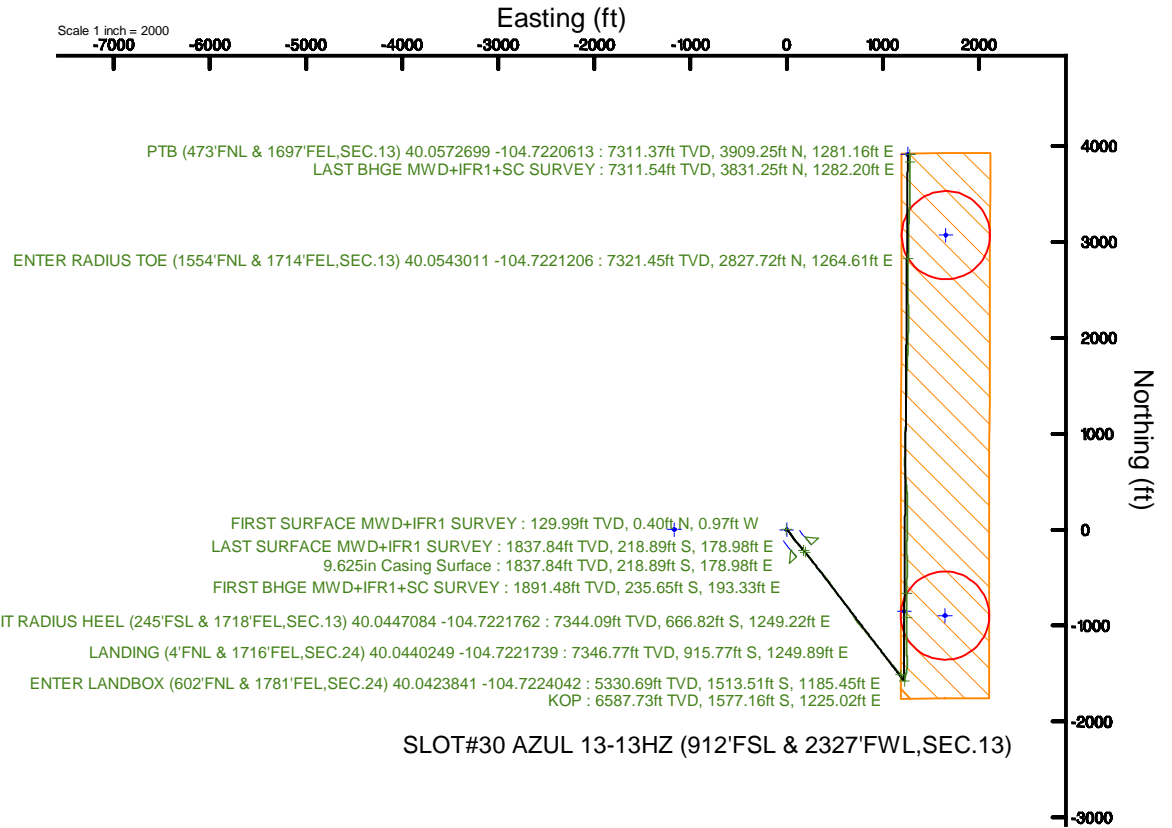
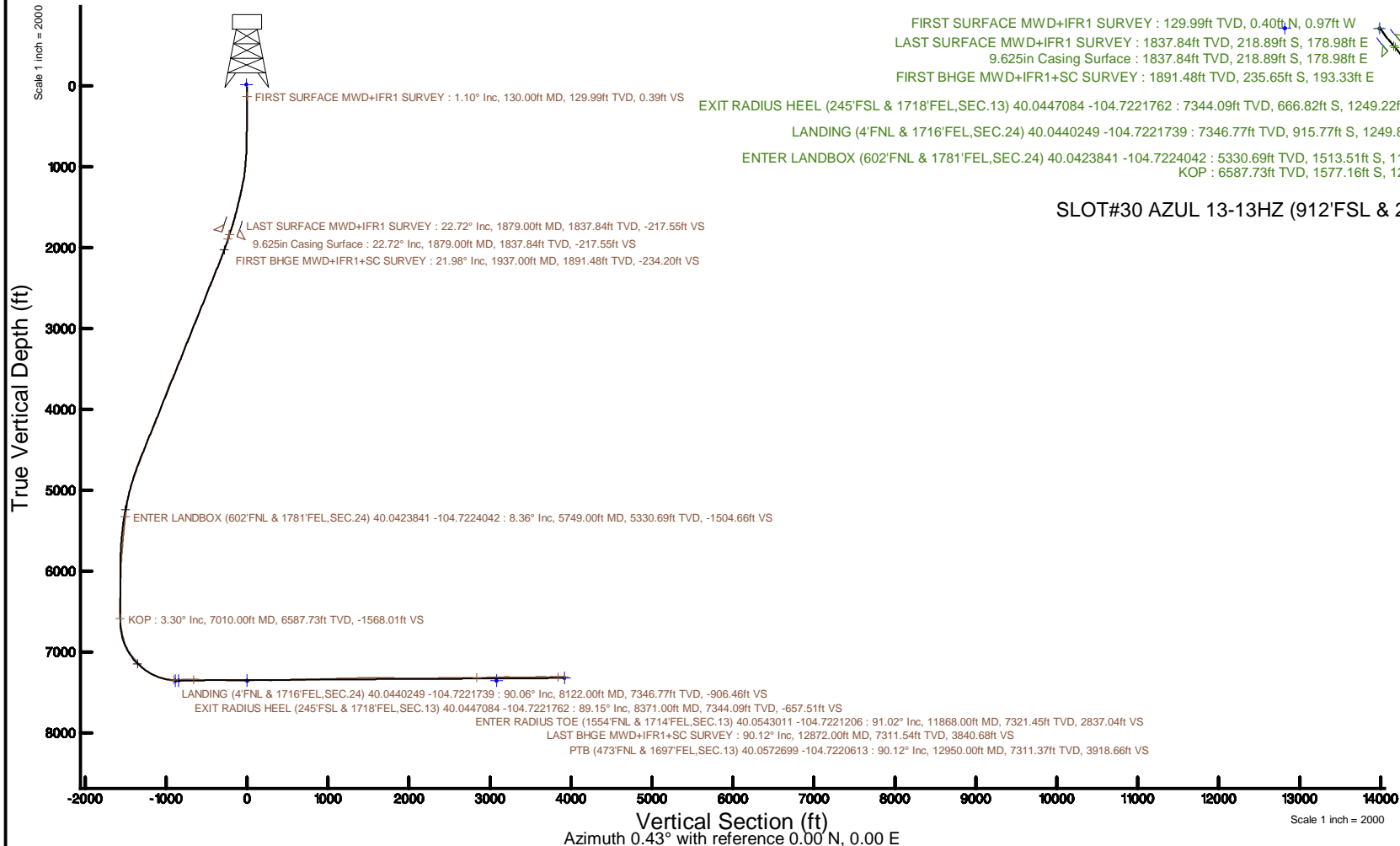


# KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO	Slot: SLOT#30 AZUL 13-13HZ (912'FSL & 2327'FWL,SEC.13)
Field: WELD COUNTY (UTM/TRUE NORTH)Well: AZUL 13-13HZ	
Facility: SEC.13-T1N-R66W	Wellbore: AZUL 13-13HZ PWB
Plot reference wellpath is AZUL 13-13HZ 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#30 AZUL 13-13HZ (912'FSL & 2327'FWL,SEC.13)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: painsetr on 2018-05-04
	Database: WA_DEN_Anadarko_Defn



SLOT#30 AZUL 13-13HZ (912'FSL & 2327'FWL,SEC.13)

# Actual Wellpath Report

AZUL 13-13HZ AWP

Page 1 of 7

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#30 AZUL 13-13HZ (912'FSL & 2327'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-13HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-13HZ 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	5/4/2018 at 2:21 PM
Convergence at slot	0.18° East	Database/Source file	WA_DEN_Anadarko_Defn/AZUL_13-13HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-4158.37	-563.29	1716919.99	14543797.66	40°02'47.540"N	104°43'35.897"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#30 AZUL 13-13HZ (912'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	0.43°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#30 AZUL 13-13HZ (912'FSL & 2327'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-13HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-13HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (184 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	292.600	0.00	0.00	0.00	0.00	1716919.99	14543797.66	40°02'47.540"N	104°43'35.897"W	0.00	
21.00	0.000	292.600	21.00	0.00	0.00	0.00	1716919.99	14543797.66	40°02'47.540"N	104°43'35.897"W	0.00	
130.00	1.100	292.600	129.99	0.39	0.40	-0.97	1716919.02	14543798.06	40°02'47.544"N	104°43'35.909"W	1.01	FIRST SURFACE MWD+IFR1 SURVEY
162.00	1.270	298.750	161.99	0.68	0.69	-1.56	1716918.43	14543798.34	40°02'47.547"N	104°43'35.917"W	0.66	
225.00	1.050	232.400	224.98	0.65	0.67	-2.63	1716917.36	14543798.32	40°02'47.547"N	104°43'35.931"W	2.04	
257.00	1.850	220.270	256.97	0.08	0.10	-3.20	1716916.80	14543797.75	40°02'47.541"N	104°43'35.938"W	2.66	
288.00	1.540	197.860	287.95	-0.70	-0.68	-3.65	1716916.35	14543796.97	40°02'47.533"N	104°43'35.944"W	2.34	
319.00	0.530	165.340	318.95	-1.24	-1.21	-3.74	1716916.26	14543796.43	40°02'47.528"N	104°43'35.945"W	3.64	
351.00	0.750	162.700	350.95	-1.58	-1.56	-3.64	1716916.36	14543796.09	40°02'47.525"N	104°43'35.944"W	0.69	
382.00	0.790	137.390	381.94	-1.93	-1.91	-3.43	1716916.56	14543795.74	40°02'47.521"N	104°43'35.941"W	1.10	
414.00	0.830	139.760	413.94	-2.27	-2.25	-3.13	1716916.86	14543795.40	40°02'47.518"N	104°43'35.937"W	0.16	
446.00	0.400	171.580	445.94	-2.56	-2.53	-2.97	1716917.03	14543795.12	40°02'47.515"N	104°43'35.935"W	1.67	
477.00	0.660	159.010	476.94	-2.83	-2.81	-2.89	1716917.11	14543794.84	40°02'47.512"N	104°43'35.934"W	0.91	
509.00	0.260	156.370	508.93	-3.07	-3.05	-2.79	1716917.21	14543794.60	40°02'47.510"N	104°43'35.933"W	1.25	
572.00	0.700	139.580	571.93	-3.49	-3.47	-2.49	1716917.52	14543794.18	40°02'47.506"N	104°43'35.929"W	0.73	
604.00	0.480	111.990	603.93	-3.68	-3.67	-2.24	1716917.77	14543793.98	40°02'47.504"N	104°43'35.926"W	1.10	
636.00	1.360	108.210	635.93	-3.85	-3.84	-1.75	1716918.25	14543793.82	40°02'47.502"N	104°43'35.920"W	2.76	
668.00	2.240	107.060	667.91	-4.15	-4.14	-0.79	1716919.21	14543793.52	40°02'47.499"N	104°43'35.907"W	2.75	
700.00	3.740	110.760	699.87	-4.69	-4.69	0.78	1716920.79	14543792.97	40°02'47.494"N	104°43'35.887"W	4.72	
732.00	4.570	113.390	731.78	-5.55	-5.57	2.93	1716922.93	14543792.10	40°02'47.485"N	104°43'35.859"W	2.66	
763.00	4.660	109.790	762.68	-6.45	-6.49	5.25	1716925.26	14543791.19	40°02'47.476"N	104°43'35.830"W	0.98	
795.00	5.230	118.840	794.56	-7.57	-7.63	7.75	1716927.76	14543790.05	40°02'47.465"N	104°43'35.797"W	3.01	
827.00	5.930	123.680	826.41	-9.17	-9.25	10.40	1716930.42	14543788.44	40°02'47.449"N	104°43'35.763"W	2.63	
859.00	6.460	125.870	858.22	-11.12	-11.22	13.23	1716933.25	14543786.48	40°02'47.429"N	104°43'35.727"W	1.81	
890.00	6.500	129.480	889.03	-13.24	-13.36	16.00	1716936.03	14543784.35	40°02'47.408"N	104°43'35.691"W	1.32	
922.00	6.680	136.860	920.82	-15.73	-15.87	18.67	1716938.71	14543781.85	40°02'47.383"N	104°43'35.657"W	2.70	
954.00	6.550	139.500	952.60	-18.46	-18.61	21.13	1716941.17	14543779.11	40°02'47.356"N	104°43'35.625"W	1.03	
985.00	6.460	143.630	983.40	-21.19	-21.36	23.31	1716943.36	14543776.37	40°02'47.329"N	104°43'35.597"W	1.54	
1017.00	7.380	142.130	1015.17	-24.24	-24.43	25.64	1716945.70	14543773.31	40°02'47.299"N	104°43'35.567"W	2.93	
1049.00	8.530	140.810	1046.86	-27.68	-27.90	28.40	1716948.47	14543769.86	40°02'47.264"N	104°43'35.532"W	3.64	
1081.00	9.180	140.460	1078.48	-31.47	-31.70	31.53	1716951.60	14543766.06	40°02'47.227"N	104°43'35.492"W	2.04	
1112.00	9.840	142.130	1109.05	-35.44	-35.70	34.73	1716954.82	14543762.07	40°02'47.187"N	104°43'35.450"W	2.31	
1144.00	11.290	143.630	1140.51	-40.10	-40.38	38.26	1716958.36	14543757.41	40°02'47.141"N	104°43'35.405"W	4.61	
1176.00	12.660	146.260	1171.81	-45.51	-45.82	42.07	1716962.19	14543751.98	40°02'47.087"N	104°43'35.356"W	4.61	
1208.00	13.100	145.820	1203.01	-51.39	-51.74	46.05	1716966.19	14543746.08	40°02'47.029"N	104°43'35.305"W	1.41	
1239.00	13.450	148.640	1233.18	-57.35	-57.72	49.90	1716970.05	14543740.11	40°02'46.970"N	104°43'35.255"W	2.37	
1271.00	13.750	148.640	1264.28	-63.75	-64.15	53.82	1716973.99	14543733.70	40°02'46.906"N	104°43'35.205"W	0.94	
1303.00	14.190	149.160	1295.34	-70.33	-70.76	57.81	1716978.00	14543727.10	40°02'46.841"N	104°43'35.154"W	1.43	
1335.00	15.120	146.350	1326.29	-77.14	-77.61	62.13	1716982.34	14543720.27	40°02'46.773"N	104°43'35.098"W	3.66	
1366.00	16.080	144.590	1356.15	-83.97	-84.47	66.86	1716987.09	14543713.43	40°02'46.705"N	104°43'35.037"W	3.45	
1398.00	16.480	143.720	1386.87	-91.20	-91.74	72.12	1716992.36	14543706.17	40°02'46.633"N	104°43'34.970"W	1.46	
1430.00	16.960	143.720	1417.52	-98.58	-99.16	77.56	1716997.83	14543698.77	40°02'46.560"N	104°43'34.900"W	1.50	
1461.00	17.310	143.450	1447.14	-105.89	-106.51	82.99	1717003.27	14543691.44	40°02'46.487"N	104°43'34.830"W	1.16	
1493.00	17.360	140.380	1477.69	-113.35	-114.01	88.86	1717009.17	14543683.96	40°02'46.413"N	104°43'34.754"W	2.86	
1524.00	18.240	137.740	1507.20	-120.46	-121.17	95.08	1717015.40	14543676.83	40°02'46.343"N	104°43'34.674"W	3.85	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#30 AZUL 13-13HZ (912'FSL & 2327'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-13HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-13HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (184 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
1556.00	18.810	137.650	1537.55	-127.93	-128.69	101.92	1717022.27	14543669.33	40°02'46.268"N	104°43'34.586"W	1.78	
1588.00	19.030	138.180	1567.82	-135.57	-136.39	108.87	1717029.24	14543661.66	40°02'46.192"N	104°43'34.497"W	0.87	
1620.00	19.640	137.650	1598.01	-143.38	-144.25	115.98	1717036.36	14543653.82	40°02'46.114"N	104°43'34.406"W	1.98	
1651.00	20.740	138.530	1627.11	-151.29	-152.21	123.12	1717043.53	14543645.88	40°02'46.036"N	104°43'34.314"W	3.68	
1683.00	21.400	140.110	1656.97	-159.96	-160.94	130.62	1717051.05	14543637.18	40°02'45.950"N	104°43'34.217"W	2.72	
1715.00	21.800	140.550	1686.72	-168.97	-170.01	138.14	1717058.59	14543628.14	40°02'45.860"N	104°43'34.121"W	1.35	
1747.00	22.500	139.940	1716.36	-178.19	-179.28	145.85	1717066.34	14543618.90	40°02'45.768"N	104°43'34.022"W	2.30	
1779.00	22.940	140.730	1745.88	-187.65	-188.79	153.74	1717074.25	14543609.41	40°02'45.674"N	104°43'33.920"W	1.67	
1808.00	23.510	140.290	1772.53	-196.42	-197.62	161.01	1717081.55	14543600.61	40°02'45.587"N	104°43'33.827"W	2.05	
1839.00	23.120	139.670	1800.99	-205.75	-207.02	168.90	1717089.46	14543591.24	40°02'45.494"N	104°43'33.725"W	1.49	
1879.00	22.720	139.670	1837.84	-217.55	-218.89	178.98	1717099.58	14543579.40	40°02'45.377"N	104°43'33.596"W	1.00	LAST SURFACE MWD+IFR1 SURVEY
1937.00	21.980	139.190	1891.48	-234.20	-235.65	193.33	1717113.96	14543562.70	40°02'45.211"N	104°43'33.411"W	1.31	FIRST BHGE MWD+IFR1+SC SURVEY
2026.00	22.880	140.910	1973.75	-260.08	-261.68	215.12	1717135.83	14543536.74	40°02'44.954"N	104°43'33.131"W	1.25	
2116.00	24.980	142.160	2056.00	-288.50	-290.27	237.82	1717158.60	14543508.23	40°02'44.671"N	104°43'32.839"W	2.40	
2206.00	26.720	142.630	2137.00	-319.41	-321.36	261.76	1717182.63	14543477.23	40°02'44.364"N	104°43'32.531"W	1.95	
2295.00	28.650	142.900	2215.80	-352.14	-354.28	286.77	1717207.74	14543444.39	40°02'44.039"N	104°43'32.210"W	2.17	
2385.00	29.300	141.660	2294.54	-386.43	-388.77	313.45	1717234.51	14543410.01	40°02'43.698"N	104°43'31.867"W	0.98	
2475.00	28.030	140.040	2373.51	-419.71	-422.25	340.69	1717261.84	14543376.62	40°02'43.367"N	104°43'31.516"W	1.65	
2564.00	28.250	138.520	2451.99	-451.31	-454.06	368.08	1717289.31	14543344.91	40°02'43.053"N	104°43'31.164"W	0.84	
2654.00	26.850	140.140	2531.78	-482.67	-485.62	395.21	1717316.53	14543313.44	40°02'42.741"N	104°43'30.815"W	1.76	
2744.00	26.600	141.820	2612.17	-513.92	-517.06	420.69	1717342.10	14543282.09	40°02'42.430"N	104°43'30.488"W	0.88	
2833.00	26.690	145.270	2691.72	-545.83	-549.15	444.40	1717365.90	14543250.09	40°02'42.113"N	104°43'30.183"W	1.74	
2923.00	27.570	146.510	2771.82	-579.64	-583.13	467.41	1717389.00	14543216.19	40°02'41.777"N	104°43'29.887"W	1.16	
3013.00	25.690	145.060	2852.27	-612.84	-616.50	490.07	1717411.76	14543182.91	40°02'41.448"N	104°43'29.596"W	2.21	
3102.00	26.190	144.420	2932.30	-644.46	-648.29	512.55	1717434.32	14543151.20	40°02'41.133"N	104°43'29.307"W	0.64	
3192.00	27.030	142.760	3012.77	-676.71	-680.72	536.48	1717458.35	14543118.85	40°02'40.813"N	104°43'28.999"W	1.25	
3282.00	26.960	141.910	3092.97	-708.86	-713.06	561.44	1717483.40	14543086.61	40°02'40.493"N	104°43'28.678"W	0.44	
3371.00	28.030	142.840	3171.91	-741.22	-745.60	586.52	1717508.57	14543054.15	40°02'40.172"N	104°43'28.356"W	1.30	
3461.00	25.930	142.270	3252.11	-773.46	-778.02	611.34	1717533.47	14543021.82	40°02'39.851"N	104°43'28.036"W	2.35	
3551.00	25.790	141.150	3333.10	-804.09	-808.83	635.66	1717557.88	14542991.10	40°02'39.547"N	104°43'27.724"W	0.56	
3640.00	25.500	144.800	3413.34	-834.65	-839.57	658.85	1717581.16	14542960.45	40°02'39.243"N	104°43'27.426"W	1.80	
3730.00	26.380	148.750	3494.28	-867.41	-872.50	680.39	1717602.79	14542927.60	40°02'38.918"N	104°43'27.149"W	2.15	
3819.00	27.890	148.570	3573.48	-901.92	-907.16	701.51	1717624.00	14542893.01	40°02'38.575"N	104°43'26.877"W	1.70	
3909.00	28.020	145.780	3652.98	-937.20	-942.61	724.37	1717646.97	14542857.65	40°02'38.225"N	104°43'26.583"W	1.46	
3999.00	26.900	142.880	3732.84	-970.73	-976.32	748.55	1717671.24	14542824.02	40°02'37.892"N	104°43'26.272"W	1.94	
4089.00	26.460	138.810	3813.27	-1001.87	-1007.65	774.04	1717696.82	14542792.78	40°02'37.582"N	104°43'25.944"W	2.09	
4178.00	26.580	140.010	3892.90	-1031.85	-1037.83	799.90	1717722.75	14542762.70	40°02'37.284"N	104°43'25.612"W	0.62	
4268.00	27.560	139.270	3973.04	-1062.86	-1069.03	826.42	1717749.36	14542731.59	40°02'36.975"N	104°43'25.271"W	1.15	
4357.00	25.380	140.090	4052.71	-1092.90	-1099.27	852.10	1717775.12	14542701.44	40°02'36.677"N	104°43'24.941"W	2.48	
4447.00	26.310	139.970	4133.70	-1122.78	-1129.34	877.30	1717800.41	14542671.46	40°02'36.379"N	104°43'24.617"W	1.03	
4537.00	28.570	143.040	4213.58	-1155.06	-1161.81	903.07	1717826.27	14542639.08	40°02'36.059"N	104°43'24.285"W	2.96	
4627.00	28.720	141.670	4292.56	-1189.03	-1195.97	929.43	1717852.71	14542605.02	40°02'35.721"N	104°43'23.947"W	0.75	
4716.00	27.240	140.580	4371.16	-1221.34	-1228.48	955.62	1717879.00	14542572.60	40°02'35.400"N	104°43'23.610"W	1.76	
4806.00	28.310	142.970	4450.79	-1254.10	-1261.43	981.56	1717905.03	14542539.74	40°02'35.074"N	104°43'23.276"W	1.72	
4896.00	25.250	141.800	4531.13	-1286.04	-1293.56	1006.28	1717929.84	14542507.70	40°02'34.757"N	104°43'22.958"W	3.45	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#30 AZUL 13-13HZ (912'FSL & 2327'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-13HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-13HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (184 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
4985.00	24.630	144.190	4611.83	-1315.83	-1323.52	1028.88	1717952.52	14542477.82	40°02'34.460"N	104°43'22.668"W	1.33	
5075.00	25.600	142.750	4693.32	-1346.35	-1354.21	1051.62	1717975.34	14542447.22	40°02'34.157"N	104°43'22.376"W	1.27	
5165.00	24.370	138.740	4774.90	-1375.61	-1383.65	1075.64	1717999.44	14542417.87	40°02'33.866"N	104°43'22.067"W	2.33	
5255.00	24.420	138.970	4856.87	-1403.42	-1411.64	1100.09	1718023.98	14542389.96	40°02'33.590"N	104°43'21.752"W	0.12	
5344.00	21.480	141.400	4938.82	-1429.87	-1438.26	1122.34	1718046.30	14542363.42	40°02'33.327"N	104°43'21.466"W	3.47	
5434.00	18.490	139.770	5023.39	-1453.51	-1462.04	1141.84	1718065.87	14542339.71	40°02'33.092"N	104°43'21.216"W	3.38	
5523.00	13.730	139.680	5108.87	-1472.23	-1480.87	1157.80	1718081.87	14542320.93	40°02'32.905"N	104°43'21.010"W	5.35	
5613.00	11.440	137.210	5196.70	-1486.82	-1495.57	1170.78	1718094.89	14542306.28	40°02'32.760"N	104°43'20.844"W	2.61	
5703.00	9.250	143.440	5285.24	-1499.11	-1507.93	1181.15	1718105.30	14542293.95	40°02'32.638"N	104°43'20.710"W	2.73	
5749.00†	8.364	141.259	5330.69	-1504.66	-1513.51	1185.45	1718109.61	14542288.39	40°02'32.583"N	104°43'20.655"W	2.06	ENTER LANDBOX (602'FNL & 1781'FEL,SEC.24) 40.0423841 -104.7224042
5793.00	7.530	138.700	5374.27	-1509.29	-1518.17	1189.35	1718113.53	14542283.74	40°02'32.537"N	104°43'20.605"W	2.06	
5882.00	7.610	146.560	5462.50	-1518.53	-1527.47	1196.45	1718120.65	14542274.47	40°02'32.445"N	104°43'20.514"W	1.17	
5972.00	6.380	140.130	5551.83	-1527.30	-1536.28	1202.94	1718127.16	14542265.68	40°02'32.358"N	104°43'20.430"W	1.62	
6062.00	6.300	144.730	5641.28	-1535.12	-1544.15	1209.00	1718133.24	14542257.83	40°02'32.280"N	104°43'20.352"W	0.57	
6152.00	6.050	154.750	5730.76	-1543.41	-1552.47	1213.87	1718138.14	14542249.53	40°02'32.198"N	104°43'20.290"W	1.23	
6241.00	4.630	143.300	5819.37	-1550.50	-1559.60	1218.02	1718142.31	14542242.42	40°02'32.127"N	104°43'20.236"W	1.99	
6331.00	3.740	134.650	5909.13	-1555.44	-1564.57	1222.28	1718146.58	14542237.46	40°02'32.078"N	104°43'20.181"W	1.21	
6420.00	3.080	123.280	5997.97	-1558.76	-1567.92	1226.34	1718150.65	14542234.12	40°02'32.045"N	104°43'20.129"W	1.06	
6510.00	2.070	155.100	6087.89	-1561.54	-1570.73	1229.05	1718153.37	14542231.33	40°02'32.017"N	104°43'20.094"W	1.90	
6599.00	1.800	212.330	6176.84	-1564.18	-1573.36	1228.98	1718153.30	14542228.69	40°02'31.991"N	104°43'20.095"W	2.10	
6689.00	1.630	209.720	6266.80	-1566.50	-1575.67	1227.59	1718151.92	14542226.38	40°02'31.969"N	104°43'20.113"W	0.21	
6778.00	0.980	210.840	6355.78	-1568.26	-1577.42	1226.57	1718150.91	14542224.63	40°02'31.951"N	104°43'20.126"W	0.73	
6868.00	0.870	205.070	6445.77	-1569.55	-1578.70	1225.88	1718150.23	14542223.35	40°02'31.939"N	104°43'20.135"W	0.16	
6957.00	0.730	313.930	6534.76	-1569.77	-1578.92	1225.19	1718149.54	14542223.13	40°02'31.936"N	104°43'20.144"W	1.47	
7010.00†	3.299	2.672	6587.73	-1568.01	-1577.16	1225.02	1718149.36	14542224.88	40°02'31.954"N	104°43'20.146"W	5.42	KOP
7047.00	5.280	6.840	6624.62	-1565.26	-1574.41	1225.27	1718149.60	14542227.64	40°02'31.981"N	104°43'20.143"W	5.42	
7137.00	9.310	4.860	6713.88	-1553.88	-1563.04	1226.38	1718150.68	14542239.01	40°02'32.093"N	104°43'20.129"W	4.49	
7227.00	14.580	14.900	6801.91	-1535.64	-1544.82	1229.91	1718154.15	14542257.22	40°02'32.273"N	104°43'20.083"W	6.27	
7316.00	18.780	18.400	6887.14	-1511.15	-1520.39	1237.32	1718161.48	14542281.67	40°02'32.515"N	104°43'19.988"W	4.85	
7405.00	28.480	11.580	6968.60	-1476.62	-1485.92	1246.12	1718170.18	14542316.15	40°02'32.855"N	104°43'19.875"W	11.31	
7495.00	36.610	4.510	7044.43	-1428.70	-1438.05	1252.55	1718176.46	14542364.02	40°02'33.329"N	104°43'19.792"W	9.96	
7585.00	41.880	358.800	7114.13	-1371.84	-1381.20	1254.04	1718177.77	14542420.85	40°02'33.890"N	104°43'19.773"W	7.09	
7674.00	46.180	356.820	7178.11	-1310.07	-1319.41	1251.63	1718175.17	14542482.61	40°02'34.501"N	104°43'19.804"W	5.07	
7764.00	55.420	0.220	7234.94	-1240.45	-1249.78	1249.97	1718173.30	14542552.21	40°02'35.189"N	104°43'19.825"W	10.67	
7854.00	61.220	359.320	7282.18	-1163.90	-1173.23	1249.64	1718172.74	14542628.73	40°02'35.946"N	104°43'19.829"W	6.50	
7943.00	72.320	1.510	7317.23	-1082.25	-1091.58	1250.30	1718173.14	14542710.35	40°02'36.752"N	104°43'19.821"W	12.67	
8033.00	79.790	359.200	7338.91	-994.97	-1004.30	1250.81	1718173.39	14542797.59	40°02'37.615"N	104°43'19.814"W	8.67	
8122.00	90.060	359.600	7346.77	-906.46	-915.77	1249.89	1718172.19	14542886.08	40°02'38.490"N	104°43'19.826"W	11.55	LANDING (4'FNL & 1716'FEL,SEC.24) 40.0440249 -104.7221739
8212.00	91.600	359.160	7345.47	-816.48	-825.79	1248.91	1718170.94	14542976.03	40°02'39.379"N	104°43'19.839"W	1.78	
8302.00	90.460	0.520	7343.85	-726.51	-735.81	1248.66	1718170.41	14543065.97	40°02'40.268"N	104°43'19.842"W	1.97	
8371.00†	89.150	0.411	7344.09	-657.51	-666.82	1249.22	1718170.76	14543134.94	40°02'40.950"N	104°43'19.834"W	1.91	EXIT RADIUS HEEL (245'FSL & 1718'FEL,SEC.13) 40.0447084 -104.7221762
8391.00	88.770	0.380	7344.45	-637.51	-646.82	1249.36	1718170.84	14543154.93	40°02'41.148"N	104°43'19.833"W	1.91	
8481.00	88.550	1.010	7346.55	-547.54	-556.85	1250.45	1718171.65	14543244.87	40°02'42.037"N	104°43'19.819"W	0.74	
8571.00	88.340	1.090	7349.00	-457.58	-466.90	1252.10	1718173.03	14543334.79	40°02'42.926"N	104°43'19.797"W	0.25	
8660.00	89.480	359.430	7350.69	-368.60	-377.92	1252.51	1718173.16	14543423.73	40°02'43.805"N	104°43'19.792"W	2.26	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#30 AZUL 13-13HZ (912'FSL & 2327'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-13HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-13HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (184 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
8750.00	89.170	359.410	7351.75	-278.62	-287.93	1251.59	1718171.97	14543513.68	40°02'44.694"N	104°43'19.804"W	0.35	
8840.00	88.710	359.410	7353.42	-188.65	-197.95	1250.67	1718170.77	14543603.62	40°02'45.583"N	104°43'19.816"W	0.51	
8929.00	90.990	1.650	7353.65	-99.66	-108.97	1251.49	1718171.32	14543692.57	40°02'46.463"N	104°43'19.805"W	3.59	
9019.00	91.350	2.770	7351.81	-9.72	-19.05	1254.96	1718174.51	14543782.46	40°02'47.351"N	104°43'19.760"W	1.31	
9109.00	89.380	0.800	7351.24	80.24	70.89	1257.76	1718177.03	14543872.38	40°02'48.240"N	104°43'19.724"W	3.10	
9198.00	90.090	358.970	7351.65	169.23	159.89	1257.58	1718176.58	14543961.34	40°02'49.120"N	104°43'19.726"W	2.21	
9288.00	89.600	359.250	7351.89	259.21	249.87	1256.19	1718174.91	14544051.28	40°02'50.009"N	104°43'19.744"W	0.63	
9377.00	90.740	357.900	7351.63	348.16	338.84	1253.97	1718172.42	14544140.21	40°02'50.888"N	104°43'19.773"W	1.99	
9467.00	90.030	355.210	7351.02	437.94	428.67	1248.57	1718166.74	14544229.99	40°02'51.776"N	104°43'19.842"W	3.09	
9557.00	90.430	353.950	7350.66	527.47	518.26	1240.07	1718157.97	14544319.52	40°02'52.661"N	104°43'19.951"W	1.47	
9646.00	91.630	357.060	7349.06	616.11	606.96	1233.09	1718150.73	14544408.16	40°02'53.538"N	104°43'20.041"W	3.74	
9736.00	92.130	0.200	7346.11	706.01	696.88	1230.94	1718148.30	14544498.03	40°02'54.426"N	104°43'20.069"W	3.53	
9825.00	92.090	1.240	7342.83	794.95	785.81	1232.06	1718149.15	14544586.93	40°02'55.305"N	104°43'20.054"W	1.17	
9915.00	92.530	0.630	7339.20	884.87	875.72	1233.53	1718150.34	14544676.81	40°02'56.194"N	104°43'20.035"W	0.84	
10005.00	91.510	1.680	7336.03	974.80	965.65	1235.34	1718151.87	14544766.71	40°02'57.082"N	104°43'20.012"W	1.63	
10094.00	92.160	1.280	7333.18	1063.74	1054.57	1237.64	1718153.90	14544855.60	40°02'57.961"N	104°43'19.982"W	0.86	
10184.00	90.800	0.950	7330.86	1153.70	1144.52	1239.39	1718155.37	14544945.52	40°02'58.850"N	104°43'19.960"W	1.55	
10273.00	91.730	0.720	7328.89	1242.68	1233.49	1240.68	1718156.39	14545034.46	40°02'59.729"N	104°43'19.943"W	1.08	
10363.00	91.750	1.910	7326.16	1332.63	1323.42	1242.75	1718158.18	14545124.36	40°03'00.618"N	104°43'19.916"W	1.32	
10453.00	90.490	1.160	7324.40	1422.59	1413.37	1245.16	1718160.32	14545214.28	40°03'01.507"N	104°43'19.885"W	1.63	
10542.00	90.990	0.570	7323.25	1511.58	1502.35	1246.50	1718161.39	14545303.23	40°03'02.386"N	104°43'19.868"W	0.87	
10632.00	89.380	2.200	7322.96	1601.56	1592.32	1248.68	1718163.28	14545393.17	40°03'03.275"N	104°43'19.840"W	2.55	
10722.00	89.570	2.620	7323.79	1691.50	1682.24	1252.46	1718166.79	14545483.06	40°03'04.164"N	104°43'19.791"W	0.51	
10811.00	89.200	2.340	7324.74	1780.44	1771.15	1256.31	1718170.37	14545571.95	40°03'05.043"N	104°43'19.742"W	0.52	
10901.00	89.720	2.400	7325.59	1870.38	1861.07	1260.03	1718173.81	14545661.84	40°03'05.931"N	104°43'19.694"W	0.58	
10990.00	89.450	1.230	7326.23	1959.35	1950.02	1262.85	1718176.36	14545750.77	40°03'06.810"N	104°43'19.657"W	1.35	
11080.00	89.720	1.020	7326.89	2049.34	2040.00	1264.62	1718177.85	14545840.72	40°03'07.699"N	104°43'19.635"W	0.38	
11170.00	89.970	1.080	7327.13	2139.34	2129.98	1266.27	1718179.22	14545930.67	40°03'08.589"N	104°43'19.613"W	0.29	
11259.00	90.090	359.340	7327.08	2228.33	2218.98	1266.60	1718179.27	14546019.63	40°03'09.468"N	104°43'19.609"W	1.96	
11349.00	90.990	359.370	7326.23	2318.31	2308.97	1265.58	1718177.98	14546109.58	40°03'10.357"N	104°43'19.622"W	1.00	
11438.00	91.730	358.120	7324.12	2407.25	2397.92	1263.63	1718175.76	14546198.49	40°03'11.236"N	104°43'19.647"W	1.63	
11528.00	90.920	358.170	7322.04	2497.15	2487.85	1260.72	1718172.57	14546288.38	40°03'12.125"N	104°43'19.685"W	0.90	
11617.00	88.830	359.470	7322.23	2586.11	2576.82	1258.89	1718170.47	14546377.31	40°03'13.004"N	104°43'19.708"W	2.77	
11707.00	89.850	1.910	7323.27	2676.09	2666.80	1259.97	1718171.28	14546467.26	40°03'13.894"N	104°43'19.694"W	2.94	
11796.00	90.920	1.650	7322.67	2765.07	2755.75	1262.74	1718173.77	14546556.18	40°03'14.773"N	104°43'19.658"W	1.24	
11868.00†	91.024	1.330	7321.45	2837.04	2827.72	1264.61	1718175.42	14546628.12	40°03'15.484"N	104°43'19.634"W	0.47	ENTER RADIUS TOE (1554'FNL & 1714'FEL,SEC.13) 40.0543011 -104.7221206
11886.00	91.050	1.250	7321.13	2855.04	2845.71	1265.01	1718175.77	14546646.11	40°03'15.662"N	104°43'19.629"W	0.47	
11976.00	91.690	0.980	7318.97	2945.00	2935.67	1266.77	1718177.24	14546736.04	40°03'16.551"N	104°43'19.607"W	0.77	
12065.00	92.460	0.550	7315.75	3033.94	3024.60	1267.95	1718178.16	14546824.94	40°03'17.429"N	104°43'19.591"W	0.99	
12155.00	91.260	1.350	7312.83	3123.89	3114.54	1269.44	1718179.37	14546914.84	40°03'18.318"N	104°43'19.572"W	1.60	
12244.00	89.940	2.170	7311.90	3212.86	3203.49	1272.18	1718181.83	14547003.77	40°03'19.197"N	104°43'19.537"W	1.75	
12334.00	89.450	2.260	7312.38	3302.81	3293.42	1275.66	1718185.03	14547093.67	40°03'20.086"N	104°43'19.492"W	0.55	
12424.00	89.540	2.070	7313.17	3392.77	3383.35	1279.06	1718188.15	14547183.58	40°03'20.975"N	104°43'19.448"W	0.23	
12513.00	90.650	1.820	7313.02	3481.74	3472.30	1282.08	1718190.90	14547272.50	40°03'21.854"N	104°43'19.409"W	1.28	
12603.00	90.740	0.730	7311.93	3571.72	3562.27	1284.08	1718192.63	14547362.44	40°03'22.743"N	104°43'19.383"W	1.22	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#30 AZUL 13-13HZ (912'FSL & 2327'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-13HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-13HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (184 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
12693.00	89.480	359.010	7311.76	3661.71	3652.26	1283.87	1718192.15	14547452.40	40°03'23.632"N	104°43'19.386"W	2.37	
12782.00	90.340	359.800	7311.90	3750.69	3741.26	1282.95	1718190.95	14547541.35	40°03'24.512"N	104°43'19.398"W	1.31	
12872.00	90.120	359.240	7311.54	3840.68	3831.25	1282.20	1718189.92	14547631.31	40°03'25.401"N	104°43'19.407"W	0.67	LAST BHGE MWD+IFR1+SC SURVEY
12950.00	90.120	359.240	7311.37	3918.66	3909.25	1281.16	1718188.65	14547709.27	40°03'26.172"N	104°43'19.421"W	0.00	PTB (473'FNL & 1697'FEL,SEC.13) 40.0572699 -104.7220613

HOLE & CASING SECTIONS - Ref Wellbore: AZUL 13-13HZ AWB Ref Wellpath: AZUL 13-13HZ 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	1879.00	1858.00	21.00	1837.84	0.00	0.00	-218.89	178.98

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	1.14	-1168.03	1715752.42	14543795.21	40°02'47.551"N	104°43'50.916"W	polygon
AZUL 13-13HZ BHL REV-1(471'FNL & 1719'FEL,SEC.13)	7324.00	3910.69	1259.45	1718166.94	14547710.64	40°03'26.186"N	104°43'19.700"W	point
AZUL 13-13HZ HEEL REV-1(50'FSL & 1742'FEL,SEC.13)	7354.00	-852.71	1224.07	1718146.19	14542949.04	40°02'39.113"N	104°43'20.158"W	point
AZUL 13-13HZ LANDBOX	7357.00	0.00	0.00	1716919.99	14543797.66	40°02'47.540"N	104°43'35.897"W	polygon
AZUL 13-13HZ RADIUS 1	7357.00	3069.09	1656.59	1718566.50	14546870.60	40°03'17.869"N	104°43'14.593"W	polygon
AZUL 13-13HZ RADIUS 2	7357.00	-895.67	1647.02	1718569.10	14542907.40	40°02'38.688"N	104°43'14.720"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: AZUL 13-13HZ AWB Ref Wellpath: AZUL 13-13HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
21.00	1879.00	Custom APC ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC ISCWSA Rev-2 MWD+IFR1+SC <130 - 1879>	AZUL 13-13HZ AWB
1879.00	12872.00	Custom APC ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+SC <1879 - 12872>	AZUL 13-13HZ AWB
12872.00	12950.00	Blind Drilling (std)	Projection to bit	AZUL 13-13HZ AWB



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#30 AZUL 13-13HZ (912'FSL & 2327'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-13HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-13HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
130.00	1.100	292.600	129.99	FIRST SURFACE MWD+IFR1 SURVEY
1879.00	22.720	139.670	1837.84	LAST SURFACE MWD+IFR1 SURVEY
1937.00	21.980	139.190	1891.48	FIRST BHGE MWD+IFR1+SC SURVEY
5749.00	8.364	141.259	5330.69	ENTER LANDBOX (602'FNL & 1781'FEL,SEC.24) 40.0423841 -104.7224042
7010.00	3.299	2.672	6587.73	KOP
8122.00	90.060	359.600	7346.77	LANDING (4'FNL & 1716'FEL,SEC.24) 40.0440249 -104.7221739
8371.00	89.150	0.411	7344.09	EXIT RADIUS HEEL (245'FSL & 1718'FEL,SEC.13) 40.0447084 -104.7221762
11868.00	91.024	1.330	7321.45	ENTER RADIUS TOE (1554'FNL & 1714'FEL,SEC.13) 40.0543011 -104.7221206
12872.00	90.120	359.240	7311.54	LAST BHGE MWD+IFR1+SC SURVEY
12950.00	90.120	359.240	7311.37	PTB (473'FNL & 1697'FEL,SEC.13) 40.0572699 -104.7220613