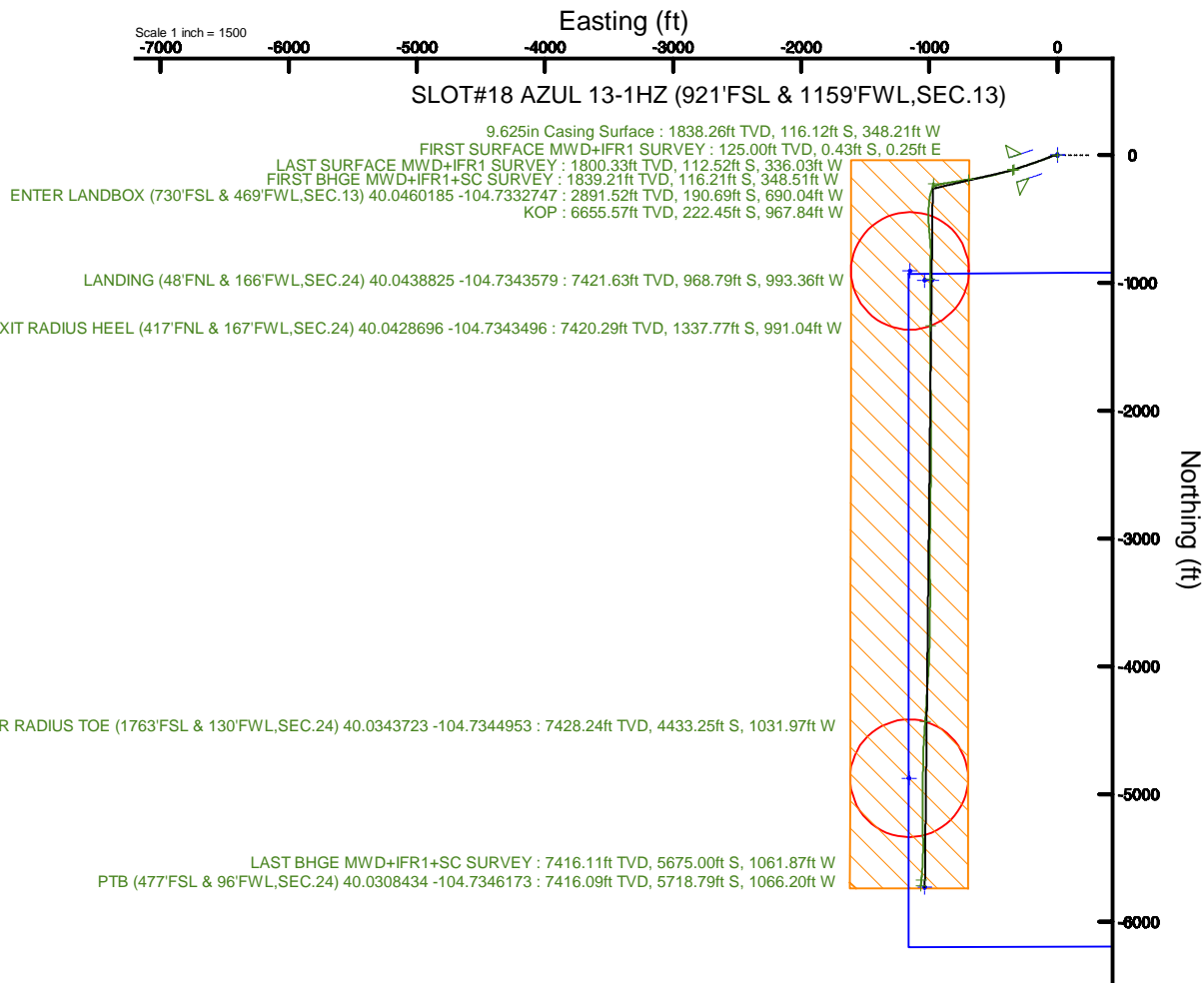
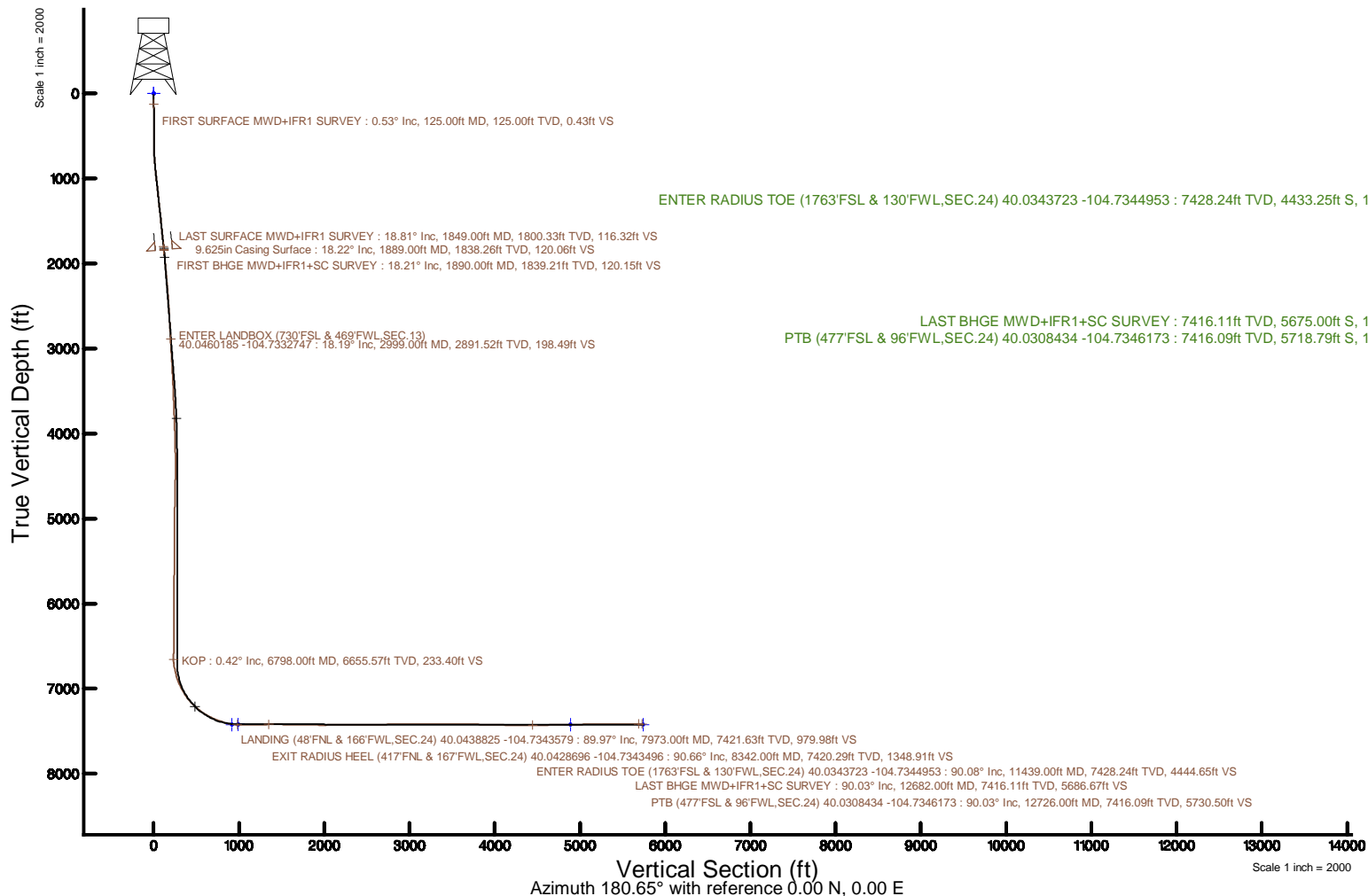


# KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#18 AZUL 13-1HZ (921'FSL & 1159'FWL,SEC.13)  
Field: WELD COUNTY (UTM/TRUE NORTH) Well: AZUL 13-1HZ  
Facility: SEC.13-T1N-R66W Wellbore: AZUL 13-1HZ PWB

Plot reference wellpath is AZUL 13-1HZ PWP Rev-B.0	Grid System: NAD83 / UTM Zone 13 North, US feet
True vertical depths are referenced to Xtrame 22 (17) (RT)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to Xtrame 22 (17) (RT)	North Reference: True north
Xtrame 22 (17) (RT) to Mean Sea Level: 5088 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#18 AZUL 13-1HZ (921'FSL & 1159'FWL,SEC.13)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: painsetr on 2018-04-18
	Database: WA, DEN, Anadarko, Delft



# Actual Wellpath Report

AZUL 13-1HZ AWP

Page 1 of 7

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#18 AZUL 13-1HZ (921'FSL & 1159'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-1HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-1HZ AWP
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	0.999606	Report Generated	4/18/2018 at 12:40 PM
Convergence at slot	0.18° East	Database/Source file	WA_DEN_Anadarko_Defn/AZUL_13-1HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-4157.20	-1731.32	1715752.42	14543795.21	40°02'47.551"N	104°43'50.916"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#18 AZUL 13-1HZ (921'FSL & 1159'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	180.65°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#18 AZUL 13-1HZ (921'FSL & 1159'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-1HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-1HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (188 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	150.220	0.00	0.00	0.00	0.00	1715752.42	14543795.21	40°02'47.551°N	104°43'50.916°W	0.00	
17.00	0.000	150.220	17.00	0.00	0.00	0.00	1715752.42	14543795.21	40°02'47.551°N	104°43'50.916°W	0.00	
125.00	0.530	150.220	125.00	0.43	-0.43	0.25	1715752.67	14543794.78	40°02'47.547°N	104°43'50.913°W	0.49	FIRST SURFACE MWD+IFR1 SURVEY
157.00	1.050	158.310	157.00	0.83	-0.83	0.43	1715752.85	14543794.38	40°02'47.543°N	104°43'50.910°W	1.66	
188.00	0.830	187.130	187.99	1.32	-1.32	0.51	1715752.93	14543793.89	40°02'47.538°N	104°43'50.909°W	1.66	
220.00	0.260	291.900	219.99	1.52	-1.52	0.41	1715752.84	14543793.69	40°02'47.536°N	104°43'50.911°W	2.91	
251.00	0.830	291.020	250.99	1.42	-1.42	0.14	1715752.56	14543793.80	40°02'47.537°N	104°43'50.914°W	1.84	
283.00	0.970	269.930	282.98	1.34	-1.33	-0.35	1715752.08	14543793.88	40°02'47.538°N	104°43'50.921°W	1.12	
314.00	1.930	270.540	313.97	1.34	-1.33	-1.14	1715751.29	14543793.88	40°02'47.538°N	104°43'50.931°W	3.10	
346.00	2.200	268.520	345.95	1.37	-1.34	-2.29	1715750.14	14543793.87	40°02'47.538°N	104°43'50.945°W	0.87	
377.00	1.930	273.090	376.93	1.37	-1.33	-3.40	1715749.02	14543793.87	40°02'47.538°N	104°43'50.960°W	1.02	
409.00	2.770	275.990	408.91	1.27	-1.22	-4.71	1715747.72	14543793.98	40°02'47.539°N	104°43'50.977°W	2.65	
441.00	3.430	266.150	440.86	1.27	-1.20	-6.44	1715745.99	14543793.99	40°02'47.539°N	104°43'50.999°W	2.64	
472.00	4.130	261.660	471.79	1.52	-1.43	-8.47	1715743.96	14543793.76	40°02'47.537°N	104°43'51.025°W	2.45	
504.00	4.480	261.930	503.70	1.89	-1.77	-10.84	1715741.59	14543793.41	40°02'47.534°N	104°43'51.055°W	1.10	
535.00	4.920	262.190	534.60	2.27	-2.12	-13.36	1715739.08	14543793.05	40°02'47.530°N	104°43'51.088°W	1.42	
567.00	5.580	260.350	566.46	2.75	-2.57	-16.25	1715736.18	14543792.60	40°02'47.526°N	104°43'51.125°W	2.13	
599.00	6.460	260.430	598.29	3.35	-3.13	-19.56	1715732.88	14543792.03	40°02'47.520°N	104°43'51.168°W	2.75	
631.00	7.290	261.660	630.06	3.98	-3.72	-23.34	1715729.10	14543791.42	40°02'47.514°N	104°43'51.216°W	2.63	
663.00	8.260	259.990	661.76	4.73	-4.41	-27.62	1715724.83	14543790.72	40°02'47.507°N	104°43'51.271°W	3.11	
695.00	9.320	257.090	693.39	5.76	-5.39	-32.41	1715720.04	14543789.72	40°02'47.498°N	104°43'51.333°W	3.59	
726.00	9.800	252.880	723.95	7.15	-6.73	-37.38	1715715.08	14543788.37	40°02'47.484°N	104°43'51.397°W	2.73	
758.00	10.770	249.180	755.44	9.08	-8.59	-42.77	1715709.69	14543786.49	40°02'47.466°N	104°43'51.466°W	3.67	
790.00	11.340	247.600	786.85	11.40	-10.86	-48.48	1715704.00	14543784.21	40°02'47.444°N	104°43'51.539°W	2.02	
822.00	11.560	245.400	818.21	14.00	-13.39	-54.30	1715698.18	14543781.66	40°02'47.419°N	104°43'51.614°W	1.53	
854.00	12.300	246.020	849.52	16.79	-16.11	-60.33	1715692.17	14543778.93	40°02'47.392°N	104°43'51.692°W	2.35	
885.00	13.360	249.620	879.74	19.45	-18.70	-66.70	1715685.80	14543776.32	40°02'47.366°N	104°43'51.774°W	4.28	
917.00	13.890	249.100	910.84	22.19	-21.36	-73.76	1715678.76	14543773.64	40°02'47.340°N	104°43'51.864°W	1.70	
949.00	14.500	249.450	941.87	25.05	-24.13	-81.10	1715671.43	14543770.84	40°02'47.313°N	104°43'51.959°W	1.93	
980.00	15.160	249.010	971.83	27.95	-26.95	-88.52	1715664.02	14543768.01	40°02'47.285°N	104°43'52.054°W	2.16	
1012.00	15.910	247.950	1002.67	31.18	-30.09	-96.49	1715656.06	14543764.84	40°02'47.254°N	104°43'52.157°W	2.51	
1044.00	16.610	250.150	1033.39	34.48	-33.29	-104.86	1715647.71	14543761.62	40°02'47.222°N	104°43'52.264°W	2.91	
1076.00	17.490	249.890	1063.98	37.78	-36.50	-113.67	1715638.91	14543758.38	40°02'47.190°N	104°43'52.378°W	2.76	
1107.00	17.710	250.150	1093.53	41.09	-39.70	-122.48	1715630.11	14543755.16	40°02'47.159°N	104°43'52.491°W	0.75	
1139.00	16.920	249.270	1124.08	44.49	-43.00	-131.42	1715621.19	14543751.83	40°02'47.126°N	104°43'52.606°W	2.60	
1171.00	16.700	250.770	1154.71	47.75	-46.17	-140.11	1715612.51	14543748.64	40°02'47.095°N	104°43'52.718°W	1.52	
1202.00	16.920	249.800	1184.39	50.87	-49.19	-148.55	1715604.08	14543745.59	40°02'47.065°N	104°43'52.826°W	1.15	
1234.00	17.400	250.500	1214.96	54.18	-52.40	-157.43	1715595.21	14543742.36	40°02'47.033°N	104°43'52.940°W	1.63	
1266.00	17.580	250.240	1245.48	57.51	-55.63	-166.49	1715586.17	14543739.11	40°02'47.001°N	104°43'53.057°W	0.61	
1298.00	17.050	249.100	1276.03	60.92	-58.93	-175.42	1715577.25	14543735.77	40°02'46.969°N	104°43'53.172°W	1.97	
1330.00	16.440	251.820	1306.67	64.10	-62.02	-184.11	1715568.58	14543732.66	40°02'46.938°N	104°43'53.283°W	3.10	
1361.00	16.960	251.380	1336.37	67.01	-64.83	-192.56	1715560.14	14543729.82	40°02'46.910°N	104°43'53.392°W	1.73	
1393.00	17.310	251.290	1366.95	70.13	-67.85	-201.49	1715551.22	14543726.78	40°02'46.880°N	104°43'53.507°W	1.10	
1425.00	17.890	251.290	1397.45	73.34	-70.95	-210.65	1715542.07	14543723.65	40°02'46.850°N	104°43'53.625°W	1.81	
1456.00	18.760	250.330	1426.88	76.64	-74.16	-219.86	1715532.88	14543720.42	40°02'46.818°N	104°43'53.743°W	2.97	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#18 AZUL 13-1HZ (921'FSL & 1159'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-1HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-1HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (188 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	18.370	250.770	1486.60	83.54	-80.84	-238.77	1715513.99	14543713.68	40°02'46.752"N	104°43'53.986"W	0.66	
1551.00	18.240	251.910	1516.98	86.86	-84.05	-248.29	1715504.48	14543710.44	40°02'46.720"N	104°43'54.109"W	1.19	
1583.00	18.590	253.050	1547.34	90.01	-87.10	-257.93	1715494.86	14543707.37	40°02'46.690"N	104°43'54.233"W	1.57	
1615.00	18.630	252.440	1577.67	93.15	-90.13	-267.69	1715485.12	14543704.31	40°02'46.660"N	104°43'54.358"W	0.62	
1646.00	17.450	253.670	1607.14	96.06	-92.93	-276.87	1715475.95	14543701.49	40°02'46.633"N	104°43'54.476"W	4.00	
1678.00	16.920	251.380	1637.71	98.99	-95.76	-285.88	1715466.94	14543698.62	40°02'46.605"N	104°43'54.592"W	2.69	
1710.00	17.490	251.290	1668.28	102.13	-98.79	-294.85	1715457.99	14543695.57	40°02'46.575"N	104°43'54.707"W	1.78	
1742.00	17.750	250.500	1698.78	105.40	-101.96	-304.00	1715448.85	14543692.37	40°02'46.543"N	104°43'54.825"W	1.10	
1773.00	18.410	251.560	1728.25	108.63	-105.09	-313.10	1715439.76	14543689.22	40°02'46.512"N	104°43'54.942"W	2.38	
1805.00	18.460	252.000	1758.61	111.90	-108.25	-322.71	1715430.16	14543686.03	40°02'46.481"N	104°43'55.066"W	0.46	
1837.00	18.500	252.000	1788.96	115.14	-111.39	-332.36	1715420.53	14543682.87	40°02'46.450"N	104°43'55.190"W	0.12	
1849.00	18.810	253.490	1800.33	116.32	-112.52	-336.03	1715416.87	14543681.72	40°02'46.439"N	104°43'55.237"W	4.74	LAST SURFACE MWD+IFR1 SURVEY
1890.00	18.210	253.620	1839.21	120.15	-116.21	-348.51	1715404.40	14543678.00	40°02'46.403"N	104°43'55.397"W	1.47	FIRST BHGE MWD+IFR1+SC SURVEY
1978.00	17.940	252.940	1922.86	128.30	-124.06	-374.66	1715378.29	14543670.07	40°02'46.325"N	104°43'55.733"W	0.39	
2066.00	18.060	256.250	2006.56	135.81	-131.28	-400.87	1715352.11	14543662.77	40°02'46.254"N	104°43'56.070"W	1.17	
2153.00	19.230	255.350	2088.99	142.95	-138.11	-427.83	1715325.18	14543655.86	40°02'46.186"N	104°43'56.417"W	1.38	
2241.00	18.150	254.390	2172.35	150.61	-145.46	-455.05	1715297.99	14543648.43	40°02'46.113"N	104°43'56.767"W	1.28	
2329.00	19.200	257.270	2255.72	157.80	-152.34	-482.37	1715270.71	14543641.47	40°02'46.045"N	104°43'57.118"W	1.59	
2417.00	18.210	255.310	2339.07	164.78	-159.02	-509.78	1715243.32	14543634.72	40°02'45.979"N	104°43'57.471"W	1.33	
2505.00	17.900	259.950	2422.74	170.93	-164.86	-536.40	1715216.73	14543628.79	40°02'45.922"N	104°43'57.813"W	1.67	
2592.00	18.450	259.100	2505.40	176.17	-169.80	-563.08	1715190.08	14543623.78	40°02'45.873"N	104°43'58.156"W	0.70	
2680.00	18.490	258.790	2588.87	181.82	-175.15	-590.45	1715162.74	14543618.35	40°02'45.820"N	104°43'58.508"W	0.12	
2767.00	18.410	261.920	2671.40	186.74	-179.76	-617.58	1715135.63	14543613.66	40°02'45.774"N	104°43'58.857"W	1.14	
2855.00	18.760	260.320	2754.81	191.39	-184.09	-645.29	1715107.95	14543609.24	40°02'45.732"N	104°43'59.213"W	0.70	
2942.00	18.090	262.410	2837.35	195.83	-188.23	-672.47	1715080.79	14543605.03	40°02'45.691"N	104°43'59.563"W	1.08	
2999.00†	18.193	261.669	2891.52	198.49	-190.69	-690.04	1715063.23	14543602.52	40°02'45.666"N	104°43'59.789"W	0.44	ENTER LANDBOX (730'FSL & 469'FWL, SEC.13) 40.0460185 -104.7332747
3030.00	18.250	261.270	2920.96	200.04	-192.13	-699.63	1715053.65	14543601.05	40°02'45.652"N	104°43'59.912"W	0.44	
3118.00	17.550	259.620	3004.70	204.82	-196.61	-726.30	1715027.01	14543596.49	40°02'45.608"N	104°44'00.255"W	0.98	
3205.00	17.940	259.750	3087.56	209.86	-201.35	-752.39	1715000.94	14543591.66	40°02'45.561"N	104°44'00.590"W	0.45	
3292.00	18.890	261.650	3170.11	214.60	-205.78	-779.51	1714973.85	14543587.15	40°02'45.517"N	104°44'00.939"W	1.29	
3380.00	16.930	261.210	3253.84	218.93	-209.81	-806.27	1714947.11	14543583.05	40°02'45.477"N	104°44'01.283"W	2.23	
3467.00	16.370	261.000	3337.19	223.06	-213.67	-830.89	1714922.51	14543579.12	40°02'45.439"N	104°44'01.600"W	0.65	
3555.00	13.570	260.610	3422.20	226.94	-217.29	-853.33	1714900.09	14543575.43	40°02'45.404"N	104°44'01.888"W	3.18	
3642.00	12.900	262.220	3506.88	230.14	-220.27	-873.03	1714880.41	14543572.39	40°02'45.374"N	104°44'02.142"W	0.88	
3729.00	12.080	259.090	3591.83	233.39	-223.31	-891.59	1714861.87	14543569.30	40°02'45.344"N	104°44'02.380"W	1.22	
3817.00	9.380	256.760	3678.28	236.96	-226.69	-907.61	1714845.86	14543565.87	40°02'45.311"N	104°44'02.586"W	3.11	
3904.00	8.140	258.480	3764.26	239.96	-229.55	-920.55	1714832.94	14543562.98	40°02'45.282"N	104°44'02.753"W	1.46	
3992.00	7.890	255.150	3851.40	242.89	-232.34	-932.49	1714821.01	14543560.15	40°02'45.255"N	104°44'02.906"W	0.60	
4079.00	6.400	248.360	3937.73	246.32	-235.66	-942.77	1714810.74	14543556.80	40°02'45.222"N	104°44'03.038"W	1.97	
4166.00	4.920	248.190	4024.30	249.59	-238.83	-950.74	1714802.78	14543553.60	40°02'45.191"N	104°44'03.141"W	1.70	
4254.00	3.660	248.140	4112.05	252.10	-241.28	-956.85	1714796.68	14543551.14	40°02'45.166"N	104°44'03.219"W	1.43	
4341.00	2.550	253.880	4198.92	253.73	-242.85	-961.29	1714792.25	14543549.55	40°02'45.151"N	104°44'03.277"W	1.32	
4429.00	1.640	260.040	4286.86	254.52	-243.61	-964.41	1714789.13	14543548.78	40°02'45.143"N	104°44'03.317"W	1.06	
4516.00	1.420	268.000	4373.83	254.80	-243.87	-966.71	1714786.83	14543548.52	40°02'45.141"N	104°44'03.346"W	0.35	
4604.00	1.410	279.390	4461.81	254.69	-243.73	-968.87	1714784.67	14543548.65	40°02'45.142"N	104°44'03.374"W	0.32	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#18 AZUL 13-1HZ (921'FSL & 1159'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-1HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-1HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (188 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
4691.00	0.940	316.730	4548.79	254.01	-243.03	-970.42	1714783.13	14543549.34	40°02'45.149"N	104°44'03.394"W	1.00	
4779.00	1.150	25.030	4636.78	252.69	-241.71	-970.54	1714783.00	14543550.67	40°02'45.162"N	104°44'03.395"W	1.35	
4866.00	1.560	34.760	4723.75	250.91	-239.94	-969.49	1714784.04	14543552.44	40°02'45.180"N	104°44'03.382"W	0.54	
4954.00	1.770	35.130	4811.72	248.80	-237.85	-968.03	1714785.50	14543554.53	40°02'45.200"N	104°44'03.363"W	0.24	
5041.00	1.640	32.750	4898.68	246.64	-235.70	-966.58	1714786.94	14543556.68	40°02'45.222"N	104°44'03.345"W	0.17	
5129.00	0.160	108.960	4986.66	245.61	-234.68	-965.79	1714787.73	14543557.70	40°02'45.232"N	104°44'03.334"W	1.83	
5216.00	0.330	47.220	5073.66	245.47	-234.55	-965.49	1714788.03	14543557.84	40°02'45.233"N	104°44'03.330"W	0.33	
5304.00	0.620	339.870	5161.66	244.85	-233.93	-965.46	1714788.05	14543558.46	40°02'45.239"N	104°44'03.330"W	0.66	
5391.00	0.400	37.590	5248.66	244.17	-233.25	-965.44	1714788.07	14543559.14	40°02'45.246"N	104°44'03.330"W	0.61	
5479.00	1.350	311.930	5336.65	243.24	-232.31	-966.03	1714787.49	14543560.07	40°02'45.255"N	104°44'03.337"W	1.57	
5566.00	0.540	339.010	5423.64	242.18	-231.25	-966.93	1714786.57	14543561.14	40°02'45.266"N	104°44'03.349"W	1.04	
5653.00	0.310	45.310	5510.64	241.64	-230.70	-966.91	1714786.59	14543561.68	40°02'45.271"N	104°44'03.349"W	0.58	
5741.00	0.260	1.780	5598.63	241.27	-230.33	-966.74	1714786.77	14543562.05	40°02'45.275"N	104°44'03.347"W	0.25	
5828.00	0.870	1.380	5685.63	240.41	-229.47	-966.72	1714786.79	14543562.91	40°02'45.283"N	104°44'03.346"W	0.70	
5915.00	1.350	7.880	5772.61	238.73	-227.80	-966.56	1714786.94	14543564.58	40°02'45.300"N	104°44'03.344"W	0.57	
6003.00	0.310	310.280	5860.60	237.55	-226.62	-966.60	1714786.89	14543565.76	40°02'45.311"N	104°44'03.345"W	1.38	
6091.00	1.050	10.620	5948.60	236.61	-225.67	-966.63	1714786.86	14543566.71	40°02'45.321"N	104°44'03.345"W	1.06	
6178.00	1.080	280.840	6035.59	235.68	-224.73	-967.29	1714786.20	14543567.65	40°02'45.330"N	104°44'03.354"W	1.73	
6266.00	0.250	318.600	6123.58	235.39	-224.43	-968.23	1714785.26	14543567.94	40°02'45.333"N	104°44'03.366"W	1.02	
6353.00	0.220	114.090	6210.58	235.31	-224.36	-968.21	1714785.28	14543568.02	40°02'45.334"N	104°44'03.365"W	0.53	
6441.00	0.490	319.140	6298.58	235.10	-224.14	-968.30	1714785.19	14543568.23	40°02'45.336"N	104°44'03.367"W	0.79	
6529.00	0.620	114.970	6386.58	235.01	-224.06	-968.11	1714785.37	14543568.32	40°02'45.337"N	104°44'03.364"W	1.23	
6616.00	0.330	31.410	6473.58	234.99	-224.05	-967.55	1714785.93	14543568.33	40°02'45.337"N	104°44'03.357"W	0.77	
6704.00	0.650	343.950	6561.57	234.29	-223.35	-967.56	1714785.92	14543569.03	40°02'45.344"N	104°44'03.357"W	0.56	
6791.00	0.560	344.160	6648.57	233.41	-222.47	-967.81	1714785.67	14543569.91	40°02'45.352"N	104°44'03.360"W	0.10	
6798.00†	0.421	224.673	6655.57	233.40	-222.45	-967.84	1714785.64	14543569.93	40°02'45.352"N	104°44'03.361"W	12.15	KOP
6878.00	10.070	191.070	6735.14	240.51	-229.54	-969.39	1714784.11	14543562.83	40°02'45.282"N	104°44'03.381"W	12.15	
6965.00	14.630	193.710	6820.11	258.70	-247.69	-973.46	1714780.10	14543544.68	40°02'45.103"N	104°44'03.433"W	5.28	
7053.00	19.980	198.850	6904.10	283.83	-272.73	-980.96	1714772.68	14543519.62	40°02'44.856"N	104°44'03.529"W	6.32	
7141.00	28.360	193.690	6984.32	318.54	-307.33	-990.78	1714762.97	14543485.01	40°02'44.514"N	104°44'03.656"W	9.81	
7228.00	31.400	188.790	7059.76	361.12	-349.82	-999.14	1714754.74	14543442.51	40°02'44.094"N	104°44'03.763"W	4.48	
7316.00	40.230	182.940	7131.07	412.32	-400.98	-1004.11	1714749.93	14543391.36	40°02'43.588"N	104°44'03.827"W	10.75	
7403.00	45.290	180.430	7194.93	471.35	-459.99	-1005.78	1714748.43	14543332.37	40°02'43.005"N	104°44'03.849"W	6.14	
7491.00	51.780	177.960	7253.17	537.23	-525.88	-1004.79	1714749.63	14543266.50	40°02'42.354"N	104°44'03.836"W	7.67	
7579.00	59.320	174.560	7302.93	609.51	-598.22	-999.96	1714754.67	14543194.21	40°02'41.639"N	104°44'03.774"W	9.14	
7667.00	63.900	174.760	7344.76	686.48	-675.28	-992.76	1714762.10	14543117.20	40°02'40.878"N	104°44'03.681"W	5.21	
7754.00	69.870	180.070	7378.92	766.30	-755.14	-989.24	1714765.86	14543037.38	40°02'40.088"N	104°44'03.636"W	8.86	
7842.00	76.120	181.710	7404.64	850.41	-839.24	-990.56	1714764.79	14542953.32	40°02'39.257"N	104°44'03.653"W	7.32	
7929.00	84.290	181.180	7419.43	936.06	-924.87	-992.72	1714762.89	14542867.71	40°02'38.411"N	104°44'03.680"W	9.41	
7973.00	89.970	180.490	7421.63	979.98	-968.79	-993.36	1714762.39	14542823.81	40°02'37.977"N	104°44'03.688"W	13.00	LANDING (48'FNL & 166'FWL,SEC.24) 40.0438825 -104.7343579
8016.00	90.000	180.190	7421.64	1022.98	-1011.79	-993.61	1714762.26	14542780.82	40°02'37.552"N	104°44'03.692"W	0.70	
8104.00	89.910	179.800	7421.71	1110.98	-1099.79	-993.61	1714762.54	14542692.86	40°02'36.682"N	104°44'03.692"W	0.45	
8191.00	90.340	179.240	7421.52	1197.96	-1186.79	-992.88	1714763.53	14542605.90	40°02'35.823"N	104°44'03.682"W	0.81	
8279.00	90.460	179.260	7420.91	1285.93	-1274.78	-991.73	1714764.95	14542517.95	40°02'34.953"N	104°44'03.667"W	0.14	
8342.00†	90.660	179.496	7420.29	1348.91	-1337.77	-991.04	1714765.82	14542454.98	40°02'34.331"N	104°44'03.658"W	0.49	EXIT RADIUS HEEL (417'FNL & 167'FWL,SEC.24) 40.0428696 -104.7343496

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#18 AZUL 13-1HZ (921'FSL & 1159'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-1HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-1HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (188 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
8367.00	90.740	179.590	7419.99	1373.90	-1362.77	-990.84	1714766.09	14542429.99	40°02'34.084"N	104°44'03.656"W	0.49	
8454.00	89.450	179.610	7419.84	1460.89	-1449.76	-990.24	1714766.96	14542343.04	40°02'33.224"N	104°44'03.648"W	1.48	
8541.00	88.580	179.960	7421.34	1547.86	-1536.75	-989.91	1714767.55	14542256.09	40°02'32.364"N	104°44'03.644"W	1.08	
8629.00	87.570	180.430	7424.29	1635.81	-1624.70	-990.21	1714767.52	14542168.17	40°02'31.495"N	104°44'03.648"W	1.27	
8716.00	89.380	179.820	7426.61	1722.77	-1711.66	-990.40	1714767.59	14542081.24	40°02'30.636"N	104°44'03.650"W	2.20	
8804.00	90.340	179.550	7426.82	1810.76	-1799.66	-989.91	1714768.34	14541993.28	40°02'29.766"N	104°44'03.644"W	1.13	
8891.00	89.570	178.750	7426.89	1897.73	-1886.65	-988.62	1714769.90	14541906.33	40°02'28.906"N	104°44'03.627"W	1.28	
8979.00	89.910	180.210	7427.29	1985.71	-1974.64	-987.82	1714770.96	14541818.37	40°02'28.037"N	104°44'03.617"W	1.70	
9066.00	90.960	180.370	7426.63	2072.70	-2061.64	-988.26	1714770.78	14541731.41	40°02'27.177"N	104°44'03.622"W	1.22	
9154.00	90.310	180.040	7425.66	2160.69	-2149.63	-988.58	1714770.73	14541643.45	40°02'26.308"N	104°44'03.626"W	0.83	
9241.00	90.120	179.810	7425.33	2247.68	-2236.63	-988.47	1714771.11	14541556.49	40°02'25.448"N	104°44'03.625"W	0.34	
9329.00	90.340	179.830	7424.98	2335.67	-2324.63	-988.19	1714771.65	14541468.53	40°02'24.578"N	104°44'03.621"W	0.25	
9416.00	90.280	179.400	7424.51	2422.66	-2411.63	-987.60	1714772.50	14541381.57	40°02'23.719"N	104°44'03.614"W	0.50	
9504.00	90.370	180.820	7424.01	2510.65	-2499.62	-987.77	1714772.60	14541293.61	40°02'22.849"N	104°44'03.616"W	1.62	
9591.00	90.860	180.890	7423.07	2597.64	-2586.61	-989.07	1714771.56	14541206.65	40°02'21.989"N	104°44'03.633"W	0.57	
9678.00	91.050	180.520	7421.62	2684.63	-2673.59	-990.14	1714770.76	14541119.70	40°02'21.130"N	104°44'03.646"W	0.48	
9765.00	91.420	180.500	7419.75	2771.61	-2760.56	-990.92	1714770.24	14541032.76	40°02'20.270"N	104°44'03.656"W	0.43	
9853.00	90.120	181.120	7418.57	2859.60	-2848.55	-992.16	1714769.27	14540944.81	40°02'19.401"N	104°44'03.672"W	1.64	
9940.00	89.600	181.150	7418.78	2946.60	-2935.53	-993.88	1714767.81	14540857.86	40°02'18.541"N	104°44'03.694"W	0.60	
10028.00	89.660	179.880	7419.35	3034.59	-3023.52	-994.67	1714767.28	14540769.90	40°02'17.672"N	104°44'03.704"W	1.44	
10116.00	90.550	180.140	7419.18	3122.59	-3111.52	-994.69	1714767.53	14540681.93	40°02'16.802"N	104°44'03.704"W	1.05	
10203.00	90.620	180.000	7418.30	3209.58	-3198.51	-994.80	1714767.69	14540594.97	40°02'15.942"N	104°44'03.706"W	0.18	
10291.00	90.460	179.630	7417.47	3297.56	-3286.51	-994.51	1714768.24	14540507.01	40°02'15.073"N	104°44'03.702"W	0.46	
10379.00	90.860	179.990	7416.45	3385.55	-3374.50	-994.22	1714768.80	14540419.05	40°02'14.203"N	104°44'03.698"W	0.61	
10466.00	91.390	180.010	7414.75	3472.53	-3461.49	-994.22	1714769.06	14540332.11	40°02'13.344"N	104°44'03.698"W	0.61	
10554.00	88.980	180.260	7414.46	3560.52	-3549.48	-994.43	1714769.12	14540244.15	40°02'12.474"N	104°44'03.701"W	2.75	
10641.00	89.070	179.730	7415.94	3647.50	-3636.47	-994.42	1714769.39	14540157.20	40°02'11.614"N	104°44'03.701"W	0.62	
10729.00	88.280	181.640	7417.98	3735.47	-3724.43	-995.47	1714768.60	14540069.26	40°02'10.745"N	104°44'03.714"W	2.35	
10817.00	87.870	181.450	7420.93	3823.41	-3812.35	-997.84	1714766.50	14539981.37	40°02'09.876"N	104°44'03.745"W	0.51	
10904.00	89.050	182.260	7423.27	3910.35	-3899.27	-1000.66	1714763.95	14539894.48	40°02'09.017"N	104°44'03.781"W	1.64	
10992.00	88.400	181.770	7425.23	3998.31	-3987.19	-1003.75	1714761.12	14539806.58	40°02'08.148"N	104°44'03.821"W	0.92	
11079.00	89.510	184.510	7426.82	4085.20	-4074.04	-1008.52	1714756.62	14539719.76	40°02'07.290"N	104°44'03.882"W	3.40	
11167.00	89.170	184.480	7427.83	4173.00	-4161.76	-1015.41	1714749.99	14539632.05	40°02'06.423"N	104°44'03.970"W	0.39	
11254.00	90.060	182.830	7428.41	4259.87	-4248.58	-1020.96	1714744.71	14539545.25	40°02'05.565"N	104°44'04.042"W	2.15	
11342.00	90.030	183.450	7428.35	4347.79	-4336.45	-1025.78	1714740.16	14539457.40	40°02'04.697"N	104°44'04.104"W	0.71	
11429.00	90.090	183.820	7428.25	4434.67	-4423.27	-1031.29	1714734.91	14539370.59	40°02'03.839"N	104°44'04.174"W	0.43	
11439.00†	90.083	183.908	7428.24	4444.65	-4433.25	-1031.97	1714734.26	14539360.62	40°02'03.740"N	104°44'04.183"W	0.88	ENTER RADIUS TOE (1763'FSL & 130'FWL,SEC.24) 40.0343723 -104.7344953
11517.00	90.030	184.590	7428.16	4522.50	-4511.03	-1037.75	1714728.72	14539282.85	40°02'02.972"N	104°44'04.257"W	0.88	
11604.00	91.020	183.120	7427.36	4609.36	-4597.83	-1043.60	1714723.14	14539196.07	40°02'02.114"N	104°44'04.332"W	2.04	
11692.00	89.690	180.680	7426.82	4697.32	-4685.77	-1046.51	1714720.49	14539108.15	40°02'01.245"N	104°44'04.370"W	3.16	
11779.00	90.680	181.410	7426.54	4784.32	-4772.76	-1048.10	1714719.16	14539021.20	40°02'00.385"N	104°44'04.390"W	1.41	
11867.00	90.860	181.520	7425.36	4872.30	-4860.72	-1050.35	1714717.18	14538933.26	40°01'59.516"N	104°44'04.419"W	0.24	
11954.00	92.460	181.390	7422.84	4959.26	-4947.65	-1052.56	1714715.24	14538846.36	40°01'58.657"N	104°44'04.447"W	1.85	
12042.00	91.200	179.920	7420.03	5047.21	-5035.60	-1053.56	1714714.50	14538758.45	40°01'57.788"N	104°44'04.460"W	2.20	
12129.00	91.910	180.200	7417.66	5134.17	-5122.56	-1053.65	1714714.67	14538671.51	40°01'56.928"N	104°44'04.461"W	0.88	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#18 AZUL 13-1HZ (921'FSL & 1159'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-1HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-1HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (188 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
12217.00	89.720	179.040	7416.41	5222.14	-5210.55	-1053.07	1714715.52	14538583.57	40°01'56.059"N	104°44'04.454"W	2.82	
12304.00	89.110	177.620	7417.30	5309.06	-5297.50	-1050.53	1714718.32	14538496.66	40°01'55.200"N	104°44'04.421"W	1.78	
12392.00	90.400	180.160	7417.68	5397.01	-5385.48	-1048.83	1714720.29	14538408.72	40°01'54.330"N	104°44'04.399"W	3.24	
12480.00	90.220	180.490	7417.20	5485.01	-5473.47	-1049.33	1714720.05	14538320.76	40°01'53.461"N	104°44'04.406"W	0.43	
12567.00	90.400	183.430	7416.73	5571.97	-5560.41	-1052.30	1714717.34	14538233.85	40°01'52.601"N	104°44'04.444"W	3.39	
12654.00	90.310	185.570	7416.19	5658.77	-5647.14	-1059.13	1714710.78	14538147.14	40°01'51.744"N	104°44'04.532"W	2.46	
12682.00	90.030	185.650	7416.11	5686.67	-5675.00	-1061.87	1714708.13	14538119.27	40°01'51.469"N	104°44'04.567"W	1.04	LAST BHGE MWD+IFR1+SC SURVEY
12726.00	90.030	185.650	7416.09	5730.50	-5718.79	-1066.20	1714703.93	14538075.49	40°01'51.036"N	104°44'04.622"W	0.00	PTB (477'FSL & 96'FWL,SEC.24) 40.0308434 -104.7346173

HOLE & CASING SECTIONS - Ref Wellbore: AZUL 13-1HZ AWB Ref Wellpath: AZUL 13-1HZ 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	17.00	1889.00	1872.00	17.00	1838.26	0.00	0.00	-116.12	-348.21

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	0.00	0.00	1715752.42	14543795.21	40°02'47.551"N	104°43'50.916"W	polygon
SEC.24-T1N-R66W	0.00	0.00	0.00	1715752.42	14543795.21	40°02'47.551"N	104°43'50.916"W	polygon
AZUL 13-1HZ HEEL REV-1(50°FNL & 126'FWL,SEC.24)	7420.00	-979.17	-1036.22	1714719.57	14542813.30	40°02'37.874"N	104°44'04.240"W	point
AZUL 13-1HZ HEEL REV-2(50°FNL & 181'FWL,SEC.24)	7420.00	-979.17	-981.22	1714774.55	14542813.47	40°02'37.874"N	104°44'03.532"W	point
AZUL 13-1HZ BHL REV-1(468'FSL & 127'FWL,SEC.24)	7422.00	-5728.41	-1035.02	1714735.12	14538065.97	40°01'50.941"N	104°44'04.222"W	point
AZUL 13-1HZ LANDBOX	7422.00	0.00	0.00	1715752.42	14543795.21	40°02'47.551"N	104°43'50.916"W	polygon
AZUL 13-1HZ RADIUS 1	7422.00	-906.10	-1150.82	1714604.80	14542886.00	40°02'38.596"N	104°44'05.713"W	polygon
AZUL 13-1HZ RADIUS 2	7422.00	-4875.27	-1157.32	1714610.30	14538918.40	40°01'59.372"N	104°44'05.794"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: AZUL 13-1HZ AWB Ref Wellpath: AZUL 13-1HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1849.00	Custom APC ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC ISCWSA Rev-2 MWD+IFR1 <125 - 1849>	AZUL 13-1HZ AWB
1849.00	12682.00	Custom APC ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+SC <1890 - 12682>	AZUL 13-1HZ AWB
12682.00	12726.00	Blind Drilling (std)	Projection to bit	AZUL 13-1HZ AWB



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#18 AZUL 13-1HZ (921'FSL & 1159'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-1HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-1HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
125.00	0.530	150.220	125.00	FIRST SURFACE MWD+IFR1 SURVEY
1849.00	18.810	253.490	1800.33	LAST SURFACE MWD+IFR1 SURVEY
1890.00	18.210	253.620	1839.21	FIRST BHGE MWD+IFR1+SC SURVEY
2999.00	18.193	261.669	2891.52	ENTER LANDBOX (730'FSL & 469'FWL,SEC.13) 40.0460185 -104.7332747
6798.00	0.421	224.673	6655.57	KOP
7973.00	89.970	180.490	7421.63	LANDING (48'FNL & 166'FWL,SEC.24) 40.0438825 -104.7343579
8342.00	90.660	179.496	7420.29	EXIT RADIUS HEEL (417'FNL & 167'FWL,SEC.24) 40.0428696 -104.7343496
11439.00	90.083	183.908	7428.24	ENTER RADIUS TOE (1763'FSL & 130'FWL,SEC.24) 40.0343723 -104.7344953
12682.00	90.030	185.650	7416.11	LAST BHGE MWD+IFR1+SC SURVEY
12726.00	90.030	185.650	7416.09	PTB (477'FSL & 96'FWL,SEC.24) 40.0308434 -104.7346173