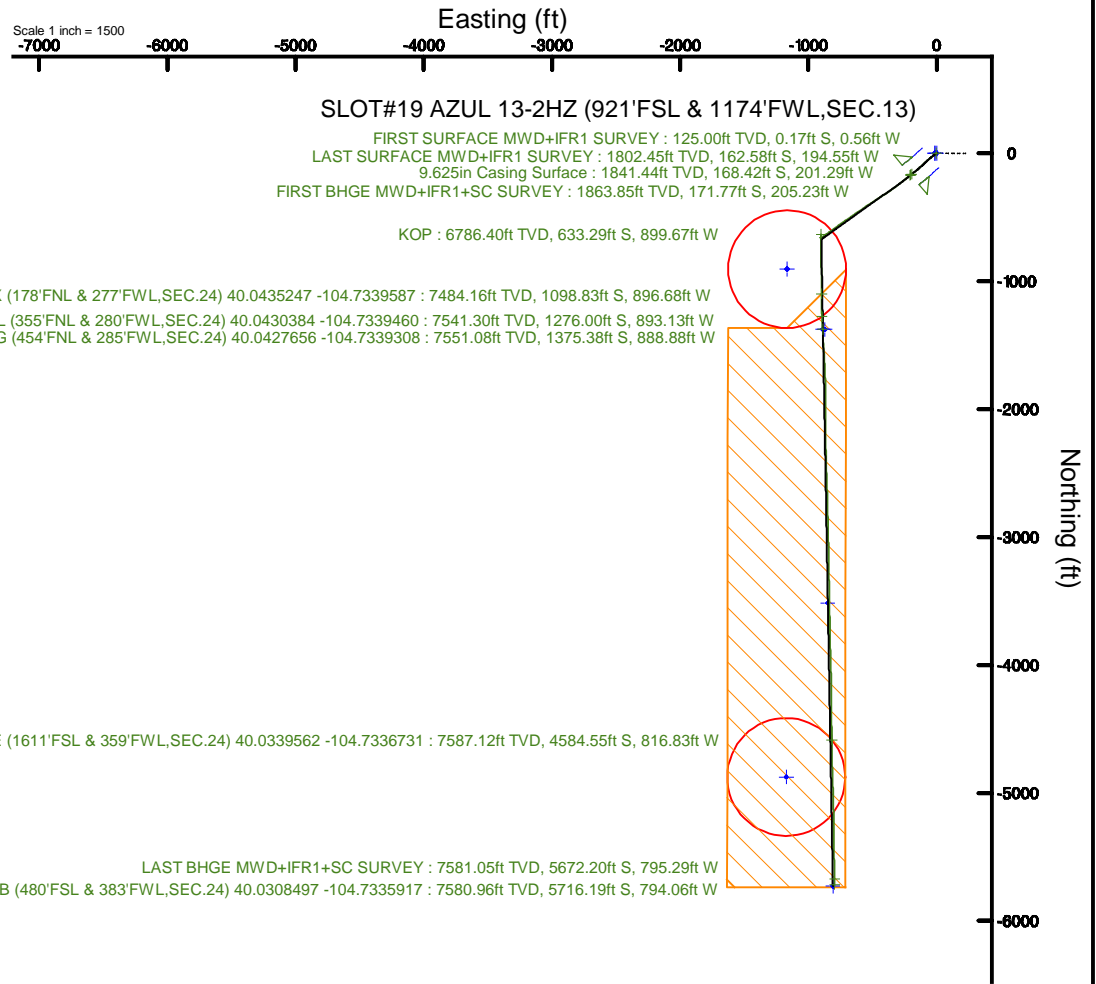
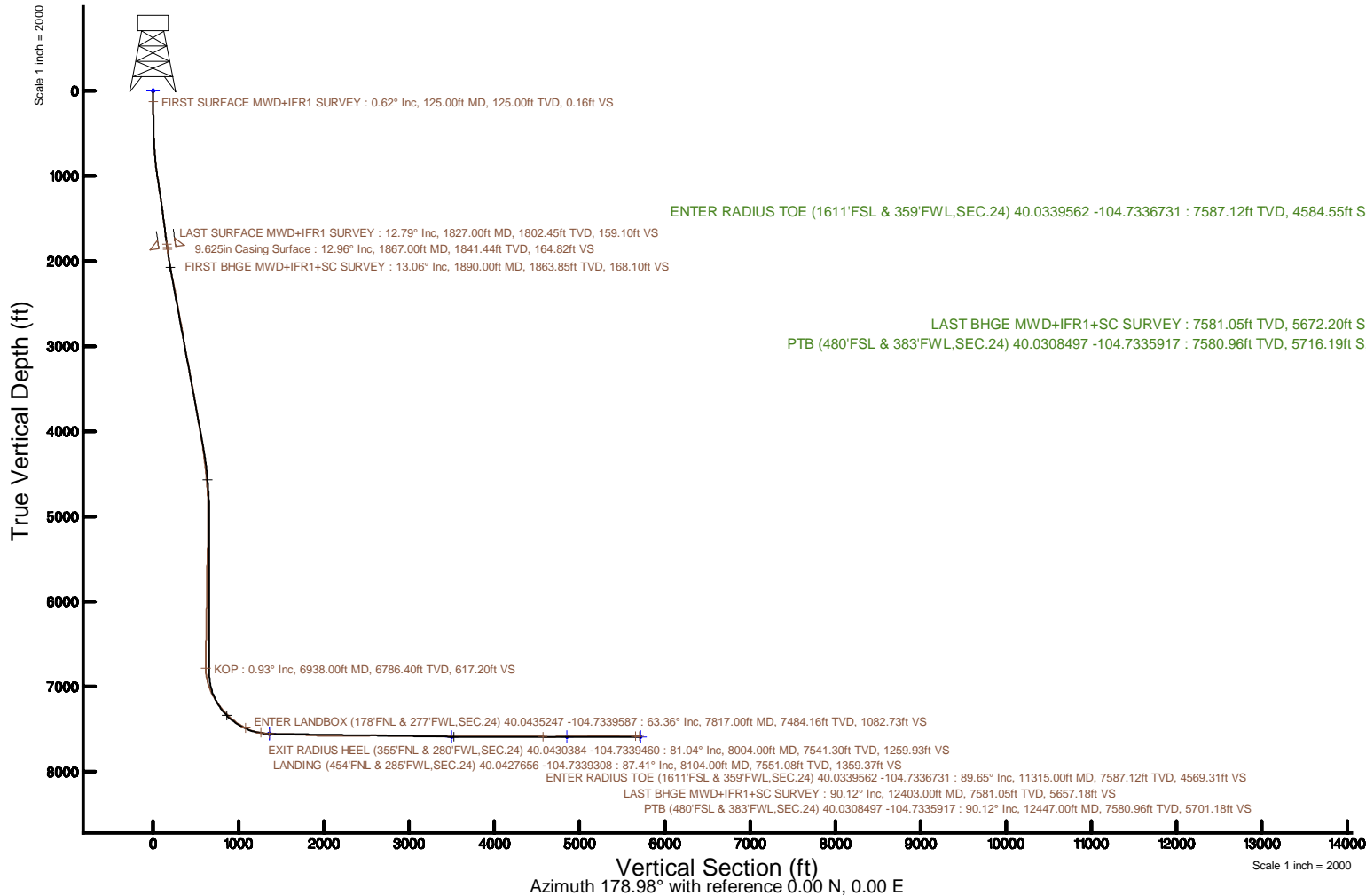


KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#19 AZUL 13-2HZ (921'FSL & 1174'FWL,SEC.13)
Field: WELD COUNTY (UTM/TRUE NORTH)Well: AZUL 13-2HZ
Facility: SEC.13-T1N-R66W Wellbore: AZUL 13-2HZ PWB

Plot reference wellpath is AZUL 13-2HZ PWP Rev-A.0	Grid System: NAD83 / UTM Zone 13 North, US feet
True vertical depths are referenced to Xtreme 22 (17') (RT)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to Xtreme 22 (17') (RT)	North Reference: True north
Xtreme 22 (17') (RT) to Mean Sea Level: 5088 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#19 AZUL 13-2HZ (921'FSL & 1174'FWL,SEC.13)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: painsetr on 2018-04-17
	Database: WA_DEN_Anadarko_Defn



Actual Wellpath Report

AZUL 13-2HZ AWP

Page 1 of 7

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#19 AZUL 13-2HZ (921'FSL & 1174'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-2HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-2HZ 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	0.999606	Report Generated	4/17/2018 at 12:56 PM
Convergence at slot	0.18° East	Database/Source file	WA_DEN_Anadarko_Defn/AZUL_13-2HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-4157.50	-1716.24	1715767.51	14543794.96	40°02'47.548"N	104°43'50.722"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#19 AZUL 13-2HZ (921'FSL & 1174'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	178.98°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#19 AZUL 13-2HZ (921'FSL & 1174'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-2HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-2HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (180 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	252.700	0.00	0.00	0.00	0.00	1715767.50	14543794.95	40°02'47.548"N	104°43'50.722"W	0.00	
17.00	0.000	252.700	17.00	0.00	0.00	0.00	1715767.50	14543794.95	40°02'47.548"N	104°43'50.722"W	0.00	
125.00	0.620	252.700	125.00	0.16	-0.17	-0.56	1715766.95	14543794.78	40°02'47.546"N	104°43'50.729"W	0.57	FIRST SURFACE MWD+IFR1 SURVEY
157.00	0.620	244.000	157.00	0.29	-0.30	-0.88	1715766.63	14543794.65	40°02'47.545"N	104°43'50.733"W	0.29	
188.00	0.570	196.450	187.99	0.50	-0.52	-1.07	1715766.43	14543794.43	40°02'47.543"N	104°43'50.736"W	1.55	
220.00	0.830	243.650	219.99	0.75	-0.78	-1.33	1715766.18	14543794.17	40°02'47.540"N	104°43'50.739"W	1.90	
251.00	0.440	224.220	250.99	0.93	-0.96	-1.61	1715765.90	14543793.99	40°02'47.538"N	104°43'50.743"W	1.42	
283.00	0.750	226.600	282.99	1.16	-1.20	-1.85	1715765.66	14543793.75	40°02'47.536"N	104°43'50.746"W	0.97	
314.00	1.190	225.890	313.98	1.52	-1.56	-2.23	1715765.28	14543793.39	40°02'47.533"N	104°43'50.751"W	1.42	
346.00	1.410	215.520	345.98	2.06	-2.11	-2.69	1715764.82	14543792.84	40°02'47.527"N	104°43'50.757"W	1.00	
377.00	1.050	218.160	376.97	2.59	-2.64	-3.09	1715764.42	14543792.30	40°02'47.522"N	104°43'50.762"W	1.18	
409.00	1.450	223.700	408.96	3.10	-3.17	-3.55	1715763.96	14543791.78	40°02'47.517"N	104°43'50.768"W	1.30	
472.00	2.860	236.530	471.92	4.51	-4.61	-5.41	1715762.11	14543790.33	40°02'47.502"N	104°43'50.792"W	2.35	
504.00	3.430	236.970	503.87	5.45	-5.57	-6.88	1715760.64	14543789.36	40°02'47.493"N	104°43'50.810"W	1.78	
535.00	4.480	235.030	534.79	6.62	-6.77	-8.65	1715758.88	14543788.16	40°02'47.481"N	104°43'50.833"W	3.41	
567.00	5.190	232.310	566.68	8.18	-8.37	-10.82	1715756.71	14543786.55	40°02'47.465"N	104°43'50.861"W	2.33	
599.00	5.190	235.120	598.55	9.85	-10.09	-13.15	1715754.39	14543784.83	40°02'47.448"N	104°43'50.891"W	0.79	
631.00	5.230	237.490	630.42	11.42	-11.70	-15.57	1715751.98	14543783.22	40°02'47.432"N	104°43'50.922"W	0.68	
663.00	5.580	232.480	662.27	13.11	-13.43	-18.04	1715749.52	14543781.48	40°02'47.415"N	104°43'50.954"W	1.84	
695.00	6.500	229.850	694.10	15.17	-15.54	-20.65	1715746.91	14543779.35	40°02'47.394"N	104°43'50.988"W	3.00	
726.00	7.120	229.940	724.88	17.49	-17.91	-23.47	1715744.10	14543776.98	40°02'47.371"N	104°43'51.024"W	2.00	
758.00	7.870	231.080	756.60	20.09	-20.56	-26.69	1715740.89	14543774.32	40°02'47.345"N	104°43'51.065"W	2.39	
790.00	8.700	232.480	788.27	22.87	-23.41	-30.31	1715737.28	14543771.46	40°02'47.317"N	104°43'51.112"W	2.67	
822.00	9.270	231.430	819.88	25.88	-26.50	-34.25	1715733.35	14543768.37	40°02'47.286"N	104°43'51.162"W	1.85	
854.00	9.670	230.460	851.44	29.13	-29.81	-38.33	1715729.28	14543765.04	40°02'47.253"N	104°43'51.215"W	1.35	
885.00	10.150	231.250	881.98	32.42	-33.18	-42.47	1715725.15	14543761.66	40°02'47.220"N	104°43'51.268"W	1.61	
917.00	11.290	229.320	913.42	36.15	-36.99	-47.05	1715720.59	14543757.84	40°02'47.182"N	104°43'51.327"W	3.73	
949.00	12.170	231.520	944.75	40.20	-41.13	-52.06	1715715.59	14543753.69	40°02'47.142"N	104°43'51.391"W	3.08	
980.00	12.880	231.250	975.01	44.30	-45.32	-57.32	1715710.35	14543749.47	40°02'47.100"N	104°43'51.459"W	2.30	
1012.00	13.360	231.610	1006.18	48.73	-49.85	-63.00	1715704.69	14543744.93	40°02'47.055"N	104°43'51.532"W	1.52	
1044.00	12.920	227.470	1037.34	53.34	-54.57	-68.53	1715699.17	14543740.20	40°02'47.009"N	104°43'51.603"W	3.25	
1076.00	13.100	226.420	1068.52	58.16	-59.49	-73.79	1715693.92	14543735.27	40°02'46.960"N	104°43'51.671"W	0.93	
1107.00	13.450	227.120	1098.69	62.95	-64.36	-78.98	1715688.75	14543730.38	40°02'46.912"N	104°43'51.738"W	1.24	
1139.00	13.050	228.180	1129.84	67.79	-69.30	-84.40	1715683.35	14543725.43	40°02'46.863"N	104°43'51.807"W	1.46	
1171.00	12.740	226.330	1161.03	72.54	-74.15	-89.64	1715678.12	14543720.57	40°02'46.815"N	104°43'51.875"W	1.61	
1202.00	13.140	226.510	1191.24	77.24	-78.93	-94.67	1715673.11	14543715.77	40°02'46.768"N	104°43'51.939"W	1.30	
1234.00	13.100	225.540	1222.41	82.19	-83.98	-99.90	1715667.90	14543710.71	40°02'46.718"N	104°43'52.007"W	0.70	
1266.00	11.910	225.540	1253.65	86.95	-88.83	-104.84	1715662.97	14543705.84	40°02'46.670"N	104°43'52.070"W	3.72	
1298.00	11.600	229.410	1284.98	91.27	-93.23	-109.64	1715658.19	14543701.43	40°02'46.627"N	104°43'52.132"W	2.65	
1330.00	11.690	228.350	1316.32	95.43	-97.48	-114.51	1715653.33	14543697.16	40°02'46.585"N	104°43'52.194"W	0.73	
1361.00	11.870	227.390	1346.67	99.59	-101.73	-119.20	1715648.66	14543692.91	40°02'46.543"N	104°43'52.255"W	0.86	
1393.00	12.220	229.580	1377.96	103.93	-106.15	-124.20	1715643.67	14543688.47	40°02'46.499"N	104°43'52.319"W	1.80	
1425.00	12.740	229.400	1409.21	108.33	-110.64	-129.46	1715638.43	14543683.96	40°02'46.455"N	104°43'52.387"W	1.63	
1456.00	12.390	230.110	1439.46	112.59	-115.00	-134.61	1715633.30	14543679.59	40°02'46.412"N	104°43'52.453"W	1.23	
1519.00	11.030	228.270	1501.15	120.77	-123.35	-144.29	1715623.64	14543671.22	40°02'46.329"N	104°43'52.577"W	2.24	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#19 AZUL 13-2HZ (921'FSL & 1174'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-2HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-2HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (180 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
1551.00	11.120	229.580	1532.55	124.72	-127.39	-148.93	1715619.02	14543667.17	40°02'46.289"N	104°43'52.637"W	0.84	
1583.00	11.030	230.460	1563.96	128.59	-131.34	-153.64	1715614.33	14543663.21	40°02'46.250"N	104°43'52.698"W	0.60	
1615.00	11.160	230.990	1595.36	132.40	-135.23	-158.40	1715609.57	14543659.30	40°02'46.212"N	104°43'52.759"W	0.52	
1646.00	11.730	231.170	1625.74	136.18	-139.10	-163.19	1715604.80	14543655.42	40°02'46.173"N	104°43'52.820"W	1.84	
1678.00	12.220	233.980	1657.05	140.11	-143.13	-168.46	1715599.54	14543651.37	40°02'46.134"N	104°43'52.888"W	2.38	
1710.00	12.440	235.030	1688.31	143.98	-147.10	-174.03	1715593.99	14543647.39	40°02'46.094"N	104°43'52.960"W	0.98	
1742.00	12.830	235.910	1719.53	147.85	-151.06	-179.79	1715588.24	14543643.41	40°02'46.055"N	104°43'53.034"W	1.36	
1805.00	12.660	229.940	1780.99	156.01	-159.43	-190.87	1715577.19	14543635.01	40°02'45.972"N	104°43'53.176"W	2.11	
1827.00	12.790	228.790	1802.45	159.10	-162.58	-194.55	1715573.53	14543631.85	40°02'45.941"N	104°43'53.224"W	1.29	LAST SURFACE MWD+IFR1 SURVEY
1890.00	13.060	229.790	1863.85	168.10	-171.77	-205.23	1715562.88	14543622.63	40°02'45.850"N	104°43'53.361"W	0.56	FIRST BHGE MWD+IFR1+SC SURVEY
1978.00	13.250	230.390	1949.54	180.67	-184.62	-220.59	1715547.56	14543609.74	40°02'45.724"N	104°43'53.558"W	0.27	
2066.00	15.270	229.990	2034.82	194.26	-198.50	-237.24	1715530.96	14543595.81	40°02'45.586"N	104°43'53.772"W	2.30	
2153.00	16.910	231.350	2118.41	209.19	-213.77	-255.90	1715512.36	14543580.49	40°02'45.435"N	104°43'54.012"W	1.93	
2241.00	18.110	231.680	2202.33	225.30	-230.25	-276.62	1715491.69	14543563.96	40°02'45.273"N	104°43'54.279"W	1.37	
2329.00	18.970	233.900	2285.77	241.81	-247.16	-298.91	1715469.46	14543546.99	40°02'45.106"N	104°43'54.565"W	1.26	
2417.00	18.420	233.230	2369.12	258.15	-263.91	-321.61	1715446.83	14543530.18	40°02'44.940"N	104°43'54.857"W	0.67	
2505.00	18.690	235.360	2452.55	274.08	-280.24	-344.34	1715424.15	14543513.78	40°02'44.779"N	104°43'55.150"W	0.83	
2592.00	17.600	234.900	2535.22	289.17	-295.73	-366.57	1715401.97	14543498.24	40°02'44.626"N	104°43'55.435"W	1.26	
2680.00	18.120	236.640	2618.98	303.95	-310.90	-388.89	1715379.71	14543483.00	40°02'44.476"N	104°43'55.722"W	0.85	
2767.00	19.000	236.550	2701.46	318.78	-326.15	-412.00	1715356.65	14543467.69	40°02'44.325"N	104°43'56.020"W	1.01	
2855.00	17.430	234.810	2785.05	333.87	-341.64	-434.73	1715333.98	14543452.13	40°02'44.172"N	104°43'56.312"W	1.89	
2942.00	17.700	236.800	2867.99	348.23	-356.39	-456.45	1715312.32	14543437.32	40°02'44.026"N	104°43'56.591"W	0.76	
3030.00	17.830	237.940	2951.79	362.30	-370.87	-479.06	1715289.76	14543422.78	40°02'43.883"N	104°43'56.882"W	0.42	
3117.00	18.450	237.220	3034.47	376.42	-385.39	-501.92	1715266.95	14543408.20	40°02'43.739"N	104°43'57.176"W	0.76	
3205.00	19.740	237.360	3117.63	391.54	-400.95	-526.14	1715242.78	14543392.58	40°02'43.586"N	104°43'57.487"W	1.47	
3292.00	18.740	236.750	3199.77	406.70	-416.54	-550.20	1715218.78	14543376.92	40°02'43.432"N	104°43'57.797"W	1.17	
3380.00	18.760	235.600	3283.10	422.02	-432.28	-573.70	1715195.34	14543361.11	40°02'43.276"N	104°43'58.099"W	0.42	
3467.00	18.850	234.110	3365.45	437.75	-448.43	-596.63	1715172.47	14543344.91	40°02'43.116"N	104°43'58.394"W	0.56	
3555.00	18.710	234.890	3448.77	453.79	-464.88	-619.69	1715149.46	14543328.39	40°02'42.954"N	104°43'58.690"W	0.33	
3642.00	18.600	235.870	3531.20	469.20	-480.69	-642.59	1715126.62	14543312.52	40°02'42.798"N	104°43'58.985"W	0.38	
3729.00	18.800	233.830	3613.60	484.85	-496.75	-665.40	1715103.88	14543296.40	40°02'42.639"N	104°43'59.278"W	0.79	
3817.00	17.670	235.940	3697.19	500.29	-512.60	-687.91	1715081.42	14543280.49	40°02'42.482"N	104°43'59.567"W	1.49	
3904.00	17.080	237.450	3780.22	514.17	-526.86	-709.62	1715059.77	14543266.16	40°02'42.341"N	104°43'59.846"W	0.85	
3991.00	16.970	233.690	3863.41	528.19	-541.26	-730.62	1715038.82	14543251.71	40°02'42.199"N	104°44'00.116"W	1.27	
4079.00	16.430	235.060	3947.69	542.56	-555.99	-751.17	1715018.32	14543236.92	40°02'42.053"N	104°44'00.381"W	0.76	
4166.00	16.510	234.020	4031.12	556.51	-570.30	-771.26	1714998.28	14543222.55	40°02'41.912"N	104°44'00.639"W	0.35	
4254.00	16.010	233.650	4115.60	570.69	-584.84	-791.15	1714978.44	14543207.96	40°02'41.768"N	104°44'00.895"W	0.58	
4341.00	14.350	232.210	4199.57	584.08	-598.56	-809.33	1714960.30	14543194.19	40°02'41.633"N	104°44'01.128"W	1.96	
4429.00	13.030	236.640	4285.07	595.92	-610.69	-826.24	1714943.44	14543182.01	40°02'41.513"N	104°44'01.346"W	1.91	
4516.00	11.790	235.560	4370.03	606.06	-621.12	-841.76	1714927.96	14543171.54	40°02'41.410"N	104°44'01.545"W	1.45	
4604.00	11.210	234.020	4456.27	615.92	-631.22	-856.10	1714913.66	14543161.39	40°02'41.310"N	104°44'01.730"W	0.75	
4691.00	8.830	236.210	4541.93	624.38	-639.91	-868.49	1714901.29	14543152.68	40°02'41.224"N	104°44'01.889"W	2.77	
4779.00	7.120	233.740	4629.08	631.18	-646.89	-878.50	1714891.31	14543145.67	40°02'41.155"N	104°44'02.018"W	1.98	
4866.00	6.310	231.510	4715.48	637.20	-653.06	-886.59	1714883.24	14543139.48	40°02'41.094"N	104°44'02.122"W	0.98	
4954.00	4.640	227.830	4803.08	642.49	-658.46	-893.02	1714876.83	14543134.06	40°02'41.041"N	104°44'02.204"W	1.94	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#19 AZUL 13-2HZ (921'FSL & 1174'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-2HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-2HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (180 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
5041.00	2.780	242.070	4889.89	645.76	-661.81	-897.49	1714872.37	14543130.70	40°02'41.008"N	104°44'02.262"W	2.37	
5129.00	1.980	279.820	4977.82	646.44	-662.55	-900.87	1714868.99	14543129.95	40°02'41.000"N	104°44'02.305"W	1.95	
5216.00	1.850	279.920	5064.77	645.89	-662.05	-903.74	1714866.13	14543130.44	40°02'41.005"N	104°44'02.342"W	0.15	
5304.00	1.090	23.420	5152.75	644.86	-661.04	-904.81	1714865.06	14543131.45	40°02'41.015"N	104°44'02.356"W	2.68	
5391.00	1.270	26.370	5239.74	643.25	-659.41	-904.05	1714865.81	14543133.07	40°02'41.031"N	104°44'02.346"W	0.22	
5479.00	1.430	28.850	5327.71	641.43	-657.58	-903.08	1714866.77	14543134.91	40°02'41.050"N	104°44'02.334"W	0.19	
5566.00	2.150	33.640	5414.67	639.14	-655.27	-901.66	1714868.19	14543137.22	40°02'41.072"N	104°44'02.316"W	0.84	
5653.00	2.500	30.530	5501.60	636.18	-652.27	-899.79	1714870.05	14543140.22	40°02'41.102"N	104°44'02.292"W	0.43	
5741.00	1.510	351.090	5589.54	633.40	-649.48	-898.99	1714870.83	14543143.02	40°02'41.130"N	104°44'02.281"W	1.87	
5828.00	1.050	338.340	5676.52	631.52	-647.60	-899.47	1714870.36	14543144.89	40°02'41.148"N	104°44'02.287"W	0.62	
5915.00	0.860	324.560	5763.51	630.23	-646.33	-900.14	1714869.68	14543146.16	40°02'41.161"N	104°44'02.296"W	0.34	
6003.00	0.560	313.420	5851.50	629.39	-645.50	-900.83	1714868.98	14543146.99	40°02'41.169"N	104°44'02.305"W	0.37	
6091.00	0.740	352.890	5939.50	628.52	-644.64	-901.22	1714868.60	14543147.85	40°02'41.177"N	104°44'02.310"W	0.53	
6178.00	0.600	4.130	6026.49	627.51	-643.62	-901.25	1714868.56	14543148.86	40°02'41.187"N	104°44'02.310"W	0.22	
6266.00	0.620	23.060	6114.49	626.62	-642.73	-901.03	1714868.77	14543149.76	40°02'41.196"N	104°44'02.308"W	0.23	
6353.00	0.990	14.310	6201.48	625.46	-641.57	-900.66	1714869.14	14543150.92	40°02'41.208"N	104°44'02.303"W	0.45	
6441.00	1.140	356.540	6289.46	623.85	-639.95	-900.53	1714869.27	14543152.53	40°02'41.224"N	104°44'02.301"W	0.41	
6529.00	1.330	356.560	6377.44	621.96	-638.06	-900.64	1714869.15	14543154.43	40°02'41.242"N	104°44'02.302"W	0.22	
6616.00	1.290	20.980	6464.42	620.04	-636.14	-900.35	1714869.44	14543156.35	40°02'41.261"N	104°44'02.299"W	0.64	
6704.00	0.530	53.860	6552.41	618.89	-634.97	-899.67	1714870.12	14543157.52	40°02'41.273"N	104°44'02.290"W	1.01	
6791.00	1.000	357.330	6639.40	617.90	-633.98	-899.38	1714870.40	14543158.51	40°02'41.283"N	104°44'02.286"W	0.96	
6878.00	0.280	357.290	6726.40	616.93	-633.01	-899.42	1714870.35	14543159.48	40°02'41.292"N	104°44'02.287"W	0.83	
6938.00†	0.932	208.946	6786.40	617.20	-633.29	-899.67	1714870.11	14543159.20	40°02'41.290"N	104°44'02.290"W	1.97	KOP
6965.00	1.460	206.350	6813.39	617.70	-633.79	-899.93	1714869.85	14543158.70	40°02'41.285"N	104°44'02.293"W	1.97	
7053.00	12.970	179.610	6900.55	628.61	-644.71	-900.36	1714869.46	14543147.79	40°02'41.177"N	104°44'02.299"W	13.28	
7141.00	16.870	179.730	6985.57	651.26	-667.36	-900.23	1714869.65	14543125.14	40°02'40.953"N	104°44'02.297"W	4.43	
7228.00	25.600	180.860	7066.59	682.73	-698.84	-900.45	1714869.52	14543093.68	40°02'40.642"N	104°44'02.300"W	10.05	
7316.00	30.870	183.590	7144.09	724.26	-740.41	-902.15	1714867.95	14543052.11	40°02'40.231"N	104°44'02.322"W	6.16	
7403.00	36.700	180.580	7216.37	772.54	-788.73	-903.82	1714866.43	14543003.81	40°02'39.753"N	104°44'02.343"W	6.97	
7491.00	40.910	176.080	7284.95	827.64	-843.80	-902.11	1714868.30	14542948.76	40°02'39.209"N	104°44'02.321"W	5.76	
7579.00	46.070	176.070	7348.77	888.11	-904.20	-897.97	1714872.63	14542888.40	40°02'38.612"N	104°44'02.268"W	5.86	
7666.00	53.510	179.280	7404.91	954.47	-970.53	-895.38	1714875.42	14542822.11	40°02'37.957"N	104°44'02.235"W	9.00	
7754.00	58.980	181.410	7453.79	1027.58	-1043.66	-895.86	1714875.16	14542749.00	40°02'37.234"N	104°44'02.241"W	6.53	
7817.00†	63.359	180.315	7484.16	1082.73	-1098.83	-896.68	1714874.50	14542693.85	40°02'36.689"N	104°44'02.251"W	7.12	ENTER LANDBOX (178'FNL & 277'FWL,SEC.24) 40.0435247 -104.7339587
7841.00	65.030	179.920	7494.61	1104.33	-1120.44	-896.72	1714874.53	14542672.26	40°02'36.475"N	104°44'02.252"W	7.12	
7929.00	74.200	178.370	7525.23	1186.73	-1202.82	-895.46	1714876.04	14542589.90	40°02'35.661"N	104°44'02.236"W	10.55	
8004.00†	81.036	177.981	7541.30	1259.93	-1276.00	-893.13	1714878.59	14542516.77	40°02'34.938"N	104°44'02.206"W	9.13	EXIT RADIUS HEEL (355'FNL & 280'FWL,SEC.24) 40.0430384 -104.7339460
8016.00	82.130	177.920	7543.06	1271.80	-1287.86	-892.70	1714879.05	14542504.91	40°02'34.821"N	104°44'02.200"W	9.13	
8104.00	87.410	177.080	7551.08	1359.37	-1375.38	-888.88	1714883.14	14542417.44	40°02'33.956"N	104°44'02.151"W	6.07	LANDING (454'FNL & 285'FWL,SEC.24) 40.0427656 -104.7339308
8191.00	88.280	177.060	7554.35	1446.26	-1462.20	-884.43	1714887.84	14542330.66	40°02'33.098"N	104°44'02.094"W	1.00	
8279.00	88.830	176.520	7556.57	1534.17	-1550.04	-879.51	1714893.03	14542242.88	40°02'32.230"N	104°44'02.030"W	0.88	
8367.00	87.810	176.810	7559.15	1622.06	-1637.85	-874.39	1714898.41	14542155.12	40°02'31.362"N	104°44'01.965"W	1.20	
8454.00	87.750	177.340	7562.52	1708.94	-1724.67	-869.95	1714903.11	14542068.34	40°02'30.504"N	104°44'01.907"W	0.61	
8541.00	85.870	179.980	7567.36	1795.80	-1811.50	-867.92	1714905.41	14541981.56	40°02'29.646"N	104°44'01.881"W	3.72	
8629.00	87.570	180.430	7572.40	1883.63	-1899.35	-868.24	1714905.36	14541893.74	40°02'28.778"N	104°44'01.885"W	2.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#19 AZUL 13-2HZ (921'FSL & 1174'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-2HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-2HZ AWW
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (180 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
8716.00	89.170	179.980	7574.87	1970.57	-1986.31	-868.55	1714905.31	14541806.81	40°02'27.919"N	104°44'01.889"W	1.91	
8804.00	90.060	179.610	7575.46	2058.56	-2074.31	-868.23	1714905.89	14541718.85	40°02'27.049"N	104°44'01.885"W	1.10	
8891.00	89.880	179.040	7575.51	2145.56	-2161.30	-867.21	1714907.18	14541631.89	40°02'26.189"N	104°44'01.872"W	0.69	
8979.00	90.180	178.670	7575.46	2233.56	-2249.29	-865.45	1714909.20	14541543.95	40°02'25.320"N	104°44'01.849"W	0.54	
9066.00	90.310	178.440	7575.09	2320.55	-2336.26	-863.26	1714911.66	14541457.02	40°02'24.460"N	104°44'01.821"W	0.30	
9154.00	90.220	178.290	7574.68	2408.55	-2424.22	-860.74	1714914.43	14541369.10	40°02'23.591"N	104°44'01.789"W	0.20	
9241.00	90.370	178.470	7574.23	2495.54	-2511.18	-858.29	1714917.15	14541282.18	40°02'22.732"N	104°44'01.757"W	0.27	
9329.00	90.770	177.960	7573.36	2583.53	-2599.14	-855.54	1714920.16	14541194.27	40°02'21.863"N	104°44'01.722"W	0.74	
9416.00	89.410	178.330	7573.22	2670.52	-2686.09	-852.73	1714923.24	14541107.36	40°02'21.003"N	104°44'01.686"W	1.62	
9504.00	89.540	178.660	7574.03	2758.51	-2774.06	-850.42	1714925.81	14541019.44	40°02'20.134"N	104°44'01.656"W	0.40	
9591.00	89.420	178.570	7574.82	2845.50	-2861.03	-848.31	1714928.18	14540932.51	40°02'19.274"N	104°44'01.629"W	0.17	
9678.00	89.110	178.760	7575.93	2932.49	-2948.00	-846.29	1714930.47	14540845.58	40°02'18.415"N	104°44'01.603"W	0.42	
9765.00	88.980	178.440	7577.38	3019.48	-3034.96	-844.16	1714932.85	14540758.66	40°02'17.556"N	104°44'01.575"W	0.40	
9852.00	89.380	179.260	7578.63	3106.47	-3121.93	-842.42	1714934.86	14540671.73	40°02'16.696"N	104°44'01.553"W	1.05	
9940.00	89.540	179.250	7579.46	3194.47	-3209.92	-841.27	1714936.27	14540583.78	40°02'15.827"N	104°44'01.538"W	0.18	
10028.00	89.450	178.710	7580.23	3282.46	-3297.90	-839.71	1714938.10	14540495.84	40°02'14.957"N	104°44'01.518"W	0.62	
10116.00	89.290	178.230	7581.20	3370.45	-3385.86	-837.36	1714940.72	14540407.91	40°02'14.088"N	104°44'01.488"W	0.57	
10203.00	89.690	179.650	7581.98	3457.45	-3472.84	-835.75	1714942.59	14540320.97	40°02'13.228"N	104°44'01.467"W	1.70	
10291.00	89.260	179.250	7582.78	3545.44	-3560.83	-834.90	1714943.70	14540233.02	40°02'12.359"N	104°44'01.456"W	0.67	
10379.00	88.980	178.840	7584.13	3633.43	-3648.81	-833.44	1714945.43	14540145.08	40°02'11.489"N	104°44'01.437"W	0.56	
10466.00	88.740	178.510	7585.86	3720.41	-3735.77	-831.42	1714947.70	14540058.16	40°02'10.630"N	104°44'01.411"W	0.47	
10554.00	90.550	179.450	7586.41	3808.40	-3823.75	-829.86	1714949.54	14539970.23	40°02'09.761"N	104°44'01.391"W	2.32	
10641.00	91.020	178.490	7585.22	3895.39	-3910.73	-828.29	1714951.36	14539883.29	40°02'08.901"N	104°44'01.371"W	1.23	
10728.00	90.490	178.090	7584.07	3982.38	-3997.68	-825.70	1714954.22	14539796.38	40°02'08.042"N	104°44'01.337"W	0.76	
10817.00	90.180	177.910	7583.55	4071.37	-4086.63	-822.59	1714957.59	14539707.48	40°02'07.163"N	104°44'01.297"W	0.40	
10904.00	90.030	179.730	7583.39	4158.36	-4173.60	-820.80	1714959.65	14539620.54	40°02'06.303"N	104°44'01.274"W	2.10	
10992.00	89.850	179.840	7583.48	4246.35	-4261.60	-820.47	1714960.24	14539532.58	40°02'05.434"N	104°44'01.270"W	0.24	
11079.00	89.600	179.680	7583.90	4333.34	-4348.60	-820.11	1714960.87	14539445.62	40°02'04.574"N	104°44'01.265"W	0.34	
11167.00	89.230	179.570	7584.80	4421.33	-4436.59	-819.53	1714961.71	14539357.66	40°02'03.704"N	104°44'01.258"W	0.44	
11254.00	88.800	178.550	7586.30	4508.32	-4523.57	-818.10	1714963.40	14539270.72	40°02'02.845"N	104°44'01.240"W	1.27	
11315.00†	89.653	179.056	7587.12	4569.31	-4584.55	-816.83	1714964.86	14539209.77	40°02'02.242"N	104°44'01.223"W	1.63	ENTER RADIUS TOE (1611'FSL & 359'FWL,SEC.24) 40.0339562 -104.7336731
11342.00	90.030	179.280	7587.19	4596.31	-4611.54	-816.44	1714965.33	14539182.79	40°02'01.975"N	104°44'01.218"W	1.63	
11429.00	89.940	179.390	7587.22	4683.31	-4698.54	-815.43	1714966.60	14539095.83	40°02'01.116"N	104°44'01.205"W	0.16	
11517.00	90.830	178.950	7586.63	4771.31	-4786.53	-814.15	1714968.14	14539007.88	40°02'00.246"N	104°44'01.189"W	1.13	
11604.00	91.570	178.170	7584.80	4858.28	-4873.48	-811.97	1714970.59	14538920.97	40°01'59.387"N	104°44'01.161"W	1.24	
11692.00	91.600	177.590	7582.37	4946.23	-4961.38	-808.71	1714974.11	14538833.11	40°01'58.518"N	104°44'01.119"W	0.66	
11779.00	90.370	178.760	7580.87	5033.21	-5048.32	-805.94	1714977.14	14538746.21	40°01'57.659"N	104°44'01.083"W	1.95	
11867.00	90.310	178.660	7580.35	5121.21	-5136.30	-803.96	1714979.39	14538658.28	40°01'56.790"N	104°44'01.057"W	0.13	
11954.00	89.970	179.920	7580.14	5208.20	-5223.29	-802.88	1714980.73	14538571.33	40°01'55.930"N	104°44'01.044"W	1.50	
12042.00	90.060	179.860	7580.12	5296.19	-5311.29	-802.71	1714981.16	14538483.36	40°01'55.060"N	104°44'01.041"W	0.12	
12129.00	89.850	179.010	7580.18	5383.19	-5398.29	-801.86	1714982.28	14538396.40	40°01'54.201"N	104°44'01.030"W	1.01	
12217.00	89.630	178.570	7580.58	5471.19	-5486.27	-800.00	1714984.41	14538308.47	40°01'53.331"N	104°44'01.006"W	0.56	
12304.00	89.820	178.620	7581.00	5558.18	-5573.24	-797.87	1714986.80	14538221.53	40°01'52.472"N	104°44'00.979"W	0.23	
12403.00	90.120	178.400	7581.05	5657.18	-5672.20	-795.29	1714989.68	14538122.62	40°01'51.494"N	104°44'00.946"W	0.38	LAST BHGE MWD+IFR1+SC SURVEY
12447.00	90.120	178.400	7580.96	5701.18	-5716.19	-794.06	1714991.04	14538078.65	40°01'51.059"N	104°44'00.930"W	0.00	PTB (480'FSL & 383'FWL,SEC.24) 40.0308497 -104.7335917

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#19 AZUL 13-2HZ (921'FSL & 1174'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-2HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-2HZ AWB
Facility	SEC.13-T1N-R66W		

HOLE & CASING SECTIONS - Ref Wellbore: AZUL 13-2HZ AWB Ref Wellpath: AZUL 13-2HZ 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	1867.00	1850.00	17.00	1841.44	0.00	0.00	-168.42	-201.29

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	0.30	-15.09	1715752.42	14543795.21	40°02'47.551"N	104°43'50.916"W	polygon
SEC.24-T1N-R66W	0.00	0.30	-15.09	1715752.42	14543795.21	40°02'47.551"N	104°43'50.916"W	polygon
AZUL 13-2HZ HEEL REV-1(450'FNL & 306'FWL,SEC.24)	7553.00	-1377.77	-871.29	1714900.72	14542415.10	40°02'33.932"N	104°44'01.925"W	point
AZUL 13-2HZ HEEL REV-2(450'FNL & 291'FWL,SEC.24)	7553.00	-1377.77	-886.29	1714885.73	14542415.06	40°02'33.932"N	104°44'02.118"W	point
AZUL 13-2HZ BHL REV-1(468'FSL & 368'FWL,SEC.24)	7588.00	-5727.75	-809.00	1714976.14	14538067.05	40°01'50.945"N	104°44'01.122"W	point
AZUL 13-2HZ INT. TARGET@3500'VS	7588.00	-3515.63	-848.30	1714930.17	14540278.17	40°02'12.806"N	104°44'01.628"W	point
AZUL 13-2HZ LANDBOX	7588.00	0.00	0.00	1715767.50	14543794.95	40°02'47.548"N	104°43'50.722"W	polygon
AZUL 13-2HZ RADIUS 1	7588.00	-905.79	-1165.91	1714604.80	14542886.00	40°02'38.596"N	104°44'05.713"W	polygon
AZUL 13-2HZ RADIUS 2	7588.00	-4874.96	-1172.41	1714610.30	14538918.40	40°01'59.372"N	104°44'05.794"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: AZUL 13-2HZ AWB Ref Wellpath: AZUL 13-2HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1827.00	Custom APC ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC ISCWSA Rev-2 MWD+IFR1 <125 - 1827>	AZUL 13-2HZ AWB
1827.00	12403.00	Custom APC ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+SC <1890 - 12403>	AZUL 13-2HZ AWB
12403.00	12447.00	Blind Drilling (std)	Projection to bit	AZUL 13-2HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#19 AZUL 13-2HZ (921'FSL & 1174'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-2HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-2HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
125.00	0.620	252.700	125.00	FIRST SURFACE MWD+IFR1 SURVEY
1827.00	12.790	228.790	1802.45	LAST SURFACE MWD+IFR1 SURVEY
1890.00	13.060	229.790	1863.85	FIRST BHGE MWD+IFR1+SC SURVEY
6938.00	0.932	208.946	6786.40	KOP
7817.00	63.359	180.315	7484.16	ENTER LANDBOX (178'FNL & 277'FWL,SEC.24) 40.0435247 -104.7339587
8004.00	81.036	177.981	7541.30	EXIT RADIUS HEEL (355'FNL & 280'FWL,SEC.24) 40.0430384 -104.7339460
8104.00	87.410	177.080	7551.08	LANDING (454'FNL & 285'FWL,SEC.24) 40.0427656 -104.7339308
11315.00	89.653	179.056	7587.12	ENTER RADIUS TOE (1611'FSL & 359'FWL,SEC.24) 40.0339562 -104.7336731
12403.00	90.120	178.400	7581.05	LAST BHGE MWD+IFR1+SC SURVEY
12447.00	90.120	178.400	7580.96	PTB (480'FSL & 383'FWL,SEC.24) 40.0308497 -104.7335917