

**VES**

VAUGHN ENERGY SERVICES

Company: Gulf Port Energy Corp

Lease/Well: State/41-14-1

Location: Sec 14, T6N, R91W

Rig Name: DHS #20

State/County: Colorado/Moffat

Latitude: 40.472, Longitude: -107.578

GRID North is 1.340 Degrees West of True North

VS-Azi: 0.000 Degrees

**VES**

VAUGHN ENERGY SERVICES

**FIELD COPY ONLY (NOT DEFINITIVE)**

Service Company : Vaughn Energy Services

**DRILLOG MS GYRO SURVEY CALCULATIONS**

Filename: state41-14-1-01.ut

Minimum Curvature Method

Report Date/Time: 10/18/2011 / 13:23

Vaughn Energy Services

Pinedale, Wyoming

866-835-8333

Troy Stephenson

API # 05-081-07664

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
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	****
100.000	0.426	247.386	99.999	-0.143	-0.343	-0.143	0.372	247.386	0.426
200.000	0.460	40.329	199.998	0.020	-0.426	0.020	0.427	272.743	0.862
300.000	0.821	75.243	299.992	0.509	0.526	0.509	0.732	45.951	0.516
400.000	1.127	10.704	399.980	1.658	1.401	1.658	2.171	40.212	1.071
500.000	1.641	359.080	499.951	4.055	1.561	4.055	4.345	21.054	0.583
600.000	2.818	358.643	599.873	7.944	1.480	7.944	8.081	10.552	1.178
700.000	3.462	358.371	699.723	13.420	1.336	13.420	13.486	5.684	0.644
800.000	4.356	357.959	799.489	20.233	1.115	20.233	20.264	3.153	0.895

HORIZONTAL DISPLACEMENT IS  
20.264 FEET AT 3.153 DEGREES



Job Number: []  
 Company: Gulfport Energy  
 Lease/Well: State 41-14-1  
 Location: Moffat County  
 Rig Name: []  
 RKB: []  
 G.L. or M.S.L.: []

State/Country: Colorado  
 Declination: []  
 Grid: []  
 File name: C:\CUST20~1\GULFPORT\03300~1.SVY  
 Date/Time: 03-Nov-11 / 08:45  
 Curve Name: As Drilled State 41-14-1

### As Drilled State 41-14-1

WINSERVE SURVEY CALCULATIONS  
 Minimum Curvature Method  
 Vertical Section Plane .00  
 Vertical Section Referenced to Wellhead  
 Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100	Grid X FT	Grid Y FT
.00	.00	.00	.00	.00	.00	.00	.00	1422095.00	421709.00
100.00	.43	247.39	100.00	-.14	-.34	-.14	.43	1422094.66	421708.86
200.00	.46	40.33	200.00	.02	-.43	.02	.86	1422094.57	421709.02
300.00	.82	75.24	299.99	.51	.53	.51	.52	1422095.53	421709.51
400.00	1.13	10.70	399.98	1.66	1.40	1.66	1.07	1422096.40	421710.66
500.00	1.64	359.08	499.95	4.06	1.56	4.06	.58	1422096.56	421713.06
600.00	2.82	358.64	599.87	7.94	1.48	7.94	1.18	1422096.48	421716.94
700.00	3.46	358.37	699.72	13.42	1.34	13.42	.64	1422096.34	421722.42
800.00	4.36	357.96	799.49	20.24	1.11	20.24	.90	1422096.11	421729.24
905.00	4.90	349.20	904.15	28.63	.13	28.63	.85	1422095.13	421737.63
997.00	3.60	354.80	995.89	35.37	-.87	35.37	1.48	1422094.13	421744.37
1089.00	2.80	8.70	1087.75	40.47	-.79	40.47	1.21	1422094.21	421749.47
1184.00	2.20	27.90	1182.66	44.37	.42	44.37	1.08	1422095.42	421753.37
1279.00	1.20	49.70	1277.62	46.63	2.03	46.63	1.24	1422097.03	421755.63
1373.00	1.50	29.70	1371.59	48.33	3.39	48.33	.59	1422098.39	421757.33
1467.00	3.30	12.40	1465.51	52.04	4.58	52.04	2.04	1422099.58	421761.04
1562.00	3.00	20.40	1560.36	57.04	6.03	57.04	.56	1422101.03	421766.04
1656.00	2.40	17.80	1654.26	61.22	7.49	61.22	.65	1422102.49	421770.22
1751.00	1.80	31.80	1749.20	64.38	8.89	64.38	.83	1422103.89	421773.38
1845.00	.50	23.20	1843.17	66.02	9.83	66.02	1.39	1422104.83	421775.02
1940.00	1.30	1.10	1938.16	67.47	10.01	67.47	.90	1422105.01	421776.47
2034.00	1.90	359.90	2032.13	70.10	10.03	70.10	.64	1422105.03	421779.10
2129.00	3.10	357.50	2127.03	74.24	9.91	74.24	1.27	1422104.91	421783.24
2223.00	2.70	9.40	2220.91	78.96	10.16	78.96	.77	1422105.16	421787.96
2318.00	2.20	21.60	2315.83	82.87	11.20	82.87	.76	1422106.20	421791.87

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100	Grid X FT	Grid Y FT
2412.00	1.10	61.00	2409.79	84.98	12.65	84.98	1.62	1422107.65	421793.98
2506.00	.30	266.50	2503.78	85.40	13.20	85.40	1.46	1422108.20	421794.40
2600.00	1.30	330.30	2597.78	86.32	12.42	86.32	1.27	1422107.42	421795.32
2695.00	2.60	342.70	2692.72	89.31	11.25	89.31	1.43	1422106.25	421798.31
2788.00	1.80	1.50	2785.65	92.78	10.66	92.78	1.15	1422105.66	421801.78
2883.00	2.50	24.20	2880.58	96.16	11.55	96.16	1.15	1422106.55	421805.16
2977.00	1.60	37.30	2974.52	99.08	13.18	99.08	1.07	1422108.18	421808.08
3071.00	2.70	25.60	3068.46	102.12	14.94	102.12	1.25	1422109.94	421811.12
3166.00	1.90	40.90	3163.38	105.33	16.93	105.33	1.05	1422111.93	421814.33
3260.00	1.10	62.80	3257.35	106.92	18.76	106.92	1.03	1422113.76	421815.92
3354.00	1.80	43.20	3351.32	108.41	20.57	108.41	.90	1422115.57	421817.41
3449.00	1.60	32.10	3446.28	110.62	22.30	110.62	.40	1422117.30	421819.62
3543.00	.70	79.00	3540.26	111.84	23.56	111.84	1.31	1422118.56	421820.84
3639.00	.80	91.60	3636.25	111.93	24.80	111.93	.20	1422119.80	421820.93
3733.00	1.10	99.20	3730.24	111.77	26.35	111.77	.35	1422121.35	421820.77
3828.00	1.10	52.00	3825.22	112.19	27.97	112.19	.93	1422122.97	421821.19
3922.00	2.90	11.30	3919.16	115.07	29.15	115.07	2.33	1422124.15	421824.07
4017.00	2.90	18.20	4014.04	119.71	30.37	119.71	.37	1422125.37	421828.71
4111.00	2.10	34.30	4107.95	123.39	32.08	123.39	1.12	1422127.08	421832.39
4206.00	1.50	31.50	4202.91	125.89	33.71	125.89	.64	1422128.71	421834.89
4301.00	2.90	11.20	4297.84	129.31	34.83	129.31	1.66	1422129.83	421838.31
4396.00	3.20	10.70	4392.70	134.27	35.79	134.27	.32	1422130.79	421843.27
4491.00	2.30	44.30	4487.60	138.24	37.61	138.24	1.90	1422132.61	421847.24
4584.00	2.80	46.70	4580.50	141.14	40.57	141.14	.55	1422135.57	421850.14
4678.00	3.50	5.40	4674.37	145.57	42.51	145.57	2.46	1422137.51	421854.57
4772.00	3.00	4.10	4768.22	150.88	42.95	150.88	.54	1422137.95	421859.88
4867.00	2.00	29.90	4863.13	154.80	43.96	154.80	1.56	1422138.96	421863.80
4961.00	1.70	51.00	4957.08	157.09	45.86	157.09	.79	1422140.86	421866.09
5055.00	1.20	65.30	5051.05	158.38	47.84	158.38	.65	1422142.84	421867.38
5149.00	2.70	11.20	5145.00	160.97	49.16	160.97	2.36	1422144.16	421869.97
5243.00	2.90	.60	5238.89	165.52	49.62	165.52	.59	1422144.62	421874.52
5338.00	2.80	354.00	5333.77	170.23	49.40	170.23	.36	1422144.40	421879.23
5432.00	4.00	351.40	5427.61	175.75	48.67	175.75	1.29	1422143.67	421884.75
5526.00	4.20	347.80	5521.37	182.36	47.45	182.36	.35	1422142.45	421891.36
5620.00	4.40	350.02	5615.10	189.27	46.10	189.27	.28	1422141.10	421898.27
5715.00	5.20	354.70	5709.77	197.15	45.07	197.15	.94	1422140.07	421906.15
5809.00	7.20	356.20	5803.21	207.27	44.29	207.27	2.13	1422139.29	421916.27
5903.00	7.20	1.80	5896.47	219.04	44.08	219.04	.75	1422139.08	421928.04
5998.00	7.60	.60	5990.68	231.27	44.33	231.27	.45	1422139.33	421940.27
6092.00	8.00	353.30	6083.82	243.98	43.63	243.98	1.14	1422138.63	421952.98
6187.00	8.30	342.40	6177.86	257.08	40.79	257.08	1.65	1422135.79	421966.08
6281.00	8.00	346.90	6270.91	269.92	37.26	269.92	.75	1422132.26	421978.92
6376.00	7.50	351.90	6365.05	282.50	34.88	282.50	.88	1422129.88	421991.50
6470.00	7.40	345.60	6458.25	294.44	32.51	294.44	.88	1422127.51	422003.44
6565.00	7.80	341.80	6552.42	306.49	28.98	306.49	.68	1422123.98	422015.49

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100	Grid X FT	Grid Y FT
6643.00	7.70	347.00	6629.71	316.60	26.15	316.60	.91	1422121.15	422025.60
6712.00	7.40	340.10	6698.11	325.29	23.60	325.29	1.38	1422118.60	422034.29
6807.00	8.30	332.50	6792.22	337.12	18.35	337.12	1.44	1422113.35	422046.12
6901.00	7.50	329.50	6885.33	348.43	12.10	348.43	.96	1422107.10	422057.43
6996.00	5.40	324.90	6979.72	357.43	6.38	357.43	2.27	1422101.38	422066.43
7090.00	6.30	323.00	7073.23	365.17	.74	365.17	.98	1422095.74	422074.17
7185.00	5.10	318.20	7167.76	372.48	-5.21	372.48	1.36	1422089.79	422081.48
7279.00	6.70	327.40	7261.26	380.21	-10.95	380.21	1.97	1422084.05	422089.21
7374.00	10.30	338.30	7355.21	392.78	-17.08	392.78	4.14	1422077.92	422101.78
7469.00	9.40	345.50	7448.81	408.18	-22.17	408.18	1.60	1422072.83	422117.18
7563.00	8.40	351.10	7541.68	422.39	-25.15	422.39	1.41	1422069.85	422131.39
7657.00	7.40	356.30	7634.79	435.22	-26.60	435.22	1.31	1422068.40	422144.22
7752.00	7.00	355.70	7729.04	447.10	-27.43	447.10	.43	1422067.57	422156.10
7846.00	7.60	356.00	7822.28	459.01	-28.29	459.01	.64	1422066.71	422168.01
7941.00	5.80	344.80	7916.63	469.91	-29.99	469.91	2.33	1422065.01	422178.91
8035.00	6.50	320.80	8010.10	478.62	-34.60	478.62	2.81	1422060.40	422187.62
8130.00	8.20	317.30	8104.32	487.76	-42.59	487.76	1.85	1422052.41	422196.76
8224.00	10.10	317.10	8197.12	498.73	-52.75	498.73	2.02	1422042.25	422207.73
8318.00	10.90	320.20	8289.55	511.60	-64.05	511.60	1.04	1422030.95	422220.60
8412.00	10.20	322.00	8381.96	524.98	-74.86	524.98	.82	1422020.14	422233.98
8507.00	11.00	336.90	8475.35	539.95	-83.60	539.95	3.00	1422011.40	422248.95
8601.00	15.30	338.00	8566.87	559.71	-91.77	559.71	4.58	1422003.23	422268.71
<b>Projected</b> 8695.00	15.30	338.00	8657.53	582.71	-101.06	582.71	.00	1421993.94	422291.71

**Company:** Gulfport Energy  
**Lease/Well:** State 41-14-1  
**Location:** Moffat County  
**State/Country:** Colorado

