



Company: NOBLE ENERGY
 Well: SHARKEY 41-35
 Location: NE/NE SEC.35-T6W-R64W
 Rig Name: LIGHTNING WIRE
 State/County: COLORADO/WELD
 Latitude: 40.45
 GRID North is 0.64 Degrees East of True North
 VS-Azi: 0.00 Degrees



FIELD COPY ONLY (NOT DEFINITIVE)

Service Company : VAUGHN ENERGY SERVICES

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: sharkey41-35-01.ut
 Minimum Curvature Method
 Report Date/Time: 2/28/2011 / 15:18

VAUGHN ENERGY SERVICES
 CORPUS CHRISTI, TX
 800-606-4976
 SURVEYOR: CORY ALBERT

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N-S FT	+E-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.10	311.33	100.00	0.06	-0.07	0.06	0.09	311.33	0.10
200.00	0.12	286.80	200.00	0.15	-0.23	0.15	0.28	302.48	0.05
300.00	0.27	301.59	300.00	0.30	-0.53	0.30	0.61	299.53	0.16
400.00	0.27	337.49	400.00	0.64	-0.82	0.64	1.04	308.13	0.17
500.00	0.27	335.17	500.00	1.08	-1.01	1.08	1.48	316.90	0.01
600.00	0.24	334.63	600.00	1.48	-1.20	1.48	1.90	321.05	0.03
700.00	0.24	324.15	700.00	1.84	-1.41	1.84	2.32	322.54	0.04
800.00	0.26	315.48	799.99	2.18	-1.69	2.18	2.76	322.08	0.04
900.00	0.31	286.71	899.99	2.42	-2.12	2.42	3.21	318.78	0.15
1000.00	0.29	293.12	999.99	2.59	-2.61	2.59	3.68	314.81	0.04
1100.00	0.38	313.84	1099.99	2.92	-3.08	2.92	4.24	313.48	0.15
1200.00	0.27	302.57	1199.99	3.28	-3.52	3.28	4.81	312.97	0.12
1300.00	0.30	296.03	1299.99	3.52	-3.95	3.52	5.29	311.68	0.04
1400.00	0.39	298.97	1399.99	3.80	-4.48	3.80	5.87	310.27	0.09
1500.00	0.34	296.92	1499.98	4.09	-5.04	4.09	6.49	309.08	0.04
1600.00	0.38	275.50	1599.98	4.26	-5.64	4.26	7.07	307.07	0.14
1700.00	0.65	255.60	1699.98	4.15	-6.52	4.15	7.73	302.47	0.32
1800.00	0.73	260.80	1799.97	3.91	-7.71	3.91	8.64	296.89	0.10
1900.00	1.10	260.57	1899.96	3.65	-9.29	3.65	9.98	291.45	0.37
2000.00	1.05	259.73	1999.94	3.33	-11.14	3.33	11.63	286.62	0.05
2100.00	1.01	263.02	2099.92	3.06	-12.92	3.06	13.27	283.31	0.08
2200.00	0.97	272.16	2199.91	2.98	-14.64	2.98	14.94	281.51	0.16
2300.00	0.78	274.69	2299.90	3.07	-16.17	3.07	16.45	280.75	0.20
2400.00	0.89	304.87	2399.89	3.57	-17.48	3.57	17.84	281.53	0.45
2500.00	0.99	310.63	2499.87	4.57	-18.77	4.57	19.32	283.68	0.14
2600.00	1.11	312.80	2599.86	5.79	-20.13	5.79	20.95	286.04	0.12
2700.00	1.06	311.40	2699.84	7.05	-21.53	7.05	22.66	288.14	0.06
2800.00	1.10	312.19	2799.82	8.31	-22.93	8.31	24.39	289.91	0.04
2900.00	0.93	324.01	2899.81	9.60	-24.12	9.60	25.96	291.71	0.27
3000.00	0.88	323.83	2999.79	10.88	-25.04	10.88	27.30	293.47	0.05
3100.00	0.65	329.65	3099.78	11.99	-25.78	11.99	28.43	294.93	0.24
3200.00	0.53	349.41	3199.78	12.93	-26.16	12.93	29.18	296.31	0.24
3300.00	0.96	31.03	3299.77	14.11	-25.81	14.11	29.41	298.66	0.66
3400.00	1.52	29.65	3399.75	15.97	-24.72	15.97	29.44	302.87	0.56
3500.00	1.75	42.01	3499.71	18.26	-23.05	18.26	29.40	308.39	0.42
3600.00	1.87	47.37	3599.66	20.50	-20.82	20.50	29.22	314.55	0.21

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
3700.00	1.93	49.08	3699.60	22.71	-18.35	22.71	29.20	321.06	0.08
3800.00	1.88	58.10	3799.55	24.68	-15.68	24.68	29.24	327.57	0.30
3900.00	1.66	53.67	3899.50	26.41	-13.12	26.41	29.49	333.57	0.26
4000.00	1.49	58.16	3999.46	27.95	-10.85	27.95	29.98	338.79	0.21
4100.00	1.10	61.05	4099.43	29.11	-8.90	29.11	30.44	343.00	0.40
4200.00	0.58	58.64	4199.42	29.84	-7.62	29.84	30.80	345.67	0.52
4300.00	0.21	56.01	4299.42	30.21	-7.03	30.21	31.01	346.89	0.37
4400.00	0.07	19.00	4399.42	30.37	-6.86	30.37	31.13	347.27	0.16
4500.00	0.14	292.84	4499.42	30.47	-6.95	30.47	31.25	347.15	0.15
4600.00	0.20	292.56	4599.42	30.58	-7.23	30.58	31.42	346.71	0.07
4700.00	0.28	242.29	4699.42	30.54	-7.61	30.54	31.47	346.01	0.22
4800.00	0.31	232.27	4799.42	30.26	-8.04	30.26	31.31	345.12	0.06
4900.00	0.38	244.50	4899.42	29.95	-8.55	29.95	31.15	344.07	0.11
5000.00	0.38	235.51	4999.41	29.62	-9.12	29.62	30.99	342.88	0.06
5100.00	0.43	211.72	5099.41	29.12	-9.59	29.12	30.65	341.77	0.18
5200.00	0.56	204.26	5199.41	28.35	-9.99	28.35	30.06	340.60	0.14
5300.00	0.75	184.79	5299.40	27.26	-10.24	27.26	29.12	339.41	0.30
5400.00	0.74	187.04	5399.39	25.96	-10.38	25.96	27.95	338.21	0.03
5500.00	0.79	169.17	5499.38	24.63	-10.33	24.63	26.71	337.26	0.24
5600.00	0.52	180.09	5599.38	23.50	-10.20	23.50	25.62	336.55	0.30
5700.00	0.53	231.72	5699.37	22.77	-10.56	22.77	25.10	335.11	0.46
5800.00	0.59	247.10	5799.37	22.28	-11.40	22.28	25.03	332.89	0.16
5900.00	0.59	257.47	5899.36	21.96	-12.39	21.96	25.21	330.58	0.11
6000.00	0.76	258.66	5999.36	21.72	-13.54	21.72	25.60	328.06	0.17
6100.00	0.78	293.19	6099.35	21.86	-14.82	21.86	26.41	325.86	0.46
6200.00	0.90	308.16	6199.34	22.61	-16.06	22.61	27.73	324.61	0.25
6300.00	0.93	310.01	6299.33	23.61	-17.29	23.61	29.27	323.78	0.04
6400.00	1.22	266.48	6399.31	24.07	-18.98	24.07	30.65	321.74	0.84
6500.00	1.94	247.68	6499.27	23.36	-21.61	23.36	31.82	317.23	0.87
6600.00	2.04	241.94	6599.21	21.88	-24.74	21.88	33.03	311.49	0.22
6700.00	2.07	241.04	6699.15	20.17	-27.89	20.17	34.42	305.87	0.05
6744.00	2.08	239.57	6743.12	19.38	-29.28	19.38	35.11	303.50	0.12
HORIZONTAL DISPLACEMENT IS 35.11 FEET AT 303.50 DEGREES									