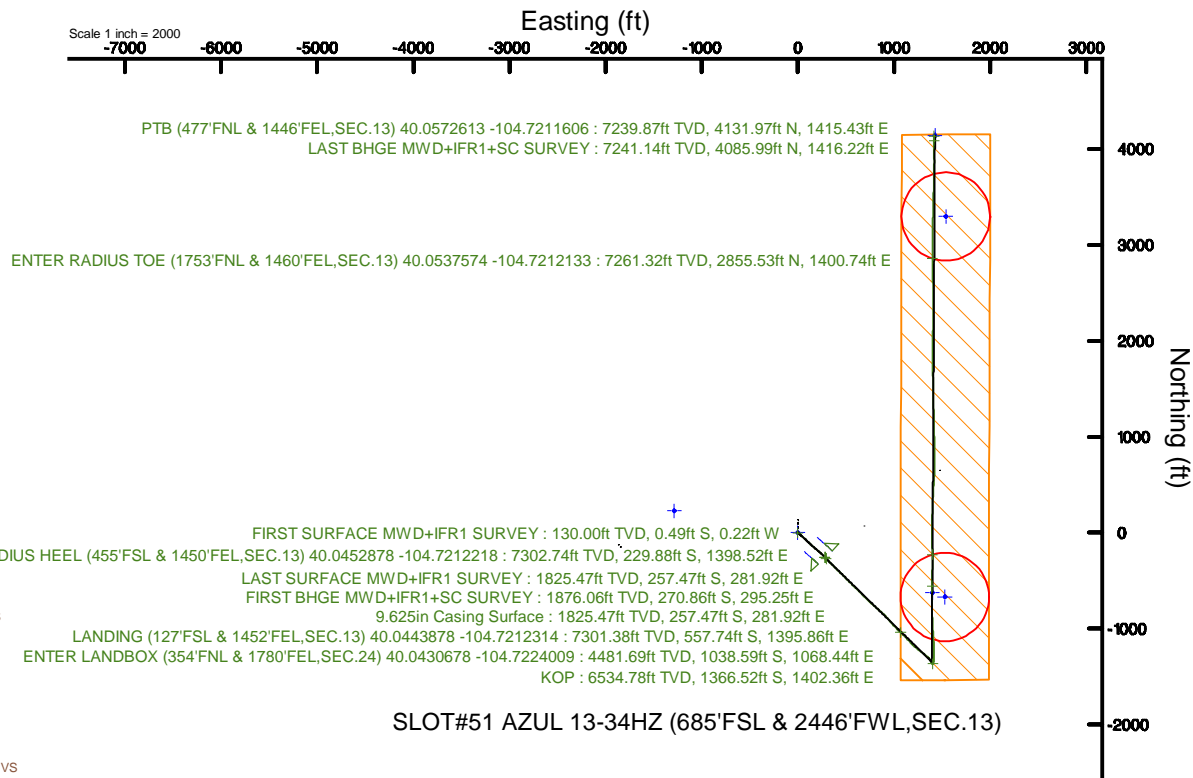
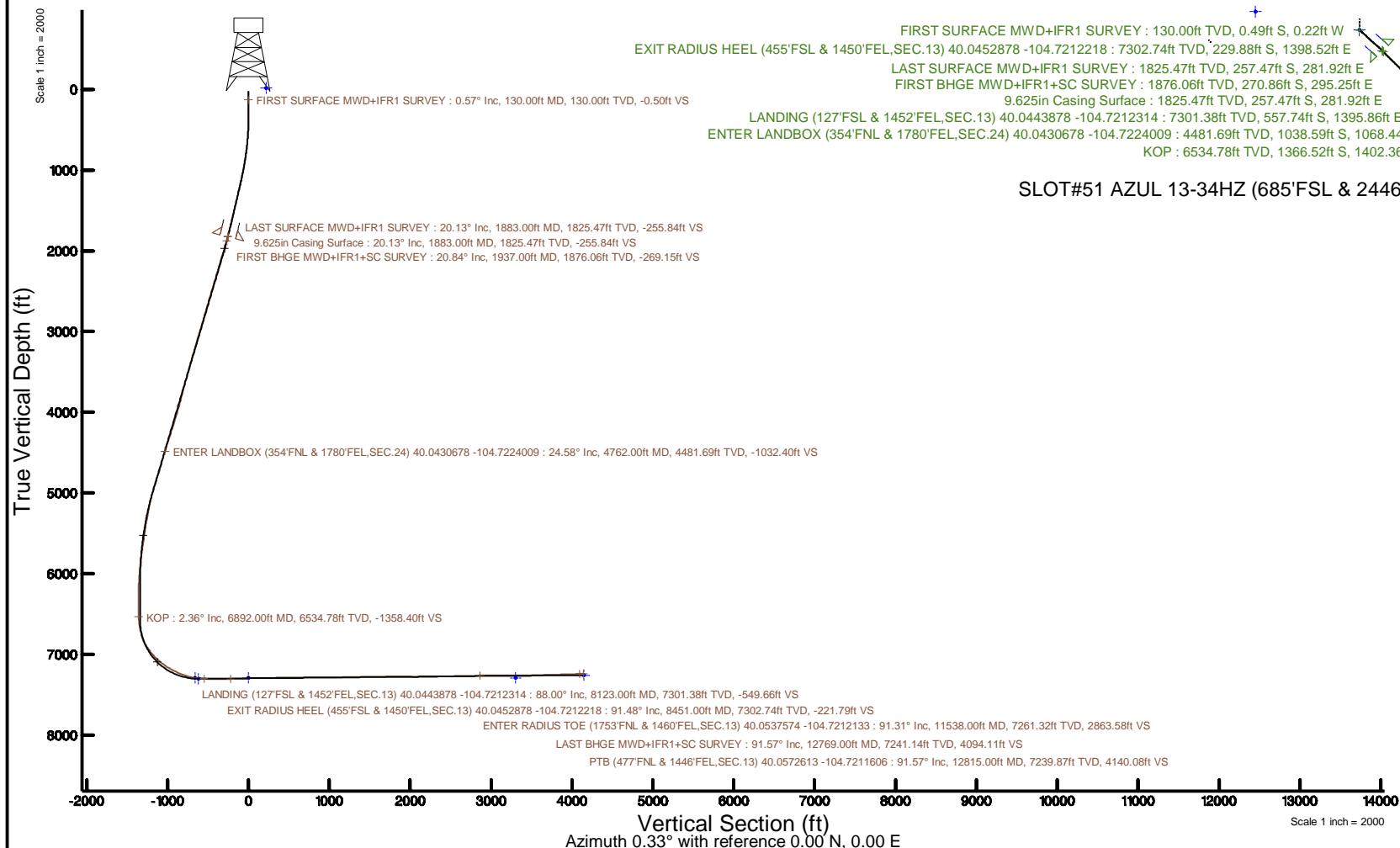


KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#51 AZUL 13-34HZ (685'FSL & 2446'FWL,SEC.13)
Field: WELD COUNTY (UTM/TRUE NORTH)Well: AZUL 13-34HZ
Facility: SEC.13-T1N-R66W Wellbore: AZUL 13-34HZ PWB

Plot reference wellpath is AZUL 13-34HZ 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#51 AZUL 13-34HZ (685'FSL & 2446'FWL,SEC.13)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: painsetr on 2018-05-03
	Database: WA_DEN_Anadarko_Defn



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#51 AZUL 13-34HZ (685'FSL & 2446'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-34HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-34HZ 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	5/3/2018 at 10:30 AM
Convergence at slot	0.18° East	Database/Source file	WA_DEN_Anadarko_Defn/AZUL_13-34HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-4384.23	-445.40	1717038.54	14543572.25	40°02'45.308"N	104°43'34.381"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#51 AZUL 13-34HZ (685'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	0.33°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#51 AZUL 13-34HZ (685'FSL & 2446'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-34HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-34HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (182 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	204.180	0.00	0.00	0.00	0.00	1717038.54	14543572.25	40°02'45.308"N	104°43'34.381"W	0.00	
21.00	0.000	204.180	21.00	0.00	0.00	0.00	1717038.54	14543572.25	40°02'45.308"N	104°43'34.381"W	0.00	
130.00	0.570	204.180	130.00	-0.50	-0.49	-0.22	1717038.32	14543571.75	40°02'45.303"N	104°43'34.384"W	0.52	FIRST SURFACE MWD+IFR1 SURVEY
162.00	1.050	240.570	162.00	-0.79	-0.78	-0.54	1717038.00	14543571.46	40°02'45.300"N	104°43'34.388"W	2.13	
194.00	0.750	237.320	193.99	-1.05	-1.04	-0.97	1717037.57	14543571.21	40°02'45.298"N	104°43'34.394"W	0.95	
226.00	0.790	10.030	225.99	-0.94	-0.94	-1.11	1717037.43	14543571.31	40°02'45.299"N	104°43'34.395"W	4.41	
257.00	1.050	355.180	256.99	-0.45	-0.44	-1.10	1717037.44	14543571.80	40°02'45.304"N	104°43'34.395"W	1.13	
288.00	1.190	8.800	287.98	0.15	0.16	-1.07	1717037.46	14543572.40	40°02'45.310"N	104°43'34.395"W	0.97	
319.00	0.920	57.930	318.98	0.60	0.61	-0.81	1717037.72	14543572.85	40°02'45.314"N	104°43'34.391"W	2.94	
382.00	0.750	121.830	381.97	0.66	0.66	-0.03	1717038.50	14543572.91	40°02'45.315"N	104°43'34.381"W	1.42	
414.00	2.150	136.240	413.96	0.12	0.12	0.56	1717039.10	14543572.37	40°02'45.309"N	104°43'34.374"W	4.49	
446.00	2.940	132.820	445.93	-0.87	-0.88	1.58	1717040.12	14543571.38	40°02'45.299"N	104°43'34.361"W	2.51	
477.00	3.160	133.170	476.88	-1.99	-2.00	2.78	1717041.33	14543570.26	40°02'45.288"N	104°43'34.345"W	0.71	
509.00	3.780	138.090	508.82	-3.37	-3.39	4.13	1717042.68	14543568.87	40°02'45.275"N	104°43'34.328"W	2.15	
541.00	5.050	130.800	540.73	-5.06	-5.09	5.90	1717044.45	14543567.17	40°02'45.258"N	104°43'34.305"W	4.33	
573.00	5.760	131.320	572.59	-7.03	-7.08	8.17	1717046.73	14543565.20	40°02'45.238"N	104°43'34.276"W	2.22	
605.00	6.940	130.270	604.39	-9.32	-9.39	10.85	1717049.42	14543562.90	40°02'45.215"N	104°43'34.241"W	3.71	
637.00	8.310	132.200	636.11	-12.11	-12.19	14.04	1717052.61	14543560.11	40°02'45.188"N	104°43'34.200"W	4.35	
668.00	9.450	131.410	666.73	-15.27	-15.38	17.61	1717056.19	14543556.93	40°02'45.156"N	104°43'34.155"W	3.70	
700.00	10.200	131.590	698.26	-18.87	-19.00	21.70	1717060.29	14543553.33	40°02'45.120"N	104°43'34.102"W	2.35	
732.00	10.410	130.970	729.75	-22.62	-22.77	26.00	1717064.60	14543549.57	40°02'45.083"N	104°43'34.047"W	0.74	
764.00	10.720	132.380	761.21	-26.50	-26.67	30.38	1717068.99	14543545.68	40°02'45.044"N	104°43'33.990"W	1.26	
795.00	11.250	132.290	791.64	-30.45	-30.65	34.75	1717073.37	14543541.72	40°02'45.005"N	104°43'33.934"W	1.71	
827.00	12.220	133.340	822.97	-34.85	-35.08	39.52	1717078.15	14543537.31	40°02'44.961"N	104°43'33.873"W	3.10	
859.00	12.740	134.930	854.21	-39.63	-39.89	44.48	1717083.13	14543532.51	40°02'44.914"N	104°43'33.809"W	1.95	
891.00	13.400	133.170	885.38	-44.63	-44.92	49.69	1717088.34	14543527.50	40°02'44.864"N	104°43'33.742"W	2.41	
922.00	13.930	132.990	915.51	-49.60	-49.92	55.04	1717093.71	14543522.52	40°02'44.815"N	104°43'33.673"W	1.72	
954.00	14.590	130.620	946.52	-54.82	-55.17	60.91	1717099.60	14543517.28	40°02'44.763"N	104°43'33.598"W	2.75	
986.00	15.120	129.300	977.45	-60.05	-60.44	67.20	1717105.90	14543512.04	40°02'44.711"N	104°43'33.517"W	1.96	
1018.00	15.690	131.060	1008.30	-65.50	-65.93	73.69	1717112.41	14543506.58	40°02'44.656"N	104°43'33.433"W	2.30	
1049.00	16.570	134.310	1038.08	-71.30	-71.77	80.02	1717118.74	14543500.76	40°02'44.599"N	104°43'33.352"W	4.07	
1081.00	16.880	135.890	1068.73	-77.79	-78.29	86.52	1717125.26	14543494.26	40°02'44.534"N	104°43'33.269"W	1.72	
1113.00	17.140	136.600	1099.33	-84.51	-85.05	92.99	1717131.75	14543487.52	40°02'44.467"N	104°43'33.185"W	1.04	
1144.00	17.670	133.960	1128.91	-91.06	-91.64	99.52	1717138.30	14543480.95	40°02'44.402"N	104°43'33.101"W	3.07	
1176.00	18.410	131.590	1159.34	-97.75	-98.36	106.79	1717145.59	14543474.25	40°02'44.336"N	104°43'33.008"W	3.26	
1208.00	18.680	132.200	1189.67	-104.50	-105.16	114.37	1717153.18	14543467.48	40°02'44.269"N	104°43'32.910"W	1.04	
1240.00	18.810	132.110	1219.98	-111.36	-112.06	121.99	1717160.82	14543460.61	40°02'44.201"N	104°43'32.812"W	0.42	
1272.00	18.810	132.730	1250.27	-118.27	-119.02	129.61	1717168.46	14543453.67	40°02'44.132"N	104°43'32.714"W	0.62	
1303.00	19.340	132.110	1279.57	-125.06	-125.85	137.09	1717175.96	14543446.87	40°02'44.064"N	104°43'32.618"W	1.83	
1367.00	19.820	131.850	1339.86	-139.31	-140.20	153.03	1717191.94	14543432.58	40°02'43.923"N	104°43'32.413"W	0.76	
1398.00	20.000	130.710	1369.01	-146.23	-147.16	160.96	1717199.89	14543425.64	40°02'43.854"N	104°43'32.311"W	1.38	
1430.00	20.390	131.150	1399.04	-153.42	-154.40	169.31	1717208.25	14543418.43	40°02'43.782"N	104°43'32.204"W	1.31	
1462.00	20.870	131.590	1428.99	-160.82	-161.85	177.77	1717216.73	14543411.01	40°02'43.709"N	104°43'32.095"W	1.58	
1493.00	20.920	131.500	1457.95	-168.11	-169.19	186.04	1717225.03	14543403.70	40°02'43.636"N	104°43'31.989"W	0.19	
1525.00	19.950	131.320	1487.94	-175.45	-176.58	194.42	1717233.43	14543396.34	40°02'43.563"N	104°43'31.881"W	3.04	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#51 AZUL 13-34HZ (685'FSL & 2446'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-34HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-34HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (182 stations) † = interpolated/extrapolated station												
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	DLS (°/100ft)	Comments
1556.00	19.160	131.500	1517.15	-182.27	-183.44	202.21	1717241.23	14543389.50	40°02'43.495"N	104°43'31.781"W	2.56	
1588.00	18.940	130.000	1547.40	-189.04	-190.26	210.12	1717249.16	14543382.71	40°02'43.428"N	104°43'31.679"W	1.68	
1620.00	19.290	129.130	1577.63	-195.67	-196.93	218.20	1717257.25	14543376.07	40°02'43.362"N	104°43'31.575"W	1.41	
1652.00	19.560	128.770	1607.81	-202.31	-203.62	226.47	1717265.55	14543369.41	40°02'43.296"N	104°43'31.469"W	0.92	
1684.00	19.820	131.500	1637.94	-209.21	-210.57	234.71	1717273.80	14543362.48	40°02'43.227"N	104°43'31.363"W	2.99	
1715.00	19.860	132.990	1667.10	-216.24	-217.64	242.50	1717281.61	14543355.44	40°02'43.157"N	104°43'31.263"W	1.64	
1747.00	18.940	135.280	1697.29	-223.59	-225.04	250.13	1717289.26	14543348.07	40°02'43.084"N	104°43'31.165"W	3.73	
1779.00	18.810	135.280	1727.56	-230.90	-232.40	257.41	1717296.56	14543340.74	40°02'43.011"N	104°43'31.071"W	0.41	
1811.00	19.380	136.070	1757.80	-238.35	-239.89	264.73	1717303.90	14543333.27	40°02'42.937"N	104°43'30.977"W	1.96	
1842.00	20.130	135.540	1786.98	-245.82	-247.40	272.03	1717311.22	14543325.79	40°02'42.863"N	104°43'30.883"W	2.49	
1883.00	20.130	135.540	1825.47	-255.84	-257.47	281.92	1717321.13	14543315.75	40°02'42.764"N	104°43'30.756"W	0.00	LAST SURFACE MWD+IFR1 SURVEY
1937.00	20.840	134.730	1876.06	-269.15	-270.86	295.25	1717334.50	14543302.40	40°02'42.631"N	104°43'30.585"W	1.42	FIRST BHGE MWD+IFR1+SC SURVEY
2027.00	22.550	136.930	1959.68	-292.89	-294.74	318.41	1717357.73	14543278.61	40°02'42.395"N	104°43'30.287"W	2.10	
2116.00	23.820	136.380	2041.49	-318.23	-320.21	342.46	1717381.85	14543253.22	40°02'42.144"N	104°43'29.978"W	1.45	
2206.00	23.310	134.730	2123.99	-343.77	-345.90	367.65	1717407.10	14543227.61	40°02'41.890"N	104°43'29.654"W	0.93	
2385.00	23.230	134.730	2288.43	-393.25	-395.67	417.89	1717457.48	14543178.02	40°02'41.398"N	104°43'29.008"W	0.04	
2475.00	22.480	132.710	2371.36	-417.27	-419.83	443.14	1717482.79	14543153.95	40°02'41.159"N	104°43'28.683"W	1.21	
2564.00	22.500	135.870	2453.60	-440.89	-443.60	467.50	1717507.22	14543130.26	40°02'40.924"N	104°43'28.370"W	1.36	
2654.00	23.520	135.400	2536.44	-465.90	-468.75	492.10	1717531.89	14543105.20	40°02'40.676"N	104°43'28.054"W	1.15	
2744.00	22.370	134.530	2619.31	-490.55	-493.54	516.92	1717556.77	14543080.49	40°02'40.431"N	104°43'27.734"W	1.33	
2834.00	23.360	135.910	2702.24	-515.23	-518.37	541.55	1717581.46	14543055.75	40°02'40.185"N	104°43'27.418"W	1.25	
2923.00	21.970	134.640	2784.37	-539.47	-542.74	565.67	1717605.65	14543031.46	40°02'39.944"N	104°43'27.108"W	1.66	
3013.00	22.310	133.680	2867.73	-562.95	-566.37	590.01	1717630.05	14543007.92	40°02'39.711"N	104°43'26.795"W	0.55	
3103.00	22.640	133.140	2950.89	-586.45	-590.01	615.00	1717655.11	14542984.36	40°02'39.477"N	104°43'26.473"W	0.43	
3192.00	23.450	136.000	3032.79	-610.76	-614.47	639.80	1717679.97	14542959.99	40°02'39.236"N	104°43'26.154"W	1.55	
3282.00	21.990	136.500	3115.81	-635.73	-639.57	663.84	1717704.08	14542934.97	40°02'38.988"N	104°43'25.845"W	1.64	
3372.00	23.450	133.890	3198.82	-660.22	-664.21	688.35	1717728.65	14542910.42	40°02'38.744"N	104°43'25.530"W	1.97	
3461.00	23.790	134.470	3280.37	-684.93	-689.06	713.92	1717754.29	14542885.66	40°02'38.498"N	104°43'25.201"W	0.46	
3551.00	21.900	132.890	3363.31	-708.92	-713.21	739.17	1717779.61	14542861.60	40°02'38.260"N	104°43'24.877"W	2.21	
3640.00	22.180	132.930	3445.80	-731.52	-735.94	763.64	1717804.13	14542838.95	40°02'38.035"N	104°43'24.562"W	0.32	
3730.00	22.560	132.830	3529.03	-754.68	-759.25	788.74	1717829.29	14542815.72	40°02'37.805"N	104°43'24.240"W	0.42	
3820.00	23.270	131.980	3611.93	-778.16	-782.88	814.61	1717855.23	14542792.19	40°02'37.571"N	104°43'23.907"W	0.87	
3909.00	22.410	130.700	3693.95	-800.83	-805.70	840.54	1717881.22	14542769.45	40°02'37.346"N	104°43'23.573"W	1.12	
3999.00	20.670	129.340	3777.66	-821.95	-826.96	865.84	1717906.57	14542748.28	40°02'37.136"N	104°43'23.248"W	2.01	
4089.00	20.300	132.990	3861.97	-842.52	-847.68	889.54	1717930.33	14542727.65	40°02'36.931"N	104°43'22.943"W	1.48	
4178.00	21.660	137.700	3945.07	-865.07	-870.36	911.89	1717952.74	14542705.04	40°02'36.707"N	104°43'22.656"W	2.43	
4268.00	22.670	137.630	4028.42	-890.04	-895.45	934.76	1717975.68	14542680.03	40°02'36.459"N	104°43'22.362"W	1.12	
4358.00	21.730	140.430	4111.75	-915.57	-921.11	957.06	1717998.05	14542654.45	40°02'36.205"N	104°43'22.075"W	1.57	
4447.00	21.980	141.070	4194.36	-941.10	-946.77	978.02	1718019.08	14542628.86	40°02'35.952"N	104°43'21.806"W	0.39	
4537.00	23.500	136.430	4277.36	-967.08	-972.88	1000.98	1718042.11	14542602.84	40°02'35.694"N	104°43'21.511"W	2.61	
4627.00	25.600	133.900	4359.23	-993.41	-999.36	1027.36	1718068.56	14542576.44	40°02'35.432"N	104°43'21.171"W	2.61	
4717.00	24.510	133.400	4440.76	-1019.56	-1025.67	1054.93	1718096.20	14542550.23	40°02'35.172"N	104°43'20.817"W	1.23	
4762.00†	24.579	134.059	4481.69	-1032.40	-1038.59	1068.44	1718109.74	14542537.35	40°02'35.044"N	104°43'20.643"W	0.63	ENTER LANDBOX (354'FNL & 1780'FEL,SEC.24) 40.0430678 -104.7224009
4806.00	24.650	134.700	4521.69	-1045.15	-1051.41	1081.54	1718122.88	14542524.58	40°02'34.917"N	104°43'20.475"W	0.63	
4896.00	21.550	132.910	4604.47	-1069.46	-1075.87	1106.99	1718148.40	14542500.21	40°02'34.676"N	104°43'20.148"W	3.53	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#51 AZUL 13-34HZ (685'FSL & 2446'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-34HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-34HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (182 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4986.00	20.940	138.700	4688.36	-1092.67	-1099.21	1129.72	1718171.18	14542476.95	40°02'34.445"N	104°43'19.855"W	2.43	
5075.00	24.460	137.610	4770.45	-1118.10	-1124.78	1152.64	1718194.18	14542451.46	40°02'34.192"N	104°43'19.561"W	3.98	
5165.00	24.180	135.910	4852.47	-1144.95	-1151.78	1178.03	1718219.64	14542424.55	40°02'33.926"N	104°43'19.234"W	0.84	
5255.00	22.170	134.780	4935.20	-1170.01	-1176.98	1202.91	1718244.59	14542399.44	40°02'33.676"N	104°43'18.914"W	2.29	
5345.00	22.970	129.870	5018.31	-1193.09	-1200.20	1228.45	1718270.18	14542376.30	40°02'33.447"N	104°43'18.586"W	2.27	
5434.00	20.650	128.200	5100.94	-1213.78	-1221.04	1254.11	1718295.90	14542355.55	40°02'33.241"N	104°43'18.256"W	2.70	
5524.00	17.990	125.010	5185.87	-1231.43	-1238.83	1277.97	1718319.80	14542337.84	40°02'33.065"N	104°43'17.949"W	3.18	
5613.00	16.470	127.820	5270.87	-1246.93	-1254.46	1299.19	1718341.07	14542322.29	40°02'32.911"N	104°43'17.676"W	1.95	
5703.00	15.690	130.760	5357.35	-1262.59	-1270.23	1318.49	1718360.41	14542306.58	40°02'32.755"N	104°43'17.428"W	1.25	
5793.00	13.510	127.310	5444.44	-1276.80	-1284.54	1336.07	1718378.02	14542292.32	40°02'32.613"N	104°43'17.202"W	2.61	
5883.00	12.730	129.640	5532.09	-1289.41	-1297.24	1352.07	1718394.05	14542279.68	40°02'32.488"N	104°43'16.997"W	1.05	
5972.00	10.670	143.440	5619.25	-1302.22	-1310.12	1364.53	1718406.55	14542266.85	40°02'32.361"N	104°43'16.836"W	3.89	
6062.00	8.930	149.210	5707.94	-1314.86	-1322.82	1373.07	1718415.13	14542254.18	40°02'32.235"N	104°43'16.727"W	2.22	
6152.00	8.110	155.170	5796.95	-1326.59	-1334.58	1379.31	1718421.40	14542242.44	40°02'32.119"N	104°43'16.646"W	1.34	
6241.00	6.730	145.680	5885.20	-1336.56	-1344.58	1384.89	1718427.01	14542232.46	40°02'32.020"N	104°43'16.575"W	2.07	
6331.00	6.310	149.060	5974.62	-1345.13	-1353.18	1390.41	1718432.55	14542223.88	40°02'31.935"N	104°43'16.504"W	0.63	
6421.00	4.910	142.720	6064.19	-1352.40	-1360.49	1395.28	1718437.45	14542216.59	40°02'31.863"N	104°43'16.441"W	1.70	
6510.00	4.060	134.520	6152.92	-1357.62	-1365.73	1399.84	1718442.01	14542211.37	40°02'31.811"N	104°43'16.383"W	1.19	
6600.00	1.450	165.210	6242.81	-1360.94	-1369.06	1402.40	1718444.59	14542208.04	40°02'31.778"N	104°43'16.350"W	3.23	
6689.00	0.770	344.500	6331.80	-1361.45	-1369.58	1402.53	1718444.71	14542207.53	40°02'31.773"N	104°43'16.348"W	2.49	
6778.00	0.830	353.970	6420.79	-1360.23	-1368.36	1402.30	1718444.48	14542208.75	40°02'31.785"N	104°43'16.351"W	0.16	
6868.00	0.710	2.290	6510.78	-1359.03	-1367.15	1402.25	1718444.43	14542209.95	40°02'31.797"N	104°43'16.351"W	0.18	
6892.00†	2.357	11.530	6534.78	-1358.40	-1366.52	1402.36	1718444.54	14542210.58	40°02'31.803"N	104°43'16.350"W	6.92	KOP
6958.00	6.920	14.130	6600.54	-1353.20	-1361.33	1403.60	1718445.76	14542215.77	40°02'31.855"N	104°43'16.334"W	6.92	
7047.00	11.630	26.890	6688.36	-1339.96	-1348.12	1408.97	1718451.09	14542228.99	40°02'31.985"N	104°43'16.265"W	5.74	
7137.00	17.030	8.770	6775.57	-1318.78	-1326.98	1415.09	1718457.14	14542250.15	40°02'32.194"N	104°43'16.186"W	7.73	
7227.00	27.580	357.580	6858.76	-1284.83	-1293.03	1416.22	1718458.17	14542284.09	40°02'32.530"N	104°43'16.172"W	12.59	
7316.00	37.110	359.480	6933.86	-1237.29	-1245.49	1415.11	1718456.91	14542331.61	40°02'32.999"N	104°43'16.186"W	10.77	
7406.00	41.460	358.210	7003.51	-1180.34	-1188.53	1413.93	1718455.56	14542388.54	40°02'33.562"N	104°43'16.201"W	4.92	
7495.00	47.020	356.630	7067.25	-1118.36	-1126.53	1411.09	1718452.53	14542450.51	40°02'34.175"N	104°43'16.238"W	6.37	
7585.00	54.200	357.050	7124.32	-1048.98	-1057.12	1407.28	1718448.50	14542519.87	40°02'34.861"N	104°43'16.287"W	7.99	
7675.00	59.650	356.260	7173.42	-973.75	-981.87	1402.86	1718443.86	14542595.09	40°02'35.605"N	104°43'16.343"W	6.10	
7764.00	64.110	357.760	7215.36	-895.41	-903.50	1398.79	1718439.54	14542673.41	40°02'36.379"N	104°43'16.396"W	5.23	
7854.00	70.670	358.410	7249.94	-812.43	-820.51	1396.03	1718436.53	14542756.36	40°02'37.199"N	104°43'16.431"W	7.32	
7943.00	74.770	359.070	7276.37	-727.50	-735.57	1394.16	1718434.40	14542841.26	40°02'38.039"N	104°43'16.455"W	4.66	
8033.00	82.610	1.080	7294.01	-639.32	-647.39	1394.30	1718434.27	14542929.40	40°02'38.910"N	104°43'16.453"W	8.98	
8123.00	88.000	0.920	7301.38	-549.66	-557.74	1395.86	1718435.56	14543019.03	40°02'39.796"N	104°43'16.433"W	5.99	LANDING (127'FSL & 1452'FEL,SEC.13) 40.0443878 -104.7212314
8212.00	87.600	0.790	7304.79	-460.73	-468.81	1397.19	1718436.61	14543107.92	40°02'40.675"N	104°43'16.416"W	0.47	
8302.00	90.950	0.610	7305.93	-370.76	-378.84	1398.29	1718437.43	14543197.86	40°02'41.564"N	104°43'16.402"W	3.73	
8391.00	91.290	359.900	7304.19	-281.77	-289.86	1398.69	1718437.56	14543286.81	40°02'42.443"N	104°43'16.397"W	0.88	
8451.00†	91.477	359.787	7302.74	-221.79	-229.88	1398.52	1718437.21	14543346.76	40°02'43.036"N	104°43'16.399"W	0.36	EXIT RADIUS HEEL (455'FSL & 1450'FEL,SEC.13) 40.0452878 -104.7212218
8481.00	91.570	359.730	7301.95	-191.81	-199.89	1398.40	1718436.99	14543376.74	40°02'43.332"N	104°43'16.400"W	0.36	
8571.00	91.790	359.220	7299.31	-101.85	-109.93	1397.57	1718435.89	14543466.66	40°02'44.221"N	104°43'16.411"W	0.62	
8661.00	92.310	359.170	7296.09	-11.93	-20.00	1396.31	1718434.35	14543556.55	40°02'45.110"N	104°43'16.427"W	0.58	
8750.00	91.730	0.250	7292.95	77.01	68.95	1395.86	1718433.63	14543645.46	40°02'45.989"N	104°43'16.433"W	1.38	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#51 AZUL 13-34HZ (685'FSL & 2446'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-34HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-34HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (182 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS ["/100ft]	Comments
8840.00	90.430	1.420	7291.25	166.99	158.92	1397.17	1718434.66	14543735.40	40°02'46.878"N	104°43'16.416"W	1.94	
8929.00	90.950	1.530	7290.18	255.96	247.88	1399.46	1718436.68	14543824.33	40°02'47.757"N	104°43'16.386"W	0.60	
9019.00	90.890	3.380	7288.74	345.88	337.78	1403.31	1718440.25	14543914.21	40°02'48.646"N	104°43'16.337"W	2.06	
9109.00	89.660	2.790	7288.31	435.78	427.65	1408.16	1718444.82	14544004.05	40°02'49.534"N	104°43'16.274"W	1.52	
9198.00	90.150	4.340	7288.45	524.63	516.47	1413.69	1718450.08	14544092.86	40°02'50.412"N	104°43'16.203"W	1.83	
9288.00	90.740	2.740	7287.75	614.48	606.30	1419.25	1718455.36	14544182.66	40°02'51.299"N	104°43'16.132"W	1.89	
9378.00	89.910	1.140	7287.24	704.44	696.24	1422.29	1718458.12	14544272.58	40°02'52.188"N	104°43'16.092"W	2.00	
9467.00	89.880	358.910	7287.41	793.44	785.23	1422.33	1718457.89	14544361.54	40°02'53.067"N	104°43'16.092"W	2.51	
9557.00	90.620	359.090	7287.01	883.41	875.22	1420.76	1718456.04	14544451.48	40°02'53.957"N	104°43'16.112"W	0.85	
9646.00	90.960	358.890	7285.79	972.38	964.20	1419.19	1718454.20	14544540.42	40°02'54.836"N	104°43'16.132"W	0.44	
9736.00	91.050	358.330	7284.21	1062.32	1054.15	1417.01	1718451.74	14544630.34	40°02'55.725"N	104°43'16.160"W	0.63	
9826.00	91.480	358.240	7282.22	1152.24	1144.09	1414.32	1718448.78	14544720.23	40°02'56.614"N	104°43'16.194"W	0.49	
9915.00	90.120	359.100	7280.98	1241.19	1233.06	1412.25	1718446.44	14544809.15	40°02'57.493"N	104°43'16.221"W	1.81	
10005.00	90.250	359.180	7280.69	1331.17	1323.05	1410.90	1718444.81	14544899.10	40°02'58.382"N	104°43'16.238"W	0.17	
10094.00	90.520	359.030	7280.09	1420.15	1412.03	1409.51	1718443.15	14544988.05	40°02'59.262"N	104°43'16.256"W	0.35	
10184.00	90.680	358.830	7279.15	1510.12	1502.01	1407.83	1718441.19	14545077.99	40°03'00.151"N	104°43'16.278"W	0.28	
10274.00	91.480	358.490	7277.45	1600.06	1591.97	1405.73	1718438.81	14545167.90	40°03'01.040"N	104°43'16.305"W	0.97	
10363.00	90.890	359.540	7275.61	1689.02	1680.94	1404.20	1718437.01	14545256.83	40°03'01.919"N	104°43'16.324"W	1.35	
10453.00	90.830	359.240	7274.26	1779.00	1770.92	1403.24	1718435.77	14545346.77	40°03'02.808"N	104°43'16.337"W	0.34	
10543.00	90.060	359.960	7273.56	1868.99	1860.92	1402.61	1718434.87	14545436.73	40°03'03.698"N	104°43'16.345"W	1.17	
10632.00	89.070	0.390	7274.24	1957.98	1949.91	1402.88	1718434.87	14545525.69	40°03'04.577"N	104°43'16.341"W	1.21	
10722.00	88.060	0.550	7276.49	2047.95	2039.88	1403.62	1718435.33	14545615.63	40°03'05.466"N	104°43'16.331"W	1.14	
10811.00	90.710	1.760	7277.45	2136.93	2128.85	1405.42	1718436.85	14545704.56	40°03'06.345"N	104°43'16.308"W	3.27	
10901.00	89.810	0.350	7277.04	2226.92	2218.83	1407.07	1718438.23	14545794.51	40°03'07.235"N	104°43'16.287"W	1.86	
10991.00	91.480	0.080	7276.02	2316.91	2308.82	1407.41	1718438.29	14545884.47	40°03'08.124"N	104°43'16.282"W	1.88	
11080.00	92.030	359.610	7273.30	2405.86	2397.77	1407.17	1718437.78	14545973.39	40°03'09.003"N	104°43'16.286"W	0.81	
11170.00	92.180	0.170	7269.99	2495.80	2487.71	1407.00	1718437.33	14546063.29	40°03'09.892"N	104°43'16.288"W	0.64	
11260.00	91.200	358.490	7267.34	2585.74	2577.66	1405.94	1718436.00	14546153.20	40°03'10.781"N	104°43'16.301"W	2.16	
11349.00	91.080	357.970	7265.57	2674.66	2666.60	1403.20	1718432.98	14546242.10	40°03'11.660"N	104°43'16.336"W	0.60	
11438.00	91.300	359.900	7263.72	2763.61	2755.56	1401.54	1718431.05	14546331.02	40°03'12.539"N	104°43'16.358"W	2.18	
11528.00	91.450	359.230	7261.56	2853.58	2845.53	1400.86	1718430.09	14546420.95	40°03'13.428"N	104°43'16.366"W	0.76	
11538.00†	91.313	359.433	7261.32	2863.58	2855.53	1400.74	1718429.94	14546430.94	40°03'13.527"N	104°43'16.368"W	2.45	ENTER RADIUS TOE (1753'FNL & 1460'FEL,SEC.13) 40.0537574 -104.7212133
11618.00	90.220	1.060	7260.25	2943.56	2935.52	1401.09	1718430.04	14546510.90	40°03'14.317"N	104°43'16.363"W	2.45	
11707.00	89.910	0.660	7260.15	3032.56	3024.51	1402.42	1718431.11	14546599.86	40°03'15.197"N	104°43'16.346"W	0.57	
11797.00	90.090	0.470	7260.15	3122.56	3114.50	1403.31	1718431.72	14546689.82	40°03'16.086"N	104°43'16.335"W	0.29	
11886.00	89.970	0.120	7260.10	3211.56	3203.50	1403.77	1718431.90	14546778.79	40°03'16.965"N	104°43'16.329"W	0.42	
11976.00	88.990	1.350	7260.92	3301.55	3293.49	1404.92	1718432.78	14546868.74	40°03'17.855"N	104°43'16.314"W	1.75	
12065.00	90.890	1.350	7261.01	3390.53	3382.46	1407.02	1718434.60	14546957.68	40°03'18.734"N	104°43'16.287"W	2.13	
12155.00	90.490	1.310	7259.93	3480.51	3472.43	1409.11	1718436.41	14547047.62	40°03'19.623"N	104°43'16.260"W	0.45	
12245.00	91.780	2.290	7258.14	3570.46	3562.36	1411.93	1718438.96	14547137.53	40°03'20.512"N	104°43'16.223"W	1.80	
12334.00	91.820	1.680	7255.35	3659.38	3651.27	1415.02	1718441.77	14547226.40	40°03'21.390"N	104°43'16.184"W	0.69	
12424.00	91.910	0.930	7252.42	3749.32	3741.20	1417.06	1718443.54	14547316.30	40°03'22.279"N	104°43'16.157"W	0.84	
12514.00	92.000	0.330	7249.35	3839.27	3831.14	1418.05	1718444.25	14547406.21	40°03'23.168"N	104°43'16.144"W	0.67	
12603.00	91.910	359.490	7246.31	3928.21	3920.08	1417.91	1718443.84	14547495.12	40°03'24.047"N	104°43'16.146"W	0.95	
12693.00	91.820	359.560	7243.38	4018.15	4010.03	1417.17	1718442.82	14547585.03	40°03'24.936"N	104°43'16.156"W	0.13	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#51 AZUL 13-34HZ (685'FSL & 2446'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-34HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-34HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (182 stations)												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12769.00	91.570	359.010	7241.14	4094.11	4085.99	1416.22	1718441.63	14547660.96	40°03'25.686"N	104°43'16.168"W	0.79	LAST BHGE MWD+IFR1+SC SURVEY
12815.00	91.570	359.010	7239.87	4140.08	4131.97	1415.43	1718440.70	14547706.92	40°03'26.141"N	104°43'16.178"W	0.00	PTB (477'FNL & 1446'FEL,SEC.13) 40.0572613 -104.7211606

HOLE & CASING SECTIONS - Ref Wellbore: AZUL 13-34HZ AWB Ref Wellpath: AZUL 13-34HZ 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	1883.00	1862.00	21.00	1825.47	0.00	0.00	-257.47	281.92

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	227.01	-1285.93	1715752.42	14543795.21	40°02'47.551"N	104°43'50.916"W	polygon
AZUL 13-34HZ BHL REV-1(470'FNL & 1435'FEL,SEC.13)	7256.00	4138.78	1425.69	1718450.94	14547713.76	40°03'26.208"N	104°43'16.046"W	point
AZUL 13-34HZ LANDBOX	7289.00	0.00	0.00	1717038.54	14543572.25	40°02'45.308"N	104°43'34.381"W	polygon
AZUL 13-34HZ RADIUS 1	7289.00	3294.94	1538.70	1718566.50	14546870.60	40°03'17.869"N	104°43'14.593"W	polygon
AZUL 13-34HZ RADIUS 2	7289.00	-669.82	1529.11	1718569.10	14542907.40	40°02'38.688"N	104°43'14.720"W	polygon
AZUL 13-34HZ HEEL REV-1(50'FSL & 1450'FEL,SEC.13)	7301.00	-624.72	1398.20	1718438.10	14542952.08	40°02'39.134"N	104°43'16.403"W	point

WELLPATH COMPOSITION - Ref Wellbore: AZUL 13-34HZ AWB Ref Wellpath: AZUL 13-34HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
21.00	1883.00	Custom APC_ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC_ISCWSA Rev-2 MWD+IFR1 <130 - 1883>	AZUL 13-34HZ AWB
1883.00	12769.00	Custom APC_ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC_ISCWSA Rev-2 MWD+IFR1+SC <1883 - 12769>	AZUL 13-34HZ AWB
12769.00	12815.00	Blind Drilling (std)	Projection to bit	AZUL 13-34HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#51 AZUL 13-34HZ (685'FSL & 2446'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-34HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-34HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
130.00	0.570	204.180	130.00	FIRST SURFACE MWD+IFR1 SURVEY
1883.00	20.130	135.540	1825.47	LAST SURFACE MWD+IFR1 SURVEY
1937.00	20.840	134.730	1876.06	FIRST BHGE MWD+IFR1+SC SURVEY
4762.00	24.579	134.059	4481.69	ENTER LANDBOX (354'FNL & 1780'FEL,SEC.24) 40.0430678 -104.7224009
6892.00	2.357	11.530	6534.78	KOP
8123.00	88.000	0.920	7301.38	LANDING (127'FSL & 1452'FEL,SEC.13) 40.0443878 -104.7212314
8451.00	91.477	359.787	7302.74	EXIT RADIUS HEEL (455'FSL & 1450'FEL,SEC.13) 40.0452878 -104.7212218
11538.00	91.313	359.433	7261.32	ENTER RADIUS TOE (1753'FNL & 1460'FEL,SEC.13) 40.0537574 -104.7212133
12769.00	91.570	359.010	7241.14	LAST BHGE MWD+IFR1+SC SURVEY
12815.00	91.570	359.010	7239.87	PTB (477'FNL & 1446'FEL,SEC.13) 40.0572613 -104.7211606