



Company: CONOCOPHILLIPS

Lease: EVGSAU 3373-518

Rig Name: PRODUCTION

State/County: NEW MEXICO/LEA

VS-Azi: 0.00 Degrees

Latitude: 32.78921, Longitude: -103.46722

Grid North = True North -0.47 degs (NAD 27)

Grid Correction Applied = -0.47 degs



HOBBS OCD
MAR 26 2018
RECEIVED

Depth Reference : RKB = GROUND LEVEL

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: msgyro_run01-01-de_01.ut

Minimum Curvature Method

Report Date/Time: 11/14/2017 / 13:08

VES Survey International

Midland, TX

432-563-5444

Surveyor: Christopher Hair

EVGSAU 3373- 518 / API 30-025-42114

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	2.53	65.31	99.97	0.92	2.00	0.92	2.21	65.31	2.53
200.00	2.45	73.76	199.87	2.44	6.06	2.44	6.53	68.06	0.38
300.00	2.46	75.87	299.78	3.56	10.19	3.56	10.79	70.74	0.09
400.00	2.07	97.97	399.71	3.83	14.05	3.83	14.56	74.74	0.95
500.00	2.09	125.12	499.64	2.53	17.33	2.53	17.52	81.69	0.98
600.00	2.17	142.23	599.57	-0.02	19.99	-0.02	19.99	90.04	0.64
700.00	2.07	141.95	699.51	-2.93	22.26	-2.93	22.45	97.50	0.11
800.00	2.99	136.70	799.41	-6.25	25.16	-6.25	25.92	103.95	0.95
900.00	3.95	139.89	899.22	-10.78	29.16	-10.78	31.09	110.29	0.98
1000.00	4.91	140.03	998.92	-16.69	34.13	-16.69	38.00	116.06	0.96
1100.00	5.85	138.27	1098.48	-23.78	40.27	-23.78	46.77	120.56	0.95
1200.00	5.63	139.20	1197.98	-31.29	46.87	-31.29	56.35	123.73	0.24
1300.00	5.40	138.01	1297.52	-38.50	53.22	-38.50	65.68	125.88	0.26
1400.00	5.41	137.93	1397.07	-45.50	59.52	-45.50	74.92	127.39	0.02
1500.00	4.96	138.26	1496.66	-52.23	65.56	-52.23	83.82	128.54	0.45
1600.00	4.90	137.87	1596.29	-58.62	71.31	-58.62	92.31	129.42	0.07
1700.00	5.78	137.05	1695.86	-65.48	77.61	-65.48	101.54	130.15	0.88
1800.00	6.08	139.11	1795.32	-73.17	84.51	-73.17	111.78	130.89	0.37

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
1900.00	6.27	138.81	1894.74	-81.28	91.57	-81.28	122.44	131.59	0.19
2000.00	6.44	134.98	1994.13	-89.35	99.13	-89.35	133.46	132.03	0.46
2100.00	6.54	136.52	2093.49	-97.45	107.02	-97.45	144.74	132.32	0.20
2200.00	6.76	134.96	2192.81	-105.74	115.10	-105.74	156.30	132.57	0.28
2300.00	6.83	136.54	2292.11	-114.22	123.36	-114.22	168.12	132.80	0.20
2400.00	6.90	132.56	2391.39	-122.60	131.88	-122.60	180.07	132.91	0.48
2500.00	6.68	134.34	2490.69	-130.73	140.46	-130.73	191.89	132.95	0.31
2600.00	6.56	131.64	2590.03	-138.59	148.89	-138.59	203.41	132.95	0.33
2700.00	6.70	130.60	2689.36	-146.18	157.59	-146.18	214.95	132.85	0.18
2800.00	5.95	134.54	2788.75	-153.62	165.71	-153.62	225.96	132.83	0.86
2900.00	5.68	138.31	2888.24	-160.95	172.70	-160.95	236.07	132.98	0.47
3000.00	5.17	136.81	2987.79	-167.92	179.07	-167.92	245.49	133.16	0.53
3100.00	4.80	139.50	3087.41	-174.39	184.87	-174.39	254.14	133.33	0.44
3200.00	5.59	140.57	3187.00	-181.33	190.68	-181.33	263.13	133.56	0.80
3300.00	5.97	139.32	3286.49	-189.04	197.16	-189.04	273.14	133.79	0.40
3400.00	5.85	138.65	3385.96	-196.81	203.92	-196.81	283.40	133.98	0.14
3500.00	5.38	130.46	3485.48	-203.68	210.86	-203.68	293.16	134.01	0.93
3600.00	6.01	135.97	3584.99	-210.48	218.06	-210.48	303.07	133.99	0.83
3700.00	6.59	133.30	3684.38	-218.18	225.87	-218.18	314.04	134.01	0.65
3800.00	7.21	139.08	3783.66	-226.85	234.16	-226.85	326.02	134.09	0.93
3900.00	7.10	139.21	3882.88	-236.28	242.30	-236.28	338.43	134.28	0.11
4000.00	6.43	139.28	3982.18	-245.20	249.99	-245.20	350.17	134.45	0.68
4100.00	5.51	138.90	4081.64	-253.06	256.80	-253.06	360.53	134.58	0.92
4200.00	4.79	139.38	4181.24	-259.84	262.67	-259.84	369.48	134.69	0.72
4300.00	4.33	139.62	4280.92	-265.89	267.84	-265.89	377.41	134.79	0.45
4400.00	3.97	145.33	4380.66	-271.62	272.26	-271.62	384.58	134.93	0.55
4500.00	4.15	147.03	4480.41	-277.50	276.20	-277.50	391.53	135.13	0.21
4600.00	4.35	148.09	4580.13	-283.76	280.17	-283.76	398.77	135.36	0.22
4700.00	4.79	146.95	4679.81	-290.48	284.46	-290.48	406.57	135.60	0.45
4800.00	4.79	152.44	4779.46	-297.69	288.67	-297.69	414.66	135.88	0.46
4900.00	4.75	148.82	4879.12	-304.93	292.74	-304.93	422.71	136.17	0.30
5000.00	4.79	150.30	4978.77	-312.09	296.95	-312.09	430.80	136.42	0.13
5100.00	4.67	150.22	5078.43	-319.25	301.04	-319.25	438.80	136.68	0.12
5200.00	5.05	155.59	5178.07	-326.79	304.88	-326.79	446.93	136.99	0.59