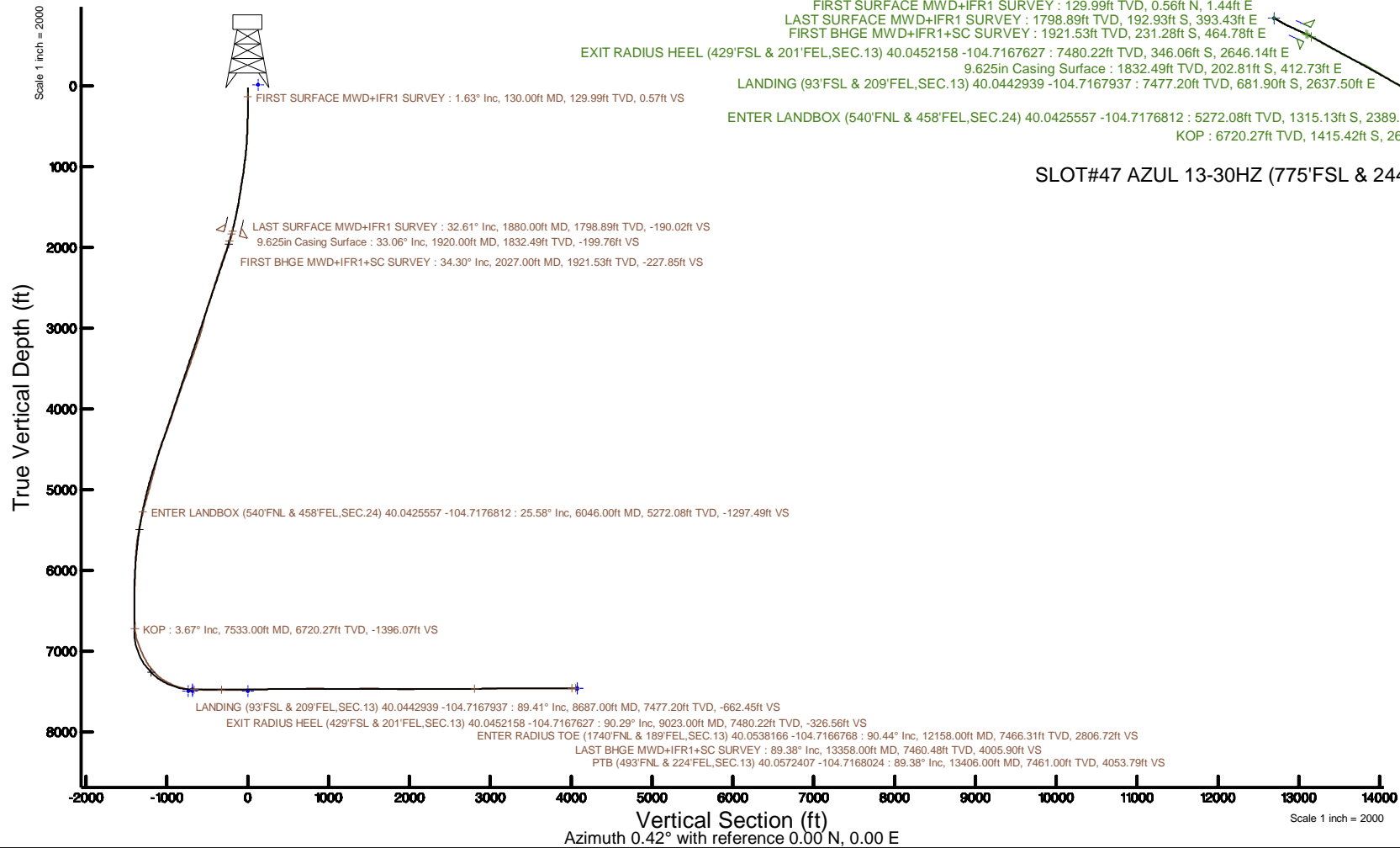
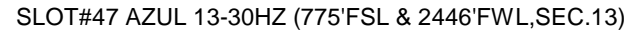


Location:	COLORADO	Slot:	SLOT#47 AZUL 13-30HZ (775FSL & 2446FWL,SEC.13)
Field:	WELD COUNTY (UTM/TRUE NORTH)	Well:	AZUL 13-30HZ
Facility:	SEC.13-T1N-R66W	Wellbore:	AZUL 13-30HZ PWB
Plot reference wellpath is AZUL 13-30HZ PWP Rev-A.0		Grid System: NAD83 / UTM Zone 13 North, US feet	
True vertical depths 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#47 AZUL 13-30HZ (775FSL & 2446FWL,SEC.13)): 0 feet		Depths are in feet	
Coordinates are in feet referenced to Slot		Created by: pairsnet on 2018-04-12	
		Database: WA_DEN_Anadarko_Defn	



Actual Wellpath Report

AZUL 13-30HZ AWP

Page 1 of 7

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#47 AZUL 13-30HZ (775'FSL & 2446'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-30HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-30HZ 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	4/12/2018 at 2:26 PM
Convergence at slot	0.18° East	Database/Source file	WA_DEN_Anadarko_Defn/AZUL_13-30HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-4294.17	-444.54	1717039.12	14543662.28	40°02'46.198"N	104°43'34.370"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#47 AZUL 13-30HZ (775'FSL & 2446'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	0.42°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#47 AZUL 13-30HZ (775'FSL & 2446'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-30HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-30HZ 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	68.740	0.00	0.00	0.00	0.00	1717039.12	14543662.28	40°02'46.198"N	104°43'34.370"W	0.00	
21.00	0.000	68.740	21.00	0.00	0.00	0.00	1717039.12	14543662.28	40°02'46.198"N	104°43'34.370"W	0.00	
130.00	1.630	68.740	129.99	0.57	0.56	1.44	1717040.56	14543662.84	40°02'46.204"N	104°43'34.351"W	1.50	FIRST SURFACE MWD+IFR1 SURVEY
162.00	1.490	80.260	161.97	0.81	0.80	2.28	1717041.39	14543663.08	40°02'46.206"N	104°43'34.341"W	1.07	
194.00	1.360	81.050	193.96	0.95	0.93	3.06	1717042.18	14543663.21	40°02'46.207"N	104°43'34.331"W	0.41	
226.00	1.230	105.390	225.96	0.92	0.89	3.77	1717042.88	14543663.18	40°02'46.207"N	104°43'34.322"W	1.75	
257.00	1.320	107.590	256.95	0.73	0.70	4.43	1717043.54	14543662.99	40°02'46.205"N	104°43'34.313"W	0.33	
289.00	1.630	111.110	288.94	0.46	0.42	5.21	1717044.32	14543662.72	40°02'46.202"N	104°43'34.303"W	1.01	
320.00	1.360	111.110	319.93	0.18	0.13	5.96	1717045.08	14543662.43	40°02'46.199"N	104°43'34.293"W	0.87	
352.00	2.200	115.500	351.91	-0.22	-0.27	6.87	1717045.99	14543662.03	40°02'46.195"N	104°43'34.282"W	2.66	
383.00	2.330	122.620	382.89	-0.81	-0.86	7.94	1717047.05	14543661.44	40°02'46.189"N	104°43'34.268"W	1.00	
415.00	2.900	122.970	414.85	-1.59	-1.66	9.17	1717048.28	14543660.65	40°02'46.182"N	104°43'34.252"W	1.78	
446.00	3.300	123.240	445.81	-2.49	-2.57	10.57	1717049.69	14543659.74	40°02'46.173"N	104°43'34.234"W	1.29	
509.00	3.650	121.650	508.69	-4.52	-4.62	13.79	1717052.92	14543657.70	40°02'46.152"N	104°43'34.193"W	0.58	
541.00	4.440	119.460	540.61	-5.65	-5.76	15.74	1717054.87	14543656.57	40°02'46.141"N	104°43'34.168"W	2.52	
573.00	5.320	115.850	572.50	-6.88	-7.02	18.15	1717057.28	14543655.32	40°02'46.129"N	104°43'34.137"W	2.91	
605.00	6.720	114.890	604.32	-8.30	-8.45	21.19	1717060.32	14543653.89	40°02'46.114"N	104°43'34.098"W	4.39	
637.00	7.290	113.920	636.08	-9.88	-10.06	24.74	1717063.88	14543652.29	40°02'46.099"N	104°43'34.052"W	1.82	
668.00	8.260	112.780	666.79	-11.51	-11.72	28.59	1717067.73	14543650.65	40°02'46.082"N	104°43'34.002"W	3.17	
700.00	8.830	114.970	698.44	-13.41	-13.65	32.94	1717072.08	14543648.73	40°02'46.063"N	104°43'33.946"W	2.05	
732.00	9.050	119.370	730.05	-15.65	-15.92	37.36	1717076.51	14543646.48	40°02'46.041"N	104°43'33.890"W	2.24	
764.00	9.540	122.270	761.63	-18.26	-18.57	41.79	1717080.95	14543643.84	40°02'46.014"N	104°43'33.833"W	2.12	
795.00	10.240	124.200	792.17	-21.15	-21.49	46.24	1717085.41	14543640.93	40°02'45.986"N	104°43'33.775"W	2.50	
827.00	10.500	125.260	823.65	-24.40	-24.77	50.98	1717090.15	14543637.67	40°02'45.953"N	104°43'33.715"W	1.01	
859.00	11.120	123.590	855.08	-27.75	-28.16	55.93	1717095.11	14543634.29	40°02'45.920"N	104°43'33.651"W	2.17	
891.00	11.950	123.940	886.43	-31.27	-31.72	61.25	1717100.44	14543630.76	40°02'45.885"N	104°43'33.582"W	2.60	
922.00	12.830	122.890	916.71	-34.89	-35.38	66.80	1717106.00	14543627.11	40°02'45.848"N	104°43'33.511"W	2.93	
954.00	13.320	121.390	947.88	-38.69	-39.23	72.93	1717112.14	14543623.28	40°02'45.810"N	104°43'33.432"W	1.86	
986.00	13.490	120.950	979.01	-42.49	-43.07	79.28	1717118.50	14543619.47	40°02'45.772"N	104°43'33.351"W	0.62	
1018.00	14.590	120.070	1010.05	-46.38	-47.01	85.97	1717125.19	14543615.55	40°02'45.733"N	104°43'33.265"W	3.50	
1049.00	15.950	118.930	1039.96	-50.34	-51.03	93.08	1717132.31	14543611.56	40°02'45.694"N	104°43'33.173"W	4.49	
1081.00	17.270	119.720	1070.62	-54.76	-55.51	101.05	1717140.30	14543607.10	40°02'45.649"N	104°43'33.071"W	4.18	
1113.00	18.110	118.840	1101.11	-59.46	-60.26	109.53	1717148.79	14543602.37	40°02'45.602"N	104°43'32.962"W	2.75	
1144.00	18.460	118.310	1130.54	-64.04	-64.92	118.07	1717157.34	14543597.75	40°02'45.556"N	104°43'32.852"W	1.25	
1176.00	18.980	118.050	1160.85	-68.83	-69.77	127.13	1717166.41	14543592.93	40°02'45.509"N	104°43'32.735"W	1.65	
1208.00	19.290	117.700	1191.08	-73.66	-74.67	136.40	1717175.69	14543588.06	40°02'45.460"N	104°43'32.616"W	1.03	
1240.00	19.560	116.730	1221.26	-78.46	-79.54	145.86	1717185.16	14543583.22	40°02'45.412"N	104°43'32.494"W	1.31	
1272.00	19.730	115.850	1251.40	-83.15	-84.30	155.51	1717194.82	14543578.49	40°02'45.365"N	104°43'32.370"W	1.07	
1303.00	20.130	115.330	1280.54	-87.65	-88.86	165.04	1717204.36	14543573.96	40°02'45.320"N	104°43'32.248"W	1.41	
1335.00	21.450	114.620	1310.46	-92.36	-93.66	175.33	1717214.67	14543569.20	40°02'45.272"N	104°43'32.116"W	4.20	
1367.00	21.800	114.100	1340.20	-97.15	-98.52	186.08	1717225.42	14543564.37	40°02'45.224"N	104°43'31.977"W	1.25	
1399.00	22.190	114.710	1369.88	-102.02	-103.47	196.99	1717236.35	14543559.45	40°02'45.175"N	104°43'31.837"W	1.41	
1430.00	22.850	113.480	1398.51	-106.79	-108.32	207.83	1717247.20	14543554.64	40°02'45.128"N	104°43'31.698"W	2.62	
1462.00	22.940	113.390	1427.99	-111.65	-113.27	219.25	1717258.63	14543549.73	40°02'45.079"N	104°43'31.551"W	0.30	
1494.00	23.250	115.060	1457.43	-116.72	-118.42	230.70	1717270.09	14543544.61	40°02'45.028"N	104°43'31.404"W	2.26	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#47 AZUL 13-30HZ (775'FSL & 2446'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-30HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-30HZ 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
1525.00	23.380	115.680	1485.90	-121.89	-123.68	241.78	1717281.18	14543539.39	40°02'44.976"N	104°43'31.261"W	0.90	
1557.00	24.470	116.210	1515.15	-127.49	-129.36	253.45	1717292.86	14543533.75	40°02'44.920"N	104°43'31.111"W	3.47	
1588.00	25.180	116.290	1543.28	-133.16	-135.11	265.12	1717304.55	14543528.03	40°02'44.863"N	104°43'30.961"W	2.29	
1620.00	25.660	115.150	1572.18	-139.03	-141.07	277.50	1717316.94	14543522.11	40°02'44.804"N	104°43'30.802"W	2.14	
1652.00	27.110	114.010	1600.85	-144.84	-146.98	290.43	1717329.88	14543516.24	40°02'44.745"N	104°43'30.636"W	4.80	
1684.00	27.640	114.270	1629.26	-150.76	-153.00	303.86	1717343.32	14543510.27	40°02'44.686"N	104°43'30.463"W	1.70	
1715.00	27.730	113.390	1656.72	-156.48	-158.82	317.03	1717356.51	14543504.49	40°02'44.628"N	104°43'30.294"W	1.35	
1747.00	29.360	113.570	1684.83	-162.47	-164.91	331.06	1717370.55	14543498.45	40°02'44.568"N	104°43'30.113"W	5.10	
1779.00	30.230	114.270	1712.59	-168.81	-171.36	345.59	1717385.10	14543492.04	40°02'44.505"N	104°43'29.926"W	2.93	
1811.00	31.070	113.570	1740.12	-175.32	-177.98	360.51	1717400.02	14543485.48	40°02'44.439"N	104°43'29.735"W	2.85	
1843.00	31.330	113.570	1767.50	-181.83	-184.60	375.70	1717415.23	14543478.90	40°02'44.374"N	104°43'29.539"W	0.81	
1880.00	32.610	116.670	1798.89	-190.02	-192.93	393.43	1717432.98	14543470.64	40°02'44.291"N	104°43'29.311"W	5.62	LAST SURFACE MWD+IFR1 SURVEY
2027.00	34.300	119.780	1921.53	-227.85	-231.28	464.78	1717504.42	14543432.51	40°02'43.912"N	104°43'28.394"W	1.64	FIRST BHGE MWD+IFR1+SC SURVEY
2117.00	35.240	120.490	1995.46	-253.30	-257.05	509.17	1717548.87	14543406.89	40°02'43.658"N	104°43'27.823"W	1.14	
2207.00	34.960	120.150	2069.10	-279.09	-283.18	553.84	1717593.61	14543380.91	40°02'43.400"N	104°43'27.249"W	0.38	
2296.00	35.400	120.110	2141.84	-304.50	-308.92	598.19	1717638.02	14543355.32	40°02'43.145"N	104°43'26.678"W	0.50	
2386.00	34.530	118.800	2215.60	-329.54	-334.28	643.09	1717682.98	14543330.10	40°02'42.894"N	104°43'26.101"W	1.28	
2476.00	35.660	118.020	2289.23	-353.82	-358.90	688.61	1717728.55	14543305.64	40°02'42.651"N	104°43'25.516"W	1.35	
2565.00	34.630	117.630	2362.01	-377.40	-382.81	733.91	1717773.91	14543281.87	40°02'42.415"N	104°43'24.933"W	1.18	
2655.00	35.130	118.520	2435.84	-401.29	-407.04	779.32	1717819.38	14543257.80	40°02'42.175"N	104°43'24.349"W	0.79	
2745.00	33.840	118.160	2510.02	-425.15	-431.23	824.17	1717864.28	14543233.75	40°02'41.936"N	104°43'23.773"W	1.45	
2834.00	33.930	118.180	2583.91	-448.25	-454.65	867.91	1717908.08	14543210.47	40°02'41.705"N	104°43'23.210"W	0.10	
2924.00	35.690	118.170	2657.80	-472.17	-478.91	913.20	1717953.42	14543186.36	40°02'41.465"N	104°43'22.628"W	1.96	
3014.00	34.180	117.680	2731.58	-495.97	-503.05	958.73	1717999.01	14543162.38	40°02'41.227"N	104°43'22.043"W	1.71	
3103.00	33.660	114.280	2805.44	-517.40	-524.81	1003.36	1718043.69	14543140.76	40°02'41.012"N	104°43'21.469"W	2.21	
3193.00	32.070	113.950	2881.03	-537.03	-544.76	1047.93	1718088.31	14543120.95	40°02'40.814"N	104°43'20.896"W	1.78	
3283.00	31.270	115.020	2957.63	-556.29	-564.34	1090.94	1718131.35	14543101.51	40°02'40.621"N	104°43'20.343"W	1.09	
3372.00	31.630	117.090	3033.56	-576.38	-584.74	1132.65	1718173.11	14543081.25	40°02'40.419"N	104°43'19.806"W	1.28	
3462.00	33.720	120.930	3109.32	-599.66	-608.33	1175.10	1718215.61	14543057.80	40°02'40.186"N	104°43'19.261"W	3.27	
3552.00	35.370	120.930	3183.45	-625.57	-634.56	1218.87	1718259.45	14543031.71	40°02'39.927"N	104°43'18.698"W	1.83	
3641.00	34.000	118.820	3256.63	-650.48	-659.80	1262.77	1718303.41	14543006.62	40°02'39.677"N	104°43'18.133"W	2.05	
3731.00	34.580	121.400	3330.99	-675.60	-685.24	1306.62	1718347.32	14542981.33	40°02'39.426"N	104°43'17.570"W	1.74	
3820.00	34.420	120.060	3404.34	-701.03	-711.00	1349.95	1718390.71	14542955.71	40°02'39.171"N	104°43'17.012"W	0.87	
3910.00	34.190	121.910	3478.69	-726.82	-737.11	1393.43	1718434.26	14542929.75	40°02'38.913"N	104°43'16.453"W	1.19	
4000.00	35.490	122.220	3552.56	-753.80	-764.40	1437.00	1718477.89	14542902.60	40°02'38.644"N	104°43'15.893"W	1.46	
4089.00	35.960	122.660	3624.81	-781.35	-792.28	1480.86	1718521.82	14542874.87	40°02'38.368"N	104°43'15.329"W	0.60	
4179.00	35.280	119.430	3697.98	-808.05	-819.31	1525.75	1718566.77	14542847.98	40°02'38.101"N	104°43'14.752"W	2.22	
4269.00	35.530	118.240	3771.33	-832.86	-844.46	1571.42	1718612.51	14542822.99	40°02'37.852"N	104°43'14.165"W	0.81	
4358.00	36.130	117.460	3843.49	-856.86	-868.79	1617.49	1718658.63	14542798.80	40°02'37.612"N	104°43'13.573"W	0.85	
4448.00	35.570	118.270	3916.44	-881.15	-893.43	1664.09	1718705.28	14542774.32	40°02'37.368"N	104°43'12.973"W	0.82	
4563.00	33.150	122.840	4011.38	-913.64	-926.33	1719.98	1718761.26	14542741.60	40°02'37.043"N	104°43'12.255"W	3.07	
4653.00	32.590	120.510	4086.98	-938.98	-951.98	1761.54	1718802.88	14542716.09	40°02'36.790"N	104°43'11.720"W	1.54	
4743.00	34.180	120.240	4162.12	-963.70	-977.02	1804.26	1718845.66	14542691.19	40°02'36.542"N	104°43'11.171"W	1.77	
4833.00	35.930	120.690	4235.80	-989.59	-1003.23	1848.82	1718890.28	14542665.13	40°02'36.283"N	104°43'10.598"W	1.97	
4922.00	37.320	122.370	4307.22	-1017.03	-1031.01	1894.06	1718935.59	14542637.50	40°02'36.009"N	104°43'10.017"W	1.93	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#47 AZUL 13-30HZ (775'FSL & 2446'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-30HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-30HZ 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
5012.00	38.990	120.870	4377.99	-1045.81	-1060.14	1941.41	1718983.01	14542608.53	40°02'35.721"N	104°43'09.408"W	2.12	
5101.00	37.250	120.120	4448.01	-1073.35	-1088.03	1988.75	1719030.41	14542580.80	40°02'35.445"N	104°43'08.799"W	2.02	
5191.00	33.200	118.440	4521.52	-1098.43	-1113.44	2033.99	1719075.72	14542555.53	40°02'35.194"N	104°43'08.217"W	4.63	
5281.00	30.500	113.700	4597.97	-1119.04	-1134.36	2076.59	1719118.36	14542534.75	40°02'34.987"N	104°43'07.670"W	4.09	
5371.00	28.690	116.050	4676.23	-1137.41	-1153.03	2116.91	1719158.73	14542516.21	40°02'34.803"N	104°43'07.151"W	2.39	
5460.00	28.000	119.260	4754.56	-1156.73	-1172.63	2154.33	1719196.19	14542496.74	40°02'34.609"N	104°43'06.670"W	1.88	
5550.00	29.590	121.690	4833.43	-1178.45	-1194.63	2191.68	1719233.59	14542474.86	40°02'34.391"N	104°43'06.190"W	2.19	
5640.00	25.820	119.360	4913.10	-1199.48	-1215.92	2227.68	1719269.64	14542453.69	40°02'34.181"N	104°43'05.727"W	4.36	
5729.00	28.720	119.880	4992.20	-1219.38	-1236.08	2263.12	1719305.13	14542433.65	40°02'33.982"N	104°43'05.272"W	3.27	
5819.00	29.350	123.200	5070.90	-1241.95	-1258.93	2300.33	1719342.40	14542410.92	40°02'33.756"N	104°43'04.793"W	1.92	
5909.00	27.950	120.940	5149.88	-1264.61	-1281.85	2336.88	1719379.00	14542388.12	40°02'33.529"N	104°43'04.323"W	1.97	
5999.00	26.600	123.420	5229.87	-1286.29	-1303.80	2371.79	1719413.96	14542366.29	40°02'33.312"N	104°43'03.874"W	1.96	
6046.00†	25.580	123.052	5272.08	-1297.49	-1315.13	2389.08	1719431.28	14542355.02	40°02'33.200"N	104°43'03.652"W	2.20	ENTER LANDBOX (540°FNL & 458°FEL,SEC.24) 40.0425557 -104.7176812
6088.00	24.670	122.700	5310.11	-1307.07	-1324.81	2404.05	1719446.28	14542345.39	40°02'33.105"N	104°43'03.460"W	2.20	
6178.00	24.120	119.280	5392.08	-1325.97	-1343.95	2435.90	1719478.17	14542326.35	40°02'32.916"N	104°43'03.050"W	1.68	
6268.00	22.140	118.830	5474.84	-1342.92	-1361.12	2466.80	1719509.11	14542309.28	40°02'32.746"N	104°43'02.653"W	2.21	
6357.00	19.310	117.500	5558.07	-1357.60	-1376.01	2494.55	1719536.90	14542294.49	40°02'32.599"N	104°43'02.296"W	3.22	
6447.00	16.150	114.690	5643.79	-1369.52	-1388.11	2519.13	1719561.51	14542282.46	40°02'32.479"N	104°43'01.980"W	3.64	
6536.00	13.670	112.800	5729.78	-1378.61	-1397.36	2540.07	1719582.47	14542273.28	40°02'32.388"N	104°43'01.711"W	2.84	
6626.00	11.300	107.930	5817.65	-1385.31	-1404.19	2558.27	1719600.68	14542266.51	40°02'32.320"N	104°43'01.477"W	2.88	
6715.00	9.760	102.770	5905.15	-1389.55	-1408.55	2573.93	1719616.34	14542262.20	40°02'32.277"N	104°43'01.276"W	2.03	
6805.00	7.440	111.270	5994.14	-1393.26	-1412.35	2586.80	1719629.22	14542258.44	40°02'32.240"N	104°43'01.110"W	2.93	
6894.00	5.780	106.010	6082.54	-1396.51	-1415.67	2596.48	1719638.90	14542255.15	40°02'32.207"N	104°43'00.986"W	1.98	
6984.00	5.500	103.800	6172.11	-1398.73	-1417.95	2605.02	1719647.45	14542252.90	40°02'32.184"N	104°43'00.876"W	0.39	
7074.00	4.690	108.220	6261.75	-1400.85	-1420.13	2612.70	1719655.14	14542250.74	40°02'32.163"N	104°43'00.777"W	1.00	
7163.00	3.920	115.220	6350.50	-1403.24	-1422.57	2618.91	1719661.35	14542248.33	40°02'32.139"N	104°43'00.697"W	1.05	
7253.00	1.620	57.140	6440.40	-1403.83	-1423.19	2622.77	1719665.21	14542247.72	40°02'32.132"N	104°43'00.648"W	3.73	
7342.00	1.270	329.900	6529.38	-1402.29	-1421.65	2623.33	1719665.76	14542249.26	40°02'32.148"N	104°43'00.640"W	2.26	
7432.00	1.790	353.620	6619.35	-1400.04	-1419.39	2622.67	1719665.10	14542251.51	40°02'32.170"N	104°43'00.649"W	0.90	
7521.00	2.500	0.860	6708.29	-1396.71	-1416.07	2622.55	1719664.97	14542254.83	40°02'32.203"N	104°43'00.650"W	0.85	
7533.00†	3.667	4.743	6720.27	-1396.07	-1415.42	2622.58	1719665.00	14542255.48	40°02'32.209"N	104°43'00.650"W	9.87	KOP
7611.00	11.340	10.330	6797.55	-1386.01	-1405.38	2624.17	1719666.55	14542265.52	40°02'32.308"N	104°43'00.630"W	9.87	
7701.00	19.310	359.350	6884.29	-1362.38	-1381.75	2625.59	1719667.90	14542289.15	40°02'32.542"N	104°43'00.611"W	9.39	
7790.00	21.130	359.790	6967.81	-1331.62	-1350.99	2625.36	1719667.58	14542319.89	40°02'32.846"N	104°43'00.614"W	2.05	
7880.00	25.660	357.910	7050.39	-1295.91	-1315.28	2624.59	1719666.70	14542355.59	40°02'33.199"N	104°43'00.624"W	5.10	
7970.00	29.740	355.650	7130.06	-1254.18	-1273.53	2622.18	1719664.17	14542397.32	40°02'33.611"N	104°43'00.655"W	4.68	
8059.00	37.310	358.170	7204.20	-1205.16	-1224.48	2619.64	1719661.48	14542446.33	40°02'34.096"N	104°43'00.687"W	8.65	
8149.00	44.480	359.100	7272.19	-1146.30	-1165.62	2618.28	1719659.93	14542505.17	40°02'34.678"N	104°43'00.705"W	8.00	
8238.00	52.150	3.340	7331.35	-1079.92	-1099.25	2619.84	1719661.28	14542571.52	40°02'35.334"N	104°43'00.685"W	9.32	
8328.00	62.150	2.490	7380.11	-1004.48	-1023.83	2623.65	1719664.86	14542646.91	40°02'36.079"N	104°43'00.636"W	11.14	
8418.00	67.090	1.990	7418.67	-923.24	-942.61	2626.82	1719667.78	14542728.12	40°02'36.882"N	104°43'00.595"W	5.51	
8507.00	73.780	2.610	7448.46	-839.47	-858.86	2630.19	1719670.89	14542811.84	40°02'37.709"N	104°43'00.551"W	7.55	
8597.00	79.970	2.400	7468.88	-751.92	-771.34	2634.02	1719674.45	14542899.34	40°02'38.574"N	104°43'00.502"W	6.88	
8687.00	89.410	2.060	7477.20	-662.45	-681.90	2637.50	1719677.65	14542988.76	40°02'39.458"N	104°43'00.457"W	10.50	LANDING (93°FSL & 209°FEL,SEC.13) 40.0442939 -104.7167937
8776.00	89.350	2.380	7478.17	-573.50	-592.97	2640.94	1719680.83	14543077.66	40°02'40.337"N	104°43'00.413"W	0.37	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#47 AZUL 13-30HZ (775'FSL & 2446'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-30HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-30HZ 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
8866.00	89.170	1.520	7479.33	-483.54	-503.03	2644.01	1719683.61	14543167.58	40°02'41.226"N	104°43'00.373"W	0.98	
8955.00	89.690	0.880	7480.22	-394.55	-414.05	2645.87	1719685.20	14543256.52	40°02'42.105"N	104°43'00.349"W	0.93	
9023.00†	90.294	359.573	7480.22	-326.56	-346.06	2646.14	1719685.26	14543324.49	40°02'42.777"N	104°43'00.346"W	2.12	EXIT RADIUS HEEL (429'FSL & 201'FEL,SEC.13) 40.0452158 -104.7167627
9045.00	90.490	359.150	7480.07	-304.56	-324.06	2645.89	1719684.95	14543346.48	40°02'42.994"N	104°43'00.349"W	2.12	
9135.00	90.680	358.950	7479.16	-214.59	-234.07	2644.40	1719683.18	14543436.42	40°02'43.883"N	104°43'00.368"W	0.31	
9225.00	90.060	358.150	7478.57	-124.64	-144.11	2642.12	1719680.63	14543526.35	40°02'44.773"N	104°43'00.397"W	1.12	
9314.00	90.120	357.730	7478.43	-35.73	-55.16	2638.92	1719677.16	14543615.24	40°02'45.651"N	104°43'00.438"W	0.48	
9404.00	91.200	358.370	7477.40	54.19	34.78	2635.86	1719673.82	14543705.14	40°02'46.540"N	104°43'00.477"W	1.39	
9493.00	91.880	358.290	7475.01	143.10	123.71	2633.27	1719670.95	14543794.03	40°02'47.419"N	104°43'00.510"W	0.77	
9583.00	92.030	359.850	7471.94	233.02	213.64	2631.81	1719669.22	14543883.92	40°02'48.308"N	104°43'00.529"W	1.74	
9673.00	89.720	1.160	7470.56	323.00	303.62	2632.60	1719669.73	14543973.86	40°02'49.197"N	104°43'00.519"W	2.95	
9762.00	89.600	1.060	7471.09	411.99	392.60	2634.33	1719671.18	14544062.81	40°02'50.076"N	104°43'00.497"W	0.18	
9852.00	90.370	2.780	7471.11	501.96	482.54	2637.34	1719673.92	14544152.73	40°02'50.965"N	104°43'00.458"W	2.09	
9941.00	91.850	1.160	7469.39	590.90	571.47	2640.40	1719676.71	14544241.63	40°02'51.844"N	104°43'00.418"W	2.47	
10031.00	92.310	1.130	7466.12	680.83	661.39	2642.20	1719678.23	14544331.52	40°02'52.733"N	104°43'00.395"W	0.51	
10121.00	91.230	1.360	7463.34	770.78	751.33	2644.15	1719679.90	14544421.43	40°02'53.621"N	104°43'00.370"W	1.23	
10210.00	88.920	1.410	7463.23	859.76	840.29	2646.30	1719681.78	14544510.37	40°02'54.501"N	104°43'00.342"W	2.60	
10300.00	88.610	1.690	7465.17	949.72	930.24	2648.74	1719683.94	14544600.28	40°02'55.389"N	104°43'00.310"W	0.46	
10389.00	88.520	2.080	7467.39	1038.67	1019.16	2651.66	1719686.59	14544689.18	40°02'56.268"N	104°43'00.273"W	0.45	
10479.00	90.280	2.170	7468.34	1128.62	1109.09	2655.00	1719689.65	14544779.09	40°02'57.157"N	104°43'00.230"W	1.96	
10569.00	90.740	3.350	7467.54	1218.54	1198.98	2659.33	1719693.70	14544868.95	40°02'58.045"N	104°43'00.174"W	1.41	
10658.00	90.920	0.700	7466.25	1307.49	1287.91	2662.48	1719696.57	14544957.85	40°02'58.924"N	104°43'00.133"W	2.98	
10748.00	90.920	0.770	7464.80	1397.47	1377.89	2663.63	1719697.45	14545047.80	40°02'59.813"N	104°43'00.118"W	0.08	
10838.00	90.890	1.200	7463.38	1487.46	1467.87	2665.18	1719698.72	14545137.75	40°03'00.702"N	104°43'00.098"W	0.48	
10927.00	88.520	357.420	7463.84	1576.42	1556.84	2664.11	1719697.38	14545226.68	40°03'01.582"N	104°43'00.112"W	5.01	
11017.00	87.720	356.540	7466.79	1666.20	1646.66	2659.37	1719692.36	14545316.45	40°03'02.469"N	104°43'00.173"W	1.32	
11107.00	88.800	358.440	7469.52	1756.04	1736.53	2655.43	1719688.15	14545406.27	40°03'03.357"N	104°43'00.223"W	2.43	
11196.00	88.620	358.410	7471.53	1844.96	1825.47	2652.99	1719685.43	14545495.17	40°03'04.236"N	104°43'00.255"W	0.21	
11286.00	90.060	0.340	7472.56	1934.93	1915.45	2652.00	1719684.17	14545585.11	40°03'05.126"N	104°43'00.267"W	2.68	
11375.00	90.620	1.680	7472.04	2023.93	2004.44	2653.57	1719685.47	14545674.07	40°03'06.005"N	104°43'00.247"W	1.63	
11465.00	91.350	3.000	7470.49	2113.86	2094.35	2657.25	1719688.86	14545763.95	40°03'06.893"N	104°43'00.199"W	1.68	
11554.00	90.460	1.420	7469.08	2202.80	2183.26	2660.68	1719692.02	14545852.84	40°03'07.772"N	104°43'00.155"W	2.04	
11644.00	90.590	1.910	7468.26	2292.78	2273.22	2663.29	1719694.36	14545942.77	40°03'08.661"N	104°43'00.121"W	0.56	
11733.00	90.340	1.610	7467.54	2381.75	2362.18	2666.03	1719696.82	14546031.70	40°03'09.540"N	104°43'00.086"W	0.44	
11823.00	89.820	1.360	7467.41	2471.73	2452.15	2668.36	1719698.87	14546121.64	40°03'10.429"N	104°43'00.056"W	0.64	
11912.00	90.650	0.220	7467.04	2560.73	2541.14	2669.59	1719699.83	14546210.60	40°03'11.309"N	104°43'00.040"W	1.58	
12092.00	89.750	0.040	7466.42	2740.72	2721.13	2669.99	1719699.68	14546390.53	40°03'13.087"N	104°43'00.035"W	0.51	
12158.00†	90.440	359.699	7466.31	2806.72	2787.13	2669.84	1719699.33	14546456.50	40°03'13.740"N	104°43'00.037"W	1.17	ENTER RADIUS TOE (1740'FNL & 189'FEL,SEC.13) 40.0538166 -104.7166768
12181.00	90.680	359.580	7466.08	2829.72	2810.13	2669.70	1719699.11	14546479.49	40°03'13.967"N	104°43'00.038"W	1.17	
12271.00	90.090	358.550	7465.48	2919.69	2900.11	2668.23	1719697.37	14546569.43	40°03'14.856"N	104°43'00.057"W	1.32	
12360.00	90.120	358.280	7465.31	3008.63	2989.08	2665.77	1719694.63	14546658.35	40°03'15.735"N	104°43'00.089"W	0.31	
12450.00	90.460	358.370	7464.86	3098.57	3079.04	2663.14	1719691.73	14546748.27	40°03'16.624"N	104°43'00.122"W	0.39	
12540.00	90.460	358.660	7464.14	3188.52	3169.01	2660.81	1719689.12	14546838.19	40°03'17.513"N	104°43'00.152"W	0.32	
12630.00	90.180	357.700	7463.63	3278.45	3258.96	2657.95	1719685.99	14546928.10	40°03'18.402"N	104°43'00.189"W	1.11	
12719.00	90.250	357.760	7463.30	3367.35	3347.89	2654.42	1719682.19	14547016.98	40°03'19.281"N	104°43'00.234"W	0.10	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#47 AZUL 13-30HZ (775'FSL & 2446'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-30HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-30HZ 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
12809.00	91.260	358.510	7462.11	3457.27	3437.83	2651.49	1719678.98	14547106.88	40°03'20.170"N	104°43'00.272"W	1.40	
12898.00	90.340	359.530	7460.87	3546.23	3526.81	2649.97	1719677.19	14547195.82	40°03'21.049"N	104°43'00.291"W	1.54	
12988.00	89.940	359.200	7460.65	3636.21	3616.80	2648.97	1719675.92	14547285.77	40°03'21.939"N	104°43'00.304"W	0.58	
13077.00	90.180	358.860	7460.56	3725.19	3705.79	2647.47	1719674.14	14547374.72	40°03'22.818"N	104°43'00.323"W	0.47	
13167.00	90.310	358.610	7460.17	3815.15	3795.76	2645.48	1719671.87	14547464.65	40°03'23.707"N	104°43'00.348"W	0.31	
13256.00	90.000	357.680	7459.93	3904.07	3884.72	2642.60	1719668.72	14547553.56	40°03'24.586"N	104°43'00.385"W	1.10	
13358.00	89.380	356.530	7460.48	4005.90	3986.58	2637.45	1719663.26	14547655.37	40°03'25.593"N	104°43'00.451"W	1.28	LAST BHGE MWD+IFR1+SC SURVEY
13406.00	89.380	356.530	7461.00	4053.79	4034.49	2634.54	1719660.21	14547703.25	40°03'26.066"N	104°43'00.489"W	0.00	PTB (493'FNL & 224'FEL,SEC.13) 40.0572407 -104.7168024

HOLE & CASING SECTIONS - Ref Wellbore: AZUL 13-30HZ AWB Ref Wellpath: AZUL 13-30HZ 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	1920.00	1899.00	21.00	1832.49	0.00	0.00	-202.81	412.73

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	136.95	-1286.79	1715752.42	14543795.21	40°02'47.551"N	104°43'50.916"W	polygon
AZUL 13-30HZ BHL REV-1(472'FNL & 223'FEL,SEC.13)	7462.00	4055.01	2636.34	1719661.94	14547723.77	40°03'26.269"N	104°43'00.466"W	point
AZUL 13-30HZ BHL REV-2(472'FNL & 193'FEL,SEC.13)	7462.00	4055.01	2666.34	1719691.93	14547723.86	40°03'26.269"N	104°43'00.080"W	point
AZUL 13-30HZ HEEL REV-2(50'FSL & 216'FEL,SEC.13)	7474.00	-705.90	2631.25	1719671.48	14542964.75	40°02'39.221"N	104°43'00.538"W	point
AZUL 13-30HZ HEEL REV-1(50'FSL & 216'FEL,SEC.13)	7494.00	-705.90	2631.25	1719671.48	14542964.75	40°02'39.221"N	104°43'00.538"W	point
AZUL 13-30HZ LANDBOX	7494.00	0.00	0.00	1717039.12	14543662.28	40°02'46.198"N	104°43'34.370"W	polygon
AZUL 13-30HZ RADIUS 1	7494.00	3205.31	2860.58	1719888.70	14546875.10	40°03'17.872"N	104°42'57.583"W	polygon
AZUL 13-30HZ RADIUS 2	7494.00	-756.84	2850.20	1719890.50	14542914.50	40°02'38.717"N	104°42'57.722"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: AZUL 13-30HZ AWB Ref Wellpath: AZUL 13-30HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
21.00	1880.00	Custom APC ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC ISCWSA Rev-2 MWD+IFR1 <130 - 1880>	AZUL 13-30HZ AWB
1880.00	13358.00	Custom APC ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+SC <2027 - 13358>	AZUL 13-30HZ AWB
13358.00	13406.00	Blind Drilling (std)	Projection to bit	AZUL 13-30HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#47 AZUL 13-30HZ (775'FSL & 2446'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-30HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-30HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
130.00	1.630	68.740	129.99	FIRST SURFACE MWD+IFR1 SURVEY
1880.00	32.610	116.670	1798.89	LAST SURFACE MWD+IFR1 SURVEY
2027.00	34.300	119.780	1921.53	FIRST BHGE MWD+IFR1+SC SURVEY
6046.00	25.580	123.052	5272.08	ENTER LANDBOX (540'FNL & 458'FEL, SEC.24) 40.0425557 -104.7176812
7533.00	3.667	4.743	6720.27	KOP
8687.00	89.410	2.060	7477.20	LANDING (93'FSL & 209'FEL, SEC.13) 40.0442939 -104.7167937
9023.00	90.294	359.573	7480.22	EXIT RADIUS HEEL (429'FSL & 201'FEL, SEC.13) 40.0452158 -104.7167627
12158.00	90.440	359.699	7466.31	ENTER RADIUS TOE (1740'FNL & 189'FEL, SEC.13) 40.0538166 -104.7166768
13358.00	89.380	356.530	7460.48	LAST BHGE MWD+IFR1+SC SURVEY
13406.00	89.380	356.530	7461.00	PTB (493'FNL & 224'FEL, SEC.13) 40.0572407 -104.7168024