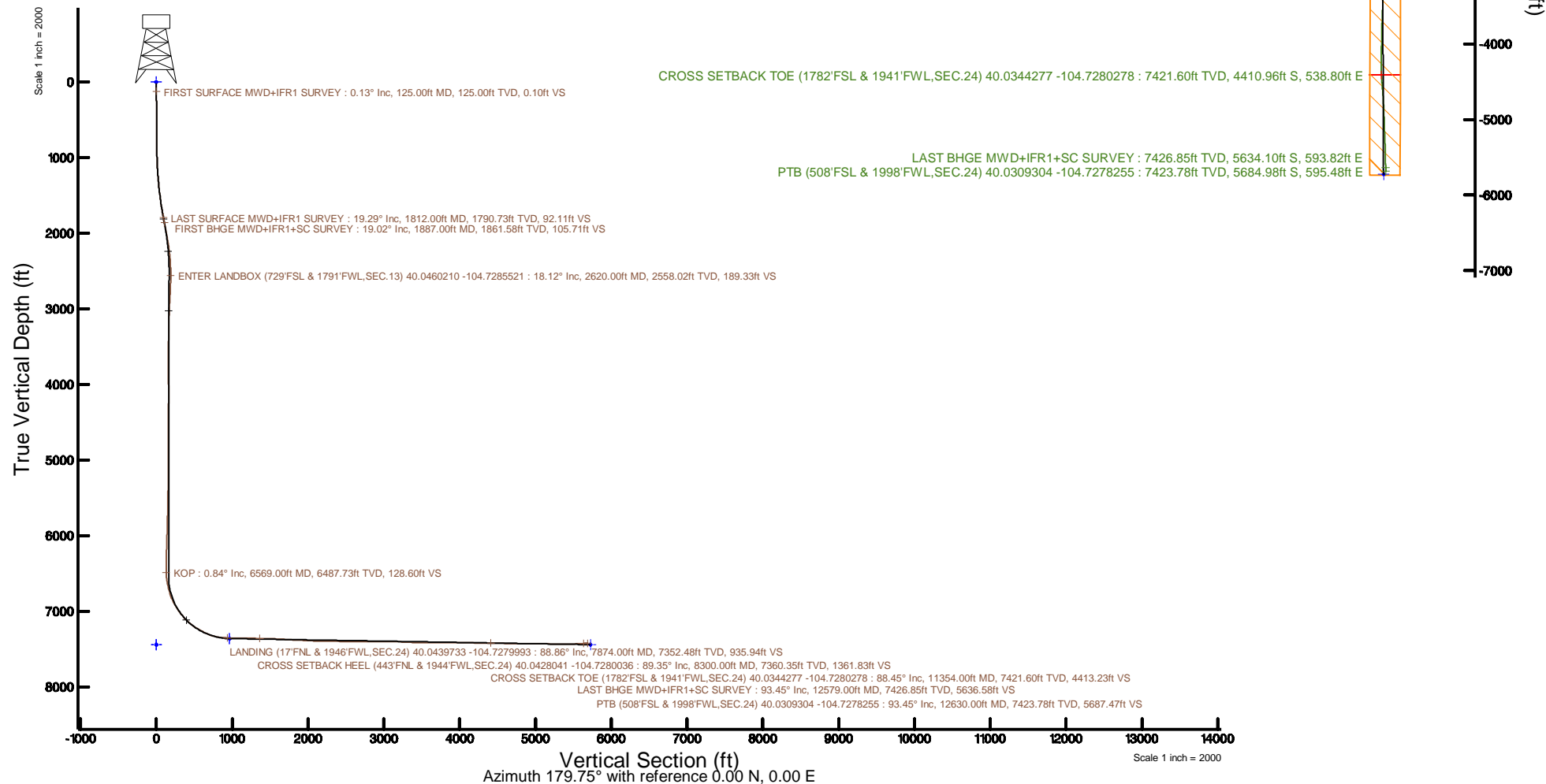


Location:	COLORADO	Slot:	SLOT#29 AZUL 13-12HZ (917FSL & 1399FWL, SEC.13)
Field:	WELD COUNTY (UTM/TRUE NORTH)	Well:	AZUL 13-12HZ
Facility:	SEC.13-T1N-R66W	Wellbore:	AZUL 13-12HZ PWB
Plot reference wellpath is AZUL 13-12HZ PWP Rev-A.0		Grid System: NAD83 / UTM Zone 13 North, US feet	
True vertical depths are referenced to Xreme 22 (17) (RT)		* = Wellpath was transformed from a different geoidic datum	
Measured depths are referenced to Xreme 22 (17) (RT)		North Reference: True north	
Xreme 22 (17) (RT) to Mean Sea Level: 5088 feet		Scale: True distance	
Mean Sea Level to Mud line (At Slot: SLOT#29 AZUL 13-12HZ (917FSL & 1399FWL SEC.13)): 0 feet		Depths are in feet	
Coordinates are in feet referenced to Slot		Created by: paimser on 2018-03-15	
		Database: WA, DEN, Anadarko, Delfn	



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#29 AZUL 13-12HZ (917'FSL & 1399'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-12HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-12HZ AWB
Facility	SEC.13-T1N-R66W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / UTM Zone 13 North, US feet	Software System	WellArchitect® 5.0
North Reference	True	User	Painsetr
Scale	0.999607	Report Generated	3/15/2018 at 12:42 PM
Convergence at slot	0.18° East	Database/Source file	WA_DEN_Anadarko_Defn/AZUL_13-12HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-4159.34	-1491.09	1715992.57	14543793.82	40°02'47.530"N	104°43'47.827"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#29 AZUL 13-12HZ (917'FSL & 1399'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	179.75°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#29 AZUL 13-12HZ (917'FSL & 1399'FWL, SEC.13)
Area	COLORADO	Well	AZUL 13-12HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-12HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (182 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	147.580	0.00	0.00	0.00	0.00	1715992.57	14543793.82	40°02'47.530"N	104°43'47.827"W	0.00	
17.00	0.000	147.580	17.00	0.00	0.00	0.00	1715992.57	14543793.82	40°02'47.530"N	104°43'47.827"W	0.00	
125.00	0.130	147.580	125.00	0.10	-0.10	0.07	1715992.63	14543793.71	40°02'47.529"N	104°43'47.826"W	0.12	FIRST SURFACE MWD+IFR1 SURVEY
188.00	0.400	151.710	188.00	0.36	-0.36	0.21	1715992.77	14543793.46	40°02'47.526"N	104°43'47.824"W	0.43	
220.00	0.130	189.950	220.00	0.49	-0.49	0.25	1715992.82	14543793.32	40°02'47.525"N	104°43'47.824"W	0.96	
283.00	0.480	147.760	283.00	0.79	-0.79	0.38	1715992.95	14543793.03	40°02'47.522"N	104°43'47.822"W	0.62	
314.00	0.480	150.220	314.00	1.01	-1.01	0.52	1715993.09	14543792.81	40°02'47.520"N	104°43'47.820"W	0.07	
377.00	0.530	119.370	376.99	1.38	-1.38	0.90	1715993.47	14543792.44	40°02'47.516"N	104°43'47.815"W	0.43	
409.00	0.620	145.910	408.99	1.60	-1.60	1.13	1715993.70	14543792.22	40°02'47.514"N	104°43'47.812"W	0.87	
441.00	0.700	145.120	440.99	1.91	-1.90	1.34	1715993.91	14543791.92	40°02'47.511"N	104°43'47.810"W	0.25	
472.00	0.700	127.280	471.99	2.18	-2.17	1.60	1715994.17	14543791.65	40°02'47.509"N	104°43'47.806"W	0.70	
504.00	0.830	135.010	503.99	2.46	-2.45	1.92	1715994.49	14543791.37	40°02'47.506"N	104°43'47.802"W	0.52	
535.00	0.620	125.080	534.98	2.72	-2.71	2.21	1715994.78	14543791.12	40°02'47.503"N	104°43'47.799"W	0.79	
567.00	0.750	118.400	566.98	2.92	-2.91	2.54	1715995.11	14543790.92	40°02'47.501"N	104°43'47.794"W	0.48	
599.00	0.790	117.960	598.98	3.12	-3.11	2.92	1715995.49	14543790.72	40°02'47.499"N	104°43'47.790"W	0.13	
631.00	0.920	119.630	630.97	3.35	-3.34	3.33	1715995.91	14543790.49	40°02'47.497"N	104°43'47.784"W	0.41	
663.00	0.880	113.570	662.97	3.58	-3.56	3.78	1715996.36	14543790.26	40°02'47.495"N	104°43'47.778"W	0.32	
695.00	0.880	115.240	694.97	3.79	-3.77	4.23	1715996.81	14543790.06	40°02'47.493"N	104°43'47.773"W	0.08	
726.00	1.010	113.390	725.96	4.00	-3.98	4.70	1715997.27	14543789.85	40°02'47.491"N	104°43'47.767"W	0.43	
758.00	0.750	120.250	757.96	4.22	-4.20	5.14	1715997.71	14543789.64	40°02'47.489"N	104°43'47.761"W	0.88	
790.00	0.920	125.700	789.96	4.47	-4.45	5.53	1715998.10	14543789.38	40°02'47.486"N	104°43'47.756"W	0.59	
822.00	1.140	125.350	821.95	4.81	-4.78	5.99	1715998.57	14543789.05	40°02'47.483"N	104°43'47.750"W	0.69	
854.00	1.190	120.250	853.94	5.16	-5.14	6.54	1715999.12	14543788.70	40°02'47.479"N	104°43'47.743"W	0.36	
885.00	1.670	116.560	884.93	5.53	-5.50	7.22	1715999.80	14543788.34	40°02'47.476"N	104°43'47.734"W	1.58	
917.00	2.020	108.120	916.92	5.92	-5.88	8.18	1716000.76	14543787.96	40°02'47.472"N	104°43'47.722"W	1.38	
949.00	2.900	110.050	948.89	6.38	-6.34	9.47	1716002.05	14543787.51	40°02'47.467"N	104°43'47.705"W	2.76	
980.00	3.740	107.860	979.84	6.96	-6.92	11.17	1716003.75	14543786.94	40°02'47.462"N	104°43'47.683"W	2.74	
1012.00	4.130	111.020	1011.76	7.71	-7.65	13.24	1716005.82	14543786.21	40°02'47.454"N	104°43'47.657"W	1.39	
1044.00	4.830	115.150	1043.66	8.70	-8.64	15.54	1716008.12	14543785.23	40°02'47.445"N	104°43'47.627"W	2.41	
1076.00	5.580	114.970	1075.53	9.94	-9.86	18.17	1716010.75	14543784.01	40°02'47.433"N	104°43'47.593"W	2.34	
1107.00	6.150	116.470	1106.37	11.33	-11.24	21.02	1716013.61	14543782.64	40°02'47.419"N	104°43'47.557"W	1.90	
1139.00	7.430	115.680	1138.14	13.01	-12.90	24.42	1716017.01	14543780.99	40°02'47.402"N	104°43'47.513"W	4.01	
1171.00	8.260	115.500	1169.84	14.91	-14.79	28.36	1716020.96	14543779.12	40°02'47.384"N	104°43'47.462"W	2.59	
1202.00	8.440	116.380	1200.51	16.90	-16.76	32.40	1716025.01	14543777.16	40°02'47.364"N	104°43'47.410"W	0.71	
1234.00	8.700	119.280	1232.16	19.14	-18.98	36.62	1716029.23	14543774.95	40°02'47.342"N	104°43'47.356"W	1.58	
1266.00	9.450	118.840	1263.76	21.61	-21.44	41.03	1716033.65	14543772.51	40°02'47.318"N	104°43'47.299"W	2.35	
1298.00	10.720	119.020	1295.26	24.34	-24.15	45.94	1716038.56	14543769.82	40°02'47.291"N	104°43'47.236"W	3.97	
1330.00	11.690	118.050	1326.65	27.33	-27.11	51.40	1716044.03	14543766.87	40°02'47.262"N	104°43'47.166"W	3.09	
1361.00	11.730	118.670	1357.01	30.35	-30.10	56.94	1716049.57	14543763.90	40°02'47.233"N	104°43'47.095"W	0.43	
1393.00	11.870	117.960	1388.33	33.48	-33.21	62.70	1716055.34	14543760.81	40°02'47.202"N	104°43'47.021"W	0.63	
1425.00	12.520	117.610	1419.61	36.65	-36.36	68.68	1716061.33	14543757.68	40°02'47.171"N	104°43'46.944"W	2.04	
1456.00	13.840	118.750	1449.79	40.02	-39.70	74.91	1716067.56	14543754.36	40°02'47.138"N	104°43'46.864"W	4.34	
1488.00	14.850	118.750	1480.79	43.86	-43.51	81.86	1716074.52	14543750.57	40°02'47.100"N	104°43'46.774"W	3.16	
1519.00	15.120	117.790	1510.74	47.69	-47.31	88.92	1716081.59	14543746.80	40°02'47.062"N	104°43'46.684"W	1.18	
1551.00	15.250	117.440	1541.62	51.60	-51.19	96.34	1716089.03	14543742.94	40°02'47.024"N	104°43'46.588"W	0.50	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#29 AZUL 13-12HZ (917'FSL & 1399'FWL, SEC.13)
Area	COLORADO	Well	AZUL 13-12HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-12HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (182 stations) † = interpolated/extrapolated station												Comments
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]	
1583.00	15.510	117.260	1572.47	55.54	-55.09	103.88	1716096.57	14543739.06	40°02'46.986"N	104°43'46.491"W	0.83	
1615.00	16.520	120.420	1603.23	59.83	-59.36	111.61	1716104.31	14543734.82	40°02'46.943"N	104°43'46.392"W	4.17	
1646.00	17.140	121.390	1632.90	64.48	-63.97	119.31	1716112.02	14543730.24	40°02'46.898"N	104°43'46.293"W	2.20	
1678.00	17.180	121.740	1663.48	69.45	-68.91	127.35	1716120.08	14543725.32	40°02'46.849"N	104°43'46.189"W	0.35	
1710.00	17.670	122.360	1694.01	74.57	-73.99	135.47	1716128.21	14543720.26	40°02'46.799"N	104°43'46.085"W	1.64	
1742.00	18.110	122.620	1724.46	79.89	-79.27	143.77	1716136.51	14543715.01	40°02'46.747"N	104°43'45.978"W	1.40	
1773.00	18.720	122.270	1753.88	85.18	-84.53	152.03	1716144.79	14543709.78	40°02'46.695"N	104°43'45.872"W	2.00	
1805.00	19.340	122.970	1784.13	90.84	-90.15	160.82	1716153.59	14543704.19	40°02'46.639"N	104°43'45.759"W	2.06	
1812.00	19.290	122.890	1790.73	92.11	-91.41	162.76	1716155.54	14543702.93	40°02'46.627"N	104°43'45.734"W	0.81	LAST SURFACE MWD+IFR1 SURVEY
1887.00	19.020	123.720	1861.58	105.71	-104.92	183.33	1716176.14	14543689.49	40°02'46.493"N	104°43'45.470"W	0.51	FIRST BHGE MWD+IFR1+SC SURVEY
1975.00	18.960	123.240	1944.79	121.61	-120.72	207.21	1716200.06	14543673.77	40°02'46.337"N	104°43'45.163"W	0.19	
2062.00	18.840	120.880	2027.10	136.66	-135.68	231.09	1716223.97	14543658.89	40°02'46.189"N	104°43'44.856"W	0.89	
2150.00	18.380	120.530	2110.50	151.11	-150.02	255.24	1716248.15	14543644.63	40°02'46.047"N	104°43'44.545"W	0.54	
2238.00	17.420	115.090	2194.25	163.84	-162.65	279.12	1716272.06	14543632.07	40°02'45.923"N	104°43'44.238"W	2.19	
2326.00	17.270	109.960	2278.25	173.99	-172.70	303.33	1716296.29	14543622.11	40°02'45.823"N	104°43'43.927"W	1.75	
2414.00	17.810	104.240	2362.16	181.87	-180.47	328.65	1716321.63	14543614.42	40°02'45.747"N	104°43'43.601"W	2.05	
2501.00	17.900	97.380	2444.98	186.97	-185.46	354.81	1716347.80	14543609.51	40°02'45.697"N	104°43'43.265"W	2.42	
2589.00	18.500	91.570	2528.59	189.21	-187.58	382.18	1716375.16	14543607.47	40°02'45.676"N	104°43'42.913"W	2.17	
2620.00†	18.118	89.286	2558.02	189.33	-187.65	391.92	1716384.89	14543607.43	40°02'45.676"N	104°43'42.788"W	2.62	ENTER LANDBOX (729'FSL & 1791'FWL, SEC.13) 40.0460210 -104.7285521
2677.00	17.490	84.850	2612.29	188.52	-186.77	409.31	1716402.28	14543608.36	40°02'45.684"N	104°43'42.564"W	2.62	
2764.00	17.130	81.790	2695.35	185.63	-183.77	435.01	1716427.96	14543611.44	40°02'45.714"N	104°43'42.233"W	1.13	
2852.00	15.080	79.630	2779.89	181.82	-179.86	459.10	1716452.03	14543615.42	40°02'45.753"N	104°43'41.924"W	2.43	
2939.00	13.770	76.690	2864.15	177.49	-175.44	480.31	1716473.22	14543619.90	40°02'45.796"N	104°43'41.651"W	1.72	
3027.00	11.850	76.080	2949.96	172.99	-170.85	499.28	1716492.16	14543624.54	40°02'45.842"N	104°43'41.407"W	2.19	
3114.00	9.910	76.120	3035.39	169.11	-166.91	515.22	1716508.08	14543628.54	40°02'45.881"N	104°43'41.202"W	2.23	
3202.00	8.150	78.480	3122.30	166.10	-163.84	528.68	1716521.53	14543631.64	40°02'45.911"N	104°43'41.029"W	2.04	
3289.00	5.940	82.080	3208.63	164.30	-161.99	539.18	1716532.02	14543633.52	40°02'45.929"N	104°43'40.894"W	2.59	
3376.00	3.820	74.450	3295.31	162.93	-160.60	546.43	1716539.27	14543634.94	40°02'45.943"N	104°43'40.801"W	2.54	
3464.00	1.810	47.900	3383.21	161.23	-158.88	550.29	1716543.12	14543636.67	40°02'45.960"N	104°43'40.751"W	2.66	
3551.00	0.390	9.800	3470.19	160.02	-157.66	551.36	1716544.18	14543637.89	40°02'45.972"N	104°43'40.737"W	1.75	
3638.00	0.220	256.070	3557.19	159.77	-157.41	551.25	1716544.07	14543638.14	40°02'45.974"N	104°43'40.739"W	0.60	
3726.00	0.250	270.350	3645.19	159.81	-157.45	550.89	1716543.71	14543638.10	40°02'45.974"N	104°43'40.743"W	0.07	
3813.00	0.310	237.370	3732.19	159.93	-157.58	550.50	1716543.33	14543637.97	40°02'45.973"N	104°43'40.748"W	0.19	
3901.00	0.250	244.360	3820.19	160.14	-157.79	550.13	1716542.95	14543637.76	40°02'45.971"N	104°43'40.753"W	0.08	
3988.00	0.210	267.360	3907.18	160.23	-157.88	549.80	1716542.62	14543637.67	40°02'45.970"N	104°43'40.758"W	0.11	
4076.00	0.220	230.000	3995.18	160.34	-158.00	549.51	1716542.33	14543637.55	40°02'45.969"N	104°43'40.761"W	0.16	
4163.00	0.420	259.520	4082.18	160.51	-158.16	549.07	1716541.89	14543637.38	40°02'45.967"N	104°43'40.767"W	0.29	
4251.00	0.240	266.590	4170.18	160.57	-158.23	548.57	1716541.39	14543637.31	40°02'45.966"N	104°43'40.773"W	0.21	
4338.00	0.960	287.630	4257.18	160.36	-158.02	547.69	1716540.52	14543637.52	40°02'45.968"N	104°43'40.785"W	0.85	
4426.00	0.840	303.890	4345.17	159.77	-157.44	546.45	1716539.28	14543638.10	40°02'45.974"N	104°43'40.801"W	0.32	
4513.00	0.910	316.960	4432.16	158.91	-156.58	545.45	1716538.27	14543638.95	40°02'45.983"N	104°43'40.813"W	0.24	
4601.00	0.630	319.120	4520.15	158.03	-155.70	544.66	1716537.48	14543639.83	40°02'45.991"N	104°43'40.824"W	0.32	
4688.00	0.170	76.960	4607.15	157.64	-155.31	544.47	1716537.29	14543640.22	40°02'45.995"N	104°43'40.826"W	0.83	
4775.00	0.530	95.130	4694.14	157.65	-155.32	545.00	1716537.82	14543640.21	40°02'45.995"N	104°43'40.819"W	0.43	
4863.00	0.430	74.870	4782.14	157.60	-155.27	545.72	1716538.54	14543640.27	40°02'45.996"N	104°43'40.810"W	0.22	

Actual Wellpath Report

AZUL 13-12HZ AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#29 AZUL 13-12HZ (917'FSL & 1399'FWL, SEC.13)
Area	COLORADO	Well	AZUL 13-12HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-12HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (182 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
4950.00	0.290	37.100	4869.14	157.34	-155.01	546.17	1716538.99	14543640.53	40°02'45.998"N	104°43'40.804"W	0.31	
5038.00	0.350	60.670	4957.14	157.03	-154.70	546.54	1716539.35	14543640.84	40°02'46.001"N	104°43'40.799"W	0.16	
5125.00	0.330	75.260	5044.14	156.84	-154.50	547.01	1716539.83	14543641.03	40°02'46.003"N	104°43'40.793"W	0.10	
5213.00	0.700	332.950	5132.13	156.30	-153.96	547.01	1716539.83	14543641.58	40°02'46.008"N	104°43'40.793"W	0.95	
5301.00	0.870	341.280	5220.13	155.18	-152.85	546.55	1716539.36	14543642.69	40°02'46.019"N	104°43'40.799"W	0.23	
5388.00	0.300	350.500	5307.12	154.33	-152.00	546.30	1716539.11	14543643.53	40°02'46.028"N	104°43'40.802"W	0.66	
5475.00	0.880	304.220	5394.12	153.73	-151.40	545.71	1716538.52	14543644.13	40°02'46.034"N	104°43'40.810"W	0.81	
5563.00	1.370	319.470	5482.10	152.54	-150.22	544.47	1716537.27	14543645.31	40°02'46.045"N	104°43'40.826"W	0.65	
5650.00	1.330	329.900	5569.08	150.88	-148.55	543.29	1716536.09	14543646.97	40°02'46.062"N	104°43'40.841"W	0.29	
5737.00	1.330	346.270	5656.05	149.02	-146.70	542.54	1716535.34	14543648.82	40°02'46.080"N	104°43'40.851"W	0.44	
5825.00	1.400	355.430	5744.03	146.95	-144.64	542.22	1716535.00	14543650.88	40°02'46.101"N	104°43'40.855"W	0.26	
5912.00	1.540	356.660	5831.00	144.73	-142.41	542.06	1716534.84	14543653.11	40°02'46.123"N	104°43'40.857"W	0.16	
6000.00	1.620	357.750	5918.96	142.30	-139.99	541.95	1716534.72	14543655.53	40°02'46.147"N	104°43'40.859"W	0.10	
6123.00	1.750	8.410	6041.91	138.71	-136.39	542.15	1716534.91	14543659.12	40°02'46.182"N	104°43'40.856"W	0.28	
6211.00	2.160	6.030	6129.86	135.73	-133.41	542.52	1716535.28	14543662.10	40°02'46.212"N	104°43'40.851"W	0.47	
6299.00	2.320	12.250	6217.79	132.34	-130.02	543.07	1716535.82	14543665.49	40°02'46.245"N	104°43'40.844"W	0.33	
6386.00	1.460	4.420	6304.75	129.52	-127.20	543.53	1716536.27	14543668.32	40°02'46.273"N	104°43'40.838"W	1.03	
6474.00	0.140	66.730	6392.74	128.36	-126.04	543.72	1716536.45	14543669.48	40°02'46.284"N	104°43'40.836"W	1.59	
6562.00	0.310	153.520	6480.73	128.53	-126.21	543.92	1716536.65	14543669.31	40°02'46.283"N	104°43'40.833"W	0.38	
6569.00†	0.838	172.964	6487.73	128.60	-126.27	543.94	1716536.67	14543669.24	40°02'46.282"N	104°43'40.833"W	7.95	KOP
6649.00	7.190	182.410	6567.50	134.19	-131.86	543.80	1716536.55	14543663.65	40°02'46.227"N	104°43'40.835"W	7.95	
6736.00	12.490	177.940	6653.19	149.04	-146.72	543.91	1716536.70	14543648.81	40°02'46.080"N	104°43'40.833"W	6.15	
6824.00	16.010	176.070	6738.47	170.67	-168.34	545.08	1716537.94	14543627.20	40°02'45.866"N	104°43'40.818"W	4.03	
6911.00	20.660	176.270	6821.03	197.98	-195.64	546.90	1716539.84	14543599.91	40°02'45.597"N	104°43'40.795"W	5.35	
6998.00	28.820	181.170	6899.98	234.32	-231.98	547.48	1716540.53	14543563.58	40°02'45.237"N	104°43'40.787"W	9.66	
7086.00	34.220	182.830	6974.97	280.27	-277.94	545.82	1716539.01	14543517.64	40°02'44.783"N	104°43'40.809"W	6.21	
7174.00	38.400	182.110	7045.87	332.31	-329.99	543.59	1716536.94	14543465.61	40°02'44.269"N	104°43'40.837"W	4.77	
7261.00	43.350	180.060	7111.64	389.21	-386.89	542.56	1716536.09	14543408.73	40°02'43.707"N	104°43'40.851"W	5.89	
7349.00	51.360	180.250	7171.21	453.88	-451.57	542.38	1716536.10	14543344.07	40°02'43.067"N	104°43'40.853"W	9.10	
7436.00	58.250	180.590	7221.32	524.93	-522.62	541.85	1716535.79	14543273.05	40°02'42.365"N	104°43'40.860"W	7.93	
7524.00	62.820	179.820	7264.59	601.52	-599.21	541.59	1716535.76	14543196.48	40°02'41.608"N	104°43'40.863"W	5.25	
7612.00	65.110	179.250	7303.22	680.59	-678.28	542.24	1716536.64	14543117.45	40°02'40.827"N	104°43'40.855"W	2.67	
7699.00	76.120	178.850	7332.05	762.52	-760.21	543.60	1716538.26	14543035.56	40°02'40.017"N	104°43'40.837"W	12.66	
7787.00	84.110	178.760	7347.14	849.13	-846.81	545.41	1716540.33	14542949.00	40°02'39.162"N	104°43'40.814"W	9.08	
7874.00	88.860	179.510	7352.48	935.94	-933.61	546.72	1716541.90	14542862.24	40°02'38.304"N	104°43'40.797"W	5.53	LANDING (17°FNL & 1946'FWL, SEC.24) 40.0439733 -104.7279993
7962.00	89.200	180.070	7353.97	1023.93	-1021.60	547.04	1716542.49	14542774.28	40°02'37.434"N	104°43'40.793"W	0.74	
8049.00	89.200	180.420	7355.18	1110.92	-1108.59	546.67	1716542.38	14542687.33	40°02'36.575"N	104°43'40.798"W	0.40	
8137.00	89.050	181.210	7356.53	1198.89	-1196.57	545.42	1716541.39	14542599.38	40°02'35.705"N	104°43'40.814"W	0.91	
8224.00	88.120	179.530	7358.67	1285.85	-1283.54	544.86	1716541.10	14542512.44	40°02'34.846"N	104°43'40.821"W	2.21	
8300.00†	89.346	179.461	7360.35	1361.83	-1359.51	545.53	1716541.99	14542436.50	40°02'34.095"N	104°43'40.813"W	1.62	CROSS SETBACK HEEL (443°FNL & 1944'FWL, SEC.24) 40.0428041 -104.7280036
8312.00	89.540	179.450	7360.47	1373.83	-1371.51	545.64	1716542.15	14542424.51	40°02'33.976"N	104°43'40.811"W	1.62	
8399.00	88.210	179.850	7362.18	1460.81	-1458.49	546.17	1716542.94	14542337.56	40°02'33.117"N	104°43'40.805"W	1.60	
8487.00	87.660	181.240	7365.35	1548.75	-1546.43	545.34	1716542.37	14542249.66	40°02'32.248"N	104°43'40.815"W	1.70	
8574.00	87.070	180.290	7369.35	1635.64	-1633.33	544.18	1716541.47	14542162.79	40°02'31.389"N	104°43'40.830"W	1.28	
8662.00	86.150	178.720	7374.55	1723.48	-1721.17	544.93	1716542.50	14542074.99	40°02'30.521"N	104°43'40.821"W	2.07	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#29 AZUL 13-12HZ (917'FSL & 1399'FWL, SEC.13)
Area	COLORADO	Well	AZUL 13-12HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-12HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (182 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
8749.00	86.550	178.640	7380.09	1810.29	-1807.97	546.93	1716544.76	14541988.23	40°02'29.663"N	104°43'40.795"W	0.47	
8837.00	87.380	179.190	7384.75	1898.15	-1895.83	548.60	1716546.69	14541900.41	40°02'28.795"N	104°43'40.773"W	1.13	
8924.00	87.410	178.860	7388.71	1985.06	-1982.72	550.08	1716548.43	14541813.55	40°02'27.936"N	104°43'40.754"W	0.38	
9012.00	87.290	178.690	7392.77	2072.95	-2070.61	551.96	1716550.58	14541725.71	40°02'27.068"N	104°43'40.730"W	0.24	
9099.00	87.440	178.440	7396.77	2159.84	-2157.49	554.13	1716553.02	14541638.87	40°02'26.209"N	104°43'40.702"W	0.33	
9187.00	89.820	179.150	7398.88	2247.79	-2245.44	555.98	1716555.13	14541550.96	40°02'25.340"N	104°43'40.679"W	2.82	
9274.00	90.400	177.710	7398.71	2334.77	-2332.40	558.37	1716557.78	14541464.04	40°02'24.481"N	104°43'40.648"W	1.78	
9362.00	88.740	176.190	7399.37	2422.65	-2420.27	563.05	1716562.72	14541376.22	40°02'23.612"N	104°43'40.588"W	2.56	
9449.00	89.110	176.560	7401.00	2509.49	-2507.08	568.55	1716568.48	14541289.46	40°02'22.754"N	104°43'40.517"W	0.60	
9537.00	89.510	178.640	7402.06	2597.41	-2594.99	572.23	1716572.43	14541201.60	40°02'21.886"N	104°43'40.470"W	2.41	
9624.00	89.940	180.870	7402.48	2684.41	-2681.98	572.60	1716573.07	14541114.64	40°02'21.026"N	104°43'40.465"W	2.61	
9711.00	91.360	181.140	7401.49	2771.38	-2768.96	571.08	1716571.81	14541027.69	40°02'20.166"N	104°43'40.485"W	1.66	
9798.00	90.890	181.250	7399.79	2858.33	-2855.93	569.26	1716570.26	14540940.76	40°02'19.307"N	104°43'40.508"W	0.55	
9885.00	89.510	182.280	7399.48	2945.28	-2942.88	566.58	1716567.84	14540853.83	40°02'18.448"N	104°43'40.543"W	1.98	
9973.00	89.880	181.320	7399.95	3033.22	-3030.84	563.82	1716565.35	14540765.90	40°02'17.578"N	104°43'40.578"W	1.17	
10060.00	87.470	179.970	7401.96	3120.18	-3117.80	562.84	1716564.63	14540678.97	40°02'16.719"N	104°43'40.591"W	3.17	
10148.00	88.090	179.950	7405.37	3208.11	-3205.73	562.90	1716564.96	14540591.07	40°02'15.850"N	104°43'40.590"W	0.70	
10236.00	87.010	181.260	7409.13	3296.02	-3293.64	561.97	1716564.30	14540503.19	40°02'14.981"N	104°43'40.602"W	1.93	
10324.00	87.690	182.170	7413.20	3383.87	-3381.51	559.34	1716561.93	14540415.36	40°02'14.113"N	104°43'40.636"W	1.29	
10412.00	88.740	182.030	7415.94	3471.75	-3469.41	556.12	1716558.98	14540327.48	40°02'13.244"N	104°43'40.677"W	1.20	
10499.00	89.940	182.530	7416.94	3558.66	-3556.33	552.66	1716555.78	14540240.58	40°02'12.385"N	104°43'40.722"W	1.49	
10587.00	89.780	181.870	7417.16	3646.58	-3644.26	549.28	1716552.67	14540152.68	40°02'11.516"N	104°43'40.765"W	0.77	
10674.00	90.920	183.100	7416.63	3733.48	-3731.18	545.51	1716549.17	14540065.78	40°02'10.658"N	104°43'40.814"W	1.93	
10761.00	89.600	180.960	7416.23	3820.40	-3818.11	542.43	1716546.35	14539978.87	40°02'09.798"N	104°43'40.853"W	2.89	
10850.00	88.610	180.380	7417.62	3909.38	-3907.10	541.39	1716545.58	14539889.92	40°02'08.919"N	104°43'40.867"W	1.29	
10937.00	90.860	181.460	7418.03	3996.35	-3994.08	539.99	1716544.45	14539802.97	40°02'08.059"N	104°43'40.885"W	2.87	
11025.00	90.090	180.540	7417.30	4084.32	-4082.06	538.45	1716543.18	14539715.02	40°02'07.190"N	104°43'40.904"W	1.36	
11112.00	88.280	180.280	7418.53	4171.31	-4169.04	537.83	1716542.82	14539628.07	40°02'06.330"N	104°43'40.912"W	2.10	
11200.00	89.880	181.120	7419.95	4259.28	-4257.02	536.76	1716542.01	14539540.12	40°02'05.461"N	104°43'40.926"W	2.05	
11287.00	89.510	179.160	7420.41	4346.27	-4344.02	536.54	1716542.06	14539453.16	40°02'04.601"N	104°43'40.929"W	2.29	
11354.00†	88.451	176.975	7421.60	4413.23	-4410.96	538.80	1716544.52	14539386.25	40°02'03.940"N	104°43'40.900"W	3.62	CROSS SETBACK TOE (1782'FSL & 1941'FWL, SEC.24) 40.0344277 -104.7280278
11375.00	88.120	176.290	7422.23	4434.19	-4431.92	540.04	1716545.82	14539365.31	40°02'03.733"N	104°43'40.884"W	3.62	
11462.00	88.680	175.420	7424.66	4520.95	-4518.65	546.32	1716552.37	14539278.62	40°02'02.875"N	104°43'40.803"W	1.19	
11550.00	89.380	175.680	7426.15	4608.70	-4606.38	553.15	1716559.46	14539190.96	40°02'02.009"N	104°43'40.716"W	0.85	
11637.00	90.520	175.860	7426.23	4695.49	-4693.14	559.57	1716566.13	14539104.25	40°02'01.151"N	104°43'40.633"W	1.33	
11725.00	88.550	176.960	7426.94	4783.33	-4780.96	565.08	1716571.91	14539016.48	40°02'00.283"N	104°43'40.562"W	2.56	
11812.00	88.830	177.940	7428.93	4870.23	-4867.85	568.94	1716576.04	14538929.64	40°01'59.425"N	104°43'40.513"W	1.17	
11900.00	89.820	177.690	7429.97	4958.18	-4955.78	572.30	1716579.66	14538841.76	40°01'58.556"N	104°43'40.470"W	1.16	
11987.00	90.890	178.540	7429.43	5045.14	-5042.72	575.16	1716582.78	14538754.85	40°01'57.696"N	104°43'40.433"W	1.57	
12075.00	87.880	177.570	7430.37	5133.08	-5130.66	578.15	1716586.03	14538666.96	40°01'56.827"N	104°43'40.394"W	3.59	
12162.00	87.810	177.650	7433.64	5219.96	-5217.52	581.77	1716589.92	14538580.15	40°01'55.969"N	104°43'40.348"W	0.12	
12250.00	89.140	177.950	7435.98	5307.88	-5305.42	585.15	1716593.56	14538492.29	40°01'55.100"N	104°43'40.305"W	1.55	
12337.00	90.620	178.480	7436.17	5394.84	-5392.38	587.86	1716596.54	14538405.38	40°01'54.241"N	104°43'40.270"W	1.81	
12425.00	92.060	179.200	7434.11	5482.80	-5480.33	589.64	1716598.58	14538317.46	40°01'53.372"N	104°43'40.247"W	1.83	
12512.00	92.740	178.150	7430.46	5569.71	-5567.23	591.65	1716600.86	14538230.61	40°01'52.513"N	104°43'40.221"W	1.44	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#29 AZUL 13-12HZ (917'FSL & 1399'FWL, SEC.13)
Area	COLORADO	Well	AZUL 13-12HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-12HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (182 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
12579.00	93.450	178.130	7426.85	5636.58	-5634.10	593.82	1716603.23	14538163.77	40°01'51.852"N	104°43'40.193"W	1.06	LAST BHGE MWD+IFR1+SC SURVEY
12630.00	93.450	178.130	7423.78	5687.47	-5684.98	595.48	1716605.04	14538112.92	40°01'51.350"N	104°43'40.172"W	0.00	PTB (508'FSL & 1998'FWL, SEC.24) 40.0309304 -104.7278255

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	2.13	-240.23	1715752.42	14543795.21	40°02'47.551"N	104°43'50.916"W	polygon
SEC.24-T1N-R66W	0.00	2.13	-240.23	1715752.42	14543795.21	40°02'47.551"N	104°43'50.916"W	polygon
AZUL 13-12HZ HEEL REV-1(50'FNL & 1968'FWL, SEC.24)	7362.00	-963.22	565.83	1716561.09	14542832.70	40°02'38.011"N	104°43'40.552"W	point
AZUL 13-12HZ HEEL REV-2(50'FNL & 1948'FWL, SEC.24)	7362.00	-963.22	545.83	1716541.10	14542832.64	40°02'38.011"N	104°43'40.809"W	point
AZUL 13-12HZ BHL REV-1(468'FSL & 1969'FWL, SEC.24)	7442.00	-5724.84	566.22	1716575.91	14538072.98	40°01'50.956"N	104°43'40.548"W	point
AZUL 13-12HZ LANDBOX	7442.00	0.00	0.00	1715992.57	14543793.82	40°02'47.530"N	104°43'47.827"W	polygon
AZUL 13-12HZ RADIUS 1	7442.00	0.00	0.00	1715992.57	14543793.82	40°02'47.530"N	104°43'47.827"W	polygon
AZUL 13-12HZ RADIUS 2	7442.00	0.00	0.00	1715992.57	14543793.82	40°02'47.530"N	104°43'47.827"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: AZUL 13-12HZ AWB Ref Wellpath: AZUL 13-12HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1812.00	Custom APC ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC ISCWSA Rev-2 MWD+IFR1 <125 - 1812>	AZUL 13-12HZ AWB
1812.00	12579.00	Custom APC ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+SC <1887 - 12579>	AZUL 13-12HZ AWB
12579.00	12630.00	Blind Drilling (std)	Projection to bit	AZUL 13-12HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#29 AZUL 13-12HZ (917'FSL & 1399'FWL, SEC.13)
Area	COLORADO	Well	AZUL 13-12HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-12HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
125.00	0.130	147.580	125.00	FIRST SURFACE MWD+IFR1 SURVEY
1812.00	19.290	122.890	1790.73	LAST SURFACE MWD+IFR1 SURVEY
1887.00	19.020	123.720	1861.58	FIRST BHGE MWD+IFR1+SC SURVEY
2620.00	18.118	89.286	2558.02	ENTER LANDBOX (729'FSL & 1791'FWL, SEC.13) 40.0460210 -104.7285521
6569.00	0.839	172.964	6487.73	KOP
7874.00	88.860	179.510	7352.48	LANDING (17'FNL & 1946'FWL, SEC.24) 40.0439733 -104.7279993
8300.00	89.346	179.461	7360.35	CROSS SETBACK HEEL (443'FNL & 1944'FWL, SEC.24) 40.0428041 -104.7280036
11354.00	88.451	176.975	7421.60	CROSS SETBACK TOE (1782'FSL & 1941'FWL, SEC.24) 40.0344277 -104.7280278
12579.00	93.450	178.130	7426.85	LAST BHGE MWD+IFR1+SC SURVEY
12630.00	93.450	178.130	7423.78	PTB (508'FSL & 1998'FWL, SEC.24) 40.0309304 -104.7278255