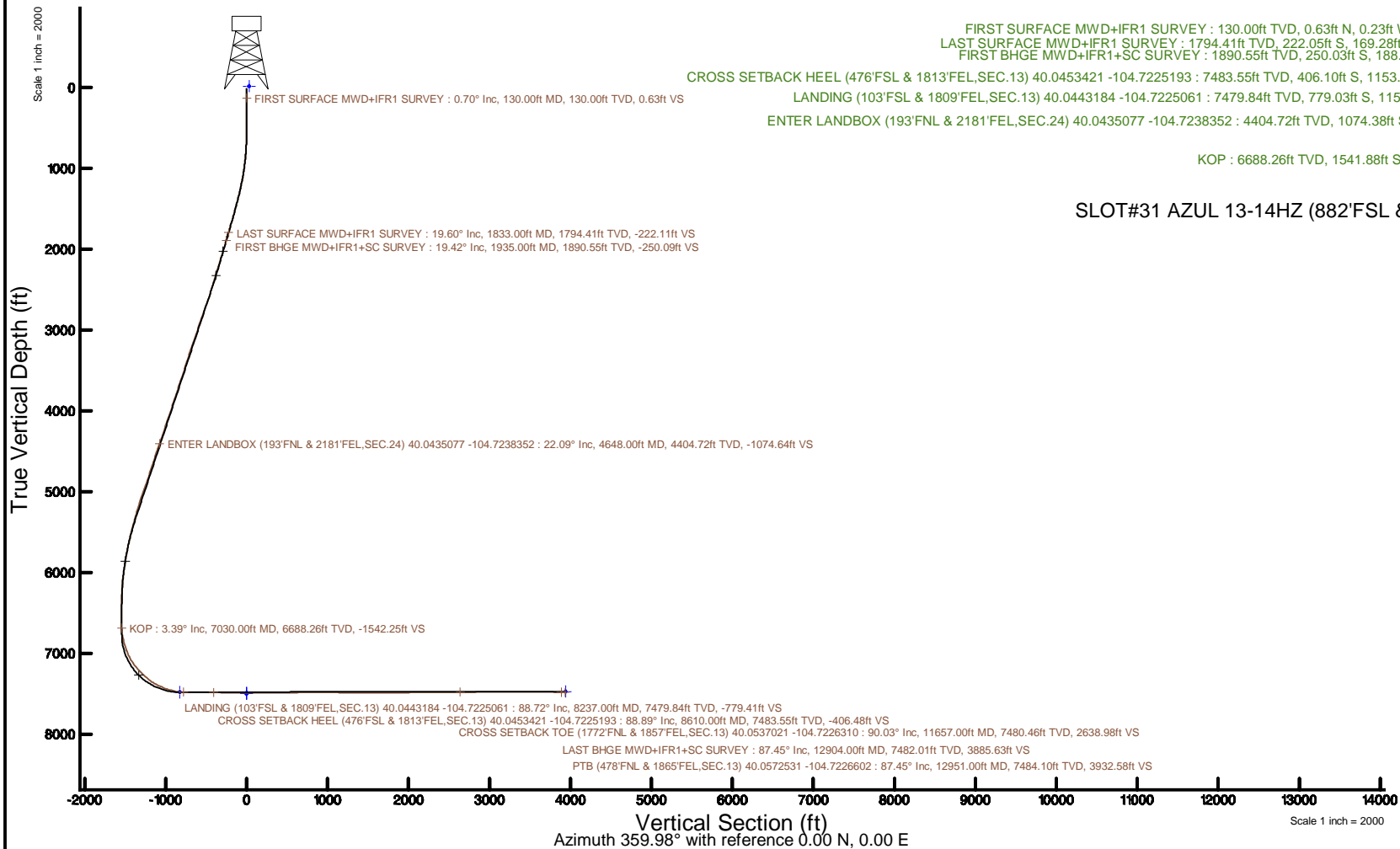


Location:	COLORADO	Slot:	SLOT#31 AZUL 13-14HZ (882'FSL & 2327'FWL, SEC.13)
Field:	WELD COUNTY (UTM/TRUE NORTH)	Well:	AZUL 13-14HZ
Facility:	SEC.13-T1N-R66W	Wellbore:	AZUL 13-14HZ PWB
Plot reference wellpath is AZUL 13-14HZ PWP Rev-A.0		Grid System: NAD83 / UTM Zone 13 North, US feet	
True vertical depths are referenced to PD 464 (21') (RT)		* = Wellpath was transformed from a different geoidetic 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#31 AZUL 13-14HZ (882'FSL & 2327'FWL, SEC.13)): 0 feet		Depths are in feet	
Coordinates are in feet referenced to Slot		Created by: painsear on 2018-05-04	
		Database: WA_DEN_Anadarko_Defn	



Actual Wellpath Report

AZUL 13-14HZ AWP

Page 1 of 7

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#31 AZUL 13-14HZ (882'FSL & 2327'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-14HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-14HZ 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	5/4/2018 at 2:35 PM
Convergence at slot	0.18° East	Database/Source file	WA_DEN_Anadarko_Defn/AZUL_13-14HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-4188.22	-563.53	1716919.85	14543767.82	40°02'47.245"N	104°43'35.900"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#31 AZUL 13-14HZ (882'FSL & 2327'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	359.98°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#31 AZUL 13-14HZ (882'FSL & 2327'FWL, SEC.13)
Area	COLORADO	Well	AZUL 13-14HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-14HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (186 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	340.150	0.00	0.00	0.00	0.00	1716919.85	14543767.82	40°02'47.245"N	104°43'35.900"W	0.00	
21.00	0.000	340.150	21.00	0.00	0.00	0.00	1716919.85	14543767.82	40°02'47.245"N	104°43'35.900"W	0.00	
130.00	0.700	340.150	130.00	0.63	0.63	-0.23	1716919.62	14543768.44	40°02'47.251"N	104°43'35.903"W	0.64	FIRST SURFACE MWD+IFR1 SURVEY
162.00	1.010	311.590	161.99	1.00	1.00	-0.50	1716919.34	14543768.81	40°02'47.255"N	104°43'35.906"W	1.62	
193.00	1.230	342.080	192.99	1.50	1.50	-0.81	1716919.04	14543769.31	40°02'47.260"N	104°43'35.910"W	2.02	
225.00	0.620	333.820	224.98	1.98	1.98	-0.99	1716918.85	14543769.79	40°02'47.265"N	104°43'35.913"W	1.95	
257.00	0.180	179.220	256.98	2.08	2.08	-1.07	1716918.78	14543769.89	40°02'47.266"N	104°43'35.914"W	2.46	
288.00	0.660	210.250	287.98	1.88	1.88	-1.16	1716918.69	14543769.69	40°02'47.264"N	104°43'35.915"W	1.66	
319.00	1.140	190.740	318.98	1.42	1.42	-1.30	1716918.54	14543769.23	40°02'47.259"N	104°43'35.917"W	1.82	
351.00	1.360	192.410	350.97	0.74	0.74	-1.45	1716918.40	14543768.55	40°02'47.252"N	104°43'35.919"W	0.70	
382.00	1.100	165.160	381.96	0.09	0.09	-1.45	1716918.40	14543767.90	40°02'47.246"N	104°43'35.919"W	2.04	
414.00	0.700	139.850	413.96	-0.35	-0.35	-1.24	1716918.61	14543767.46	40°02'47.241"N	104°43'35.916"W	1.73	
446.00	1.100	73.580	445.96	-0.42	-0.42	-0.82	1716919.03	14543767.40	40°02'47.241"N	104°43'35.911"W	3.25	
477.00	1.320	72.880	476.95	-0.23	-0.23	-0.20	1716919.65	14543767.59	40°02'47.243"N	104°43'35.903"W	0.71	
509.00	1.270	54.510	508.94	0.09	0.09	0.44	1716920.29	14543767.90	40°02'47.246"N	104°43'35.894"W	1.30	
540.00	1.930	71.640	539.93	0.45	0.45	1.22	1716921.07	14543768.27	40°02'47.249"N	104°43'35.884"W	2.61	
572.00	2.590	91.070	571.91	0.61	0.61	2.45	1716922.30	14543768.43	40°02'47.251"N	104°43'35.868"W	3.13	
604.00	3.120	107.590	603.87	0.33	0.33	4.01	1716923.85	14543768.16	40°02'47.248"N	104°43'35.848"W	3.04	
636.00	2.940	120.510	635.82	-0.35	-0.35	5.54	1716925.39	14543767.48	40°02'47.242"N	104°43'35.829"W	2.20	
668.00	3.560	130.000	667.77	-1.41	-1.41	7.01	1716926.86	14543766.43	40°02'47.231"N	104°43'35.810"W	2.56	
700.00	3.380	137.210	699.71	-2.74	-2.74	8.41	1716928.27	14543765.11	40°02'47.218"N	104°43'35.792"W	1.47	
732.00	3.690	135.540	731.65	-4.17	-4.16	9.78	1716929.64	14543763.68	40°02'47.204"N	104°43'35.774"W	1.02	
763.00	4.260	139.760	762.58	-5.76	-5.75	11.22	1716931.08	14543762.10	40°02'47.188"N	104°43'35.756"W	2.07	
795.00	5.270	141.870	794.47	-7.82	-7.82	12.89	1716932.76	14543760.04	40°02'47.168"N	104°43'35.734"W	3.20	
827.00	5.760	142.660	826.32	-10.25	-10.25	14.78	1716934.65	14543757.62	40°02'47.144"N	104°43'35.710"W	1.55	
859.00	6.240	144.680	858.14	-12.95	-12.95	16.75	1716936.64	14543754.93	40°02'47.117"N	104°43'35.685"W	1.64	
890.00	7.120	148.550	888.93	-15.97	-15.96	18.73	1716938.62	14543751.92	40°02'47.087"N	104°43'35.659"W	3.19	
922.00	8.130	146.880	920.65	-19.55	-19.55	21.00	1716940.90	14543748.34	40°02'47.052"N	104°43'35.630"W	3.23	
954.00	8.350	147.490	952.32	-23.41	-23.40	23.49	1716943.40	14543744.50	40°02'47.014"N	104°43'35.598"W	0.74	
985.00	9.180	145.650	982.96	-27.35	-27.34	26.09	1716946.02	14543740.57	40°02'46.975"N	104°43'35.564"W	2.83	
1017.00	10.550	143.360	1014.48	-31.81	-31.80	29.28	1716949.22	14543736.12	40°02'46.931"N	104°43'35.523"W	4.45	
1049.00	11.650	141.520	1045.88	-36.69	-36.68	33.04	1716952.99	14543731.25	40°02'46.883"N	104°43'35.475"W	3.61	
1081.00	12.440	143.010	1077.18	-41.97	-41.96	37.12	1716957.09	14543725.99	40°02'46.830"N	104°43'35.423"W	2.65	
1112.00	12.740	144.510	1107.43	-47.43	-47.41	41.12	1716961.10	14543720.55	40°02'46.776"N	104°43'35.371"W	1.43	
1144.00	13.140	145.390	1138.62	-53.29	-53.28	45.23	1716965.23	14543714.70	40°02'46.718"N	104°43'35.318"W	1.39	
1176.00	13.540	144.590	1169.76	-59.34	-59.32	49.47	1716969.48	14543708.67	40°02'46.659"N	104°43'35.264"W	1.38	
1208.00	13.580	145.120	1200.86	-65.48	-65.46	53.79	1716973.82	14543702.55	40°02'46.598"N	104°43'35.208"W	0.41	
1239.00	13.620	143.010	1231.00	-71.38	-71.36	58.07	1716978.11	14543696.66	40°02'46.540"N	104°43'35.153"W	1.61	
1271.00	14.550	144.590	1262.03	-77.67	-77.65	62.66	1716982.72	14543690.39	40°02'46.478"N	104°43'35.094"W	3.14	
1303.00	16.260	145.390	1292.88	-84.63	-84.61	67.54	1716987.62	14543683.45	40°02'46.409"N	104°43'35.032"W	5.38	
1335.00	16.960	145.030	1323.55	-92.15	-92.12	72.75	1716992.86	14543675.95	40°02'46.335"N	104°43'34.964"W	2.21	
1366.00	17.400	145.120	1353.16	-99.66	-99.63	78.00	1716998.12	14543668.47	40°02'46.260"N	104°43'34.897"W	1.42	
1398.00	17.670	144.070	1383.68	-107.52	-107.49	83.58	1717003.73	14543660.63	40°02'46.183"N	104°43'34.825"W	1.30	
1430.00	17.840	144.420	1414.15	-115.44	-115.41	89.28	1717009.45	14543652.73	40°02'46.105"N	104°43'34.752"W	0.63	
1461.00	18.060	143.630	1443.64	-123.17	-123.14	94.90	1717015.09	14543645.02	40°02'46.028"N	104°43'34.680"W	1.06	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#31 AZUL 13-14HZ (882'FSL & 2327'FWL, SEC.13)
Area	COLORADO	Well	AZUL 13-14HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-14HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (186 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
1493.00	18.190	143.450	1474.06	-131.18	-131.14	100.81	1717021.03	14543637.03	40°02'45.949"N	104°43'34.604"W	0.44	
1524.00	18.370	142.750	1503.49	-138.95	-138.92	106.65	1717026.88	14543629.28	40°02'45.872"N	104°43'34.529"W	0.92	
1556.00	18.540	142.660	1533.85	-147.02	-146.98	112.79	1717033.05	14543621.24	40°02'45.793"N	104°43'34.450"W	0.54	
1588.00	19.120	142.750	1564.13	-155.23	-155.19	119.05	1717039.33	14543613.05	40°02'45.711"N	104°43'34.369"W	1.81	
1620.00	19.290	142.050	1594.35	-163.58	-163.53	125.47	1717045.77	14543604.73	40°02'45.629"N	104°43'34.287"W	0.89	
1651.00	19.860	142.400	1623.56	-171.79	-171.74	131.83	1717052.16	14543596.55	40°02'45.548"N	104°43'34.205"W	1.88	
1683.00	20.130	141.780	1653.63	-180.42	-180.38	138.56	1717058.90	14543587.94	40°02'45.462"N	104°43'34.118"W	1.07	
1747.00	20.570	143.190	1713.64	-198.08	-198.03	152.11	1717072.50	14543570.33	40°02'45.288"N	104°43'33.944"W	1.03	
1779.00	20.390	144.240	1743.61	-207.11	-207.06	158.73	1717079.15	14543561.33	40°02'45.199"N	104°43'33.859"W	1.28	
1810.00	19.640	145.030	1772.74	-215.76	-215.71	164.87	1717085.32	14543552.70	40°02'45.113"N	104°43'33.780"W	2.57	
1833.00	19.600	145.390	1794.41	-222.11	-222.05	169.28	1717089.74	14543546.38	40°02'45.051"N	104°43'33.723"W	0.55	LAST SURFACE MWD+IFR1 SURVEY
1935.00	19.420	145.060	1890.55	-250.09	-250.03	188.71	1717109.25	14543518.47	40°02'44.774"N	104°43'33.474"W	0.21	FIRST BHGE MWD+IFR1+SC SURVEY
2025.00	20.980	140.800	1975.02	-274.85	-274.78	207.46	1717128.07	14543493.78	40°02'44.530"N	104°43'33.232"W	2.38	
2115.00	22.430	138.550	2058.63	-300.22	-300.14	229.01	1717149.69	14543468.50	40°02'44.279"N	104°43'32.955"W	1.86	
2205.00	21.960	137.500	2141.97	-325.50	-325.42	251.75	1717172.50	14543443.30	40°02'44.029"N	104°43'32.663"W	0.68	
2294.00	22.620	140.460	2224.32	-350.98	-350.89	273.89	1717194.71	14543417.91	40°02'43.777"N	104°43'32.378"W	1.46	
2384.00	22.100	139.280	2307.55	-377.16	-377.07	295.95	1717216.84	14543391.81	40°02'43.519"N	104°43'32.095"W	0.76	
2474.00	21.290	138.630	2391.18	-402.27	-402.16	317.80	1717238.75	14543366.79	40°02'43.271"N	104°43'31.814"W	0.94	
2563.00	20.680	141.830	2474.27	-426.75	-426.64	338.19	1717259.21	14543342.38	40°02'43.029"N	104°43'31.552"W	1.46	
2653.00	20.330	147.240	2558.58	-452.40	-452.29	356.47	1717277.56	14543316.81	40°02'42.775"N	104°43'31.316"W	2.14	
2743.00	21.820	149.840	2642.56	-480.02	-479.90	373.33	1717294.51	14543289.26	40°02'42.503"N	104°43'31.100"W	1.95	
2832.00	23.670	147.850	2724.64	-509.46	-509.33	391.15	1717312.41	14543259.89	40°02'42.212"N	104°43'30.871"W	2.25	
2922.00	24.220	144.270	2806.89	-539.75	-539.61	411.55	1717332.89	14543229.68	40°02'41.912"N	104°43'30.608"W	1.73	
3012.00	22.900	142.770	2889.39	-568.68	-568.54	432.92	1717354.35	14543200.83	40°02'41.627"N	104°43'30.333"W	1.61	
3101.00	22.440	143.920	2971.51	-596.21	-596.06	453.40	1717374.90	14543173.39	40°02'41.355"N	104°43'30.070"W	0.72	
3191.00	22.070	146.010	3054.81	-624.12	-623.96	472.97	1717394.55	14543145.56	40°02'41.079"N	104°43'29.818"W	0.97	
3281.00	22.880	146.680	3137.98	-652.76	-652.60	492.04	1717413.69	14543116.99	40°02'40.796"N	104°43'29.573"W	0.94	
3370.00	22.920	145.470	3219.96	-681.50	-681.33	511.36	1717433.10	14543088.32	40°02'40.512"N	104°43'29.325"W	0.53	
3460.00	21.290	144.560	3303.34	-709.26	-709.08	530.77	1717452.59	14543060.64	40°02'40.238"N	104°43'29.075"W	1.85	
3550.00	21.270	144.380	3387.21	-735.85	-735.67	549.76	1717471.64	14543034.13	40°02'39.975"N	104°43'28.831"W	0.08	
3639.00	21.100	143.620	3470.19	-761.87	-761.69	568.66	1717490.62	14543008.18	40°02'39.718"N	104°43'28.588"W	0.36	
3729.00	21.590	145.330	3554.02	-788.54	-788.35	587.69	1717509.72	14542981.59	40°02'39.454"N	104°43'28.344"W	0.88	
3818.00	22.970	144.230	3636.37	-816.11	-815.91	607.15	1717529.26	14542954.10	40°02'39.182"N	104°43'28.093"W	1.62	
3908.00	22.520	144.810	3719.37	-844.45	-844.24	627.35	1717549.54	14542925.84	40°02'38.902"N	104°43'27.834"W	0.56	
3998.00	22.680	142.100	3802.47	-872.23	-872.02	647.94	1717570.21	14542898.13	40°02'38.627"N	104°43'27.569"W	1.17	
4087.00	21.780	144.410	3884.85	-899.21	-898.99	668.09	1717590.44	14542871.24	40°02'38.361"N	104°43'27.310"W	1.41	
4177.00	22.200	145.090	3968.30	-926.74	-926.51	687.54	1717609.96	14542843.79	40°02'38.089"N	104°43'27.060"W	0.55	
4267.00	22.130	145.360	4051.65	-954.63	-954.40	706.91	1717629.40	14542815.97	40°02'37.813"N	104°43'26.811"W	0.14	
4356.00	21.680	145.770	4134.23	-982.02	-981.78	725.68	1717648.26	14542788.65	40°02'37.543"N	104°43'26.569"W	0.53	
4446.00	21.730	147.900	4217.85	-1009.89	-1009.64	743.89	1717666.54	14542760.86	40°02'37.267"N	104°43'26.335"W	0.88	
4536.00	22.880	147.760	4301.11	-1038.81	-1038.55	762.08	1717684.81	14542732.02	40°02'36.982"N	104°43'26.101"W	1.28	
4626.00	21.910	147.140	4384.32	-1067.72	-1067.46	780.52	1717703.34	14542703.18	40°02'36.696"N	104°43'25.864"W	1.11	
4648.00†	22.088	147.092	4404.72	-1074.64	-1074.38	785.00	1717707.83	14542696.28	40°02'36.628"N	104°43'25.807"W	0.81	ENTER LANDBOX (193'FNL & 2181'FEL, SEC.24) 40.0435077 -104.7238352
4715.00	22.630	146.950	4466.68	-1096.02	-1095.76	798.87	1717721.76	14542674.95	40°02'36.416"N	104°43'25.628"W	0.81	
4805.00	21.720	144.010	4550.03	-1124.02	-1123.75	818.10	1717741.07	14542647.03	40°02'36.140"N	104°43'25.381"W	1.59	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#31 AZUL 13-14HZ (882'FSL & 2327'FWL, SEC.13)
Area	COLORADO	Well	AZUL 13-14HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-14HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (186 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
4895.00	21.450	143.610	4633.72	-1150.75	-1150.47	837.65	1717760.69	14542620.38	40°02'35.876"N	104°43'25.130"W	0.34	
4984.00	22.710	144.420	4716.19	-1177.83	-1177.54	857.30	1717780.42	14542593.38	40°02'35.608"N	104°43'24.877"W	1.46	
5074.00	21.410	143.150	4799.60	-1205.11	-1204.82	877.26	1717800.46	14542566.17	40°02'35.339"N	104°43'24.620"W	1.54	
5164.00	21.870	147.310	4883.26	-1232.37	-1232.07	896.17	1717819.44	14542538.99	40°02'35.069"N	104°43'24.377"W	1.78	
5254.00	24.120	148.950	4966.10	-1262.24	-1261.94	914.71	1717838.07	14542509.19	40°02'34.774"N	104°43'24.139"W	2.60	
5343.00	23.780	144.120	5047.45	-1292.37	-1292.06	934.61	1717858.05	14542479.14	40°02'34.476"N	104°43'23.883"W	2.24	
5433.00	21.190	142.580	5130.60	-1320.00	-1319.68	955.13	1717878.65	14542451.59	40°02'34.203"N	104°43'23.619"W	2.95	
5522.00	21.030	139.300	5213.63	-1344.89	-1344.57	975.32	1717898.90	14542426.78	40°02'33.957"N	104°43'23.360"W	1.34	
5612.00	19.150	144.330	5298.16	-1369.14	-1368.81	994.46	1717918.11	14542402.61	40°02'33.718"N	104°43'23.114"W	2.84	
5702.00	19.250	142.010	5383.15	-1392.83	-1392.49	1012.20	1717935.92	14542378.99	40°02'33.484"N	104°43'22.886"W	0.85	
5792.00	19.120	138.320	5468.16	-1415.54	-1415.19	1031.13	1717954.91	14542356.35	40°02'33.259"N	104°43'22.642"W	1.35	
5881.00	17.340	141.010	5552.69	-1436.74	-1436.39	1049.17	1717973.01	14542335.22	40°02'33.050"N	104°43'22.410"W	2.21	
5971.00	14.910	143.710	5639.14	-1456.50	-1456.15	1064.47	1717988.36	14542315.51	40°02'32.855"N	104°43'22.214"W	2.82	
6061.00	12.670	147.080	5726.54	-1474.13	-1473.77	1076.69	1718000.63	14542297.94	40°02'32.681"N	104°43'22.056"W	2.84	
6151.00	12.390	141.340	5814.40	-1489.96	-1489.60	1088.08	1718012.07	14542282.15	40°02'32.524"N	104°43'21.910"W	1.42	
6240.00	11.060	141.900	5901.54	-1504.14	-1503.77	1099.31	1718023.34	14542268.02	40°02'32.384"N	104°43'21.765"W	1.50	
6330.00	10.140	142.040	5990.01	-1517.18	-1516.81	1109.51	1718033.57	14542255.02	40°02'32.255"N	104°43'21.634"W	1.02	
6419.00	6.890	148.520	6078.02	-1527.91	-1527.54	1117.12	1718041.21	14542244.31	40°02'32.149"N	104°43'21.537"W	3.80	
6509.00	4.510	151.160	6167.57	-1535.62	-1535.25	1121.65	1718045.76	14542236.62	40°02'32.073"N	104°43'21.478"W	2.66	
6598.00	2.490	159.000	6256.40	-1540.49	-1540.12	1124.03	1718048.16	14542231.76	40°02'32.025"N	104°43'21.448"W	2.33	
6688.00	1.260	141.570	6346.35	-1543.09	-1542.72	1125.35	1718049.48	14542229.17	40°02'31.999"N	104°43'21.431"W	1.49	
6777.00	0.910	141.500	6435.33	-1544.41	-1544.04	1126.39	1718050.53	14542227.85	40°02'31.986"N	104°43'21.417"W	0.39	
6867.00	0.630	118.550	6525.32	-1545.21	-1544.84	1127.27	1718051.41	14542227.06	40°02'31.978"N	104°43'21.406"W	0.46	
6956.00	0.860	332.380	6614.32	-1544.85	-1544.48	1127.39	1718051.53	14542227.42	40°02'31.982"N	104°43'21.404"W	1.60	
7030.00†	3.389	344.683	6688.26	-1542.25	-1541.88	1126.56	1718050.69	14542230.01	40°02'32.008"N	104°43'21.415"W	3.45	KOP
7046.00	3.940	345.260	6704.23	-1541.26	-1540.89	1126.29	1718050.42	14542231.00	40°02'32.017"N	104°43'21.419"W	3.45	
7136.00	11.000	0.200	6793.42	-1529.67	-1529.30	1125.54	1718049.63	14542242.59	40°02'32.132"N	104°43'21.428"W	8.07	
7226.00	14.020	7.210	6881.27	-1510.26	-1509.89	1126.93	1718050.97	14542261.99	40°02'32.324"N	104°43'21.410"W	3.75	
7315.00	22.720	11.140	6965.66	-1482.65	-1482.28	1131.62	1718055.56	14542289.61	40°02'32.597"N	104°43'21.350"W	9.87	
7404.00	27.280	11.470	7046.30	-1445.78	-1445.40	1139.00	1718062.83	14542326.49	40°02'32.961"N	104°43'21.255"W	5.13	
7494.00	34.650	6.110	7123.44	-1400.06	-1399.68	1145.83	1718069.52	14542372.21	40°02'33.413"N	104°43'21.167"W	8.74	
7584.00	40.370	6.680	7194.80	-1345.63	-1345.24	1151.95	1718075.47	14542426.65	40°02'33.951"N	104°43'21.089"W	6.37	
7673.00	47.300	0.260	7258.99	-1284.19	-1283.81	1155.46	1718078.79	14542488.07	40°02'34.558"N	104°43'21.043"W	9.24	
7763.00	50.100	358.560	7318.39	-1216.59	-1216.21	1154.74	1718077.86	14542555.64	40°02'35.226"N	104°43'21.053"W	3.42	
7853.00	60.490	0.870	7369.56	-1142.71	-1142.33	1154.47	1718077.36	14542629.49	40°02'35.956"N	104°43'21.056"W	11.73	
7942.00	65.560	1.580	7409.92	-1063.44	-1063.06	1156.17	1718078.82	14542708.73	40°02'36.739"N	104°43'21.034"W	5.74	
8032.00	70.290	359.490	7443.74	-980.07	-979.69	1156.93	1718079.32	14542792.07	40°02'37.563"N	104°43'21.024"W	5.68	
8121.00	77.730	358.840	7468.24	-894.58	-894.20	1155.67	1718077.80	14542877.52	40°02'38.408"N	104°43'21.040"W	8.39	
8211.00	88.310	1.990	7479.16	-805.39	-805.01	1156.35	1718078.20	14542966.68	40°02'39.289"N	104°43'21.032"W	12.26	
8237.00†	88.717	1.392	7479.84	-779.41	-779.03	1157.11	1718078.89	14542992.65	40°02'39.546"N	104°43'21.022"W	2.78	LANDING (103'FSL & 1809'FEL, SEC.13) 40.0443184 -104.7225061
8301.00	89.720	359.920	7480.71	-715.43	-715.04	1157.85	1718079.43	14543056.61	40°02'40.179"N	104°43'21.012"W	2.78	
8390.00	89.570	359.430	7481.26	-626.43	-626.05	1157.34	1718078.65	14543145.57	40°02'41.058"N	104°43'21.019"W	0.58	
8480.00	89.720	359.260	7481.82	-536.44	-536.05	1156.31	1718077.34	14543235.53	40°02'41.947"N	104°43'21.032"W	0.25	
8570.00	89.010	358.410	7482.82	-446.46	-446.08	1154.48	1718075.24	14543325.46	40°02'42.836"N	104°43'21.056"W	1.23	
8610.00†	88.889	358.500	7483.55	-406.48	-406.10	1153.40	1718074.04	14543365.42	40°02'43.232"N	104°43'21.069"W	0.38	CROSS SETBACK HEEL (476'FSL & 1813'FEL, SEC.13) 40.0453421 -104.7225193

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#31 AZUL 13-14HZ (882'FSL & 2327'FWL, SEC.13)
Area	COLORADO	Well	AZUL 13-14HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-14HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (186 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
8659.00	88.740	358.610	7484.56	-357.51	-357.13	1152.17	1718072.65	14543414.37	40°02'43.716"N	104°43'21.085"W	0.38	
8749.00	88.490	358.220	7486.74	-267.57	-267.19	1149.68	1718069.89	14543504.26	40°02'44.604"N	104°43'21.117"W	0.51	
8839.00	90.090	359.380	7487.85	-177.60	-177.22	1147.80	1718067.73	14543594.19	40°02'45.493"N	104°43'21.141"W	2.20	
8928.00	90.060	358.530	7487.74	-88.61	-88.23	1146.17	1718065.83	14543683.13	40°02'46.373"N	104°43'21.162"W	0.96	
9018.00	90.030	358.740	7487.67	1.36	1.74	1144.03	1718063.42	14543773.07	40°02'47.262"N	104°43'21.190"W	0.24	
9108.00	89.630	358.660	7487.93	91.34	91.72	1141.99	1718061.10	14543863.00	40°02'48.151"N	104°43'21.216"W	0.45	
9197.00	90.460	0.510	7487.86	180.33	180.71	1141.34	1718060.18	14543951.96	40°02'49.031"N	104°43'21.224"W	2.28	
9287.00	90.030	0.250	7487.48	270.33	270.71	1141.94	1718060.50	14544041.92	40°02'49.920"N	104°43'21.216"W	0.56	
9376.00	89.910	359.590	7487.53	359.33	359.71	1141.81	1718060.10	14544130.88	40°02'50.799"N	104°43'21.218"W	0.75	
9466.00	90.180	358.900	7487.46	449.32	449.70	1140.63	1718058.64	14544220.83	40°02'51.689"N	104°43'21.233"W	0.82	
9556.00	90.960	357.670	7486.56	539.27	539.65	1137.94	1718055.67	14544310.74	40°02'52.578"N	104°43'21.268"W	1.62	
9645.00	90.490	356.840	7485.43	628.16	628.54	1133.67	1718051.14	14544399.58	40°02'53.456"N	104°43'21.322"W	1.07	
9735.00	91.230	358.210	7484.08	718.07	718.44	1129.79	1718046.98	14544489.44	40°02'54.345"N	104°43'21.372"W	1.73	
9824.00	89.450	358.600	7483.56	807.03	807.40	1127.31	1718044.23	14544578.36	40°02'55.224"N	104°43'21.404"W	2.05	
9914.00	91.050	358.460	7483.16	897.00	897.37	1125.00	1718041.65	14544668.28	40°02'56.113"N	104°43'21.434"W	1.78	
10004.00	90.120	357.690	7482.24	986.94	987.31	1121.98	1718038.35	14544758.18	40°02'57.002"N	104°43'21.473"W	1.34	
10093.00	88.330	355.420	7483.45	1075.76	1076.13	1116.63	1718032.73	14544846.95	40°02'57.879"N	104°43'21.541"W	3.25	
10183.00	88.460	356.240	7485.97	1165.49	1165.86	1110.09	1718025.92	14544936.62	40°02'58.766"N	104°43'21.625"W	0.92	
10272.00	88.980	357.580	7487.96	1254.34	1254.71	1105.29	1718020.85	14545025.41	40°02'59.644"N	104°43'21.687"W	1.61	
10362.00	90.990	0.010	7487.98	1344.31	1344.67	1103.40	1718018.68	14545115.34	40°03'00.533"N	104°43'21.711"W	3.50	
10452.00	90.620	359.730	7486.72	1434.30	1434.67	1103.20	1718018.20	14545205.29	40°03'01.422"N	104°43'21.714"W	0.52	
10541.00	90.060	359.780	7486.19	1523.30	1523.66	1102.82	1718017.55	14545294.25	40°03'02.302"N	104°43'21.719"W	0.63	
10631.00	89.600	359.870	7486.45	1613.30	1613.66	1102.54	1718017.00	14545384.22	40°03'03.191"N	104°43'21.722"W	0.52	
10721.00	89.720	359.590	7486.99	1703.29	1703.66	1102.12	1718016.30	14545474.18	40°03'04.081"N	104°43'21.728"W	0.34	
10810.00	90.000	1.210	7487.21	1792.29	1792.65	1102.74	1718016.65	14545563.14	40°03'04.960"N	104°43'21.720"W	1.85	
10900.00	90.490	1.970	7486.82	1882.25	1882.62	1105.24	1718018.87	14545653.07	40°03'05.849"N	104°43'21.687"W	1.00	
10989.00	90.680	1.110	7485.91	1971.21	1971.58	1107.63	1718020.99	14545742.01	40°03'06.728"N	104°43'21.657"W	0.99	
11079.00	90.520	0.960	7484.97	2061.19	2061.56	1109.25	1718022.33	14545831.96	40°03'07.618"N	104°43'21.636"W	0.24	
11169.00	90.280	1.580	7484.34	2151.17	2151.53	1111.25	1718024.05	14545921.90	40°03'08.507"N	104°43'21.610"W	0.74	
11258.00	91.230	2.050	7483.17	2240.11	2240.48	1114.07	1718026.60	14546010.82	40°03'09.386"N	104°43'21.574"W	1.19	
11348.00	90.580	2.320	7481.75	2330.03	2330.40	1117.50	1718029.75	14546100.72	40°03'10.274"N	104°43'21.529"W	0.78	
11437.00	90.150	1.210	7481.18	2418.99	2419.36	1120.24	1718032.22	14546189.64	40°03'11.153"N	104°43'21.494"W	1.34	
11527.00	90.250	0.030	7480.87	2508.98	2509.35	1121.21	1718032.91	14546279.60	40°03'12.043"N	104°43'21.482"W	1.32	
11616.00	90.180	0.500	7480.53	2597.98	2598.35	1121.62	1718033.05	14546368.57	40°03'12.922"N	104°43'21.476"W	0.53	
11657.00†	90.030	0.491	7480.46	2638.98	2639.35	1121.98	1718033.28	14546409.55	40°03'13.327"N	104°43'21.472"W	0.37	CROSS SETBACK TOE (1772'FNL & 1857'FEL, SEC.13) 40.0537021 -104.7226310
11706.00	89.850	0.480	7480.51	2687.97	2688.35	1122.39	1718033.55	14546458.53	40°03'13.812"N	104°43'21.466"W	0.37	
11795.00	91.230	359.360	7479.67	2776.97	2777.34	1122.27	1718033.15	14546547.49	40°03'14.691"N	104°43'21.468"W	2.00	
11885.00	91.020	359.290	7477.90	2866.94	2867.31	1121.21	1718031.81	14546637.42	40°03'15.580"N	104°43'21.481"W	0.25	
11975.00	90.860	358.490	7476.43	2956.91	2957.28	1119.47	1718029.79	14546727.35	40°03'16.469"N	104°43'21.504"W	0.91	
12064.00	91.020	358.840	7474.97	3045.88	3046.25	1117.39	1718027.45	14546816.27	40°03'17.348"N	104°43'21.530"W	0.43	
12154.00	90.550	357.660	7473.73	3135.83	3136.20	1114.65	1718024.43	14546906.18	40°03'18.237"N	104°43'21.566"W	1.41	
12243.00	89.380	359.940	7473.79	3224.80	3225.17	1112.78	1718022.29	14546995.11	40°03'19.117"N	104°43'21.590"W	2.88	
12333.00	90.460	1.360	7473.91	3314.79	3315.16	1113.80	1718023.03	14547085.07	40°03'20.006"N	104°43'21.576"W	1.98	
12423.00	90.550	0.990	7473.12	3404.77	3405.14	1115.65	1718024.60	14547175.01	40°03'20.895"N	104°43'21.553"W	0.42	
12512.00	89.690	0.190	7472.93	3493.76	3494.13	1116.56	1718025.25	14547263.98	40°03'21.775"N	104°43'21.541"W	1.32	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#31 AZUL 13-14HZ (882'FSL & 2327'FWL, SEC.13)
Area	COLORADO	Well	AZUL 13-14HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-14HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (186 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
12602.00	88.550	359.540	7474.32	3583.75	3584.12	1116.35	1718024.76	14547353.93	40°03'22.664"N	104°43'21.543"W	1.46	
12692.00	89.230	359.610	7476.06	3673.73	3674.10	1115.69	1718023.81	14547443.87	40°03'23.553"N	104°43'21.552"W	0.76	
12781.00	88.670	359.670	7477.69	3762.71	3763.08	1115.13	1718022.98	14547532.81	40°03'24.432"N	104°43'21.559"W	0.63	
12871.00	87.630	359.530	7480.60	3852.66	3853.03	1114.50	1718022.08	14547622.73	40°03'25.321"N	104°43'21.567"W	1.17	
12904.00	87.450	359.440	7482.01	3885.63	3886.00	1114.20	1718021.68	14547655.68	40°03'25.647"N	104°43'21.571"W	0.61	LAST BHGE MWD+IFR1+SC SURVEY
12951.00	87.450	359.440	7484.10	3932.58	3932.95	1113.74	1718021.08	14547702.61	40°03'26.111"N	104°43'21.577"W	0.00	PTB (478'FNL & 1865'FEL, SEC.13) 40.0572531 -104.7226602

HOLE & CASING SECTIONS - Ref Wellbore: AZUL 13-14HZ AWB Ref Wellpath: AZUL 13-14HZ AWP									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.625in Casing Surface	21.00	1873.00	1852.00	21.00	1832.10	0.00	0.00	-233.06	176.90

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.13-T1N-R66W	-17.00	30.99	-1167.80	1715752.42	14543795.21	40°02'47.551"N	104°43'50.916"W	polygon
AZUL 13-14HZ BHL REV-1(471'FNL & 1860'FEL, SEC.13)	7473.00	3939.52	1118.55	1718025.86	14547709.19	40°03'26.176"N	104°43'21.515"W	point
AZUL 13-14HZ HEEL REV-1(50'FSL & 1846'FEL, SEC.13)	7481.00	-823.57	1120.16	1718042.09	14542948.01	40°02'39.106"N	104°43'21.497"W	point
AZUL 13-14HZ LANDBOX	7495.00	0.00	0.00	1716919.85	14543767.82	40°02'47.245"N	104°43'35.900"W	polygon
AZUL 13-14HZ SETBACK 1	7495.00	0.00	0.00	1716919.85	14543767.82	40°02'47.245"N	104°43'35.900"W	polygon
AZUL 13-14HZ SETBACK 2	7495.00	0.00	0.00	1716919.85	14543767.82	40°02'47.245"N	104°43'35.900"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: AZUL 13-14HZ AWB Ref Wellpath: AZUL 13-14HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
21.00	1833.00	Custom APC_ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC_ISCWSA Rev-2 MWD+IFR1+SC <130 - 1833>	AZUL 13-14HZ AWB
1833.00	12904.00	Custom APC_ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC_ISCWSA Rev-2 MWD+IFR1+SC <1833 - 12904>	AZUL 13-14HZ AWB
12904.00	12951.00	Blind Drilling (std)	Projection to bit	AZUL 13-14HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#31 AZUL 13-14HZ (882'FSL & 2327'FWL, SEC.13)
Area	COLORADO	Well	AZUL 13-14HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-14HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
130.00	0.700	340.150	130.00	FIRST SURFACE MWD+IFR1 SURVEY
1833.00	19.600	145.390	1794.41	LAST SURFACE MWD+IFR1 SURVEY
1935.00	19.420	145.060	1890.55	FIRST BHGE MWD+IFR1+SC SURVEY
4648.00	22.088	147.092	4404.72	ENTER LANDBOX (193'FNL & 2181'FEL, SEC.24) 40.0435077 -104.7238352
7030.00	3.389	344.683	6688.26	KOP
8237.00	88.717	1.392	7479.84	LANDING (103'FSL & 1809'FEL, SEC.13) 40.0443184 -104.7225061
8610.00	88.889	358.500	7483.55	CROSS SETBACK HEEL (476'FSL & 1813'FEL, SEC.13) 40.0453421 -104.7225193
11657.00	90.030	0.491	7480.46	CROSS SETBACK TOE (1772'FNL & 1857'FEL, SEC.13) 40.0537021 -104.7226310
12904.00	87.450	359.440	7482.01	LAST BHGE MWD+IFR1+SC SURVEY
12951.00	87.450	359.440	7484.10	PTB (478'FNL & 1865'FEL, SEC.13) 40.0572531 -104.7226602