



Company: CONOCO PHILLIPS CO
 Lease/Well: EAST VACUUM GBSA UNIT /3374-W517
 API: 30-025-42722
 Rig Name: PRODUCTION
 State/County: NEW MEXICO/LEA
 VS-Azi: 0.00 Degrees
 Latitude: 32.78913, Longitude: -103.46996
 Grid North = True North -0.47 degs (NAD 27)
 Grid Correction Applied = -0.47 degs



FIELD COPY ONLY (NOT DEFINITIVE)

Depth Reference : GROUND LEVEL

DRILLOG MS GYRO SURVEY CALCULATIONS
 Error Model: VESSI_GYROFLEX_SLICKLINE.IPM
 Filename: msgyro_run01-01-de_01.ut
 Minimum Curvature Method
 Report Date/Time: 9/22/2017 / 16:12

VES Survey International
 Midland, TX
 432-563-5444
 Andrew Meadville

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	0.33	32.60	100.00	0.24	0.16	0.24	0.29	32.60	0.33
200.00	0.20	4.80	200.00	0.66	0.33	0.66	0.74	26.15	0.18
300.00	0.33	340.44	300.00	1.11	0.24	1.11	1.14	12.32	0.17
400.00	0.20	298.92	400.00	1.47	-0.01	1.47	1.47	359.79	0.23
500.00	0.25	263.23	500.00	1.53	-0.38	1.53	1.58	346.21	0.15
600.00	0.88	248.17	599.99	1.22	-1.31	1.22	1.79	313.03	0.64
700.00	1.06	225.97	699.98	0.29	-2.68	0.29	2.70	276.13	0.42
800.00	1.70	228.48	799.95	-1.34	-4.46	-1.34	4.66	253.30	0.64
900.00	2.45	229.90	899.88	-3.69	-7.20	-3.69	8.10	242.84	0.75
1000.00	2.16	237.49	999.80	-6.08	-10.42	-6.08	12.07	239.74	0.42
1100.00	2.18	223.63	1099.73	-8.47	-13.32	-8.47	15.78	237.56	0.52
1200.00	2.17	218.95	1199.66	-11.31	-15.82	-11.31	19.45	234.43	0.18
1300.00	1.79	216.43	1299.60	-14.04	-17.94	-14.04	22.78	231.94	0.39
1400.00	1.70	209.66	1399.55	-16.59	-19.60	-16.59	25.67	229.76	0.23
1500.00	2.49	207.58	1499.48	-19.80	-21.34	-19.80	29.11	227.14	0.80
1600.00	2.80	206.53	1599.38	-23.91	-23.43	-23.91	33.48	224.42	0.31
1700.00	2.83	203.32	1699.26	-28.36	-25.50	-28.36	38.14	221.96	0.16
1800.00	3.05	202.16	1799.13	-33.09	-27.48	-33.09	43.01	219.71	0.23
1900.00	3.28	206.82	1898.97	-38.11	-29.77	-38.11	48.36	218.00	0.34
2000.00	2.95	212.69	1998.82	-42.82	-32.45	-42.82	53.73	217.16	0.46
2100.00	2.88	208.70	2098.70	-47.20	-35.05	-47.20	58.79	216.60	0.21
2200.00	2.22	205.18	2198.60	-51.16	-37.09	-51.16	63.19	215.94	0.68
2300.00	2.39	202.89	2298.51	-54.83	-38.72	-54.83	67.13	215.23	0.19
2400.00	2.63	200.76	2398.42	-58.90	-40.35	-58.90	71.39	214.41	0.26
2500.00	2.42	198.90	2498.32	-63.05	-41.85	-63.05	75.67	213.57	0.23
2600.00	2.34	195.92	2598.24	-67.01	-43.09	-67.01	79.67	212.74	0.15
2700.00	1.79	190.43	2698.17	-70.51	-43.93	-70.51	83.07	211.93	0.59
2800.00	1.15	184.10	2798.14	-73.04	-44.29	-73.04	85.42	211.23	0.66
2900.00	0.75	171.83	2898.12	-74.69	-44.26	-74.69	86.82	210.65	0.45
3000.00	0.27	250.97	2998.12	-75.42	-44.40	-75.42	87.51	210.48	0.75
3100.00	0.27	338.20	3098.12	-75.27	-44.71	-75.27	87.55	210.71	0.38
3200.00	0.70	319.61	3198.11	-74.58	-45.20	-74.58	87.21	211.22	0.45

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
3300.00	1.07	309.68	3298.10	-73.52	-46.31	-73.52	86.89	212.21	0.40
3400.00	1.26	321.31	3398.08	-72.06	-47.72	-72.06	86.43	213.52	0.30
3500.00	1.01	335.01	3498.06	-70.40	-48.79	-70.40	85.65	214.72	0.37
3600.00	1.67	339.69	3598.03	-68.24	-49.66	-68.24	84.40	216.05	0.67
3700.00	2.16	342.78	3697.98	-65.07	-50.72	-65.07	82.51	217.94	0.50
3800.00	1.96	346.29	3797.91	-61.62	-51.69	-61.62	80.43	219.99	0.23
3900.00	2.22	349.99	3897.85	-58.05	-52.43	-58.05	78.22	222.09	0.30
4000.00	2.57	352.75	3997.76	-53.92	-53.05	-53.92	75.64	224.53	0.36
4100.00	2.41	355.93	4097.67	-49.61	-53.48	-49.61	72.94	227.15	0.21
4200.00	2.49	357.17	4197.57	-45.34	-53.73	-45.34	70.31	229.84	0.10
4300.00	2.26	353.86	4297.49	-41.21	-54.05	-41.21	67.97	232.68	0.27
4400.00	2.18	351.28	4397.41	-37.38	-54.55	-37.38	66.13	235.58	0.13
4500.00	2.13	349.40	4497.34	-33.67	-55.18	-33.67	64.64	238.61	0.08
4600.00	2.46	340.41	4597.26	-29.82	-56.24	-29.82	63.66	242.07	0.48
4700.00	2.56	334.19	4697.17	-25.79	-57.93	-25.79	63.41	246.00	0.29
4800.00	2.04	351.73	4797.09	-22.02	-59.16	-22.02	63.13	249.58	0.87
4900.00	2.12	355.35	4897.02	-18.42	-59.57	-18.42	62.35	252.81	0.16
5000.00	3.00	358.31	4996.92	-13.96	-59.79	-13.96	61.40	256.86	0.89
5100.00	2.84	0.73	5096.79	-8.87	-59.84	-8.87	60.49	261.57	0.20

HORIZONTAL DISPLACEMENT IS
60.49 FEET AT 261.57 DEGREES