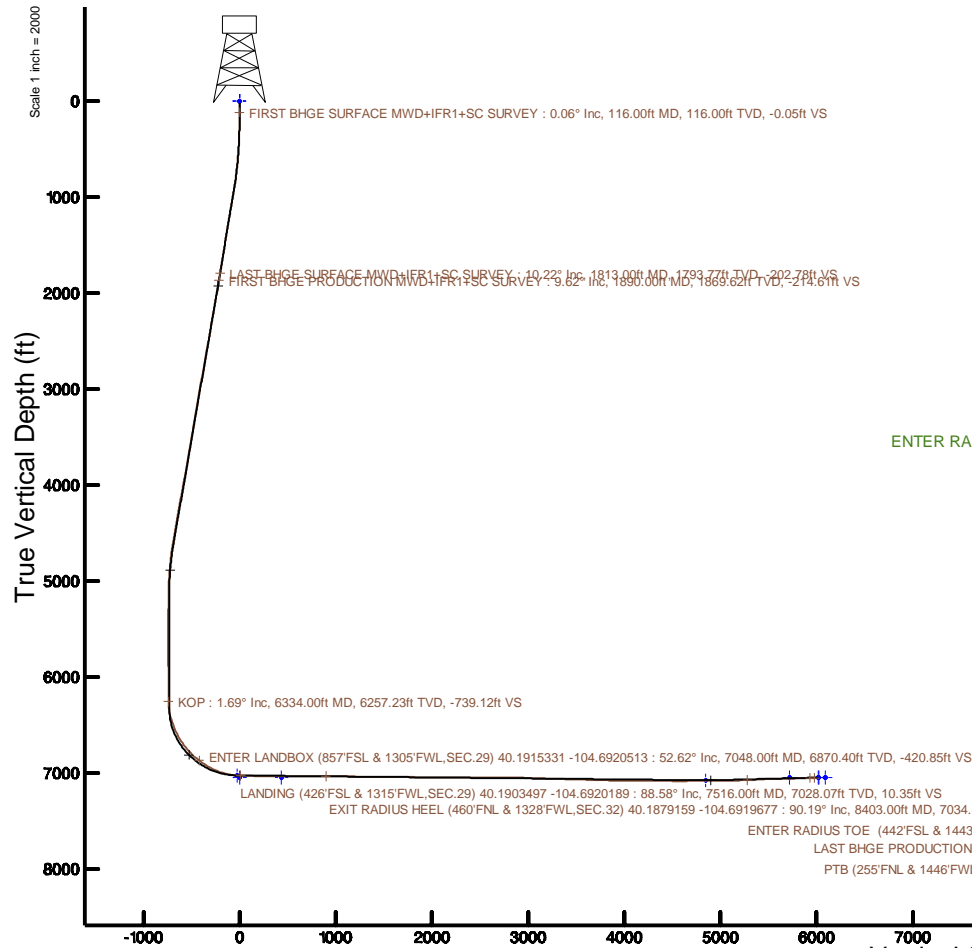


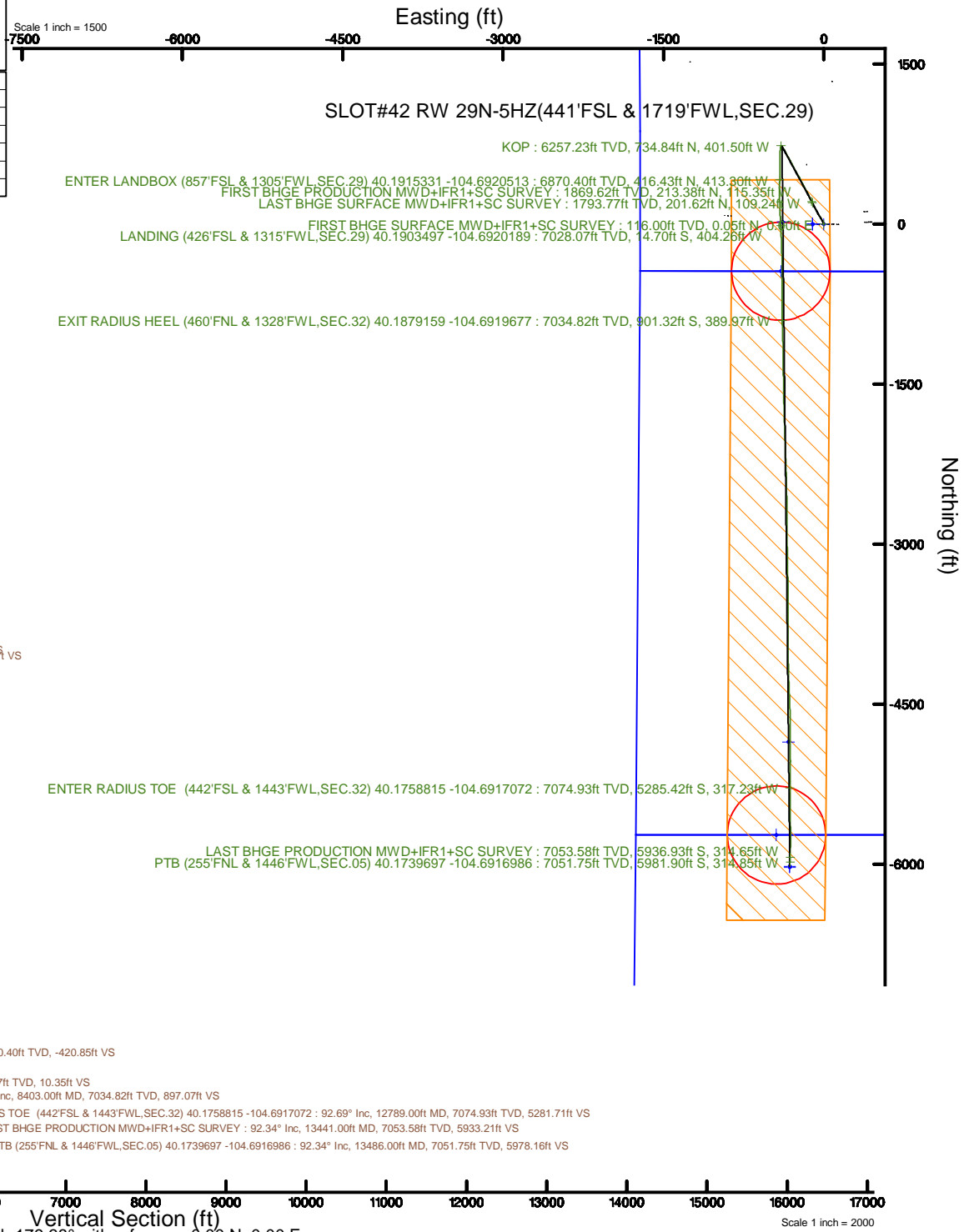
KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#42 RW 29N-5HZ(441'FSL & 1719'FWL,SEC.29)
 Field: WELD COUNTY (UTM/TRUE NORTH) Well: RW 29N-5HZ
 Facility: SEC.29-T3N-R65W Wellbore: RW 29N-5HZ PWB

Plot reference wellpath is RW 29N-5HZ PWP Rev.C.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 geodetic 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#42 RW 29N-5HZ(441'FSL & 1719'FWL,SEC.29): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: painsetr on 2017-08-25
	Database: WA_DEN_Anadarko_Defn



Vertical Section (ft)
 Azimuth 179.38° with reference 0.00 N, 0.00 E



Scale 1 inch = 2000

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#42 RW 29N-5HZ(441'FSL & 1719'FWL,SEC.29)
Area	COLORADO	Well	RW 29N-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 29N-5HZ 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	8/25/2017 at 11:53 AM
Convergence at slot	0.20° East	Database/Source file	WA_DEN_Anadarko_Defn/RW_29N-5HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-78.71	898.76	1726831.21	14596213.89	40°11'25.404"N	104°41'26.059"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#42 RW 29N-5HZ (441'FSL & 1719'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	179.38°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#42 RW 29N-5HZ(441'FSL & 1719'FWL,SEC.29)
Area	COLORADO	Well	RW 29N-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 29N-5HZ AWB
Facility	SEC.29-T3N-R65W		

WELLPATH DATA (161 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†	0.000	0.760	0.00	0.00	0.00	0.00	1726831.21	14596213.89	40°11'25.404"N	104°41'26.059"W	0.00	
17.00	0.000	0.760	17.00	0.00	0.00	0.00	1726831.21	14596213.89	40°11'25.404"N	104°41'26.059"W	0.00	
116.00	0.060	0.760	116.00	-0.05	0.05	0.00	1726831.21	14596213.95	40°11'25.405"N	104°41'26.059"W	0.06	FIRST BHGE SURFACE MWD+IFR1+SC SURVEY
211.00	0.740	345.760	211.00	-0.70	0.70	-0.15	1726831.06	14596214.59	40°11'25.411"N	104°41'26.061"W	0.72	
301.00	1.150	337.490	300.98	-2.10	2.09	-0.64	1726830.56	14596215.98	40°11'25.425"N	104°41'26.067"W	0.48	
392.00	2.720	336.610	391.93	-4.94	4.92	-1.85	1726829.35	14596218.80	40°11'25.453"N	104°41'26.083"W	1.73	
483.00	3.880	334.270	482.78	-9.72	9.67	-4.04	1726827.14	14596223.55	40°11'25.500"N	104°41'26.111"W	1.28	
574.00	5.200	336.030	573.49	-16.29	16.22	-7.05	1726824.11	14596230.08	40°11'25.564"N	104°41'26.150"W	1.46	
665.00	6.180	331.150	664.04	-24.39	24.28	-11.09	1726820.04	14596238.12	40°11'25.644"N	104°41'26.202"W	1.20	
752.00	7.720	330.610	750.40	-33.64	33.47	-16.22	1726814.88	14596247.29	40°11'25.735"N	104°41'26.268"W	1.77	
839.00	9.490	329.880	836.42	-45.01	44.77	-22.68	1726808.38	14596258.56	40°11'25.846"N	104°41'26.351"W	2.04	
927.00	10.650	330.980	923.06	-58.47	58.15	-30.27	1726800.75	14596271.92	40°11'25.979"N	104°41'26.449"W	1.34	
1015.00	10.760	327.870	1009.53	-72.63	72.22	-38.58	1726792.39	14596285.95	40°11'26.118"N	104°41'26.556"W	0.67	
1102.00	11.190	329.270	1094.94	-86.86	86.35	-47.22	1726783.71	14596300.05	40°11'26.257"N	104°41'26.667"W	0.58	
1190.00	10.900	328.960	1181.31	-101.42	100.82	-55.87	1726775.01	14596314.48	40°11'26.400"N	104°41'26.779"W	0.34	
1277.00	10.860	332.180	1266.74	-115.80	115.12	-63.94	1726766.90	14596328.74	40°11'26.542"N	104°41'26.883"W	0.70	
1365.00	10.830	332.200	1353.17	-130.53	129.76	-71.66	1726759.13	14596343.35	40°11'26.686"N	104°41'26.982"W	0.03	
1452.00	10.430	333.160	1438.68	-144.86	144.02	-79.03	1726751.71	14596357.58	40°11'26.827"N	104°41'27.077"W	0.50	
1539.00	10.210	331.440	1524.27	-158.74	157.82	-86.27	1726744.42	14596371.35	40°11'26.964"N	104°41'27.171"W	0.44	
1627.00	10.850	332.460	1610.79	-173.01	172.01	-93.83	1726736.82	14596385.51	40°11'27.104"N	104°41'27.268"W	0.76	
1715.00	10.210	331.660	1697.31	-187.30	186.22	-101.36	1726729.24	14596399.69	40°11'27.244"N	104°41'27.365"W	0.75	
1802.00	10.120	333.940	1782.94	-201.03	199.87	-108.38	1726722.18	14596413.31	40°11'27.379"N	104°41'27.456"W	0.47	
1813.00	10.220	333.720	1793.77	-202.78	201.62	-109.24	1726721.32	14596415.05	40°11'27.396"N	104°41'27.467"W	0.98	LAST BHGE SURFACE MWD+IFR1+SC SURVEY
1890.00	9.620	331.270	1869.62	-214.61	213.38	-115.35	1726715.16	14596426.79	40°11'27.513"N	104°41'27.545"W	0.95	FIRST BHGE PRODUCTION MWD+IFR1+SC SURVEY
1978.00	10.400	333.020	1956.28	-228.21	226.91	-122.49	1726707.98	14596440.29	40°11'27.646"N	104°41'27.637"W	0.95	
2065.00	11.920	335.090	2041.63	-243.44	242.06	-129.84	1726700.58	14596455.40	40°11'27.796"N	104°41'27.732"W	1.81	
2153.00	11.700	333.650	2127.77	-259.76	258.30	-137.63	1726692.74	14596471.61	40°11'27.956"N	104°41'27.832"W	0.42	
2241.00	11.150	332.910	2214.02	-275.42	273.87	-145.46	1726684.85	14596487.15	40°11'28.110"N	104°41'27.933"W	0.65	
2328.00	10.940	332.570	2299.41	-290.31	288.68	-153.10	1726677.17	14596501.93	40°11'28.257"N	104°41'28.032"W	0.25	
2416.00	10.360	331.200	2385.90	-304.74	303.03	-160.75	1726669.46	14596516.24	40°11'28.399"N	104°41'28.130"W	0.72	
2503.00	11.320	332.690	2471.34	-319.26	317.47	-168.44	1726661.73	14596530.65	40°11'28.541"N	104°41'28.229"W	1.15	
2591.00	10.760	332.150	2557.71	-334.28	332.41	-176.24	1726653.88	14596545.56	40°11'28.689"N	104°41'28.330"W	0.65	
2678.00	11.890	333.560	2643.02	-349.57	347.62	-184.03	1726646.05	14596560.73	40°11'28.839"N	104°41'28.430"W	1.34	
2766.00	11.310	332.400	2729.22	-365.42	363.38	-192.06	1726637.96	14596576.46	40°11'28.995"N	104°41'28.534"W	0.71	
2853.00	11.280	332.190	2814.54	-380.59	378.47	-199.98	1726629.99	14596591.51	40°11'29.144"N	104°41'28.636"W	0.06	
2941.00	10.960	333.120	2900.88	-395.75	393.54	-207.78	1726622.14	14596606.55	40°11'29.293"N	104°41'28.736"W	0.42	
3028.00	10.840	333.060	2986.31	-410.50	408.21	-215.23	1726614.65	14596621.19	40°11'29.438"N	104°41'28.832"W	0.14	
3115.00	12.000	332.630	3071.59	-425.91	423.54	-223.09	1726606.73	14596636.48	40°11'29.589"N	104°41'28.934"W	1.34	
3227.00	10.790	330.910	3181.38	-445.52	443.04	-233.54	1726596.22	14596655.94	40°11'29.782"N	104°41'29.068"W	1.12	
3315.00	11.310	329.110	3267.75	-460.22	457.64	-241.98	1726587.74	14596670.51	40°11'29.926"N	104°41'29.177"W	0.71	
3403.00	9.980	328.030	3354.23	-474.18	471.52	-250.44	1726579.22	14596684.35	40°11'30.064"N	104°41'29.286"W	1.53	
3490.00	10.130	331.990	3439.90	-487.41	484.67	-258.03	1726571.60	14596697.47	40°11'30.193"N	104°41'29.384"W	0.81	
3578.00	11.080	332.670	3526.39	-501.84	499.01	-265.54	1726564.03	14596711.78	40°11'30.335"N	104°41'29.481"W	1.09	
3666.00	11.280	330.620	3612.72	-516.93	514.02	-273.65	1726555.88	14596726.76	40°11'30.484"N	104°41'29.585"W	0.51	
3754.00	10.870	333.370	3699.09	-531.94	528.94	-281.59	1726547.89	14596741.64	40°11'30.631"N	104°41'29.688"W	0.76	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#42 RW 29N-5HZ(441'FSL & 1719'FWL,SEC.29)
Area	COLORADO	Well	RW 29N-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 29N-5HZ AWB
Facility	SEC.29-T3N-R65W		

WELLPATH DATA (161 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
3842.00	10.880	335.190	3785.51	-546.97	543.90	-288.80	1726540.64	14596756.57	40°11'30.779"N	104°41'29.780"W	0.39	
3929.00	11.780	331.990	3870.81	-562.34	559.19	-296.41	1726532.97	14596771.83	40°11'30.930"N	104°41'29.878"W	1.26	
4017.00	12.060	330.000	3956.91	-578.33	575.08	-305.23	1726524.10	14596787.68	40°11'31.087"N	104°41'29.992"W	0.57	
4103.00	11.950	328.470	4041.03	-593.80	590.45	-314.37	1726514.90	14596803.01	40°11'31.239"N	104°41'30.110"W	0.39	
4191.00	12.570	332.280	4127.03	-610.14	606.69	-323.59	1726505.63	14596819.22	40°11'31.399"N	104°41'30.229"W	1.16	
4278.00	11.110	331.120	4212.17	-625.95	622.42	-332.05	1726497.13	14596834.90	40°11'31.555"N	104°41'30.338"W	1.70	
4365.00	10.460	333.840	4297.64	-640.46	636.84	-339.58	1726489.55	14596849.30	40°11'31.697"N	104°41'30.435"W	0.95	
4453.00	11.880	333.170	4383.97	-655.79	652.10	-347.19	1726481.89	14596864.52	40°11'31.848"N	104°41'30.533"W	1.62	
4540.00	11.260	330.580	4469.20	-671.27	667.49	-355.40	1726473.63	14596879.88	40°11'32.000"N	104°41'30.639"W	0.93	
4628.00	10.960	329.130	4555.55	-686.02	682.15	-363.91	1726465.07	14596894.50	40°11'32.145"N	104°41'30.748"W	0.47	
4716.00	9.770	328.620	4642.11	-699.67	695.71	-372.09	1726456.84	14596908.03	40°11'32.279"N	104°41'30.854"W	1.36	
4803.00	7.960	323.570	4728.07	-710.90	706.86	-379.52	1726449.38	14596919.14	40°11'32.389"N	104°41'30.949"W	2.26	
4891.00	7.080	329.450	4815.32	-720.54	716.43	-385.89	1726442.98	14596928.69	40°11'32.484"N	104°41'31.032"W	1.33	
4978.00	5.270	323.000	4901.81	-728.40	724.24	-391.02	1726437.82	14596936.48	40°11'32.561"N	104°41'31.098"W	2.22	
5066.00	4.700	319.130	4989.48	-734.41	730.19	-395.81	1726433.01	14596942.41	40°11'32.620"N	104°41'31.159"W	0.75	
5153.00	2.500	320.230	5076.30	-738.60	734.35	-399.36	1726429.45	14596946.56	40°11'32.661"N	104°41'31.205"W	2.53	
5241.00	1.050	294.620	5164.25	-740.43	736.16	-401.32	1726427.49	14596948.36	40°11'32.679"N	104°41'31.230"W	1.84	
5328.00	0.370	50.780	5251.25	-740.94	736.67	-401.83	1726426.98	14596948.87	40°11'32.684"N	104°41'31.237"W	1.45	
5416.00	0.210	346.270	5339.25	-741.28	737.00	-401.65	1726427.16	14596949.20	40°11'32.687"N	104°41'31.235"W	0.38	
5503.00	0.130	317.070	5426.25	-741.51	737.23	-401.75	1726427.05	14596949.43	40°11'32.689"N	104°41'31.236"W	0.13	
5590.00	0.300	320.460	5513.25	-741.76	737.48	-401.96	1726426.84	14596949.68	40°11'32.692"N	104°41'31.239"W	0.20	
5678.00	0.230	293.310	5601.25	-742.01	737.73	-402.27	1726426.53	14596949.92	40°11'32.694"N	104°41'31.243"W	0.16	
5766.00	0.440	305.210	5689.25	-742.28	737.99	-402.71	1726426.09	14596950.19	40°11'32.697"N	104°41'31.248"W	0.25	
5852.00	0.810	147.550	5775.24	-741.95	737.67	-402.65	1726426.15	14596949.86	40°11'32.694"N	104°41'31.248"W	1.43	
5940.00	0.500	128.470	5863.24	-741.18	736.90	-402.02	1726426.78	14596949.10	40°11'32.686"N	104°41'31.239"W	0.43	
6028.00	0.340	130.980	5951.24	-740.77	736.49	-401.52	1726427.28	14596948.69	40°11'32.682"N	104°41'31.233"W	0.18	
6115.00	0.340	155.650	6038.23	-740.36	736.09	-401.22	1726427.59	14596948.29	40°11'32.678"N	104°41'31.229"W	0.17	
6203.00	0.250	189.440	6126.23	-739.93	735.66	-401.14	1726427.66	14596947.86	40°11'32.674"N	104°41'31.228"W	0.22	
6290.00	0.190	271.590	6213.23	-739.75	735.48	-401.32	1726427.49	14596947.68	40°11'32.672"N	104°41'31.230"W	0.34	
6334.00†	1.690	189.334	6257.23	-739.12	734.84	-401.50	1726427.31	14596947.04	40°11'32.666"N	104°41'31.233"W	3.81	KOP
6378.00	3.360	186.120	6301.18	-737.20	732.92	-401.74	1726427.08	14596945.12	40°11'32.647"N	104°41'31.236"W	3.81	
6465.00	13.350	192.160	6387.15	-724.84	720.53	-404.13	1726424.73	14596932.73	40°11'32.524"N	104°41'31.267"W	11.51	
6553.00	18.180	189.530	6471.82	-701.40	697.05	-408.55	1726420.40	14596909.24	40°11'32.292"N	104°41'31.324"W	5.55	
6640.00	24.670	179.280	6552.79	-669.84	665.46	-410.57	1726418.49	14596877.66	40°11'31.980"N	104°41'31.350"W	8.59	
6728.00	29.210	179.490	6631.22	-629.98	625.61	-410.15	1726419.05	14596837.82	40°11'31.586"N	104°41'31.344"W	5.16	
6815.00	36.530	178.690	6704.24	-582.80	578.43	-409.37	1726419.99	14596790.67	40°11'31.120"N	104°41'31.334"W	8.43	
6903.00	41.380	181.320	6772.66	-527.50	523.13	-409.44	1726420.11	14596735.39	40°11'30.574"N	104°41'31.335"W	5.82	
6990.00	49.180	182.300	6833.83	-465.79	461.39	-411.42	1726418.34	14596673.67	40°11'29.963"N	104°41'31.361"W	9.00	
7048.00†	52.620	182.462	6870.40	-420.85	416.43	-413.30	1726416.63	14596628.72	40°11'29.519"N	104°41'31.385"W	5.94	ENTER LANDBOX (857'FSL & 1305'FWL,SEC.29) 40.1915331 -104.6920513
7078.00	54.400	182.540	6888.24	-396.77	392.33	-414.35	1726415.66	14596604.63	40°11'29.281"N	104°41'31.398"W	5.94	
7165.00	59.700	180.880	6935.55	-323.85	319.39	-416.49	1726413.77	14596531.70	40°11'28.560"N	104°41'31.426"W	6.30	
7253.00	66.450	177.620	6975.38	-245.45	241.00	-415.40	1726415.14	14596453.35	40°11'27.785"N	104°41'31.412"W	8.35	
7340.00	74.750	177.670	7004.25	-163.50	159.08	-412.03	1726418.79	14596371.47	40°11'26.976"N	104°41'31.368"W	9.54	
7428.00	82.740	177.630	7021.41	-77.30	72.91	-408.50	1726422.62	14596285.35	40°11'26.124"N	104°41'31.323"W	9.08	
7516.00	88.580	176.840	7028.07	10.35	-14.70	-404.26	1726427.16	14596197.80	40°11'25.259"N	104°41'31.268"W	6.70	LANDING (426'FSL & 1315'FWL,SEC.29) 40.1903497 -104.6920189

REFERENCE WELLPATH IDENTIFICATION				
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)		Slot	SLOT#42 RW 29N-5HZ(441'FSL & 1719'FWL,SEC.29)
Area	COLORADO		Well	RW 29N-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)		Wellbore	RW 29N-5HZ AWB
Facility	SEC.29-T3N-R65W			

WELLPATH DATA (161 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
7604.00	88.640	177.270	7030.21	98.25	-102.55	-399.74	1726431.98	14596109.99	40°11'24.391"N	104°41'31.210"W	0.49	
7691.00	89.080	177.650	7031.94	185.18	-189.45	-395.89	1726436.14	14596023.14	40°11'23.532"N	104°41'31.160"W	0.67	
7779.00	89.350	179.660	7033.14	273.16	-277.41	-393.82	1726438.51	14595935.22	40°11'22.663"N	104°41'31.134"W	2.30	
7866.00	89.140	179.090	7034.29	360.15	-364.40	-392.87	1726439.76	14595848.27	40°11'21.803"N	104°41'31.121"W	0.70	
7953.00	88.370	178.900	7036.18	447.13	-451.36	-391.35	1726441.59	14595761.35	40°11'20.944"N	104°41'31.102"W	0.91	
8041.00	90.310	180.720	7037.19	535.12	-539.35	-391.06	1726442.19	14595673.40	40°11'20.074"N	104°41'31.098"W	3.02	
8129.00	90.490	180.290	7036.58	623.10	-627.34	-391.83	1726441.72	14595585.43	40°11'19.205"N	104°41'31.108"W	0.53	
8216.00	90.740	180.250	7035.65	710.08	-714.34	-392.24	1726441.61	14595498.47	40°11'18.345"N	104°41'31.113"W	0.29	
8303.00	90.090	179.170	7035.01	797.08	-801.33	-391.80	1726442.36	14595411.52	40°11'17.485"N	104°41'31.107"W	1.45	
8391.00	90.120	178.790	7034.85	885.07	-889.32	-390.24	1726444.23	14595323.57	40°11'16.616"N	104°41'31.087"W	0.43	
8403.00†	90.188	178.645	7034.82	897.07	-901.32	-389.97	1726444.54	14595311.58	40°11'16.497"N	104°41'31.084"W	1.33	EXIT RADIUS HEEL (460'FNL & 1328'FWL,SEC.32) 40.1879159 -104.6919677
8479.00	90.620	177.730	7034.29	973.05	-977.28	-387.56	1726447.21	14595235.66	40°11'15.747"N	104°41'31.053"W	1.33	
8566.00	88.830	178.740	7034.70	1060.03	-1064.23	-384.88	1726450.19	14595148.75	40°11'14.887"N	104°41'31.018"W	2.36	
8654.00	88.400	178.610	7036.83	1148.00	-1152.18	-382.85	1726452.53	14595060.84	40°11'14.018"N	104°41'30.992"W	0.51	
8741.00	89.690	179.210	7038.28	1234.98	-1239.15	-381.20	1726454.48	14594973.91	40°11'13.159"N	104°41'30.971"W	1.64	
8829.00	89.750	179.050	7038.71	1322.98	-1327.14	-379.86	1726456.13	14594885.96	40°11'12.289"N	104°41'30.953"W	0.19	
8916.00	90.800	179.770	7038.29	1409.97	-1414.13	-378.96	1726457.32	14594799.01	40°11'11.430"N	104°41'30.942"W	1.46	
9004.00	89.020	178.890	7038.43	1497.97	-1502.12	-377.93	1726458.66	14594711.06	40°11'10.560"N	104°41'30.929"W	2.26	
9091.00	89.290	178.790	7039.71	1584.96	-1589.09	-376.17	1726460.72	14594624.13	40°11'09.701"N	104°41'30.906"W	0.33	
9179.00	88.650	178.510	7041.30	1672.93	-1677.05	-374.10	1726463.10	14594536.21	40°11'08.831"N	104°41'30.879"W	0.79	
9266.00	88.710	178.430	7043.30	1759.90	-1764.00	-371.78	1726465.73	14594449.30	40°11'07.972"N	104°41'30.849"W	0.11	
9353.00	88.490	178.260	7045.43	1846.86	-1850.94	-369.27	1726468.54	14594362.41	40°11'07.113"N	104°41'30.817"W	0.32	
9441.00	90.120	178.090	7046.49	1934.83	-1938.88	-366.46	1726471.65	14594274.51	40°11'06.244"N	104°41'30.781"W	1.86	
9528.00	90.250	178.610	7046.21	2021.82	-2025.85	-363.96	1726474.45	14594187.59	40°11'05.385"N	104°41'30.748"W	0.62	
9616.00	90.340	178.290	7045.76	2109.80	-2113.81	-361.58	1726477.14	14594099.67	40°11'04.515"N	104°41'30.718"W	0.38	
9703.00	90.090	177.990	7045.43	2196.78	-2200.77	-358.76	1726480.27	14594012.76	40°11'03.656"N	104°41'30.681"W	0.45	
9791.00	90.220	177.480	7045.19	2284.74	-2288.70	-355.28	1726484.05	14593924.87	40°11'02.787"N	104°41'30.636"W	0.60	
9878.00	89.970	178.830	7045.05	2371.72	-2375.65	-352.48	1726487.15	14593837.97	40°11'01.928"N	104°41'30.600"W	1.58	
9966.00	90.250	179.050	7044.88	2459.72	-2463.63	-350.85	1726489.08	14593750.02	40°11'01.058"N	104°41'30.579"W	0.40	
10054.00	89.570	178.260	7045.02	2547.71	-2551.61	-348.78	1726491.46	14593662.09	40°11'00.189"N	104°41'30.553"W	1.18	
10141.00	89.200	178.750	7045.95	2634.70	-2638.57	-346.51	1726494.03	14593575.17	40°10'59.330"N	104°41'30.524"W	0.71	
10229.00	89.290	180.420	7047.11	2722.68	-2726.56	-345.88	1726494.97	14593487.22	40°10'58.460"N	104°41'30.515"W	1.90	
10316.00	89.080	179.830	7048.35	2809.67	-2813.55	-346.07	1726495.08	14593400.26	40°10'57.600"N	104°41'30.518"W	0.72	
10403.00	88.800	179.410	7049.96	2896.65	-2900.53	-345.49	1726495.96	14593313.32	40°10'56.741"N	104°41'30.510"W	0.58	
10491.00	88.580	179.220	7051.97	2984.63	-2988.50	-344.44	1726497.32	14593225.38	40°10'55.872"N	104°41'30.497"W	0.33	
10579.00	88.400	178.750	7054.29	3072.60	-3076.46	-342.88	1726499.19	14593137.47	40°10'55.002"N	104°41'30.477"W	0.57	
10666.00	87.910	178.300	7057.09	3159.54	-3163.39	-340.64	1726501.73	14593050.59	40°10'54.143"N	104°41'30.448"W	0.76	
10754.00	88.090	179.780	7060.16	3247.48	-3251.32	-339.17	1726503.51	14592962.69	40°10'53.274"N	104°41'30.429"W	1.69	
10841.00	87.910	179.560	7063.20	3334.43	-3338.26	-338.67	1726504.31	14592875.79	40°10'52.415"N	104°41'30.422"W	0.33	
10929.00	88.300	180.220	7066.11	3422.38	-3426.21	-338.50	1726504.78	14592787.87	40°10'51.546"N	104°41'30.420"W	0.87	
11016.00	88.060	180.060	7068.87	3509.32	-3513.17	-338.71	1726504.87	14592700.95	40°10'50.687"N	104°41'30.423"W	0.33	
11104.00	88.800	180.100	7071.28	3597.28	-3601.14	-338.83	1726505.06	14592613.02	40°10'49.818"N	104°41'30.424"W	0.84	
11191.00	88.580	179.860	7073.27	3684.26	-3688.11	-338.80	1726505.39	14592526.07	40°10'48.958"N	104°41'30.424"W	0.37	
11279.00	88.340	179.300	7075.64	3772.22	-3776.08	-338.16	1726506.34	14592438.15	40°10'48.089"N	104°41'30.416"W	0.69	
11366.00	87.930	179.500	7078.47	3859.18	-3863.03	-337.25	1726507.56	14592351.24	40°10'47.230"N	104°41'30.404"W	0.52	

REFERENCE WELLPATH IDENTIFICATION				
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)		Slot	SLOT#42 RW 29N-5HZ(441'FSL & 1719'FWL,SEC.29)
Area	COLORADO		Well	RW 29N-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)		Wellbore	RW 29N-5HZ AWB
Facility	SEC.29-T3N-R65W			

WELLPATH DATA (161 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
11454.00	88.740	179.570	7081.03	3947.14	-3950.99	-336.53	1726508.58	14592263.31	40°10'46.360"N	104°41'30.395"W	0.92	
11541.00	90.180	179.060	7081.85	4034.13	-4037.97	-335.49	1726509.92	14592176.36	40°10'45.501"N	104°41'30.381"W	1.76	
11629.00	90.090	178.890	7081.64	4122.13	-4125.96	-333.92	1726511.80	14592088.42	40°10'44.631"N	104°41'30.361"W	0.22	
11716.00	90.250	178.000	7081.38	4209.12	-4212.93	-331.56	1726514.46	14592001.50	40°10'43.772"N	104°41'30.331"W	1.04	
11804.00	89.510	177.320	7081.56	4297.08	-4300.85	-327.97	1726518.36	14591913.62	40°10'42.903"N	104°41'30.284"W	1.14	
11892.00	89.290	178.040	7082.49	4385.03	-4388.77	-324.40	1726522.23	14591825.74	40°10'42.034"N	104°41'30.238"W	0.86	
11979.00	88.670	177.710	7084.03	4471.99	-4475.70	-321.18	1726525.75	14591738.86	40°10'41.175"N	104°41'30.197"W	0.81	
12066.00	89.260	178.910	7085.61	4558.96	-4562.65	-318.61	1726528.62	14591651.96	40°10'40.316"N	104°41'30.164"W	1.54	
12154.00	91.760	178.640	7084.82	4646.94	-4650.61	-316.73	1726530.81	14591564.03	40°10'39.447"N	104°41'30.139"W	2.86	
12242.00	90.770	179.210	7082.88	4734.91	-4738.58	-315.08	1726532.76	14591476.11	40°10'38.577"N	104°41'30.118"W	1.30	
12329.00	90.830	180.360	7081.67	4821.90	-4825.57	-314.75	1726533.39	14591389.16	40°10'37.718"N	104°41'30.114"W	1.32	
12416.00	90.860	179.650	7080.38	4908.89	-4912.56	-314.76	1726533.69	14591302.20	40°10'36.858"N	104°41'30.114"W	0.82	
12503.00	89.140	179.480	7080.38	4995.88	-4999.55	-314.10	1726534.65	14591215.25	40°10'35.998"N	104°41'30.106"W	1.99	
12590.00	90.710	180.790	7080.50	5082.87	-5086.54	-314.31	1726534.75	14591128.29	40°10'35.139"N	104°41'30.108"W	2.35	
12678.00	91.260	181.540	7078.98	5170.82	-5174.51	-316.10	1726533.27	14591040.35	40°10'34.269"N	104°41'30.131"W	1.06	
12765.00	92.620	179.980	7076.04	5257.74	-5261.45	-317.25	1726532.42	14590953.44	40°10'33.410"N	104°41'30.146"W	2.38	
12789.00†	92.694	179.925	7074.93	5281.71	-5285.42	-317.23	1726532.52	14590929.48	40°10'33.173"N	104°41'30.146"W	0.38	ENTER RADIUS TOE (442'FSL & 1443'FWL,SEC.32) 40.1758815 -104.6917072
12853.00	92.890	179.780	7071.81	5345.63	-5349.35	-317.07	1726532.91	14590865.58	40°10'32.542"N	104°41'30.144"W	0.38	
12940.00	93.640	179.610	7066.85	5432.49	-5436.21	-316.60	1726533.67	14590778.76	40°10'31.683"N	104°41'30.138"W	0.88	
13027.00	92.560	179.100	7062.15	5519.36	-5523.07	-315.62	1726534.95	14590691.93	40°10'30.825"N	104°41'30.125"W	1.37	
13115.00	90.620	179.370	7059.71	5607.32	-5611.02	-314.45	1726536.43	14590604.02	40°10'29.956"N	104°41'30.110"W	2.23	
13202.00	90.280	179.140	7059.02	5694.32	-5698.01	-313.32	1726537.87	14590517.06	40°10'29.096"N	104°41'30.095"W	0.47	
13289.00	91.230	180.870	7057.88	5781.30	-5785.00	-313.33	1726538.16	14590430.11	40°10'28.237"N	104°41'30.095"W	2.27	
13377.00	91.540	180.390	7055.75	5869.25	-5872.97	-314.29	1726537.50	14590342.17	40°10'27.367"N	104°41'30.108"W	0.65	
13441.00	92.340	180.250	7053.58	5933.21	-5936.93	-314.65	1726537.37	14590278.24	40°10'26.735"N	104°41'30.112"W	1.27	LAST BHGE PRODUCTION MWD+IFR1+SC SURVEY
13486.00	92.340	180.250	7051.75	5978.16	-5981.90	-314.85	1726537.33	14590233.29	40°10'26.291"N	104°41'30.115"W	0.00	PTB (255'FNL & 1446'FWL,SEC.05) 40.1739697 -104.6916986

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#42 RW 29N-5HZ(441'FSL & 1719'FWL,SEC.29)
Area	COLORADO	Well	RW 29N-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 29N-5HZ AWB
Facility	SEC.29-T3N-R65W		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.05-T2N-R65W	1.00	1.11	-105.08	1726726.17	14596214.64	40°11'25.415"N	104°41'27.413"W	polygon
SEC.29-T3N-R65W	1.00	1.11	-105.08	1726726.17	14596214.64	40°11'25.415"N	104°41'27.413"W	polygon
SEC.32-T3N-R65W	1.00	1.11	-105.08	1726726.17	14596214.64	40°11'25.415"N	104°41'27.413"W	polygon
RW 29N-5HZ HEEL REV-1(461'FSL & 1334'FWL,SEC.29)	7026.00	20.77	-384.45	1726446.84	14596233.31	40°11'25.609"N	104°41'31.013"W	point
RW 29N-5HZ BHL REV-1(368'FNL & 1442'FWL,SEC.05)	7048.00	-6094.71	-319.43	1726533.14	14590120.51	40°10'25.176"N	104°41'30.174"W	point
RW 29N-5HZ BHL REV-2(301'FNL & 1442'FWL,SEC.05)	7048.00	-6027.71	-319.43	1726532.90	14590187.48	40°10'25.838"N	104°41'30.174"W	point
RW 29N-5HZ BHL REV-3(293'FNL & 1442'FWL,SEC.05)	7048.00	-6019.71	-319.43	1726532.88	14590195.48	40°10'25.917"N	104°41'30.174"W	point
RW 29N-5HZN LANDBOX	7048.00	0.00	0.00	1726831.21	14596213.89	40°11'25.404"N	104°41'26.059"W	polygon
RW 29N-5HZN RADIUS 1	7048.00	-440.26	-403.71	1726429.20	14595772.40	40°11'21.053"N	104°41'31.261"W	polygon
RW 29N-5HZN RADIUS 2	7048.00	-5726.53	-444.04	1726407.30	14590488.10	40°10'28.814"N	104°41'31.779"W	polygon
RW 29N-5HZ INT. TARGET@4850'VS	7077.00	-4853.85	-332.05	1726516.20	14591360.83	40°10'37.438"N	104°41'30.337"W	point

WELLPATH COMPOSITION - Ref Wellbore: RW 29N-5HZ AWB Ref Wellpath: RW 29N-5HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1813.00	Custom APC_ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC_ISCWSA Rev-2 MWD+IFR1+SC <116 - 1813>	RW 29N-5HZ AWB
1813.00	13441.00	Custom APC_ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC_ISCWSA Rev-2 MWD+IFR1+SC <1890 - 13441>	RW 29N-5HZ AWB
13441.00	13486.00	Blind Drilling (std)	Projection to bit	RW 29N-5HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#42 RW 29N-5HZ(441'FSL & 1719'FWL,SEC.29)
Area	COLORADO	Well	RW 29N-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 29N-5HZ AWB
Facility	SEC.29-T3N-R65W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
116.00	0.060	0.760	116.00	FIRST BHGE SURFACE MWD+IFR1+SC SURVEY
1813.00	10.220	333.720	1793.77	LAST BHGE SURFACE MWD+IFR1+SC SURVEY
1890.00	9.620	331.270	1869.62	FIRST BHGE PRODUCTION MWD+IFR1+SC SURVEY
6334.00	1.690	189.334	6257.23	KOP
7048.00	52.620	182.462	6870.40	ENTER LANDBOX (857'FSL & 1305'FWL,SEC.29) 40.1915331 -104.6920513
7516.00	88.580	176.840	7028.07	LANDING (426'FSL & 1315'FWL,SEC.29) 40.1903497 -104.6920189
8403.00	90.188	178.645	7034.82	EXIT RADIUS HEEL (460'FNL & 1328'FWL,SEC.32) 40.1879159 -104.6919677
12789.00	92.694	179.925	7074.93	ENTER RADIUS TOE (442'FSL & 1443'FWL,SEC.32) 40.1758815 -104.6917072
13441.00	92.340	180.250	7053.58	LAST BHGE PRODUCTION MWD+IFR1+SC SURVEY
13486.00	92.340	180.250	7051.75	PTB (255'FNL & 1446'FWL,SEC.05) 40.1739697 -104.6916986