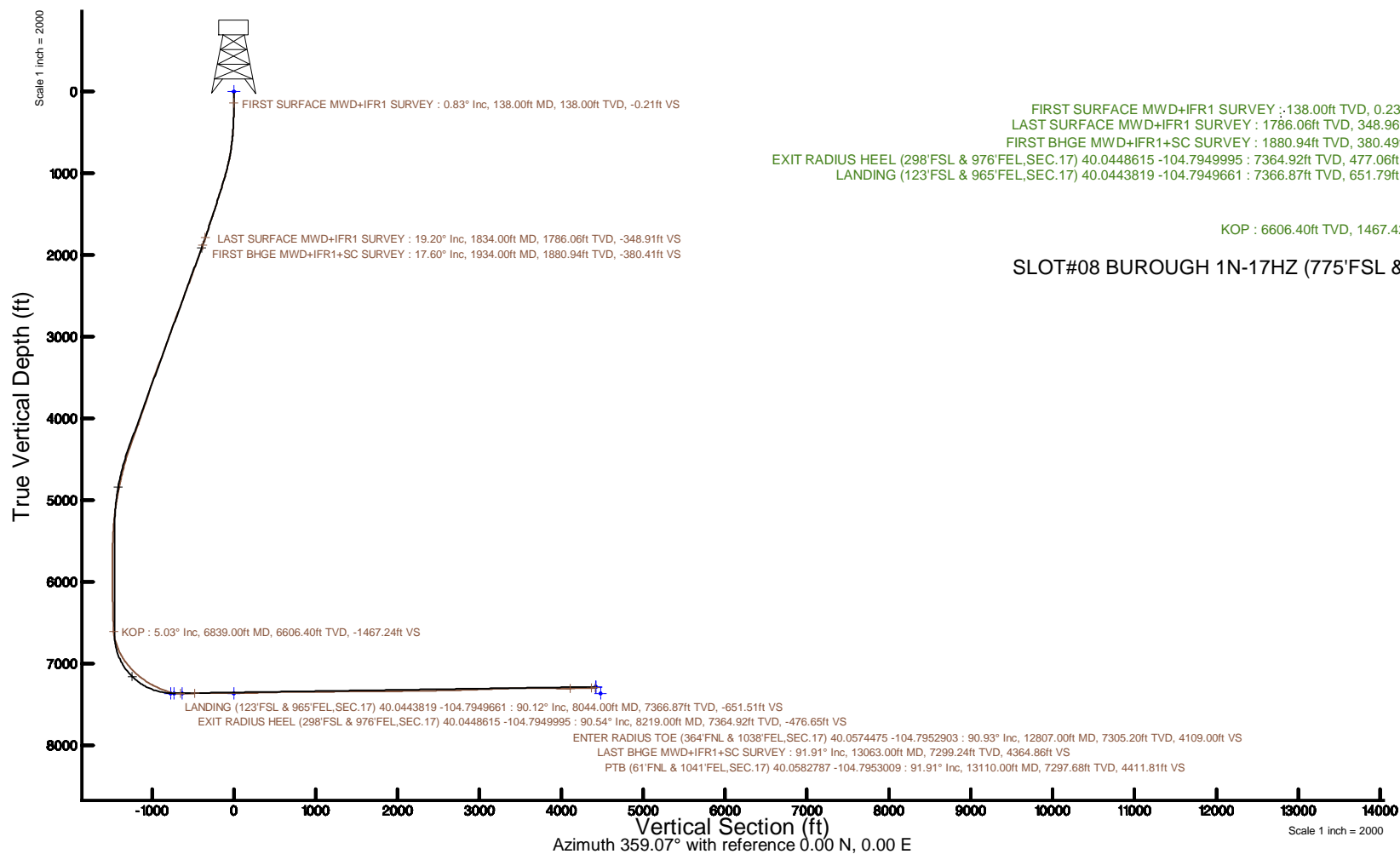


Location:	COLORADO	Slot:	SL07#08 BURGHOUGH 1N-17HZ (775FSL & 953FEL, SEC. 17)
Field:	WELD COUNTY (UTM/TRUE NORTH)	Well:	BURGHOUGH 1N-17HZ
Facility:	SEC. 17-T1N-R66W	Wellbore:	BURGHOUGH 1N-17HZ PWB
Plot reference well is BURGHOUGH 1N-17HZ PWP Rev-B.0		Grid System: NAD83 / UTM Zone 13 North, US feet	
True vertical depths are referenced to PD 564 (26) (RT)		* = Wellpath was transformed from a different geoidic datum	
Measured depths are referenced to PD 564 (26) (RT)		North Reference: True north	
PD 564 (26) (RT) to Mean Sea Level: 5005 feet		Scale: True distance	
Mean Sea Level to Mud line (At Slot: SL07#08 BURGHOUGH 1N-17HZ (775FSL & 953FEL, SEC. 17)): 0 feet		Depths are in feet	
Coordinates are in feet referenced to Slot		Created by: painstner on 2017-11-21	
		Database: WA_DEN_Anadarko_Defn	



## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#08 BUROUGH 1N-17HZ (775'FSL & 953'FEL,SEC.17)
Area	COLORADO	Well	BUROUGH 1N-17HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUROUGH 1N-17HZ AWB
Facility	SEC.17-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	0.999604	Report Generated	11/21/2017 at 2:57 PM
Convergence at slot	0.14° East	Database/Source file	WA_DEN_Anadarko_Defn/BUROUGH_1N-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	-8437.77	-445.09	1697809.98	14543612.40	40°02'46.216"N	104°47'41.723"W
Facility Reference Pt			1698235.31	14552047.82	40°04'09.600"N	104°47'36.000"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 564 (26') (RT) to Facility Vertical Datum	5005.00ft
Horizontal Reference Pt	Slot	PD 564 (26') (RT) to Mean Sea Level	5005.00ft
Vertical Reference Pt	PD 564 (26') (RT)	PD 564 (26') (RT) to Mud Line at Slot (SLOT#08 BUROUGH 1N-17HZ (775'FSL & 953'FEL,SEC.17))	5005.00ft
MD Reference Pt	PD 564 (26') (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	359.07°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#08 BUROUGH 1N-17HZ (775'FSL & 953'FEL, SEC.17)
Area	COLORADO	Well	BUROUGH 1N-17HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUROUGH 1N-17HZ AWP
Facility	SEC.17-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	253.730	0.00	0.00	0.00	0.00	1697809.98	14543612.40	40°02'46.216"N	104°47'41.723"W	0.00	
26.00	0.000	253.730	26.00	0.00	0.00	0.00	1697809.98	14543612.40	40°02'46.216"N	104°47'41.723"W	0.00	
138.00	0.830	253.730	138.00	-0.21	-0.23	-0.78	1697809.20	14543612.17	40°02'46.214"N	104°47'41.733"W	0.74	FIRST SURFACE MWD+IFR1 SURVEY
170.00	0.970	250.650	169.99	-0.36	-0.38	-1.26	1697808.73	14543612.01	40°02'46.212"N	104°47'41.739"W	0.46	
202.00	0.480	259.970	201.99	-0.47	-0.50	-1.64	1697808.34	14543611.90	40°02'46.211"N	104°47'41.744"W	1.57	
233.00	0.350	215.930	232.99	-0.56	-0.59	-1.83	1697808.15	14543611.80	40°02'46.210"N	104°47'41.747"W	1.08	
265.00	0.620	212.070	264.99	-0.79	-0.82	-1.98	1697808.01	14543611.57	40°02'46.208"N	104°47'41.748"W	0.85	
296.00	1.450	191.410	295.98	-1.31	-1.35	-2.14	1697807.84	14543611.04	40°02'46.203"N	104°47'41.751"W	2.89	
327.00	2.110	183.590	326.97	-2.26	-2.30	-2.26	1697807.73	14543610.09	40°02'46.193"N	104°47'41.752"W	2.26	
359.00	2.290	180.870	358.94	-3.49	-3.53	-2.30	1697807.69	14543608.86	40°02'46.181"N	104°47'41.753"W	0.65	
390.00	2.370	184.910	389.92	-4.75	-4.79	-2.37	1697807.62	14543607.61	40°02'46.169"N	104°47'41.753"W	0.59	
422.00	2.720	186.050	421.89	-6.16	-6.20	-2.50	1697807.49	14543606.19	40°02'46.155"N	104°47'41.755"W	1.11	
454.00	3.690	187.190	453.84	-7.93	-7.98	-2.71	1697807.29	14543604.42	40°02'46.137"N	104°47'41.758"W	3.04	
485.00	4.040	181.220	484.77	-10.01	-10.06	-2.86	1697807.14	14543602.33	40°02'46.117"N	104°47'41.760"W	1.72	
517.00	4.660	180.250	516.67	-12.44	-12.49	-2.89	1697807.12	14543599.91	40°02'46.093"N	104°47'41.760"W	1.95	
548.00	5.580	180.160	547.55	-15.20	-15.25	-2.90	1697807.12	14543597.14	40°02'46.065"N	104°47'41.760"W	2.97	
580.00	6.420	178.050	579.37	-18.55	-18.60	-2.84	1697807.18	14543593.80	40°02'46.032"N	104°47'41.760"W	2.71	
613.00	6.550	176.820	612.16	-22.27	-22.32	-2.68	1697807.36	14543590.08	40°02'45.995"N	104°47'41.757"W	0.58	
644.00	6.940	175.240	642.95	-25.91	-25.95	-2.42	1697807.62	14543586.45	40°02'45.960"N	104°47'41.754"W	1.39	
676.00	7.560	175.500	674.69	-29.94	-29.98	-2.10	1697807.95	14543582.43	40°02'45.920"N	104°47'41.750"W	1.94	
708.00	8.040	177.440	706.40	-34.28	-34.31	-1.83	1697808.23	14543578.10	40°02'45.877"N	104°47'41.747"W	1.71	
740.00	8.880	179.020	738.05	-38.98	-39.02	-1.69	1697808.38	14543573.39	40°02'45.830"N	104°47'41.745"W	2.72	
771.00	9.670	181.040	768.64	-43.98	-44.01	-1.70	1697808.39	14543568.40	40°02'45.781"N	104°47'41.745"W	2.76	
803.00	10.630	181.410	800.14	-49.61	-49.65	-1.82	1697808.28	14543562.76	40°02'45.725"N	104°47'41.746"W	3.01	
835.00	11.510	181.660	831.55	-55.75	-55.79	-1.98	1697808.13	14543556.62	40°02'45.665"N	104°47'41.749"W	2.75	
867.00	12.520	181.480	862.84	-62.41	-62.45	-2.17	1697807.96	14543549.97	40°02'45.599"N	104°47'41.751"W	3.16	
898.00	13.710	181.480	893.03	-69.43	-69.48	-2.35	1697807.79	14543542.94	40°02'45.529"N	104°47'41.753"W	3.84	
930.00	14.990	181.920	924.04	-77.36	-77.41	-2.58	1697807.58	14543535.01	40°02'45.451"N	104°47'41.756"W	4.01	
962.00	15.290	181.740	954.92	-85.70	-85.76	-2.85	1697807.33	14543526.66	40°02'45.368"N	104°47'41.760"W	0.95	
994.00	15.640	180.950	985.77	-94.23	-94.29	-3.05	1697807.15	14543518.13	40°02'45.284"N	104°47'41.762"W	1.28	
1025.00	15.290	179.990	1015.64	-102.49	-102.56	-3.12	1697807.10	14543509.87	40°02'45.203"N	104°47'41.763"W	1.40	
1089.00	16.260	179.020	1077.23	-119.89	-119.95	-2.96	1697807.29	14543492.48	40°02'45.031"N	104°47'41.761"W	1.57	
1120.00	16.520	178.580	1106.97	-128.64	-128.70	-2.78	1697807.50	14543483.74	40°02'44.944"N	104°47'41.759"W	0.93	
1152.00	17.180	178.320	1137.60	-137.91	-137.97	-2.53	1697807.77	14543474.47	40°02'44.853"N	104°47'41.756"W	2.08	
1184.00	16.880	177.530	1168.20	-147.28	-147.34	-2.19	1697808.13	14543465.11	40°02'44.760"N	104°47'41.751"W	1.18	
1216.00	16.880	176.650	1198.82	-156.57	-156.62	-1.72	1697808.62	14543455.84	40°02'44.668"N	104°47'41.745"W	0.80	
1247.00	17.310	178.930	1228.45	-165.68	-165.72	-1.37	1697808.99	14543446.74	40°02'44.578"N	104°47'41.741"W	2.57	
1279.00	17.670	179.630	1258.97	-175.30	-175.34	-1.25	1697809.14	14543437.12	40°02'44.483"N	104°47'41.739"W	1.30	
1311.00	17.750	179.110	1289.45	-185.03	-185.07	-1.14	1697809.26	14543427.40	40°02'44.387"N	104°47'41.738"W	0.55	
1343.00	17.930	178.140	1319.91	-194.83	-194.87	-0.91	1697809.52	14543417.60	40°02'44.290"N	104°47'41.735"W	1.09	
1374.00	17.450	177.350	1349.45	-204.25	-204.28	-0.54	1697809.91	14543408.19	40°02'44.197"N	104°47'41.730"W	1.73	
1406.00	17.530	176.120	1379.97	-213.86	-213.89	0.01	1697810.48	14543398.60	40°02'44.102"N	104°47'41.723"W	1.18	
1438.00	17.890	178.320	1410.45	-223.59	-223.61	0.48	1697810.98	14543388.88	40°02'44.006"N	104°47'41.717"W	2.37	
1469.00	17.840	179.020	1439.96	-233.10	-233.11	0.70	1697811.22	14543379.38	40°02'43.912"N	104°47'41.714"W	0.71	
1501.00	17.710	177.790	1470.43	-242.86	-242.88	0.97	1697811.51	14543369.62	40°02'43.816"N	104°47'41.710"W	1.24	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#08 BUROUGH 1N-17HZ (775'FSL & 953'FEL,SEC.17)
Area	COLORADO	Well	BUROUGH 1N-17HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUROUGH 1N-17HZ AWB
Facility	SEC.17-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
1533.00	17.840	177.350	1500.90	-252.63	-252.64	1.39	1697811.95	14543359.86	40°02'43.719"N	104°47'41.705"W	0.58	
1558.00	18.060	180.950	1524.69	-260.33	-260.34	1.50	1697812.08	14543352.16	40°02'43.643"N	104°47'41.704"W	4.52	
1596.00	18.460	180.950	1560.77	-272.23	-272.24	1.30	1697811.91	14543340.26	40°02'43.526"N	104°47'41.706"W	1.05	
1628.00	18.850	181.130	1591.09	-282.46	-282.48	1.12	1697811.75	14543330.03	40°02'43.424"N	104°47'41.709"W	1.23	
1659.00	19.340	180.600	1620.39	-292.60	-292.62	0.96	1697811.62	14543319.90	40°02'43.324"N	104°47'41.711"W	1.68	
1691.00	18.540	181.830	1650.65	-302.97	-303.00	0.75	1697811.42	14543309.52	40°02'43.222"N	104°47'41.713"W	2.79	
1723.00	18.280	182.100	1681.01	-313.07	-313.10	0.40	1697811.10	14543299.42	40°02'43.122"N	104°47'41.718"W	0.86	
1755.00	18.540	181.920	1711.38	-323.16	-323.20	0.05	1697810.77	14543289.32	40°02'43.022"N	104°47'41.722"W	0.83	
1787.00	19.120	181.130	1741.66	-333.48	-333.53	-0.23	1697810.52	14543279.00	40°02'42.920"N	104°47'41.726"W	1.98	
1818.00	19.200	180.780	1770.95	-343.65	-343.70	-0.40	1697810.37	14543268.83	40°02'42.819"N	104°47'41.728"W	0.45	
1834.00	19.200	181.830	1786.06	-348.91	-348.96	-0.52	1697810.27	14543263.57	40°02'42.767"N	104°47'41.730"W	2.16	LAST SURFACE MWD+IFR1 SURVEY
1934.00	17.600	183.530	1880.94	-380.41	-380.49	-1.97	1697808.88	14543232.06	40°02'42.456"N	104°47'41.748"W	1.69	FIRST BHGE MWD+IFR1+SC SURVEY
2024.00	19.400	189.370	1966.30	-408.68	-408.82	-5.25	1697805.68	14543203.73	40°02'42.176"N	104°47'41.790"W	2.87	
2114.00	20.670	185.310	2050.85	-439.18	-439.39	-9.15	1697801.85	14543173.16	40°02'41.874"N	104°47'41.841"W	2.09	
2203.00	20.610	184.640	2134.14	-470.39	-470.64	-11.87	1697799.20	14543141.92	40°02'41.565"N	104°47'41.876"W	0.27	
2293.00	20.300	182.600	2218.47	-501.74	-502.02	-13.86	1697797.28	14543110.54	40°02'41.255"N	104°47'41.901"W	0.86	
2382.00	19.730	181.250	2302.09	-532.16	-532.47	-14.89	1697796.32	14543080.11	40°02'40.954"N	104°47'41.914"W	0.82	
2471.00	21.050	178.640	2385.51	-563.15	-563.47	-14.84	1697796.45	14543049.12	40°02'40.648"N	104°47'41.914"W	1.80	
2561.00	20.300	178.530	2469.72	-594.93	-595.23	-14.05	1697797.30	14543017.37	40°02'40.334"N	104°47'41.904"W	0.83	
2650.00	19.650	178.130	2553.36	-625.33	-625.62	-13.17	1697798.26	14542986.99	40°02'40.033"N	104°47'41.892"W	0.75	
2740.00	21.450	176.030	2637.63	-656.90	-657.17	-11.53	1697799.96	14542955.46	40°02'39.722"N	104°47'41.871"W	2.16	
2829.00	21.050	174.570	2720.58	-689.08	-689.31	-8.89	1697802.68	14542923.34	40°02'39.404"N	104°47'41.837"W	0.75	
2919.00	19.920	174.360	2804.89	-720.47	-720.66	-5.86	1697805.78	14542892.01	40°02'39.094"N	104°47'41.798"W	1.26	
3008.00	19.590	175.110	2888.65	-750.47	-750.62	-3.10	1697808.61	14542862.07	40°02'38.798"N	104°47'41.763"W	0.47	
3097.00	20.540	181.940	2972.26	-780.95	-781.09	-2.35	1697809.43	14542831.61	40°02'38.497"N	104°47'41.753"W	2.84	
3187.00	20.180	182.140	3056.64	-812.22	-812.39	-3.47	1697808.38	14542800.33	40°02'38.188"N	104°47'41.768"W	0.41	
3276.00	18.810	182.220	3140.53	-841.88	-842.06	-4.60	1697807.32	14542770.66	40°02'37.895"N	104°47'41.782"W	1.54	
3366.00	20.920	184.120	3225.17	-872.38	-872.59	-6.31	1697805.68	14542740.14	40°02'37.593"N	104°47'41.804"W	2.45	
3455.00	19.890	183.130	3308.59	-903.31	-903.56	-8.28	1697803.78	14542709.18	40°02'37.287"N	104°47'41.829"W	1.22	
3545.00	21.770	180.810	3392.70	-935.26	-935.54	-9.35	1697802.78	14542677.21	40°02'36.971"N	104°47'41.843"W	2.28	
3635.00	20.160	178.700	3476.74	-967.46	-967.73	-9.24	1697802.97	14542645.03	40°02'36.653"N	104°47'41.842"W	1.98	
3724.00	17.760	176.340	3560.91	-996.36	-996.62	-8.02	1697804.26	14542616.16	40°02'36.367"N	104°47'41.826"W	2.83	
3814.00	17.740	181.400	3646.63	-1023.77	-1024.02	-7.48	1697804.86	14542588.76	40°02'36.096"N	104°47'41.819"W	1.71	
3903.00	16.980	180.650	3731.58	-1050.31	-1050.57	-7.96	1697804.44	14542562.22	40°02'35.834"N	104°47'41.825"W	0.89	
3993.00	18.280	178.650	3817.35	-1077.56	-1077.83	-7.78	1697804.69	14542534.98	40°02'35.565"N	104°47'41.823"W	1.59	
4083.00	19.690	175.190	3902.45	-1106.81	-1107.05	-6.17	1697806.36	14542505.78	40°02'35.276"N	104°47'41.802"W	2.00	
4172.00	19.720	171.950	3986.24	-1136.66	-1136.86	-2.81	1697809.79	14542475.99	40°02'34.981"N	104°47'41.759"W	1.23	
4262.00	19.390	171.490	4071.05	-1166.54	-1166.67	1.52	1697814.19	14542446.20	40°02'34.687"N	104°47'41.703"W	0.40	
4351.00	19.630	175.250	4154.95	-1196.10	-1196.18	4.95	1697817.68	14542416.71	40°02'34.395"N	104°47'41.659"W	1.44	
4441.00	20.030	178.070	4239.61	-1226.60	-1226.65	6.72	1697819.52	14542386.25	40°02'34.094"N	104°47'41.637"W	1.15	
4530.00	20.040	182.430	4323.23	-1257.06	-1257.12	6.59	1697819.46	14542355.79	40°02'33.793"N	104°47'41.638"W	1.68	
4620.00	19.160	182.820	4408.01	-1287.19	-1287.28	5.21	1697818.15	14542325.65	40°02'33.495"N	104°47'41.656"W	0.99	
4709.00	16.870	182.510	4492.65	-1314.66	-1314.77	3.92	1697816.93	14542298.16	40°02'33.223"N	104°47'41.673"W	2.58	
4823.00	13.970	181.900	4602.53	-1344.93	-1345.06	2.74	1697815.82	14542267.88	40°02'32.924"N	104°47'41.688"W	2.55	
4912.00	13.520	179.650	4688.98	-1366.06	-1366.20	2.45	1697815.57	14542246.75	40°02'32.715"N	104°47'41.692"W	0.79	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#08 BUROUGH 1N-17HZ (775'FSL & 953'FEL,SEC.17)
Area	COLORADO	Well	BUROUGH 1N-17HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUROUGH 1N-17HZ AWB
Facility	SEC.17-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
5002.00	12.110	179.610	4776.74	-1386.02	-1386.16	2.58	1697815.75	14542226.80	40°02'32.518"N	104°47'41.690"W	1.57	
5091.00	11.010	178.860	4863.93	-1403.85	-1403.99	2.81	1697816.02	14542208.97	40°02'32.341"N	104°47'41.687"W	1.25	
5181.00	10.370	178.540	4952.37	-1420.55	-1420.68	3.19	1697816.44	14542192.29	40°02'32.176"N	104°47'41.682"W	0.71	
5270.00	8.750	178.030	5040.13	-1435.33	-1435.46	3.62	1697816.91	14542177.52	40°02'32.030"N	104°47'41.676"W	1.82	
5360.00	7.680	177.670	5129.21	-1448.18	-1448.31	4.10	1697817.42	14542164.68	40°02'31.903"N	104°47'41.670"W	1.19	
5449.00	6.680	180.520	5217.51	-1459.30	-1459.42	4.30	1697817.64	14542153.57	40°02'31.794"N	104°47'41.668"W	1.19	
5538.00	4.310	182.390	5306.09	-1467.82	-1467.94	4.11	1697817.47	14542145.05	40°02'31.709"N	104°47'41.670"W	2.67	
5628.00	3.720	179.920	5395.87	-1474.11	-1474.24	3.97	1697817.35	14542138.75	40°02'31.647"N	104°47'41.672"W	0.68	
5717.00	1.790	172.070	5484.76	-1478.38	-1478.51	4.17	1697817.55	14542134.49	40°02'31.605"N	104°47'41.669"W	2.20	
5807.00	1.350	180.890	5574.73	-1480.84	-1480.96	4.35	1697817.74	14542132.04	40°02'31.581"N	104°47'41.667"W	0.56	
5896.00	0.910	190.500	5663.71	-1482.58	-1482.70	4.20	1697817.60	14542130.30	40°02'31.564"N	104°47'41.669"W	0.54	
5986.00	0.460	198.340	5753.71	-1483.62	-1483.75	3.96	1697817.35	14542129.25	40°02'31.553"N	104°47'41.672"W	0.51	
6075.00	0.460	255.730	5842.70	-1484.04	-1484.17	3.50	1697816.90	14542128.82	40°02'31.549"N	104°47'41.678"W	0.50	
6165.00	0.580	272.220	5932.70	-1484.10	-1484.25	2.70	1697816.09	14542128.75	40°02'31.548"N	104°47'41.688"W	0.21	
6255.00	0.480	329.420	6022.70	-1483.74	-1483.90	2.05	1697815.44	14542129.09	40°02'31.552"N	104°47'41.697"W	0.57	
6344.00	1.120	333.710	6111.69	-1482.63	-1482.80	1.47	1697814.87	14542130.19	40°02'31.563"N	104°47'41.704"W	0.72	
6434.00	1.480	350.920	6201.66	-1480.69	-1480.87	0.90	1697814.29	14542132.12	40°02'31.582"N	104°47'41.711"W	0.59	
6523.00	1.450	16.460	6290.64	-1478.48	-1478.65	1.04	1697814.42	14542134.34	40°02'31.604"N	104°47'41.710"W	0.73	
6613.00	1.660	12.840	6380.60	-1476.12	-1476.29	1.65	1697815.03	14542136.70	40°02'31.627"N	104°47'41.702"W	0.26	
6702.00	2.010	353.920	6469.56	-1473.32	-1473.48	1.77	1697815.14	14542139.51	40°02'31.655"N	104°47'41.700"W	0.78	
6792.00	2.110	345.670	6559.50	-1470.13	-1470.31	1.19	1697814.56	14542142.68	40°02'31.686"N	104°47'41.708"W	0.35	
6839.00†	5.026	352.946	6606.40	-1467.24	-1467.42	0.73	1697814.09	14542145.56	40°02'31.715"N	104°47'41.714"W	6.27	KOP
6881.00	7.650	354.740	6648.14	-1462.63	-1462.81	0.24	1697813.59	14542150.17	40°02'31.760"N	104°47'41.720"W	6.27	
6971.00	17.410	358.320	6735.89	-1443.14	-1443.34	-0.70	1697812.60	14542169.63	40°02'31.953"N	104°47'41.732"W	10.87	
7060.00	23.020	359.300	6819.38	-1412.40	-1412.61	-1.30	1697811.93	14542200.35	40°02'32.256"N	104°47'41.740"W	6.31	
7150.00	28.760	1.630	6900.31	-1373.14	-1373.33	-0.90	1697812.24	14542239.61	40°02'32.644"N	104°47'41.735"W	6.48	
7240.00	35.470	1.340	6976.50	-1325.36	-1325.53	0.32	1697813.36	14542287.40	40°02'33.117"N	104°47'41.719"W	7.46	
7329.00	41.690	357.250	7046.05	-1269.92	-1270.09	-0.49	1697812.41	14542342.81	40°02'33.665"N	104°47'41.729"W	7.55	
7419.00	47.080	356.910	7110.35	-1207.03	-1207.24	-3.71	1697809.05	14542405.63	40°02'34.286"N	104°47'41.771"W	5.99	
7508.00	51.350	358.300	7168.47	-1139.68	-1139.93	-6.50	1697806.11	14542472.91	40°02'34.951"N	104°47'41.807"W	4.94	
7597.00	57.620	0.640	7220.15	-1067.28	-1067.54	-7.11	1697805.33	14542545.27	40°02'35.666"N	104°47'41.814"W	7.36	
7687.00	62.400	2.390	7265.13	-989.43	-989.64	-5.02	1697807.24	14542623.14	40°02'36.436"N	104°47'41.788"W	5.57	
7776.00	65.650	0.440	7304.11	-909.50	-909.67	-3.06	1697809.01	14542703.08	40°02'37.226"N	104°47'41.762"W	4.15	
7865.00	70.090	358.460	7337.63	-827.09	-827.26	-3.88	1697808.01	14542785.46	40°02'38.041"N	104°47'41.773"W	5.40	
7955.00	81.050	357.240	7360.02	-740.08	-740.29	-7.16	1697804.52	14542872.38	40°02'38.900"N	104°47'41.815"W	12.25	
8044.00	90.120	356.450	7366.87	-651.51	-651.79	-12.05	1697799.44	14542960.84	40°02'39.775"N	104°47'41.878"W	10.23	LANDING (123'FSL & 965'FEL,SEC.17) 40.0443819 -104.7949661
8134.00	90.950	356.380	7366.03	-561.61	-561.97	-17.67	1697793.61	14543050.61	40°02'40.663"N	104°47'41.950"W	0.93	
8219.00†	90.539	358.596	7364.92	-476.65	-477.06	-21.40	1697789.69	14543135.48	40°02'41.502"N	104°47'41.998"W	2.65	EXIT RADIUS HEEL (298'FSL & 976'FEL,SEC.17) 40.0448615 -104.7949995
8223.00	90.520	358.700	7364.88	-472.65	-473.06	-21.49	1697789.58	14543139.47	40°02'41.541"N	104°47'41.999"W	2.65	
8313.00	90.460	0.670	7364.11	-382.67	-383.07	-21.99	1697788.88	14543229.43	40°02'42.430"N	104°47'42.006"W	2.19	
8402.00	90.990	0.610	7362.99	-293.71	-294.08	-20.99	1697789.67	14543318.38	40°02'43.310"N	104°47'41.993"W	0.60	
8492.00	91.820	0.470	7360.78	-203.76	-204.12	-20.15	1697790.31	14543408.31	40°02'44.199"N	104°47'41.982"W	0.94	
8581.00	90.310	0.280	7359.13	-114.81	-115.14	-19.56	1697790.69	14543497.26	40°02'45.078"N	104°47'41.975"W	1.71	
8671.00	89.410	359.790	7359.35	-24.82	-25.14	-19.51	1697790.54	14543587.22	40°02'45.968"N	104°47'41.974"W	1.14	
8760.00	89.940	0.060	7359.85	64.17	63.86	-19.63	1697790.22	14543676.18	40°02'46.847"N	104°47'41.975"W	0.67	

## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#08 BUROUGH 1N-17HZ (775°FSL & 953°FEL, SEC.17)
Area	COLORADO	Well	BUROUGH 1N-17HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUROUGH 1N-17HZ AWP
Facility	SEC.17-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
8850.00	90.150	359.520	7359.78	154.16	153.86	-19.96	1697789.68	14543766.15	40°02'47.736"N	104°47'41.980"W	0.64	
8939.00	90.800	359.230	7359.04	243.16	242.85	-20.93	1697788.50	14543855.10	40°02'48.616"N	104°47'41.992"W	0.80	
9029.00	91.140	359.560	7357.52	333.14	332.83	-21.88	1697787.35	14543945.04	40°02'49.505"N	104°47'42.004"W	0.53	
9118.00	91.420	359.110	7355.53	422.12	421.80	-22.91	1697786.11	14544033.98	40°02'50.384"N	104°47'42.018"W	0.60	
9207.00	92.190	359.200	7352.73	511.07	510.75	-24.22	1697784.59	14544122.88	40°02'51.263"N	104°47'42.034"W	0.87	
9296.00	90.250	359.390	7350.83	600.05	599.72	-25.32	1697783.29	14544211.81	40°02'52.143"N	104°47'42.049"W	2.19	
9386.00	90.460	359.820	7350.28	690.04	689.71	-25.94	1697782.47	14544301.77	40°02'53.032"N	104°47'42.056"W	0.53	
9476.00	90.860	0.130	7349.24	780.03	779.71	-25.98	1697782.22	14544391.73	40°02'53.921"N	104°47'42.057"W	0.56	
9565.00	89.380	357.440	7349.05	869.01	868.68	-27.86	1697780.13	14544480.66	40°02'54.800"N	104°47'42.081"W	3.45	
9654.00	89.940	358.250	7349.58	957.99	957.61	-31.21	1697776.58	14544569.55	40°02'55.679"N	104°47'42.124"W	1.11	
9744.00	90.920	358.080	7348.91	1047.98	1047.56	-34.09	1697773.49	14544659.46	40°02'56.568"N	104°47'42.161"W	1.11	
9833.00	91.760	357.730	7346.82	1136.93	1136.48	-37.34	1697770.04	14544748.33	40°02'57.447"N	104°47'42.203"W	1.02	
9923.00	90.620	358.630	7344.96	1226.90	1226.41	-40.20	1697766.97	14544838.22	40°02'58.336"N	104°47'42.240"W	1.61	
10012.00	90.090	357.350	7344.40	1315.88	1315.35	-43.32	1697763.65	14544927.12	40°02'59.215"N	104°47'42.280"W	1.56	
10102.00	90.460	357.420	7343.97	1405.84	1405.26	-47.43	1697759.34	14545016.98	40°03'00.103"N	104°47'42.333"W	0.42	
10191.00	90.370	357.190	7343.33	1494.79	1494.15	-51.61	1697754.95	14545105.83	40°03'00.982"N	104°47'42.387"W	0.28	
10281.00	90.550	357.070	7342.60	1584.74	1584.04	-56.12	1697750.24	14545195.67	40°03'01.870"N	104°47'42.445"W	0.24	
10371.00	92.430	357.160	7340.26	1674.65	1673.89	-60.65	1697745.50	14545285.48	40°03'02.758"N	104°47'42.503"W	2.09	
10460.00	89.690	356.490	7338.62	1763.56	1762.73	-65.58	1697740.37	14545374.27	40°03'03.636"N	104°47'42.566"W	3.17	
10550.00	89.410	358.700	7339.33	1853.52	1852.64	-69.35	1697736.39	14545464.14	40°03'04.524"N	104°47'42.615"W	2.48	
10639.00	90.180	359.750	7339.64	1942.52	1941.63	-70.56	1697734.98	14545553.09	40°03'05.404"N	104°47'42.630"W	1.46	
10729.00	90.860	0.890	7338.83	2032.49	2031.62	-70.05	1697735.28	14545643.04	40°03'06.293"N	104°47'42.624"W	1.47	
10818.00	90.960	1.270	7337.41	2121.42	2120.60	-68.38	1697736.75	14545731.99	40°03'07.172"N	104°47'42.602"W	0.44	
10908.00	91.260	1.990	7335.67	2211.32	2210.54	-65.82	1697739.10	14545821.90	40°03'08.061"N	104°47'42.569"W	0.87	
10998.00	90.920	1.750	7333.96	2301.19	2300.48	-62.88	1697741.83	14545911.81	40°03'08.950"N	104°47'42.532"W	0.46	
11087.00	90.710	2.100	7332.69	2390.07	2389.42	-59.89	1697744.61	14546000.72	40°03'09.829"N	104°47'42.493"W	0.46	
11177.00	90.860	359.900	7331.46	2480.01	2479.39	-58.32	1697745.98	14546090.66	40°03'10.718"N	104°47'42.473"W	2.45	
11266.00	90.920	0.000	7330.08	2568.99	2568.38	-58.40	1697745.69	14546179.61	40°03'11.597"N	104°47'42.474"W	0.13	
11356.00	91.410	0.050	7328.25	2658.96	2658.36	-58.36	1697745.53	14546269.56	40°03'12.487"N	104°47'42.473"W	0.55	
11445.00	91.540	359.630	7325.96	2747.92	2747.33	-58.61	1697745.07	14546358.49	40°03'13.366"N	104°47'42.477"W	0.49	
11534.00	91.600	359.800	7323.52	2836.88	2836.30	-59.05	1697744.43	14546447.42	40°03'14.245"N	104°47'42.482"W	0.20	
11624.00	92.150	359.940	7320.57	2926.82	2926.25	-59.25	1697744.01	14546537.33	40°03'15.134"N	104°47'42.485"W	0.63	
11713.00	92.090	359.600	7317.28	3015.76	3015.19	-59.61	1697743.45	14546626.24	40°03'16.013"N	104°47'42.490"W	0.39	
11803.00	92.190	359.200	7313.92	3105.69	3105.12	-60.55	1697742.30	14546716.13	40°03'16.902"N	104°47'42.502"W	0.46	
11892.00	92.120	358.830	7310.57	3194.63	3194.04	-62.08	1697740.57	14546805.01	40°03'17.780"N	104°47'42.521"W	0.42	
11982.00	92.370	358.610	7307.05	3284.56	3283.95	-64.09	1697738.36	14546894.88	40°03'18.669"N	104°47'42.547"W	0.37	
12071.00	90.920	357.720	7304.49	3373.51	3372.87	-66.94	1697735.30	14546983.75	40°03'19.547"N	104°47'42.584"W	1.91	
12161.00	90.800	357.130	7303.14	3463.46	3462.76	-70.98	1697731.06	14547073.61	40°03'20.436"N	104°47'42.636"W	0.67	
12250.00	91.050	356.890	7301.70	3552.39	3551.63	-75.62	1697726.21	14547162.43	40°03'21.314"N	104°47'42.696"W	0.39	
12340.00	89.660	358.840	7301.15	3642.36	3641.56	-78.98	1697722.65	14547252.31	40°03'22.203"N	104°47'42.739"W	2.66	
12429.00	89.170	357.520	7302.06	3731.34	3730.51	-81.80	1697719.62	14547341.22	40°03'23.082"N	104°47'42.775"W	1.58	
12519.00	89.200	356.230	7303.34	3821.27	3820.36	-86.71	1697714.51	14547431.03	40°03'23.970"N	104°47'42.838"W	1.43	
12608.00	89.290	356.990	7304.51	3910.17	3909.20	-91.97	1697709.05	14547519.82	40°03'24.848"N	104°47'42.906"W	0.86	
12698.00	89.260	355.960	7305.65	4000.07	3999.02	-97.50	1697703.31	14547609.59	40°03'25.735"N	104°47'42.977"W	1.14	
12788.00	90.920	358.120	7305.51	4090.01	4088.89	-102.15	1697698.46	14547699.41	40°03'26.623"N	104°47'43.037"W	3.03	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#08 BUROUGH 1N-17HZ (775'FSL & 953'FEL,SEC.17)
Area	COLORADO	Well	BUROUGH 1N-17HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUROUGH 1N-17HZ AWB
Facility	SEC.17-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
12807.00†	90.935	357.956	7305.20	4109.00	4107.88	-102.80	1697697.76	14547718.39	40°03'26.811"N	104°47'43.045"W	0.87	ENTER RADIUS TOE (364'FNL & 1038'FEL,SEC.17) 40.0574475 -104.7952903
12877.00	90.990	357.350	7304.02	4178.97	4177.81	-105.67	1697694.74	14547788.29	40°03'27.502"N	104°47'43.082"W	0.87	
12967.00	91.480	0.380	7302.08	4268.94	4267.76	-107.45	1697692.75	14547878.20	40°03'28.391"N	104°47'43.105"W	3.41	
13063.00	91.910	0.820	7299.24	4364.86	4363.71	-106.44	1697693.53	14547974.11	40°03'29.339"N	104°47'43.092"W	0.64	LAST BHGE MWD+IFR1+SC SURVEY
13110.00	91.910	0.820	7297.68	4411.81	4410.68	-105.77	1697694.10	14548021.07	40°03'29.803"N	104°47'43.083"W	0.00	PTB (61'FNL & 1041'FEL,SEC.17) 40.0582787 -104.7953009

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.17-T1N-R66W	0.00	0.00	-89.83	1697720.19	14543612.19	40°02'46.216"N	104°47'42.878"W	polygon
BUROUGH 1N-17HZ BHL REV-1(51'FNL & 1026'FEL,SEC.17)	7285.00	4420.62	-90.96	1697708.88	14548031.03	40°03'29.902"N	104°47'42.893"W	point
BUROUGH 1N-17HZ BHL REV-2(53'FNL & 1026'FEL,SEC.17)	7285.00	4418.62	-90.96	1697708.88	14548029.04	40°03'29.882"N	104°47'42.893"W	point
BUROUGH 1N-17HZ BHL REV-3(54'FNL & 1026'FEL,SEC.17)	7285.00	4417.62	-90.96	1697708.89	14548028.04	40°03'29.872"N	104°47'42.893"W	point
BUROUGH 1N-17HZ HEEL REV-1(146'FSL & 963'FEL,SEC.17)	7365.00	-628.80	-7.82	1697803.61	14542983.83	40°02'40.002"N	104°47'41.824"W	point
BUROUGH 1N-17HZ HEEL REV-2(46'FSL & 963'FEL,SEC.17)	7365.00	-728.81	-7.82	1697803.84	14542883.86	40°02'39.014"N	104°47'41.824"W	point
BUROUGH 1N-17HZ LANDBOX	7365.00	0.00	0.00	1697809.98	14543612.40	40°02'46.216"N	104°47'41.723"W	polygon
BUROUGH 1N-17HZ RADIUS 1	7365.00	-778.56	-369.92	1697442.00	14542833.30	40°02'38.522"N	104°47'46.479"W	polygon
BUROUGH 1N-17HZ RADIUS 2	7365.00	4472.39	-385.94	1697413.90	14548082.10	40°03'30.413"N	104°47'46.686"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: BUROUGH 1N-17HZ AWB Ref Wellpath: BUROUGH 1N-17HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	1834.00	Custom APC ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC ISCWSA Rev-2 MWD+IFR1 <138 - 1834>	BUROUGH 1N-17HZ AWB
1834.00	13063.00	Custom APC ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+SC <1934 - 13063>	BUROUGH 1N-17HZ AWB
13063.00	13110.00	Blind Drilling (std)	Projection to bit	BUROUGH 1N-17HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#08 BROUGH 1N-17HZ (775'FSL & 953'FEL,SEC.17)
Area	COLORADO	Well	BROUGH 1N-17HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BROUGH 1N-17HZ AWP
Facility	SEC.17-T1N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
138.00	0.830	253.730	138.00	FIRST SURFACE MWD+IFR1 SURVEY
1834.00	19.200	181.830	1786.06	LAST SURFACE MWD+IFR1 SURVEY
1934.00	17.600	183.530	1880.94	FIRST BHGE MWD+IFR1+SC SURVEY
6839.00	5.026	352.946	6606.40	KOP
8044.00	90.120	356.450	7366.87	LANDING (123'FSL & 965'FEL,SEC.17) 40.0443819 -104.7949661
8219.00	90.539	358.596	7364.92	EXIT RADIUS HEEL (298'FSL & 976'FEL,SEC.17) 40.0448615 -104.7949995
12807.00	90.935	357.956	7305.20	ENTER RADIUS TOE (364'FNL & 1038'FEL,SEC.17) 40.0574475 -104.7952903
13063.00	91.910	0.820	7299.24	LAST BHGE MWD+IFR1+SC SURVEY
13110.00	91.910	0.820	7297.68	PTB (61'FNL & 1041'FEL,SEC.17) 40.0582787 -104.7953009