

Project: Weld County, CO (NAD 83)
 Site: Sec. 33-T4N-R67W (Deering 33H Pad)
 Well: Deering 33-8HX
 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	800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	
3	1160.00	9.00	200.27	1158.52	-26.47	-9.77	2.50	200.27	11.00	
4	3013.88	9.00	200.27	2989.58	-298.53	-110.23	0.00	0.00	124.08	
5	3373.88	0.00	0.00	3348.10	-325.00	-120.00	2.50	180.00	135.08	
6	6465.75	0.00	0.00	6439.97	-325.00	-120.00	0.00	0.00	135.08	
7	7606.42	91.25	271.09	7156.00	-311.05	-851.73	8.00	271.09	865.36	
8	11720.88	91.25	271.09	7066.00	-232.66	-4964.46	0.00	0.00	4969.91	Deering 33-8HX_RevA0_BHL Tgt

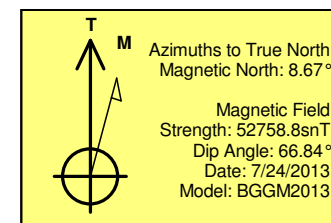
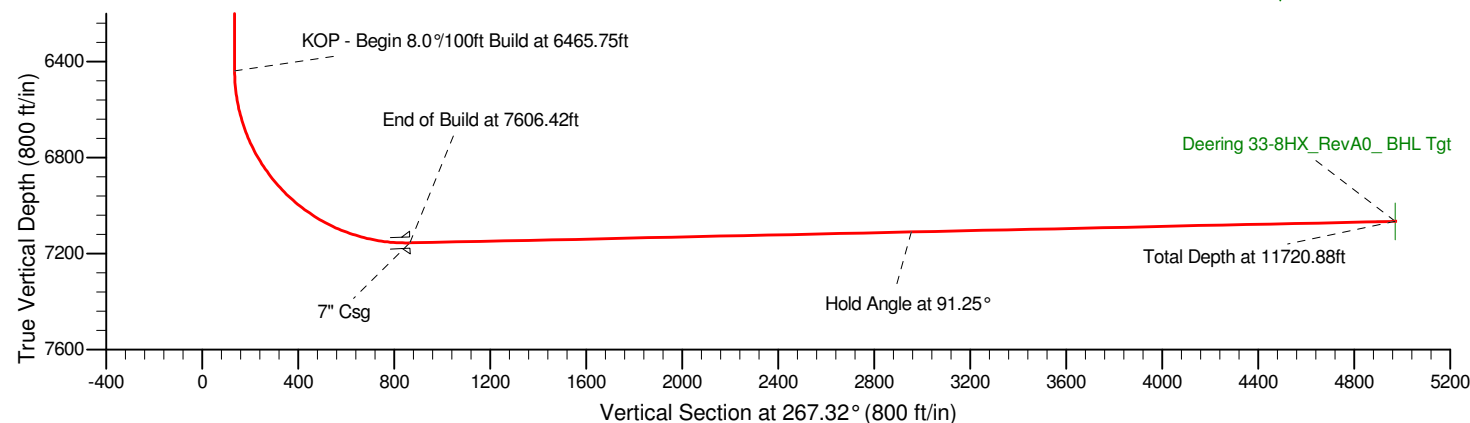
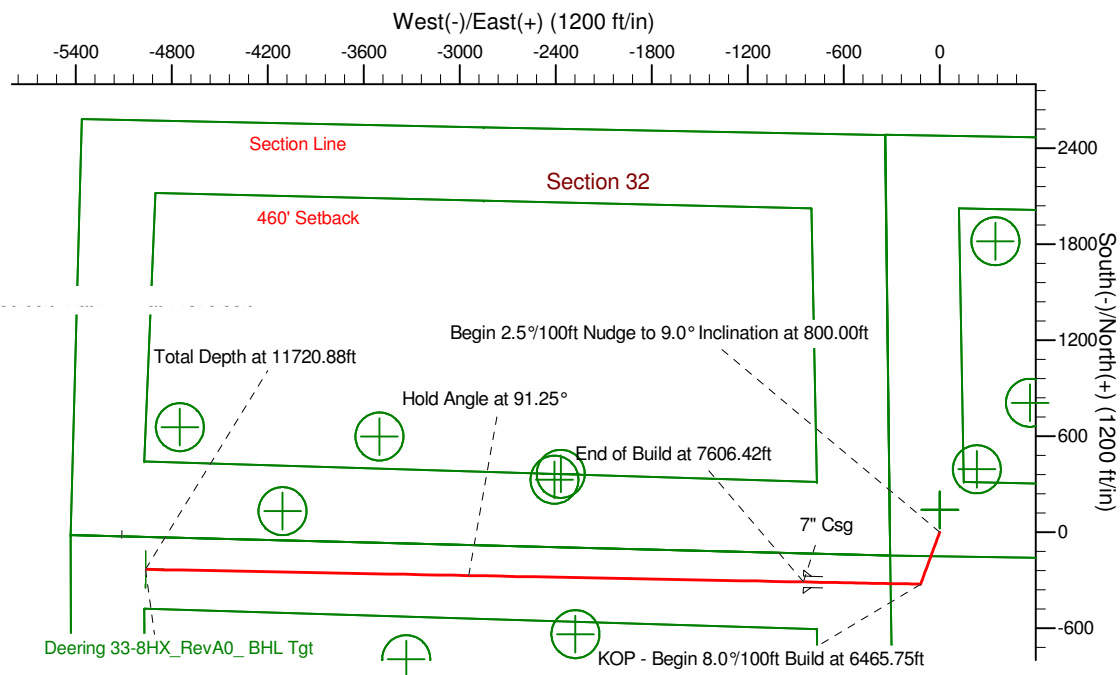
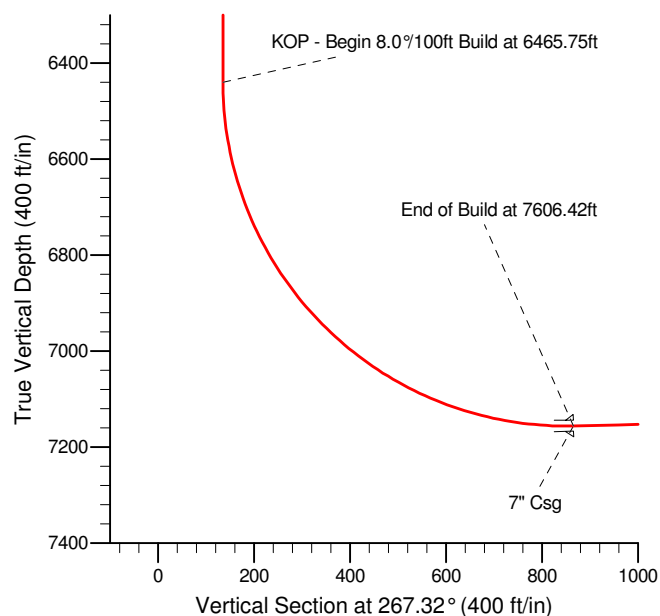
Plan: Rev A0 (Permitting Plan Only) (Deering 33-8HX/Plan A)

Created By: Jay Lantz Date: 14:27, July 25 2013

Approved: _____ Date: _____

WELL DETAILS: Deering 33-8HX

Ground Level: 4902.00
 Northing 1341732.43 Easting 3166345.69 Latitude 40° 16' 11.712 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 33-8HX

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 33-8HX - Plan A - Rev A0 (Permitting Plan Only)

Well Coordinates: 1,341,732.43 N, 3,166,345.69 E (40° 16' 11.71" N, 104° 54' 13.93" W)

Datum Height: GL @ 4902.00ft (Ground Level)

Scan Range: 0.00 to 11,870.88 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 33-8HX - 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 11,870.88 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	3.00	0.00	138.44	0.00	0.00	138.44	137.78	0.00	209.810
200.00	200.00	0.00	0.00	0.34	203.00	200.00	138.44	0.00	0.34	138.44	137.10	0.00	103.520
400.00	400.00	0.00	0.00	0.79	403.00	400.00	138.44	0.00	0.79	138.44	136.20	0.00	61.902
600.00	600.00	0.00	0.00	1.24	600.00	596.97	140.57	-0.47	1.24	140.60	137.47	359.81	44.913
800.00	800.00	0.00	0.00	1.69	784.66	780.92	155.67	-3.83	1.68	156.88	152.86	358.59	39.022
1,000.00	999.75	-8.18	-3.02	2.07	966.76	960.54	184.67	-10.27	2.22	196.93	192.06	357.85	40.399
1,200.00	1,198.03	-32.34	-11.94	2.52	1,137.24	1,126.06	224.36	-19.09	2.91	266.70	260.97	358.40	46.589
1,400.00	1,395.57	-61.69	-22.78	3.09	1,307.53	1,288.46	274.34	-30.20	3.78	352.76	346.14	358.74	53.278
1,600.00	1,593.10	-91.04	-33.61	3.73	1,487.27	1,459.41	328.56	-42.25	4.80	440.47	432.91	358.82	58.279
1,800.00	1,790.64	-120.39	-44.45	4.40	1,667.01	1,630.35	382.78	-54.30	5.86	528.18	519.65	358.88	61.932
2,000.00	1,988.18	-149.74	-55.29	5.10	1,846.76	1,801.30	437.00	-66.34	6.93	615.89	606.36	358.92	64.656
2,200.00	2,185.72	-179.09	-66.13	5.81	2,026.50	1,972.24	491.22	-78.39	8.01	703.59	693.05	358.95	66.750
2,400.00	2,383.25	-208.44	-76.96	6.53	2,206.24	2,143.19	545.44	-90.44	9.10	791.30	779.73	358.98	68.400
2,600.00	2,580.79	-237.79	-87.80	7.26	2,385.98	2,314.13	599.66	-102.49	10.20	879.01	866.40	358.99	69.727
2,800.00	2,778.33	-267.14	-98.64	7.99	2,565.72	2,485.07	653.88	-114.54	11.30	966.72	953.07	359.01	70.814
3,000.00	2,975.87	-296.49	-109.47	8.73	2,745.47	2,656.02	708.11	-126.59	12.41	1,054.43	1,039.72	359.02	71.720
3,200.00	3,174.38	-318.82	-117.72	9.27	2,928.09	2,829.70	763.19	-138.83	13.53	1,135.78	1,119.90	358.88	71.514
3,400.00	3,374.22	-325.00	-120.00	9.61	3,116.43	3,008.82	820.01	-151.46	14.69	1,202.31	1,177.36	358.43	48.181
3,600.00	3,574.22	-325.00	-120.00	9.90	3,306.64	3,189.72	877.39	-164.21	15.86	1,263.14	1,236.69	357.89	47.751
3,800.00	3,774.22	-325.00	-120.00	10.20	3,496.85	3,370.63	934.77	-176.96	17.03	1,324.06	1,296.10	357.41	47.345
4,000.00	3,974.22	-325.00	-120.00	10.51	3,687.06	3,551.53	992.15	-189.71	18.21	1,385.06	1,355.57	356.97	46.962
4,200.00	4,174.22	-325.00	-120.00	10.83	3,877.27	3,732.43	1,049.52	-202.46	19.38	1,446.13	1,415.10	356.57	46.601
4,400.00	4,374.22	-325.00	-120.00	11.16	4,067.48	3,913.33	1,106.90	-215.21	20.56	1,507.26	1,474.68	356.20	46.261
4,600.00	4,574.22	-325.00	-120.00	11.49	4,257.69	4,094.23	1,164.28	-227.96	21.74	1,568.44	1,534.30	355.85	45.941
4,800.00	4,774.22	-325.00	-120.00	11.84	4,447.91	4,275.13	1,221.66	-240.71	22.91	1,629.67	1,593.96	355.54	45.639
5,000.00	4,974.22	-325.00	-120.00	12.19	4,638.12	4,456.04	1,279.04	-253.46	24.09	1,690.94	1,653.65	355.24	45.354
5,200.00	5,174.22	-325.00	-120.00	12.55	4,828.33	4,636.94	1,336.42	-266.22	25.27	1,752.24	1,713.38	354.97	45.086
5,400.00	5,374.22	-325.00	-120.00	12.91	5,198.30	4,991.98	1,437.29	-288.63	27.12	1,811.14	1,769.98	354.53	44.003
5,600.00	5,574.22	-325.00	-120.00	13.28	5,784.29	5,574.22	1,488.44	-300.00	28.29	1,822.35	1,779.62	354.33	42.649
5,800.00	5,774.22	-325.00	-120.00	13.65	5,984.29	5,774.22	1,488.44	-300.00	28.48	1,822.35	1,779.05	354.33	42.094
6,000.00	5,974.22	-325.00	-120.00	14.03	6,184.29	5,974.22	1,488.44	-300.00	28.67	1,822.35	1,778.48	354.33	41.543
6,200.00	6,174.22	-325.00	-120.00	14.41	6,384.29	6,174.22	1,488.44	-300.00	28.86	1,822.35	1,777.90	354.33	40.998
6,400.00	6,374.22	-325.00	-120.00	14.80	6,584.29	6,374.22	1,488.44	-300.00	29.06	1,822.35	1,777.30	354.33	40.459
6,600.00	6,573.43	-324.76	-132.54	15.22	6,832.02	6,619.90	1,488.01	-276.25	29.23	1,819.06	1,786.72	355.47	56.253
6,800.00	6,762.22	-323.54	-196.58	15.82	7,012.76	6,787.00	1,486.81	-208.66	29.22	1,810.56	1,777.20	359.62	54.264
6,860.34	6,814.90	-322.98	-225.96	16.08	7,044.31	6,814.17	1,486.53	-192.64	29.21	1,809.82	1,776.08	1.05	53.645
7,000.00	6,926.03	-321.38	-310.16	16.76	7,086.60	6,849.45	1,486.11	-169.32	29.19	1,814.58	1,780.08	4.46	52.588
7,200.00	7,052.19	-318.43	-464.48	18.43	7,100.00	6,860.33	1,485.97	-161.50	29.19	1,839.70	1,803.33	9.53	50.579
7,400.00	7,130.91	-314.94	-647.60	21.08	7,071.12	6,836.70	1,486.27	-178.10	29.20	1,884.51	1,845.26	14.61	48.013
7,600.00	7,156.11	-311.17	-845.31	24.54	7,026.10	6,798.58	1,486.69	-202.03	29.22	1,942.67	1,900.12	19.69	45.654
7,800.00	7,151.76	-307.36	-1,045.23	27.01	6,979.15	6,757.30	1,487.09	-224.38	29.23	2,012.33	1,967.51	24.58	44.900
8,000.00	7,147.39	-303.55	-1,245.15	29.59	6,950.00	6,730.97	1,487.31	-236.88	29.24	2,096.95	2,049.66	29.38	44.343
8,200.00	7,143.01	-299.74	-1,445.06	32.76	6,900.00	6,684.70	1,487.65	-255.80	29.24	2,195.26	2,145.03	33.64	43.704
8,400.00	7,138.64	-295.93	-1,644.98	36.38	6,900.00	6,684.70	1,487.65	-255.80	29.24	2,305.87	2,252.06	37.91	42.855
8,600.00	7,134.26	-292.12	-1,844.89	40.33	6,850.00	6,637.22	1,487.93	-271.44	29.24	2,427.22	2,369.82	41.47	42.292
8,800.00	7,129.89	-288.31	-2,044.81	44.53	6,850.00	6,637.22	1,487.93	-271.44	29.24	2,557.85	2,496.37	44.95	41.605
9,000.00	7,125.51	-284.50	-2,244.72	48.90	6,830.50	6,618.42	1,488.02	-276.64	29.23	2,696.73	2,631.14	47.99	41.119
9,200.00	7,121.14	-280.69	-2,444.64	53.41	6,800.00	6,588.77	1,488.15	-283.73	29.22	2,842.84	2,773.15	50.70	40.795
9,400.00	7,116.76	-276.88	-2,644.56	58.02	6,800.00	6,588.77	1,488.15	-283.73	29.22	2,994.59	2,920.46	53.22	40.397
9,600.00	7,112.39	-273.07	-2,844.47	62.72	6,800.00	6,588.77	1,488.15	-283.73	29.22	3,151.74	3,073.09	55.48	40.076

Anticollision Report for Deering 33-8HX - 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 11,870.88 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	7,108.02	-269.26	-3,044.39	67.48	6,800.00	6,588.77	1,488.15	-283.73	29.22	3,313.50	3,230.29	57.52	39.817
10,000.00	7,103.64	-265.44	-3,244.30	72.29	6,777.18	6,566.39	1,488.23	-288.21	29.21	3,478.86	3,391.29	59.32	39.727
10,200.00	7,099.27	-261.63	-3,444.22	77.14	6,750.00	6,539.57	1,488.30	-292.61	29.20	3,648.04	3,556.18	60.96	39.713
10,400.00	7,094.89	-257.82	-3,644.14	82.03	6,750.00	6,539.57	1,488.30	-292.61	29.20	3,819.69	3,723.18	62.48	39.577
10,600.00	7,090.52	-254.01	-3,844.05	86.94	6,750.00	6,539.57	1,488.30	-292.61	29.20	3,993.99	3,892.79	63.87	39.469
10,800.00	7,086.14	-250.20	-4,043.97	91.88	6,750.00	6,539.57	1,488.30	-292.61	29.20	4,170.59	4,064.69	65.14	39.384
11,000.00	7,081.77	-246.39	-4,243.88	96.83	6,750.00	6,539.57	1,488.30	-292.61	29.20	4,349.22	4,238.60	66.30	39.319
11,200.00	7,077.39	-242.58	-4,443.80	101.81	6,750.00	6,539.57	1,488.30	-292.61	29.20	4,529.63	4,414.28	67.37	39.269
11,400.00	7,073.02	-238.77	-4,643.71	106.80	6,750.00	6,539.57	1,488.30	-292.61	29.20	4,711.63	4,591.53	68.35	39.232
11,600.00	7,068.64	-234.96	-4,843.63	111.80	6,750.00	6,539.57	1,488.30	-292.61	29.20	4,895.03	4,770.17	69.26	39.206
11,800.00	7,064.27	-231.15	-5,043.55	116.81	6,750.00	6,539.57	1,488.30	-292.61	29.20	5,079.69	4,950.06	70.10	39.188
11,870.88	7,062.72	-229.80	-5,114.40	118.59	6,728.20	6,517.95	1,488.35	-295.41	29.19	5,145.05	5,014.16	70.38	39.309

Anticollision Report for Deering 33-8HX - 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 11,870.88 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	179.99	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	179.99	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	179.99	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	179.99	6.984
800.00	800.00	0.00	0.00	1.69	797.66	797.42	-30.17	-1.84	1.62	30.33	26.37	183.50	7.654
1,000.00	999.75	-8.18	-3.02	2.07	993.63	991.70	-54.77	-7.31	2.08	47.47	42.74	185.26	10.042
1,200.00	1,198.03	-32.34	-11.94	2.52	1,191.13	1,185.20	-93.30	-15.87	2.75	62.42	56.87	183.69	11.254
1,400.00	1,395.57	-61.69	-22.78	3.09	1,390.80	1,380.50	-133.82	-24.88	3.54	73.72	67.24	181.67	11.378
1,600.00	1,593.10	-91.04	-33.61	3.73	1,590.46	1,575.81	-174.34	-33.88	4.38	85.08	77.61	180.19	11.392
1,800.00	1,790.64	-120.39	-44.45	4.40	1,790.13	1,771.11	-214.87	-42.89	5.25	96.49	87.99	179.05	11.350
2,000.00	1,988.18	-149.74	-55.29	5.10	1,989.80	1,966.41	-255.39	-51.89	6.13	107.92	98.36	178.16	11.287
2,200.00	2,185.72	-179.09	-66.13	5.81	2,189.46	2,161.72	-295.92	-60.90	7.02	119.38	108.74	177.44	11.217
2,400.00	2,383.25	-208.44	-76.96	6.53	2,389.13	2,357.02	-336.44	-69.91	7.91	130.85	119.11	176.84	11.147
2,600.00	2,580.79	-237.79	-87.80	7.26	2,588.80	2,552.32	-376.97	-78.91	8.81	142.33	129.48	176.35	11.079
2,800.00	2,778.33	-267.14	-98.64	7.99	2,788.46	2,747.63	-417.49	-87.92	9.71	153.82	139.86	175.92	11.015
3,000.00	2,975.87	-296.49	-109.47	8.73	2,988.13	2,942.93	-458.01	-96.92	10.61	165.32	150.23	175.56	10.956
3,200.00	3,174.38	-318.82	-117.72	9.27	3,187.21	3,137.66	-498.42	-105.90	11.51	183.70	167.66	176.24	11.449
3,400.00	3,374.22	-325.00	-120.00	9.61	3,396.61	3,343.27	-536.95	-114.46	12.27	214.27	192.27	178.50	9.739
3,600.00	3,574.22	-325.00	-120.00	9.90	3,616.60	3,562.05	-558.67	-119.29	12.75	233.99	211.15	179.83	10.245
3,800.00	3,774.22	-325.00	-120.00	10.20	3,828.83	3,774.22	-561.85	-120.00	13.03	236.85	213.41	180.00	10.104
4,000.00	3,974.22	-325.00	-120.00	10.51	4,028.83	3,974.22	-561.85	-120.00	13.26	236.85	212.86	180.00	9.872
4,200.00	4,174.22	-325.00	-120.00	10.83	4,228.83	4,174.22	-561.85	-120.00	13.50	236.85	212.29	180.00	9.643
4,400.00	4,374.22	-325.00	-120.00	11.16	4,428.83	4,374.22	-561.85	-120.00	13.76	236.85	211.70	180.00	9.417
4,600.00	4,574.22	-325.00	-120.00	11.49	4,628.83	4,574.22	-561.85	-120.00	14.02	236.85	211.09	180.00	9.194
4,800.00	4,774.22	-325.00	-120.00	11.84	4,828.83	4,774.22	-561.85	-120.00	14.29	236.85	210.47	180.00	8.977
5,000.00	4,974.22	-325.00	-120.00	12.19	5,028.83	4,974.22	-561.85	-120.00	14.57	236.85	209.83	180.00	8.764
5,200.00	5,174.22	-325.00	-120.00	12.55	5,228.83	5,174.22	-561.85	-120.00	14.86	236.85	209.17	180.00	8.557
5,400.00	5,374.22	-325.00	-120.00	12.91	5,428.83	5,374.22	-561.85	-120.00	15.15	236.85	208.50	180.00	8.355
5,600.00	5,574.22	-325.00	-120.00	13.28	5,628.83	5,574.22	-561.85	-120.00	15.46	236.85	207.82	180.00	8.160
5,800.00	5,774.22	-325.00	-120.00	13.65	5,828.83	5,774.22	-561.85	-120.00	15.77	236.85	207.13	180.00	7.970
6,000.00	5,974.22	-325.00	-120.00	14.03	6,028.83	5,974.22	-561.85	-120.00	16.09	236.85	206.43	180.00	7.786
6,200.00	6,174.22	-325.00	-120.00	14.41	6,228.83	6,174.22	-561.85	-120.00	16.41	236.85	205.72	180.00	7.607
6,400.00	6,374.22	-325.00	-120.00	14.80	6,428.83	6,374.22	-561.85	-120.00	16.74	236.85	205.00	180.00	7.435
6,600.00	6,573.43	-324.76	-132.54	15.22	6,630.49	6,575.06	-561.37	-132.84	17.11	236.62	207.40	180.07	8.099
6,800.00	6,762.22	-323.54	-196.58	15.82	6,832.83	6,765.78	-558.94	-198.34	17.62	235.44	204.96	180.43	7.724
7,000.00	6,926.03	-321.38	-310.16	16.76	7,034.83	6,930.42	-554.64	-314.14	18.40	233.34	200.76	180.98	7.161
7,200.00	7,052.19	-318.43	-464.48	18.43	7,236.35	7,056.05	-548.83	-470.74	19.77	230.52	194.26	181.56	6.359
7,400.00	7,130.91	-314.94	-647.60	21.08	7,437.26	7,133.08	-541.97	-655.46	22.11	227.18	185.31	181.98	5.427
7,600.00	7,156.11	-311.17	-845.31	24.54	7,637.50	7,155.95	-534.62	-853.60	25.26	223.60	174.80	182.12	4.582
7,800.00	7,151.76	-307.36	-1,045.23	27.01	7,837.47	7,151.58	-527.20	-1,053.39	27.32	219.99	166.58	182.12	4.119
8,000.00	7,147.39	-303.55	-1,245.15	29.59	8,037.44	7,147.20	-519.79	-1,253.17	30.03	216.38	157.46	182.12	3.672
8,200.00	7,143.01	-299.74	-1,445.06	32.76	8,237.41	7,142.83	-512.37	-1,452.95	33.30	212.78	147.18	182.12	3.244
8,400.00	7,138.64	-295.93	-1,644.98	36.38	8,437.37	7,138.46	-504.96	-1,652.73	37.00	209.17	136.05	182.12	2.861
8,600.00	7,134.26	-292.12	-1,844.89	40.33	8,637.34	7,134.09	-497.54	-1,852.51	41.01	205.56	124.32	182.12	2.530
8,800.00	7,129.89	-288.31	-2,044.81	44.53	8,837.31	7,129.72	-490.12	-2,052.30	45.26	201.95	112.14	182.12	2.249
9,000.00	7,125.51	-284.50	-2,244.72	48.90	9,037.27	7,125.35	-482.71	-2,252.08	49.68	198.34	99.64	182.12	2.009
9,200.00	7,121.14	-280.69	-2,444.64	53.41	9,237.24	7,120.98	-475.29	-2,451.86	54.23	194.74	86.89	182.12	1.806
9,400.00	7,116.76	-276.88	-2,644.56	58.02	9,437.21	7,116.61	-467.87	-2,651.64	58.88	191.13	73.96	182.12	1.631
9,600.00	7,112.39	-273.07	-2,844.47	62.72	9,637.18	7,112.23	-460.46	-2,851.42	63.60	187.52	60.88	182.12	1.481
9,800.00	7,108.02	-269.26	-3,044.39	67.48	9,837.14	7,107.86	-453.04	-3,051.21	68.39	183.91	47.69	182.12	1.350
10,000.00	7,103.64	-265.44	-3,244.30	72.29	10,037.11	7,103.49	-445.63	-3,250.99	73.22	180.31	34.40	182.12	1.236
10,200.00	7,099.27	-261.63	-3,444.22	77.14	10,237.08	7,099.12	-438.21	-3,450.77	78.10	176.70	21.04	182.12	1.135

Anticollision Report for Deering 33-8HX - 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 11,870.88 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	7,094.89	-257.82	-3,644.14	82.03	10,437.05	7,094.75	-430.79	-3,650.55	83.00	173.09	7.61	182.12	1.046
10,600.00	7,090.52	-254.01	-3,844.05	86.94	10,637.01	7,090.38	-423.38	-3,850.34	87.93	169.48	< 0	182.12	0.967
10,800.00	7,086.14	-250.20	-4,043.97	91.88	10,836.98	7,086.01	-415.96	-4,050.12	92.89	165.87	< 0	182.12	0.895
11,000.00	7,081.77	-246.39	-4,243.88	96.83	11,036.95	7,081.64	-408.55	-4,249.90	97.86	162.27	< 0	182.12	0.831
11,200.00	7,077.39	-242.58	-4,443.80	101.81	11,236.92	7,077.26	-401.13	-4,449.68	102.85	158.66	< 0	182.12	0.773
11,400.00	7,073.02	-238.77	-4,643.71	106.80	11,436.88	7,072.89	-393.71	-4,649.46	107.85	155.05	< 0	182.12	0.721
11,600.00	7,068.64	-234.96	-4,843.63	111.80	11,636.85	7,068.52	-386.30	-4,849.25	112.87	151.44	< 0	182.12	0.672
11,800.00	7,064.27	-231.15	-5,043.55	116.81	11,836.82	7,064.15	-378.88	-5,049.03	117.89	147.84	< 0	182.12	0.628
11,859.89	7,062.96	-230.01	-5,103.41	118.32	11,896.70	7,062.84	-376.66	-5,108.85	119.40	146.76	< 0	182.12	0.616
11,870.88	7,062.72	-229.80	-5,114.40	118.59	11,902.21	7,062.72	-376.46	-5,114.35	119.54	146.66	< 0	179.98	0.614

Anticollision Report for Deering 33-8HX - 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 11,870.88 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
800.00	800.00	0.00	0.00	1.69	802.00	800.00	58.29	0.00	1.69	58.29	54.26	0.00	14.457
1,000.00	999.75	-8.18	-3.02	2.07	1,001.75	999.75	58.29	0.00	2.14	66.54	61.69	2.60	13.700
1,200.00	1,198.03	-32.34	-11.94	2.52	1,200.00	1,198.00	58.29	0.00	2.58	91.42	85.74	7.51	16.104
1,400.00	1,395.57	-61.69	-22.78	3.09	1,393.99	1,391.76	62.17	-7.23	3.01	124.89	118.36	7.16	19.127
1,600.00	1,593.10	-91.04	-33.61	3.73	1,586.59	1,582.91	73.22	-27.82	3.47	164.68	157.21	2.02	22.053
1,800.00	1,790.64	-120.39	-44.45	4.40	1,781.60	1,776.02	86.06	-51.73	4.00	207.09	198.61	357.98	24.419
2,000.00	1,988.18	-149.74	-55.29	5.10	1,976.62	1,969.13	98.89	-75.65	4.57	250.19	240.65	355.32	26.226
2,200.00	2,185.72	-179.09	-66.13	5.81	2,171.63	2,162.25	111.73	-99.56	5.16	293.67	283.04	353.44	27.633
2,400.00	2,383.25	-208.44	-76.96	6.53	2,366.64	2,355.36	124.56	-123.47	5.78	337.39	325.65	352.05	28.747
2,600.00	2,580.79	-237.79	-87.80	7.26	2,561.66	2,548.48	137.39	-147.39	6.40	381.26	368.40	350.98	29.648
2,800.00	2,778.33	-267.14	-98.64	7.99	2,756.67	2,741.59	150.23	-171.30	7.03	425.24	411.24	350.12	30.388
3,000.00	2,975.87	-296.49	-109.47	8.73	2,951.68	2,934.71	163.06	-195.22	7.67	469.29	454.16	349.43	31.005
3,200.00	3,174.38	-318.82	-117.72	9.27	3,147.81	3,128.93	175.97	-219.27	8.32	507.14	490.88	348.40	31.195
3,400.00	3,374.22	-325.00	-120.00	9.61	3,345.57	3,324.76	188.98	-243.52	8.98	530.93	512.97	346.49	29.567
3,600.00	3,574.22	-325.00	-120.00	9.90	3,543.62	3,520.89	202.02	-267.81	9.64	549.94	531.10	344.33	29.191
3,800.00	3,774.22	-325.00	-120.00	10.20	3,762.51	3,738.01	215.03	-292.05	10.27	567.93	548.19	342.33	28.763
4,000.00	3,974.22	-325.00	-120.00	10.51	3,998.98	3,974.22	219.29	-300.00	10.70	573.28	552.76	341.70	27.938
4,200.00	4,174.22	-325.00	-120.00	10.83	4,198.98	4,174.22	219.29	-300.00	11.06	573.28	552.04	341.70	26.985
4,400.00	4,374.22	-325.00	-120.00	11.16	4,398.98	4,374.22	219.29	-300.00	11.42	573.28	551.30	341.70	26.079
4,600.00	4,574.22	-325.00	-120.00	11.49	4,598.98	4,574.22	219.29	-300.00	11.79	573.28	550.55	341.70	25.219
4,800.00	4,774.22	-325.00	-120.00	11.84	4,798.98	4,774.22	219.29	-300.00	12.17	573.28	549.79	341.70	24.402
5,000.00	4,974.22	-325.00	-120.00	12.19	4,998.98	4,974.22	219.29	-300.00	12.55	573.28	549.02	341.70	23.627
5,200.00	5,174.22	-325.00	-120.00	12.55	5,198.98	5,174.22	219.29	-300.00	12.93	573.28	548.24	341.70	22.892
5,400.00	5,374.22	-325.00	-120.00	12.91	5,398.98	5,374.22	219.29	-300.00	13.32	573.28	547.45	341.70	22.194
5,600.00	5,574.22	-325.00	-120.00	13.28	5,598.98	5,574.22	219.29	-300.00	13.72	573.28	546.66	341.70	21.531
5,800.00	5,774.22	-325.00	-120.00	13.65	5,798.98	5,774.22	219.29	-300.00	14.11	573.28	545.86	341.70	20.902
6,000.00	5,974.22	-325.00	-120.00	14.03	5,998.98	5,974.22	219.29	-300.00	14.51	573.28	545.05	341.70	20.304
6,200.00	6,174.22	-325.00	-120.00	14.41	6,198.98	6,174.22	219.29	-300.00	14.92	573.28	544.24	341.70	19.736
6,400.00	6,374.22	-325.00	-120.00	14.80	6,398.98	6,374.22	219.29	-300.00	15.32	573.28	543.42	341.70	19.195
6,600.00	6,573.43	-324.76	-132.54	15.22	6,636.08	6,609.63	219.29	-279.13	15.66	564.62	534.35	344.92	18.657
6,800.00	6,762.22	-323.54	-196.58	15.82	6,811.32	6,772.95	219.29	-216.83	15.74	543.31	512.27	357.86	17.504
6,834.49	6,792.63	-323.23	-212.83	15.96	6,830.45	6,789.74	219.29	-207.66	15.75	542.55	511.32	0.55	17.374
7,000.00	6,926.03	-321.38	-310.16	16.76	6,886.49	6,837.43	219.29	-178.26	15.78	563.53	531.43	13.71	17.559
7,200.00	7,052.19	-318.43	-464.48	18.43	6,900.00	6,848.57	219.29	-170.62	15.78	645.72	611.71	28.66	18.983
7,400.00	7,130.91	-314.94	-647.60	21.08	6,876.25	6,828.89	219.29	-183.91	15.77	769.17	733.74	40.96	21.707
7,600.00	7,156.11	-311.17	-845.31	24.54	6,833.39	6,792.30	219.29	-206.21	15.75	906.75	873.13	50.31	26.968
7,800.00	7,151.76	-307.36	-1,045.23	27.01	6,800.00	6,762.91	219.29	-222.05	15.74	1,051.76	1,017.10	57.39	30.343
8,000.00	7,147.39	-303.55	-1,245.15	29.59	6,750.00	6,717.59	219.29	-243.16	15.72	1,209.16	1,173.70	62.44	34.101
8,200.00	7,143.01	-299.74	-1,445.06	32.76	6,722.08	6,691.68	219.29	-253.56	15.71	1,375.78	1,338.57	66.46	36.970
8,400.00	7,138.64	-295.93	-1,644.98	36.38	6,700.00	6,670.92	219.29	-261.06	15.70	1,549.01	1,509.62	69.58	39.324
8,600.00	7,134.26	-292.12	-1,844.89	40.33	6,676.70	6,648.76	219.29	-268.28	15.69	1,727.13	1,685.44	72.03	41.434
8,800.00	7,129.89	-288.31	-2,044.81	44.53	6,650.00	6,623.11	219.29	-275.66	15.67	1,909.03	1,865.09	73.99	43.453
9,000.00	7,125.51	-284.50	-2,244.72	48.90	6,650.00	6,623.11	219.29	-275.66	15.67	2,093.67	2,046.48	75.65	44.369
9,200.00	7,121.14	-280.69	-2,444.64	53.41	6,630.63	6,604.33	219.29	-280.41	15.66	2,280.56	2,230.80	76.99	45.826
9,400.00	7,116.76	-276.88	-2,644.56	58.02	6,600.00	6,574.40	219.29	-286.89	15.64	2,469.61	2,417.74	78.12	47.616
9,600.00	7,112.39	-273.07	-2,844.47	62.72	6,600.00	6,574.40	219.29	-286.89	15.64	2,659.53	2,604.32	79.10	48.168
9,800.00	7,108.02	-269.26	-3,044.39	67.48	6,600.00	6,574.40	219.29	-286.89	15.64	2,850.83	2,792.23	79.95	48.646

Anticollision Report for Deering 33-8HX - 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 11,870.88 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	7,103.64	-265.44	-3,244.30	72.29	6,600.00	6,574.40	219.29	-286.89	15.64	3,043.25	2,981.23	80.69	49.063
10,200.00	7,099.27	-261.63	-3,444.22	77.14	6,600.00	6,574.40	219.29	-286.89	15.64	3,236.59	3,171.12	81.34	49.431
10,400.00	7,094.89	-257.82	-3,644.14	82.03	6,577.62	6,552.37	219.29	-290.80	15.61	3,430.28	3,362.52	81.90	50.627
10,600.00	7,090.52	-254.01	-3,844.05	86.94	6,571.60	6,546.42	219.29	-291.74	15.61	3,624.77	3,553.91	82.41	51.156
10,800.00	7,086.14	-250.20	-4,043.97	91.88	6,550.00	6,525.02	219.29	-294.69	15.58	3,820.00	3,746.94	82.86	52.285
11,000.00	7,081.77	-246.39	-4,243.88	96.83	6,550.00	6,525.02	219.29	-294.69	15.58	4,015.34	3,938.89	83.27	52.522
11,200.00	7,077.39	-242.58	-4,443.80	101.81	6,550.00	6,525.02	219.29	-294.69	15.58	4,211.12	4,131.27	83.65	52.736
11,400.00	7,073.02	-238.77	-4,643.71	106.80	6,550.00	6,525.02	219.29	-294.69	15.58	4,407.28	4,324.02	83.99	52.932
11,600.00	7,068.64	-234.96	-4,843.63	111.80	6,550.00	6,525.02	219.29	-294.69	15.58	4,603.77	4,517.09	84.30	53.111
11,800.00	7,064.27	-231.15	-5,043.55	116.81	6,550.00	6,525.02	219.29	-294.69	15.58	4,800.56	4,710.45	84.58	53.276
11,870.88	7,062.72	-229.80	-5,114.40	118.59	6,550.00	6,525.02	219.29	-294.69	15.58	4,870.36	4,779.04	84.68	53.331

Anticollision Report for Deering 33-8HX - 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 11,870.88 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	120.22	0.00	0.00	120.22	119.56	0.00	182.510
200.00	200.00	0.00	0.00	0.34	202.00	200.00	120.22	0.00	0.34	120.22	118.88	0.00	90.048
400.00	400.00	0.00	0.00	0.79	402.00	400.00	120.22	0.00	0.79	120.22	117.98	0.00	53.810
532.66	532.66	0.00	0.00	1.08	534.66	532.66	120.22	0.00	1.09	120.22	117.39	0.00	42.473
600.00	600.00	0.00	0.00	1.24	600.00	598.00	120.22	0.00	1.24	120.23	117.11	0.00	38.430
800.00	800.00	0.00	0.00	1.69	791.77	789.55	128.00	-1.95	1.68	128.44	124.42	359.13	31.957
1,000.00	999.75	-8.18	-3.02	2.07	977.69	973.99	150.34	-7.53	2.15	160.67	155.80	358.37	33.027
1,200.00	1,198.03	-32.34	-11.94	2.52	1,153.29	1,145.94	184.70	-16.12	2.74	223.24	217.53	358.90	39.077
1,400.00	1,395.57	-61.69	-22.78	3.09	1,332.97	1,319.61	229.37	-27.29	3.52	300.84	294.23	359.11	45.532
1,600.00	1,593.10	-91.04	-33.61	3.73	1,517.09	1,497.46	275.60	-38.85	4.39	378.94	371.41	359.18	50.269
1,800.00	1,790.64	-120.39	-44.45	4.40	1,701.21	1,675.30	321.83	-50.40	5.30	457.05	448.55	359.23	53.760
2,000.00	1,988.18	-149.74	-55.29	5.10	1,885.33	1,853.14	368.06	-61.96	6.23	535.16	525.67	359.26	56.390
2,200.00	2,185.72	-179.09	-66.13	5.81	2,069.44	2,030.99	414.29	-73.52	7.18	613.27	602.77	359.29	58.434
2,400.00	2,383.25	-208.44	-76.96	6.53	2,253.56	2,208.83	460.52	-85.08	8.13	691.37	679.86	359.31	60.058
2,600.00	2,580.79	-237.79	-87.80	7.26	2,437.68	2,386.68	506.75	-96.63	9.09	769.48	756.94	359.32	61.375
2,800.00	2,778.33	-267.14	-98.64	7.99	2,621.80	2,564.52	552.98	-108.19	10.05	847.59	834.02	359.33	62.462
3,000.00	2,975.87	-296.49	-109.47	8.73	2,805.91	2,742.36	599.21	-119.75	11.02	925.70	911.09	359.34	63.373
3,200.00	3,174.38	-318.82	-117.72	9.27	2,992.58	2,922.67	646.08	-131.47	12.00	997.28	981.54	359.18	63.367
3,400.00	3,374.22	-325.00	-120.00	9.61	3,184.19	3,107.75	694.19	-143.50	13.01	1,053.71	1,030.54	358.68	45.481
3,600.00	3,574.22	-325.00	-120.00	9.90	3,377.38	3,294.36	742.70	-155.62	14.03	1,104.34	1,079.84	358.09	45.071
3,800.00	3,774.22	-325.00	-120.00	10.20	3,570.56	3,480.96	791.21	-167.75	15.05	1,155.07	1,129.22	357.55	44.680
4,000.00	3,974.22	-325.00	-120.00	10.51	3,763.75	3,667.56	839.71	-179.88	16.08	1,205.89	1,178.68	357.06	44.309
4,200.00	4,174.22	-325.00	-120.00	10.83	3,956.93	3,854.16	888.22	-192.00	17.10	1,256.79	1,228.20	356.60	43.958
4,400.00	4,374.22	-325.00	-120.00	11.16	4,150.12	4,040.77	936.73	-204.13	18.12	1,307.75	1,277.78	356.19	43.625
4,600.00	4,574.22	-325.00	-120.00	11.49	4,343.30	4,227.37	985.23	-216.26	19.15	1,358.78	1,327.41	355.80	43.309
4,800.00	4,774.22	-325.00	-120.00	11.84	4,536.49	4,413.97	1,033.74	-228.38	20.17	1,409.86	1,377.08	355.44	43.011
5,000.00	4,974.22	-325.00	-120.00	12.19	4,729.68	4,600.57	1,082.25	-240.51	21.20	1,460.99	1,426.79	355.11	42.729
5,200.00	5,174.22	-325.00	-120.00	12.55	4,922.86	4,787.18	1,130.75	-252.64	22.22	1,512.16	1,476.54	354.79	42.462
5,400.00	5,374.22	-325.00	-120.00	12.91	5,116.05	4,973.78	1,179.26	-264.76	23.25	1,563.37	1,526.33	354.50	42.209
5,600.00	5,574.22	-325.00	-120.00	13.28	5,309.23	5,160.38	1,227.77	-276.89	24.27	1,614.61	1,576.14	354.23	41.969
5,800.00	5,774.22	-325.00	-120.00	13.65	5,822.92	5,665.09	1,315.28	-298.77	25.96	1,653.60	1,613.01	353.78	40.738
6,000.00	5,974.22	-325.00	-120.00	14.03	6,132.16	5,974.22	1,320.22	-300.00	26.33	1,655.04	1,613.69	353.76	40.027
6,200.00	6,174.22	-325.00	-120.00	14.41	6,332.16	6,174.22	1,320.22	-300.00	26.54	1,655.04	1,613.08	353.76	39.452
6,400.00	6,374.22	-325.00	-120.00	14.80	6,532.16	6,374.22	1,320.22	-300.00	26.76	1,655.04	1,612.47	353.76	38.884
6,600.00	6,573.43	-324.76	-132.54	15.22	6,776.44	6,616.59	1,319.90	-277.37	26.95	1,651.59	1,619.64	354.97	51.681
6,800.00	6,762.22	-323.54	-196.58	15.82	6,955.80	6,782.90	1,318.99	-211.48	26.94	1,642.73	1,609.75	359.48	49.805
6,855.99	6,811.18	-323.02	-223.69	16.06	6,985.46	6,808.59	1,318.79	-196.67	26.93	1,642.03	1,608.70	0.94	49.265
7,000.00	6,926.03	-321.38	-310.16	16.76	7,030.25	6,846.17	1,318.45	-172.30	26.92	1,647.55	1,613.42	4.81	48.276
7,200.00	7,052.19	-318.43	-464.48	18.43	7,040.90	6,854.88	1,318.36	-166.17	26.91	1,675.42	1,639.43	10.33	46.548
7,400.00	7,130.91	-314.94	-647.60	21.08	7,016.51	6,834.80	1,318.56	-180.03	26.92	1,724.71	1,685.89	15.97	44.434
7,600.00	7,156.11	-311.17	-845.31	24.54	6,972.17	6,797.15	1,318.88	-203.44	26.94	1,788.28	1,746.34	21.49	42.644
7,800.00	7,151.76	-307.36	-1,045.23	27.01	6,925.74	6,756.26	1,319.18	-225.40	26.95	1,863.92	1,819.78	26.75	42.227
8,000.00	7,147.39	-303.55	-1,245.15	29.59	6,900.00	6,733.00	1,319.34	-236.42	26.96	1,955.25	1,908.67	31.86	41.973
8,200.00	7,143.01	-299.74	-1,445.06	32.76	6,850.00	6,686.76	1,319.60	-255.41	26.96	2,060.51	2,011.06	36.30	41.670
8,400.00	7,138.64	-295.93	-1,644.98	36.38	6,833.01	6,670.76	1,319.68	-261.12	26.96	2,178.11	2,125.22	40.58	41.182
8,600.00	7,134.26	-292.12	-1,844.89	40.33	6,800.00	6,639.31	1,319.82	-271.13	26.96	2,306.53	2,250.04	44.31	40.829
8,800.00	7,129.89	-288.31	-2,044.81	44.53	6,800.00	6,639.31	1,319.82	-271.13	26.96	2,443.91	2,383.36	47.80	40.361
9,000.00	7,125.51	-284.50	-2,244.72	48.90	6,778.49	6,618.57	1,319.90	-276.86	26.95	2,589.12	2,524.55	50.81	40.097
9,200.00	7,121.14	-280.69	-2,444.64	53.41	6,750.00	6,590.87	1,319.99	-283.49	26.94	2,741.15	2,672.55	53.47	39.956
9,400.00	7,116.76	-276.88	-2,644.56	58.02	6,750.00	6,590.87	1,319.99	-283.49	26.94	2,898.48	2,825.47	55.93	39.700
9,600.00	7,112.39	-273.07	-2,844.47	62.72	6,750.00	6,590.87	1,319.99	-283.49	26.94	3,060.79	2,983.30	58.12	39.501
9,800.00	7,108.02	-269.26	-3,044.39	67.48	6,750.00	6,590.87	1,319.99	-283.49	26.94	3,227.33	3,145.31	60.07	39.347

Anticollision Report for Deering 33-8HX - 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 11,870.88 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	7,103.64	-265.44	-3,244.30	72.29	6,725.53	6,566.88	1,320.06	-288.31	26.93	3,397.03	3,310.78	61.79	39.383
10,200.00	7,099.27	-261.63	-3,444.22	77.14	6,700.00	6,541.69	1,320.11	-292.45	26.92	3,570.22	3,479.76	63.35	39.468
10,400.00	7,094.89	-257.82	-3,644.14	82.03	6,700.00	6,541.69	1,320.11	-292.45	26.92	3,745.62	3,650.55	64.79	39.400
10,600.00	7,090.52	-254.01	-3,844.05	86.94	6,700.00	6,541.69	1,320.11	-292.45	26.92	3,923.38	3,823.68	66.10	39.351
10,800.00	7,086.14	-250.20	-4,043.97	91.88	6,700.00	6,541.69	1,320.11	-292.45	26.92	4,103.19	3,998.83	67.29	39.319
11,000.00	7,081.77	-246.39	-4,243.88	96.83	6,700.00	6,541.69	1,320.11	-292.45	26.92	4,284.79	4,175.76	68.37	39.299
11,200.00	7,077.39	-242.58	-4,443.80	101.81	6,700.00	6,541.69	1,320.11	-292.45	26.92	4,467.96	4,354.24	69.37	39.290
11,400.00	7,073.02	-238.77	-4,643.71	106.80	6,700.00	6,541.69	1,320.11	-292.45	26.92	4,652.52	4,534.10	70.29	39.289
11,600.00	7,068.64	-234.96	-4,843.63	111.80	6,700.00	6,541.69	1,320.11	-292.45	26.92	4,838.30	4,715.17	71.14	39.294
11,800.00	7,064.27	-231.15	-5,043.55	116.81	6,678.05	6,519.93	1,320.15	-295.30	26.90	5,024.81	4,897.46	71.91	39.457
11,870.88	7,062.72	-229.80	-5,114.40	118.59	6,676.80	6,518.69	1,320.15	-295.44	26.90	5,091.24	4,962.25	72.17	39.471

Anticollision Report for Deering 33-8HX - 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 11,870.88 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	18.21	0.00	0.00	18.21	17.55	0.01	27.742
200.00	200.00	0.00	0.00	0.34	200.00	200.00	18.21	0.00	0.34	18.21	16.88	0.01	13.687
400.00	400.00	0.00	0.00	0.79	400.00	400.00	18.21	0.00	0.79	18.21	15.98	0.01	8.168
600.00	600.00	0.00	0.00	1.24	600.00	600.00	18.21	0.00	1.24	18.21	15.08	0.01	5.821
800.00	800.00	0.00	0.00	1.69	800.00	800.00	18.21	0.00	1.69	18.21	14.18	0.01	4.521
1,000.00	999.75	-8.18	-3.02	2.07	999.75	999.75	18.21	0.00	2.13	26.57	21.71	6.53	5.475
1,200.00	1,198.03	-32.34	-11.94	2.52	1,201.17	1,200.91	12.56	-6.78	2.53	45.29	39.68	6.56	8.071
1,400.00	1,395.57	-61.69	-22.78	3.09	1,401.01	1,399.69	-0.60	-22.57	2.96	61.23	54.75	0.19	9.456
1,600.00	1,593.10	-91.04	-33.61	3.73	1,600.30	1,597.89	-13.94	-38.58	3.45	77.41	69.98	356.32	10.419
1,800.00	1,790.64	-120.39	-44.45	4.40	1,799.59	1,796.09	-27.27	-54.58	3.97	93.82	85.38	353.79	11.109
2,000.00	1,988.18	-149.74	-55.29	5.10	1,998.88	1,994.29	-40.61	-70.58	4.51	110.37	100.86	352.02	11.613
2,200.00	2,185.72	-179.09	-66.13	5.81	2,198.17	2,192.49	-53.95	-86.59	5.07	126.99	116.40	350.72	11.989
2,400.00	2,383.25	-208.44	-76.96	6.53	2,397.46	2,390.68	-67.28	-102.59	5.63	143.66	131.96	349.71	12.278
2,600.00	2,580.79	-237.79	-87.80	7.26	2,593.34	2,585.68	-79.02	-116.68	6.13	161.45	148.71	349.69	12.673
2,800.00	2,778.33	-267.14	-98.64	7.99	2,786.08	2,778.33	-81.79	-120.00	6.50	186.58	173.05	353.43	13.786
3,000.00	2,975.87	-296.49	-109.47	8.73	2,983.61	2,975.87	-81.79	-120.00	6.87	214.96	200.65	357.19	15.021
3,200.00	3,174.38	-318.82	-117.72	9.27	3,182.13	3,174.38	-81.79	-120.00	7.25	237.04	221.94	359.45	15.705
3,400.00	3,374.22	-325.00	-120.00	9.61	3,381.97	3,374.22	-81.79	-120.00	7.65	243.21	225.87	0.00	14.029
3,600.00	3,574.22	-325.00	-120.00	9.90	3,581.97	3,574.22	-81.79	-120.00	8.04	243.21	225.17	0.00	13.480
3,800.00	3,774.22	-325.00	-120.00	10.20	3,781.97	3,774.22	-81.79	-120.00	8.45	243.21	224.45	0.00	12.962
4,000.00	3,974.22	-325.00	-120.00	10.51	3,981.97	3,974.22	-81.79	-120.00	8.86	243.21	223.71	0.00	12.473
4,200.00	4,174.22	-325.00	-120.00	10.83	4,181.97	4,174.22	-81.79	-120.00	9.27	243.21	222.96	0.00	12.013
4,400.00	4,374.22	-325.00	-120.00	11.16	4,381.97	4,374.22	-81.79	-120.00	9.68	243.21	222.21	0.00	11.578
4,600.00	4,574.22	-325.00	-120.00	11.49	4,581.97	4,574.22	-81.79	-120.00	10.10	243.21	221.44	0.00	11.169
4,800.00	4,774.22	-325.00	-120.00	11.84	4,781.97	4,774.22	-81.79	-120.00	10.52	243.21	220.66	0.00	10.784
5,000.00	4,974.22	-325.00	-120.00	12.19	4,981.97	4,974.22	-81.79	-120.00	10.94	243.21	219.87	0.00	10.420
5,200.00	5,174.22	-325.00	-120.00	12.55	5,181.97	5,174.22	-81.79	-120.00	11.37	243.21	219.08	0.00	10.077
5,400.00	5,374.22	-325.00	-120.00	12.91	5,381.97	5,374.22	-81.79	-120.00	11.80	243.21	218.27	0.00	9.753
5,600.00	5,574.22	-325.00	-120.00	13.28	5,581.97	5,574.22	-81.79	-120.00	12.22	243.21	217.47	0.00	9.447
5,800.00	5,774.22	-325.00	-120.00	13.65	5,781.97	5,774.22	-81.79	-120.00	12.65	243.21	216.65	0.00	9.158
6,000.00	5,974.22	-325.00	-120.00	14.03	5,981.97	5,974.22	-81.79	-120.00	13.09	243.21	215.83	0.00	8.884
6,200.00	6,174.22	-325.00	-120.00	14.41	6,181.97	6,174.22	-81.79	-120.00	13.52	243.21	215.01	0.00	8.624
6,400.00	6,374.22	-325.00	-120.00	14.80	6,381.97	6,374.22	-81.79	-120.00	13.95	243.21	214.18	0.00	8.379
6,600.00	6,573.43	-324.76	-132.54	15.22	6,581.50	6,572.98	-81.66	-132.46	14.41	243.10	213.95	0.02	8.339
6,800.00	6,762.22	-323.54	-196.58	15.82	6,780.85	6,761.22	-81.01	-196.08	15.08	242.53	212.07	0.12	7.962
7,000.00	6,926.03	-321.38	-310.16	16.76	6,980.28	6,924.79	-79.86	-309.04	16.18	241.52	208.89	0.27	7.402
7,200.00	7,052.19	-318.43	-464.48	18.43	7,179.84	7,051.08	-78.29	-462.71	18.04	240.16	203.82	0.42	6.609
7,400.00	7,130.91	-314.94	-647.60	21.08	7,379.55	7,130.28	-76.42	-645.34	20.84	238.53	196.59	0.54	5.687
7,600.00	7,156.11	-311.17	-845.31	24.54	7,579.45	7,156.14	-74.40	-842.89	24.38	236.78	187.71	0.59	4.825
7,800.00	7,151.76	-307.36	-1,045.23	27.01	7,779.45	7,151.82	-72.36	-1,042.83	26.54	235.02	181.32	0.59	4.377
8,000.00	7,147.39	-303.55	-1,245.15	29.59	7,979.44	7,147.44	-70.32	-1,242.76	29.28	233.25	174.18	0.59	3.949
8,200.00	7,143.01	-299.74	-1,445.06	32.76	8,179.43	7,143.07	-68.27	-1,442.70	32.60	231.48	165.85	0.59	3.527
8,400.00	7,138.64	-295.93	-1,644.98	36.38	8,379.42	7,138.69	-66.23	-1,642.63	36.34	229.71	156.66	0.59	3.145
8,600.00	7,134.26	-292.12	-1,844.89	40.33	8,579.42	7,134.32	-64.19	-1,842.57	40.39	227.94	146.84	0.59	2.811
8,800.00	7,129.89	-288.31	-2,044.81	44.53	8,779.41	7,129.94	-62.14	-2,042.50	44.66	226.18	136.57	0.59	2.524
9,000.00	7,125.51	-284.50	-2,244.72	48.90	8,979.40	7,125.57	-60.10	-2,242.43	49.10	224.41	125.96	0.59	2.279
9,200.00	7,121.14	-280.69	-2,444.64	53.41	9,179.39	7,121.19	-58.06	-2,442.37	53.66	222.64	115.10	0.59	2.070
9,400.00	7,116.76	-276.88	-2,644.56	58.02	9,379.38	7,116.81	-56.02	-2,642.30	58.31	220.87	104.04	0.59	1.891
9,600.00	7,112.39	-273.07	-2,844.47	62.72	9,579.38	7,112.44	-53.97	-2,842.23	63.04	219.10	92.84	0.59	1.735
9,800.00	7,108.02	-269.26	-3,044.39	67.48	9,779.37	7,108.06	-51.93	-3,042.17	67.83	217.34	81.51	0.59	1.600
10,000.00	7,103.64	-265.44	-3,244.30	72.29	9,979.36	7,103.69	-49.89	-3,242.10	72.66	215.57	70.09	0.59	1.482

Anticollision Report for Deering 33-8HX - 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 11,870.88 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	7,099.27	-261.63	-3,444.22	77.14	10,179.35	7,099.31	-47.84	-3,442.04	77.53	213.80	58.59	0.59	1.377
10,400.00	7,094.89	-257.82	-3,644.14	82.03	10,379.35	7,094.94	-45.80	-3,641.97	82.43	212.03	47.03	0.59	1.285
10,600.00	7,090.52	-254.01	-3,844.05	86.94	10,579.34	7,090.56	-43.76	-3,841.90	87.36	210.27	35.41	0.59	1.203
10,800.00	7,086.14	-250.20	-4,043.97	91.88	10,779.33	7,086.19	-41.72	-4,041.84	92.31	208.50	23.75	0.59	1.129
11,000.00	7,081.77	-246.39	-4,243.88	96.83	10,979.32	7,081.81	-39.67	-4,241.77	97.27	206.73	12.05	0.59	1.062
11,200.00	7,077.39	-242.58	-4,443.80	101.81	11,179.31	7,077.44	-37.63	-4,441.71	102.26	204.96	0.32	0.59	1.002
11,400.00	7,073.02	-238.77	-4,643.71	106.80	11,379.31	7,073.06	-35.59	-4,641.64	107.25	203.19	< 0	0.59	0.947
11,600.00	7,068.64	-234.96	-4,843.63	111.80	11,579.30	7,068.69	-33.54	-4,841.57	112.26	201.43	< 0	0.59	0.897
11,800.00	7,064.27	-231.15	-5,043.55	116.81	11,779.29	7,064.31	-31.50	-5,041.51	117.28	199.66	< 0	0.59	0.851
11,870.88	7,062.72	-229.80	-5,114.40	118.59	11,850.17	7,062.76	-30.78	-5,112.37	119.06	199.03	< 0	0.59	0.835

Anticollision Report for Deering 33-8HX - 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 11,870.88 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	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
1,000.00	999.75	-8.18	-3.02	2.07	1,000.75	999.75	40.07	0.00	2.14	48.35	43.49	3.58	9.959
1,200.00	1,198.03	-32.34	-11.94	2.52	1,199.03	1,198.03	40.07	0.00	2.58	73.39	67.72	9.36	12.937
1,400.00	1,395.57	-61.69	-22.78	3.09	1,395.57	1,395.57	40.07	0.00	3.03	104.28	97.75	12.62	15.963
1,600.00	1,593.10	-91.04	-33.61	3.73	1,594.10	1,593.10	40.07	0.00	3.47	135.35	127.94	14.38	18.256
1,800.00	1,790.64	-120.39	-44.45	4.40	1,791.64	1,790.64	40.07	0.00	3.91	166.51	158.20	15.48	20.037
2,000.00	1,988.18	-149.74	-55.29	5.10	1,989.18	1,988.18	40.07	0.00	4.36	197.70	188.49	16.24	21.453
2,200.00	2,185.72	-179.09	-66.13	5.81	2,186.72	2,185.72	40.07	0.00	4.80	228.92	218.79	16.79	22.602
2,400.00	2,383.25	-208.44	-76.96	6.53	2,384.25	2,383.25	40.07	0.00	5.25	260.16	249.11	17.21	23.552
2,600.00	2,580.79	-237.79	-87.80	7.26	2,581.79	2,580.79	40.07	0.00	5.69	291.41	279.44	17.54	24.349
2,800.00	2,778.33	-267.14	-98.64	7.99	2,779.33	2,778.33	40.07	0.00	6.13	322.66	309.77	17.80	25.027
3,000.00	2,975.87	-296.49	-109.47	8.73	2,976.87	2,975.87	40.07	0.00	6.58	353.92	340.10	18.02	25.610
3,200.00	3,174.38	-318.82	-117.72	9.27	3,175.38	3,174.38	40.07	0.00	7.02	377.70	362.95	18.16	25.606
3,400.00	3,374.22	-325.00	-120.00	9.61	3,375.22	3,374.22	40.07	0.00	7.47	384.29	366.50	18.20	21.606
3,600.00	3,574.22	-325.00	-120.00	9.90	3,575.22	3,574.22	40.07	0.00	7.92	384.29	365.77	18.20	20.747
3,800.00	3,774.22	-325.00	-120.00	10.20	3,775.22	3,774.22	40.07	0.00	8.37	384.29	365.02	18.20	19.941
4,000.00	3,974.22	-325.00	-120.00	10.51	3,975.22	3,974.22	40.07	0.00	8.82	384.29	364.26	18.20	19.186
4,200.00	4,174.22	-325.00	-120.00	10.83	4,175.22	4,174.22	40.07	0.00	9.27	384.29	363.49	18.20	18.476
4,400.00	4,374.22	-325.00	-120.00	11.16	4,375.22	4,374.22	40.07	0.00	9.72	384.29	362.71	18.20	17.810
4,600.00	4,574.22	-325.00	-120.00	11.49	4,575.22	4,574.22	40.07	0.00	10.17	384.29	361.93	18.20	17.184
4,800.00	4,774.22	-325.00	-120.00	11.84	4,775.22	4,774.22	40.07	0.00	10.62	384.29	361.13	18.20	16.595
5,000.00	4,974.22	-325.00	-120.00	12.19	4,975.22	4,974.22	40.07	0.00	11.07	384.29	360.33	18.20	16.041
5,200.00	5,174.22	-325.00	-120.00	12.55	5,175.22	5,174.22	40.07	0.00	11.52	384.29	359.53	18.20	15.518
5,400.00	5,374.22	-325.00	-120.00	12.91	5,375.22	5,374.22	40.07	0.00	11.97	384.29	358.71	18.20	15.025
5,600.00	5,574.22	-325.00	-120.00	13.28	5,575.22	5,574.22	40.07	0.00	12.42	384.29	357.89	18.20	14.560
5,800.00	5,774.22	-325.00	-120.00	13.65	5,775.22	5,774.22	40.07	0.00	12.87	384.29	357.07	18.20	14.120
6,000.00	5,974.22	-325.00	-120.00	14.03	5,975.22	5,974.22	40.07	0.00	13.32	384.29	356.25	18.20	13.703
6,200.00	6,174.22	-325.00	-120.00	14.41	6,175.22	6,174.22	40.07	0.00	13.77	384.29	355.41	18.20	13.309
6,400.00	6,374.22	-325.00	-120.00	14.80	6,381.62	6,380.60	40.07	-1.18	14.22	383.98	354.26	18.03	12.922
6,600.00	6,573.43	-324.76	-132.54	15.22	6,609.70	6,603.72	40.07	-44.79	14.71	376.46	347.08	13.52	12.812
6,800.00	6,762.22	-323.54	-196.58	15.82	6,828.83	6,798.88	40.07	-142.99	15.41	369.36	338.69	8.38	12.040
7,000.00	6,926.03	-321.38	-310.16	16.76	7,040.82	6,956.48	40.07	-283.90	16.67	363.68	330.49	4.16	10.958
7,200.00	7,052.19	-318.43	-464.48	18.43	7,247.31	7,070.30	40.07	-455.52	18.80	359.08	321.69	1.43	9.604
7,400.00	7,130.91	-314.94	-647.60	21.08	7,449.90	7,136.87	40.07	-646.31	21.83	355.07	311.71	0.21	8.189
7,600.00	7,156.11	-311.17	-845.31	24.54	7,649.18	7,154.82	40.08	-844.30	25.43	351.26	300.73	0.17	6.951
7,652.13	7,155.37	-310.18	-897.43	25.18	7,695.62	7,153.82	40.59	-890.72	26.06	350.84	299.39	1.10	6.819
7,800.00	7,151.76	-307.36	-1,045.23	27.01	7,827.26	7,150.96	46.12	-1,022.20	27.37	354.23	299.41	3.73	6.462
8,000.00	7,147.39	-303.55	-1,245.15	29.59	8,018.91	7,146.80	62.11	-1,213.13	29.80	367.07	307.24	5.00	6.135
8,200.00	7,143.01	-299.74	-1,445.06	32.76	8,218.44	7,142.47	79.51	-1,411.86	32.93	380.70	314.52	5.00	5.753
8,400.00	7,138.64	-295.93	-1,644.98	36.38	8,417.98	7,138.13	96.90	-1,610.59	36.52	394.33	320.91	5.00	5.370
8,600.00	7,134.26	-292.12	-1,844.89	40.33	8,617.51	7,133.80	114.29	-1,809.32	40.44	407.96	326.64	5.00	5.016
8,800.00	7,129.89	-288.31	-2,044.81	44.53	8,817.05	7,129.47	131.68	-2,008.04	44.61	421.60	331.89	5.00	4.700
9,000.00	7,125.51	-284.50	-2,244.72	48.90	9,016.58	7,125.13	149.07	-2,206.77	48.96	435.23	336.79	5.00	4.421
9,200.00	7,121.14	-280.69	-2,444.64	53.41	9,216.12	7,120.80	166.46	-2,405.50	53.45	448.86	341.42	5.00	4.178
9,400.00	7,116.76	-276.88	-2,644.56	58.02	9,415.65	7,116.47	183.86	-2,604.23	58.05	462.50	345.84	5.00	3.965
9,600.00	7,112.39	-273.07	-2,844.47	62.72	9,615.19	7,112.13	201.25	-2,802.96	62.73	476.13	350.11	5.00	3.778
9,800.00	7,108.02	-269.26	-3,044.39	67.48	9,814.72	7,107.80	218.64	-3,001.68	67.48	489.76	354.24	5.00	3.614
10,000.00	7,103.64	-265.44	-3,244.30	72.29	10,014.26	7,103.47	236.03	-3,200.41	72.28	503.39	358.28	5.00	3.469

Anticollision Report for Deering 33-8HX - 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 11,870.88 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	7,099.27	-261.63	-3,444.22	77.14	10,213.79	7,099.13	253.42	-3,399.14	77.12	517.03	362.23	5.00	3.340
10,400.00	7,094.89	-257.82	-3,644.14	82.03	10,413.33	7,094.80	270.82	-3,597.87	82.00	530.66	366.12	5.00	3.225
10,600.00	7,090.52	-254.01	-3,844.05	86.94	10,612.86	7,090.46	288.21	-3,796.60	86.90	544.29	369.94	5.00	3.122
10,800.00	7,086.14	-250.20	-4,043.97	91.88	10,812.40	7,086.13	305.60	-3,995.33	91.84	557.93	373.72	5.00	3.029
11,000.00	7,081.77	-246.39	-4,243.88	96.83	11,011.93	7,081.80	322.99	-4,194.05	96.79	571.56	377.46	5.00	2.945
11,200.00	7,077.39	-242.58	-4,443.80	101.81	11,211.46	7,077.46	340.38	-4,392.78	101.76	585.19	381.17	5.00	2.868
11,400.00	7,073.02	-238.77	-4,643.71	106.80	11,411.00	7,073.13	357.78	-4,591.51	106.74	598.82	384.85	5.00	2.799
11,600.00	7,068.64	-234.96	-4,843.63	111.80	11,610.53	7,068.80	375.17	-4,790.24	111.74	612.46	388.50	5.00	2.735
11,800.00	7,064.27	-231.15	-5,043.55	116.81	11,785.35	7,065.00	390.40	-4,964.35	116.13	626.58	393.22	7.26	2.685
11,870.88	7,062.72	-229.80	-5,114.40	118.59	11,785.35	7,065.00	390.40	-4,964.35	116.13	638.10	402.96	13.60	2.714

Anticollision Report for Deering 33-8HX - 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 11,870.88 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	98.37	0.00	0.00	98.37	97.71	0.00	149.082
200.00	200.00	0.00	0.00	0.34	203.00	200.00	98.37	0.00	0.34	98.37	97.03	0.00	73.557
400.00	400.00	0.00	0.00	0.79	403.00	400.00	98.37	0.00	0.79	98.37	96.13	0.00	43.985
600.00	600.00	0.00	0.00	1.24	603.00	600.00	98.37	0.00	1.24	98.37	95.23	0.00	31.373
732.32	732.32	0.00	0.00	1.53	735.32	732.32	98.37	0.00	1.54	98.37	94.64	0.00	26.370
800.00	800.00	0.00	0.00	1.69	802.88	799.88	98.37	0.00	1.69	98.37	94.33	0.00	24.383
1,000.00	999.75	-8.18	-3.02	2.07	993.82	990.59	106.12	-2.64	2.13	114.67	109.81	0.19	23.613
1,200.00	1,198.03	-32.34	-11.94	2.52	1,177.64	1,172.94	127.75	-10.02	2.58	162.05	156.36	0.69	28.452
1,400.00	1,395.57	-61.69	-22.78	3.09	1,355.25	1,346.90	161.47	-21.51	3.15	228.41	221.82	0.33	34.675
1,600.00	1,593.10	-91.04	-33.61	3.73	1,542.26	1,529.12	201.29	-35.09	3.87	299.25	291.74	359.71	39.851
1,800.00	1,790.64	-120.39	-44.45	4.40	1,729.27	1,711.33	241.11	-48.66	4.65	370.12	361.65	359.33	43.697
2,000.00	1,988.18	-149.74	-55.29	5.10	1,916.29	1,893.55	280.92	-62.23	5.46	440.99	431.54	359.08	46.643
2,200.00	2,185.72	-179.09	-66.13	5.81	2,103.30	2,075.77	320.74	-75.81	6.29	511.87	501.42	358.89	48.948
2,400.00	2,383.25	-208.44	-76.96	6.53	2,290.31	2,257.99	360.56	-89.38	7.14	582.76	571.29	358.75	50.791
2,600.00	2,580.79	-237.79	-87.80	7.26	2,477.32	2,440.21	400.38	-102.96	8.00	653.65	641.15	358.64	52.295
2,800.00	2,778.33	-267.14	-98.64	7.99	2,664.33	2,622.43	440.20	-116.53	8.86	724.54	711.01	358.55	53.542
3,000.00	2,975.87	-296.49	-109.47	8.73	2,851.35	2,804.65	480.02	-130.11	9.73	795.43	780.86	358.48	54.591
3,200.00	3,174.38	-318.82	-117.72	9.27	3,040.62	2,989.07	520.32	-143.85	10.61	859.75	844.08	358.22	54.864
3,400.00	3,374.22	-325.00	-120.00	9.61	3,234.18	3,177.67	561.53	-157.89	11.52	908.85	887.31	357.55	42.201
3,600.00	3,574.22	-325.00	-120.00	9.90	3,429.06	3,367.55	603.02	-172.04	12.43	952.18	929.42	356.79	41.843
3,800.00	3,774.22	-325.00	-120.00	10.20	3,623.93	3,557.43	644.51	-186.19	13.34	995.66	971.66	356.09	41.498
4,000.00	3,974.22	-325.00	-120.00	10.51	3,818.80	3,747.31	686.01	-200.33	14.26	1,039.27	1,014.02	355.46	41.166
4,200.00	4,174.22	-325.00	-120.00	10.83	4,013.68	3,937.19	727.50	-214.48	15.18	1,082.99	1,056.48	354.87	40.850
4,400.00	4,374.22	-325.00	-120.00	11.16	4,208.55	4,127.07	768.99	-228.62	16.10	1,126.81	1,099.02	354.33	40.548
4,600.00	4,574.22	-325.00	-120.00	11.49	4,403.43	4,316.95	810.48	-242.77	17.02	1,170.72	1,141.64	353.83	40.261
4,800.00	4,774.22	-325.00	-120.00	11.84	4,598.30	4,506.83	851.97	-256.91	17.94	1,214.71	1,184.33	353.36	39.988
5,000.00	4,974.22	-325.00	-120.00	12.19	4,793.17	4,696.71	893.47	-271.06	18.86	1,258.77	1,227.08	352.93	39.729
5,200.00	5,174.22	-325.00	-120.00	12.55	5,060.16	4,957.61	946.93	-289.28	19.98	1,301.30	1,268.10	352.42	39.193
5,400.00	5,374.22	-325.00	-120.00	12.91	5,478.66	5,374.22	978.37	-300.00	20.82	1,315.74	1,281.30	352.14	38.211
5,600.00	5,574.22	-325.00	-120.00	13.28	5,678.66	5,574.22	978.37	-300.00	21.06	1,315.74	1,280.68	352.14	37.532
5,800.00	5,774.22	-325.00	-120.00	13.65	5,878.66	5,774.22	978.37	-300.00	21.31	1,315.74	1,280.04	352.14	36.863
6,000.00	5,974.22	-325.00	-120.00	14.03	6,078.66	5,974.22	978.37	-300.00	21.57	1,315.74	1,279.40	352.14	36.208
6,200.00	6,174.22	-325.00	-120.00	14.41	6,278.66	6,174.22	978.37	-300.00	21.84	1,315.74	1,278.74	352.14	35.565
6,400.00	6,374.22	-325.00	-120.00	14.80	6,478.66	6,374.22	978.37	-300.00	22.11	1,315.74	1,278.08	352.14	34.937
6,600.00	6,573.43	-324.76	-132.54	15.22	6,719.18	6,612.92	978.19	-278.05	22.34	1,311.65	1,280.56	353.63	42.187
6,800.00	6,762.22	-323.54	-196.58	15.82	6,895.94	6,777.19	977.69	-214.04	22.34	1,301.43	1,269.33	359.23	40.540
6,847.13	6,803.57	-323.11	-219.15	16.02	6,921.32	6,799.31	977.59	-201.59	22.33	1,300.82	1,268.43	0.77	40.154
7,000.00	6,926.03	-321.38	-310.16	16.76	6,970.57	6,840.90	977.38	-175.23	22.31	1,308.52	1,275.27	5.93	39.358
7,200.00	7,052.19	-318.43	-464.48	18.43	6,982.08	6,850.36	977.33	-168.66	22.31	1,344.34	1,309.22	12.86	38.286
7,400.00	7,130.91	-314.94	-647.60	21.08	6,950.00	6,823.75	977.47	-186.59	22.32	1,406.13	1,368.36	19.63	37.228
7,600.00	7,156.11	-311.17	-845.31	24.54	6,915.00	6,793.85	977.61	-204.76	22.33	1,484.09	1,443.69	26.43	36.740
7,800.00	7,151.76	-307.36	-1,045.23	27.01	6,869.20	6,753.43	977.78	-226.30	22.34	1,575.09	1,532.67	32.51	37.132
8,000.00	7,147.39	-303.55	-1,245.15	29.59	6,832.42	6,720.03	977.91	-241.69	22.35	1,682.76	1,638.11	38.06	37.688
8,200.00	7,143.01	-299.74	-1,445.06	32.76	6,800.00	6,689.97	978.00	-253.83	22.35	1,804.69	1,757.25	42.99	38.044
8,400.00	7,138.64	-295.93	-1,644.98	36.38	6,777.49	6,668.80	978.06	-261.44	22.35	1,938.55	1,887.86	47.36	38.246
8,600.00	7,134.26	-292.12	-1,844.89	40.33	6,750.00	6,642.62	978.13	-269.84	22.35	2,082.31	2,028.18	51.11	38.468
8,800.00	7,129.89	-288.31	-2,044.81	44.53	6,750.00	6,642.62	978.13	-269.84	22.35	2,234.23	2,176.14	54.49	38.457
9,000.00	7,125.51	-284.50	-2,244.72	48.90	6,723.43	6,617.03	978.18	-277.00	22.34	2,392.67	2,330.83	57.31	38.690
9,200.00	7,121.14	-280.69	-2,444.64	53.41	6,700.00	6,594.26	978.23	-282.52	22.33	2,556.81	2,491.11	59.79	38.921
9,400.00	7,116.76	-276.88	-2,644.56	58.02	6,700.00	6,594.26	978.23	-282.52	22.33	2,725.35	2,655.37	62.02	38.945
9,600.00	7,112.39	-273.07	-2,844.47	62.72	6,700.00	6,594.26	978.23	-282.52	22.33	2,897.90	2,823.56	63.97	38.983
9,800.00	7,108.02	-269.26	-3,044.39	67.48	6,678.98	6,573.70	978.26	-286.83	22.32	3,073.42	2,995.09	65.66	39.234

Anticollision Report for Deering 33-8HX - 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 11,870.88 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	7,103.64	-265.44	-3,244.30	72.29	6,670.79	6,565.64	978.27	-288.35	22.31	3,251.76	3,169.17	67.18	39.369
10,200.00	7,099.27	-261.63	-3,444.22	77.14	6,650.00	6,545.14	978.30	-291.78	22.30	3,432.54	3,345.96	68.53	39.643
10,400.00	7,094.89	-257.82	-3,644.14	82.03	6,650.00	6,545.14	978.30	-291.78	22.30	3,615.04	3,523.98	69.76	39.703
10,600.00	7,090.52	-254.01	-3,844.05	86.94	6,650.00	6,545.14	978.30	-291.78	22.30	3,799.29	3,703.75	70.87	39.766
10,800.00	7,086.14	-250.20	-4,043.97	91.88	6,650.00	6,545.14	978.30	-291.78	22.30	3,985.07	3,885.02	71.87	39.830
11,000.00	7,081.77	-246.39	-4,243.88	96.83	6,650.00	6,545.14	978.30	-291.78	22.30	4,172.16	4,067.58	72.78	39.894
11,200.00	7,077.39	-242.58	-4,443.80	101.81	6,650.00	6,545.14	978.30	-291.78	22.30	4,360.40	4,251.28	73.61	39.959
11,400.00	7,073.02	-238.77	-4,643.71	106.80	6,650.00	6,545.14	978.30	-291.78	22.30	4,549.64	4,435.96	74.38	40.022
11,600.00	7,068.64	-234.96	-4,843.63	111.80	6,627.18	6,522.53	978.33	-294.87	22.28	4,739.36	4,621.84	75.07	40.329
11,800.00	7,064.27	-231.15	-5,043.55	116.81	6,623.50	6,518.87	978.33	-295.30	22.28	4,930.12	4,808.18	75.71	40.430
11,870.88	7,062.72	-229.80	-5,114.40	118.59	6,622.25	6,517.64	978.33	-295.44	22.28	4,997.90	4,874.39	75.93	40.465

Anticollision Report for Deering 33-8HX - 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 11,870.88 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	800.00	0.00	0.00	1.69	802.00	800.00	80.15	0.00	1.69	80.15	76.11	0.00	19.876
1,000.00	999.75	-8.18	-3.02	2.07	1,001.69	999.69	80.15	0.00	2.14	88.38	83.52	1.96	18.196
1,200.00	1,198.03	-32.34	-11.94	2.52	1,191.75	1,189.53	87.20	-3.81	2.57	120.12	114.44	3.89	21.157
1,400.00	1,395.57	-61.69	-22.78	3.09	1,375.33	1,371.66	107.13	-14.56	3.02	170.71	164.15	2.79	26.034
1,600.00	1,593.10	-91.04	-33.61	3.73	1,564.70	1,558.17	135.96	-30.12	3.57	229.70	222.21	0.88	30.669
1,800.00	1,790.64	-120.39	-44.45	4.40	1,755.65	1,746.22	165.14	-45.86	4.19	288.97	280.52	359.72	34.190
2,000.00	1,988.18	-149.74	-55.29	5.10	1,946.59	1,934.26	194.32	-61.61	4.85	348.32	338.87	358.95	36.888
2,200.00	2,185.72	-179.09	-66.13	5.81	2,137.54	2,122.30	223.50	-77.35	5.53	407.71	397.26	358.40	39.013
2,400.00	2,383.25	-208.44	-76.96	6.53	2,328.48	2,310.35	252.68	-93.10	6.23	467.13	455.66	358.00	40.719
2,600.00	2,580.79	-237.79	-87.80	7.26	2,519.43	2,498.39	281.86	-108.84	6.94	526.57	514.06	357.68	42.114
2,800.00	2,778.33	-267.14	-98.64	7.99	2,710.37	2,686.43	311.04	-124.59	7.66	586.02	572.47	357.43	43.273
3,000.00	2,975.87	-296.49	-109.47	8.73	2,901.31	2,874.48	340.22	-140.33	8.38	645.48	630.89	357.23	44.250
3,200.00	3,174.38	-318.82	-117.72	9.27	3,094.08	3,064.32	369.68	-156.23	9.12	698.30	682.64	356.80	44.599
3,400.00	3,374.22	-325.00	-120.00	9.61	3,290.12	3,257.38	399.64	-172.39	9.87	735.87	716.21	355.86	37.429
3,600.00	3,574.22	-325.00	-120.00	9.90	3,487.09	3,451.35	429.74	-188.63	10.63	767.75	747.05	354.80	37.081
3,800.00	3,774.22	-325.00	-120.00	10.20	3,684.05	3,645.32	459.84	-204.87	11.39	799.87	778.10	353.83	36.744
4,000.00	3,974.22	-325.00	-120.00	10.51	3,881.01	3,839.29	489.94	-221.11	12.15	832.20	809.35	352.93	36.420
4,200.00	4,174.22	-325.00	-120.00	10.83	4,077.97	4,033.26	520.04	-237.36	12.91	864.72	840.77	352.09	36.108
4,400.00	4,374.22	-325.00	-120.00	11.16	4,274.93	4,227.23	550.14	-253.60	13.68	897.40	872.34	351.32	35.811
4,600.00	4,574.22	-325.00	-120.00	11.49	4,471.89	4,421.20	580.24	-269.84	14.44	930.23	904.05	350.60	35.528
4,800.00	4,774.22	-325.00	-120.00	11.84	4,668.93	4,636.02	613.04	-287.53	15.26	962.85	935.48	349.87	35.175
5,000.00	4,974.22	-325.00	-120.00	12.19	5,024.16	4,968.93	636.11	-299.98	15.95	977.83	949.39	349.39	34.371
5,200.00	5,174.22	-325.00	-120.00	12.55	5,229.45	5,174.22	636.15	-300.00	16.25	977.86	948.73	349.39	33.578
5,400.00	5,374.22	-325.00	-120.00	12.91	5,429.45	5,374.22	636.15	-300.00	16.56	977.86	948.05	349.39	32.804
5,600.00	5,574.22	-325.00	-120.00	13.28	5,629.45	5,574.22	636.15	-300.00	16.87	977.86	947.35	349.39	32.054
5,800.00	5,774.22	-325.00	-120.00	13.65	5,829.45	5,774.22	636.15	-300.00	17.19	977.86	946.64	349.39	31.327
6,000.00	5,974.22	-325.00	-120.00	14.03	6,029.45	5,974.22	636.15	-300.00	17.52	977.86	945.92	349.39	30.623
6,200.00	6,174.22	-325.00	-120.00	14.41	6,229.45	6,174.22	636.15	-300.00	17.85	977.86	945.20	349.39	29.941
6,400.00	6,374.22	-325.00	-120.00	14.80	6,429.45	6,374.22	636.15	-300.00	18.19	977.86	944.46	349.39	29.282
6,600.00	6,573.43	-324.76	-132.54	15.22	6,637.34	6,582.09	636.13	-299.18	18.53	975.27	944.74	350.16	31.940
6,800.00	6,762.22	-323.54	-196.58	15.82	6,849.27	6,789.21	635.54	-258.09	18.68	961.43	929.80	356.33	30.402
6,903.62	6,851.07	-322.53	-249.71	16.28	6,914.84	6,849.84	635.18	-233.20	18.68	957.85	925.57	0.99	29.678
7,000.00	6,926.03	-321.38	-310.16	16.76	6,950.00	6,881.35	634.95	-217.60	18.67	961.83	929.03	5.53	29.323
7,200.00	7,052.19	-318.43	-464.48	18.43	6,980.46	6,908.00	634.74	-202.84	18.66	998.89	964.23	15.35	28.821
7,400.00	7,130.91	-314.94	-647.60	21.08	6,966.11	6,895.52	634.84	-209.93	18.67	1,071.94	1,034.62	24.74	28.722
7,600.00	7,156.11	-311.17	-845.31	24.54	6,927.92	6,861.66	635.10	-227.58	18.68	1,167.79	1,128.36	33.14	29.616
7,800.00	7,151.76	-307.36	-1,045.23	27.01	6,886.11	6,823.56	635.35	-244.79	18.68	1,279.50	1,238.23	40.33	31.004
8,000.00	7,147.39	-303.55	-1,245.15	29.59	6,850.00	6,789.90	635.53	-257.85	18.68	1,408.70	1,365.40	46.43	32.529
8,200.00	7,143.01	-299.74	-1,445.06	32.76	6,826.25	6,767.41	635.65	-265.50	18.68	1,551.57	1,505.57	51.59	33.728
8,400.00	7,138.64	-295.93	-1,644.98	36.38	6,800.00	6,742.29	635.76	-273.09	18.67	1,705.05	1,656.04	55.82	34.791
8,600.00	7,134.26	-292.12	-1,844.89	40.33	6,800.00	6,742.29	635.76	-273.09	18.67	1,866.86	1,814.15	59.45	35.418
8,800.00	7,129.89	-288.31	-2,044.81	44.53	6,770.27	6,713.52	635.86	-280.57	18.65	2,034.70	1,978.66	62.35	36.310
9,000.00	7,125.51	-284.50	-2,244.72	48.90	6,750.00	6,693.73	635.93	-284.98	18.65	2,207.77	2,148.14	64.84	37.025
9,200.00	7,121.14	-280.69	-2,444.64	53.41	6,750.00	6,693.73	635.93	-284.98	18.65	2,384.74	2,320.99	67.00	37.408
9,400.00	7,116.76	-276.88	-2,644.56	58.02	6,750.00	6,693.73	635.93	-284.98	18.65	2,565.11	2,497.15	68.85	37.745
9,600.00	7,112.39	-273.07	-2,844.47	62.72	6,726.33	6,670.48	635.99	-289.42	18.63	2,747.72	2,676.13	70.42	38.379
9,800.00	7,108.02	-269.26	-3,044.39	67.48	6,700.00	6,644.47	636.05	-293.45	18.61	2,932.94	2,857.82	71.78	39.045
10,000.00	7,103.64	-265.44	-3,244.30	72.29	6,700.00	6,644.47	636.05	-293.45	18.61	3,119.47	3,040.06	73.01	39.282

Anticollision Report for Deering 33-8HX - 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 11,870.88 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	7,099.27	-261.63	-3,444.22	77.14	6,700.00	6,644.47	636.05	-293.45	18.61	3,307.57	3,223.83	74.10	39.497
10,400.00	7,094.89	-257.82	-3,644.14	82.03	6,700.00	6,644.47	636.05	-293.45	18.61	3,497.00	3,408.90	75.06	39.693
10,600.00	7,090.52	-254.01	-3,844.05	86.94	6,700.00	6,644.47	636.05	-293.45	18.61	3,687.54	3,595.06	75.93	39.872
10,800.00	7,086.14	-250.20	-4,043.97	91.88	6,700.00	6,644.47	636.05	-293.45	18.61	3,879.03	3,782.15	76.70	40.037
11,000.00	7,081.77	-246.39	-4,243.88	96.83	6,700.00	6,644.47	636.05	-293.45	18.61	4,071.35	3,970.04	77.41	40.189
11,200.00	7,077.39	-242.58	-4,443.80	101.81	6,700.00	6,644.47	636.05	-293.45	18.61	4,264.37	4,158.63	78.05	40.330
11,400.00	7,073.02	-238.77	-4,643.71	106.80	6,677.30	6,621.93	636.09	-296.15	18.58	4,457.59	4,348.40	78.62	40.825
11,600.00	7,068.64	-234.96	-4,843.63	111.80	6,673.90	6,618.55	636.09	-296.50	18.58	4,651.64	4,538.19	79.16	41.002
11,800.00	7,064.27	-231.15	-5,043.55	116.81	6,650.00	6,594.73	636.12	-298.46	18.55	4,846.49	4,729.77	79.64	41.522
11,870.88	7,062.72	-229.80	-5,114.40	118.59	6,650.00	6,594.73	636.12	-298.46	18.55	4,915.50	4,797.22	79.81	41.561

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	7,606.42	Rev A0 (Permitting Plan Only)	MWD
7,606.42	11,870.88	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.

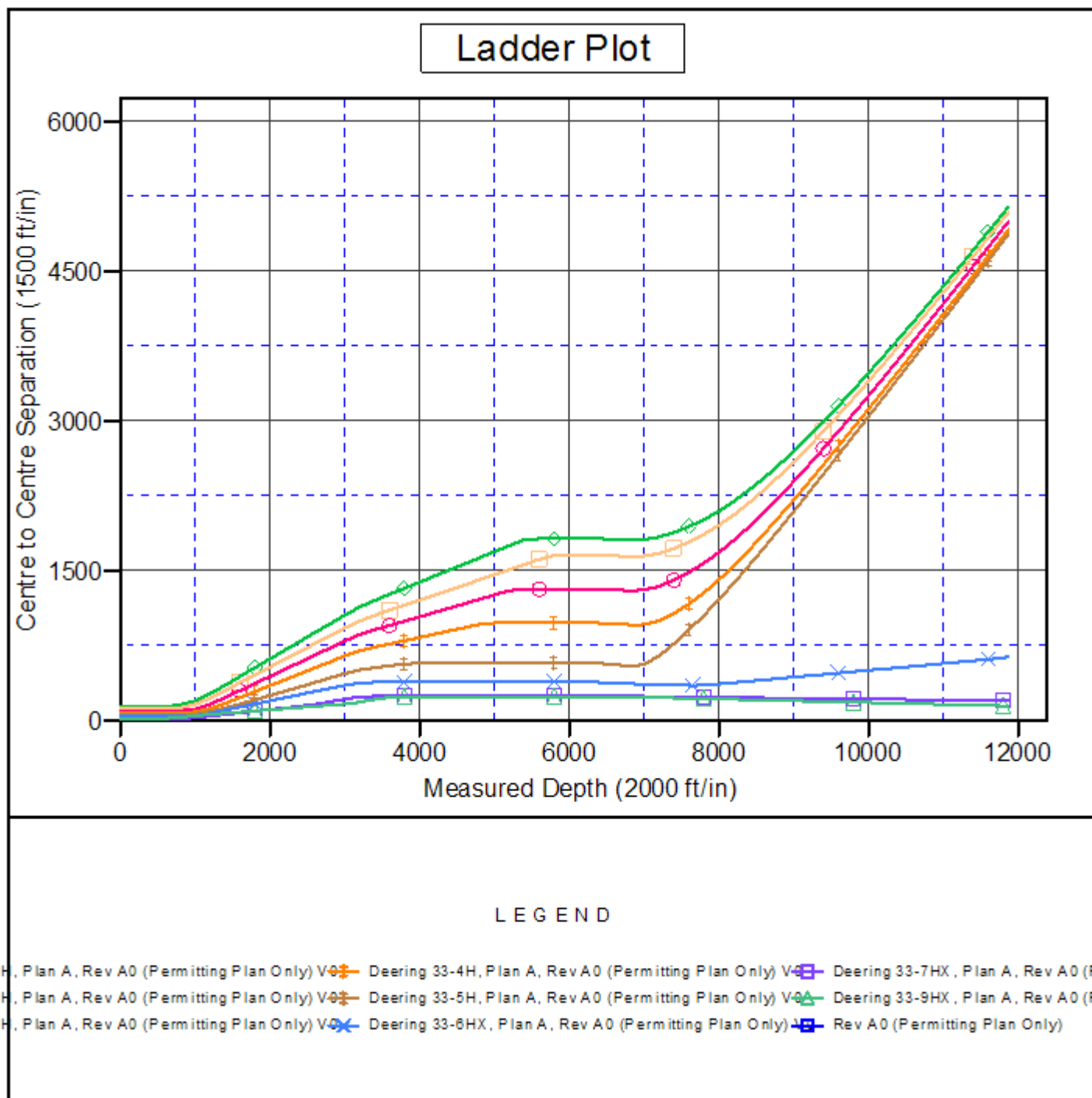
Anticollision Report for Deering 33-8HX - Rev A0 (Permitting Plan Only)

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 33-8HX - Slot A8

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 33-8HX - A8

Plan A

Plan: Rev A0 (Permitting Plan Only)

Sperry Drilling Services

Proposal Report

25 July, 2013

Well Coordinates: 1,341,732.43 N, 3,166,345.69 E (40° 16' 11.71" N, 104° 54' 13.93" W)

Ground Level: 4,902.00 ft

Local Coordinate Origin: Centered on Well Deering 33-8HX - Slot A8

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 33-8HX - 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
Begin 2.5°/100ft Nudge to 9.0° Inclination at 800.00ft										
900.00	2.50	200.27	899.97	-2.05	-0.76	0.85	2.50	2.50	0.00	200.27
1,000.00	5.00	200.27	999.75	-8.18	-3.02	3.40	2.50	2.50	0.00	0.00
1,100.00	7.50	200.27	1,099.14	-18.39	-6.79	7.64	2.50	2.50	0.00	0.00
1,160.00	9.00	200.27	1,158.52	-26.47	-9.77	11.00	2.50	2.50	0.00	0.00
Begin 1853.88ft Tangent at 1160.00ft										
1,200.00	9.00	200.27	1,198.03	-32.34	-11.94	13.44	0.00	0.00	0.00	0.00
1,300.00	9.00	200.27	1,296.80	-47.01	-17.36	19.54	0.00	0.00	0.00	0.00
1,400.00	9.00	200.27	1,395.57	-61.69	-22.78	25.64	0.00	0.00	0.00	0.00
1,500.00	9.00	200.27	1,494.34	-76.37	-28.20	31.74	0.00	0.00	0.00	0.00
1,600.00	9.00	200.27	1,593.10	-91.04	-33.61	37.84	0.00	0.00	0.00	0.00
1,700.00	9.00	200.27	1,691.87	-105.72	-39.03	43.94	0.00	0.00	0.00	0.00
1,800.00	9.00	200.27	1,790.64	-120.39	-44.45	50.04	0.00	0.00	0.00	0.00
1,900.00	9.00	200.27	1,889.41	-135.07	-49.87	56.14	0.00	0.00	0.00	0.00
2,000.00	9.00	200.27	1,988.18	-149.74	-55.29	62.24	0.00	0.00	0.00	0.00
2,100.00	9.00	200.27	2,086.95	-164.42	-60.71	68.34	0.00	0.00	0.00	0.00
2,200.00	9.00	200.27	2,185.72	-179.09	-66.13	74.44	0.00	0.00	0.00	0.00
2,300.00	9.00	200.27	2,284.49	-193.77	-71.54	80.54	0.00	0.00	0.00	0.00
2,400.00	9.00	200.27	2,383.25	-208.44	-76.96	86.64	0.00	0.00	0.00	0.00
2,500.00	9.00	200.27	2,482.02	-223.12	-82.38	92.74	0.00	0.00	0.00	0.00
2,600.00	9.00	200.27	2,580.79	-237.79	-87.80	98.84	0.00	0.00	0.00	0.00
2,700.00	9.00	200.27	2,679.56	-252.47	-93.22	104.94	0.00	0.00	0.00	0.00
2,800.00	9.00	200.27	2,778.33	-267.14	-98.64	111.03	0.00	0.00	0.00	0.00
2,900.00	9.00	200.27	2,877.10	-281.82	-104.06	117.13	0.00	0.00	0.00	0.00
3,000.00	9.00	200.27	2,975.87	-296.49	-109.47	123.23	0.00	0.00	0.00	0.00
3,013.88	9.00	200.27	2,989.58	-298.53	-110.23	124.08	0.00	0.00	0.00	0.00
Begin 2.5°/100ft Drop to Vertical at 3013.88ft										
3,100.00	6.85	200.27	3,074.87	-309.67	-114.34	128.71	2.50	-2.50	0.00	180.00
3,200.00	4.35	200.27	3,174.38	-318.82	-117.72	132.51	2.50	-2.50	0.00	180.00
3,300.00	1.85	200.27	3,274.23	-323.88	-119.59	134.62	2.50	-2.50	0.00	180.00
3,373.88	0.00	0.00	3,348.10	-325.00	-120.00	135.08	2.50	-2.50	216.21	180.00
End of Drop at 3373.88ft										
3,400.00	0.00	0.00	3,374.22	-325.00	-120.00	135.08	0.00	0.00	0.00	180.00
3,500.00	0.00	0.00	3,474.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,574.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,674.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,774.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,874.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	3,974.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,074.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,174.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,274.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,374.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,474.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,574.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,674.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,774.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,874.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	4,974.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00

Plan Report for Deering 33-8HX - 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	5,074.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,174.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,274.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,374.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,474.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,574.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,674.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,774.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,874.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	5,974.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,074.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,174.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,274.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,374.22	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
6,465.75	0.00	0.00	6,439.97	-325.00	-120.00	135.08	0.00	0.00	0.00	0.00
KOP - Begin 8.0°/100ft Build at 6465.75ft										
6,500.00	2.74	271.09	6,474.20	-324.98	-120.82	135.90	8.00	8.00	0.00	271.09
6,600.00	10.74	271.09	6,573.43	-324.76	-132.54	147.60	8.00	8.00	0.00	0.00
6,700.00	18.74	271.09	6,670.06	-324.28	-157.96	172.97	8.00	8.00	0.00	0.00
6,800.00	26.74	271.09	6,762.22	-323.54	-196.58	211.51	8.00	8.00	0.00	0.00
6,900.00	34.74	271.09	6,848.10	-322.57	-247.64	262.47	8.00	8.00	0.00	0.00
7,000.00	42.74	271.09	6,926.03	-321.38	-310.16	324.86	8.00	8.00	0.00	0.00
7,100.00	50.74	271.09	6,994.51	-319.99	-382.91	397.47	8.00	8.00	0.00	0.00
7,200.00	58.74	271.09	7,052.19	-318.43	-464.48	478.88	8.00	8.00	0.00	0.00
7,300.00	66.74	271.09	7,097.96	-316.74	-553.29	567.51	8.00	8.00	0.00	0.00
7,400.00	74.74	271.09	7,130.91	-314.94	-647.60	661.63	8.00	8.00	0.00	0.00
7,500.00	82.74	271.09	7,150.43	-313.08	-745.57	759.41	8.00	8.00	0.00	0.00
7,600.00	90.74	271.09	7,156.11	-311.17	-845.31	858.95	8.00	8.00	0.00	0.00
7,606.42	91.25	271.09	7,156.00	-311.05	-851.73	865.36	8.00	8.00	0.00	0.00
End of Build at 7606.42ft - 7" Csg										
7,700.00	91.25	271.09	7,153.95	-309.27	-945.27	958.71	0.00	0.00	0.00	0.00
7,800.00	91.25	271.09	7,151.76	-307.36	-1,045.23	1,058.47	0.00	0.00	0.00	0.00
7,900.00	91.25	271.09	7,149.57	-305.46	-1,145.19	1,158.23	0.00	0.00	0.00	0.00
8,000.00	91.25	271.09	7,147.39	-303.55	-1,245.15	1,257.99	0.00	0.00	0.00	0.00
8,100.00	91.25	271.09	7,145.20	-301.65	-1,345.10	1,357.75	0.00	0.00	0.00	0.00
8,200.00	91.25	271.09	7,143.01	-299.74	-1,445.06	1,457.51	0.00	0.00	0.00	0.00
8,300.00	91.25	271.09	7,140.83	-297.84	-1,545.02	1,557.27	0.00	0.00	0.00	0.00
8,400.00	91.25	271.09	7,138.64	-295.93	-1,644.98	1,657.03	0.00	0.00	0.00	0.00
8,500.00	91.25	271.09	7,136.45	-294.03	-1,744.93	1,756.79	0.00	0.00	0.00	0.00
8,600.00	91.25	271.09	7,134.26	-292.12	-1,844.89	1,856.55	0.00	0.00	0.00	0.00
8,700.00	91.25	271.09	7,132.08	-290.21	-1,944.85	1,956.30	0.00	0.00	0.00	0.00
8,800.00	91.25	271.09	7,129.89	-288.31	-2,044.81	2,056.06	0.00	0.00	0.00	0.00
8,900.00	91.25	271.09	7,127.70	-286.40	-2,144.77	2,155.82	0.00	0.00	0.00	0.00
9,000.00	91.25	271.09	7,125.51	-284.50	-2,244.72	2,255.58	0.00	0.00	0.00	0.00
9,100.00	91.25	271.09	7,123.33	-282.59	-2,344.68	2,355.34	0.00	0.00	0.00	0.00
9,200.00	91.25	271.09	7,121.14	-280.69	-2,444.64	2,455.10	0.00	0.00	0.00	0.00
9,300.00	91.25	271.09	7,118.95	-278.78	-2,544.60	2,554.86	0.00	0.00	0.00	0.00
9,400.00	91.25	271.09	7,116.76	-276.88	-2,644.56	2,654.62	0.00	0.00	0.00	0.00
9,500.00	91.25	271.09	7,114.58	-274.97	-2,744.51	2,754.38	0.00	0.00	0.00	0.00
9,600.00	91.25	271.09	7,112.39	-273.07	-2,844.47	2,854.14	0.00	0.00	0.00	0.00
9,700.00	91.25	271.09	7,110.20	-271.16	-2,944.43	2,953.90	0.00	0.00	0.00	0.00
Hold Angle at 91.25°										
9,800.00	91.25	271.09	7,108.02	-269.26	-3,044.39	3,053.65	0.00	0.00	0.00	0.00
9,900.00	91.25	271.09	7,105.83	-267.35	-3,144.35	3,153.41	0.00	0.00	0.00	0.00
10,000.00	91.25	271.09	7,103.64	-265.44	-3,244.30	3,253.17	0.00	0.00	0.00	0.00
10,100.00	91.25	271.09	7,101.45	-263.54	-3,344.26	3,352.93	0.00	0.00	0.00	0.00
10,200.00	91.25	271.09	7,099.27	-261.63	-3,444.22	3,452.69	0.00	0.00	0.00	0.00
10,300.00	91.25	271.09	7,097.08	-259.73	-3,544.18	3,552.45	0.00	0.00	0.00	0.00
10,400.00	91.25	271.09	7,094.89	-257.82	-3,644.14	3,652.21	0.00	0.00	0.00	0.00

Plan Report for Deering 33-8HX - 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	271.09	7,092.70	-255.92	-3,744.09	3,751.97	0.00	0.00	0.00	0.00
10,600.00	91.25	271.09	7,090.52	-254.01	-3,844.05	3,851.73	0.00	0.00	0.00	0.00
10,700.00	91.25	271.09	7,088.33	-252.11	-3,944.01	3,951.49	0.00	0.00	0.00	0.00
10,800.00	91.25	271.09	7,086.14	-250.20	-4,043.97	4,051.25	0.00	0.00	0.00	0.00
10,900.00	91.25	271.09	7,083.96	-248.30	-4,143.93	4,151.01	0.00	0.00	0.00	0.00
11,000.00	91.25	271.09	7,081.77	-246.39	-4,243.88	4,250.76	0.00	0.00	0.00	0.00
11,100.00	91.25	271.09	7,079.58	-244.49	-4,343.84	4,350.52	0.00	0.00	0.00	0.00
11,200.00	91.25	271.09	7,077.39	-242.58	-4,443.80	4,450.28	0.00	0.00	0.00	0.00
11,300.00	91.25	271.09	7,075.21	-240.68	-4,543.76	4,550.04	0.00	0.00	0.00	0.00
11,400.00	91.25	271.09	7,073.02	-238.77	-4,643.71	4,649.80	0.00	0.00	0.00	0.00
11,500.00	91.25	271.09	7,070.83	-236.86	-4,743.67	4,749.56	0.00	0.00	0.00	0.00
11,600.00	91.25	271.09	7,068.64	-234.96	-4,843.63	4,849.32	0.00	0.00	0.00	0.00
11,700.00	91.25	271.09	7,066.46	-233.05	-4,943.59	4,949.08	0.00	0.00	0.00	0.00
11,720.88	91.25	271.09	7,066.00	-232.66	-4,964.46	4,969.91	0.00	0.00	0.00	0.00
Total Depth at 11720.88ft										

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
800.00	800.00	0.00	0.00	Begin 2.5°/100ft Nudge to 9.0° Inclination at 800.00ft
1,160.00	1,158.52	-26.47	-9.77	Begin 1853.88ft Tangent at 1160.00ft
3,013.88	2,989.58	-298.53	-110.23	Begin 2.5°/100ft Drop to Vertical at 3013.88ft
3,373.88	3,348.10	-325.00	-120.00	End of Drop at 3373.88ft
6,465.75	6,439.97	-325.00	-120.00	KOP - Begin 8.0°/100ft Build at 6465.75ft
7,606.42	7,156.00	-311.05	-851.73	End of Build at 7606.42ft
9,700.00	7,110.20	-271.16	-2,944.43	Hold Angle at 91.25°
11,720.88	7,066.00	-232.66	-4,964.46	Total Depth at 11720.88ft

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (ft)
				+N/-S (ft)	+E/-W (ft)	
Target	Deering 33-8HX_RevA0_ BHL Tgt	267.32	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	7,606.42	Rev A0 (Permitting Plan Only)	MWD
7,606.42	11,870.88	Rev A0 (Permitting Plan Only)	MWD

Casing Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,606.42	7,156.00	7" Csg	7	8-3/4

Plan Report for Deering 33-8HX - Rev A0 (Permitting Plan Only)

Plan Report for Deering 33-8HX - Rev A0 (Permitting Plan Only)**Targets associated with this wellbore**

Target Name	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Shape
Deering 33-8HX_RevA0_BHL Tgt	7,066.00	-232.66	-4,964.46	Point
Deering_Camenisch 32-9	-3.00	-932.59	-1,021.38	Circle
Stroh_Sunmarke 19-28-11_BHL	-87.00	4,436.46	1,628.27	Circle
Stroh_Stroh 28-10	-34.00	4,411.89	2,971.43	Circle
Stroh_Stroh 23-28	-34.00	3,632.23	2,466.50	Circle
Stroh_Spaur 1	-34.00	4,417.23	1,608.48	Circle
Deering_Anderson 12-32	-3.00	-811.96	-4,649.24	Circle
Deering_Anderson 1	-3.00	-793.96	-3,334.83	Circle
Stroh_Frank 1 (B)	-34.00	1,229.89	4,271.03	Circle
Deering_Hepp 32-5	-3.00	656.20	-4,749.42	Circle
Deering_Stroh 7-33	-3.00	426.42	3,002.60	Circle
Stroh_Koester 18-33-6_BHL	-36.00	455.90	1,645.41	Circle
Stroh_Stroh 33-2	-34.00	1,763.41	2,980.12	Circle
Stroh_Koester 3-33-3_BHL	-67.00	1,741.64	1,683.45	Circle
Stroh_Sunmarke 15-28	-34.00	3,380.76	1,021.21	Circle
Deering_Stroh 33-4	-3.00	422.97	4,311.36	Circle
Stroh_Stroh 28-16	-34.00	3,057.08	5,320.96	Circle
Stroh_Stroh 2	-34.00	3,453.82	3,303.57	Circle
Deering_Camenisch 32-10	-3.00	-637.43	-2,277.16	Circle
Stroh_Sunmarke 19-28-14_BHL	-87.00	3,107.31	1,620.02	Circle
Stroh_Koester 18-33	-34.00	808.76	563.68	Circle
Stroh_Stroh 39-28R	-34.00	3,548.77	4,748.87	Circle
Stroh 28-1H_Sec. 33 Lines	-34.00	2,692.66	4,768.56	Polygon
Deering 33-1H_Sec. 32 S Half 460' Setback	-3.00	138.44	0.00	Polygon
Stroh_Sunmarke 19-28-12_BHL	-87.00	4,417.80	305.95	Circle
Deering_Hepp 22-32R	-3.00	131.49	-4,107.69	Circle
Deering 33-1H_Sec. 32 N Half 460' Setback	-3.00	138.44	0.00	Polygon
Stroh_Stroh 38-28R	-34.00	2,546.94	4,754.64	Circle
Stroh_Koester 3-33-21_BHL	-66.00	1,129.83	2,147.99	Circle
Stroh_Stroh 33-1	-34.00	1,759.94	4,171.61	Circle
Deering 33-1H_Sec. 32 N Half Lines	-3.00	138.44	0.00	Polygon
Deering_Camenisch 9-32-40R	-3.00	-899.81	-996.27	Circle
Stroh_Frank 1	-34.00	2,074.76	1,642.11	Circle
Stroh_Stroh 28-33R	-34.00	2,273.38	2,466.64	Circle
Stroh_Sunmarke 19-28-13_BHL	-87.00	3,109.22	269.99	Circle
Stroh_Koester 18-33-4_BHL	-34.00	1,818.38	347.46	Circle
Stroh 28-1H_Sec. 33 460' Setback	-34.00	2,692.66	4,768.56	Polygon
Stroh_Stroh 1	-34.00	736.11	3,298.36	Circle
Deering_Camenisch 7-32-25R	-3.00	327.99	-2,408.22	Circle
Stroh_Koester 18-33-5_BHL	-33.00	393.02	231.53	Circle
Deering 33-1H_Sec. 32 S Half Lines	-3.00	138.44	0.00	Polygon
Stroh_Stroh 15-28	-34.00	3,053.04	2,943.69	Circle
Stroh_Koester 18-33-22_BHL	-34.00	8.03	995.48	Circle
Stroh_Stroh 41-33R	-34.00	914.86	4,766.12	Circle
Stroh_Koester 3-33-29_BHL	-68.00	2,273.10	983.27	Circle
Deering_Hepp 32-6	-3.00	597.71	-3,502.07	Circle
Deering_Camenisch 41-32	-3.00	364.42	-2,369.15	Circle
Stroh_Stroh 28-9	-34.00	4,372.01	4,288.35	Circle

North Reference Sheet for Sec. 33-T4N-R67W (Deering 33H Pad) - Deering 33-8HX - 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 33-8HX - Slot A8

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: 1,341,732.43 ft N, 3,166,345.69 ft E

Geographical Coordinates of Well: 40° 16' 11.71" N, 104° 54' 13.93" W

Grid Convergence at Surface is: 0.39°

Based upon Minimum Curvature type calculations, at a Measured Depth of 11,870.88ft

the Bottom Hole Displacement is 5,119.56ft in the Direction of 267.43° (True).

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

