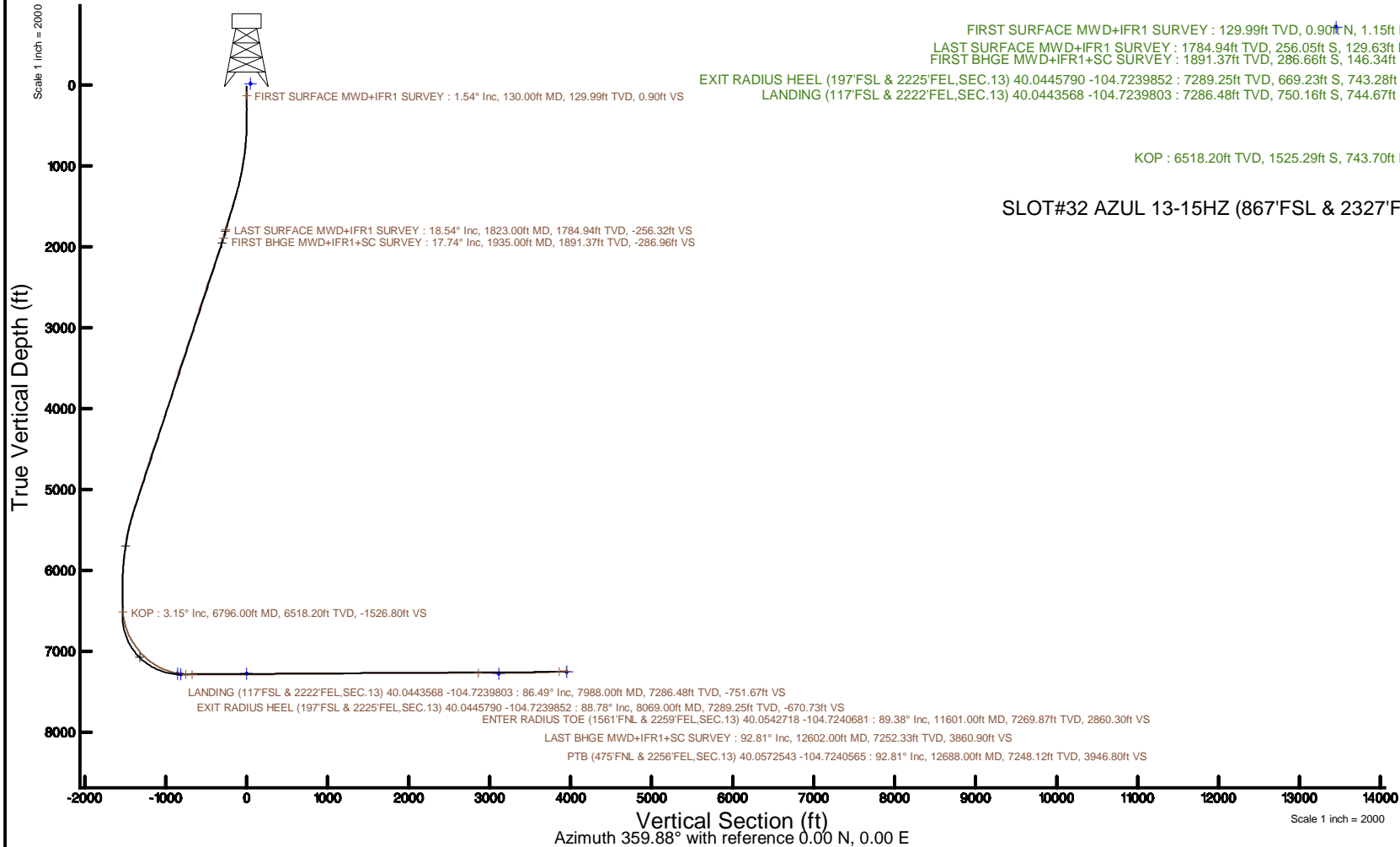


KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO	Slot: SLOT#32 AZUL 13-15HZ (867'FSL & 2327'FWL,SEC.13)
Field: WELD COUNTY (UTM/TRUE NORTH)Well: AZUL 13-15HZ	
Facility: SEC.13-T1N-R66W	Wellbore: AZUL 13-15HZ PWB
Plot reference wellpath is AZUL 13-15HZ 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 geodetic 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#32 AZUL 13-15HZ (867'FSL & 2327'FWL,SEC.13): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: painsetr on 2018-05-08
	Database: WA, DEN, Anadarko, Defn



Scale 1 inch = 2000

Easting (ft)

-7000 -6000 -5000 -4000 -3000 -2000 -1000 0 1000 2000

PTB (475'FNL & 2256'FEL,SEC.13) 40.0572543 -104.7240565 : 7248.12ft TVD, 3948.27ft N, 723.20ft E
LAST BHGE MWD+IFR1+SC SURVEY : 7252.33ft TVD, 3862.38ft N, 723.29ft E

ENTER RADIUS TOE (1561'FNL & 2259'FEL,SEC.13) 40.0542718 -104.7240681 : 7269.87ft TVD, 2861.76ft N, 719.98ft E

FIRST SURFACE MWD+IFR1 SURVEY : 129.99ft TVD, 0.90ft N, 1.15ft E
LAST SURFACE MWD+IFR1 SURVEY : 1784.94ft TVD, 256.05ft S, 129.63ft E
FIRST BHGE MWD+IFR1+SC SURVEY : 1891.37ft TVD, 286.66ft S, 146.34ft E
EXIT RADIUS HEEL (197'FSL & 2225'FEL,SEC.13) 40.0445790 -104.7239852 : 7289.25ft TVD, 669.23ft S, 743.28ft E
LANDING (117'FSL & 2222'FEL,SEC.13) 40.0443568 -104.7239803 : 7286.48ft TVD, 750.16ft S, 744.67ft E

KOP : 6518.20ft TVD, 1525.29ft S, 743.70ft E

SLOT#32 AZUL 13-15HZ (867'FSL & 2327'FWL,SEC.13)

Northing (ft)

4000
3000
2000
1000
0
-1000
-2000
-3000

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#32 AZUL 13-15HZ (867'FSL & 2327'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-15HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-15HZ 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	5/8/2018 at 1:39 PM
Convergence at slot	0.18° East	Database/Source file	WA_DEN_Anadarko_Defn/AZUL_13-15HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-4203.09	-563.84	1716919.59	14543752.95	40°02'47.098"N	104°43'35.904"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#32 AZUL 13-15HZ (867'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	359.88°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#32 AZUL 13-15HZ (867'FSL & 2327'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-15HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-15HZ 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	0.00	51.870	0.00	0.00	0.00	0.00	1716919.58	14543752.95	40°02'47.098"N	104°43'35.904"W	0.00	
21.00	0.000	51.870	21.00	0.00	0.00	0.00	1716919.58	14543752.95	40°02'47.098"N	104°43'35.904"W	0.00	
130.00	1.540	51.870	129.99	0.90	0.90	1.15	1716920.73	14543753.85	40°02'47.107"N	104°43'35.889"W	1.41	FIRST SURFACE MWD+IFR1 SURVEY
162.00	0.660	29.190	161.98	1.33	1.33	1.58	1716921.16	14543754.28	40°02'47.111"N	104°43'35.884"W	3.02	
193.00	0.570	5.550	192.98	1.64	1.64	1.68	1716921.26	14543754.59	40°02'47.114"N	104°43'35.882"W	0.86	
225.00	0.750	278.100	224.98	1.83	1.83	1.49	1716921.07	14543754.78	40°02'47.116"N	104°43'35.885"W	2.88	
257.00	0.400	285.750	256.98	1.89	1.89	1.18	1716920.75	14543754.84	40°02'47.117"N	104°43'35.889"W	1.12	
288.00	1.010	275.640	287.97	1.94	1.94	0.80	1716920.38	14543754.89	40°02'47.117"N	104°43'35.894"W	2.00	
319.00	0.750	254.630	318.97	1.92	1.92	0.33	1716919.91	14543754.86	40°02'47.117"N	104°43'35.900"W	1.32	
351.00	0.530	136.860	350.97	1.75	1.75	0.23	1716919.81	14543754.70	40°02'47.115"N	104°43'35.901"W	3.44	
382.00	0.660	152.420	381.97	1.49	1.49	0.41	1716919.99	14543754.44	40°02'47.113"N	104°43'35.899"W	0.67	
414.00	1.540	142.130	413.96	0.99	0.99	0.76	1716920.34	14543753.94	40°02'47.108"N	104°43'35.894"W	2.81	
446.00	1.450	154.700	445.95	0.28	0.28	1.20	1716920.78	14543753.23	40°02'47.101"N	104°43'35.889"W	1.06	
477.00	1.540	155.490	476.94	-0.45	-0.45	1.54	1716921.12	14543752.50	40°02'47.094"N	104°43'35.884"W	0.30	
509.00	1.930	142.660	508.92	-1.27	-1.27	2.04	1716921.63	14543751.68	40°02'47.085"N	104°43'35.878"W	1.71	
540.00	1.410	151.630	539.91	-2.03	-2.02	2.54	1716922.13	14543750.93	40°02'47.078"N	104°43'35.871"W	1.87	
572.00	1.890	143.450	571.90	-2.80	-2.79	3.04	1716922.64	14543750.16	40°02'47.070"N	104°43'35.865"W	1.67	
604.00	2.810	138.000	603.87	-3.81	-3.80	3.88	1716923.48	14543749.16	40°02'47.060"N	104°43'35.854"W	2.96	
636.00	4.040	138.000	635.81	-5.23	-5.22	5.16	1716924.76	14543747.74	40°02'47.046"N	104°43'35.838"W	3.84	
668.00	4.480	144.950	667.73	-7.09	-7.08	6.63	1716926.24	14543745.89	40°02'47.028"N	104°43'35.819"W	2.12	
700.00	5.710	150.660	699.60	-9.51	-9.49	8.13	1716927.74	14543743.48	40°02'47.004"N	104°43'35.799"W	4.15	
732.00	6.150	159.270	731.43	-12.50	-12.48	9.52	1716929.14	14543740.50	40°02'46.975"N	104°43'35.782"W	3.10	
763.00	6.550	160.770	762.24	-15.73	-15.70	10.69	1716930.32	14543737.28	40°02'46.943"N	104°43'35.767"W	1.40	
795.00	6.720	159.100	794.02	-19.20	-19.18	11.96	1716931.60	14543733.81	40°02'46.908"N	104°43'35.750"W	0.80	
827.00	7.510	158.480	825.78	-22.90	-22.87	13.39	1716933.04	14543730.12	40°02'46.872"N	104°43'35.732"W	2.48	
859.00	8.090	162.000	857.48	-26.99	-26.96	14.86	1716934.52	14543726.04	40°02'46.832"N	104°43'35.713"W	2.35	
890.00	8.570	162.000	888.15	-31.26	-31.23	16.24	1716935.92	14543721.78	40°02'46.789"N	104°43'35.695"W	1.55	
922.00	8.960	162.000	919.78	-35.90	-35.87	17.75	1716937.44	14543717.15	40°02'46.744"N	104°43'35.676"W	1.22	
954.00	9.760	158.740	951.35	-40.80	-40.76	19.50	1716939.21	14543712.26	40°02'46.695"N	104°43'35.653"W	3.00	
985.00	10.410	155.320	981.87	-45.80	-45.76	21.63	1716941.34	14543707.27	40°02'46.646"N	104°43'35.626"W	2.85	
1017.00	11.030	151.980	1013.32	-51.14	-51.09	24.27	1716944.00	14543701.95	40°02'46.593"N	104°43'35.592"W	2.74	
1049.00	12.000	153.380	1044.67	-56.82	-56.76	27.20	1716946.95	14543696.29	40°02'46.537"N	104°43'35.554"W	3.15	
1081.00	12.520	154.700	1075.94	-62.94	-62.87	30.17	1716949.94	14543690.19	40°02'46.477"N	104°43'35.516"W	1.85	
1112.00	12.920	154.440	1106.18	-69.11	-69.04	33.10	1716952.89	14543684.04	40°02'46.416"N	104°43'35.478"W	1.30	
1144.00	13.270	157.070	1137.35	-75.72	-75.65	36.08	1716955.88	14543677.44	40°02'46.350"N	104°43'35.440"W	2.16	
1176.00	13.540	156.460	1168.48	-82.54	-82.47	39.01	1716958.83	14543670.63	40°02'46.283"N	104°43'35.402"W	0.95	
1208.00	15.030	153.300	1199.49	-89.69	-89.61	42.37	1716962.21	14543663.51	40°02'46.212"N	104°43'35.359"W	5.25	
1239.00	15.610	150.130	1229.39	-96.91	-96.81	46.25	1716966.11	14543656.31	40°02'46.141"N	104°43'35.309"W	3.29	
1271.00	16.350	149.870	1260.15	-104.55	-104.44	50.65	1716970.54	14543648.70	40°02'46.066"N	104°43'35.253"W	2.32	
1303.00	17.090	149.870	1290.80	-112.52	-112.41	55.28	1716975.18	14543640.75	40°02'45.987"N	104°43'35.193"W	2.31	
1335.00	17.050	149.960	1321.39	-120.66	-120.53	59.98	1716979.91	14543632.64	40°02'45.907"N	104°43'35.133"W	0.15	
1366.00	17.710	149.520	1350.97	-128.66	-128.53	64.65	1716984.60	14543624.66	40°02'45.828"N	104°43'35.073"W	2.17	
1398.00	18.060	149.160	1381.42	-137.13	-136.99	69.66	1716989.64	14543616.23	40°02'45.744"N	104°43'35.008"W	1.15	
1430.00	18.020	151.710	1411.85	-145.75	-145.60	74.55	1716994.55	14543607.63	40°02'45.659"N	104°43'34.945"W	2.47	
1461.00	17.840	154.090	1441.35	-154.26	-154.10	78.90	1716998.92	14543599.15	40°02'45.575"N	104°43'34.889"W	2.43	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#32 AZUL 13-15HZ (867'FSL & 2327'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-15HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-15HZ 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
1493.00	17.930	154.700	1471.80	-163.13	-162.96	83.15	1717003.20	14543590.31	40°02'45.488"N	104°43'34.835"W	0.65	
1524.00	18.280	154.610	1501.27	-171.84	-171.66	87.27	1717007.35	14543581.62	40°02'45.402"N	104°43'34.782"W	1.13	
1556.00	19.030	153.470	1531.58	-181.05	-180.87	91.75	1717011.85	14543572.43	40°02'45.311"N	104°43'34.724"W	2.61	
1588.00	19.560	154.170	1561.79	-190.55	-190.36	96.42	1717016.55	14543562.96	40°02'45.217"N	104°43'34.664"W	1.81	
1620.00	18.760	155.140	1592.01	-200.05	-199.85	100.91	1717021.07	14543553.49	40°02'45.123"N	104°43'34.606"W	2.69	
1651.00	18.190	154.790	1621.42	-208.96	-208.75	105.07	1717025.25	14543544.61	40°02'45.035"N	104°43'34.553"W	1.87	
1683.00	18.190	153.820	1651.82	-217.97	-217.75	109.40	1717029.61	14543535.62	40°02'44.946"N	104°43'34.497"W	0.95	
1715.00	17.620	154.000	1682.27	-226.81	-226.58	113.73	1717033.96	14543526.80	40°02'44.859"N	104°43'34.442"W	1.79	
1747.00	17.580	150.660	1712.77	-235.39	-235.15	118.22	1717038.48	14543518.25	40°02'44.774"N	104°43'34.384"W	3.16	
1779.00	18.240	151.010	1743.22	-243.99	-243.74	123.01	1717043.30	14543509.68	40°02'44.689"N	104°43'34.322"W	2.09	
1810.00	18.720	152.330	1772.62	-252.65	-252.39	127.68	1717047.98	14543501.05	40°02'44.604"N	104°43'34.262"W	2.05	
1823.00	18.540	151.360	1784.94	-256.32	-256.05	129.63	1717049.95	14543497.39	40°02'44.568"N	104°43'34.237"W	2.76	LAST SURFACE MWD+IFR1 SURVEY
1935.00	17.740	151.410	1891.37	-286.96	-286.66	146.34	1717066.74	14543466.85	40°02'44.265"N	104°43'34.022"W	0.71	FIRST BHGE MWD+IFR1+SC SURVEY
2025.00	20.290	153.670	1976.46	-313.02	-312.69	159.82	1717080.30	14543440.87	40°02'44.008"N	104°43'33.849"W	2.95	
2115.00	21.560	157.300	2060.52	-342.29	-341.94	173.12	1717093.69	14543411.68	40°02'43.719"N	104°43'33.678"W	2.02	
2204.00	20.770	155.660	2143.52	-371.78	-371.40	185.94	1717106.59	14543382.26	40°02'43.428"N	104°43'33.513"W	1.11	
2294.00	20.150	154.300	2227.84	-400.31	-399.91	199.24	1717119.97	14543353.81	40°02'43.146"N	104°43'33.342"W	0.87	
2384.00	19.790	154.150	2312.43	-428.02	-427.59	212.60	1717133.42	14543326.18	40°02'42.872"N	104°43'33.170"W	0.40	
2473.00	21.110	156.930	2395.82	-456.35	-455.90	225.45	1717146.35	14543297.92	40°02'42.593"N	104°43'33.005"W	1.84	
2563.00	20.290	156.070	2480.01	-485.55	-485.07	238.14	1717159.11	14543268.80	40°02'42.304"N	104°43'32.842"W	0.97	
2652.00	19.040	155.250	2563.82	-512.87	-512.36	250.47	1717171.53	14543241.56	40°02'42.035"N	104°43'32.683"W	1.44	
2742.00	20.290	158.650	2648.57	-540.76	-540.23	262.30	1717183.44	14543213.74	40°02'41.759"N	104°43'32.531"W	1.88	
2832.00	19.130	157.160	2733.30	-568.91	-568.35	273.71	1717194.93	14543185.66	40°02'41.481"N	104°43'32.385"W	1.40	
2922.00	20.410	154.520	2817.99	-596.69	-596.11	286.18	1717207.48	14543157.95	40°02'41.207"N	104°43'32.224"W	1.73	
3011.00	18.460	152.220	2901.92	-623.20	-622.59	299.43	1717220.80	14543131.52	40°02'40.945"N	104°43'32.054"W	2.35	
3101.00	18.800	151.580	2987.20	-648.59	-647.95	312.97	1717234.42	14543106.21	40°02'40.695"N	104°43'31.880"W	0.44	
3191.00	20.250	154.950	3072.03	-675.48	-674.82	326.47	1717247.99	14543079.40	40°02'40.429"N	104°43'31.706"W	2.04	
3280.00	21.850	155.470	3155.08	-704.53	-703.84	339.87	1717261.48	14543050.43	40°02'40.142"N	104°43'31.534"W	1.81	
3370.00	20.220	153.950	3239.08	-733.77	-733.05	353.65	1717275.34	14543021.27	40°02'39.854"N	104°43'31.357"W	1.91	
3460.00	20.190	158.600	3323.55	-762.23	-761.49	366.15	1717287.92	14542992.88	40°02'39.573"N	104°43'31.196"W	1.78	
3549.00	21.420	157.370	3406.75	-791.55	-790.79	378.01	1717299.87	14542963.63	40°02'39.283"N	104°43'31.044"W	1.47	
3639.00	19.020	154.480	3491.20	-819.99	-819.20	390.65	1717312.59	14542935.27	40°02'39.002"N	104°43'30.881"W	2.89	
3728.00	18.390	150.700	3575.50	-845.35	-844.53	403.77	1717325.78	14542909.99	40°02'38.752"N	104°43'30.712"W	1.53	
3818.00	19.740	150.760	3660.56	-871.02	-870.17	418.14	1717340.23	14542884.40	40°02'38.499"N	104°43'30.528"W	1.50	
3908.00	19.170	154.840	3745.42	-897.69	-896.81	431.85	1717354.01	14542857.82	40°02'38.235"N	104°43'30.351"W	1.64	
3997.00	18.780	150.730	3829.59	-923.44	-922.54	445.07	1717367.30	14542832.14	40°02'37.981"N	104°43'30.181"W	1.56	
4087.00	20.580	151.330	3914.33	-949.99	-949.06	459.74	1717382.05	14542805.68	40°02'37.719"N	104°43'29.993"W	2.01	
4177.00	21.350	155.140	3998.38	-978.76	-977.80	474.22	1717396.61	14542776.99	40°02'37.435"N	104°43'29.807"W	1.74	
4266.00	19.210	151.870	4081.86	-1006.40	-1005.42	487.93	1717410.41	14542749.43	40°02'37.162"N	104°43'29.630"W	2.72	
4356.00	20.770	154.580	4166.43	-1033.90	-1032.89	501.77	1717424.32	14542722.01	40°02'36.891"N	104°43'29.452"W	2.02	
4446.00	21.420	156.770	4250.40	-1063.45	-1062.41	515.10	1717437.74	14542692.55	40°02'36.599"N	104°43'29.281"W	1.14	
4535.00	20.180	154.790	4333.60	-1092.30	-1091.23	528.05	1717450.77	14542663.77	40°02'36.314"N	104°43'29.114"W	1.60	
4625.00	22.470	155.850	4417.44	-1122.07	-1120.97	541.70	1717464.51	14542634.08	40°02'36.020"N	104°43'28.939"W	2.58	
4715.00	20.640	155.090	4501.14	-1152.18	-1151.06	555.42	1717478.31	14542604.05	40°02'35.723"N	104°43'28.763"W	2.06	
4805.00	18.340	153.890	4585.98	-1179.31	-1178.16	568.33	1717491.30	14542577.00	40°02'35.455"N	104°43'28.597"W	2.59	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#32 AZUL 13-15HZ (867'FSL & 2327'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-15HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-15HZ 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
4894.00	20.560	156.120	4669.89	-1206.20	-1205.03	580.82	1717503.87	14542550.18	40°02'35.190"N	104°43'28.436"W	2.63	
4984.00	18.480	154.250	4754.72	-1233.53	-1232.33	593.42	1717516.55	14542522.93	40°02'34.920"N	104°43'28.274"W	2.41	
5073.00	19.140	152.750	4838.96	-1259.23	-1258.01	606.23	1717529.43	14542497.30	40°02'34.666"N	104°43'28.109"W	0.92	
5163.00	20.770	152.190	4923.56	-1286.49	-1285.24	620.43	1717543.71	14542470.12	40°02'34.397"N	104°43'27.927"W	1.82	
5253.00	19.480	151.870	5008.06	-1313.87	-1312.59	634.95	1717558.31	14542442.83	40°02'34.127"N	104°43'27.740"W	1.44	
5343.00	20.380	151.860	5092.67	-1340.95	-1339.64	649.42	1717572.85	14542415.83	40°02'33.859"N	104°43'27.554"W	1.00	
5432.00	19.130	156.950	5176.44	-1368.07	-1366.73	662.44	1717585.95	14542388.80	40°02'33.592"N	104°43'27.387"W	2.39	
5522.00	18.670	158.210	5261.58	-1395.04	-1393.68	673.56	1717597.15	14542361.90	40°02'33.325"N	104°43'27.244"W	0.68	
5612.00	17.940	156.000	5347.03	-1421.10	-1419.71	684.54	1717608.21	14542335.90	40°02'33.068"N	104°43'27.102"W	1.12	
5701.00	16.310	154.080	5432.08	-1444.88	-1443.48	695.58	1717619.32	14542312.18	40°02'32.833"N	104°43'26.960"W	1.94	
5791.00	13.580	155.220	5519.03	-1465.87	-1464.44	705.54	1717629.33	14542291.26	40°02'32.626"N	104°43'26.833"W	3.05	
5881.00	10.770	148.510	5607.00	-1482.65	-1481.21	714.36	1717638.20	14542274.52	40°02'32.460"N	104°43'26.719"W	3.49	
5971.00	8.740	142.730	5695.70	-1495.28	-1493.82	722.89	1717646.77	14542261.94	40°02'32.336"N	104°43'26.609"W	2.50	
6060.00	8.220	148.410	5783.73	-1506.10	-1504.62	730.32	1717654.23	14542251.16	40°02'32.229"N	104°43'26.514"W	1.11	
6150.00	6.930	149.790	5872.94	-1516.29	-1514.80	736.42	1717660.36	14542241.01	40°02'32.128"N	104°43'26.435"W	1.45	
6240.00	3.910	160.270	5962.53	-1523.88	-1522.38	740.19	1717664.15	14542233.45	40°02'32.053"N	104°43'26.387"W	3.52	
6329.00	3.060	165.560	6051.36	-1529.04	-1527.54	741.81	1717665.78	14542228.30	40°02'32.002"N	104°43'26.366"W	1.02	
6419.00	1.750	126.150	6141.29	-1532.18	-1530.67	743.52	1717667.50	14542225.17	40°02'31.971"N	104°43'26.344"W	2.26	
6508.00	0.960	47.540	6230.27	-1532.48	-1530.97	745.17	1717669.15	14542224.87	40°02'31.968"N	104°43'26.323"W	2.05	
6598.00	1.020	339.140	6320.26	-1531.22	-1529.71	745.44	1717669.42	14542226.13	40°02'31.981"N	104°43'26.320"W	1.24	
6687.00	1.400	332.580	6409.24	-1529.51	-1528.01	744.65	1717668.63	14542227.83	40°02'31.998"N	104°43'26.330"W	0.45	
6777.00	1.350	341.590	6499.21	-1527.53	-1526.03	743.81	1717667.78	14542229.81	40°02'32.017"N	104°43'26.340"W	0.25	
6796.00†	3.151	355.122	6518.20	-1526.80	-1525.29	743.70	1717667.66	14542230.54	40°02'32.025"N	104°43'26.342"W	9.82	KOP
6866.00	9.990	1.830	6587.69	-1518.80	-1517.30	743.73	1717667.67	14542238.54	40°02'32.104"N	104°43'26.341"W	9.82	
6956.00	14.940	358.810	6675.55	-1499.39	-1497.89	743.74	1717667.62	14542257.94	40°02'32.295"N	104°43'26.341"W	5.55	
7046.00	19.820	0.830	6761.41	-1472.52	-1471.01	743.72	1717667.52	14542284.80	40°02'32.561"N	104°43'26.342"W	5.46	
7135.00	30.660	2.860	6841.80	-1434.66	-1433.15	745.07	1717668.76	14542322.66	40°02'32.935"N	104°43'26.324"W	12.22	
7225.00	35.740	0.200	6917.09	-1385.42	-1383.91	746.31	1717669.84	14542371.88	40°02'33.422"N	104°43'26.308"W	5.87	
7314.00	36.660	359.630	6988.90	-1332.86	-1331.35	746.23	1717669.60	14542424.42	40°02'33.941"N	104°43'26.309"W	1.10	
7404.00	45.370	357.770	7056.75	-1273.87	-1272.37	744.81	1717668.00	14542483.38	40°02'34.524"N	104°43'26.328"W	9.77	
7493.00	51.950	0.870	7115.51	-1207.10	-1205.60	744.10	1717667.09	14542550.11	40°02'35.184"N	104°43'26.337"W	7.84	
7583.00	56.490	357.600	7168.13	-1134.13	-1132.63	743.07	1717665.83	14542623.05	40°02'35.905"N	104°43'26.350"W	5.84	
7673.00	65.270	358.840	7211.89	-1055.62	-1054.12	740.67	1717663.19	14542701.52	40°02'36.681"N	104°43'26.381"W	9.83	
7762.00	71.130	1.320	7244.93	-973.03	-971.53	740.82	1717663.09	14542784.08	40°02'37.497"N	104°43'26.379"W	7.07	
7852.00	77.930	1.760	7268.92	-886.38	-884.87	743.15	1717665.16	14542870.71	40°02'38.353"N	104°43'26.349"W	7.57	
7942.00	84.320	0.280	7282.80	-797.52	-796.01	744.73	1717666.46	14542959.54	40°02'39.232"N	104°43'26.328"W	7.28	
7988.00†	86.491	359.576	7286.48	-751.67	-750.16	744.67	1717666.26	14543005.37	40°02'39.685"N	104°43'26.329"W	4.96	LANDING (117'FSL & 2222'FEL,SEC.13) 40.0443568 -104.7239803
8031.00	88.520	358.920	7288.35	-708.72	-707.21	744.10	1717665.56	14543048.30	40°02'40.109"N	104°43'26.336"W	4.96	
8069.00†	88.782	358.603	7289.25	-670.73	-669.23	743.28	1717664.62	14543086.26	40°02'40.484"N	104°43'26.347"W	1.08	EXIT RADIUS HEEL (197'FSL & 2225'FEL,SEC.13) 40.0445790 -104.7239852
8121.00	89.140	358.170	7290.19	-618.76	-617.26	741.82	1717663.00	14543138.21	40°02'40.998"N	104°43'26.366"W	1.08	
8210.00	90.400	359.590	7290.55	-529.78	-528.28	740.08	1717660.99	14543227.15	40°02'41.877"N	104°43'26.388"W	2.13	
8300.00	91.230	358.630	7289.27	-439.80	-438.30	738.68	1717659.32	14543317.09	40°02'42.766"N	104°43'26.406"W	1.41	
8390.00	90.150	359.820	7288.18	-349.81	-348.32	737.46	1717657.82	14543407.03	40°02'43.656"N	104°43'26.422"W	1.79	
8479.00	90.490	359.870	7287.69	-260.81	-259.32	737.22	1717657.31	14543495.99	40°02'44.535"N	104°43'26.425"W	0.39	
8569.00	90.590	359.780	7286.84	-170.82	-169.33	736.95	1717656.76	14543585.95	40°02'45.425"N	104°43'26.428"W	0.15	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#32 AZUL 13-15HZ (867'FSL & 2327'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-15HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-15HZ 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
8659.00	90.000	358.580	7286.38	-80.83	-79.34	735.66	1717655.20	14543675.90	40°02'46.314"N	104°43'26.445"W	1.49	
8748.00	90.400	1.940	7286.07	8.16	9.65	736.06	1717655.33	14543764.85	40°02'47.193"N	104°43'26.439"W	3.80	
8838.00	90.120	1.850	7285.66	98.10	99.60	739.04	1717658.02	14543854.77	40°02'48.082"N	104°43'26.401"W	0.33	
8927.00	89.510	1.610	7285.94	187.05	188.55	741.73	1717660.44	14543943.70	40°02'48.961"N	104°43'26.367"W	0.74	
9017.00	90.400	2.740	7286.02	276.98	278.49	745.14	1717663.58	14544033.61	40°02'49.850"N	104°43'26.323"W	1.60	
9107.00	91.390	1.050	7284.61	366.91	368.42	748.12	1717666.27	14544123.52	40°02'50.739"N	104°43'26.284"W	2.18	
9197.00	90.030	359.110	7283.49	456.89	458.41	748.24	1717666.12	14544213.47	40°02'51.628"N	104°43'26.283"W	2.63	
9286.00	89.630	359.050	7283.76	545.88	547.40	746.82	1717664.42	14544302.42	40°02'52.507"N	104°43'26.301"W	0.45	
9376.00	89.690	359.260	7284.29	635.88	637.39	745.49	1717662.82	14544392.36	40°02'53.397"N	104°43'26.318"W	0.24	
9465.00	91.110	359.450	7283.67	724.87	726.38	744.49	1717661.54	14544481.32	40°02'54.276"N	104°43'26.331"W	1.61	
9555.00	89.970	358.280	7282.82	814.85	816.35	742.70	1717659.49	14544571.25	40°02'55.165"N	104°43'26.354"W	1.82	
9645.00	90.800	0.100	7282.22	904.83	906.34	741.43	1717657.94	14544661.19	40°02'56.055"N	104°43'26.370"W	2.22	
9734.00	90.620	0.250	7281.11	993.82	995.33	741.70	1717657.94	14544750.15	40°02'56.934"N	104°43'26.367"W	0.26	
9824.00	90.650	359.710	7280.12	1083.82	1085.32	741.67	1717657.63	14544840.11	40°02'57.823"N	104°43'26.367"W	0.60	
9913.00	90.990	359.100	7278.84	1172.81	1174.31	740.75	1717656.43	14544929.06	40°02'58.703"N	104°43'26.379"W	0.78	
10003.00	92.030	358.800	7276.47	1262.76	1264.26	739.10	1717654.51	14545018.97	40°02'59.592"N	104°43'26.400"W	1.20	
10093.00	92.000	358.730	7273.31	1352.69	1354.18	737.16	1717652.30	14545108.85	40°03'00.480"N	104°43'26.425"W	0.08	
10182.00	90.710	357.830	7271.20	1441.63	1443.12	734.49	1717649.35	14545197.74	40°03'01.359"N	104°43'26.459"W	1.77	
10272.00	89.630	357.930	7270.94	1531.57	1533.05	731.16	1717645.75	14545287.63	40°03'02.248"N	104°43'26.502"W	1.21	
10361.00	90.090	357.420	7271.15	1620.50	1621.98	727.55	1717641.87	14545376.51	40°03'03.127"N	104°43'26.548"W	0.77	
10451.00	90.460	358.800	7270.72	1710.46	1711.93	724.58	1717638.62	14545466.41	40°03'04.016"N	104°43'26.586"W	1.59	
10541.00	90.710	0.570	7269.80	1800.45	1801.92	724.09	1717637.85	14545556.36	40°03'04.905"N	104°43'26.593"W	1.99	
10630.00	90.650	0.100	7268.75	1889.44	1890.91	724.61	1717638.10	14545645.32	40°03'05.784"N	104°43'26.586"W	0.53	
10720.00	91.020	359.640	7267.43	1979.43	1980.90	724.40	1717637.62	14545735.27	40°03'06.674"N	104°43'26.589"W	0.66	
10810.00	89.880	0.310	7266.73	2069.42	2070.89	724.36	1717637.30	14545825.23	40°03'07.563"N	104°43'26.589"W	1.47	
10899.00	89.140	359.860	7267.49	2158.42	2159.89	724.50	1717637.16	14545914.19	40°03'08.442"N	104°43'26.587"W	0.97	
10989.00	88.640	359.930	7269.23	2248.40	2249.87	724.33	1717636.72	14546004.14	40°03'09.332"N	104°43'26.589"W	0.56	
11078.00	90.520	0.930	7269.88	2337.39	2338.86	725.00	1717637.12	14546093.10	40°03'10.211"N	104°43'26.581"W	2.39	
11168.00	90.620	0.630	7268.99	2427.37	2428.85	726.22	1717638.07	14546183.05	40°03'11.100"N	104°43'26.565"W	0.35	
11258.00	89.690	359.580	7268.75	2517.37	2518.85	726.39	1717637.95	14546273.01	40°03'11.990"N	104°43'26.563"W	1.56	
11347.00	90.430	359.290	7268.65	2606.37	2607.84	725.51	1717636.80	14546361.97	40°03'12.869"N	104°43'26.574"W	0.89	
11437.00	89.970	357.940	7268.34	2696.34	2697.81	723.34	1717634.35	14546451.90	40°03'13.758"N	104°43'26.602"W	1.58	
11526.00	89.230	358.740	7268.96	2785.31	2786.77	720.76	1717631.50	14546540.81	40°03'14.637"N	104°43'26.635"W	1.22	
11601.00†	89.380	0.065	7269.87	2860.30	2861.76	719.98	1717630.49	14546615.77	40°03'15.378"N	104°43'26.645"W	1.78	ENTER RADIUS TOE (1561'FNL & 2259'FEL,SEC.13) 40.0542718 -104.7240681
11616.00	89.410	0.330	7270.03	2875.30	2876.76	720.03	1717630.50	14546630.76	40°03'15.527"N	104°43'26.645"W	1.78	
11705.00	90.550	0.850	7270.06	2964.29	2965.75	720.94	1717631.14	14546719.72	40°03'16.406"N	104°43'26.633"W	1.41	
11795.00	89.940	0.740	7269.67	3054.27	3055.74	722.19	1717632.11	14546809.68	40°03'17.295"N	104°43'26.617"W	0.69	
11884.00	91.050	0.060	7268.91	3143.27	3144.73	722.81	1717632.46	14546898.64	40°03'18.175"N	104°43'26.609"W	1.46	
11974.00	90.340	358.800	7267.81	3233.25	3234.72	721.92	1717631.29	14546988.59	40°03'19.064"N	104°43'26.620"W	1.61	
12064.00	89.750	359.350	7267.74	3323.24	3324.71	720.47	1717629.56	14547078.54	40°03'19.953"N	104°43'26.639"W	0.90	
12153.00	90.650	0.210	7267.43	3412.24	3413.71	720.12	1717628.95	14547167.50	40°03'20.833"N	104°43'26.643"W	1.40	
12243.00	90.370	0.250	7266.63	3502.24	3503.70	720.49	1717629.03	14547257.46	40°03'21.722"N	104°43'26.638"W	0.31	
12332.00	92.070	0.680	7264.74	3591.21	3592.68	721.21	1717629.48	14547346.40	40°03'22.602"N	104°43'26.629"W	1.97	
12422.00	92.810	0.770	7260.90	3681.12	3682.59	722.35	1717630.34	14547436.28	40°03'23.490"N	104°43'26.614"W	0.83	
12512.00	92.650	0.250	7256.62	3771.01	3772.48	723.15	1717630.87	14547526.14	40°03'24.378"N	104°43'26.604"W	0.60	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#32 AZUL 13-15HZ (867'FSL & 2327'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-15HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-15HZ 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
12602.00	92.810	359.940	7252.33	3860.90	3862.38	723.29	1717630.74	14547616.00	40°03'25.267"N	104°43'26.602"W	0.39	LAST BHGE MWD+IFR1+SC SURVEY
12688.00	92.810	359.940	7248.12	3946.80	3948.27	723.20	1717630.38	14547701.86	40°03'26.116"N	104°43'26.603"W	0.00	PTB (475'FNL & 2256'FEL,SEC.13) 40.0572543 -104.7240565

HOLE & CASING SECTIONS - Ref Wellbore: AZUL 13-15HZ AWB Ref Wellpath: AZUL 13-15HZ 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	1863.00	1842.00	21.00	1822.90	0.00	0.00	-267.13	135.68

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	45.87	-1167.49	1715752.42	14543795.21	40°02'47.551"N	104°43'50.916"W	polygon
AZUL 13-15HZ BHL REV-1(470'FNL & 2248'FEL,SEC.13)	7256.00	3952.86	730.93	1717638.09	14547706.47	40°03'26.161"N	104°43'26.504"W	point
AZUL 13-15HZ LANDBOX	7278.00	0.00	0.00	1716919.58	14543752.95	40°02'47.098"N	104°43'35.904"W	polygon
AZUL 13-15HZ RADIUS 1	7278.00	3113.47	334.30	1717244.20	14546866.20	40°03'17.866"N	104°43'31.605"W	polygon
AZUL 13-15HZ RADIUS 2	7278.00	-853.99	325.53	1717247.60	14542900.30	40°02'38.659"N	104°43'31.718"W	polygon
AZUL 13-15HZ HEEL REV-1(50'FSL & 2226'FEL,SEC.13)	7286.00	-811.34	740.55	1717662.33	14542944.20	40°02'39.080"N	104°43'26.382"W	point

WELLPATH COMPOSITION - Ref Wellbore: AZUL 13-15HZ AWB Ref Wellpath: AZUL 13-15HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
21.00	1823.00	Custom APC_ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC_ISCWSA Rev-2 MWD+IFR1 <130 - 1823>	AZUL 13-15HZ AWB
1823.00	12602.00	Custom APC_ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC_ISCWSA Rev-2 MWD+IFR1+SC <1935 - 12602>	AZUL 13-15HZ AWB
12602.00	12688.00	Blind Drilling (std)	Projection to bit	AZUL 13-15HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#32 AZUL 13-15HZ (867'FSL & 2327'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-15HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-15HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
130.00	1.540	51.870	129.99	FIRST SURFACE MWD+IFR1 SURVEY
1823.00	18.540	151.360	1784.94	LAST SURFACE MWD+IFR1 SURVEY
1935.00	17.740	151.410	1891.37	FIRST BHGE MWD+IFR1+SC SURVEY
6796.00	3.151	355.122	6518.20	KOP
7988.00	86.491	359.576	7286.48	LANDING (117'FSL & 2222'FEL,SEC.13) 40.0443568 -104.7239803
8069.00	88.782	358.603	7289.25	EXIT RADIUS HEEL (197'FSL & 2225'FEL,SEC.13) 40.0445790 -104.7239852
11601.00	89.380	0.065	7269.87	ENTER RADIUS TOE (1561'FNL & 2259'FEL,SEC.13) 40.0542718 -104.7240681
12602.00	92.810	359.940	7252.33	LAST BHGE MWD+IFR1+SC SURVEY
12688.00	92.810	359.940	7248.12	PTB (475'FNL & 2256'FEL,SEC.13) 40.0572543 -104.7240565