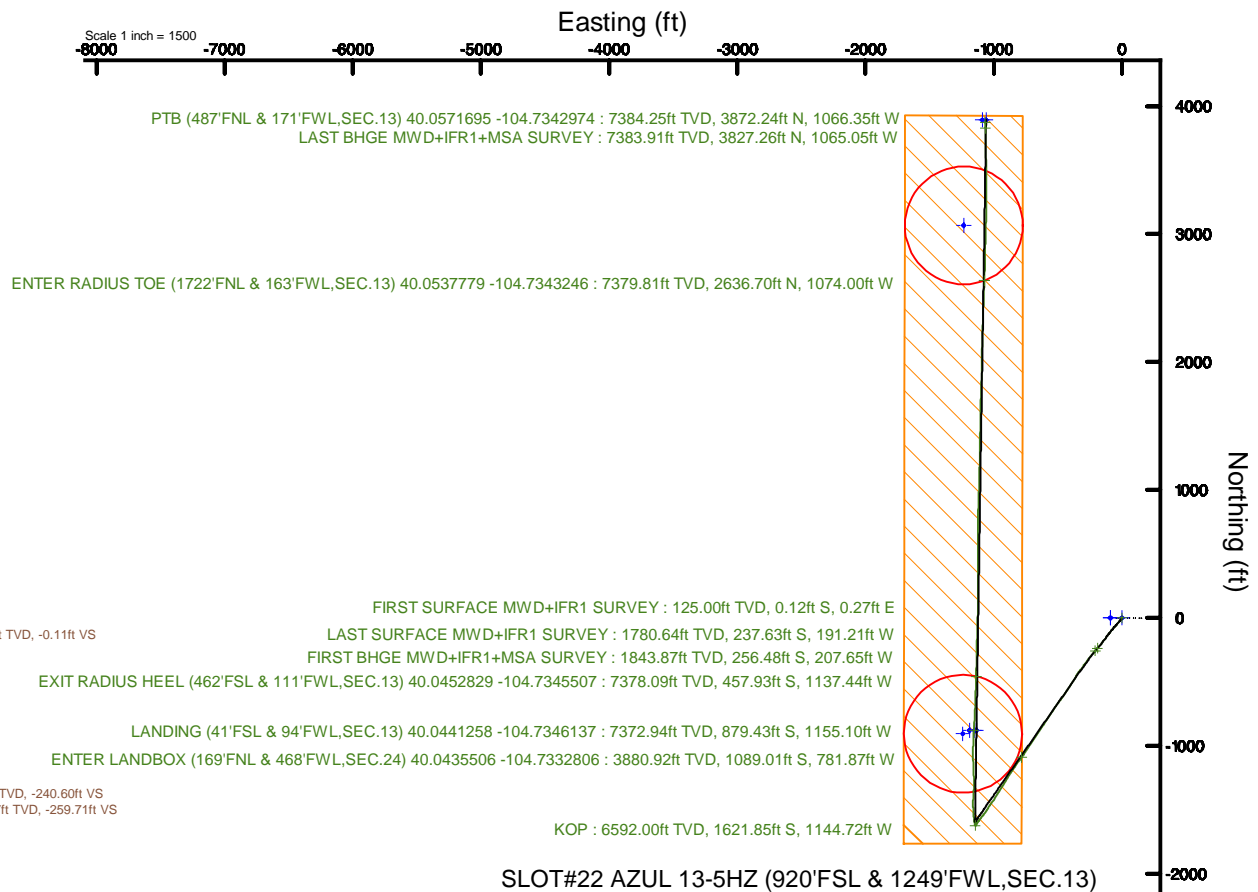
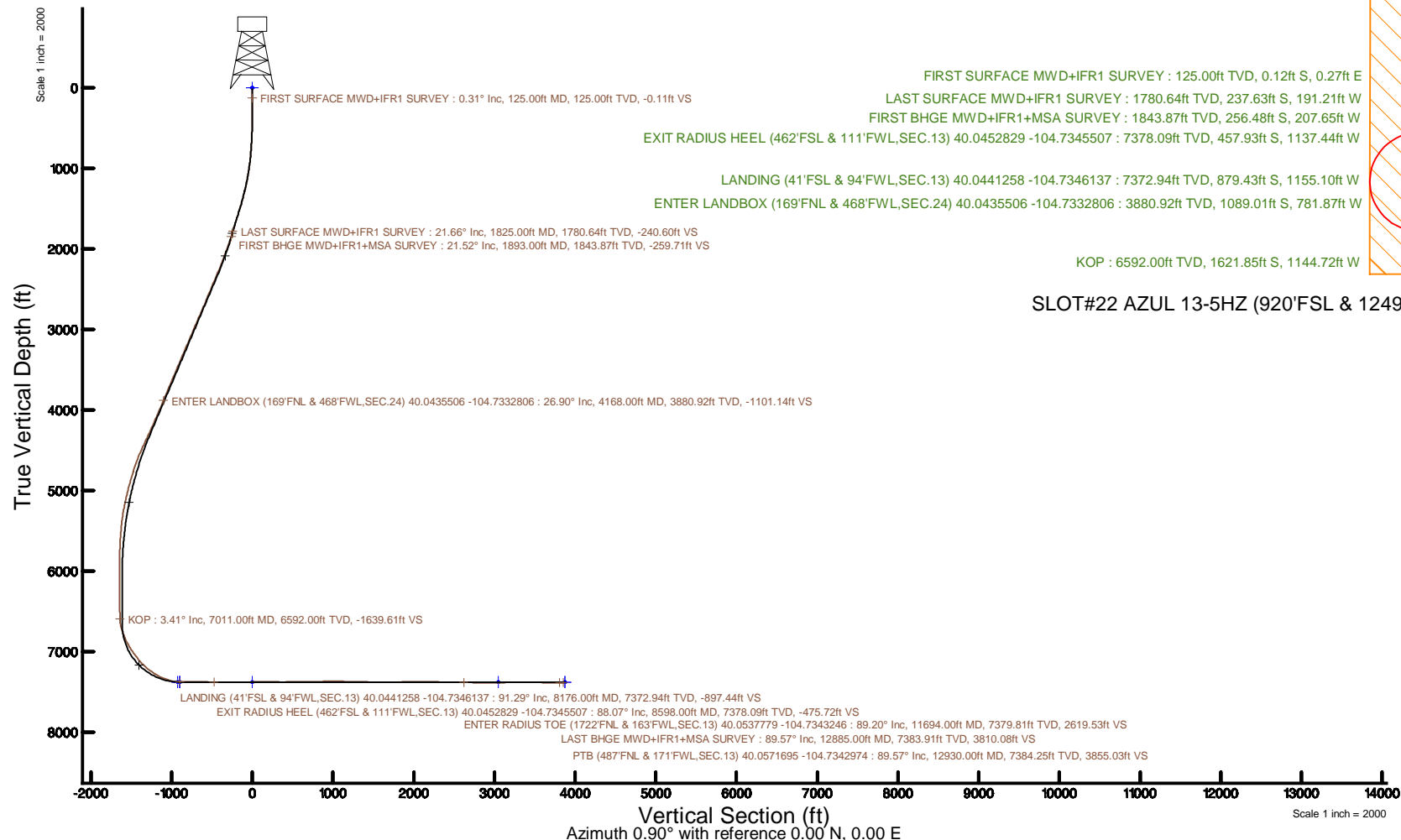


# KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#22 AZUL 13-5HZ (920'FSL & 1249'FWL,SEC.13)  
Field: WELD COUNTY (UTM/TRUE NORTH)Well: AZUL 13-5HZ  
Facility: SEC.13-T1N-R66W Wellbore: AZUL 13-5HZ PWB

Plot reference wellpath is AZUL 13-5HZ 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: 5088 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#22 AZUL 13-5HZ (920'FSL & 1249'FWL,SEC.13)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: painsetr on 2018-04-06
	Database: WA, DEN, Anadarko, Delth



# Actual Wellpath Report

AZUL 13-5HZ AWP

Page 1 of 7

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#22 AZUL 13-5HZ (920'FSL & 1249'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-5HZ AWB
Facility	SEC.13-T1N-R66W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / UTM Zone 13 North, US feet	Software System	WellArchitect® 5.0
North Reference	True	User	Painsetr
Scale	0.999607	Report Generated	4/6/2018 at 2:24 PM
Convergence at slot	0.18° East	Database/Source file	WA_DEN_Anadarko_Defn/AZUL_13-5HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-4157.91	-1641.19	1715842.52	14543794.78	40°02'47.544"N	104°43'49.757"W
Facility Reference Pt			1717470.20	14547956.10	40°03'28.634"N	104°43'28.654"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	5088.00ft
Horizontal Reference Pt	Slot	Xtreme 22 (17') (RT) to Mean Sea Level	5088.00ft
Vertical Reference Pt	Xtreme 22 (17') (RT)	Xtreme 22 (17') (RT) to Mud Line at Slot (SLOT#22 AZUL 13-5HZ (920'FSL & 1249'FWL,SEC.13))	5088.00ft
MD Reference Pt	Xtreme 22 (17') (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	0.90°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#22 AZUL 13-5HZ (920'FSL & 1249'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-5HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (190 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	113.660	0.00	0.00	0.00	0.00	1715842.52	14543794.78	40°02'47.544"N	104°43'49.757"W	0.00	
17.00	0.000	113.660	17.00	0.00	0.00	0.00	1715842.52	14543794.78	40°02'47.544"N	104°43'49.757"W	0.00	
125.00	0.310	113.660	125.00	-0.11	-0.12	0.27	1715842.79	14543794.66	40°02'47.543"N	104°43'49.754"W	0.29	FIRST SURFACE MWD+IFR1 SURVEY
157.00	0.310	113.570	157.00	-0.18	-0.19	0.43	1715842.95	14543794.59	40°02'47.542"N	104°43'49.752"W	0.00	
188.00	0.750	115.500	188.00	-0.30	-0.31	0.69	1715843.21	14543794.47	40°02'47.541"N	104°43'49.748"W	1.42	
220.00	0.750	140.020	219.99	-0.54	-0.56	1.01	1715843.54	14543794.22	40°02'47.538"N	104°43'49.744"W	1.00	
251.00	0.570	146.090	250.99	-0.82	-0.84	1.23	1715843.75	14543793.94	40°02'47.536"N	104°43'49.741"W	0.62	
283.00	0.570	234.070	282.99	-1.05	-1.07	1.19	1715843.71	14543793.71	40°02'47.533"N	104°43'49.742"W	2.47	
314.00	0.530	262.540	313.99	-1.16	-1.18	0.92	1715843.45	14543793.60	40°02'47.532"N	104°43'49.745"W	0.88	
346.00	0.180	241.360	345.99	-1.21	-1.22	0.73	1715843.26	14543793.56	40°02'47.532"N	104°43'49.748"W	1.15	
377.00	0.400	249.100	376.99	-1.27	-1.28	0.58	1715843.11	14543793.50	40°02'47.531"N	104°43'49.749"W	0.72	
409.00	0.620	216.580	408.99	-1.45	-1.46	0.38	1715842.91	14543793.32	40°02'47.530"N	104°43'49.752"W	1.11	
441.00	0.660	230.730	440.99	-1.71	-1.72	0.13	1715842.66	14543793.06	40°02'47.527"N	104°43'49.755"W	0.51	
472.00	0.700	215.260	471.98	-1.99	-1.98	-0.12	1715842.41	14543792.79	40°02'47.524"N	104°43'49.758"W	0.60	
504.00	1.980	217.280	503.97	-2.59	-2.58	-0.56	1715841.97	14543792.19	40°02'47.518"N	104°43'49.764"W	4.00	
535.00	2.420	212.890	534.95	-3.58	-3.56	-1.24	1715841.29	14543791.22	40°02'47.509"N	104°43'49.773"W	1.52	
567.00	2.900	209.900	566.92	-4.86	-4.83	-2.01	1715840.53	14543789.94	40°02'47.496"N	104°43'49.783"W	1.56	
599.00	2.940	214.640	598.88	-6.25	-6.20	-2.88	1715839.66	14543788.57	40°02'47.483"N	104°43'49.794"W	0.76	
631.00	3.380	214.120	630.83	-7.72	-7.66	-3.88	1715838.67	14543787.11	40°02'47.468"N	104°43'49.807"W	1.38	
695.00	4.130	218.420	694.69	-11.13	-11.03	-6.37	1715836.19	14543783.73	40°02'47.435"N	104°43'49.839"W	1.25	
726.00	4.220	214.380	725.61	-12.96	-12.84	-7.71	1715834.86	14543781.91	40°02'47.417"N	104°43'49.856"W	0.99	
758.00	4.970	217.720	757.50	-15.06	-14.91	-9.22	1715833.35	14543779.84	40°02'47.397"N	104°43'49.876"W	2.49	
790.00	5.930	217.980	789.36	-17.48	-17.31	-11.09	1715831.49	14543777.44	40°02'47.373"N	104°43'49.900"W	3.00	
822.00	6.680	222.640	821.17	-20.19	-19.98	-13.36	1715829.23	14543774.76	40°02'47.347"N	104°43'49.929"W	2.84	
854.00	7.470	221.590	852.92	-23.16	-22.91	-16.01	1715826.59	14543771.83	40°02'47.318"N	104°43'49.963"W	2.50	
885.00	7.820	220.000	883.65	-26.32	-26.03	-18.70	1715823.91	14543768.70	40°02'47.287"N	104°43'49.997"W	1.32	
917.00	8.790	222.820	915.31	-29.83	-29.49	-21.76	1715820.86	14543765.23	40°02'47.253"N	104°43'50.037"W	3.29	
949.00	9.890	223.260	946.89	-33.68	-33.29	-25.31	1715817.33	14543761.43	40°02'47.215"N	104°43'50.082"W	3.44	
980.00	11.030	222.550	977.37	-37.86	-37.41	-29.14	1715813.51	14543757.29	40°02'47.174"N	104°43'50.132"W	3.70	
1012.00	11.650	221.760	1008.74	-42.59	-42.08	-33.36	1715809.31	14543752.62	40°02'47.128"N	104°43'50.186"W	2.00	
1044.00	12.130	223.610	1040.06	-47.51	-46.92	-37.83	1715804.85	14543747.76	40°02'47.080"N	104°43'50.243"W	1.92	
1076.00	12.960	222.990	1071.29	-52.64	-51.98	-42.59	1715800.10	14543742.69	40°02'47.030"N	104°43'50.305"W	2.63	
1107.00	13.620	223.520	1101.46	-57.91	-57.17	-47.48	1715795.24	14543737.49	40°02'46.979"N	104°43'50.367"W	2.16	
1139.00	14.020	222.730	1132.54	-63.57	-62.75	-52.70	1715790.03	14543731.89	40°02'46.924"N	104°43'50.435"W	1.38	
1171.00	14.630	221.940	1163.54	-69.50	-68.60	-58.03	1715784.72	14543726.03	40°02'46.866"N	104°43'50.503"W	2.00	
1202.00	15.380	218.690	1193.49	-75.71	-74.72	-63.22	1715779.56	14543719.89	40°02'46.806"N	104°43'50.570"W	3.64	
1234.00	15.860	218.770	1224.30	-82.51	-81.45	-68.61	1715774.19	14543713.16	40°02'46.739"N	104°43'50.639"W	1.50	
1266.00	16.790	218.070	1255.01	-89.65	-88.49	-74.20	1715768.62	14543706.09	40°02'46.669"N	104°43'50.711"W	2.97	
1298.00	16.960	218.250	1285.64	-97.04	-95.80	-79.94	1715762.91	14543698.78	40°02'46.597"N	104°43'50.785"W	0.56	
1330.00	17.010	218.250	1316.24	-104.47	-103.14	-85.73	1715757.14	14543691.42	40°02'46.525"N	104°43'50.859"W	0.16	
1361.00	17.310	219.130	1345.86	-111.70	-110.28	-91.44	1715751.45	14543684.27	40°02'46.454"N	104°43'50.933"W	1.28	
1393.00	17.800	218.420	1376.37	-119.32	-117.80	-97.49	1715745.43	14543676.73	40°02'46.380"N	104°43'51.011"W	1.67	
1425.00	19.120	217.370	1406.72	-127.41	-125.80	-103.71	1715739.24	14543668.71	40°02'46.301"N	104°43'51.091"W	4.25	
1456.00	20.260	216.930	1435.91	-135.83	-134.12	-110.02	1715732.96	14543660.37	40°02'46.219"N	104°43'51.172"W	3.71	
1488.00	20.870	216.140	1465.87	-144.97	-143.16	-116.71	1715726.30	14543651.32	40°02'46.129"N	104°43'51.258"W	2.09	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#22 AZUL 13-5HZ (920'FSL & 1249'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-5HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (190 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
1519.00	21.310	218.160	1494.79	-153.96	-152.05	-123.44	1715719.59	14543642.42	40°02'46.041"N	104°43'51.344"W	2.74	
1551.00	21.490	216.840	1524.59	-163.34	-161.31	-130.55	1715712.51	14543633.14	40°02'45.950"N	104°43'51.436"W	1.61	
1583.00	20.520	217.540	1554.46	-172.58	-170.45	-137.48	1715705.61	14543623.98	40°02'45.860"N	104°43'51.525"W	3.13	
1615.00	20.520	217.890	1584.43	-181.56	-179.32	-144.34	1715698.78	14543615.09	40°02'45.772"N	104°43'51.613"W	0.38	
1646.00	20.960	217.460	1613.42	-190.36	-188.01	-151.05	1715692.10	14543606.39	40°02'45.686"N	104°43'51.699"W	1.50	
1678.00	21.400	217.020	1643.26	-199.67	-197.21	-158.05	1715685.14	14543597.16	40°02'45.595"N	104°43'51.789"W	1.46	
1710.00	20.300	218.860	1673.16	-208.76	-206.20	-165.05	1715678.17	14543588.16	40°02'45.506"N	104°43'51.879"W	4.00	
1742.00	20.350	220.180	1703.17	-217.45	-214.77	-172.12	1715671.12	14543579.57	40°02'45.422"N	104°43'51.970"W	1.44	
1773.00	20.740	219.300	1732.20	-225.92	-223.14	-179.07	1715664.20	14543571.19	40°02'45.339"N	104°43'52.060"W	1.60	
1805.00	21.530	219.920	1762.05	-234.92	-232.03	-186.43	1715656.87	14543562.28	40°02'45.251"N	104°43'52.154"W	2.57	
1825.00	21.660	220.970	1780.64	-240.60	-237.63	-191.21	1715652.11	14543556.67	40°02'45.196"N	104°43'52.216"W	2.04	LAST SURFACE MWD+IFR1 SURVEY
1893.00	21.520	221.210	1843.87	-259.71	-256.48	-207.65	1715635.73	14543537.77	40°02'45.009"N	104°43'52.427"W	0.24	FIRST BHGE MWD+IFR1+MSA SURVEY
1980.00	23.620	218.910	1924.21	-285.61	-282.05	-229.11	1715614.36	14543512.14	40°02'44.757"N	104°43'52.703"W	2.62	
2068.00	24.530	219.170	2004.55	-313.85	-309.94	-251.73	1715591.84	14543484.20	40°02'44.481"N	104°43'52.994"W	1.04	
2156.00	25.880	218.930	2084.17	-343.32	-339.04	-275.33	1715568.33	14543455.04	40°02'44.194"N	104°43'53.297"W	1.54	
2244.00	25.980	215.360	2163.32	-374.34	-369.70	-298.56	1715545.21	14543424.32	40°02'43.891"N	104°43'53.596"W	1.78	
2331.00	26.940	214.970	2241.20	-406.38	-401.39	-320.88	1715522.99	14543392.58	40°02'43.577"N	104°43'53.883"W	1.12	
2419.00	26.770	213.550	2319.71	-439.58	-434.24	-343.26	1715500.72	14543359.67	40°02'43.253"N	104°43'54.171"W	0.75	
2507.00	25.730	212.730	2398.64	-472.49	-466.83	-364.54	1715479.54	14543327.03	40°02'42.931"N	104°43'54.444"W	1.25	
2594.00	26.180	211.460	2476.86	-505.06	-499.09	-384.77	1715459.42	14543294.72	40°02'42.612"N	104°43'54.704"W	0.82	
2682.00	26.130	212.970	2555.85	-538.20	-531.90	-405.44	1715438.85	14543261.86	40°02'42.288"N	104°43'54.970"W	0.76	
2769.00	26.390	213.800	2633.87	-570.67	-564.04	-426.63	1715417.78	14543229.67	40°02'41.970"N	104°43'55.243"W	0.52	
2857.00	27.170	216.570	2712.44	-603.41	-596.43	-449.48	1715395.03	14543197.22	40°02'41.650"N	104°43'55.536"W	1.67	
2945.00	27.680	215.290	2790.55	-636.60	-629.25	-473.26	1715371.36	14543164.34	40°02'41.326"N	104°43'55.842"W	0.89	
3032.00	27.550	214.860	2867.64	-669.96	-662.26	-496.43	1715348.30	14543131.28	40°02'40.999"N	104°43'56.140"W	0.27	
3120.00	27.620	214.090	2945.63	-703.91	-695.85	-519.50	1715325.34	14543097.63	40°02'40.667"N	104°43'56.437"W	0.41	
3207.00	26.370	214.400	3023.15	-736.90	-728.49	-541.72	1715303.23	14543064.94	40°02'40.345"N	104°43'56.722"W	1.45	
3295.00	27.060	213.490	3101.76	-770.07	-761.31	-563.80	1715281.25	14543032.06	40°02'40.020"N	104°43'57.006"W	0.91	
3320.00	26.730	214.000	3124.06	-779.57	-770.72	-570.09	1715275.00	14543022.64	40°02'39.928"N	104°43'57.087"W	1.61	
3408.00	28.360	213.510	3202.08	-813.75	-804.55	-592.69	1715252.50	14542988.75	40°02'39.593"N	104°43'57.378"W	1.87	
3495.00	26.180	212.680	3279.40	-847.48	-837.94	-614.47	1715230.84	14542955.31	40°02'39.263"N	104°43'57.658"W	2.54	
3583.00	26.870	213.940	3358.14	-880.65	-870.78	-636.05	1715209.36	14542922.42	40°02'38.939"N	104°43'57.935"W	1.01	
3670.00	26.800	213.870	3435.77	-913.59	-903.37	-657.96	1715187.56	14542889.77	40°02'38.617"N	104°43'58.217"W	0.09	
3757.00	27.190	215.140	3513.29	-946.47	-935.91	-680.33	1715165.30	14542857.18	40°02'38.295"N	104°43'58.505"W	0.80	
3845.00	25.840	214.680	3592.04	-979.04	-968.13	-702.82	1715142.92	14542824.91	40°02'37.977"N	104°43'58.794"W	1.55	
3932.00	26.770	211.890	3670.03	-1011.59	-1000.36	-723.96	1715121.89	14542792.63	40°02'37.658"N	104°43'59.066"W	1.78	
4019.00	26.630	212.150	3747.75	-1045.06	-1033.50	-744.68	1715101.27	14542759.44	40°02'37.331"N	104°43'59.332"W	0.21	
4107.00	26.570	213.370	3826.44	-1078.52	-1066.63	-766.00	1715080.06	14542726.25	40°02'37.003"N	104°43'59.606"W	0.62	
4168.00†	26.905	217.311	3880.92	-1101.14	-1089.01	-781.87	1715064.26	14542703.84	40°02'36.782"N	104°43'59.810"W	2.96	ENTER LANDBOX (169'FNL & 468'FWL,SEC.24) 40.0435506 -104.7332806
4194.00	27.080	218.960	3904.09	-1110.53	-1098.29	-789.16	1715057.00	14542694.54	40°02'36.690"N	104°43'59.904"W	2.96	
4282.00	27.860	214.820	3982.17	-1143.37	-1130.75	-813.50	1715032.77	14542662.02	40°02'36.370"N	104°44'00.217"W	2.34	
4369.00	27.790	214.210	4059.11	-1177.19	-1164.21	-836.51	1715009.87	14542628.51	40°02'36.039"N	104°44'00.513"W	0.34	
4457.00	27.060	215.160	4137.22	-1210.88	-1197.54	-859.57	1714986.92	14542595.12	40°02'35.709"N	104°44'00.809"W	0.97	
4544.00	27.890	211.750	4214.42	-1244.70	-1231.02	-881.67	1714964.93	14542561.58	40°02'35.379"N	104°44'01.093"W	2.04	
4632.00	28.320	210.810	4292.04	-1280.47	-1266.45	-903.20	1714943.52	14542526.10	40°02'35.028"N	104°44'01.370"W	0.70	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#22 AZUL 13-5HZ (920'FSL & 1249'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-5HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (190 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
4719.00	28.940	213.350	4368.40	-1316.12	-1301.76	-925.34	1714921.49	14542490.74	40°02'34.680"N	104°44'01.655"W	1.57	
4806.00	28.120	212.410	4444.84	-1351.36	-1336.65	-947.90	1714899.05	14542455.79	40°02'34.335"N	104°44'01.945"W	1.07	
4894.00	26.720	211.130	4522.95	-1386.14	-1371.10	-969.24	1714877.82	14542421.30	40°02'33.994"N	104°44'02.219"W	1.73	
4982.00	24.710	210.250	4602.23	-1419.26	-1403.92	-988.74	1714858.43	14542388.42	40°02'33.670"N	104°44'02.470"W	2.32	
5069.00	22.200	216.930	4682.05	-1448.42	-1432.78	-1007.78	1714839.48	14542359.52	40°02'33.385"N	104°44'02.715"W	4.20	
5156.00	20.770	215.030	4763.01	-1474.48	-1458.55	-1026.51	1714820.83	14542333.70	40°02'33.130"N	104°44'02.956"W	1.83	
5244.00	18.950	213.070	4845.77	-1499.49	-1483.31	-1043.27	1714804.16	14542308.91	40°02'32.885"N	104°44'03.171"W	2.20	
5332.00	17.930	212.130	4929.25	-1523.17	-1506.75	-1058.27	1714789.24	14542285.43	40°02'32.654"N	104°44'03.364"W	1.21	
5419.00	17.520	218.850	5012.13	-1544.95	-1528.29	-1073.61	1714773.97	14542263.85	40°02'32.441"N	104°44'03.561"W	2.40	
5506.00	16.180	216.560	5095.39	-1565.12	-1548.23	-1089.04	1714758.60	14542243.87	40°02'32.244"N	104°44'03.759"W	1.72	
5594.00	13.800	217.470	5180.39	-1583.52	-1566.41	-1102.73	1714744.97	14542225.66	40°02'32.064"N	104°44'03.935"W	2.72	
5681.00	11.800	219.550	5265.23	-1598.80	-1581.51	-1114.71	1714733.04	14542210.53	40°02'31.915"N	104°44'04.089"W	2.36	
5768.00	8.810	214.640	5350.82	-1611.29	-1593.85	-1124.16	1714723.63	14542198.16	40°02'31.793"N	104°44'04.211"W	3.58	
5856.00	6.480	209.020	5438.03	-1621.28	-1603.74	-1130.41	1714717.42	14542188.26	40°02'31.695"N	104°44'04.291"W	2.78	
5943.00	5.860	206.910	5524.52	-1629.60	-1611.99	-1134.80	1714713.06	14542180.00	40°02'31.614"N	104°44'04.348"W	0.76	
6031.00	3.370	202.890	5612.23	-1636.03	-1618.38	-1137.84	1714710.04	14542173.60	40°02'31.551"N	104°44'04.387"W	2.85	
6118.00	2.510	198.240	5699.12	-1640.22	-1622.55	-1139.43	1714708.46	14542169.43	40°02'31.509"N	104°44'04.407"W	1.03	
6206.00	0.610	168.880	5787.08	-1642.52	-1624.84	-1139.94	1714707.96	14542167.14	40°02'31.487"N	104°44'04.414"W	2.27	
6294.00	0.560	140.040	5875.08	-1643.30	-1625.62	-1139.57	1714708.32	14542166.36	40°02'31.479"N	104°44'04.409"W	0.34	
6381.00	0.110	162.970	5962.08	-1643.71	-1626.03	-1139.28	1714708.62	14542165.95	40°02'31.475"N	104°44'04.405"W	0.53	
6469.00	0.220	340.330	6050.07	-1643.63	-1625.95	-1139.31	1714708.59	14542166.03	40°02'31.476"N	104°44'04.406"W	0.37	
6557.00	0.370	359.420	6138.07	-1643.19	-1625.51	-1139.37	1714708.53	14542166.47	40°02'31.480"N	104°44'04.406"W	0.20	
6644.00	1.380	270.520	6225.06	-1642.91	-1625.22	-1140.42	1714707.48	14542166.76	40°02'31.483"N	104°44'04.420"W	1.63	
6731.00	0.860	282.690	6312.05	-1642.78	-1625.07	-1142.10	1714705.79	14542166.91	40°02'31.484"N	104°44'04.442"W	0.65	
6819.00	0.620	322.470	6400.04	-1642.28	-1624.54	-1143.04	1714704.86	14542167.43	40°02'31.490"N	104°44'04.454"W	0.63	
6906.00	0.560	339.800	6487.04	-1641.51	-1623.77	-1143.47	1714704.42	14542168.20	40°02'31.497"N	104°44'04.459"W	0.22	
6993.00	1.490	319.050	6574.02	-1640.27	-1622.52	-1144.36	1714703.53	14542169.45	40°02'31.510"N	104°44'04.471"W	1.13	
7011.00†	3.410	336.731	6592.00	-1639.61	-1621.85	-1144.72	1714703.16	14542170.11	40°02'31.516"N	104°44'04.475"W	11.34	KOP
7081.00	11.290	345.730	6661.38	-1631.08	-1613.28	-1147.24	1714700.62	14542178.67	40°02'31.601"N	104°44'04.508"W	11.34	
7169.00	17.210	349.480	6746.63	-1609.99	-1592.11	-1151.74	1714696.06	14542199.82	40°02'31.810"N	104°44'04.566"W	6.81	
7256.00	24.490	355.240	6827.89	-1579.38	-1561.45	-1155.60	1714692.11	14542230.46	40°02'32.113"N	104°44'04.615"W	8.68	
7344.00	27.930	355.870	6906.83	-1540.69	-1522.70	-1158.59	1714689.00	14542269.18	40°02'32.496"N	104°44'04.654"W	3.92	
7431.00	33.970	357.110	6981.41	-1496.10	-1478.06	-1161.29	1714686.17	14542313.79	40°02'32.937"N	104°44'04.688"W	6.98	
7519.00	37.400	2.570	7052.89	-1444.83	-1426.78	-1161.33	1714685.97	14542365.05	40°02'33.444"N	104°44'04.689"W	5.32	
7607.00	41.680	5.070	7120.75	-1388.90	-1370.91	-1157.55	1714689.59	14542420.91	40°02'33.996"N	104°44'04.640"W	5.19	
7694.00	46.770	0.210	7183.09	-1328.30	-1310.35	-1154.87	1714692.08	14542481.46	40°02'34.595"N	104°44'04.606"W	7.03	
7782.00	54.010	358.340	7239.16	-1260.59	-1242.61	-1155.79	1714690.96	14542549.17	40°02'35.264"N	104°44'04.618"W	8.39	
7869.00	60.300	356.780	7286.32	-1187.66	-1169.62	-1158.93	1714687.60	14542622.12	40°02'35.985"N	104°44'04.658"W	7.38	
7957.00	65.000	358.930	7326.74	-1109.64	-1091.54	-1161.82	1714684.47	14542700.16	40°02'36.757"N	104°44'04.696"W	5.76	
8044.00	75.430	1.860	7356.16	-1027.90	-1009.80	-1161.19	1714684.85	14542781.86	40°02'37.565"N	104°44'04.687"W	12.40	
8132.00	84.630	2.850	7371.38	-941.35	-923.30	-1157.62	1714688.16	14542868.34	40°02'38.419"N	104°44'04.642"W	10.51	
8176.00	91.290	3.720	7372.94	-897.44	-879.43	-1155.10	1714690.54	14542912.21	40°02'38.853"N	104°44'04.609"W	15.26	LANDING (41'FSL & 94'FWL,SEC.13) 40.0441258 -104.7346137
8219.00	91.420	3.930	7371.93	-854.51	-836.53	-1152.24	1714693.28	14542955.09	40°02'39.277"N	104°44'04.572"W	0.57	
8307.00	89.200	2.020	7371.45	-766.58	-748.66	-1147.67	1714697.58	14543042.94	40°02'40.145"N	104°44'04.514"W	3.33	
8394.00	89.260	2.250	7372.62	-679.61	-661.73	-1144.43	1714700.55	14543129.85	40°02'41.004"N	104°44'04.472"W	0.27	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#22 AZUL 13-5HZ (920'FSL & 1249'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-5HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (190 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
8482.00	88.580	2.100	7374.28	-591.64	-573.81	-1141.09	1714703.63	14543217.74	40°02'41.873"N	104°44'04.429"W	0.79	
8569.00	87.780	1.660	7377.04	-504.70	-486.90	-1138.24	1714706.21	14543304.63	40°02'42.732"N	104°44'04.393"W	1.05	
8598.00†	88.067	1.489	7378.09	-475.72	-457.93	-1137.44	1714706.92	14543333.59	40°02'43.018"N	104°44'04.382"W	1.15	EXIT RADIUS HEEL (462'FSL & 111'FWL,SEC.13) 40.0452829 -104.7345507
8657.00	88.650	1.140	7379.78	-416.75	-398.97	-1136.09	1714708.10	14543392.53	40°02'43.601"N	104°44'04.365"W	1.15	
8744.00	90.520	0.530	7380.41	-329.76	-311.99	-1134.82	1714709.10	14543479.48	40°02'44.461"N	104°44'04.349"W	2.26	
8832.00	91.290	2.140	7379.02	-241.77	-224.03	-1132.77	1714710.88	14543567.41	40°02'45.330"N	104°44'04.322"W	2.03	
8919.00	90.680	1.040	7377.53	-154.79	-137.07	-1130.36	1714713.03	14543654.34	40°02'46.189"N	104°44'04.291"W	1.45	
9007.00	90.770	2.040	7376.41	-66.81	-49.11	-1127.99	1714715.13	14543742.27	40°02'47.058"N	104°44'04.261"W	1.14	
9094.00	90.580	1.330	7375.39	20.18	37.84	-1125.44	1714717.42	14543829.20	40°02'47.918"N	104°44'04.228"W	0.84	
9182.00	90.250	0.800	7374.75	108.18	125.82	-1123.80	1714718.79	14543917.15	40°02'48.787"N	104°44'04.207"W	0.71	
9269.00	90.030	0.120	7374.54	195.17	212.82	-1123.10	1714719.23	14544004.11	40°02'49.647"N	104°44'04.198"W	0.82	
9357.00	89.170	358.730	7375.15	283.14	300.81	-1123.98	1714718.08	14544092.07	40°02'50.516"N	104°44'04.210"W	1.86	
9444.00	90.000	0.600	7375.78	370.11	387.80	-1124.49	1714717.31	14544179.02	40°02'51.376"N	104°44'04.216"W	2.35	
9532.00	90.430	0.530	7375.45	458.11	475.80	-1123.63	1714717.91	14544266.98	40°02'52.246"N	104°44'04.205"W	0.50	
9619.00	90.740	0.140	7374.56	545.10	562.79	-1123.12	1714718.15	14544353.94	40°02'53.105"N	104°44'04.199"W	0.57	
9706.00	90.650	359.610	7373.51	632.08	649.78	-1123.31	1714717.70	14544440.90	40°02'53.965"N	104°44'04.201"W	0.62	
9793.00	91.380	359.540	7371.97	719.04	736.77	-1123.95	1714716.79	14544527.85	40°02'54.825"N	104°44'04.210"W	0.84	
9880.00	90.950	2.750	7370.20	806.01	823.72	-1122.21	1714718.27	14544614.77	40°02'55.684"N	104°44'04.187"W	3.72	
9968.00	91.140	2.000	7368.59	893.97	911.63	-1118.57	1714721.65	14544702.66	40°02'56.553"N	104°44'04.140"W	0.88	
10055.00	91.020	1.720	7366.95	980.94	998.57	-1115.74	1714724.21	14544789.57	40°02'57.412"N	104°44'04.104"W	0.35	
10143.00	88.460	1.420	7367.35	1068.92	1086.53	-1113.33	1714726.35	14544877.50	40°02'58.281"N	104°44'04.073"W	2.93	
10231.00	88.550	1.380	7369.65	1156.89	1174.47	-1111.18	1714728.23	14544965.42	40°02'59.150"N	104°44'04.046"W	0.11	
10319.00	88.920	1.030	7371.59	1244.87	1262.43	-1109.33	1714729.82	14545053.34	40°03'00.019"N	104°44'04.022"W	0.58	
10407.00	88.950	1.210	7373.23	1332.85	1350.40	-1107.61	1714731.27	14545141.28	40°03'00.889"N	104°44'04.000"W	0.21	
10494.00	88.580	0.530	7375.10	1419.83	1437.37	-1106.29	1714732.33	14545228.22	40°03'01.748"N	104°44'03.983"W	0.89	
10582.00	88.490	0.390	7377.35	1507.80	1525.33	-1105.59	1714732.77	14545316.16	40°03'02.617"N	104°44'03.974"W	0.19	
10669.00	90.030	1.870	7378.48	1594.79	1612.30	-1103.87	1714734.22	14545403.10	40°03'03.477"N	104°44'03.952"W	2.45	
10756.00	90.490	1.680	7378.08	1681.78	1699.26	-1101.18	1714736.65	14545490.03	40°03'04.336"N	104°44'03.917"W	0.57	
10845.00	90.770	1.730	7377.10	1770.76	1788.22	-1098.53	1714739.03	14545578.96	40°03'05.215"N	104°44'03.883"W	0.32	
10932.00	91.380	2.680	7375.47	1857.72	1875.14	-1095.18	1714742.11	14545665.85	40°03'06.074"N	104°44'03.840"W	1.30	
11020.00	91.390	359.620	7373.34	1945.68	1963.08	-1093.42	1714743.61	14545753.77	40°03'06.943"N	104°44'03.818"W	3.48	
11107.00	90.340	1.350	7372.03	2032.67	2050.06	-1092.68	1714744.08	14545840.72	40°03'07.803"N	104°44'03.808"W	2.33	
11195.00	89.110	1.660	7372.45	2120.66	2138.03	-1090.37	1714746.12	14545928.65	40°03'08.672"N	104°44'03.779"W	1.44	
11282.00	89.200	1.720	7373.74	2207.64	2224.98	-1087.80	1714748.42	14546015.58	40°03'09.532"N	104°44'03.746"W	0.12	
11370.00	88.740	1.370	7375.32	2295.62	2312.94	-1085.43	1714750.53	14546103.51	40°03'10.401"N	104°44'03.715"W	0.66	
11457.00	89.140	2.380	7376.93	2382.59	2399.87	-1082.59	1714753.11	14546190.42	40°03'11.260"N	104°44'03.679"W	1.25	
11545.00	89.380	2.030	7378.06	2470.56	2487.80	-1079.20	1714756.23	14546278.32	40°03'12.129"N	104°44'03.635"W	0.48	
11632.00	89.350	1.940	7379.03	2557.54	2574.74	-1076.19	1714758.98	14546365.24	40°03'12.988"N	104°44'03.596"W	0.11	
11694.00†	89.202	2.095	7379.81	2619.53	2636.70	-1074.00	1714760.97	14546427.17	40°03'13.600"N	104°44'03.568"W	0.35	ENTER RADIUS TOE (1722'FNL & 163'FWL,SEC.13) 40.0537779 -104.7343246
11720.00	89.140	2.160	7380.19	2645.52	2662.68	-1073.04	1714761.86	14546453.15	40°03'13.857"N	104°44'03.556"W	0.35	
11807.00	87.720	1.700	7382.57	2732.47	2749.60	-1070.11	1714764.52	14546540.04	40°03'14.716"N	104°44'03.518"W	1.72	
11895.00	89.880	1.410	7384.41	2820.44	2837.54	-1067.72	1714766.64	14546627.95	40°03'15.585"N	104°44'03.488"W	2.48	
11982.00	89.940	0.680	7384.55	2907.44	2924.52	-1066.14	1714767.97	14546714.91	40°03'16.445"N	104°44'03.467"W	0.84	
12070.00	90.680	2.530	7384.07	2995.42	3012.48	-1063.67	1714770.16	14546802.84	40°03'17.314"N	104°44'03.436"W	2.26	
12157.00	90.740	1.500	7383.00	3082.40	3099.42	-1060.61	1714772.96	14546889.75	40°03'18.173"N	104°44'03.396"W	1.19	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#22 AZUL 13-5HZ (920'FSL & 1249'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-5HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (190 stations)												
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
12245.00	91.290	0.700	7381.44	3170.38	3187.39	-1058.92	1714774.38	14546977.69	40°03'19.042"N	104°44'03.375"W	1.10	
12332.00	89.970	1.000	7380.48	3257.38	3274.37	-1057.63	1714775.41	14547064.64	40°03'19.902"N	104°44'03.358"W	1.56	
12420.00	89.850	0.040	7380.62	3345.37	3362.37	-1056.83	1714775.94	14547152.60	40°03'20.772"N	104°44'03.348"W	1.10	
12507.00	89.820	359.490	7380.87	3432.36	3449.37	-1057.19	1714775.32	14547239.57	40°03'21.631"N	104°44'03.353"W	0.63	
12595.00	89.380	357.700	7381.48	3520.28	3537.34	-1059.35	1714772.90	14547327.49	40°03'22.501"N	104°44'03.380"W	2.09	
12682.00	89.290	359.380	7382.49	3607.20	3624.30	-1061.56	1714770.42	14547414.41	40°03'23.360"N	104°44'03.409"W	1.93	
12769.00	89.720	359.220	7383.24	3694.16	3711.29	-1062.63	1714769.09	14547501.37	40°03'24.220"N	104°44'03.423"W	0.53	
12857.00	89.660	358.600	7383.72	3782.10	3799.27	-1064.30	1714767.15	14547589.31	40°03'25.089"N	104°44'03.444"W	0.71	
12885.00	89.570	358.340	7383.91	3810.08	3827.26	-1065.05	1714766.32	14547617.28	40°03'25.366"N	104°44'03.454"W	0.98	LAST BHGE MWD+IFR1+MSA SURVEY
12930.00	89.570	358.340	7384.25	3855.03	3872.24	-1066.35	1714764.88	14547662.24	40°03'25.810"N	104°44'03.471"W	0.00	PTB (487'FNL & 171'FWL,SEC.13) 40.0571695 -104.7342974

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.13-T1N-R66W	0.00	0.71	-90.14	1715752.42	14543795.21	40°02'47.551"N	104°43'50.916"W	polygon
SEC.24-T1N-R66W	0.00	0.71	-90.14	1715752.42	14543795.21	40°02'47.551"N	104°43'50.916"W	polygon
AZUL 13-5HZ BHL REV-1(468'FNL & 147'FWL,SEC.13)	7376.00	3891.37	-1090.31	1714740.88	14547681.29	40°03'25.999"N	104°44'03.779"W	point
AZUL 13-5HZ BHL REV-2(468'FNL & 177'FWL,SEC.13)	7376.00	3891.37	-1060.31	1714770.86	14547681.38	40°03'25.999"N	104°44'03.393"W	point
AZUL 13-5HZ HEEL REV-1(50'FSL & 62'FWL,SEC.13)	7376.00	-879.00	-1190.19	1714655.47	14542912.53	40°02'38.857"N	104°44'05.060"W	point
AZUL 13-5HZ HEEL REV-2(50'FSL & 102'FWL,SEC.13)	7376.00	-879.00	-1150.19	1714695.45	14542912.65	40°02'38.857"N	104°44'04.546"W	point
AZUL 13-5HZ HEEL REV-3(50'FSL & 117'FWL,SEC.13)	7376.00	-879.00	-1135.19	1714710.44	14542912.69	40°02'38.857"N	104°44'04.353"W	point
AZUL 13-5HZ LANDBOX	7376.00	0.00	0.00	1715842.52	14543794.78	40°02'47.544"N	104°43'49.757"W	polygon
AZUL 13-5HZ RADIUS 1	7376.00	-905.38	-1240.96	1714604.80	14542886.00	40°02'38.596"N	104°44'05.713"W	polygon
AZUL 13-5HZ RADIUS 2	7376.00	3067.38	-1233.94	1714599.80	14546857.20	40°03'17.856"N	104°44'05.625"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: AZUL 13-5HZ AWB Ref Wellpath: AZUL 13-5HZ AWP						
Start MD [ft]	End MD [ft]	Positional Uncertainty Model		Log Name/Comment		Wellbore
17.00	1825.00	Custom APC ISCWSA REV 2 MWD+IFR1 (approximation)		Custom APC ISCWSA Rev-2 MWD+IFR1 <125 - 1825>		AZUL 13-5HZ AWB
1825.00	12885.00	Custom APC ISCWSA REV 2 MWD+IFR1+MSA (approximation)		BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+MSA <1893 - 12885>		AZUL 13-5HZ AWB
12885.00	12930.00	Blind Drilling (std)		Projection to bit		AZUL 13-5HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#22 AZUL 13-5HZ (920'FSL & 1249'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-5HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
125.00	0.310	113.660	125.00	FIRST SURFACE MWD+IFR1 SURVEY
1825.00	21.660	220.970	1780.64	LAST SURFACE MWD+IFR1 SURVEY
1893.00	21.520	221.210	1843.87	FIRST BHGE MWD+IFR1+MSA SURVEY
4168.00	26.905	217.311	3880.92	ENTER LANDBOX (169'FNL & 468'FWL,SEC.24) 40.0435506 -104.7332806
7011.00	3.410	336.731	6592.00	KOP
8176.00	91.290	3.720	7372.94	LANDING (41'FSL & 94'FWL,SEC.13) 40.0441258 -104.7346137
8598.00	88.067	1.489	7378.09	EXIT RADIUS HEEL (462'FSL & 111'FWL,SEC.13) 40.0452829 -104.7345507
11694.00	89.202	2.095	7379.81	ENTER RADIUS TOE (1722'FNL & 163'FWL,SEC.13) 40.0537779 -104.7343246
12885.00	89.570	358.340	7383.91	LAST BHGE MWD+IFR1+MSA SURVEY
12930.00	89.570	358.340	7384.25	PTB (487'FNL & 171'FWL,SEC.13) 40.0571695 -104.7342974