

GyroTracer Directional:

Date: 7/8/2019
Operator : Adrian Bruner
API : 05-123-26311
Well Name : Lovelace 32-12
Field : Noble Energy Inc
Tool Number: 1820
Bottom Depth : 6800.00
Total Well Depth: 7044.00
Latitude : 40.53566 N
Longitude : 104.45844 W
Grid Offset : 0.67
Datum: NAD 83



Starting Point Coordinates (in local grid):

Northing: 0.00 **Easting:** 0.00 **GLE:** 4766.00

Description:

Azimuth measured in degrees and referenced to local grid

Inclination measured from Vertical

Length measured in US survey feet

Lat/Long/Elevation obtained by handheld GPS at wellhead. Device error ± 9 Feet

RKB = Ground Level Elevation

Start Time: 7/8/2019 9:46

End Time: 7/8/2019 10:56

Depth	Inclination	Azimuth	Closure Direction	True Depth	Coordinates		Dogleg Severity	Closure Distance
					+N/-S	+E/-W		
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100.000	0.230	137.580	0.000	100.000	0.400	0.000	0.230	0.400
150.000	0.247	166.173	11.209	150.000	0.235	0.047	0.238	0.239
200.000	0.376	159.734	107.307	199.999	-0.027	0.086	0.185	0.090
250.000	0.205	171.996	155.901	249.998	-0.235	0.105	0.012	0.257
300.000	0.217	188.251	167.841	299.998	-0.393	0.085	0.092	0.402
350.000	0.152	216.813	176.020	349.998	-0.565	0.039	0.164	0.566
400.000	0.182	202.305	173.795	399.998	-0.599	0.065	0.071	0.603
450.000	0.317	77.457	164.052	449.997	-0.633	0.181	0.472	0.659
500.000	0.360	94.066	147.118	499.997	-0.659	0.426	0.290	0.785
550.000	0.606	99.931	129.474	549.994	-0.758	0.921	0.445	1.193
600.000	0.546	101.785	120.155	599.991	-0.830	1.428	0.112	1.652
650.000	0.606	113.724	117.678	649.989	-1.001	1.908	0.179	2.154
700.000	0.792	104.669	116.852	699.985	-1.237	2.444	0.101	2.739
750.000	0.731	101.956	115.453	749.981	-1.451	3.048	0.154	3.376
800.000	0.678	95.732	113.206	799.977	-1.584	3.694	0.128	4.019
850.000	0.702	108.138	111.579	849.973	-1.683	4.256	0.083	4.576
900.000	0.632	102.853	111.454	899.970	-1.894	4.818	0.055	5.177
950.000	0.771	104.870	110.411	949.965	-2.026	5.446	0.151	5.811
1000.000	0.692	102.318	109.758	999.961	-2.175	6.056	0.064	6.435
1050.000	0.863	100.833	109.261	1049.957	-2.344	6.707	0.163	7.105
1100.000	0.847	99.997	108.743	1099.952	-2.512	7.403	0.098	7.817

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1150.000	0.847	97.038	108.108	1149.947	-2.643	8.083	0.149	8.504
1200.000	0.726	103.564	107.790	1199.941	-2.836	8.837	0.114	9.281
1250.000	0.725	100.248	107.266	1249.935	-2.976	9.574	0.118	10.026
1300.000	0.942	102.609	106.883	1299.930	-3.114	10.259	0.069	10.721
1350.000	0.863	111.044	107.022	1349.925	-3.340	10.911	0.144	11.411
1400.000	0.841	100.277	107.288	1399.919	-3.624	11.645	0.275	12.196
1450.000	0.840	101.101	106.899	1449.913	-3.765	12.391	0.154	12.951
1500.000	0.955	100.498	106.513	1499.907	-3.892	13.126	0.079	13.691
1550.000	0.790	102.154	106.203	1549.902	-4.024	13.849	0.091	14.422
1600.000	0.854	96.678	105.901	1599.895	-4.168	14.631	0.030	15.213
1650.000	0.990	99.715	105.517	1649.889	-4.273	15.390	0.066	15.972
1700.000	0.860	110.232	105.322	1699.884	-4.407	16.085	0.188	16.677
1750.000	0.937	105.943	105.455	1749.879	-4.643	16.793	0.198	17.423
1800.000	0.899	107.042	105.566	1799.873	-4.879	17.513	0.089	18.180
1850.000	0.733	115.371	105.625	1849.868	-5.077	18.152	0.222	18.849
1900.000	0.663	119.964	105.964	1899.865	-5.336	18.651	0.213	19.399
1950.000	0.793	119.475	106.581	1949.861	-5.705	19.159	0.028	19.991
2000.000	0.690	120.899	107.155	1999.857	-6.075	19.680	0.051	20.597
2050.000	0.660	122.636	107.422	2049.853	-6.347	20.224	0.164	21.196
2100.000	0.688	117.891	107.747	2099.849	-6.649	20.776	0.054	21.814
2150.000	0.730	107.468	107.736	2149.845	-6.845	21.400	0.253	22.468
2200.000	0.812	101.345	107.515	2199.840	-6.969	22.084	0.223	23.158
2250.000	0.979	73.812	106.881	2249.833	-6.943	22.879	0.529	23.910
2300.000	1.145	92.338	106.212	2299.825	-6.920	23.802	0.420	24.787
2350.000	1.622	84.431	105.286	2349.812	-6.811	24.919	0.668	25.833
2400.000	1.416	77.355	104.127	2399.795	-6.590	26.182	0.388	26.999
2450.000	1.450	82.660	102.956	2449.777	-6.329	27.513	0.159	28.231
2500.000	1.762	76.723	102.147	2499.756	-6.227	28.929	0.279	29.591
2550.000	1.642	82.152	101.004	2549.736	-5.893	30.307	0.133	30.874
2600.000	1.679	78.163	100.120	2599.714	-5.667	31.751	0.019	32.253
2650.000	1.544	84.057	99.334	2649.694	-5.450	33.158	0.152	33.603
2700.000	1.599	78.934	98.596	2699.675	-5.219	34.526	0.041	34.919
2750.000	1.369	62.940	97.848	2749.659	-4.923	35.716	0.564	36.054
2800.000	1.296	73.027	97.212	2799.645	-4.666	36.874	0.354	37.168
2850.000	1.352	68.176	96.444	2849.632	-4.283	37.923	0.090	38.164
2900.000	1.262	64.192	95.671	2899.620	-3.866	38.932	0.225	39.123
2950.000	1.276	63.829	94.989	2949.609	-3.482	39.892	0.131	40.044
3000.000	0.932	88.578	94.363	2999.600	-3.112	40.785	0.554	40.904
3050.000	1.046	53.917	93.819	3049.591	-2.779	41.630	0.282	41.722
3100.000	1.083	54.072	93.141	3099.584	-2.324	42.352	0.669	42.415
3150.000	1.100	50.097	92.432	3149.576	-1.829	43.047	0.108	43.086
3200.000	0.912	48.513	91.736	3199.570	-1.324	43.672	0.128	43.692
3250.000	1.010	45.958	91.096	3249.563	-0.848	44.312	0.115	44.320
3300.000	0.775	36.586	90.323	3299.558	-0.253	44.770	0.222	44.771

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3350.000	0.470	32.687	89.698	3349.554	0.237	45.060	0.544	45.061
3400.000	0.380	18.660	89.203	3399.553	0.629	45.215	0.420	45.219
3450.000	0.317	25.671	88.744	3449.551	0.993	45.294	0.144	45.305
3500.000	0.263	178.987	88.761	3499.550	0.979	45.265	0.659	45.276
3550.000	0.688	168.317	89.000	3549.549	0.792	45.377	0.602	45.384
3600.000	0.445	170.383	89.847	3599.544	0.122	45.592	0.231	45.592
3650.000	0.993	160.684	90.451	3649.538	-0.361	45.895	0.338	45.896
3700.000	1.215	151.472	91.357	3699.531	-1.093	46.178	0.185	46.191
3750.000	1.280	154.818	92.253	3749.524	-1.829	46.482	0.246	46.518
3800.000	0.898	145.517	93.146	3799.517	-2.573	46.811	0.243	46.881
3850.000	1.235	162.823	94.071	3849.509	-3.355	47.142	0.225	47.262
3900.000	1.013	168.572	95.117	3899.501	-4.240	47.342	0.419	47.531
3950.000	0.846	166.471	96.254	3949.491	-5.209	47.536	0.162	47.820
4000.000	1.056	169.779	97.283	3999.481	-6.116	47.856	0.058	48.245
4050.000	1.140	165.974	98.283	4049.471	-7.019	48.215	0.175	48.723
4100.000	1.549	151.359	99.330	4099.461	-7.963	48.471	0.728	49.121
4150.000	1.077	160.076	100.244	4149.451	-8.829	48.858	0.343	49.649
4200.000	1.324	142.934	101.130	4199.441	-9.703	49.319	0.803	50.265
4250.000	0.708	140.128	101.762	4249.432	-10.394	49.918	0.472	50.989
4300.000	0.999	96.583	101.957	4299.424	-10.743	50.732	0.864	51.857
4350.000	1.280	83.325	101.827	4349.414	-10.824	51.688	0.786	52.809
4400.000	1.277	82.258	101.450	4399.402	-10.690	52.780	0.252	53.852
4450.000	1.481	91.762	101.293	4449.386	-10.789	54.025	0.322	55.092
4500.000	1.504	88.405	101.088	4499.370	-10.839	55.309	0.237	56.361
4550.000	1.660	90.445	100.823	4549.350	-10.841	56.706	0.192	57.733
4600.000	1.839	92.707	100.568	4599.327	-10.859	58.203	0.393	59.207
4650.000	1.883	82.907	100.095	4649.302	-10.644	59.785	0.270	60.725
4700.000	2.100	85.248	99.659	4699.270	-10.474	61.541	0.302	62.426
4750.000	2.267	92.087	99.352	4749.237	-10.434	63.356	0.519	64.209
4800.000	2.286	91.696	99.202	4799.200	-10.572	65.255	0.315	66.106
4850.000	2.479	95.828	99.088	4849.157	-10.767	67.313	0.432	68.169
4900.000	2.198	95.280	98.815	4899.114	-10.757	69.367	0.383	70.196
4950.000	2.254	98.646	98.776	4949.075	-11.010	71.319	0.125	72.164
5000.000	2.196	95.191	98.709	4999.034	-11.234	73.337	0.167	74.192
5050.000	2.326	103.903	98.773	5048.993	-11.623	75.313	0.222	76.204
5100.000	1.922	109.600	98.780	5098.953	-11.936	77.282	0.598	78.198
5150.000	2.108	109.682	99.101	5148.920	-12.644	78.924	0.393	79.931
5200.000	1.800	116.198	99.408	5198.891	-13.337	80.490	0.553	81.588
5250.000	1.672	137.691	99.975	5248.863	-14.385	81.788	0.971	83.043
5300.000	1.617	137.323	100.594	5298.837	-15.507	82.911	0.574	84.348
5350.000	2.333	141.524	101.276	5348.812	-16.725	83.882	0.516	85.534
5400.000	1.683	135.095	101.841	5398.791	-17.786	84.832	0.223	86.676
5450.000	1.424	108.831	102.223	5448.772	-18.606	85.890	1.120	87.882
5500.000	1.419	114.555	102.399	5498.757	-19.125	86.991	0.643	89.069

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5550.000	1.455	108.571	102.538	5548.741	-19.611	88.179	0.086	90.334
5600.000	1.110	104.879	102.564	5598.725	-19.921	89.386	0.389	91.579
5650.000	1.244	85.815	102.489	5648.713	-20.035	90.453	0.537	92.645
5700.000	1.313	76.466	102.312	5698.702	-19.966	91.480	0.574	93.633
5750.000	0.974	92.790	102.150	5748.694	-19.883	92.357	0.310	94.473
5800.000	0.973	92.704	102.039	5798.686	-19.885	93.241	0.194	95.338
5850.000	0.755	96.289	101.841	5848.679	-19.713	94.024	0.313	96.069
5900.000	0.762	61.091	101.693	5898.674	-19.611	94.761	0.426	96.769
5950.000	0.791	61.996	101.442	5948.668	-19.308	95.397	0.410	97.331
6000.000	0.452	73.891	101.225	5998.664	-19.046	95.970	0.383	97.842
6050.000	0.797	50.974	100.973	6048.660	-18.707	96.480	0.147	98.277
6100.000	0.756	56.119	100.707	6098.656	-18.327	96.927	0.202	98.645
6150.000	0.715	49.379	100.439	6148.653	-17.931	97.330	0.092	98.967
6200.000	0.772	61.108	100.202	6198.649	-17.613	97.873	0.110	99.446
6250.000	0.760	51.732	99.906	6248.644	-17.184	98.397	0.079	99.887
6300.000	0.838	50.719	99.598	6298.638	-16.729	98.931	0.195	100.336
6350.000	0.962	67.098	99.272	6348.632	-16.250	99.535	0.507	100.852
6400.000	0.701	68.008	99.037	6398.627	-15.927	100.140	0.265	101.399
6450.000	0.941	75.248	98.848	6448.622	-15.692	100.808	0.198	102.022
6500.000	1.008	73.513	98.614	6498.616	-15.380	101.519	0.295	102.677
6550.000	0.827	72.418	98.411	6548.610	-15.112	102.197	0.155	103.308
6600.000	0.890	72.580	98.284	6598.605	-14.985	102.926	0.108	104.011
6650.000	1.030	81.844	98.159	6648.597	-14.881	103.792	0.254	104.853
6700.000	0.985	83.918	98.031	6698.588	-14.768	104.668	0.214	105.704
6750.000	0.949	74.403	97.873	6748.581	-14.590	105.509	0.156	106.513
6800.000	0.990	83.990	97.712	6798.572	-14.409	106.406	0.167	107.377