,620.85	1,341.74	-276.27	26.95	2,695.88	2,631.00	47.06	41.553
9,200.00	7,121.79	-454.82	-2,414.66	53.37	6,750.00	6,590.87	1,341.84	-283.50	26.94	2,837.55	2,768.49	49.87	41.087
9,400.00	7,117.42	-447.40	-2,614.47	58.00	6,750.00	6,590.87	1,341.84	-283.50	26.94	2,985.31	2,911.74	52.49	40.576

Anticollision Report for Deering 33-9HX - 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 11,902.21 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	7,113.05	-439.99	-2,814.29	62.72	6,750.00	6,590.87	1,341.84	-283.50	26.94	3,138.86	3,060.71	54.85	40.164
9,800.00	7,108.67	-432.57	-3,014.10	67.49	6,750.00	6,590.87	1,341.84	-283.50	26.94	3,297.40	3,214.62	56.98	39.833
10,000.00	7,104.30	-425.15	-3,213.91	72.32	6,726.81	6,568.14	1,341.90	-288.08	26.93	3,459.84	3,372.65	58.87	39.682
10,200.00	7,099.93	-417.73	-3,413.73	77.19	6,700.00	6,541.69	1,341.96	-292.46	26.92	3,626.36	3,534.82	60.59	39.613
10,400.00	7,095.56	-410.32	-3,613.54	82.09	6,700.00	6,541.69	1,341.96	-292.46	26.92	3,795.64	3,699.39	62.18	39.437
10,600.00	7,091.19	-402.90	-3,813.36	87.02	6,700.00	6,541.69	1,341.96	-292.46	26.92	3,967.78	3,866.80	63.64	39.296
10,800.00	7,086.82	-395.48	-4,013.17	91.97	6,700.00	6,541.69	1,341.96	-292.46	26.92	4,142.42	4,036.70	64.97	39.185
11,000.00	7,082.44	-388.07	-4,212.99	96.94	6,700.00	6,541.69	1,341.96	-292.46	26.92	4,319.26	4,208.78	66.19	39.098
11,200.00	7,078.07	-380.65	-4,412.80	101.93	6,700.00	6,541.69	1,341.96	-292.46	26.92	4,498.04	4,382.79	67.31	39.030
11,400.00	7,073.70	-373.23	-4,612.62	106.93	6,700.00	6,541.69	1,341.96	-292.46	26.92	4,678.54	4,558.51	68.35	38.978
11,600.00	7,069.33	-365.81	-4,812.43	111.94	6,700.00	6,541.69	1,341.96	-292.46	26.92	4,860.56	4,735.74	69.30	38.939
11,800.00	7,064.96	-358.40	-5,012.25	116.97	6,700.00	6,541.69	1,341.96	-292.46	26.92	5,043.95	4,914.32	70.19	38.911
11,902.21	7,062.72	-354.61	-5,114.36	119.54	6,676.83	6,518.72	1,342.01	-295.44	26.90	5,137.74	5,006.10	70.60	39.027

Anticollision Report for Deering 33-9HX - 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 11,902.21 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	102.00	0.00	0.00	102.00	101.34	0.00	154.847
200.00	200.00	0.00	0.00	0.34	202.00	200.00	102.00	0.00	0.34	102.00	100.66	0.00	76.400
400.00	400.00	0.00	0.00	0.79	402.00	400.00	102.00	0.00	0.79	102.00	99.76	0.00	45.654
600.00	600.00	0.00	0.00	1.24	602.00	600.00	102.00	0.00	1.24	102.00	98.86	0.00	32.554
800.00	799.75	-8.51	-1.89	1.63	801.75	799.75	102.00	0.00	1.69	110.53	106.56	0.98	27.866
1,000.00	997.97	-33.99	-7.55	2.10	999.97	997.97	102.00	0.00	2.14	136.20	131.39	3.18	28.355
1,200.00	1,193.88	-73.24	-16.28	2.79	1,183.71	1,181.52	108.47	-3.50	2.55	182.59	176.92	4.02	32.224
1,400.00	1,389.51	-113.84	-25.30	3.58	1,360.30	1,356.82	126.87	-13.43	2.98	243.21	236.63	2.82	36.978
1,600.00	1,585.14	-154.43	-34.32	4.42	1,543.88	1,537.67	154.63	-28.40	3.51	312.74	305.20	1.10	41.499
1,800.00	1,780.76	-195.02	-43.34	5.29	1,731.08	1,722.03	183.24	-43.84	4.11	382.79	374.27	359.92	44.933
2,000.00	1,976.39	-235.61	-52.36	6.17	1,918.28	1,906.38	211.84	-59.27	4.75	452.95	443.42	359.11	47.526
2,200.00	2,172.02	-276.20	-61.38	7.06	2,105.48	2,090.73	240.45	-74.71	5.42	523.18	512.63	358.52	49.563
2,400.00	2,367.65	-316.80	-70.40	7.96	2,292.68	2,275.09	269.06	-90.15	6.10	593.45	581.86	358.07	51.189
2,600.00	2,563.28	-357.39	-79.42	8.86	2,479.87	2,459.44	297.67	-105.58	6.79	663.75	651.11	357.71	52.513
2,800.00	2,758.91	-397.98	-88.44	9.76	2,667.07	2,643.79	326.28	-121.02	7.50	734.07	720.38	357.42	53.612
3,000.00	2,954.54	-438.57	-97.46	10.67	2,854.27	2,828.15	354.88	-136.45	8.20	804.41	789.66	357.19	54.536
3,200.00	3,150.17	-479.16	-106.48	11.57	3,041.47	3,012.50	383.49	-151.89	8.92	874.75	858.94	356.99	55.322
3,400.00	3,346.62	-515.59	-114.58	12.28	3,230.03	3,198.20	412.31	-167.44	9.64	941.18	924.26	356.74	55.619
3,600.00	3,545.47	-535.89	-119.09	12.72	3,423.13	3,388.37	441.82	-183.36	10.38	992.34	974.40	356.24	55.327
3,800.00	3,745.38	-540.00	-120.00	13.00	3,619.46	3,581.71	471.82	-199.55	11.14	1,028.06	1,003.78	355.50	42.339
4,000.00	3,945.38	-540.00	-120.00	13.23	3,816.42	3,775.68	501.92	-215.79	11.90	1,059.99	1,034.73	354.75	41.956
4,200.00	4,145.38	-540.00	-120.00	13.47	4,013.38	3,969.65	532.02	-232.03	12.66	1,092.09	1,065.83	354.03	41.581
4,400.00	4,345.38	-540.00	-120.00	13.72	4,210.34	4,163.62	562.12	-248.27	13.43	1,124.35	1,097.07	353.36	41.215
4,600.00	4,545.38	-540.00	-120.00	13.98	4,407.30	4,357.59	592.22	-264.51	14.19	1,156.75	1,128.44	352.73	40.858
4,800.00	4,745.38	-540.00	-120.00	14.25	4,604.26	4,551.55	622.32	-280.76	14.96	1,189.29	1,159.93	352.13	40.513
5,000.00	4,945.38	-540.00	-120.00	14.53	4,964.47	4,909.24	656.98	-299.46	15.86	1,210.90	1,180.34	351.47	39.619
5,200.00	5,145.38	-540.00	-120.00	14.82	5,200.62	5,145.38	658.00	-300.00	16.21	1,211.44	1,180.23	351.45	38.813
5,400.00	5,345.38	-540.00	-120.00	15.11	5,400.62	5,345.38	658.00	-300.00	16.51	1,211.44	1,179.62	351.45	38.061
5,600.00	5,545.38	-540.00	-120.00	15.41	5,600.62	5,545.38	658.00	-300.00	16.83	1,211.44	1,178.99	351.45	37.322
5,800.00	5,745.38	-540.00	-120.00	15.72	5,800.62	5,745.38	658.00	-300.00	17.15	1,211.44	1,178.34	351.45	36.597
6,000.00	5,945.38	-540.00	-120.00	16.04	6,000.62	5,945.38	658.00	-300.00	17.47	1,211.44	1,177.69	351.45	35.886
6,200.00	6,145.38	-540.00	-120.00	16.36	6,200.62	6,145.38	658.00	-300.00	17.80	1,211.44	1,177.02	351.45	35.191
6,400.00	6,345.38	-540.00	-120.00	16.69	6,400.62	6,345.38	658.00	-300.00	18.14	1,211.44	1,176.34	351.45	34.512
6,600.00	6,545.00	-539.71	-127.74	17.04	6,600.24	6,545.00	658.00	-300.00	18.48	1,210.03	1,179.30	351.82	39.373
6,800.00	6,736.21	-537.62	-184.10	17.52	6,826.91	6,768.05	657.49	-265.30	18.68	1,198.29	1,166.61	356.11	37.818
6,953.42	6,868.06	-534.73	-261.92	18.05	6,926.23	6,860.14	656.96	-228.32	18.68	1,192.19	1,159.68	1.62	36.672
7,000.00	6,904.47	-533.65	-290.94	18.23	6,944.78	6,876.72	656.84	-220.02	18.67	1,192.93	1,160.19	3.41	36.446
7,200.00	7,036.74	-528.12	-439.98	19.46	6,980.94	6,908.41	656.59	-202.60	18.66	1,215.05	1,180.66	11.33	35.335
7,400.00	7,122.77	-521.45	-619.69	21.59	6,971.03	6,899.81	656.66	-207.54	18.67	1,267.88	1,230.94	19.28	34.322
7,600.00	7,155.90	-514.16	-816.13	24.69	6,935.31	6,868.28	656.90	-224.31	18.68	1,343.27	1,303.76	26.81	34.006
7,800.00	7,152.39	-506.74	-1,015.95	26.86	6,900.00	6,836.33	657.12	-239.32	18.68	1,434.44	1,393.34	33.71	34.897
8,000.00	7,148.02	-499.32	-1,215.77	29.46	6,850.00	6,789.90	657.39	-257.85	18.68	1,543.97	1,500.62	39.63	35.614
8,200.00	7,143.65	-491.91	-1,415.58	32.64	6,830.22	6,771.19	657.48	-264.28	18.68	1,668.93	1,622.53	45.05	35.974
8,400.00	7,139.28	-484.49	-1,615.40	36.27	6,800.00	6,742.29	657.61	-273.09	18.67	1,806.59	1,756.91	49.61	36.364
8,600.00	7,134.91	-477.07	-1,815.21	40.24	6,800.00	6,742.29	657.61	-273.09	18.67	1,954.42	1,900.84	53.65	36.474
8,800.00	7,130.53	-469.66	-2,015.03	44.45	6,772.63	6,715.81	657.71	-280.02	18.66	2,110.26	2,052.95	56.99	36.827
9,000.00	7,126.16	-462.24	-2,214.84	48.84	6,750.00	6,693.73	657.78	-284.98	18.65	2,272.84	2,211.66	59.87	37.153
9,200.00	7,121.79	-454.82	-2,414.66	53.37	6,750.00	6,693.73	657.78	-284.98	18.65	2,440.62	2,375.13	62.42	37.265
9,400.00	7,117.42	-447.40	-2,614.47	58.00	6,750.00	6,693.73	657.78	-284.98	18.65	2,612.94	2,543.05	64.62	37.383
9,600.00	7,113.05	-439.99	-2,814.29	62.72	6,727.71	6,671.84	657.84	-289.18	18.63	2,788.55	2,714.64	66.50	37.725
9,800.00	7,108.67	-432.57	-3,014.10	67.49	6,700.00	6,644.47	657.90	-293.45	18.61	2,967.58	2,889.78	68.16	38.141
10,000.00	7,104.30	-425.15	-3,213.91	72.32	6,700.00	6,644.47	657.90	-293.45	18.61	3,148.58	3,066.28	69.65	38.255

Anticollision Report for Deering 33-9HX - 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 11,902.21 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	7,099.93	-417.73	-3,413.73	77.19	6,700.00	6,644.47	657.90	-293.45	18.61	3,331.75	3,244.92	70.98	38.369
10,400.00	7,095.56	-410.32	-3,613.54	82.09	6,700.00	6,644.47	657.90	-293.45	18.61	3,516.76	3,425.37	72.16	38.481
10,600.00	7,091.19	-402.90	-3,813.36	87.02	6,700.00	6,644.47	657.90	-293.45	18.61	3,703.32	3,607.36	73.23	38.589
10,800.00	7,086.82	-395.48	-4,013.17	91.97	6,700.00	6,644.47	657.90	-293.45	18.61	3,891.22	3,790.66	74.19	38.694
11,000.00	7,082.44	-388.07	-4,212.99	96.94	6,700.00	6,644.47	657.90	-293.45	18.61	4,080.27	3,975.10	75.06	38.795
11,200.00	7,078.07	-380.65	-4,412.80	101.93	6,700.00	6,644.47	657.90	-293.45	18.61	4,270.32	4,160.52	75.85	38.892
11,400.00	7,073.70	-373.23	-4,612.62	106.93	6,677.89	6,622.52	657.94	-296.10	18.58	4,460.85	4,347.14	76.56	39.229
11,600.00	7,069.33	-365.81	-4,812.43	111.94	6,674.45	6,619.09	657.95	-296.45	18.58	4,652.41	4,534.20	77.23	39.357
11,800.00	7,064.96	-358.40	-5,012.25	116.97	6,650.00	6,594.73	657.97	-298.47	18.55	4,844.98	4,723.03	77.83	39.730
11,902.21	7,062.72	-354.61	-5,114.36	119.54	6,650.00	6,594.73	657.97	-298.47	18.55	4,943.39	4,819.10	78.13	39.771

Anticollision Report for Deering 33-9HX - 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 33-6HX - Plan A - Rev A0 (Permitting Plan Only)

Scan Range: 0.00 to 11,902.21 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	1.00	0.00	61.92	0.00	0.00	61.92	61.27	0.00	94.171
200.00	200.00	0.00	0.00	0.34	201.00	200.00	61.92	0.00	0.34	61.92	60.59	0.00	46.462
400.00	400.00	0.00	0.00	0.79	401.00	400.00	61.92	0.00	0.79	61.92	59.69	0.00	27.746
600.00	600.00	0.00	0.00	1.24	601.00	600.00	61.92	0.00	1.24	61.92	58.79	0.00	19.778
800.00	799.75	-8.51	-1.89	1.63	800.75	799.75	61.92	0.00	1.69	70.46	66.50	1.54	17.775
1,000.00	997.97	-33.99	-7.55	2.10	998.97	997.97	61.92	0.00	2.13	96.21	91.41	4.50	20.043
1,200.00	1,193.88	-73.24	-16.28	2.79	1,194.88	1,193.88	61.92	0.00	2.57	136.14	130.48	6.86	24.029
1,400.00	1,389.51	-113.84	-25.30	3.58	1,390.51	1,389.51	61.92	0.00	3.01	177.57	171.00	8.19	27.031
1,600.00	1,585.14	-154.43	-34.32	4.42	1,586.14	1,585.14	61.92	0.00	3.45	219.06	211.57	9.01	29.242
1,800.00	1,780.76	-195.02	-43.34	5.29	1,781.76	1,780.76	61.92	0.00	3.89	260.57	252.15	9.57	30.928
2,000.00	1,976.39	-235.61	-52.36	6.17	1,977.39	1,976.39	61.92	0.00	4.33	302.11	292.74	9.98	32.252
2,200.00	2,172.02	-276.20	-61.38	7.06	2,173.02	2,172.02	61.92	0.00	4.77	343.65	333.34	10.29	33.317
2,400.00	2,367.65	-316.80	-70.40	7.96	2,368.65	2,367.65	61.92	0.00	5.21	385.21	373.94	10.53	34.192
2,600.00	2,563.28	-357.39	-79.42	8.86	2,564.28	2,563.28	61.92	0.00	5.65	426.77	414.55	10.72	34.922
2,800.00	2,758.91	-397.98	-88.44	9.76	2,759.91	2,758.91	61.92	0.00	6.09	468.33	455.15	10.88	35.541
3,000.00	2,954.54	-438.57	-97.46	10.67	2,955.54	2,954.54	61.92	0.00	6.53	509.90	495.76	11.02	36.072
3,200.00	3,150.17	-479.16	-106.48	11.57	3,151.17	3,150.17	61.92	0.00	6.97	551.46	536.37	11.13	36.532
3,400.00	3,346.62	-515.59	-114.58	12.28	3,347.62	3,346.62	61.92	0.00	7.41	588.77	572.69	11.22	36.620
3,600.00	3,545.47	-535.89	-119.09	12.72	3,546.47	3,545.47	61.92	0.00	7.86	609.56	592.62	11.27	35.985
3,800.00	3,745.38	-540.00	-120.00	13.00	3,746.38	3,745.38	61.92	0.00	8.31	613.77	591.79	11.27	27.931
4,000.00	3,945.38	-540.00	-120.00	13.23	3,946.38	3,945.38	61.92	0.00	8.76	613.77	591.12	11.27	27.094
4,200.00	4,145.38	-540.00	-120.00	13.47	4,146.38	4,145.38	61.92	0.00	9.21	613.77	590.43	11.27	26.294
4,400.00	4,345.38	-540.00	-120.00	13.72	4,346.38	4,345.38	61.92	0.00	9.66	613.77	589.73	11.27	25.528
4,600.00	4,545.38	-540.00	-120.00	13.98	4,546.38	4,545.38	61.92	0.00	10.11	613.77	589.02	11.27	24.795
4,800.00	4,745.38	-540.00	-120.00	14.25	4,746.38	4,745.38	61.92	0.00	10.56	613.77	588.30	11.27	24.095
5,000.00	4,945.38	-540.00	-120.00	14.53	4,946.38	4,945.38	61.92	0.00	11.01	613.77	587.57	11.27	23.425
5,200.00	5,145.38	-540.00	-120.00	14.82	5,146.38	5,145.38	61.92	0.00	11.45	613.77	586.83	11.27	22.784
5,400.00	5,345.38	-540.00	-120.00	15.11	5,346.38	5,345.38	61.92	0.00	11.90	613.77	586.08	11.27	22.171
5,600.00	5,545.38	-540.00	-120.00	15.41	5,546.38	5,545.38	61.92	0.00	12.35	613.77	585.33	11.27	21.584
5,800.00	5,745.38	-540.00	-120.00	15.72	5,746.38	5,745.38	61.92	0.00	12.80	613.77	584.57	11.27	21.023
6,000.00	5,945.38	-540.00	-120.00	16.04	5,946.38	5,945.38	61.92	0.00	13.25	613.77	583.81	11.27	20.485
6,200.00	6,145.38	-540.00	-120.00	16.36	6,146.38	6,145.38	61.92	0.00	13.70	613.77	583.03	11.27	19.971
6,400.00	6,345.38	-540.00	-120.00	16.69	6,347.88	6,346.88	61.92	-0.07	14.15	613.76	582.24	11.27	19.476
6,600.00	6,545.00	-539.71	-127.74	17.04	6,577.43	6,573.01	61.92	-34.86	14.64	609.41	579.94	8.78	20.680
6,800.00	6,736.21	-537.62	-184.10	17.52	6,797.69	6,772.86	61.92	-125.90	15.28	603.48	572.80	5.54	19.670
7,000.00	6,904.47	-533.65	-290.94	18.23	7,010.57	6,936.30	61.92	-261.36	16.44	597.16	564.37	2.84	18.209
7,200.00	7,036.74	-528.12	-439.98	19.46	7,217.67	7,056.68	61.92	-429.20	18.43	590.48	553.86	1.05	16.125
7,400.00	7,122.77	-521.45	-619.69	21.59	7,420.62	7,130.20	61.92	-617.81	21.35	583.43	541.18	0.18	13.811
7,600.00	7,155.90	-514.16	-816.13	24.69	7,621.02	7,155.19	61.92	-816.14	24.93	576.08	526.79	0.00	11.687
7,747.44	7,157.26	-508.69	-963.46	26.29	7,747.09	7,152.70	63.88	-942.16	26.56	572.99	520.75	2.13	10.969
7,800.00	7,152.39	-506.74	-1,015.95	26.86	7,790.94	7,151.75	65.84	-985.96	26.98	573.37	520.05	3.00	10.755
8,000.00	7,148.02	-499.32	-1,215.77	29.46	7,970.66	7,147.85	79.76	-1,165.09	29.14	581.30	523.15	5.00	9.997
8,200.00	7,143.65	-491.91	-1,415.58	32.64	8,170.41	7,143.51	97.17	-1,364.03	32.14	591.33	526.82	5.00	9.167
8,400.00	7,139.28	-484.49	-1,615.40	36.27	8,370.16	7,139.17	114.58	-1,562.97	35.63	601.36	529.58	5.00	8.377
8,600.00	7,134.91	-477.07	-1,815.21	40.24	8,569.91	7,134.83	131.99	-1,761.91	39.48	611.39	531.67	5.00	7.669
8,800.00	7,130.53	-469.66	-2,015.03	44.45	8,769.66	7,130.50	149.40	-1,960.85	43.60	621.42	533.27	5.00	7.049
9,000.00	7,126.16	-462.24	-2,214.84	48.84	8,969.41	7,126.16	166.81	-2,159.79	47.92	631.45	534.52	5.00	6.514
9,200.00	7,121.79	-454.82	-2,414.66	53.37	9,169.15	7,121.82	184.22	-2,358.73	52.39	641.49	535.50	5.00	6.052
9,400.00	7,117.42	-447.40	-2,614.47	58.00	9,368.90	7,117.48	201.63	-2,557.67	56.97	651.52	536.27	5.00	5.653
9,600.00	7,113.05	-439.99	-2,814.29	62.72	9,568.65	7,113.14	219.04	-2,756.61	61.63	661.55	536.89	5.00	5.307
9,800.00	7,108.67	-432.57	-3,014.10	67.49	9,768.40	7,108.80	236.45	-2,955.55	66.37	671.58	537.38	5.00	5.004
10,000.00	7,104.30	-425.15	-3,213.91	72.32	9,968.15	7,104.47	253.86	-3,154.49	71.16	681.61	537.76	5.00	4.738

Anticollision Report for Deering 33-9HX - 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 33-6HX - Plan A - Rev A0 (Permitting Plan Only)

Scan Range: 0.00 to 11,902.21 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	7,099.93	-417.73	-3,413.73	77.19	10,167.89	7,100.13	271.27	-3,353.43	76.00	691.64	538.07	5.00	4.504
10,400.00	7,095.56	-410.32	-3,613.54	82.09	10,367.64	7,095.79	288.69	-3,552.37	80.88	701.67	538.32	5.00	4.295
10,600.00	7,091.19	-402.90	-3,813.36	87.02	10,567.39	7,091.45	306.10	-3,751.32	85.78	711.70	538.50	5.00	4.109
10,800.00	7,086.82	-395.48	-4,013.17	91.97	10,767.14	7,087.11	323.51	-3,950.26	90.72	721.74	538.64	5.00	3.942
11,000.00	7,082.44	-388.07	-4,212.99	96.94	10,966.89	7,082.78	340.92	-4,149.20	95.67	731.77	538.74	5.00	3.791
11,200.00	7,078.07	-380.65	-4,412.80	101.93	11,166.64	7,078.44	358.33	-4,348.14	100.64	741.80	538.81	5.00	3.654
11,400.00	7,073.70	-373.23	-4,612.62	106.93	11,366.38	7,074.10	375.74	-4,547.08	105.63	751.83	538.85	5.00	3.530
11,600.00	7,069.33	-365.81	-4,812.43	111.94	11,566.13	7,069.76	393.15	-4,746.02	110.63	761.86	538.86	5.00	3.416
11,800.00	7,064.96	-358.40	-5,012.25	116.97	11,765.88	7,065.42	410.56	-4,944.96	115.64	771.89	538.86	5.00	3.312
11,902.21	7,062.72	-354.61	-5,114.36	119.54	11,785.35	7,065.00	412.26	-4,964.35	116.13	781.40	545.30	11.07	3.310

Anticollision Report for Deering 33-9HX - 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 11,902.21 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	0.00	21.85	0.00	0.00	21.85	21.20	359.99	33.287
200.00	200.00	0.00	0.00	0.34	200.00	200.00	21.85	0.00	0.34	21.85	20.52	359.99	16.423
400.00	400.00	0.00	0.00	0.79	400.00	400.00	21.85	0.00	0.79	21.85	19.62	359.99	9.801
600.00	600.00	0.00	0.00	1.24	600.00	600.00	21.85	0.00	1.24	21.85	18.72	359.99	6.984
800.00	799.75	-8.51	-1.89	1.63	799.75	799.75	21.85	0.00	1.69	30.42	26.46	3.56	7.679
1,000.00	997.97	-33.99	-7.55	2.10	1,002.31	1,002.05	13.48	-3.09	2.07	47.85	43.13	5.37	10.142
1,200.00	1,193.88	-73.24	-16.28	2.79	1,205.34	1,203.31	-11.27	-12.23	2.53	62.82	57.27	3.73	11.330
1,400.00	1,389.51	-113.84	-25.30	3.58	1,405.01	1,400.51	-40.57	-23.05	3.11	74.12	67.64	1.75	11.437
1,600.00	1,585.14	-154.43	-34.32	4.42	1,604.68	1,597.72	-69.88	-33.87	3.74	85.49	78.01	0.30	11.436
1,800.00	1,780.76	-195.02	-43.34	5.29	1,804.34	1,794.93	-99.18	-44.69	4.42	96.89	88.39	359.19	11.388
2,000.00	1,976.39	-235.61	-52.36	6.17	2,004.01	1,992.14	-128.48	-55.51	5.11	108.33	98.76	358.32	11.320
2,200.00	2,172.02	-276.20	-61.38	7.06	2,203.68	2,189.35	-157.78	-66.33	5.82	119.79	109.13	357.61	11.245
2,400.00	2,367.65	-316.80	-70.40	7.96	2,403.34	2,386.56	-187.08	-77.15	6.54	131.26	119.51	357.02	11.170
2,600.00	2,563.28	-357.39	-79.42	8.86	2,603.01	2,583.77	-216.38	-87.97	7.27	142.74	129.88	356.53	11.100
2,800.00	2,758.91	-397.98	-88.44	9.76	2,802.68	2,780.97	-245.68	-98.79	8.00	154.23	140.25	356.11	11.034
3,000.00	2,954.54	-438.57	-97.46	10.67	3,002.34	2,978.18	-274.99	-109.60	8.74	165.73	150.63	355.75	10.973
3,200.00	3,150.17	-479.16	-106.48	11.57	3,189.30	3,163.72	-296.18	-117.43	9.24	183.81	167.75	356.58	11.448
3,400.00	3,346.62	-515.59	-114.58	12.28	3,373.88	3,348.10	-303.15	-120.00	9.57	212.52	195.71	358.54	12.649
3,600.00	3,545.47	-535.89	-119.09	12.72	3,571.25	3,545.47	-303.15	-120.00	9.86	232.75	215.32	359.77	13.356
3,800.00	3,745.38	-540.00	-120.00	13.00	3,771.17	3,745.38	-303.15	-120.00	10.16	236.85	213.54	0.00	10.161
4,000.00	3,945.38	-540.00	-120.00	13.23	3,971.17	3,945.38	-303.15	-120.00	10.46	236.85	212.99	0.00	9.927
4,200.00	4,145.38	-540.00	-120.00	13.47	4,171.17	4,145.38	-303.15	-120.00	10.78	236.85	212.42	0.00	9.696
4,400.00	4,345.38	-540.00	-120.00	13.72	4,371.17	4,345.38	-303.15	-120.00	11.11	236.85	211.84	0.00	9.468
4,600.00	4,545.38	-540.00	-120.00	13.98	4,571.17	4,545.38	-303.15	-120.00	11.44	236.85	211.23	0.00	9.244
4,800.00	4,745.38	-540.00	-120.00	14.25	4,771.17	4,745.38	-303.15	-120.00	11.79	236.85	210.61	0.00	9.024
5,000.00	4,945.38	-540.00	-120.00	14.53	4,971.17	4,945.38	-303.15	-120.00	12.14	236.85	209.97	0.00	8.810
5,200.00	5,145.38	-540.00	-120.00	14.82	5,171.17	5,145.38	-303.15	-120.00	12.49	236.85	209.31	0.00	8.601
5,400.00	5,345.38	-540.00	-120.00	15.11	5,371.17	5,345.38	-303.15	-120.00	12.86	236.85	208.65	0.00	8.397
5,600.00	5,545.38	-540.00	-120.00	15.41	5,571.17	5,545.38	-303.15	-120.00	13.22	236.85	207.97	0.00	8.200
5,800.00	5,745.38	-540.00	-120.00	15.72	5,771.17	5,745.38	-303.15	-120.00	13.60	236.85	207.28	0.00	8.008
6,000.00	5,945.38	-540.00	-120.00	16.04	5,971.17	5,945.38	-303.15	-120.00	13.97	236.85	206.57	0.00	7.823
6,200.00	6,145.38	-540.00	-120.00	16.36	6,171.17	6,145.38	-303.15	-120.00	14.35	236.85	205.86	0.00	7.643
6,400.00	6,345.38	-540.00	-120.00	16.69	6,371.17	6,345.38	-303.15	-120.00	14.74	236.85	205.14	0.00	7.469
6,600.00	6,545.00	-539.71	-127.74	17.04	6,570.51	6,544.35	-303.00	-127.65	15.15	236.71	207.65	0.02	8.145
6,800.00	6,736.21	-537.62	-184.10	17.52	6,769.30	6,734.52	-301.94	-183.36	15.71	235.69	205.47	0.18	7.800
7,000.00	6,904.47	-533.65	-290.94	18.23	6,968.23	6,902.23	-299.92	-289.13	16.58	233.75	201.65	0.44	7.283
7,200.00	7,036.74	-528.12	-439.98	19.46	7,167.37	7,034.63	-297.11	-436.99	18.09	231.04	195.66	0.74	6.529
7,400.00	7,122.77	-521.45	-619.69	21.59	7,366.79	7,121.43	-293.70	-615.78	20.57	227.79	187.19	0.98	5.610
7,600.00	7,155.90	-514.16	-816.13	24.69	7,566.54	7,155.76	-289.96	-811.87	23.92	224.24	176.73	1.09	4.720
7,800.00	7,152.39	-506.74	-1,015.95	26.86	7,766.50	7,152.49	-286.15	-1,011.75	26.66	220.63	168.23	1.09	4.210
8,000.00	7,148.02	-499.32	-1,215.77	29.46	7,966.47	7,148.12	-282.34	-1,211.63	29.13	217.02	159.36	1.09	3.764
8,200.00	7,143.65	-491.91	-1,415.58	32.64	8,166.44	7,143.75	-278.53	-1,411.52	32.21	213.42	149.26	1.09	3.327
8,400.00	7,139.28	-484.49	-1,615.40	36.27	8,366.41	7,139.37	-274.72	-1,611.40	35.76	209.81	138.27	1.09	2.933
8,600.00	7,134.91	-477.07	-1,815.21	40.24	8,566.37	7,135.00	-270.91	-1,811.28	39.66	206.20	126.63	1.09	2.591
8,800.00	7,130.53	-469.66	-2,015.03	44.45	8,766.34	7,130.62	-267.10	-2,011.17	43.81	202.59	114.52	1.09	2.300
9,000.00	7,126.16	-462.24	-2,214.84	48.84	8,966.31	7,126.25	-263.29	-2,211.05	48.16	198.98	102.06	1.09	2.053
9,200.00	7,121.79	-454.82	-2,414.66	53.37	9,166.28	7,121.88	-259.48	-2,410.93	52.65	195.38	89.35	1.09	1.843
9,400.00	7,117.42	-447.40	-2,614.47	58.00	9,366.24	7,117.50	-255.67	-2,610.82	57.24	191.77	76.45	1.09	1.663
9,600.00	7,113.05	-439.99	-2,814.29	62.72	9,566.21	7,113.13	-251.86	-2,810.70	61.92	188.16	63.39	1.09	1.508
9,800.00	7,108.67	-432.57	-3,014.10	67.49	9,766.18	7,108.76	-248.05	-3,010.58	66.67	184.55	50.21	1.09	1.374
10,000.00	7,104.30	-425.15	-3,213.91	72.32	9,966.15	7,104.38	-244.24	-3,210.47	71.47	180.95	36.94	1.09	1.256
10,200.00	7,099.93	-417.73	-3,413.73	77.19	10,166.11	7,100.01	-240.43	-3,410.35	76.32	177.34	23.58	1.09	1.153

Anticollision Report for Deering 33-9HX - 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 11,902.21 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
10,400.00	7,095.56	-410.32	-3,613.54	82.09	10,366.08	7,095.63	-236.62	-3,610.23	81.20	173.73	10.17	1.09	1.062
10,600.00	7,091.19	-402.90	-3,813.36	87.02	10,566.05	7,091.26	-232.81	-3,810.12	86.10	170.12	< 0	1.09	0.981
10,800.00	7,086.82	-395.48	-4,013.17	91.97	10,766.02	7,086.89	-229.00	-4,010.00	91.04	166.51	< 0	1.09	0.908
11,000.00	7,082.44	-388.07	-4,212.99	96.94	10,965.98	7,082.51	-225.19	-4,209.88	95.99	162.91	< 0	1.09	0.843
11,200.00	7,078.07	-380.65	-4,412.80	101.93	11,165.95	7,078.14	-221.38	-4,409.77	100.96	159.30	< 0	1.09	0.784
11,400.00	7,073.70	-373.23	-4,612.62	106.93	11,365.92	7,073.76	-217.57	-4,609.65	105.95	155.69	< 0	1.09	0.730
11,600.00	7,069.33	-365.81	-4,812.43	111.94	11,565.89	7,069.39	-213.76	-4,809.53	110.95	152.08	< 0	1.09	0.681
11,800.00	7,064.96	-358.40	-5,012.25	116.97	11,765.85	7,065.02	-209.95	-5,009.42	115.96	148.48	< 0	1.09	0.636
11,902.21	7,062.72	-354.61	-5,114.36	119.54	11,868.04	7,062.78	-208.00	-5,111.56	118.52	146.63	< 0	1.09	0.615

Anticollision Report for Deering 33-9HX - 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 11,902.21 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	3.00	0.00	160.29	0.00	0.00	160.29	159.63	0.00	242.928
200.00	200.00	0.00	0.00	0.34	203.00	200.00	160.29	0.00	0.34	160.29	158.95	0.00	119.860
400.00	400.00	0.00	0.00	0.79	403.00	400.00	160.29	0.00	0.79	160.29	158.05	0.00	71.673
462.57	462.57	0.00	0.00	0.93	465.57	462.57	160.29	0.00	0.93	160.29	157.77	0.00	63.666
600.00	600.00	0.00	0.00	1.24	596.36	593.33	162.26	-0.44	1.23	162.40	159.28	359.84	52.013
800.00	799.75	-8.51	-1.89	1.63	781.07	777.36	177.09	-3.73	1.67	186.96	182.99	359.43	47.129
1,000.00	997.97	-33.99	-7.55	2.10	956.84	950.82	204.59	-9.84	2.19	243.20	238.37	359.45	50.354
1,200.00	1,193.88	-73.24	-16.28	2.79	1,119.20	1,108.69	241.45	-18.04	2.82	326.02	320.32	359.68	57.152
1,400.00	1,389.51	-113.84	-25.30	3.58	1,279.61	1,261.91	287.77	-28.33	3.63	421.40	414.78	359.57	63.635
1,600.00	1,585.14	-154.43	-34.32	4.42	1,454.03	1,427.79	340.38	-40.02	4.61	519.26	511.68	359.34	68.566
1,800.00	1,780.76	-195.02	-43.34	5.29	1,628.44	1,593.67	393.00	-51.71	5.63	617.12	608.57	359.18	72.194
2,000.00	1,976.39	-235.61	-52.36	6.17	1,802.86	1,759.54	445.61	-63.41	6.66	714.99	705.44	359.07	74.881
2,200.00	2,172.02	-276.20	-61.38	7.06	1,977.27	1,925.42	498.22	-75.10	7.71	812.86	802.29	358.99	76.937
2,400.00	2,367.65	-316.80	-70.40	7.96	2,151.69	2,091.30	550.84	-86.79	8.77	910.73	899.14	358.92	78.557
2,600.00	2,563.28	-357.39	-79.42	8.86	2,326.10	2,257.18	603.45	-98.48	9.84	1,008.60	995.97	358.86	79.861
2,800.00	2,758.91	-397.98	-88.44	9.76	2,500.51	2,423.06	656.06	-110.17	10.90	1,106.47	1,092.80	358.82	80.929
3,000.00	2,954.54	-438.57	-97.46	10.67	2,674.93	2,588.93	708.68	-121.86	11.97	1,204.35	1,189.62	358.78	81.816
3,200.00	3,150.17	-479.16	-106.48	11.57	2,849.34	2,754.81	761.29	-133.56	13.04	1,302.22	1,286.45	358.75	82.565
3,400.00	3,346.62	-515.59	-114.58	12.28	3,025.73	2,922.56	814.50	-145.38	14.13	1,396.39	1,379.44	358.67	82.370
3,600.00	3,545.47	-535.89	-119.09	12.72	3,209.02	3,096.89	869.79	-157.67	15.26	1,476.03	1,457.94	358.43	81.602
3,800.00	3,745.38	-540.00	-120.00	13.00	3,397.98	3,276.59	926.79	-170.33	16.42	1,540.71	1,510.57	358.03	51.130
4,000.00	3,945.38	-540.00	-120.00	13.23	3,588.19	3,457.50	984.17	-183.09	17.60	1,601.60	1,570.03	357.63	50.731
4,200.00	4,145.38	-540.00	-120.00	13.47	3,778.40	3,638.40	1,041.55	-195.84	18.77	1,662.55	1,629.53	357.25	50.349
4,400.00	4,345.38	-540.00	-120.00	13.72	3,968.61	3,819.30	1,098.93	-208.59	19.95	1,723.57	1,689.09	356.91	49.982
4,600.00	4,545.38	-540.00	-120.00	13.98	4,158.82	4,000.20	1,156.31	-221.34	21.13	1,784.64	1,748.69	356.58	49.631
4,800.00	4,745.38	-540.00	-120.00	14.25	4,349.03	4,181.10	1,213.69	-234.09	22.30	1,845.77	1,808.32	356.28	49.294
5,000.00	4,945.38	-540.00	-120.00	14.53	4,539.25	4,362.00	1,271.07	-246.84	23.48	1,906.93	1,867.99	355.99	48.970
5,200.00	5,145.38	-540.00	-120.00	14.82	4,729.46	4,542.91	1,328.45	-259.59	24.66	1,968.13	1,927.69	355.73	48.661
5,400.00	5,345.38	-540.00	-120.00	15.11	4,919.67	4,723.81	1,385.82	-272.34	25.83	2,029.38	1,987.41	355.48	48.364
5,600.00	5,545.38	-540.00	-120.00	15.41	5,109.88	5,000.00	1,443.20	-285.09	27.00	2,090.57	2,047.49	355.23	48.067
5,800.00	5,745.38	-540.00	-120.00	15.72	5,299.90	5,181.10	1,500.59	-297.84	28.17	2,151.76	2,107.61	354.98	47.770
6,000.00	5,945.38	-540.00	-120.00	16.04	5,490.00	5,362.00	1,557.98	-310.59	29.34	2,212.95	2,167.76	354.73	47.473
6,200.00	6,145.38	-540.00	-120.00	16.36	5,680.10	5,542.00	1,615.37	-323.34	30.51	2,274.14	2,227.91	354.48	47.176
6,400.00	6,345.38	-540.00	-120.00	16.69	5,870.20	5,722.00	1,672.76	-336.09	31.68	2,335.33	2,288.01	354.23	46.879
6,600.00	6,545.00	-539.71	-127.74	17.04	6,060.30	5,900.00	1,730.15	-348.84	32.85	2,396.52	2,347.80	353.98	46.582
6,800.00	6,736.21	-537.62	-184.10	17.52	6,250.40	6,080.00	1,787.54	-361.59	34.02	2,457.71	2,407.89	353.73	46.285
6,918.04	6,839.18	-535.49	-241.50	17.92	6,440.50	6,260.00	1,844.93	-374.34	35.19	2,518.90	2,467.97	353.48	45.988
7,000.00	6,904.47	-533.65	-290.94	18.23	6,630.60	6,450.00	1,902.32	-387.09	36.36	2,580.09	2,528.94	353.23	45.691
7,200.00	7,036.74	-528.12	-439.98	19.46	6,820.70	6,640.00	1,959.71	-400.00	37.53	2,641.28	2,589.01	352.98	45.394
7,400.00	7,122.77	-521.45	-619.69	21.59	7,010.80	6,830.00	2,017.10	-412.75	38.70	2,702.47	2,649.00	352.73	45.097
7,600.00	7,155.90	-514.16	-816.13	24.69	7,200.90	7,020.00	2,074.49	-425.50	40.87	2,763.66	2,709.51	352.48	44.800
7,800.00	7,152.39	-506.74	-1,015.95	26.86	7,391.00	7,210.00	2,131.88	-438.25	42.04	2,824.85	2,769.76	352.23	44.503
8,000.00	7,148.02	-499.32	-1,215.77	29.46	7,581.10	7,400.00	2,189.27	-451.00	44.21	2,886.04	2,830.55	351.98	44.206
8,200.00	7,143.65	-491.91	-1,415.58	32.64	7,771.20	7,590.00	2,246.66	-463.75	46.38	2,947.23	2,890.34	351.73	43.909
8,400.00	7,139.28	-484.49	-1,615.40	36.27	7,961.30	7,780.00	2,304.05	-476.50	48.55	3,008.42	2,951.53	351.48	43.612
8,600.00	7,134.91	-477.07	-1,815.21	40.24	8,151.40	7,970.00	2,361.44	-489.25	50.72	3,069.61	3,011.72	351.23	43.315
8,800.00	7,130.53	-469.66	-2,015.03	44.45	8,341.50	8,160.00	2,418.83	-502.00	52.89	3,130.80	3,071.91	350.98	43.018
9,000.00	7,126.16	-462.24	-2,214.84	48.84	8,531.60	8,350.00	2,476.22	-514.75	55.06	3,192.00	3,132.10	350.73	42.721
9,200.00	7,121.79	-454.82	-2,414.66	53.37	8,721.70	8,540.00	2,533.61	-527.50	57.23	3,253.19	3,192.29	350.48	42.424
9,400.00	7,117.42	-447.40	-2,614.47	58.00	8,911.80	8,730.00	2,591.00	-540.25	59.40	3,314.38	3,252.48	350.23	42.127
9,600.00	7,113.05	-439.99	-2,814.29	62.72	9,101.90	8,920.00	2,648.39	-553.00	61.57	3,375.57	3,312.67	350.00	41.830
9,800.00	7,108.67	-432.57	-3,014.10	67.49	9,292.00	9,110.00	2,705.78	-565.75	63.74	3,436.76	3,373.86	349.75	41.533

Anticollision Report for Deering 33-9HX - 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 11,902.21 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	7,104.30	-425.15	-3,213.91	72.32	6,778.49	6,567.68	1,510.07	-287.97	29.21	3,548.83	3,460.55	56.52	40.203
10,200.00	7,099.93	-417.73	-3,413.73	77.19	6,770.91	6,560.22	1,510.10	-289.32	29.21	3,710.76	3,617.85	58.32	39.936
10,400.00	7,095.56	-410.32	-3,613.54	82.09	6,750.00	6,539.57	1,510.16	-292.62	29.20	3,876.33	3,778.90	59.96	39.786
10,600.00	7,091.19	-402.90	-3,813.36	87.02	6,750.00	6,539.57	1,510.16	-292.62	29.20	4,044.71	3,942.53	61.48	39.582
10,800.00	7,086.82	-395.48	-4,013.17	91.97	6,750.00	6,539.57	1,510.16	-292.62	29.20	4,215.86	4,108.90	62.88	39.415
11,000.00	7,082.44	-388.07	-4,212.99	96.94	6,750.00	6,539.57	1,510.16	-292.62	29.20	4,389.45	4,277.70	64.16	39.278
11,200.00	7,078.07	-380.65	-4,412.80	101.93	6,750.00	6,539.57	1,510.16	-292.62	29.20	4,565.20	4,448.64	65.35	39.167
11,400.00	7,073.70	-373.23	-4,612.62	106.93	6,750.00	6,539.57	1,510.16	-292.62	29.20	4,742.87	4,621.50	66.44	39.076
11,600.00	7,069.33	-365.81	-4,812.43	111.94	6,750.00	6,539.57	1,510.16	-292.62	29.20	4,922.26	4,796.06	67.46	39.003
11,800.00	7,064.96	-358.40	-5,012.25	116.97	6,750.00	6,539.57	1,510.16	-292.62	29.20	5,103.18	4,972.14	68.40	38.944
11,902.21	7,062.72	-354.61	-5,114.36	119.54	6,750.00	6,539.57	1,510.16	-292.62	29.20	5,196.17	5,062.66	68.86	38.919

Anticollision Report for Deering 33-9HX - 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 11,902.21 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	3.00	0.00	120.22	0.00	0.00	120.22	119.56	0.00	182.200
200.00	200.00	0.00	0.00	0.34	203.00	200.00	120.22	0.00	0.34	120.22	118.88	0.00	89.897
400.00	400.00	0.00	0.00	0.79	403.00	400.00	120.22	0.00	0.79	120.22	117.98	0.00	53.756
600.00	600.00	0.00	0.00	1.24	603.00	600.00	120.22	0.00	1.24	120.22	117.08	0.00	38.342
800.00	799.75	-8.51	-1.89	1.63	802.61	799.61	120.22	0.00	1.69	128.75	124.78	0.84	32.444
1,000.00	997.97	-33.99	-7.55	2.10	988.70	985.49	127.57	-2.51	2.12	162.12	157.31	1.79	33.736
1,200.00	1,193.88	-73.24	-16.28	2.79	1,165.17	1,160.63	147.70	-9.37	2.55	223.53	217.85	1.79	39.342
1,400.00	1,389.51	-113.84	-25.30	3.58	1,333.77	1,325.97	178.75	-19.96	3.07	299.45	292.85	1.05	45.366
1,600.00	1,585.14	-154.43	-34.32	4.42	1,516.40	1,503.92	217.63	-33.21	3.77	380.82	373.28	0.17	50.471
1,800.00	1,780.76	-195.02	-43.34	5.29	1,699.03	1,681.86	256.52	-46.47	4.52	462.25	453.73	359.60	54.242
2,000.00	1,976.39	-235.61	-52.36	6.17	1,881.65	1,859.81	295.40	-59.72	5.31	543.71	534.19	359.21	57.108
2,200.00	2,172.02	-276.20	-61.38	7.06	2,064.28	2,037.76	334.29	-72.98	6.12	625.19	614.65	358.91	59.346
2,400.00	2,367.65	-316.80	-70.40	7.96	2,246.91	2,215.70	373.17	-86.24	6.94	706.68	695.12	358.69	61.132
2,600.00	2,563.28	-357.39	-79.42	8.86	2,429.54	2,393.65	412.06	-99.49	7.78	788.18	775.58	358.51	62.586
2,800.00	2,758.91	-397.98	-88.44	9.76	2,612.16	2,571.60	450.94	-112.75	8.62	869.68	856.05	358.36	63.791
3,000.00	2,954.54	-438.57	-97.46	10.67	2,794.79	2,749.54	489.83	-126.00	9.47	951.19	936.51	358.24	64.802
3,200.00	3,150.17	-479.16	-106.48	11.57	2,977.42	2,927.49	528.71	-139.26	10.32	1,032.70	1,016.97	358.14	65.663
3,400.00	3,346.62	-515.59	-114.58	12.28	3,161.66	3,107.01	567.94	-152.63	11.18	1,110.36	1,093.50	357.99	65.885
3,600.00	3,545.47	-535.89	-119.09	12.72	3,351.42	3,291.91	608.34	-166.41	12.06	1,172.95	1,155.05	357.63	65.528
3,800.00	3,745.38	-540.00	-120.00	13.00	3,545.41	3,480.92	649.65	-180.49	12.97	1,220.19	1,193.79	357.09	46.217
4,000.00	3,945.38	-540.00	-120.00	13.23	3,740.28	3,670.80	691.14	-194.63	13.89	1,263.59	1,236.03	356.53	45.849
4,200.00	4,145.38	-540.00	-120.00	13.47	3,935.15	3,860.68	732.63	-208.78	14.81	1,307.11	1,278.37	356.01	45.489
4,400.00	4,345.38	-540.00	-120.00	13.72	4,130.03	4,050.56	774.12	-222.92	15.73	1,350.72	1,320.79	355.52	45.140
4,600.00	4,545.38	-540.00	-120.00	13.98	4,324.90	4,240.44	815.61	-237.07	16.65	1,394.41	1,363.29	355.06	44.801
4,800.00	4,745.38	-540.00	-120.00	14.25	4,519.78	4,430.31	857.11	-251.21	17.57	1,438.19	1,405.85	354.63	44.473
5,000.00	4,945.38	-540.00	-120.00	14.53	4,714.65	4,620.19	898.60	-265.36	18.49	1,482.04	1,448.48	354.23	44.156
5,200.00	5,145.38	-540.00	-120.00	14.82	4,909.52	4,810.07	940.09	-279.50	19.41	1,525.96	1,491.16	353.85	43.850
5,400.00	5,345.38	-540.00	-120.00	15.11	5,447.94	5,343.50	1,000.22	-300.00	20.78	1,550.70	1,514.20	353.33	42.480
5,600.00	5,545.38	-540.00	-120.00	15.41	5,649.83	5,545.38	1,000.22	-300.00	21.02	1,550.70	1,513.64	353.33	41.844
5,800.00	5,745.38	-540.00	-120.00	15.72	5,849.83	5,745.38	1,000.22	-300.00	21.28	1,550.70	1,513.07	353.33	41.209
6,000.00	5,945.38	-540.00	-120.00	16.04	6,049.83	5,945.38	1,000.22	-300.00	21.53	1,550.70	1,512.49	353.33	40.580
6,200.00	6,145.38	-540.00	-120.00	16.36	6,249.83	6,145.38	1,000.22	-300.00	21.80	1,550.70	1,511.89	353.33	39.957
6,400.00	6,345.38	-540.00	-120.00	16.69	6,449.83	6,345.38	1,000.22	-300.00	22.07	1,550.70	1,511.28	353.33	39.341
6,600.00	6,545.00	-539.71	-127.74	17.04	6,684.96	6,579.56	1,000.10	-285.67	22.32	1,548.28	1,517.02	354.14	49.532
6,800.00	6,736.21	-537.62	-184.10	17.52	6,878.50	6,761.75	999.60	-222.14	22.34	1,537.91	1,505.75	358.58	47.822
6,898.53	6,822.84	-535.89	-230.85	17.85	6,932.53	6,808.94	999.39	-195.84	22.33	1,535.74	1,503.05	1.31	46.971
7,000.00	6,904.47	-533.65	-290.94	18.23	6,965.50	6,836.71	999.25	-178.08	22.31	1,538.55	1,505.36	4.21	46.353
7,200.00	7,036.74	-528.12	-439.98	19.46	6,983.86	6,851.81	999.17	-167.64	22.31	1,562.37	1,527.51	10.11	44.820
7,400.00	7,122.77	-521.45	-619.69	21.59	6,964.11	6,835.55	999.26	-178.85	22.32	1,609.16	1,571.75	16.17	43.013
7,600.00	7,155.90	-514.16	-816.13	24.69	6,922.71	6,800.51	999.43	-200.89	22.33	1,672.06	1,631.87	22.12	41.605
7,800.00	7,152.39	-506.74	-1,015.95	26.86	6,875.63	6,759.18	999.61	-223.43	22.34	1,746.94	1,705.04	27.75	41.695
8,000.00	7,148.02	-499.32	-1,215.77	29.46	6,850.00	6,736.10	999.70	-234.55	22.35	1,838.35	1,793.91	33.21	41.361
8,200.00	7,143.65	-491.91	-1,415.58	32.64	6,800.00	6,689.97	999.85	-253.83	22.35	1,944.44	1,897.07	37.91	41.046
8,400.00	7,139.28	-484.49	-1,615.40	36.27	6,781.09	6,672.19	999.90	-260.28	22.35	2,063.48	2,012.60	42.39	40.556
8,600.00	7,134.91	-477.07	-1,815.21	40.24	6,750.00	6,642.62	999.98	-269.85	22.35	2,193.67	2,139.13	46.29	40.224
8,800.00	7,130.53	-469.66	-2,015.03	44.45	6,750.00	6,642.62	999.98	-269.85	22.35	2,333.14	2,274.48	49.90	39.773
9,000.00	7,126.16	-462.24	-2,214.84	48.84	6,725.68	6,619.21	1,000.03	-276.43	22.34	2,480.46	2,417.79	52.97	39.581
9,200.00	7,121.79	-454.82	-2,414.66	53.37	6,700.00	6,594.26	1,000.08	-282.52	22.33	2,634.58	2,567.86	55.69	39.486
9,400.00	7,117.42	-447.40	-2,614.47	58.00	6,700.00	6,594.26	1,000.08	-282.52	22.33	2,794.08	2,722.93	58.17	39.268
9,600.00	7,113.05	-439.99	-2,814.29	62.72	6,700.00	6,594.26	1,000.08	-282.52	22.33	2,958.51	2,882.85	60.37	39.107
9,800.00	7,108.67	-432.57	-3,014.10	67.49	6,700.00	6,594.26	1,000.08	-282.52	22.33	3,127.08	3,046.88	62.32	38.991
10,000.00	7,104.30	-425.15	-3,213.91	72.32	6,672.03	6,566.86	1,000.12	-288.13	22.31	3,298.56	3,214.22	64.03	39.113

Anticollision Report for Deering 33-9HX - 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 11,902.21 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	7,099.93	-417.73	-3,413.73	77.19	6,650.00	6,545.14	1,000.15	-291.79	22.30	3,473.43	3,384.89	65.57	39.230
10,400.00	7,095.56	-410.32	-3,613.54	82.09	6,650.00	6,545.14	1,000.15	-291.79	22.30	3,650.54	3,557.39	66.99	39.192
10,600.00	7,091.19	-402.90	-3,813.36	87.02	6,650.00	6,545.14	1,000.15	-291.79	22.30	3,829.91	3,732.13	68.28	39.172
10,800.00	7,086.82	-395.48	-4,013.17	91.97	6,650.00	6,545.14	1,000.15	-291.79	22.30	4,011.22	3,908.81	69.44	39.166
11,000.00	7,082.44	-388.07	-4,212.99	96.94	6,650.00	6,545.14	1,000.15	-291.79	22.30	4,194.24	4,087.16	70.50	39.170
11,200.00	7,078.07	-380.65	-4,412.80	101.93	6,650.00	6,545.14	1,000.15	-291.79	22.30	4,378.74	4,266.99	71.48	39.183
11,400.00	7,073.70	-373.23	-4,612.62	106.93	6,650.00	6,545.14	1,000.15	-291.79	22.30	4,564.55	4,448.11	72.37	39.202
11,600.00	7,069.33	-365.81	-4,812.43	111.94	6,627.80	6,523.15	1,000.18	-294.80	22.28	4,751.13	4,630.55	73.18	39.403
11,800.00	7,064.96	-358.40	-5,012.25	116.97	6,624.07	6,519.45	1,000.18	-295.24	22.28	4,938.97	4,813.81	73.93	39.461
11,902.21	7,062.72	-354.61	-5,114.36	119.54	6,622.27	6,517.66	1,000.18	-295.44	22.28	5,035.32	4,907.82	74.30	39.490

Anticollision Report for Deering 33-9HX - 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 11,902.21 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	80.15	0.00	0.00	80.15	79.49	0.00	121.673
200.00	200.00	0.00	0.00	0.34	202.00	200.00	80.15	0.00	0.34	80.15	78.81	0.00	60.032
400.00	400.00	0.00	0.00	0.79	402.00	400.00	80.15	0.00	0.79	80.15	77.91	0.00	35.874
600.00	600.00	0.00	0.00	1.24	602.00	600.00	80.15	0.00	1.24	80.15	77.01	0.00	25.580
800.00	799.75	-8.51	-1.89	1.63	801.75	799.75	80.15	0.00	1.69	88.68	84.71	1.22	22.358
1,000.00	997.97	-33.99	-7.55	2.10	999.97	997.97	80.15	0.00	2.14	114.38	109.58	3.79	23.816
1,200.00	1,193.88	-73.24	-16.28	2.79	1,195.88	1,193.88	80.15	0.00	2.58	154.25	148.58	6.06	27.208
1,400.00	1,389.51	-113.84	-25.30	3.58	1,385.47	1,383.27	83.69	-6.61	2.99	198.51	191.95	5.40	30.252
1,600.00	1,585.14	-154.43	-34.32	4.42	1,573.18	1,569.62	94.19	-26.18	3.44	249.24	241.71	1.88	33.111
1,800.00	1,780.76	-195.02	-43.34	5.29	1,765.34	1,759.91	106.84	-49.74	3.96	302.65	294.08	358.79	35.323
2,000.00	1,976.39	-235.61	-52.36	6.17	1,957.50	1,950.20	119.48	-73.30	4.51	356.68	347.02	356.62	36.946
2,200.00	2,172.02	-276.20	-61.38	7.06	2,149.66	2,140.49	132.13	-96.87	5.10	411.09	400.32	355.03	38.172
2,400.00	2,367.65	-316.80	-70.40	7.96	2,341.82	2,330.78	144.78	-120.43	5.70	465.74	453.83	353.81	39.120
2,600.00	2,563.28	-357.39	-79.42	8.86	2,533.98	2,521.07	157.42	-144.00	6.31	520.56	507.50	352.85	39.872
2,800.00	2,758.91	-397.98	-88.44	9.76	2,726.14	2,711.36	170.07	-167.56	6.93	575.50	561.28	352.07	40.479
3,000.00	2,954.54	-438.57	-97.46	10.67	2,918.30	2,901.65	182.72	-191.13	7.56	630.53	615.14	351.43	40.979
3,200.00	3,150.17	-479.16	-106.48	11.57	3,110.46	3,091.94	195.36	-214.69	8.19	685.63	669.07	350.89	41.397
3,400.00	3,346.62	-515.59	-114.58	12.28	3,303.59	3,283.19	208.07	-238.38	8.84	736.91	719.16	350.29	41.519
3,600.00	3,545.47	-535.89	-119.09	12.72	3,499.72	3,477.42	220.98	-262.43	9.49	773.33	754.51	349.28	41.086
3,800.00	3,745.38	-540.00	-120.00	13.00	3,712.60	3,688.35	234.53	-287.68	10.16	794.53	772.27	347.78	35.691
4,000.00	3,945.38	-540.00	-120.00	13.23	3,970.15	3,945.38	241.15	-300.00	10.65	801.62	778.63	347.02	34.872
4,200.00	4,145.38	-540.00	-120.00	13.47	4,170.15	4,145.38	241.15	-300.00	11.00	801.62	777.99	347.02	33.932
4,400.00	4,345.38	-540.00	-120.00	13.72	4,370.15	4,345.38	241.15	-300.00	11.37	801.62	777.34	347.02	33.015
4,600.00	4,545.38	-540.00	-120.00	13.98	4,570.15	4,545.38	241.15	-300.00	11.74	801.62	776.67	347.02	32.128
4,800.00	4,745.38	-540.00	-120.00	14.25	4,770.15	4,745.38	241.15	-300.00	12.11	801.62	775.98	347.02	31.270
5,000.00	4,945.38	-540.00	-120.00	14.53	4,970.15	4,945.38	241.15	-300.00	12.49	801.62	775.28	347.02	30.443
5,200.00	5,145.38	-540.00	-120.00	14.82	5,170.15	5,145.38	241.15	-300.00	12.88	801.62	774.58	347.02	29.646
5,400.00	5,345.38	-540.00	-120.00	15.11	5,370.15	5,345.38	241.15	-300.00	13.27	801.62	773.86	347.02	28.878
5,600.00	5,545.38	-540.00	-120.00	15.41	5,570.15	5,545.38	241.15	-300.00	13.66	801.62	773.13	347.02	28.140
5,800.00	5,745.38	-540.00	-120.00	15.72	5,770.15	5,745.38	241.15	-300.00	14.06	801.62	772.39	347.02	27.429
6,000.00	5,945.38	-540.00	-120.00	16.04	5,970.15	5,945.38	241.15	-300.00	14.46	801.62	771.64	347.02	26.746
6,200.00	6,145.38	-540.00	-120.00	16.36	6,170.15	6,145.38	241.15	-300.00	14.86	801.62	770.89	347.02	26.089
6,400.00	6,345.38	-540.00	-120.00	16.69	6,370.15	6,345.38	241.15	-300.00	15.26	801.62	770.13	347.02	25.458
6,600.00	6,545.00	-539.71	-127.74	17.04	6,601.90	6,576.26	241.14	-286.53	15.64	797.45	766.93	348.51	26.124
6,800.00	6,736.21	-537.62	-184.10	17.52	6,793.00	6,756.66	241.14	-225.20	15.74	780.11	749.01	356.98	25.085
6,876.05	6,803.65	-536.32	-219.14	17.77	6,836.80	6,795.26	241.14	-204.52	15.75	777.64	746.19	1.08	24.725
7,000.00	6,904.47	-533.65	-290.94	18.23	6,880.42	6,832.38	241.14	-181.62	15.77	785.78	753.76	8.03	24.540
7,200.00	7,036.74	-528.12	-439.98	19.46	6,900.00	6,848.57	241.14	-170.62	15.78	836.49	802.77	19.30	24.807
7,400.00	7,122.77	-521.45	-619.69	21.59	6,881.10	6,832.95	241.14	-181.25	15.77	926.16	890.36	29.90	25.868
7,600.00	7,155.90	-514.16	-816.13	24.69	6,850.00	6,806.64	241.14	-197.83	15.76	1,036.70	1,000.25	39.30	28.439
7,800.00	7,152.39	-506.74	-1,015.95	26.86	6,800.00	6,762.91	241.14	-222.05	15.74	1,158.15	1,121.18	46.71	31.324
8,000.00	7,148.02	-499.32	-1,215.77	29.46	6,750.00	6,717.59	241.14	-243.16	15.72	1,295.96	1,257.42	52.72	33.628
8,200.00	7,143.65	-491.91	-1,415.58	32.64	6,726.11	6,695.45	241.14	-252.12	15.71	1,446.34	1,405.31	57.79	35.253
8,400.00	7,139.28	-484.49	-1,615.40	36.27	6,700.00	6,670.92	241.14	-261.06	15.70	1,606.28	1,562.52	61.82	36.708
8,600.00	7,134.91	-477.07	-1,815.21	40.24	6,679.56	6,651.50	241.14	-267.43	15.69	1,773.45	1,726.66	65.11	37.898
8,800.00	7,130.53	-469.66	-2,015.03	44.45	6,650.00	6,623.11	241.14	-275.66	15.67	1,946.31	1,896.62	67.77	39.171
9,000.00	7,126.16	-462.24	-2,214.84	48.84	6,650.00	6,623.11	241.14	-275.66	15.67	2,123.26	2,069.80	70.06	39.717
9,200.00	7,121.79	-454.82	-2,414.66	53.37	6,650.00	6,623.11	241.14	-275.66	15.67	2,303.99	2,246.66	71.98	40.190
9,400.00	7,117.42	-447.40	-2,614.47	58.00	6,620.70	6,594.66	241.14	-282.65	15.65	2,486.92	2,426.63	73.55	41.250
9,600.00	7,113.05	-439.99	-2,814.29	62.72	6,600.00	6,574.40	241.14	-286.89	15.64	2,672.42	2,608.93	74.92	42.092
9,800.00	7,108.67	-432.57	-3,014.10	67.49	6,600.00	6,574.40	241.14	-286.89	15.64	2,859.55	2,792.12	76.12	42.409
10,000.00	7,104.30	-425.15	-3,213.91	72.32	6,600.00	6,574.40	241.14	-286.89	15.64	3,048.32	2,976.92	77.18	42.694

Anticollision Report for Deering 33-9HX - 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 11,902.21 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	7,099.93	-417.73	-3,413.73	77.19	6,600.00	6,574.40	241.14	-286.89	15.64	3,238.43	3,163.03	78.10	42.952
10,400.00	7,095.56	-410.32	-3,613.54	82.09	6,578.60	6,553.33	241.14	-290.65	15.61	3,429.29	3,350.82	78.91	43.701
10,600.00	7,091.19	-402.90	-3,813.36	87.02	6,572.49	6,547.29	241.14	-291.61	15.61	3,621.23	3,539.05	79.64	44.063
10,800.00	7,086.82	-395.48	-4,013.17	91.97	6,550.00	6,525.02	241.14	-294.69	15.58	3,814.18	3,729.09	80.28	44.823
11,000.00	7,082.44	-388.07	-4,212.99	96.94	6,550.00	6,525.02	241.14	-294.69	15.58	4,007.45	3,918.40	80.88	45.000
11,200.00	7,078.07	-380.65	-4,412.80	101.93	6,550.00	6,525.02	241.14	-294.69	15.58	4,201.35	4,108.32	81.41	45.164
11,400.00	7,073.70	-373.23	-4,612.62	106.93	6,550.00	6,525.02	241.14	-294.69	15.58	4,395.79	4,298.78	81.90	45.315
11,600.00	7,069.33	-365.81	-4,812.43	111.94	6,550.00	6,525.02	241.14	-294.69	15.58	4,590.71	4,489.72	82.35	45.455
11,800.00	7,064.96	-358.40	-5,012.25	116.97	6,550.00	6,525.02	241.14	-294.69	15.58	4,786.05	4,681.06	82.76	45.586
11,902.21	7,062.72	-354.61	-5,114.36	119.54	6,550.00	6,525.02	241.14	-294.69	15.58	4,886.02	4,778.99	82.95	45.649

Anticollision Report for Deering 33-9HX - 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 11,902.21 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	0.00	40.06	0.00	0.00	40.06	39.41	0.00	61.029
200.00	200.00	0.00	0.00	0.34	200.00	200.00	40.06	0.00	0.34	40.06	38.73	0.00	30.110
400.00	400.00	0.00	0.00	0.79	400.00	400.00	40.06	0.00	0.79	40.06	37.83	0.00	17.968
600.00	600.00	0.00	0.00	1.24	600.00	600.00	40.06	0.00	1.24	40.06	36.93	0.00	12.805
800.00	799.75	-8.51	-1.89	1.63	799.75	799.75	40.06	0.00	1.69	48.61	44.65	2.23	12.270
1,000.00	997.97	-33.99	-7.55	2.10	997.97	997.97	40.06	0.00	2.13	74.44	69.64	5.82	15.516
1,200.00	1,193.88	-73.24	-16.28	2.79	1,200.83	1,200.57	34.43	-6.76	2.53	108.30	102.69	5.05	19.304
1,400.00	1,389.51	-113.84	-25.30	3.58	1,400.14	1,398.82	21.31	-22.51	2.96	135.49	128.98	1.18	20.793
1,600.00	1,585.14	-154.43	-34.32	4.42	1,598.14	1,595.74	8.06	-38.40	3.44	162.88	155.38	358.56	21.706
1,800.00	1,780.76	-195.02	-43.34	5.29	1,796.14	1,792.65	-5.19	-54.30	3.96	190.52	181.97	356.69	22.297
2,000.00	1,976.39	-235.61	-52.36	6.17	1,994.14	1,989.57	-18.44	-70.20	4.50	218.30	208.68	355.30	22.688
2,200.00	2,172.02	-276.20	-61.38	7.06	2,192.13	2,186.48	-31.69	-86.10	5.05	246.19	235.46	354.23	22.953
2,400.00	2,367.65	-316.80	-70.40	7.96	2,390.13	2,383.39	-44.94	-102.00	5.61	274.14	262.29	353.37	23.136
2,600.00	2,563.28	-357.39	-79.42	8.86	2,581.85	2,574.22	-56.70	-116.11	6.11	303.12	290.20	353.04	23.475
2,800.00	2,758.91	-397.98	-88.44	9.76	2,766.66	2,758.91	-59.94	-120.00	6.46	339.51	325.73	354.67	24.636
3,000.00	2,954.54	-438.57	-97.46	10.67	2,962.29	2,954.54	-59.94	-120.00	6.83	379.30	364.68	356.59	25.932
3,200.00	3,150.17	-479.16	-106.48	11.57	3,157.92	3,150.17	-59.94	-120.00	7.21	419.44	403.95	358.15	27.075
3,400.00	3,346.62	-515.59	-114.58	12.28	3,354.36	3,346.62	-59.94	-120.00	7.59	455.68	439.32	359.32	27.844
3,600.00	3,545.47	-535.89	-119.09	12.72	3,553.22	3,545.47	-59.94	-120.00	7.99	475.96	458.82	359.89	27.770
3,800.00	3,745.38	-540.00	-120.00	13.00	3,753.13	3,745.38	-59.94	-120.00	8.39	480.06	458.56	0.00	22.327
4,000.00	3,945.38	-540.00	-120.00	13.23	3,953.13	3,945.38	-59.94	-120.00	8.80	480.06	457.91	0.00	21.670
4,200.00	4,145.38	-540.00	-120.00	13.47	4,153.13	4,145.38	-59.94	-120.00	9.21	480.06	457.24	0.00	21.038
4,400.00	4,345.38	-540.00	-120.00	13.72	4,353.13	4,345.38	-59.94	-120.00	9.62	480.06	456.56	0.00	20.429
4,600.00	4,545.38	-540.00	-120.00	13.98	4,553.13	4,545.38	-59.94	-120.00	10.04	480.06	455.87	0.00	19.846
4,800.00	4,745.38	-540.00	-120.00	14.25	4,753.13	4,745.38	-59.94	-120.00	10.46	480.06	455.17	0.00	19.285
5,000.00	4,945.38	-540.00	-120.00	14.53	4,953.13	4,945.38	-59.94	-120.00	10.88	480.06	454.46	0.00	18.748
5,200.00	5,145.38	-540.00	-120.00	14.82	5,153.13	5,145.38	-59.94	-120.00	11.31	480.06	453.73	0.00	18.233
5,400.00	5,345.38	-540.00	-120.00	15.11	5,353.13	5,345.38	-59.94	-120.00	11.73	480.06	453.00	0.00	17.739
5,600.00	5,545.38	-540.00	-120.00	15.41	5,553.13	5,545.38	-59.94	-120.00	12.16	480.06	452.26	0.00	17.267
5,800.00	5,745.38	-540.00	-120.00	15.72	5,753.13	5,745.38	-59.94	-120.00	12.59	480.06	451.51	0.00	16.814
6,000.00	5,945.38	-540.00	-120.00	16.04	5,953.13	5,945.38	-59.94	-120.00	13.02	480.06	450.75	0.00	16.380
6,200.00	6,145.38	-540.00	-120.00	16.36	6,153.13	6,145.38	-59.94	-120.00	13.46	480.06	449.99	0.00	15.964
6,400.00	6,345.38	-540.00	-120.00	16.69	6,353.13	6,345.38	-59.94	-120.00	13.89	480.06	449.22	0.00	15.565
6,600.00	6,545.00	-539.71	-127.74	17.04	6,552.42	6,544.30	-59.86	-127.64	14.34	479.85	450.65	0.01	16.431
6,800.00	6,736.21	-537.62	-184.10	17.52	6,751.11	6,734.37	-59.29	-183.30	14.96	478.33	447.95	0.10	15.741
7,000.00	6,904.47	-533.65	-290.94	18.23	6,950.00	6,902.08	-58.21	-289.02	15.97	475.45	443.14	0.23	14.714
7,200.00	7,036.74	-528.12	-439.98	19.46	7,148.96	7,034.42	-56.70	-436.72	17.69	471.44	435.78	0.40	13.221
7,400.00	7,122.77	-521.45	-619.69	21.59	7,348.29	7,121.29	-54.88	-615.40	20.34	466.60	425.69	0.53	11.407
7,600.00	7,155.90	-514.16	-816.13	24.69	7,547.98	7,155.74	-52.87	-811.43	23.79	461.31	413.50	0.58	9.649
7,800.00	7,152.39	-506.74	-1,015.95	26.86	7,747.90	7,152.51	-50.83	-1,011.30	26.18	455.94	403.59	0.59	8.709
8,000.00	7,148.02	-499.32	-1,215.77	29.46	7,947.83	7,148.13	-48.79	-1,211.17	28.81	450.56	392.82	0.59	7.803
8,200.00	7,143.65	-491.91	-1,415.58	32.64	8,147.76	7,143.76	-46.75	-1,411.04	32.05	445.18	380.84	0.59	6.919
8,400.00	7,139.28	-484.49	-1,615.40	36.27	8,347.69	7,139.38	-44.70	-1,610.91	35.73	439.81	368.00	0.59	6.124
8,600.00	7,134.91	-477.07	-1,815.21	40.24	8,547.61	7,135.01	-42.66	-1,810.78	39.73	434.43	354.53	0.59	5.437
8,800.00	7,130.53	-469.66	-2,015.03	44.45	8,747.54	7,130.64	-40.62	-2,010.65	43.97	429.06	340.60	0.59	4.850
9,000.00	7,126.16	-462.24	-2,214.84	48.84	8,947.47	7,126.26	-38.58	-2,210.51	48.38	423.68	326.34	0.59	4.353
9,200.00	7,121.79	-454.82	-2,414.66	53.37	9,147.40	7,121.89	-36.53	-2,410.38	52.92	418.31	311.83	0.59	3.929
9,400.00	7,117.42	-447.40	-2,614.47	58.00	9,347.33	7,117.52	-34.49	-2,610.25	57.56	412.93	297.14	0.59	3.566
9,600.00	7,113.05	-439.99	-2,814.29	62.72	9,547.25	7,113.14	-32.45	-2,810.12	62.28	407.56	282.29	0.59	3.254
9,800.00	7,108.67	-432.57	-3,014.10	67.49	9,747.18	7,108.77	-30.41	-3,009.99	67.05	402.18	267.33	0.59	2.982
10,000.00	7,104.30	-425.15	-3,213.91	72.32	9,947.11	7,104.40	-28.37	-3,209.86	71.88	396.81	252.28	0.59	2.746
10,200.00	7,099.93	-417.73	-3,413.73	77.19	10,147.04	7,100.02	-26.32	-3,409.73	76.74	391.43	237.15	0.59	2.537

Anticollision Report for Deering 33-9HX - 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 11,902.21 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
10,400.00	7,095.56	-410.32	-3,613.54	82.09	10,346.96	7,095.65	-24.28	-3,609.60	81.63	386.06	221.96	0.59	2.353
10,600.00	7,091.19	-402.90	-3,813.36	87.02	10,546.89	7,091.27	-22.24	-3,809.47	86.56	380.68	206.72	0.59	2.188
10,800.00	7,086.82	-395.48	-4,013.17	91.97	10,746.82	7,086.90	-20.20	-4,009.34	91.50	375.31	191.44	0.59	2.041
11,000.00	7,082.44	-388.07	-4,212.99	96.94	10,946.75	7,082.53	-18.15	-4,209.21	96.46	369.93	176.11	0.59	1.909
11,200.00	7,078.07	-380.65	-4,412.80	101.93	11,146.67	7,078.15	-16.11	-4,409.08	101.44	364.55	160.76	0.59	1.789
11,400.00	7,073.70	-373.23	-4,612.62	106.93	11,346.60	7,073.78	-14.07	-4,608.95	106.43	359.18	145.38	0.59	1.680
11,600.00	7,069.33	-365.81	-4,812.43	111.94	11,546.53	7,069.41	-12.03	-4,808.82	111.44	353.80	129.98	0.59	1.581
11,800.00	7,064.96	-358.40	-5,012.25	116.97	11,746.46	7,065.03	-9.99	-5,008.69	116.46	348.43	114.56	0.59	1.490
11,902.21	7,062.72	-354.61	-5,114.36	119.54	11,848.63	7,062.80	-8.94	-5,110.83	119.02	345.68	106.67	0.59	1.446

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	7,635.24	Rev A0 (Permitting Plan Only)	MWD
7,635.24	11,902.21	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.

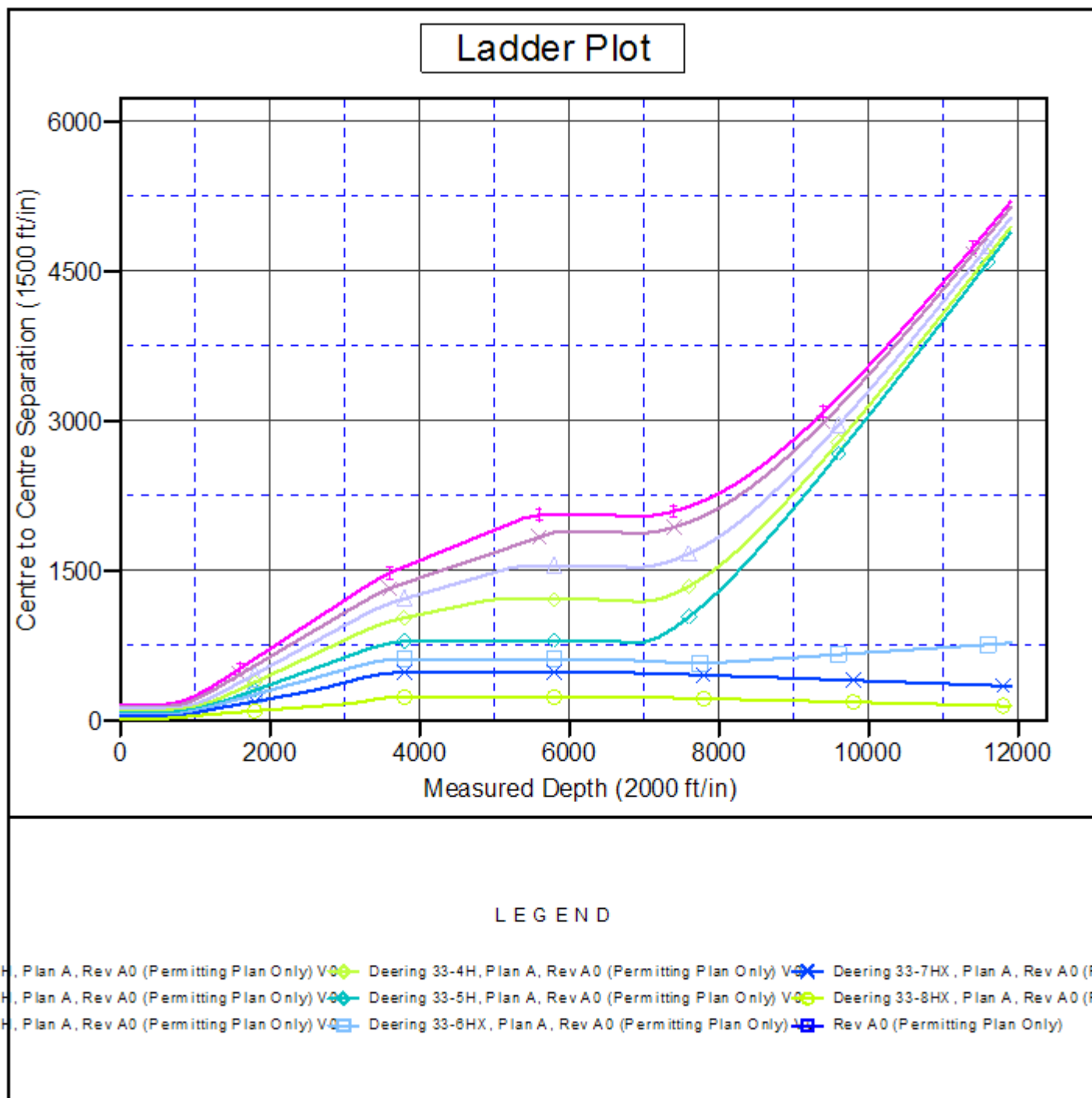
Anticollision Report for Deering 33-9HX - Rev A0 (Permitting Plan Only)

Direction and Coordinates are relative to True North Reference.

Vertical Depths are relative to GL @ 4902.00ft (Ground Level). Northing and Easting are relative to Deering 33-9HX - Slot A9

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 33-9HX - A9

Plan A

Plan: Rev A0 (Permitting Plan Only)

Sperry Drilling Services

Proposal Report

25 July, 2013

Well Coordinates: 1,341,710.58 N, 3,166,345.84 E (40° 16' 11.50" N, 104° 54' 13.93" W)

Ground Level: 4,902.00 ft

Local Coordinate Origin: Centered on Well Deering 33-9HX - Slot A9

Viewing Datum: GL @ 4902.00ft (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 33-9HX - 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
Begin 2.5°/100ft Nudge to 12.0° Inclination at 600.00ft										
700.00	2.50	192.53	699.97	-2.13	-0.47	0.63	2.50	2.50	0.00	192.53
800.00	5.00	192.53	799.75	-8.51	-1.89	2.50	2.50	2.50	0.00	0.00
900.00	7.50	192.53	899.14	-19.14	-4.25	5.63	2.50	2.50	0.00	0.00
1,000.00	10.00	192.53	997.97	-33.99	-7.55	9.99	2.50	2.50	0.00	0.00
1,080.00	12.00	192.53	1,076.50	-48.89	-10.86	14.37	2.50	2.50	0.00	0.00
Begin 2178.87ft Tangent at 1080.00ft										
1,100.00	12.00	192.53	1,096.06	-52.95	-11.77	15.57	0.00	0.00	0.00	0.00
1,200.00	12.00	192.53	1,193.88	-73.24	-16.28	21.53	0.00	0.00	0.00	0.00
1,300.00	12.00	192.53	1,291.69	-93.54	-20.79	27.50	0.00	0.00	0.00	0.00
1,400.00	12.00	192.53	1,389.51	-113.84	-25.30	33.47	0.00	0.00	0.00	0.00
1,500.00	12.00	192.53	1,487.32	-134.13	-29.81	39.43	0.00	0.00	0.00	0.00
1,600.00	12.00	192.53	1,585.14	-154.43	-34.32	45.40	0.00	0.00	0.00	0.00
1,700.00	12.00	192.53	1,682.95	-174.72	-38.83	51.37	0.00	0.00	0.00	0.00
1,800.00	12.00	192.53	1,780.76	-195.02	-43.34	57.34	0.00	0.00	0.00	0.00
1,900.00	12.00	192.53	1,878.58	-215.32	-47.85	63.30	0.00	0.00	0.00	0.00
2,000.00	12.00	192.53	1,976.39	-235.61	-52.36	69.27	0.00	0.00	0.00	0.00
2,100.00	12.00	192.53	2,074.21	-255.91	-56.87	75.24	0.00	0.00	0.00	0.00
2,200.00	12.00	192.53	2,172.02	-276.20	-61.38	81.20	0.00	0.00	0.00	0.00
2,300.00	12.00	192.53	2,269.84	-296.50	-65.89	87.17	0.00	0.00	0.00	0.00
2,400.00	12.00	192.53	2,367.65	-316.80	-70.40	93.14	0.00	0.00	0.00	0.00
2,500.00	12.00	192.53	2,465.47	-337.09	-74.91	99.10	0.00	0.00	0.00	0.00
2,600.00	12.00	192.53	2,563.28	-357.39	-79.42	105.07	0.00	0.00	0.00	0.00
2,700.00	12.00	192.53	2,661.10	-377.68	-83.93	111.04	0.00	0.00	0.00	0.00
2,800.00	12.00	192.53	2,758.91	-397.98	-88.44	117.01	0.00	0.00	0.00	0.00
2,900.00	12.00	192.53	2,856.73	-418.28	-92.95	122.97	0.00	0.00	0.00	0.00
3,000.00	12.00	192.53	2,954.54	-438.57	-97.46	128.94	0.00	0.00	0.00	0.00
3,100.00	12.00	192.53	3,052.36	-458.87	-101.97	134.91	0.00	0.00	0.00	0.00
3,200.00	12.00	192.53	3,150.17	-479.16	-106.48	140.87	0.00	0.00	0.00	0.00
3,258.87	12.00	192.53	3,207.76	-491.11	-109.14	144.39	0.00	0.00	0.00	0.00
Begin 2.5°/100ft Drop to Vertical at 3258.87ft										
3,300.00	10.97	192.53	3,248.06	-499.11	-110.91	146.74	2.50	-2.50	0.00	180.00
3,400.00	8.47	192.53	3,346.62	-515.59	-114.58	151.58	2.50	-2.50	0.00	180.00
3,500.00	5.97	192.53	3,445.82	-527.86	-117.30	155.19	2.50	-2.50	0.00	180.00
3,600.00	3.47	192.53	3,545.47	-535.89	-119.09	157.55	2.50	-2.50	0.00	180.00
3,700.00	0.97	192.53	3,645.39	-539.68	-119.93	158.66	2.50	-2.50	0.00	180.00
3,738.87	0.00	0.00	3,684.25	-540.00	-120.00	158.76	2.50	-2.50	0.00	180.00
End of Drop at 3738.87ft										
3,800.00	0.00	0.00	3,745.38	-540.00	-120.00	158.76	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,845.38	-540.00	-120.00	158.76	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	3,945.38	-540.00	-120.00	158.76	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,045.38	-540.00	-120.00	158.76	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,145.38	-540.00	-120.00	158.76	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,245.38	-540.00	-120.00	158.76	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,345.38	-540.00	-120.00	158.76	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,445.38	-540.00	-120.00	158.76	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,545.38	-540.00	-120.00	158.76	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,645.38	-540.00	-120.00	158.76	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,745.38	-540.00	-120.00	158.76	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,845.38	-540.00	-120.00	158.76	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	4,945.38	-540.00	-120.00	158.76	0.00	0.00	0.00	0.00

Plan Report for Deering 33-9HX - 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 (°)
5,100.00	0.00	0.00	5,045.38	-540.00	-120.00	158.76	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,145.38	-540.00	-120.00	158.76	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,245.38	-540.00	-120.00	158.76	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,345.38	-540.00	-120.00	158.76	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,445.38	-540.00	-120.00	158.76	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,545.38	-540.00	-120.00	158.76	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,645.38	-540.00	-120.00	158.76	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,745.38	-540.00	-120.00	158.76	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,845.38	-540.00	-120.00	158.76	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	5,945.38	-540.00	-120.00	158.76	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,045.38	-540.00	-120.00	158.76	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,145.38	-540.00	-120.00	158.76	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,245.38	-540.00	-120.00	158.76	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,345.38	-540.00	-120.00	158.76	0.00	0.00	0.00	0.00
6,494.59	0.00	0.00	6,439.97	-540.00	-120.00	158.76	0.00	0.00	0.00	0.00
KOP - Begin 8.0°/100ft Build at 6494.59ft										
6,500.00	0.43	272.13	6,445.38	-540.00	-120.02	158.78	8.01	8.01	0.00	272.13
6,600.00	8.43	272.13	6,545.00	-539.71	-127.74	166.46	8.00	8.00	0.00	0.00
6,700.00	16.43	272.13	6,642.58	-538.91	-149.24	187.84	8.00	8.00	0.00	0.00
6,800.00	24.43	272.13	6,736.21	-537.62	-184.10	222.51	8.00	8.00	0.00	0.00
6,900.00	32.43	272.13	6,824.08	-535.86	-231.64	269.80	8.00	8.00	0.00	0.00
7,000.00	40.43	272.13	6,904.47	-533.65	-290.94	328.79	8.00	8.00	0.00	0.00
7,100.00	48.43	272.13	6,975.82	-531.06	-360.84	398.32	8.00	8.00	0.00	0.00
7,200.00	56.43	272.13	7,036.74	-528.12	-439.98	477.05	8.00	8.00	0.00	0.00
7,300.00	64.43	272.13	7,086.04	-524.90	-526.83	563.43	8.00	8.00	0.00	0.00
7,400.00	72.43	272.13	7,122.77	-521.45	-619.69	655.80	8.00	8.00	0.00	0.00
7,500.00	80.43	272.13	7,146.21	-517.85	-716.76	752.35	8.00	8.00	0.00	0.00
7,600.00	88.43	272.13	7,155.90	-514.16	-816.13	851.20	8.00	8.00	0.00	0.00
7,635.24	91.25	272.13	7,156.00	-512.85	-851.35	886.22	8.00	8.00	0.00	0.00
End of Build at 7635.24ft - 7" Csg										
7,700.00	91.25	272.13	7,154.58	-510.45	-916.05	950.58	0.00	0.00	0.00	0.00
7,800.00	91.25	272.13	7,152.39	-506.74	-1,015.95	1,049.96	0.00	0.00	0.00	0.00
7,900.00	91.25	272.13	7,150.21	-503.03	-1,115.86	1,149.33	0.00	0.00	0.00	0.00
8,000.00	91.25	272.13	7,148.02	-499.32	-1,215.77	1,248.71	0.00	0.00	0.00	0.00
8,100.00	91.25	272.13	7,145.84	-495.62	-1,315.68	1,348.09	0.00	0.00	0.00	0.00
8,200.00	91.25	272.13	7,143.65	-491.91	-1,415.58	1,447.47	0.00	0.00	0.00	0.00
8,300.00	91.25	272.13	7,141.46	-488.20	-1,515.49	1,546.84	0.00	0.00	0.00	0.00
8,400.00	91.25	272.13	7,139.28	-484.49	-1,615.40	1,646.22	0.00	0.00	0.00	0.00
8,500.00	91.25	272.13	7,137.09	-480.78	-1,715.30	1,745.60	0.00	0.00	0.00	0.00
8,600.00	91.25	272.13	7,134.91	-477.07	-1,815.21	1,844.97	0.00	0.00	0.00	0.00
8,700.00	91.25	272.13	7,132.72	-473.36	-1,915.12	1,944.35	0.00	0.00	0.00	0.00
8,800.00	91.25	272.13	7,130.53	-469.66	-2,015.03	2,043.73	0.00	0.00	0.00	0.00
8,900.00	91.25	272.13	7,128.35	-465.95	-2,114.93	2,143.11	0.00	0.00	0.00	0.00
9,000.00	91.25	272.13	7,126.16	-462.24	-2,214.84	2,242.48	0.00	0.00	0.00	0.00
9,100.00	91.25	272.13	7,123.98	-458.53	-2,314.75	2,341.86	0.00	0.00	0.00	0.00
9,200.00	91.25	272.13	7,121.79	-454.82	-2,414.66	2,441.24	0.00	0.00	0.00	0.00
9,300.00	91.25	272.13	7,119.60	-451.11	-2,514.56	2,540.61	0.00	0.00	0.00	0.00
9,400.00	91.25	272.13	7,117.42	-447.40	-2,614.47	2,639.99	0.00	0.00	0.00	0.00
9,500.00	91.25	272.13	7,115.23	-443.69	-2,714.38	2,739.37	0.00	0.00	0.00	0.00
9,600.00	91.25	272.13	7,113.05	-439.99	-2,814.29	2,838.74	0.00	0.00	0.00	0.00
9,700.00	91.25	272.13	7,110.86	-436.28	-2,914.19	2,938.12	0.00	0.00	0.00	0.00
Hold Angle at 91.25°										
9,800.00	91.25	272.13	7,108.67	-432.57	-3,014.10	3,037.50	0.00	0.00	0.00	0.00
9,900.00	91.25	272.13	7,106.49	-428.86	-3,114.01	3,136.88	0.00	0.00	0.00	0.00
10,000.00	91.25	272.13	7,104.30	-425.15	-3,213.91	3,236.25	0.00	0.00	0.00	0.00
10,100.00	91.25	272.13	7,102.12	-421.44	-3,313.82	3,335.63	0.00	0.00	0.00	0.00
10,200.00	91.25	272.13	7,099.93	-417.73	-3,413.73	3,435.01	0.00	0.00	0.00	0.00
10,300.00	91.25	272.13	7,097.74	-414.03	-3,513.64	3,534.38	0.00	0.00	0.00	0.00
10,400.00	91.25	272.13	7,095.56	-410.32	-3,613.54	3,633.76	0.00	0.00	0.00	0.00

Plan Report for Deering 33-9HX - 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 (°)
10,500.00	91.25	272.13	7,093.37	-406.61	-3,713.45	3,733.14	0.00	0.00	0.00	0.00
10,600.00	91.25	272.13	7,091.19	-402.90	-3,813.36	3,832.52	0.00	0.00	0.00	0.00
10,700.00	91.25	272.13	7,089.00	-399.19	-3,913.27	3,931.89	0.00	0.00	0.00	0.00
10,800.00	91.25	272.13	7,086.82	-395.48	-4,013.17	4,031.27	0.00	0.00	0.00	0.00
10,900.00	91.25	272.13	7,084.63	-391.77	-4,113.08	4,130.65	0.00	0.00	0.00	0.00
11,000.00	91.25	272.13	7,082.44	-388.07	-4,212.99	4,230.02	0.00	0.00	0.00	0.00
11,100.00	91.25	272.13	7,080.26	-384.36	-4,312.89	4,329.40	0.00	0.00	0.00	0.00
11,200.00	91.25	272.13	7,078.07	-380.65	-4,412.80	4,428.78	0.00	0.00	0.00	0.00
11,300.00	91.25	272.13	7,075.89	-376.94	-4,512.71	4,528.15	0.00	0.00	0.00	0.00
11,400.00	91.25	272.13	7,073.70	-373.23	-4,612.62	4,627.53	0.00	0.00	0.00	0.00
11,500.00	91.25	272.13	7,071.51	-369.52	-4,712.52	4,726.91	0.00	0.00	0.00	0.00
11,600.00	91.25	272.13	7,069.33	-365.81	-4,812.43	4,826.29	0.00	0.00	0.00	0.00
11,700.00	91.25	272.13	7,067.14	-362.10	-4,912.34	4,925.66	0.00	0.00	0.00	0.00
11,752.21	91.25	272.13	7,066.00	-360.17	-4,964.50	4,977.55	0.00	0.00	0.00	0.00
Total Depth at 11752.21ft										

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
600.00	600.00	0.00	0.00	Begin 2.5°/100ft Nudge to 12.0° Inclination at 600.00ft
1,080.00	1,076.50	-48.89	-10.86	Begin 2178.87ft Tangent at 1080.00ft
3,258.87	3,207.76	-491.11	-109.14	Begin 2.5°/100ft Drop to Vertical at 3258.87ft
3,738.87	3,684.25	-540.00	-120.00	End of Drop at 3738.87ft
6,494.59	6,439.97	-540.00	-120.00	KOP - Begin 8.0°/100ft Build at 6494.59ft
7,635.24	7,156.00	-512.85	-851.35	End of Build at 7635.24ft
9,700.00	7,110.86	-436.28	-2,914.19	Hold Angle at 91.25°
11,752.21	7,066.00	-360.17	-4,964.50	Total Depth at 11752.21ft

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (ft)
				+N/-S (ft)	+E/-W (ft)	
Target	Deering 33-9HX_RevA0_BHL Tgt	265.85	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	7,635.24	Rev A0 (Permitting Plan Only)	MWD
7,635.24	11,902.21	Rev A0 (Permitting Plan Only)	MWD

Casing Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,635.24	7,156.00	7" Csg	7	8-3/4

Plan Report for Deering 33-9HX - Rev A0 (Permitting Plan Only)

Plan Report for Deering 33-9HX - 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	-3.00	-910.74	-1,021.39	Circle
Stroh_Sunmarke 19-28-11_BHL	-87.00	4,458.31	1,628.27	Circle
Stroh_Stroh 28-10	-34.00	4,433.75	2,971.42	Circle
Stroh_Stroh 23-28	-34.00	3,654.08	2,466.50	Circle
Stroh_Spaur 1	-34.00	4,439.08	1,608.48	Circle
Deering_Anderson 12-32	-3.00	-790.11	-4,649.24	Circle
Deering_Anderson 1	-3.00	-772.10	-3,334.84	Circle
Stroh_Frank 1 (B)	-34.00	1,251.74	4,271.03	Circle
Deering_Hepp 32-5	-3.00	678.05	-4,749.42	Circle
Deering_Stroh 7-33	-3.00	448.27	3,002.60	Circle
Stroh_Koester 18-33-6_BHL	-36.00	477.76	1,645.40	Circle
Stroh_Stroh 33-2	-34.00	1,785.26	2,980.11	Circle
Stroh_Koester 3-33-3_BHL	-67.00	1,763.49	1,683.44	Circle
Stroh_Sunmarke 15-28	-34.00	3,402.61	1,021.21	Circle
Deering_Stroh 33-4	-3.00	444.82	4,311.35	Circle
Stroh_Stroh 28-16	-34.00	3,078.93	5,320.96	Circle
Stroh_Stroh 2	-34.00	3,475.67	3,303.57	Circle
Deering_Camenisch 32-10	-3.00	-615.57	-2,277.16	Circle
Stroh_Sunmarke 19-28-14_BHL	-87.00	3,129.16	1,620.01	Circle
Stroh_Koester 18-33	-34.00	830.61	563.68	Circle
Stroh_Stroh 39-28R	-34.00	3,570.62	4,748.87	Circle
Stroh 28-1H_Sec. 33 Lines	-34.00	2,714.51	4,768.56	Polygon
Deering 33-1H_Sec. 32 S Half 460' Setback	-3.00	160.29	0.00	Polygon
Stroh_Sunmarke 19-28-12_BHL	-87.00	4,439.65	305.95	Circle
Deering_Hepp 22-32R	-3.00	153.34	-4,107.69	Circle
Deering 33-1H_Sec. 32 N Half 460' Setback	-3.00	160.29	0.00	Polygon
Stroh_Stroh 38-28R	-34.00	2,568.79	4,754.64	Circle
Stroh_Koester 3-33-21_BHL	-66.00	1,151.68	2,147.99	Circle
Stroh_Stroh 33-1	-34.00	1,781.79	4,171.60	Circle
Deering 33-1H_Sec. 32 N Half Lines	-3.00	160.29	0.00	Polygon
Deering_Camenisch 9-32-40R	-3.00	-877.96	-996.27	Circle
Stroh_Frank 1	-34.00	2,096.61	1,642.11	Circle
Stroh_Stroh 28-33R	-34.00	2,295.23	2,466.64	Circle
Stroh_Sunmarke 19-28-13_BHL	-87.00	3,131.07	269.98	Circle
Stroh_Koester 18-33-4_BHL	-34.00	1,840.23	347.46	Circle
Stroh 28-1H_Sec. 33 460' Setback	-34.00	2,714.51	4,768.56	Polygon
Stroh_Stroh 1	-34.00	757.96	3,298.35	Circle
Deering_Camenisch 7-32-25R	-3.00	349.84	-2,408.23	Circle
Deering 33-9HX_RevA0_BHL Tgt	7,066.00	-360.17	-4,964.50	Point
Stroh_Koester 18-33-5_BHL	-33.00	414.87	231.53	Circle
Deering 33-1H_Sec. 32 S Half Lines	-3.00	160.29	0.00	Polygon
Stroh_Stroh 15-28	-34.00	3,074.89	2,943.69	Circle
Stroh_Koester 18-33-22_BHL	-34.00	29.88	995.48	Circle
Stroh_Stroh 41-33R	-34.00	936.71	4,766.11	Circle
Stroh_Koester 3-33-29_BHL	-68.00	2,294.95	983.27	Circle
Deering_Hepp 32-6	-3.00	619.56	-3,502.08	Circle
Deering_Camenisch 41-32	-3.00	386.27	-2,369.16	Circle
Stroh_Stroh 28-9	-34.00	4,393.87	4,288.34	Circle

North Reference Sheet for Sec. 33-T4N-R67W (Deering 33H Pad) - Deering 33-9HX - 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 @ 4902.00ft (Ground Level). Northing and Easting are relative to Deering 33-9HX - Slot A9

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: 1,341,710.58 ft N, 3,166,345.84 ft E

Geographical Coordinates of Well: 40° 16' 11.50" N, 104° 54' 13.93" W

Grid Convergence at Surface is: 0.39°

Based upon Minimum Curvature type calculations, at a Measured Depth of 11,902.21ft

the Bottom Hole Displacement is 5,126.64ft in the Direction of 266.03° (True).

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

