

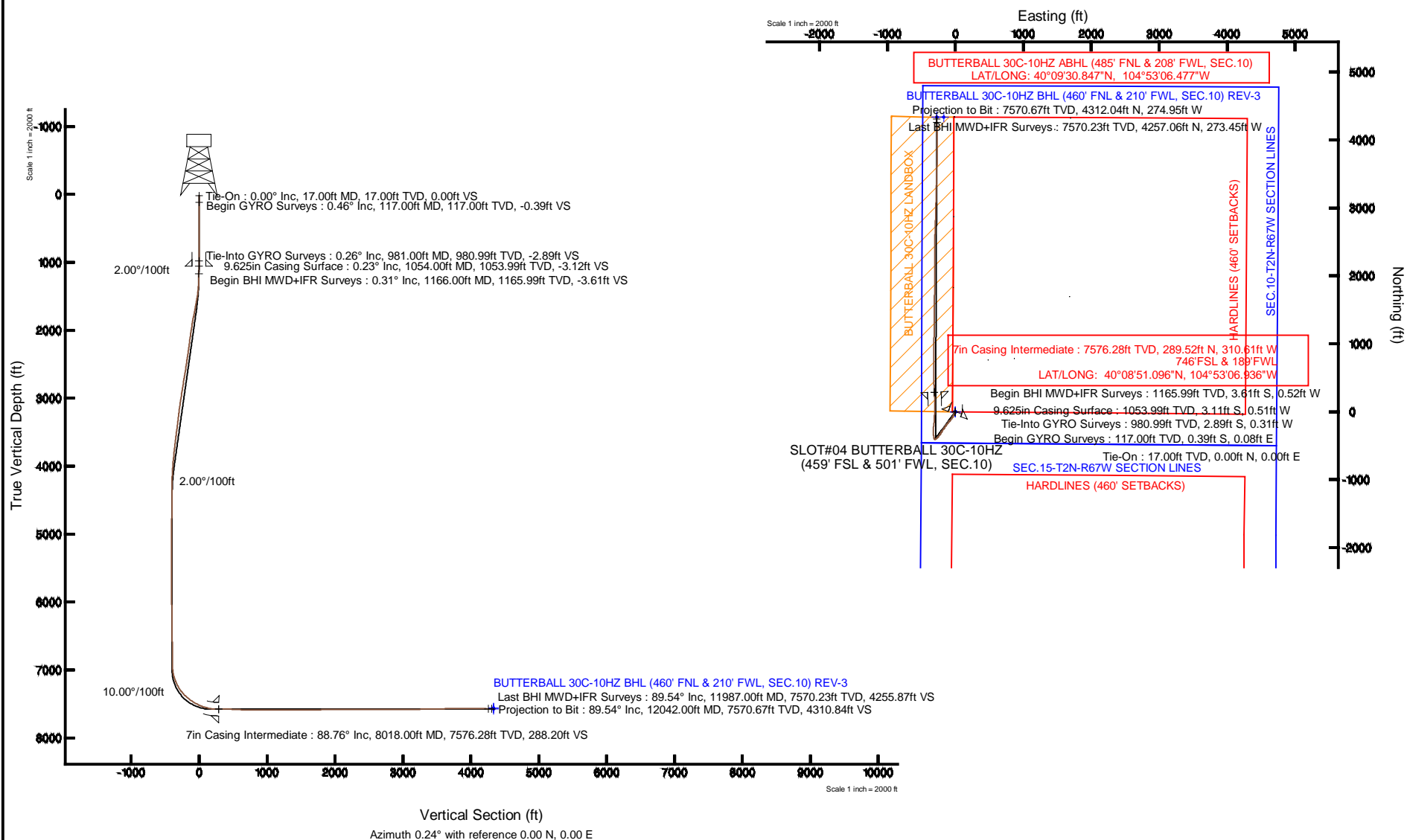
# KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#04 BUTTERBALL 30C-10HZ (459' FSL & 501' FWL, SEC.10)  
 Field: WELD COUNTY (KERR MCGEE) Well: BUTTERBALL 30C-10HZ  
 Facility: SEC.10-T2N-R67W Wellbore: BUTTERBALL 30C-10HZ PWP



Plot reference wellpath is BUTTERBALL 30C-10HZ (REV-B.0) PWP

True vertical depths are referenced to XTREME 8 (17' KB) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to XTREME 8 (17' KB) (RKB)	North Reference: True north
XTREME 8 (17' KB) (RKB) to Mean Sea Level: 5013 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#04 BUTTERBALL 30C-10HZ (459' FSL & 501' FWL, SEC.10): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: preclin on 05/Dec/2013



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#04 BUTTERBALL 30C-10HZ (459' FSL & 501' FWL, SEC.10)
Area	COLORADO	Well	BUTTERBALL 30C-10HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	BUTTERBALL 30C-10HZ AWB
Facility	SEC.10-T2N-R67W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 4.0.0
North Reference	True	User	Precain
Scale	0.999958	Report Generated	05/Dec/2013 at 12:32
Convergence at slot	n/a	Database/Source file	WellArchitectDB/BUTTERBALL_30C-10HZ_AWB.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-4154.66	-1461.11	3172160.30	1296895.72	40°08'48.235"N	104°53'02.936"W
Facility Reference Pt			3173592.20	1301060.32	40°09'29.292"N	104°52'44.121"W
Field Reference Pt			3197771.84	1268891.29	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM			
Calculation method	Minimum curvature	XTREME 8 (17' KB) (RKB) to Facility Vertical Datum	5013.00ft
Horizontal Reference Pt	Slot	XTREME 8 (17' KB) (RKB) to Mean Sea Level	5013.00ft
Vertical Reference Pt	XTREME 8 (17' KB) (RKB)	XTREME 8 (17' KB) (RKB) to Mud Line at Slot (SLOT#04 BUTTERBALL 30C-10HZ (459' FSL & 501' FWL, SEC.10))	5013.00ft
MD Reference Pt	XTREME 8 (17' KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	0.24°

# Actual Wellpath Report

BUTTERBALL 30C-10HZ AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#04 BUTTERBALL 30C-10HZ (459' FSL & 501' FWL, SEC.10)
Area	COLORADO	Well	BUTTERBALL 30C-10HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	BUTTERBALL 30C-10HZ AWB
Facility	SEC.10-T2N-R67W		

## WELLPATH DATA (133 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	168.240	0.00	0.00	0.00	0.00	40°08'48.235"N	104°53'02.936"W	0.00	
17.00	0.000	168.240	17.00	0.00	0.00	0.00	40°08'48.235"N	104°53'02.936"W	0.00	Tie-On
117.00	0.460	168.240	117.00	-0.39	-0.39	0.08	40°08'48.231"N	104°53'02.935"W	0.46	Begin GYRO Surveys
217.00	0.220	207.540	217.00	-0.96	-0.96	0.07	40°08'48.226"N	104°53'02.935"W	0.32	
317.00	0.120	221.400	317.00	-1.21	-1.21	-0.08	40°08'48.223"N	104°53'02.937"W	0.11	
417.00	0.160	183.710	417.00	-1.42	-1.42	-0.16	40°08'48.221"N	104°53'02.938"W	0.10	
517.00	0.250	125.630	517.00	-1.69	-1.69	0.01	40°08'48.218"N	104°53'02.936"W	0.21	
617.00	0.250	231.470	617.00	-1.95	-1.95	0.01	40°08'48.216"N	104°53'02.936"W	0.40	
717.00	0.060	166.990	717.00	-2.14	-2.14	-0.15	40°08'48.214"N	104°53'02.938"W	0.23	
817.00	0.190	129.880	816.99	-2.30	-2.30	-0.01	40°08'48.212"N	104°53'02.936"W	0.15	
917.00	0.360	217.590	916.99	-2.65	-2.65	-0.07	40°08'48.209"N	104°53'02.937"W	0.40	
981.00	0.260	236.170	980.99	-2.89	-2.89	-0.31	40°08'48.206"N	104°53'02.940"W	0.22	Tie-Into GYRO Surveys
1166.00	0.310	163.850	1165.99	-3.61	-3.61	-0.52	40°08'48.199"N	104°53'02.943"W	0.18	Begin BHI MWD+IFR Surveys
1258.00	2.360	216.880	1257.96	-5.37	-5.36	-1.59	40°08'48.182"N	104°53'02.956"W	2.38	
1350.00	5.120	219.350	1349.76	-10.07	-10.05	-5.33	40°08'48.136"N	104°53'03.005"W	3.00	
1442.00	8.020	210.840	1441.15	-18.79	-18.74	-11.23	40°08'48.050"N	104°53'03.081"W	3.32	
1533.00	11.290	208.140	1530.85	-32.13	-32.05	-18.68	40°08'47.918"N	104°53'03.177"W	3.63	
1625.00	11.740	206.760	1620.99	-48.46	-48.35	-27.15	40°08'47.757"N	104°53'03.286"W	0.57	
1717.00	11.550	205.050	1711.10	-65.20	-65.05	-35.26	40°08'47.592"N	104°53'03.390"W	0.43	
1809.00	12.820	209.010	1801.03	-82.50	-82.32	-44.11	40°08'47.422"N	104°53'03.504"W	1.65	
1901.00	11.880	215.070	1890.90	-99.23	-99.00	-54.50	40°08'47.257"N	104°53'03.638"W	1.74	
1992.00	10.870	219.370	1980.11	-113.57	-113.30	-65.33	40°08'47.115"N	104°53'03.777"W	1.45	
2084.00	10.640	220.470	2070.50	-126.79	-126.46	-76.34	40°08'46.985"N	104°53'03.919"W	0.34	
2267.00	9.570	221.180	2250.66	-151.18	-150.77	-97.32	40°08'46.745"N	104°53'04.189"W	0.59	
2359.00	11.620	220.360	2341.08	-164.04	-163.58	-108.36	40°08'46.618"N	104°53'04.331"W	2.23	
2451.00	11.320	218.710	2431.25	-178.20	-177.69	-120.01	40°08'46.479"N	104°53'04.481"W	0.48	
2544.00	10.400	218.600	2522.58	-191.93	-191.37	-130.95	40°08'46.344"N	104°53'04.622"W	0.99	
2635.00	9.900	217.810	2612.16	-204.57	-203.97	-140.87	40°08'46.219"N	104°53'04.750"W	0.57	
2727.00	11.880	209.290	2702.50	-219.12	-218.48	-150.35	40°08'46.076"N	104°53'04.872"W	2.77	
2818.00	11.420	216.300	2791.63	-234.59	-233.91	-160.27	40°08'45.923"N	104°53'05.000"W	1.63	
2904.00	11.190	216.340	2875.96	-248.22	-247.50	-170.26	40°08'45.789"N	104°53'05.128"W	0.27	
2989.00	11.130	217.190	2959.35	-261.44	-260.67	-180.10	40°08'45.659"N	104°53'05.255"W	0.21	
3074.00	10.710	215.910	3042.81	-274.41	-273.61	-189.69	40°08'45.531"N	104°53'05.379"W	0.57	
3159.00	8.580	210.910	3126.61	-286.28	-285.45	-197.59	40°08'45.414"N	104°53'05.480"W	2.69	
3244.00	7.830	209.940	3210.74	-296.76	-295.90	-203.73	40°08'45.311"N	104°53'05.559"W	0.90	
3329.00	7.600	210.080	3294.97	-306.67	-305.78	-209.44	40°08'45.213"N	104°53'05.633"W	0.27	
3414.00	9.280	210.990	3379.05	-317.44	-316.52	-215.79	40°08'45.107"N	104°53'05.715"W	1.98	
3500.00	9.180	215.620	3463.93	-328.99	-328.05	-223.35	40°08'44.993"N	104°53'05.812"W	0.87	
3585.00	8.800	212.180	3547.89	-340.04	-339.06	-230.76	40°08'44.884"N	104°53'05.908"W	0.77	
3670.00	8.650	220.730	3631.91	-350.42	-349.41	-238.40	40°08'44.782"N	104°53'06.006"W	1.53	
3755.00	7.980	223.470	3716.02	-359.58	-358.53	-246.63	40°08'44.692"N	104°53'06.112"W	0.92	
3840.00	7.930	217.070	3800.20	-368.57	-367.49	-254.22	40°08'44.603"N	104°53'06.210"W	1.04	
3926.00	7.300	213.340	3885.44	-377.90	-376.79	-260.80	40°08'44.511"N	104°53'06.294"W	0.93	
4011.00	6.640	230.090	3969.82	-385.59	-384.46	-267.54	40°08'44.436"N	104°53'06.381"W	2.50	
4096.00	4.250	220.450	4054.43	-391.16	-390.01	-273.35	40°08'44.381"N	104°53'06.456"W	3.00	

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Area	COLORADO	Well	BUTTERBALL 30C-10HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	BUTTERBALL 30C-10HZ AWB
Facility	SEC.10-T2N-R67W		

WELLPATH DATA (133 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4181.00	3.680	220.060	4139.23	-395.66	-394.49	-277.15	40°08'44.337"N	104°53'06.505"W	0.67	
4266.00	2.930	231.930	4224.09	-399.11	-397.92	-280.62	40°08'44.303"N	104°53'06.550"W	1.19	
4351.00	1.270	243.300	4309.03	-400.88	-399.68	-283.17	40°08'44.285"N	104°53'06.582"W	2.00	
4436.00	0.740	257.110	4394.02	-401.43	-400.23	-284.55	40°08'44.280"N	104°53'06.600"W	0.68	
4778.00	1.080	250.440	4735.97	-403.03	-401.80	-289.74	40°08'44.264"N	104°53'06.667"W	0.10	
5119.00	1.710	228.970	5076.87	-407.47	-406.22	-296.60	40°08'44.221"N	104°53'06.755"W	0.24	
5204.00	1.200	249.980	5161.84	-408.62	-407.35	-298.39	40°08'44.209"N	104°53'06.778"W	0.86	
5290.00	1.320	303.750	5247.83	-408.38	-407.11	-300.06	40°08'44.212"N	104°53'06.800"W	1.33	
5376.00	1.170	332.740	5333.81	-407.06	-405.78	-301.29	40°08'44.225"N	104°53'06.816"W	0.74	
5461.00	0.520	333.380	5418.80	-405.94	-404.66	-301.86	40°08'44.236"N	104°53'06.823"W	0.76	
5632.00	0.420	344.790	5589.79	-404.65	-403.37	-302.37	40°08'44.249"N	104°53'06.830"W	0.08	
5803.00	0.180	303.930	5760.79	-403.89	-402.61	-302.76	40°08'44.256"N	104°53'06.835"W	0.18	
6145.00	0.710	287.120	6102.78	-402.98	-401.69	-305.23	40°08'44.265"N	104°53'06.866"W	0.16	
6316.00	1.560	300.690	6273.74	-401.49	-400.19	-308.25	40°08'44.280"N	104°53'06.905"W	0.52	
6487.00	1.200	23.970	6444.71	-398.67	-397.36	-309.52	40°08'44.308"N	104°53'06.922"W	1.08	
6658.00	0.980	332.760	6615.68	-395.74	-394.43	-309.46	40°08'44.337"N	104°53'06.921"W	0.56	
6743.00	1.060	317.460	6700.67	-394.51	-393.20	-310.33	40°08'44.349"N	104°53'06.932"W	0.33	
6828.00	1.080	318.830	6785.65	-393.34	-392.02	-311.38	40°08'44.361"N	104°53'06.946"W	0.04	
6999.00	1.290	314.780	6956.62	-390.78	-389.45	-313.81	40°08'44.386"N	104°53'06.977"W	0.13	
7042.00	4.210	345.420	6999.56	-388.91	-387.58	-314.55	40°08'44.405"N	104°53'06.987"W	7.37	
7084.00	9.400	348.950	7041.25	-384.05	-382.72	-315.60	40°08'44.453"N	104°53'07.000"W	12.39	
7127.00	14.700	347.580	7083.29	-375.28	-373.94	-317.45	40°08'44.540"N	104°53'07.024"W	12.34	
7170.00	19.060	349.740	7124.43	-363.05	-361.70	-319.87	40°08'44.661"N	104°53'07.055"W	10.24	
7213.00	22.750	349.460	7164.59	-347.97	-346.61	-322.64	40°08'44.810"N	104°53'07.091"W	8.58	
7256.00	25.570	351.570	7203.82	-330.63	-329.25	-325.53	40°08'44.981"N	104°53'07.128"W	6.86	
7298.00	29.590	354.550	7241.04	-311.34	-309.95	-327.84	40°08'45.172"N	104°53'07.158"W	10.12	
7341.00	33.060	1.770	7277.78	-289.04	-287.65	-328.49	40°08'45.392"N	104°53'07.166"W	11.88	
7384.00	38.690	6.570	7312.62	-263.93	-262.55	-326.59	40°08'45.640"N	104°53'07.141"W	14.63	
7427.00	42.620	7.760	7345.23	-236.13	-234.76	-323.08	40°08'45.915"N	104°53'07.096"W	9.32	
7469.00	45.970	7.170	7375.29	-207.03	-205.68	-319.27	40°08'46.202"N	104°53'07.047"W	8.04	
7512.00	49.210	5.680	7404.29	-175.47	-174.14	-315.73	40°08'46.514"N	104°53'07.002"W	7.96	
7555.00	52.560	4.880	7431.41	-142.24	-140.92	-312.67	40°08'46.842"N	104°53'06.962"W	7.92	
7597.00	55.640	3.810	7456.04	-108.31	-107.00	-310.10	40°08'47.178"N	104°53'06.929"W	7.62	
7640.00	59.460	1.910	7479.11	-72.08	-70.77	-308.30	40°08'47.536"N	104°53'06.906"W	9.63	
7683.00	62.990	1.320	7499.80	-34.40	-33.10	-307.24	40°08'47.908"N	104°53'06.892"W	8.30	
7726.00	66.170	1.140	7518.26	4.42	5.72	-306.41	40°08'48.292"N	104°53'06.882"W	7.41	
7768.00	69.650	0.820	7534.05	43.33	44.63	-305.75	40°08'48.676"N	104°53'06.873"W	8.32	
7810.00	73.170	0.940	7547.44	83.13	84.43	-305.13	40°08'49.069"N	104°53'06.865"W	8.39	
7853.00	76.880	359.640	7558.55	124.66	125.96	-304.93	40°08'49.480"N	104°53'06.863"W	9.11	
7896.00	80.240	358.830	7567.08	166.80	168.09	-305.49	40°08'49.896"N	104°53'06.870"W	8.03	
7939.00	85.350	357.510	7572.47	209.41	210.72	-306.86	40°08'50.317"N	104°53'06.887"W	12.27	
7977.00	87.350	357.060	7574.89	247.28	248.59	-308.65	40°08'50.692"N	104°53'06.911"W	5.39	
8018.00†	88.756	357.459	7576.28	288.20	289.52	-310.61	40°08'51.096"N	104°53'06.936"W	3.56	7" Casing Point
8082.00	90.950	358.080	7576.44	352.14	353.47	-313.10	40°08'51.728"N	104°53'06.968"W	3.56	
8125.00	90.150	357.220	7576.03	395.09	396.43	-314.87	40°08'52.153"N	104°53'06.991"W	2.73	

# Actual Wellpath Report

BUTTERBALL 30C-10HZ AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#04 BUTTERBALL 30C-10HZ (459' FSL & 501' FWL, SEC.10)
Area	COLORADO	Well	BUTTERBALL 30C-10HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	BUTTERBALL 30C-10HZ AWB
Facility	SEC.10-T2N-R67W		

## WELLPATH DATA (133 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8295.00	86.570	359.160	7580.90	564.88	566.24	-320.23	40°08'53.831"N	104°53'07.060"W	2.39	
8380.00	87.100	0.010	7585.59	649.74	651.11	-320.85	40°08'54.669"N	104°53'07.068"W	1.18	
8465.00	88.400	0.240	7588.93	734.67	736.04	-320.66	40°08'55.509"N	104°53'07.065"W	1.55	
8550.00	89.320	0.230	7590.62	819.66	821.02	-320.32	40°08'56.348"N	104°53'07.061"W	1.08	
8635.00	90.030	1.960	7591.10	904.64	906.00	-318.69	40°08'57.188"N	104°53'07.040"W	2.20	
8720.00	90.610	1.210	7590.62	989.62	990.97	-316.34	40°08'58.028"N	104°53'07.010"W	1.12	
8805.00	90.670	0.840	7589.68	1074.60	1075.95	-314.82	40°08'58.868"N	104°53'06.990"W	0.44	
8891.00	90.710	1.400	7588.64	1160.59	1161.92	-313.14	40°08'59.717"N	104°53'06.969"W	0.65	
8976.00	90.700	1.050	7587.59	1245.57	1246.90	-311.32	40°09'00.557"N	104°53'06.945"W	0.41	
9061.00	91.040	1.370	7586.30	1330.54	1331.87	-309.53	40°09'01.397"N	104°53'06.922"W	0.55	
9146.00	90.430	0.280	7585.21	1415.53	1416.85	-308.30	40°09'02.236"N	104°53'06.906"W	1.47	
9232.00	89.630	0.020	7585.17	1501.53	1502.85	-308.08	40°09'03.086"N	104°53'06.903"W	0.98	
9317.00	89.930	0.070	7585.49	1586.53	1587.85	-308.01	40°09'03.926"N	104°53'06.903"W	0.36	
9402.00	90.150	0.110	7585.43	1671.53	1672.85	-307.88	40°09'04.766"N	104°53'06.901"W	0.26	
9488.00	90.830	0.760	7584.70	1757.52	1758.84	-307.22	40°09'05.616"N	104°53'06.892"W	1.09	
9573.00	91.230	1.130	7583.17	1842.50	1843.82	-305.82	40°09'06.456"N	104°53'06.874"W	0.64	
9658.00	90.830	1.440	7581.64	1927.48	1928.78	-303.92	40°09'07.295"N	104°53'06.850"W	0.60	
9744.00	90.150	0.330	7580.91	2013.47	2014.77	-302.59	40°09'08.145"N	104°53'06.833"W	1.51	
9829.00	90.640	0.470	7580.32	2098.46	2099.76	-302.00	40°09'08.985"N	104°53'06.825"W	0.60	
9914.00	90.520	359.760	7579.46	2183.46	2184.76	-301.83	40°09'09.825"N	104°53'06.823"W	0.85	
10000.00	90.180	359.040	7578.94	2269.45	2270.75	-302.73	40°09'10.675"N	104°53'06.835"W	0.93	
10085.00	89.410	358.960	7579.24	2354.43	2355.74	-304.21	40°09'11.515"N	104°53'06.854"W	0.91	
10170.00	90.460	0.350	7579.34	2439.42	2440.73	-304.72	40°09'12.354"N	104°53'06.860"W	2.05	
10256.00	90.460	1.500	7578.65	2525.41	2526.72	-303.33	40°09'13.204"N	104°53'06.842"W	1.34	
10341.00	90.800	2.270	7577.71	2610.37	2611.66	-300.54	40°09'14.044"N	104°53'06.806"W	0.99	
10426.00	89.720	1.720	7577.33	2695.32	2696.61	-297.58	40°09'14.883"N	104°53'06.768"W	1.43	
10511.00	89.660	2.100	7577.79	2780.29	2781.56	-294.75	40°09'15.723"N	104°53'06.732"W	0.45	
10597.00	89.690	1.900	7578.27	2866.24	2867.51	-291.74	40°09'16.572"N	104°53'06.693"W	0.24	
10681.00	90.120	0.970	7578.41	2950.23	2951.48	-289.64	40°09'17.402"N	104°53'06.666"W	1.22	
10767.00	90.030	1.560	7578.30	3036.21	3037.46	-287.74	40°09'18.251"N	104°53'06.642"W	0.69	
10852.00	90.030	1.310	7578.26	3121.19	3122.43	-285.61	40°09'19.091"N	104°53'06.614"W	0.29	
10937.00	90.740	1.810	7577.68	3206.17	3207.40	-283.30	40°09'19.931"N	104°53'06.585"W	1.02	
11022.00	91.050	1.680	7576.36	3291.13	3292.35	-280.71	40°09'20.770"N	104°53'06.551"W	0.40	
11107.00	91.140	1.430	7574.73	3376.09	3377.30	-278.40	40°09'21.610"N	104°53'06.522"W	0.31	
11192.00	91.140	1.470	7573.04	3461.05	3462.26	-276.25	40°09'22.449"N	104°53'06.494"W	0.05	
11362.00	91.110	1.250	7569.70	3630.99	3632.18	-272.22	40°09'24.128"N	104°53'06.442"W	0.13	
11533.00	90.120	0.800	7567.87	3801.96	3803.14	-269.16	40°09'25.818"N	104°53'06.403"W	0.64	
11618.00	89.820	0.720	7567.91	3886.96	3888.13	-268.03	40°09'26.658"N	104°53'06.388"W	0.37	
11703.00	89.510	359.230	7568.41	3971.95	3973.13	-268.07	40°09'27.498"N	104°53'06.389"W	1.79	
11789.00	89.260	359.050	7569.33	4057.93	4059.11	-269.36	40°09'28.347"N	104°53'06.405"W	0.36	
11874.00	90.060	358.930	7569.84	4142.91	4144.09	-270.86	40°09'29.187"N	104°53'06.425"W	0.95	
11987.00	89.540	358.440	7570.23	4255.87	4257.06	-273.45	40°09'30.304"N	104°53'06.458"W	0.63	Last BHI MWD+IFR Surveys
12042.00	89.540	358.440	7570.67	4310.84	4312.04	-274.95	40°09'30.847"N	104°53'06.477"W	0.00	Projection to Bit

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#04 BUTTERBALL 30C-10HZ (459' FSL & 501' FWL, SEC.10)
Area	COLORADO	Well	BUTTERBALL 30C-10HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	BUTTERBALL 30C-10HZ AWB
Facility	SEC.10-T2N-R67W		

HOLE & CASING SECTIONS - Ref Wellbore: BUTTERBALL 30C-10HZ AWB Ref Wellpath: BUTTERBALL 30C-10HZ AWP									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
13.5in Open Hole	17.00	1057.00	1040.00	17.00	1056.99	0.00	0.00	-3.13	-0.52
9.625in Casing Surface	17.00	1054.00	1037.00	17.00	1053.99	0.00	0.00	-3.11	-0.51
8.75in Open Hole	1057.00	8028.00	6971.00	1056.99	7576.47	-3.13	-0.52	299.51	-311.05
7in Casing Intermediate	17.00	8018.00	8001.00	17.00	7576.28	0.00	0.00	289.52	-310.61
6.125in Open Hole	8028.00	12042.00	4014.00	7576.47	7570.67	299.51	-311.05	4312.04	-274.95

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.10-T2N-R67W HARDLINES (460' SETBACKS)		0.00	0.00	0.00	3172160.30	1296895.72	40°08'48.235"N	104°53'02.936"W	polygon
SEC.10-T2N-R67W SECTION LINES		0.00	0.00	0.00	3172160.30	1296895.72	40°08'48.235"N	104°53'02.936"W	polygon
SEC.15-T2N-R67W HARDLINES (460' SETBACKS)		0.00	0.00	0.00	3172160.30	1296895.72	40°08'48.235"N	104°53'02.936"W	polygon
SEC.15-T2N-R67W SECTION LINES		0.00	0.00	0.00	3172160.30	1296895.72	40°08'48.235"N	104°53'02.936"W	polygon
BUTTERBALL 30C-10HZ BHL (460' FNL & 210' FWL, SEC.10) REV-2		7558.00	4336.95	-272.77	3171857.43	1301230.48	40°09'31.093"N	104°53'06.449"W	point
BUTTERBALL 30C-10HZ BHL ON PLAT (460' FNL & 310' FWL, SEC.10) REV-1		7558.00	4336.95	-172.76	3171957.43	1301231.17	40°09'31.093"N	104°53'05.161"W	point
BUTTERBALL 30C-10HZ LANDBOX		7558.00	0.00	0.00	3172160.30	1296895.72	40°08'48.235"N	104°53'02.936"W	polygon
BUTTERBALL 30C-10HZ BHL (460' FNL & 210' FWL, SEC.10) REV-3		7577.00	4336.95	-272.77	3171857.43	1301230.48	40°09'31.093"N	104°53'06.449"W	point

WELLPATH COMPOSITION - Ref Wellbore: BUTTERBALL 30C-10HZ AWB Ref Wellpath: BUTTERBALL 30C-10HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	981.00	Generic gyro - continuous (Standard)	MS ENERGY GYRO SURVEYS <117-981>	BUTTERBALL 30C-10HZ AWB
981.00	7977.00	NaviTrak (MAGCORR,IFR)	BHI MWD+IFR SURVEYS 8 3/4" HOLE <1166-7977>	BUTTERBALL 30C-10HZ AWB
7977.00	11987.00	NaviTrak (MAGCORR,IFR)	BHI MWD+IFR SURVEYS 6 1/8" HOLE <8082-11987>	BUTTERBALL 30C-10HZ AWB
11987.00	12042.00	Blind Drilling (std)	Projection to bit	BUTTERBALL 30C-10HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#04 BUTTERBALL 30C-10HZ (459' FSL & 501' FWL, SEC.10)
Area	COLORADO	Well	BUTTERBALL 30C-10HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	BUTTERBALL 30C-10HZ AWB
Facility	SEC.10-T2N-R67W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	168.240	17.00	Tie-On
117.00	0.460	168.240	117.00	Begin GYRO Surveys
981.00	0.260	236.170	980.99	Tie-Into GYRO Surveys
1166.00	0.310	163.850	1165.99	Begin BHI MWD+IFR Surveys
8018.00	88.756	357.459	7576.28	7" Casing Point
11987.00	89.540	358.440	7570.23	Last BHI MWD+IFR Surveys
12042.00	89.540	358.440	7570.67	Projection to Bit