



Company: Exxon
Lease/Well: PCU/296-6A8-ST1

Rig Name: Production
State/County: Colorado/Rio Blanco

Latitude: 39.90
GRID North is 1.74 Degrees West of True North
VS-Azi: 0.00 Degrees



Depth Reference : GL

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: run1-01.ut
Minimum Curvature Method
Report Date/Time: 2/25/2011 / 13:46

Vaughn Energy Services
Rifle, Colorado 970-456-2071
Surveyor: Garry Fowler
North Seeking Rate Gyro
PCU 296-6A8-ST1 / API# 05-103-1147901

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	****
200.00	0.52	58.21	200.00	0.48	0.77	0.48	0.91	58.21	0.26
400.00	3.15	55.06	399.88	4.10	6.05	4.10	7.31	55.84	1.32
600.00	7.78	59.34	598.91	14.16	22.21	14.16	26.34	57.48	2.32
800.00	12.89	63.06	795.61	31.18	53.75	31.18	62.14	59.89	2.57
1000.00	16.50	65.21	989.04	53.19	99.43	53.19	112.77	61.85	1.83
1200.00	19.99	66.27	1178.96	78.87	156.52	78.87	175.27	63.26	1.75
1400.00	17.57	67.02	1368.29	104.42	215.62	104.42	239.57	64.16	1.22
1600.00	17.10	65.70	1559.21	128.30	270.21	128.30	299.13	64.60	0.30
1800.00	16.53	68.05	1750.66	151.04	323.40	151.04	356.93	64.97	0.45
2000.00	16.20	72.09	1942.56	170.25	376.34	170.25	413.06	65.66	0.59
2200.00	16.04	71.05	2134.70	187.80	429.02	187.80	468.32	66.36	0.17
2400.00	15.84	71.12	2327.01	205.61	480.98	205.61	523.08	66.85	0.10
2600.00	15.01	71.58	2519.81	222.62	531.38	222.62	576.13	67.27	0.42
2800.00	14.85	70.55	2713.05	239.34	580.12	239.34	627.55	67.58	0.15
3000.00	14.62	71.33	2906.48	255.96	628.19	255.96	678.34	67.83	0.15
3200.00	16.24	71.48	3099.26	272.92	678.63	272.92	731.45	68.09	0.81
3400.00	16.42	70.95	3291.19	291.03	731.87	291.03	787.61	68.31	0.12
3600.00	16.48	70.18	3483.01	309.88	785.27	309.88	844.20	68.47	0.11

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
3800.00	16.28	70.26	3674.89	328.96	838.35	328.96	900.58	68.58	0.10
4000.00	15.52	70.51	3867.24	347.36	889.96	347.36	955.34	68.68	0.38
4200.00	15.48	70.61	4059.96	365.15	940.36	365.15	1008.77	68.78	0.02
4400.00	15.46	69.60	4252.71	383.31	990.53	383.31	1062.11	68.84	0.13
4600.00	15.44	69.75	4445.48	401.82	1040.50	401.82	1115.39	68.88	0.02
4800.00	15.92	68.57	4638.04	421.05	1091.02	421.05	1169.45	68.90	0.29
5000.00	14.26	71.04	4831.14	439.08	1139.85	439.08	1221.50	68.93	0.89
5200.00	12.78	78.45	5025.60	451.52	1184.83	451.52	1267.94	69.14	1.14
5400.00	5.98	80.05	5222.81	457.75	1216.80	457.75	1300.05	69.38	3.40
5600.00	1.87	89.63	5422.30	459.58	1230.33	459.58	1313.36	69.52	2.07
5800.00	1.56	57.65	5622.22	461.05	1235.89	461.05	1319.09	69.54	0.50
6000.00	1.36	52.23	5822.15	463.96	1240.07	463.96	1324.02	69.49	0.12
6200.00	0.87	67.16	6022.12	466.00	1243.34	466.00	1327.80	69.45	0.28
6400.00	0.52	119.84	6222.10	466.14	1245.52	466.14	1329.89	69.48	0.34
6600.00	0.47	173.22	6422.10	464.86	1246.41	464.86	1330.27	69.55	0.22
6800.00	0.94	170.80	6622.08	462.41	1246.77	462.41	1329.76	69.65	0.23
7000.00	1.98	170.68	6822.01	457.37	1247.59	457.37	1328.79	69.87	0.52
7200.00	1.77	172.75	7021.90	450.90	1248.54	450.90	1327.47	70.14	0.11
7400.00	2.19	171.30	7221.79	444.06	1249.51	444.06	1326.07	70.44	0.21
7600.00	2.22	172.70	7421.64	436.44	1250.58	436.44	1324.55	70.76	0.03
7800.00	2.34	185.55	7621.48	428.53	1250.68	428.53	1322.05	71.09	0.26
8000.00	2.40	187.24	7821.31	420.31	1249.75	420.31	1318.54	71.41	0.04
8200.00	2.53	185.41	8021.12	411.77	1248.81	411.77	1314.95	71.75	0.08
8400.00	2.57	188.98	8220.93	402.95	1247.70	402.95	1311.15	72.10	0.08
8600.00	2.37	189.14	8420.74	394.44	1246.34	394.44	1307.26	72.44	0.10
8800.00	2.16	190.77	8620.58	386.65	1244.98	386.65	1303.64	72.75	0.11
9000.00	1.96	190.83	8820.45	379.59	1243.63	379.59	1300.27	73.03	0.10
9200.00	2.22	196.63	9020.32	372.53	1241.88	372.53	1296.55	73.30	0.17
9400.00	2.34	199.71	9220.16	364.98	1239.40	364.98	1292.02	73.59	0.08
9600.00	2.60	198.14	9419.98	356.82	1236.61	356.82	1287.06	73.90	0.14
9800.00	3.00	196.59	9619.74	347.49	1233.70	347.49	1281.70	74.27	0.20
10000.00	2.95	195.20	9819.47	337.51	1230.86	337.51	1276.29	74.67	0.04
10200.00	3.61	194.01	10019.14	326.44	1227.98	326.44	1270.63	75.11	0.33
10400.00	3.45	199.93	10218.76	314.67	1224.41	314.67	1264.19	75.59	0.20
10600.00	3.40	203.01	10418.40	303.54	1220.03	303.54	1257.22	76.03	0.10
10800.00	3.43	214.09	10618.05	293.12	1214.36	293.12	1249.23	76.43	0.33
11000.00	3.69	233.86	10817.67	284.37	1205.80	284.37	1238.88	76.73	0.62
11200.00	3.93	233.90	11017.23	276.53	1195.07	276.53	1226.64	76.97	0.12
11400.00	4.49	234.66	11216.69	267.96	1183.14	267.96	1213.10	77.24	0.28

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
11600.00	5.32	230.28	11415.95	257.50	1169.61	257.50	1197.62	77.58	0.45
11800.00	6.02	230.87	11614.97	244.96	1154.34	244.96	1180.04	78.02	0.35
12000.00	6.27	231.68	11813.82	231.56	1137.63	231.56	1160.96	78.49	0.13
12200.00	6.55	236.76	12012.58	218.54	1119.53	218.54	1140.66	78.95	0.32
12400.00	6.82	235.47	12211.22	205.56	1100.21	205.56	1119.24	79.42	0.16
12600.00	6.90	232.77	12409.79	191.56	1080.86	191.56	1097.71	79.95	0.17
12800.00	6.00	230.02	12608.52	177.58	1063.29	177.58	1078.02	80.52	0.47
13000.00	5.80	233.73	12807.46	164.89	1047.14	164.89	1060.04	81.05	0.22
13200.00	5.76	232.00	13006.44	152.74	1031.09	152.74	1042.34	81.57	0.09
13400.00	5.45	230.41	13205.49	140.51	1015.86	140.51	1025.53	82.13	0.18
13600.00	5.01	227.80	13404.66	128.59	1002.08	128.59	1010.29	82.69	0.25
13718.00	4.72	230.08	13522.23	122.02	994.54	122.02	1001.99	83.01	0.30