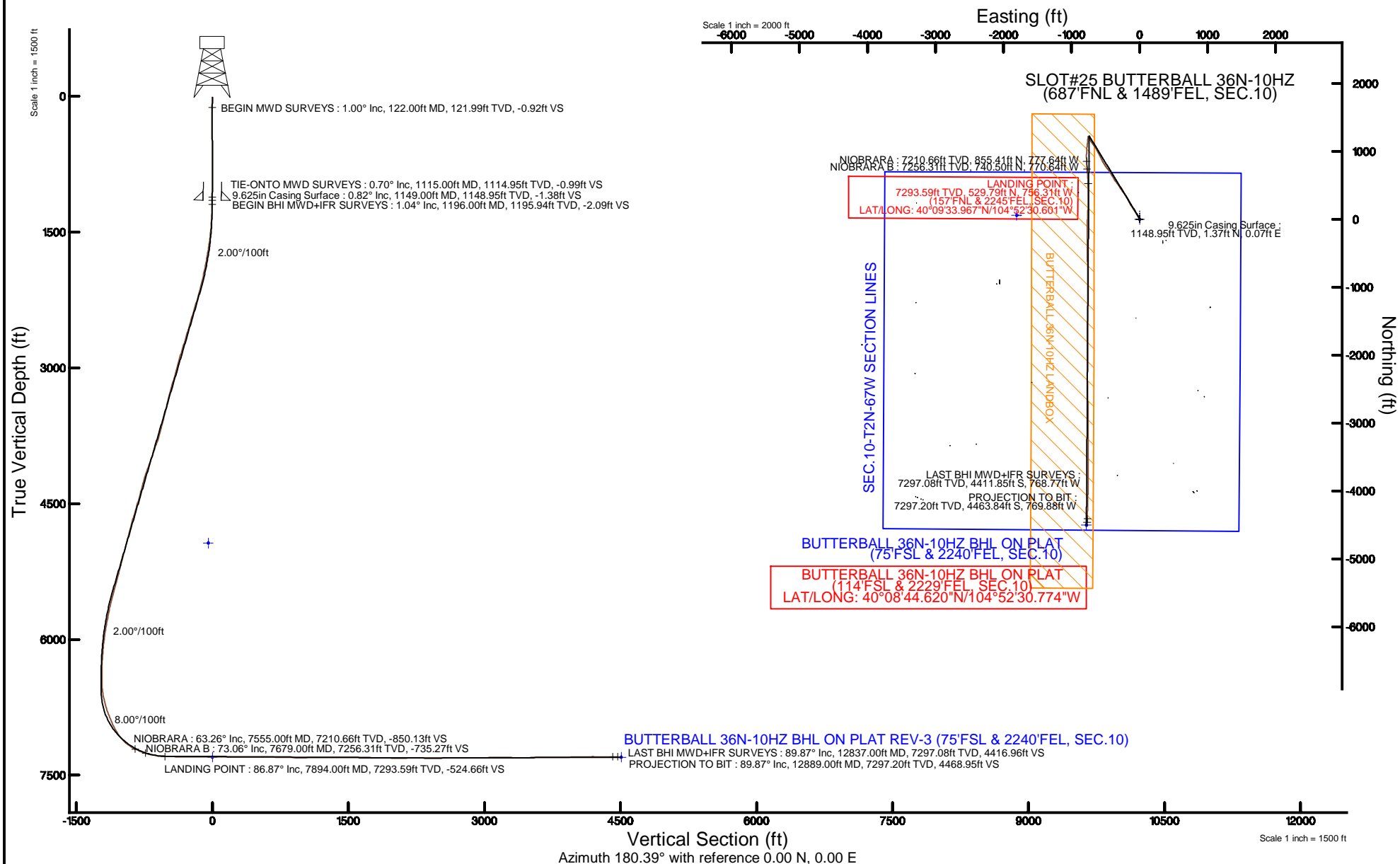


KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location:	COLORADO	Slot:	SLOT#25 BUTTERBALL 36N-10HZ (687°FNL & 1489°FEL, SEC.10)
Field:	WELD COUNTY (UTM/TRUE NORTH)	Well:	BUTTERBALL 36N-10HZ
Facility:	SEC.10-T2N-R67W	Wellbore:	BUTTERBALL 36N-10HZ PWB

Plot reference wellpath is BUTTERBALL 36N-10HZ (REV-B.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#25 BUTTERBALL 36N-10HZ (687FNL & 1489FEL, SEC.10): 0 feet	Depths are in feet
Coordinates are in foot referenced to Slot	Created by: amarcos on 18/May/2015





# Actual Wellpath Report

BUTTERBALL 36N-10HZ AWP  
Page 1 of 6



## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#25 BUTTERBALL 36N-10HZ (687'FNL & 1489'FEL, SEC.10)
Area	COLORADO	Well	BUTTERBALL 36N-10HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUTTERBALL 36N-10HZ AWB <12889>
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	18/May/2015 at 08:08
Convergence at slot	0.08° East	Database/Source file	KERR MCGEE UTM/BUTTERBALL_36N-10HZ_AWB_12889_.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-56.60	1806.07	1676051.61	14584287.15	40°09'28.732"N	104°52'20.860"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#25 BUTTERBALL 36N-10HZ (687'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	180.39°

**REFERENCE WELLPATH IDENTIFICATION**

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#25 BUTTERBALL 36N-10HZ (687'FNL & 1489'FEL, SEC.10)
Area	COLORADO	Well	BUTTERBALL 36N-10HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUTTERBALL 36N-10HZ AWB <12889>
Facility	SEC.10-T2N-R67W		

**WELLPATH DATA (119 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	354.100	0.00	0.00	0.00	0.00	40°09'28.732"N	104°52'20.860"W	0.00	
16.00	0.000	354.100	16.00	0.00	0.00	0.00	40°09'28.732"N	104°52'20.860"W	0.00	
122.00	1.000	354.100	121.99	-0.92	0.92	-0.10	40°09'28.741"N	104°52'20.861"W	0.94	BEGIN MWD SURVEYS
211.00	0.500	351.400	210.99	-2.07	2.08	-0.23	40°09'28.753"N	104°52'20.863"W	0.56	
297.00	0.300	139.700	296.99	-2.27	2.28	-0.14	40°09'28.754"N	104°52'20.862"W	0.90	
384.00	0.600	157.100	383.98	-1.68	1.68	0.18	40°09'28.749"N	104°52'20.858"W	0.38	
474.00	0.900	146.300	473.98	-0.67	0.66	0.76	40°09'28.739"N	104°52'20.850"W	0.37	
568.00	0.500	256.900	567.97	0.04	-0.05	0.77	40°09'28.732"N	104°52'20.850"W	1.25	
664.00	0.500	256.500	663.97	0.24	-0.24	-0.05	40°09'28.730"N	104°52'20.861"W	0.00	
760.00	0.600	261.400	759.96	0.42	-0.41	-0.95	40°09'28.728"N	104°52'20.872"W	0.12	
855.00	0.100	25.400	854.96	0.42	-0.41	-1.41	40°09'28.728"N	104°52'20.878"W	0.70	
948.00	0.300	46.900	947.96	0.18	-0.17	-1.20	40°09'28.730"N	104°52'20.875"W	0.23	
1045.00	0.600	40.800	1044.96	-0.38	0.39	-0.68	40°09'28.736"N	104°52'20.869"W	0.31	
1115.00	0.700	39.200	1114.95	-0.99	0.99	-0.17	40°09'28.742"N	104°52'20.862"W	0.15	TIE-ONTO MWD SURVEYS
1196.00	1.040	13.780	1195.94	-2.09	2.09	0.32	40°09'28.753"N	104°52'20.856"W	0.63	BEGIN BHI MWD+IFR SURVEYS
1291.00	2.690	339.910	1290.89	-5.02	5.02	-0.24	40°09'28.782"N	104°52'20.863"W	2.02	
1386.00	4.600	323.750	1385.70	-10.17	10.19	-3.26	40°09'28.833"N	104°52'20.902"W	2.26	
1481.00	5.800	334.350	1480.31	-17.54	17.59	-7.59	40°09'28.906"N	104°52'20.958"W	1.61	
1576.00	8.250	330.900	1574.59	-27.79	27.87	-12.98	40°09'29.007"N	104°52'21.027"W	2.62	
1671.00	9.680	329.880	1668.42	-40.60	40.74	-20.31	40°09'29.135"N	104°52'21.122"W	1.51	
1766.00	11.910	326.450	1761.74	-55.62	55.82	-29.73	40°09'29.284"N	104°52'21.243"W	2.44	
1861.00	13.150	326.020	1854.47	-72.67	72.95	-41.19	40°09'29.453"N	104°52'21.391"W	1.31	
1956.00	14.270	328.660	1946.77	-91.55	91.91	-53.32	40°09'29.640"N	104°52'21.547"W	1.35	
2051.00	15.410	328.960	2038.60	-112.28	112.73	-65.92	40°09'29.846"N	104°52'21.709"W	1.20	
2146.00	17.530	328.240	2129.69	-135.16	135.71	-79.96	40°09'30.073"N	104°52'21.890"W	2.24	
2241.00	18.990	326.560	2219.91	-160.12	160.77	-96.01	40°09'30.321"N	104°52'22.097"W	1.63	
2336.00	19.800	326.710	2309.52	-186.35	187.12	-113.36	40°09'30.581"N	104°52'22.320"W	0.85	
2431.00	19.220	328.270	2399.06	-212.98	213.87	-130.42	40°09'30.845"N	104°52'22.540"W	0.82	
2526.00	18.260	333.920	2489.03	-239.55	240.54	-145.18	40°09'31.109"N	104°52'22.730"W	2.16	
2621.00	17.270	336.660	2579.50	-265.79	266.86	-157.31	40°09'31.369"N	104°52'22.886"W	1.36	
2716.00	18.620	335.040	2669.88	-292.40	293.56	-169.30	40°09'31.633"N	104°52'23.041"W	1.51	
2811.00	20.120	330.530	2759.50	-320.28	321.54	-183.74	40°09'31.909"N	104°52'23.227"W	2.23	
2906.00	20.220	324.480	2848.69	-347.76	349.13	-201.32	40°09'32.182"N	104°52'23.453"W	2.20	
3001.00	19.610	321.960	2938.01	-373.54	375.04	-220.68	40°09'32.438"N	104°52'23.702"W	1.11	
3096.00	18.780	321.660	3027.73	-397.96	399.59	-239.99	40°09'32.681"N	104°52'23.951"W	0.88	
3191.00	19.600	325.010	3117.45	-422.88	424.64	-258.62	40°09'32.928"N	104°52'24.191"W	1.44	
3286.00	18.970	326.300	3207.12	-448.66	450.54	-276.32	40°09'33.184"N	104°52'24.419"W	0.80	
3381.00	16.980	330.140	3297.48	-473.44	475.42	-291.80	40°09'33.430"N	104°52'24.618"W	2.44	
3476.00	15.880	321.920	3388.61	-495.60	497.69	-306.72	40°09'33.650"N	104°52'24.810"W	2.70	
3571.00	16.350	324.840	3479.88	-516.66	518.85	-322.44	40°09'33.859"N	104°52'25.013"W	0.99	
3666.00	16.880	324.380	3570.91	-538.69	541.00	-338.17	40°09'34.078"N	104°52'25.216"W	0.57	
3761.00	17.420	323.690	3661.69	-561.25	563.67	-354.63	40°09'34.302"N	104°52'25.427"W	0.61	
3856.00	19.490	326.950	3751.80	-585.88	588.41	-371.69	40°09'34.547"N	104°52'25.647"W	2.43	
3951.00	23.580	333.050	3840.16	-616.00	618.65	-388.96	40°09'34.846"N	104°52'25.870"W	4.90	
4046.00	21.700	323.800	3927.87	-647.00	649.77	-407.95	40°09'35.153"N	104°52'26.114"W	4.23	

**REFERENCE WELLPATH IDENTIFICATION**

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#25 BUTTERBALL 36N-10HZ (687'FNL & 1489'FEL, SEC.10)
Area	COLORADO	Well	BUTTERBALL 36N-10HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUTTERBALL 36N-10HZ AWP <12889>
Facility	SEC.10-T2N-R67W		

**WELLPATH DATA (119 stations) † = interpolated/extrapolated station**

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4141.00	23.350	327.630	4015.62	-676.94	679.85	-428.40	40°09'35.450"N	104°52'26.378"W	2.32	
4235.00	24.120	325.830	4101.67	-708.42	711.48	-449.16	40°09'35.763"N	104°52'26.645"W	1.12	
4330.00	22.100	323.970	4189.04	-738.79	741.99	-470.58	40°09'36.064"N	104°52'26.921"W	2.26	
4425.00	18.890	324.140	4278.02	-765.58	768.91	-490.11	40°09'36.330"N	104°52'27.172"W	3.38	
4520.00	17.260	326.820	4368.33	-789.73	793.18	-506.83	40°09'36.570"N	104°52'27.388"W	1.93	
4614.00	17.590	328.660	4458.02	-813.43	816.98	-521.85	40°09'36.805"N	104°52'27.581"W	0.68	
4709.00	18.310	330.690	4548.39	-838.60	842.25	-536.62	40°09'37.055"N	104°52'27.772"W	1.00	
4804.00	19.080	333.200	4638.38	-865.38	869.12	-550.93	40°09'37.321"N	104°52'27.956"W	1.17	
4899.00	16.670	333.100	4728.79	-891.30	895.14	-564.09	40°09'37.578"N	104°52'28.125"W	2.54	
4994.00	16.830	335.790	4819.76	-915.92	919.83	-575.90	40°09'37.822"N	104°52'28.277"W	0.83	
5088.00	14.810	332.840	4910.20	-938.94	942.94	-586.96	40°09'38.050"N	104°52'28.420"W	2.31	
5183.00	16.160	333.440	5001.74	-961.49	965.57	-598.42	40°09'38.274"N	104°52'28.568"W	1.43	
5278.00	16.390	330.830	5092.94	-984.94	989.10	-610.86	40°09'38.506"N	104°52'28.728"W	0.81	
5373.00	16.610	332.490	5184.03	-1008.60	1012.84	-623.67	40°09'38.741"N	104°52'28.893"W	0.55	
5468.00	17.440	328.590	5274.87	-1032.70	1037.04	-637.36	40°09'38.980"N	104°52'29.069"W	1.49	
5563.00	18.760	325.420	5365.17	-1057.32	1061.76	-653.45	40°09'39.224"N	104°52'29.276"W	1.73	
5657.00	19.580	326.590	5453.95	-1082.79	1087.36	-670.70	40°09'39.477"N	104°52'29.499"W	0.96	
5753.00	16.390	324.140	5545.25	-1107.09	1111.77	-687.50	40°09'39.718"N	104°52'29.715"W	3.41	
5847.00	15.070	324.750	5635.73	-1127.72	1132.50	-702.32	40°09'39.923"N	104°52'29.906"W	1.42	
5942.00	14.190	321.610	5727.65	-1146.83	1151.71	-716.68	40°09'40.113"N	104°52'30.091"W	1.25	
6037.00	12.350	326.450	5820.11	-1164.34	1169.31	-729.53	40°09'40.287"N	104°52'30.256"W	2.26	
6132.00	9.540	339.580	5913.39	-1180.14	1185.16	-737.89	40°09'40.444"N	104°52'30.364"W	3.94	
6227.00	7.690	336.210	6007.31	-1193.30	1198.35	-743.20	40°09'40.574"N	104°52'30.432"W	2.02	
6322.00	6.180	335.540	6101.62	-1203.73	1208.82	-747.88	40°09'40.678"N	104°52'30.493"W	1.59	
6417.00	4.250	331.330	6196.22	-1211.45	1216.57	-751.69	40°09'40.754"N	104°52'30.542"W	2.07	
6512.00	2.050	322.470	6291.07	-1215.87	1221.00	-754.41	40°09'40.798"N	104°52'30.577"W	2.36	
6606.00	0.170	3.770	6385.05	-1217.34	1222.48	-755.43	40°09'40.812"N	104°52'30.590"W	2.05	
6701.00	1.040	168.510	6480.04	-1216.63	1221.77	-755.25	40°09'40.805"N	104°52'30.588"W	1.27	
6796.00	7.350	184.530	6574.74	-1209.72	1214.86	-755.56	40°09'40.737"N	104°52'30.592"W	6.69	
6891.00	12.880	187.960	6668.23	-1193.15	1198.31	-757.51	40°09'40.574"N	104°52'30.617"W	5.85	
6986.00	17.430	185.920	6759.90	-1168.48	1173.65	-760.44	40°09'40.330"N	104°52'30.654"W	4.82	
7081.00	21.940	185.300	6849.33	-1136.62	1141.81	-763.55	40°09'40.015"N	104°52'30.694"W	4.75	
7175.00	24.220	187.030	6935.80	-1099.97	1105.19	-767.53	40°09'39.653"N	104°52'30.746"W	2.53	
7271.00	30.870	187.260	7020.87	-1055.91	1061.16	-773.06	40°09'39.218"N	104°52'30.817"W	6.93	
7366.00	41.820	183.170	7097.28	-999.90	1005.18	-777.91	40°09'38.665"N	104°52'30.879"W	11.80	
7461.00	53.300	180.100	7161.29	-929.93	935.23	-779.73	40°09'37.974"N	104°52'30.903"W	12.31	
7555.00†	63.264	177.059	7210.66	-850.13	855.41	-777.64	40°09'37.185"N	104°52'30.876"W	10.95	NIOBRARA
7556.00	63.370	177.030	7211.11	-849.24	854.52	-777.59	40°09'37.176"N	104°52'30.875"W	10.95	
7651.00	71.250	176.230	7247.73	-761.85	767.10	-772.43	40°09'36.312"N	104°52'30.809"W	8.33	
7679.00†	73.060	176.070	7256.31	-735.27	740.50	-770.64	40°09'36.050"N	104°52'30.786"W	6.49	NIOBRARA B
7746.00	77.390	175.700	7273.39	-670.70	675.90	-765.99	40°09'35.411"N	104°52'30.726"W	6.49	
7841.00	83.510	175.830	7289.14	-577.37	582.52	-759.07	40°09'34.488"N	104°52'30.637"W	6.44	
7894.00†	86.866	178.174	7293.59	-524.66	529.79	-756.31	40°09'33.967"N	104°52'30.601"W	7.71	LANDING POINT
7936.00	89.530	180.020	7294.91	-482.70	487.82	-755.65	40°09'33.553"N	104°52'30.593"W	7.71	
8031.00	89.410	180.010	7295.79	-387.70	392.82	-755.68	40°09'32.614"N	104°52'30.593"W	0.13	

**REFERENCE WELLPATH IDENTIFICATION**

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#25 BUTTERBALL 36N-10HZ (687'FNL & 1489'FEL, SEC.10)
Area	COLORADO	Well	BUTTERBALL 36N-10HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUTTERBALL 36N-10HZ AWB <12889>
Facility	SEC.10-T2N-R67W		

**WELLPATH DATA (119 stations)**

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8126.00	89.220	179.380	7296.92	-292.72	297.83	-755.17	40°09'31.675"N	104°52'30.586"W	0.69	
8221.00	88.920	182.160	7298.47	-197.74	202.86	-756.45	40°09'30.737"N	104°52'30.603"W	2.94	
8316.00	89.870	182.820	7299.47	-102.81	107.96	-760.58	40°09'29.799"N	104°52'30.656"W	1.22	
8505.00	90.760	182.430	7298.43	86.04	-80.84	-769.23	40°09'27.933"N	104°52'30.767"W	0.51	
8600.00	89.870	180.900	7297.91	181.01	-175.79	-771.99	40°09'26.995"N	104°52'30.803"W	1.86	
8790.00	90.030	178.920	7298.07	370.99	-365.78	-771.69	40°09'25.117"N	104°52'30.799"W	1.05	
8979.00	89.560	178.760	7298.75	559.92	-554.74	-767.87	40°09'23.250"N	104°52'30.749"W	0.26	
9169.00	88.330	178.290	7302.25	749.79	-744.64	-762.98	40°09'21.373"N	104°52'30.686"W	0.69	
9358.00	89.500	180.630	7305.83	938.71	-933.58	-761.20	40°09'19.506"N	104°52'30.663"W	1.38	
9453.00	90.580	180.210	7305.76	1033.71	-1028.58	-761.89	40°09'18.567"N	104°52'30.672"W	1.22	
9642.00	90.430	180.370	7304.09	1222.70	-1217.57	-762.85	40°09'16.700"N	104°52'30.685"W	0.12	
9832.00	90.270	180.770	7302.93	1412.70	-1407.55	-764.74	40°09'14.822"N	104°52'30.709"W	0.23	
10022.00	89.720	180.860	7302.95	1602.69	-1597.53	-767.44	40°09'12.945"N	104°52'30.744"W	0.29	
10211.00	87.990	179.900	7306.73	1791.64	-1786.48	-768.70	40°09'11.078"N	104°52'30.760"W	1.05	
10401.00	89.560	180.350	7310.79	1981.59	-1976.43	-769.11	40°09'09.201"N	104°52'30.765"W	0.86	
10590.00	90.730	179.590	7310.31	2170.58	-2165.43	-769.01	40°09'07.333"N	104°52'30.764"W	0.74	
10780.00	91.100	178.900	7307.28	2360.52	-2355.39	-766.51	40°09'05.456"N	104°52'30.731"W	0.41	
10969.00	89.690	178.860	7305.97	2549.44	-2544.34	-762.81	40°09'03.589"N	104°52'30.684"W	0.75	
11159.00	89.260	177.930	7307.71	2739.32	-2734.26	-757.49	40°09'01.712"N	104°52'30.615"W	0.54	
11349.00	90.920	181.030	7307.42	2929.26	-2924.22	-755.77	40°08'59.835"N	104°52'30.593"W	1.85	
11539.00	90.830	180.250	7304.51	3119.24	-3114.18	-757.89	40°08'57.957"N	104°52'30.620"W	0.41	
11729.00	88.460	180.030	7305.69	3309.22	-3304.16	-758.36	40°08'56.080"N	104°52'30.626"W	1.25	
11918.00	91.600	180.000	7305.59	3498.19	-3493.14	-758.40	40°08'54.212"N	104°52'30.626"W	1.66	
12107.00	90.000	178.980	7302.95	3687.14	-3682.11	-756.72	40°08'52.345"N	104°52'30.605"W	1.00	
12297.00	90.760	180.460	7301.69	3877.12	-3872.09	-755.79	40°08'50.468"N	104°52'30.593"W	0.88	
12487.00	91.720	181.890	7297.58	4067.05	-4062.00	-759.69	40°08'48.591"N	104°52'30.643"W	0.91	
12677.00	89.290	181.390	7295.91	4256.98	-4251.90	-765.13	40°08'46.714"N	104°52'30.713"W	1.31	
12837.00	89.870	181.220	7297.08	4416.96	-4411.85	-768.77	40°08'45.134"N	104°52'30.759"W	0.38	LAST BHI MWD+IFR SURVEYS
12889.00	89.870	181.220	7297.20	4468.95	-4463.84	-769.88	40°08'44.620"N	104°52'30.774"W	0.00	PROJECTION TO BIT

**HOLE & CASING SECTIONS - Ref Wellbore: BUTTERBALL 36N-10HZ AWB <12889> Ref Wellpath: BUTTERBALL 36N-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	1160.00	1144.00	16.00	1159.95	0.00	0.00	1.52	0.14
9.625in Casing Surface	16.00	1149.00	1133.00	16.00	1148.95	0.00	0.00	1.37	0.07
7.875in Open Hole	1160.00	12889.00	11729.00	1159.95	7297.20	1.52	0.14	-4463.84	-769.88

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#25 BUTTERBALL 36N-10HZ (687'FNL & 1489'FEL, SEC.10)
Area	COLORADO	Well	BUTTERBALL 36N-10HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUTTERBALL 36N-10HZ AWB <12889>
Facility	SEC.10-T2N-R67W		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.10-T2N-67W SECTION LINES	4936.00	56.84	-1806.22	1674246.04	14584341.37	40°09'29.293"N	104°52'44.123"W	polygon
BUTTERBALL 36N-10HZ BHL ON PLAT REV-3 (75'FSL & 2240'FEL, SEC.10)	7301.00	-4502.37	-781.36	1675277.02	14579785.46	40°08'44.239"N	104°52'30.922"W	point
BUTTERBALL 36N-10HZ LANDBOX	7301.00	0.00	0.00	1676051.61	14584287.15	40°09'28.732"N	104°52'20.860"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: BUTTERBALL 36N-10HZ AWB <12889>				Ref Wellpath: BUTTERBALL 36N-10HZ AWP		
Start MD [ft]	End MD [ft]	Positional Uncertainty Model		Log Name/Comment		Wellbore
16.00	1115.00	ISCWSA MWD, Rev. 2 (Standard)		CATHEDRAL MWD SURVEYS 13.5" <122-1115>		BUTTERBALL 36N-10HZ AWB <12889>
1115.00	12837.00	ISCWSA MWD, Rev. 2, axial magnetic correction (Standard) (MagVAR IFR Wattenberg)		BHI MWD+IFR SURVEYS 7 7/8" <1196-12837>		BUTTERBALL 36N-10HZ AWB <12889>
12837.00	12889.00	Blind Drilling (std)		Projection to bit		BUTTERBALL 36N-10HZ AWB <12889>

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#25 BUTTERBALL 36N-10HZ (687'FNL & 1489'FEL, SEC.10)
Area	COLORADO	Well	BUTTERBALL 36N-10HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUTTERBALL 36N-10HZ AWB <12889>
Facility	SEC.10-T2N-R67W		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
122.00	1.000	354.100	121.99	BEGIN MWD SURVEYS	
1115.00	0.700	39.200	1114.95	TIE-ONTO MWD SURVEYS	
1196.00	1.040	13.780	1195.94	BEGIN BHI MWD+IFR SURVEYS	
7555.00	63.264	177.059	7210.66	NIOBRARA	
7679.00	73.060	176.070	7256.31	NIOBRARA B	
7894.00	86.866	178.174	7293.59	LANDING POINT	
12837.00	89.870	181.220	7297.08	LAST BHI MWD+IFR SURVEYS	
12889.00	89.870	181.220	7297.20	PROJECTION TO BIT	