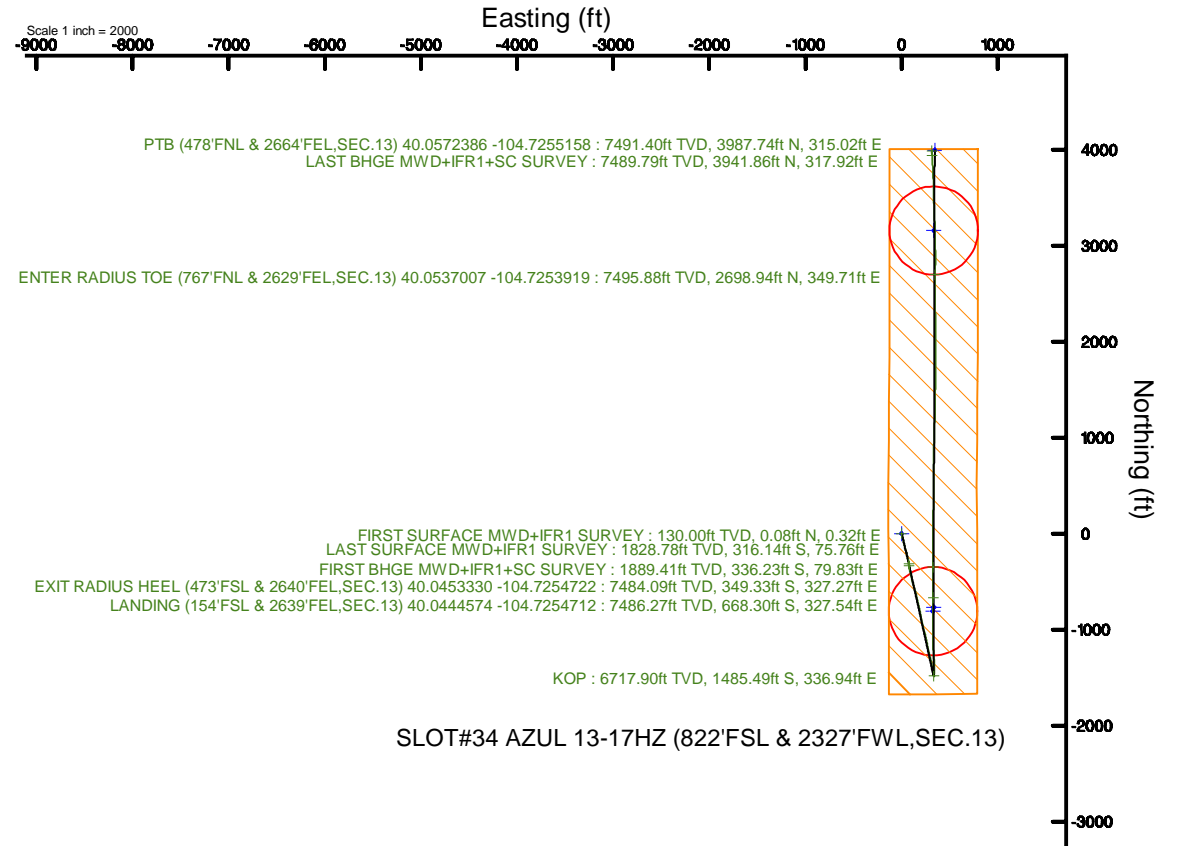
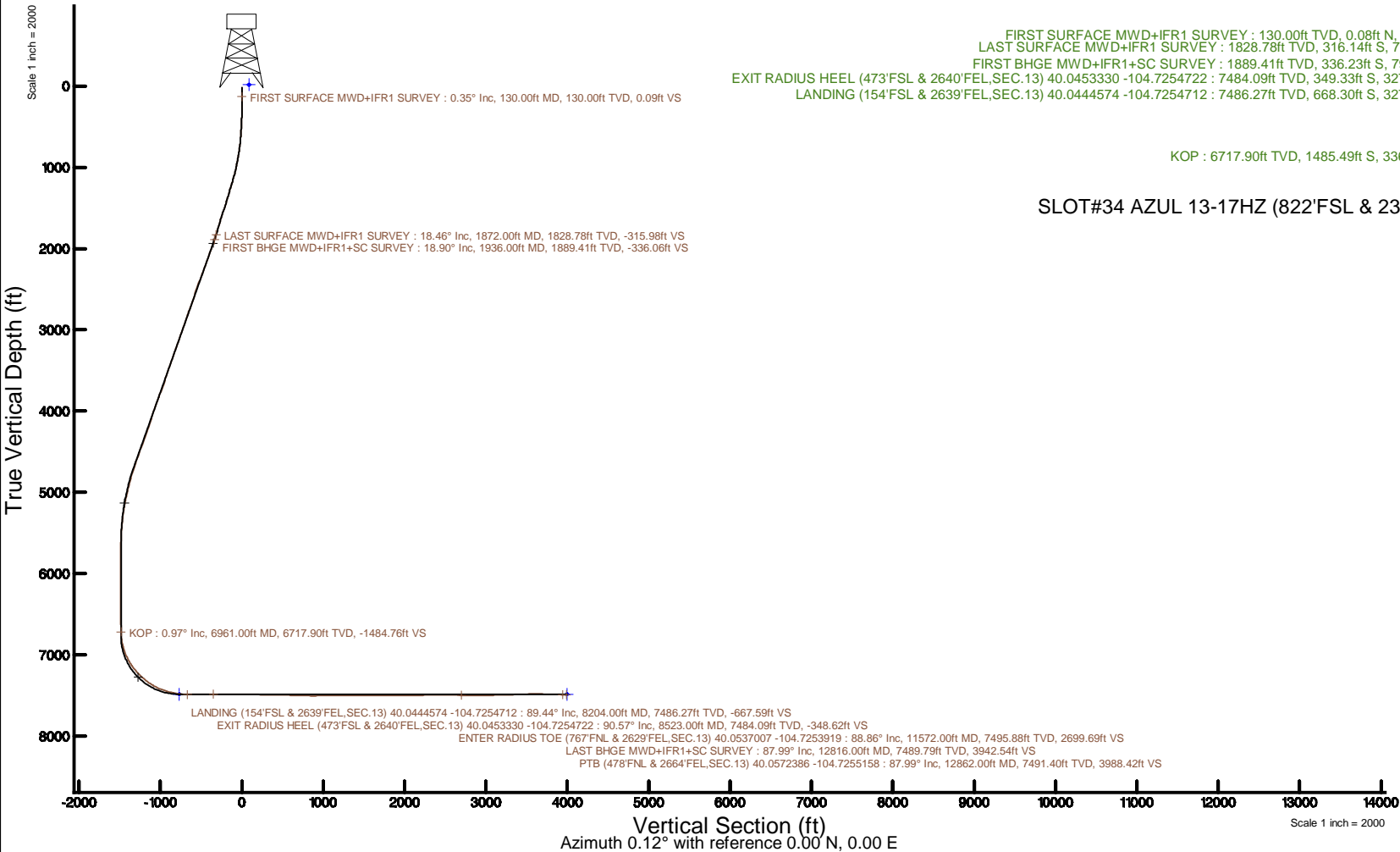


# KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO	Slot: SLOT#34 AZUL 13-17HZ (822'FSL & 2327'FWL,SEC.13)
Field: WELD COUNTY (UTM/TRUE NORTH)	Well: AZUL 13-17HZ
Facility: SEC.13-T1N-R66W	Wellbore: AZUL 13-17HZ PWB
Plot reference wellpath is AZUL 13-17HZ 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#34 AZUL 13-17HZ (822'FSL & 2327'FWL,SEC.13)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: painsetr on 2018-05-15
	Database: WA_DEN_Anadarko_DeIn



SLOT#34 AZUL 13-17HZ (822'FSL & 2327'FWL,SEC.13)

# Actual Wellpath Report

AZUL 13-17HZ AWP

Page 1 of 7

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#34 AZUL 13-17HZ (822'FSL & 2327'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-17HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-17HZ 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	5/15/2018 at 8:22 AM
Convergence at slot	0.18° East	Database/Source file	WA_DEN_Anadarko_Defn/AZUL_13-17HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-4248.32	-564.15	1716919.41	14543707.73	40°02'46.651"N	104°43'35.908"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#34 AZUL 13-17HZ (822'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	0.12°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#34 AZUL 13-17HZ (822'FSL & 2327'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-17HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-17HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (183 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	75.250	0.00	0.00	0.00	0.00	1716919.41	14543707.73	40°02'46.651"N	104°43'35.908"W	0.00	
21.00	0.000	75.250	21.00	0.00	0.00	0.00	1716919.41	14543707.73	40°02'46.651"N	104°43'35.908"W	0.00	
130.00	0.350	75.250	130.00	0.09	0.08	0.32	1716919.73	14543707.82	40°02'46.652"N	104°43'35.904"W	0.32	FIRST SURFACE MWD+IFR1 SURVEY
162.00	0.220	60.220	162.00	0.14	0.14	0.47	1716919.88	14543707.87	40°02'46.652"N	104°43'35.902"W	0.47	
193.00	0.750	89.840	193.00	0.17	0.17	0.72	1716920.14	14543707.90	40°02'46.653"N	104°43'35.899"W	1.84	
225.00	0.440	34.470	225.00	0.27	0.27	1.00	1716920.41	14543708.01	40°02'46.654"N	104°43'35.895"W	1.93	
257.00	0.970	68.310	256.99	0.48	0.47	1.32	1716920.74	14543708.21	40°02'46.656"N	104°43'35.891"W	2.04	
288.00	0.920	84.650	287.99	0.60	0.59	1.82	1716921.23	14543708.33	40°02'46.657"N	104°43'35.885"W	0.88	
319.00	0.700	116.730	318.99	0.54	0.53	2.23	1716921.64	14543708.27	40°02'46.656"N	104°43'35.879"W	1.60	
351.00	1.410	124.910	350.98	0.22	0.22	2.73	1716922.14	14543707.96	40°02'46.653"N	104°43'35.873"W	2.26	
382.00	1.980	148.200	381.97	-0.45	-0.45	3.33	1716922.74	14543707.29	40°02'46.647"N	104°43'35.865"W	2.85	
414.00	2.330	154.610	413.95	-1.50	-1.51	3.90	1716923.31	14543706.23	40°02'46.636"N	104°43'35.858"W	1.33	
446.00	2.900	174.560	445.91	-2.90	-2.91	4.25	1716923.67	14543704.84	40°02'46.622"N	104°43'35.853"W	3.33	
477.00	3.210	169.560	476.87	-4.53	-4.54	4.48	1716923.91	14543703.21	40°02'46.606"N	104°43'35.850"W	1.32	
509.00	3.600	173.160	508.81	-6.41	-6.42	4.77	1716924.20	14543701.33	40°02'46.588"N	104°43'35.847"W	1.39	
540.00	3.560	172.630	539.75	-8.33	-8.34	5.00	1716924.44	14543699.41	40°02'46.569"N	104°43'35.844"W	0.17	
572.00	3.650	175.270	571.69	-10.33	-10.34	5.22	1716924.66	14543697.41	40°02'46.549"N	104°43'35.841"W	0.59	
636.00	4.390	182.390	635.53	-14.81	-14.82	5.28	1716924.74	14543692.94	40°02'46.505"N	104°43'35.840"W	1.39	
668.00	5.010	173.860	667.42	-17.42	-17.43	5.38	1716924.84	14543690.32	40°02'46.479"N	104°43'35.839"W	2.91	
700.00	5.710	168.500	699.28	-20.37	-20.38	5.85	1716925.32	14543687.38	40°02'46.450"N	104°43'35.833"W	2.69	
732.00	7.080	166.480	731.08	-23.84	-23.86	6.63	1716926.11	14543683.90	40°02'46.415"N	104°43'35.823"W	4.34	
763.00	8.260	164.550	761.81	-27.84	-27.86	7.67	1716927.16	14543679.90	40°02'46.376"N	104°43'35.809"W	3.90	
795.00	9.320	160.940	793.43	-32.51	-32.53	9.12	1716928.63	14543675.25	40°02'46.330"N	104°43'35.791"W	3.73	
827.00	9.760	162.440	824.99	-37.54	-37.56	10.79	1716930.31	14543670.22	40°02'46.280"N	104°43'35.769"W	1.58	
859.00	10.200	163.930	856.50	-42.84	-42.87	12.39	1716931.93	14543664.92	40°02'46.227"N	104°43'35.749"W	1.59	
890.00	10.330	167.620	887.01	-48.19	-48.22	13.75	1716933.30	14543659.57	40°02'46.174"N	104°43'35.731"W	2.16	
922.00	10.990	167.360	918.45	-53.97	-54.00	15.03	1716934.60	14543653.80	40°02'46.117"N	104°43'35.715"W	2.07	
954.00	11.250	166.390	949.85	-59.98	-60.01	16.43	1716936.02	14543647.79	40°02'46.058"N	104°43'35.697"W	1.00	
985.00	11.470	168.760	980.25	-65.93	-65.97	17.74	1716937.35	14543641.84	40°02'45.999"N	104°43'35.680"W	1.66	
1017.00	12.660	167.620	1011.54	-72.48	-72.52	19.12	1716938.74	14543635.30	40°02'45.934"N	104°43'35.662"W	3.79	
1049.00	13.670	167.530	1042.70	-79.59	-79.64	20.68	1716940.33	14543628.19	40°02'45.864"N	104°43'35.642"W	3.16	
1081.00	14.680	169.200	1073.72	-87.26	-87.31	22.26	1716941.93	14543620.52	40°02'45.788"N	104°43'35.622"W	3.40	
1112.00	15.380	170.260	1103.66	-95.17	-95.22	23.69	1716943.39	14543612.62	40°02'45.710"N	104°43'35.603"W	2.43	
1144.00	15.820	169.470	1134.48	-103.64	-103.69	25.21	1716944.93	14543604.16	40°02'45.626"N	104°43'35.584"W	1.53	
1176.00	16.260	168.590	1165.24	-112.31	-112.37	26.89	1716946.64	14543595.49	40°02'45.541"N	104°43'35.562"W	1.57	
1208.00	16.660	167.090	1195.93	-121.17	-121.24	28.80	1716948.57	14543586.63	40°02'45.453"N	104°43'35.538"W	1.82	
1239.00	16.740	166.650	1225.62	-129.84	-129.91	30.82	1716950.62	14543577.97	40°02'45.367"N	104°43'35.512"W	0.48	
1271.00	17.230	166.570	1256.22	-138.93	-139.00	32.99	1716952.82	14543568.88	40°02'45.277"N	104°43'35.484"W	1.53	
1303.00	17.090	166.220	1286.80	-148.10	-148.18	35.21	1716955.06	14543559.72	40°02'45.187"N	104°43'35.455"W	0.54	
1335.00	17.010	165.950	1317.39	-157.21	-157.29	37.47	1716957.35	14543550.62	40°02'45.097"N	104°43'35.426"W	0.35	
1366.00	16.700	163.750	1347.06	-165.88	-165.96	39.81	1716959.72	14543541.96	40°02'45.011"N	104°43'35.396"W	2.29	
1398.00	17.400	164.550	1377.65	-174.90	-174.99	42.38	1716962.31	14543532.94	40°02'44.922"N	104°43'35.363"W	2.31	
1430.00	18.190	163.490	1408.12	-184.29	-184.39	45.07	1716965.03	14543523.55	40°02'44.829"N	104°43'35.328"W	2.67	
1461.00	18.900	163.400	1437.51	-193.74	-193.84	47.88	1716967.87	14543514.11	40°02'44.735"N	104°43'35.292"W	2.29	
1493.00	19.340	163.670	1467.75	-203.78	-203.89	50.85	1716970.87	14543504.08	40°02'44.636"N	104°43'35.254"W	1.40	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#34 AZUL 13-17HZ (822'FSL & 2327'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-17HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-17HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (183 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
1524.00	18.980	167.180	1497.03	-213.62	-213.73	53.41	1716973.46	14543494.25	40°02'44.539"N	104°43'35.221"W	3.89	
1556.00	18.730	168.240	1527.31	-223.72	-223.84	55.61	1716975.69	14543484.15	40°02'44.439"N	104°43'35.193"W	1.33	
1588.00	18.940	168.760	1557.60	-233.84	-233.96	57.67	1716977.78	14543474.04	40°02'44.339"N	104°43'35.166"W	0.84	
1620.00	18.370	170.260	1587.92	-243.90	-244.03	59.54	1716979.68	14543463.99	40°02'44.239"N	104°43'35.142"W	2.33	
1651.00	17.360	169.030	1617.42	-253.25	-253.38	61.24	1716981.41	14543454.64	40°02'44.147"N	104°43'35.121"W	3.48	
1683.00	15.690	167.530	1648.10	-262.16	-262.29	63.09	1716983.28	14543445.74	40°02'44.059"N	104°43'35.097"W	5.39	
1715.00	15.560	163.580	1678.92	-270.49	-270.63	65.23	1716985.45	14543437.40	40°02'43.977"N	104°43'35.069"W	3.35	
1779.00	17.010	166.830	1740.35	-287.83	-287.98	69.79	1716990.06	14543420.08	40°02'43.805"N	104°43'35.011"W	2.68	
1810.00	17.800	168.320	1769.93	-296.88	-297.04	71.79	1716992.08	14543411.03	40°02'43.716"N	104°43'34.985"W	2.93	
1832.00	18.460	168.240	1790.84	-303.58	-303.74	73.18	1716993.49	14543404.33	40°02'43.649"N	104°43'34.967"W	3.00	
1872.00	18.460	168.240	1828.78	-315.98	-316.14	75.76	1716996.11	14543391.95	40°02'43.527"N	104°43'34.934"W	0.00	LAST SURFACE MWD+IFR1 SURVEY
1936.00	18.900	168.840	1889.41	-336.06	-336.23	79.83	1717000.24	14543371.88	40°02'43.328"N	104°43'34.882"W	0.75	FIRST BHGE MWD+IFR1+SC SURVEY
2026.00	18.230	168.330	1974.73	-364.13	-364.32	85.50	1717006.00	14543343.82	40°02'43.051"N	104°43'34.809"W	0.77	
2116.00	20.590	171.460	2059.61	-393.56	-393.76	90.70	1717011.28	14543314.41	40°02'42.760"N	104°43'34.742"W	2.86	
2205.00	19.970	170.160	2143.09	-424.00	-424.21	95.62	1717016.30	14543283.98	40°02'42.459"N	104°43'34.679"W	0.86	
2295.00	21.590	166.910	2227.24	-455.26	-455.49	102.00	1717022.77	14543252.74	40°02'42.150"N	104°43'34.597"W	2.21	
2385.00	20.620	165.530	2311.20	-486.72	-486.96	109.71	1717030.57	14543221.30	40°02'41.839"N	104°43'34.497"W	1.21	
2474.00	21.480	164.060	2394.26	-517.55	-517.80	118.10	1717039.05	14543190.50	40°02'41.534"N	104°43'34.389"W	1.13	
2564.00	20.410	163.820	2478.31	-548.44	-548.72	127.00	1717048.04	14543159.62	40°02'41.228"N	104°43'34.275"W	1.19	
2654.00	19.210	161.450	2562.99	-577.53	-577.83	136.08	1717057.21	14543130.55	40°02'40.941"N	104°43'34.158"W	1.60	
2743.00	20.160	165.440	2646.79	-606.24	-606.56	144.59	1717065.81	14543101.86	40°02'40.657"N	104°43'34.049"W	1.85	
2833.00	20.710	168.660	2731.13	-636.84	-637.17	151.62	1717072.93	14543071.28	40°02'40.354"N	104°43'33.958"W	1.39	
2923.00	19.240	166.070	2815.71	-666.83	-667.17	158.32	1717079.72	14543041.31	40°02'40.058"N	104°43'33.872"W	1.91	
3012.00	19.930	167.730	2899.56	-695.87	-696.23	165.08	1717086.56	14543012.29	40°02'39.771"N	104°43'33.785"W	1.00	
3102.00	20.540	167.610	2984.01	-726.26	-726.64	171.72	1717093.30	14542981.91	40°02'39.470"N	104°43'33.700"W	0.68	
3192.00	18.530	165.460	3068.82	-755.52	-755.90	178.70	1717100.36	14542952.68	40°02'39.181"N	104°43'33.610"W	2.37	
3282.00	20.100	169.360	3153.76	-784.55	-784.95	185.15	1717106.90	14542923.66	40°02'38.894"N	104°43'33.527"W	2.26	
3371.00	18.090	167.250	3237.86	-813.04	-813.46	191.02	1717112.85	14542895.18	40°02'38.612"N	104°43'33.452"W	2.39	
3461.00	20.160	170.920	3322.89	-841.98	-842.41	196.55	1717118.47	14542866.26	40°02'38.326"N	104°43'33.381"W	2.66	
3550.00	20.530	170.410	3406.34	-872.50	-872.94	201.58	1717123.59	14542835.76	40°02'38.024"N	104°43'33.316"W	0.46	
3640.00	18.190	168.060	3491.24	-901.80	-902.25	207.11	1717129.21	14542806.48	40°02'37.735"N	104°43'33.245"W	2.74	
3729.00	18.860	166.600	3575.63	-929.37	-929.83	213.32	1717135.50	14542778.92	40°02'37.462"N	104°43'33.165"W	0.92	
3819.00	19.910	166.760	3660.53	-958.42	-958.90	220.20	1717142.47	14542749.89	40°02'37.175"N	104°43'33.077"W	1.17	
3909.00	20.470	165.440	3745.00	-988.56	-989.05	227.67	1717150.02	14542719.77	40°02'36.877"N	104°43'32.981"W	0.80	
3998.00	20.580	165.420	3828.35	-1018.74	-1019.25	235.52	1717157.96	14542689.61	40°02'36.578"N	104°43'32.880"W	0.12	
4088.00	20.350	163.790	3912.67	-1049.06	-1049.59	243.87	1717166.40	14542659.31	40°02'36.279"N	104°43'32.772"W	0.68	
4178.00	20.280	167.030	3997.07	-1079.27	-1079.81	251.74	1717174.36	14542629.12	40°02'35.980"N	104°43'32.671"W	1.25	
4267.00	17.990	168.730	4081.15	-1107.77	-1108.33	257.89	1717180.60	14542600.64	40°02'35.698"N	104°43'32.592"W	2.65	
4357.00	18.380	170.360	4166.66	-1135.38	-1135.95	262.98	1717185.77	14542573.04	40°02'35.425"N	104°43'32.527"W	0.71	
4447.00	19.620	170.730	4251.75	-1164.27	-1164.85	267.79	1717190.67	14542544.17	40°02'35.140"N	104°43'32.465"W	1.38	
4537.00	20.560	168.010	4336.28	-1194.63	-1195.22	273.51	1717196.48	14542513.82	40°02'34.839"N	104°43'32.391"W	1.47	
4626.00	22.190	166.340	4419.15	-1226.23	-1226.84	280.72	1717203.79	14542482.24	40°02'34.527"N	104°43'32.299"W	1.95	
4716.00	19.760	164.260	4503.18	-1257.38	-1258.01	288.86	1717212.02	14542451.11	40°02'34.219"N	104°43'32.194"W	2.82	
4806.00	20.420	167.290	4587.71	-1287.32	-1287.97	296.44	1717219.69	14542421.19	40°02'33.923"N	104°43'32.096"W	1.37	
4895.00	18.550	166.210	4671.61	-1316.20	-1316.86	303.24	1717226.57	14542392.32	40°02'33.637"N	104°43'32.009"W	2.14	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#34 AZUL 13-17HZ (822'FSL & 2327'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-17HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-17HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (183 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	17.530	167.810	4757.18	1343.34	-1344.02	309.51	1717232.92	14542365.20	40°02'33.369"N	104°43'31.928"W	1.26	
5075.00	15.720	166.730	4843.42	1368.45	-1369.13	315.17	1717238.66	14542340.11	40°02'33.121"N	104°43'31.856"W	2.04	
5164.00	14.290	166.120	4929.38	1390.84	-1391.53	320.57	1717244.13	14542317.74	40°02'32.900"N	104°43'31.786"W	1.62	
5254.00	13.460	165.820	5016.75	1411.76	-1412.47	325.81	1717249.42	14542296.82	40°02'32.693"N	104°43'31.719"W	0.93	
5344.00	12.020	169.080	5104.54	1431.11	-1431.83	330.15	1717253.82	14542277.49	40°02'32.501"N	104°43'31.663"W	1.79	
5433.00	8.630	172.580	5192.08	1446.83	-1447.56	332.77	1717256.49	14542261.77	40°02'32.346"N	104°43'31.629"W	3.87	
5523.00	7.520	170.810	5281.19	1459.34	-1460.07	334.58	1717258.34	14542249.28	40°02'32.222"N	104°43'31.606"W	1.26	
5613.00	5.640	168.440	5370.59	1469.48	-1470.21	336.40	1717260.19	14542239.14	40°02'32.122"N	104°43'31.583"W	2.11	
5703.00	4.710	163.470	5460.23	1477.35	-1478.09	338.34	1717262.16	14542231.27	40°02'32.044"N	104°43'31.558"W	1.15	
5792.00	2.720	186.500	5549.04	1482.95	-1483.69	339.14	1717262.97	14542225.67	40°02'31.989"N	104°43'31.547"W	2.75	
5882.00	2.040	183.950	5638.96	1486.67	-1487.41	338.79	1717262.63	14542221.95	40°02'31.952"N	104°43'31.552"W	0.76	
5972.00	0.420	257.520	5728.94	1488.34	-1489.08	338.36	1717262.20	14542220.28	40°02'31.936"N	104°43'31.558"W	2.18	
6062.00	0.250	223.290	5818.94	1488.56	-1489.29	337.90	1717261.75	14542220.07	40°02'31.933"N	104°43'31.563"W	0.28	
6151.00	0.140	216.730	5907.94	1488.79	-1489.52	337.70	1717261.55	14542219.84	40°02'31.931"N	104°43'31.566"W	0.13	
6241.00	0.150	198.260	5997.94	1488.99	-1489.72	337.60	1717261.45	14542219.64	40°02'31.929"N	104°43'31.567"W	0.05	
6331.00	0.250	331.100	6087.94	1488.93	-1489.66	337.47	1717261.32	14542219.70	40°02'31.930"N	104°43'31.569"W	0.41	
6420.00	0.480	353.510	6176.94	1488.39	-1489.12	337.33	1717261.18	14542220.24	40°02'31.935"N	104°43'31.571"W	0.30	
6510.00	0.840	3.530	6266.93	1487.36	-1488.09	337.33	1717261.18	14542221.27	40°02'31.945"N	104°43'31.571"W	0.42	
6599.00	0.910	26.600	6355.92	1486.07	-1486.81	337.69	1717261.53	14542222.56	40°02'31.958"N	104°43'31.566"W	0.40	
6688.00	0.460	90.900	6444.91	1485.44	-1486.18	338.36	1717262.20	14542223.18	40°02'31.964"N	104°43'31.557"W	0.92	
6778.00	0.300	284.460	6534.91	1485.39	-1486.13	338.49	1717262.33	14542223.24	40°02'31.965"N	104°43'31.556"W	0.84	
6867.00	0.590	278.700	6623.91	1485.26	-1486.00	337.82	1717261.65	14542223.36	40°02'31.966"N	104°43'31.565"W	0.33	
6957.00	0.700	315.400	6713.91	1484.81	-1485.54	336.97	1717260.81	14542223.82	40°02'31.971"N	104°43'31.575"W	0.47	
6961.00†	0.967	330.988	6717.90	1484.76	-1485.49	336.94	1717260.77	14542223.87	40°02'31.971"N	104°43'31.576"W	8.70	KOP
7047.00	8.310	0.130	6803.57	1477.90	-1478.63	336.60	1717260.42	14542230.72	40°02'32.039"N	104°43'31.580"W	8.70	
7136.00	15.400	4.570	6890.62	1459.66	-1460.40	337.56	1717261.32	14542248.95	40°02'32.219"N	104°43'31.568"W	8.03	
7226.00	20.100	3.970	6976.31	1432.30	-1433.04	339.58	1717263.26	14542276.30	40°02'32.489"N	104°43'31.542"W	5.23	
7316.00	28.310	359.490	7058.33	1395.47	-1396.21	340.46	1717264.02	14542313.13	40°02'32.853"N	104°43'31.530"W	9.34	
7405.00	33.320	357.380	7134.75	1349.92	-1350.66	339.16	1717262.58	14542358.66	40°02'33.303"N	104°43'31.547"W	5.76	
7495.00	42.140	355.260	7205.86	1295.03	-1295.76	335.53	1717258.78	14542413.52	40°02'33.846"N	104°43'31.594"W	9.90	
7584.00	46.670	356.890	7269.43	1232.93	-1233.65	331.30	1717254.37	14542475.59	40°02'34.460"N	104°43'31.648"W	5.25	
7674.00	53.520	359.050	7327.13	1163.99	-1164.70	828.92	1717251.78	14542544.50	40°02'35.141"N	104°43'31.679"W	7.83	
7764.00	60.050	359.960	7376.41	1088.74	-1089.45	828.29	1717250.92	14542619.72	40°02'35.885"N	104°43'31.687"W	7.30	
7853.00	67.180	1.070	7415.94	1009.06	-1009.78	829.03	1717251.41	14542699.37	40°02'36.672"N	104°43'31.677"W	8.09	
7943.00	72.550	357.510	7446.91	924.62	-925.33	827.94	1717250.06	14542783.77	40°02'37.507"N	104°43'31.691"W	7.03	
8032.00	79.060	359.050	7468.73	838.43	-839.14	825.37	1717247.23	14542869.93	40°02'38.358"N	104°43'31.724"W	7.50	
8122.00	84.270	1.330	7481.77	749.42	-750.13	825.68	1717247.26	14542958.90	40°02'39.238"N	104°43'31.720"W	6.31	
8204.00†	89.439	1.284	7486.27	667.59	-668.30	827.54	1717248.88	14543040.70	40°02'40.047"N	104°43'31.696"W	6.30	LANDING (154'FSL & 2639'FEL,SEC.13) 40.0444574 -104.7254712
8211.00	89.880	1.280	7486.31	660.59	-661.30	827.70	1717249.01	14543047.70	40°02'40.116"N	104°43'31.694"W	6.30	
8301.00	90.340	0.110	7486.14	570.60	-571.31	828.79	1717249.83	14543137.66	40°02'41.005"N	104°43'31.680"W	1.40	
8391.00	90.280	359.110	7485.65	480.60	-481.31	828.18	1717248.94	14543227.62	40°02'41.895"N	104°43'31.688"W	1.11	
8481.00	90.990	359.910	7484.66	390.61	-391.32	827.41	1717247.89	14543317.57	40°02'42.784"N	104°43'31.698"W	1.19	
8523.00†	90.565	359.702	7484.09	348.62	-349.33	827.27	1717247.62	14543359.55	40°02'43.199"N	104°43'31.700"W	1.13	EXIT RADIUS HEEL (473'FSL & 2640'FEL,SEC.13) 40.0453330 -104.7254722
8570.00	90.090	359.470	7483.82	301.62	-302.33	826.93	1717247.14	14543406.52	40°02'43.663"N	104°43'31.704"W	1.13	
8660.00	89.720	359.970	7483.97	211.62	-212.33	826.49	1717246.42	14543496.49	40°02'44.553"N	104°43'31.710"W	0.69	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#34 AZUL 13-17HZ (822'FSL & 2327'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-17HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-17HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (183 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	89.820	358.620	7484.33	-121.64	-122.34	325.38	1717245.04	14543586.44	40°02'45.442"N	104°43'31.724"W	1.50	
8839.00	88.710	1.200	7485.47	-32.65	-33.36	325.24	1717244.63	14543675.38	40°02'46.321"N	104°43'31.726"W	3.16	
8929.00	89.110	0.610	7487.18	57.32	56.61	326.66	1717245.77	14543765.32	40°02'47.210"N	104°43'31.708"W	0.79	
9019.00	89.750	1.450	7488.08	147.30	146.59	328.28	1717247.11	14543855.27	40°02'48.100"N	104°43'31.687"W	1.17	
9108.00	88.950	1.200	7489.09	236.28	235.56	330.34	1717248.90	14543944.21	40°02'48.979"N	104°43'31.660"W	0.94	
9198.00	89.720	1.070	7490.13	326.26	325.54	332.12	1717250.40	14544034.16	40°02'49.868"N	104°43'31.637"W	0.87	
9287.00	88.710	0.680	7491.35	415.24	414.52	333.48	1717251.49	14544123.11	40°02'50.747"N	104°43'31.620"W	1.22	
9377.00	88.710	0.600	7493.38	505.21	504.49	334.48	1717252.22	14544213.05	40°02'51.636"N	104°43'31.607"W	0.09	
9467.00	88.310	359.850	7495.72	595.18	594.46	334.84	1717252.29	14544302.98	40°02'52.526"N	104°43'31.602"W	0.94	
9556.00	88.370	359.850	7498.29	684.14	683.42	334.60	1717251.79	14544391.91	40°02'53.405"N	104°43'31.605"W	0.07	
9646.00	88.280	359.770	7500.92	774.10	773.38	334.31	1717251.21	14544481.83	40°02'54.294"N	104°43'31.609"W	0.13	
9735.00	89.570	1.230	7502.59	863.08	862.36	335.08	1717251.72	14544570.77	40°02'55.173"N	104°43'31.599"W	2.19	
9825.00	91.730	1.690	7501.57	953.05	952.32	337.38	1717253.73	14544660.70	40°02'56.062"N	104°43'31.570"W	2.45	
9915.00	89.850	1.950	7500.33	1042.99	1042.26	340.23	1717256.31	14544750.62	40°02'56.951"N	104°43'31.533"W	2.11	
10004.00	90.000	1.640	7500.45	1131.96	1131.22	343.02	1717258.83	14544839.55	40°02'57.830"N	104°43'31.497"W	0.39	
10094.00	90.090	1.030	7500.38	1221.94	1221.19	345.12	1717260.65	14544929.49	40°02'58.719"N	104°43'31.470"W	0.69	
10183.00	90.590	0.840	7499.85	1310.92	1310.18	346.57	1717261.82	14545018.45	40°02'59.598"N	104°43'31.451"W	0.60	
10273.00	90.800	0.990	7498.76	1400.91	1400.16	348.01	1717262.98	14545108.40	40°03'00.488"N	104°43'31.433"W	0.29	
10362.00	89.390	1.600	7498.61	1489.89	1489.13	350.02	1717264.72	14545197.34	40°03'01.367"N	104°43'31.407"W	1.73	
10452.00	89.940	1.240	7499.14	1579.86	1579.10	352.25	1717266.68	14545287.28	40°03'02.256"N	104°43'31.378"W	0.73	
10542.00	90.370	0.500	7498.89	1669.85	1669.09	353.62	1717267.77	14545377.24	40°03'03.145"N	104°43'31.361"W	0.95	
10632.00	90.550	0.420	7498.17	1759.85	1759.09	354.34	1717268.21	14545467.20	40°03'04.035"N	104°43'31.351"W	0.22	
10721.00	90.930	0.580	7497.02	1848.84	1848.08	355.12	1717268.71	14545556.16	40°03'04.914"N	104°43'31.341"W	0.46	
10811.00	89.380	359.360	7496.78	1938.84	1938.07	355.07	1717268.39	14545646.12	40°03'05.803"N	104°43'31.342"W	2.19	
10901.00	90.220	359.770	7497.09	2028.83	2028.07	354.38	1717267.43	14545736.07	40°03'06.693"N	104°43'31.351"W	1.04	
10990.00	90.400	359.470	7496.61	2117.82	2117.06	353.79	1717266.57	14545825.03	40°03'07.572"N	104°43'31.358"W	0.39	
11080.00	90.520	358.790	7495.89	2207.81	2207.05	352.43	1717264.93	14545914.98	40°03'08.462"N	104°43'31.376"W	0.77	
11169.00	90.550	358.680	7495.06	2296.78	2296.02	350.46	1717262.69	14546003.91	40°03'09.341"N	104°43'31.401"W	0.13	
11259.00	90.710	358.530	7494.07	2386.74	2385.99	348.27	1717260.22	14546093.84	40°03'10.230"N	104°43'31.429"W	0.24	
11348.00	90.740	0.570	7492.94	2475.72	2474.98	347.57	1717259.25	14546182.78	40°03'11.109"N	104°43'31.438"W	2.29	
11438.00	88.890	0.450	7493.23	2565.72	2564.97	348.37	1717259.78	14546272.74	40°03'11.999"N	104°43'31.428"W	2.06	
11527.00	88.860	0.670	7494.98	2654.70	2653.95	349.24	1717260.37	14546361.69	40°03'12.878"N	104°43'31.417"W	0.25	
11572.00†	88.860	0.525	7495.88	2699.69	2698.94	349.71	1717260.70	14546406.66	40°03'13.323"N	104°43'31.411"W	0.32	ENTER RADIUS TOE (767'FNL & 2629'FEL,SEC.13) 40.0537007 -104.7253919
11617.00	88.860	0.380	7496.77	2744.68	2743.93	350.07	1717260.92	14546451.63	40°03'13.767"N	104°43'31.406"W	0.32	
11707.00	89.040	0.260	7498.42	2834.66	2833.91	350.57	1717261.15	14546541.58	40°03'14.656"N	104°43'31.400"W	0.24	
11796.00	90.680	359.700	7498.64	2923.66	2922.91	350.54	1717260.84	14546630.54	40°03'15.536"N	104°43'31.400"W	1.95	
11886.00	91.050	359.100	7497.28	3013.64	3012.89	349.60	1717259.63	14546720.49	40°03'16.425"N	104°43'31.412"W	0.78	
11975.00	91.360	358.930	7495.41	3102.60	3101.86	348.07	1717257.82	14546809.42	40°03'17.304"N	104°43'31.432"W	0.40	
12065.00	91.570	358.270	7493.11	3192.54	3191.80	345.87	1717255.35	14546899.32	40°03'18.193"N	104°43'31.460"W	0.77	
12154.00	91.720	358.120	7490.55	3281.45	3280.72	343.07	1717252.28	14546988.19	40°03'19.072"N	104°43'31.496"W	0.24	
12244.00	92.240	357.490	7487.44	3371.33	3370.60	339.62	1717248.56	14547078.02	40°03'19.960"N	104°43'31.540"W	0.91	
12334.00	91.970	358.070	7484.14	3461.19	3460.47	336.14	1717244.80	14547167.85	40°03'20.848"N	104°43'31.585"W	0.71	
12423.00	91.790	359.560	7481.22	3550.12	3549.40	334.30	1717242.69	14547256.74	40°03'21.727"N	104°43'31.609"W	1.69	
12513.00	88.830	358.290	7480.73	3640.08	3639.37	332.61	1717240.72	14547346.67	40°03'22.616"N	104°43'31.631"W	3.58	
12603.00	88.120	357.630	7483.12	3729.99	3729.28	329.41	1717237.25	14547436.53	40°03'23.505"N	104°43'31.672"W	1.08	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#34 AZUL 13-17HZ (822'FSL & 2327'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-17HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-17HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (183 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]
12692.00	88.370	356.910	7485.85	3818.83	3818.14	325.17	1717232.74	14547525.34	40°03'24.383"N	104°43'31.726"W	0.86
12816.00	87.990	356.380	7489.79	3942.54	3941.86	317.92	1717225.11	14547648.99	40°03'25.605"N	104°43'31.819"W	0.53
12862.00	87.990	356.380	7491.40	3988.42	3987.74	315.02	1717222.07	14547694.85	40°03'26.059"N	104°43'31.857"W	0.00

HOLE & CASING SECTIONS - Ref Wellbore: AZUL 13-17HZ AWB Ref Wellpath: AZUL 13-17HZ 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	1872.00	1851.00	21.00	1828.78	0.00	0.00	-316.14	75.76

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	91.10	-1167.18	1715752.42	14543795.21	40°02'47.551"N	104°43'50.916"W	polygon
AZUL 13-17HZ BHL REV-1(470'FNL & 2635'FEL,SEC.13)	7484.00	3995.96	344.08	1717251.09	14547703.15	40°03'26.140"N	104°43'31.483"W	point
AZUL 13-17HZ HEEL REV-1(50'FSL & 2633'FEL,SEC.13)	7484.00	-768.95	333.80	1717255.44	14542940.11	40°02'39.052"N	104°43'31.616"W	point
AZUL 13-17HZ LANDBOX	7605.00	0.00	0.00	1716919.41	14543707.73	40°02'46.651"N	104°43'35.908"W	polygon
AZUL 13-17HZ RADIUS 1	7605.00	3158.71	334.61	1717244.20	14546866.20	40°03'17.866"N	104°43'31.605"W	polygon
AZUL 13-17HZ RADIUS 2	7605.00	-808.75	325.84	1717247.60	14542900.30	40°02'38.659"N	104°43'31.718"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: AZUL 13-17HZ AWB Ref Wellpath: AZUL 13-17HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
21.00	1872.00	Custom APC ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC ISCWSA Rev-2 MWD+IFR1 <130 - 1872>	AZUL 13-17HZ AWB
1872.00	12816.00	Custom APC ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+SC <1936 - 12816>	AZUL 13-17HZ AWB
12816.00	12862.00	Blind Drilling (std)	Projection to bit	AZUL 13-17HZ AWB



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#34 AZUL 13-17HZ (822'FSL & 2327'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-17HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-17HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
130.00	0.350	75.250	130.00	FIRST SURFACE MWD+IFR1 SURVEY
1872.00	18.460	168.240	1828.78	LAST SURFACE MWD+IFR1 SURVEY
1936.00	18.900	168.840	1889.41	FIRST BHGE MWD+IFR1+SC SURVEY
6961.00	0.967	330.988	6717.90	KOP
8204.00	89.439	1.284	7486.27	LANDING (154'FSL & 2639'FEL,SEC.13) 40.0444574 -104.7254712
8523.00	90.565	359.702	7484.09	EXIT RADIUS HEEL (473'FSL & 2640'FEL,SEC.13) 40.0453330 -104.7254722
11572.00	88.860	0.525	7495.88	ENTER RADIUS TOE (767'FNL & 2629'FEL,SEC.13) 40.0537007 -104.7253919
12816.00	87.990	356.380	7489.79	LAST BHGE MWD+IFR1+SC SURVEY
12862.00	87.990	356.380	7491.40	PTB (478'FNL & 2664'FEL,SEC.13) 40.0572386 -104.7255158