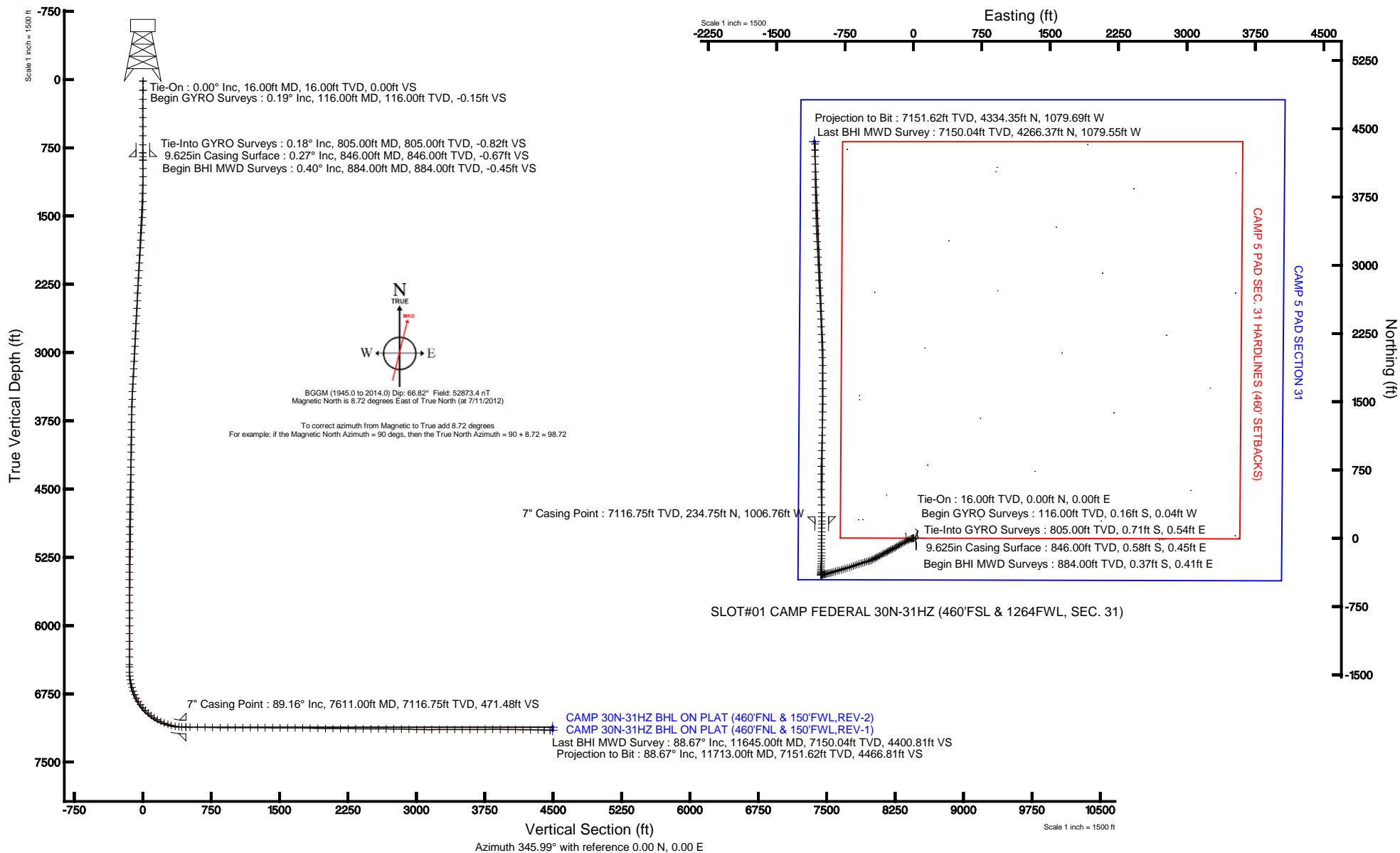


KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#01 CAMP FEDERAL 30N-31HZ (460'FSL & 1264FWL, SEC. 31)
 Field: WELD COUNTY (KERR MCGEE) Well: CAMP FEDERAL 30N-31HZ
 Facility: SEC.31-T3N-R65W Wellbore: CAMP FEDERAL 30N-31HZ PWB

Plot reference wellpath is CAMP FEDERAL 30N-31HZ (REV-B.0) PWP

True vertical depths are referenced to XTREME 20 (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to XTREME 20 (RKB)	North Reference: True north
XTREME 20 (RKB) to Mean Sea Level: 4985 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#01 CAMP FEDERAL 30N-31HZ (460'FSL & 1264FWL, SEC. 31)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: wilsje02 on 8/8/2012





Actual Wellpath Report

CAMP FEDERAL 30N-31HZ AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#01 CAMP FEDERAL 30N-31HZ (460'FSL & 1264FWL, SEC. 31)
Area	COLORADO	Well	CAMP FEDERAL 30N-31HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	CAMP FEDERAL 30N-31HZ AWB
Facility	SEC.31-T3N-R65W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 3.0.2
North Reference	True	User	Wilsjef02
Scale	0.999958	Report Generated	8/6/2012 at 10:54:15
Convergence at slot	0.51° East	Database/Source file	WellArchitectDB/CAMP_FEDERAL_30N-31HZ_AWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	3220379.93	1307925.56	40°10'33.460"N	104°42'40.734"W
Facility Reference Pt			3220379.93	1307925.56	40°10'33.460"N	104°42'40.734"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 20 (RKB) to Facility Vertical Datum	4985.00ft
Horizontal Reference Pt	Slot	XTREME 20 (RKB) to Mean Sea Level	4985.00ft
Vertical Reference Pt	XTREME 20 (RKB)	XTREME 20 (RKB) to Mud Line at Slot (SLOT#01 CAMP FEDERAL 30N-31HZ (460'FSL & 1264FWL, SEC. 31))	4985.00ft
MD Reference Pt	XTREME 20 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	346.01°



Actual Wellpath Report

CAMP FEDERAL 30N-31HZ AWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#01 CAMP FEDERAL 30N-31HZ (460'FSL & 1264FWL, SEC. 31)
Area	COLORADO	Well	CAMP FEDERAL 30N-31HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	CAMP FEDERAL 30N-31HZ AWB
Facility	SEC.31-T3N-R65W		

WELLPATH DATA (151 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	193.240	0.00	0.00	0.00	0.00	40°10'33.460"N	104°42'40.734"W	0.00	
16.00	0.000	193.240	16.00	0.00	0.00	0.00	40°10'33.460"N	104°42'40.734"W	0.00	Tie-On
116.00	0.190	193.240	116.00	-0.15	-0.16	-0.04	40°10'33.458"N	104°42'40.734"W	0.19	Begin GYRO Surveys
216.00	0.060	193.950	216.00	-0.34	-0.37	-0.09	40°10'33.456"N	104°42'40.735"W	0.13	
316.00	0.150	163.040	316.00	-0.52	-0.55	-0.06	40°10'33.455"N	104°42'40.735"W	0.10	
416.00	0.190	169.690	416.00	-0.81	-0.84	0.00	40°10'33.452"N	104°42'40.734"W	0.04	
516.00	0.060	122.920	516.00	-1.02	-1.03	0.08	40°10'33.450"N	104°42'40.733"W	0.16	
616.00	0.140	97.880	616.00	-1.10	-1.07	0.24	40°10'33.449"N	104°42'40.731"W	0.09	
716.00	0.250	43.730	716.00	-1.03	-0.93	0.52	40°10'33.451"N	104°42'40.727"W	0.20	
805.00	0.180	305.610	805.00	-0.82	-0.71	0.54	40°10'33.453"N	104°42'40.727"W	0.37	Tie-Into GYRO Surveys
884.00	0.400	353.830	884.00	-0.45	-0.37	0.41	40°10'33.456"N	104°42'40.729"W	0.39	Begin BHI MWD Surveys
976.00	2.200	263.300	975.97	0.09	-0.25	-1.38	40°10'33.458"N	104°42'40.752"W	2.43	
1068.00	3.260	253.920	1067.87	0.22	-1.18	-5.65	40°10'33.448"N	104°42'40.807"W	1.25	
1159.00	5.060	253.050	1158.62	-0.08	-3.07	-11.98	40°10'33.430"N	104°42'40.888"W	1.98	
1250.00	6.980	249.340	1249.12	-0.93	-6.19	-20.99	40°10'33.399"N	104°42'41.004"W	2.15	
1342.00	9.130	249.190	1340.21	-2.45	-10.76	-33.04	40°10'33.354"N	104°42'41.160"W	2.34	
1434.00	11.060	248.390	1430.78	-4.49	-16.60	-48.07	40°10'33.296"N	104°42'41.353"W	2.10	
1521.00	12.700	241.430	1515.92	-8.00	-24.25	-64.23	40°10'33.220"N	104°42'41.561"W	2.50	
1607.00	13.010	240.120	1599.76	-13.03	-33.59	-80.93	40°10'33.128"N	104°42'41.777"W	0.49	
1692.00	13.700	240.680	1682.46	-18.32	-43.29	-98.00	40°10'33.032"N	104°42'41.997"W	0.83	
1777.00	14.150	241.260	1764.96	-23.62	-53.21	-115.89	40°10'32.934"N	104°42'42.227"W	0.55	
1862.00	13.220	243.390	1847.55	-28.39	-62.56	-133.69	40°10'32.842"N	104°42'42.456"W	1.24	
1948.00	12.430	239.480	1931.40	-33.18	-71.67	-150.45	40°10'32.752"N	104°42'42.672"W	1.36	
2033.00	12.720	239.120	2014.37	-38.50	-81.12	-166.36	40°10'32.658"N	104°42'42.877"W	0.35	
2118.00	12.930	238.940	2097.25	-44.01	-90.82	-182.54	40°10'32.562"N	104°42'43.086"W	0.25	
2203.00	12.950	236.380	2180.09	-50.00	-101.00	-198.62	40°10'32.462"N	104°42'43.293"W	0.67	
2288.00	11.980	243.500	2263.09	-55.11	-110.22	-214.45	40°10'32.371"N	104°42'43.497"W	2.14	
2373.00	11.730	243.370	2346.27	-58.91	-118.02	-230.07	40°10'32.294"N	104°42'43.698"W	0.30	
2459.00	11.560	244.990	2430.50	-62.48	-125.59	-245.69	40°10'32.219"N	104°42'43.899"W	0.43	
2544.00	11.250	242.000	2513.83	-66.11	-133.08	-260.73	40°10'32.145"N	104°42'44.093"W	0.79	
2629.00	11.280	235.180	2597.19	-71.08	-141.72	-274.87	40°10'32.060"N	104°42'44.275"W	1.57	
2714.00	11.360	238.350	2680.54	-76.57	-150.86	-288.83	40°10'31.969"N	104°42'44.455"W	0.74	
2800.00	11.350	245.040	2764.86	-80.75	-158.87	-303.71	40°10'31.890"N	104°42'44.647"W	1.53	
2885.00	12.150	246.190	2848.08	-83.87	-166.01	-319.48	40°10'31.819"N	104°42'44.850"W	0.98	
2970.00	13.660	241.630	2930.93	-87.89	-174.40	-336.49	40°10'31.737"N	104°42'45.069"W	2.14	
3056.00	13.550	240.950	3014.52	-93.03	-184.11	-354.23	40°10'31.641"N	104°42'45.297"W	0.23	
3141.00	12.550	242.220	3097.32	-97.82	-193.25	-371.11	40°10'31.550"N	104°42'45.515"W	1.22	
3226.00	12.020	242.410	3180.38	-102.10	-201.66	-387.12	40°10'31.467"N	104°42'45.721"W	0.63	
3311.00	11.990	240.720	3263.52	-106.51	-210.07	-402.67	40°10'31.384"N	104°42'45.921"W	0.42	
3397.00	12.470	240.190	3347.57	-111.40	-219.06	-418.52	40°10'31.295"N	104°42'46.126"W	0.57	
3482.00	11.780	242.350	3430.67	-115.95	-227.65	-434.17	40°10'31.210"N	104°42'46.327"W	0.97	
3567.00	11.610	244.470	3513.90	-119.71	-235.36	-449.57	40°10'31.134"N	104°42'46.526"W	0.54	
3652.00	11.790	249.160	3597.14	-122.46	-242.14	-465.40	40°10'31.067"N	104°42'46.730"W	1.14	
3738.00	12.200	251.330	3681.26	-124.25	-248.17	-482.22	40°10'31.008"N	104°42'46.946"W	0.71	
3823.00	12.170	252.610	3764.35	-125.51	-253.72	-499.28	40°10'30.953"N	104°42'47.166"W	0.32	



Actual Wellpath Report

CAMP FEDERAL 30N-31HZ AWP

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REFERENCE WELLPATH IDENTIFICATION				
Operator	KERR-MCGEE OIL & GAS ONSHORE LP		Slot	SLOT#01 CAMP FEDERAL 30N-31HZ (460'FSL & 1264FWL, SEC. 31)
Area	COLORADO		Well	CAMP FEDERAL 30N-31HZ
Field	WELD COUNTY (KERR MCGEE)		Wellbore	CAMP FEDERAL 30N-31HZ AWB
Facility	SEC.31-T3N-R65W			

WELLPATH DATA (151 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3908.00	12.710	254.050	3847.35	-126.37	-258.97	-516.82	40°10'30.901"N	104°42'47.392"W	0.73	
3993.00	13.250	253.040	3930.18	-127.19	-264.38	-535.13	40°10'30.847"N	104°42'47.628"W	0.69	
4079.00	13.770	251.690	4013.80	-128.47	-270.47	-554.28	40°10'30.787"N	104°42'47.875"W	0.71	
4164.00	16.350	252.290	4095.87	-130.01	-277.29	-575.28	40°10'30.720"N	104°42'48.145"W	3.04	
4249.00	16.410	251.960	4177.42	-131.64	-284.65	-598.09	40°10'30.647"N	104°42'48.439"W	0.13	
4334.00	14.490	252.030	4259.35	-133.23	-291.65	-619.63	40°10'30.578"N	104°42'48.716"W	2.26	
4420.00	14.170	251.210	4342.67	-134.85	-298.36	-639.83	40°10'30.512"N	104°42'48.977"W	0.44	
4505.00	14.070	248.800	4425.11	-137.02	-305.45	-659.31	40°10'30.441"N	104°42'49.228"W	0.70	
4590.00	16.180	251.010	4507.16	-139.35	-313.04	-680.14	40°10'30.366"N	104°42'49.496"W	2.57	
4676.00	17.060	253.330	4589.56	-140.99	-320.55	-703.56	40°10'30.292"N	104°42'49.798"W	1.28	
4761.00	16.840	253.060	4670.87	-142.21	-327.72	-727.28	40°10'30.221"N	104°42'50.103"W	0.27	
4846.00	16.630	252.900	4752.27	-143.50	-334.88	-750.69	40°10'30.151"N	104°42'50.405"W	0.25	
4931.00	15.240	252.800	4834.00	-144.79	-341.76	-772.98	40°10'30.083"N	104°42'50.692"W	1.64	
5016.00	14.600	254.080	4916.14	-145.77	-348.00	-793.96	40°10'30.021"N	104°42'50.962"W	0.85	
5102.00	14.390	255.280	4999.40	-146.28	-353.69	-814.72	40°10'29.965"N	104°42'51.230"W	0.43	
5187.00	13.940	253.810	5081.82	-146.80	-359.23	-834.77	40°10'29.910"N	104°42'51.488"W	0.68	
5272.00	14.630	253.330	5164.19	-147.70	-365.17	-854.88	40°10'29.851"N	104°42'51.747"W	0.82	
5357.00	13.840	252.870	5246.58	-148.76	-371.24	-874.88	40°10'29.791"N	104°42'52.005"W	0.94	
5442.00	11.810	254.370	5329.45	-149.57	-376.58	-892.97	40°10'29.738"N	104°42'52.238"W	2.42	
5528.00	10.390	255.900	5413.84	-149.83	-380.84	-908.97	40°10'29.696"N	104°42'52.444"W	1.69	
5613.00	9.690	257.750	5497.54	-149.63	-384.22	-923.40	40°10'29.663"N	104°42'52.630"W	0.91	
5698.00	9.110	259.230	5581.40	-149.04	-387.00	-937.00	40°10'29.635"N	104°42'52.805"W	0.74	
5784.00	8.760	256.530	5666.35	-148.60	-389.80	-950.05	40°10'29.608"N	104°42'52.973"W	0.64	
5869.00	7.850	256.700	5750.46	-148.47	-392.64	-962.00	40°10'29.580"N	104°42'53.127"W	1.07	
5954.00	6.760	259.580	5834.77	-148.09	-394.88	-972.57	40°10'29.558"N	104°42'53.263"W	1.35	
6039.00	5.840	253.920	5919.26	-147.93	-396.98	-981.64	40°10'29.537"N	104°42'53.380"W	1.30	
6125.00	5.230	253.770	6004.86	-148.25	-399.29	-989.61	40°10'29.514"N	104°42'53.483"W	0.71	
6210.00	4.460	251.090	6089.55	-148.68	-401.44	-996.46	40°10'29.493"N	104°42'53.571"W	0.94	
6295.00	3.630	250.600	6174.34	-149.22	-403.41	-1002.12	40°10'29.473"N	104°42'53.644"W	0.98	
6380.00	2.940	250.100	6259.20	-149.70	-405.04	-1006.71	40°10'29.457"N	104°42'53.703"W	0.81	
6465.00	2.530	257.240	6344.10	-149.88	-406.20	-1010.59	40°10'29.446"N	104°42'53.753"W	0.63	
6550.00	1.750	264.620	6429.04	-149.65	-406.74	-1013.71	40°10'29.440"N	104°42'53.793"W	0.97	
6576.00	1.580	269.350	6455.03	-149.50	-406.78	-1014.47	40°10'29.440"N	104°42'53.803"W	0.84	
6635.00	1.760	322.920	6514.01	-148.48	-406.06	-1015.83	40°10'29.447"N	104°42'53.820"W	2.57	
6677.00	6.490	355.320	6555.89	-145.55	-403.18	-1016.41	40°10'29.476"N	104°42'53.828"W	12.12	
6720.00	10.480	356.060	6598.41	-139.29	-396.86	-1016.88	40°10'29.538"N	104°42'53.834"W	9.28	
6762.00	13.960	357.340	6639.46	-130.56	-387.98	-1017.37	40°10'29.626"N	104°42'53.840"W	8.31	
6805.00	17.180	359.960	6680.87	-119.31	-376.45	-1017.62	40°10'29.740"N	104°42'53.844"W	7.66	
6847.00	20.740	1.890	6720.59	-106.13	-362.81	-1017.38	40°10'29.875"N	104°42'53.840"W	8.61	
6891.00	24.020	2.560	6761.27	-90.05	-346.07	-1016.72	40°10'30.040"N	104°42'53.832"W	7.48	
6933.00	29.160	3.980	6798.81	-72.11	-327.31	-1015.63	40°10'30.225"N	104°42'53.818"W	12.33	
6976.00	33.550	4.160	6835.53	-50.85	-305.00	-1014.04	40°10'30.446"N	104°42'53.797"W	10.21	
7018.00	37.990	4.430	6869.60	-27.54	-280.52	-1012.20	40°10'30.688"N	104°42'53.774"W	10.58	
7061.00	41.220	3.390	6902.72	-1.46	-253.18	-1010.34	40°10'30.958"N	104°42'53.750"W	7.67	
7103.00	44.980	1.920	6933.38	26.04	-224.52	-1009.02	40°10'31.241"N	104°42'53.733"W	9.27	



Actual Wellpath Report

CAMP FEDERAL 30N-31HZ AWP

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REFERENCE WELLPATH IDENTIFICATION				
Operator	KERR-MCGEE OIL & GAS ONSHORE LP		Slot	SLOT#01 CAMP FEDERAL 30N-31HZ (460'FSL & 1264FWL, SEC. 31)
Area	COLORADO		Well	CAMP FEDERAL 30N-31HZ
Field	WELD COUNTY (KERR MCGEE)		Wellbore	CAMP FEDERAL 30N-31HZ AWB
Facility	SEC.31-T3N-R65W			

WELLPATH DATA (151 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7147.00	48.760	359.610	6963.46	57.08	-192.42	-1008.61	40°10'31.558"N	104°42'53.728"W	9.41	
7189.00	53.170	358.930	6989.91	88.83	-159.81	-1009.03	40°10'31.881"N	104°42'53.733"W	10.57	
7232.00	57.070	359.830	7014.49	123.14	-124.54	-1009.41	40°10'32.229"N	104°42'53.738"W	9.23	
7274.00	61.500	0.360	7035.94	158.15	-88.44	-1009.34	40°10'32.586"N	104°42'53.737"W	10.60	
7317.00	64.760	359.710	7055.37	195.36	-50.09	-1009.32	40°10'32.965"N	104°42'53.737"W	7.70	
7359.00	68.870	0.680	7071.90	232.79	-11.49	-1009.19	40°10'33.346"N	104°42'53.735"W	10.01	
7402.00	72.610	0.400	7086.08	272.07	29.09	-1008.81	40°10'33.747"N	104°42'53.730"W	8.72	
7444.00	75.040	1.490	7097.78	311.05	69.42	-1008.14	40°10'34.146"N	104°42'53.722"W	6.30	
7488.00	79.250	1.690	7107.57	352.36	112.29	-1006.95	40°10'34.569"N	104°42'53.706"W	9.58	
7530.00	84.370	0.490	7113.55	392.48	153.84	-1006.16	40°10'34.980"N	104°42'53.696"W	12.51	
7565.00	88.380	359.430	7115.76	426.38	188.77	-1006.18	40°10'35.325"N	104°42'53.697"W	11.85	
7611.00†	89.164	359.142	7116.75	471.14	234.75	-1006.76	40°10'35.780"N	104°42'53.704"W	1.81	7" Casing Point
7656.00	89.930	358.860	7117.11	514.99	279.74	-1007.54	40°10'36.224"N	104°42'53.714"W	1.81	
7741.00	89.600	359.430	7117.46	597.76	364.73	-1008.81	40°10'37.064"N	104°42'53.730"W	0.77	
7826.00	88.370	358.130	7118.96	680.64	449.70	-1010.62	40°10'37.904"N	104°42'53.754"W	2.11	
7911.00	88.760	359.620	7121.09	763.48	534.65	-1012.29	40°10'38.743"N	104°42'53.775"W	1.81	
7997.00	89.130	359.430	7122.67	847.09	620.63	-1013.00	40°10'39.593"N	104°42'53.785"W	0.48	
8082.00	89.630	1.060	7123.59	929.47	705.62	-1012.64	40°10'40.433"N	104°42'53.780"W	2.01	
8167.00	89.930	0.300	7123.92	1011.70	790.62	-1011.63	40°10'41.273"N	104°42'53.767"W	0.96	
8252.00	89.840	2.310	7124.09	1093.68	875.59	-1009.69	40°10'42.112"N	104°42'53.742"W	2.37	
8338.00	90.400	1.320	7123.91	1176.43	961.54	-1006.97	40°10'42.962"N	104°42'53.707"W	1.32	
8423.00	89.660	1.650	7123.87	1258.35	1046.52	-1004.77	40°10'43.801"N	104°42'53.679"W	0.95	
8508.00	89.750	1.570	7124.30	1340.22	1131.48	-1002.38	40°10'44.641"N	104°42'53.648"W	0.14	
8593.00	89.780	1.830	7124.65	1422.05	1216.44	-999.86	40°10'45.481"N	104°42'53.616"W	0.31	
8678.00	89.910	0.720	7124.88	1504.05	1301.42	-997.97	40°10'46.320"N	104°42'53.591"W	1.31	
8764.00	89.590	1.380	7125.26	1587.11	1387.40	-996.39	40°10'47.170"N	104°42'53.571"W	0.85	
8849.00	90.210	0.760	7125.41	1669.19	1472.39	-994.80	40°10'48.010"N	104°42'53.551"W	1.03	
8934.00	88.430	359.960	7126.41	1751.53	1557.38	-994.27	40°10'48.850"N	104°42'53.544"W	2.30	
9020.00	88.580	359.610	7128.66	1835.02	1643.35	-994.59	40°10'49.699"N	104°42'53.548"W	0.44	
9105.00	88.640	359.260	7130.72	1917.68	1728.32	-995.43	40°10'50.539"N	104°42'53.559"W	0.42	
9190.00	89.130	359.550	7132.37	2000.35	1813.30	-996.31	40°10'51.379"N	104°42'53.570"W	0.67	
9275.00	89.070	358.250	7133.71	2083.20	1898.27	-997.94	40°10'52.219"N	104°42'53.591"W	1.53	
9360.00	90.430	358.490	7134.08	2166.22	1983.23	-1000.36	40°10'53.058"N	104°42'53.622"W	1.62	
9446.00	89.720	357.630	7133.97	2250.33	2069.18	-1003.27	40°10'53.907"N	104°42'53.660"W	1.30	
9531.00	89.620	358.200	7134.46	2333.50	2154.12	-1006.36	40°10'54.747"N	104°42'53.700"W	0.68	
9616.00	89.750	358.220	7134.92	2416.58	2239.08	-1009.02	40°10'55.586"N	104°42'53.734"W	0.15	
9702.00	89.810	357.790	7135.25	2500.70	2325.03	-1012.01	40°10'56.436"N	104°42'53.773"W	0.50	
9787.00	89.410	357.140	7135.83	2584.01	2409.94	-1015.77	40°10'57.275"N	104°42'53.821"W	0.90	
9872.00	89.470	357.280	7136.66	2667.38	2494.84	-1019.91	40°10'58.114"N	104°42'53.875"W	0.18	
9957.00	89.780	357.350	7137.22	2750.73	2579.74	-1023.89	40°10'58.953"N	104°42'53.926"W	0.37	
10043.00	88.490	356.160	7138.52	2835.21	2665.59	-1028.76	40°10'59.801"N	104°42'53.989"W	2.04	
10128.00	88.360	357.460	7140.85	2918.68	2750.42	-1033.49	40°11'00.640"N	104°42'54.050"W	1.54	
10213.00	88.820	357.550	7142.95	3001.95	2835.32	-1037.19	40°11'01.478"N	104°42'54.097"W	0.55	
10298.00	89.470	357.410	7144.21	3085.24	2920.22	-1040.92	40°11'02.317"N	104°42'54.146"W	0.78	
10383.00	90.180	357.610	7144.47	3168.53	3005.14	-1044.62	40°11'03.157"N	104°42'54.193"W	0.87	



Actual Wellpath Report

CAMP FEDERAL 30N-31HZ AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#01 CAMP FEDERAL 30N-31HZ (460'FSL & 1264FWL, SEC. 31)
Area	COLORADO	Well	CAMP FEDERAL 30N-31HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	CAMP FEDERAL 30N-31HZ AWB
Facility	SEC.31-T3N-R65W		

WELLPATH DATA (151 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
10469.00	90.300	357.000	7144.11	3252.87	3091.05	-1048.66	40°11'04.006"N	104°42'54.245"W	0.72	
10554.00	90.030	356.960	7143.87	3336.31	3175.93	-1053.14	40°11'04.844"N	104°42'54.303"W	0.32	
10639.00	90.280	357.230	7143.64	3419.73	3260.82	-1057.45	40°11'05.683"N	104°42'54.359"W	0.43	
10724.00	90.650	356.560	7142.95	3503.20	3345.69	-1062.05	40°11'06.522"N	104°42'54.418"W	0.90	
10810.00	90.030	358.290	7142.44	3587.49	3431.60	-1065.91	40°11'07.371"N	104°42'54.468"W	2.14	
10895.00	90.060	358.120	7142.37	3670.57	3516.56	-1068.58	40°11'08.210"N	104°42'54.502"W	0.20	
10980.00	90.310	358.410	7142.10	3753.64	3601.52	-1071.15	40°11'09.050"N	104°42'54.535"W	0.45	
11065.00	90.460	358.720	7141.53	3836.60	3686.49	-1073.28	40°11'09.890"N	104°42'54.563"W	0.41	
11151.00	89.320	359.110	7141.69	3920.43	3772.47	-1074.91	40°11'10.739"N	104°42'54.584"W	1.40	
11236.00	89.140	359.140	7142.83	4003.20	3857.45	-1076.20	40°11'11.579"N	104°42'54.601"W	0.21	
11321.00	89.010	359.490	7144.21	4085.91	3942.44	-1077.22	40°11'12.419"N	104°42'54.614"W	0.44	
11406.00	89.350	359.430	7145.42	4168.57	4027.42	-1078.02	40°11'13.259"N	104°42'54.624"W	0.41	
11491.00	89.010	359.800	7146.64	4251.18	4112.41	-1078.59	40°11'14.099"N	104°42'54.632"W	0.59	
11576.00	88.610	359.450	7148.40	4333.78	4197.39	-1079.15	40°11'14.938"N	104°42'54.639"W	0.63	
11645.00	88.670	359.880	7150.04	4400.81	4266.37	-1079.55	40°11'15.620"N	104°42'54.644"W	0.63	Last BHI MWD Survey
11713.00	88.670	359.880	7151.62	4466.81	4334.35	-1079.69	40°11'16.292"N	104°42'54.646"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: CAMP FEDERAL 30N-31HZ AWB Ref Wellpath: CAMP FEDERAL 30N-31HZ 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	846.00	830.00	16.00	846.00	0.00	0.00	-0.58	0.45
9.625in Casing Surface	16.00	846.00	830.00	16.00	846.00	0.00	0.00	-0.58	0.45
8.75in Open Hole	846.00	7621.00	6775.00	846.00	7116.88	-0.58	0.45	244.75	-1006.91
7in Casing Intermediate	16.00	7611.00	7595.00	16.00	7116.75	0.00	0.00	234.75	-1006.76
6.125in Open Hole	7611.00	11713.00	4102.00	7116.75	7151.62	234.75	-1006.76	4334.35	-1079.69



Actual Wellpath Report

CAMP FEDERAL 30N-31HZ AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#01 CAMP FEDERAL 30N-31HZ (460'FSL & 1264FWL, SEC. 31)
Area	COLORADO	Well	CAMP FEDERAL 30N-31HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	CAMP FEDERAL 30N-31HZ AWB
Facility	SEC.31-T3N-R65W		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
CAMP 5 PAD SECTION 31		11.00	-6.12	2722.63	3223102.38	1307943.65	40°10'33.398"N	104°42'05.659"W	polygon
CAMP 30N-31HZ BHL ON PLAT (460'FNL & 150'FWL,REV-2)		7117.00	4359.56	-1087.70	3219253.55	1312275.08	40°11'16.541"N	104°42'54.749"W	point
CAMP 30N-31HZ BHL ON PLAT (460'FNL & 150'FWL,REV-1)		7150.00	4359.56	-1087.70	3219253.55	1312275.08	40°11'16.541"N	104°42'54.749"W	point
CAMP 5 PAD SEC. 31 HARDLINES (460' SETBACKS)		7411.00	-6.12	2722.63	3223102.38	1307943.65	40°10'33.398"N	104°42'05.659"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: CAMP FEDERAL 30N-31HZ AWB Ref Wellpath: CAMP FEDERAL 30N-31HZ AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	805.00	Generic gyro - continuous (Standard)	GYRODATA SURVEYS <116-805>	CAMP FEDERAL 30N-31HZ AWB
805.00	7565.00	NaviTrak (Standard)	BHI MWD SURVEYS 8 3/4" HOLE <884-7565>	CAMP FEDERAL 30N-31HZ AWB
7565.00	11645.00	OnTrak (Standard)	BHI MWD SURVEYS 6 1/8" HOLE <7656-11645>	CAMP FEDERAL 30N-31HZ AWB
11645.00	11713.00	Blind Drilling (std)	Projection to bit	CAMP FEDERAL 30N-31HZ AWB



Actual Wellpath Report

CAMP FEDERAL 30N-31HZ AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#01 CAMP FEDERAL 30N-31HZ (460'FSL & 1264FWL, SEC. 31)
Area	COLORADO	Well	CAMP FEDERAL 30N-31HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	CAMP FEDERAL 30N-31HZ AWB
Facility	SEC.31-T3N-R65W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
16.00	0.000	193.240	16.00	Tie-On
116.00	0.190	193.240	116.00	Begin GYRO Surveys
805.00	0.180	305.610	805.00	Tie-Into GYRO Surveys
884.00	0.400	353.830	884.00	Begin BHI MWD Surveys
7611.00	89.164	359.142	7116.75	7" Casing Point
11645.00	88.670	359.880	7150.04	Last BHI MWD Survey
11713.00	88.670	359.880	7151.62	Projection to Bit