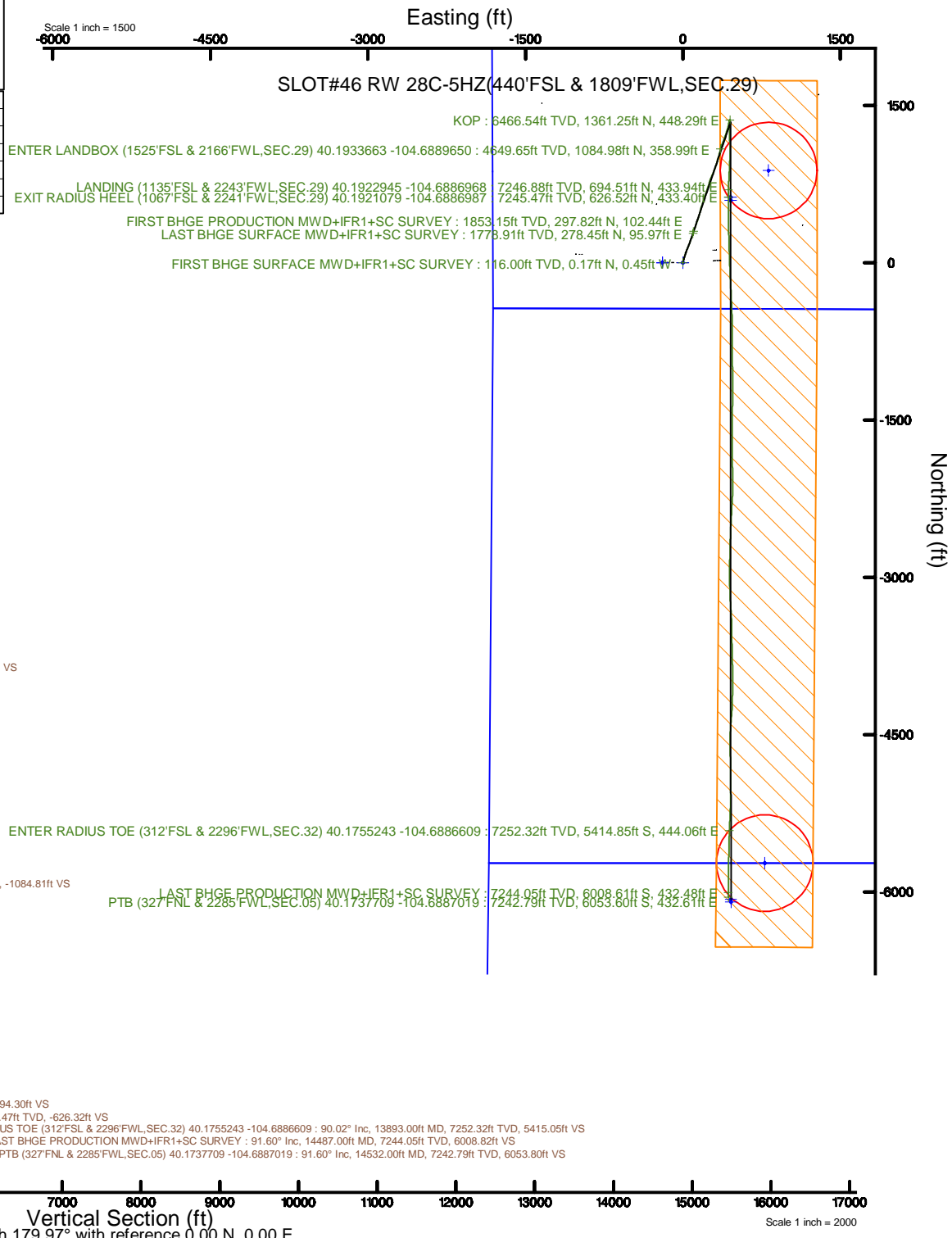
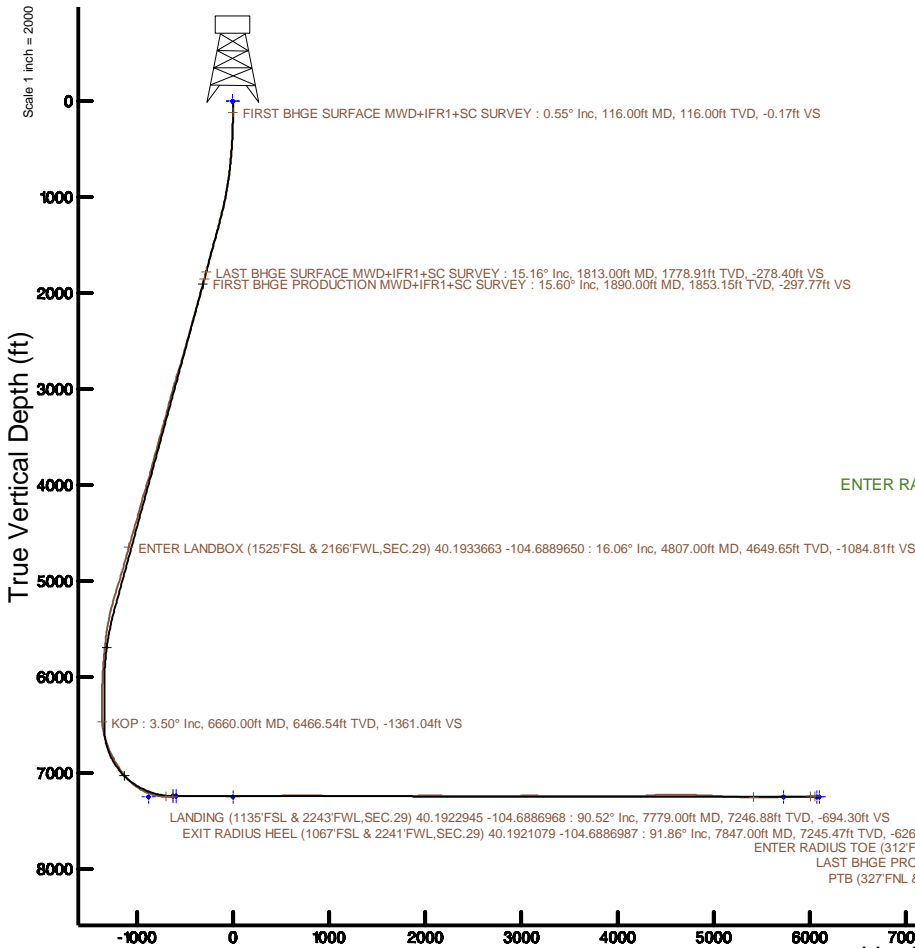


KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#46 RW 28C-5HZ(440'FSL & 1809'FWL,SEC.29)
 Field: WELD COUNTY (UTM/TRUE NORTH) Well: RW 28C-5HZ
 Facility: SEC.29-T3N-R65W Wellbore: RW 28C-5HZ PWB

Plot reference wellpath is RW 28C-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#46 RW 28C-5HZ(440'FSL & 1809'FWL,SEC.29)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: painsetr on 2017-09-13
	Database: WA_DEN_Anadarko_Defn



Azimuth 179.97° with reference 0.00 N, 0.00 E

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#46 RW 28C-5HZ(440'FSL & 1809'FWL,SEC.29)
Area	COLORADO	Well	RW 28C-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 28C-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	9/13/2017 at 10:09 AM
Convergence at slot	0.20° East	Database/Source file	WA_DEN_Anadarko_Defn/RW_28C-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	-79.42	988.71	1726921.12	14596213.50	40°11'25.397"N	104°41'24.900"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#46 RW 28C-5HZ (440'FSL & 1809'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	179.97°

REFERENCE WELLPATH IDENTIFICATION				
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)		Slot	SLOT#46 RW 28C-5HZ(440'FSL & 1809'FWL,SEC.29)
Area	COLORADO		Well	RW 28C-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)		Wellbore	RW 28C-5HZ AWB
Facility	SEC.29-T3N-R65W			

WELLPATH DATA (173 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	290.340	0.00	0.00	0.00	0.00	1726921.12	14596213.50	40°11'25.397"N	104°41'24.900"W	0.00	
17.00	0.000	290.340	17.00	0.00	0.00	0.00	1726921.12	14596213.50	40°11'25.397"N	104°41'24.900"W	0.00	
116.00	0.550	290.340	116.00	-0.17	0.17	-0.45	1726920.68	14596213.66	40°11'25.399"N	104°41'24.906"W	0.56	FIRST BHGE SURFACE MWD+IFR1+SC SURVEY
211.00	1.210	354.390	210.99	-1.32	1.32	-0.97	1726920.15	14596214.82	40°11'25.410"N	104°41'24.913"W	1.15	
301.00	1.920	4.740	300.95	-3.77	3.77	-0.94	1726920.17	14596217.26	40°11'25.434"N	104°41'24.912"W	0.85	
392.00	3.370	15.340	391.86	-7.87	7.87	-0.11	1726920.99	14596221.36	40°11'25.475"N	104°41'24.901"W	1.67	
483.00	4.260	18.710	482.65	-13.65	13.65	1.69	1726922.76	14596227.15	40°11'25.532"N	104°41'24.878"W	1.01	
574.00	5.110	19.050	573.35	-20.68	20.68	4.09	1726925.14	14596234.19	40°11'25.601"N	104°41'24.847"W	0.93	
665.00	5.590	19.300	663.95	-28.69	28.70	6.88	1726927.90	14596242.21	40°11'25.681"N	104°41'24.811"W	0.53	
752.00	7.110	18.080	750.42	-37.81	37.81	9.95	1726930.94	14596251.33	40°11'25.771"N	104°41'24.772"W	1.75	
839.00	9.050	17.660	836.55	-49.45	49.45	13.70	1726934.64	14596262.98	40°11'25.886"N	104°41'24.723"W	2.23	
927.00	10.400	17.710	923.28	-63.61	63.61	18.22	1726939.11	14596277.15	40°11'26.026"N	104°41'24.665"W	1.53	
1015.00	11.910	17.840	1009.62	-79.82	79.83	23.41	1726944.25	14596293.37	40°11'26.186"N	104°41'24.598"W	1.72	
1102.00	13.610	18.270	1094.46	-98.08	98.09	29.37	1726950.14	14596311.66	40°11'26.366"N	104°41'24.522"W	1.96	
1189.00	15.130	21.550	1178.74	-118.36	118.38	36.75	1726957.45	14596331.96	40°11'26.567"N	104°41'24.426"W	1.98	
1277.00	15.150	21.640	1263.69	-139.72	139.75	45.21	1726965.83	14596353.35	40°11'26.778"N	104°41'24.317"W	0.04	
1364.00	16.470	21.700	1347.39	-161.75	161.77	53.97	1726974.50	14596375.40	40°11'26.996"N	104°41'24.205"W	1.52	
1452.00	16.280	20.520	1431.82	-184.89	184.92	62.90	1726983.35	14596398.56	40°11'27.224"N	104°41'24.089"W	0.44	
1539.00	16.370	20.560	1515.32	-207.78	207.82	71.48	1726991.85	14596421.48	40°11'27.451"N	104°41'23.979"W	0.10	
1627.00	16.240	19.840	1599.78	-230.96	231.00	80.01	1727000.30	14596444.69	40°11'27.680"N	104°41'23.869"W	0.27	
1714.00	15.500	18.840	1683.46	-253.40	253.45	87.90	1727008.10	14596467.15	40°11'27.902"N	104°41'23.767"W	0.91	
1802.00	15.320	17.050	1768.30	-275.64	275.69	95.10	1727015.22	14596489.41	40°11'28.121"N	104°41'23.675"W	0.58	
1813.00	15.160	17.830	1778.91	-278.40	278.45	95.97	1727016.08	14596492.17	40°11'28.149"N	104°41'23.663"W	2.36	LAST BHGE SURFACE MWD+IFR1+SC SURVEY
1890.00	15.600	19.120	1853.15	-297.77	297.82	102.44	1727022.49	14596511.55	40°11'28.340"N	104°41'23.580"W	0.72	FIRST BHGE PRODUCTION MWD+IFR1+SC SURVEY
1978.00	16.750	20.000	1937.67	-320.86	320.91	110.66	1727030.61	14596534.67	40°11'28.568"N	104°41'23.474"W	1.34	
2065.00	15.950	18.150	2021.15	-344.00	344.05	118.67	1727038.54	14596557.83	40°11'28.797"N	104°41'23.371"W	1.10	
2153.00	16.680	19.900	2105.61	-367.36	367.42	126.73	1727046.52	14596581.21	40°11'29.028"N	104°41'23.267"W	1.00	
2240.00	15.660	18.450	2189.16	-390.23	390.30	134.70	1727054.41	14596604.11	40°11'29.254"N	104°41'23.164"W	1.26	
2328.00	16.780	19.140	2273.66	-413.50	413.56	142.62	1727062.25	14596627.39	40°11'29.484"N	104°41'23.062"W	1.29	
2416.00	15.870	18.180	2358.11	-436.92	437.00	150.54	1727070.08	14596650.85	40°11'29.715"N	104°41'22.960"W	1.08	
2503.00	17.030	14.820	2441.55	-460.54	460.61	157.51	1727076.97	14596674.48	40°11'29.949"N	104°41'22.870"W	1.72	
2591.00	15.740	14.060	2525.98	-484.57	484.65	163.71	1727083.08	14596698.53	40°11'30.186"N	104°41'22.791"W	1.49	
2678.00	15.810	14.140	2609.70	-507.51	507.59	169.47	1727088.75	14596721.48	40°11'30.413"N	104°41'22.716"W	0.08	
2766.00	17.240	17.970	2694.06	-531.54	531.62	176.42	1727095.62	14596745.52	40°11'30.650"N	104°41'22.627"W	2.04	
2853.00	18.670	19.260	2776.83	-556.95	557.03	184.99	1727104.10	14596770.95	40°11'30.902"N	104°41'22.516"W	1.71	
2940.00	18.030	19.020	2859.40	-582.82	582.91	193.97	1727112.99	14596796.85	40°11'31.157"N	104°41'22.400"W	0.74	
3027.00	17.460	18.280	2942.26	-607.93	608.03	202.46	1727121.38	14596821.99	40°11'31.406"N	104°41'22.291"W	0.70	
3115.00	16.560	17.920	3026.41	-632.40	632.50	210.46	1727129.29	14596846.48	40°11'31.647"N	104°41'22.188"W	1.03	
3228.00	14.790	17.590	3135.20	-661.47	661.57	219.77	1727138.50	14596875.57	40°11'31.935"N	104°41'22.068"W	1.57	
3316.00	15.110	17.310	3220.23	-683.12	683.23	226.58	1727145.23	14596897.24	40°11'32.149"N	104°41'21.980"W	0.37	
3403.00	16.590	19.060	3303.92	-705.68	705.80	234.01	1727152.58	14596919.83	40°11'32.372"N	104°41'21.885"W	1.79	
3491.00	16.720	19.270	3388.22	-729.50	729.62	242.29	1727160.77	14596943.67	40°11'32.607"N	104°41'21.778"W	0.16	
3579.00	15.230	13.840	3472.83	-752.68	752.79	249.23	1727167.63	14596966.86	40°11'32.836"N	104°41'21.688"W	2.40	
3666.00	15.690	18.880	3556.68	-774.90	775.02	255.77	1727174.09	14596989.10	40°11'33.056"N	104°41'21.604"W	1.63	
3755.00	16.350	21.800	3642.23	-797.91	798.04	264.32	1727182.55	14597012.14	40°11'33.283"N	104°41'21.494"W	1.17	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#46 RW 28C-5HZ(440'FSL & 1809'FWL,SEC.29)
Area	COLORADO	Well	RW 28C-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 28C-5HZ AWB
Facility	SEC.29-T3N-R65W		

WELLPATH DATA (173 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	16.390	20.320	3725.70	-820.79	820.92	273.13	1727191.28	14597035.04	40°11'33.509"N	104°41'21.380"W	0.48	
3930.00	17.100	24.160	3809.97	-844.24	844.37	282.74	1727200.80	14597058.52	40°11'33.741"N	104°41'21.257"W	1.49	
4018.00	15.910	23.160	3894.35	-867.13	867.26	292.77	1727210.76	14597081.44	40°11'33.967"N	104°41'21.127"W	1.39	
4104.00	18.550	20.050	3976.48	-890.81	890.96	302.10	1727220.00	14597105.15	40°11'34.201"N	104°41'21.007"W	3.25	
4191.00	18.160	19.840	4059.05	-916.56	916.71	311.45	1727229.25	14597130.93	40°11'34.456"N	104°41'20.887"W	0.45	
4279.00	16.830	17.990	4142.98	-941.58	941.73	320.04	1727237.75	14597155.97	40°11'34.703"N	104°41'20.776"W	1.64	
4366.00	15.010	15.620	4226.64	-964.40	964.56	326.96	1727244.59	14597178.81	40°11'34.929"N	104°41'20.687"W	2.22	
4454.00	16.410	16.130	4311.35	-987.32	987.47	333.48	1727251.03	14597201.74	40°11'35.155"N	104°41'20.603"W	1.60	
4541.00	16.290	15.290	4394.84	-1010.89	1011.05	340.12	1727257.58	14597225.33	40°11'35.388"N	104°41'20.517"W	0.30	
4629.00	17.230	14.690	4479.10	-1035.40	1035.56	346.68	1727264.05	14597249.86	40°11'35.630"N	104°41'20.433"W	1.09	
4716.00	16.620	14.260	4562.33	-1059.92	1060.09	353.01	1727270.29	14597274.39	40°11'35.873"N	104°41'20.351"W	0.72	
4804.00	16.080	12.800	4646.77	-1084.00	1084.17	358.81	1727276.01	14597298.48	40°11'36.111"N	104°41'20.276"W	0.77	
4807.00†	16.062	13.090	4649.65	-1084.81	1084.98	358.99	1727276.19	14597299.29	40°11'36.119"N	104°41'20.274"W	2.74	ENTER LANDBOX (1525'FSL & 2166'FWL,SEC.29) 40.1933663 -104.6889650
4891.00	15.720	21.420	4730.45	-1106.72	1106.89	365.78	1727282.90	14597321.22	40°11'36.335"N	104°41'20.186"W	2.74	
4979.00	16.050	20.330	4815.09	-1129.22	1129.40	374.36	1727291.40	14597343.75	40°11'36.558"N	104°41'20.076"W	0.51	
5066.00	17.320	21.590	4898.43	-1152.54	1152.72	383.31	1727300.26	14597367.09	40°11'36.788"N	104°41'19.961"W	1.52	
5154.00	17.810	20.190	4982.32	-1177.34	1177.53	392.77	1727309.63	14597391.93	40°11'37.033"N	104°41'19.839"W	0.74	
5241.00	18.910	19.150	5064.89	-1203.14	1203.33	401.99	1727318.75	14597417.75	40°11'37.288"N	104°41'19.720"W	1.32	
5329.00	17.760	18.230	5148.43	-1229.36	1229.55	410.87	1727327.54	14597443.99	40°11'37.547"N	104°41'19.606"W	1.35	
5416.00	15.480	17.360	5231.79	-1253.04	1253.24	418.48	1727335.07	14597467.70	40°11'37.781"N	104°41'19.507"W	2.64	
5504.00	13.300	15.660	5317.02	-1274.00	1274.20	424.72	1727341.23	14597488.67	40°11'37.989"N	104°41'19.427"W	2.52	
5591.00	11.550	14.440	5401.98	-1292.07	1292.27	429.59	1727346.04	14597506.75	40°11'38.167"N	104°41'19.364"W	2.03	
5679.00	9.360	12.300	5488.51	-1307.59	1307.80	433.31	1727349.70	14597522.28	40°11'38.321"N	104°41'19.316"W	2.53	
5766.00	7.480	10.160	5574.57	-1320.08	1320.28	435.82	1727352.16	14597534.77	40°11'38.444"N	104°41'19.284"W	2.19	
5853.00	6.260	4.580	5660.95	-1330.38	1330.59	437.20	1727353.51	14597545.08	40°11'38.546"N	104°41'19.266"W	1.60	
5940.00	5.270	13.520	5747.51	-1338.99	1339.20	438.51	1727354.79	14597553.69	40°11'38.631"N	104°41'19.249"W	1.53	
6028.00	4.430	14.060	5835.19	-1346.22	1346.42	440.28	1727356.53	14597560.92	40°11'38.702"N	104°41'19.226"W	0.96	
6116.00	3.590	17.580	5922.98	-1352.14	1352.35	441.94	1727358.17	14597566.85	40°11'38.761"N	104°41'19.205"W	0.99	
6203.00	3.050	14.860	6009.83	-1356.97	1357.18	443.36	1727359.57	14597571.69	40°11'38.809"N	104°41'19.187"W	0.65	
6291.00	2.360	12.470	6097.73	-1361.00	1361.21	444.35	1727360.55	14597575.72	40°11'38.848"N	104°41'19.174"W	0.79	
6378.00	2.000	9.200	6184.67	-1364.25	1364.46	444.98	1727361.16	14597578.97	40°11'38.881"N	104°41'19.166"W	0.44	
6466.00	1.360	80.100	6272.64	-1365.95	1366.16	446.25	1727362.43	14597580.67	40°11'38.897"N	104°41'19.150"W	2.29	
6554.00	1.820	171.780	6360.62	-1364.74	1364.95	447.48	1727363.66	14597579.47	40°11'38.885"N	104°41'19.134"W	2.62	
6641.00	1.990	163.520	6447.57	-1361.93	1362.14	448.11	1727364.30	14597576.66	40°11'38.858"N	104°41'19.126"W	0.37	
6660.00†	3.501	171.383	6466.54	-1361.04	1361.25	448.29	1727364.48	14597575.77	40°11'38.849"N	104°41'19.123"W	8.18	KOP
6729.00	9.110	177.630	6535.10	-1353.49	1353.70	448.83	1727365.05	14597568.22	40°11'38.774"N	104°41'19.116"W	8.18	
6816.00	14.420	183.390	6620.25	-1335.78	1335.99	448.47	1727364.76	14597550.52	40°11'38.599"N	104°41'19.121"W	6.24	
6903.00	20.690	183.340	6703.15	-1309.60	1309.81	446.93	1727363.31	14597524.34	40°11'38.340"N	104°41'19.141"W	7.21	
6991.00	24.520	180.110	6784.38	-1275.81	1276.02	445.99	1727362.49	14597490.56	40°11'38.007"N	104°41'19.153"W	4.57	
7078.00	29.260	179.260	6861.95	-1236.47	1236.68	446.23	1727362.87	14597451.24	40°11'37.618"N	104°41'19.150"W	5.47	
7166.00	32.860	179.430	6937.32	-1191.08	1191.29	446.75	1727363.54	14597405.87	40°11'37.169"N	104°41'19.143"W	4.09	
7253.00	36.710	178.340	7008.76	-1141.46	1141.68	447.74	1727364.70	14597356.28	40°11'36.679"N	104°41'19.130"W	4.48	
7341.00	44.340	178.570	7075.60	-1084.35	1084.56	449.27	1727366.43	14597299.19	40°11'36.115"N	104°41'19.111"W	8.67	
7429.00	52.450	181.590	7133.99	-1018.61	1018.83	449.07	1727366.46	14597233.48	40°11'35.465"N	104°41'19.113"W	9.56	
7517.00	61.470	183.060	7181.93	-944.99	945.20	446.03	1727363.68	14597159.88	40°11'34.737"N	104°41'19.152"W	10.34	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#46 RW 28C-5HZ(440'FSL & 1809'FWL,SEC.29)
Area	COLORADO	Well	RW 28C-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 28C-5HZ AWB
Facility	SEC.29-T3N-R65W		

WELLPATH DATA (173 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	70.650	182.610	7217.19	-865.66	865.87	442.11	1727360.04	14597080.56	40°11'33.953"N	104°41'19.203"W	10.56	
7692.00	79.840	183.830	7239.58	-780.79	781.00	437.32	1727355.54	14596995.71	40°11'33.115"N	104°41'19.265"W	10.53	
7779.00	90.520	180.670	7246.88	-694.30	694.51	433.94	1727352.47	14596909.24	40°11'32.260"N	104°41'19.308"W	12.80	LANDING (1135'FSL & 2243'FWL,SEC.29) 40.1922945 -104.6886968
7847.00†	91.857	180.237	7245.47	-626.32	626.52	433.40	1727352.17	14596841.28	40°11'31.588"N	104°41'19.315"W	2.07	EXIT RADIUS HEEL (1067'FSL & 2241'FWL,SEC.29) 40.1921079 -104.6886987
7867.00	92.250	180.110	7244.75	-606.33	606.54	433.34	1727352.17	14596821.31	40°11'31.391"N	104°41'19.316"W	2.07	
7954.00	91.020	178.560	7242.27	-519.38	519.58	434.35	1727353.49	14596734.39	40°11'30.531"N	104°41'19.303"W	2.27	
8042.00	89.910	179.780	7241.56	-431.39	431.60	435.62	1727355.07	14596646.44	40°11'29.662"N	104°41'19.287"W	1.87	
8129.00	90.340	179.740	7241.37	-344.39	344.60	435.99	1727355.74	14596559.48	40°11'28.802"N	104°41'19.282"W	0.50	
8217.00	90.000	178.530	7241.11	-256.41	256.61	437.32	1727357.37	14596471.53	40°11'27.933"N	104°41'19.265"W	1.43	
8304.00	90.000	177.750	7241.11	-169.45	169.66	440.14	1727360.50	14596384.62	40°11'27.074"N	104°41'19.229"W	0.90	
8392.00	90.030	178.140	7241.08	-81.51	81.71	443.30	1727363.96	14596296.73	40°11'26.204"N	104°41'19.188"W	0.44	
8479.00	89.570	178.010	7241.39	5.45	-5.24	446.22	1727367.18	14596209.82	40°11'25.345"N	104°41'19.150"W	0.55	
8567.00	89.200	177.370	7242.33	93.37	-93.16	449.77	1727371.03	14596121.95	40°11'24.476"N	104°41'19.105"W	0.84	
8654.00	89.110	177.420	7243.62	180.27	-180.06	453.72	1727375.29	14596035.09	40°11'23.618"N	104°41'19.054"W	0.12	
8742.00	91.480	177.540	7243.16	268.18	-267.97	457.59	1727379.46	14595947.24	40°11'22.749"N	104°41'19.004"W	2.70	
8829.00	91.780	177.130	7240.69	355.05	-354.84	461.63	1727383.81	14595860.41	40°11'21.890"N	104°41'18.952"W	0.58	
8917.00	90.460	177.610	7238.97	442.94	-442.72	465.67	1727388.15	14595772.58	40°11'21.022"N	104°41'18.900"W	1.60	
9004.00	91.360	178.470	7237.59	529.88	-529.66	468.64	1727391.43	14595685.68	40°11'20.163"N	104°41'18.861"W	1.43	
9092.00	90.120	180.410	7236.45	617.87	-617.64	469.50	1727392.59	14595597.74	40°11'19.293"N	104°41'18.850"W	2.62	
9179.00	90.120	179.610	7236.27	704.86	-704.64	469.49	1727392.88	14595510.77	40°11'18.434"N	104°41'18.851"W	0.92	
9267.00	90.710	179.970	7235.63	792.86	-792.64	469.81	1727393.51	14595422.81	40°11'17.564"N	104°41'18.846"W	0.79	
9354.00	88.090	179.120	7236.54	879.85	-879.62	470.50	1727394.50	14595335.87	40°11'16.705"N	104°41'18.838"W	3.17	
9441.00	88.210	179.230	7239.35	966.79	-966.57	471.75	1727396.06	14595248.96	40°11'15.845"N	104°41'18.821"W	0.19	
9529.00	89.570	178.190	7241.05	1054.75	-1054.53	473.73	1727398.35	14595161.05	40°11'14.976"N	104°41'18.796"W	1.95	
9616.00	90.090	179.510	7241.31	1141.73	-1141.51	475.48	1727400.39	14595074.11	40°11'14.117"N	104°41'18.773"W	1.63	
9704.00	89.570	181.130	7241.57	1229.73	-1229.50	474.99	1727400.21	14594986.14	40°11'13.247"N	104°41'18.780"W	1.93	
9791.00	89.630	181.190	7242.18	1316.70	-1316.48	473.23	1727398.75	14594899.19	40°11'12.387"N	104°41'18.803"W	0.10	
9879.00	89.660	180.440	7242.73	1404.69	-1404.47	471.98	1727397.81	14594811.24	40°11'11.518"N	104°41'18.819"W	0.85	
9967.00	89.850	180.900	7243.10	1492.69	-1492.46	470.95	1727397.09	14594723.27	40°11'10.648"N	104°41'18.832"W	0.57	
10054.00	90.280	180.150	7243.00	1579.68	-1579.46	470.15	1727396.59	14594636.31	40°11'09.789"N	104°41'18.842"W	0.99	
10142.00	90.650	180.010	7242.29	1667.68	-1667.46	470.03	1727396.78	14594548.35	40°11'08.919"N	104°41'18.844"W	0.45	
10229.00	90.920	179.700	7241.10	1754.67	-1754.45	470.25	1727397.30	14594461.39	40°11'08.060"N	104°41'18.841"W	0.47	
10317.00	90.960	179.750	7239.65	1842.66	-1842.43	470.67	1727398.03	14594373.44	40°11'07.190"N	104°41'18.836"W	0.07	
10404.00	91.230	178.950	7237.99	1929.63	-1929.41	471.66	1727399.32	14594286.50	40°11'06.331"N	104°41'18.823"W	0.97	
10492.00	90.860	178.790	7236.39	2017.60	-2017.38	473.39	1727401.36	14594198.58	40°11'05.461"N	104°41'18.801"W	0.46	
10579.00	88.890	178.940	7236.58	2104.58	-2104.36	475.12	1727403.39	14594111.64	40°11'04.602"N	104°41'18.778"W	2.27	
10667.00	88.830	182.380	7238.33	2192.55	-2192.32	474.10	1727402.68	14594023.71	40°11'03.732"N	104°41'18.791"W	3.91	
10754.00	89.720	183.750	7239.43	2279.41	-2279.19	469.45	1727398.33	14593936.86	40°11'02.874"N	104°41'18.851"W	1.88	
10842.00	89.660	183.110	7239.90	2367.25	-2367.03	464.19	1727393.38	14593849.03	40°11'02.006"N	104°41'18.919"W	0.73	
10930.00	89.810	182.730	7240.31	2455.13	-2454.91	459.70	1727389.20	14593761.17	40°11'01.138"N	104°41'18.977"W	0.46	
11017.00	89.970	182.240	7240.48	2542.05	-2541.83	455.93	1727385.74	14593674.27	40°11'00.279"N	104°41'19.026"W	0.59	
11104.00	90.280	182.100	7240.29	2628.98	-2628.77	452.64	1727382.75	14593587.36	40°10'59.419"N	104°41'19.068"W	0.39	
11192.00	90.340	181.630	7239.81	2716.93	-2716.72	449.77	1727380.19	14593499.43	40°10'58.550"N	104°41'19.105"W	0.54	
11279.00	90.370	181.140	7239.27	2803.90	-2803.69	447.67	1727378.39	14593412.49	40°10'57.691"N	104°41'19.132"W	0.56	
11367.00	90.340	180.580	7238.73	2891.89	-2891.68	446.35	1727377.38	14593324.53	40°10'56.821"N	104°41'19.149"W	0.64	

REFERENCE WELLPATH IDENTIFICATION				
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)		Slot	SLOT#46 RW 28C-5HZ(440'FSL & 1809'FWL,SEC.29)
Area	COLORADO		Well	RW 28C-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)		Wellbore	RW 28C-5HZ AWB
Facility	SEC.29-T3N-R65W			

WELLPATH DATA (173 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	90.370	179.970	7238.19	2978.89	-2978.68	445.93	1727377.26	14593237.57	40°10'55.962"N	104°41'19.155"W	0.70	
11542.00	90.280	178.810	7237.69	3066.88	-3066.67	446.87	1727378.51	14593149.61	40°10'55.092"N	104°41'19.143"W	1.32	
11629.00	89.630	178.420	7237.76	3153.85	-3153.64	448.97	1727380.91	14593062.68	40°10'54.233"N	104°41'19.116"W	0.87	
11716.00	87.600	176.220	7239.86	3240.73	-3240.51	453.04	1727385.28	14592975.86	40°10'53.374"N	104°41'19.063"W	3.44	
11804.00	89.320	176.370	7242.23	3328.51	-3328.29	458.72	1727391.27	14592888.13	40°10'52.507"N	104°41'18.990"W	1.96	
11892.00	89.080	178.130	7243.45	3416.40	-3416.18	462.94	1727395.79	14592800.30	40°10'51.638"N	104°41'18.936"W	2.02	
11979.00	90.520	179.560	7243.76	3503.38	-3503.16	464.70	1727397.85	14592713.36	40°10'50.779"N	104°41'18.913"W	2.33	
12067.00	90.250	178.720	7243.17	3591.36	-3591.15	466.02	1727399.48	14592625.41	40°10'49.909"N	104°41'18.896"W	1.00	
12155.00	90.830	177.970	7242.34	3679.32	-3679.10	468.56	1727402.32	14592537.50	40°10'49.040"N	104°41'18.863"W	1.08	
12242.00	89.600	178.930	7242.01	3766.29	-3766.07	470.91	1727404.98	14592450.58	40°10'48.181"N	104°41'18.833"W	1.79	
12330.00	89.260	178.820	7242.89	3854.27	-3854.05	472.64	1727407.01	14592362.64	40°10'47.311"N	104°41'18.811"W	0.41	
12417.00	90.120	180.720	7243.36	3941.26	-3941.04	472.99	1727407.67	14592275.68	40°10'46.452"N	104°41'18.806"W	2.40	
12504.00	90.030	179.260	7243.24	4028.26	-4028.04	473.00	1727407.98	14592188.72	40°10'45.592"N	104°41'18.806"W	1.68	
12591.00	91.050	181.230	7242.42	4115.25	-4115.03	472.63	1727407.92	14592101.76	40°10'44.732"N	104°41'18.811"W	2.55	
12678.00	89.850	180.810	7241.74	4202.23	-4202.01	471.08	1727406.67	14592014.81	40°10'43.873"N	104°41'18.831"W	1.46	
12766.00	94.250	185.990	7238.59	4289.97	-4289.75	465.88	1727401.77	14591927.09	40°10'43.006"N	104°41'18.898"W	7.72	
12853.00	93.860	184.150	7232.44	4376.40	-4376.19	458.21	1727394.41	14591840.66	40°10'42.151"N	104°41'18.997"W	2.16	
12940.00	92.930	183.460	7227.29	4463.05	-4462.84	452.44	1727388.95	14591754.02	40°10'41.295"N	104°41'19.071"W	1.33	
13028.00	89.230	180.670	7225.63	4550.95	-4550.74	449.28	1727386.09	14591666.14	40°10'40.426"N	104°41'19.112"W	5.27	
13115.00	88.980	178.400	7226.99	4637.94	-4637.72	449.98	1727387.10	14591579.20	40°10'39.567"N	104°41'19.103"W	2.62	
13202.00	88.950	177.770	7228.56	4724.87	-4724.66	452.89	1727390.31	14591492.30	40°10'38.708"N	104°41'19.065"W	0.72	
13290.00	87.450	178.930	7231.32	4812.79	-4812.58	455.42	1727393.15	14591404.43	40°10'37.839"N	104°41'19.033"W	2.15	
13377.00	88.120	180.590	7234.69	4899.72	-4899.51	455.79	1727393.81	14591317.54	40°10'36.980"N	104°41'19.028"W	2.06	
13465.00	87.010	179.520	7238.42	4987.64	-4987.43	455.70	1727394.03	14591229.65	40°10'36.111"N	104°41'19.029"W	1.75	
13552.00	86.020	179.970	7243.71	5074.48	-5074.26	456.09	1727394.72	14591142.85	40°10'35.253"N	104°41'19.024"W	1.25	
13640.00	87.630	182.300	7248.59	5162.32	-5162.10	454.35	1727393.29	14591055.04	40°10'34.385"N	104°41'19.047"W	3.21	
13727.00	89.050	182.630	7251.11	5249.19	-5248.98	450.61	1727389.85	14590968.19	40°10'33.526"N	104°41'19.095"W	1.68	
13815.00	89.660	182.150	7252.10	5337.11	-5336.90	446.94	1727386.49	14590880.29	40°10'32.658"N	104°41'19.142"W	0.88	
13893.00†	90.019	182.078	7252.32	5415.05	-5414.85	444.06	1727383.89	14590802.37	40°10'31.887"N	104°41'19.179"W	0.47	ENTER RADIUS TOE (312'FSL & 2296'FWL,SEC.32) 40.1755243 -104.6886609
13902.00	90.060	182.070	7252.31	5424.05	-5423.84	443.73	1727383.59	14590793.37	40°10'31.799"N	104°41'19.183"W	0.47	
13990.00	89.570	181.320	7252.59	5512.01	-5511.80	441.13	1727381.30	14590705.44	40°10'30.929"N	104°41'19.217"W	1.02	
14077.00	90.740	181.580	7252.36	5598.98	-5598.77	438.93	1727379.40	14590618.50	40°10'30.070"N	104°41'19.245"W	1.38	
14164.00	91.170	181.470	7250.91	5685.93	-5685.73	436.61	1727377.39	14590531.57	40°10'29.211"N	104°41'19.275"W	0.51	
14252.00	90.920	181.060	7249.30	5773.90	-5773.69	434.67	1727375.76	14590443.63	40°10'28.341"N	104°41'19.300"W	0.55	
14339.00	91.420	180.890	7247.53	5860.86	-5860.66	433.19	1727374.58	14590356.69	40°10'27.482"N	104°41'19.319"W	0.61	
14426.00	91.200	180.090	7245.54	5947.84	-5947.63	432.45	1727374.14	14590269.75	40°10'26.622"N	104°41'19.329"W	0.95	
14487.00	91.600	179.840	7244.05	6008.82	-6008.61	432.48	1727374.39	14590208.79	40°10'26.020"N	104°41'19.329"W	0.77	LAST BHGE PRODUCTION MWD+IFR1+SC SURVEY
14532.00	91.600	179.840	7242.79	6053.80	-6053.60	432.61	1727374.67	14590163.83	40°10'25.575"N	104°41'19.327"W	0.00	PTB (327'FNL & 2285'FWL,SEC.05) 40.1737709 -104.6887019

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#46 RW 28C-5HZ(440'FSL & 1809'FWL,SEC.29)
Area	COLORADO	Well	RW 28C-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 28C-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	1.82	-195.03	1726726.17	14596214.64	40°11'25.415"N	104°41'27.413"W	polygon
SEC.29-T3N-R65W	1.00	1.82	-195.03	1726726.17	14596214.64	40°11'25.415"N	104°41'27.413"W	polygon
SEC.32-T3N-R65W	1.00	1.82	-195.03	1726726.17	14596214.64	40°11'25.415"N	104°41'27.413"W	polygon
RW 28C-5HZ HEEL REV-1(1035'FSL & 2265'FWL,SEC.29)	7241.00	593.79	454.55	1727373.42	14596808.64	40°11'31.265"N	104°41'19.043"W	point
RW 28C-5HZ HEEL REV-2(1066'FSL & 2265'FWL,SEC.29)	7241.00	624.79	454.55	1727373.31	14596839.63	40°11'31.571"N	104°41'19.043"W	point
RW 28C-5HZ BHL REV-1(370'FNL & 2310'FWL,SEC.05)	7251.00	-6097.28	457.74	1727399.94	14590120.25	40°10'25.144"N	104°41'19.003"W	point
RW 28C-5HZ BHL REV-2(345'FNL & 2310'FWL,SEC.05)	7251.00	-6072.28	457.74	1727399.86	14590145.24	40°10'25.391"N	104°41'19.003"W	point
RW 28C-5HZ LANDBOX	7251.00	0.00	0.00	1726921.12	14596213.50	40°11'25.397"N	104°41'24.900"W	polygon
RW 28C-5HZ RADIUS 1	7251.00	879.30	816.57	1727734.30	14597095.30	40°11'34.086"N	104°41'14.378"W	polygon
RW 28C-5HZ RADIUS 2	7251.00	-5727.01	779.92	1727720.70	14590491.50	40°10'28.803"N	104°41'14.853"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: RW 28C-5HZ AWB Ref Wellpath: RW 28C-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 28C-5HZ AWB
1813.00	14487.00	Custom APC ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+SC <1890 - 14487>	RW 28C-5HZ AWB
14487.00	14532.00	Blind Drilling (std)	Projection to bit	RW 28C-5HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#46 RW 28C-5HZ(440'FSL & 1809'FWL,SEC.29)
Area	COLORADO	Well	RW 28C-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 28C-5HZ AWB
Facility	SEC.29-T3N-R65W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
116.00	0.550	290.340	116.00	FIRST BHGE SURFACE MWD+IFR1+SC SURVEY
1813.00	15.160	17.830	1778.91	LAST BHGE SURFACE MWD+IFR1+SC SURVEY
1890.00	15.600	19.120	1853.15	FIRST BHGE PRODUCTION MWD+IFR1+SC SURVEY
4807.00	16.062	13.090	4649.65	ENTER LANDBOX (1525'FSL & 2166'FWL,SEC.29) 40.1933663 -104.6889650
6660.00	3.501	171.383	6466.54	KOP
7779.00	90.520	180.670	7246.88	LANDING (1135'FSL & 2243'FWL,SEC.29) 40.1922945 -104.6886968
7847.00	91.857	180.237	7245.47	EXIT RADIUS HEEL (1067'FSL & 2241'FWL,SEC.29) 40.1921079 -104.6886987
13893.00	90.019	182.078	7252.32	ENTER RADIUS TOE (312'FSL & 2296'FWL,SEC.32) 40.1755243 -104.6886609
14487.00	91.600	179.840	7244.05	LAST BHGE PRODUCTION MWD+IFR1+SC SURVEY
14532.00	91.600	179.840	7242.79	PTB (327'FNL & 2285'FWL,SEC.05) 40.1737709 -104.6887019