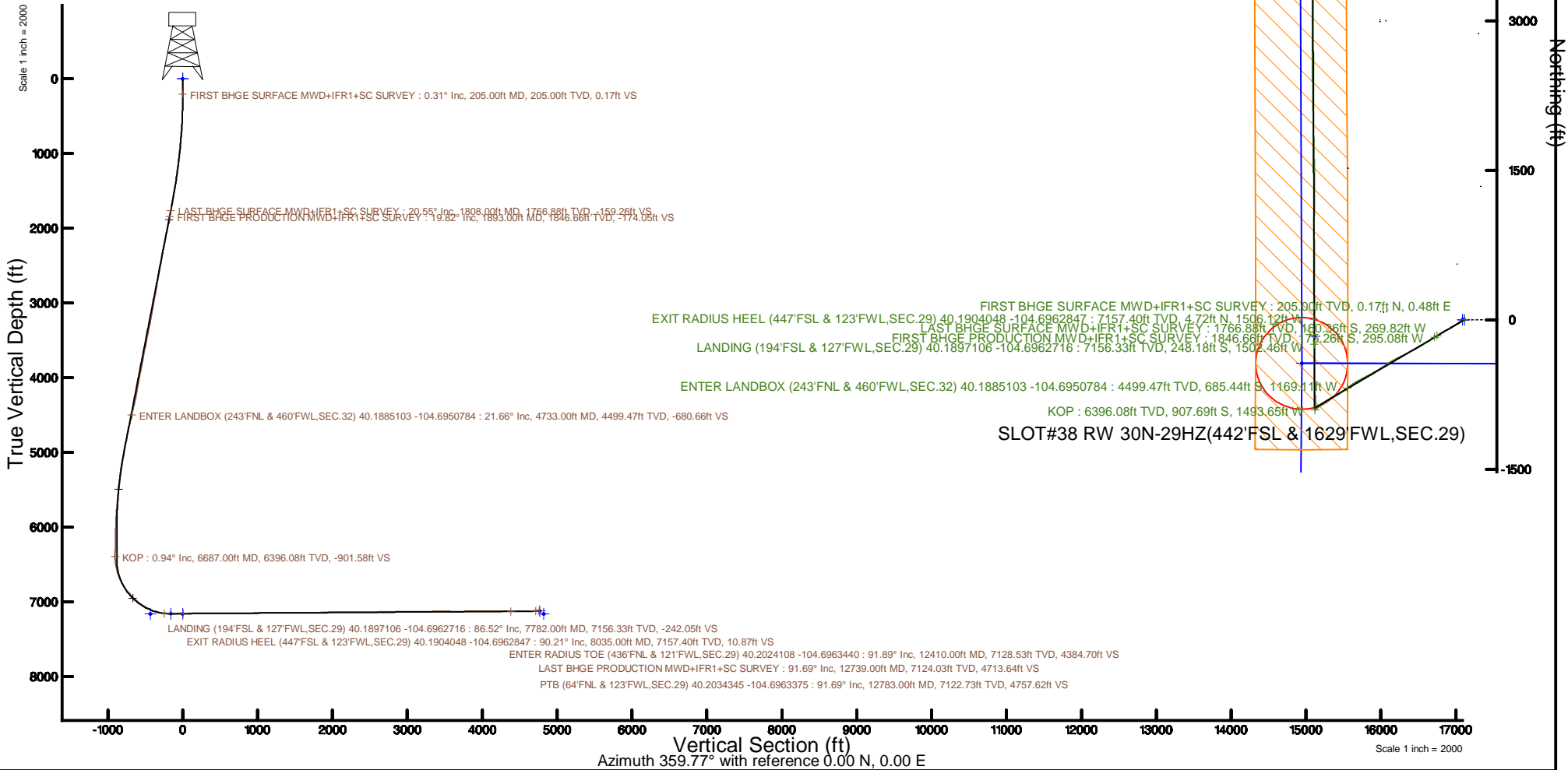


KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#38 RW 30N-29HZ(442'FSL & 1629'FWL,SEC.29)
 Field: WELD COUNTY (UTM/TRUE NORTH) Well: RW 30N-29HZ
 Facility: SEC.29-T3N-R65W Wellbore: RW 30N-29HZ PWB

Plot reference wellpath is RW 30N-29HZ PWP Rev-B.0	Grid System: NAD83 / UTM Zone 13 North, US feet
True vertical depths are referenced to Xtreme 22 (17) (RT)	* = Wellpath was transformed from a different geoidetic datum
Measured depths are referenced to Xtreme 22 (17) (RT)	North Reference: True north
Xtreme 22 (17) (RT) to Mean Sea Level: 4903 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#38 RW 30N-29HZ(442'FSL & 1629'FWL,SEC.29)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: painsetr on 2017-08-01
	Database: WA_DEN_Anadarko_Defn



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#38 RW 30N-29HZ(442'FSL & 1629'FWL,SEC.29)
Area	COLORADO	Well	RW 30N-29HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 30N-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	8/1/2017 at 11:05 AM
Convergence at slot	0.20° East	Database/Source file	WA_DEN_Anadarko_Defn/RW_30N-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	-78.01	808.82	1726741.30	14596214.29	40°11'25.411"N	104°41'27.218"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#38 RW 30N-29HZ(442'FSL & 1629'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	359.77°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#38 RW 30N-29HZ(442'FSL & 1629'FWL,SEC.29)
Area	COLORADO	Well	RW 30N-29HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 30N-29HZ AWB
Facility	SEC.29-T3N-R65W		

WELLPATH DATA (150 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
0.00	0.00	70.610	0.00	0.00	0.00	0.00	1726741.30	14596214.29	40°11'25.411"N	104°41'27.218"W	0.00	
17.00	0.00	70.610	17.00	0.00	0.00	0.00	1726741.30	14596214.29	40°11'25.411"N	104°41'27.218"W	0.00	
205.00	0.310	70.610	205.00	0.17	0.17	0.48	1726741.78	14596214.46	40°11'25.413"N	104°41'27.212"W	0.16	FIRST BHGE SURFACE MWD+IFR1+SC SURVEY
295.00	0.500	255.560	295.00	0.15	0.15	0.33	1726741.63	14596214.44	40°11'25.412"N	104°41'27.214"W	0.90	
386.00	2.550	236.540	385.96	-1.06	-1.06	-1.74	1726739.56	14596213.22	40°11'25.400"N	104°41'27.240"W	2.29	
476.00	3.880	239.040	475.82	-3.71	-3.73	-6.03	1726735.29	14596210.54	40°11'25.374"N	104°41'27.296"W	1.49	
568.00	5.370	242.990	567.52	-7.24	-7.29	-12.53	1726728.80	14596206.96	40°11'25.339"N	104°41'27.379"W	1.66	
658.00	6.860	240.210	657.00	-11.79	-11.87	-20.95	1726720.40	14596202.35	40°11'25.294"N	104°41'27.488"W	1.69	
746.00	8.480	237.670	744.21	-17.83	-17.96	-30.99	1726710.38	14596196.23	40°11'25.234"N	104°41'27.617"W	1.88	
834.00	9.710	237.310	831.10	-25.26	-25.43	-42.72	1726698.68	14596188.72	40°11'25.160"N	104°41'27.768"W	1.40	
921.00	10.810	238.620	916.71	-33.42	-33.64	-55.86	1726685.58	14596180.46	40°11'25.079"N	104°41'27.938"W	1.29	
1009.00	11.260	238.720	1003.08	-42.12	-42.40	-70.25	1726671.22	14596171.66	40°11'24.992"N	104°41'28.123"W	0.51	
1096.00	13.670	239.180	1088.03	-51.73	-52.08	-86.34	1726655.17	14596161.93	40°11'24.896"N	104°41'28.331"W	2.77	
1183.00	14.560	239.860	1172.40	-62.41	-62.84	-104.63	1726636.93	14596151.11	40°11'24.790"N	104°41'28.566"W	1.04	
1271.00	15.260	239.260	1257.44	-73.81	-74.31	-124.15	1726617.46	14596139.57	40°11'24.677"N	104°41'28.818"W	0.81	
1358.00	16.610	239.940	1341.09	-85.80	-86.39	-144.75	1726596.91	14596127.42	40°11'24.557"N	104°41'29.083"W	1.57	
1446.00	17.470	239.550	1425.23	-98.71	-99.39	-167.02	1726574.69	14596114.36	40°11'24.429"N	104°41'29.370"W	0.99	
1533.00	18.490	239.990	1507.98	-112.13	-112.91	-190.23	1726551.54	14596100.76	40°11'24.295"N	104°41'29.669"W	1.18	
1621.00	19.580	239.890	1591.16	-126.41	-127.28	-215.07	1726526.76	14596086.31	40°11'24.153"N	104°41'29.989"W	1.24	
1708.00	19.910	238.240	1673.05	-141.41	-142.40	-240.27	1726501.62	14596071.11	40°11'24.004"N	104°41'30.314"W	0.74	
1808.00	20.550	239.130	1766.88	-159.26	-160.36	-269.82	1726472.15	14596053.05	40°11'23.826"N	104°41'30.695"W	0.71	LAST BHGE SURFACE MWD+IFR1+SC SURVEY
1893.00	19.820	239.840	1846.66	-174.05	-175.26	-295.08	1726446.94	14596038.07	40°11'23.679"N	104°41'31.020"W	0.91	FIRST BHGE PRODUCTION MWD+IFR1+SC SURVEY
1981.00	19.560	236.360	1929.52	-189.61	-190.91	-320.25	1726421.84	14596022.34	40°11'23.524"N	104°41'31.344"W	1.36	
2068.00	20.450	235.230	2011.27	-206.24	-207.65	-344.86	1726397.30	14596005.52	40°11'23.359"N	104°41'31.662"W	1.12	
2156.00	21.640	240.360	2093.40	-222.92	-224.44	-371.59	1726370.64	14595988.64	40°11'23.193"N	104°41'32.006"W	2.49	
2244.00	20.780	237.640	2175.44	-239.19	-240.82	-398.88	1726343.41	14595972.17	40°11'23.031"N	104°41'32.358"W	1.48	
2331.00	20.460	238.160	2256.87	-255.37	-257.11	-424.83	1726317.53	14595955.81	40°11'22.870"N	104°41'32.692"W	0.42	
2419.00	20.170	240.470	2339.40	-270.85	-272.70	-451.10	1726291.33	14595940.13	40°11'22.716"N	104°41'33.031"W	0.97	
2506.00	20.450	239.990	2420.99	-285.74	-287.69	-477.31	1726265.18	14595925.05	40°11'22.568"N	104°41'33.368"W	0.37	
2594.00	20.650	242.790	2503.39	-300.41	-302.48	-504.43	1726238.13	14595910.18	40°11'22.422"N	104°41'33.718"W	1.14	
2682.00	21.750	242.760	2585.43	-314.86	-317.04	-532.72	1726209.89	14595895.53	40°11'22.278"N	104°41'34.082"W	1.25	
2795.00	20.230	241.270	2690.93	-333.69	-336.01	-568.47	1726174.22	14595876.43	40°11'22.090"N	104°41'34.543"W	1.43	
2882.00	22.020	244.950	2772.09	-347.71	-350.15	-596.44	1726146.31	14595862.20	40°11'21.951"N	104°41'34.903"W	2.56	
2969.00	21.300	243.900	2852.94	-361.45	-364.01	-625.41	1726117.41	14595848.25	40°11'21.814"N	104°41'35.277"W	0.94	
3056.00	20.590	242.990	2934.19	-375.23	-377.91	-653.23	1726089.65	14595834.26	40°11'21.676"N	104°41'35.635"W	0.90	
3144.00	21.620	242.240	3016.29	-389.70	-392.48	-681.36	1726061.58	14595819.59	40°11'21.532"N	104°41'35.998"W	1.21	
3231.00	19.930	240.080	3097.63	-404.45	-407.35	-708.40	1726034.60	14595804.64	40°11'21.385"N	104°41'36.346"W	2.13	
3319.00	19.320	240.600	3180.52	-418.97	-421.97	-734.08	1726008.98	14595789.93	40°11'21.241"N	104°41'36.677"W	0.72	
3406.00	21.340	237.530	3262.10	-434.43	-437.54	-759.98	1725983.15	14595774.28	40°11'21.087"N	104°41'37.010"W	2.62	
3494.00	19.960	234.070	3344.45	-451.74	-454.95	-785.65	1725957.55	14595756.79	40°11'20.915"N	104°41'37.341"W	2.09	
3582.00	19.110	235.630	3427.38	-468.59	-471.90	-809.70	1725933.56	14595739.76	40°11'20.748"N	104°41'37.651"W	1.13	
3670.00	21.240	239.240	3509.98	-484.77	-488.18	-835.29	1725908.04	14595723.39	40°11'20.587"N	104°41'37.981"W	2.80	
3758.00	22.460	240.100	3591.66	-501.19	-504.72	-863.56	1725879.84	14595706.77	40°11'20.423"N	104°41'38.345"W	1.43	
3846.00	20.060	237.810	3673.66	-517.50	-521.14	-890.91	1725852.55	14595690.26	40°11'20.261"N	104°41'38.698"W	2.89	
3933.00	21.340	241.930	3755.05	-532.79	-536.54	-917.51	1725826.02	14595674.77	40°11'20.109"N	104°41'39.040"W	2.23	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#38 RW 30N-29HZ(442'FSL & 1629'FWL,SEC.29)
Area	COLORADO	Well	RW 30N-29HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 30N-29HZ AWB
Facility	SEC.29-T3N-R65W		

WELLPATH DATA (150 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
4021.00	21.800	242.170	3836.89	-547.83	-551.70	-946.09	1725797.51	14595659.52	40°11'19.959"N	104°41'39.409"W	0.53	
4107.00	22.530	242.030	3916.53	-562.90	-566.88	-974.76	1725768.90	14595644.24	40°11'19.809"N	104°41'39.778"W	0.85	
4195.00	22.110	241.920	3997.94	-578.48	-582.59	-1004.26	1725739.46	14595628.44	40°11'19.654"N	104°41'40.158"W	0.48	
4282.00	21.560	241.570	4078.70	-593.68	-597.90	-1032.77	1725711.02	14595613.03	40°11'19.502"N	104°41'40.525"W	0.65	
4369.00	20.130	241.940	4160.00	-608.22	-612.56	-1060.04	1725683.82	14595598.29	40°11'19.358"N	104°41'40.877"W	1.65	
4457.00	20.740	239.030	4242.46	-623.25	-627.70	-1086.76	1725657.16	14595583.06	40°11'19.208"N	104°41'41.221"W	1.35	
4544.00	21.960	234.760	4323.50	-640.46	-645.01	-1113.26	1725630.73	14595565.66	40°11'19.037"N	104°41'41.563"W	2.27	
4632.00	21.040	233.500	4405.37	-659.24	-663.90	-1139.40	1725604.67	14595546.89	40°11'18.850"N	104°41'41.899"W	1.17	
4719.00	21.490	234.460	4486.45	-677.69	-682.46	-1164.92	1725579.22	14595528.05	40°11'18.667"N	104°41'42.228"W	0.65	
4733.00†	21.664	234.741	4499.47	-680.66	-685.44	-1169.11	1725575.04	14595525.06	40°11'18.637"N	104°41'42.282"W	1.44	ENTER LANDBOX (243'FNL & 460'FWL,SEC.32) 40.1885103 -104.6950784
4807.00	22.590	236.160	4568.02	-696.36	-701.24	-1192.07	1725552.14	14595509.18	40°11'18.481"N	104°41'42.578"W	1.44	
4895.00	21.550	235.170	4649.57	-714.90	-719.88	-1219.38	1725524.91	14595490.45	40°11'18.297"N	104°41'42.930"W	1.26	
4982.00	21.640	238.870	4730.47	-732.21	-737.30	-1246.23	1725498.13	14595472.94	40°11'18.125"N	104°41'43.276"W	1.57	
5070.00	21.770	239.750	4812.23	-748.70	-753.91	-1274.21	1725470.22	14595456.24	40°11'17.961"N	104°41'43.636"W	0.40	
5157.00	20.200	239.600	4893.45	-764.32	-769.64	-1301.11	1725443.39	14595440.43	40°11'17.805"N	104°41'43.983"W	1.81	
5245.00	17.800	238.360	4976.65	-778.97	-784.39	-1325.67	1725418.89	14595425.60	40°11'17.659"N	104°41'44.299"W	2.77	
5332.00	18.040	235.800	5059.43	-793.42	-798.94	-1348.13	1725396.49	14595410.98	40°11'17.516"N	104°41'44.589"W	0.95	
5419.00	16.310	234.980	5142.55	-807.92	-813.52	-1369.28	1725375.40	14595396.33	40°11'17.371"N	104°41'44.861"W	2.01	
5507.00	13.840	233.370	5227.52	-821.22	-826.89	-1387.85	1725356.88	14595382.90	40°11'17.239"N	104°41'45.101"W	2.85	
5594.00	12.960	235.510	5312.15	-832.88	-838.62	-1404.24	1725340.54	14595371.11	40°11'17.123"N	104°41'45.312"W	1.16	
5682.00	11.960	238.090	5398.07	-843.23	-849.03	-1420.11	1725324.71	14595360.65	40°11'17.020"N	104°41'45.516"W	1.30	
5769.00	9.980	235.890	5483.48	-852.16	-858.03	-1434.01	1725310.85	14595351.61	40°11'16.932"N	104°41'45.695"W	2.33	
5856.00	10.590	232.100	5569.08	-861.25	-867.16	-1446.56	1725298.33	14595342.44	40°11'16.841"N	104°41'45.857"W	1.05	
5944.00	9.920	233.220	5655.68	-870.70	-876.67	-1459.01	1725285.92	14595332.89	40°11'16.747"N	104°41'46.017"W	0.79	
6032.00	8.520	231.930	5742.54	-879.22	-885.23	-1470.21	1725274.75	14595324.30	40°11'16.663"N	104°41'46.162"W	1.61	
6119.00	6.810	238.890	5828.76	-885.82	-891.87	-1479.71	1725265.29	14595317.63	40°11'16.597"N	104°41'46.284"W	2.23	
6207.00	4.270	229.860	5916.34	-890.60	-896.68	-1486.68	1725258.33	14595312.80	40°11'16.550"N	104°41'46.374"W	3.04	
6294.00	2.470	227.980	6003.19	-893.93	-900.02	-1490.55	1725254.48	14595309.44	40°11'16.517"N	104°41'46.424"W	2.07	
6382.00	0.790	204.990	6091.15	-895.74	-901.84	-1492.21	1725252.82	14595307.62	40°11'16.499"N	104°41'46.445"W	2.01	
6469.00	1.290	201.040	6178.14	-897.19	-903.30	-1492.82	1725252.22	14595306.16	40°11'16.484"N	104°41'46.453"W	0.58	
6557.00	1.780	189.120	6266.11	-899.47	-905.57	-1493.39	1725251.66	14595303.88	40°11'16.462"N	104°41'46.460"W	0.66	
6644.00	1.000	185.300	6353.08	-901.55	-907.66	-1493.67	1725251.38	14595301.79	40°11'16.441"N	104°41'46.464"W	0.90	
6687.00†	0.941	10.332	6396.08	-901.58	-907.69	-1493.65	1725251.41	14595301.77	40°11'16.441"N	104°41'46.464"W	4.51	KOP
6732.00	2.970	8.560	6441.05	-900.06	-906.17	-1493.41	1725251.64	14595303.28	40°11'16.456"N	104°41'46.461"W	4.51	
6819.00	12.220	358.140	6527.19	-888.61	-894.71	-1493.37	1725251.64	14595314.73	40°11'16.569"N	104°41'46.460"W	10.71	
6907.00	15.520	3.030	6612.62	-867.54	-873.64	-1493.05	1725251.89	14595335.80	40°11'16.777"N	104°41'46.456"W	3.98	
6994.00	24.630	1.490	6694.25	-837.73	-843.83	-1491.96	1725252.87	14595365.60	40°11'17.072"N	104°41'46.442"W	10.49	
7082.00	30.100	359.040	6772.37	-797.31	-803.41	-1491.85	1725252.84	14595406.01	40°11'17.471"N	104°41'46.441"W	6.35	
7169.00	36.760	358.440	6844.94	-749.41	-755.52	-1492.93	1725251.60	14595453.88	40°11'17.945"N	104°41'46.455"W	7.66	
7257.00	42.080	357.450	6912.90	-693.58	-699.70	-1494.96	1725249.37	14595509.67	40°11'18.496"N	104°41'46.481"W	6.09	
7344.00	48.490	357.110	6974.08	-631.85	-637.97	-1497.90	1725246.22	14595571.36	40°11'19.106"N	104°41'46.519"W	7.37	
7432.00	54.860	358.830	7028.62	-562.89	-569.02	-1500.30	1725243.58	14595640.27	40°11'19.787"N	104°41'46.550"W	7.40	
7520.00	59.630	0.160	7076.22	-488.91	-495.04	-1500.93	1725242.69	14595714.22	40°11'20.519"N	104°41'46.558"W	5.57	
7608.00	67.000	0.780	7115.71	-410.34	-416.47	-1500.27	1725243.08	14595792.76	40°11'21.295"N	104°41'46.549"W	8.40	
7695.00	76.110	359.570	7143.21	-327.90	-334.03	-1500.04	1725243.02	14595875.17	40°11'22.110"N	104°41'46.547"W	10.55	

REFERENCE WELLPATH IDENTIFICATION				
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)		Slot	SLOT#38 RW 30N-29HZ(442'FSL & 1629'FWL,SEC.29)
Area	COLORADO		Well	RW 30N-29HZ
Field	WELD COUNTY (UTM/TRUE NORTH)		Wellbore	RW 30N-29HZ AWB
Facility	SEC.29-T3N-R65W			

WELLPATH DATA (150 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
7782.00	86.520	357.240	7156.33	-242.05	-248.18	-1502.46	1725240.31	14595960.97	40°11'22.958"N	104°41'46.578"W	12.25	LANDING (194'FSL & 127'FWL,SEC.29) 40.1897106 -104.6962716
7870.00	90.520	359.800	7158.61	-154.12	-160.27	-1504.73	1725237.73	14596048.85	40°11'23.827"N	104°41'46.607"W	5.40	
7957.00	90.460	359.640	7157.86	-67.12	-73.27	-1505.15	1725237.00	14596135.81	40°11'24.686"N	104°41'46.613"W	0.20	
8035.00†	90.212	358.940	7157.40	10.87	4.72	-1506.12	1725235.77	14596213.76	40°11'25.457"N	104°41'46.625"W	0.95	EXIT RADIUS HEEL (447'FSL & 123'FWL,SEC.29) 40.1904048 -104.6962847
8045.00	90.180	358.850	7157.37	20.87	14.72	-1506.31	1725235.54	14596223.76	40°11'25.556"N	104°41'46.628"W	0.95	
8132.00	90.550	1.270	7156.82	107.86	101.71	-1506.22	1725235.33	14596310.72	40°11'26.416"N	104°41'46.626"W	2.81	
8220.00	90.680	1.160	7155.87	195.83	189.68	-1504.35	1725236.89	14596398.66	40°11'27.285"N	104°41'46.602"W	0.19	
8307.00	90.800	0.850	7154.75	282.80	276.66	-1502.83	1725238.11	14596485.61	40°11'28.145"N	104°41'46.583"W	0.38	
8395.00	89.750	0.880	7154.33	370.78	364.65	-1501.50	1725239.13	14596573.57	40°11'29.014"N	104°41'46.566"W	1.19	
8483.00	89.600	0.340	7154.82	458.77	452.64	-1500.56	1725239.76	14596661.53	40°11'29.884"N	104°41'46.554"W	0.64	
8570.00	89.450	0.030	7155.55	545.76	539.64	-1500.28	1725239.74	14596748.49	40°11'30.743"N	104°41'46.550"W	0.40	
8658.00	89.720	359.630	7156.18	633.76	627.64	-1500.54	1725239.17	14596836.45	40°11'31.613"N	104°41'46.554"W	0.55	
8745.00	89.600	359.120	7156.70	720.76	714.63	-1501.49	1725237.92	14596923.41	40°11'32.473"N	104°41'46.566"W	0.60	
8833.00	91.660	359.140	7155.73	808.74	802.61	-1502.83	1725236.28	14597011.35	40°11'33.342"N	104°41'46.583"W	2.34	
8920.00	92.340	359.680	7152.70	895.69	889.55	-1503.72	1725235.08	14597098.25	40°11'34.201"N	104°41'46.595"W	1.00	
9008.00	90.590	0.670	7150.45	983.65	977.52	-1503.45	1725235.04	14597186.18	40°11'35.070"N	104°41'46.592"W	2.28	
9095.00	90.990	0.400	7149.25	1070.63	1064.51	-1502.64	1725235.55	14597273.14	40°11'35.930"N	104°41'46.581"W	0.55	
9182.00	89.690	0.770	7148.73	1157.62	1151.50	-1501.75	1725236.14	14597360.10	40°11'36.790"N	104°41'46.570"W	1.55	
9270.00	89.510	0.120	7149.34	1245.61	1239.49	-1501.07	1725236.51	14597448.06	40°11'37.659"N	104°41'46.561"W	0.77	
9357.00	88.830	359.980	7150.60	1332.60	1326.48	-1500.99	1725236.29	14597535.02	40°11'38.519"N	104°41'46.560"W	0.80	
9445.00	90.580	0.090	7151.06	1420.60	1414.48	-1500.94	1725236.03	14597622.98	40°11'39.388"N	104°41'46.559"W	1.99	
9532.00	90.680	359.520	7150.10	1507.59	1501.47	-1501.24	1725235.44	14597709.94	40°11'40.248"N	104°41'46.563"W	0.67	
9620.00	90.980	359.070	7148.83	1595.58	1589.46	-1502.32	1725234.05	14597797.88	40°11'41.118"N	104°41'46.577"W	0.61	
9707.00	91.260	358.480	7147.13	1682.55	1676.42	-1504.18	1725231.89	14597884.80	40°11'41.977"N	104°41'46.601"W	0.75	
9795.00	90.520	358.840	7145.76	1770.52	1764.38	-1506.24	1725229.52	14597972.73	40°11'42.846"N	104°41'46.628"W	0.94	
9882.00	91.050	358.020	7144.57	1857.49	1851.34	-1508.62	1725226.84	14598059.64	40°11'43.706"N	104°41'46.659"W	1.12	
9970.00	89.750	359.830	7143.95	1945.47	1939.32	-1510.27	1725224.88	14598147.58	40°11'44.575"N	104°41'46.680"W	2.53	
10058.00	90.030	358.970	7144.12	2033.47	2027.31	-1511.19	1725223.65	14598235.53	40°11'45.444"N	104°41'46.692"W	1.03	
10145.00	90.220	358.350	7143.93	2120.45	2114.29	-1513.23	1725221.32	14598322.47	40°11'46.304"N	104°41'46.718"W	0.75	
10232.00	90.340	359.660	7143.51	2207.44	2201.27	-1514.74	1725219.51	14598409.41	40°11'47.164"N	104°41'46.738"W	1.51	
10320.00	90.620	359.020	7142.77	2295.43	2289.26	-1515.75	1725218.19	14598497.36	40°11'48.033"N	104°41'46.751"W	0.79	
10407.00	90.620	358.500	7141.83	2382.42	2376.24	-1517.63	1725216.00	14598584.29	40°11'48.893"N	104°41'46.775"W	0.60	
10495.00	90.680	0.300	7140.83	2470.40	2464.22	-1518.55	1725214.77	14598672.24	40°11'49.762"N	104°41'46.787"W	2.05	
10583.00	91.510	359.970	7139.15	2558.39	2552.21	-1518.35	1725214.67	14598760.19	40°11'50.631"N	104°41'46.785"W	1.01	
10670.00	90.980	359.200	7137.26	2645.36	2639.18	-1518.98	1725213.74	14598847.13	40°11'51.491"N	104°41'46.793"W	1.07	
10758.00	90.180	0.780	7136.37	2733.36	2727.17	-1518.99	1725213.42	14598935.09	40°11'52.360"N	104°41'46.793"W	2.01	
10845.00	90.490	0.530	7135.86	2820.34	2814.17	-1518.00	1725214.11	14599022.05	40°11'53.220"N	104°41'46.780"W	0.46	
10933.00	90.590	359.280	7135.03	2908.34	2902.16	-1518.14	1725213.66	14599110.01	40°11'54.090"N	104°41'46.782"W	1.42	
11020.00	91.330	359.000	7133.57	2995.32	2989.14	-1519.45	1725212.05	14599196.94	40°11'54.949"N	104°41'46.799"W	0.91	
11107.00	89.570	359.900	7132.89	3082.31	3076.13	-1520.28	1725210.92	14599283.90	40°11'55.809"N	104°41'46.810"W	2.27	
11195.00	90.090	0.490	7133.15	3170.31	3164.13	-1519.98	1725210.91	14599371.86	40°11'56.678"N	104°41'46.806"W	0.89	
11283.00	90.680	2.190	7132.56	3258.27	3252.10	-1517.93	1725212.66	14599459.80	40°11'57.548"N	104°41'46.780"W	2.04	
11370.00	91.110	3.580	7131.20	3345.13	3338.97	-1513.55	1725216.73	14599546.66	40°11'58.406"N	104°41'46.723"W	1.67	
11457.00	90.150	2.350	7130.24	3431.98	3425.85	-1509.05	1725220.93	14599633.52	40°11'59.265"N	104°41'46.666"W	1.79	
11545.00	89.410	359.450	7130.58	3519.96	3513.83	-1507.67	1725222.00	14599721.46	40°12'00.134"N	104°41'46.648"W	3.40	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#38 RW 30N-29HZ(442'FSL & 1629'FWL,SEC.29)
Area	COLORADO	Well	RW 30N-29HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 30N-29HZ AWB
Facility	SEC.29-T3N-R65W		

WELLPATH DATA (150 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
11632.00	89.320	359.020	131.54	3606.95	3600.81	-1508.83	1725220.54	14599808.41	40°12'00.994"N	104°41'46.663"W	0.50	
11720.00	89.320	358.680	132.59	3694.93	3688.79	-1510.59	1725218.47	14599896.35	40°12'01.863"N	104°41'46.686"W	0.39	
11807.00	89.290	358.290	133.64	3781.90	3775.75	-1512.89	1725215.87	14599983.27	40°12'02.722"N	104°41'46.715"W	0.45	
11896.00	89.630	357.850	134.48	3870.86	3864.70	-1515.89	1725212.56	14600072.17	40°12'03.601"N	104°41'46.754"W	0.62	
11983.00	89.850	0.960	134.88	3957.84	3951.68	-1516.80	1725211.36	14600159.11	40°12'04.461"N	104°41'46.766"W	3.58	
12070.00	91.390	0.350	133.94	4044.82	4038.67	-1515.80	1725212.05	14600246.07	40°12'05.321"N	104°41'46.753"W	1.90	
12158.00	90.280	358.180	132.65	4132.81	4126.64	-1516.93	1725210.61	14600334.01	40°12'06.190"N	104°41'46.768"W	2.77	
12245.00	90.710	357.790	131.90	4219.76	4213.59	-1519.99	1725207.25	14600420.90	40°12'07.049"N	104°41'46.807"W	0.67	
12333.00	91.080	359.740	130.53	4307.73	4301.55	-1521.89	1725205.05	14600508.83	40°12'07.918"N	104°41'46.832"W	2.26	
12410.00†	91.894	359.483	128.53	4384.70	4378.52	-1522.41	1725204.26	14600585.76	40°12'08.679"N	104°41'46.838"W	1.11	ENTER RADIUS TOE (436'FNL & 121'FWL,SEC.29) 40.2024108 -104.6963440
12420.00	92.000	359.450	128.19	4394.70	4388.52	-1522.50	1725204.13	14600595.75	40°12'08.778"N	104°41'46.840"W	1.11	
12507.00	90.090	0.320	126.60	4481.68	4475.50	-1522.67	1725203.66	14600682.70	40°12'09.637"N	104°41'46.842"W	2.41	
12594.00	90.180	0.650	126.40	4568.67	4562.49	-1521.94	1725204.09	14600769.66	40°12'10.497"N	104°41'46.833"W	0.39	
12739.00	91.690	0.270	124.03	4713.64	4707.47	-1520.77	1725204.75	14600914.58	40°12'11.930"N	104°41'46.818"W	1.07	LAST BHGE PRODUCTION MWD+IFR1+SC SURVEY
12783.00	91.690	0.270	122.73	4757.62	4751.45	-1520.57	1725204.80	14600958.54	40°12'12.364"N	104°41'46.815"W	0.00	PTB (64'FNL & 123'FWL,SEC.29) 40.2034345 -104.6963375

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	0.40	-15.13	1726726.17	14596214.64	40°11'25.415"N	104°41'27.413"W	polygon
SEC.32-T3N-R65W	1.00	0.40	-15.13	1726726.17	14596214.64	40°11'25.415"N	104°41'27.413"W	polygon
RW 30N-29HZ BHL REV-1(54'FNL & 123'FWL,SEC.29)	7124.00	4760.73	-1521.27	1725204.07	14600967.82	40°12'12.456"N	104°41'46.824"W	point
RW 30N-29HZ HEEL REV-1(275'FSL & 127'FWL,SEC.29)	7160.00	-163.89	-1501.16	1725241.31	14596045.24	40°11'23.791"N	104°41'46.561"W	point
RW 30N-29HZ LANDBOX	7163.00	0.00	0.00	1726741.30	14596214.29	40°11'25.411"N	104°41'27.218"W	polygon
RW 30N-29HZ RADIUS 1	7163.00	4813.66	-1674.71	1725050.50	14601020.20	40°12'12.979"N	104°41'48.802"W	polygon
RW 30N-29HZ RADIUS 2	7163.00	-438.50	-1627.17	1725116.30	14595770.30	40°11'21.077"N	104°41'48.185"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: RW 30N-29HZ AWB Ref Wellpath: RW 30N-29HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1808.00	Custom APC ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+SC <205 - 1808>	RW 30N-29HZ AWB
1808.00	12739.00	Custom APC ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+SC <1893 - 12739>	RW 30N-29HZ AWB
12739.00	12783.00	Blind Drilling (std)	Projection to bit	RW 30N-29HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#38 RW 30N-29HZ(442'FSL & 1629'FWL,SEC.29)
Area	COLORADO	Well	RW 30N-29HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 30N-29HZ AWB
Facility	SEC.29-T3N-R65W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
205.00	0.310	70.610	205.00	FIRST BHGE SURFACE MWD+IFR1+SC SURVEY
1808.00	20.550	239.130	1766.88	LAST BHGE SURFACE MWD+IFR1+SC SURVEY
1893.00	19.820	239.840	1846.66	FIRST BHGE PRODUCTION MWD+IFR1+SC SURVEY
4733.00	21.664	234.741	4499.47	ENTER LANDBOX (243'FNL & 460'FWL,SEC.32) 40.1885103 -104.6950784
6687.00	0.941	10.332	6396.08	KOP
7782.00	86.520	357.240	7156.33	LANDING (194'FSL & 127'FWL,SEC.29) 40.1897106 -104.6962716
8035.00	90.212	358.940	7157.40	EXIT RADIUS HEEL (447'FSL & 123'FWL,SEC.29) 40.1904048 -104.6962847
12410.00	91.894	359.483	7128.53	ENTER RADIUS TOE (436'FNL & 121'FWL,SEC.29) 40.2024108 -104.6963440
12739.00	91.690	0.270	7124.03	LAST BHGE PRODUCTION MWD+IFR1+SC SURVEY
12783.00	91.690	0.270	7122.73	PTB (64'FNL & 123'FWL,SEC.29) 40.2034345 -104.6963375