



Company: NOBLE ENERGY
 Lease/Well: UNI UPRR/C25-5
 Location:
 Rig Name: PRODUCTION
 State/County: COLORADO/WELD
 Latitude: 40.29
 GRID North is 0.64 Degrees East of True North
 VS-Azi: 0.00 Degrees

FIELD COPY ONLY (NOT DEFINITIVE)

DEPTH REFERENCE : GL = 0'

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: uniuprc25-5raw.ut
 Minimum Curvature Method
 Report Date/Time: 4/6/2011 / 17:30

Vaughn Energy Services
 Rifle, Colorado
 970 456 2071
 Surveyor: S.Anderson
 UNI UPRC 25-5 API# 05-123-14777

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	0.18	88.56	100.00	0.00	0.16	0.00	0.16	88.56	0.18
200.00	0.20	201.91	200.00	-0.16	0.25	-0.16	0.30	121.61	0.32
300.00	0.21	227.52	300.00	-0.44	0.06	-0.44	0.44	172.87	0.09
400.00	0.47	343.21	400.00	-0.17	-0.19	-0.17	0.26	228.39	0.58
500.00	0.53	321.35	499.99	0.57	-0.60	0.57	0.83	313.84	0.20
600.00	0.36	296.99	599.99	1.08	-1.17	1.08	1.59	312.68	0.25
700.00	0.56	294.49	699.99	1.42	-1.90	1.42	2.37	306.90	0.20
800.00	0.31	294.91	799.98	1.74	-2.59	1.74	3.12	303.93	0.25
900.00	0.34	282.19	899.98	1.92	-3.13	1.92	3.67	301.53	0.08
1000.00	0.42	278.31	999.98	2.03	-3.78	2.03	4.29	298.28	0.08
1100.00	0.65	276.96	1099.98	2.16	-4.70	2.16	5.17	294.62	0.23
1200.00	0.38	276.86	1199.97	2.26	-5.59	2.26	6.03	292.04	0.27
1300.00	0.41	272.38	1299.97	2.32	-6.28	2.32	6.69	290.27	0.05
1400.00	0.47	271.32	1399.97	2.34	-7.04	2.34	7.42	288.39	0.05
1500.00	0.40	276.77	1499.96	2.39	-7.80	2.39	8.15	287.06	0.08
1600.00	0.48	275.59	1599.96	2.47	-8.56	2.47	8.91	286.13	0.08
1700.00	0.70	277.68	1699.96	2.60	-9.58	2.60	9.92	285.17	0.22
1800.00	0.91	274.96	1799.95	2.75	-10.97	2.75	11.31	284.05	0.22
1900.00	1.09	279.11	1899.93	2.97	-12.70	2.97	13.04	283.14	0.19
2000.00	1.47	278.72	1999.91	3.31	-14.91	3.31	15.27	282.52	0.38
2100.00	1.68	274.46	2099.87	3.62	-17.64	3.62	18.01	281.59	0.24
2200.00	2.06	274.89	2199.81	3.89	-20.90	3.89	21.26	280.54	0.38
2300.00	2.15	276.57	2299.75	4.26	-24.55	4.26	24.92	279.83	0.10
2400.00	1.91	279.82	2399.68	4.75	-28.06	4.75	28.46	279.62	0.26
2500.00	1.69	283.79	2499.63	5.39	-31.14	5.39	31.60	279.82	0.25
2600.00	1.68	286.89	2599.59	6.17	-33.98	6.17	34.53	280.29	0.09
2700.00	1.72	288.28	2699.55	7.07	-36.80	7.07	37.48	280.87	0.06
2800.00	1.95	293.75	2799.50	8.22	-39.79	8.22	40.63	281.68	0.29
2900.00	1.91	286.95	2899.44	9.39	-42.94	9.39	43.96	282.34	0.23
3000.00	1.89	287.64	2999.38	10.38	-46.10	10.38	47.25	282.69	0.03
3100.00	1.80	283.09	3099.33	11.23	-49.20	11.23	50.47	282.86	0.17

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
3200.00	1.56	284.43	3199.29	11.93	-52.06	11.93	53.41	282.91	0.25
3300.00	1.50	289.97	3299.25	12.72	-54.61	12.72	56.07	283.11	0.16
3400.00	0.75	237.75	3399.24	12.81	-56.39	12.81	57.83	282.80	1.20
3500.00	0.11	188.78	3499.23	12.37	-56.96	12.37	58.29	282.26	0.69
3600.00	0.43	183.67	3599.23	11.91	-57.00	11.91	58.23	281.80	0.33
3700.00	0.85	185.63	3699.23	10.80	-57.10	10.80	58.11	280.71	0.42
3800.00	1.01	182.11	3799.21	9.18	-57.20	9.18	57.93	279.12	0.17
3900.00	1.21	186.74	3899.19	7.26	-57.36	7.26	57.81	277.21	0.22
4000.00	1.80	194.97	3999.16	4.69	-57.89	4.69	58.08	274.64	0.62
4100.00	2.81	196.05	4099.08	0.82	-58.97	0.82	58.97	270.80	1.02
4200.00	2.79	198.08	4198.96	-3.85	-60.40	-3.85	60.53	266.35	0.10
4300.00	2.86	205.63	4298.84	-8.42	-62.24	-8.42	62.80	262.30	0.38
4400.00	3.45	210.94	4398.68	-13.24	-64.86	-13.24	66.20	258.46	0.65
4500.00	3.55	217.17	4498.50	-18.29	-68.28	-18.29	70.68	255.01	0.39
4600.00	3.76	214.48	4598.29	-23.46	-72.00	-23.46	75.73	251.96	0.27
4700.00	3.21	215.85	4698.11	-28.42	-75.50	-28.42	80.67	249.37	0.56
4800.00	2.86	221.78	4797.97	-32.55	-78.80	-32.55	85.25	247.55	0.47
4900.00	2.86	234.97	4897.85	-35.84	-82.50	-35.84	89.95	246.52	0.66
5000.00	2.52	239.72	4997.74	-38.39	-86.45	-38.39	94.59	246.06	0.41
5100.00	2.08	241.92	5097.65	-40.35	-89.95	-40.35	98.59	245.84	0.46
5200.00	1.83	250.78	5197.60	-41.73	-93.05	-41.73	101.98	245.85	0.39
5300.00	0.81	263.52	5297.57	-42.33	-95.26	-42.33	104.25	246.04	1.05
5400.00	0.53	280.63	5397.56	-42.33	-96.42	-42.33	105.30	246.30	0.34
5500.00	0.61	284.65	5497.56	-42.11	-97.40	-42.11	106.11	246.62	0.09
5600.00	0.56	284.65	5597.55	-41.85	-98.38	-41.85	106.91	246.96	0.06
5700.00	1.15	288.95	5697.54	-41.40	-99.80	-41.40	108.05	247.47	0.60
5800.00	0.46	249.89	5797.53	-41.21	-101.13	-41.21	109.21	247.83	0.85
5900.00	0.35	224.66	5897.53	-41.56	-101.72	-41.56	109.89	247.78	0.21
6000.00	0.39	202.13	5997.53	-42.09	-102.06	-42.09	110.40	247.59	0.15
6100.00	0.98	196.36	6097.52	-43.23	-102.43	-43.23	111.18	247.12	0.60
6200.00	1.09	192.76	6197.50	-44.98	-102.89	-44.98	112.29	246.38	0.13
6300.00	1.34	190.26	6297.48	-47.07	-103.30	-47.07	113.52	245.51	0.25
6400.00	0.86	190.09	6397.46	-48.96	-103.64	-48.96	114.62	244.72	0.48
6500.00	0.30	338.77	6497.46	-49.45	-103.87	-49.45	115.04	244.54	1.13
6600.00	1.72	329.27	6597.44	-47.91	-104.73	-47.91	115.17	245.42	1.42
6700.00	1.32	329.91	6697.40	-45.63	-106.08	-45.63	115.47	246.73	0.39
6779.00	1.08	332.62	6776.39	-44.18	-106.88	-44.18	115.65	247.54	0.32

<div> HORIZONTAL DISPLACEMENT IS 115.65 FEET AT 247.54 DEGREES </div>
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