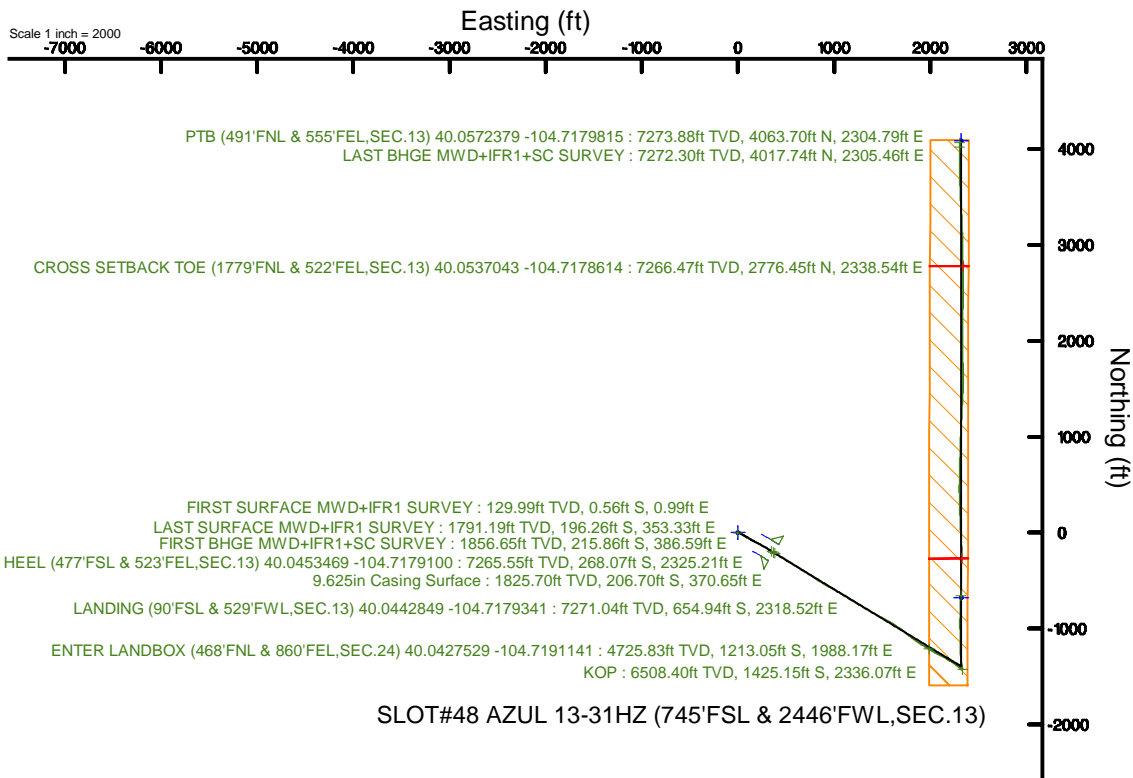
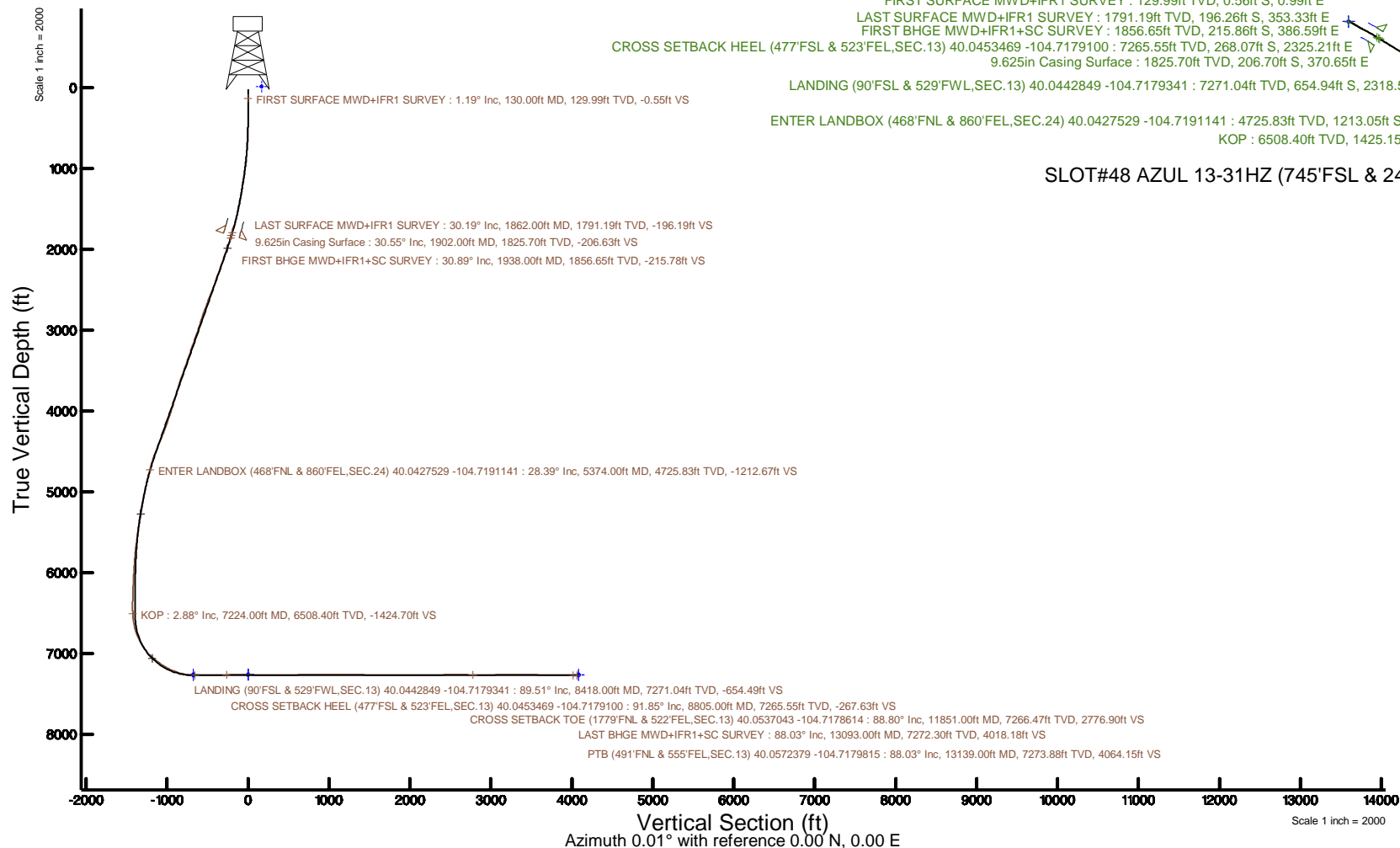


# KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#48 AZUL 13-31HZ (745'FSL & 2446'FWL,SEC.13)  
Field: WELD COUNTY (UTM/TRUE NORTH)Well: AZUL 13-31HZ  
Facility: SEC.13-T1N-R66W Wellbore: AZUL 13-31HZ PWB

Plot reference wellpath is AZUL 13-31HZ 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#48 AZUL 13-31HZ (745'FSL & 2446'FWL,SEC.13)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: painsetr on 2018-04-13
	Database: WA, DEN, Anadarko, Dfn



SLOT#48 AZUL 13-31HZ (745'FSL & 2446'FWL,SEC.13)

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#48 AZUL 13-31HZ (745'FSL & 2446'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-31HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-31HZ AWB
Facility	SEC.13-T1N-R66W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / UTM Zone 13 North, US feet	Software System	WellArchitect® 5.0
North Reference	True	User	Painsetr
Scale	0.999607	Report Generated	4/13/2018 at 9:27 AM
Convergence at slot	0.18° East	Database/Source file	WA_DEN_Anadarko_Defn/AZUL_13-31HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-4324.42	-444.85	1717038.90	14543632.03	40°02'45.899"N	104°43'34.374"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#48 AZUL 13-31HZ (745'FSL & 2446'FWL,SEC.13))	5071.00ft
MD Reference Pt	PD 464 (21') (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	0.01°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#48 AZUL 13-31HZ (745'FSL & 2446'FWL, SEC.13)
Area	COLORADO	Well	AZUL 13-31HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-31HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (185 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	119.370	0.00	0.00	0.00	0.00	1717038.90	14543632.03	40°02'45.899"N	104°43'34.374"W	0.00	
21.00	0.000	119.370	21.00	0.00	0.00	0.00	1717038.90	14543632.03	40°02'45.899"N	104°43'34.374"W	0.00	
130.00	1.190	119.370	129.99	-0.55	-0.56	0.99	1717039.89	14543631.48	40°02'45.894"N	104°43'34.361"W	1.09	FIRST SURFACE MWD+IFR1 SURVEY
162.00	1.360	117.170	161.98	-0.89	-0.89	1.61	1717040.51	14543631.15	40°02'45.890"N	104°43'34.353"W	0.55	
226.00	0.790	91.680	225.97	-1.25	-1.25	2.73	1717041.63	14543630.79	40°02'45.887"N	104°43'34.339"W	1.14	
257.00	0.480	68.830	256.97	-1.21	-1.21	3.07	1717041.97	14543630.83	40°02'45.887"N	104°43'34.335"W	1.27	
289.00	0.570	36.400	288.97	-1.03	-1.03	3.28	1717042.19	14543631.01	40°02'45.889"N	104°43'34.332"W	0.96	
320.00	0.970	68.660	319.97	-0.81	-0.81	3.62	1717042.52	14543631.23	40°02'45.891"N	104°43'34.327"W	1.86	
352.00	1.540	80.520	351.96	-0.64	-0.65	4.30	1717043.20	14543631.40	40°02'45.893"N	104°43'34.319"W	1.95	
383.00	1.930	85.970	382.95	-0.54	-0.54	5.23	1717044.13	14543631.51	40°02'45.894"N	104°43'34.307"W	1.36	
415.00	2.720	96.780	414.92	-0.59	-0.59	6.52	1717045.42	14543631.46	40°02'45.893"N	104°43'34.290"W	2.81	
446.00	3.250	100.740	445.88	-0.84	-0.84	8.11	1717047.01	14543631.21	40°02'45.891"N	104°43'34.270"W	1.83	
478.00	3.870	102.850	477.81	-1.25	-1.25	10.06	1717048.96	14543630.81	40°02'45.887"N	104°43'34.245"W	1.98	
509.00	4.310	105.390	508.74	-1.79	-1.79	12.20	1717051.10	14543630.28	40°02'45.881"N	104°43'34.217"W	1.53	
541.00	4.480	110.490	540.64	-2.55	-2.55	14.53	1717053.43	14543629.53	40°02'45.874"N	104°43'34.187"W	1.33	
573.00	5.140	113.310	572.53	-3.55	-3.55	17.02	1717055.92	14543628.53	40°02'45.864"N	104°43'34.155"W	2.19	
605.00	5.540	116.470	604.39	-4.81	-4.81	19.72	1717058.62	14543627.28	40°02'45.851"N	104°43'34.120"W	1.55	
637.00	5.670	115.590	636.24	-6.18	-6.18	22.53	1717061.43	14543625.92	40°02'45.838"N	104°43'34.084"W	0.49	
668.00	6.150	117.790	667.07	-7.61	-7.62	25.38	1717064.29	14543624.50	40°02'45.824"N	104°43'34.048"W	1.71	
700.00	7.160	119.460	698.86	-9.39	-9.40	28.63	1717067.55	14543622.73	40°02'45.806"N	104°43'34.006"W	3.21	
732.00	8.000	119.550	730.58	-11.47	-11.48	32.30	1717071.22	14543620.66	40°02'45.786"N	104°43'33.959"W	2.63	
764.00	8.440	119.630	762.25	-13.73	-13.74	36.28	1717075.21	14543618.41	40°02'45.763"N	104°43'33.907"W	1.38	
795.00	9.140	120.510	792.88	-16.10	-16.11	40.38	1717079.31	14543616.05	40°02'45.740"N	104°43'33.855"W	2.30	
827.00	10.330	120.250	824.42	-18.84	-18.85	45.05	1717083.99	14543613.33	40°02'45.713"N	104°43'33.795"W	3.72	
859.00	10.810	121.220	855.88	-21.84	-21.85	50.09	1717089.04	14543610.35	40°02'45.683"N	104°43'33.730"W	1.60	
891.00	11.470	120.690	887.28	-25.02	-25.03	55.40	1717094.35	14543607.19	40°02'45.652"N	104°43'33.662"W	2.09	
922.00	12.260	119.280	917.61	-28.20	-28.21	60.92	1717099.88	14543604.02	40°02'45.620"N	104°43'33.591"W	2.71	
954.00	12.920	118.310	948.84	-31.55	-31.57	67.03	1717106.00	14543600.68	40°02'45.587"N	104°43'33.512"W	2.17	
986.00	13.230	119.190	980.01	-35.04	-35.05	73.38	1717112.35	14543597.22	40°02'45.553"N	104°43'33.431"W	1.15	
1018.00	14.190	120.250	1011.10	-38.80	-38.81	79.96	1717118.95	14543593.48	40°02'45.515"N	104°43'33.346"W	3.10	
1049.00	14.770	121.830	1041.12	-42.79	-42.81	86.60	1717125.60	14543589.50	40°02'45.476"N	104°43'33.260"W	2.26	
1081.00	15.730	122.010	1071.99	-47.24	-47.26	93.74	1717132.75	14543585.08	40°02'45.432"N	104°43'33.169"W	3.00	
1113.00	16.440	121.920	1102.74	-51.93	-51.95	101.27	1717140.28	14543580.41	40°02'45.386"N	104°43'33.072"W	2.22	
1144.00	17.010	121.220	1132.43	-56.60	-56.62	108.87	1717147.90	14543575.76	40°02'45.339"N	104°43'32.974"W	1.95	
1176.00	17.620	119.980	1162.98	-61.45	-61.47	117.07	1717156.11	14543570.95	40°02'45.292"N	104°43'32.869"W	2.23	
1208.00	17.970	119.630	1193.44	-66.31	-66.33	125.55	1717164.60	14543566.11	40°02'45.243"N	104°43'32.760"W	1.14	
1240.00	18.590	118.840	1223.83	-71.21	-71.23	134.31	1717173.37	14543561.24	40°02'45.195"N	104°43'32.647"W	2.09	
1272.00	18.900	118.840	1254.13	-76.16	-76.19	143.32	1717182.39	14543556.31	40°02'45.146"N	104°43'32.531"W	0.97	
1303.00	20.260	119.190	1283.34	-81.20	-81.23	152.40	1717191.49	14543551.30	40°02'45.096"N	104°43'32.414"W	4.40	
1335.00	20.870	118.750	1313.30	-86.64	-86.68	162.24	1717201.34	14543545.89	40°02'45.042"N	104°43'32.288"W	1.97	
1367.00	21.010	118.140	1343.19	-92.09	-92.12	172.29	1717211.41	14543540.47	40°02'44.989"N	104°43'32.159"W	0.81	
1399.00	20.870	117.170	1373.07	-97.40	-97.43	182.42	1717221.55	14543535.20	40°02'44.936"N	104°43'32.028"W	1.17	
1430.00	20.870	116.470	1402.04	-102.38	-102.41	192.28	1717231.41	14543530.25	40°02'44.887"N	104°43'31.902"W	0.80	
1462.00	22.280	118.140	1431.80	-107.78	-107.82	202.73	1717241.88	14543524.88	40°02'44.834"N	104°43'31.767"W	4.81	
1494.00	22.680	118.580	1461.36	-113.59	-113.63	213.50	1717252.66	14543519.10	40°02'44.776"N	104°43'31.629"W	1.36	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#48 AZUL 13-31HZ (745'FSL & 2446'FWL, SEC.13)
Area	COLORADO	Well	AZUL 13-31HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-31HZ AWB
Facility	SEC.13-T1N-R66W		

### WELLPATH DATA (185 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
1525.00	22.850	118.580	1489.95	-119.32	-119.37	224.03	1717263.21	14543513.40	40°02'44.719"N	104°43'31.493"W	0.55	
1557.00	23.250	118.310	1519.39	-125.29	-125.33	235.05	1717274.24	14543507.47	40°02'44.660"N	104°43'31.352"W	1.29	
1588.00	24.390	119.810	1547.75	-131.37	-131.42	245.99	1717285.19	14543501.42	40°02'44.600"N	104°43'31.211"W	4.16	
1620.00	24.920	119.720	1576.84	-138.00	-138.04	257.58	1717296.80	14543494.83	40°02'44.535"N	104°43'31.062"W	1.66	
1652.00	25.310	119.280	1605.81	-144.68	-144.73	269.40	1717308.63	14543488.18	40°02'44.469"N	104°43'30.910"W	1.35	
1684.00	25.620	120.250	1634.70	-151.51	-151.56	281.34	1717320.59	14543481.39	40°02'44.401"N	104°43'30.756"W	1.62	
1715.00	27.110	121.650	1662.48	-158.59	-158.65	293.14	1717332.41	14543474.35	40°02'44.331"N	104°43'30.605"W	5.21	
1747.00	27.990	122.450	1690.85	-166.44	-166.50	305.69	1717344.98	14543466.54	40°02'44.254"N	104°43'30.443"W	2.98	
1779.00	28.830	122.090	1718.99	-174.57	-174.63	318.56	1717357.87	14543458.45	40°02'44.173"N	104°43'30.278"W	2.68	
1811.00	29.440	122.010	1746.95	-182.83	-182.90	331.77	1717371.09	14543450.23	40°02'44.092"N	104°43'30.108"W	1.91	
1843.00	29.930	121.650	1774.75	-191.19	-191.25	345.23	1717384.58	14543441.91	40°02'44.009"N	104°43'29.935"W	1.63	
1862.00	30.190	121.740	1791.19	-196.19	-196.26	353.33	1717392.69	14543436.94	40°02'43.960"N	104°43'29.831"W	1.39	LAST SURFACE MWD+IFR1 SURVEY
1938.00	30.890	119.310	1856.65	-215.78	-215.86	386.59	1717426.00	14543417.45	40°02'43.766"N	104°43'29.403"W	1.87	FIRST BHGE MWD+IFR1+SC SURVEY
2028.00	32.800	120.430	1933.10	-239.44	-239.52	427.76	1717467.22	14543393.92	40°02'43.532"N	104°43'28.874"W	2.22	
2117.00	34.320	122.100	2007.26	-264.97	-265.06	469.80	1717509.33	14543368.52	40°02'43.280"N	104°43'28.333"W	2.00	
2207.00	34.130	121.750	2081.68	-291.73	-291.83	512.77	1717552.36	14543341.89	40°02'43.015"N	104°43'27.781"W	0.30	
2297.00	33.430	120.240	2156.49	-317.50	-317.60	555.65	1717595.31	14543316.26	40°02'42.760"N	104°43'27.229"W	1.21	
2386.00	34.470	123.030	2230.32	-343.56	-343.68	597.95	1717637.67	14543290.33	40°02'42.503"N	104°43'26.685"W	2.10	
2476.00	33.810	122.920	2304.81	-371.05	-371.17	640.33	1717680.11	14543262.98	40°02'42.231"N	104°43'26.141"W	0.74	
2565.00	32.710	121.750	2379.23	-397.15	-397.28	681.56	1717721.41	14543237.00	40°02'41.973"N	104°43'25.610"W	1.43	
2655.00	34.270	122.990	2454.28	-423.74	-423.88	723.50	1717763.41	14543210.55	40°02'41.710"N	104°43'25.071"W	1.89	
2745.00	35.100	123.250	2528.29	-451.72	-451.86	766.39	1717806.37	14543182.70	40°02'41.433"N	104°43'24.520"W	0.94	
2835.00	35.980	122.730	2601.52	-480.19	-480.34	810.27	1717850.32	14543154.37	40°02'41.152"N	104°43'23.956"W	1.03	
2924.00	34.900	121.320	2674.03	-507.55	-507.72	854.02	1717894.13	14543127.14	40°02'40.881"N	104°43'23.393"W	1.52	
3014.00	35.750	120.730	2747.46	-534.36	-534.54	898.61	1717938.79	14543100.47	40°02'40.616"N	104°43'22.820"W	1.02	
3104.00	34.450	120.680	2821.10	-560.78	-560.96	943.11	1717983.35	14543074.19	40°02'40.355"N	104°43'22.248"W	1.44	
3193.00	33.070	120.080	2895.09	-585.79	-585.98	985.77	1718026.07	14543049.32	40°02'40.108"N	104°43'21.699"W	1.60	
3283.00	33.260	118.600	2970.43	-609.90	-610.10	1028.69	1718069.05	14543025.34	40°02'39.870"N	104°43'21.147"W	0.92	
3373.00	33.120	121.660	3045.75	-634.61	-634.82	1071.29	1718111.71	14543000.76	40°02'39.625"N	104°43'20.599"W	1.87	
3462.00	34.910	121.450	3119.52	-660.66	-660.87	1113.71	1718154.20	14542974.85	40°02'39.368"N	104°43'20.054"W	2.02	
3552.00	33.800	121.500	3193.82	-687.17	-687.39	1157.03	1718197.58	14542948.47	40°02'39.106"N	104°43'19.497"W	1.23	
3641.00	33.910	121.790	3267.73	-713.17	-713.40	1199.24	1718239.85	14542922.60	40°02'38.849"N	104°43'18.954"W	0.22	
3731.00	33.820	120.780	3342.46	-739.21	-739.44	1242.09	1718282.77	14542896.70	40°02'38.591"N	104°43'18.403"W	0.63	
3821.00	34.530	120.040	3416.92	-764.78	-765.03	1285.69	1718326.43	14542871.26	40°02'38.338"N	104°43'17.843"W	0.91	
3910.00	33.840	121.440	3490.54	-790.33	-790.58	1328.67	1718369.47	14542845.85	40°02'38.086"N	104°43'17.290"W	1.18	
4000.00	34.630	120.740	3564.95	-816.46	-816.73	1372.04	1718412.89	14542819.85	40°02'37.828"N	104°43'16.733"W	0.98	
4090.00	33.240	120.740	3639.62	-842.14	-842.41	1415.22	1718456.14	14542794.31	40°02'37.574"N	104°43'16.177"W	1.54	
4179.00	32.740	117.520	3714.27	-865.72	-866.00	1457.53	1718498.51	14542770.86	40°02'37.341"N	104°43'15.633"W	2.05	
4269.00	30.920	118.810	3790.73	-888.10	-888.39	1499.38	1718540.41	14542748.61	40°02'37.119"N	104°43'15.095"W	2.16	
4359.00	30.820	119.700	3867.99	-910.66	-910.96	1539.67	1718580.75	14542726.17	40°02'36.896"N	104°43'14.577"W	0.52	
4448.00	31.930	118.140	3943.97	-933.05	-933.35	1580.23	1718621.36	14542703.91	40°02'36.675"N	104°43'14.056"W	1.55	
4564.00	32.130	123.190	4042.33	-964.40	-964.71	1633.10	1718674.31	14542672.72	40°02'36.365"N	104°43'13.376"W	2.31	
4654.00	32.230	125.620	4118.51	-991.47	-991.79	1672.64	1718713.92	14542645.78	40°02'36.097"N	104°43'12.868"W	1.44	
4744.00	30.800	124.500	4195.23	-1018.49	-1018.82	1711.14	1718752.48	14542618.88	40°02'35.830"N	104°43'12.373"W	1.72	
4833.00	31.260	128.980	4271.51	-1045.92	-1046.26	1747.87	1718789.29	14542591.56	40°02'35.559"N	104°43'11.900"W	2.65	

# Actual Wellpath Report

AZUL 13-31HZ AWP

Page 4 of 7

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#48 AZUL 13-31HZ (745'FSL & 2446'FWL, SEC.13)
Area	COLORADO	Well	AZUL 13-31HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-31HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (185 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
4923.00	33.890	130.470	4347.34	-1076.90	-1077.24	1785.12	1718826.62	14542560.71	40°02'35.253"N	104°43'11.421"W	3.05	
5013.00	36.010	125.310	4421.12	-1108.48	-1108.83	1825.81	1718867.39	14542529.26	40°02'34.941"N	104°43'10.898"W	4.04	
5102.00	34.600	125.020	4493.75	-1138.09	-1138.45	1867.86	1718909.51	14542499.78	40°02'34.648"N	104°43'10.358"W	1.60	
5192.00	32.560	121.100	4568.74	-1165.26	-1165.63	1909.53	1718951.25	14542472.74	40°02'34.379"N	104°43'09.822"W	3.31	
5282.00	30.170	121.080	4645.58	-1189.44	-1189.82	1949.65	1718991.42	14542448.68	40°02'34.140"N	104°43'09.306"W	2.66	
5372.00	28.420	121.110	4724.07	-1212.18	-1212.56	1987.35	1719029.18	14542426.06	40°02'33.915"N	104°43'08.821"W	1.94	
5374.00†	28.391	121.124	4725.83	-1212.67	-1213.05	1988.17	1719030.00	14542425.57	40°02'33.911"N	104°43'08.811"W	1.50	ENTER LANDBOX (468°FNL & 860°FEL, SEC.24) 40.0427529 -104.7191141
5461.00	27.120	121.770	4802.82	-1233.80	-1234.19	2022.73	1719064.62	14542404.56	40°02'33.702"N	104°43'08.366"W	1.50	
5551.00	25.540	116.730	4883.49	-1253.32	-1253.72	2057.51	1719099.44	14542385.14	40°02'33.509"N	104°43'07.919"W	3.04	
5640.00	24.220	116.790	4964.23	-1270.17	-1270.58	2090.94	1719132.91	14542368.39	40°02'33.342"N	104°43'07.489"W	1.48	
5730.00	22.680	116.960	5046.79	-1286.36	-1286.76	2122.89	1719164.89	14542352.31	40°02'33.182"N	104°43'07.079"W	1.71	
5820.00	22.010	121.280	5130.04	-1302.97	-1303.39	2152.77	1719194.81	14542335.78	40°02'33.018"N	104°43'06.695"W	1.97	
5910.00	19.210	122.590	5214.27	-1319.70	-1320.12	2179.66	1719221.75	14542319.14	40°02'32.852"N	104°43'06.349"W	3.15	
5999.00	17.070	120.940	5298.84	-1334.30	-1334.73	2203.21	1719245.33	14542304.61	40°02'32.708"N	104°43'06.046"W	2.47	
6089.00	14.960	117.960	5385.34	-1346.54	-1346.97	2224.80	1719266.95	14542292.44	40°02'32.587"N	104°43'05.768"W	2.52	
6179.00	14.620	125.770	5472.37	-1358.62	-1359.05	2244.28	1719286.46	14542280.42	40°02'32.468"N	104°43'05.518"W	2.25	
6268.00	12.510	123.000	5558.88	-1370.44	-1370.87	2261.48	1719303.69	14542268.66	40°02'32.351"N	104°43'05.297"W	2.48	
6358.00	11.160	131.540	5646.98	-1381.52	-1381.96	2276.17	1719318.41	14542257.62	40°02'32.241"N	104°43'05.108"W	2.45	
6448.00	9.120	130.830	5735.57	-1391.96	-1392.40	2288.09	1719330.35	14542247.22	40°02'32.138"N	104°43'04.955"W	2.27	
6537.00	7.690	124.700	5823.61	-1399.96	-1400.40	2298.32	1719340.61	14542239.26	40°02'32.059"N	104°43'04.823"W	1.89	
6627.00	6.720	123.360	5912.90	-1406.28	-1406.72	2307.67	1719349.97	14542232.96	40°02'31.996"N	104°43'04.703"W	1.09	
6716.00	5.760	126.130	6001.37	-1411.77	-1412.22	2315.63	1719357.94	14542227.49	40°02'31.942"N	104°43'04.601"W	1.13	
6805.00	4.840	124.950	6089.99	-1416.56	-1417.00	2322.32	1719364.64	14542222.73	40°02'31.895"N	104°43'04.515"W	1.04	
6895.00	3.720	115.300	6179.74	-1419.98	-1420.43	2328.07	1719370.40	14542219.33	40°02'31.861"N	104°43'04.441"W	1.48	
6985.00	3.630	132.680	6269.55	-1423.16	-1423.61	2332.80	1719375.14	14542216.16	40°02'31.830"N	104°43'04.380"W	1.24	
7074.00	1.760	152.520	6358.45	-1426.28	-1426.73	2335.50	1719377.85	14542213.05	40°02'31.799"N	104°43'04.345"W	2.32	
7164.00	1.020	8.600	6448.44	-1426.71	-1427.16	2336.26	1719378.61	14542212.62	40°02'31.794"N	104°43'04.335"W	2.95	
7224.00†	2.879	349.680	6508.40	-1424.70	-1425.15	2336.07	1719378.42	14542214.63	40°02'31.814"N	104°43'04.338"W	3.24	KOP
7254.00	3.840	347.210	6538.35	-1422.98	-1423.43	2335.71	1719378.05	14542216.35	40°02'31.831"N	104°43'04.342"W	3.24	
7343.00	10.550	347.330	6626.60	-1412.11	-1412.56	2333.26	1719375.57	14542227.20	40°02'31.939"N	104°43'04.374"W	7.54	
7433.00	17.900	349.940	6713.78	-1390.43	-1390.88	2329.04	1719371.28	14542248.87	40°02'32.153"N	104°43'04.428"W	8.20	
7522.00	22.920	350.330	6797.17	-1359.86	-1360.31	2323.73	1719365.88	14542279.41	40°02'32.455"N	104°43'04.496"W	5.64	
7612.00	30.330	357.910	6877.59	-1319.81	-1320.25	2319.95	1719361.98	14542319.44	40°02'32.851"N	104°43'04.545"W	9.04	
7702.00	35.790	356.070	6952.99	-1270.81	-1271.25	2317.32	1719359.20	14542368.41	40°02'33.335"N	104°43'04.579"W	6.17	
7791.00	46.340	358.560	7020.01	-1212.49	-1212.94	2314.72	1719356.42	14542426.69	40°02'33.911"N	104°43'04.612"W	11.99	
7881.00	51.180	359.310	7079.32	-1144.85	-1145.29	2313.48	1719354.97	14542494.31	40°02'34.580"N	104°43'04.628"W	5.41	
7970.00	55.290	359.140	7132.58	-1073.57	-1074.02	2312.51	1719353.78	14542565.55	40°02'35.284"N	104°43'04.640"W	4.62	
8060.00	61.420	358.060	7179.78	-997.02	-997.46	2310.62	1719351.66	14542642.07	40°02'36.041"N	104°43'04.665"W	6.89	
8150.00	68.960	1.380	7217.52	-915.40	-915.84	2310.29	1719351.08	14542723.66	40°02'36.847"N	104°43'04.669"W	9.02	
8239.00	74.080	2.290	7245.72	-831.06	-831.50	2313.00	1719353.53	14542807.97	40°02'37.681"N	104°43'04.634"W	5.83	
8329.00	81.940	1.830	7264.41	-743.15	-743.59	2316.16	1719356.41	14542895.85	40°02'38.550"N	104°43'04.593"W	8.75	
8418.00	89.510	1.220	7271.04	-654.49	-654.94	2318.52	1719358.50	14542984.48	40°02'39.426"N	104°43'04.563"W	8.53	LANDING (90°FSL & 529°FNL, SEC.13) 40.0442849 -104.7179341
8508.00	90.060	1.110	7271.37	-564.51	-564.96	2320.34	1719360.05	14543074.43	40°02'40.315"N	104°43'04.539"W	0.62	
8598.00	90.710	0.610	7270.77	-474.52	-474.97	2321.70	1719361.13	14543164.39	40°02'41.204"N	104°43'04.522"W	0.91	
8688.00	91.320	0.820	7269.17	-384.54	-384.99	2322.82	1719361.97	14543254.33	40°02'42.093"N	104°43'04.507"W	0.72	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#48 AZUL 13-31HZ (745'FSL & 2446'FWL, SEC.13)
Area	COLORADO	Well	AZUL 13-31HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-31HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (185 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
8777.00	92.100	1.520	7266.52	-295.60	-296.05	2324.64	1719363.51	14543343.24	40°02'42.972"N	104°43'04.484"W	1.18	
8805.00†	91.848	0.829	7265.55	-267.63	-268.07	2325.21	1719364.00	14543371.21	40°02'43.249"N	104°43'04.476"W	2.62	CROSS SETBACK HEEL (477'FSL & 523'FEL, SEC.13) 40.0453469 -104.7179100
8867.00	91.290	359.300	7263.86	-205.65	-206.10	2325.28	1719363.88	14543433.16	40°02'43.861"N	104°43'04.475"W	2.62	
8956.00	89.510	357.700	7263.23	-116.69	-117.14	2322.95	1719361.28	14543522.08	40°02'44.740"N	104°43'04.505"W	2.69	
9046.00	89.380	357.740	7264.11	-26.77	-27.21	2319.37	1719357.42	14543611.96	40°02'45.629"N	104°43'04.551"W	0.15	
9136.00	89.480	357.800	7265.00	63.16	62.71	2315.87	1719353.65	14543701.84	40°02'46.518"N	104°43'04.596"W	0.13	
9225.00	89.170	357.490	7266.05	152.08	151.63	2312.21	1719349.72	14543790.71	40°02'47.396"N	104°43'04.643"W	0.49	
9315.00	89.200	357.030	7267.33	241.96	241.52	2307.91	1719345.14	14543880.55	40°02'48.285"N	104°43'04.698"W	0.51	
9405.00	89.940	359.500	7268.01	331.91	331.47	2305.18	1719342.14	14543970.45	40°02'49.174"N	104°43'04.733"W	2.86	
9494.00	89.690	358.930	7268.29	420.90	420.46	2303.96	1719340.65	14544059.40	40°02'50.053"N	104°43'04.748"W	0.70	
9584.00	91.140	1.360	7267.64	510.89	510.45	2304.19	1719340.60	14544149.36	40°02'50.942"N	104°43'04.745"W	3.14	
9673.00	91.910	0.810	7265.27	599.84	599.40	2305.88	1719342.01	14544238.28	40°02'51.821"N	104°43'04.724"W	1.06	
9763.00	90.550	1.810	7263.34	689.80	689.35	2307.93	1719343.79	14544328.20	40°02'52.710"N	104°43'04.697"W	1.88	
9853.00	91.600	1.570	7261.65	779.74	779.30	2310.59	1719346.17	14544418.12	40°02'53.599"N	104°43'04.663"W	1.20	
9942.00	89.630	2.160	7260.70	868.68	868.24	2313.48	1719348.79	14544507.03	40°02'54.478"N	104°43'04.626"W	2.31	
10032.00	90.120	1.620	7260.89	958.63	958.19	2316.45	1719351.48	14544596.96	40°02'55.367"N	104°43'04.587"W	0.81	
10121.00	88.980	2.040	7261.59	1047.58	1047.14	2319.29	1719354.05	14544685.88	40°02'56.246"N	104°43'04.551"W	1.37	
10211.00	89.350	2.210	7262.90	1137.51	1137.07	2322.63	1719357.11	14544775.78	40°02'57.135"N	104°43'04.508"W	0.45	
10301.00	89.450	2.310	7263.85	1227.44	1226.99	2326.18	1719360.38	14544865.68	40°02'58.023"N	104°43'04.462"W	0.16	
10390.00	89.820	2.550	7264.41	1316.36	1315.91	2329.95	1719363.88	14544954.58	40°02'58.902"N	104°43'04.413"W	0.50	
10480.00	89.880	3.550	7264.65	1406.23	1405.78	2334.74	1719368.39	14545044.43	40°02'59.790"N	104°43'04.352"W	1.11	
10570.00	88.250	1.520	7266.12	1496.12	1495.67	2338.72	1719372.09	14545134.29	40°03'00.679"N	104°43'04.300"W	2.89	
10659.00	90.180	359.590	7267.34	1585.10	1584.65	2339.58	1719372.68	14545223.24	40°03'01.558"N	104°43'04.289"W	3.07	
10749.00	89.820	359.240	7267.34	1675.10	1674.65	2338.66	1719371.48	14545313.20	40°03'02.447"N	104°43'04.301"W	0.56	
10838.00	89.690	359.130	7267.72	1764.09	1763.64	2337.40	1719369.94	14545402.15	40°03'03.327"N	104°43'04.317"W	0.19	
10928.00	89.630	359.040	7268.25	1854.07	1853.63	2335.96	1719368.23	14545492.09	40°03'04.216"N	104°43'04.335"W	0.12	
11107.00	90.060	359.930	7268.74	2033.06	2032.62	2334.35	1719366.07	14545671.01	40°03'05.985"N	104°43'04.356"W	0.55	
11197.00	90.060	359.790	7268.64	2123.06	2122.61	2334.13	1719365.57	14545760.97	40°03'06.874"N	104°43'04.359"W	0.16	
11287.00	90.800	1.040	7267.97	2213.06	2212.61	2334.78	1719365.95	14545850.93	40°03'07.763"N	104°43'04.350"W	1.61	
11376.00	90.920	1.320	7266.63	2302.03	2301.58	2336.62	1719367.51	14545939.87	40°03'08.643"N	104°43'04.326"W	0.34	
11465.00	90.890	1.080	7265.22	2391.00	2390.55	2338.48	1719369.10	14546028.81	40°03'09.522"N	104°43'04.302"W	0.27	
11555.00	90.890	1.520	7263.83	2480.96	2480.51	2340.52	1719370.86	14546118.75	40°03'10.411"N	104°43'04.276"W	0.49	
11645.00	89.910	359.630	7263.20	2570.95	2570.50	2341.43	1719371.49	14546208.70	40°03'11.300"N	104°43'04.264"W	2.37	
11734.00	89.140	359.120	7263.94	2659.94	2659.49	2340.45	1719370.24	14546297.65	40°03'12.180"N	104°43'04.277"W	1.04	
11824.00	88.460	359.040	7265.82	2749.91	2749.46	2339.01	1719368.52	14546387.58	40°03'13.069"N	104°43'04.295"W	0.76	
11851.00†	88.799	358.980	7266.47	2776.90	2776.45	2338.54	1719367.97	14546414.56	40°03'13.335"N	104°43'04.301"W	1.28	CROSS SETBACK TOE (1779'FNL & 522'FEL, SEC.13) 40.0537043 -104.7178614
12003.00	90.710	358.640	7267.12	2928.86	2928.41	2335.39	1719364.35	14546566.44	40°03'14.837"N	104°43'04.341"W	1.28	
12092.00	91.020	358.430	7265.77	3017.82	3017.37	2333.11	1719361.80	14546655.36	40°03'15.716"N	104°43'04.371"W	0.42	
12182.00	91.200	359.290	7264.03	3107.78	3107.33	2331.32	1719359.74	14546745.29	40°03'16.605"N	104°43'04.393"W	0.98	
12272.00	90.460	357.850	7262.73	3197.74	3197.29	2329.07	1719357.22	14546835.20	40°03'17.494"N	104°43'04.422"W	1.80	
12361.00	90.340	357.490	7262.10	3286.66	3286.22	2325.46	1719353.33	14546924.08	40°03'18.373"N	104°43'04.469"W	0.43	
12451.00	89.970	357.350	7261.86	3376.57	3376.12	2321.41	1719349.00	14547013.94	40°03'19.262"N	104°43'04.521"W	0.44	
12541.00	89.350	357.320	7262.40	3466.47	3466.02	2317.22	1719344.54	14547103.79	40°03'20.150"N	104°43'04.574"W	0.69	
12630.00	88.090	357.330	7264.38	3555.35	3554.90	2313.07	1719340.12	14547192.62	40°03'21.028"N	104°43'04.628"W	1.42	
12720.00	89.570	358.860	7266.22	3645.27	3644.83	2310.08	1719336.85	14547282.50	40°03'21.917"N	104°43'04.666"W	2.36	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#48 AZUL 13-31HZ (745'FSL & 2446'FWL, SEC.13)
Area	COLORADO	Well	AZUL 13-31HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-31HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (185 stations)												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12809.00	89.040	358.740	7267.30	3734.25	3733.80	2308.21	1719334.71	14547371.44	40°03'22.796"N	104°43'04.690"W	0.61	
12899.00	89.510	359.820	7268.44	3824.23	3823.79	2307.08	1719333.31	14547461.38	40°03'23.685"N	104°43'04.704"W	1.31	
12988.00	89.010	359.580	7269.59	3913.22	3912.78	2306.62	1719332.57	14547550.33	40°03'24.565"N	104°43'04.710"W	0.62	
13093.00	88.030	359.160	7272.30	4018.18	4017.74	2305.46	1719331.09	14547655.25	40°03'25.602"N	104°43'04.725"W	1.02	LAST BHGE MWD+IFR1+SC SURVEY
13139.00	88.030	359.160	7273.88	4064.15	4063.70	2304.79	1719330.28	14547701.19	40°03'26.056"N	104°43'04.734"W	0.00	PTB (491'FNL & 555'FEL, SEC.13) 40.0572379 -104.7179815

HOLE & CASING SECTIONS - Ref Wellbore: AZUL 13-31HZ AWB Ref Wellpath: AZUL 13-31HZ 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	1902.00	1881.00	21.00	1825.70	0.00	0.00	-206.70	370.65

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	167.20	-1286.48	1715752.42	14543795.21	40°02'47.551"N	104°43'50.916"W	polygon
AZUL 13-31HZ BHL REV-1(471'FNL & 536'FEL, SEC.13)	7261.00	4084.15	2323.69	1719349.11	14547721.69	40°03'26.258"N	104°43'04.490"W	point
AZUL 13-31HZ HEEL REV-1(50'FSL & 525'FEL, SEC.13)	7261.00	-677.86	2322.74	1719362.79	14542961.59	40°02'39.199"N	104°43'04.508"W	point
AZUL 13-31HZ LANDBOX	7261.00	0.00	0.00	1717038.90	14543632.03	40°02'45.899"N	104°43'34.374"W	polygon
AZUL 13-31HZ SETBACK 1	7261.00	0.00	0.00	1717038.90	14543632.03	40°02'45.899"N	104°43'34.374"W	polygon
AZUL 13-31HZ SETBACK 2	7261.00	0.00	0.00	1717038.90	14543632.03	40°02'45.899"N	104°43'34.374"W	polygon
AZUL 13-31HZ BHL REV-2(471'FNL & 536'FEL, SEC.13)	7271.00	4084.15	2323.69	1719349.11	14547721.68	40°03'26.258"N	104°43'04.490"W	point
AZUL 13-31HZ HEEL REV-2(50'FSL & 525'FEL, SEC.13)	7271.00	-677.86	2322.74	1719362.79	14542961.59	40°02'39.199"N	104°43'04.508"W	point

WELLPATH COMPOSITION - Ref Wellbore: AZUL 13-31HZ AWB Ref Wellpath: AZUL 13-31HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
21.00	1862.00	Custom APC_ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC_ISCWSA Rev-2 MWD+IFR1 <130 - 1862>	AZUL 13-31HZ AWB
1862.00	13093.00	Custom APC_ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC_ISCWSA Rev-2 MWD+IFR1+SC <1938 - 13093>	AZUL 13-31HZ AWB
13093.00	13139.00	Blind Drilling (std)	Projection to bit	AZUL 13-31HZ AWB



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#48 AZUL 13-31HZ (745'FSL & 2446'FWL, SEC.13)
Area	COLORADO	Well	AZUL 13-31HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-31HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
130.00	1.190	119.370	129.99	FIRST SURFACE MWD+IFR1 SURVEY
1862.00	30.190	121.740	1791.19	LAST SURFACE MWD+IFR1 SURVEY
1938.00	30.890	119.310	1856.65	FIRST BHGE MWD+IFR1+SC SURVEY
5374.00	28.391	121.124	4725.83	ENTER LANDBOX (468'FNL & 860'FEL, SEC.24) 40.0427529 -104.7191141
7224.00	2.879	349.680	6508.40	KOP
8418.00	89.510	1.220	7271.04	LANDING (90'FSL & 529'FWL, SEC.13) 40.0442849 -104.7179341
8805.00	91.848	0.829	7265.55	CROSS SETBACK HEEL (477'FSL & 523'FEL, SEC.13) 40.0453469 -104.7179100
11851.00	88.799	358.980	7266.47	CROSS SETBACK TOE (1779'FNL & 522'FEL, SEC.13) 40.0537043 -104.7178614
13093.00	88.030	359.160	7272.30	LAST BHGE MWD+IFR1+SC SURVEY
13139.00	88.030	359.160	7273.88	PTB (491'FNL & 555'FEL, SEC.13) 40.0572379 -104.7179815