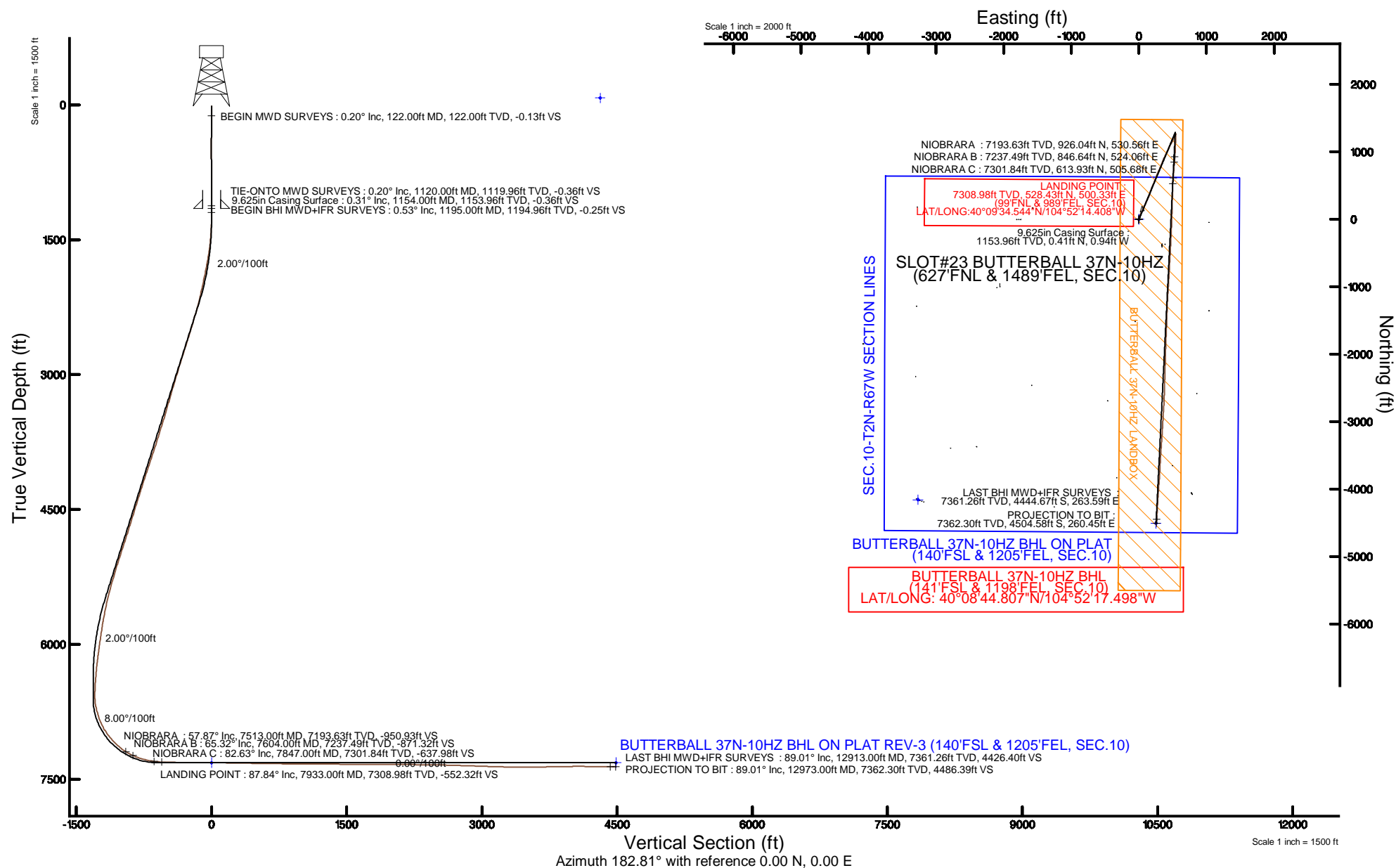


Location:	COLORADO	Slot:	SLOT#23 BUTTERBALL 37N-10HZ (627'FNL & 1489'FEL, SEC.10)
Field:	WELD COUNTY (UTM/TRUE NORTH)	Well:	BUTTERBALL 37N-10HZ
Facility:	SEC.10-T2N-R67W	Wellbore:	BUTTERBALL 37N-10HZ PWB

Plot reference wellpath is BUTTERBALL 37N-10HZ (REV-A.0) PWP	
True vertical depths are referenced to XTREME 24 (16'KB) (RKB)	Grid System: NAD83 / UTM Zone 13 North, US feet
Measured depths are referenced to XTREME 24 (16'KB) (RKB)	North Reference: True north
XTREME 24 (16'KB) (RKB) to Mean Sea Level: 4936 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#23 BUTTERBALL 37N-10HZ (627FNL & 1489FEL, SEC.10):	Depths are in feet
Coordinates are in level referenced to Slot	Created by: amarcar on 15/May/2015



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#23 BUTTERBALL 37N-10HZ (627'FNL & 1489'FEL, SEC.10)
Area	COLORADO	Well	BUTTERBALL 37N-10HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUTTERBALL 37N-10HZ AWB <12973>
Facility	SEC.10-T2N-R67W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / UTM Zone 13 North, US feet	Software System	WellArchitect® 4.1.1
North Reference	True	User	Amarcar
Scale	0.999601	Report Generated	15/May/2015 at 15:47
Convergence at slot	0.08° East	Database/Source file	KERR MCGEE UTM/BUTTERBALL_37N-10HZ_AWB_12973_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	3.10	1806.68	1676052.15	14584346.83	40°09'29.322"N	104°52'20.852"W
Facility Reference Pt			1674246.19	14584341.27	40°09'29.292"N	104°52'44.121"W
Field Reference Pt			1698235.31	14552047.82	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM			
Calculation method	Minimum curvature	XTREME 24 (16'KB) (RKB) to Facility Vertical Datum	4936.00ft
Horizontal Reference Pt	Slot	XTREME 24 (16'KB) (RKB) to Mean Sea Level	4936.00ft
Vertical Reference Pt	XTREME 24 (16'KB) (RKB)	XTREME 24 (16'KB) (RKB) to Mud Line at Slot (SLOT#23 BUTTERBALL 37N-10HZ (627'FNL & 1489'FEL, SEC.10))	4936.00ft
MD Reference Pt	XTREME 24 (16'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	182.81°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#23 BUTTERBALL 37N-10HZ (627°FNL & 1489°FEL, SEC.10)
Area	COLORADO	Well	BUTTERBALL 37N-10HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUTTERBALL 37N-10HZ AWB <12973>
Facility	SEC.10-T2N-R67W		

WELLPATH DATA (130 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	49.300	0.00	0.00	0.00	0.00	40°09'29.322"N	104°52'20.852"W	0.00	
16.00	0.000	49.300	16.00	0.00	0.00	0.00	40°09'29.322"N	104°52'20.852"W	0.00	
122.00	0.200	49.300	122.00	-0.13	0.12	0.14	40°09'29.323"N	104°52'20.850"W	0.19	BEGIN MWD SURVEYS
211.00	0.300	17.800	211.00	-0.46	0.44	0.33	40°09'29.326"N	104°52'20.848"W	0.19	
297.00	0.500	31.300	297.00	-1.01	0.98	0.59	40°09'29.332"N	104°52'20.844"W	0.26	
384.00	0.700	26.000	383.99	-1.83	1.78	1.02	40°09'29.340"N	104°52'20.839"W	0.24	
474.00	0.100	98.400	473.99	-2.33	2.26	1.34	40°09'29.344"N	104°52'20.835"W	0.75	
568.00	0.400	179.600	567.99	-1.99	1.92	1.43	40°09'29.341"N	104°52'20.834"W	0.42	
664.00	0.700	177.600	663.98	-1.07	1.00	1.45	40°09'29.332"N	104°52'20.833"W	0.31	
760.00	0.600	238.700	759.98	-0.21	0.16	1.05	40°09'29.324"N	104°52'20.839"W	0.69	
855.00	1.100	270.800	854.97	0.10	-0.09	-0.29	40°09'29.321"N	104°52'20.856"W	0.71	
948.00	0.200	313.300	947.96	0.03	0.03	-1.30	40°09'29.322"N	104°52'20.869"W	1.03	
1045.00	0.200	46.700	1044.96	-0.20	0.27	-1.30	40°09'29.325"N	104°52'20.869"W	0.30	
1120.00	0.200	65.200	1119.96	-0.36	0.41	-1.09	40°09'29.326"N	104°52'20.866"W	0.09	TIE-ONTO MWD SURVEYS
1195.00	0.530	122.320	1194.96	-0.25	0.28	-0.67	40°09'29.325"N	104°52'20.861"W	0.60	BEGIN BHI MWD+IFR SURVEYS
1290.00	1.420	58.140	1289.95	-0.70	0.67	0.70	40°09'29.329"N	104°52'20.843"W	1.35	
1385.00	3.440	29.670	1384.86	-3.91	3.76	3.11	40°09'29.359"N	104°52'20.812"W	2.41	
1480.00	5.360	18.110	1479.58	-10.74	10.46	5.90	40°09'29.425"N	104°52'20.776"W	2.22	
1575.00	7.030	18.630	1574.02	-20.61	20.19	9.13	40°09'29.521"N	104°52'20.734"W	1.76	
1670.00	9.040	10.620	1668.08	-33.60	33.03	12.37	40°09'29.648"N	104°52'20.693"W	2.42	
1766.00	11.090	10.210	1762.60	-50.23	49.53	15.39	40°09'29.811"N	104°52'20.654"W	2.14	
1860.00	11.620	20.330	1854.77	-68.22	67.31	20.29	40°09'29.987"N	104°52'20.591"W	2.19	
1955.00	12.260	26.630	1947.72	-86.57	85.30	28.13	40°09'30.165"N	104°52'20.490"W	1.53	
2050.00	14.060	27.650	2040.22	-106.28	104.54	38.01	40°09'30.355"N	104°52'20.362"W	1.91	
2146.00	14.610	25.080	2133.23	-128.06	125.83	48.55	40°09'30.565"N	104°52'20.227"W	0.88	
2241.00	15.730	23.990	2224.92	-151.16	148.45	58.87	40°09'30.789"N	104°52'20.094"W	1.22	
2335.00	16.910	23.780	2315.13	-175.81	172.60	69.56	40°09'31.028"N	104°52'19.956"W	1.26	
2430.00	17.340	24.350	2405.92	-201.88	198.14	80.97	40°09'31.280"N	104°52'19.809"W	0.49	
2525.00	18.500	25.080	2496.31	-228.99	224.69	93.20	40°09'31.542"N	104°52'19.652"W	1.24	
2620.00	18.310	23.260	2586.45	-256.92	252.05	105.48	40°09'31.813"N	104°52'19.493"W	0.64	
2715.00	19.290	25.000	2676.38	-285.44	279.99	118.00	40°09'32.089"N	104°52'19.332"W	1.19	
2810.00	18.120	23.930	2766.36	-313.75	307.71	130.63	40°09'32.363"N	104°52'19.170"W	1.28	
2905.00	19.350	24.940	2856.33	-342.11	335.49	143.26	40°09'32.637"N	104°52'19.007"W	1.34	
3000.00	17.710	24.160	2946.40	-370.15	362.94	155.81	40°09'32.909"N	104°52'18.845"W	1.75	
3095.00	16.880	15.620	3037.12	-397.06	389.42	165.44	40°09'33.170"N	104°52'18.721"W	2.81	
3190.00	16.940	16.090	3128.01	-423.98	416.00	172.99	40°09'33.433"N	104°52'18.624"W	0.16	
3285.00	16.630	20.290	3218.97	-450.41	442.05	181.54	40°09'33.690"N	104°52'18.514"W	1.32	
3380.00	17.180	19.790	3309.86	-476.80	468.00	191.00	40°09'33.947"N	104°52'18.392"W	0.60	
3475.00	16.820	23.390	3400.71	-503.09	493.82	201.21	40°09'34.202"N	104°52'18.261"W	1.17	
3571.00	17.830	24.240	3492.36	-529.77	519.97	212.76	40°09'34.460"N	104°52'18.112"W	1.08	
3665.00	18.770	20.560	3581.60	-557.57	547.25	223.98	40°09'34.730"N	104°52'17.967"W	1.58	
3760.00	17.590	19.510	3671.86	-585.88	575.09	234.14	40°09'35.005"N	104°52'17.836"W	1.29	
3855.00	18.120	21.310	3762.29	-613.64	602.39	244.30	40°09'35.275"N	104°52'17.705"W	0.81	
3950.00	19.590	23.040	3852.19	-642.59	630.81	255.90	40°09'35.556"N	104°52'17.556"W	1.66	
4045.00	19.230	20.560	3941.79	-672.44	660.11	267.63	40°09'35.845"N	104°52'17.405"W	0.95	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#23 BUTTERBALL 37N-10HZ (627'FNL & 1489'FEL, SEC.10)
Area	COLORADO	Well	BUTTERBALL 37N-10HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUTTERBALL 37N-10HZ AWP <12973>
Facility	SEC.10-T2N-R67W		

WELLPATH DATA (130 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4140.00	20.370	25.290	4031.18	-702.62	689.71	280.19	40°09'36.138"N	104°52'17.243"W	2.07	
4234.00	19.520	24.530	4119.54	-732.33	718.79	293.70	40°09'36.425"N	104°52'17.069"W	0.95	
4329.00	18.180	23.110	4209.44	-760.97	746.86	306.11	40°09'36.703"N	104°52'16.909"W	1.49	
4424.00	18.660	24.220	4299.57	-789.02	774.35	318.16	40°09'36.974"N	104°52'16.754"W	0.63	
4519.00	19.350	22.110	4389.40	-818.02	802.80	330.32	40°09'37.255"N	104°52'16.598"W	1.02	
4614.00	17.270	18.090	4479.58	-846.48	830.79	340.62	40°09'37.532"N	104°52'16.465"W	2.56	
4709.00	17.440	22.910	4570.26	-873.46	857.30	350.54	40°09'37.794"N	104°52'16.337"W	1.52	
4803.00	18.320	20.760	4659.72	-900.74	884.09	361.26	40°09'38.059"N	104°52'16.199"W	1.17	
4898.00	19.020	26.690	4749.73	-929.10	911.89	373.51	40°09'38.333"N	104°52'16.041"W	2.13	
4993.00	19.140	26.640	4839.51	-957.50	939.64	387.44	40°09'38.608"N	104°52'15.862"W	0.13	
5088.00	20.200	26.900	4928.97	-986.73	968.19	401.85	40°09'38.890"N	104°52'15.676"W	1.12	
5183.00	18.830	25.670	5018.51	-1015.83	996.64	415.91	40°09'39.171"N	104°52'15.495"W	1.51	
5277.00	19.190	22.470	5107.39	-1044.35	1024.59	428.39	40°09'39.447"N	104°52'15.334"W	1.17	
5372.00	17.190	21.600	5197.63	-1072.35	1052.07	439.52	40°09'39.719"N	104°52'15.191"W	2.12	
5467.00	16.440	26.330	5288.58	-1097.97	1077.17	450.66	40°09'39.967"N	104°52'15.048"W	1.64	
5562.00	17.450	28.590	5379.45	-1123.12	1101.73	463.43	40°09'40.209"N	104°52'14.883"W	1.27	
5657.00	15.350	29.980	5470.58	-1147.14	1125.13	476.54	40°09'40.441"N	104°52'14.714"W	2.25	
5752.00	14.190	27.550	5562.44	-1168.90	1146.34	488.20	40°09'40.650"N	104°52'14.564"W	1.38	
5847.00	11.510	25.610	5655.05	-1188.22	1165.22	497.69	40°09'40.837"N	104°52'14.442"W	2.86	
5942.00	10.240	19.710	5748.35	-1205.03	1181.72	504.63	40°09'41.000"N	104°52'14.352"W	1.78	
6036.00	8.610	19.900	5841.08	-1219.76	1196.20	509.85	40°09'41.143"N	104°52'14.285"W	1.73	
6131.00	9.190	26.980	5934.94	-1233.47	1209.65	515.71	40°09'41.276"N	104°52'14.210"W	1.30	
6226.00	8.760	25.590	6028.77	-1247.07	1222.93	522.28	40°09'41.407"N	104°52'14.125"W	0.51	
6321.00	8.340	28.960	6122.72	-1259.92	1235.48	528.74	40°09'41.531"N	104°52'14.042"W	0.69	
6416.00	6.750	27.360	6216.89	-1271.18	1246.47	534.64	40°09'41.640"N	104°52'13.966"W	1.69	
6511.00	5.760	28.240	6311.32	-1280.57	1255.63	539.46	40°09'41.730"N	104°52'13.904"W	1.05	
6606.00	4.730	8.170	6405.93	-1288.77	1263.71	542.27	40°09'41.810"N	104°52'13.867"W	2.20	
6700.00	1.770	12.560	6499.77	-1294.06	1268.96	543.14	40°09'41.862"N	104°52'13.856"W	3.16	
6795.00	0.670	136.210	6594.76	-1295.13	1269.99	543.84	40°09'41.872"N	104°52'13.847"W	2.33	
6889.00	11.550	176.700	6688.09	-1285.36	1260.17	544.77	40°09'41.775"N	104°52'13.835"W	11.75	
6984.00	17.390	176.450	6780.04	-1261.78	1236.49	546.20	40°09'41.541"N	104°52'13.817"W	6.15	
7079.00	22.780	182.270	6869.24	-1229.25	1203.91	546.35	40°09'41.219"N	104°52'13.815"W	6.04	
7174.00	31.700	184.830	6953.62	-1185.83	1160.58	543.51	40°09'40.791"N	104°52'13.852"W	9.47	
7269.00	38.560	183.730	7031.27	-1131.21	1106.09	539.48	40°09'40.252"N	104°52'13.904"W	7.25	
7364.00	44.780	180.390	7102.21	-1068.11	1043.02	537.32	40°09'39.629"N	104°52'13.931"W	6.95	
7459.00	54.580	184.390	7163.62	-995.79	970.77	534.12	40°09'38.915"N	104°52'13.973"W	10.80	
7513.00†	57.871	184.711	7193.63	-950.93	926.04	530.56	40°09'38.473"N	104°52'14.018"W	6.11	NIOBRARA
7554.00	60.370	184.940	7214.67	-915.77	890.98	527.60	40°09'38.127"N	104°52'14.057"W	6.11	
7604.00†	65.316	184.198	7237.49	-871.32	846.64	524.06	40°09'37.689"N	104°52'14.102"W	9.98	NIOBRARA B
7649.00	69.770	183.580	7254.67	-829.75	805.16	521.25	40°09'37.279"N	104°52'14.138"W	9.98	
7744.00	75.900	185.020	7282.70	-739.06	714.70	514.42	40°09'36.385"N	104°52'14.226"W	6.61	
7839.00	82.150	184.920	7300.78	-645.91	621.83	506.35	40°09'35.467"N	104°52'14.330"W	6.58	
7847.00†	82.634	184.710	7301.84	-637.98	613.93	505.68	40°09'35.389"N	104°52'14.339"W	6.59	NIOBRARA C
7933.00	87.840	182.470	7308.98	-552.32	528.43	500.33	40°09'34.544"N	104°52'14.408"W	6.59	LANDING POINT
8029.00	88.980	181.580	7311.64	-456.37	432.53	496.94	40°09'33.596"N	104°52'14.452"W	1.51	

Actual Wellpath Report

BUTTERBALL 37N-10HZ AWP
Page 4 of 6

REFERENCE WELLPATH IDENTIFICATION				
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#23 BUTTERBALL 37N-10HZ (627°FNL & 1489°FEL, SEC.10)	
Area	COLORADO	Well	BUTTERBALL 37N-10HZ	
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUTTERBALL 37N-10HZ AWB <12973>	
Facility	SEC.10-T2N-R67W			

WELLPATH DATA (130 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8124.00	88.510	180.700	7313.72	-361.43	337.57	495.05	40°09'32.658"N	104°52'14.476"W	1.05	
8225.00	89.350	181.110	7315.61	-260.51	236.60	493.45	40°09'31.660"N	104°52'14.497"W	0.93	
8320.00	89.780	182.430	7316.33	-165.53	141.65	490.52	40°09'30.722"N	104°52'14.534"W	1.46	
8414.00	89.940	181.620	7316.56	-71.54	47.71	487.20	40°09'29.793"N	104°52'14.577"W	0.88	
8604.00	89.570	182.060	7317.37	118.43	-142.19	481.10	40°09'27.917"N	104°52'14.656"W	0.30	
8699.00	89.010	183.310	7318.55	213.42	-237.07	476.65	40°09'26.979"N	104°52'14.713"W	1.44	
8889.00	88.770	182.540	7322.23	403.38	-426.79	466.95	40°09'25.104"N	104°52'14.838"W	0.42	
8984.00	89.540	183.300	7323.63	498.37	-521.65	462.11	40°09'24.167"N	104°52'14.900"W	1.14	
9173.00	88.890	183.310	7326.22	687.35	-710.32	451.22	40°09'22.303"N	104°52'15.041"W	0.34	
9362.00	89.140	183.150	7329.47	876.31	-898.99	440.57	40°09'20.438"N	104°52'15.178"W	0.16	
9552.00	89.880	183.880	7331.09	1066.29	-1088.63	428.92	40°09'18.564"N	104°52'15.328"W	0.55	
9647.00	89.780	182.620	7331.37	1161.28	-1183.47	423.54	40°09'17.627"N	104°52'15.397"W	1.33	
9836.00	89.660	182.270	7332.30	1350.28	-1372.30	415.47	40°09'15.761"N	104°52'15.501"W	0.20	
10026.00	88.890	181.410	7334.70	1540.23	-1562.18	409.37	40°09'13.884"N	104°52'15.580"W	0.61	
10120.00	89.440	182.650	7336.07	1634.21	-1656.11	406.04	40°09'12.956"N	104°52'15.623"W	1.44	
10310.00	89.930	182.320	7337.12	1824.20	-1845.93	397.81	40°09'11.080"N	104°52'15.729"W	0.31	
10500.00	90.520	181.180	7336.37	2014.17	-2035.83	392.00	40°09'09.204"N	104°52'15.804"W	0.68	
10594.00	90.000	182.110	7335.94	2108.15	-2129.79	389.31	40°09'08.275"N	104°52'15.838"W	1.13	
10689.00	88.890	181.850	7336.86	2203.13	-2224.73	386.02	40°09'07.337"N	104°52'15.881"W	1.20	
10784.00	89.470	181.270	7338.22	2298.10	-2319.68	383.44	40°09'06.399"N	104°52'15.914"W	0.86	
10973.00	88.950	181.740	7340.83	2487.03	-2508.60	378.47	40°09'04.532"N	104°52'15.978"W	0.37	
11068.00	88.980	182.180	7342.54	2582.00	-2603.53	375.23	40°09'03.594"N	104°52'16.020"W	0.46	
11163.00	87.900	182.610	7345.13	2676.96	-2698.41	371.26	40°09'02.656"N	104°52'16.071"W	1.22	
11258.00	88.210	183.710	7348.35	2771.90	-2793.21	366.02	40°09'01.719"N	104°52'16.138"W	1.20	
11448.00	88.120	182.710	7354.44	2961.80	-2982.81	355.39	40°08'59.846"N	104°52'16.275"W	0.53	
11543.00	88.030	183.710	7357.63	3056.74	-3077.61	350.07	40°08'58.909"N	104°52'16.344"W	1.06	
11638.00	88.580	183.610	7360.44	3151.69	-3172.37	344.01	40°08'57.972"N	104°52'16.422"W	0.59	
11733.00	88.270	184.540	7363.05	3246.63	-3267.09	337.26	40°08'57.036"N	104°52'16.509"W	1.03	
11827.00	90.120	183.720	7364.37	3340.59	-3360.83	330.50	40°08'56.110"N	104°52'16.596"W	2.15	
11922.00	90.580	183.420	7363.79	3435.58	-3455.65	324.58	40°08'55.173"N	104°52'16.672"W	0.58	
12017.00	90.280	182.830	7363.08	3530.58	-3550.50	319.40	40°08'54.236"N	104°52'16.739"W	0.70	
12111.00	89.570	183.380	7363.20	3624.57	-3644.36	314.31	40°08'53.308"N	104°52'16.804"W	0.96	
12206.00	90.920	183.340	7362.80	3719.57	-3739.20	308.74	40°08'52.371"N	104°52'16.876"W	1.42	
12396.00	91.110	183.970	7359.43	3909.51	-3928.78	296.63	40°08'50.498"N	104°52'17.032"W	0.35	
12491.00	90.710	184.490	7357.92	4004.47	-4023.51	289.63	40°08'49.561"N	104°52'17.122"W	0.69	
12586.00	89.690	184.010	7357.59	4099.44	-4118.25	282.59	40°08'48.625"N	104°52'17.213"W	1.19	
12681.00	89.410	183.130	7358.34	4194.43	-4213.06	276.67	40°08'47.688"N	104°52'17.289"W	0.97	
12776.00	89.380	183.410	7359.34	4289.42	-4307.90	271.25	40°08'46.751"N	104°52'17.359"W	0.30	
12913.00	89.010	183.000	7361.26	4426.40	-4444.67	263.59	40°08'45.399"N	104°52'17.458"W	0.40	LAST BHI MWD+IFR SURVEYS
12973.00	89.010	183.000	7362.30	4486.39	-4504.58	260.45	40°08'44.807"N	104°52'17.498"W	0.00	PROJECTION TO BIT

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#23 BUTTERBALL 37N-10HZ (627'FNL & 1489'FEL, SEC.10)
Area	COLORADO	Well	BUTTERBALL 37N-10HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUTTERBALL 37N-10HZ AWB <12973>
Facility	SEC.10-T2N-R67W		

HOLE & CASING SECTIONS - Ref Wellbore: BUTTERBALL 37N-10HZ AWB <12973> Ref Wellpath: BUTTERBALL 37N-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	16.00	1164.00	1148.00	16.00	1163.96	0.00	0.00	0.39	-0.89
9.625in Casing Surface	16.00	1154.00	1138.00	16.00	1153.96	0.00	0.00	0.41	-0.94
7.875in Open Hole	1164.00	12973.00	11809.00	1163.96	7362.30	0.39	-0.89	-4504.58	260.45

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.10-T2N-R67W SECTION LINES	-77.00	-4157.52	-3268.09	1672791.33	14580186.29	40°08'48.235"N	104°53'02.936"W	polygon
BUTTERBALL 37N-10HZ LANDBOX	7316.00	0.00	0.00	1676052.15	14584346.83	40°09'29.322"N	104°52'20.852"W	polygon
BUTTERBALL 37N-10HZ BHL ON PLAT REV-3 (140'FSL & 1205'FEL, SEC.10)	7316.00	-4505.98	253.54	1676312.05	14579843.02	40°08'44.794"N	104°52'17.587"W	point

WELLPATH COMPOSITION - Ref Wellbore: BUTTERBALL 37N-10HZ AWB <12973> Ref Wellpath: BUTTERBALL 37N-10HZ AWP						
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore		
16.00	1120.00	ISCWSA MWD, Rev. 2 (Standard)	CATHEDRAL MWD SURVEYS 13.5" <122-1120>	BUTTERBALL 37N-10HZ AWB <12973>		
1120.00	12913.00	Custom APC, ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHI MWD+IFR SURVEYS 7 7/8" <1195-12913>	BUTTERBALL 37N-10HZ AWB <12973>		
12913.00	12973.00	Blind Drilling (std)	Projection to bit	BUTTERBALL 37N-10HZ AWB <12973>		



Actual Wellpath Report

BUTTERBALL 37N-10HZ AWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#23 BUTTERBALL 37N-10HZ (627'FNL & 1489'FEL, SEC.10)
Area	COLORADO	Well	BUTTERBALL 37N-10HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUTTERBALL 37N-10HZ AWB <12973>
Facility	SEC.10-T2N-R67W		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
122.00	0.200	49.300	122.00	BEGIN MWD SURVEYS	
1120.00	0.200	65.200	1119.96	TIE-ONTO MWD SURVEYS	
1195.00	0.530	122.320	1194.96	BEGIN BHI MWD+IFR SURVEYS	
7513.00	57.871	184.711	7193.63	NIOBRARA	
7604.00	65.316	184.198	7237.49	NIOBRARA B	
7847.00	82.634	184.710	7301.84	NIOBRARA C	
7933.00	87.840	182.470	7308.98	LANDING POINT	
12913.00	89.010	183.000	7361.26	LAST BHI MWD+IFR SURVEYS	
12973.00	89.010	183.000	7362.30	PROJECTION TO BIT	