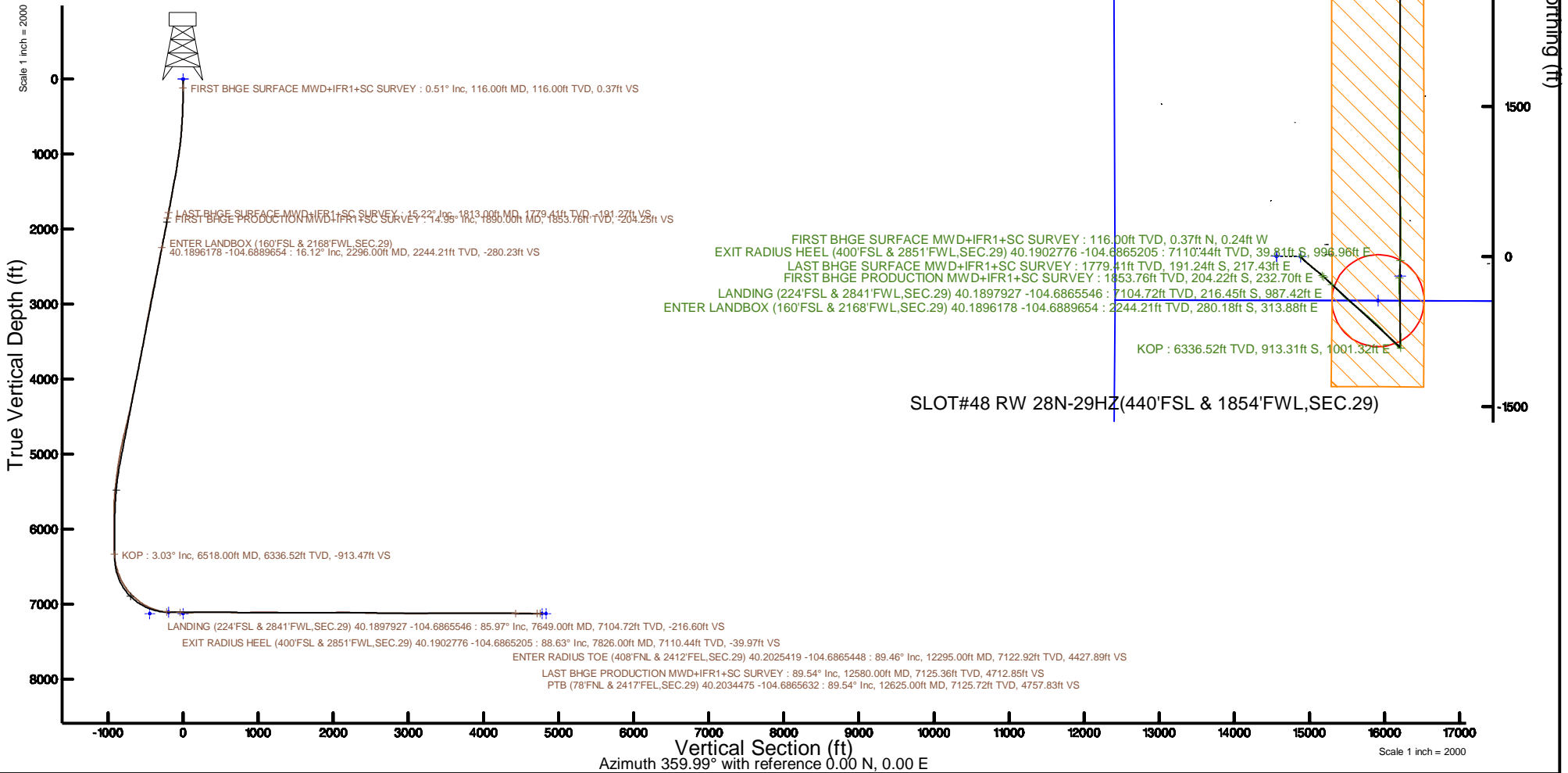


KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#48 RW 28N-29HZ(440'FSL & 1854'FWL,SEC.29)
 Field: WELD COUNTY (UTM/TRUE NORTH) Well: RW 28N-29HZ
 Facility: SEC.29-T3N-R65W Wellbore: RW 28N-29HZ PWB

Plot reference wellpath is RW 28N-29HZ PWB 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 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#48 RW 28N-29HZ(440'FSL & 1854'FWL,SEC.29)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: painsetr on 2017-09-21
	Database: WA_DEN_Anadarko_Defn



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#48 RW 28N-29HZ(440'FSL & 1854'FWL,SEC.29)
Area	COLORADO	Well	RW 28N-29HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 28N-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	9/21/2017 at 1:15 PM
Convergence at slot	0.20° East	Database/Source file	WA_DEN_Anadarko_Defn/RW_28N-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	-79.82	1033.72	1726966.12	14596213.25	40°11'25.393"N	104°41'24.320"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#48 RW 28N-29HZ(440'FSL & 1854'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	359.99°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#48 RW 28N-29HZ(440'FSL & 1854'FWL,SEC.29)
Area	COLORADO	Well	RW 28N-29HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 28N-29HZ AWB
Facility	SEC.29-T3N-R65W		

WELLPATH DATA (152 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	327.150	0.00	0.00	0.00	0.00	1726966.12	14596213.25	40°11'25.393"N	104°41'24.320"W	0.00	
17.00	0.000	327.150	17.00	0.00	0.00	0.00	1726966.12	14596213.25	40°11'25.393"N	104°41'24.320"W	0.00	
116.00	0.510	327.150	116.00	0.37	0.37	-0.24	1726965.88	14596213.62	40°11'25.397"N	104°41'24.323"W	0.52	FIRST BHGE SURFACE MWD+IFR1+SC SURVEY
211.00	0.730	153.210	211.00	0.19	0.19	-0.20	1726965.92	14596213.44	40°11'25.395"N	104°41'24.323"W	1.30	
301.00	1.220	136.790	300.98	-1.03	-1.03	0.72	1726966.84	14596212.23	40°11'25.383"N	104°41'24.311"W	0.62	
392.00	2.510	139.470	391.93	-3.25	-3.25	2.68	1726968.81	14596210.02	40°11'25.361"N	104°41'24.286"W	1.42	
483.00	4.070	138.090	482.78	-7.16	-7.16	6.13	1726972.27	14596206.11	40°11'25.322"N	104°41'24.241"W	1.72	
574.00	5.190	137.140	573.48	-12.59	-12.58	11.09	1726977.24	14596200.71	40°11'25.269"N	104°41'24.177"W	1.23	
665.00	6.150	133.860	664.04	-18.98	-18.98	17.40	1726983.58	14596194.34	40°11'25.205"N	104°41'24.096"W	1.11	
752.00	6.770	132.040	750.48	-25.65	-25.64	24.57	1726990.77	14596187.71	40°11'25.140"N	104°41'24.003"W	0.75	
839.00	9.200	133.840	836.63	-33.90	-33.89	33.40	1726999.62	14596179.49	40°11'25.058"N	104°41'23.890"W	2.81	
927.00	10.790	134.000	923.30	-44.50	-44.49	44.40	1727010.65	14596168.93	40°11'24.953"N	104°41'23.748"W	1.81	
1015.00	12.710	133.190	1009.45	-56.85	-56.84	57.38	1727023.67	14596156.64	40°11'24.831"N	104°41'23.581"W	2.19	
1102.00	12.690	130.600	1094.32	-69.62	-69.61	71.61	1727037.95	14596143.92	40°11'24.705"N	104°41'23.397"W	0.65	
1189.00	14.920	128.160	1178.80	-82.76	-82.75	87.68	1727054.05	14596130.84	40°11'24.575"N	104°41'23.190"W	2.65	
1277.00	15.490	130.580	1263.72	-97.41	-97.39	105.51	1727071.93	14596116.27	40°11'24.431"N	104°41'22.960"W	0.97	
1364.00	16.350	129.190	1347.38	-112.71	-112.69	123.83	1727090.29	14596101.04	40°11'24.279"N	104°41'22.724"W	1.08	
1452.00	16.380	128.540	1431.82	-128.27	-128.25	143.13	1727109.64	14596085.56	40°11'24.126"N	104°41'22.476"W	0.21	
1539.00	15.870	128.430	1515.40	-143.31	-143.28	162.04	1727128.60	14596070.59	40°11'23.977"N	104°41'22.232"W	0.59	
1627.00	15.790	129.640	1600.06	-158.43	-158.40	180.69	1727147.29	14596055.55	40°11'23.828"N	104°41'21.992"W	0.39	
1714.00	15.210	132.730	1683.90	-173.73	-173.70	198.19	1727164.83	14596040.32	40°11'23.677"N	104°41'21.766"W	1.16	
1802.00	15.290	132.130	1768.80	-189.35	-189.31	215.27	1727181.97	14596024.77	40°11'23.522"N	104°41'21.546"W	0.20	
1813.00	15.220	131.350	1779.41	-191.27	-191.24	217.43	1727184.13	14596022.85	40°11'23.503"N	104°41'21.518"W	1.97	LAST BHGE SURFACE MWD+IFR1+SC SURVEY
1890.00	14.950	129.360	1853.76	-204.25	-204.22	232.70	1727199.44	14596009.93	40°11'23.375"N	104°41'21.322"W	0.76	FIRST BHGE PRODUCTION MWD+IFR1+SC SURVEY
1979.00	15.290	133.440	1939.68	-219.60	-219.56	250.10	1727216.88	14595994.65	40°11'23.223"N	104°41'21.097"W	1.26	
2066.00	16.030	135.460	2023.45	-236.06	-236.01	266.85	1727233.69	14595978.26	40°11'23.061"N	104°41'20.882"W	1.06	
2154.00	16.860	132.470	2107.85	-253.34	-253.29	284.79	1727251.68	14595961.05	40°11'22.890"N	104°41'20.650"W	1.35	
2241.00	15.830	132.520	2191.33	-269.88	-269.83	302.84	1727269.78	14595944.59	40°11'22.727"N	104°41'20.418"W	1.18	
2296.00†	16.119	133.791	2244.21	-280.23	-280.18	313.88	1727280.85	14595934.27	40°11'22.624"N	104°41'20.276"W	0.82	ENTER LANDBOX (160'FSL & 2168'FWL,SEC.29) 40.1896178 -104.6889654
2328.00	16.290	134.510	2274.94	-286.45	-286.40	320.29	1727287.28	14595928.08	40°11'22.563"N	104°41'20.193"W	0.82	
2415.00	16.900	132.940	2358.31	-303.63	-303.57	338.25	1727305.29	14595910.98	40°11'22.393"N	104°41'19.962"W	0.87	
2502.00	15.800	132.160	2441.79	-320.19	-320.14	356.29	1727323.38	14595894.48	40°11'22.229"N	104°41'19.729"W	1.29	
2590.00	15.250	135.590	2526.58	-336.51	-336.45	373.27	1727340.41	14595878.24	40°11'22.068"N	104°41'19.510"W	1.22	
2677.00	16.160	135.200	2610.34	-353.27	-353.21	389.80	1727357.00	14595861.54	40°11'21.903"N	104°41'19.297"W	1.05	
2765.00	17.030	135.080	2694.67	-371.09	-371.03	407.53	1727374.78	14595843.80	40°11'21.726"N	104°41'19.069"W	0.99	
2852.00	16.530	134.970	2777.97	-388.86	-388.79	425.28	1727392.59	14595826.10	40°11'21.551"N	104°41'18.840"W	0.58	
2940.00	16.180	134.030	2862.40	-406.23	-406.16	442.96	1727410.31	14595808.80	40°11'21.379"N	104°41'18.612"W	0.50	
3028.00	16.430	130.890	2946.87	-422.90	-422.83	461.18	1727428.59	14595792.20	40°11'21.215"N	104°41'18.378"W	1.04	
3115.00	15.740	129.430	3030.46	-438.46	-438.38	479.60	1727447.05	14595776.72	40°11'21.061"N	104°41'18.140"W	0.92	
3228.00	16.900	130.950	3138.91	-458.96	-458.88	503.84	1727471.36	14595756.31	40°11'20.858"N	104°41'17.828"W	1.09	
3316.00	15.490	130.510	3223.41	-474.98	-474.90	522.44	1727490.00	14595740.36	40°11'20.700"N	104°41'17.588"W	1.61	
3404.00	15.830	126.190	3308.15	-489.71	-489.62	541.06	1727508.67	14595725.71	40°11'20.555"N	104°41'17.348"W	1.38	
3491.00	15.970	127.300	3391.82	-503.97	-503.88	560.16	1727527.81	14595711.53	40°11'20.414"N	104°41'17.102"W	0.38	
3578.00	16.460	132.120	3475.36	-519.49	-519.40	578.82	1727546.52	14595696.08	40°11'20.260"N	104°41'16.862"W	1.65	
3666.00	16.170	128.940	3559.82	-535.56	-535.46	597.60	1727565.35	14595680.09	40°11'20.101"N	104°41'16.620"W	1.07	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#48 RW 28N-29HZ(440'FSL & 1854'FWL,SEC.29)
Area	COLORADO	Well	RW 28N-29HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 28N-29HZ AWB
Facility	SEC.29-T3N-R65W		

WELLPATH DATA (152 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
3753.00	16.240	130.660	3643.36	-551.10	-551.00	616.25	1727584.04	14595664.62	40°11'19.948"N	104°41'16.379"W	0.56	
3841.00	16.430	131.000	3727.81	-567.29	-567.19	634.98	1727602.82	14595648.51	40°11'19.788"N	104°41'16.138"W	0.24	
3928.00	16.380	129.980	3811.27	-583.24	-583.14	653.66	1727621.55	14595632.63	40°11'19.630"N	104°41'15.897"W	0.34	
4016.00	16.700	129.300	3895.63	-599.23	-599.12	672.95	1727640.89	14595616.72	40°11'19.472"N	104°41'15.649"W	0.42	
4103.00	18.540	133.470	3978.55	-616.66	-616.56	692.67	1727660.66	14595599.36	40°11'19.300"N	104°41'15.395"W	2.56	
4190.00	18.020	132.850	4061.16	-635.34	-635.22	712.57	1727680.62	14595580.77	40°11'19.116"N	104°41'15.138"W	0.64	
4278.00	16.700	131.420	4145.15	-652.96	-652.85	732.03	1727700.14	14595563.22	40°11'18.941"N	104°41'14.888"W	1.58	
4366.00	16.110	130.400	4229.56	-669.24	-669.12	750.81	1727718.97	14595547.01	40°11'18.781"N	104°41'14.646"W	0.75	
4453.00	15.980	133.600	4313.18	-685.33	-685.21	768.68	1727736.88	14595531.00	40°11'18.622"N	104°41'14.415"W	1.03	
4540.00	16.940	135.800	4396.61	-702.68	-702.55	786.19	1727754.44	14595513.72	40°11'18.450"N	104°41'14.190"W	1.32	
4628.00	17.190	136.510	4480.74	-721.30	-721.18	804.07	1727772.39	14595495.17	40°11'18.266"N	104°41'13.959"W	0.37	
4716.00	18.790	137.210	4564.43	-741.14	-741.01	822.65	1727791.03	14595475.40	40°11'18.070"N	104°41'13.720"W	1.83	
4803.00	17.670	137.260	4647.06	-761.13	-760.99	841.13	1727809.57	14595455.50	40°11'17.873"N	104°41'13.482"W	1.29	
4891.00	18.260	137.810	4730.77	-781.15	-781.02	859.46	1727827.96	14595435.55	40°11'17.675"N	104°41'13.246"W	0.70	
4978.00	16.950	138.360	4813.70	-800.73	-800.59	877.04	1727845.60	14595416.04	40°11'17.481"N	104°41'13.019"W	1.52	
5066.00	16.320	134.870	4898.02	-819.04	-818.90	894.32	1727862.94	14595397.80	40°11'17.300"N	104°41'12.797"W	1.34	
5153.00	14.460	134.790	4981.89	-835.32	-835.18	910.70	1727879.36	14595381.58	40°11'17.140"N	104°41'12.586"W	2.14	
5240.00	12.990	134.420	5066.41	-849.82	-849.68	925.39	1727894.10	14595367.14	40°11'16.996"N	104°41'12.396"W	1.69	
5328.00	12.240	134.510	5152.28	-863.29	-863.14	939.11	1727907.86	14595353.73	40°11'16.863"N	104°41'12.220"W	0.85	
5416.00	10.770	135.330	5238.51	-875.68	-875.53	951.54	1727920.33	14595341.39	40°11'16.741"N	104°41'12.059"W	1.68	
5503.00	8.970	140.110	5324.22	-886.67	-886.51	961.60	1727930.43	14595330.45	40°11'16.632"N	104°41'11.930"W	2.27	
5590.00	8.160	145.200	5410.25	-896.94	-896.79	969.48	1727938.34	14595320.20	40°11'16.531"N	104°41'11.828"W	1.27	
5678.00	6.270	138.210	5497.55	-905.65	-905.50	976.25	1727945.13	14595311.52	40°11'16.445"N	104°41'11.741"W	2.36	
5767.00	5.080	133.670	5586.11	-912.00	-911.85	982.33	1727951.24	14595305.20	40°11'16.382"N	104°41'11.663"W	1.43	
5854.00	4.170	112.520	5672.84	-915.87	-915.72	988.04	1727956.96	14595301.35	40°11'16.344"N	104°41'11.589"W	2.20	
5942.00	3.270	87.460	5760.66	-916.99	-916.83	993.51	1727962.43	14595300.25	40°11'16.333"N	104°41'11.519"W	2.09	
6029.00	1.300	64.920	5847.58	-916.46	-916.30	996.88	1727965.80	14595300.79	40°11'16.338"N	104°41'11.475"W	2.45	
6116.00	0.540	110.190	5934.57	-916.18	-916.03	998.16	1727967.07	14595301.07	40°11'16.341"N	104°41'11.459"W	1.15	
6204.00	0.770	97.900	6022.57	-916.41	-916.25	999.13	1727968.05	14595300.85	40°11'16.338"N	104°41'11.446"W	0.30	
6291.00	0.780	95.750	6109.56	-916.55	-916.39	1000.30	1727969.22	14595300.72	40°11'16.337"N	104°41'11.431"W	0.04	
6379.00	0.730	3.320	6197.55	-916.05	-915.89	1000.93	1727969.84	14595301.22	40°11'16.342"N	104°41'11.423"W	1.24	
6466.00	0.620	29.880	6284.55	-915.09	-914.93	1001.20	1727970.11	14595302.18	40°11'16.351"N	104°41'11.420"W	0.38	
6518.00†	3.034	359.316	6336.52	-913.47	-913.31	1001.32	1727970.23	14595303.80	40°11'16.367"N	104°41'11.418"W	4.85	KOP
6554.00	4.770	356.690	6372.43	-911.02	-910.86	1001.22	1727970.12	14595306.25	40°11'16.392"N	104°41'11.419"W	4.85	
6641.00	12.310	0.640	6458.41	-898.12	-897.96	1001.12	1727969.97	14595319.15	40°11'16.519"N	104°41'11.421"W	8.69	
6729.00	17.180	0.500	6543.48	-875.73	-875.57	1001.34	1727970.11	14595341.53	40°11'16.740"N	104°41'11.418"W	5.53	
6816.00	22.110	359.780	6625.40	-846.49	-846.33	1001.38	1727970.06	14595370.75	40°11'17.029"N	104°41'11.417"W	5.67	
6904.00	29.050	357.330	6704.72	-808.54	-808.38	1000.32	1727968.86	14595408.69	40°11'17.404"N	104°41'11.431"W	7.98	
6992.00	34.140	355.330	6779.66	-762.55	-762.39	997.32	1727965.70	14595454.64	40°11'17.859"N	104°41'11.469"W	5.90	
7079.00	41.000	359.120	6848.58	-709.61	-709.46	994.89	1727963.08	14595507.55	40°11'18.382"N	104°41'11.501"W	8.32	
7167.00	48.230	0.400	6911.18	-647.85	-647.69	994.67	1727962.65	14595569.29	40°11'18.992"N	104°41'11.503"W	8.28	
7254.00	53.730	359.340	6965.94	-580.29	-580.13	994.50	1727962.24	14595636.82	40°11'19.660"N	104°41'11.506"W	6.39	
7341.00	60.170	358.330	7013.36	-507.42	-507.26	992.99	1727960.48	14595709.66	40°11'20.380"N	104°41'11.525"W	7.47	
7429.00	65.860	357.180	7053.28	-429.09	-428.94	989.90	1727957.12	14595787.94	40°11'21.154"N	104°41'11.565"W	6.57	
7516.00	74.050	357.670	7083.07	-347.51	-347.36	986.24	1727953.18	14595869.47	40°11'21.960"N	104°41'11.612"W	9.43	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#48 RW 28N-29HZ(440'FSL & 1854'FWL,SEC.29)
Area	COLORADO	Well	RW 28N-29HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 28N-29HZ AWB
Facility	SEC.29-T3N-R65W		

WELLPATH DATA (152 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	83.150	1.590	7100.45	-261.36	-261.21	985.73	1727952.37	14595955.59	40°11'22.812"N	104°41'11.619"W	11.22	
7649.00†	85.973	2.742	7104.72	-216.60	-216.45	987.42	1727953.90	14596000.34	40°11'23.254"N	104°41'11.597"W	6.77	LANDING (224'FSL & 2841'FWL,SEC.29) 40.1897927 -104.6865546
7691.00	88.610	3.810	7106.70	-174.72	-174.57	989.82	1727956.15	14596042.21	40°11'23.668"N	104°41'11.566"W	6.77	
7779.00	88.210	2.820	7109.14	-86.90	-86.75	994.91	1727960.93	14596130.01	40°11'24.536"N	104°41'11.500"W	1.21	
7826.00†	88.626	2.172	7110.44	-39.97	-39.81	996.96	1727962.81	14596176.93	40°11'24.999"N	104°41'11.474"W	1.64	EXIT RADIUS HEEL (400'FSL & 2851'FWL,SEC.29) 40.1902776 -104.6865205
7866.00	88.980	1.620	7111.28	0.00	0.16	998.28	1727964.00	14596216.89	40°11'25.394"N	104°41'11.457"W	1.64	
7954.00	90.340	0.740	7111.80	87.98	88.13	1000.09	1727965.50	14596304.84	40°11'26.264"N	104°41'11.433"W	1.84	
8041.00	90.740	0.620	7110.98	174.97	175.12	1001.12	1727966.23	14596391.80	40°11'27.123"N	104°41'11.420"W	0.48	
8129.00	91.110	359.670	7109.56	262.95	263.11	1001.35	1727966.15	14596479.75	40°11'27.993"N	104°41'11.417"W	1.16	
8216.00	90.740	359.440	7108.15	349.94	350.10	1000.67	1727965.17	14596566.70	40°11'28.852"N	104°41'11.426"W	0.50	
8304.00	89.080	358.550	7108.29	437.92	438.08	999.13	1727963.32	14596654.64	40°11'29.722"N	104°41'11.446"W	2.14	
8391.00	89.140	358.260	7109.64	524.88	525.04	996.71	1727960.59	14596741.55	40°11'30.581"N	104°41'11.477"W	0.34	
8479.00	89.080	357.950	7111.01	612.82	612.98	993.80	1727957.38	14596829.45	40°11'31.450"N	104°41'11.514"W	0.36	
8566.00	89.110	357.640	7112.39	699.75	699.90	990.45	1727953.73	14596916.33	40°11'32.309"N	104°41'11.557"W	0.36	
8654.00	90.740	358.200	7112.50	787.68	787.84	987.25	1727950.23	14597004.22	40°11'33.178"N	104°41'11.598"W	1.96	
8741.00	90.590	359.300	7111.49	874.66	874.81	985.36	1727948.03	14597091.15	40°11'34.038"N	104°41'11.623"W	1.28	
8829.00	89.880	0.330	7111.13	962.65	962.81	985.07	1727947.44	14597179.11	40°11'34.907"N	104°41'11.626"W	1.42	
8916.00	90.220	0.070	7111.05	1049.65	1049.81	985.38	1727947.44	14597266.08	40°11'35.767"N	104°41'11.622"W	0.49	
9004.00	90.590	359.700	7110.43	1137.65	1137.81	985.20	1727946.95	14597354.04	40°11'36.637"N	104°41'11.625"W	0.59	
9092.00	88.920	0.710	7110.81	1225.65	1225.80	985.51	1727946.96	14597442.00	40°11'37.506"N	104°41'11.621"W	2.22	
9179.00	89.660	0.240	7111.89	1312.63	1312.79	986.24	1727947.38	14597528.96	40°11'38.366"N	104°41'11.611"W	1.01	
9267.00	89.600	359.800	7112.45	1400.63	1400.79	986.27	1727947.10	14597616.92	40°11'39.235"N	104°41'11.611"W	0.50	
9354.00	90.650	359.620	7112.26	1487.63	1487.78	985.83	1727946.36	14597703.88	40°11'40.095"N	104°41'11.616"W	1.22	
9441.00	90.030	0.250	7111.75	1574.63	1574.78	985.73	1727945.96	14597790.84	40°11'40.955"N	104°41'11.618"W	1.02	
9529.00	88.860	0.500	7112.60	1662.62	1662.77	986.30	1727946.23	14597878.80	40°11'41.824"N	104°41'11.610"W	1.36	
9617.00	89.630	1.270	7113.76	1750.60	1750.76	987.66	1727947.28	14597966.75	40°11'42.694"N	104°41'11.593"W	1.24	
9704.00	89.720	1.010	7114.25	1837.58	1837.74	989.39	1727948.70	14598053.71	40°11'43.553"N	104°41'11.570"W	0.32	
9791.00	90.490	0.200	7114.09	1924.57	1924.73	990.31	1727949.32	14598140.67	40°11'44.413"N	104°41'11.558"W	1.28	
9879.00	91.750	0.380	7112.37	2012.55	2012.71	990.76	1727949.46	14598228.61	40°11'45.282"N	104°41'11.553"W	1.45	
9966.00	91.020	1.660	7110.27	2099.51	2099.67	992.31	1727950.70	14598315.54	40°11'46.142"N	104°41'11.533"W	1.69	
10054.00	88.830	0.720	7110.39	2187.49	2187.64	994.13	1727952.22	14598403.49	40°11'47.011"N	104°41'11.509"W	2.71	
10142.00	88.400	0.310	7112.51	2275.46	2275.61	994.92	1727952.70	14598491.43	40°11'47.880"N	104°41'11.499"W	0.68	
10229.00	87.540	359.770	7115.60	2362.40	2362.56	994.98	1727952.46	14598578.34	40°11'48.740"N	104°41'11.498"W	1.17	
10317.00	88.120	0.650	7118.93	2450.34	2450.49	995.31	1727952.48	14598666.24	40°11'49.609"N	104°41'11.494"W	1.20	
10405.00	90.060	1.420	7120.32	2538.31	2538.46	996.90	1727953.76	14598754.18	40°11'50.478"N	104°41'11.473"W	2.37	
10492.00	89.630	0.930	7120.56	2625.29	2625.44	998.68	1727955.24	14598841.13	40°11'51.337"N	104°41'11.450"W	0.75	
10579.00	89.260	0.590	7121.40	2712.27	2712.43	999.83	1727956.09	14598928.09	40°11'52.197"N	104°41'11.435"W	0.58	
10667.00	89.380	1.060	7122.45	2800.26	2800.42	1001.10	1727957.05	14599016.04	40°11'53.066"N	104°41'11.419"W	0.55	
10753.00	88.950	0.760	7123.70	2886.24	2886.40	1002.47	1727958.11	14599101.99	40°11'53.916"N	104°41'11.401"W	0.61	
10841.00	88.400	358.990	7125.74	2974.21	2974.37	1002.28	1727957.62	14599189.93	40°11'54.785"N	104°41'11.404"W	2.11	
10928.00	89.320	358.400	7127.47	3061.17	3061.33	1000.29	1727955.33	14599276.85	40°11'55.645"N	104°41'11.429"W	1.26	
11015.00	91.050	358.380	7127.19	3148.13	3148.29	997.85	1727952.58	14599363.76	40°11'56.504"N	104°41'11.461"W	1.99	
11103.00	91.570	358.050	7125.17	3236.07	3236.22	995.11	1727949.54	14599451.65	40°11'57.373"N	104°41'11.496"W	0.70	
11190.00	91.480	0.190	7122.86	3323.02	3323.18	993.77	1727947.90	14599538.57	40°11'58.232"N	104°41'11.513"W	2.46	
11277.00	90.250	359.540	7121.54	3410.01	3410.16	993.57	1727947.39	14599625.52	40°11'59.092"N	104°41'11.516"W	1.60	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#48 RW 28N-29HZ(440'FSL & 1854'FWL,SEC.29)
Area	COLORADO	Well	RW 28N-29HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 28N-29HZ AWB
Facility	SEC.29-T3N-R65W		

WELLPATH DATA (152 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
11365.00	90.150	359.140	7121.24	3498.00	3498.16	992.56	1727946.07	14599713.48	40°11'59.962"N	104°41'11.529"W	0.47	
11452.00	89.910	358.780	7121.19	3584.99	3585.14	990.98	1727944.19	14599800.42	40°12'00.821"N	104°41'11.549"W	0.50	
11539.00	89.970	359.660	7121.28	3671.98	3672.13	989.79	1727942.70	14599887.37	40°12'01.681"N	104°41'11.564"W	1.01	
11627.00	90.710	0.610	7120.76	3759.98	3760.13	990.00	1727942.60	14599975.33	40°12'02.550"N	104°41'11.561"W	1.37	
11715.00	90.400	359.590	7119.91	3847.97	3848.13	990.15	1727942.45	14600063.29	40°12'03.420"N	104°41'11.559"W	1.21	
11802.00	90.370	359.290	7119.32	3934.96	3935.12	989.30	1727941.30	14600150.25	40°12'04.280"N	104°41'11.570"W	0.35	
11890.00	90.430	358.920	7118.71	4022.95	4023.11	987.93	1727939.61	14600238.20	40°12'05.149"N	104°41'11.588"W	0.43	
11977.00	88.650	0.070	7119.41	4109.94	4110.10	987.16	1727938.54	14600325.15	40°12'06.009"N	104°41'11.598"W	2.44	
12063.00	89.880	1.180	7120.51	4195.92	4196.08	988.10	1727939.18	14600411.10	40°12'06.858"N	104°41'11.586"W	1.93	
12151.00	89.320	0.810	7121.13	4283.91	4284.06	989.63	1727940.40	14600499.06	40°12'07.728"N	104°41'11.566"W	0.76	
12238.00	89.200	359.890	7122.25	4370.90	4371.05	990.16	1727940.63	14600586.01	40°12'08.587"N	104°41'11.559"W	1.07	
12295.00†	89.459	359.773	7122.92	4427.89	4428.05	989.99	1727940.26	14600642.99	40°12'09.151"N	104°41'11.561"W	0.50	ENTER RADIUS TOE (408'FNL & 2412'FEL,SEC.29) 40.2025419 -104.6865448
12326.00	89.600	359.710	7123.17	4458.89	4459.05	989.85	1727940.02	14600673.97	40°12'09.457"N	104°41'11.563"W	0.50	
12414.00	89.440	359.430	7123.91	4546.89	4547.04	989.19	1727939.05	14600761.93	40°12'10.327"N	104°41'11.571"W	0.37	
12501.00	89.510	358.830	7124.71	4633.87	4634.03	987.87	1727937.42	14600848.88	40°12'11.186"N	104°41'11.588"W	0.69	
12580.00	89.540	358.490	7125.36	4712.85	4713.00	986.02	1727935.30	14600927.81	40°12'11.967"N	104°41'11.612"W	0.43	LAST BHGE PRODUCTION MWD+IFR1+SC SURVEY
12625.00	89.540	358.490	7125.72	4757.83	4757.99	984.84	1727933.96	14600972.77	40°12'12.411"N	104°41'11.627"W	0.00	PTB (78'FNL & 2417'FEL,SEC.29) 40.2034475 -104.6865632

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	2.23	-240.04	1726726.17	14596214.64	40°11'25.415"N	104°41'27.413"W	polygon
SEC.32-T3N-R65W	1.00	2.23	-240.04	1726726.17	14596214.64	40°11'25.415"N	104°41'27.413"W	polygon
RW 28N-29HZ HEEL REV-1(248'FSL & 2406'FEL,SEC.29)	7108.00	-194.13	995.70	1727962.10	14596022.67	40°11'23.474"N	104°41'11.490"W	point
RW 28N-29HZ BHL REV-1(57'FNL & 2407'FEL,SEC.29)	7126.00	4779.28	994.94	1727943.99	14600994.10	40°12'12.622"N	104°41'11.497"W	point
RW 28N-29HZ LANDBOX	7126.00	0.00	0.00	1726966.12	14596213.25	40°11'25.393"N	104°41'24.320"W	polygon
RW 28N-29HZ RADIUS 1	7126.00	4832.60	769.15	1727718.10	14601046.60	40°12'13.149"N	104°41'14.407"W	polygon
RW 28N-29HZ RADIUS 2	7126.00	-441.63	774.55	1727741.90	14595774.50	40°11'21.029"N	104°41'14.340"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: RW 28N-29HZ AWB Ref Wellpath: RW 28N-29HZ 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 28N-29HZ AWB
1813.00	12580.00	Custom APC_ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC_ISCWSA Rev-2 MWD+IFR1+SC <1890 - 12580>	RW 28N-29HZ AWB
12580.00	12625.00	Blind Drilling (std)	Projection to bit	RW 28N-29HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#48 RW 28N-29HZ(440'FSL & 1854'FWL,SEC.29)
Area	COLORADO	Well	RW 28N-29HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 28N-29HZ AWB
Facility	SEC.29-T3N-R65W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
116.00	0.510	327.150	116.00	FIRST BHGE SURFACE MWD+IFR1+SC SURVEY
1813.00	15.220	131.350	1779.41	LAST BHGE SURFACE MWD+IFR1+SC SURVEY
1890.00	14.950	129.360	1853.76	FIRST BHGE PRODUCTION MWD+IFR1+SC SURVEY
2296.00	16.119	133.791	2244.21	ENTER LANDBOX (160'FSL & 2168'FWL,SEC.29) 40.1896178 -104.6889654
6518.00	3.034	359.316	6336.52	KOP
7649.00	85.973	2.742	7104.72	LANDING (224'FSL & 2841'FWL,SEC.29) 40.1897927 -104.6865546
7826.00	88.626	2.172	7110.44	EXIT RADIUS HEEL (400'FSL & 2851'FWL,SEC.29) 40.1902776 -104.6865205
12295.00	89.459	359.773	7122.92	ENTER RADIUS TOE (408'FNL & 2412'FEL,SEC.29) 40.2025419 -104.6865448
12580.00	89.540	358.490	7125.36	LAST BHGE PRODUCTION MWD+IFR1+SC SURVEY
12625.00	89.540	358.490	7125.72	PTB (78'FNL & 2417'FEL,SEC.29) 40.2034475 -104.6865632