

Actual Wellpath Report

AZUL 13-9HZ AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#26 AZUL 13-9HZ (918'FSL & 1339'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-9HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-9HZ 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	3/22/2018 at 12:06 PM
Convergence at slot	0.18° East	Database/Source file	WA_DEN_Anadarko_Defn/AZUL_13-9HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-4159.03	-1551.29	1715932.39	14543793.94	40°02'47.533"N	104°43'48.601"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#26 AZUL 13-9HZ (918'FSL & 1339'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	180.97°

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Area	COLORADO	Well	AZUL 13-9HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-9HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (185 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	121.650	0.00	0.00	0.00	0.00	1715932.39	14543793.94	40°02'47.533"N	104°43'48.601"W	0.00	
17.00	0.000	121.650	17.00	0.00	0.00	0.00	1715932.39	14543793.94	40°02'47.533"N	104°43'48.601"W	0.00	
125.00	0.920	121.650	125.00	0.44	-0.45	0.74	1715933.13	14543793.48	40°02'47.529"N	104°43'48.592"W	0.85	FIRST SURFACE MWD+IFR1 SURVEY
157.00	0.830	112.070	156.99	0.66	-0.68	1.17	1715933.57	14543793.26	40°02'47.526"N	104°43'48.586"W	0.54	
188.00	1.140	118.930	187.99	0.88	-0.91	1.65	1715934.05	14543793.03	40°02'47.524"N	104°43'48.580"W	1.07	
220.00	0.880	145.210	219.98	1.23	-1.27	2.07	1715934.47	14543792.68	40°02'47.520"N	104°43'48.574"W	1.64	
251.00	0.220	168.850	250.98	1.48	-1.52	2.22	1715934.61	14543792.42	40°02'47.518"N	104°43'48.573"W	2.21	
283.00	0.400	195.130	282.98	1.65	-1.69	2.20	1715934.60	14543792.26	40°02'47.516"N	104°43'48.573"W	0.70	
314.00	0.350	185.460	313.98	1.85	-1.89	2.16	1715934.56	14543792.06	40°02'47.514"N	104°43'48.573"W	0.26	
346.00	0.350	207.080	345.98	2.04	-2.07	2.11	1715934.51	14543791.87	40°02'47.513"N	104°43'48.574"W	0.41	
377.00	0.310	205.330	376.98	2.20	-2.23	2.03	1715934.43	14543791.71	40°02'47.511"N	104°43'48.575"W	0.13	
409.00	0.620	201.990	408.98	2.44	-2.47	1.93	1715934.33	14543791.47	40°02'47.509"N	104°43'48.576"W	0.97	
441.00	0.440	207.610	440.98	2.71	-2.74	1.80	1715934.21	14543791.20	40°02'47.506"N	104°43'48.578"W	0.58	
472.00	0.480	192.850	471.97	2.94	-2.97	1.72	1715934.12	14543790.97	40°02'47.504"N	104°43'48.579"W	0.40	
504.00	0.530	171.660	503.97	3.22	-3.25	1.71	1715934.12	14543790.69	40°02'47.501"N	104°43'48.579"W	0.60	
535.00	0.400	199.000	534.97	3.46	-3.49	1.70	1715934.10	14543790.45	40°02'47.498"N	104°43'48.579"W	0.82	
567.00	0.400	181.600	566.97	3.68	-3.71	1.66	1715934.06	14543790.23	40°02'47.496"N	104°43'48.580"W	0.38	
599.00	0.530	165.690	598.97	3.94	-3.97	1.69	1715934.10	14543789.98	40°02'47.494"N	104°43'48.579"W	0.57	
631.00	0.880	175.880	630.97	4.32	-4.35	1.75	1715934.15	14543789.59	40°02'47.490"N	104°43'48.579"W	1.16	
663.00	1.890	179.310	662.96	5.10	-5.13	1.77	1715934.18	14543788.82	40°02'47.482"N	104°43'48.578"W	3.17	
695.00	2.680	174.210	694.93	6.37	-6.40	1.85	1715934.26	14543787.55	40°02'47.470"N	104°43'48.577"W	2.55	
726.00	2.940	181.680	725.90	7.88	-7.91	1.90	1715934.32	14543786.03	40°02'47.455"N	104°43'48.577"W	1.45	
758.00	3.470	181.860	757.85	9.67	-9.70	1.85	1715934.27	14543784.24	40°02'47.437"N	104°43'48.577"W	1.66	
790.00	3.690	182.830	789.78	11.67	-11.70	1.76	1715934.19	14543782.25	40°02'47.417"N	104°43'48.578"W	0.71	
822.00	3.910	178.340	821.71	13.79	-13.82	1.74	1715934.18	14543780.13	40°02'47.396"N	104°43'48.579"W	1.16	
854.00	4.310	171.490	853.63	16.06	-16.10	1.95	1715934.40	14543777.85	40°02'47.374"N	104°43'48.576"W	1.98	
885.00	4.920	171.050	884.53	18.52	-18.56	2.33	1715934.78	14543775.39	40°02'47.350"N	104°43'48.571"W	1.97	
917.00	5.050	169.030	916.41	21.25	-21.30	2.82	1715935.27	14543772.65	40°02'47.322"N	104°43'48.565"W	0.68	
949.00	5.190	168.320	948.28	24.04	-24.10	3.38	1715935.84	14543769.86	40°02'47.295"N	104°43'48.558"W	0.48	
980.00	6.060	168.850	979.13	27.01	-27.08	3.98	1715936.45	14543766.88	40°02'47.265"N	104°43'48.550"W	2.81	
1012.00	6.860	168.240	1010.93	30.52	-30.61	4.69	1715937.18	14543763.35	40°02'47.231"N	104°43'48.541"W	2.51	
1044.00	7.510	169.560	1042.68	34.44	-34.54	5.46	1715937.96	14543759.43	40°02'47.192"N	104°43'48.531"W	2.10	
1076.00	8.390	169.290	1074.37	38.77	-38.89	6.27	1715938.78	14543755.08	40°02'47.149"N	104°43'48.520"W	2.75	
1077.00†	8.428	169.235	1075.36	38.92	-39.03	6.30	1715938.81	14543754.94	40°02'47.147"N	104°43'48.520"W	3.91	ENTER LANDBOX (879'FSL & 1344'FWL,SEC.13) 40.0464298 -104.7301444
1107.00	9.580	167.800	1104.99	43.50	-43.63	7.24	1715939.76	14543750.35	40°02'47.102"N	104°43'48.508"W	3.91	
1139.00	10.280	169.560	1136.51	48.89	-49.04	8.32	1715940.86	14543744.94	40°02'47.048"N	104°43'48.494"W	2.38	
1171.00	10.850	170.610	1167.97	54.65	-54.82	9.33	1715941.88	14543739.17	40°02'46.991"N	104°43'48.481"W	1.88	
1202.00	11.250	169.990	1198.39	60.49	-60.68	10.33	1715942.90	14543733.32	40°02'46.933"N	104°43'48.468"W	1.35	
1234.00	11.250	166.300	1229.78	66.58	-66.78	11.61	1715944.20	14543727.21	40°02'46.873"N	104°43'48.452"W	2.25	
1266.00	11.820	165.340	1261.13	72.75	-72.99	13.18	1715945.79	14543721.02	40°02'46.812"N	104°43'48.432"W	1.88	
1298.00	12.080	165.340	1292.44	79.13	-79.40	14.86	1715947.49	14543714.62	40°02'46.748"N	104°43'48.410"W	0.81	
1330.00	13.050	164.630	1323.67	85.83	-86.12	16.66	1715949.31	14543707.90	40°02'46.682"N	104°43'48.387"W	3.07	
1361.00	13.270	163.750	1353.86	92.58	-92.91	18.59	1715951.25	14543701.12	40°02'46.615"N	104°43'48.362"W	0.96	
1393.00	13.710	164.980	1384.97	99.74	-100.10	20.60	1715953.29	14543693.94	40°02'46.544"N	104°43'48.336"W	1.64	
1425.00	15.070	165.250	1415.97	107.39	-107.78	22.64	1715955.35	14543686.26	40°02'46.468"N	104°43'48.310"W	4.26	

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Area	COLORADO	Well	AZUL 13-9HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-9HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (185 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
1456.00	16.220	165.510	1445.82	115.44	-115.87	24.75	1715957.48	14543678.18	40°02'46.388"N	104°43'48.283"W	3.72	
1488.00	16.960	164.810	1476.49	124.23	-124.71	27.09	1715959.85	14543669.36	40°02'46.301"N	104°43'48.253"W	2.40	
1519.00	18.110	164.460	1506.05	133.19	-133.71	29.56	1715962.35	14543660.37	40°02'46.212"N	104°43'48.221"W	3.73	
1551.00	18.940	164.460	1536.39	142.94	-143.51	32.29	1715965.10	14543650.59	40°02'46.115"N	104°43'48.186"W	2.59	
1615.00	20.350	164.460	1596.66	163.57	-164.24	38.05	1715970.93	14543629.88	40°02'45.910"N	104°43'48.112"W	2.20	
1646.00	20.610	165.600	1625.70	174.00	-174.71	40.85	1715973.76	14543619.42	40°02'45.806"N	104°43'48.076"W	1.54	
1678.00	19.510	166.480	1655.76	184.60	-185.36	43.50	1715976.44	14543608.78	40°02'45.701"N	104°43'48.042"W	3.56	
1742.00	18.150	165.600	1716.33	204.56	-205.41	48.48	1715981.48	14543588.75	40°02'45.503"N	104°43'47.978"W	2.17	
1773.00	18.110	163.840	1745.79	213.82	-214.72	51.02	1715984.05	14543579.46	40°02'45.411"N	104°43'47.945"W	1.77	
1805.00	17.310	163.400	1776.28	223.11	-224.06	53.77	1715986.82	14543570.13	40°02'45.319"N	104°43'47.910"W	2.53	
1823.00	17.090	162.960	1793.47	228.18	-229.15	55.31	1715988.37	14543565.05	40°02'45.268"N	104°43'47.890"W	1.42	LAST SURFACE MWD+IFR1 SURVEY
1889.00	16.970	161.880	1856.58	246.50	-247.58	61.14	1715994.26	14543546.64	40°02'45.086"N	104°43'47.815"W	0.51	FIRST BHGE MWD+IFR1+SC SURVEY
1977.00	16.450	161.210	1940.86	270.37	-271.58	69.15	1716002.34	14543522.68	40°02'44.849"N	104°43'47.712"W	0.63	
2065.00	14.920	157.850	2025.59	292.51	-293.87	77.44	1716010.69	14543500.42	40°02'44.629"N	104°43'47.605"W	2.02	
2152.00	13.100	157.410	2109.99	311.85	-313.35	85.45	1716018.76	14543480.97	40°02'44.436"N	104°43'47.502"W	2.10	
2240.00	10.950	160.250	2196.06	328.81	-330.42	92.10	1716025.46	14543463.93	40°02'44.268"N	104°43'47.417"W	2.53	
2328.00	8.830	161.610	2282.75	343.00	-344.70	97.06	1716030.46	14543449.67	40°02'44.127"N	104°43'47.353"W	2.42	
2416.00	6.670	157.870	2369.94	354.08	-355.84	101.12	1716034.55	14543438.54	40°02'44.016"N	104°43'47.301"W	2.52	
2504.00	5.850	154.960	2457.41	362.81	-364.64	104.94	1716038.40	14543429.76	40°02'43.930"N	104°43'47.252"W	1.00	
2591.00	3.930	151.990	2544.09	369.40	-371.29	108.22	1716041.69	14543423.12	40°02'43.864"N	104°43'47.210"W	2.23	
2679.00	3.420	147.600	2631.91	374.23	-376.17	111.04	1716044.53	14543418.25	40°02'43.816"N	104°43'47.173"W	0.66	
2766.00	2.820	145.490	2718.78	378.14	-380.12	113.64	1716047.14	14543414.31	40°02'43.777"N	104°43'47.140"W	0.70	
2854.00	1.080	115.810	2806.73	380.26	-382.27	115.62	1716049.12	14543412.17	40°02'43.755"N	104°43'47.114"W	2.22	
2941.00	1.120	97.670	2893.71	380.70	-382.74	117.20	1716050.70	14543411.70	40°02'43.751"N	104°43'47.094"W	0.40	
3029.00	1.490	46.590	2981.69	380.00	-382.07	118.88	1716052.38	14543412.38	40°02'43.757"N	104°43'47.072"W	1.33	
3117.00	2.070	13.360	3069.65	377.65	-379.74	120.08	1716053.57	14543414.72	40°02'43.780"N	104°43'47.057"W	1.32	
3204.00	3.010	354.350	3156.57	373.84	-375.93	120.22	1716053.70	14543418.52	40°02'43.818"N	104°43'47.055"W	1.44	
3291.00	4.720	355.140	3243.37	368.01	-370.09	119.69	1716053.16	14543424.35	40°02'43.876"N	104°43'47.062"W	1.97	
3379.00	5.650	356.650	3331.01	360.09	-362.16	119.13	1716052.57	14543432.28	40°02'43.954"N	104°43'47.069"W	1.07	
3466.00	6.860	350.130	3417.49	350.72	-352.77	117.99	1716051.40	14543441.67	40°02'44.047"N	104°43'47.084"W	1.61	
3554.00	7.390	346.150	3504.81	340.08	-342.09	115.73	1716049.12	14543452.33	40°02'44.152"N	104°43'47.113"W	0.82	
3641.00	7.880	345.400	3591.04	328.93	-330.89	112.89	1716046.24	14543463.52	40°02'44.263"N	104°43'47.149"W	0.57	
3728.00	6.610	347.400	3677.34	318.32	-320.23	110.29	1716043.61	14543474.17	40°02'44.368"N	104°43'47.183"W	1.49	
3816.00	6.600	345.200	3764.76	308.53	-310.40	107.90	1716041.19	14543483.99	40°02'44.466"N	104°43'47.214"W	0.29	
3903.00	7.210	344.460	3851.12	298.48	-300.31	105.16	1716038.42	14543494.07	40°02'44.565"N	104°43'47.249"W	0.71	
3991.00	7.570	349.070	3938.39	287.51	-289.29	102.58	1716035.81	14543505.07	40°02'44.674"N	104°43'47.282"W	0.79	
4078.00	7.330	348.880	4024.66	276.48	-278.22	100.42	1716033.62	14543516.13	40°02'44.784"N	104°43'47.310"W	0.28	
4165.00	6.320	347.430	4111.04	266.40	-268.10	98.31	1716031.48	14543526.24	40°02'44.884"N	104°43'47.337"W	1.18	
4253.00	5.240	345.560	4198.59	257.81	-259.48	96.25	1716029.39	14543534.85	40°02'44.969"N	104°43'47.363"W	1.25	
4340.00	4.150	343.790	4285.30	250.98	-252.61	94.38	1716027.50	14543541.71	40°02'45.037"N	104°43'47.387"W	1.26	
4428.00	3.830	343.300	4373.09	245.13	-246.74	92.65	1716025.75	14543547.58	40°02'45.095"N	104°43'47.410"W	0.37	
4515.00	3.610	341.730	4459.90	239.78	-241.36	90.96	1716024.05	14543552.95	40°02'45.148"N	104°43'47.431"W	0.28	
4603.00	1.110	339.600	4547.82	236.37	-237.93	89.79	1716022.87	14543556.38	40°02'45.182"N	104°43'47.446"W	2.84	
4690.00	0.480	356.210	4634.81	235.22	-236.77	89.47	1716022.55	14543557.53	40°02'45.193"N	104°43'47.451"W	0.76	
4778.00	0.450	16.060	4722.81	234.52	-236.07	89.54	1716022.62	14543558.23	40°02'45.200"N	104°43'47.450"W	0.19	

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Area	COLORADO	Well	AZUL 13-9HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-9HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (185 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
4865.00	0.660	19.670	4809.81	233.72	-235.27	89.81	1716022.88	14543559.03	40°02'45.208"N	104°43'47.446"W	0.24	
4953.00	1.020	2.700	4897.80	232.45	-234.01	90.01	1716023.08	14543560.29	40°02'45.220"N	104°43'47.444"W	0.49	
5040.00	0.620	88.540	4984.79	231.66	-233.23	90.52	1716023.59	14543561.08	40°02'45.228"N	104°43'47.437"W	1.33	
5128.00	0.700	77.300	5072.78	231.51	-233.10	91.52	1716024.59	14543561.21	40°02'45.229"N	104°43'47.424"W	0.17	
5215.00	0.890	67.860	5159.78	231.12	-232.72	92.67	1716025.73	14543561.59	40°02'45.233"N	104°43'47.409"W	0.26	
5303.00	0.680	163.130	5247.77	231.35	-232.97	93.45	1716026.51	14543561.35	40°02'45.231"N	104°43'47.399"W	1.33	
5390.00	0.460	143.120	5334.77	232.12	-233.74	93.81	1716026.87	14543560.57	40°02'45.223"N	104°43'47.395"W	0.34	
5478.00	0.310	107.420	5422.76	232.46	-234.09	94.25	1716027.31	14543560.22	40°02'45.220"N	104°43'47.389"W	0.31	
5565.00	0.280	94.600	5509.76	232.54	-234.18	94.69	1716027.75	14543560.14	40°02'45.219"N	104°43'47.384"W	0.08	
5652.00	0.410	60.810	5596.76	232.40	-234.05	95.17	1716028.23	14543560.27	40°02'45.220"N	104°43'47.377"W	0.27	
5740.00	0.460	44.170	5684.76	231.99	-233.64	95.69	1716028.75	14543560.68	40°02'45.224"N	104°43'47.371"W	0.15	
5827.00	0.730	199.520	5771.76	232.26	-233.91	95.75	1716028.81	14543560.41	40°02'45.221"N	104°43'47.370"W	1.34	
5914.00	0.440	204.890	5858.75	233.09	-234.74	95.42	1716028.49	14543559.58	40°02'45.213"N	104°43'47.374"W	0.34	
6002.00	0.060	156.510	5946.75	233.44	-235.09	95.30	1716028.37	14543559.23	40°02'45.210"N	104°43'47.376"W	0.46	
6090.00	0.220	20.040	6034.75	233.32	-234.97	95.38	1716028.44	14543559.35	40°02'45.211"N	104°43'47.375"W	0.30	
6177.00	0.540	19.320	6121.75	232.77	-234.43	95.57	1716028.63	14543559.89	40°02'45.216"N	104°43'47.372"W	0.37	
6265.00	0.530	28.520	6209.75	232.02	-233.68	95.90	1716028.96	14543560.64	40°02'45.224"N	104°43'47.368"W	0.10	
6352.00	0.440	25.460	6296.74	231.36	-233.02	96.24	1716029.30	14543561.30	40°02'45.230"N	104°43'47.364"W	0.11	
6440.00	0.610	13.790	6384.74	230.59	-232.26	96.49	1716029.55	14543562.06	40°02'45.238"N	104°43'47.360"W	0.23	
6528.00	0.900	7.970	6472.73	229.45	-231.12	96.70	1716029.76	14543563.20	40°02'45.249"N	104°43'47.358"W	0.34	
6615.00	1.100	2.320	6559.72	227.94	-229.61	96.83	1716029.88	14543564.71	40°02'45.264"N	104°43'47.356"W	0.26	
6703.00	0.200	176.810	6647.71	227.25	-228.92	96.87	1716029.92	14543565.40	40°02'45.271"N	104°43'47.355"W	1.48	
6790.00	0.250	4.380	6734.71	227.21	-228.88	96.89	1716029.94	14543565.44	40°02'45.271"N	104°43'47.355"W	0.52	
6800.00†	0.582	193.418	6744.71	227.24	-228.91	96.88	1716029.93	14543565.41	40°02'45.271"N	104°43'47.355"W	8.30	KOP
6877.00	6.970	190.930	6821.51	232.22	-233.88	95.91	1716028.97	14543560.44	40°02'45.222"N	104°43'47.368"W	8.30	
6964.00	13.440	183.870	6907.09	247.54	-249.17	94.22	1716027.33	14543545.15	40°02'45.071"N	104°43'47.389"W	7.56	
7052.00	17.630	184.610	6991.85	271.06	-272.67	92.46	1716025.64	14543521.66	40°02'44.838"N	104°43'47.412"W	4.77	
7140.00	22.580	186.680	7074.47	301.19	-302.75	89.42	1716022.70	14543491.58	40°02'44.541"N	104°43'47.451"W	5.68	
7227.00	28.670	183.460	7152.88	338.70	-340.21	86.22	1716019.61	14543454.13	40°02'44.171"N	104°43'47.492"W	7.18	
7315.00	32.030	184.610	7228.81	383.09	-384.55	83.06	1716016.59	14543409.79	40°02'43.733"N	104°43'47.533"W	3.87	
7402.00	37.850	180.650	7300.10	432.85	-434.29	80.91	1716014.58	14543360.07	40°02'43.241"N	104°43'47.561"W	7.18	
7490.00	44.640	178.340	7366.24	490.81	-492.26	81.50	1716015.35	14543302.12	40°02'42.668"N	104°43'47.553"W	7.91	
7578.00	51.800	178.410	7424.83	556.32	-557.81	83.35	1716017.40	14543236.60	40°02'42.021"N	104°43'47.529"W	8.14	
7666.00	59.910	178.600	7474.18	629.02	-630.56	85.25	1716019.52	14543163.89	40°02'41.302"N	104°43'47.505"W	9.22	
7753.00	68.150	177.330	7512.25	707.06	-708.65	88.05	1716022.56	14543085.83	40°02'40.530"N	104°43'47.469"W	9.56	
7841.00	77.740	177.890	7538.03	790.95	-792.61	91.54	1716026.30	14543001.92	40°02'39.700"N	104°43'47.424"W	10.91	
7928.00	87.320	178.890	7549.32	877.02	-878.74	93.96	1716028.98	14542915.83	40°02'38.849"N	104°43'47.393"W	11.07	LANDING (39'FSL & 1433'FWL,SEC.13) 40.0441247 -104.7298314
8015.00	91.360	178.620	7550.33	963.93	-965.69	95.85	1716031.13	14542828.92	40°02'37.990"N	104°43'47.369"W	4.65	
8103.00	90.710	179.530	7548.74	1051.87	-1053.67	97.27	1716032.81	14542740.99	40°02'37.120"N	104°43'47.350"W	1.27	
8190.00	90.370	180.560	7547.92	1138.85	-1140.66	97.20	1716033.01	14542654.03	40°02'36.261"N	104°43'47.351"W	1.25	
8278.00	90.220	181.550	7547.46	1226.85	-1228.64	95.58	1716031.66	14542566.07	40°02'35.391"N	104°43'47.372"W	1.14	
8366.00	91.050	181.950	7546.49	1314.83	-1316.60	92.89	1716029.24	14542478.15	40°02'34.522"N	104°43'47.407"W	1.05	
8399.00†	90.523	181.738	7546.04	1347.83	-1349.58	91.83	1716028.28	14542445.18	40°02'34.196"N	104°43'47.420"W	1.72	EXIT RADIUS HEEL (432'FNL & 1430'FWL,SEC.24) 40.0428323 -104.7298390
8453.00	89.660	181.390	7545.95	1401.82	-1403.56	90.36	1716026.97	14542391.22	40°02'33.663"N	104°43'47.439"W	1.72	
8540.00	90.090	180.740	7546.14	1488.82	-1490.54	88.74	1716025.61	14542304.26	40°02'32.803"N	104°43'47.460"W	0.90	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#26 AZUL 13-9HZ (918'FSL & 1339'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-9HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-9HZ AWP
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (185 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
8628.00	88.610	181.160	7547.14	1576.81	-1578.52	87.28	1716024.42	14542216.31	40°02'31.934"N	104°43'47.479"W	1.75	
8715.00	89.940	180.950	7548.24	1663.80	-1665.50	85.68	1716023.08	14542129.37	40°02'31.074"N	104°43'47.499"W	1.55	
8803.00	88.610	181.150	7549.35	1751.80	-1753.47	84.07	1716021.74	14542041.42	40°02'30.205"N	104°43'47.520"W	1.53	
8890.00	87.260	181.510	7552.49	1838.73	-1840.39	82.05	1716019.98	14541954.53	40°02'29.346"N	104°43'47.546"W	1.61	
8978.00	87.780	180.850	7556.29	1926.65	-1928.29	80.24	1716018.44	14541866.66	40°02'28.477"N	104°43'47.569"W	0.95	
9065.00	88.580	181.130	7559.06	2013.61	-2015.23	78.74	1716017.20	14541779.75	40°02'27.618"N	104°43'47.589"W	0.97	
9153.00	89.480	180.960	7560.55	2101.59	-2103.20	77.13	1716015.86	14541691.81	40°02'26.749"N	104°43'47.609"W	1.04	
9240.00	88.580	182.260	7562.02	2188.57	-2190.15	74.69	1716013.69	14541604.89	40°02'25.889"N	104°43'47.641"W	1.82	
9328.00	89.320	182.450	7563.63	2276.53	-2278.06	71.07	1716010.34	14541517.00	40°02'25.021"N	104°43'47.687"W	0.87	
9415.00	87.970	182.260	7565.69	2363.48	-2364.96	67.50	1716007.03	14541430.12	40°02'24.162"N	104°43'47.733"W	1.57	
9503.00	88.580	181.840	7568.34	2451.42	-2452.87	64.35	1716004.15	14541342.25	40°02'23.293"N	104°43'47.774"W	0.84	
9590.00	89.570	180.850	7569.74	2538.41	-2539.83	62.31	1716002.37	14541255.31	40°02'22.434"N	104°43'47.800"W	1.61	
9677.00	88.250	181.590	7571.40	2625.39	-2626.79	60.46	1716000.78	14541168.38	40°02'21.574"N	104°43'47.824"W	1.74	
9764.00	89.170	181.480	7573.36	2712.36	-2713.74	58.13	1715998.72	14541081.46	40°02'20.715"N	104°43'47.854"W	1.06	
9852.00	88.680	181.810	7575.01	2800.34	-2801.68	55.60	1715996.46	14540993.54	40°02'19.846"N	104°43'47.886"W	0.67	
9939.00	89.110	181.450	7576.69	2887.32	-2888.63	53.13	1715994.25	14540906.62	40°02'18.987"N	104°43'47.918"W	0.64	
10027.00	89.880	181.520	7577.46	2975.31	-2976.60	50.85	1715992.24	14540818.68	40°02'18.118"N	104°43'47.947"W	0.88	
10115.00	90.580	180.770	7577.11	3063.31	-3064.58	49.09	1715990.75	14540730.73	40°02'17.248"N	104°43'47.970"W	1.17	
10202.00	88.950	181.160	7577.47	3150.30	-3151.56	47.62	1715989.55	14540643.78	40°02'16.388"N	104°43'47.989"W	1.93	
10290.00	89.380	180.970	7578.75	3238.29	-3239.54	45.99	1715988.18	14540555.83	40°02'15.519"N	104°43'48.010"W	0.53	
10378.00	88.060	181.320	7580.71	3326.27	-3327.50	44.23	1715986.69	14540467.90	40°02'14.650"N	104°43'48.032"W	1.55	
10465.00	88.800	181.080	7583.10	3413.24	-3414.44	42.41	1715985.13	14540380.99	40°02'13.791"N	104°43'48.056"W	0.89	
10553.00	89.970	181.300	7584.04	3501.23	-3502.42	40.58	1715983.57	14540293.04	40°02'12.921"N	104°43'48.079"W	1.35	
10640.00	89.750	180.620	7584.25	3588.23	-3589.41	39.12	1715982.38	14540206.09	40°02'12.062"N	104°43'48.098"W	0.82	
10728.00	90.680	181.090	7583.92	3676.23	-3677.39	37.81	1715981.33	14540118.13	40°02'11.192"N	104°43'48.115"W	1.18	
10816.00	91.880	181.050	7581.96	3764.20	-3765.36	36.17	1715979.95	14540030.20	40°02'10.323"N	104°43'48.136"W	1.36	
10903.00	90.740	181.330	7579.97	3851.18	-3852.31	34.36	1715978.41	14539943.27	40°02'09.463"N	104°43'48.159"W	1.35	
10991.00	89.020	180.860	7580.15	3939.17	-3940.29	32.68	1715977.00	14539855.32	40°02'08.594"N	104°43'48.181"W	2.03	
11078.00	89.600	180.510	7581.20	4026.16	-4027.28	31.64	1715976.22	14539768.36	40°02'07.734"N	104°43'48.194"W	0.78	
11166.00	90.520	180.610	7581.11	4114.16	-4115.27	30.78	1715975.63	14539680.40	40°02'06.865"N	104°43'48.205"W	1.05	
11253.00	91.570	180.850	7579.52	4201.15	-4202.25	29.67	1715974.78	14539593.46	40°02'06.005"N	104°43'48.220"W	1.24	
11341.00	92.180	180.830	7576.64	4289.10	-4290.19	28.38	1715973.76	14539505.54	40°02'05.136"N	104°43'48.236"W	0.69	
11428.00	90.890	180.790	7574.31	4376.06	-4377.15	27.15	1715972.79	14539418.62	40°02'04.277"N	104°43'48.252"W	1.48	
11464.00†	90.915	180.655	7573.75	4412.06	-4413.15	26.70	1715972.45	14539382.64	40°02'03.921"N	104°43'48.258"W	0.38	ENTER RADIUS TOE (1780'FSL & 1365'FWL,SEC.24) 40.0344226 -104.7300716
11516.00	90.950	180.460	7572.90	4464.05	-4465.14	26.19	1715972.10	14539330.67	40°02'03.407"N	104°43'48.264"W	0.38	
11603.00	90.400	181.430	7571.87	4551.04	-4552.12	24.76	1715970.93	14539243.72	40°02'02.548"N	104°43'48.283"W	1.28	
11691.00	89.660	181.600	7571.83	4639.04	-4640.09	22.43	1715968.87	14539155.78	40°02'01.679"N	104°43'48.313"W	0.86	
11778.00	90.280	180.610	7571.87	4726.04	-4727.07	20.75	1715967.46	14539068.82	40°02'00.819"N	104°43'48.334"W	1.34	
11866.00	91.050	178.830	7570.85	4814.01	-4815.06	21.18	1715968.15	14538980.87	40°01'59.949"N	104°43'48.329"W	2.20	
11953.00	88.340	180.030	7571.32	4900.96	-4902.04	22.05	1715969.28	14538893.92	40°01'59.090"N	104°43'48.318"W	3.41	
12041.00	87.690	179.140	7574.36	4988.88	-4989.98	22.69	1715970.19	14538806.02	40°01'58.221"N	104°43'48.309"W	1.25	
12128.00	88.800	178.190	7577.03	5075.77	-5076.92	24.71	1715972.47	14538719.12	40°01'57.362"N	104°43'48.283"W	1.68	
12216.00	89.420	179.500	7578.40	5163.70	-5164.89	26.49	1715974.51	14538631.20	40°01'56.492"N	104°43'48.260"W	1.65	
12303.00	88.120	179.550	7580.26	5250.65	-5251.86	27.21	1715975.50	14538544.26	40°01'55.633"N	104°43'48.251"W	1.50	
12391.00	88.090	178.710	7583.17	5338.55	-5339.80	28.54	1715977.10	14538456.36	40°01'54.764"N	104°43'48.234"W	0.95	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#26 AZUL 13-9HZ (918'FSL & 1339'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-9HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-9HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (185 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
12479.00	88.430	180.720	7585.85	5426.49	-5427.76	28.98	1715977.80	14538368.44	40°01'53.895"N	104°43'48.228"W	2.32	
12566.00	88.980	182.000	7587.81	5513.46	-5514.71	26.92	1715976.00	14538281.52	40°01'53.035"N	104°43'48.255"W	1.60	
12653.00	89.660	181.620	7588.84	5600.44	-5601.66	24.17	1715973.52	14538194.59	40°01'52.176"N	104°43'48.290"W	0.90	
12724.00	90.620	181.180	7588.67	5671.44	-5672.64	22.43	1715972.00	14538123.64	40°01'51.475"N	104°43'48.313"W	1.49	LAST BHGE MWD+IFR1+SC SURVEY
12769.00	90.620	181.180	7588.18	5716.44	-5717.62	21.51	1715971.21	14538078.67	40°01'51.030"N	104°43'48.324"W	0.00	PTB (475'FSL & 1361'FWL,SEC.24) 40.0308417 -104.7300901

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	1.82	-180.04	1715752.42	14543795.21	40°02'47.551"N	104°43'50.916"W	polygon
SEC.24-T1N-R66W	0.00	1.82	-180.04	1715752.42	14543795.21	40°02'47.551"N	104°43'50.916"W	polygon
AZUL 13-9HZ HEEL REV-2(50'FNL & 1421'FWL,SEC.24)	7514.00	-967.53	78.94	1716014.23	14542827.03	40°02'37.972"N	104°43'47.586"W	point
AZUL 13-9HZ HEEL REV-1(50'FNL & 1421'FWL,SEC.24)	7565.00	-967.53	78.94	1716014.23	14542827.03	40°02'37.972"N	104°43'47.586"W	point
AZUL 13-9HZ BHL REV-1(468'FSL & 1341'FWL,SEC.24)	7591.00	-5725.15	-1.70	1715948.04	14538071.07	40°01'50.956"N	104°43'48.623"W	point
AZUL 13-9HZ LANDBOX	7591.00	0.00	0.00	1715932.39	14543793.94	40°02'47.533"N	104°43'48.601"W	polygon
AZUL 13-9HZ RADIUS 1	7591.00	-901.07	-8.93	1715926.20	14542893.20	40°02'38.628"N	104°43'48.716"W	polygon
AZUL 13-9HZ RADIUS 2	7591.00	-4871.94	-15.06	1715932.10	14538923.90	40°01'59.387"N	104°43'48.795"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: AZUL 13-9HZ AWB Ref Wellpath: AZUL 13-9HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1823.00	Custom APC ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC ISCWSA Rev-2 MWD+IFR1 <125 - 1823>	AZUL 13-9HZ AWB
1823.00	12724.00	Custom APC ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+SC <1889 - 12724>	AZUL 13-9HZ AWB
12724.00	12769.00	Blind Drilling (std)	Projection to bit	AZUL 13-9HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#26 AZUL 13-9HZ (918'FSL & 1339'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-9HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-9HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
125.00	0.920	121.650	125.00	FIRST SURFACE MWD+IFR1 SURVEY
1077.00	8.428	169.235	1075.36	ENTER LANDBOX (879'FSL & 1344'FWL,SEC.13) 40.0464298 -104.7301444
1823.00	17.090	162.960	1793.47	LAST SURFACE MWD+IFR1 SURVEY
1889.00	16.970	161.880	1856.58	FIRST BHGE MWD+IFR1+SC SURVEY
6800.00	0.582	193.418	6744.71	KOP
7928.00	87.320	178.890	7549.32	LANDING (39'FSL & 1433'FWL,SEC.13) 40.0441247 -104.7298314
8399.00	90.523	181.738	7546.04	EXIT RADIUS HEEL (432'FNL & 1430'FWL,SEC.24) 40.0428323 -104.7298390
11464.00	90.915	180.655	7573.75	ENTER RADIUS TOE (1780'FSL & 1365'FWL,SEC.24) 40.0344226 -104.7300716
12724.00	90.620	181.180	7588.67	LAST BHGE MWD+IFR1+SC SURVEY
12769.00	90.620	181.180	7588.18	PTB (475'FSL & 1361'FWL,SEC.24) 40.0308417 -104.7300901