



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#43 RW 29N-29HZ(441'FSL & 1749'FWL,SEC.29)
Area	COLORADO	Well	RW 29N-29HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 29N-29HZ AWB
Facility	SEC.29-T3N-R65W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / UTM Zone 13 North, US feet	Software System	WellArchitect® 5.0
North Reference	True	User	Painsetr
Scale	0.999609	Report Generated	9/5/2017 at 1:11 PM
Convergence at slot	0.20° East	Database/Source file	WA_DEN_Anadarko_Defn/RW_29N-29HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-79.12	928.95	1726861.39	14596213.59	40°11'25.400"N	104°41'25.670"W
Facility Reference Pt			1725932.54	14596289.48	40°11'26.182"N	104°41'37.640"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 22 (17') (RT) to Facility Vertical Datum	4903.00ft
Horizontal Reference Pt	Slot	Xtreme 22 (17') (RT) to Mean Sea Level	4903.00ft
Vertical Reference Pt	Xtreme 22 (17') (RT)	Xtreme 22 (17') (RT) to Mud Line at Slot (SLOT#43 RW 29N-29HZ(441'FSL & 1749'FWL,SEC.29))	4903.00ft
MD Reference Pt	Xtreme 22 (17') (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	0.38°

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WELLPATH DATA (148 stations) † = interpolated/extrapolated station												Comments
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	DLS (°/100ft)	
0.00†	0.000	313.020	0.00	0.00	0.00	0.00	1726861.39	14596213.59	40°11'25.400"N	104°41'25.670"W	0.00	
17.00	0.000	313.020	17.00	0.00	0.00	0.00	1726861.39	14596213.59	40°11'25.400"N	104°41'25.670"W	0.00	
116.00	0.400	313.020	116.00	0.23	0.24	-0.25	1726861.14	14596213.83	40°11'25.402"N	104°41'25.673"W	0.40	FIRST BHGE SURFACE MWD+IFR1+SC SURVEY
211.00	0.630	255.940	211.00	0.33	0.34	-1.00	1726860.39	14596213.93	40°11'25.403"N	104°41'25.683"W	0.56	
301.00	1.800	219.370	300.98	-0.89	-0.88	-2.38	1726859.01	14596212.71	40°11'25.391"N	104°41'25.701"W	1.50	
392.00	3.480	214.150	391.88	-4.30	-4.27	-4.84	1726856.57	14596209.31	40°11'25.358"N	104°41'25.732"W	1.86	
483.00	3.790	211.790	482.69	-9.16	-9.11	-7.97	1726853.45	14596204.46	40°11'25.310"N	104°41'25.773"W	0.38	
574.00	5.320	209.540	573.40	-15.42	-15.34	-11.63	1726849.81	14596198.22	40°11'25.248"N	104°41'25.820"W	1.69	
665.00	6.690	203.930	663.90	-23.96	-23.85	-15.87	1726845.61	14596189.70	40°11'25.164"N	104°41'25.874"W	1.64	
752.00	7.980	197.770	750.19	-34.37	-34.24	-19.76	1726841.75	14596179.30	40°11'25.062"N	104°41'25.925"W	1.73	
839.00	8.950	193.000	836.24	-46.74	-46.58	-23.13	1726838.43	14596166.95	40°11'24.940"N	104°41'25.968"W	1.38	
927.00	9.980	192.540	923.04	-60.87	-60.70	-26.33	1726835.29	14596152.83	40°11'24.800"N	104°41'26.009"W	1.17	
1015.00	11.200	194.460	1009.54	-76.62	-76.42	-30.11	1726831.55	14596137.10	40°11'24.645"N	104°41'26.058"W	1.44	
1102.00	12.570	192.180	1094.68	-94.08	-93.85	-34.22	1726827.51	14596119.66	40°11'24.473"N	104°41'26.111"W	1.66	
1189.00	13.140	192.470	1179.49	-113.02	-112.76	-38.35	1726823.44	14596100.74	40°11'24.286"N	104°41'26.164"W	0.66	
1277.00	13.390	194.120	1265.15	-132.69	-132.41	-43.00	1726818.87	14596081.09	40°11'24.092"N	104°41'26.224"W	0.52	
1364.00	13.410	192.990	1349.78	-152.33	-152.01	-47.73	1726814.21	14596061.48	40°11'23.898"N	104°41'26.285"W	0.30	
1452.00	13.620	195.070	1435.34	-172.31	-171.96	-52.71	1726809.30	14596041.52	40°11'23.701"N	104°41'26.349"W	0.60	
1539.00	13.510	195.470	1519.92	-192.03	-191.64	-58.09	1726803.99	14596021.83	40°11'23.506"N	104°41'26.418"W	0.17	
1627.00	13.250	196.130	1605.53	-211.66	-211.24	-63.63	1726798.52	14596002.22	40°11'23.313"N	104°41'26.490"W	0.34	
1714.00	12.500	195.440	1690.34	-230.35	-229.89	-68.91	1726793.31	14595983.56	40°11'23.128"N	104°41'26.558"W	0.88	
1802.00	13.030	196.350	1776.16	-249.08	-248.59	-74.24	1726788.05	14595964.85	40°11'22.943"N	104°41'26.627"W	0.64	
1814.00	13.050	197.110	1787.85	-251.68	-251.18	-75.01	1726787.28	14595962.25	40°11'22.918"N	104°41'26.637"W	1.44	LAST BHGE SURFACE MWD+IFR1+SC SURVEY
1892.00	13.020	198.030	1863.84	-268.48	-267.95	-80.33	1726782.03	14595945.47	40°11'22.752"N	104°41'26.705"W	0.27	FIRST BHGE PRODUCTION MWD+IFR1+SC SURVEY
1980.00	12.300	196.600	1949.70	-286.93	-286.36	-86.07	1726776.35	14595927.05	40°11'22.570"N	104°41'26.779"W	0.89	
2067.00	13.020	197.350	2034.59	-305.20	-304.60	-91.64	1726770.85	14595908.80	40°11'22.390"N	104°41'26.851"W	0.85	
2155.00	12.870	195.160	2120.35	-324.16	-323.52	-97.16	1726765.39	14595889.87	40°11'22.203"N	104°41'26.922"W	0.58	
2243.00	13.780	197.230	2205.98	-343.67	-342.99	-102.83	1726759.80	14595870.38	40°11'22.011"N	104°41'26.995"W	1.17	
2330.00	13.830	198.750	2290.47	-363.45	-362.73	-109.24	1726753.46	14595850.63	40°11'21.815"N	104°41'27.078"W	0.42	
2418.00	13.550	197.400	2375.97	-383.29	-382.53	-115.70	1726747.06	14595830.81	40°11'21.620"N	104°41'27.161"W	0.48	
2505.00	12.850	196.660	2460.67	-402.33	-401.52	-121.52	1726741.31	14595811.81	40°11'21.432"N	104°41'27.236"W	0.83	
2593.00	13.270	193.860	2546.40	-421.54	-420.70	-126.75	1726736.16	14595792.62	40°11'21.243"N	104°41'27.303"W	0.86	
2680.00	12.770	193.210	2631.16	-440.63	-439.76	-131.34	1726731.63	14595773.55	40°11'21.054"N	104°41'27.362"W	0.60	
2768.00	13.560	192.720	2716.85	-460.19	-459.29	-135.83	1726727.21	14595754.01	40°11'20.861"N	104°41'27.420"W	0.91	
2855.00	13.530	191.620	2801.43	-480.13	-479.21	-140.13	1726722.99	14595734.09	40°11'20.664"N	104°41'27.476"W	0.30	
2943.00	13.210	192.310	2887.04	-500.07	-499.12	-144.35	1726718.84	14595714.18	40°11'20.468"N	104°41'27.530"W	0.41	
3030.00	12.790	191.980	2971.81	-519.23	-518.25	-148.46	1726714.79	14595695.04	40°11'20.279"N	104°41'27.583"W	0.49	
3117.00	13.680	191.560	3056.50	-538.76	-537.75	-152.52	1726710.80	14595675.53	40°11'20.086"N	104°41'27.635"W	1.03	
3230.00	12.280	190.790	3166.61	-563.68	-562.64	-157.45	1726705.96	14595650.63	40°11'19.840"N	104°41'27.699"W	1.25	
3317.00	13.010	194.400	3251.50	-582.29	-581.22	-161.62	1726701.86	14595632.04	40°11'19.656"N	104°41'27.753"W	1.24	
3405.00	13.270	195.520	3337.20	-601.65	-600.54	-166.79	1726696.76	14595612.71	40°11'19.465"N	104°41'27.819"W	0.41	
3492.00	13.940	196.920	3421.75	-621.33	-620.19	-172.51	1726691.11	14595593.05	40°11'19.271"N	104°41'27.893"W	0.86	
3580.00	12.770	194.900	3507.37	-640.91	-639.73	-178.09	1726685.60	14595573.50	40°11'19.078"N	104°41'27.965"W	1.43	
3668.00	12.650	199.590	3593.22	-659.42	-658.21	-183.82	1726679.93	14595555.01	40°11'18.896"N	104°41'28.039"W	1.18	
3756.00	13.130	203.840	3679.00	-677.69	-676.43	-191.10	1726672.73	14595536.77	40°11'18.716"N	104°41'28.132"W	1.21	

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Area	COLORADO	Well	RW 29N-29HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 29N-29HZ AWP
Facility	SEC.29-T3N-R65W		

WELLPATH DATA (148 stations)												† = interpolated/extrapolated station
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3844.00	13.720	202.500	3764.60	-696.53	-695.21	-199.13	1726664.76	14595517.96	40°11'18.530"N	104°41'28.236"W	0.76	
3931.00	13.100	200.630	3849.23	-715.34	-713.97	-206.55	1726657.41	14595499.19	40°11'18.345"N	104°41'28.331"W	0.87	
4019.00	12.390	199.500	3935.06	-733.61	-732.21	-213.22	1726650.81	14595480.94	40°11'18.164"N	104°41'28.417"W	0.86	
4105.00	12.190	199.910	4019.09	-750.89	-749.44	-219.39	1726644.70	14595463.69	40°11'17.994"N	104°41'28.497"W	0.25	
4193.00	11.050	199.460	4105.28	-767.62	-766.13	-225.36	1726638.79	14595446.99	40°11'17.829"N	104°41'28.574"W	1.30	
4280.00	9.290	195.540	4190.91	-782.28	-780.76	-230.02	1726634.18	14595432.35	40°11'17.685"N	104°41'28.634"W	2.17	
4367.00	7.200	190.040	4277.01	-794.43	-792.89	-232.85	1726631.39	14595420.21	40°11'17.565"N	104°41'28.670"W	2.57	
4455.00	5.800	183.490	4364.44	-804.31	-802.76	-234.09	1726630.19	14595410.34	40°11'17.467"N	104°41'28.686"W	1.80	
4543.00	3.760	190.170	4452.13	-811.59	-810.04	-234.87	1726629.44	14595403.06	40°11'17.395"N	104°41'28.696"W	2.40	
4630.00	2.270	175.920	4539.01	-816.12	-814.57	-235.25	1726629.07	14595398.53	40°11'17.350"N	104°41'28.701"W	1.90	
4718.00	1.210	100.150	4626.98	-818.02	-816.47	-234.21	1726630.12	14595396.64	40°11'17.332"N	104°41'28.688"W	2.61	
4805.00	1.460	79.360	4713.96	-817.96	-816.43	-232.21	1726632.11	14595396.69	40°11'17.332"N	104°41'28.662"W	0.62	
4893.00	1.980	56.940	4801.92	-816.91	-815.39	-229.84	1726634.48	14595397.73	40°11'17.342"N	104°41'28.631"W	0.96	
4980.00	0.580	49.060	4888.89	-815.79	-814.28	-228.25	1726636.07	14595398.84	40°11'17.353"N	104°41'28.611"W	1.62	
5068.00	0.250	352.650	4976.89	-815.30	-813.80	-227.93	1726636.38	14595399.33	40°11'17.358"N	104°41'28.607"W	0.55	
5155.00	0.500	327.030	5063.89	-814.80	-813.29	-228.17	1726636.15	14595399.83	40°11'17.363"N	104°41'28.610"W	0.34	
5243.00	0.210	328.870	5151.89	-814.34	-812.83	-228.46	1726635.85	14595400.29	40°11'17.368"N	104°41'28.614"W	0.33	
5330.00	0.190	257.250	5238.89	-814.24	-812.73	-228.68	1726635.63	14595400.40	40°11'17.369"N	104°41'28.617"W	0.27	
5418.00	0.240	244.140	5326.89	-814.35	-812.84	-228.99	1726635.32	14595400.28	40°11'17.368"N	104°41'28.621"W	0.08	
5505.00	0.490	209.840	5413.88	-814.76	-813.24	-229.34	1726634.98	14595399.88	40°11'17.364"N	104°41'28.625"W	0.37	
5592.00	0.680	208.150	5500.88	-815.54	-814.02	-229.77	1726634.55	14595399.10	40°11'17.356"N	104°41'28.631"W	0.22	
5680.00	0.740	206.910	5588.87	-816.51	-814.99	-230.27	1726634.05	14595398.13	40°11'17.346"N	104°41'28.637"W	0.07	
5768.00	0.830	206.800	5676.87	-817.59	-816.06	-230.82	1726633.51	14595397.05	40°11'17.336"N	104°41'28.644"W	0.10	
5854.00	0.730	179.870	5762.86	-818.69	-817.17	-231.09	1726633.23	14595395.95	40°11'17.325"N	104°41'28.648"W	0.44	
5942.00	0.830	155.950	5850.85	-819.83	-818.31	-230.83	1726633.50	14595394.81	40°11'17.313"N	104°41'28.644"W	0.38	
6030.00	0.530	304.790	5938.85	-820.18	-818.66	-230.91	1726633.43	14595394.46	40°11'17.310"N	104°41'28.645"W	1.49	
6117.00	0.110	293.080	6025.85	-819.92	-818.40	-231.32	1726633.02	14595394.72	40°11'17.313"N	104°41'28.651"W	0.49	
6205.00	0.330	306.260	6113.84	-819.74	-818.21	-231.60	1726632.74	14595394.90	40°11'17.314"N	104°41'28.654"W	0.25	
6292.00	0.360	331.850	6200.84	-819.36	-817.82	-231.93	1726632.40	14595395.29	40°11'17.318"N	104°41'28.658"W	0.18	
6380.00	0.150	325.920	6288.84	-819.02	-817.48	-232.12	1726632.21	14595395.63	40°11'17.322"N	104°41'28.661"W	0.24	
6438.00†	2.462	359.416	6346.82	-817.71	-816.18	-232.18	1726632.15	14595396.93	40°11'17.335"N	104°41'28.662"W	4.03	KOP
6467.00	3.630	0.070	6375.78	-816.17	-814.64	-232.18	1726632.14	14595398.48	40°11'17.350"N	104°41'28.662"W	4.03	
6555.00	14.050	11.380	6462.62	-802.86	-801.34	-230.07	1726634.21	14595411.77	40°11'17.481"N	104°41'28.634"W	11.95	
6642.00	19.910	11.840	6545.79	-777.95	-776.47	-224.94	1726639.25	14595436.65	40°11'17.727"N	104°41'28.568"W	6.74	
6730.00	23.190	6.310	6627.64	-746.02	-744.57	-219.96	1726644.11	14595468.56	40°11'18.042"N	104°41'28.504"W	4.38	
6817.00	26.790	3.270	6706.48	-709.39	-707.96	-216.96	1726646.99	14595505.17	40°11'18.404"N	104°41'28.466"W	4.39	
6905.00	34.940	0.900	6781.96	-664.31	-662.88	-215.43	1726648.36	14595550.23	40°11'18.849"N	104°41'28.446"W	9.36	
6992.00	40.410	0.120	6850.79	-611.16	-609.73	-214.98	1726648.62	14595603.36	40°11'19.375"N	104°41'28.440"W	6.31	
7080.00	45.210	358.470	6915.34	-551.39	-549.96	-215.75	1726647.64	14595663.11	40°11'19.965"N	104°41'28.450"W	5.60	
7167.00	50.820	356.330	6973.51	-486.84	-485.39	-218.74	1726644.43	14595727.64	40°11'20.603"N	104°41'28.488"W	6.70	
7255.00	60.950	354.910	7022.81	-414.34	-412.85	-224.35	1726638.57	14595800.13	40°11'21.320"N	104°41'28.561"W	11.59	
7342.00	66.760	357.830	7061.13	-336.47	-334.95	-229.24	1726633.41	14595877.98	40°11'22.090"N	104°41'28.624"W	7.33	
7430.00	71.350	0.570	7092.59	-254.34	-252.80	-230.36	1726632.01	14595960.09	40°11'22.902"N	104°41'28.638"W	5.97	
7518.00	82.630	0.180	7112.37	-168.73	-167.20	-229.80	1726632.26	14596045.66	40°11'23.748"N	104°41'28.631"W	12.83	
7606.00	90.180	1.450	7117.88	-80.97	-79.45	-228.55	1726633.21	14596133.38	40°11'24.615"N	104°41'28.615"W	8.70	LANDING (362'FSL & 1520'FWL,SEC.29) 40.1901708 -104.6912819

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Area	COLORADO	Well	RW 29N-29HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 29N-29HZ AWP
Facility	SEC.29-T3N-R65W		

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7656.00†	90.870	1.404	7117.42	-30.99	-29.47	-227.30	1726634.28	14596183.35	40°11'25.109"N	104°41'28.599"W	1.38	EXIT RADIUS HEEL (412'FSL & 1521'FWL,SEC.29) 40.1903080 -104.6912775
7693.00	91.380	1.370	7116.70	6.00	7.52	-226.41	1726635.04	14596220.32	40°11'25.474"N	104°41'28.587"W	1.38	
7781.00	91.820	0.770	7114.24	93.96	95.47	-224.77	1726636.38	14596308.24	40°11'26.343"N	104°41'28.566"W	0.85	
7868.00	91.600	359.600	7111.64	180.92	182.42	-224.49	1726636.36	14596395.16	40°11'27.203"N	104°41'28.563"W	1.37	
7955.00	90.090	359.550	7110.36	267.90	269.41	-225.13	1726635.41	14596482.11	40°11'28.062"N	104°41'28.571"W	1.74	
8043.00	91.170	358.190	7109.39	355.86	357.38	-226.87	1726633.37	14596570.04	40°11'28.932"N	104°41'28.593"W	1.97	
8131.00	88.710	357.240	7109.48	443.76	445.31	-230.37	1726629.55	14596657.92	40°11'29.801"N	104°41'28.639"W	3.00	
8218.00	89.380	357.490	7110.93	530.62	532.20	-234.37	1726625.25	14596744.77	40°11'30.659"N	104°41'28.690"W	0.82	
8305.00	89.110	357.630	7112.08	617.51	619.12	-238.08	1726621.25	14596831.63	40°11'31.518"N	104°41'28.738"W	0.35	
8393.00	89.970	357.710	7112.79	705.41	707.04	-241.65	1726617.37	14596919.51	40°11'32.387"N	104°41'28.784"W	0.98	
8481.00	89.600	357.610	7113.12	793.31	794.96	-245.25	1726613.47	14597007.39	40°11'33.256"N	104°41'28.830"W	0.44	
8568.00	89.940	358.850	7113.47	880.24	881.92	-247.93	1726610.48	14597094.30	40°11'34.115"N	104°41'28.865"W	1.48	
8656.00	90.150	359.950	7113.40	968.23	969.91	-248.86	1726609.25	14597182.25	40°11'34.985"N	104°41'28.877"W	1.27	
8743.00	89.970	1.390	7113.31	1055.23	1056.91	-247.84	1726609.97	14597269.21	40°11'35.844"N	104°41'28.864"W	1.67	
8831.00	91.420	1.630	7112.24	1143.20	1144.87	-245.52	1726611.98	14597357.15	40°11'36.714"N	104°41'28.834"W	1.67	
8918.00	90.650	1.860	7110.67	1230.16	1231.81	-242.87	1726614.32	14597444.07	40°11'37.573"N	104°41'28.800"W	0.92	
9006.00	89.350	0.490	7110.67	1318.15	1319.79	-241.07	1726615.82	14597532.02	40°11'38.442"N	104°41'28.776"W	2.15	
9093.00	89.480	1.860	7111.55	1405.13	1406.76	-239.28	1726617.30	14597618.96	40°11'39.302"N	104°41'28.753"W	1.58	
9181.00	88.280	0.500	7113.28	1493.10	1494.72	-237.47	1726618.80	14597706.89	40°11'40.171"N	104°41'28.730"W	2.06	
9268.00	89.600	359.900	7114.88	1580.09	1581.71	-237.17	1726618.80	14597793.84	40°11'41.030"N	104°41'28.726"W	1.67	
9355.00	88.800	1.660	7116.10	1667.07	1668.69	-235.98	1726619.68	14597880.79	40°11'41.890"N	104°41'28.711"W	2.22	
9443.00	89.540	1.730	7117.37	1755.04	1756.64	-233.38	1726621.98	14597968.72	40°11'42.759"N	104°41'28.677"W	0.84	
9530.00	88.030	1.840	7119.22	1841.99	1843.57	-230.67	1726624.38	14598055.63	40°11'43.618"N	104°41'28.643"W	1.74	
9618.00	88.490	1.730	7121.89	1929.92	1931.49	-227.93	1726626.82	14598143.52	40°11'44.487"N	104°41'28.607"W	0.54	
9705.00	89.140	1.150	7123.69	2016.89	2018.44	-225.75	1726628.70	14598230.44	40°11'45.346"N	104°41'28.579"W	1.00	
9793.00	89.780	0.530	7124.52	2104.88	2106.43	-224.46	1726629.68	14598318.40	40°11'46.216"N	104°41'28.562"W	1.01	
9880.00	90.800	0.410	7124.08	2191.88	2193.42	-223.74	1726630.09	14598405.36	40°11'47.075"N	104°41'28.553"W	1.18	
9968.00	89.450	0.620	7123.89	2279.88	2281.42	-222.95	1726630.58	14598493.32	40°11'47.945"N	104°41'28.543"W	1.55	
10056.00	89.880	0.090	7124.40	2367.87	2369.41	-222.41	1726630.81	14598581.29	40°11'48.815"N	104°41'28.536"W	0.78	
10143.00	90.740	359.800	7123.93	2454.87	2456.41	-222.49	1726630.43	14598668.25	40°11'49.674"N	104°41'28.537"W	1.04	
10231.00	89.480	1.380	7123.76	2542.86	2544.40	-221.58	1726631.03	14598756.21	40°11'50.544"N	104°41'28.525"W	2.30	
10318.00	90.000	0.570	7124.16	2629.86	2631.39	-220.10	1726632.20	14598843.16	40°11'51.403"N	104°41'28.506"W	1.11	
10405.00	89.200	0.660	7124.76	2716.85	2718.38	-219.17	1726632.83	14598930.12	40°11'52.263"N	104°41'28.494"W	0.93	
10493.00	89.940	0.520	7125.42	2804.85	2806.37	-218.26	1726633.43	14599018.08	40°11'53.133"N	104°41'28.483"W	0.86	
10581.00	89.260	1.720	7126.04	2892.84	2894.35	-216.54	1726634.85	14599106.03	40°11'54.002"N	104°41'28.461"W	1.57	
10668.00	89.570	1.310	7126.93	2979.82	2981.32	-214.24	1726636.84	14599192.97	40°11'54.861"N	104°41'28.431"W	0.59	
10756.00	90.310	1.490	7127.02	3067.80	3069.29	-212.09	1726638.68	14599280.92	40°11'55.731"N	104°41'28.403"W	0.87	
10843.00	91.480	1.000	7125.66	3154.78	3156.26	-210.20	1726640.27	14599367.86	40°11'56.590"N	104°41'28.379"W	1.46	
10931.00	90.650	2.240	7124.02	3242.74	3244.20	-207.72	1726642.45	14599455.78	40°11'57.459"N	104°41'28.347"W	1.70	
11018.00	89.480	0.570	7123.93	3329.72	3331.17	-205.58	1726644.28	14599542.72	40°11'58.319"N	104°41'28.319"W	2.34	
11106.00	90.030	359.920	7124.30	3417.72	3419.17	-205.21	1726644.35	14599630.68	40°11'59.188"N	104°41'28.315"W	0.97	
11193.00	91.910	0.320	7122.83	3504.70	3506.15	-205.02	1726644.23	14599717.63	40°12'00.048"N	104°41'28.312"W	2.21	
11281.00	90.400	0.820	7121.06	3592.68	3594.13	-204.15	1726644.80	14599805.58	40°12'00.917"N	104°41'28.301"W	1.81	
11368.00	88.490	0.040	7121.90	3679.67	3681.12	-203.50	1726645.15	14599892.53	40°12'01.777"N	104°41'28.293"W	2.37	
11456.00	88.770	358.870	7124.00	3767.64	3769.09	-204.33	1726644.00	14599980.46	40°12'02.646"N	104°41'28.303"W	1.37	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#43 RW 29N-29HZ(441'FSL & 1749'FWL,SEC.29)
Area	COLORADO	Well	RW 29N-29HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 29N-29HZ AWB
Facility	SEC.29-T3N-R65W		

WELLPATH DATA (148 stations) † = interpolated/extrapolated station											
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]
11543.00	89.540	358.740	7125.29	3854.59	3856.06	-206.15	1726641.89	14600067.39	40°12'03.506"N	104°41'28.327"W	0.90
11631.00	90.220	358.280	7125.47	3942.55	3944.03	-208.43	1726639.29	14600155.32	40°12'04.375"N	104°41'28.356"W	0.93
11718.00	89.880	359.830	7125.39	4029.52	4031.01	-209.87	1726637.55	14600242.26	40°12'05.234"N	104°41'28.375"W	1.82
11806.00	89.140	0.070	7126.15	4117.51	4119.01	-209.95	1726637.17	14600330.22	40°12'06.104"N	104°41'28.376"W	0.88
11894.00	90.090	0.110	7126.74	4205.51	4207.00	-209.81	1726637.00	14600418.19	40°12'06.974"N	104°41'28.374"W	1.08
11981.00	88.580	359.870	7127.75	4292.50	4294.00	-209.82	1726636.68	14600505.14	40°12'07.833"N	104°41'28.374"W	1.76
12068.00	88.650	359.650	7129.85	4379.47	4380.97	-210.19	1726636.02	14600592.08	40°12'08.693"N	104°41'28.379"W	0.27
12129.00†	89.288	359.539	7130.95	4440.45	4441.96	-210.62	1726635.37	14600653.04	40°12'09.295"N	104°41'28.384"W	1.06
12156.00	89.570	359.490	7131.22	4467.45	4468.96	-210.85	1726635.05	14600680.03	40°12'09.562"N	104°41'28.387"W	1.06
12244.00	90.190	359.510	7131.40	4555.44	4556.95	-211.62	1726633.98	14600767.99	40°12'10.432"N	104°41'28.397"W	0.70
12331.00	90.680	358.840	7130.74	4642.41	4643.94	-212.87	1726632.42	14600854.94	40°12'11.291"N	104°41'28.413"W	0.95
12389.00	91.170	358.410	7129.80	4700.38	4701.92	-214.26	1726630.83	14600912.88	40°12'11.864"N	104°41'28.431"W	1.12
12434.00	91.170	358.410	7128.89	4745.34	4746.89	-215.51	1726629.42	14600957.84	40°12'12.309"N	104°41'28.447"W	0.00

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.29-T3N-R65W	1.00	1.52	-135.27	1726726.17	14596214.64	40°11'25.415"N	104°41'27.413"W	polygon
SEC.32-T3N-R65W	1.00	1.52	-135.27	1726726.17	14596214.64	40°11'25.415"N	104°41'27.413"W	polygon
RW 29N-29HZ HEEL REV-1(352'FSL & 1515'FWL,SEC.29)	7116.00	-88.12	-233.32	1726628.47	14596124.70	40°11'24.529"N	104°41'28.676"W	point
RW 29N-29HZ BHL REV-1(56'FNL & 1564'FWL,SEC.29)	7133.00	4770.18	-200.87	1726643.97	14600981.16	40°12'12.539"N	104°41'28.259"W	point
RW 29N-29HZ LANDBOX	7133.00	0.00	0.00	1726861.39	14596213.59	40°11'25.400"N	104°41'25.670"W	polygon
RW 29N-29HZ RADIUS 1	7133.00	4838.29	-445.51	1726399.20	14601048.40	40°12'13.212"N	104°41'31.412"W	polygon
RW 29N-29HZ RADIUS 2	7133.00	-439.86	-433.89	1726429.20	14595772.40	40°11'21.053"N	104°41'31.261"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: RW 29N-29HZ AWB Ref Wellpath: RW 29N-29HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1814.00	Custom APC ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+SC <116 - 1814>	RW 29N-29HZ AWB
1814.00	12389.00	Custom APC ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+SC <1892 - 12389>	RW 29N-29HZ AWB
12389.00	12434.00	Blind Drilling (std)	Projection to bit	RW 29N-29HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#43 RW 29N-29HZ(441'FSL & 1749'FWL,SEC.29)
Area	COLORADO	Well	RW 29N-29HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 29N-29HZ AWB
Facility	SEC.29-T3N-R65W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
116.00	0.400	313.020	116.00	FIRST BHGE SURFACE MWD+IFR1+SC SURVEY
1814.00	13.050	197.110	1787.85	LAST BHGE SURFACE MWD+IFR1+SC SURVEY
1892.00	13.020	198.030	1863.84	FIRST BHGE PRODUCTION MWD+IFR1+SC SURVEY
6438.00	2.462	359.416	6346.82	KOP
7606.00	90.180	1.450	7117.88	LANDING (362'FSL & 1520'FWL,SEC.29) 40.1901708 -104.6912819
7656.00	90.870	1.404	7117.42	EXIT RADIUS HEEL (412'FSL & 1521'FWL,SEC.29) 40.1903080 -104.6912775
12129.00	89.288	359.539	7130.95	ENTER RADIUS TOE (384'FNL & 1554'FWL,SEC.29) 40.2025820 -104.6912179
12389.00	91.170	358.410	7129.80	LAST BHGE PRODUCTION MWD+IFR1+SC SURVEY
12434.00	91.170	358.410	7128.89	PTB (79'FNL & 1549'FWL,SEC.29) 40.2034191 -104.6912354