



Company: Mewbourne Oil Co.
 Lease/Well: University B 11 7#2H
 Location: 16.7 Miles SW From Frankel City
 Rig Name: Patterson #47
 State/County: Texas/Andrews
 Latitude: 32.15, Longitude: -102.83
 GRID North is 2.91 Degrees West of True North
 VS-Azi: 0.00 Degrees



FIELD COPY ONLY (NOT DEFINITIVE)

Depth Reference : 18 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: university b 11 7 #2h_ed_ed.ut

Minimum Curvature Method

Report Date/Time: 12/16/2011 / 21:50

Vaughn Energy Services
 Midland, TX
 432-563-5444
 Zach Garcia

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	1.04	57.56	99.99	0.49	0.77	0.49	0.91	57.56	1.04
200.00	1.11	77.12	199.98	1.19	2.47	1.19	2.74	64.32	0.37
300.00	1.06	86.50	299.96	1.46	4.34	1.46	4.58	71.39	0.18
400.00	1.03	95.49	399.94	1.43	6.15	1.43	6.32	76.91	0.17
500.00	1.08	94.07	499.93	1.28	7.99	1.28	8.09	80.90	0.06
600.00	0.94	93.43	599.91	1.16	9.74	1.16	9.81	83.19	0.14
700.00	0.96	95.07	699.90	1.04	11.39	1.04	11.44	84.78	0.03
800.00	0.92	106.89	799.88	0.73	12.99	0.73	13.01	86.77	0.20
900.00	1.05	107.49	899.87	0.22	14.64	0.22	14.64	89.12	0.13
1000.00	0.87	111.57	999.85	-0.33	16.22	-0.33	16.22	91.17	0.19
1100.00	1.16	101.17	1099.84	-0.81	17.92	-0.81	17.94	92.58	0.34
1200.00	1.40	111.98	1199.81	-1.46	20.05	-1.46	20.10	94.17	0.34
1300.00	1.39	121.28	1299.78	-2.55	22.22	-2.55	22.37	96.55	0.23
1400.00	1.46	117.11	1399.75	-3.76	24.39	-3.76	24.68	98.77	0.13
1500.00	1.41	128.45	1499.72	-5.11	26.49	-5.11	26.98	100.91	0.29
1600.00	1.76	121.41	1599.68	-6.67	28.77	-6.67	29.53	103.06	0.40
1700.00	2.10	118.01	1699.63	-8.33	31.69	-8.33	32.77	104.73	0.37
1800.00	2.03	110.66	1799.56	-9.82	34.98	-9.82	36.33	105.69	0.27
1900.00	1.85	115.08	1899.50	-11.13	38.10	-11.13	39.69	106.29	0.24
2000.00	1.72	107.26	1999.46	-12.26	40.99	-12.26	42.79	106.65	0.28
2100.00	1.83	103.27	2099.41	-13.07	43.98	-13.07	45.88	106.55	0.16
2200.00	1.74	88.92	2199.36	-13.41	47.05	-13.41	48.92	105.91	0.45
2300.00	1.91	81.35	2299.31	-13.13	50.21	-13.13	51.90	104.65	0.30
2400.00	2.13	81.27	2399.25	-12.60	53.70	-12.60	55.16	103.20	0.22
2500.00	1.92	75.21	2499.18	-11.89	57.16	-11.89	58.38	101.75	0.30
2600.00	1.78	72.59	2599.13	-10.99	60.26	-10.99	61.25	100.34	0.17
2700.00	1.86	77.21	2699.08	-10.17	63.32	-10.17	64.13	99.13	0.17
2800.00	1.40	74.60	2799.04	-9.49	66.08	-9.49	66.76	98.17	0.47
2900.00	1.42	76.16	2899.01	-8.87	68.46	-8.87	69.03	97.38	0.04
3000.00	1.29	69.50	2998.98	-8.18	70.71	-8.18	71.18	96.60	0.20
3100.00	1.34	85.91	3098.96	-7.70	72.93	-7.70	73.34	96.03	0.38
3200.00	1.43	85.01	3198.93	-7.51	75.35	-7.51	75.72	95.69	0.09
3300.00	1.67	82.28	3298.89	-7.21	78.04	-7.21	78.37	95.28	0.25
3400.00	1.76	85.48	3398.85	-6.89	81.01	-6.89	81.30	94.86	0.13

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	1.82	79.32	3498.80	-6.47	84.10	-6.47	84.35	94.40	0.20
3600.00	2.25	79.62	3598.74	-5.83	87.59	-5.83	87.78	93.80	0.43
3700.00	2.37	78.69	3698.65	-5.07	91.55	-5.07	91.69	93.17	0.13
3800.00	2.40	82.05	3798.57	-4.37	95.66	-4.37	95.76	92.62	0.14
3900.00	2.15	87.43	3898.49	-4.00	99.61	-4.00	99.69	92.30	0.33
4000.00	2.34	87.67	3998.41	-3.83	103.53	-3.83	103.60	92.12	0.19
4100.00	2.35	88.02	4098.33	-3.67	107.62	-3.67	107.68	91.96	0.02
4200.00	2.12	91.42	4198.25	-3.65	111.52	-3.65	111.58	91.87	0.27
4300.00	2.12	85.52	4298.18	-3.55	115.20	-3.55	115.26	91.77	0.22
4400.00	1.85	88.90	4398.12	-3.37	118.66	-3.37	118.71	91.63	0.29
4500.00	1.86	91.72	4498.07	-3.39	121.90	-3.39	121.94	91.59	0.09
4600.00	1.40	94.17	4598.03	-3.53	124.74	-3.53	124.79	91.62	0.47
4700.00	1.27	88.89	4698.00	-3.60	127.06	-3.60	127.11	91.62	0.17
4800.00	1.51	93.65	4797.97	-3.66	129.49	-3.66	129.54	91.62	0.27
4900.00	1.05	101.67	4897.95	-3.93	131.70	-3.93	131.76	91.71	0.49
5000.00	1.00	104.94	4997.93	-4.34	133.44	-4.34	133.51	91.86	0.08
5100.00	1.02	126.20	5097.92	-5.09	135.01	-5.09	135.10	92.16	0.37
5200.00	0.86	137.85	5197.90	-6.17	136.23	-6.17	136.37	92.59	0.25
5300.00	0.78	130.13	5297.89	-7.17	137.25	-7.17	137.44	92.99	0.13
5400.00	0.83	124.95	5397.88	-8.02	138.36	-8.02	138.59	93.32	0.09
5500.00	0.82	125.69	5497.87	-8.85	139.54	-8.85	139.82	93.63	0.01
5600.00	0.92	130.23	5597.86	-9.79	140.73	-9.79	141.07	93.98	0.12
5700.00	1.02	114.22	5697.85	-10.67	142.16	-10.67	142.56	94.29	0.29
5800.00	0.87	97.47	5797.83	-11.14	143.73	-11.14	144.17	94.43	0.31
5900.00	0.89	104.83	5897.82	-11.44	145.24	-11.44	145.69	94.50	0.11
6000.00	0.75	111.27	5997.81	-11.87	146.60	-11.87	147.08	94.63	0.16
6100.00	0.68	104.20	6097.80	-12.26	147.79	-12.26	148.29	94.74	0.11
6200.00	0.81	104.20	6197.80	-12.58	149.05	-12.58	149.58	94.82	0.13
6300.00	1.13	99.39	6297.78	-12.91	150.72	-12.91	151.27	94.90	0.33
6394.00	1.16	97.85	6391.76	-13.19	152.58	-13.19	153.15	94.94	0.05

HORIZONTAL DISPLACEMENT IS
153.15 FEET AT 94.94 DEGREES