

K.P. Kauffman Company, Inc.

Weld County, CO (NAD 83)

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

Deering 33-2H - A2

Plan A

Plan: Rev A0 (Permitting Plan Only)

Sperry Drilling Services

Proposal Report

25 July, 2013

Well Coordinates: 1,341,852.64 N, 3,166,344.88 E (40° 16' 12.90" N, 104° 54' 13.93" W)

Ground Level: 4,904.00 ft

Local Coordinate Origin: Centered on Well Deering 33-2H - Slot A2

Viewing Datum: GL @ 4904.00ft (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

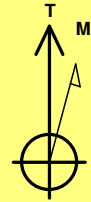
Project: Weld County, CO (NAD 83)
 Site: Sec. 33-T4N-R67W (Deering 33H Pad)
 Well: Deering 33-2H
 Wellbore: Plan A
 Design: Rev A0 (Permitting Plan Only)

K.P. Kauffman Company, Inc.

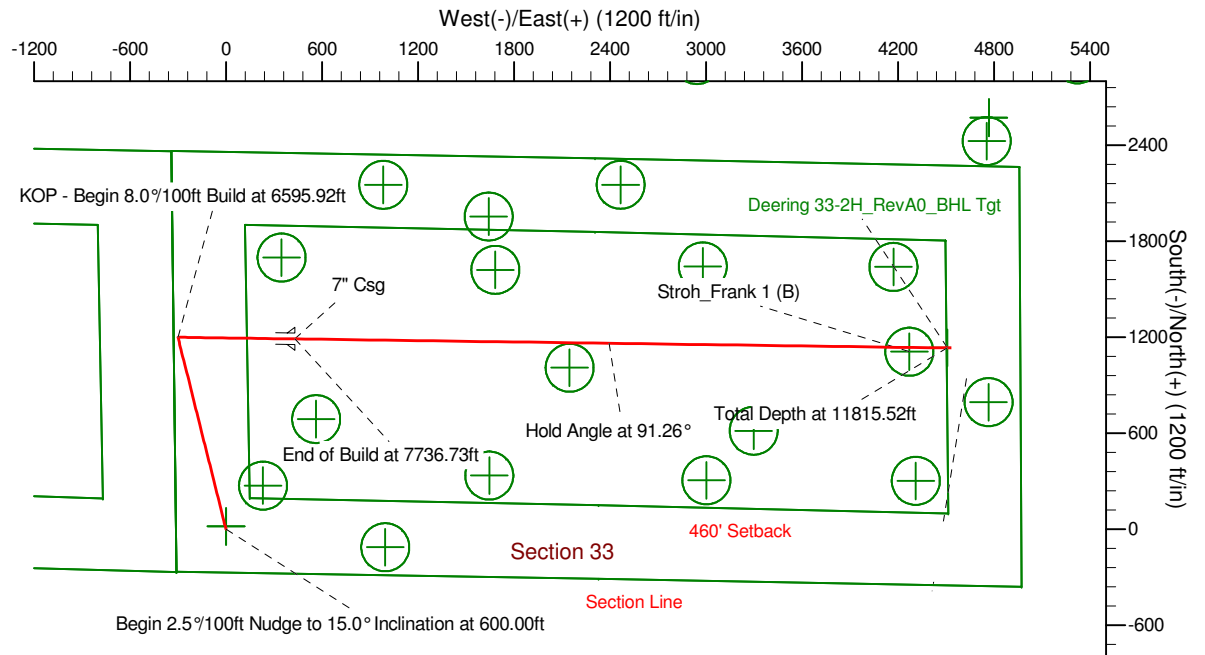
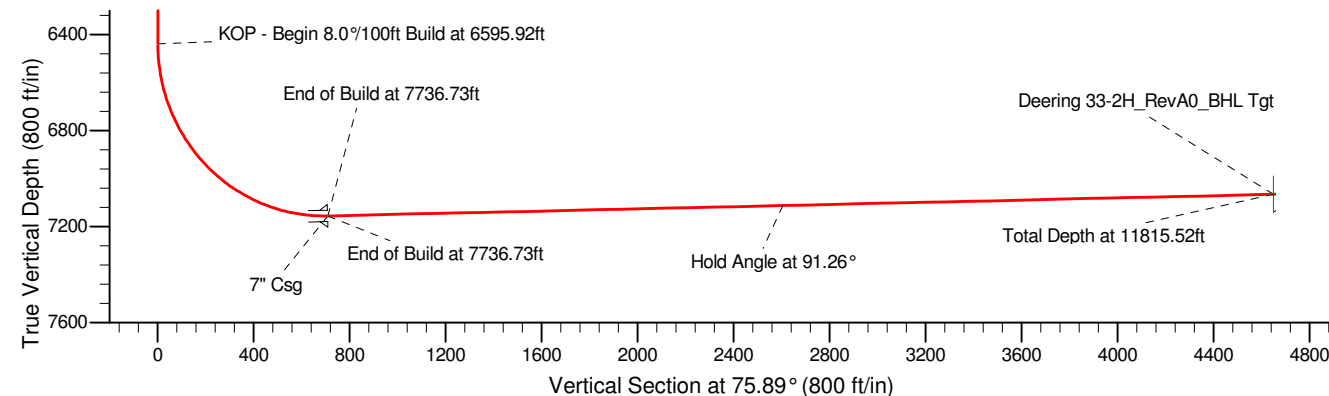
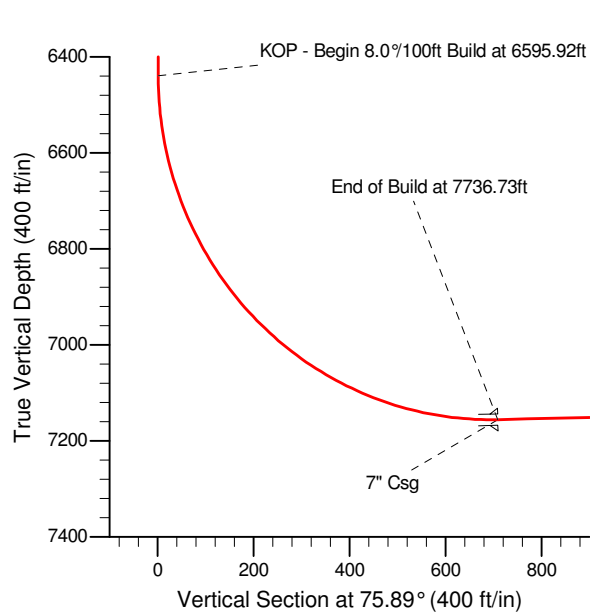
HALLIBURTON
 Sperry Drilling

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-/S	+E-/W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	
3	1200.00	15.00	345.96	1193.17	75.76	-18.94	2.50	345.96	0.10	
4	5375.69	15.00	345.96	5226.58	1124.24	-281.06	0.00	0.00	1.47	
5	5975.69	0.00	0.00	5819.75	1200.00	-300.00	2.50	180.00	1.56	
6	6595.92	0.00	0.00	6439.98	1200.00	-300.00	0.00	0.00	1.56	
7	7736.73	91.26	90.79	7156.00	1189.86	431.93	8.00	90.79	708.95	
8	11815.52	91.26	90.79	7066.00	1133.40	4509.33	0.00	0.00	4649.59	Deering 33-2H_RevA0_BHL Tgt



Azimuths to True North
 Magnetic North: 8.67°
 Magnetic Field
 Strength: 52759.0snT
 Dip Angle: 66.84°
 Date: 7/24/2013
 Model: BGGM2013



WELL DETAILS: Deering 33-2H

Ground Level: 4904.00
 Northing 1341852.64 Easting 3166344.88 Latitude 40° 16' 12.900 N Longitude 104° 54' 13.932 W

Plan: Rev A0 (Permitting Plan Only) (Deering 33-2H/Plan A)

Created By: Jay Lantz Date: 8:55, July 25 2013

Approved: _____ Date: _____

Plan Report for Deering 33-2H - Rev A0 (Permitting Plan Only)

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Toolface Azimuth (°)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin 2.5°/100ft Nudge to 15.0° Inclination at 600.00ft										
700.00	2.50	345.96	699.97	2.12	-0.53	0.00	2.50	2.50	0.00	345.96
800.00	5.00	345.96	799.75	8.46	-2.12	0.01	2.50	2.50	0.00	0.00
900.00	7.50	345.96	899.14	19.02	-4.76	0.02	2.50	2.50	0.00	0.00
1,000.00	10.00	345.96	997.97	33.78	-8.44	0.04	2.50	2.50	0.00	0.00
1,100.00	12.50	345.96	1,096.04	52.70	-13.18	0.07	2.50	2.50	0.00	0.00
1,200.00	15.00	345.96	1,193.17	75.76	-18.94	0.10	2.50	2.50	0.00	0.00
Begin 4175.70ft Tangent at 1200.00ft										
1,300.00	15.00	345.96	1,289.76	100.87	-25.22	0.13	0.00	0.00	0.00	0.00
1,400.00	15.00	345.96	1,386.35	125.98	-31.49	0.16	0.00	0.00	0.00	0.00
1,500.00	15.00	345.96	1,482.95	151.09	-37.77	0.20	0.00	0.00	0.00	0.00
1,600.00	15.00	345.96	1,579.54	176.20	-44.05	0.23	0.00	0.00	0.00	0.00
1,700.00	15.00	345.96	1,676.13	201.31	-50.33	0.26	0.00	0.00	0.00	0.00
1,800.00	15.00	345.96	1,772.73	226.42	-56.60	0.30	0.00	0.00	0.00	0.00
1,900.00	15.00	345.96	1,869.32	251.52	-62.88	0.33	0.00	0.00	0.00	0.00
2,000.00	15.00	345.96	1,965.91	276.63	-69.16	0.36	0.00	0.00	0.00	0.00
2,100.00	15.00	345.96	2,062.50	301.74	-75.44	0.39	0.00	0.00	0.00	0.00
2,200.00	15.00	345.96	2,159.10	326.85	-81.71	0.43	0.00	0.00	0.00	0.00
2,300.00	15.00	345.96	2,255.69	351.96	-87.99	0.46	0.00	0.00	0.00	0.00
2,400.00	15.00	345.96	2,352.28	377.07	-94.27	0.49	0.00	0.00	0.00	0.00
2,500.00	15.00	345.96	2,448.87	402.18	-100.54	0.52	0.00	0.00	0.00	0.00
2,600.00	15.00	345.96	2,545.47	427.29	-106.82	0.56	0.00	0.00	0.00	0.00
2,700.00	15.00	345.96	2,642.06	452.40	-113.10	0.59	0.00	0.00	0.00	0.00
2,800.00	15.00	345.96	2,738.65	477.51	-119.38	0.62	0.00	0.00	0.00	0.00
2,900.00	15.00	345.96	2,835.24	502.62	-125.65	0.66	0.00	0.00	0.00	0.00
3,000.00	15.00	345.96	2,931.84	527.72	-131.93	0.69	0.00	0.00	0.00	0.00
3,100.00	15.00	345.96	3,028.43	552.83	-138.21	0.72	0.00	0.00	0.00	0.00
3,200.00	15.00	345.96	3,125.02	577.94	-144.49	0.75	0.00	0.00	0.00	0.00
3,300.00	15.00	345.96	3,221.61	603.05	-150.76	0.79	0.00	0.00	0.00	0.00
3,400.00	15.00	345.96	3,318.21	628.16	-157.04	0.82	0.00	0.00	0.00	0.00
3,500.00	15.00	345.96	3,414.80	653.27	-163.32	0.85	0.00	0.00	0.00	0.00
3,600.00	15.00	345.96	3,511.39	678.38	-169.59	0.88	0.00	0.00	0.00	0.00
3,700.00	15.00	345.96	3,607.98	703.49	-175.87	0.92	0.00	0.00	0.00	0.00
3,800.00	15.00	345.96	3,704.58	728.60	-182.15	0.95	0.00	0.00	0.00	0.00
3,900.00	15.00	345.96	3,801.17	753.71	-188.43	0.98	0.00	0.00	0.00	0.00
4,000.00	15.00	345.96	3,897.76	778.82	-194.70	1.02	0.00	0.00	0.00	0.00
4,100.00	15.00	345.96	3,994.35	803.92	-200.98	1.05	0.00	0.00	0.00	0.00
4,200.00	15.00	345.96	4,090.95	829.03	-207.26	1.08	0.00	0.00	0.00	0.00
4,300.00	15.00	345.96	4,187.54	854.14	-213.54	1.11	0.00	0.00	0.00	0.00
4,400.00	15.00	345.96	4,284.13	879.25	-219.81	1.15	0.00	0.00	0.00	0.00
4,500.00	15.00	345.96	4,380.73	904.36	-226.09	1.18	0.00	0.00	0.00	0.00
4,600.00	15.00	345.96	4,477.32	929.47	-232.37	1.21	0.00	0.00	0.00	0.00
4,700.00	15.00	345.96	4,573.91	954.58	-238.64	1.24	0.00	0.00	0.00	0.00
4,800.00	15.00	345.96	4,670.50	979.69	-244.92	1.28	0.00	0.00	0.00	0.00
4,900.00	15.00	345.96	4,767.10	1,004.80	-251.20	1.31	0.00	0.00	0.00	0.00
5,000.00	15.00	345.96	4,863.69	1,029.91	-257.48	1.34	0.00	0.00	0.00	0.00
5,100.00	15.00	345.96	4,960.28	1,055.02	-263.75	1.38	0.00	0.00	0.00	0.00
5,200.00	15.00	345.96	5,056.87	1,080.12	-270.03	1.41	0.00	0.00	0.00	0.00
5,300.00	15.00	345.96	5,153.47	1,105.23	-276.31	1.44	0.00	0.00	0.00	0.00
5,375.69	15.00	345.96	5,226.58	1,124.24	-281.06	1.47	0.00	0.00	0.00	0.00
Begin 2.5°/100ft Drop to Vertical at 5375.69ft										

Plan Report for Deering 33-2H - 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 (°)
5,400.00	14.39	345.96	5,250.09	1,130.22	-282.56	1.47	2.50	-2.50	0.00	180.00
5,500.00	11.89	345.96	5,347.46	1,152.28	-288.07	1.50	2.50	-2.50	0.00	180.00
5,600.00	9.39	345.96	5,445.74	1,170.19	-292.55	1.53	2.50	-2.50	0.00	180.00
5,700.00	6.89	345.96	5,544.72	1,183.93	-295.98	1.54	2.50	-2.50	0.00	180.00
5,800.00	4.39	345.96	5,644.23	1,193.47	-298.37	1.56	2.50	-2.50	0.00	180.00
5,900.00	1.89	345.96	5,744.07	1,198.79	-299.70	1.56	2.50	-2.50	0.00	180.00
5,975.69	0.00	345.96	5,819.75	1,200.00	-300.00	1.56	2.50	-2.50	0.00	180.00
End of Drop at 5975.69ft										
6,000.00	0.00	0.00	5,844.06	1,200.00	-300.00	1.56	0.00	0.00	0.00	180.00
6,100.00	0.00	0.00	5,944.06	1,200.00	-300.00	1.56	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,044.06	1,200.00	-300.00	1.56	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,144.06	1,200.00	-300.00	1.56	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,244.06	1,200.00	-300.00	1.56	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,344.06	1,200.00	-300.00	1.56	0.00	0.00	0.00	0.00
6,595.92	0.00	0.00	6,439.98	1,200.00	-300.00	1.56	0.00	0.00	0.00	0.00
KOP - Begin 8.0°/100ft Build at 6595.92ft										
6,600.00	0.33	90.79	6,444.06	1,200.00	-299.99	1.58	7.99	7.99	0.00	90.79
6,700.00	8.33	90.79	6,543.69	1,199.90	-292.45	8.86	8.00	8.00	0.00	0.00
6,800.00	16.33	90.79	6,641.31	1,199.60	-271.12	29.47	8.00	8.00	0.00	0.00
6,900.00	24.33	90.79	6,735.00	1,199.12	-236.42	63.01	8.00	8.00	0.00	0.00
7,000.00	32.33	90.79	6,822.96	1,198.46	-189.01	108.83	8.00	8.00	0.00	0.00
7,100.00	40.33	90.79	6,903.46	1,197.64	-129.83	166.03	8.00	8.00	0.00	0.00
7,200.00	48.33	90.79	6,974.94	1,196.68	-60.02	233.50	8.00	8.00	0.00	0.00
7,300.00	56.33	90.79	7,036.00	1,195.58	19.06	309.92	8.00	8.00	0.00	0.00
7,400.00	64.33	90.79	7,085.47	1,194.38	105.87	393.82	8.00	8.00	0.00	0.00
7,500.00	72.33	90.79	7,122.37	1,193.09	198.71	483.55	8.00	8.00	0.00	0.00
7,600.00	80.33	90.79	7,145.99	1,191.75	295.79	577.37	8.00	8.00	0.00	0.00
7,700.00	88.33	90.79	7,155.87	1,190.37	395.21	673.46	8.00	8.00	0.00	0.00
7,736.73	91.26	90.79	7,156.00	1,189.86	431.93	708.95	8.00	8.00	0.00	0.00
End of Build at 7736.73ft - 7" Csg										
7,800.00	91.26	90.79	7,154.61	1,188.99	495.18	770.07	0.00	0.00	0.00	0.00
7,900.00	91.26	90.79	7,152.40	1,187.60	595.15	866.69	0.00	0.00	0.00	0.00
8,000.00	91.26	90.79	7,150.19	1,186.22	695.11	963.30	0.00	0.00	0.00	0.00
8,100.00	91.26	90.79	7,147.99	1,184.83	795.08	1,059.91	0.00	0.00	0.00	0.00
8,200.00	91.26	90.79	7,145.78	1,183.45	895.04	1,156.53	0.00	0.00	0.00	0.00
8,300.00	91.26	90.79	7,143.57	1,182.07	995.01	1,253.14	0.00	0.00	0.00	0.00
8,400.00	91.26	90.79	7,141.37	1,180.68	1,094.98	1,349.75	0.00	0.00	0.00	0.00
8,500.00	91.26	90.79	7,139.16	1,179.30	1,194.94	1,446.37	0.00	0.00	0.00	0.00
8,600.00	91.26	90.79	7,136.95	1,177.91	1,294.91	1,542.98	0.00	0.00	0.00	0.00
8,700.00	91.26	90.79	7,134.75	1,176.53	1,394.88	1,639.59	0.00	0.00	0.00	0.00
8,800.00	91.26	90.79	7,132.54	1,175.14	1,494.84	1,736.21	0.00	0.00	0.00	0.00
8,900.00	91.26	90.79	7,130.33	1,173.76	1,594.81	1,832.82	0.00	0.00	0.00	0.00
9,000.00	91.26	90.79	7,128.13	1,172.37	1,694.77	1,929.43	0.00	0.00	0.00	0.00
9,100.00	91.26	90.79	7,125.92	1,170.99	1,794.74	2,026.04	0.00	0.00	0.00	0.00
9,200.00	91.26	90.79	7,123.71	1,169.61	1,894.71	2,122.66	0.00	0.00	0.00	0.00
9,300.00	91.26	90.79	7,121.51	1,168.22	1,994.67	2,219.27	0.00	0.00	0.00	0.00
9,400.00	91.26	90.79	7,119.30	1,166.84	2,094.64	2,315.88	0.00	0.00	0.00	0.00
9,500.00	91.26	90.79	7,117.09	1,165.45	2,194.60	2,412.50	0.00	0.00	0.00	0.00
9,600.00	91.26	90.79	7,114.89	1,164.07	2,294.57	2,509.11	0.00	0.00	0.00	0.00
9,700.00	91.26	90.79	7,112.68	1,162.68	2,394.54	2,605.72	0.00	0.00	0.00	0.00
Hold Angle at 91.26°										
9,800.00	91.26	90.79	7,110.47	1,161.30	2,494.50	2,702.34	0.00	0.00	0.00	0.00
9,900.00	91.26	90.79	7,108.27	1,159.92	2,594.47	2,798.95	0.00	0.00	0.00	0.00
10,000.00	91.26	90.79	7,106.06	1,158.53	2,694.43	2,895.56	0.00	0.00	0.00	0.00
10,100.00	91.26	90.79	7,103.85	1,157.15	2,794.40	2,992.18	0.00	0.00	0.00	0.00
10,200.00	91.26	90.79	7,101.65	1,155.76	2,894.37	3,088.79	0.00	0.00	0.00	0.00
10,300.00	91.26	90.79	7,099.44	1,154.38	2,994.33	3,185.40	0.00	0.00	0.00	0.00
10,400.00	91.26	90.79	7,097.23	1,152.99	3,094.30	3,282.02	0.00	0.00	0.00	0.00
10,500.00	91.26	90.79	7,095.03	1,151.61	3,194.26	3,378.63	0.00	0.00	0.00	0.00

Plan Report for Deering 33-2H - 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 (°)
10,600.00	91.26	90.79	7,092.82	1,150.22	3,294.23	3,475.24	0.00	0.00	0.00	0.00
10,700.00	91.26	90.79	7,090.62	1,148.84	3,394.20	3,571.85	0.00	0.00	0.00	0.00
10,800.00	91.26	90.79	7,088.41	1,147.46	3,494.16	3,668.47	0.00	0.00	0.00	0.00
10,900.00	91.26	90.79	7,086.20	1,146.07	3,594.13	3,765.08	0.00	0.00	0.00	0.00
11,000.00	91.26	90.79	7,084.00	1,144.69	3,694.09	3,861.69	0.00	0.00	0.00	0.00
11,100.00	91.26	90.79	7,081.79	1,143.30	3,794.06	3,958.31	0.00	0.00	0.00	0.00
11,200.00	91.26	90.79	7,079.58	1,141.92	3,894.03	4,054.92	0.00	0.00	0.00	0.00
11,300.00	91.26	90.79	7,077.38	1,140.53	3,993.99	4,151.53	0.00	0.00	0.00	0.00
11,400.00	91.26	90.79	7,075.17	1,139.15	4,093.96	4,248.15	0.00	0.00	0.00	0.00
11,500.00	91.26	90.79	7,072.96	1,137.76	4,193.93	4,344.76	0.00	0.00	0.00	0.00
11,600.00	91.26	90.79	7,070.76	1,136.38	4,293.89	4,441.37	0.00	0.00	0.00	0.00
11,700.00	91.26	90.79	7,068.55	1,135.00	4,393.86	4,537.99	0.00	0.00	0.00	0.00
11,800.00	91.26	90.79	7,066.34	1,133.61	4,493.82	4,634.60	0.00	0.00	0.00	0.00
11,815.52	91.26	90.79	7,066.00	1,133.40	4,509.34	4,649.59	0.00	0.00	0.00	0.00
Total Depth at 11815.52ft										

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
600.00	600.00	0.00	0.00	Begin 2.5°/100ft Nudge to 15.0° Inclination at 600.00ft
1,200.00	1,193.17	75.76	-18.94	Begin 4175.70ft Tangent at 1200.00ft
5,375.69	5,226.58	1,124.24	-281.06	Begin 2.5°/100ft Drop to Vertical at 5375.69ft
5,975.69	5,819.75	1,200.00	-300.00	End of Drop at 5975.69ft
6,595.92	6,439.98	1,200.00	-300.00	KOP - Begin 8.0°/100ft Build at 6595.92ft
7,736.73	7,156.00	1,189.86	431.93	End of Build at 7736.73ft
9,700.00	7,112.68	1,162.68	2,394.54	Hold Angle at 91.26°
11,815.52	7,066.00	1,133.40	4,509.34	Total Depth at 11815.52ft

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (ft)
				+N/-S (ft)	+E/-W (ft)	
Target	Deering 33-2H_RevA0_BHL Tgt	75.89	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	7,736.73	Rev A0 (Permitting Plan Only)	MWD
7,736.73	11,965.52	Rev A0 (Permitting Plan Only)	MWD

Casing Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,736.73	7,156.00	7" Csg	7	8-3/4

Plan Report for Deering 33-2H - 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	-1.00	-1,052.81	-1,021.38	Circle
Stroh_Sunmarke 19-28-11_BHL	-85.00	4,316.24	1,628.27	Circle
Stroh_Stroh 28-10	-32.00	4,291.68	2,971.43	Circle
Stroh_Stroh 23-28	-32.00	3,512.01	2,466.50	Circle
Stroh_Spaur 1	-32.00	4,297.02	1,608.48	Circle
Deering_Anderson 12-32	-1.00	-932.18	-4,649.23	Circle
Deering_Anderson 1	-1.00	-914.17	-3,334.83	Circle
Stroh_Frank 1 (B)	-32.00	1,109.67	4,271.04	Circle
Deering_Hepp 32-5	-1.00	535.98	-4,749.42	Circle
Deering_Stroh 7-33	-1.00	306.20	3,002.60	Circle
Stroh_Koester 18-33-6_BHL	-34.00	335.69	1,645.41	Circle
Stroh_Stroh 33-2	-32.00	1,643.19	2,980.12	Circle
Stroh_Koester 3-33-3_BHL	-65.00	1,621.42	1,683.45	Circle
Stroh_Sunmarke 15-28	-32.00	3,260.54	1,021.21	Circle
Deering_Stroh 33-4	-1.00	302.75	4,311.36	Circle
Stroh_Stroh 28-16	-32.00	2,936.86	5,320.96	Circle
Stroh_Stroh 2	-32.00	3,333.60	3,303.58	Circle
Deering_Camenisch 32-10	-1.00	-757.64	-2,277.16	Circle
Stroh_Sunmarke 19-28-14_BHL	-85.00	2,987.09	1,620.02	Circle
Stroh_Koester 18-33	-32.00	688.54	563.68	Circle
Stroh_Stroh 39-28R	-32.00	3,428.55	4,748.87	Circle
Stroh 28-1H_Sec. 33 Lines	-32.00	2,572.44	4,768.57	Polygon
Stroh_Sunmarke 19-28-12_BHL	-85.00	4,297.58	305.95	Circle
Deering_Hepp 22-32R	-1.00	11.27	-4,107.69	Circle
Deering 33-1H_Sec. 32 N Half 460' Setback	-1.00	18.22	0.00	Polygon
Stroh_Stroh 38-28R	-32.00	2,426.72	4,754.64	Circle
Stroh_Koester 3-33-21_BHL	-64.00	1,009.61	2,147.99	Circle
Stroh_Stroh 33-1	-32.00	1,639.72	4,171.61	Circle
Deering 33-1H_Sec. 32 N Half Lines	-1.00	18.22	0.00	Polygon
Deering_Camenisch 9-32-40R	-1.00	-1,020.03	-996.26	Circle
Stroh_Frank 1	-32.00	1,954.54	1,642.12	Circle
Stroh_Stroh 28-33R	-32.00	2,153.16	2,466.64	Circle
Stroh_Sunmarke 19-28-13_BHL	-85.00	2,989.00	269.99	Circle
Stroh_Koester 18-33-4_BHL	-32.00	1,698.16	347.46	Circle
Stroh 28-1H_Sec. 33 460' Setback	-32.00	2,572.44	4,768.57	Polygon
Stroh_Stroh 1	-32.00	615.89	3,298.36	Circle
Deering_Camenisch 7-32-25R	-1.00	207.77	-2,408.22	Circle
Stroh_Koester 18-33-5_BHL	-31.00	272.80	231.53	Circle
Stroh_Stroh 15-28	-32.00	2,932.82	2,943.69	Circle
Stroh_Koester 18-33-22_BHL	-32.00	-112.19	995.48	Circle
Stroh_Stroh 41-33R	-32.00	794.64	4,766.12	Circle
Stroh_Koester 3-33-29_BHL	-66.00	2,152.88	983.28	Circle
Deering_Hepp 32-6	-1.00	477.49	-3,502.07	Circle
Deering 33-2H_RevA0_BHL Tgt	7,066.00	1,133.40	4,509.33	Point
Deering_Camenisch 41-32	-1.00	244.20	-2,369.15	Circle
Stroh_Stroh 28-9	-32.00	4,251.80	4,288.35	Circle

North Reference Sheet for Sec. 33-T4N-R67W (Deering 33H Pad) - Deering 33-2H - Plan A

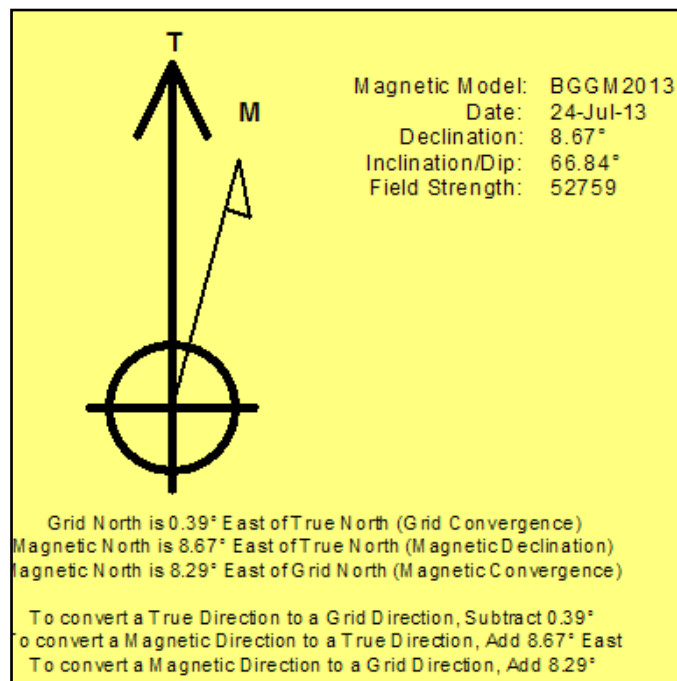
All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to True North Reference.
 Vertical Depths are relative to GL @ 4904.00ft (Ground Level). Northing and Easting are relative to Deering 33-2H - Slot A2
 Coordinate System is US State Plane 1983, Colorado Northern Zone 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: 1,341,852.64 ft N, 3,166,344.88 ft E
 Geographical Coordinates of Well: 40° 16' 12.90" N, 104° 54' 13.93" W
 Grid Convergence at Surface is: 0.39°

Based upon Minimum Curvature type calculations, at a Measured Depth of 11,965.52ft
 the Bottom Hole Displacement is 4,794.66ft in the Direction of 76.35° (True).

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



K.P. Kauffman Company, Inc.

Weld County, CO (NAD 83)

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

Deering 33-2H

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 33-2H - Plan A - Rev A0 (Permitting Plan Only)

Well Coordinates: 1,341,852.64 N, 3,166,344.88 E (40° 16' 12.90" N, 104° 54' 13.93" W)

Datum Height: GL @ 4904.00ft (Ground Level)

Scan Range: 0.00 to 11,966.19 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 33-2H - 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 11,966.19 ft. Measured Depth.

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

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	+E/-W (ft)	Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	+E/-W (ft)	Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids ft	Relative North Bearing	Clearance Factor
0.00	0.00	0.00	0.00	0.00	1.00	0.00	-21.85	0.00	0.00	21.85	21.19	179.99	33.231
200.00	200.00	0.00	0.00	0.34	201.00	200.00	-21.85	0.00	0.34	21.85	20.52	179.99	16.395
400.00	400.00	0.00	0.00	0.79	401.00	400.00	-21.85	0.00	0.79	21.85	19.62	179.99	9.791
600.00	600.00	0.00	0.00	1.24	601.00	600.00	-21.85	0.00	1.24	21.85	18.72	179.99	6.979
800.00	799.75	8.46	-2.12	1.70	800.76	799.76	-21.85	0.00	1.69	30.39	26.35	176.00	7.531
1,000.00	997.97	33.78	-8.44	2.21	1,003.36	1,002.10	-13.32	-2.91	2.15	47.60	42.68	173.29	9.672
1,200.00	1,193.17	75.76	-18.94	2.93	1,207.52	1,204.38	12.35	-11.66	2.67	64.80	58.98	173.45	11.140
1,400.00	1,386.35	125.98	-31.49	3.83	1,410.51	1,402.74	53.02	-25.52	3.35	75.02	68.17	175.32	10.951
1,600.00	1,579.54	176.20	-44.05	4.80	1,610.35	1,597.46	95.57	-40.03	4.15	82.69	74.74	177.14	10.396
1,800.00	1,772.73	226.42	-56.60	5.80	1,810.19	1,792.17	138.12	-54.53	5.00	90.44	81.33	178.66	9.930
2,000.00	1,965.91	276.63	-69.16	6.82	2,010.03	1,986.89	180.67	-69.04	5.88	98.23	87.93	179.93	9.535
2,200.00	2,159.10	326.85	-81.71	7.85	2,209.86	2,181.61	223.21	-83.54	6.78	106.07	94.54	181.01	9.200
2,400.00	2,352.28	377.07	-94.27	8.89	2,409.70	2,376.32	265.76	-98.05	7.69	113.94	101.15	181.95	8.914
2,600.00	2,545.47	427.29	-106.82	9.94	2,609.54	2,571.04	308.31	-112.55	8.61	121.83	107.77	182.76	8.668
2,800.00	2,738.65	477.51	-119.38	10.99	2,809.38	2,765.75	350.86	-127.06	9.53	129.74	114.39	183.47	8.455
3,000.00	2,931.84	527.72	-131.93	12.04	3,009.21	2,960.47	393.41	-141.56	10.46	137.67	121.02	184.10	8.268
3,200.00	3,125.02	577.94	-144.49	13.10	3,209.05	3,155.18	435.96	-156.07	11.40	145.61	127.65	184.66	8.105
3,400.00	3,318.21	628.16	-157.04	14.15	3,408.89	3,349.90	478.51	-170.57	12.33	153.57	134.27	185.17	7.960
3,600.00	3,511.39	678.38	-169.59	15.21	3,608.73	3,544.62	521.06	-185.08	13.27	161.53	140.91	185.62	7.830
3,800.00	3,704.58	728.60	-182.15	16.27	3,808.56	3,739.33	563.61	-199.59	14.21	169.51	147.54	186.03	7.715
4,000.00	3,897.76	778.82	-194.70	17.33	4,008.40	3,934.05	606.16	-214.09	15.15	177.49	154.17	186.41	7.611
4,200.00	4,090.95	829.03	-207.26	18.39	4,208.24	4,128.76	648.71	-228.60	16.10	185.48	160.80	186.75	7.516
4,400.00	4,284.13	879.25	-219.81	19.45	4,408.08	4,323.48	691.25	-243.10	17.04	193.48	167.44	187.06	7.431
4,600.00	4,477.32	929.47	-232.37	20.51	4,607.91	4,518.19	733.80	-257.61	17.98	201.48	174.08	187.35	7.353
4,800.00	4,670.50	979.69	-244.92	21.57	4,807.75	4,712.91	776.35	-272.11	18.93	209.48	180.71	187.62	7.281
5,000.00	4,863.69	1,029.91	-257.48	22.63	5,000.00	4,900.46	816.32	-285.74	19.79	218.56	188.51	187.54	7.272
5,200.00	5,056.87	1,080.12	-270.03	23.69	5,183.97	5,082.13	843.46	-294.99	20.32	239.31	208.48	186.02	7.764
5,400.00	5,250.09	1,130.22	-282.56	24.74	5,362.31	5,259.89	856.53	-299.45	20.67	274.39	243.14	183.53	8.781
5,600.00	5,445.74	1,170.19	-292.55	25.44	5,548.18	5,445.74	858.15	-300.00	20.90	312.13	280.66	181.37	9.918
5,800.00	5,644.23	1,193.47	-298.37	25.92	5,746.67	5,644.23	858.15	-300.00	21.14	335.33	303.57	180.28	10.559
6,000.00	5,844.06	1,200.00	-300.00	26.19	5,946.50	5,844.06	858.15	-300.00	21.40	341.85	294.73	180.00	7.254
6,200.00	6,044.06	1,200.00	-300.00	26.40	6,146.50	6,044.06	858.15	-300.00	21.66	341.85	294.25	180.00	7.181
6,400.00	6,244.06	1,200.00	-300.00	26.62	6,346.50	6,244.06	858.15	-300.00	21.93	341.85	293.76	180.00	7.108
6,600.00	6,444.06	1,200.00	-299.99	26.84	6,546.48	6,444.04	858.15	-299.98	22.20	341.85	307.62	180.00	9.987
6,800.00	6,641.31	1,199.60	-271.12	26.96	6,745.70	6,640.50	857.92	-271.06	22.34	341.68	307.07	179.99	9.873
7,000.00	6,822.96	1,198.46	-189.01	26.93	6,944.90	6,821.45	857.27	-189.32	22.32	341.19	306.43	180.05	9.814
7,200.00	6,974.94	1,196.68	-60.02	26.84	7,144.15	6,973.04	856.26	-61.01	22.23	340.42	305.03	180.17	9.617
7,400.00	7,085.47	1,194.38	105.87	26.82	7,343.49	7,083.60	854.95	104.09	22.21	339.44	301.95	180.30	9.054
7,600.00	7,145.99	1,191.75	295.79	27.08	7,543.00	7,144.57	853.46	293.36	22.65	338.30	296.67	180.41	8.126
7,800.00	7,154.61	1,188.99	495.18	28.43	7,742.76	7,153.67	851.88	492.49	24.63	337.12	290.52	180.46	7.235
8,000.00	7,150.19	1,186.22	695.11	29.60	7,942.76	7,149.26	850.30	692.44	26.28	335.93	286.09	180.46	6.740
8,200.00	7,145.78	1,183.45	895.04	31.38	8,142.75	7,144.85	848.72	892.38	28.63	334.74	279.88	180.46	6.102
8,400.00	7,141.37	1,180.68	1,094.98	33.82	8,342.75	7,140.44	847.14	1,092.32	31.61	333.55	272.34	180.46	5.449
8,600.00	7,136.95	1,177.91	1,294.91	36.86	8,542.75	7,136.03	845.56	1,292.26	35.10	332.37	263.84	180.46	4.850
8,800.00	7,132.54	1,175.14	1,494.84	40.38	8,742.74	7,131.62	843.98	1,492.20	38.95	331.18	254.66	180.46	4.328
9,000.00	7,128.13	1,172.37	1,694.77	44.26	8,942.74	7,127.21	842.40	1,692.14	43.09	329.99	244.98	180.46	3.882
9,200.00	7,123.71	1,169.61	1,894.71	48.39	9,142.73	7,122.80	840.81	1,892.09	47.42	328.80	234.95	180.46	3.504
9,400.00	7,119.30	1,166.84	2,094.64	52.72	9,342.73	7,118.38	839.23	2,092.03	51.90	327.62	224.66	180.46	3.182
9,600.00	7,114.89	1,164.07	2,294.57	57.19	9,542.73	7,113.97	837.65	2,291.97	56.50	326.43	214.17	180.46	2.908
9,800.00	7,110.47	1,161.30	2,494.50	61.77	9,742.72	7,109.56	836.07	2,491.91	61.18	325.24	203.52	180.46	2.672

Anticollision Report for Deering 33-2H - 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 11,966.19 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	7,106.06	1,158.53	2,694.43	66.43	9,942.72	7,105.15	834.49	2,691.85	65.93	324.05	192.76	180.46	2.468
10,200.00	7,101.65	1,155.76	2,894.37	71.16	10,142.72	7,100.74	832.91	2,891.79	70.73	322.86	181.90	180.46	2.290
10,400.00	7,097.23	1,152.99	3,094.30	75.95	10,342.71	7,096.33	831.33	3,091.73	75.58	321.68	170.96	180.46	2.134
10,600.00	7,092.82	1,150.22	3,294.23	80.78	10,542.71	7,091.92	829.75	3,291.68	80.46	320.49	159.96	180.46	1.996
10,800.00	7,088.41	1,147.46	3,494.16	85.64	10,742.71	7,087.51	828.17	3,491.62	85.37	319.30	148.91	180.46	1.874
11,000.00	7,084.00	1,144.69	3,694.09	90.54	10,942.70	7,083.10	826.59	3,691.56	90.30	318.11	137.81	180.46	1.764
11,200.00	7,079.58	1,141.92	3,894.03	95.46	11,142.70	7,078.69	825.00	3,891.50	95.26	316.92	126.68	180.46	1.666
11,400.00	7,075.17	1,139.15	4,093.96	100.40	11,342.70	7,074.28	823.42	4,091.44	100.23	315.74	115.51	180.46	1.577
11,600.00	7,070.76	1,136.38	4,293.89	105.36	11,542.69	7,069.87	821.84	4,291.38	105.22	314.55	104.32	180.46	1.496
11,800.00	7,066.34	1,133.61	4,493.82	110.34	11,742.69	7,065.46	820.26	4,491.33	110.22	313.36	93.11	180.46	1.423
11,966.19	7,062.68	1,131.31	4,659.96	114.48	11,908.88	7,061.80	818.95	4,657.47	114.38	312.37	83.78	180.46	1.367

Anticollision Report for Deering 33-2H - 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 11,966.19 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	2.00	-142.07	0.00	0.00	142.08	141.43	180.00	216.443
200.00	200.00	0.00	0.00	0.34	198.00	200.00	-142.07	0.00	0.33	142.07	140.74	180.00	107.137
400.00	400.00	0.00	0.00	0.79	398.00	400.00	-142.07	0.00	0.78	142.07	139.84	180.00	63.848
600.00	600.00	0.00	0.00	1.24	598.00	600.00	-142.07	0.00	1.23	142.07	138.95	180.00	45.474
800.00	799.75	8.46	-2.12	1.70	785.46	787.26	-149.39	-1.62	1.60	158.35	154.39	179.82	39.985
1,000.00	997.97	33.78	-8.44	2.21	965.52	965.98	-170.46	-6.30	2.01	206.74	201.92	179.40	42.817
1,200.00	1,193.17	75.76	-18.94	2.93	1,138.40	1,135.62	-202.81	-13.49	2.56	284.51	278.78	178.88	49.726
1,400.00	1,386.35	125.98	-31.49	3.83	1,317.73	1,311.04	-239.21	-21.58	3.25	373.01	366.38	178.45	56.278
1,600.00	1,579.54	176.20	-44.05	4.80	1,497.07	1,486.46	-275.61	-29.67	3.99	461.52	453.94	178.18	60.871
1,800.00	1,772.73	226.42	-56.60	5.80	1,676.41	1,661.88	-312.01	-37.76	4.75	550.04	541.47	178.00	64.203
2,000.00	1,965.91	276.63	-69.16	6.82	1,855.75	1,837.29	-348.40	-45.85	5.54	638.56	628.99	177.86	66.716
2,200.00	2,159.10	326.85	-81.71	7.85	2,035.08	2,012.71	-384.80	-53.94	6.33	727.08	716.49	177.76	68.658
2,400.00	2,352.28	377.07	-94.27	8.89	2,214.42	2,188.13	-421.20	-62.02	7.13	815.61	803.99	177.69	70.196
2,600.00	2,545.47	427.29	-106.82	9.94	2,393.76	2,363.55	-457.60	-70.11	7.93	904.14	891.48	177.62	71.440
2,800.00	2,738.65	477.51	-119.38	10.99	2,573.10	2,538.97	-494.00	-78.20	8.74	992.67	978.97	177.57	72.463
3,000.00	2,931.84	527.72	-131.93	12.04	2,752.44	2,714.39	-530.40	-86.29	9.55	1,081.20	1,066.45	177.53	73.319
3,200.00	3,125.02	577.94	-144.49	13.10	2,931.77	2,889.81	-566.79	-94.38	10.36	1,169.73	1,153.93	177.49	74.044
3,400.00	3,318.21	628.16	-157.04	14.15	3,111.11	3,065.23	-603.19	-102.47	11.17	1,258.26	1,241.40	177.46	74.665
3,600.00	3,511.39	678.38	-169.59	15.21	3,331.98	3,281.50	-646.90	-112.18	12.09	1,346.30	1,328.31	177.52	74.857
3,800.00	3,704.58	728.60	-182.15	16.27	3,557.19	3,704.58	-682.07	-120.00	12.95	1,412.03	1,392.70	177.48	73.029
4,000.00	3,897.76	778.82	-194.70	17.33	3,950.38	3,897.76	-682.07	-120.00	13.17	1,462.79	1,442.54	177.07	72.234
4,200.00	4,090.95	829.03	-207.26	18.39	4,143.56	4,090.95	-682.07	-120.00	13.40	1,513.62	1,492.45	176.69	71.503
4,400.00	4,284.13	879.25	-219.81	19.45	4,336.75	4,284.13	-682.07	-120.00	13.64	1,564.51	1,542.42	176.34	70.818
4,600.00	4,477.32	929.47	-232.37	20.51	4,529.93	4,477.32	-682.07	-120.00	13.89	1,615.45	1,592.43	176.01	70.176
4,800.00	4,670.50	979.69	-244.92	21.57	4,723.12	4,670.50	-682.07	-120.00	14.15	1,666.45	1,642.49	175.70	69.573
5,000.00	4,863.69	1,029.91	-257.48	22.63	4,916.30	4,863.69	-682.07	-120.00	14.41	1,717.49	1,692.60	175.41	69.006
5,200.00	5,056.87	1,080.12	-270.03	23.69	5,109.49	5,056.87	-682.07	-120.00	14.69	1,768.57	1,742.74	175.13	68.472
5,400.00	5,250.09	1,130.22	-282.56	24.74	5,302.71	5,250.09	-682.07	-120.00	14.97	1,819.57	1,792.76	174.87	67.870
5,600.00	5,445.74	1,170.19	-292.55	25.44	5,498.35	5,445.74	-682.07	-120.00	15.26	1,860.28	1,832.40	174.68	66.717
5,800.00	5,644.23	1,193.47	-298.37	25.92	5,696.84	5,644.23	-682.07	-120.00	15.56	1,884.00	1,855.28	174.57	65.596
6,000.00	5,844.06	1,200.00	-300.00	26.19	5,896.67	5,844.06	-682.07	-120.00	15.88	1,890.66	1,848.42	174.54	44.764
6,200.00	6,044.06	1,200.00	-300.00	26.40	6,096.67	6,044.06	-682.07	-120.00	16.20	1,890.66	1,847.89	174.54	44.203
6,400.00	6,244.06	1,200.00	-300.00	26.62	6,296.67	6,244.06	-682.07	-120.00	16.52	1,890.66	1,847.34	174.54	43.645
6,600.00	6,444.06	1,200.00	-299.99	26.84	6,497.79	6,445.17	-682.07	-120.00	16.85	1,890.66	1,859.04	174.54	59.800
6,800.00	6,641.31	1,199.60	-271.12	26.96	6,768.58	6,709.33	-680.15	-171.73	17.44	1,883.60	1,850.90	176.97	57.604
6,998.70	6,821.86	1,198.47	-189.71	26.93	6,911.72	6,835.92	-677.69	-237.99	17.88	1,876.84	1,843.24	181.47	55.865
7,000.00	6,822.96	1,198.46	-189.01	26.93	6,912.27	6,836.38	-677.68	-238.30	17.88	1,876.84	1,843.24	181.50	55.859
7,200.00	6,974.94	1,196.68	-60.02	26.84	6,957.49	6,873.31	-676.71	-264.36	18.05	1,887.24	1,853.13	186.22	55.334
7,400.00	7,085.47	1,194.38	105.87	26.82	6,950.00	6,867.31	-676.88	-259.88	18.02	1,919.10	1,884.12	191.06	54.861
7,600.00	7,145.99	1,191.75	295.79	27.08	6,913.79	6,837.65	-677.65	-239.14	17.89	1,968.72	1,931.26	195.97	52.556
7,800.00	7,154.61	1,188.99	495.18	28.43	6,862.86	6,794.23	-678.63	-212.55	17.71	2,029.47	1,989.45	200.75	50.710
8,000.00	7,150.19	1,186.22	695.11	29.60	6,817.78	6,754.30	-679.41	-191.64	17.58	2,103.24	2,060.90	205.42	49.670
8,200.00	7,145.78	1,183.45	895.04	31.38	6,781.58	6,721.34	-679.96	-176.69	17.47	2,191.14	2,145.54	209.91	48.051
8,400.00	7,141.37	1,180.68	1,094.98	33.82	6,750.00	6,692.00	-680.40	-165.03	17.39	2,291.98	2,242.44	214.10	46.274
8,600.00	7,136.95	1,177.91	1,294.91	36.86	6,727.50	6,670.80	-680.68	-157.51	17.33	2,404.41	2,350.41	218.01	44.532
8,800.00	7,132.54	1,175.14	1,494.84	40.38	6,700.00	6,644.58	-680.98	-149.23	17.26	2,527.11	2,468.41	221.53	43.049
9,000.00	7,128.13	1,172.37	1,694.77	44.26	6,700.00	6,644.58	-680.98	-149.23	17.26	2,658.78	2,594.85	224.86	41.588
9,200.00	7,123.71	1,169.61	1,894.71	48.39	6,674.22	6,619.73	-681.24	-142.39	17.21	2,798.10	2,729.09	227.74	40.545
9,400.00	7,119.30	1,166.84	2,094.64	52.72	6,650.00	6,596.17	-681.45	-136.78	17.15	2,944.32	2,870.13	230.37	39.684
9,600.00	7,114.89	1,164.07	2,294.57	57.19	6,650.00	6,596.17	-681.45	-136.78	17.15	3,096.20	3,016.42	232.80	38.811
9,800.00	7,110.47	1,161.30	2,494.50	61.77	6,650.00	6,596.17	-681.45	-136.78	17.15	3,253.29	3,167.86	235.00	38.083
10,000.00	7,106.06	1,158.53	2,694.43	66.43	6,650.00	6,596.17	-681.45	-136.78	17.15	3,414.86	3,323.73	236.98	37.471

Anticollision Report for Deering 33-2H - 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 11,966.19 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	7,101.65	1,155.76	2,894.37	71.16	6,622.29	6,569.00	-681.65	-131.34	17.09	3,579.76	3,483.34	238.73	37.125
10,400.00	7,097.23	1,152.99	3,094.30	75.95	6,600.00	6,547.00	-681.78	-127.73	17.04	3,748.42	3,646.63	240.34	36.826
10,600.00	7,092.82	1,150.22	3,294.23	80.78	6,600.00	6,547.00	-681.78	-127.73	17.04	3,919.69	3,812.13	241.84	36.441
10,800.00	7,088.41	1,147.46	3,494.16	85.64	6,600.00	6,547.00	-681.78	-127.73	17.04	4,093.58	3,980.21	243.20	36.111
11,000.00	7,084.00	1,144.69	3,694.09	90.54	6,600.00	6,547.00	-681.78	-127.73	17.04	4,269.74	4,150.57	244.46	35.827
11,200.00	7,079.58	1,141.92	3,894.03	95.46	6,600.00	6,547.00	-681.78	-127.73	17.04	4,447.93	4,322.92	245.61	35.580
11,400.00	7,075.17	1,139.15	4,093.96	100.40	6,600.00	6,547.00	-681.78	-127.73	17.04	4,627.90	4,497.04	246.67	35.366
11,600.00	7,070.76	1,136.38	4,293.89	105.36	6,600.00	6,547.00	-681.78	-127.73	17.04	4,809.45	4,672.73	247.65	35.178
11,800.00	7,066.34	1,133.61	4,493.82	110.34	6,600.00	6,547.00	-681.78	-127.73	17.04	4,992.41	4,849.82	248.55	35.013
11,966.19	7,062.68	1,131.31	4,659.96	114.48	6,576.17	6,523.37	-681.90	-124.63	17.00	5,144.99	4,998.11	249.24	35.030

Anticollision Report for Deering 33-2H - 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 11,966.19 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	2.00	-120.22	0.00	0.00	120.23	119.58	180.00	183.159
200.00	200.00	0.00	0.00	0.34	198.00	200.00	-120.22	0.00	0.33	120.22	118.89	180.00	90.659
400.00	400.00	0.00	0.00	0.79	398.00	400.00	-120.22	0.00	0.78	120.22	117.99	180.00	54.028
600.00	600.00	0.00	0.00	1.24	598.00	600.00	-120.22	0.00	1.23	120.22	117.09	180.00	38.480
800.00	799.75	8.46	-2.12	1.70	797.75	799.75	-120.22	0.00	1.68	128.70	124.67	179.06	31.950
1,000.00	997.97	33.78	-8.44	2.21	984.18	985.98	-127.16	-2.56	2.04	161.49	156.63	177.91	33.205
1,200.00	1,193.17	75.76	-18.94	2.93	1,160.10	1,160.62	-146.70	-9.78	2.41	225.02	219.30	177.64	39.324
1,400.00	1,386.35	125.98	-31.49	3.83	1,344.22	1,342.47	-173.72	-19.75	2.92	303.12	296.50	177.76	45.753
1,600.00	1,579.54	176.20	-44.05	4.80	1,528.33	1,524.32	-200.74	-29.73	3.49	381.23	373.66	177.82	50.366
1,800.00	1,772.73	226.42	-56.60	5.80	1,712.45	1,706.17	-227.76	-39.71	4.10	459.34	450.79	177.87	53.735
2,000.00	1,965.91	276.63	-69.16	6.82	1,896.57	1,888.02	-254.78	-49.68	4.74	537.44	527.90	177.90	56.286
2,200.00	2,159.10	326.85	-81.71	7.85	2,080.69	2,069.87	-281.80	-59.66	5.39	615.55	604.99	177.92	58.261
2,400.00	2,352.28	377.07	-94.27	8.89	2,264.80	2,251.72	-308.82	-69.64	6.04	693.66	682.06	177.94	59.829
2,600.00	2,545.47	427.29	-106.82	9.94	2,448.92	2,433.57	-335.84	-79.61	6.71	771.77	759.14	177.96	61.100
2,800.00	2,738.65	477.51	-119.38	10.99	2,633.04	2,615.42	-362.86	-89.59	7.38	849.87	836.20	177.97	62.148
3,000.00	2,931.84	527.72	-131.93	12.04	2,817.15	2,797.27	-389.88	-99.57	8.06	927.98	913.26	177.98	63.025
3,200.00	3,125.02	577.94	-144.49	13.10	3,001.27	2,979.12	-416.90	-109.54	8.73	1,006.09	990.31	177.99	63.768
3,400.00	3,318.21	628.16	-157.04	14.15	3,317.57	3,293.79	-444.57	-119.76	9.48	1,073.65	1,056.67	178.01	63.211
3,600.00	3,511.39	678.38	-169.59	15.21	3,535.17	3,511.39	-445.22	-120.00	9.81	1,124.69	1,106.74	177.47	62.642
3,800.00	3,704.58	728.60	-182.15	16.27	3,728.36	3,704.58	-445.22	-120.00	10.09	1,175.46	1,156.57	176.97	62.237
4,000.00	3,897.76	778.82	-194.70	17.33	3,921.54	3,897.76	-445.22	-120.00	10.39	1,226.31	1,206.49	176.51	61.860
4,200.00	4,090.95	829.03	-207.26	18.39	4,114.73	4,090.95	-445.22	-120.00	10.69	1,277.24	1,256.47	176.08	61.508
4,400.00	4,284.13	879.25	-219.81	19.45	4,307.91	4,284.13	-445.22	-120.00	11.00	1,328.23	1,306.51	175.69	61.178
4,600.00	4,477.32	929.47	-232.37	20.51	4,501.10	4,477.32	-445.22	-120.00	11.33	1,379.27	1,356.61	175.33	60.870
4,800.00	4,670.50	979.69	-244.92	21.57	4,694.28	4,670.50	-445.22	-120.00	11.65	1,430.37	1,406.76	174.99	60.580
5,000.00	4,863.69	1,029.91	-257.48	22.63	4,887.47	4,863.69	-445.22	-120.00	11.99	1,481.52	1,456.95	174.68	60.307
5,200.00	5,056.87	1,080.12	-270.03	23.69	5,080.66	5,056.87	-445.22	-120.00	12.33	1,532.70	1,507.18	174.38	60.051
5,400.00	5,250.09	1,130.22	-282.56	24.74	5,273.87	5,250.09	-445.22	-120.00	12.68	1,583.80	1,557.29	174.11	59.736
5,600.00	5,445.74	1,170.19	-292.55	25.44	5,469.52	5,445.74	-445.22	-120.00	13.04	1,624.60	1,597.05	173.90	58.971
5,800.00	5,644.23	1,193.47	-298.37	25.92	5,668.01	5,644.23	-445.22	-120.00	13.40	1,648.37	1,620.01	173.79	58.133
6,000.00	5,844.06	1,200.00	-300.00	26.19	5,867.84	5,844.06	-445.22	-120.00	13.78	1,655.04	1,614.85	173.76	41.187
6,200.00	6,044.06	1,200.00	-300.00	26.40	6,067.84	6,044.06	-445.22	-120.00	14.16	1,655.04	1,614.26	173.76	40.584
6,400.00	6,244.06	1,200.00	-300.00	26.62	6,267.84	6,244.06	-445.22	-120.00	14.54	1,655.04	1,613.65	173.76	39.990
6,600.00	6,444.06	1,200.00	-299.99	26.84	6,468.71	6,444.93	-445.22	-120.00	14.93	1,655.03	1,623.74	173.76	52.895
6,800.00	6,641.31	1,199.60	-271.12	26.96	6,721.74	6,692.54	-444.36	-165.25	15.56	1,648.16	1,615.80	176.32	50.942
6,985.41	6,810.55	1,198.57	-196.69	26.93	6,855.96	6,813.16	-443.24	-223.68	16.04	1,642.03	1,608.76	180.94	49.347
7,000.00	6,822.96	1,198.46	-189.01	26.93	6,862.52	6,818.75	-443.18	-227.10	16.06	1,642.09	1,608.76	181.33	49.272
7,200.00	6,974.94	1,196.68	-60.02	26.84	6,910.55	6,858.72	-442.67	-253.72	16.28	1,654.83	1,620.96	186.74	48.857
7,400.00	7,085.47	1,194.38	105.87	26.82	6,900.00	6,850.10	-442.78	-247.64	16.23	1,691.35	1,656.56	192.18	48.606
7,600.00	7,145.99	1,191.75	295.79	27.08	6,873.29	6,827.87	-443.07	-232.83	16.11	1,747.36	1,710.23	197.92	47.056
7,800.00	7,154.61	1,188.99	495.18	28.43	6,824.86	6,786.22	-443.54	-208.14	15.91	1,815.35	1,775.90	203.31	46.016
8,000.00	7,150.19	1,186.22	695.11	29.60	6,781.67	6,747.74	-443.91	-188.54	15.75	1,897.40	1,855.70	208.46	45.500
8,200.00	7,145.78	1,183.45	895.04	31.38	6,750.00	6,718.81	-444.16	-175.66	15.65	1,994.44	1,949.53	213.34	44.401
8,400.00	7,141.37	1,180.68	1,094.98	33.82	6,718.37	6,689.38	-444.38	-164.08	15.55	2,104.84	2,056.07	217.77	43.166
8,600.00	7,136.95	1,177.91	1,294.91	36.86	6,700.00	6,672.06	-444.49	-157.96	15.49	2,226.92	2,173.72	221.84	41.865
8,800.00	7,132.54	1,175.14	1,494.84	40.38	6,674.67	6,647.94	-444.64	-150.25	15.42	2,359.00	2,301.16	225.44	40.791
9,000.00	7,128.13	1,172.37	1,694.77	44.26	6,650.00	6,624.19	-444.77	-143.56	15.35	2,499.72	2,437.05	228.66	39.890
9,200.00	7,123.71	1,169.61	1,894.71	48.39	6,650.00	6,624.19	-444.77	-143.56	15.35	2,647.69	2,579.69	231.62	38.937
9,400.00	7,119.30	1,166.84	2,094.64	52.72	6,630.10	6,604.88	-444.86	-138.77	15.30	2,801.84	2,728.71	234.18	38.313
9,600.00	7,114.89	1,164.07	2,294.57	57.19	6,600.00	6,575.43	-444.98	-132.54	15.22	2,961.57	2,883.44	236.46	37.905
9,800.00	7,110.47	1,161.30	2,494.50	61.77	6,600.00	6,575.43	-444.98	-132.54	15.22	3,125.34	3,041.64	238.56	37.340
10,000.00	7,106.06	1,158.53	2,694.43	66.43	6,600.00	6,575.43	-444.98	-132.54	15.22	3,293.11	3,203.79	240.44	36.867

Anticollision Report for Deering 33-2H - 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 11,966.19 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	7,101.65	1,155.76	2,894.37	71.16	6,600.00	6,575.43	-444.98	-132.54	15.22	3,464.31	3,369.32	242.13	36.471
10,400.00	7,097.23	1,152.99	3,094.30	75.95	6,600.00	6,575.43	-444.98	-132.54	15.22	3,638.45	3,537.76	243.65	36.136
10,600.00	7,092.82	1,150.22	3,294.23	80.78	6,578.52	6,554.27	-445.05	-128.86	15.17	3,814.77	3,708.84	245.01	36.014
10,800.00	7,088.41	1,147.46	3,494.16	85.64	6,572.64	6,548.46	-445.07	-127.96	15.15	3,993.42	3,881.91	246.27	35.812
11,000.00	7,084.00	1,144.69	3,694.09	90.54	6,550.00	6,526.02	-445.12	-124.95	15.10	4,174.20	4,057.52	247.40	35.777
11,200.00	7,079.58	1,141.92	3,894.03	95.46	6,550.00	6,526.02	-445.12	-124.95	15.10	4,356.29	4,233.89	248.45	35.589
11,400.00	7,075.17	1,139.15	4,093.96	100.40	6,550.00	6,526.02	-445.12	-124.95	15.10	4,539.89	4,411.74	249.42	35.426
11,600.00	7,070.76	1,136.38	4,293.89	105.36	6,550.00	6,526.02	-445.12	-124.95	15.10	4,724.83	4,590.92	250.31	35.284
11,800.00	7,066.34	1,133.61	4,493.82	110.34	6,550.00	6,526.02	-445.12	-124.95	15.10	4,910.95	4,771.27	251.13	35.160
11,966.19	7,062.68	1,131.31	4,659.96	114.48	6,550.00	6,526.02	-445.12	-124.95	15.10	5,066.41	4,921.94	251.77	35.069

Anticollision Report for Deering 33-2H - 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 11,966.19 ft. Measured Depth.

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

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre		Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre		Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids ft	Relative North Bearing	Clearance Factor
		+N/-S (ft)	+E/-W (ft)				+N/-S (ft)	+E/-W (ft)					
0.00	0.00	0.00	0.00	0.00	0.00	2.00	-102.01	0.00	0.00	102.03	101.37	180.00	155.422
200.00	200.00	0.00	0.00	0.34	198.00	200.00	-102.01	0.00	0.33	102.01	100.68	180.00	76.925
400.00	400.00	0.00	0.00	0.79	398.00	400.00	-102.01	0.00	0.78	102.01	99.78	180.00	45.843
600.00	600.00	0.00	0.00	1.24	598.00	600.00	-102.01	0.00	1.23	102.01	98.88	180.00	32.651
800.00	799.75	8.46	-2.12	1.70	797.75	799.75	-102.01	0.00	1.68	110.49	106.46	178.90	27.430
1,000.00	997.97	33.78	-8.44	2.21	995.97	997.97	-102.01	0.00	2.13	136.05	131.12	176.44	27.626
1,200.00	1,193.17	75.76	-18.94	2.93	1,182.84	1,184.65	-106.67	-5.60	2.50	183.12	177.36	175.82	31.769
1,400.00	1,386.35	125.98	-31.49	3.83	1,369.96	1,370.81	-118.74	-20.08	2.89	245.48	238.79	177.33	36.712
1,600.00	1,579.54	176.20	-44.05	4.80	1,559.74	1,559.55	-131.44	-35.32	3.35	308.41	300.75	178.37	40.257
1,800.00	1,772.73	226.42	-56.60	5.80	1,749.51	1,748.28	-144.14	-50.56	3.84	371.41	362.73	179.06	42.806
2,000.00	1,965.91	276.63	-69.16	6.82	1,939.28	1,937.02	-156.84	-65.79	4.35	434.45	424.73	179.56	44.693
2,200.00	2,159.10	326.85	-81.71	7.85	2,129.06	2,125.75	-169.54	-81.03	4.87	497.51	486.73	179.92	46.136
2,400.00	2,352.28	377.07	-94.27	8.89	2,318.83	2,314.48	-182.24	-96.27	5.41	560.59	548.73	180.21	47.264
2,600.00	2,545.47	427.29	-106.82	9.94	2,511.70	2,506.31	-195.10	-111.71	5.95	623.64	610.69	180.45	48.162
2,800.00	2,738.65	477.51	-119.38	10.99	2,744.40	2,738.65	-202.01	-120.00	6.42	679.51	665.53	180.05	48.603
3,000.00	2,931.84	527.72	-131.93	12.04	2,937.58	2,931.84	-202.01	-120.00	6.78	729.83	714.91	179.06	48.910
3,200.00	3,125.02	577.94	-144.49	13.10	3,130.77	3,125.02	-202.01	-120.00	7.15	780.33	764.46	178.20	49.172
3,400.00	3,318.21	628.16	-157.04	14.15	3,323.95	3,318.21	-202.01	-120.00	7.53	830.99	814.17	177.44	49.402
3,600.00	3,511.39	678.38	-169.59	15.21	3,517.14	3,511.39	-202.01	-120.00	7.91	881.78	864.01	176.78	49.605
3,800.00	3,704.58	728.60	-182.15	16.27	3,710.32	3,704.58	-202.01	-120.00	8.30	932.68	913.94	176.18	49.784
4,000.00	3,897.76	778.82	-194.70	17.33	3,903.51	3,897.76	-202.01	-120.00	8.69	983.66	963.97	175.64	49.943
4,200.00	4,090.95	829.03	-207.26	18.39	4,096.69	4,090.95	-202.01	-120.00	9.09	1,034.73	1,014.07	175.16	50.084
4,400.00	4,284.13	879.25	-219.81	19.45	4,289.88	4,284.13	-202.01	-120.00	9.49	1,085.86	1,064.23	174.73	50.210
4,600.00	4,477.32	929.47	-232.37	20.51	4,483.07	4,477.32	-202.01	-120.00	9.89	1,137.04	1,114.45	174.33	50.322
4,800.00	4,670.50	979.69	-244.92	21.57	4,676.25	4,670.50	-202.01	-120.00	10.30	1,188.28	1,164.71	173.97	50.423
5,000.00	4,863.69	1,029.91	-257.48	22.63	4,869.44	4,863.69	-202.01	-120.00	10.71	1,239.56	1,215.02	173.63	50.513
5,200.00	5,056.87	1,080.12	-270.03	23.69	5,062.62	5,056.87	-202.01	-120.00	11.12	1,290.88	1,265.37	173.33	50.595
5,400.00	5,250.09	1,130.22	-282.56	24.74	5,255.84	5,250.09	-202.01	-120.00	11.53	1,342.11	1,315.59	173.04	50.616
5,600.00	5,445.74	1,170.19	-292.55	25.44	5,451.48	5,445.74	-202.01	-120.00	11.94	1,383.01	1,355.48	172.83	50.241
5,800.00	5,644.23	1,193.47	-298.37	25.92	5,649.98	5,644.23	-202.01	-120.00	12.37	1,406.83	1,378.52	172.72	49.693
6,000.00	5,844.06	1,200.00	-300.00	26.19	5,849.80	5,844.06	-202.01	-120.00	12.80	1,413.51	1,374.23	172.68	35.981
6,200.00	6,044.06	1,200.00	-300.00	26.40	6,049.80	6,044.06	-202.01	-120.00	13.23	1,413.51	1,373.58	172.68	35.397
6,400.00	6,244.06	1,200.00	-300.00	26.62	6,249.80	6,244.06	-202.01	-120.00	13.67	1,413.51	1,372.93	172.68	34.827
6,600.00	6,444.06	1,200.00	-299.99	26.84	6,450.58	6,444.83	-202.01	-120.00	14.10	1,413.51	1,382.22	172.68	45.178
6,800.00	6,641.31	1,199.60	-271.12	26.96	6,696.43	6,685.71	-201.57	-162.75	14.76	1,406.06	1,373.69	175.58	43.438
6,977.88	6,804.09	1,198.62	-200.55	26.93	6,825.64	6,802.60	-201.01	-217.41	15.28	1,399.74	1,366.35	180.69	41.931
7,000.00	6,822.96	1,198.46	-189.01	26.93	6,835.81	6,811.35	-200.96	-222.59	15.33	1,399.87	1,366.40	181.37	41.825
7,200.00	6,974.94	1,196.68	-60.02	26.84	6,884.90	6,852.50	-200.69	-249.33	15.58	1,415.43	1,381.39	187.72	41.576
7,400.00	7,085.47	1,194.38	105.87	26.82	6,882.03	6,850.15	-200.70	-247.69	15.57	1,458.30	1,423.26	194.22	41.622
7,600.00	7,145.99	1,191.75	295.79	27.08	6,850.00	6,823.43	-200.88	-230.03	15.40	1,523.14	1,486.06	200.69	41.077
7,800.00	7,154.61	1,188.99	495.18	28.43	6,800.00	6,780.22	-201.14	-204.90	15.16	1,600.85	1,561.84	206.73	41.038
8,000.00	7,150.19	1,186.22	695.11	29.60	6,750.00	6,735.36	-201.36	-182.84	14.96	1,693.60	1,652.55	212.32	41.259
8,200.00	7,145.78	1,183.45	895.04	31.38	6,726.33	6,713.61	-201.46	-173.50	14.87	1,801.82	1,757.56	217.65	40.713
8,400.00	7,141.37	1,180.68	1,094.98	33.82	6,700.00	6,689.07	-201.56	-163.97	14.78	1,923.57	1,875.52	222.33	40.038
8,600.00	7,136.95	1,177.91	1,294.91	36.86	6,674.90	6,665.37	-201.64	-155.73	14.69	2,056.67	2,004.41	226.44	39.351
8,800.00	7,132.54	1,175.14	1,494.84	40.38	6,650.00	6,641.57	-201.72	-148.37	14.61	2,199.30	2,142.55	230.04	38.749
9,000.00	7,128.13	1,172.37	1,694.77	44.26	6,650.00	6,641.57	-201.72	-148.37	14.61	2,349.90	2,288.03	233.29	37.982
9,200.00	7,123.71	1,169.61	1,894.71	48.39	6,623.80	6,616.29	-201.79	-141.53	14.53	2,506.88	2,440.24	236.04	37.617
9,400.00	7,119.30	1,166.84	2,094.64	52.72	6,600.00	6,593.11	-201.84	-136.12	14.46	2,669.54	2,598.03	238.47	37.330
9,600.00	7,114.89	1,164.07	2,294.57	57.19	6,600.00	6,593.11	-201.84	-136.12	14.46	2,836.59	2,759.65	240.67	36.870
9,800.00	7,110.47	1,161.30	2,494.50	61.77	6,600.00	6,593.11	-201.84	-136.12	14.46	3,007.66	2,925.24	242.61	36.490
10,000.00	7,106.06	1,158.53	2,694.43	66.43	6,600.00	6,593.11	-201.84	-136.12	14.46	3,182.10	3,094.14	244.33	36.175

Anticollision Report for Deering 33-2H - 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 11,966.19 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	7,101.65	1,155.76	2,894.37	71.16	6,573.53	6,567.14	-201.89	-131.02	14.39	3,358.85	3,265.99	245.83	36.171
10,400.00	7,097.23	1,152.99	3,094.30	75.95	6,550.00	6,543.91	-201.93	-127.29	14.33	3,538.45	3,440.66	247.19	36.185
10,600.00	7,092.82	1,150.22	3,294.23	80.78	6,550.00	6,543.91	-201.93	-127.29	14.33	3,719.73	3,616.37	248.44	35.986
10,800.00	7,088.41	1,147.46	3,494.16	85.64	6,550.00	6,543.91	-201.93	-127.29	14.33	3,902.85	3,793.88	249.56	35.818
11,000.00	7,084.00	1,144.69	3,694.09	90.54	6,550.00	6,543.91	-201.93	-127.29	14.33	4,087.55	3,972.97	250.59	35.674
11,200.00	7,079.58	1,141.92	3,894.03	95.46	6,550.00	6,543.91	-201.93	-127.29	14.33	4,273.62	4,153.41	251.52	35.551
11,400.00	7,075.17	1,139.15	4,093.96	100.40	6,550.00	6,543.91	-201.93	-127.29	14.33	4,460.90	4,335.05	252.38	35.445
11,600.00	7,070.76	1,136.38	4,293.89	105.36	6,550.00	6,543.91	-201.93	-127.29	14.33	4,649.24	4,517.73	253.16	35.352
11,800.00	7,066.34	1,133.61	4,493.82	110.34	6,550.00	6,543.91	-201.93	-127.29	14.33	4,838.52	4,701.34	253.88	35.272
11,966.19	7,062.68	1,131.31	4,659.96	114.48	6,550.00	6,543.91	-201.93	-127.29	14.33	4,996.44	4,854.55	254.44	35.215

Anticollision Report for Deering 33-2H - 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 11,966.19 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	-61.92	0.00	0.00	61.92	61.27	180.00	94.332
200.00	200.00	0.00	0.00	0.34	200.00	200.00	-61.92	0.00	0.34	61.92	60.59	180.00	46.540
400.00	400.00	0.00	0.00	0.79	400.00	400.00	-61.92	0.00	0.79	61.92	59.69	180.00	27.773
600.00	600.00	0.00	0.00	1.24	600.00	600.00	-61.92	0.00	1.24	61.92	58.80	180.00	19.792
800.00	799.75	8.46	-2.12	1.70	799.75	799.75	-61.92	0.00	1.69	70.42	66.38	178.28	17.462
1,000.00	997.97	33.78	-8.44	2.21	997.97	997.97	-61.92	0.00	2.13	96.07	91.15	174.96	19.496
1,200.00	1,193.17	75.76	-18.94	2.93	1,193.17	1,193.17	-61.92	0.00	2.57	138.98	133.17	172.17	23.928
1,400.00	1,386.35	125.98	-31.49	3.83	1,395.87	1,395.63	-57.97	-7.37	3.01	185.75	179.01	172.53	27.548
1,600.00	1,579.54	176.20	-44.05	4.80	1,597.96	1,596.16	-46.25	-29.21	3.50	223.56	215.78	176.18	28.752
1,800.00	1,772.73	226.42	-56.60	5.80	1,794.11	1,790.40	-33.34	-53.26	4.04	260.38	251.47	179.26	29.242
2,000.00	1,965.91	276.63	-69.16	6.82	1,990.26	1,984.64	-20.43	-77.32	4.61	297.76	287.67	181.57	29.490
2,200.00	2,159.10	326.85	-81.71	7.85	2,186.41	2,178.88	-7.52	-101.37	5.21	335.53	324.19	183.36	29.594
2,400.00	2,352.28	377.07	-94.27	8.89	2,382.56	2,373.12	5.39	-125.42	5.83	373.57	360.95	184.79	29.617
2,600.00	2,545.47	427.29	-106.82	9.94	2,578.71	2,567.36	18.30	-149.48	6.45	411.79	397.88	185.95	29.595
2,800.00	2,738.65	477.51	-119.38	10.99	2,774.86	2,761.60	31.21	-173.53	7.09	450.16	434.92	186.92	29.548
3,000.00	2,931.84	527.72	-131.93	12.04	2,971.01	2,955.85	44.12	-197.59	7.73	488.64	472.07	187.73	29.489
3,200.00	3,125.02	577.94	-144.49	13.10	3,167.16	3,150.09	57.02	-221.64	8.38	527.20	509.28	188.42	29.424
3,400.00	3,318.21	628.16	-157.04	14.15	3,363.30	3,344.33	69.93	-245.69	9.03	565.83	546.55	189.02	29.358
3,600.00	3,511.39	678.38	-169.59	15.21	3,559.45	3,538.57	82.84	-269.75	9.69	604.51	583.87	189.55	29.292
3,800.00	3,704.58	728.60	-182.15	16.27	3,746.62	3,724.18	94.12	-290.76	10.24	644.00	622.13	189.71	29.440
4,000.00	3,897.76	778.82	-194.70	17.33	3,924.65	3,901.88	98.90	-299.67	10.58	687.98	665.19	188.78	30.185
4,200.00	4,090.95	829.03	-207.26	18.39	4,113.71	4,090.95	99.08	-300.00	10.90	735.82	712.23	187.24	31.184
4,400.00	4,284.13	879.25	-219.81	19.45	4,306.90	4,284.13	99.08	-300.00	11.25	784.29	759.86	185.87	32.106
4,600.00	4,477.32	929.47	-232.37	20.51	4,500.08	4,477.32	99.08	-300.00	11.61	833.14	807.87	184.66	32.966
4,800.00	4,670.50	979.69	-244.92	21.57	4,693.27	4,670.50	99.08	-300.00	11.97	882.33	856.20	183.58	33.766
5,000.00	4,863.69	1,029.91	-257.48	22.63	4,886.45	4,863.69	99.08	-300.00	12.33	931.80	904.80	182.62	34.510
5,200.00	5,056.87	1,080.12	-270.03	23.69	5,079.64	5,056.87	99.08	-300.00	12.70	981.51	953.63	181.75	35.204
5,400.00	5,250.09	1,130.22	-282.56	24.74	5,272.86	5,250.09	99.08	-300.00	13.08	1,031.29	1,002.51	180.97	35.827
5,600.00	5,445.74	1,170.19	-292.55	25.44	5,468.50	5,445.74	99.08	-300.00	13.46	1,071.14	1,041.49	180.40	36.120
5,800.00	5,644.23	1,193.47	-298.37	25.92	5,666.99	5,644.23	99.08	-300.00	13.85	1,094.40	1,064.06	180.09	36.078
6,000.00	5,844.06	1,200.00	-300.00	26.19	5,866.82	5,844.06	99.08	-300.00	14.25	1,100.92	1,061.43	180.00	27.873
6,200.00	6,044.06	1,200.00	-300.00	26.40	6,066.82	6,044.06	99.08	-300.00	14.65	1,100.92	1,060.79	180.00	27.430
6,400.00	6,244.06	1,200.00	-300.00	26.62	6,266.82	6,244.06	99.08	-300.00	15.05	1,100.92	1,060.14	180.00	26.995
6,600.00	6,444.06	1,200.00	-299.99	26.84	6,466.82	6,444.06	99.08	-299.98	15.46	1,100.92	1,067.80	180.00	33.237
6,800.00	6,641.31	1,199.60	-271.12	26.96	6,666.80	6,641.29	99.07	-271.12	15.68	1,100.53	1,066.98	180.00	32.810
7,000.00	6,822.96	1,198.46	-189.01	26.93	6,866.78	6,822.92	99.07	-189.02	15.77	1,099.39	1,065.65	180.00	32.582
7,200.00	6,974.94	1,196.68	-60.02	26.84	7,066.75	6,974.89	99.06	-60.04	16.05	1,097.62	1,063.17	180.00	31.861
7,400.00	7,085.47	1,194.38	105.87	26.82	7,266.72	7,085.43	99.05	105.82	17.20	1,095.33	1,058.66	180.00	29.868
7,600.00	7,145.99	1,191.75	295.79	27.08	7,466.70	7,145.97	99.04	295.73	19.48	1,092.71	1,051.73	180.00	26.666
7,800.00	7,154.61	1,188.99	495.18	28.43	7,666.68	7,154.61	99.03	495.11	22.25	1,089.96	1,043.69	180.00	23.556
8,000.00	7,150.19	1,186.22	695.11	29.60	7,866.66	7,150.21	99.01	695.05	24.06	1,087.20	1,037.58	180.00	21.908
8,200.00	7,145.78	1,183.45	895.04	31.38	8,066.64	7,145.80	99.00	894.98	26.56	1,084.45	1,029.88	180.00	19.874
8,400.00	7,141.37	1,180.68	1,094.98	33.82	8,266.62	7,141.40	98.99	1,094.91	29.74	1,081.69	1,020.83	180.00	17.773
8,600.00	7,136.95	1,177.91	1,294.91	36.86	8,466.60	7,137.00	98.98	1,294.84	33.41	1,078.94	1,010.80	180.00	15.836
8,800.00	7,132.54	1,175.14	1,494.84	40.38	8,666.58	7,132.59	98.96	1,494.78	37.41	1,076.18	1,000.08	180.00	14.142
9,000.00	7,128.13	1,172.37	1,694.77	44.26	8,866.56	7,128.19	98.95	1,694.71	41.67	1,073.42	988.86	180.00	12.694
9,200.00	7,123.71	1,169.61	1,894.71	48.39	9,066.54	7,123.78	98.94	1,894.64	46.09	1,070.67	977.28	180.00	11.465
9,400.00	7,119.30	1,166.84	2,094.64	52.72	9,266.52	7,119.38	98.93	2,094.57	50.66	1,067.91	965.43	180.00	10.421
9,600.00	7,114.89	1,164.07	2,294.57	57.19	9,466.50	7,114.98	98.91	2,294.51	55.31	1,065.15	953.38	180.00	9.530
9,800.00	7,110.47	1,161.30	2,494.50	61.77	9,666.49	7,110.57	98.90	2,494.44	60.05	1,062.40	941.18	180.00	8.764
10,000.00	7,106.06	1,158.53	2,694.43	66.43	9,866.47	7,106.17	98.89	2,694.37	64.84	1,059.64	928.85	180.00	8.102
10,200.00	7,101.65	1,155.76	2,894.37	71.16	10,066.45	7,101.76	98.88	2,894.30	69.68	1,056.88	916.43	180.00	7.525

Anticollision Report for Deering 33-2H - 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 11,966.19 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	7,097.23	1,152.99	3,094.30	75.95	10,266.43	7,097.36	98.87	3,094.24	74.56	1,054.13	903.93	180.00	7.018
10,600.00	7,092.82	1,150.22	3,294.23	80.78	10,466.41	7,092.96	98.85	3,294.17	79.47	1,051.37	891.37	180.00	6.571
10,800.00	7,088.41	1,147.46	3,494.16	85.64	10,666.39	7,088.55	98.84	3,494.10	84.40	1,048.62	878.75	180.00	6.173
11,000.00	7,084.00	1,144.69	3,694.09	90.54	10,866.37	7,084.15	98.83	3,694.03	89.36	1,045.86	866.09	180.00	5.818
11,200.00	7,079.58	1,141.92	3,894.03	95.46	11,066.35	7,079.74	98.82	3,893.97	94.33	1,043.10	853.40	180.00	5.499
11,400.00	7,075.17	1,139.15	4,093.96	100.40	11,266.33	7,075.34	98.80	4,093.90	99.32	1,040.35	840.67	180.00	5.210
11,600.00	7,070.76	1,136.38	4,293.89	105.36	11,466.31	7,070.94	98.79	4,293.83	104.32	1,037.59	827.91	180.00	4.949
11,800.00	7,066.34	1,133.61	4,493.82	110.34	11,666.30	7,066.53	98.78	4,493.76	109.33	1,034.83	815.14	180.00	4.710
11,966.19	7,062.68	1,131.31	4,659.96	114.48	11,832.47	7,062.87	98.77	4,659.90	113.51	1,032.54	804.51	180.00	4.528

Anticollision Report for Deering 33-2H - 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 11,966.19 ft. Measured Depth.

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

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre		Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre		Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids ft	Relative North Bearing	Clearance Factor
		+N/-S (ft)	+E/-W (ft)				+N/-S (ft)	+E/-W (ft)					
0.00	0.00	0.00	0.00	0.00	0.00	0.00	-40.07	0.00	0.00	40.07	39.42	180.00	61.045
200.00	200.00	0.00	0.00	0.34	200.00	200.00	-40.07	0.00	0.34	40.07	38.74	180.00	30.117
400.00	400.00	0.00	0.00	0.79	400.00	400.00	-40.07	0.00	0.79	40.07	37.84	180.00	17.973
600.00	600.00	0.00	0.00	1.24	600.00	600.00	-40.07	0.00	1.24	40.07	36.94	180.00	12.808
800.00	799.75	8.46	-2.12	1.70	799.75	799.75	-40.07	0.00	1.69	48.58	44.55	177.50	12.047
1,000.00	997.97	33.78	-8.44	2.21	997.97	997.97	-40.07	0.00	2.13	74.33	69.41	173.48	15.087
1,200.00	1,193.17	75.76	-18.94	2.93	1,202.47	1,202.20	-32.21	-4.24	2.59	109.34	103.53	172.25	18.840
1,400.00	1,386.35	125.98	-31.49	3.83	1,410.49	1,408.30	-7.83	-17.40	3.11	136.33	129.53	173.99	20.075
1,600.00	1,579.54	176.20	-44.05	4.80	1,609.45	1,604.24	22.58	-33.80	3.71	155.93	148.08	176.18	19.861
1,800.00	1,772.73	226.42	-56.60	5.80	1,808.41	1,800.17	52.98	-50.21	4.37	175.71	166.74	177.89	19.599
2,000.00	1,965.91	276.63	-69.16	6.82	2,007.37	1,996.11	83.39	-66.62	5.07	195.61	185.49	179.25	19.329
2,200.00	2,159.10	326.85	-81.71	7.85	2,206.33	2,192.05	113.79	-83.02	5.78	215.59	204.29	180.35	19.071
2,400.00	2,352.28	377.07	-94.27	8.89	2,405.29	2,387.99	144.20	-99.43	6.52	235.65	223.13	181.27	18.831
2,600.00	2,545.47	427.29	-106.82	9.94	2,604.25	2,583.92	174.61	-115.83	7.26	255.75	242.01	182.04	18.612
2,800.00	2,738.65	477.51	-119.38	10.99	2,803.21	2,779.86	205.01	-132.24	8.01	275.89	260.91	182.70	18.413
3,000.00	2,931.84	527.72	-131.93	12.04	3,002.17	2,975.80	235.42	-148.64	8.77	296.07	279.83	183.27	18.233
3,200.00	3,125.02	577.94	-144.49	13.10	3,201.13	3,171.73	265.82	-165.05	9.53	316.27	298.76	183.77	18.071
3,400.00	3,318.21	628.16	-157.04	14.15	3,400.09	3,367.67	296.23	-181.46	10.29	336.49	317.71	184.21	17.923
3,600.00	3,511.39	678.38	-169.59	15.21	3,599.05	3,563.61	326.63	-197.86	11.06	356.72	336.67	184.59	17.790
3,800.00	3,704.58	728.60	-182.15	16.27	3,798.01	3,759.55	357.04	-214.27	11.83	376.97	355.64	184.94	17.668
4,000.00	3,897.76	778.82	-194.70	17.33	3,996.97	3,955.48	387.44	-230.67	12.60	397.24	374.61	185.25	17.557
4,200.00	4,090.95	829.03	-207.26	18.39	4,195.93	4,151.42	417.85	-247.08	13.37	417.51	393.59	185.53	17.456
4,400.00	4,284.13	879.25	-219.81	19.45	4,394.89	4,347.36	448.26	-263.49	14.14	437.79	412.58	185.79	17.362
4,600.00	4,477.32	929.47	-232.37	20.51	4,593.85	4,543.30	478.66	-279.89	14.92	458.08	431.57	186.02	17.276
4,800.00	4,670.50	979.69	-244.92	21.57	4,793.74	4,717.11	502.21	-292.60	15.47	482.11	454.51	185.70	17.470
5,000.00	4,863.69	1,029.91	-257.48	22.63	4,936.07	4,882.87	513.96	-298.94	15.82	517.96	489.56	184.59	18.241
5,200.00	5,056.87	1,080.12	-270.03	23.69	5,110.11	5,056.87	515.93	-300.00	16.07	564.99	535.95	183.04	19.455
5,400.00	5,250.09	1,130.22	-282.56	24.74	5,303.33	5,250.09	515.93	-300.00	16.36	614.54	584.79	181.63	20.656
5,600.00	5,445.74	1,170.19	-292.55	25.44	5,498.97	5,445.74	515.93	-300.00	16.67	654.31	623.90	180.65	21.514
5,800.00	5,644.23	1,193.47	-298.37	25.92	5,697.46	5,644.23	515.93	-300.00	16.98	677.54	646.60	180.14	21.895
6,000.00	5,844.06	1,200.00	-300.00	26.19	5,897.29	5,844.06	515.93	-300.00	17.30	684.07	641.24	180.00	15.971
6,200.00	6,044.06	1,200.00	-300.00	26.40	6,097.29	6,044.06	515.93	-300.00	17.63	684.07	640.69	180.00	15.768
6,400.00	6,244.06	1,200.00	-300.00	26.62	6,297.29	6,244.06	515.93	-300.00	17.96	684.07	640.13	180.00	15.566
6,600.00	6,444.06	1,200.00	-299.99	26.84	6,497.29	6,444.06	515.93	-300.00	18.30	684.07	650.47	180.00	20.358
6,712.56	6,556.10	1,199.87	-290.52	26.90	6,609.33	6,556.10	515.93	-299.97	18.49	684.01	649.94	180.79	20.080
6,800.00	6,641.31	1,199.60	-271.12	26.96	6,696.50	6,643.00	515.84	-293.91	18.60	684.14	649.67	181.91	19.845
7,000.00	6,822.96	1,198.46	-189.01	26.93	6,902.35	6,840.48	515.03	-238.37	18.68	685.43	650.40	184.13	19.566
7,200.00	6,974.94	1,196.68	-60.02	26.84	7,117.69	7,021.29	513.36	-122.93	18.60	687.77	652.20	185.26	19.336
7,400.00	7,085.47	1,194.38	105.87	26.82	7,342.17	7,164.54	510.88	48.69	18.49	690.43	653.17	184.78	18.528
7,600.00	7,145.99	1,191.75	295.79	27.08	7,573.98	7,249.49	507.77	263.27	19.73	692.53	651.14	182.72	16.732
7,800.00	7,154.61	1,188.99	495.18	28.43	7,797.19	7,266.00	504.55	485.26	22.80	693.51	646.64	180.83	14.794
8,000.00	7,150.19	1,186.22	695.11	29.60	7,997.14	7,266.00	501.65	685.20	24.57	694.36	644.38	180.83	13.892
8,200.00	7,145.78	1,183.45	895.04	31.38	8,197.09	7,266.00	498.76	885.13	27.11	695.24	640.43	180.83	12.686
8,400.00	7,141.37	1,180.68	1,094.98	33.82	8,397.04	7,266.00	495.86	1,085.06	30.28	696.14	635.21	180.83	11.426
8,600.00	7,136.95	1,177.91	1,294.91	36.86	8,596.99	7,266.00	492.97	1,284.99	33.91	697.07	629.08	180.83	10.252
8,800.00	7,132.54	1,175.14	1,494.84	40.38	8,796.94	7,266.00	490.07	1,484.92	37.89	698.02	622.30	180.83	9.218
9,000.00	7,128.13	1,172.37	1,694.77	44.26	8,996.89	7,266.00	487.17	1,684.85	42.11	699.01	615.08	180.83	8.329
9,200.00	7,123.71	1,169.61	1,894.71	48.39	9,196.84	7,266.00	484.28	1,884.78	46.52	700.01	607.55	180.83	7.571
9,400.00	7,119.30	1,166.84	2,094.64	52.72	9,396.80	7,266.00	481.38	2,084.71	51.06	701.05	599.80	180.83	6.924
9,600.00	7,114.89	1,164.07	2,294.57	57.19	9,596.75	7,266.00	478.48	2,284.64	55.71	702.11	591.91	180.83	6.371
9,800.00	7,110.47	1,161.30	2,494.50	61.77	9,796.70	7,266.00	475.59	2,484.57	60.43	703.20	583.91	180.83	5.895
10,000.00	7,106.06	1,158.53	2,694.43	66.43	9,996.65	7,266.00	472.69	2,684.50	65.22	704.31	575.84	180.83	5.482

Anticollision Report for Deering 33-2H - 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 11,966.19 ft. Measured Depth.

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

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre		Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre		Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids ft	Relative North Bearing	Clearance Factor
		+N/-S (ft)	+E/-W (ft)				+N/-S (ft)	+E/-W (ft)					
10,200.00	7,101.65	1,155.76	2,894.37	71.16	10,196.60	7,266.00	469.79	2,884.43	70.05	705.45	567.73	180.83	5.122
10,400.00	7,097.23	1,152.99	3,094.30	75.95	10,396.55	7,266.00	466.90	3,084.36	74.92	706.62	559.59	180.83	4.806
10,600.00	7,092.82	1,150.22	3,294.23	80.78	10,596.50	7,266.00	464.00	3,284.29	79.83	707.81	551.45	180.83	4.527
10,800.00	7,088.41	1,147.46	3,494.16	85.64	10,806.38	7,266.00	463.24	3,494.16	85.00	706.88	540.98	180.00	4.261
11,000.00	7,084.00	1,144.69	3,694.09	90.54	11,006.31	7,266.00	463.24	3,694.09	89.96	705.33	530.11	180.00	4.025
11,200.00	7,079.58	1,141.92	3,894.03	95.46	11,206.25	7,266.00	463.24	3,894.03	94.93	703.81	519.28	180.00	3.814
11,400.00	7,075.17	1,139.15	4,093.96	100.40	11,406.18	7,266.00	463.24	4,093.96	99.92	702.33	508.50	180.00	3.623
11,490.06	7,073.18	1,137.90	4,183.99	102.63	11,491.12	7,266.00	463.16	4,178.91	102.04	701.77	503.87	180.43	3.546
11,600.00	7,070.76	1,136.38	4,293.89	105.36	11,580.07	7,266.00	461.11	4,267.82	104.26	703.41	500.84	182.21	3.472
11,800.00	7,066.34	1,133.61	4,493.82	110.34	11,770.82	7,266.00	451.46	4,458.33	109.04	711.66	499.81	182.98	3.359
11,966.19	7,062.68	1,131.31	4,659.96	114.48	11,936.86	7,266.00	442.83	4,624.14	113.20	718.77	499.03	182.98	3.271

Anticollision Report for Deering 33-2H - 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 11,966.19 ft. Measured Depth.

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

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids ft	Relative North Bearing	Clearance Factor
0.00	0.00	0.00	0.00	0.00	0.00	1.00	-80.15	0.00	0.00	80.15	79.50	180.00	122.099
200.00	200.00	0.00	0.00	0.34	199.00	200.00	-80.15	0.00	0.33	80.15	78.82	180.00	60.337
400.00	400.00	0.00	0.00	0.79	399.00	400.00	-80.15	0.00	0.78	80.15	77.92	180.00	35.982
600.00	600.00	0.00	0.00	1.24	599.00	600.00	-80.15	0.00	1.23	80.15	77.02	180.00	25.635
800.00	799.75	8.46	-2.12	1.70	798.75	799.75	-80.15	0.00	1.68	88.63	84.60	178.63	21.991
1,000.00	997.97	33.78	-8.44	2.21	996.97	997.97	-80.15	0.00	2.13	114.24	109.31	175.76	23.189
1,200.00	1,193.17	75.76	-18.94	2.93	1,192.17	1,193.17	-80.15	0.00	2.57	157.05	151.24	173.07	27.040
1,400.00	1,386.35	125.98	-31.49	3.83	1,385.35	1,386.35	-80.15	0.00	3.00	208.52	201.78	171.31	30.934
1,600.00	1,579.54	176.20	-44.05	4.80	1,578.54	1,579.54	-80.15	0.00	3.44	260.10	252.41	170.25	33.811
1,800.00	1,772.73	226.42	-56.60	5.80	1,771.73	1,772.73	-80.15	0.00	3.87	311.74	303.09	169.54	36.010
2,000.00	1,965.91	276.63	-69.16	6.82	1,964.91	1,965.91	-80.15	0.00	4.30	363.42	353.79	169.03	37.740
2,200.00	2,159.10	326.85	-81.71	7.85	2,158.10	2,159.10	-80.15	0.00	4.74	415.12	404.51	168.65	39.132
2,400.00	2,352.28	377.07	-94.27	8.89	2,351.28	2,352.28	-80.15	0.00	5.17	466.83	455.24	168.35	40.277
2,600.00	2,545.47	427.29	-106.82	9.94	2,544.47	2,545.47	-80.15	0.00	5.61	518.56	505.98	168.11	41.232
2,800.00	2,738.65	477.51	-119.38	10.99	2,737.65	2,738.65	-80.15	0.00	6.04	570.29	556.72	167.92	42.042
3,000.00	2,931.84	527.72	-131.93	12.04	2,930.84	2,931.84	-80.15	0.00	6.48	622.02	607.47	167.75	42.737
3,200.00	3,125.02	577.94	-144.49	13.10	3,124.02	3,125.02	-80.15	0.00	6.91	673.76	658.22	167.62	43.339
3,400.00	3,318.21	628.16	-157.04	14.15	3,317.21	3,318.21	-80.15	0.00	7.34	725.51	708.97	167.50	43.866
3,600.00	3,511.39	678.38	-169.59	15.21	3,510.39	3,511.39	-80.15	0.00	7.78	777.25	759.72	167.40	44.331
3,800.00	3,704.58	728.60	-182.15	16.27	3,703.58	3,704.58	-80.15	0.00	8.21	829.00	810.47	167.31	44.744
4,000.00	3,897.76	778.82	-194.70	17.33	3,896.76	3,897.76	-80.15	0.00	8.65	880.75	861.23	167.23	45.113
4,200.00	4,090.95	829.03	-207.26	18.39	4,089.95	4,090.95	-80.15	0.00	9.08	932.50	911.98	167.16	45.446
4,400.00	4,284.13	879.25	-219.81	19.45	4,283.13	4,284.13	-80.15	0.00	9.51	984.26	962.74	167.10	45.747
4,600.00	4,477.32	929.47	-232.37	20.51	4,476.32	4,477.32	-80.15	0.00	9.95	1,036.01	1,013.50	167.04	46.020
4,800.00	4,670.50	979.69	-244.92	21.57	4,669.50	4,670.50	-80.15	0.00	10.38	1,087.77	1,064.26	166.99	46.269
5,000.00	4,863.69	1,029.91	-257.48	22.63	4,862.69	4,863.69	-80.15	0.00	10.82	1,139.52	1,115.01	166.94	46.497
5,200.00	5,056.87	1,080.12	-270.03	23.69	5,055.87	5,056.87	-80.15	0.00	11.25	1,191.28	1,165.77	166.90	46.707
5,400.00	5,250.09	1,130.22	-282.56	24.74	5,249.09	5,250.09	-80.15	0.00	11.69	1,242.91	1,216.38	166.86	46.850
5,600.00	5,445.74	1,170.19	-292.55	25.44	5,444.74	5,445.74	-80.15	0.00	12.13	1,284.11	1,256.54	166.83	46.576
5,800.00	5,644.23	1,193.47	-298.37	25.92	5,643.23	5,644.23	-80.15	0.00	12.57	1,308.10	1,279.73	166.82	46.109
6,000.00	5,844.06	1,200.00	-300.00	26.19	5,843.06	5,844.06	-80.15	0.00	13.02	1,314.83	1,274.96	166.81	32.980
6,200.00	6,044.06	1,200.00	-300.00	26.40	6,043.06	6,044.06	-80.15	0.00	13.47	1,314.83	1,274.30	166.81	32.444
6,400.00	6,244.06	1,200.00	-300.00	26.62	6,243.06	6,244.06	-80.15	0.00	13.92	1,314.83	1,273.64	166.81	31.920
6,600.00	6,444.06	1,200.00	-299.99	26.84	6,501.79	6,501.69	-80.15	-16.39	14.47	1,312.45	1,280.94	167.51	41.651
6,800.00	6,641.31	1,199.60	-271.12	26.96	6,751.06	6,734.71	-80.15	-102.18	15.12	1,294.22	1,261.64	172.48	39.722
7,000.00	6,822.96	1,198.46	-189.01	26.93	6,874.41	6,837.77	-80.15	-169.76	15.62	1,278.84	1,245.11	179.14	37.917
7,036.75	6,853.49	1,198.18	-168.58	26.90	6,886.00	6,846.90	-80.15	-176.89	15.68	1,278.37	1,244.48	180.37	37.719
7,200.00	6,974.94	1,196.68	-60.02	26.84	6,908.99	6,864.72	-80.15	-191.42	15.80	1,288.29	1,254.02	185.88	37.596
7,400.00	7,085.47	1,194.38	105.87	26.82	6,900.00	6,857.80	-80.15	-185.68	15.74	1,327.12	1,292.02	192.88	37.805
7,600.00	7,145.99	1,191.75	295.79	27.08	6,850.00	6,818.20	-80.15	-155.17	15.50	1,388.71	1,351.80	199.52	37.624
7,800.00	7,154.61	1,188.99	495.18	28.43	6,800.00	6,776.81	-80.15	-127.13	15.29	1,463.11	1,424.35	206.12	37.747
8,000.00	7,150.19	1,186.22	695.11	29.60	6,750.00	6,733.78	-80.15	-101.67	15.11	1,553.04	1,512.27	212.18	38.086
8,200.00	7,145.78	1,183.45	895.04	31.38	6,700.00	6,689.28	-80.15	-78.89	14.96	1,659.40	1,615.81	217.62	38.071
8,400.00	7,141.37	1,180.68	1,094.98	33.82	6,650.00	6,643.48	-80.15	-58.87	14.82	1,780.15	1,733.21	222.46	37.927
8,600.00	7,136.95	1,177.91	1,294.91	36.86	6,633.29	6,627.90	-80.15	-52.80	14.77	1,912.63	1,861.45	226.97	37.365
8,800.00	7,132.54	1,175.14	1,494.84	40.38	6,600.00	6,596.53	-80.15	-41.67	14.69	2,055.22	1,999.82	230.75	37.094
9,000.00	7,128.13	1,172.37	1,694.77	44.26	6,600.00	6,596.53	-80.15	-41.67	14.69	2,206.05	2,145.63	234.20	36.514
9,200.00	7,123.71	1,169.61	1,894.71	48.39	6,568.21	6,566.17	-80.15	-32.25	14.62	2,363.45	2,298.54	237.03	36.415
9,400.00	7,119.30	1,166.84	2,094.64	52.72	6,550.00	6,548.63	-80.15	-27.38	14.57	2,526.58	2,456.86	239.56	36.239
9,600.00	7,114.89	1,164.07	2,294.57	57.19	6,550.00	6,548.63	-80.15	-27.38	14.57	2,694.47	2,619.45	241.82	35.918
9,800.00	7,110.47	1,161.30	2,494.50	61.77	6,525.02	6,524.39	-80.15	-21.34	14.52	2,866.04	2,786.32	243.74	35.951
10,000.00	7,106.06	1,158.53	2,694.43	66.43	6,500.00	6,499.94	-80.15	-16.04	14.46	3,041.11	2,956.73	245.44	36.038

Anticollision Report for Deering 33-2H - 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 11,966.19 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	7,101.65	1,155.76	2,894.37	71.16	6,500.00	6,499.94	-80.15	-16.04	14.46	3,218.69	3,128.93	246.99	35.858
10,400.00	7,097.23	1,152.99	3,094.30	75.95	6,500.00	6,499.94	-80.15	-16.04	14.46	3,398.77	3,303.60	248.37	35.713
10,600.00	7,092.82	1,150.22	3,294.23	80.78	6,500.00	6,499.94	-80.15	-16.04	14.46	3,580.95	3,480.35	249.61	35.596
10,800.00	7,088.41	1,147.46	3,494.16	85.64	6,478.56	6,478.87	-80.15	-12.09	14.42	3,764.62	3,659.32	250.70	35.750
11,000.00	7,084.00	1,144.69	3,694.09	90.54	6,471.66	6,472.06	-80.15	-10.94	14.40	3,949.93	3,839.45	251.71	35.751
11,200.00	7,079.58	1,141.92	3,894.03	95.46	6,450.00	6,450.65	-80.15	-7.69	14.36	4,136.72	4,021.63	252.61	35.945
11,400.00	7,075.17	1,139.15	4,093.96	100.40	6,450.00	6,450.65	-80.15	-7.69	14.36	4,324.38	4,203.88	253.44	35.887
11,600.00	7,070.76	1,136.38	4,293.89	105.36	6,450.00	6,450.65	-80.15	-7.69	14.36	4,513.10	4,387.18	254.21	35.839
11,800.00	7,066.34	1,133.61	4,493.82	110.34	6,450.00	6,450.65	-80.15	-7.69	14.36	4,702.76	4,571.40	254.91	35.800
11,966.19	7,062.68	1,131.31	4,659.96	114.48	6,450.00	6,450.65	-80.15	-7.69	14.36	4,860.99	4,725.11	255.45	35.775

Anticollision Report for Deering 33-2H - 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 11,966.19 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	18.22	0.00	0.00	18.22	17.56	0.02	27.705
200.00	200.00	0.00	0.00	0.34	201.00	200.00	18.22	0.00	0.34	18.22	16.88	0.02	13.669
400.00	400.00	0.00	0.00	0.79	401.00	400.00	18.22	0.00	0.79	18.22	15.99	0.02	8.163
483.73	483.73	0.00	0.00	0.97	484.73	483.73	18.22	0.00	0.98	18.22	15.61	0.02	6.985
600.00	600.00	0.00	0.00	1.24	600.00	598.97	20.35	-0.47	1.24	20.38	17.25	358.68	6.511
800.00	799.75	8.46	-2.12	1.70	797.87	796.03	37.09	-4.19	1.71	28.94	24.91	355.86	7.181
1,000.00	997.97	33.78	-8.44	2.21	994.87	990.03	70.17	-11.54	2.32	37.38	32.44	355.14	7.570
1,200.00	1,193.17	75.76	-18.94	2.93	1,191.17	1,179.74	119.19	-22.43	3.16	45.59	39.70	355.40	7.738
1,400.00	1,386.35	125.98	-31.49	3.83	1,390.33	1,369.21	179.10	-35.75	4.25	55.98	48.98	355.42	8.002
1,600.00	1,579.54	176.20	-44.05	4.80	1,590.05	1,559.15	239.35	-49.13	5.40	66.55	58.41	355.40	8.176
1,800.00	1,772.73	226.42	-56.60	5.80	1,789.77	1,749.10	299.59	-62.52	6.59	77.13	67.81	355.38	8.281
2,000.00	1,965.91	276.63	-69.16	6.82	1,989.49	1,939.04	359.84	-75.91	7.79	87.70	77.19	355.36	8.350
2,200.00	2,159.10	326.85	-81.71	7.85	2,189.21	2,128.99	420.09	-89.30	9.00	98.27	86.57	355.35	8.396
2,400.00	2,352.28	377.07	-94.27	8.89	2,388.93	2,318.93	480.34	-102.69	10.22	108.84	95.93	355.34	8.428
2,600.00	2,545.47	427.29	-106.82	9.94	2,588.65	2,508.88	540.58	-116.08	11.44	119.41	105.29	355.33	8.451
2,800.00	2,738.65	477.51	-119.38	10.99	2,788.37	2,698.82	600.83	-129.46	12.67	129.99	114.64	355.32	8.468
3,000.00	2,931.84	527.72	-131.93	12.04	2,988.09	2,888.77	661.08	-142.85	13.90	140.56	123.99	355.32	8.481
3,200.00	3,125.02	577.94	-144.49	13.10	3,187.81	3,078.71	721.32	-156.24	15.13	151.13	133.33	355.31	8.491
3,400.00	3,318.21	628.16	-157.04	14.15	3,387.53	3,268.66	781.57	-169.63	16.36	161.70	142.68	355.31	8.498
3,600.00	3,511.39	678.38	-169.59	15.21	3,587.25	3,458.61	841.82	-183.02	17.59	172.28	152.02	355.30	8.504
3,800.00	3,704.58	728.60	-182.15	16.27	3,786.97	3,648.55	902.07	-196.41	18.83	182.85	161.36	355.30	8.508
4,000.00	3,897.76	778.82	-194.70	17.33	3,986.69	3,838.50	962.31	-209.79	20.06	193.42	170.70	355.30	8.512
4,200.00	4,090.95	829.03	-207.26	18.39	4,186.41	4,028.44	1,022.56	-223.18	21.30	203.99	180.04	355.30	8.515
4,400.00	4,284.13	879.25	-219.81	19.45	4,386.13	4,218.39	1,082.81	-236.57	22.53	214.57	189.38	355.29	8.517
4,600.00	4,477.32	929.47	-232.37	20.51	4,585.85	4,408.33	1,143.06	-249.96	23.77	225.14	198.71	355.29	8.519
4,800.00	4,670.50	979.69	-244.92	21.57	4,785.57	4,598.28	1,203.30	-263.35	25.00	235.71	208.05	355.29	8.521
5,000.00	4,863.69	1,029.91	-257.48	22.63	4,987.21	4,790.06	1,264.06	-276.85	26.24	246.22	217.32	355.27	8.519
5,200.00	5,056.87	1,080.12	-270.03	23.69	5,211.09	5,006.48	1,319.70	-289.21	27.17	245.57	215.45	355.42	8.153
5,400.00	5,250.09	1,130.22	-282.56	24.74	5,432.70	5,225.16	1,354.21	-296.88	27.81	225.83	194.46	356.34	7.199
5,600.00	5,445.74	1,170.19	-292.55	25.44	5,650.52	5,442.45	1,367.90	-299.92	28.17	197.87	165.49	357.86	6.112
5,800.00	5,644.23	1,193.47	-298.37	25.92	5,852.30	5,644.23	1,368.22	-300.00	28.36	174.76	141.66	359.47	5.280
6,000.00	5,844.06	1,200.00	-300.00	26.19	6,052.13	5,844.06	1,368.22	-300.00	28.54	168.22	113.77	0.00	3.089
6,200.00	6,044.06	1,200.00	-300.00	26.40	6,252.13	6,044.06	1,368.22	-300.00	28.73	168.22	113.36	0.00	3.066
6,400.00	6,244.06	1,200.00	-300.00	26.62	6,452.13	6,244.06	1,368.22	-300.00	28.93	168.22	112.94	0.00	3.043
6,600.00	6,444.06	1,200.00	-299.99	26.84	6,652.15	6,444.08	1,368.22	-299.98	29.13	168.22	132.73	0.00	4.740
6,800.00	6,641.31	1,199.60	-271.12	26.96	6,852.93	6,642.04	1,367.70	-270.61	29.24	168.10	132.22	0.17	4.686
7,000.00	6,822.96	1,198.46	-189.01	26.93	7,053.58	6,824.02	1,366.22	-187.70	29.21	167.77	131.73	0.45	4.655
7,200.00	6,974.94	1,196.68	-60.02	26.84	7,254.03	6,975.86	1,363.92	-57.86	29.12	167.26	130.59	0.74	4.562
7,400.00	7,085.47	1,194.38	105.87	26.82	7,454.25	7,085.82	1,360.96	108.66	29.09	166.60	127.89	0.96	4.303
7,600.00	7,145.99	1,191.75	295.79	27.08	7,654.23	7,145.51	1,357.58	298.82	29.29	165.86	123.07	1.05	3.877
7,800.00	7,154.61	1,188.99	495.18	28.43	7,854.08	7,153.54	1,354.04	498.09	30.39	165.08	117.48	1.01	3.468
8,000.00	7,150.19	1,186.22	695.11	29.60	8,054.08	7,149.13	1,350.48	698.01	31.37	164.29	113.49	1.01	3.234
8,200.00	7,145.78	1,183.45	895.04	31.38	8,254.08	7,144.72	1,346.93	897.93	32.91	163.51	107.75	1.01	2.932
8,400.00	7,141.37	1,180.68	1,094.98	33.82	8,454.08	7,140.30	1,343.38	1,097.84	35.11	162.73	100.68	1.01	2.623
8,600.00	7,136.95	1,177.91	1,294.91	36.86	8,654.08	7,135.89	1,339.83	1,297.76	37.96	161.94	92.65	1.01	2.337
8,800.00	7,132.54	1,175.14	1,494.84	40.38	8,854.08	7,131.48	1,336.27	1,497.68	41.35	161.16	83.93	1.01	2.087
9,000.00	7,128.13	1,172.37	1,694.77	44.26	9,054.08	7,127.06	1,332.72	1,697.60	45.13	160.38	74.71	1.01	1.872
9,200.00	7,123.71	1,169.61	1,894.71	48.39	9,254.07	7,122.65	1,329.17	1,897.52	49.20	159.59	65.12	1.01	1.689
9,400.00	7,119.30	1,166.84	2,094.64	52.72	9,454.07	7,118.24	1,325.62	2,097.44	53.47	158.81	55.27	1.01	1.534
9,600.00	7,114.89	1,164.07	2,294.57	57.19	9,654.07	7,113.83	1,322.07	2,297.35	57.91	158.03	45.21	1.01	1.401
9,800.00	7,110.47	1,161.30	2,494.50	61.77	9,854.07	7,109.41	1,318.51	2,497.27	62.46	157.24	34.99	1.01	1.286
10,000.00	7,106.06	1,158.53	2,694.43	66.43	10,054.07	7,105.00	1,314.96	2,697.19	67.10	156.46	24.65	1.01	1.187

Anticollision Report for Deering 33-2H - 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 11,966.19 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	7,101.65	1,155.76	2,894.37	71.16	10,254.07	7,100.59	1,311.41	2,897.11	71.82	155.67	14.21	1.01	1.100
10,400.00	7,097.23	1,152.99	3,094.30	75.95	10,454.06	7,096.17	1,307.86	3,097.03	76.59	154.89	3.69	1.01	1.024
10,600.00	7,092.82	1,150.22	3,294.23	80.78	10,654.06	7,091.76	1,304.30	3,296.94	81.40	154.11	< 0	1.01	0.957
10,800.00	7,088.41	1,147.46	3,494.16	85.64	10,854.06	7,087.35	1,300.75	3,496.86	86.26	153.32	< 0	1.01	0.897
11,000.00	7,084.00	1,144.69	3,694.09	90.54	11,054.06	7,082.94	1,297.20	3,696.78	91.15	152.54	< 0	1.01	0.844
11,200.00	7,079.58	1,141.92	3,894.03	95.46	11,254.06	7,078.52	1,293.65	3,896.70	96.06	151.76	< 0	1.01	0.796
11,400.00	7,075.17	1,139.15	4,093.96	100.40	11,454.06	7,074.11	1,290.09	4,096.62	101.00	150.97	< 0	1.01	0.752
11,600.00	7,070.76	1,136.38	4,293.89	105.36	11,654.06	7,069.70	1,286.54	4,296.54	105.95	150.19	< 0	1.01	0.713
11,800.00	7,066.34	1,133.61	4,493.82	110.34	11,854.05	7,065.28	1,282.99	4,496.45	110.92	149.40	< 0	1.01	0.677
11,925.74	7,063.57	1,131.87	4,619.52	113.47	11,979.79	7,062.51	1,280.76	4,622.14	114.05	148.91	< 0	1.01	0.656
11,966.19	7,062.68	1,131.31	4,659.96	114.48	12,017.51	7,061.68	1,280.09	4,659.85	114.99	148.78	< 0	359.96	0.650

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	7,736.73	Rev A0 (Permitting Plan Only)	MWD
7,736.73	11,965.52	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 33-2H - Rev A0 (Permitting Plan Only)

Direction and Coordinates are relative to True North Reference.

Vertical Depths are relative to GL @ 4904.00ft (Ground Level). Northing and Easting are relative to Deering 33-2H - Slot A2

Coordinate System is US State Plane 1983, Colorado Northern Zone

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

