



Company: Noble Energy
Lease/Well: Trinity/USX AA 7-8
API: 05-123-26025
Rig Name: Production
State/County: Colorado/Weld
Latitude: 39.18, Longitude: -103.45
GRID North is 1.32 Degrees East of True North
VS-Azi: 0.00 Degrees



FIELD COPY ONLY (NOT DEFINITIVE)

Depth Reference : Ground Level

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: trinityusxaa7-01_ed.ut

Minimum Curvature Method

Report Date/Time: 8/17/2011 / 10:27

Vaughn Energy Services

Fort Worth, TX

817-741-3610

James Proulx

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	0.23	305.13	100.00	0.12	-0.17	0.12	0.20	305.13	0.23
200.00	0.27	327.98	200.00	0.44	-0.46	0.44	0.64	313.51	0.11
300.00	0.37	320.75	300.00	0.89	-0.79	0.89	1.19	318.34	0.11
400.00	0.35	341.69	400.00	1.43	-1.09	1.43	1.80	322.66	0.13
500.00	0.77	314.66	499.99	2.20	-1.67	2.20	2.76	322.82	0.48
600.00	0.68	314.61	599.98	3.08	-2.56	3.08	4.01	320.25	0.08
700.00	0.82	316.31	699.97	4.02	-3.48	4.02	5.31	319.09	0.14
800.00	1.06	304.38	799.96	5.06	-4.74	5.06	6.93	316.86	0.31
900.00	0.90	310.18	899.95	6.09	-6.10	6.09	8.62	314.92	0.19
1000.00	1.05	310.15	999.93	7.18	-7.41	7.18	10.32	314.13	0.16
1100.00	1.01	307.02	1099.91	8.31	-8.81	8.31	12.11	313.31	0.07
1200.00	1.11	303.30	1199.90	9.37	-10.33	9.37	13.95	312.22	0.12
1300.00	1.10	302.21	1299.88	10.42	-11.95	10.42	15.85	311.08	0.03
1400.00	1.13	291.20	1399.86	11.28	-13.68	11.28	17.73	309.51	0.22
1500.00	0.93	302.75	1499.84	12.08	-15.29	12.08	19.49	308.32	0.29
1600.00	1.11	310.03	1599.83	13.15	-16.72	13.15	21.27	308.18	0.22
1700.00	0.96	306.37	1699.81	14.27	-18.14	14.27	23.08	308.19	0.17
1800.00	1.15	312.64	1799.79	15.45	-19.55	15.45	24.91	308.31	0.22
1900.00	0.99	320.84	1899.78	16.79	-20.83	16.79	26.76	308.87	0.22
2000.00	1.02	305.80	1999.76	17.98	-22.10	17.98	28.49	309.14	0.27
2100.00	0.96	315.82	2099.75	19.10	-23.40	19.10	30.21	309.22	0.19
2200.00	0.96	307.89	2199.73	20.22	-24.65	20.22	31.88	309.36	0.13
2300.00	0.74	306.74	2299.72	21.11	-25.82	21.11	33.35	309.27	0.22
2400.00	0.74	294.68	2399.71	21.77	-26.92	21.77	34.62	308.96	0.15
2500.00	0.70	293.54	2499.71	22.28	-28.06	22.28	35.83	308.45	0.04
2600.00	0.62	275.20	2599.70	22.57	-29.15	22.57	36.87	307.75	0.22
2700.00	0.75	289.84	2699.69	22.84	-30.30	22.84	37.94	307.01	0.22
2800.00	0.49	297.12	2799.69	23.25	-31.29	23.25	38.98	306.62	0.27
2900.00	0.47	274.58	2899.68	23.48	-32.08	23.48	39.75	306.20	0.19
3000.00	0.05	351.80	2999.68	23.55	-32.49	23.55	40.13	305.93	0.46
3100.00	0.46	73.64	3099.68	23.71	-32.11	23.71	39.91	306.43	0.46
3200.00	0.80	66.52	3199.68	24.10	-31.08	24.10	39.33	307.79	0.35
3300.00	1.09	47.86	3299.66	25.01	-29.73	25.01	38.86	310.07	0.41
3400.00	1.60	44.00	3399.63	26.66	-28.06	26.66	38.70	313.53	0.52

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
3500.00	1.70	54.07	3499.59	28.53	-25.89	28.53	38.53	317.78	0.31
3600.00	1.92	55.42	3599.54	30.35	-23.31	30.35	38.27	322.48	0.22
3700.00	1.86	58.64	3699.49	32.15	-20.54	32.15	38.15	327.43	0.12
3800.00	1.83	58.08	3799.44	33.84	-17.79	33.84	38.23	332.27	0.03
3900.00	1.65	56.81	3899.39	35.48	-15.23	35.48	38.61	336.76	0.19
4000.00	0.98	69.01	3999.36	36.57	-13.23	36.57	38.89	340.11	0.72
4100.00	0.74	117.49	4099.35	36.58	-11.86	36.58	38.45	342.04	0.74
4200.00	0.74	121.20	4199.34	35.94	-10.73	35.94	37.51	343.38	0.05
4300.00	0.81	153.48	4299.34	34.98	-9.86	34.98	36.34	344.25	0.43
4400.00	0.86	178.10	4399.33	33.60	-9.53	33.60	34.93	344.17	0.36
4500.00	1.27	221.77	4499.31	32.03	-10.24	32.03	33.63	342.27	0.88
4600.00	2.56	254.88	4599.25	30.62	-13.13	30.62	33.32	336.78	1.65
4700.00	2.64	273.13	4699.15	30.16	-17.59	30.16	34.92	329.75	0.83
4800.00	2.83	280.00	4799.04	30.72	-22.33	30.72	37.98	323.99	0.38
4900.00	3.06	285.00	4898.91	31.84	-27.34	31.84	41.97	319.35	0.34
5000.00	3.11	285.01	4998.76	33.23	-32.54	33.23	46.51	315.60	0.05
5100.00	1.46	292.11	5098.68	34.41	-36.34	34.41	50.05	313.44	1.67
5200.00	0.48	300.64	5198.66	35.11	-37.88	35.11	51.65	312.82	0.99
5300.00	0.32	335.52	5298.66	35.57	-38.35	35.57	52.31	312.85	0.28
5400.00	0.54	259.29	5398.66	35.74	-38.93	35.74	52.85	312.55	0.55
5500.00	0.34	332.41	5498.66	35.92	-39.53	35.92	53.41	312.26	0.55
5600.00	0.45	12.22	5598.66	36.57	-39.58	36.57	53.89	312.73	0.29
5700.00	0.51	20.05	5698.65	37.37	-39.35	37.37	54.26	313.52	0.09
5800.00	0.59	15.50	5798.65	38.28	-39.06	38.28	54.69	314.42	0.09
5900.00	0.62	19.91	5898.64	39.27	-38.74	39.27	55.17	315.39	0.05
6000.00	0.50	4.32	5998.64	40.22	-38.52	40.22	55.69	316.23	0.19
6100.00	0.16	18.81	6098.63	40.79	-38.44	40.79	56.05	316.70	0.35
6200.00	0.05	320.70	6198.63	40.96	-38.42	40.96	56.16	316.83	0.14
6300.00	0.22	58.12	6298.63	41.09	-38.29	41.09	56.17	317.02	0.23
6400.00	0.26	130.72	6398.63	41.05	-37.96	41.05	55.91	317.24	0.28
6500.00	0.54	67.06	6498.63	41.09	-37.36	41.09	55.53	317.72	0.48
6600.00	0.32	138.83	6598.63	41.06	-36.74	41.06	55.09	318.18	0.53
6700.00	0.19	173.63	6698.63	40.68	-36.54	40.68	54.68	318.07	0.20
6750.00	0.25	42.01	6748.63	40.67	-36.45	40.67	54.62	318.13	0.81
HORIZONTAL DISPLACEMENT IS 54.62 FEET AT 318.13 DEGREES									