

Project: Weld County, CO (NAD 83)
 Site: Sec. 33-T4N-R67W (Deering 33H Pad)
 Well: Deering 33-7HX
 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	1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00	
3	1240.00	6.00	230.19	1239.56	-8.04	-9.65	2.50	230.19	9.73	
4	2494.15	6.00	230.19	2486.84	-91.96	-110.35	0.00	0.00	111.28	
5	2734.15	0.00	0.00	2726.40	-100.00	-120.00	2.50	180.00	121.01	
6	6447.72	0.00	0.00	6439.97	-100.00	-120.00	0.00	0.00	121.01	
7	7588.39	91.25	270.59	7156.00	-92.52	-851.83	8.00	270.59	852.72	
8	11702.18	91.25	270.59	7066.00	-50.50	-4964.43	0.00	0.00	4964.68	Deering 33-7H_RevA0_BHL Tgt

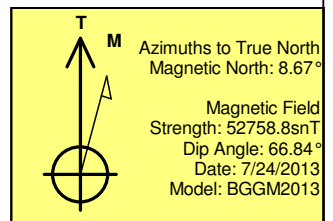
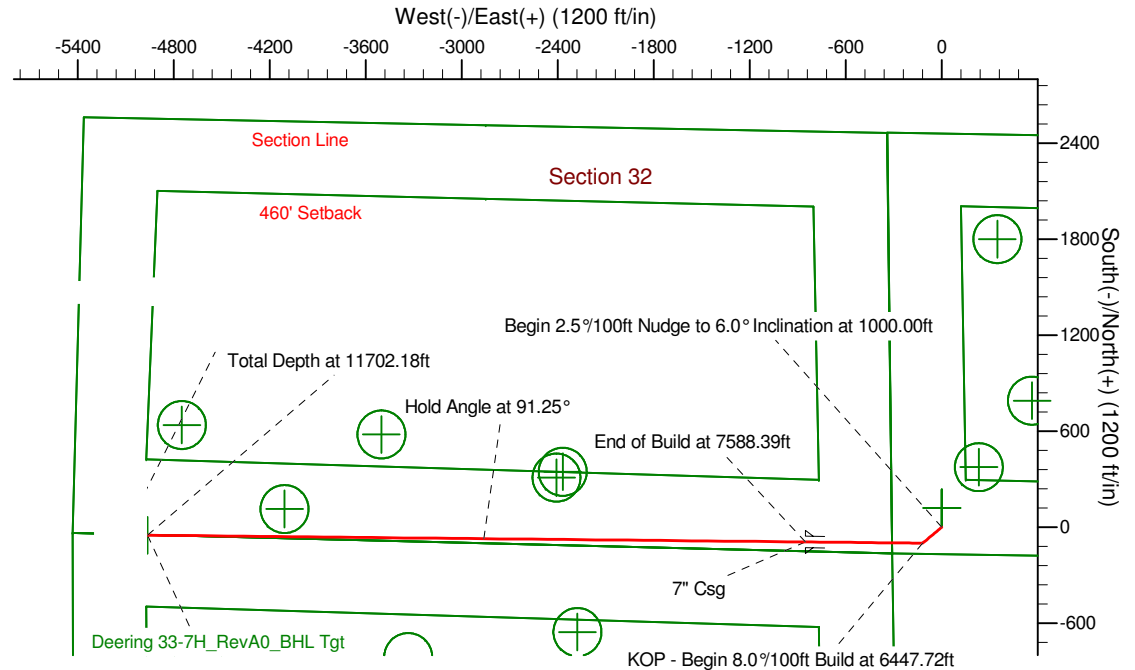
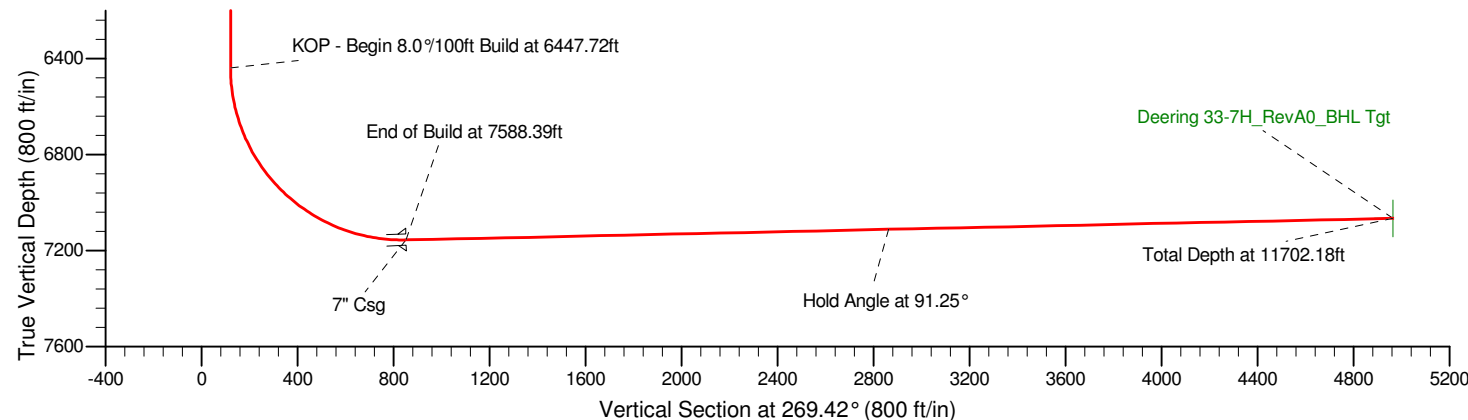
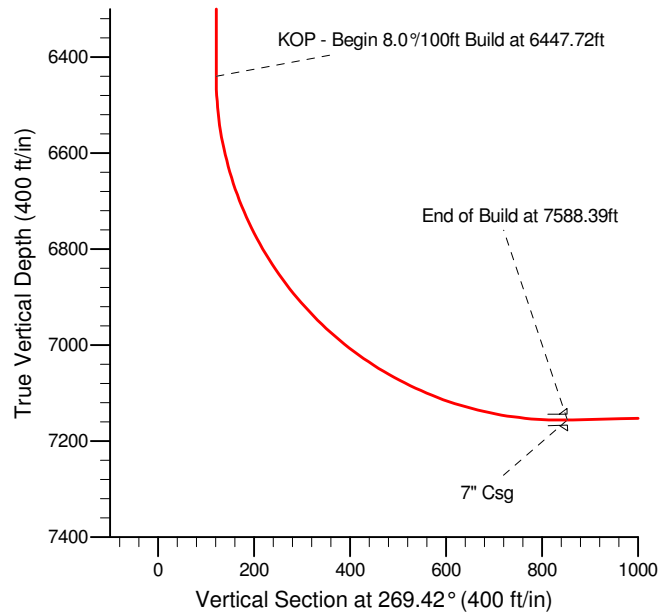
Plan: Rev A0 (Permitting Plan Only) (Deering 33-7HX/Plan A)

Created By: Jay Lantz Date: 13:54, July 25 2013

Approved: _____ Date: _____

WELL DETAILS: Deering 33-7HX

Ground Level: 4902.00
 Northing 1341750.64 Easting 3166345.57 Latitude 40° 16' 11.892 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 33-7HX

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 33-7HX - Plan A - Rev A0 (Permitting Plan Only)

Well Coordinates: 1,341,750.64 N, 3,166,345.57 E (40° 16' 11.89" N, 104° 54' 13.93" W)

Datum Height: GL @ 4902.00ft (Ground Level)

Scan Range: 0.00 to 11,852.18 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 33-7HX - 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 11,852.18 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	0.00	0.00	-18.21	0.00	0.00	18.21	17.55	180.01	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	180.01	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	180.01	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	180.01	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	180.01	4.521
1,000.00	1,000.00	0.00	0.00	2.14	998.03	997.78	-26.23	-2.96	2.07	26.49	21.64	186.45	5.456
1,200.00	1,199.75	-5.58	-6.70	2.53	1,194.81	1,192.91	-49.79	-11.66	2.50	45.01	39.37	186.40	7.988
1,400.00	1,398.69	-18.74	-22.49	2.96	1,394.09	1,389.73	-79.03	-22.46	3.07	60.95	54.46	179.97	9.387
1,600.00	1,597.59	-32.13	-38.55	3.45	1,593.38	1,586.57	-108.28	-33.26	3.71	77.13	69.68	176.02	10.360
1,800.00	1,796.49	-45.51	-54.61	3.97	1,792.67	1,783.40	-137.53	-44.06	4.38	93.54	85.08	173.46	11.059
2,000.00	1,995.40	-58.90	-70.67	4.51	1,991.96	1,980.24	-166.77	-54.86	5.07	110.08	100.57	171.66	11.570
2,200.00	2,194.30	-72.28	-86.73	5.07	2,191.25	2,177.07	-196.02	-65.65	5.78	126.70	116.10	170.33	11.952
2,400.00	2,393.21	-85.66	-102.79	5.64	2,390.54	2,373.91	-225.26	-76.45	6.50	143.37	131.66	169.31	12.245
2,600.00	2,592.33	-97.49	-116.98	6.15	2,589.71	2,570.63	-254.49	-87.25	7.22	161.26	148.51	169.27	12.647
2,800.00	2,792.25	-100.00	-120.00	6.53	2,787.71	2,766.19	-283.55	-97.97	7.95	186.70	172.36	173.16	13.021
3,000.00	2,992.25	-100.00	-120.00	6.90	2,985.25	2,961.29	-312.54	-108.68	8.67	215.08	199.53	176.95	13.828
3,200.00	3,192.25	-100.00	-120.00	7.29	3,201.13	3,175.51	-337.11	-117.75	9.27	237.71	221.09	179.46	14.305
3,400.00	3,392.25	-100.00	-120.00	7.68	3,418.03	3,392.25	-343.21	-120.00	9.64	243.21	225.79	180.00	13.964
3,600.00	3,592.25	-100.00	-120.00	8.08	3,618.03	3,592.25	-343.21	-120.00	9.93	243.21	225.09	180.00	13.420
3,800.00	3,792.25	-100.00	-120.00	8.48	3,818.03	3,792.25	-343.21	-120.00	10.23	243.21	224.37	180.00	12.906
4,000.00	3,992.25	-100.00	-120.00	8.89	4,018.03	3,992.25	-343.21	-120.00	10.54	243.21	223.63	180.00	12.421
4,200.00	4,192.25	-100.00	-120.00	9.30	4,218.03	4,192.25	-343.21	-120.00	10.86	243.21	222.88	180.00	11.963
4,400.00	4,392.25	-100.00	-120.00	9.72	4,418.03	4,392.25	-343.21	-120.00	11.19	243.21	222.12	180.00	11.533
4,600.00	4,592.25	-100.00	-120.00	10.14	4,618.03	4,592.25	-343.21	-120.00	11.52	243.21	221.35	180.00	11.126
4,800.00	4,792.25	-100.00	-120.00	10.56	4,818.03	4,792.25	-343.21	-120.00	11.87	243.21	220.57	180.00	10.744
5,000.00	4,992.25	-100.00	-120.00	10.98	5,018.03	4,992.25	-343.21	-120.00	12.22	243.21	219.79	180.00	10.382
5,200.00	5,192.25	-100.00	-120.00	11.41	5,218.03	5,192.25	-343.21	-120.00	12.58	243.21	218.99	180.00	10.042
5,400.00	5,392.25	-100.00	-120.00	11.83	5,418.03	5,392.25	-343.21	-120.00	12.94	243.21	218.19	180.00	9.720
5,600.00	5,592.25	-100.00	-120.00	12.26	5,618.03	5,592.25	-343.21	-120.00	13.31	243.21	217.38	180.00	9.416
5,800.00	5,792.25	-100.00	-120.00	12.69	5,818.03	5,792.25	-343.21	-120.00	13.68	243.21	216.57	180.00	9.128
6,000.00	5,992.25	-100.00	-120.00	13.12	6,018.03	5,992.25	-343.21	-120.00	14.06	243.21	215.75	180.00	8.856
6,200.00	6,192.25	-100.00	-120.00	13.56	6,218.03	6,192.25	-343.21	-120.00	14.44	243.21	214.93	180.00	8.598
6,400.00	6,392.25	-100.00	-120.00	13.99	6,418.03	6,392.25	-343.21	-120.00	14.83	243.21	214.10	180.00	8.354
6,600.00	6,591.11	-99.84	-136.13	14.46	6,619.02	6,592.07	-342.90	-136.34	15.27	243.07	213.81	180.05	8.309
6,800.00	6,778.22	-99.13	-204.90	15.16	6,820.23	6,780.15	-341.57	-205.94	15.89	242.45	211.82	180.24	7.915
7,000.00	6,939.12	-97.93	-322.59	16.32	7,021.27	6,941.44	-339.31	-324.82	16.90	241.40	208.45	180.53	7.327
7,200.00	7,061.35	-96.32	-480.06	18.27	7,222.05	7,063.34	-336.28	-483.51	18.67	239.99	203.13	180.82	6.510
7,400.00	7,135.44	-94.43	-665.12	21.17	7,422.52	7,136.50	-332.74	-669.41	21.44	238.35	195.66	181.03	5.583
7,600.00	7,155.74	-92.40	-863.44	24.71	7,622.64	7,155.64	-328.95	-867.94	24.89	236.59	186.80	181.09	4.752
7,800.00	7,151.37	-90.36	-1,063.38	26.77	7,822.63	7,151.27	-325.14	-1,067.85	27.28	234.83	180.58	181.09	4.329
8,000.00	7,146.99	-88.32	-1,263.32	29.58	8,022.62	7,146.89	-321.33	-1,267.76	29.93	233.06	173.29	181.09	3.899
8,200.00	7,142.62	-86.27	-1,463.26	32.96	8,222.61	7,142.52	-317.52	-1,467.67	33.16	231.29	164.85	181.09	3.481
8,400.00	7,138.24	-84.23	-1,663.20	36.74	8,422.61	7,138.14	-313.71	-1,667.58	36.82	229.52	155.58	181.09	3.104
8,600.00	7,133.87	-82.19	-1,863.15	40.82	8,622.60	7,133.77	-309.90	-1,867.48	40.80	227.75	145.71	181.09	2.776
8,800.00	7,129.49	-80.15	-2,063.09	45.11	8,822.59	7,129.39	-306.09	-2,067.39	45.02	225.99	135.39	181.09	2.495
9,000.00	7,125.11	-78.10	-2,263.03	49.56	9,022.58	7,125.02	-302.28	-2,267.30	49.41	224.22	124.75	181.09	2.254
9,200.00	7,120.74	-76.06	-2,462.97	54.13	9,222.57	7,120.65	-298.47	-2,467.21	53.93	222.45	113.87	181.09	2.049
9,400.00	7,116.36	-74.02	-2,662.91	58.80	9,422.57	7,116.27	-294.66	-2,667.12	58.55	220.68	102.79	181.09	1.872
9,600.00	7,111.99	-71.97	-2,862.85	63.53	9,622.56	7,111.90	-290.85	-2,867.02	63.25	218.91	91.57	181.09	1.719
9,800.00	7,107.61	-69.93	-3,062.80	68.32	9,822.55	7,107.52	-287.04	-3,066.93	68.02	217.15	80.24	181.09	1.586

Anticollision Report for Deering 33-7HX - 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 11,852.18 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	7,103.24	-67.89	-3,262.74	73.16	10,022.54	7,103.15	-283.23	-3,266.84	72.83	215.38	68.81	181.09	1.469
10,200.00	7,098.86	-65.84	-3,462.68	78.03	10,222.54	7,098.77	-279.42	-3,466.75	77.69	213.61	57.30	181.09	1.367
10,400.00	7,094.49	-63.80	-3,662.62	82.94	10,422.53	7,094.40	-275.61	-3,666.66	82.58	211.84	45.73	181.09	1.275
10,600.00	7,090.11	-61.76	-3,862.56	87.87	10,622.52	7,090.02	-271.79	-3,866.56	87.49	210.07	34.11	181.09	1.194
10,800.00	7,085.74	-59.72	-4,062.50	92.82	10,822.51	7,085.65	-267.98	-4,066.47	92.43	208.31	22.45	181.09	1.121
11,000.00	7,081.36	-57.67	-4,262.45	97.79	11,022.50	7,081.28	-264.17	-4,266.38	97.39	206.54	10.75	181.09	1.055
11,200.00	7,076.99	-55.63	-4,462.39	102.77	11,222.50	7,076.90	-260.36	-4,466.29	102.37	204.77	< 0	181.09	0.995
11,400.00	7,072.61	-53.59	-4,662.33	107.77	11,422.49	7,072.53	-256.55	-4,666.20	107.36	203.00	< 0	181.09	0.941
11,600.00	7,068.24	-51.54	-4,862.27	112.78	11,622.48	7,068.15	-252.74	-4,866.10	112.36	201.23	< 0	181.09	0.891
11,800.00	7,063.86	-49.50	-5,062.21	117.80	11,822.47	7,063.78	-248.93	-5,066.01	117.38	199.47	< 0	181.09	0.846
11,848.84	7,062.79	-49.00	-5,111.04	119.03	11,870.88	7,062.72	-248.01	-5,114.40	118.59	199.04	< 0	180.97	0.835
11,852.18	7,062.72	-48.97	-5,114.38	119.11	11,870.88	7,062.72	-248.01	-5,114.40	118.59	199.04	< 0	180.01	0.835

Anticollision Report for Deering 33-7HX - 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 11,852.18 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	61.93	0.00	0.00	61.93	61.28	0.00	94.026
200.00	200.00	0.00	0.00	0.34	202.00	200.00	61.93	0.00	0.34	61.93	60.60	0.00	46.391
400.00	400.00	0.00	0.00	0.79	402.00	400.00	61.93	0.00	0.79	61.93	59.70	0.00	27.722
600.00	600.00	0.00	0.00	1.24	602.00	600.00	61.93	0.00	1.24	61.93	58.80	0.00	19.767
800.00	800.00	0.00	0.00	1.69	802.00	800.00	61.93	0.00	1.69	61.93	57.90	0.00	15.360
932.66	932.66	0.00	0.00	1.98	934.66	932.66	61.93	0.00	1.99	61.93	57.31	0.00	13.381
1,000.00	1,000.00	0.00	0.00	2.14	1,001.95	999.95	61.93	0.00	2.14	61.93	57.00	0.00	12.560
1,200.00	1,199.75	-5.58	-6.70	2.53	1,196.43	1,194.19	69.34	-4.00	2.58	75.18	69.41	2.06	13.041
1,400.00	1,398.69	-18.74	-22.49	2.96	1,386.70	1,382.87	90.58	-15.46	3.05	110.68	104.04	3.68	16.670
1,600.00	1,597.59	-32.13	-38.55	3.45	1,581.31	1,574.53	120.28	-31.49	3.62	154.31	146.73	2.65	20.357
1,800.00	1,796.49	-45.51	-54.61	3.97	1,776.47	1,766.73	150.11	-47.58	4.26	198.00	189.44	2.06	23.125
2,000.00	1,995.40	-58.90	-70.67	4.51	1,971.63	1,958.92	179.94	-63.67	4.94	241.70	232.13	1.68	25.242
2,200.00	2,194.30	-72.28	-86.73	5.07	2,166.80	2,151.12	209.76	-79.77	5.64	285.41	274.80	1.42	26.897
2,400.00	2,393.21	-85.66	-102.79	5.64	2,361.96	2,343.32	239.59	-95.86	6.36	329.13	317.46	1.22	28.220
2,600.00	2,592.33	-97.49	-116.98	6.15	2,557.42	2,535.81	269.46	-111.98	7.08	371.30	358.60	0.78	29.233
2,800.00	2,792.25	-100.00	-120.00	6.53	2,754.17	2,729.57	299.52	-128.20	7.82	404.49	390.02	358.82	27.948
3,000.00	2,992.25	-100.00	-120.00	6.90	2,951.13	2,923.54	329.62	-144.44	8.57	435.77	420.15	356.74	27.900
3,200.00	3,192.25	-100.00	-120.00	7.29	3,148.09	3,117.51	359.72	-160.68	9.32	467.53	450.75	354.94	27.854
3,400.00	3,392.25	-100.00	-120.00	7.68	3,345.05	3,311.48	389.82	-176.92	10.08	499.69	481.73	353.37	27.812
3,600.00	3,592.25	-100.00	-120.00	8.08	3,542.01	3,505.44	419.92	-193.16	10.84	532.18	513.01	351.99	27.774
3,800.00	3,792.25	-100.00	-120.00	8.48	3,738.98	3,699.41	450.03	-209.41	11.60	564.92	544.56	350.77	27.742
4,000.00	3,992.25	-100.00	-120.00	8.89	3,935.94	3,893.38	480.13	-225.65	12.36	597.90	576.32	349.68	27.713
4,200.00	4,192.25	-100.00	-120.00	9.30	4,132.90	4,087.35	510.23	-241.89	13.12	631.06	608.27	348.70	27.689
4,400.00	4,392.25	-100.00	-120.00	9.72	4,329.86	4,281.32	540.33	-258.13	13.89	664.38	640.37	347.83	27.669
4,600.00	4,592.25	-100.00	-120.00	10.14	4,526.82	4,475.29	570.43	-274.37	14.66	697.84	672.60	347.03	27.652
4,800.00	4,792.25	-100.00	-120.00	10.56	4,722.39	4,707.82	603.45	-292.19	15.45	729.13	702.63	346.25	27.513
5,000.00	4,992.25	-100.00	-120.00	10.98	5,047.49	4,992.25	617.93	-300.00	15.98	740.16	712.67	345.92	26.930
5,200.00	5,192.25	-100.00	-120.00	11.41	5,247.49	5,192.25	617.93	-300.00	16.28	740.16	711.94	345.92	26.230
5,400.00	5,392.25	-100.00	-120.00	11.83	5,447.49	5,392.25	617.93	-300.00	16.59	740.16	711.19	345.92	25.554
5,600.00	5,592.25	-100.00	-120.00	12.26	5,647.49	5,592.25	617.93	-300.00	16.90	740.16	710.44	345.92	24.905
5,800.00	5,792.25	-100.00	-120.00	12.69	5,847.49	5,792.25	617.93	-300.00	17.22	740.16	709.68	345.92	24.283
6,000.00	5,992.25	-100.00	-120.00	13.12	6,047.49	5,992.25	617.93	-300.00	17.55	740.16	708.91	345.92	23.686
6,200.00	6,192.25	-100.00	-120.00	13.56	6,247.49	6,192.25	617.93	-300.00	17.88	740.16	708.13	345.92	23.114
6,400.00	6,392.25	-100.00	-120.00	13.99	6,447.49	6,392.25	617.93	-300.00	18.22	740.16	707.35	345.92	22.565
6,600.00	6,591.11	-99.84	-136.13	14.46	6,660.15	6,604.85	617.90	-297.73	18.56	735.83	705.27	347.31	24.077
6,800.00	6,778.22	-99.13	-204.90	15.16	6,861.42	6,800.62	617.27	-253.90	18.68	718.42	686.57	356.09	22.555
6,876.15	6,843.30	-98.73	-244.36	15.60	6,908.56	6,844.14	617.00	-235.83	18.68	715.79	683.38	0.68	22.086
7,000.00	6,939.12	-97.93	-322.59	16.32	6,956.11	6,886.75	616.70	-214.73	18.67	724.62	691.46	8.58	21.852
7,200.00	7,061.35	-96.32	-480.06	18.27	6,979.30	6,906.99	616.53	-203.43	18.66	780.07	744.94	21.21	22.206
7,400.00	7,135.44	-94.43	-665.12	21.17	6,962.46	6,892.33	616.65	-211.70	18.67	877.69	840.04	32.52	23.312
7,600.00	7,155.74	-92.40	-863.44	24.71	6,922.95	6,857.18	616.92	-229.74	18.68	996.92	958.10	41.78	25.679
7,800.00	7,151.37	-90.36	-1,063.38	26.77	6,882.20	6,819.95	617.16	-246.29	18.68	1,130.51	1,090.49	49.11	28.247
8,000.00	7,146.99	-88.32	-1,263.32	29.58	6,850.00	6,789.90	617.32	-257.85	18.68	1,279.23	1,237.28	54.94	30.495
8,200.00	7,142.62	-86.27	-1,463.26	32.96	6,823.69	6,764.98	617.45	-266.28	18.68	1,438.95	1,394.56	59.55	32.412
8,400.00	7,138.24	-84.23	-1,663.20	36.74	6,800.00	6,742.29	617.54	-273.09	18.67	1,606.76	1,559.59	63.21	34.067
8,600.00	7,133.87	-82.19	-1,863.15	40.82	6,800.00	6,742.29	617.54	-273.09	18.67	1,780.79	1,730.06	66.25	35.104
8,800.00	7,129.49	-80.15	-2,063.09	45.11	6,768.75	6,712.04	617.66	-280.92	18.65	1,958.91	1,905.33	68.62	36.563
9,000.00	7,125.11	-78.10	-2,263.03	49.56	6,750.00	6,693.73	617.72	-284.98	18.65	2,140.78	2,083.97	70.62	37.681
9,200.00	7,120.74	-76.06	-2,462.97	54.13	6,750.00	6,693.73	617.72	-284.98	18.65	2,325.36	2,264.66	72.33	38.308
9,400.00	7,116.36	-74.02	-2,662.91	58.80	6,750.00	6,693.73	617.72	-284.98	18.65	2,512.30	2,447.64	73.78	38.849
9,600.00	7,111.99	-71.97	-2,862.85	63.53	6,725.45	6,669.61	617.78	-289.57	18.63	2,700.60	2,632.85	74.99	39.863
9,800.00	7,107.61	-69.93	-3,062.80	68.32	6,700.00	6,644.47	617.84	-293.45	18.61	2,890.81	2,820.09	76.05	40.877

Anticollision Report for Deering 33-7HX - 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 11,852.18 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	7,103.24	-67.89	-3,262.74	73.16	6,700.00	6,644.47	617.84	-293.45	18.61	3,081.78	3,007.06	77.00	41.245
10,200.00	7,098.86	-65.84	-3,462.68	78.03	6,700.00	6,644.47	617.84	-293.45	18.61	3,273.82	3,195.07	77.83	41.573
10,400.00	7,094.49	-63.80	-3,662.62	82.94	6,700.00	6,644.47	617.84	-293.45	18.61	3,466.77	3,383.96	78.56	41.867
10,600.00	7,090.11	-61.76	-3,862.56	87.87	6,700.00	6,644.47	617.84	-293.45	18.61	3,660.47	3,573.59	79.22	42.133
10,800.00	7,085.74	-59.72	-4,062.50	92.82	6,700.00	6,644.47	617.84	-293.45	18.61	3,854.81	3,763.84	79.81	42.374
11,000.00	7,081.36	-57.67	-4,262.45	97.79	6,700.00	6,644.47	617.84	-293.45	18.61	4,049.71	3,954.63	80.34	42.593
11,200.00	7,076.99	-55.63	-4,462.39	102.77	6,700.00	6,644.47	617.84	-293.45	18.61	4,245.08	4,145.88	80.82	42.794
11,400.00	7,072.61	-53.59	-4,662.33	107.77	6,676.93	6,621.57	617.88	-296.20	18.58	4,440.43	4,338.49	81.26	43.559
11,600.00	7,068.24	-51.54	-4,862.27	112.78	6,673.56	6,618.21	617.88	-296.53	18.58	4,636.44	4,530.63	81.66	43.816
11,800.00	7,063.86	-49.50	-5,062.21	117.80	6,650.00	6,594.73	617.91	-298.46	18.55	4,833.10	4,724.72	82.02	44.596
11,852.18	7,062.72	-48.97	-5,114.38	119.11	6,650.00	6,594.73	617.91	-298.46	18.55	4,884.34	4,774.92	82.12	44.636

Anticollision Report for Deering 33-7HX - 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 11,852.18 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	80.16	0.00	0.00	80.16	79.50	0.00	121.482
200.00	200.00	0.00	0.00	0.34	203.00	200.00	80.16	0.00	0.34	80.16	78.82	0.00	59.939
400.00	400.00	0.00	0.00	0.79	403.00	400.00	80.16	0.00	0.79	80.16	77.92	0.00	35.842
600.00	600.00	0.00	0.00	1.24	603.00	600.00	80.16	0.00	1.24	80.16	77.02	0.00	25.564
732.32	732.32	0.00	0.00	1.53	735.32	732.32	80.16	0.00	1.54	80.16	76.43	0.00	21.488
800.00	800.00	0.00	0.00	1.69	802.90	799.90	80.16	0.00	1.69	80.16	76.12	0.00	19.869
1,000.00	1,000.00	0.00	0.00	2.14	996.02	992.78	88.08	-2.70	2.13	88.42	83.50	358.24	17.963
1,200.00	1,199.75	-5.58	-6.70	2.53	1,185.65	1,180.83	110.79	-10.45	2.61	117.96	112.19	358.16	20.419
1,400.00	1,398.69	-18.74	-22.49	2.96	1,371.29	1,362.52	146.67	-22.68	3.21	169.32	162.65	359.94	25.382
1,600.00	1,597.59	-32.13	-38.55	3.45	1,563.41	1,549.72	187.58	-36.62	3.96	224.87	217.26	0.50	29.537
1,800.00	1,796.49	-45.51	-54.61	3.97	1,755.53	1,736.92	228.49	-50.57	4.76	280.43	271.83	0.85	32.598
2,000.00	1,995.40	-58.90	-70.67	4.51	1,947.66	1,924.12	269.39	-64.51	5.60	335.99	326.37	1.08	34.918
2,200.00	2,194.30	-72.28	-86.73	5.07	2,139.78	2,111.32	310.30	-78.46	6.46	391.56	380.90	1.24	36.716
2,400.00	2,393.21	-85.66	-102.79	5.64	2,331.90	2,298.52	351.21	-92.40	7.33	447.13	435.41	1.36	38.144
2,600.00	2,592.33	-97.49	-116.98	6.15	2,524.43	2,486.11	392.20	-106.38	8.21	501.19	488.40	1.24	39.214
2,800.00	2,792.25	-100.00	-120.00	6.53	2,718.92	2,675.61	433.61	-120.50	9.11	546.21	530.30	359.95	34.342
3,000.00	2,992.25	-100.00	-120.00	6.90	2,913.79	2,865.49	475.10	-134.64	10.02	589.09	571.86	358.54	34.196
3,200.00	3,192.25	-100.00	-120.00	7.29	3,108.66	3,055.37	516.59	-148.79	10.93	632.26	613.70	357.33	34.060
3,400.00	3,392.25	-100.00	-120.00	7.68	3,303.54	3,245.25	558.08	-162.93	11.84	675.67	655.76	356.27	33.933
3,600.00	3,592.25	-100.00	-120.00	8.08	3,498.41	3,435.13	599.58	-177.08	12.75	719.27	698.00	355.34	33.818
3,800.00	3,792.25	-100.00	-120.00	8.48	3,693.29	3,625.01	641.07	-191.22	13.67	763.04	740.40	354.51	33.712
4,000.00	3,992.25	-100.00	-120.00	8.89	3,888.16	3,814.89	682.56	-205.37	14.59	806.94	782.93	353.77	33.616
4,200.00	4,192.25	-100.00	-120.00	9.30	4,083.03	4,004.77	724.05	-219.51	15.51	850.95	825.57	353.11	33.529
4,400.00	4,392.25	-100.00	-120.00	9.72	4,277.91	4,194.65	765.55	-233.66	16.43	895.06	868.30	352.52	33.449
4,600.00	4,592.25	-100.00	-120.00	10.14	4,472.78	4,384.53	807.04	-247.80	17.35	939.26	911.11	351.98	33.376
4,800.00	4,792.25	-100.00	-120.00	10.56	4,667.66	4,574.41	848.53	-261.95	18.27	983.52	954.00	351.49	33.309
5,000.00	4,992.25	-100.00	-120.00	10.98	4,862.53	4,764.29	890.02	-276.09	19.19	1,027.85	996.94	351.04	33.248
5,200.00	5,192.25	-100.00	-120.00	11.41	5,165.23	5,061.52	943.34	-294.27	20.27	1,065.84	1,033.36	350.52	32.821
5,400.00	5,392.25	-100.00	-120.00	11.83	5,496.70	5,392.25	960.16	-300.00	20.84	1,075.33	1,041.84	350.36	32.111
5,600.00	5,592.25	-100.00	-120.00	12.26	5,696.70	5,592.25	960.16	-300.00	21.08	1,075.33	1,041.16	350.36	31.469
5,800.00	5,792.25	-100.00	-120.00	12.69	5,896.70	5,792.25	960.16	-300.00	21.34	1,075.33	1,040.47	350.36	30.845
6,000.00	5,992.25	-100.00	-120.00	13.12	6,096.70	5,992.25	960.16	-300.00	21.59	1,075.33	1,039.77	350.36	30.239
6,200.00	6,192.25	-100.00	-120.00	13.56	6,296.70	6,192.25	960.16	-300.00	21.86	1,075.33	1,039.06	350.36	29.651
6,400.00	6,392.25	-100.00	-120.00	13.99	6,496.70	6,392.25	960.16	-300.00	22.13	1,075.33	1,038.35	350.36	29.080
6,600.00	6,591.11	-99.84	-136.13	14.46	6,739.18	6,632.23	959.94	-272.87	22.34	1,069.35	1,038.15	352.65	34.266
6,800.00	6,778.22	-99.13	-204.90	15.16	6,905.35	6,785.45	959.44	-209.51	22.34	1,058.61	1,026.25	359.75	32.716
6,819.08	6,794.91	-99.04	-214.14	15.27	6,915.43	6,794.21	959.40	-204.55	22.33	1,058.48	1,025.99	0.52	32.578
7,000.00	6,939.12	-97.93	-322.59	16.32	6,972.77	6,842.72	959.16	-173.99	22.31	1,071.83	1,038.23	8.00	31.906
7,200.00	7,061.35	-96.32	-480.06	18.27	6,980.36	6,848.95	959.12	-169.66	22.31	1,120.46	1,084.89	16.39	31.504
7,400.00	7,135.44	-94.43	-665.12	21.17	6,950.00	6,823.75	959.26	-186.59	22.32	1,198.50	1,160.31	24.43	31.385
7,600.00	7,155.74	-92.40	-863.44	24.71	6,900.00	6,780.76	959.46	-212.10	22.34	1,292.78	1,252.46	31.77	32.064
7,800.00	7,151.37	-90.36	-1,063.38	26.77	6,865.17	6,749.81	959.59	-228.07	22.35	1,400.49	1,358.57	38.50	33.406
8,000.00	7,146.99	-88.32	-1,263.32	29.58	6,829.15	6,717.03	959.70	-242.98	22.35	1,524.57	1,480.41	44.23	34.527
8,200.00	7,142.62	-86.27	-1,463.26	32.96	6,800.00	6,689.97	959.79	-253.83	22.35	1,614.89	1,614.97	49.14	35.422
8,400.00	7,138.24	-84.23	-1,663.20	36.74	6,775.25	6,666.67	959.86	-262.17	22.35	1,809.80	1,759.76	53.31	36.165
8,600.00	7,133.87	-82.19	-1,863.15	40.82	6,750.00	6,642.62	959.92	-269.84	22.35	1,966.19	1,912.83	56.81	36.847
8,800.00	7,129.49	-80.15	-2,063.09	45.11	6,750.00	6,642.62	959.92	-269.84	22.35	2,129.43	2,072.18	59.89	37.193
9,000.00	7,125.11	-78.10	-2,263.03	49.56	6,722.02	6,615.66	959.98	-277.35	22.34	2,297.84	2,237.09	62.40	37.827
9,200.00	7,120.74	-76.06	-2,462.97	54.13	6,700.00	6,594.26	960.02	-282.52	22.33	2,470.83	2,406.45	64.58	38.378
9,400.00	7,116.36	-74.02	-2,662.91	58.80	6,700.00	6,594.26	960.02	-282.52	22.33	2,647.28	2,578.74	66.52	38.624
9,600.00	7,111.99	-71.97	-2,862.85	63.53	6,700.00	6,594.26	960.02	-282.52	22.33	2,826.87	2,754.11	68.20	38.852
9,800.00	7,107.61	-69.93	-3,062.80	68.32	6,678.13	6,572.85	960.05	-286.99	22.32	3,008.64	2,932.18	69.64	39.352

Anticollision Report for Deering 33-7HX - 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 11,852.18 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	7,103.24	-67.89	-3,262.74	73.16	6,650.00	6,545.14	960.09	-291.79	22.30	3,192.92	3,112.99	70.91	39.944
10,200.00	7,098.86	-65.84	-3,462.68	78.03	6,650.00	6,545.14	960.09	-291.79	22.30	3,378.42	3,294.21	72.07	40.122
10,400.00	7,094.49	-63.80	-3,662.62	82.94	6,650.00	6,545.14	960.09	-291.79	22.30	3,565.48	3,476.98	73.10	40.289
10,600.00	7,090.11	-61.76	-3,862.56	87.87	6,650.00	6,545.14	960.09	-291.79	22.30	3,753.88	3,661.06	74.03	40.445
10,800.00	7,085.74	-59.72	-4,062.50	92.82	6,650.00	6,545.14	960.09	-291.79	22.30	3,943.42	3,846.27	74.87	40.591
11,000.00	7,081.36	-57.67	-4,262.45	97.79	6,650.00	6,545.14	960.09	-291.79	22.30	4,133.95	4,032.44	75.62	40.728
11,200.00	7,076.99	-55.63	-4,462.39	102.77	6,650.00	6,545.14	960.09	-291.79	22.30	4,325.33	4,219.46	76.31	40.857
11,400.00	7,072.61	-53.59	-4,662.33	107.77	6,650.00	6,545.14	960.09	-291.79	22.30	4,517.46	4,407.21	76.94	40.978
11,600.00	7,068.24	-51.54	-4,862.27	112.78	6,626.80	6,522.15	960.12	-294.92	22.28	4,709.82	4,596.15	77.51	41.437
11,800.00	7,063.86	-49.50	-5,062.21	117.80	6,623.14	6,518.52	960.12	-295.34	22.28	4,903.04	4,785.18	78.04	41.601
11,852.18	7,062.72	-48.97	-5,114.38	119.11	6,622.23	6,517.62	960.12	-295.45	22.28	4,953.54	4,834.58	78.17	41.642

Anticollision Report for Deering 33-7HX - 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 11,852.18 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	180.00	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	180.00	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	180.00	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	180.00	12.805
800.00	800.00	0.00	0.00	1.69	796.16	795.92	-48.25	-1.82	1.62	48.46	44.50	182.16	12.248
1,000.00	1,000.00	0.00	0.00	2.14	989.50	987.62	-72.29	-7.16	2.07	73.69	68.84	185.66	15.178
1,200.00	1,199.75	-5.58	-6.70	2.53	1,183.45	1,177.68	-109.95	-15.53	2.73	107.04	101.40	184.84	18.999
1,400.00	1,398.69	-18.74	-22.49	2.96	1,381.42	1,371.33	-150.13	-24.46	3.51	134.22	127.68	180.86	20.548
1,600.00	1,597.59	-32.13	-38.55	3.45	1,579.42	1,565.01	-190.31	-33.39	4.34	161.59	154.08	178.13	21.512
1,800.00	1,796.49	-45.51	-54.61	3.97	1,777.42	1,758.68	-230.50	-42.32	5.19	189.21	180.67	176.20	22.138
2,000.00	1,995.40	-58.90	-70.67	4.51	1,975.42	1,952.35	-270.69	-51.25	6.06	216.99	207.37	174.76	22.556
2,200.00	2,194.30	-72.28	-86.73	5.07	2,173.42	2,146.02	-310.87	-60.18	6.94	244.87	234.15	173.65	22.842
2,400.00	2,393.21	-85.66	-102.79	5.64	2,371.41	2,339.69	-351.06	-69.11	7.83	272.82	260.98	172.77	23.043
2,600.00	2,592.33	-97.49	-116.98	6.15	2,569.23	2,533.18	-391.20	-78.03	8.72	302.13	289.23	172.45	23.412
2,800.00	2,792.25	-100.00	-120.00	6.53	2,765.43	2,725.09	-431.02	-86.88	9.60	339.39	323.32	174.29	21.117
3,000.00	2,992.25	-100.00	-120.00	6.90	2,961.06	2,916.45	-470.73	-95.70	10.49	379.18	361.78	176.25	21.787
3,200.00	3,192.25	-100.00	-120.00	7.29	3,156.69	3,107.80	-510.43	-104.53	11.38	419.32	400.58	177.84	22.384
3,400.00	3,392.25	-100.00	-120.00	7.68	3,374.91	3,321.82	-551.91	-113.74	12.21	457.41	437.40	179.21	22.858
3,600.00	3,592.25	-100.00	-120.00	8.08	3,623.32	3,568.75	-577.22	-119.37	12.76	477.80	456.81	179.92	22.760
3,800.00	3,792.25	-100.00	-120.00	8.48	3,846.87	3,792.25	-580.06	-120.00	13.05	480.06	458.35	180.00	22.112
4,000.00	3,992.25	-100.00	-120.00	8.89	4,046.87	3,992.25	-580.06	-120.00	13.28	480.06	457.70	180.00	21.465
4,200.00	4,192.25	-100.00	-120.00	9.30	4,246.87	4,192.25	-580.06	-120.00	13.53	480.06	457.03	180.00	20.843
4,400.00	4,392.25	-100.00	-120.00	9.72	4,446.87	4,392.25	-580.06	-120.00	13.78	480.06	456.35	180.00	20.245
4,600.00	4,592.25	-100.00	-120.00	10.14	4,646.87	4,592.25	-580.06	-120.00	14.04	480.06	455.66	180.00	19.670
4,800.00	4,792.25	-100.00	-120.00	10.56	4,846.87	4,792.25	-580.06	-120.00	14.31	480.06	454.95	180.00	19.118
5,000.00	4,992.25	-100.00	-120.00	10.98	5,046.87	4,992.25	-580.06	-120.00	14.60	480.06	454.24	180.00	18.589
5,200.00	5,192.25	-100.00	-120.00	11.41	5,246.87	5,192.25	-580.06	-120.00	14.88	480.06	453.51	180.00	18.082
5,400.00	5,392.25	-100.00	-120.00	11.83	5,446.87	5,392.25	-580.06	-120.00	15.18	480.06	452.78	180.00	17.596
5,600.00	5,592.25	-100.00	-120.00	12.26	5,646.87	5,592.25	-580.06	-120.00	15.49	480.06	452.04	180.00	17.130
5,800.00	5,792.25	-100.00	-120.00	12.69	5,846.87	5,792.25	-580.06	-120.00	15.80	480.06	451.29	180.00	16.684
6,000.00	5,992.25	-100.00	-120.00	13.12	6,046.87	5,992.25	-580.06	-120.00	16.12	480.06	450.53	180.00	16.256
6,200.00	6,192.25	-100.00	-120.00	13.56	6,246.87	6,192.25	-580.06	-120.00	16.44	480.06	449.77	180.00	15.846
6,400.00	6,392.25	-100.00	-120.00	13.99	6,446.87	6,392.25	-580.06	-120.00	16.77	480.06	449.00	180.00	15.453
6,600.00	6,591.11	-99.84	-136.13	14.46	6,650.72	6,594.87	-579.43	-136.94	17.15	479.61	450.15	180.10	16.278
6,800.00	6,778.22	-99.13	-204.90	15.16	6,855.45	6,785.76	-576.76	-208.94	17.69	477.71	446.87	180.48	15.495
7,000.00	6,939.12	-97.93	-322.59	16.32	7,059.45	6,948.07	-572.22	-331.30	18.53	474.45	441.32	181.05	14.319
7,200.00	7,061.35	-96.32	-480.06	18.27	7,262.39	7,068.93	-566.20	-493.37	20.01	470.13	433.05	181.62	12.679
7,400.00	7,135.44	-94.43	-665.12	21.17	7,464.07	7,139.35	-559.22	-681.51	22.50	465.09	422.16	182.02	10.832
7,600.00	7,155.74	-92.40	-863.44	24.71	7,664.40	7,155.36	-551.83	-880.48	25.50	459.75	410.09	182.12	9.259
7,800.00	7,151.37	-90.36	-1,063.38	26.77	7,864.33	7,150.99	-544.42	-1,080.23	27.64	454.37	400.40	182.12	8.418
8,000.00	7,146.99	-88.32	-1,263.32	29.58	8,064.26	7,146.62	-537.00	-1,279.97	30.44	448.99	389.23	182.12	7.513
8,200.00	7,142.62	-86.27	-1,463.26	32.96	8,264.19	7,142.25	-529.59	-1,479.71	33.77	443.62	376.97	182.12	6.656
8,400.00	7,138.24	-84.23	-1,663.20	36.74	8,464.12	7,137.88	-522.17	-1,679.45	37.52	438.24	363.92	182.12	5.896
8,600.00	7,133.87	-82.19	-1,863.15	40.82	8,664.04	7,133.51	-514.76	-1,879.20	41.57	432.87	350.30	182.12	5.243
8,800.00	7,129.49	-80.15	-2,063.09	45.11	8,863.97	7,129.14	-507.35	-2,078.94	45.84	427.49	336.27	182.12	4.686
9,000.00	7,125.11	-78.10	-2,263.03	49.56	9,063.90	7,124.77	-499.93	-2,278.68	50.28	422.12	321.94	182.12	4.214
9,200.00	7,120.74	-76.06	-2,462.97	54.13	9,263.83	7,120.40	-492.52	-2,478.42	54.84	416.74	307.37	182.12	3.810
9,400.00	7,116.36	-74.02	-2,662.91	58.80	9,463.75	7,116.03	-485.10	-2,678.16	59.50	411.37	292.63	182.12	3.465
9,600.00	7,111.99	-71.97	-2,862.85	63.53	9,663.68	7,111.65	-477.69	-2,877.91	64.23	405.99	277.75	182.12	3.166
9,800.00	7,107.61	-69.93	-3,062.80	68.32	9,863.61	7,107.28	-470.27	-3,077.65	69.03	400.62	262.77	182.12	2.906
10,000.00	7,103.24	-67.89	-3,262.74	73.16	10,063.54	7,102.91	-462.86	-3,277.39	73.86	395.24	247.69	182.12	2.679
10,200.00	7,098.86	-65.84	-3,462.68	78.03	10,263.47	7,098.54	-455.44	-3,477.13	78.74	389.87	232.55	182.12	2.478

Anticollision Report for Deering 33-7HX - 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 11,852.18 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	7,094.49	-63.80	-3,662.62	82.94	10,463.39	7,094.17	-448.03	-3,676.88	83.65	384.49	217.34	182.12	2.300
10,600.00	7,090.11	-61.76	-3,862.56	87.87	10,663.32	7,089.80	-440.61	-3,876.62	88.58	379.12	202.09	182.12	2.142
10,800.00	7,085.74	-59.72	-4,062.50	92.82	10,863.25	7,085.43	-433.20	-4,076.36	93.54	373.74	186.79	182.12	1.999
11,000.00	7,081.36	-57.67	-4,262.45	97.79	11,063.18	7,081.06	-425.78	-4,276.10	98.51	368.37	171.47	182.12	1.871
11,200.00	7,076.99	-55.63	-4,462.39	102.77	11,263.10	7,076.69	-418.37	-4,475.85	103.51	362.99	156.11	182.12	1.755
11,400.00	7,072.61	-53.59	-4,662.33	107.77	11,463.03	7,072.32	-410.96	-4,675.59	108.51	357.61	140.72	182.12	1.649
11,600.00	7,068.24	-51.54	-4,862.27	112.78	11,662.96	7,067.95	-403.54	-4,875.33	113.52	352.24	125.32	182.12	1.552
11,800.00	7,063.86	-49.50	-5,062.21	117.80	11,862.89	7,063.58	-396.13	-5,075.07	118.55	346.86	109.89	182.12	1.464
11,848.63	7,062.80	-49.00	-5,110.83	119.02	11,902.21	7,062.72	-394.67	-5,114.36	119.54	345.68	106.50	180.59	1.445
11,852.18	7,062.72	-48.97	-5,114.38	119.11	11,902.21	7,062.72	-394.67	-5,114.36	119.54	345.70	106.42	180.00	1.445

Anticollision Report for Deering 33-7HX - 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 11,852.18 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	40.08	0.00	0.00	40.08	39.42	0.00	60.852
200.00	200.00	0.00	0.00	0.34	202.00	200.00	40.08	0.00	0.34	40.08	38.75	0.00	30.024
400.00	400.00	0.00	0.00	0.79	402.00	400.00	40.08	0.00	0.79	40.08	37.85	0.00	17.941
600.00	600.00	0.00	0.00	1.24	602.00	600.00	40.08	0.00	1.24	40.08	36.95	0.00	12.793
800.00	800.00	0.00	0.00	1.69	802.00	800.00	40.08	0.00	1.69	40.08	36.05	0.00	9.941
1,000.00	1,000.00	0.00	0.00	2.14	1,002.00	1,000.00	40.08	0.00	2.14	40.08	35.15	0.00	8.128
1,200.00	1,199.75	-5.58	-6.70	2.53	1,201.73	1,199.73	40.08	0.00	2.59	46.15	40.39	8.35	8.004
1,400.00	1,398.69	-18.74	-22.49	2.96	1,399.48	1,397.23	44.19	-7.65	3.02	64.67	58.07	13.28	9.793
1,600.00	1,597.59	-32.13	-38.55	3.45	1,596.71	1,592.93	55.68	-29.06	3.50	88.44	80.90	6.17	11.730
1,800.00	1,796.49	-45.51	-54.61	3.97	1,794.77	1,789.06	68.71	-53.35	4.04	114.47	105.92	0.63	13.382
2,000.00	1,995.40	-58.90	-70.67	4.51	1,992.83	1,985.19	81.75	-77.64	4.62	141.18	131.57	357.17	14.686
2,200.00	2,194.30	-72.28	-86.73	5.07	2,190.89	2,181.32	94.78	-101.92	5.22	168.25	157.55	354.80	15.723
2,400.00	2,393.21	-85.66	-102.79	5.64	2,388.94	2,377.45	107.82	-126.21	5.85	195.53	183.72	353.10	16.559
2,600.00	2,592.33	-97.49	-116.98	6.15	2,587.09	2,573.67	120.86	-150.51	6.48	221.69	208.80	351.27	17.205
2,800.00	2,792.25	-100.00	-120.00	6.53	2,785.27	2,769.92	133.90	-174.81	7.12	241.27	227.90	346.81	18.044
3,000.00	2,992.25	-100.00	-120.00	6.90	2,983.33	2,966.05	146.93	-199.10	7.77	260.61	246.21	342.24	18.096
3,200.00	3,192.25	-100.00	-120.00	7.29	3,181.38	3,162.17	159.97	-223.39	8.43	281.38	265.91	338.31	18.188
3,400.00	3,392.25	-100.00	-120.00	7.68	3,379.43	3,358.30	173.00	-247.68	9.09	303.29	286.72	334.94	18.306
3,600.00	3,592.25	-100.00	-120.00	8.08	3,577.49	3,554.43	186.04	-271.96	9.75	326.10	308.42	332.02	18.441
3,800.00	3,792.25	-100.00	-120.00	8.48	3,794.83	3,770.23	198.07	-294.38	10.34	346.03	327.28	329.67	18.452
4,000.00	3,992.25	-100.00	-120.00	8.89	4,017.02	3,992.25	201.08	-300.00	10.73	350.79	331.19	329.13	17.901
4,200.00	4,192.25	-100.00	-120.00	9.30	4,217.02	4,192.25	201.08	-300.00	11.09	350.79	330.39	329.13	17.197
4,400.00	4,392.25	-100.00	-120.00	9.72	4,417.02	4,392.25	201.08	-300.00	11.45	350.79	329.58	329.13	16.541
4,600.00	4,592.25	-100.00	-120.00	10.14	4,617.02	4,592.25	201.08	-300.00	11.83	350.79	328.76	329.13	15.927
4,800.00	4,792.25	-100.00	-120.00	10.56	4,817.02	4,792.25	201.08	-300.00	12.20	350.79	327.94	329.13	15.354
5,000.00	4,992.25	-100.00	-120.00	10.98	5,017.02	4,992.25	201.08	-300.00	12.58	350.79	327.11	329.13	14.817
5,200.00	5,192.25	-100.00	-120.00	11.41	5,217.02	5,192.25	201.08	-300.00	12.97	350.79	326.28	329.13	14.313
5,400.00	5,392.25	-100.00	-120.00	11.83	5,417.02	5,392.25	201.08	-300.00	13.36	350.79	325.44	329.13	13.840
5,600.00	5,592.25	-100.00	-120.00	12.26	5,617.02	5,592.25	201.08	-300.00	13.75	350.79	324.60	329.13	13.395
5,800.00	5,792.25	-100.00	-120.00	12.69	5,817.02	5,792.25	201.08	-300.00	14.15	350.79	323.75	329.13	12.976
6,000.00	5,992.25	-100.00	-120.00	13.12	6,017.02	5,992.25	201.08	-300.00	14.55	350.79	322.90	329.13	12.581
6,200.00	6,192.25	-100.00	-120.00	13.56	6,217.02	6,192.25	201.08	-300.00	14.95	350.79	322.05	329.13	12.208
6,400.00	6,392.25	-100.00	-120.00	13.99	6,417.02	6,392.25	201.08	-300.00	15.36	350.79	321.20	329.13	11.856
6,600.00	6,591.11	-99.84	-136.13	14.46	6,656.45	6,629.33	201.08	-273.97	15.68	333.18	303.07	335.39	11.066
6,800.00	6,778.22	-99.13	-204.90	15.16	6,821.68	6,782.08	201.08	-211.93	15.75	300.32	269.01	358.66	9.591
6,811.48	6,788.29	-99.08	-210.41	15.23	6,827.86	6,787.48	201.08	-208.93	15.75	300.16	268.79	0.28	9.570
7,000.00	6,939.12	-97.93	-322.59	16.32	6,889.63	6,840.04	201.07	-176.50	15.78	347.22	314.82	26.04	10.716
7,200.00	7,061.35	-96.32	-480.06	18.27	6,900.00	6,848.57	201.07	-170.62	15.78	479.03	444.64	46.14	13.929
7,400.00	7,135.44	-94.43	-665.12	21.17	6,873.03	6,826.19	201.08	-185.66	15.77	642.53	609.82	58.35	19.642
7,600.00	7,155.74	-92.40	-863.44	24.71	6,828.86	6,788.35	201.08	-208.44	15.75	806.30	779.49	65.86	30.072
7,800.00	7,151.37	-90.36	-1,063.38	26.77	6,784.52	6,749.03	201.08	-228.93	15.73	971.14	944.50	70.75	36.453
8,000.00	7,146.99	-88.32	-1,263.32	29.58	6,750.00	6,717.59	201.08	-243.16	15.72	1,144.05	1,116.83	74.16	42.032
8,200.00	7,142.62	-86.27	-1,463.26	32.96	6,719.65	6,689.41	201.08	-254.42	15.71	1,322.60	1,294.39	76.63	46.878
8,400.00	7,138.24	-84.23	-1,663.20	36.74	6,700.00	6,670.92	201.08	-261.06	15.70	1,505.26	1,475.52	78.50	50.621
8,600.00	7,133.87	-82.19	-1,863.15	40.82	6,674.97	6,647.11	201.08	-268.79	15.69	1,690.90	1,659.72	79.93	54.223
8,800.00	7,129.49	-80.15	-2,063.09	45.11	6,650.00	6,623.11	201.08	-275.66	15.67	1,878.94	1,846.25	81.06	57.482
9,000.00	7,125.11	-78.10	-2,263.03	49.56	6,650.00	6,623.11	201.08	-275.66	15.67	2,068.72	2,033.61	82.00	58.919
9,200.00	7,120.74	-76.06	-2,462.97	54.13	6,629.50	6,603.24	201.08	-280.67	15.66	2,259.88	2,223.07	82.76	61.394
9,400.00	7,116.36	-74.02	-2,662.91	58.80	6,600.00	6,574.40	201.08	-286.89	15.64	2,452.53	2,414.37	83.40	64.277
9,600.00	7,111.99	-71.97	-2,862.85	63.53	6,600.00	6,574.40	201.08	-286.89	15.64	2,645.59	2,604.97	83.95	65.132
9,800.00	7,107.61	-69.93	-3,062.80	68.32	6,600.00	6,574.40	201.08	-286.89	15.64	2,839.62	2,796.51	84.42	65.867
10,000.00	7,103.24	-67.89	-3,262.74	73.16	6,600.00	6,574.40	201.08	-286.89	15.64	3,034.42	2,988.79	84.84	66.503

Anticollision Report for Deering 33-7HX - 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 11,852.18 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	7,098.86	-65.84	-3,462.68	78.03	6,600.00	6,574.40	201.08	-286.89	15.64	3,229.85	3,181.69	85.20	67.060
10,400.00	7,094.49	-63.80	-3,662.62	82.94	6,577.04	6,551.79	201.08	-290.90	15.61	3,425.37	3,375.76	85.51	69.034
10,600.00	7,090.11	-61.76	-3,862.56	87.87	6,571.07	6,545.89	201.08	-291.82	15.61	3,621.52	3,569.68	85.79	69.857
10,800.00	7,085.74	-59.72	-4,062.50	92.82	6,550.00	6,525.02	201.08	-294.69	15.58	3,818.22	3,764.90	86.04	71.608
11,000.00	7,081.36	-57.67	-4,262.45	97.79	6,550.00	6,525.02	201.08	-294.69	15.58	4,014.92	3,959.12	86.27	71.958
11,200.00	7,076.99	-55.63	-4,462.39	102.77	6,550.00	6,525.02	201.08	-294.69	15.58	4,211.92	4,153.64	86.48	72.274
11,400.00	7,072.61	-53.59	-4,662.33	107.77	6,550.00	6,525.02	201.08	-294.69	15.58	4,409.19	4,348.43	86.66	72.561
11,600.00	7,068.24	-51.54	-4,862.27	112.78	6,550.00	6,525.02	201.08	-294.69	15.58	4,606.70	4,543.44	86.83	72.823
11,800.00	7,063.86	-49.50	-5,062.21	117.80	6,550.00	6,525.02	201.08	-294.69	15.58	4,804.41	4,738.66	86.99	73.063
11,852.18	7,062.72	-48.97	-5,114.38	119.11	6,550.00	6,525.02	201.08	-294.69	15.58	4,856.03	4,789.62	87.03	73.122

Anticollision Report for Deering 33-7HX - 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 11,852.18 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	102.01	0.00	0.00	102.01	101.35	0.00	154.862
200.00	200.00	0.00	0.00	0.34	202.00	200.00	102.01	0.00	0.34	102.01	100.67	0.00	76.407
400.00	400.00	0.00	0.00	0.79	402.00	400.00	102.01	0.00	0.79	102.01	99.77	0.00	45.659
532.66	532.66	0.00	0.00	1.08	534.66	532.66	102.01	0.00	1.09	102.01	99.18	0.00	36.039
600.00	600.00	0.00	0.00	1.24	600.00	598.00	102.01	0.00	1.24	102.03	98.90	0.00	32.610
800.00	800.00	0.00	0.00	1.69	793.18	790.95	109.90	-1.98	1.68	110.29	106.27	358.97	27.443
1,000.00	1,000.00	0.00	0.00	2.14	981.79	978.03	132.79	-7.70	2.16	134.81	129.87	356.68	27.291
1,200.00	1,199.75	-5.58	-6.70	2.53	1,164.24	1,156.56	169.05	-16.77	2.79	180.18	174.38	356.70	31.100
1,400.00	1,398.69	-18.74	-22.49	2.96	1,351.33	1,337.34	215.76	-28.44	3.60	242.47	235.77	358.55	36.200
1,600.00	1,597.59	-32.13	-38.55	3.45	1,541.10	1,520.65	263.41	-40.36	4.51	305.40	297.74	359.65	39.888
1,800.00	1,796.49	-45.51	-54.61	3.97	1,730.87	1,703.95	311.07	-52.27	5.45	368.40	359.74	0.38	42.558
2,000.00	1,995.40	-58.90	-70.67	4.51	1,920.65	1,887.26	358.72	-64.18	6.41	431.43	421.75	0.89	44.540
2,200.00	2,194.30	-72.28	-86.73	5.07	2,110.42	2,070.57	406.37	-76.09	7.39	494.49	483.76	1.27	46.054
2,400.00	2,393.21	-85.66	-102.79	5.64	2,300.20	2,253.88	454.02	-88.01	8.37	557.57	545.77	1.57	47.241
2,600.00	2,592.33	-97.49	-116.98	6.15	2,490.46	2,437.66	501.79	-99.95	9.37	619.15	606.27	1.63	48.064
2,800.00	2,792.25	-100.00	-120.00	6.53	2,683.13	2,623.76	550.17	-112.04	10.38	671.69	654.43	0.70	38.911
3,000.00	2,992.25	-100.00	-120.00	6.90	2,876.31	2,810.36	598.67	-124.17	11.39	721.97	703.27	359.66	38.609
3,200.00	3,192.25	-100.00	-120.00	7.29	3,069.50	2,996.97	647.18	-136.30	12.41	772.45	752.30	358.75	38.337
3,400.00	3,392.25	-100.00	-120.00	7.68	3,262.68	3,183.57	695.69	-148.42	13.43	823.09	801.48	357.95	38.093
3,600.00	3,592.25	-100.00	-120.00	8.08	3,455.87	3,370.17	744.20	-160.55	14.45	873.86	850.79	357.25	37.873
3,800.00	3,792.25	-100.00	-120.00	8.48	3,649.05	3,556.77	792.70	-172.68	15.47	924.74	900.19	356.62	37.674
4,000.00	3,992.25	-100.00	-120.00	8.89	3,842.24	3,743.38	841.21	-184.80	16.49	975.71	949.69	356.06	37.495
4,200.00	4,192.25	-100.00	-120.00	9.30	4,035.42	3,929.98	889.72	-196.93	17.51	1,026.76	999.26	355.56	37.332
4,400.00	4,392.25	-100.00	-120.00	9.72	4,228.61	4,116.58	938.22	-209.06	18.54	1,077.88	1,048.90	355.10	37.183
4,600.00	4,592.25	-100.00	-120.00	10.14	4,421.79	4,303.18	986.73	-221.19	19.56	1,129.06	1,098.59	354.68	37.048
4,800.00	4,792.25	-100.00	-120.00	10.56	4,614.98	4,489.79	1,035.24	-233.31	20.59	1,180.29	1,148.33	354.30	36.924
5,000.00	4,992.25	-100.00	-120.00	10.98	4,808.16	4,676.39	1,083.74	-245.44	21.61	1,231.57	1,198.11	353.95	36.810
5,200.00	5,192.25	-100.00	-120.00	11.41	5,001.35	4,862.99	1,132.25	-257.57	22.64	1,282.88	1,247.93	353.63	36.705
5,400.00	5,392.25	-100.00	-120.00	11.83	5,194.53	5,049.59	1,180.76	-269.69	23.66	1,334.23	1,297.78	353.33	36.608
5,600.00	5,592.25	-100.00	-120.00	12.26	5,405.77	5,253.69	1,233.61	-282.91	24.76	1,385.53	1,347.51	353.04	36.445
5,800.00	5,792.25	-100.00	-120.00	12.69	5,909.91	5,751.97	1,301.09	-299.78	26.09	1,413.15	1,373.32	352.69	35.480
6,000.00	5,992.25	-100.00	-120.00	13.12	6,150.20	5,992.25	1,302.01	-300.00	26.35	1,413.51	1,372.99	352.68	34.882
6,200.00	6,192.25	-100.00	-120.00	13.56	6,350.20	6,192.25	1,302.01	-300.00	26.56	1,413.51	1,372.34	352.68	34.329
6,400.00	6,392.25	-100.00	-120.00	13.99	6,550.20	6,392.25	1,302.01	-300.00	26.78	1,413.51	1,371.68	352.68	33.788
6,600.00	6,591.11	-99.84	-136.13	14.46	6,796.31	6,635.77	1,301.62	-272.16	26.95	1,408.75	1,376.65	354.46	43.882
6,800.00	6,778.22	-99.13	-204.90	15.16	6,964.50	6,790.50	1,300.72	-207.25	26.94	1,399.91	1,366.68	359.90	42.123
6,825.64	6,800.60	-99.00	-217.42	15.31	6,977.88	6,802.09	1,300.63	-200.55	26.94	1,399.74	1,366.33	0.69	41.896
7,000.00	6,939.12	-97.93	-322.59	16.32	7,031.70	6,847.36	1,300.23	-171.48	26.92	1,409.29	1,374.83	6.17	40.893
7,200.00	7,061.35	-96.32	-480.06	18.27	7,038.54	6,852.95	1,300.17	-167.54	26.91	1,446.13	1,409.69	12.61	39.682
7,400.00	7,135.44	-94.43	-665.12	21.17	7,012.12	6,831.15	1,300.38	-182.45	26.92	1,507.00	1,467.68	19.09	38.319
7,600.00	7,155.74	-92.40	-863.44	24.71	6,966.71	6,792.42	1,300.71	-206.16	26.94	1,582.65	1,540.35	25.26	37.414
7,800.00	7,151.37	-90.36	-1,063.38	26.77	6,921.40	6,752.36	1,301.00	-227.32	26.95	1,671.55	1,627.50	31.00	37.943
8,000.00	7,146.99	-88.32	-1,263.32	29.58	6,900.00	6,733.00	1,301.13	-236.42	26.96	1,776.64	1,730.01	36.47	38.100
8,200.00	7,142.62	-86.27	-1,463.26	32.96	6,850.00	6,686.76	1,301.39	-255.41	26.96	1,895.34	1,845.84	41.04	38.288
8,400.00	7,138.24	-84.23	-1,663.20	36.74	6,830.60	6,668.48	1,301.48	-261.90	26.96	2,025.96	1,973.03	45.32	38.273
8,600.00	7,133.87	-82.19	-1,863.15	40.82	6,800.00	6,639.31	1,301.61	-271.13	26.96	2,166.56	2,110.07	49.00	38.349
8,800.00	7,129.49	-80.15	-2,063.09	45.11	6,800.00	6,639.31	1,301.61	-271.13	26.96	2,315.31	2,254.76	52.36	38.242
9,000.00	7,125.11	-78.10	-2,263.03	49.56	6,776.98	6,617.11	1,301.69	-277.24	26.95	2,470.88	2,406.42	55.21	38.334
9,200.00	7,120.74	-76.06	-2,462.97	54.13	6,750.00	6,590.87	1,301.78	-283.50	26.94	2,632.36	2,563.98	57.70	38.500
9,400.00	7,116.36	-74.02	-2,662.91	58.80	6,750.00	6,590.87	1,301.78	-283.50	26.94	2,798.32	2,725.59	59.96	38.479
9,600.00	7,111.99	-71.97	-2,862.85	63.53	6,750.00	6,590.87	1,301.78	-283.50	26.94	2,968.48	2,891.34	61.96	38.483
9,800.00	7,107.61	-69.93	-3,062.80	68.32	6,750.00	6,590.87	1,301.78	-283.50	26.94	3,142.15	3,060.55	63.73	38.504

Anticollision Report for Deering 33-7HX - 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 11,852.18 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	7,103.24	-67.89	-3,262.74	73.16	6,724.71	6,566.07	1,301.85	-288.46	26.93	3,318.29	3,232.64	65.27	38.743
10,200.00	7,098.86	-65.84	-3,462.68	78.03	6,700.00	6,541.69	1,301.90	-292.46	26.92	3,497.35	3,407.68	66.66	39.002
10,400.00	7,094.49	-63.80	-3,662.62	82.94	6,700.00	6,541.69	1,301.90	-292.46	26.92	3,678.14	3,583.95	67.94	39.049
10,600.00	7,090.11	-61.76	-3,862.56	87.87	6,700.00	6,541.69	1,301.90	-292.46	26.92	3,860.83	3,762.09	69.09	39.103
10,800.00	7,085.74	-59.72	-4,062.50	92.82	6,700.00	6,541.69	1,301.90	-292.46	26.92	4,045.15	3,941.85	70.14	39.160
11,000.00	7,081.36	-57.67	-4,262.45	97.79	6,700.00	6,541.69	1,301.90	-292.46	26.92	4,230.90	4,123.02	71.10	39.219
11,200.00	7,076.99	-55.63	-4,462.39	102.77	6,700.00	6,541.69	1,301.90	-292.46	26.92	4,417.89	4,305.42	71.97	39.280
11,400.00	7,072.61	-53.59	-4,662.33	107.77	6,700.00	6,541.69	1,301.90	-292.46	26.92	4,605.98	4,488.90	72.77	39.341
11,600.00	7,068.24	-51.54	-4,862.27	112.78	6,700.00	6,541.69	1,301.90	-292.46	26.92	4,795.03	4,673.33	73.50	39.402
11,800.00	7,063.86	-49.50	-5,062.21	117.80	6,677.68	6,519.55	1,301.94	-295.34	26.90	4,984.55	4,858.88	74.17	39.666
11,852.18	7,062.72	-48.97	-5,114.38	119.11	6,676.76	6,518.65	1,301.94	-295.45	26.90	5,034.19	4,907.36	74.34	39.690

Anticollision Report for Deering 33-7HX - 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 11,852.18 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	182.210
200.00	200.00	0.00	0.00	0.34	203.00	200.00	120.22	0.00	0.34	120.22	118.89	0.00	89.902
400.00	400.00	0.00	0.00	0.79	403.00	400.00	120.22	0.00	0.79	120.22	117.99	0.00	53.759
600.00	600.00	0.00	0.00	1.24	600.00	596.97	122.35	-0.47	1.24	122.39	119.26	359.78	39.112
800.00	800.00	0.00	0.00	1.69	786.73	782.99	137.71	-3.89	1.68	138.81	134.79	358.38	34.498
1,000.00	1,000.00	0.00	0.00	2.14	971.72	965.40	167.45	-10.49	2.24	171.31	166.32	356.41	34.374
1,200.00	1,199.75	-5.58	-6.70	2.53	1,149.44	1,137.79	209.45	-19.83	2.97	224.17	218.36	356.51	38.600
1,400.00	1,398.69	-18.74	-22.49	2.96	1,328.93	1,308.81	262.58	-31.63	3.90	295.48	288.76	358.14	43.973
1,600.00	1,597.59	-32.13	-38.55	3.45	1,515.13	1,485.90	318.75	-44.12	4.96	368.27	360.58	359.09	47.904
1,800.00	1,796.49	-45.51	-54.61	3.97	1,701.34	1,663.00	374.92	-56.60	6.06	441.13	432.42	359.73	50.692
2,000.00	1,995.40	-58.90	-70.67	4.51	1,887.55	1,840.09	431.10	-69.08	7.17	514.02	504.27	0.19	52.728
2,200.00	2,194.30	-72.28	-86.73	5.07	2,073.76	2,017.19	487.27	-81.56	8.30	586.93	576.12	0.53	54.263
2,400.00	2,393.21	-85.66	-102.79	5.64	2,259.97	2,194.28	543.44	-94.05	9.43	659.86	647.96	0.80	55.451
2,600.00	2,592.33	-97.49	-116.98	6.15	2,446.73	2,371.90	599.78	-106.57	10.57	731.35	718.34	0.86	56.205
2,800.00	2,792.25	-100.00	-120.00	6.53	2,636.31	2,552.21	656.97	-119.28	11.74	794.12	775.41	0.05	42.442
3,000.00	2,992.25	-100.00	-120.00	6.90	2,826.52	2,733.11	714.35	-132.03	12.90	854.67	834.36	359.15	42.074
3,200.00	3,192.25	-100.00	-120.00	7.29	3,016.73	2,914.01	771.72	-144.78	14.07	915.39	893.46	358.37	41.748
3,400.00	3,392.25	-100.00	-120.00	7.68	3,206.95	3,094.91	829.10	-157.53	15.25	976.24	952.70	357.69	41.456
3,600.00	3,592.25	-100.00	-120.00	8.08	3,397.16	3,275.81	886.48	-170.28	16.42	1,037.21	1,012.03	357.08	41.196
3,800.00	3,792.25	-100.00	-120.00	8.48	3,587.37	3,456.72	943.86	-183.03	17.59	1,098.27	1,071.46	356.54	40.962
4,000.00	3,992.25	-100.00	-120.00	8.89	3,777.58	3,637.62	1,001.24	-195.78	18.77	1,159.41	1,130.96	356.06	40.751
4,200.00	4,192.25	-100.00	-120.00	9.30	3,967.79	3,818.52	1,058.62	-208.53	19.94	1,220.62	1,190.53	355.63	40.560
4,400.00	4,392.25	-100.00	-120.00	9.72	4,158.00	3,999.42	1,116.00	-221.28	21.12	1,281.88	1,250.14	355.24	40.387
4,600.00	4,592.25	-100.00	-120.00	10.14	4,348.21	4,180.32	1,173.38	-234.03	22.30	1,343.20	1,309.81	354.88	40.229
4,800.00	4,792.25	-100.00	-120.00	10.56	4,538.42	4,361.22	1,230.76	-246.78	23.47	1,404.55	1,369.51	354.56	40.084
5,000.00	4,992.25	-100.00	-120.00	10.98	4,728.64	4,542.12	1,288.13	-259.53	24.65	1,465.95	1,429.25	354.26	39.952
5,200.00	5,192.25	-100.00	-120.00	11.41	4,918.85	4,723.03	1,345.51	-272.29	25.83	1,527.37	1,489.03	353.99	39.830
5,400.00	5,392.25	-100.00	-120.00	11.83	5,113.83	5,204.42	1,404.09	-286.41	27.77	1,575.31	1,534.51	353.52	38.617
5,600.00	5,592.25	-100.00	-120.00	12.26	5,302.33	5,592.25	1,470.22	-300.00	28.31	1,580.51	1,538.73	353.46	37.830
5,800.00	5,792.25	-100.00	-120.00	12.69	5,492.33	5,792.25	1,470.22	-300.00	28.49	1,580.51	1,538.11	353.46	37.276
6,000.00	5,992.25	-100.00	-120.00	13.12	5,682.33	5,992.25	1,470.22	-300.00	28.68	1,580.51	1,537.48	353.46	36.733
6,200.00	6,192.25	-100.00	-120.00	13.56	5,872.33	6,192.25	1,470.22	-300.00	28.88	1,580.51	1,536.85	353.46	36.200
6,400.00	6,392.25	-100.00	-120.00	13.99	6,062.33	6,392.25	1,470.22	-300.00	29.08	1,580.51	1,536.21	353.46	35.678
6,600.00	6,591.11	-99.84	-136.13	14.46	6,251.77	6,638.92	1,469.71	-270.95	29.24	1,576.05	1,543.56	355.09	48.504
6,800.00	6,778.22	-99.13	-204.90	15.16	7,020.91	6,794.08	1,468.53	-204.64	29.22	1,567.74	1,534.13	0.01	46.640
6,828.90	6,803.41	-98.99	-219.06	15.33	7,035.83	6,806.94	1,468.40	-197.06	29.21	1,567.54	1,533.73	0.80	46.364
7,000.00	6,939.12	-97.93	-322.59	16.32	7,087.49	6,850.17	1,467.89	-168.81	29.19	1,575.87	1,541.03	5.61	45.239
7,200.00	7,061.35	-96.32	-480.06	18.27	7,100.00	6,860.33	1,467.76	-161.50	29.19	1,608.80	1,571.98	11.51	43.693
7,400.00	7,135.44	-94.43	-665.12	21.17	7,066.37	6,832.74	1,468.11	-180.74	29.20	1,663.66	1,623.87	17.22	41.814
7,600.00	7,155.74	-92.40	-863.44	24.71	7,020.35	6,793.61	1,468.53	-204.91	29.22	1,732.43	1,689.43	22.87	40.285
7,800.00	7,151.37	-90.36	-1,063.38	26.77	6,974.57	6,753.20	1,468.92	-226.42	29.23	1,813.94	1,769.11	28.23	40.461
8,000.00	7,146.99	-88.32	-1,263.32	29.58	6,950.00	6,730.97	1,469.10	-236.89	29.24	1,911.07	1,863.62	33.39	40.276
8,200.00	7,142.62	-86.27	-1,463.26	32.96	6,900.00	6,684.70	1,469.44	-255.80	29.24	2,021.85	1,971.42	37.82	40.092
8,400.00	7,138.24	-84.23	-1,663.20	36.74	6,882.94	6,668.63	1,469.54	-261.51	29.24	2,144.64	2,090.69	42.05	39.752
8,600.00	7,133.87	-82.19	-1,863.15	40.82	6,850.00	6,637.22	1,469.72	-271.44	29.24	2,277.85	2,220.25	45.73	39.546
8,800.00	7,129.49	-80.15	-2,063.09	45.11	6,850.00	6,637.22	1,469.72	-271.44	29.24	2,419.59	2,357.89	49.14	39.220
9,000.00	7,125.11	-78.10	-2,263.03	49.56	6,828.92	6,616.90	1,469.82	-277.04	29.23	2,568.76	2,503.03	52.07	39.081
9,200.00	7,120.74	-76.06	-2,462.97	54.13	6,800.00	6,588.77	1,469.94	-283.73	29.22	2,724.37	2,654.62	54.65	39.060
9,400.00	7,116.36	-74.02	-2,662.91	58.80	6,800.00	6,588.77	1,469.94	-283.73	29.22	2,884.90	2,810.74	57.02	38.904
9,600.00	7,111.99	-71.97	-2,862.85	63.53	6,800.00	6,588.77	1,469.94	-283.73	29.22	3,050.10	2,971.47	59.13	38.792
9,800.00	7,107.61	-69.93	-3,062.80	68.32	6,800.00	6,588.77	1,469.94	-283.73	29.22	3,219.25	3,136.10	61.01	38.714
10,000.00	7,103.24	-67.89	-3,262.74	73.16	6,776.32	6,565.55	1,470.02	-288.37	29.21	3,391.33	3,303.97	62.66	38.818

Anticollision Report for Deering 33-7HX - 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 11,852.18 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	7,098.86	-65.84	-3,462.68	78.03	6,750.00	6,539.57	1,470.09	-292.61	29.20	3,566.68	3,475.17	64.15	38.974
10,400.00	7,094.49	-63.80	-3,662.62	82.94	6,750.00	6,539.57	1,470.09	-292.61	29.20	3,744.02	3,647.92	65.53	38.959
10,600.00	7,090.11	-61.76	-3,862.56	87.87	6,750.00	6,539.57	1,470.09	-292.61	29.20	3,923.54	3,822.83	66.78	38.957
10,800.00	7,085.74	-59.72	-4,062.50	92.82	6,750.00	6,539.57	1,470.09	-292.61	29.20	4,104.96	3,999.61	67.91	38.966
11,000.00	7,081.36	-57.67	-4,262.45	97.79	6,750.00	6,539.57	1,470.09	-292.61	29.20	4,288.03	4,178.03	68.95	38.983
11,200.00	7,076.99	-55.63	-4,462.39	102.77	6,750.00	6,539.57	1,470.09	-292.61	29.20	4,472.54	4,357.88	69.90	39.007
11,400.00	7,072.61	-53.59	-4,662.33	107.77	6,750.00	6,539.57	1,470.09	-292.61	29.20	4,658.34	4,539.01	70.78	39.036
11,600.00	7,068.24	-51.54	-4,862.27	112.78	6,750.00	6,539.57	1,470.09	-292.61	29.20	4,845.27	4,721.25	71.58	39.068
11,800.00	7,063.86	-49.50	-5,062.21	117.80	6,750.00	6,539.57	1,470.09	-292.61	29.20	5,033.20	4,904.48	72.33	39.103
11,852.18	7,062.72	-48.97	-5,114.38	119.11	6,728.15	6,517.90	1,470.14	-295.41	29.19	5,082.03	4,952.62	72.50	39.273

Anticollision Report for Deering 33-7HX - 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 11,852.18 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	21.86	0.00	0.00	21.86	21.20	359.99	33.246
200.00	200.00	0.00	0.00	0.34	201.00	200.00	21.86	0.00	0.34	21.86	20.53	359.99	16.403
400.00	400.00	0.00	0.00	0.79	401.00	400.00	21.86	0.00	0.79	21.86	19.63	359.99	9.795
600.00	600.00	0.00	0.00	1.24	601.00	600.00	21.86	0.00	1.24	21.86	18.73	359.99	6.982
800.00	800.00	0.00	0.00	1.69	801.00	800.00	21.86	0.00	1.69	21.86	17.83	359.99	5.425
1,000.00	1,000.00	0.00	0.00	2.14	1,001.00	1,000.00	21.86	0.00	2.14	21.86	16.93	359.99	4.435
1,200.00	1,199.75	-5.58	-6.70	2.53	1,200.75	1,199.75	21.86	0.00	2.59	28.25	22.49	13.71	4.902
1,400.00	1,398.69	-18.74	-22.49	2.96	1,399.69	1,398.69	21.86	0.00	3.03	46.42	39.82	28.98	7.035
1,600.00	1,597.59	-32.13	-38.55	3.45	1,598.59	1,597.59	21.86	0.00	3.48	66.34	58.89	35.53	8.900
1,800.00	1,796.49	-45.51	-54.61	3.97	1,797.49	1,796.49	21.86	0.00	3.93	86.73	78.40	39.03	10.419
2,000.00	1,995.40	-58.90	-70.67	4.51	1,996.40	1,995.40	21.86	0.00	4.37	107.31	98.11	41.19	11.661
2,200.00	2,194.30	-72.28	-86.73	5.07	2,195.30	2,194.30	21.86	0.00	4.82	128.00	117.91	42.65	12.687
2,400.00	2,393.21	-85.66	-102.79	5.64	2,394.21	2,393.21	21.86	0.00	5.27	148.75	137.77	43.71	13.546
2,600.00	2,592.33	-97.49	-116.98	6.15	2,593.33	2,592.33	21.86	0.00	5.72	167.12	155.24	44.43	14.070
2,800.00	2,792.25	-100.00	-120.00	6.53	2,793.25	2,792.25	21.86	0.00	6.17	171.02	157.63	44.56	12.772
3,000.00	2,992.25	-100.00	-120.00	6.90	2,993.25	2,992.25	21.86	0.00	6.62	171.02	156.81	44.56	12.029
3,200.00	3,192.25	-100.00	-120.00	7.29	3,193.25	3,192.25	21.86	0.00	7.06	171.02	155.97	44.56	11.362
3,400.00	3,392.25	-100.00	-120.00	7.68	3,393.25	3,392.25	21.86	0.00	7.51	171.02	155.13	44.56	10.760
3,600.00	3,592.25	-100.00	-120.00	8.08	3,593.25	3,592.25	21.86	0.00	7.96	171.02	154.28	44.56	10.215
3,800.00	3,792.25	-100.00	-120.00	8.48	3,793.25	3,792.25	21.86	0.00	8.41	171.02	153.43	44.56	9.720
4,000.00	3,992.25	-100.00	-120.00	8.89	3,993.25	3,992.25	21.86	0.00	8.86	171.02	152.57	44.56	9.268
4,200.00	4,192.25	-100.00	-120.00	9.30	4,193.25	4,192.25	21.86	0.00	9.31	171.02	151.71	44.56	8.855
4,400.00	4,392.25	-100.00	-120.00	9.72	4,393.25	4,392.25	21.86	0.00	9.76	171.02	150.85	44.56	8.475
4,600.00	4,592.25	-100.00	-120.00	10.14	4,593.25	4,592.25	21.86	0.00	10.21	171.02	149.98	44.56	8.126
4,800.00	4,792.25	-100.00	-120.00	10.56	4,793.25	4,792.25	21.86	0.00	10.66	171.02	149.11	44.56	7.803
5,000.00	4,992.25	-100.00	-120.00	10.98	4,993.25	4,992.25	21.86	0.00	11.11	171.02	148.24	44.56	7.505
5,200.00	5,192.25	-100.00	-120.00	11.41	5,193.25	5,192.25	21.86	0.00	11.56	171.02	147.36	44.56	7.227
5,400.00	5,392.25	-100.00	-120.00	11.83	5,393.25	5,392.25	21.86	0.00	12.01	171.02	146.48	44.56	6.969
5,600.00	5,592.25	-100.00	-120.00	12.26	5,593.25	5,592.25	21.86	0.00	12.46	171.02	145.61	44.56	6.728
5,800.00	5,792.25	-100.00	-120.00	12.69	5,793.25	5,792.25	21.86	0.00	12.91	171.02	144.73	44.56	6.503
6,000.00	5,992.25	-100.00	-120.00	13.12	5,993.25	5,992.25	21.86	0.00	13.36	171.02	143.85	44.56	6.293
6,200.00	6,192.25	-100.00	-120.00	13.56	6,193.25	6,192.25	21.86	0.00	13.81	171.02	142.96	44.56	6.095
6,400.00	6,392.25	-100.00	-120.00	13.99	6,402.66	6,401.59	21.86	-2.58	14.26	169.48	140.54	43.94	5.855
6,600.00	6,591.11	-99.84	-136.13	14.46	6,629.79	6,622.63	21.86	-51.58	14.76	151.50	122.10	34.79	5.152
6,800.00	6,778.22	-99.13	-204.90	15.16	6,848.22	6,814.75	21.86	-154.13	15.49	136.21	105.74	22.76	4.471
7,000.00	6,939.12	-97.93	-322.59	16.32	7,059.66	6,968.62	21.86	-298.31	16.82	125.74	92.61	11.46	3.795
7,200.00	7,061.35	-96.32	-480.06	18.27	7,265.76	7,078.29	21.86	-472.15	19.04	119.65	81.73	3.83	3.155
7,400.00	7,135.44	-94.43	-665.12	21.17	7,468.10	7,140.50	21.86	-664.15	22.15	116.41	72.08	0.48	2.626
7,600.00	7,155.74	-92.40	-863.44	24.71	7,667.25	7,154.43	21.98	-862.36	25.67	114.40	62.95	0.54	2.224
7,603.25	7,155.67	-92.37	-866.69	24.74	7,670.38	7,154.37	22.01	-865.49	25.72	114.40	63.34	0.60	2.240
7,800.00	7,151.37	-90.36	-1,063.38	26.77	7,859.30	7,150.27	30.17	-1,054.16	27.73	120.88	65.36	4.38	2.177
8,000.00	7,146.99	-88.32	-1,263.32	29.58	8,057.36	7,145.97	47.25	-1,251.43	30.37	136.10	75.13	5.01	2.232
8,200.00	7,142.62	-86.27	-1,463.26	32.96	8,256.77	7,141.63	64.63	-1,450.03	33.60	151.49	83.94	5.01	2.243
8,400.00	7,138.24	-84.23	-1,663.20	36.74	8,456.18	7,137.30	82.02	-1,648.63	37.25	166.89	91.91	5.01	2.226
8,600.00	7,133.87	-82.19	-1,863.15	40.82	8,655.58	7,132.97	99.40	-1,847.23	41.22	182.28	99.27	5.01	2.196
8,800.00	7,129.49	-80.15	-2,063.09	45.11	8,854.99	7,128.64	116.78	-2,045.83	45.43	197.68	106.19	5.01	2.161
9,000.00	7,125.11	-78.10	-2,263.03	49.56	9,054.40	7,124.31	134.16	-2,244.44	49.81	213.07	112.78	5.01	2.125
9,200.00	7,120.74	-76.06	-2,462.97	54.13	9,253.80	7,119.98	151.54	-2,443.04	54.32	228.47	119.12	5.01	2.089
9,400.00	7,116.36	-74.02	-2,662.91	58.80	9,453.21	7,115.65	168.92	-2,641.64	58.93	243.87	125.27	5.01	2.056
9,600.00	7,111.99	-71.97	-2,862.85	63.53	9,652.62	7,111.32	186.30	-2,840.24	63.62	259.26	131.26	5.00	2.025
9,800.00	7,107.61	-69.93	-3,062.80	68.32	9,852.02	7,106.99	203.68	-3,038.84	68.37	274.66	137.14	5.00	1.997

Anticollision Report for Deering 33-7HX - 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 11,852.18 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	7,103.24	-67.89	-3,262.74	73.16	10,051.43	7,102.66	221.06	-3,237.44	73.18	290.05	142.92	5.00	1.971
10,200.00	7,098.86	-65.84	-3,462.68	78.03	10,250.83	7,098.33	238.44	-3,436.04	78.02	305.45	148.62	5.00	1.948
10,400.00	7,094.49	-63.80	-3,662.62	82.94	10,450.24	7,094.00	255.82	-3,634.64	82.90	320.85	154.26	5.00	1.926
10,600.00	7,090.11	-61.76	-3,862.56	87.87	10,649.65	7,089.67	273.20	-3,833.24	87.81	336.24	159.84	5.00	1.906
10,800.00	7,085.74	-59.72	-4,062.50	92.82	10,849.05	7,085.33	290.58	-4,031.84	92.74	351.64	165.38	5.00	1.888
11,000.00	7,081.36	-57.67	-4,262.45	97.79	11,048.46	7,081.00	307.96	-4,230.44	97.70	367.04	170.88	5.00	1.871
11,200.00	7,076.99	-55.63	-4,462.39	102.77	11,247.87	7,076.67	325.34	-4,429.04	102.67	382.43	176.35	5.00	1.856
11,400.00	7,072.61	-53.59	-4,662.33	107.77	11,447.27	7,072.34	342.73	-4,627.64	107.65	397.83	181.79	5.00	1.841
11,600.00	7,068.24	-51.54	-4,862.27	112.78	11,646.68	7,068.01	360.11	-4,826.24	112.65	413.22	187.21	5.00	1.828
11,800.00	7,063.86	-49.50	-5,062.21	117.80	11,785.35	7,065.00	372.19	-4,964.35	116.13	432.90	198.58	13.06	1.847
11,852.18	7,062.72	-48.97	-5,114.38	119.11	11,785.35	7,065.00	372.19	-4,964.35	116.13	447.09	211.45	19.61	1.897

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	7,588.39	Rev A0 (Permitting Plan Only)	MWD
7,588.39	11,852.18	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.

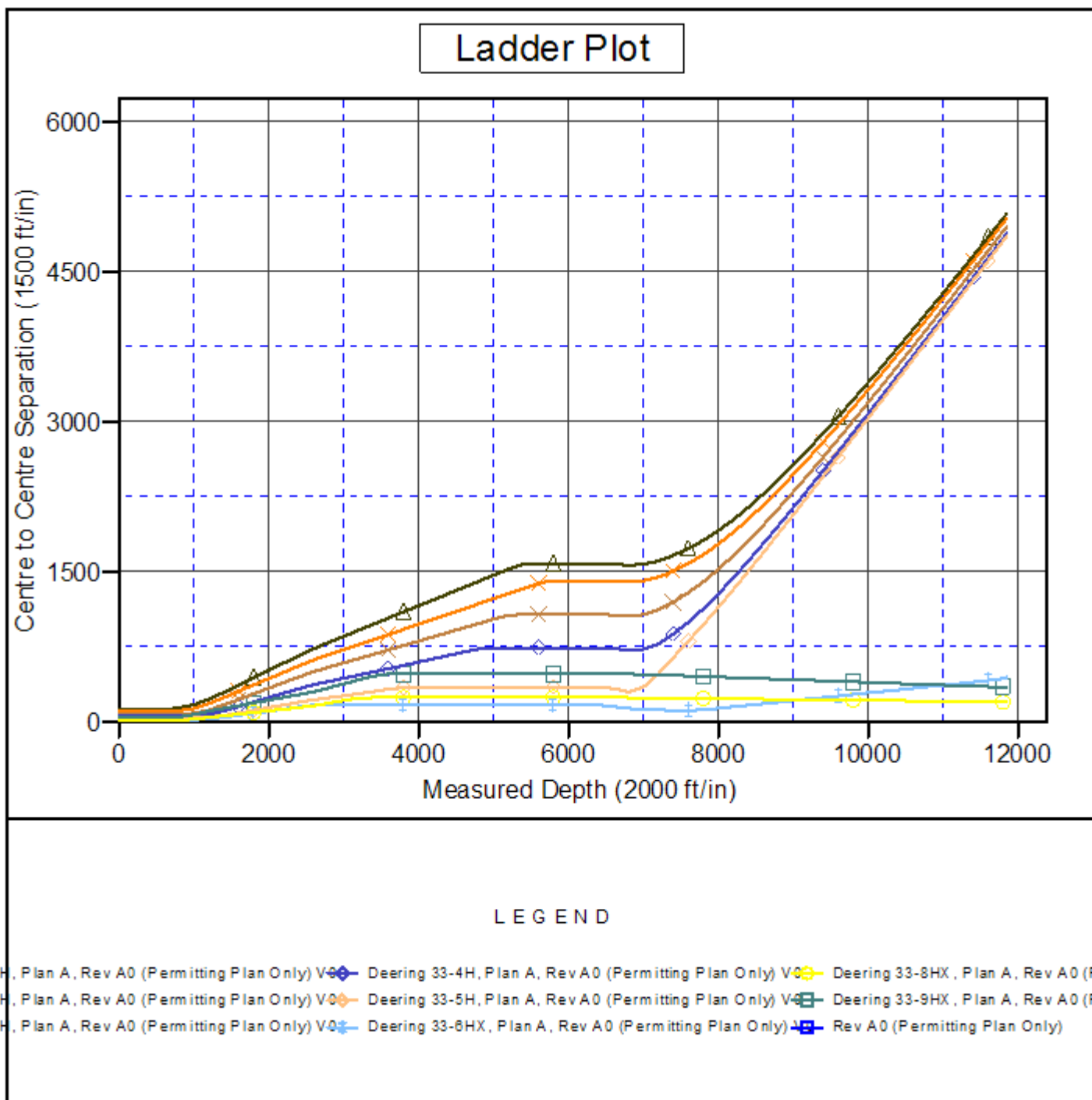
Anticollision Report for Deering 33-7HX - Rev A0 (Permitting Plan Only)

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 33-7HX - Slot A7

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 33-7HX - A7

Plan A

Plan: Rev A0 (Permitting Plan Only)

Sperry Drilling Services

Proposal Report

25 July, 2013

Well Coordinates: 1,341,750.64 N, 3,166,345.57 E (40° 16' 11.89" N, 104° 54' 13.93" W)

Ground Level: 4,902.00 ft

Local Coordinate Origin: Centered on Well Deering 33-7HX - Slot A7

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 33-7HX - Rev A0 (Permitting Plan Only)

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Toolface Azimuth (°)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin 2.5°/100ft Nudge to 6.0° Inclination at 1000.00ft										
1,100.00	2.50	230.19	1,099.97	-1.40	-1.68	1.69	2.50	2.50	0.00	230.19
1,200.00	5.00	230.19	1,199.75	-5.58	-6.70	6.76	2.50	2.50	0.00	0.00
1,240.00	6.00	230.19	1,239.56	-8.04	-9.64	9.73	2.50	2.50	0.00	0.00
Begin 1254.14ft Tangent at 1240.00ft										
1,300.00	6.00	230.19	1,299.23	-12.05	-14.46	14.58	0.00	0.00	0.00	0.00
1,400.00	6.00	230.19	1,398.69	-18.74	-22.49	22.68	0.00	0.00	0.00	0.00
1,500.00	6.00	230.19	1,498.14	-25.44	-30.52	30.78	0.00	0.00	0.00	0.00
1,600.00	6.00	230.19	1,597.59	-32.13	-38.55	38.88	0.00	0.00	0.00	0.00
1,700.00	6.00	230.19	1,697.04	-38.82	-46.58	46.98	0.00	0.00	0.00	0.00
1,800.00	6.00	230.19	1,796.49	-45.51	-54.61	55.07	0.00	0.00	0.00	0.00
1,900.00	6.00	230.19	1,895.95	-52.20	-62.64	63.17	0.00	0.00	0.00	0.00
2,000.00	6.00	230.19	1,995.40	-58.90	-70.67	71.27	0.00	0.00	0.00	0.00
2,100.00	6.00	230.19	2,094.85	-65.59	-78.70	79.37	0.00	0.00	0.00	0.00
2,200.00	6.00	230.19	2,194.30	-72.28	-86.73	87.47	0.00	0.00	0.00	0.00
2,300.00	6.00	230.19	2,293.75	-78.97	-94.76	95.56	0.00	0.00	0.00	0.00
2,400.00	6.00	230.19	2,393.21	-85.66	-102.79	103.66	0.00	0.00	0.00	0.00
2,494.15	6.00	230.19	2,486.84	-91.96	-110.36	111.29	0.00	0.00	0.00	0.00
Begin 2.5°/100ft Drop to Vertical at 2494.15ft										
2,500.00	5.85	230.19	2,492.66	-92.35	-110.82	111.75	2.50	-2.50	0.00	180.00
2,600.00	3.35	230.19	2,592.33	-97.49	-116.98	117.97	2.50	-2.50	0.00	180.00
2,700.00	0.85	230.19	2,692.25	-99.84	-119.80	120.81	2.50	-2.50	0.00	180.00
2,734.15	0.00	0.00	2,726.40	-100.00	-120.00	121.01	2.50	-2.50	0.00	180.00
End of Drop at 2734.15ft										
2,800.00	0.00	0.00	2,792.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,892.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	2,992.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,092.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,192.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,292.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,392.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,492.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,592.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,692.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,792.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,892.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	3,992.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,092.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,192.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,292.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,392.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,492.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,592.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,692.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,792.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,892.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	4,992.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00

Plan Report for Deering 33-7HX - 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	5,092.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,192.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,292.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,392.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,492.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,592.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,692.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,792.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,892.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	5,992.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,092.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,192.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,292.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,392.25	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
6,447.72	0.00	0.00	6,439.97	-100.00	-120.00	121.01	0.00	0.00	0.00	0.00
KOP - Begin 8.0°/100ft Build at 6447.72ft										
6,500.00	4.18	270.59	6,492.21	-99.98	-121.91	122.92	8.00	8.00	0.00	270.59
6,600.00	12.18	270.59	6,591.11	-99.84	-136.13	137.14	8.00	8.00	0.00	0.00
6,700.00	20.18	270.59	6,687.07	-99.55	-163.97	164.98	8.00	8.00	0.00	0.00
6,800.00	28.18	270.59	6,778.22	-99.13	-204.90	205.90	8.00	8.00	0.00	0.00
6,900.00	36.18	270.59	6,862.78	-98.59	-258.12	259.11	8.00	8.00	0.00	0.00
7,000.00	44.18	270.59	6,939.12	-97.93	-322.59	323.57	8.00	8.00	0.00	0.00
7,100.00	52.18	270.59	7,005.74	-97.17	-397.05	398.02	8.00	8.00	0.00	0.00
7,200.00	60.18	270.59	7,061.35	-96.32	-480.06	481.01	8.00	8.00	0.00	0.00
7,300.00	68.18	270.59	7,104.87	-95.40	-570.00	570.94	8.00	8.00	0.00	0.00
7,400.00	76.18	270.59	7,135.44	-94.43	-665.12	666.05	8.00	8.00	0.00	0.00
7,500.00	84.18	270.59	7,152.48	-93.42	-763.57	764.48	8.00	8.00	0.00	0.00
7,588.39	91.25	270.59	7,156.00	-92.52	-851.83	852.73	8.00	8.00	0.00	0.00
End of Build at 7588.39ft - 7" Csg										
7,600.00	91.25	270.59	7,155.74	-92.40	-863.44	864.33	0.00	0.00	0.00	0.00
7,700.00	91.25	270.59	7,153.55	-91.38	-963.41	964.29	0.00	0.00	0.00	0.00
7,800.00	91.25	270.59	7,151.37	-90.36	-1,063.38	1,064.24	0.00	0.00	0.00	0.00
7,900.00	91.25	270.59	7,149.18	-89.34	-1,163.35	1,164.20	0.00	0.00	0.00	0.00
8,000.00	91.25	270.59	7,146.99	-88.32	-1,263.32	1,264.15	0.00	0.00	0.00	0.00
8,100.00	91.25	270.59	7,144.80	-87.30	-1,363.29	1,364.11	0.00	0.00	0.00	0.00
8,200.00	91.25	270.59	7,142.62	-86.27	-1,463.26	1,464.06	0.00	0.00	0.00	0.00
8,300.00	91.25	270.59	7,140.43	-85.25	-1,563.23	1,564.02	0.00	0.00	0.00	0.00
8,400.00	91.25	270.59	7,138.24	-84.23	-1,663.20	1,663.97	0.00	0.00	0.00	0.00
8,500.00	91.25	270.59	7,136.05	-83.21	-1,763.17	1,763.93	0.00	0.00	0.00	0.00
8,600.00	91.25	270.59	7,133.87	-82.19	-1,863.15	1,863.89	0.00	0.00	0.00	0.00
8,700.00	91.25	270.59	7,131.68	-81.17	-1,963.12	1,963.84	0.00	0.00	0.00	0.00
8,800.00	91.25	270.59	7,129.49	-80.15	-2,063.09	2,063.80	0.00	0.00	0.00	0.00
8,900.00	91.25	270.59	7,127.30	-79.12	-2,163.06	2,163.75	0.00	0.00	0.00	0.00
9,000.00	91.25	270.59	7,125.11	-78.10	-2,263.03	2,263.71	0.00	0.00	0.00	0.00
9,100.00	91.25	270.59	7,122.93	-77.08	-2,363.00	2,363.66	0.00	0.00	0.00	0.00
9,200.00	91.25	270.59	7,120.74	-76.06	-2,462.97	2,463.62	0.00	0.00	0.00	0.00
9,300.00	91.25	270.59	7,118.55	-75.04	-2,562.94	2,563.57	0.00	0.00	0.00	0.00
9,400.00	91.25	270.59	7,116.36	-74.02	-2,662.91	2,663.53	0.00	0.00	0.00	0.00
9,500.00	91.25	270.59	7,114.18	-73.00	-2,762.88	2,763.48	0.00	0.00	0.00	0.00
9,600.00	91.25	270.59	7,111.99	-71.97	-2,862.85	2,863.44	0.00	0.00	0.00	0.00
Hold Angle at 91.25°										
9,700.00	91.25	270.59	7,109.80	-70.95	-2,962.82	2,963.39	0.00	0.00	0.00	0.00
9,800.00	91.25	270.59	7,107.61	-69.93	-3,062.80	3,063.35	0.00	0.00	0.00	0.00
9,900.00	91.25	270.59	7,105.43	-68.91	-3,162.77	3,163.30	0.00	0.00	0.00	0.00
10,000.00	91.25	270.59	7,103.24	-67.89	-3,262.74	3,263.26	0.00	0.00	0.00	0.00
10,100.00	91.25	270.59	7,101.05	-66.87	-3,362.71	3,363.21	0.00	0.00	0.00	0.00
10,200.00	91.25	270.59	7,098.86	-65.84	-3,462.68	3,463.17	0.00	0.00	0.00	0.00
10,300.00	91.25	270.59	7,096.68	-64.82	-3,562.65	3,563.13	0.00	0.00	0.00	0.00
10,400.00	91.25	270.59	7,094.49	-63.80	-3,662.62	3,663.08	0.00	0.00	0.00	0.00

Plan Report for Deering 33-7HX - 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	270.59	7,092.30	-62.78	-3,762.59	3,763.04	0.00	0.00	0.00	0.00
10,600.00	91.25	270.59	7,090.11	-61.76	-3,862.56	3,862.99	0.00	0.00	0.00	0.00
10,700.00	91.25	270.59	7,087.92	-60.74	-3,962.53	3,962.95	0.00	0.00	0.00	0.00
10,800.00	91.25	270.59	7,085.74	-59.72	-4,062.50	4,062.90	0.00	0.00	0.00	0.00
10,900.00	91.25	270.59	7,083.55	-58.69	-4,162.48	4,162.86	0.00	0.00	0.00	0.00
11,000.00	91.25	270.59	7,081.36	-57.67	-4,262.45	4,262.81	0.00	0.00	0.00	0.00
11,100.00	91.25	270.59	7,079.17	-56.65	-4,362.42	4,362.77	0.00	0.00	0.00	0.00
11,200.00	91.25	270.59	7,076.99	-55.63	-4,462.39	4,462.72	0.00	0.00	0.00	0.00
11,300.00	91.25	270.59	7,074.80	-54.61	-4,562.36	4,562.68	0.00	0.00	0.00	0.00
11,400.00	91.25	270.59	7,072.61	-53.59	-4,662.33	4,662.63	0.00	0.00	0.00	0.00
11,500.00	91.25	270.59	7,070.42	-52.57	-4,762.30	4,762.59	0.00	0.00	0.00	0.00
11,600.00	91.25	270.59	7,068.24	-51.54	-4,862.27	4,862.54	0.00	0.00	0.00	0.00
11,700.00	91.25	270.59	7,066.05	-50.52	-4,962.24	4,962.50	0.00	0.00	0.00	0.00
11,702.18	91.25	270.59	7,066.00	-50.50	-4,964.42	4,964.68	0.00	0.00	0.00	0.00
Total Depth at 11702.18ft										

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,000.00	1,000.00	0.00	0.00	Begin 2.5°/100ft Nudge to 6.0° Inclination at 1000.00ft
1,240.00	1,239.56	-8.04	-9.64	Begin 1254.14ft Tangent at 1240.00ft
2,494.15	2,486.84	-91.96	-110.36	Begin 2.5°/100ft Drop to Vertical at 2494.15ft
2,734.15	2,726.40	-100.00	-120.00	End of Drop at 2734.15ft
6,447.72	6,439.97	-100.00	-120.00	KOP - Begin 8.0°/100ft Build at 6447.72ft
7,588.39	7,156.00	-92.52	-851.83	End of Build at 7588.39ft
9,600.00	7,111.99	-71.97	-2,862.85	Hold Angle at 91.25°
11,702.18	7,066.00	-50.50	-4,964.42	Total Depth at 11702.18ft

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (ft)
				+N/-S (ft)	+E/-W (ft)	
Target	Deering 33-7H_RevA0_BHL Tgt	269.42	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	7,588.39	Rev A0 (Permitting Plan Only)	MWD
7,588.39	11,852.18	Rev A0 (Permitting Plan Only)	MWD

Casing Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,588.39	7,156.00	7" Csg	7	8-3/4

Plan Report for Deering 33-7HX - Rev A0 (Permitting Plan Only)

Plan Report for Deering 33-7HX - 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	-950.81	-1,021.39	Circle
Stroh_Sunmarke 19-28-11_BHL	-87.00	4,418.25	1,628.27	Circle
Stroh_Stroh 28-10	-34.00	4,393.68	2,971.43	Circle
Stroh_Stroh 23-28	-34.00	3,614.02	2,466.50	Circle
Stroh_Spaur 1	-34.00	4,399.02	1,608.48	Circle
Deering_Anderson 12-32	-3.00	-830.17	-4,649.24	Circle
Deering_Anderson 1	-3.00	-812.17	-3,334.83	Circle
Stroh_Frank 1 (B)	-34.00	1,211.68	4,271.03	Circle
Deering_Hepp 32-5	-3.00	637.99	-4,749.42	Circle
Deering_Stroh 7-33	-3.00	408.21	3,002.60	Circle
Stroh_Koester 18-33-6_BHL	-36.00	437.69	1,645.40	Circle
Stroh_Stroh 33-2	-34.00	1,745.20	2,980.11	Circle
Stroh_Koester 3-33-3_BHL	-67.00	1,723.43	1,683.44	Circle
Stroh_Sunmarke 15-28	-34.00	3,362.55	1,021.21	Circle
Deering_Stroh 33-4	-3.00	404.76	4,311.35	Circle
Stroh_Stroh 28-16	-34.00	3,038.87	5,320.96	Circle
Stroh_Stroh 2	-34.00	3,435.61	3,303.57	Circle
Deering_Camenisch 32-10	-3.00	-655.64	-2,277.16	Circle
Stroh_Sunmarke 19-28-14_BHL	-87.00	3,089.10	1,620.01	Circle
Stroh_Koester 18-33	-34.00	790.55	563.68	Circle
Stroh_Stroh 39-28R	-34.00	3,530.56	4,748.87	Circle
Stroh 28-1H_Sec. 33 Lines	-34.00	2,674.45	4,768.56	Polygon
Deering 33-1H_Sec. 32 S Half 460' Setback	-3.00	120.22	0.00	Polygon
Stroh_Sunmarke 19-28-12_BHL	-87.00	4,399.58	305.95	Circle
Deering_Hepp 22-32R	-3.00	113.28	-4,107.69	Circle
Deering 33-1H_Sec. 32 N Half 460' Setback	-3.00	120.22	0.00	Polygon
Stroh_Stroh 38-28R	-34.00	2,528.73	4,754.64	Circle
Stroh_Koester 3-33-21_BHL	-66.00	1,111.62	2,147.99	Circle
Deering 33-7H_RevA0_BHL Tgt	7,066.00	-50.50	-4,964.43	Point
Stroh_Stroh 33-1	-34.00	1,741.73	4,171.60	Circle
Deering 33-1H_Sec. 32 N Half Lines	-3.00	120.22	0.00	Polygon
Deering_Camenisch 9-32-40R	-3.00	-918.02	-996.27	Circle
Stroh_Frank 1	-34.00	2,056.55	1,642.11	Circle
Stroh_Stroh 28-33R	-34.00	2,255.17	2,466.64	Circle
Stroh_Sunmarke 19-28-13_BHL	-87.00	3,091.01	269.98	Circle
Stroh_Koester 18-33-4_BHL	-34.00	1,800.17	347.46	Circle
Stroh 28-1H_Sec. 33 460' Setback	-34.00	2,674.45	4,768.56	Polygon
Stroh_Stroh 1	-34.00	717.90	3,298.35	Circle
Deering_Camenisch 7-32-25R	-3.00	309.78	-2,408.23	Circle
Stroh_Koester 18-33-5_BHL	-33.00	374.81	231.53	Circle
Deering 33-1H_Sec. 32 S Half Lines	-3.00	120.22	0.00	Polygon
Stroh_Stroh 15-28	-34.00	3,034.83	2,943.69	Circle
Stroh_Koester 18-33-22_BHL	-34.00	-10.19	995.48	Circle
Stroh_Stroh 41-33R	-34.00	896.65	4,766.11	Circle
Stroh_Koester 3-33-29_BHL	-68.00	2,254.89	983.27	Circle
Deering_Hepp 32-6	-3.00	579.49	-3,502.08	Circle
Deering_Camenisch 41-32	-3.00	346.21	-2,369.16	Circle
Stroh_Stroh 28-9	-34.00	4,353.80	4,288.35	Circle

North Reference Sheet for Sec. 33-T4N-R67W (Deering 33H Pad) - Deering 33-7HX - 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 33-7HX - Slot A7

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: 1,341,750.64 ft N, 3,166,345.57 ft E

Geographical Coordinates of Well: 40° 16' 11.89" N, 104° 54' 13.93" W

Grid Convergence at Surface is: 0.39°

Based upon Minimum Curvature type calculations, at a Measured Depth of 11,852.18ft

the Bottom Hole Displacement is 5,114.61ft in the Direction of 269.45° (True).

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

