



Company: Mewbourne Oil Company
Lease/Well: Pine Box 17 BO Federal / No. 001H

Rig Name: Patterson 101
State/County: New Mexico / Eddy

Latitude: 32.580
GRID North is 8.017 Degrees West of True North
VS-Azi: 0.000 Degrees



Depth Reference : RKB = 18.5 '

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: msgyro_run02-01_ed.ut

Minimum Curvature Method

Report Date/Time: 7/23/2012 / 10:53

Vaughn Energy Services

Henderson, Colorado

303-853-4976

Surveyor: Levi Sheldon

Pine Box 17 BO Federal No. 001 / API 30-015-40205

30015-40205

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	0.217	330.063	100.000	0.164	-0.094	0.164	0.189	330.063	0.217
200.000	0.231	10.498	199.999	0.526	-0.152	0.526	0.548	343.871	0.155
300.000	0.138	13.224	299.999	0.842	-0.088	0.842	0.846	354.044	0.093
400.000	0.133	43.061	399.998	1.044	0.019	1.044	1.044	1.043	0.070
500.000	0.264	16.499	499.998	1.350	0.164	1.350	1.360	6.915	0.157
600.000	0.156	355.595	599.997	1.707	0.219	1.707	1.720	7.303	0.131
700.000	0.146	317.042	699.997	1.936	0.121	1.936	1.940	3.581	0.100
800.000	0.296	313.937	799.996	2.209	-0.152	2.209	2.214	356.062	0.150
900.000	0.247	311.695	899.995	2.531	-0.499	2.531	2.580	348.851	0.051
1000.000	0.372	301.054	999.993	2.842	-0.938	2.842	2.992	341.740	0.137
1100.000	0.595	312.138	1099.990	3.358	-1.601	3.358	3.720	334.508	0.241
1200.000	0.958	315.211	1199.980	4.300	-2.575	4.300	5.012	329.081	0.365
1300.000	0.962	296.528	1299.967	5.268	-3.915	5.268	6.564	323.378	0.312
1400.000	0.965	323.575	1399.953	6.320	-5.167	6.320	8.163	320.735	0.451
1500.000	1.115	285.980	1499.938	7.265	-6.602	7.265	9.817	317.741	0.685
1600.000	1.106	289.781	1599.919	7.860	-8.445	7.860	11.537	312.944	0.074
1700.000	0.900	297.114	1699.903	8.545	-10.053	8.545	13.194	310.363	0.242
1800.000	1.018	322.991	1799.890	9.612	-11.287	9.612	14.826	310.418	0.445

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
1862.000	1.228	318.980	1861.878	10.553	-12.055	10.553	16.022	311.200	0.361



Job Number: S12-104
Company: Mewbourne Oil Company
Lease/Well: Pine Box 17 BO Federal #1H
Location: NM-East
Rig Name: Patterson #101
State/County: New Mexico/ Eddy
Country: United States of America
API Number: 30-015-40205

Elevation (To MSL): 0.00 ft
RKB: 0.00 ft
Projection System: US State Plane 1927 (Exact solution)
Projection Group: New Mexico East 3001
Projection Datum: CLARKE 1866
Magnetic Declination: 7.93
Grid Convergence: -0.09150 W
Date: Saturday, August 11, 2012

Calculated by HawkEye Software
Minimum Curvature Method
Vertical Section Plane 179.99°

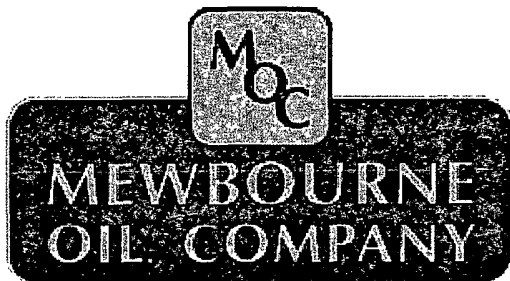
Northing (US ft): 574905.99 Easting (US ft): 447658.57
Latitude: 32°34'49.4687" N Longitude: -104°30'11.7307" W
Well Location: 151.12 FNL, 1657.40 FEL, Section 17, T20S, R25E, Meridian 23, Eddy County, NM
Direction Reference: Grid North

Measured Depth (Ft)	INC Deg	AZM Deg	Subsea TVD (Ft)	TVD (Ft)	NS (Ft)	EW (Ft)	Northing (US ft)	Easting (US ft)	Latitude DMS	Longitude DMS	Build Rate %/100Ft	VS (Ft)	Closure (Ft)	Closure Dir Deg	DLS %/100Ft
TI: 1862 MD, 1.22°															
1862.00	1.22	318.98	1861.87	1861.87	10.55	-12.05	574916.55	447646.52	32°34'49.5730" N	-104°30'11.8717" W	0.00	-10.55	16.02	311.20	0.00
2010.00	1.50	92.10	2009.85	2009.85	11.67	-11.15	574917.66	447647.42	32°34'49.5840" N	-104°30'11.8612" W	0.19	-11.67	16.14	316.31	1.69
2041.00	5.70	97.00	2040.78	2040.78	11.47	-9.21	574917.46	447649.36	32°34'49.5820" N	-104°30'11.8386" W	13.55	-11.47	14.71	321.21	13.57
2072.00	11.30	97.10	2071.43	2071.43	10.90	-4.67	574916.90	447653.90	32°34'49.5765" N	-104°30'11.7855" W	18.06	-10.90	11.86	336.82	18.06
2103.00	15.20	86.30	2101.60	2101.60	10.79	2.40	574916.78	447660.97	32°34'49.5755" N	-104°30'11.7028" W	12.58	-10.79	11.05	12.57	14.85
2134.00	19.60	76.70	2131.18	2131.18	12.25	11.53	574918.24	447670.10	32°34'49.5901" N	-104°30'11.5962" W	14.19	-12.25	16.82	43.26	16.90
2166.00	23.40	78.00	2160.95	2160.95	14.80	22.97	574920.80	447681.54	32°34'49.6156" N	-104°30'11.4625" W	11.88	-14.80	27.33	57.20	11.97
2197.00	26.20	87.00	2189.10	2189.10	16.44	35.83	574922.44	447694.40	32°34'49.6320" N	-104°30'11.3122" W	9.03	-16.44	39.43	65.35	15.14
2228.00	29.20	96.50	2216.56	2216.56	15.95	50.19	574921.94	447708.76	32°34'49.6273" N	-104°30'11.1444" W	9.68	-15.94	52.66	72.37	17.19
2260.00	31.60	105.40	2244.17	2244.17	12.83	66.04	574918.83	447724.61	32°34'49.5968" N	-104°30'10.9591" W	7.50	-12.82	67.27	79.00	15.93
2291.00	34.20	114.30	2270.21	2270.21	7.09	81.82	574913.08	447740.39	32°34'49.5402" N	-104°30'10.7746" W	8.39	-7.07	82.13	85.05	17.69
2323.00	36.60	122.70	2296.31	2296.31	-1.77	98.06	574904.22	447756.63	32°34'49.4527" N	-104°30'10.5847" W	7.50	1.79	98.07	91.04	16.94
2355.00	39.00	130.70	2321.61	2321.61	-13.50	113.73	574892.49	447772.30	32°34'49.3369" N	-104°30'10.4013" W	7.50	13.52	114.53	96.77	17.05
2386.00	41.30	138.50	2345.32	2345.32	-27.54	127.92	574878.46	447786.49	32°34'49.1983" N	-104°30'10.2352" W	7.42	27.56	130.85	102.15	17.83
2417.00	44.20	145.70	2368.09	2368.09	-44.14	140.79	574861.86	447799.36	32°34'49.0342" N	-104°30'10.0844" W	9.35	44.16	147.55	107.41	18.32
2449.00	47.10	152.20	2390.47	2390.47	-63.74	152.56	574842.26	447811.13	32°34'48.8404" N	-104°30'9.9466" W	9.06	63.76	165.33	112.67	17.11
2480.00	50.00	158.80	2411.00	2411.00	-84.87	162.15	574821.13	447820.72	32°34'48.6315" N	-104°30'9.8340" W	9.35	84.90	183.02	117.63	18.49
2511.00	53.00	165.20	2430.31	2430.31	-107.93	169.62	574798.07	447828.19	32°34'48.4034" N	-104°30'9.7464" W	9.68	107.96	201.04	122.47	18.83
2543.00	56.00	171.20	2448.90	2448.90	-133.41	174.91	574772.58	447833.48	32°34'48.1513" N	-104°30'9.6840" W	9.38	133.44	219.98	127.33	17.91
2574.00	59.80	176.10	2465.38	2465.38	-159.49	177.79	574746.50	447836.36	32°34'47.8932" N	-104°30'9.6498" W	12.26	159.53	238.85	131.89	18.15
2605.00	64.60	179.50	2479.84	2479.84	-186.88	178.83	574719.11	447837.40	32°34'47.6222" N	-104°30'9.6372" W	15.48	186.91	258.66	136.26	18.27
2637.00	69.30	182.70	2492.37	2492.37	-216.31	178.25	574689.68	447836.82	32°34'47.3310" N	-104°30'9.6435" W	14.69	216.34	280.29	140.51	17.33
2668.00	74.30	185.40	2502.05	2502.05	-245.67	176.16	574660.32	447834.73	32°34'47.0404" N	-104°30'9.6673" W	16.13	245.70	302.30	144.36	18.13
2699.00	79.50	187.30	2509.07	2509.07	-275.67	172.81	574630.33	447831.38	32°34'46.7435" N	-104°30'9.7058" W	16.77	275.70	325.36	147.92	17.80
2726.00	83.60	189.10	2513.04	2513.04	-302.09	169.00	574603.90	447827.57	32°34'46.4819" N	-104°30'9.7499" W	15.19	302.12	346.16	150.78	16.55
2775.00	89.80	191.90	2515.86	2515.86	-350.17	160.09	574555.83	447818.66	32°34'46.0061" N	-104°30'9.8532" W	12.65	350.19	385.03	155.43	13.88

Measured Depth (Ft)	INC Deg	AZM Deg	Subsea TVD (Ft)	TVD (Ft)	NS (Ft)	EW (Ft)	Northing (US ft)	Easting (US ft)	Latitude DMS	Longitude DMS	Build Rate °/100Ft	VS (Ft)	Closure (Ft)	Closure Dir Deg	DLS °/100Ft
2807.00	89.70	191.70	2516.00	2516.00	-381.49	153.55	574524.51	447812.12	32°34'45.6960" N	-104°30'9.9291" W	-0.31	381.52	411.23	158.08	0.70
2838.00	92.00	192.10	2515.54	2515.54	-411.82	147.16	574494.18	447805.73	32°34'45.3958" N	-104°30'10.0032" W	7.42	411.84	437.32	160.34	7.53
2870.00	92.30	192.20	2514.34	2514.34	-443.08	140.43	574462.92	447799.00	32°34'45.0863" N	-104°30'10.0813" W	0.94	443.10	464.80	162.41	0.99
2902.00	92.30	192.20	2513.05	2513.05	-474.33	133.67	574431.66	447792.24	32°34'44.7770" N	-104°30'10.1597" W	0.00	474.35	492.80	164.26	0.00
2965.00	90.30	192.00	2511.62	2511.62	-535.91	120.47	574370.08	447779.04	32°34'44.1674" N	-104°30'10.3128" W	-3.17	535.93	549.28	167.33	3.19
3029.00	90.20	191.90	2511.34	2511.34	-598.52	107.22	574307.47	447765.79	32°34'43.5476" N	-104°30'10.4665" W	-0.16	598.54	608.05	169.84	0.22
3092.00	89.50	191.30	2511.51	2511.51	-660.24	94.55	574245.76	447753.12	32°34'42.9367" N	-104°30'10.6134" W	-1.11	660.25	666.97	171.85	1.46
3155.00	89.40	191.10	2512.11	2512.11	-722.03	82.31	574183.96	447740.88	32°34'42.3249" N	-104°30'10.7553" W	-0.16	722.05	726.71	173.50	0.35
3219.00	90.20	191.10	2512.34	2512.34	-784.84	69.99	574121.16	447728.56	32°34'41.7033" N	-104°30'10.8981" W	1.25	784.85	787.95	174.90	1.25
3282.00	90.20	190.80	2512.12	2512.12	-846.69	58.02	574059.31	447716.59	32°34'41.0910" N	-104°30'11.0368" W	0.00	846.70	848.67	176.08	0.48
3345.00	89.90	190.80	2512.06	2512.06	-908.57	46.22	573997.42	447704.79	32°34'40.4784" N	-104°30'11.1736" W	-0.48	908.58	909.75	177.09	0.48
3409.00	89.40	190.90	2512.45	2512.45	-971.43	34.17	573934.57	447692.74	32°34'39.8563" N	-104°30'11.3132" W	-0.78	971.43	972.03	177.99	0.80
3472.00	89.30	191.00	2513.17	2513.17	-1033.28	22.21	573872.72	447680.78	32°34'39.2440" N	-104°30'11.4519" W	-0.16	1033.28	1033.51	178.77	0.22
3536.00	89.50	189.40	2513.84	2513.84	-1096.26	10.87	573809.74	447669.44	32°34'38.6206" N	-104°30'11.5832" W	0.31	1096.26	1096.31	179.43	2.52
3599.00	90.10	187.10	2514.06	2514.06	-1158.60	1.83	573747.39	447660.40	32°34'38.0035" N	-104°30'11.6877" W	0.95	1158.60	1158.60	179.91	3.77
3662.00	90.20	187.10	2513.89	2513.89	-1221.12	-5.95	573684.88	447652.62	32°34'37.3847" N	-104°30'11.7775" W	0.16	1221.12	1221.13	180.28	0.16
3725.00	90.50	182.20	2513.51	2513.51	-1283.89	-11.06	573622.10	447647.51	32°34'36.7635" N	-104°30'11.8360" W	0.48	1283.89	1283.94	180.49	7.79
3789.00	90.10	179.60	2513.17	2513.17	-1347.88	-12.06	573558.12	447646.51	32°34'36.1303" N	-104°30'11.8465" W	-0.63	1347.87	1347.93	180.51	4.11
3853.00	89.70	179.20	2513.29	2513.29	-1411.87	-11.39	573494.12	447647.18	32°34'35.4970" N	-104°30'11.8375" W	-0.62	1411.87	1411.92	180.46	0.88
3916.00	88.30	179.10	2514.38	2514.38	-1474.85	-10.46	573431.14	447648.11	32°34'34.8737" N	-104°30'11.8254" W	-2.22	1474.85	1474.89	180.41	2.23
3979.00	89.20	179.60	2515.76	2515.76	-1537.83	-9.75	573368.16	447648.82	32°34'34.2505" N	-104°30'11.8159" W	1.43	1537.83	1537.87	180.36	1.63
4042.00	88.80	179.50	2516.86	2516.86	-1600.82	-9.25	573305.17	447649.32	32°34'33.6272" N	-104°30'11.8089" W	-0.63	1600.82	1600.85	180.33	0.65
4106.00	88.50	179.10	2518.37	2518.37	-1664.80	-8.47	573241.19	447650.10	32°34'32.9941" N	-104°30'11.7986" W	-0.47	1664.80	1664.82	180.29	0.78
4169.00	88.40	178.80	2520.07	2520.07	-1727.77	-7.31	573178.23	447651.26	32°34'32.3710" N	-104°30'11.7839" W	-0.16	1727.77	1727.78	180.24	0.50
4233.00	90.20	179.80	2520.85	2520.85	-1791.75	-6.53	573114.24	447652.04	32°34'31.7378" N	-104°30'11.7736" W	2.81	1791.75	1791.77	180.21	3.22
4296.00	90.20	179.80	2520.63	2520.63	-1854.75	-6.31	573051.24	447652.26	32°34'31.1144" N	-104°30'11.7699" W	0.00	1854.75	1854.76	180.20	0.00
4359.00	89.80	179.50	2520.63	2520.63	-1917.75	-5.93	572988.24	447652.64	32°34'30.4910" N	-104°30'11.7642" W	-0.63	1917.75	1917.76	180.18	0.79
4423.00	88.90	178.90	2521.36	2521.36	-1981.74	-5.03	572924.25	447653.54	32°34'29.8578" N	-104°30'11.7526" W	-1.41	1981.74	1981.75	180.15	1.69
4486.00	88.80	180.40	2522.62	2522.62	-2044.72	-4.65	572861.27	447653.92	32°34'29.2345" N	-104°30'11.7469" W	-0.16	2044.72	2044.73	180.13	2.39
4550.00	88.70	180.30	2524.02	2524.02	-2108.71	-5.04	572797.29	447653.53	32°34'28.6013" N	-104°30'11.7503" W	-0.16	2108.71	2108.71	180.14	0.22
4613.00	88.40	180.20	2525.61	2525.61	-2171.69	-5.32	572734.31	447653.25	32°34'27.9781" N	-104°30'11.7523" W	-0.48	2171.69	2171.69	180.14	0.50
4676.00	89.80	181.30	2526.60	2526.60	-2234.67	-6.14	572671.32	447652.43	32°34'27.3548" N	-104°30'11.7608" W	2.22	2234.67	2234.68	180.16	2.83
4740.00	89.60	181.50	2526.94	2526.94	-2298.65	-7.70	572607.34	447650.87	32°34'26.7217" N	-104°30'11.7778" W	-0.31	2298.65	2298.66	180.19	0.44
4803.00	89.80	181.40	2527.27	2527.27	-2361.63	-9.30	572544.36	447649.27	32°34'26.0984" N	-104°30'11.7953" W	0.32	2361.63	2361.65	180.23	0.35
4866.00	89.90	181.30	2527.43	2527.43	-2424.61	-10.78	572481.38	447647.79	32°34'25.4751" N	-104°30'11.8115" W	0.16	2424.61	2424.64	180.25	0.22
4929.00	89.90	181.30	2527.54	2527.54	-2487.60	-12.21	572418.40	447646.36	32°34'24.8518" N	-104°30'11.8270" W	0.00	2487.59	2487.63	180.28	0.00
4993.00	89.80	181.40	2527.71	2527.71	-2551.58	-13.72	572354.42	447644.85	32°34'24.2187" N	-104°30'11.8434" W	-0.16	2551.58	2551.61	180.31	0.22
5056.00	87.80	180.50	2529.03	2529.03	-2614.55	-14.76	572291.44	447643.81	32°34'23.5955" N	-104°30'11.8545" W	-3.17	2614.55	2614.59	180.32	3.48
5120.00	87.80	180.80	2531.49	2531.49	-2678.50	-15.49	572227.49	447643.08	32°34'22.9626" N	-104°30'11.8617" W	0.00	2678.50	2678.55	180.33	0.47
5183.00	87.30	180.70	2534.18	2534.18	-2741.44	-16.31	572164.56	447642.26	32°34'22.3398" N	-104°30'11.8702" W	-0.79	2741.43	2741.49	180.34	0.81
5247.00	85.70	181.10	2538.09	2538.09	-2805.31	-17.32	572100.69	447641.25	32°34'21.7078" N	-104°30'11.8807" W	-2.50	2805.30	2805.36	180.35	2.58

Measured Depth (Ft)	INC Deg	AZM Deg	Subsea TVD (Ft)	TVD (Ft)	NS (Ft)	EW (Ft)	Northing (US ft)	Easting (US ft)	Latitude DMS	Longitude DMS	Build Rate °/100Ft	VS (Ft)	Closure (Ft)	Dir Deg.	DLS °/100Ft
5310.00	84.00	181.30	2543.74	2543.74	-2868.04	-18.63	572037.96	447639.94	32°34'21.0870" N	-104°30'11.8949" W	-2.70	2868.03	2868.10	180.37	2.72
5373.00	82.90	181.30	2550.93	2550.93	-2930.61	-20.05	571975.38	447638.52	32°34'20.4678" N	-104°30'11.9103" W	-1.75	2930.61	2930.68	180.39	1.75
5434.00	80.80	182.00	2559.58	2559.58	-2990.96	-21.79	571915.03	447636.78	32°34'19.8705" N	-104°30'11.9295" W	-3.44	2990.96	2991.04	180.42	3.63
5495.00	78.50	182.10	2570.53	2570.53	-3050.93	-23.93	571855.06	447634.64	32°34'19.2770" N	-104°30'11.9535" W	-3.77	3050.92	3051.02	180.45	3.77
5527.00	78.00	182.90	2577.05	2577.05	-3082.23	-25.30	571823.77	447633.27	32°34'18.9673" N	-104°30'11.9689" W	-1.56	3082.22	3082.33	180.47	2.90
5555.00	79.80	181.60	2582.44	2582.44	-3109.68	-26.38	571796.31	447632.19	32°34'18.6956" N	-104°30'11.9809" W	6.43	3109.68	3109.79	180.49	7.88
5586.00	83.80	180.50	2586.86	2586.86	-3140.35	-26.94	571765.64	447631.63	32°34'18.3921" N	-104°30'11.9869" W	12.90	3140.35	3140.47	180.49	13.37
5617.00	87.50	179.40	2589.21	2589.21	-3171.26	-26.91	571734.74	447631.66	32°34'18.0862" N	-104°30'11.9860" W	11.94	3171.25	3171.37	180.49	12.45
5648.00	91.60	178.80	2589.46	2589.46	-3202.25	-26.42	571703.75	447632.15	32°34'17.7796" N	-104°30'11.9797" W	13.23	3202.24	3202.36	180.47	13.37
5678.00	92.60	178.70	2588.36	2588.36	-3232.22	-25.77	571673.78	447632.80	32°34'17.4830" N	-104°30'11.9715" W	3.33	3232.21	3232.32	180.46	3.35
5709.00	92.80	178.70	2586.90	2586.90	-3263.18	-25.07	571642.82	447633.50	32°34'17.1767" N	-104°30'11.9628" W	0.65	3263.17	3263.27	180.44	0.65
5739.00	92.70	178.90	2585.46	2585.46	-3293.14	-24.44	571612.86	447634.13	32°34'16.8802" N	-104°30'11.9549" W	-0.33	3293.13	3293.23	180.43	0.74
5770.00	93.90	178.60	2583.67	2583.67	-3324.08	-23.77	571581.92	447634.80	32°34'16.5740" N	-104°30'11.9464" W	3.87	3324.07	3324.16	180.41	3.99
5800.00	93.80	178.80	2581.66	2581.66	-3354.00	-23.09	571551.99	447635.48	32°34'16.2779" N	-104°30'11.9379" W	-0.33	3354.00	3354.08	180.39	0.74
5831.00	93.90	178.80	2579.58	2579.58	-3384.92	-22.44	571521.07	447636.13	32°34'15.9719" N	-104°30'11.9298" W	0.32	3384.92	3385.00	180.38	0.32
5861.00	93.70	178.50	2577.59	2577.59	-3414.85	-21.73	571491.14	447636.84	32°34'15.6758" N	-104°30'11.9210" W	-0.67	3414.85	3414.92	180.36	1.20
5892.00	93.70	178.60	2575.59	2575.59	-3445.77	-20.95	571460.22	447637.62	32°34'15.3698" N	-104°30'11.9112" W	0.00	3445.77	3445.84	180.35	0.32
5922.00	93.70	178.70	2573.65	2573.65	-3475.70	-20.24	571430.29	447638.33	32°34'15.0736" N	-104°30'11.9024" W	0.00	3475.70	3475.76	180.33	0.33
5953.00	93.60	178.60	2571.68	2571.68	-3506.63	-19.52	571399.36	447639.05	32°34'14.7676" N	-104°30'11.8933" W	-0.32	3506.63	3506.69	180.32	0.46
5985.00	93.50	178.60	2569.70	2569.70	-3538.56	-18.74	571367.43	447639.83	32°34'14.4516" N	-104°30'11.8836" W	-0.31	3538.56	3538.61	180.30	0.31
6016.00	93.50	178.50	2567.80	2567.80	-3569.49	-17.95	571336.50	447640.62	32°34'14.1455" N	-104°30'11.8739" W	0.00	3569.49	3569.54	180.29	0.32
6048.00	93.50	178.70	2565.85	2565.85	-3601.42	-17.17	571304.57	447641.40	32°34'13.8296" N	-104°30'11.8642" W	0.00	3601.42	3601.47	180.27	0.62
6080.00	93.50	178.50	2563.90	2563.90	-3633.36	-16.39	571272.64	447642.18	32°34'13.5136" N	-104°30'11.8545" W	0.00	3633.35	3633.39	180.26	0.62
6112.00	93.60	178.70	2561.92	2561.92	-3665.28	-15.61	571240.71	447642.96	32°34'13.1976" N	-104°30'11.8447" W	0.31	3665.28	3665.32	180.24	0.70
6143.00	93.20	178.60	2560.08	2560.08	-3696.22	-14.88	571209.77	447643.69	32°34'12.8915" N	-104°30'11.8357" W	-1.29	3696.22	3696.25	180.23	1.33
6175.00	92.00	179.00	2558.63	2558.63	-3728.18	-14.21	571177.81	447644.36	32°34'12.5753" N	-104°30'11.8272" W	-3.75	3728.18	3728.21	180.22	3.95
6207.00	91.60	179.00	2557.62	2557.62	-3760.16	-13.65	571145.83	447644.92	32°34'12.2588" N	-104°30'11.8201" W	-1.25	3760.16	3760.18	180.21	1.25
6237.00	91.50	178.80	2556.81	2556.81	-3790.14	-13.08	571115.85	447645.49	32°34'11.9621" N	-104°30'11.8128" W	-0.33	3790.14	3790.17	180.20	0.75
6269.00	91.60	178.60	2555.94	2555.94	-3822.12	-12.35	571083.87	447646.22	32°34'11.6456" N	-104°30'11.8037" W	0.31	3822.12	3822.14	180.19	0.70
6301.00	91.60	178.70	2555.05	2555.05	-3854.10	-11.60	571051.89	447646.97	32°34'11.3292" N	-104°30'11.7943" W	0.00	3854.10	3854.12	180.17	0.31
6332.00	91.50	179.00	2554.21	2554.21	-3885.08	-10.98	571020.91	447647.59	32°34'11.0226" N	-104°30'11.7865" W	-0.32	3885.08	3885.10	180.16	1.02
6364.00	91.20	178.90	2553.46	2553.46	-3917.07	-10.39	570988.92	447648.18	32°34'10.7061" N	-104°30'11.7791" W	-0.94	3917.07	3917.08	180.15	0.99
6396.00	91.40	178.90	2552.73	2552.73	-3949.06	-9.78	570956.94	447648.79	32°34'10.3896" N	-104°30'11.7713" W	0.63	3949.05	3949.07	180.14	0.62
6459.00	91.30	178.90	2551.25	2551.25	-4012.03	-8.57	570893.97	447650.00	32°34'9.7665" N	-104°30'11.7560" W	-0.16	4012.03	4012.04	180.12	0.16
6522.00	91.10	178.80	2549.93	2549.93	-4075.00	-7.30	570830.99	447651.27	32°34'9.1433" N	-104°30'11.7400" W	-0.32	4075.00	4075.01	180.10	0.35
6585.00	91.00	178.20	2548.77	2548.77	-4137.97	-5.66	570768.03	447652.91	32°34'8.5202" N	-104°30'11.7196" W	-0.16	4137.97	4137.97	180.08	0.97
6649.00	90.40	178.00	2547.99	2547.99	-4201.93	-3.53	570704.07	447655.04	32°34'7.8873" N	-104°30'11.6936" W	-0.94	4201.93	4201.93	180.05	0.99
6711.00	90.10	179.90	2547.72	2547.72	-4263.91	-2.40	570642.08	447656.17	32°34'7.2739" N	-104°30'11.6792" W	-0.48	4263.91	4263.91	180.03	3.10
6775.00	89.80	179.80	2547.78	2547.78	-4327.91	-2.23	570578.08	447656.34	32°34'6.6406" N	-104°30'11.6760" W	-0.47	4327.91	4327.91	180.03	0.49
6839.00	89.40	181.30	2548.22	2548.22	-4391.91	-2.84	570514.09	447655.73	32°34'6.0073" N	-104°30'11.6820" W	-0.62	4391.91	4391.91	180.04	2.43
6903.00	89.10	182.10	2549.06	2549.06	-4455.87	-4.74	570450.12	447653.83	32°34'5.3743" N	-104°30'11.7030" W	-0.47	4455.87	4455.87	180.06	1.33

Measured Depth (Ft)	INC Deg	AZM Deg	Subsea TVD (Ft)	TVD (Ft)	NS (Ft)	EW (Ft)	Northing (US ft)	Easting (US ft)	Latitude DMS	Longitude DMS	Build Rate °/100Ft	VS (Ft)	Closure (Ft)	Closure Dir Deg	DLS °/100Ft				
6966.00	89.00	181.60	2550.11	2550.11	-4518.83	-6.78	570387.16	447651.79	32°34'4.7513" N	-104°30'11.7256" W	-0.16	4518.83	4518.84	180.09	0.81				
7030.00	88.80	181.70	2551.34	2551.34	-4582.79	-8.62	570323.20	447649.95	32°34'4.1183" N	-104°30'11.7459" W	-0.31	4582.79	4582.80	180.11	0.35				
7094.00	89.70	180.90	2552.17	2552.17	-4646.77	-10.07	570259.22	447648.50	32°34'3.4852" N	-104°30'11.7617" W	1.41	4646.77	4646.78	180.12	1.88				
7157.00	89.70	181.30	2552.50	2552.50	-4709.76	-11.28	570196.24	447647.29	32°34'2.8618" N	-104°30'11.7746" W	0.00	4709.75	4709.77	180.14	0.63				
7173.00	89.70	181.30	2552.59	2552.59	-4725.75	-11.64	570180.24	447646.93	32°34'2.7035" N	-104°30'11.7786" W	0.00	4725.75	4725.77	180.14	0.00				
BHL: 7220 MD, 89.70°																			
7220.00	89.70	181.30	2552.83	2552.83	-4772.74	-12.71	570133.25	447645.86	32°34'2.2385" N	-104°30'11.7902" W	0.00	4772.74	4772.76	180.15	0.00				
MAGNETICS INFORMATION																			
Magnetic Model: C:\HawkEye\IGRF2010.MIF Date for Magnetics: 05/30/2012 Latitude: 32°34'49.4687" N Longitude: -104°30'11.7307" W Magnetic Declination: 7.93 Total Correction(Mag to Grid): 8.02									Field Strength (nt): 48656 B-X Component (nt): 23859 B-Y Component (nt): 3322 B-Z Component (nt): 42274 B-Horz Component (nt): 24089 Dip Angle: 60.32										
TARGET DATA																			
Name		Shape		Easting (Ft)		Northing (Ft)		Subsea TVD (Ft)		NS (Ft)		EW (Ft)		Side A (Ft)		Side B (Ft)		Diameter (Ft)	
LP		CYLINDER		447658.71		573755.99		2516.00		-1150.00		0.14		100.00		100.00		100.00	
PBHL		CYLINDER		447659.12		570113.99		2554.00		-4792.00		0.55		100.00		200.00		100.00	



NM-East
NAD27

****Grid Correction = 8.017° E****

Final As-Drilled
4772.76' Displacement from S/L
@ 180.15° Azimuth from S/L
South 4772.74' West 12.71'
TVD 2552.83' MD 7220.00'
Y 570133.25
X 447645.86

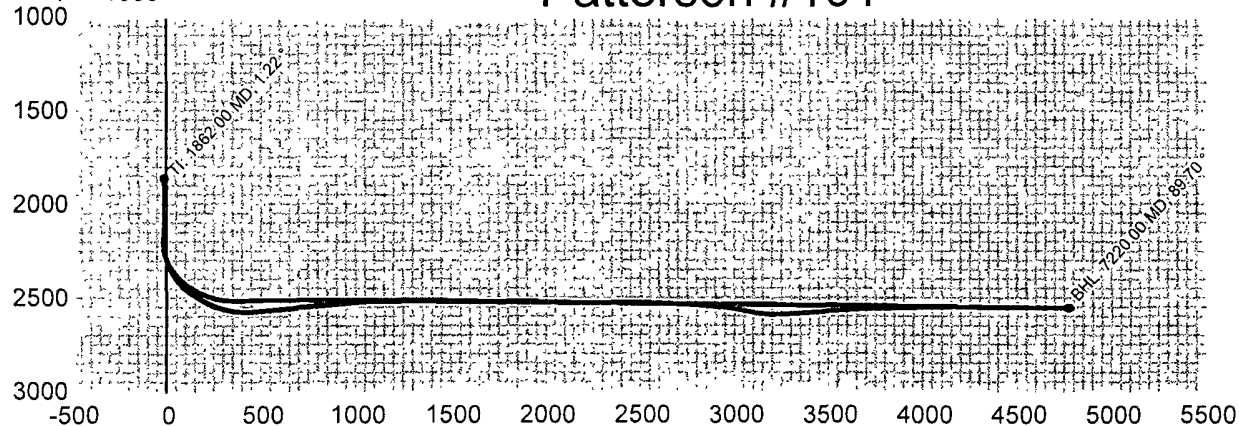
Final As-Drilled
August 11, 2012



Pine Box 17 BO Federal #001H Eddy County, New Mexico Patterson #101

Vertical Section Plot

1" = 1000'

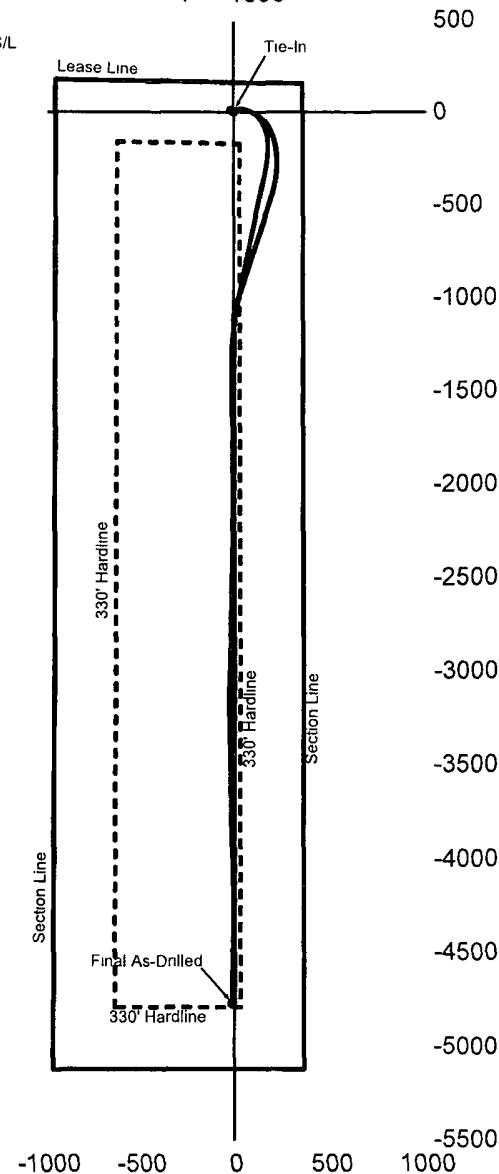


Plane of Proposal (179.99°)

VS = 4772.74'

Horizontal Plot

1" = 1000'



Operating Company Mewbourne
Well Name & Number Pine Box 17 Bo Federal #1H
Sales Ticket Number 4707060

Company Rep Wesley Noseff
Field
BOT Service Rep John Davis
District Location Odessa, Texas, USA



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse	
Casing	7.000	26.00	J-55	6.276	6.151		0.03826	2,774.00	9,960	6,230	
Top Liner	4.500	11.60	J-55	4.000	3.795	LT&C	0.01492	4,643.87	12,410	10,680	
Bott Liner											
TVD		1,933.00		KOP		1,997.00		Open Hole	6.125	Casing Vol. (bbl)	97.5
Carry Fluid Weight (ppg)			8.4		Propan Content (ppa)				Max Drill Out Size		0

	Comm. Number	Description	Depth	Length	OD	ID	Ball Seal ID	Shear Press	Max Rate (BPM)	Disp (BBL)
Liner Top	1	JR Setting Sleeve_RH Profile	2548.13							

Zone Length

20

19

18

17

16

JR Sleeve_S3 Hyd Set Packer	2548.13	8.33	5.813	3.875					
4-1/2-13.5 LTC Nipple	2556.46	5.08	5.000	3.920					
6 Joints of 4-1/2-11.60 J-55 Casing	2561.54	250.97	5.000	4.000					
L-80 Open Hole Packer	2944.42	3.89	5.820	3.875		2154			
2 Joints of 4-1/2-11 60 J-55 Casing	2948.31	84.92	5.000	4.000					
L-80 Open Hole Packer	3157.54	3.89	5.820	3.875		2154			
3 Joints of 4-1/2-11 60 J-55 Casing	3161.43	127.94	5.000	4.000					
L-80 Open Hole Packer	3378.13	3.89	5.820	3.875		2154			
3 Joints of 4-1/2-11 60 J-55 Casing	3382.02	128.01	5.000	4.000					
L-80 Open Hole Packer	3641.14	3.89	5.820	3.875		2154			
2 Joints of 4-1/2-11 60 J-55 Casing	3645.03	85.24	5.000	4.000					
L-80 Open Hole Packer	3862.19	3.89	5.820	3.875		2154			

Operating Company Mewbourne
 Well Name & Number Pine Box 17 Bo Federal #1H
 Sales Ticket Number 4707060
 Date 7/27/2012

Company Rep Wesley Noseff
 Field
 BOT Service Rep John Davis
 District Location Odessa, Texas, USA



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse	
Casing	7.000	26.00	J-55	6.276	6.151		0.03826	2,774.00	9,960	6,230	
Top Liner	4.500	11.60	J-55	4.000	3.795	LT&C	0.01492	4,643.87	12,410	10,680	
Bott Liner											
TVD		1,933.00		KOP		1,997.00		Open Hole	6.125	Casing Vol. (bbl)	97.5
Carry Fluid Weight (ppg)			8.4		Propant Content (ppa)				Max Drill Out Size		0

	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press	Max Rate (BPM)	Displ (BBL)
15		3 Joints of 4-1/2-11 60 J-55 Casing	3866.08	124.16	5.000	4.000				
		2-800 Frac Sleeve	3890.24	2.80	5.750		2.900	1524	17.1	97
		2 Joints of 4-1/2-11 60 J-55 Casing	3994.14	77.58	5.000	4.000				
14		L-80 Open Hole Packer	4071.72	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-11 60 J-55 Casing	4075.61	128.01	5.000	4.000				
		2-875 Frac Sleeve	4108.32	3.80	6.750		2.775	1524	15.7	97
13		2 Joints of 4-1/2-11 60 J-55 Casing	4207.52	84.12	5.000	4.000				
		L-80 Open Hole Packer	4291.64	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-11 60 J-55 Casing	4295.53	127.68	5.000	4.000				
12		2-750 Frac Sleeve	4323.23	3.00	6.750		2.650	1524	14.3	97
		2 Joints of 4-1/2-11 60 J-55 Casing	4427.11	84.80	5.000	4.000				
		L-80 Open Hole Packer	4511.91	3.89	5.820	3.875		2154		
11		3 Joints of 4-1/2-11 60 J-55 Casing	4515.80	128.03	5.000	4.000				
		2-800 Frac Sleeve	4541.15	3.80	6.750		2.525	1524	12.0	97
		3 Joints of 4-1/2-11 60 J-55 Casing	4647.73	128.01	5.000	4.000				
10		L-80 Open Hole Packer	4775.74	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-11 60 J-55 Casing	4779.63	128.09	5.000	4.000				
		2-800 Frac Sleeve	4807.73	3.80	6.750		2.400	1524	11.7	97
9		2 Joints of 4-1/2-11 60 J-55 Casing	4911.62	81.42	5.000	4.000				
		L-80 Open Hole Packer	4993.04	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-11 60 J-55 Casing	4996.93	128.02	5.000	4.000				
		2-800 Frac Sleeve	5024.95	3.80	6.750		2.275	1524	10.5	97
		3 Joints of 4-1/2-11 60 J-55 Casing	5128.85	127.21	5.000	4.000				
		L-80 Open Hole Packer	5256.06	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-11 60 J-55 Casing	5259.95	84.54	5.000	4.000				
		2-750 Frac Sleeve	5311.48	3.80	6.750		2.150	1524	9.4	97

Operating Company Mewbourne
 Well Name & Number Pine Box 17 Bo Federal #1H
 Sales Ticket Number 4707060
 Date 7/27/2012

Company Rep Wesley Noseff
 Field
 BOT Service Rep John Davis
 District Location Odessa, Texas, USA



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse
Casing	7.000	26.00	J-55	6.276	6.151		0.03826	2,774.00	9,960	6,230
Top Liner	4.500	11.60	J-55	4.000	3.795	LT&C	0.01492	4,643.87	12,410	10,680
Bott Liner										
TVD	1,933.00		KOP	1,997.00		Open Hole	6.125	Casing Vol. (bbl)	97.5	
Carry Fluid Weight (ppg)		8.4		Propant Content (ppa)				Max Drill Out Size	0	

	Comm. Number	Description	Depth	Length	OD	ID	Ball Seal ID	Shear Press.	Max Rate (BPM)	Disp (BBL)
8		3 Joints of 4-1/2-11 60 J-55 Casing	5348.39	127.73	5.000	4.000				
		L-80 Open Hole Packer	5476.12	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-11.60 J-55 Casing	5480.01	84.93	5.000	4.000				
		2-200 Frac Sleeve	5531.94	3.90	5.750		2.025	1524	84	97
7		3 Joints of 4-1/2-11.60 J-55 Casing	5568.84	127.45	5.000	4.000				
		L-80 Open Hole Packer	5696.29	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-11 60 J-55 Casing	5700.18	127.35	5.000	4.000				
		2-200 Frac Sleeve	5812.53	3.89	5.750		2.000	1524	74	97
6		2 Joints of 4-1/2-11.60 J-55 Casing	5831.43	85.29	5.000	4.000				
		L-80 Open Hole Packer	5916.72	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-11 60 J-55 Casing	5920.61	128.00	5.000	4.000				
		2-200 Frac Sleeve	6012.00	3.90	5.750		2.025	1524	84	97
5		2 Joints of 4-1/2-11.60 J-55 Casing	6052.51	85.30	5.000	4.000				
		L-80 Open Hole Packer	6137.81	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-11.60 J-55 Casing	6141.70	85.28	5.000	4.000				
		2-200 Frac Sleeve	6233.08	3.89	5.750		2.000	1524	55	97
4		3 Joints of 4-1/2-11 60 J-55 Casing	6230.88	127.94	5.000	4.000				
		L-80 Open Hole Packer	6358.82	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-11.60 J-55 Casing	6362.71	128.03	5.000	4.000				
		2-200 Frac Sleeve	6494.64	3.89	5.750		2.025	1524	47	97
3		2 Joints of 4-1/2-11.60 J-55 Casing	6494.64	84.99	5.000	4.000				
		L-80 Open Hole Packer	6579.63	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-11.60 J-55 Casing	6583.52	127.52	5.000	4.000				
		2-200 Frac Sleeve	6714.94	3.89	5.750		2.000	1524	40	97
		3 Joints of 4-1/2-11.60 J-55 Casing	6714.94	123.74	5.000	4.000				
		L-80 Open Hole Packer	6838.68	3.89	5.820	3.875		2154		

Company Rep	Wesley Noseff
Field	
BOT Service Rep	John Davis
District Location	Odessa, Texas, USA

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