



Well: Homer 7-11-7-14 H
 Location: Sec. 7 - T33S - R2E
 Rig: Duke Drilling Rig #20

Declination Corr.: 4.1 deg
 Grid Corr.: _____
 Total Corr.: _____

Calculation Method Minimum Curvature
 Proposed Azimuth 180 From True North
 Depth Reference KB
 Tie Into: _____

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)			
Surface Casing Set @ 331' KB													
Last Survey Tie In to Surface													
	2896	0.86	359		2896	-8.91	8.55 N	1.38 E					
MWD	2928	0.71	335		2928	0							
MWD	2928	0.71	335	0	2928	-8.55	8.55 N	1.38 E	8.66	9.17	#DIV/0!	#DIV/0!	#DIV/0!
MWD	2959	2.66	225	31	2959	-8.22	8.22 N	0.79 E	8.26	5.46	9.58	6.29	-352.58
MWD	2991	5.63	220	32	2991	-6.50	6.50 N	0.75 W	6.54	353.38	9.35	9.28	-17.19
MWD	3026	8.93	219	35	3026	-3.08	3.08 N	3.58 W	4.72	310.70	9.43	9.43	-1.89
MWD	3057	11.64	218	31	3056	1.26	1.26 S	7.02 W	7.13	259.84	8.79	8.74	-5.23
MWD	3089	14.55	215	32	3087	7.09	7.09 S	11.32 W	13.36	237.94	9.24	9.09	-7.31
MWD	3120	17.85	214	31	3117	14.21	14.21 S	16.23 W	21.57	228.81	10.71	10.65	-4.32
MWD	3152	20.73	211	32	3147	23.13	23.13 S	21.90 W	31.85	223.44	9.53	9.00	-9.47
MWD	3184	23.28	211	32	3177	33.43	33.43 S	28.03 W	43.63	219.99	7.98	7.97	-1.28
MWD	3215	25.84	207	31	3205	44.73	44.73 S	34.19 W	56.31	217.39	9.71	8.26	-12.32
MWD	3247	28.67	202	32	3234	58.09	58.09 S	40.19 W	70.64	214.68	11.33	8.84	-15.50
MWD	3278	31.57	199	31	3260	72.69	72.69 S	45.56 W	85.78	212.08	10.61	9.35	-10.00
MWD	3310	33.54	197	32	3287	89.10	89.10 S	50.76 W	102.54	209.67	7.19	6.16	-6.91
MWD	3341	35.95	195	31	3313	106.12	106.12 S	55.49 W	119.75	207.60	8.51	7.77	-6.06
MWD	3373	38.35	191	32	3338	124.95	124.95 S	59.80 W	138.52	205.58	9.81	7.50	-10.47
MWD	3404	40.05	189	31	3362	144.23	144.23 S	63.28 W	157.50	203.69	6.89	5.48	-6.61
MWD	3436	42.44	187	32	3386	165.10	165.10 S	66.29 W	177.91	201.87	8.51	7.47	-6.19
MWD	3467	46.49	185	31	3409	186.68	186.68 S	68.68 W	198.91	200.20	13.67	13.06	-5.74
MWD	3498	50.41	183	31	3429	209.82	209.82 S	70.27 W	221.27	198.52	14.52	12.65	-9.55
MWD	3530	52.50	179	32	3449	234.83	234.83 S	70.66 W	245.23	196.75	10.09	6.53	-9.84
MWD	3562	53.40	178	32	3468	260.36	260.36 S	70.03 W	269.62	195.05	4.76	2.81	-4.81
MWD	3593	54.92	178	31	3486	285.48	285.48 S	69.20 W	293.75	193.63	5.15	4.90	1.94
MWD	3625	56.89	178	32	3504	311.96	311.96 S	68.35 W	319.36	192.36	6.29	6.16	-1.53
MWD	3656	59.07	177	31	3521	338.22	338.22 S	67.22 W	344.84	191.24	7.33	7.03	-2.42
MWD	3688	61.27	177	32	3537	365.95	365.95 S	65.89 W	371.83	190.21	6.89	6.88	0.47
MWD	3720	63.93	178	32	3551	394.33	394.33 S	64.65 W	399.59	189.31	8.38	8.31	1.16
MWD	3751	67.50	177	31	3564	422.55	422.55 S	63.44 W	427.29	188.54	11.55	11.52	-0.90
MWD	3783	71.03	178	32	3576	452.45	452.45 S	62.14 W	456.70	187.82	11.05	11.03	0.63
MWD	3815	74.04	178	32	3585	482.94	482.94 S	60.85 W	486.76	187.18	9.41	9.41	-0.25
MWD	3846	76.26	178	31	3593	512.88	512.88 S	59.71 W	516.35	186.64	7.37	7.16	1.81
MWD	3878	77.64	179	32	3600	544.05	544.05 S	58.95 W	547.23	186.18	5.35	4.31	3.25
MWD	3909	76.76	178	31	3607	574.27	574.27 S	58.29 W	577.22	185.80	3.71	-2.84	-2.45
MWD	3941	75.96	178	32	3615	605.35	605.35 S	57.30 W	608.05	185.41	2.79	-2.50	-1.28
MWD	3972	76.78	178	31	3622	635.46	635.46 S	56.29 W	637.95	185.06	2.76	2.65	0.81
MWD	4004	80.74	178	32	3628	666.82	666.82 S	55.28 W	669.11	184.74	12.38	12.38	-0.38
MWD	4036	84.27	178	32	3632	698.53	698.53 S	54.21 W	700.63	184.44	11.03	11.03	-0.06
MWD	4046	85.47	178	10	3633	708.48	708.48 S	53.86 W	710.52	184.35	12.24	12.00	-2.40
MWD	4122	88.29	176	76	3637	784.23	784.23 S	49.47 W	785.79	183.61	4.77	3.71	-3.00
MWD	4153	88.66	173	31	3638	815.06	815.06 S	46.39 W	816.38	183.26	8.25	1.19	-8.16
MWD	4184	90.03	173	31	3639	845.84	845.84 S	42.75 W	846.92	182.89	4.67	4.42	1.52
MWD	4216	90.17	173	32	3639	877.63	877.63 S	39.07 W	878.50	182.55	0.66	0.44	-0.50
MWD	4247	91.44	173	31	3638	908.42	908.42 S	35.47 W	909.11	182.24	4.10	4.10	-0.03
MWD	4278	92.11	172	31	3637	939.16	939.16 S	31.62 W	939.69	181.93	3.64	2.16	-2.94
MWD	4309	92.86	173	31	3636	969.88	969.88 S	27.68 W	970.28	181.64	3.04	2.42	1.84
MWD	4340	91.72	173	31	3635	1,000.61	1,000.61 S	23.79 W	1,000.89	181.36	3.90	-3.68	-1.29
MWD	4371	91.97	173	31	3634	1,031.36	1,031.36 S	19.95 W	1,031.55	181.11	2.13	0.81	1.97
MWD	4402	90.81	172	31	3633	1,062.09	1,062.09 S	15.95 W	1,062.21	180.86	5.48	-3.74	-4.00
MWD	4,433	87.85	171.2	31	3,633.24	1,092.75	1,092.75 S	11.41 W	1,092.81	180.60	9.83	-9.55	-2.35
MWD	4,465	86.52	171.0	32	3,634.81	1,124.32	1,124.32 S	6.46 W	1,124.34	180.33	4.24	-4.16	-0.84
MWD	4,496	88.65	174.5	31	3,636.11	1,155.04	1,155.04 S	2.54 W	1,155.04	180.13	13.40	6.87	11.52



Well: Homer 7-11-7-14 H
 Location: Sec. 7 - T33S - R2E
 Rig: Duke Drilling Rig #20

Declination Corr.: 4.1 deg
 Grid Corr.:
 Total Corr.:

Calculation Method Minimum Curvature
 Proposed Azimuth 180 From True North
 Depth Reference KB
 Tie Into:

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)			
MWD	4,526	87.22	175.5	30	3,637.19	1,184.90	1,184.90 S	0.07 E	1,184.90	180.00	5.74	-4.77	3.20
MWD	4,557	86.8	177.2	31	3,638.81	1,215.80	1,215.80 S	2.04 E	1,215.80	179.90	5.83	-1.35	5.68
MWD	4,588	87.4	177.9	31	3,640.39	1,246.73	1,246.73 S	3.35 E	1,246.73	179.85	2.77	1.77	2.13
MWD	4,619	88.5	178.4	31	3,641.51	1,277.69	1,277.69 S	4.34 E	1,277.70	179.81	4.16	3.77	1.74
MWD	4,650	89.9	179.2	31	3,641.93	1,308.68	1,308.68 S	4.97 E	1,308.69	179.78	5.20	4.55	2.52
MWD	4,681	90.6	178.8	31	3,641.79	1,339.68	1,339.68 S	5.51 E	1,339.69	179.76	2.49	2.06	-1.39
MWD	4,711	90.8	178.4	30	3,641.43	1,369.66	1,369.66 S	6.25 E	1,369.68	179.74	1.61	0.90	-1.33
MWD	4,743	91.1	178.2	32	3,640.89	1,401.65	1,401.65 S	7.20 E	1,401.66	179.71	0.94	0.75	-0.56
MWD	4,774	91.0	178.7	31	3,640.32	1,432.63	1,432.63 S	8.04 E	1,432.65	179.68	1.46	-0.13	1.45
MWD	4,804	91.9	179.0	30	3,639.54	1,462.61	1,462.61 S	8.65 E	1,462.64	179.66	3.17	2.93	1.20
MWD	4,835	91.7	179.7	31	3,638.56	1,493.60	1,493.60 S	9.01 E	1,493.62	179.65	2.14	-0.68	2.03
MWD	4,867	90.2	179.6	32	3,638.03	1,525.59	1,525.59 S	9.21 E	1,525.62	179.65	4.75	-4.75	-0.06
MWD	4,898	89.9	179.0	31	3,638.01	1,556.59	1,556.59 S	9.57 E	1,556.62	179.65	2.17	-1.03	-1.90
MWD	4,929	90.2	179.3	31	3,638.00	1,587.58	1,587.58 S	10.02 E	1,587.62	179.64	1.26	0.97	0.81
MWD	4,960	90.9	179.6	31	3,637.73	1,618.58	1,618.58 S	10.32 E	1,618.61	179.63	2.41	2.19	1.00
MWD	4,991	91.3	179.7	31	3,637.13	1,649.57	1,649.57 S	10.52 E	1,649.61	179.63	1.59	1.58	0.19
MWD	5,023	92.0	179.6	32	3,636.20	1,681.56	1,681.56 S	10.73 E	1,681.59	179.63	2.10	2.09	-0.16
MWD	5,055	92.1	180.1	32	3,635.06	1,713.54	1,713.54 S	10.82 E	1,713.57	179.64	1.42	0.22	1.41
MWD	5,086	90.5	181.2	31	3,634.36	1,744.53	1,744.53 S	10.48 E	1,744.56	179.66	6.27	-5.10	3.65
MWD	5,118	88.8	180.4	32	3,634.55	1,776.52	1,776.52 S	10.05 E	1,776.55	179.68	5.86	-5.25	-2.59
MWD	5,149	90.0	179.8	31	3,634.86	1,807.52	1,807.52 S	10.01 E	1,807.55	179.68	4.36	3.90	-1.94
MWD	5,181	90.6	179.5	32	3,634.67	1,839.52	1,839.52 S	10.22 E	1,839.55	179.68	2.05	1.91	-0.75
MWD	5,212	89.5	180.6	31	3,634.63	1,870.52	1,870.52 S	10.18 E	1,870.55	179.69	5.00	-3.58	3.48
MWD	5,244	89.0	181.2	32	3,635.05	1,902.51	1,902.51 S	9.69 E	1,902.54	179.71	2.48	-1.78	1.72
MWD	5,275	88.7	181.2	31	3,635.67	1,933.50	1,933.50 S	9.05 E	1,933.52	179.73	0.78	-0.74	0.23
MWD	5,307	89.7	180.9	32	3,636.12	1,965.49	1,965.49 S	8.45 E	1,965.51	179.75	3.04	2.91	-0.88
MWD	5,339	88.0	180.1	32	3,636.77	1,997.48	1,997.48 S	8.16 E	1,997.50	179.77	5.74	-5.13	-2.59
MWD	5,370	88.2	180.2	31	3,637.79	2,028.46	2,028.46 S	8.08 E	2,028.48	179.77	0.69	0.65	0.26
MWD	5,402	87.7	179.6	32	3,638.92	2,060.44	2,060.44 S	8.15 E	2,060.46	179.77	2.54	-1.56	-2.00
MWD	5,434	87.6	180.6	32	3,640.24	2,092.42	2,092.42 S	8.12 E	2,092.43	179.78	3.16	-0.47	3.13
MWD	5,465	87.9	180.6	31	3,641.45	2,123.39	2,123.39 S	7.81 E	2,123.40	179.79	1.14	1.13	0.16
MWD	5,497	88.1	180.1	32	3,642.57	2,155.37	2,155.37 S	7.62 E	2,155.38	179.80	1.68	0.53	-1.59
MWD	5,528	88.8	181.5	31	3,643.41	2,186.35	2,186.35 S	7.19 E	2,186.37	179.81	5.08	2.26	4.55
MWD	5,559	89.6	181.7	31	3,643.86	2,217.34	2,217.34 S	6.31 E	2,217.35	179.84	2.59	2.48	0.74
MWD	5,591	89.1	181.1	32	3,644.24	2,249.33	2,249.33 S	5.51 E	2,249.33	179.86	2.44	-1.56	-1.87
MWD	5,623	89.7	180.6	32	3,644.59	2,281.32	2,281.32 S	5.03 E	2,281.33	179.87	2.59	1.97	-1.69
MWD	5,654	90.5	180.9	31	3,644.54	2,312.32	2,312.32 S	4.62 E	2,312.32	179.89	2.85	2.61	1.13
MWD	5,685	90.5	181.2	31	3,644.27	2,343.31	2,343.31 S	4.04 E	2,343.31	179.90	0.84	0.00	0.84
MWD	5,717	89.5	181.9	32	3,644.27	2,375.30	2,375.30 S	3.18 E	2,375.30	179.92	3.80	-3.13	2.16
MWD	5,748	89.4	181.7	31	3,644.57	2,406.28	2,406.28 S	2.21 E	2,406.28	179.95	0.69	-0.32	-0.61
MWD	5,780	89.2	181.4	32	3,644.96	2,438.27	2,438.27 S	1.35 E	2,438.27	179.97	1.22	-0.66	-1.03
MWD	5,812	88.2	181.3	32	3,645.70	2,470.25	2,470.25 S	0.62 E	2,470.25	179.99	3.17	-3.16	-0.34
MWD	5,843	87.0	181.7	31	3,647.00	2,501.21	2,501.21 S	0.18 W	2,501.21	180.00	4.01	-3.77	1.35
MWD	5,875	85.3	178.7	32	3,649.15	2,533.13	2,533.13 S	0.28 W	2,533.13	180.01	10.76	-5.38	-9.34
MWD	5,907	84.4	176.8	32	3,652.03	2,564.98	2,564.98 S	0.98 E	2,564.98	179.98	6.62	-2.84	-6.00
MWD	5,938	84.8	177.3	31	3,654.95	2,595.80	2,595.80 S	2.58 E	2,595.80	179.94	2.22	1.42	1.71
MWD	5,969	85.4	177.2	31	3,657.60	2,626.65	2,626.65 S	4.06 E	2,626.65	179.91	1.77	1.74	-0.29
MWD	6,000	85.7	177.6	31	3,660.01	2,657.52	2,657.52 S	5.44 E	2,657.53	179.88	1.81	1.16	1.39
MWD	6,032	86.0	177.4	32	3,662.33	2,689.41	2,689.41 S	6.84 E	2,689.42	179.85	1.15	0.75	-0.87
MWD	6,063	86.5	177.3	31	3,664.36	2,720.31	2,720.31 S	8.29 E	2,720.32	179.83	1.87	1.84	-0.35
MWD	6,095	86.7	177.3	32	3,666.26	2,752.22	2,752.22 S	9.82 E	2,752.23	179.80	0.44	0.44	0.06
MWD	6,127	87.0	176.9	32	3,668.03	2,784.13	2,784.13 S	11.43 E	2,784.15	179.76	1.46	1.03	-1.03
MWD	6,158	88.3	176.7	31	3,669.30	2,815.05	2,815.05 S	13.16 E	2,815.08	179.73	4.26	4.16	-0.94



Well: Homer 7-11-7-14 H
 Location: Sec. 7 - T33S - R2E
 Rig: Duke Drilling Rig #20

Declination Corr.: 4.1 deg
 Grid Corr.: _____
 Total Corr.: _____

Calculation Method Minimum Curvature
 Proposed Azimuth 180 From True North
 Depth Reference KB
 Tie Into: _____

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)			
MWD	6,190	88.8	176.6	32	3,670.12	2,846.99	2,846.99 S	15.04 E	2,847.02	179.70	1.47	1.47	-0.06
MWD	6,221	89.0	176.9	31	3,670.72	2,877.93	2,877.93 S	16.78 E	2,877.98	179.67	1.31	0.84	1.00
MWD	6,253	90.5	177.0	32	3,670.86	2,909.88	2,909.88 S	18.48 E	2,909.94	179.64	4.56	4.56	0.03
MWD	6,285	91.3	176.8	32	3,670.37	2,941.83	2,941.83 S	20.24 E	2,941.90	179.61	2.54	2.47	-0.59
MWD	6,316	91.0	176.4	31	3,669.76	2,972.77	2,972.77 S	22.08 E	2,972.85	179.57	1.41	-0.84	-1.13
MWD	6,348	90.5	176.0	32	3,669.34	3,004.70	3,004.70 S	24.20 E	3,004.80	179.54	2.10	-1.69	-1.25
MWD	6,379	91.1	175.7	31	3,668.93	3,035.61	3,035.61 S	26.43 E	3,035.73	179.50	2.17	1.97	-0.90
MWD	6,410	91.3	176.0	31	3,668.29	3,066.53	3,066.53 S	28.68 E	3,066.66	179.46	0.94	0.61	0.71
MWD	6,442	90.9	177.1	32	3,667.67	3,098.46	3,098.46 S	30.61 E	3,098.61	179.43	3.86	-1.03	3.72
MWD	6,474	91.7	176.4	32	3,666.95	3,130.40	3,130.40 S	32.41 E	3,130.57	179.41	3.20	2.22	-2.31
MWD	6,505	91.7	176.3	31	3,666.05	3,161.33	3,161.33 S	34.39 E	3,161.51	179.38	0.37	0.10	-0.35
MWD	6,537	91.9	176.0	32	3,665.04	3,193.24	3,193.24 S	36.53 E	3,193.45	179.34	1.15	0.75	-0.88
MWD	6,568	92.3	176.5	31	3,663.90	3,224.15	3,224.15 S	38.56 E	3,224.38	179.31	2.01	1.29	1.55
MWD	6,600	92.2	177.0	32	3,662.64	3,256.07	3,256.07 S	40.38 E	3,256.32	179.29	1.63	-0.47	1.56
MWD	6,632	92.5	176.0	32	3,661.33	3,287.99	3,287.99 S	42.33 E	3,288.26	179.26	3.25	1.09	-3.06
MWD	6,663	92.1	176.2	31	3,660.10	3,318.89	3,318.89 S	44.44 E	3,319.19	179.23	1.59	-1.52	0.48
MWD	6,695	91.0	175.3	32	3,659.25	3,350.79	3,350.79 S	46.83 E	3,351.12	179.20	4.30	-3.28	-2.78
MWD	6,726	90.7	174.7	31	3,658.78	3,381.67	3,381.67 S	49.55 E	3,382.03	179.16	2.05	-0.84	-1.87
MWD	6,758	91.3	174.3	32	3,658.21	3,413.51	3,413.51 S	52.61 E	3,413.92	179.12	2.06	1.69	-1.19
MWD	6,790	90.5	173.8	32	3,657.72	3,445.34	3,445.34 S	55.94 E	3,445.79	179.07	3.06	-2.53	-1.72
MWD	6,821	90.9	173.3	31	3,657.36	3,476.14	3,476.14 S	59.42 E	3,476.65	179.02	1.87	1.29	-1.35
MWD	6,883	91.6	173.7	62	3,656.05	3,537.73	3,537.73 S	66.39 E	3,538.35	178.92	1.29	1.11	0.65
TD	7,015	91.0	173.0	132	3,653.10	3,668.81	3,668.81 S	81.63 E	3,669.72	178.73	0.70	-0.42	-0.56