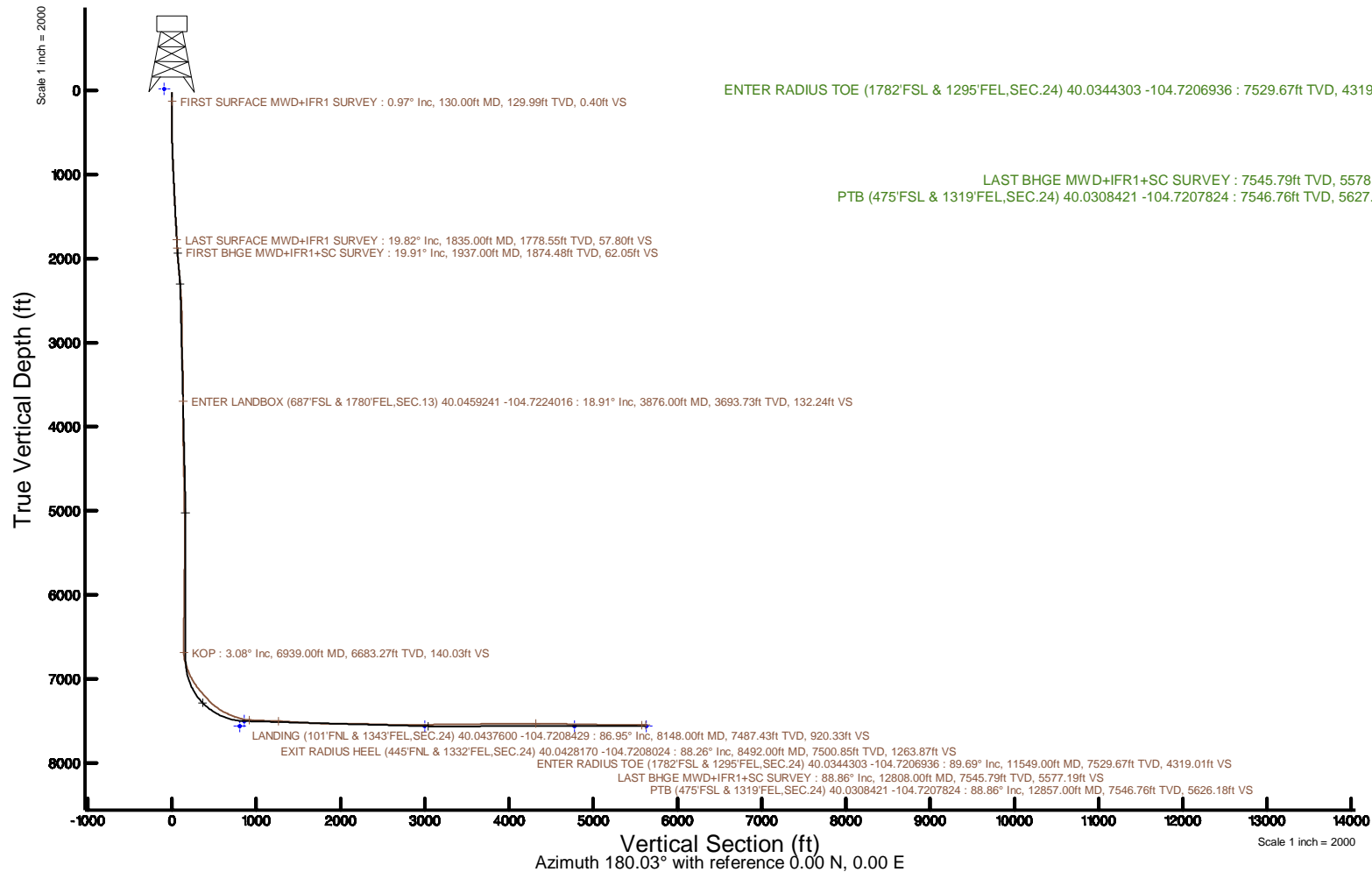


Location: COLORADO	Slot: SLOT#45 AZUL 13-28HZ (820FSL & 2447FWL, SEC.13)
Field: WELD COUNTY (UTM/TRUE NORTH)	Well: AZUL 13-28HZ
Facility: SEC.13-T1N-R66W	Wellbore: AZUL 13-28HZ PWB
Plot reference wellpath is AZUL 13-28HZ PWP Rev-B.0	Grid System: NAD83 / UTM Zone 13 North, US feet
True vertical depths are referenced to PD 464 (21) (RT)	* = Wellpath was transformed from a different geoidic datum
Measured depths are referenced to PD 464 (21) (RT)	North Reference: True north
PD 464 (21) (RT) to Mean Sea Level: 5071 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#45 AZUL 13-28HZ (820FSL & 2447FWL SEC.13): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: paimser on 2018-04-05
	Database: WA, DEN, Anadarko, Delfi



Actual Wellpath Report

AZUL 13-28HZ AWP

Page 1 of 7

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#45 AZUL 13-28HZ (820'FSL & 2447'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-28HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-28HZ 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	4/5/2018 at 2:41 PM
Convergence at slot	0.18° East	Database/Source file	WA_DEN_Anadarko_Defn/AZUL_13-28HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-4249.44	-444.31	1717039.21	14543706.99	40°02'46.640"N	104°43'34.367"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	PD 464 (21') (RT) to Facility Vertical Datum	5071.00ft
Horizontal Reference Pt	Slot	PD 464 (21') (RT) to Mean Sea Level	5071.00ft
Vertical Reference Pt	PD 464 (21') (RT)	PD 464 (21') (RT) to Mud Line at Slot (SLOT#45 AZUL 13-28HZ (820'FSL & 2447'FWL,SEC.13))	5071.00ft
MD Reference Pt	PD 464 (21') (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	180.03°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#45 AZUL 13-28HZ (820'FSL & 2447'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-28HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-28HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (184 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	0.00	115.580	0.00	0.00	0.00	0.00	1717039.21	14543706.99	40°02'46.640"N	104°43'34.367"W	0.00	
21.00	0.000	115.580	21.00	0.00	0.00	0.00	1717039.21	14543706.99	40°02'46.640"N	104°43'34.367"W	0.00	
130.00	0.970	115.580	129.99	0.40	-0.40	0.83	1717040.05	14543706.59	40°02'46.636"N	104°43'34.356"W	0.89	FIRST SURFACE MWD+IFR1 SURVEY
162.00	0.530	145.120	161.99	0.64	-0.64	1.16	1717040.38	14543706.35	40°02'46.634"N	104°43'34.352"W	1.79	
194.00	0.220	146.090	193.99	0.81	-0.81	1.28	1717040.49	14543706.18	40°02'46.632"N	104°43'34.351"W	0.97	
226.00	0.040	166.650	225.99	0.87	-0.87	1.32	1717040.53	14543706.12	40°02'46.631"N	104°43'34.350"W	0.57	
257.00	0.180	118.050	256.99	0.90	-0.90	1.36	1717040.58	14543706.09	40°02'46.631"N	104°43'34.349"W	0.50	
289.00	0.880	82.720	288.99	0.90	-0.90	1.65	1717040.87	14543706.09	40°02'46.631"N	104°43'34.346"W	2.31	
320.00	1.410	91.600	319.98	0.88	-0.88	2.27	1717041.48	14543706.12	40°02'46.631"N	104°43'34.338"W	1.80	
352.00	2.070	83.600	351.97	0.82	-0.82	3.24	1717042.45	14543706.17	40°02'46.632"N	104°43'34.325"W	2.19	
383.00	2.200	84.480	382.95	0.70	-0.70	4.38	1717043.60	14543706.30	40°02'46.633"N	104°43'34.311"W	0.43	
415.00	2.420	87.110	414.92	0.61	-0.61	5.67	1717044.88	14543706.39	40°02'46.634"N	104°43'34.294"W	0.76	
446.00	3.380	92.300	445.88	0.61	-0.61	7.24	1717046.45	14543706.39	40°02'46.634"N	104°43'34.274"W	3.21	
478.00	3.780	94.580	477.82	0.73	-0.74	9.23	1717048.44	14543706.28	40°02'46.633"N	104°43'34.248"W	1.33	
509.00	4.220	97.660	508.74	0.96	-0.97	11.38	1717050.59	14543706.05	40°02'46.630"N	104°43'34.221"W	1.58	
541.00	5.010	96.520	540.64	1.28	-1.29	13.94	1717053.15	14543705.74	40°02'46.627"N	104°43'34.188"W	2.49	
573.00	6.020	95.810	572.49	1.60	-1.61	16.99	1717056.20	14543705.42	40°02'46.624"N	104°43'34.148"W	3.16	
605.00	7.030	95.290	604.28	1.95	-1.97	20.61	1717059.82	14543705.08	40°02'46.621"N	104°43'34.102"W	3.16	
637.00	7.820	97.400	636.01	2.41	-2.43	24.72	1717063.93	14543704.64	40°02'46.616"N	104°43'34.049"W	2.61	
668.00	8.790	101.790	666.69	3.16	-3.18	29.13	1717068.34	14543703.90	40°02'46.609"N	104°43'33.992"W	3.74	
700.00	9.180	102.760	698.30	4.23	-4.25	34.01	1717073.23	14543702.85	40°02'46.598"N	104°43'33.930"W	1.31	
732.00	9.710	103.290	729.86	5.41	-5.43	39.13	1717078.34	14543701.68	40°02'46.586"N	104°43'33.864"W	1.68	
764.00	10.370	102.490	761.37	6.65	-6.67	44.57	1717083.78	14543700.45	40°02'46.574"N	104°43'33.794"W	2.11	
795.00	10.810	101.350	791.84	7.82	-7.85	50.14	1717089.36	14543699.30	40°02'46.562"N	104°43'33.722"W	1.57	
827.00	11.120	102.490	823.26	9.07	-9.11	56.10	1717095.32	14543698.06	40°02'46.550"N	104°43'33.646"W	1.18	
859.00	11.780	101.700	854.62	10.40	-10.44	62.31	1717101.53	14543696.75	40°02'46.537"N	104°43'33.566"W	2.12	
891.00	12.130	102.320	885.93	11.78	-11.82	68.79	1717108.01	14543695.39	40°02'46.523"N	104°43'33.482"W	1.17	
922.00	12.880	101.790	916.19	13.17	-13.22	75.36	1717114.58	14543694.01	40°02'46.509"N	104°43'33.398"W	2.45	
954.00	13.360	101.700	947.36	14.65	-14.69	82.47	1717121.69	14543692.55	40°02'46.495"N	104°43'33.307"W	1.50	
986.00	13.710	101.700	978.47	16.16	-16.21	89.80	1717129.03	14543691.05	40°02'46.480"N	104°43'33.212"W	1.09	
1018.00	14.590	100.560	1009.50	17.67	-17.72	97.48	1717136.71	14543689.57	40°02'46.465"N	104°43'33.114"W	2.88	
1049.00	15.210	100.030	1039.46	19.08	-19.15	105.32	1717144.55	14543688.17	40°02'46.451"N	104°43'33.013"W	2.05	
1081.00	16.130	99.420	1070.27	20.54	-20.60	113.84	1717153.07	14543686.74	40°02'46.436"N	104°43'32.903"W	2.92	
1113.00	16.660	99.330	1100.96	22.00	-22.07	122.75	1717161.98	14543685.30	40°02'46.422"N	104°43'32.789"W	1.66	
1144.00	17.580	98.100	1130.59	23.38	-23.46	131.77	1717171.00	14543683.95	40°02'46.408"N	104°43'32.673"W	3.19	
1176.00	17.840	96.430	1161.07	24.60	-24.68	141.43	1717180.66	14543682.75	40°02'46.396"N	104°43'32.548"W	1.78	
1208.00	18.500	96.340	1191.48	25.71	-25.79	151.34	1717190.57	14543681.67	40°02'46.385"N	104°43'32.421"W	2.06	
1240.00	19.340	97.570	1221.75	26.96	-27.05	161.64	1717200.87	14543680.44	40°02'46.373"N	104°43'32.289"W	2.91	
1272.00	19.910	99.070	1251.89	28.51	-28.61	172.28	1717211.51	14543678.92	40°02'46.357"N	104°43'32.152"W	2.38	
1303.00	19.910	99.860	1281.04	30.24	-30.35	182.69	1717221.92	14543677.21	40°02'46.340"N	104°43'32.018"W	0.87	
1335.00	20.480	99.150	1311.07	32.06	-32.17	193.58	1717232.82	14543675.42	40°02'46.322"N	104°43'31.878"W	1.94	
1367.00	20.920	98.890	1341.00	33.82	-33.94	204.75	1717243.99	14543673.69	40°02'46.305"N	104°43'31.734"W	1.40	
1399.00	21.050	97.920	1370.88	35.49	-35.62	216.09	1717255.33	14543672.05	40°02'46.288"N	104°43'31.588"W	1.16	
1430.00	21.450	97.220	1399.77	36.97	-37.10	227.23	1717266.46	14543670.60	40°02'46.273"N	104°43'31.445"W	1.53	
1462.00	22.020	96.080	1429.50	38.33	-38.47	239.00	1717278.23	14543669.27	40°02'46.260"N	104°43'31.294"W	2.22	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#45 AZUL 13-28HZ (820'FSL & 2447'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-28HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-28HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (184 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
1494.00	22.280	95.640	1459.14	39.55	-39.70	251.00	1717290.23	14543668.07	40°02'46.248"N	104°43'31.140"W	0.96	
1525.00	21.800	97.840	1487.87	40.91	-41.06	262.55	1717301.79	14543666.75	40°02'46.234"N	104°43'30.991"W	3.08	
1557.00	21.660	98.450	1517.60	42.58	-42.74	274.28	1717313.51	14543665.11	40°02'46.218"N	104°43'30.840"W	0.83	
1588.00	20.740	99.950	1546.50	44.36	-44.53	285.35	1717324.58	14543663.35	40°02'46.200"N	104°43'30.698"W	3.44	
1620.00	20.430	100.470	1576.46	46.35	-46.52	296.42	1717335.65	14543661.39	40°02'46.180"N	104°43'30.556"W	1.12	
1652.00	20.610	100.560	1606.43	48.39	-48.57	307.45	1717346.69	14543659.38	40°02'46.160"N	104°43'30.414"W	0.57	
1684.00	19.730	100.210	1636.46	50.38	-50.56	318.30	1717357.54	14543657.42	40°02'46.140"N	104°43'30.274"W	2.78	
1715.00	19.160	99.510	1665.70	52.14	-52.33	328.47	1717367.71	14543655.69	40°02'46.123"N	104°43'30.143"W	1.99	
1747.00	19.600	98.100	1695.88	53.76	-53.95	338.96	1717378.20	14543654.10	40°02'46.107"N	104°43'30.009"W	2.01	
1779.00	20.350	97.400	1725.96	55.22	-55.42	349.79	1717389.03	14543652.66	40°02'46.092"N	104°43'29.869"W	2.46	
1811.00	20.080	97.840	1755.99	56.68	-56.89	360.75	1717399.99	14543651.23	40°02'46.078"N	104°43'29.728"W	0.97	
1835.00	19.820	97.840	1778.55	57.80	-58.01	368.86	1717408.11	14543650.14	40°02'46.067"N	104°43'29.624"W	1.08	LAST SURFACE MWD+IFR1 SURVEY
1937.00	19.910	96.340	1874.48	62.05	-62.28	403.26	1717442.50	14543645.97	40°02'46.024"N	104°43'29.182"W	0.51	FIRST BHGE MWD+IFR1+SC SURVEY
2026.00	20.140	101.370	1958.10	66.73	-66.98	433.34	1717472.59	14543641.37	40°02'45.978"N	104°43'28.795"W	1.95	
2116.00	20.400	104.210	2042.53	73.62	-73.88	463.74	1717502.99	14543634.56	40°02'45.910"N	104°43'28.404"W	1.13	
2206.00	20.520	105.330	2126.85	81.62	-81.91	494.16	1717533.42	14543626.63	40°02'45.831"N	104°43'28.013"W	0.45	
2295.00	19.830	104.050	2210.39	89.39	-89.69	523.84	1717563.12	14543618.94	40°02'45.754"N	104°43'27.631"W	0.92	
2385.00	19.890	102.810	2295.04	96.48	-96.79	553.58	1717592.87	14543611.93	40°02'45.683"N	104°43'27.249"W	0.47	
2475.00	21.130	101.810	2379.34	103.17	-103.51	584.39	1717623.69	14543605.31	40°02'45.617"N	104°43'26.853"W	1.43	
2564.00	21.900	98.470	2462.14	108.88	-109.24	616.51	1717655.81	14543599.69	40°02'45.560"N	104°43'26.440"W	1.63	
2654.00	21.670	95.410	2545.71	112.90	-113.28	649.66	1717688.96	14543595.75	40°02'45.520"N	104°43'26.014"W	1.29	
2744.00	20.880	94.830	2629.58	115.80	-116.19	682.18	1717721.48	14543592.94	40°02'45.492"N	104°43'25.595"W	0.91	
2833.00	21.020	90.540	2712.70	117.27	-117.68	713.95	1717753.24	14543591.55	40°02'45.477"N	104°43'25.187"W	1.73	
2923.00	19.850	89.250	2797.03	117.20	-117.63	745.37	1717784.64	14543591.69	40°02'45.477"N	104°43'24.783"W	1.39	
3013.00	19.320	88.810	2881.83	116.68	-117.12	775.53	1717814.79	14543592.29	40°02'45.482"N	104°43'24.395"W	0.61	
3102.00	18.590	90.830	2966.00	116.56	-117.02	804.44	1717843.69	14543592.48	40°02'45.483"N	104°43'24.023"W	1.10	
3192.00	18.860	92.970	3051.24	117.50	-117.98	833.31	1717872.55	14543591.61	40°02'45.474"N	104°43'23.652"W	0.82	
3282.00	20.240	95.350	3136.05	119.69	-120.19	863.34	1717902.57	14543589.50	40°02'45.452"N	104°43'23.266"W	1.77	
3371.00	20.890	97.760	3219.38	123.25	-123.77	894.39	1717933.62	14543586.02	40°02'45.417"N	104°43'22.867"W	1.20	
3461.00	19.710	97.210	3303.79	127.31	-127.84	925.35	1717964.58	14543582.04	40°02'45.376"N	104°43'22.469"W	1.33	
3551.00	20.230	93.900	3388.38	130.25	-130.80	955.93	1717995.16	14543579.17	40°02'45.347"N	104°43'22.075"W	1.38	
3640.00	20.920	91.680	3471.70	131.75	-132.31	987.16	1718026.39	14543577.76	40°02'45.332"N	104°43'21.674"W	1.17	
3730.00	19.470	90.520	3556.17	132.34	-132.92	1018.22	1718057.44	14543577.25	40°02'45.326"N	104°43'21.274"W	1.67	
3819.00	19.890	90.020	3639.97	132.46	-133.06	1048.20	1718087.40	14543577.20	40°02'45.325"N	104°43'20.889"W	0.51	
3876.00	18.905	88.710	3693.73	132.24	-132.86	1067.13	1718106.32	14543577.46	40°02'45.327"N	104°43'20.646"W	1.89	ENTER LANDBOX (687'FSL & 1780'FEL,SEC.13) 40.0459241 -104.7224016
3909.00	18.340	87.890	3725.00	131.92	-132.55	1077.66	1718116.85	14543577.81	40°02'45.330"N	104°43'20.510"W	1.89	
3999.00	18.810	91.990	3810.32	131.89	-132.53	1106.31	1718145.49	14543577.91	40°02'45.330"N	104°43'20.142"W	1.54	
4089.00	20.060	93.840	3895.19	133.41	-134.07	1136.21	1718175.38	14543576.47	40°02'45.315"N	104°43'19.757"W	1.55	
4178.00	19.810	92.090	3978.86	134.97	-135.64	1166.51	1718205.68	14543574.99	40°02'45.299"N	104°43'19.368"W	0.73	
4268.00	19.260	88.750	4063.68	135.18	-135.87	1196.60	1718235.75	14543574.85	40°02'45.297"N	104°43'18.981"W	1.38	
4357.00	20.090	90.190	4147.48	134.89	-135.60	1226.56	1718265.70	14543575.21	40°02'45.300"N	104°43'18.596"W	1.08	
4447.00	20.030	91.700	4232.02	135.38	-136.11	1257.42	1718296.55	14543574.80	40°02'45.295"N	104°43'18.199"W	0.58	
4563.00	20.230	92.230	4340.94	136.73	-137.48	1297.32	1718336.43	14543573.55	40°02'45.281"N	104°43'17.686"W	0.23	
4652.00	21.540	93.250	4424.09	138.24	-139.00	1329.01	1718368.12	14543572.12	40°02'45.266"N	104°43'17.278"W	1.53	
4742.00	19.480	92.330	4508.38	139.77	-140.55	1360.50	1718399.60	14543570.67	40°02'45.251"N	104°43'16.873"W	2.32	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#45 AZUL 13-28HZ (820'FSL & 2447'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-28HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-28HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (184 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
4832.00	17.720	96.940	4593.68	142.02	-142.82	1389.09	1718428.19	14543568.50	40°02'45.228"N	104°43'16.506"W	2.55	
4921.00	16.680	94.410	4678.70	144.62	-145.43	1415.28	1718454.37	14543565.96	40°02'45.202"N	104°43'16.169"W	1.44	
5011.00	15.510	92.820	4765.17	146.19	-147.02	1440.17	1718479.26	14543564.45	40°02'45.187"N	104°43'15.849"W	1.39	
5101.00	14.530	90.880	4852.10	146.94	-147.79	1463.48	1718502.56	14543563.76	40°02'45.179"N	104°43'15.549"W	1.22	
5190.00	13.080	91.960	4938.52	147.45	-148.30	1484.71	1718523.78	14543563.31	40°02'45.174"N	104°43'15.276"W	1.65	
5280.00	9.410	99.500	5026.78	149.00	-149.86	1502.15	1718541.22	14543561.80	40°02'45.159"N	104°43'15.052"W	4.38	
5370.00	7.270	98.180	5115.83	151.02	-151.89	1515.05	1718554.12	14543559.81	40°02'45.139"N	104°43'14.886"W	2.39	
5459.00	6.740	94.130	5204.16	152.19	-153.07	1525.83	1718564.90	14543558.67	40°02'45.127"N	104°43'14.748"W	0.81	
5549.00	4.930	91.630	5293.69	152.67	-153.56	1534.96	1718574.03	14543558.21	40°02'45.122"N	104°43'14.630"W	2.03	
5639.00	2.520	102.860	5383.50	153.22	-154.11	1540.76	1718579.83	14543557.67	40°02'45.117"N	104°43'14.556"W	2.79	
5728.00	1.110	343.360	5472.47	152.83	-153.72	1542.42	1718581.49	14543558.07	40°02'45.120"N	104°43'14.534"W	3.61	
5818.00	1.120	337.680	5562.45	151.18	-152.07	1541.84	1718580.90	14543559.72	40°02'45.137"N	104°43'14.542"W	0.12	
5908.00	1.210	350.840	5652.43	149.43	-150.32	1541.35	1718580.41	14543561.47	40°02'45.154"N	104°43'14.548"W	0.31	
5998.00	0.430	39.700	5742.43	148.23	-149.12	1541.42	1718580.47	14543562.66	40°02'45.166"N	104°43'14.547"W	1.09	
6087.00	0.570	32.360	5831.42	147.60	-148.49	1541.87	1718580.92	14543563.30	40°02'45.172"N	104°43'14.541"W	0.17	
6177.00	0.730	47.590	5921.42	146.83	-147.72	1542.53	1718581.58	14543564.06	40°02'45.180"N	104°43'14.533"W	0.26	
6267.00	1.010	58.140	6011.41	146.03	-146.92	1543.63	1718582.67	14543564.87	40°02'45.188"N	104°43'14.519"W	0.36	
6357.00	1.190	54.000	6101.39	145.06	-145.95	1545.06	1718584.10	14543565.84	40°02'45.197"N	104°43'14.500"W	0.22	
6446.00	1.780	47.770	6190.36	143.59	-144.48	1546.83	1718585.86	14543567.32	40°02'45.212"N	104°43'14.478"W	0.69	
6536.00	1.000	9.680	6280.33	141.87	-142.76	1547.99	1718587.03	14543569.04	40°02'45.229"N	104°43'14.463"W	1.30	
6625.00	0.720	23.930	6369.32	140.59	-141.49	1548.35	1718587.38	14543570.31	40°02'45.241"N	104°43'14.458"W	0.39	
6714.00	0.620	33.210	6458.32	139.68	-140.57	1548.84	1718587.87	14543571.23	40°02'45.250"N	104°43'14.452"W	0.17	
6804.00	0.990	55.250	6548.31	138.83	-139.72	1549.75	1718588.77	14543572.08	40°02'45.259"N	104°43'14.440"W	0.53	
6893.00	1.060	109.370	6637.30	138.66	-139.56	1551.16	1718590.18	14543572.25	40°02'45.260"N	104°43'14.422"W	1.05	
6939.00†	3.078	172.159	6683.27	140.03	-140.92	1551.73	1718590.75	14543570.89	40°02'45.247"N	104°43'14.415"W	6.00	KOP
6983.00	5.630	181.390	6727.14	143.36	-144.25	1551.83	1718590.87	14543567.56	40°02'45.214"N	104°43'14.413"W	6.00	
7073.00	17.430	196.180	6815.18	160.78	-161.67	1547.96	1718587.05	14543550.13	40°02'45.042"N	104°43'14.463"W	13.41	
7162.00	21.430	197.580	6899.10	189.10	-189.99	1539.33	1718578.51	14543521.81	40°02'44.762"N	104°43'14.574"W	4.52	
7252.00	29.090	196.600	6980.43	225.80	-226.68	1528.10	1718567.39	14543485.09	40°02'44.399"N	104°43'14.718"W	8.52	
7342.00	34.610	189.260	7056.88	272.05	-272.93	1517.72	1718557.16	14543438.83	40°02'43.942"N	104°43'14.852"W	7.48	
7431.00	38.370	182.570	7128.45	324.64	-325.51	1512.41	1718552.02	14543386.26	40°02'43.423"N	104°43'14.920"W	6.15	
7521.00	41.870	180.100	7197.26	382.60	-383.47	1511.10	1718550.89	14543328.31	40°02'42.850"N	104°43'14.937"W	4.27	
7610.00	45.070	179.900	7261.84	443.82	-444.69	1511.11	1718551.08	14543267.12	40°02'42.245"N	104°43'14.937"W	3.60	
7700.00	51.110	179.980	7321.93	510.77	-511.64	1511.18	1718551.36	14543200.20	40°02'41.583"N	104°43'14.936"W	6.71	
7790.00	59.100	181.770	7373.38	584.51	-585.38	1509.99	1718550.40	14543126.48	40°02'40.855"N	104°43'14.951"W	9.03	
7879.00	65.120	183.900	7415.00	663.04	-663.90	1506.06	1718546.71	14543047.98	40°02'40.079"N	104°43'15.002"W	7.09	
7969.00	70.240	181.690	7449.17	746.16	-747.03	1502.04	1718542.94	14542964.87	40°02'39.257"N	104°43'15.054"W	6.13	
8058.00	76.590	179.070	7474.57	831.41	-832.27	1501.50	1718542.67	14542879.66	40°02'38.415"N	104°43'15.061"W	7.67	
8148.00	86.950	178.270	7487.43	920.33	-921.20	1503.58	1718545.02	14542790.78	40°02'37.536"N	104°43'15.034"W	11.54	LANDING (101'FNL & 1343'FEL,SEC.24) 40.0437600 -104.7208429
8237.00	87.530	178.260	7491.72	1009.19	-1010.05	1506.27	1718547.98	14542701.97	40°02'36.658"N	104°43'15.000"W	0.65	
8327.00	87.840	177.850	7495.35	1099.06	-1099.93	1509.32	1718551.31	14542612.14	40°02'35.770"N	104°43'14.961"W	0.57	
8417.00	88.150	178.170	7498.50	1188.95	-1189.82	1512.44	1718554.71	14542522.29	40°02'34.881"N	104°43'14.920"W	0.49	
8492.00†	88.258	178.045	7500.85	1263.87	-1264.74	1514.92	1718557.41	14542447.41	40°02'34.141"N	104°43'14.889"W	0.22	EXIT RADIUS HEEL (445'FNL & 1332'FEL,SEC.24) 40.0428170 -104.7208024
8507.00	88.280	178.020	7501.30	1278.85	-1279.73	1515.43	1718557.97	14542432.43	40°02'33.993"N	104°43'14.882"W	0.22	
8596.00	85.250	175.960	7506.33	1367.57	-1368.45	1520.10	1718562.91	14542343.76	40°02'33.116"N	104°43'14.822"W	4.11	



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#45 AZUL 13-28HZ (820'FSL & 2447'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-28HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-28HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (184 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
8686.00	86.420	178.310	7512.86	1457.21	-1458.09	1524.58	1718567.66	14542254.17	40°02'32.230"N	104°43'14.765"W	2.91	
8776.00	86.980	178.110	7518.04	1547.01	-1547.89	1527.39	1718570.75	14542164.40	40°02'31.343"N	104°43'14.729"W	0.66	
8865.00	86.890	177.960	7522.80	1635.83	-1636.72	1530.43	1718574.06	14542075.63	40°02'30.465"N	104°43'14.689"W	0.20	
8955.00	87.380	178.890	7527.30	1725.68	-1726.57	1532.90	1718576.81	14541985.82	40°02'29.577"N	104°43'14.658"W	1.17	
9045.00	88.890	180.600	7530.23	1815.63	-1816.51	1533.30	1718577.49	14541895.91	40°02'28.688"N	104°43'14.653"W	2.53	
9134.00	88.920	180.050	7531.93	1904.61	-1905.49	1532.80	1718577.25	14541806.96	40°02'27.809"N	104°43'14.659"W	0.62	
9224.00	88.400	179.940	7534.04	1994.59	-1995.47	1532.81	1718577.54	14541717.03	40°02'26.920"N	104°43'14.659"W	0.59	
9313.00	90.430	180.670	7534.95	2083.58	-2084.46	1532.33	1718577.34	14541628.07	40°02'26.040"N	104°43'14.665"W	2.42	
9403.00	90.220	180.500	7534.43	2173.57	-2174.45	1531.41	1718576.70	14541538.11	40°02'25.151"N	104°43'14.677"W	0.30	
9493.00	90.000	179.920	7534.26	2263.57	-2264.45	1531.08	1718576.64	14541448.15	40°02'24.262"N	104°43'14.682"W	0.69	
9582.00	88.490	179.850	7535.43	2352.56	-2353.44	1531.26	1718577.10	14541359.19	40°02'23.382"N	104°43'14.679"W	1.70	
9672.00	88.180	180.520	7538.05	2442.52	-2443.40	1530.97	1718577.08	14541269.27	40°02'22.493"N	104°43'14.683"W	0.82	
9761.00	88.030	179.900	7540.99	2531.47	-2532.35	1530.65	1718577.03	14541180.35	40°02'21.614"N	104°43'14.687"W	0.72	
9851.00	87.750	179.820	7544.31	2621.41	-2622.29	1530.87	1718577.53	14541090.45	40°02'20.725"N	104°43'14.685"W	0.32	
9941.00	89.260	180.220	7546.65	2711.38	-2712.26	1530.84	1718577.77	14541000.52	40°02'19.836"N	104°43'14.685"W	1.74	
10030.00	91.020	179.670	7546.44	2800.37	-2801.25	1530.92	1718578.13	14540911.56	40°02'18.957"N	104°43'14.684"W	2.07	
10120.00	90.740	179.180	7545.05	2890.35	-2891.24	1531.82	1718579.31	14540821.61	40°02'18.068"N	104°43'14.673"W	0.63	
10209.00	90.960	178.440	7543.73	2979.32	-2980.21	1533.67	1718581.43	14540732.68	40°02'17.188"N	104°43'14.649"W	0.87	
10299.00	90.920	178.260	7542.26	3069.27	-3070.16	1536.26	1718584.30	14540642.78	40°02'16.299"N	104°43'14.616"W	0.20	
10388.00	90.620	178.490	7541.06	3158.23	-3159.11	1538.79	1718587.09	14540553.86	40°02'15.420"N	104°43'14.583"W	0.42	
10478.00	89.970	178.270	7540.60	3248.19	-3249.08	1541.33	1718589.91	14540463.95	40°02'14.531"N	104°43'14.551"W	0.76	
10568.00	91.320	179.270	7539.59	3338.16	-3339.05	1543.26	1718592.12	14540374.02	40°02'13.642"N	104°43'14.526"W	1.87	
10658.00	90.770	180.860	7537.94	3428.14	-3429.03	1543.16	1718592.29	14540284.07	40°02'12.753"N	104°43'14.527"W	1.87	
10747.00	90.650	181.310	7536.84	3517.12	-3518.01	1541.48	1718590.88	14540195.12	40°02'11.874"N	104°43'14.549"W	0.52	
10837.00	90.620	180.560	7535.84	3607.10	-3607.99	1540.01	1718589.69	14540105.17	40°02'10.984"N	104°43'14.568"W	0.83	
10927.00	90.710	179.850	7534.80	3697.09	-3697.98	1539.68	1718589.65	14540015.22	40°02'10.095"N	104°43'14.572"W	0.80	
11016.00	90.460	179.540	7533.89	3786.09	-3786.97	1540.16	1718590.39	14539926.26	40°02'09.216"N	104°43'14.566"W	0.45	
11106.00	90.520	180.050	7533.12	3876.08	-3876.97	1540.48	1718590.99	14539836.30	40°02'08.326"N	104°43'14.562"W	0.57	
11195.00	90.710	179.680	7532.17	3965.08	-3965.96	1540.69	1718591.47	14539747.34	40°02'07.447"N	104°43'14.559"W	0.47	
11285.00	90.740	179.050	7531.03	4055.06	-4055.95	1541.69	1718592.75	14539657.40	40°02'06.558"N	104°43'14.547"W	0.70	
11374.00	90.860	178.210	7529.78	4144.03	-4144.92	1543.82	1718595.15	14539568.47	40°02'05.678"N	104°43'14.519"W	0.95	
11464.00	89.780	179.910	7529.28	4234.01	-4234.90	1545.29	1718596.90	14539478.53	40°02'04.789"N	104°43'14.501"W	2.24	
11549.00†	89.694	179.709	7529.67	4319.01	-4319.90	1545.57	1718597.44	14539393.57	40°02'03.949"N	104°43'14.497"W	0.26	ENTER RADIUS TOE (1782'FSL & 1295'FEL,SEC.24) 40.0344303 -104.7206936
11553.00	89.690	179.700	7529.69	4323.01	-4323.90	1545.59	1718597.48	14539389.57	40°02'03.910"N	104°43'14.497"W	0.26	
11643.00	89.540	178.920	7530.30	4413.00	-4413.89	1546.68	1718598.84	14539299.62	40°02'03.020"N	104°43'14.483"W	0.88	
11733.00	89.320	177.820	7531.19	4502.95	-4503.85	1549.24	1718601.67	14539209.70	40°02'02.131"N	104°43'14.450"W	1.25	
11822.00	88.890	179.750	7532.58	4591.92	-4592.81	1551.12	1718603.83	14539120.78	40°02'01.252"N	104°43'14.426"W	2.22	
11912.00	87.870	180.090	7535.13	4681.88	-4682.77	1551.25	1718604.23	14539030.85	40°02'00.363"N	104°43'14.424"W	1.19	
12001.00	89.420	181.630	7537.23	4770.84	-4771.73	1549.91	1718603.17	14538941.93	40°01'59.484"N	104°43'14.441"W	2.45	
12091.00	89.320	181.010	7538.22	4860.81	-4861.70	1547.84	1718601.38	14538851.99	40°01'58.595"N	104°43'14.468"W	0.70	
12180.00	88.950	180.570	7539.57	4949.79	-4950.68	1546.61	1718600.42	14538763.04	40°01'57.716"N	104°43'14.484"W	0.65	
12270.00	88.370	182.240	7541.67	5039.74	-5040.63	1544.41	1718598.49	14538673.12	40°01'56.827"N	104°43'14.512"W	1.96	
12360.00	90.120	183.580	7542.86	5129.61	-5130.50	1539.84	1718594.20	14538583.27	40°01'55.939"N	104°43'14.571"W	2.45	
12449.00	89.970	183.220	7542.79	5218.46	-5219.34	1534.56	1718589.20	14538494.45	40°01'55.061"N	104°43'14.639"W	0.44	
12539.00	89.750	182.410	7543.01	5308.35	-5309.23	1530.14	1718585.06	14538404.58	40°01'54.172"N	104°43'14.696"W	0.93	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#45 AZUL 13-28HZ (820'FSL & 2447'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-28HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-28HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (184 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
12629.00	89.570	182.170	7543.54	5398.28	-5399.16	1526.55	1718581.74	14538314.68	40°01'53.284"N	104°43'14.742"W	0.33	
12718.00	89.350	181.710	7544.38	5487.23	-5488.10	1523.53	1718579.00	14538225.76	40°01'52.405"N	104°43'14.781"W	0.57	
12808.00	88.860	180.860	7545.79	5577.19	-5578.07	1521.52	1718577.26	14538135.82	40°01'51.516"N	104°43'14.807"W	1.09	LAST BHGE MWD+IFR1+SC SURVEY
12857.00	88.860	180.860	7546.76	5626.18	-5627.05	1520.78	1718576.68	14538086.86	40°01'51.032"N	104°43'14.817"W	0.00	PTB (475'FSL & 1319'FEL,SEC.24) 40.0308421 -104.7207824

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.24-T1N-R66W	-17.00	92.22	-1287.02	1715752.42	14543795.21	40°02'47.551"N	104°43'50.916"W	polygon
AZUL 13-28HZ HEEL REV-1(50'FNL & 1307'FEL,SEC.24)	7500.00	-858.54	1539.93	1718581.16	14542853.52	40°02'38.155"N	104°43'14.567"W	point
AZUL 13-28HZ BHL REV-1(468'FSL & 1303'FEL,SEC.24)	7561.00	-5634.01	1537.14	1718593.05	14538079.95	40°01'50.963"N	104°43'14.606"W	point
AZUL 13-28HZ INT. TARGET@3000"VS	7561.00	-3000.89	1538.68	1718586.49	14540712.03	40°02'16.984"N	104°43'14.585"W	point
AZUL 13-28HZ LANDBOX	7561.00	0.00	0.00	1717039.21	14543706.99	40°02'46.640"N	104°43'34.367"W	polygon
AZUL 13-28HZ RADIUS 1	7561.00	-4779.18	1522.21	1718575.50	14538934.40	40°01'59.411"N	104°43'14.798"W	polygon
AZUL 13-28HZ RADIUS 2	7561.00	-804.60	1528.03	1718569.10	14542907.40	40°02'38.688"N	104°43'14.720"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: AZUL 13-28HZ AWB Ref Wellpath: AZUL 13-28HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
21.00	1835.00	Custom APC_ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC ISCWSA Rev-2 MWD+IFR1 <130 - 1835>	AZUL 13-28HZ AWB
1835.00	12808.00	Custom APC_ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+SC <1937 - 12808>	AZUL 13-28HZ AWB
12808.00	12857.00	Blind Drilling (std)	Projection to bit	AZUL 13-28HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#45 AZUL 13-28HZ (820'FSL & 2447'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-28HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-28HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
130.00	0.970	115.580	129.99	FIRST SURFACE MWD+IFR1 SURVEY
1835.00	19.820	97.840	1778.55	LAST SURFACE MWD+IFR1 SURVEY
1937.00	19.910	96.340	1874.48	FIRST BHGE MWD+IFR1+SC SURVEY
3876.00	18.905	88.710	3693.73	ENTER LANDBOX (687'FSL & 1780'FEL,SEC.13) 40.0459241 -104.7224016
6939.00	3.078	172.159	6683.27	KOP
8148.00	86.950	178.270	7487.43	LANDING (101'FNL & 1343'FEL,SEC.24) 40.0437600 -104.7208429
8492.00	88.258	178.045	7500.85	EXIT RADIUS HEEL (445'FNL & 1332'FEL,SEC.24) 40.0428170 -104.7208024
11549.00	89.694	179.709	7529.67	ENTER RADIUS TOE (1782'FSL & 1295'FEL,SEC.24) 40.0344303 -104.7206936
12808.00	88.860	180.860	7545.79	LAST BHGE MWD+IFR1+SC SURVEY
12857.00	88.860	180.860	7546.76	PTB (475'FSL & 1319'FEL,SEC.24) 40.0308421 -104.7207824