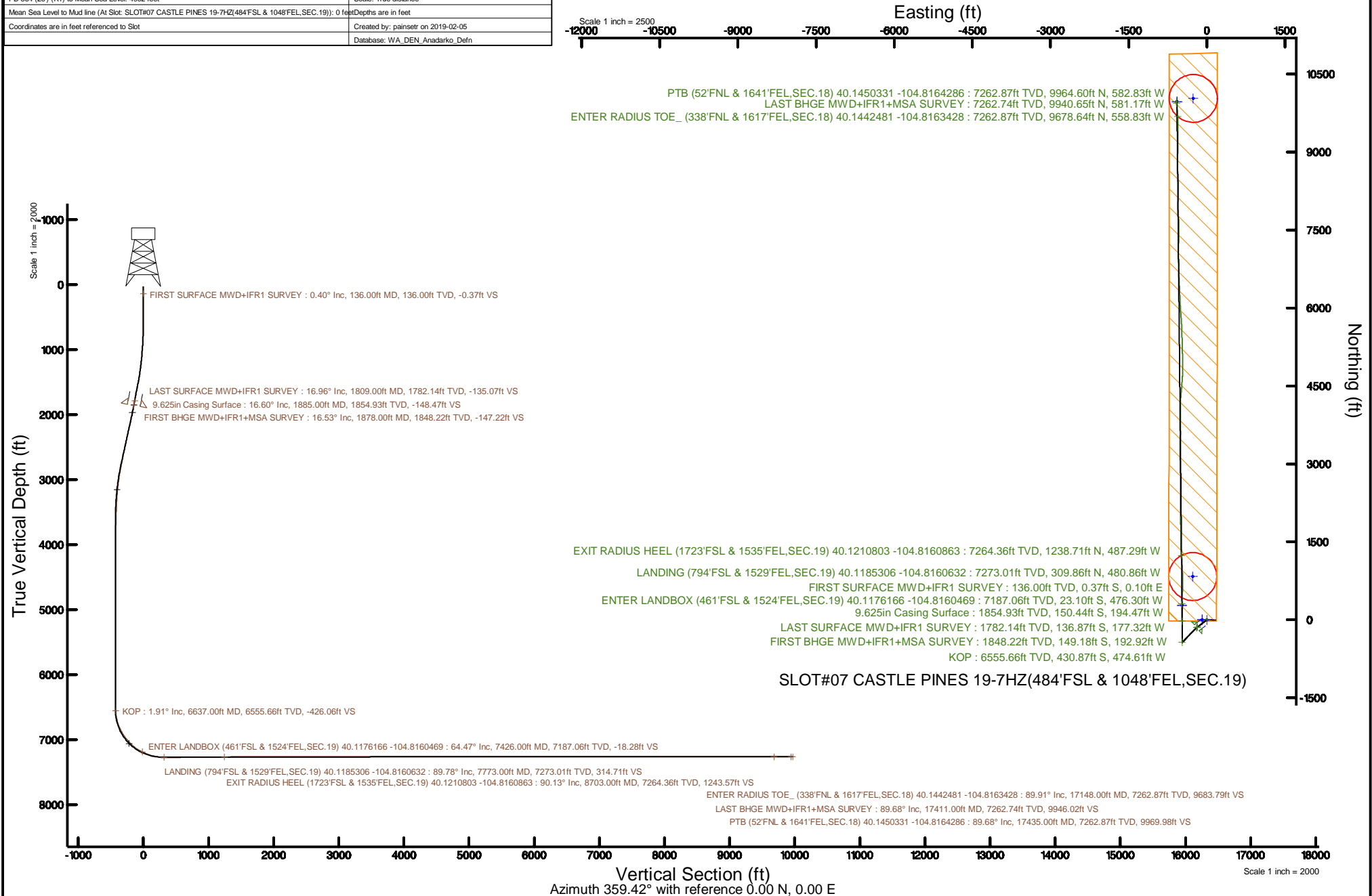


KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#07 CASTLE PINES 19-7HZ(484'FSL & 1048'FEL,SEC.19)
Field: WELD COUNTY (UTM/TRUE NORTH) Well: CASTLE PINES 19-7HZ
Facility: SEC.19-T2N-R66W Wellbore: CASTLE PINES 19-7HZ PWB

Plot reference wellpath is CASTLE PINES 19-7HZ PWP Rev.C.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 geodetic datum
Measured depths are referenced to PD 564 (26) (RT)	North Reference: True north
PD 564 (26) (RT) to Mean Sea Level: 4902 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#07 CASTLE PINES 19-7HZ(484'FSL & 1048'FEL,SEC.19)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: painsetr on 2019-02-05
	Database: WA_DEN_Anadarko_Defn



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#07 CASTLE PINES 19-7HZ(484'FSL & 1048'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-7HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-7HZ AWB
Facility	SEC.19-T2N-R66W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / UTM Zone 13 North, US feet	Software System	WellArchitect® 5.0
North Reference	True	User	Painsetr
Scale	0.999603	Report Generated	2/5/2019 at 2:13 PM
Convergence at slot	0.12° East	Database/Source file	WA_DEN_Anadarko_Defn/CASTLE_PINES_19-7HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-0.71	90.12	1692320.49	14569640.14	40°07'03.648"N	104°48'51.638"W
Facility Reference Pt			1692230.40	14569640.66	40°07'03.655"N	104°48'52.798"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	4902.00ft
Horizontal Reference Pt	Slot	PD 564 (26') (RT) to Mean Sea Level	4902.00ft
Vertical Reference Pt	PD 564 (26') (RT)	PD 564 (26') (RT) to Mud Line at Slot (SLOT#07 CASTLE PINES 19-7HZ(484'FSL & 1048'FEL,SEC.19))	4902.00ft
MD Reference Pt	PD 564 (26') (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	359.42°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#07 CASTLE PINES 19-7HZ(484'FSL & 1048'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-7HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-7HZ AWP
Facility	SEC.19-T2N-R66W		

WELLPATH DATA (235 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	164.450	0.00	0.00	0.00	0.00	1692320.49	14569640.14	40°07'03.648"N	104°48'51.638"W	0.00	
26.00	0.000	164.450	26.00	0.00	0.00	0.00	1692320.49	14569640.14	40°07'03.648"N	104°48'51.638"W	0.00	
136.00	0.400	164.450	136.00	-0.37	-0.37	0.10	1692320.59	14569639.77	40°07'03.644"N	104°48'51.637"W	0.36	FIRST SURFACE MWD+IFR1 SURVEY
168.00	0.400	172.090	168.00	-0.59	-0.59	0.15	1692320.64	14569639.55	40°07'03.642"N	104°48'51.636"W	0.17	
199.00	0.620	140.630	199.00	-0.83	-0.83	0.27	1692320.76	14569639.32	40°07'03.640"N	104°48'51.635"W	1.12	
231.00	0.620	143.350	231.00	-1.10	-1.10	0.48	1692320.97	14569639.04	40°07'03.637"N	104°48'51.632"W	0.09	
263.00	0.400	156.450	262.99	-1.35	-1.34	0.63	1692321.12	14569638.80	40°07'03.635"N	104°48'51.630"W	0.77	
295.00	0.700	163.570	294.99	-1.64	-1.63	0.73	1692321.22	14569638.51	40°07'03.632"N	104°48'51.629"W	0.96	
326.00	0.830	162.250	325.99	-2.03	-2.02	0.85	1692321.34	14569638.12	40°07'03.628"N	104°48'51.627"W	0.42	
358.00	0.750	159.530	357.99	-2.45	-2.44	1.00	1692321.49	14569637.70	40°07'03.624"N	104°48'51.625"W	0.28	
390.00	0.350	116.720	389.99	-2.69	-2.68	1.16	1692321.65	14569637.46	40°07'03.622"N	104°48'51.623"W	1.71	
422.00	0.310	98.090	421.98	-2.75	-2.74	1.33	1692321.82	14569637.41	40°07'03.621"N	104°48'51.621"W	0.36	
454.00	0.400	109.160	453.98	-2.80	-2.79	1.52	1692322.01	14569637.36	40°07'03.620"N	104°48'51.618"W	0.35	
486.00	0.400	103.630	485.98	-2.87	-2.85	1.74	1692322.23	14569637.30	40°07'03.620"N	104°48'51.616"W	0.12	
517.00	0.310	66.190	516.98	-2.86	-2.84	1.92	1692322.41	14569637.30	40°07'03.620"N	104°48'51.613"W	0.78	
549.00	0.260	187.910	548.98	-2.90	-2.88	1.99	1692322.48	14569637.27	40°07'03.620"N	104°48'51.612"W	1.56	
581.00	0.880	223.420	580.98	-3.15	-3.13	1.81	1692322.30	14569637.02	40°07'03.617"N	104°48'51.615"W	2.14	
612.00	0.970	247.060	611.98	-3.42	-3.40	1.40	1692321.90	14569636.74	40°07'03.614"N	104°48'51.620"W	1.25	
644.00	1.050	232.910	643.97	-3.70	-3.69	0.92	1692321.41	14569636.46	40°07'03.612"N	104°48'51.626"W	0.82	
676.00	1.540	244.080	675.96	-4.05	-4.05	0.30	1692320.80	14569636.09	40°07'03.608"N	104°48'51.634"W	1.72	
707.00	2.420	241.350	706.95	-4.54	-4.55	-0.65	1692319.85	14569635.59	40°07'03.603"N	104°48'51.646"W	2.85	
739.00	3.160	243.810	738.91	-5.24	-5.26	-2.04	1692318.47	14569634.88	40°07'03.596"N	104°48'51.664"W	2.34	
771.00	3.470	243.810	770.85	-6.04	-6.08	-3.70	1692316.81	14569634.06	40°07'03.588"N	104°48'51.686"W	0.97	
803.00	3.560	242.320	802.79	-6.91	-6.97	-5.44	1692315.06	14569633.17	40°07'03.579"N	104°48'51.708"W	0.40	
834.00	4.000	236.520	833.73	-7.94	-8.01	-7.20	1692313.31	14569632.12	40°07'03.569"N	104°48'51.731"W	1.88	
866.00	4.790	232.040	865.63	-9.35	-9.45	-9.18	1692311.33	14569630.68	40°07'03.555"N	104°48'51.756"W	2.69	
898.00	5.630	231.680	897.50	-11.13	-11.24	-11.47	1692309.05	14569628.88	40°07'03.537"N	104°48'51.786"W	2.63	
930.00	6.460	234.230	929.32	-13.12	-13.27	-14.16	1692306.36	14569626.85	40°07'03.517"N	104°48'51.820"W	2.73	
961.00	6.940	232.390	960.11	-15.26	-15.43	-17.06	1692303.47	14569624.68	40°07'03.496"N	104°48'51.858"W	1.70	
993.00	7.560	235.460	991.85	-17.60	-17.80	-20.32	1692300.21	14569622.30	40°07'03.472"N	104°48'51.900"W	2.28	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#07 CASTLE PINES 19-7HZ(484'FSL & 1048'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-7HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-7HZ AWP
Facility	SEC.19-T2N-R66W		

WELLPATH DATA (235 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
1025.00	8.130	235.380	1023.55	-20.04	-20.28	-23.92	1692296.62	14569619.82	40°07'03.448"N	104°48'51.946"W	1.78	
1057.00	8.530	237.570	1055.22	-22.56	-22.84	-27.79	1692292.76	14569617.25	40°07'03.422"N	104°48'51.996"W	1.60	
1088.00	8.660	236.870	1085.87	-25.03	-25.35	-31.68	1692288.87	14569614.74	40°07'03.397"N	104°48'52.046"W	0.54	
1120.00	9.270	235.380	1117.48	-27.77	-28.13	-35.82	1692284.74	14569611.95	40°07'03.370"N	104°48'52.099"W	2.04	
1152.00	10.330	235.020	1149.01	-30.83	-31.24	-40.29	1692280.28	14569608.83	40°07'03.339"N	104°48'52.157"W	3.32	
1184.00	10.850	233.620	1180.46	-34.21	-34.67	-45.07	1692275.51	14569605.39	40°07'03.305"N	104°48'52.218"W	1.81	
1215.00	11.210	233.180	1210.89	-37.70	-38.21	-49.83	1692270.76	14569601.84	40°07'03.270"N	104°48'52.279"W	1.19	
1247.00	11.470	233.530	1242.27	-41.41	-41.96	-54.88	1692265.72	14569598.08	40°07'03.233"N	104°48'52.344"W	0.84	
1279.00	12.080	233.180	1273.59	-45.25	-45.86	-60.12	1692260.49	14569594.17	40°07'03.195"N	104°48'52.412"W	1.92	
1310.00	13.010	233.530	1303.85	-49.21	-49.88	-65.52	1692255.10	14569590.15	40°07'03.155"N	104°48'52.481"W	3.01	
1342.00	13.320	233.880	1335.01	-53.47	-54.19	-71.39	1692249.24	14569585.82	40°07'03.112"N	104°48'52.557"W	1.00	
1373.00	14.280	232.470	1365.12	-57.84	-58.63	-77.31	1692243.33	14569581.38	40°07'03.069"N	104°48'52.633"W	3.28	
1405.00	15.160	232.650	1396.07	-62.72	-63.57	-83.77	1692236.89	14569576.42	40°07'03.020"N	104°48'52.716"W	2.75	
1437.00	15.820	231.600	1426.90	-67.90	-68.82	-90.51	1692230.16	14569571.16	40°07'02.968"N	104°48'52.803"W	2.24	
1468.00	16.130	231.860	1456.71	-73.12	-74.10	-97.21	1692223.47	14569565.87	40°07'02.916"N	104°48'52.889"W	1.03	
1500.00	16.660	230.720	1487.41	-78.69	-79.75	-104.26	1692216.44	14569560.20	40°07'02.860"N	104°48'52.980"W	1.94	
1532.00	17.230	231.770	1518.02	-84.46	-85.59	-111.53	1692209.18	14569554.35	40°07'02.802"N	104°48'53.074"W	2.02	
1563.00	17.620	231.860	1547.59	-90.12	-91.33	-118.83	1692201.90	14569548.60	40°07'02.745"N	104°48'53.167"W	1.26	
1594.00	17.890	231.070	1577.12	-95.94	-97.22	-126.22	1692194.52	14569542.70	40°07'02.687"N	104°48'53.263"W	1.17	
1626.00	18.370	231.600	1607.53	-102.08	-103.44	-134.00	1692186.76	14569536.47	40°07'02.626"N	104°48'53.363"W	1.59	
1658.00	18.590	232.040	1637.88	-108.27	-109.71	-141.97	1692178.81	14569530.18	40°07'02.564"N	104°48'53.465"W	0.81	
1690.00	17.400	231.770	1668.31	-114.29	-115.80	-149.75	1692171.04	14569524.07	40°07'02.504"N	104°48'53.566"W	3.73	
1721.00	16.740	233.090	1697.95	-119.76	-121.35	-156.96	1692163.84	14569518.51	40°07'02.449"N	104°48'53.658"W	2.47	
1753.00	16.960	232.390	1728.57	-125.30	-126.97	-164.34	1692156.48	14569512.88	40°07'02.393"N	104°48'53.753"W	0.94	
1785.00	16.920	232.830	1759.18	-130.89	-132.63	-171.75	1692149.08	14569507.20	40°07'02.337"N	104°48'53.849"W	0.42	
1809.00	16.960	232.650	1782.14	-135.07	-136.87	-177.32	1692143.53	14569502.96	40°07'02.295"N	104°48'53.920"W	0.27	LAST SURFACE MWD+IFR1 SURVEY
1878.00	16.530	230.780	1848.22	-147.22	-149.18	-192.92	1692127.96	14569490.62	40°07'02.174"N	104°48'54.121"W	1.00	FIRST BHGE MWD+IFR1+MSA SURVEY
1968.00	17.470	230.050	1934.28	-163.79	-165.95	-213.20	1692107.72	14569473.81	40°07'02.008"N	104°48'54.382"W	1.07	
2058.00	17.350	225.860	2020.16	-181.60	-183.97	-233.18	1692087.78	14569455.76	40°07'01.830"N	104°48'54.639"W	1.40	
2147.00	17.050	222.870	2105.19	-200.22	-202.77	-251.58	1692069.43	14569436.92	40°07'01.644"N	104°48'54.876"W	1.05	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#07 CASTLE PINES 19-7HZ(484'FSL & 1048'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-7HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-7HZ AWP
Facility	SEC.19-T2N-R66W		

WELLPATH DATA (235 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
2236.00	17.090	223.500	2190.26	-219.09	-221.82	-269.46	1692051.60	14569417.84	40°07'01.456"N	104°48'55.106"W	0.21	
2326.00	17.150	223.950	2276.28	-238.05	-240.97	-287.78	1692033.33	14569398.67	40°07'01.267"N	104°48'55.342"W	0.16	
2415.00	17.180	222.970	2361.31	-256.93	-260.03	-305.84	1692015.31	14569379.57	40°07'01.078"N	104°48'55.575"W	0.33	
2505.00	17.150	227.040	2447.31	-275.51	-278.80	-324.61	1691996.59	14569360.77	40°07'00.893"N	104°48'55.816"W	1.33	
2594.00	17.100	228.880	2532.36	-292.86	-296.35	-344.07	1691977.17	14569343.19	40°07'00.719"N	104°48'56.067"W	0.61	
2683.00	17.070	227.460	2617.44	-310.10	-313.79	-363.56	1691957.73	14569325.72	40°07'00.547"N	104°48'56.318"W	0.47	
2773.00	16.070	224.460	2703.70	-327.73	-331.61	-382.01	1691939.32	14569307.87	40°07'00.371"N	104°48'56.555"W	1.46	
2862.00	14.830	222.030	2789.48	-344.82	-348.86	-398.27	1691923.11	14569290.59	40°07'00.200"N	104°48'56.764"W	1.57	
2951.00	13.540	221.280	2875.77	-360.96	-365.15	-412.77	1691908.65	14569274.27	40°07'00.039"N	104°48'56.951"W	1.46	
3040.00	11.080	218.580	2962.71	-375.36	-379.67	-424.98	1691896.48	14569259.74	40°06'59.896"N	104°48'57.108"W	2.84	
3130.00	9.110	218.510	3051.32	-387.59	-392.01	-434.81	1691886.67	14569247.38	40°06'59.774"N	104°48'57.235"W	2.19	
3219.00	7.410	220.800	3139.39	-397.37	-401.87	-442.94	1691878.56	14569237.51	40°06'59.677"N	104°48'57.339"W	1.95	
3309.00	5.920	221.520	3228.78	-405.17	-409.73	-449.81	1691871.71	14569229.63	40°06'59.599"N	104°48'57.428"W	1.66	
3398.00	5.020	224.460	3317.37	-411.33	-415.95	-455.58	1691865.96	14569223.41	40°06'59.537"N	104°48'57.502"W	1.06	
3487.00	3.870	228.310	3406.10	-416.05	-420.73	-460.55	1691861.00	14569218.62	40°06'59.490"N	104°48'57.566"W	1.33	
3577.00	2.900	230.590	3495.95	-419.48	-424.19	-464.58	1691856.98	14569215.15	40°06'59.456"N	104°48'57.618"W	1.09	
3666.00	2.540	225.090	3584.85	-422.27	-427.01	-467.72	1691853.85	14569212.32	40°06'59.428"N	104°48'57.658"W	0.50	
3756.00	2.590	221.370	3674.76	-425.17	-429.95	-470.47	1691851.10	14569209.38	40°06'59.399"N	104°48'57.694"W	0.19	
3845.00	1.890	207.660	3763.69	-427.96	-432.76	-472.48	1691849.10	14569206.57	40°06'59.371"N	104°48'57.720"W	0.99	
3935.00	0.140	337.850	3853.67	-429.17	-433.97	-473.21	1691848.37	14569205.36	40°06'59.359"N	104°48'57.729"W	2.20	
4024.00	0.090	248.310	3942.67	-429.09	-433.90	-473.32	1691848.26	14569205.43	40°06'59.360"N	104°48'57.730"W	0.19	
4113.00	0.110	267.580	4031.67	-429.12	-433.92	-473.47	1691848.11	14569205.40	40°06'59.360"N	104°48'57.732"W	0.04	
4202.00	0.070	299.750	4120.67	-429.09	-433.90	-473.60	1691847.98	14569205.42	40°06'59.360"N	104°48'57.734"W	0.07	
4292.00	0.060	308.530	4210.67	-429.04	-433.84	-473.69	1691847.90	14569205.48	40°06'59.361"N	104°48'57.735"W	0.02	
4381.00	0.070	270.270	4299.67	-429.01	-433.82	-473.78	1691847.81	14569205.51	40°06'59.361"N	104°48'57.736"W	0.05	
4470.00	0.100	344.780	4388.67	-428.93	-433.74	-473.85	1691847.73	14569205.59	40°06'59.362"N	104°48'57.737"W	0.12	
4560.00	0.070	274.330	4478.67	-428.85	-433.66	-473.93	1691847.66	14569205.66	40°06'59.362"N	104°48'57.738"W	0.11	
4649.00	0.110	18.540	4567.67	-428.76	-433.58	-473.96	1691847.63	14569205.75	40°06'59.363"N	104°48'57.739"W	0.16	
4738.00	0.030	149.380	4656.67	-428.70	-433.51	-473.92	1691847.67	14569205.81	40°06'59.364"N	104°48'57.738"W	0.15	
4828.00	0.070	231.340	4746.67	-428.76	-433.57	-473.95	1691847.64	14569205.76	40°06'59.363"N	104°48'57.738"W	0.08	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#07 CASTLE PINES 19-7HZ(484'FSL & 1048'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-7HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-7HZ AWB
Facility	SEC.19-T2N-R66W		

WELLPATH DATA (235 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
4917.00	0.040	3.680	4835.67	-428.76	-433.57	-473.99	1691847.60	14569205.75	40°06'59.363"N	104°48'57.739"W	0.11	
5007.00	0.170	10.500	4925.67	-428.60	-433.41	-473.96	1691847.62	14569205.92	40°06'59.365"N	104°48'57.739"W	0.14	
5096.00	0.160	296.890	5014.67	-428.41	-433.22	-474.05	1691847.53	14569206.10	40°06'59.367"N	104°48'57.740"W	0.22	
5185.00	0.100	293.220	5103.67	-428.32	-433.14	-474.23	1691847.35	14569206.19	40°06'59.368"N	104°48'57.742"W	0.07	
5363.00	0.030	20.490	5281.67	-428.22	-433.03	-474.36	1691847.23	14569206.29	40°06'59.369"N	104°48'57.744"W	0.06	
5452.00	0.030	67.470	5370.67	-428.19	-433.00	-474.33	1691847.26	14569206.32	40°06'59.369"N	104°48'57.743"W	0.03	
5542.00	0.110	267.060	5460.67	-428.18	-433.00	-474.39	1691847.19	14569206.33	40°06'59.369"N	104°48'57.744"W	0.15	
5631.00	0.060	19.860	5549.67	-428.14	-432.96	-474.46	1691847.12	14569206.37	40°06'59.369"N	104°48'57.745"W	0.16	
5720.00	0.040	33.580	5638.67	-428.07	-432.89	-474.43	1691847.15	14569206.44	40°06'59.370"N	104°48'57.745"W	0.03	
5809.00	0.040	25.160	5727.67	-428.02	-432.83	-474.40	1691847.18	14569206.49	40°06'59.371"N	104°48'57.744"W	0.01	
5899.00	0.070	266.150	5817.67	-427.99	-432.81	-474.44	1691847.14	14569206.52	40°06'59.371"N	104°48'57.745"W	0.11	
5988.00	0.130	322.400	5906.67	-427.91	-432.73	-474.56	1691847.03	14569206.59	40°06'59.372"N	104°48'57.746"W	0.12	
6078.00	0.070	10.500	5996.67	-427.78	-432.60	-474.61	1691846.97	14569206.73	40°06'59.373"N	104°48'57.747"W	0.11	
6167.00	0.030	328.160	6085.67	-427.71	-432.52	-474.61	1691846.97	14569206.80	40°06'59.374"N	104°48'57.747"W	0.06	
6256.00	0.310	328.960	6174.67	-427.48	-432.30	-474.75	1691846.83	14569207.03	40°06'59.376"N	104°48'57.749"W	0.31	
6346.00	0.370	347.650	6264.67	-426.98	-431.81	-474.93	1691846.65	14569207.52	40°06'59.381"N	104°48'57.751"W	0.14	
6435.00	0.140	55.990	6353.67	-426.64	-431.46	-474.91	1691846.67	14569207.86	40°06'59.384"N	104°48'57.751"W	0.39	
6524.00	0.120	44.800	6442.67	-426.52	-431.34	-474.75	1691846.83	14569207.99	40°06'59.385"N	104°48'57.749"W	0.04	
6613.00	0.040	92.310	6531.67	-426.45	-431.27	-474.65	1691846.93	14569208.05	40°06'59.386"N	104°48'57.748"W	0.11	
6637.00†	1.905	4.833	6555.66	-426.06	-430.87	-474.61	1691846.97	14569208.45	40°06'59.390"N	104°48'57.747"W	7.93	KOP
6703.00	7.140	3.950	6621.43	-420.87	-425.69	-474.24	1691847.33	14569213.64	40°06'59.441"N	104°48'57.742"W	7.93	
6792.00	14.950	5.760	6708.72	-403.92	-408.72	-472.70	1691848.83	14569230.60	40°06'59.609"N	104°48'57.722"W	8.78	
6881.00	21.620	2.860	6793.18	-376.11	-380.89	-470.73	1691850.74	14569258.42	40°06'59.884"N	104°48'57.697"W	7.56	
6970.00	27.970	359.330	6873.94	-338.84	-343.60	-470.15	1691851.24	14569295.69	40°07'00.252"N	104°48'57.690"W	7.32	
7059.00	34.540	358.340	6949.98	-292.69	-297.46	-471.13	1691850.17	14569341.81	40°07'00.708"N	104°48'57.702"W	7.40	
7149.00	41.180	358.310	7020.99	-237.49	-242.28	-472.74	1691848.44	14569396.97	40°07'01.254"N	104°48'57.723"W	7.38	
7238.00	48.510	359.270	7084.06	-174.78	-179.58	-474.03	1691847.02	14569459.64	40°07'01.873"N	104°48'57.740"W	8.27	
7327.00	56.200	0.170	7138.37	-104.36	-109.16	-474.35	1691846.56	14569530.03	40°07'02.569"N	104°48'57.744"W	8.68	
7416.00	64.000	357.610	7182.71	-27.28	-32.09	-475.91	1691844.84	14569607.07	40°07'03.331"N	104°48'57.764"W	9.11	
7426.00†	64.475	357.479	7187.06	-18.28	-23.10	-476.30	1691844.43	14569616.06	40°07'03.420"N	104°48'57.769"W	4.89	ENTER LANDBOX (461'FSL & 1524'FEL, SEC.19) 40.1176166 -104.8160469

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#07 CASTLE PINES 19-7HZ(484'FSL & 1048'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-7HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-7HZ AWP
Facility	SEC.19-T2N-R66W		

WELLPATH DATA (235 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
7505.00	68.230	356.480	7218.74	54.00	49.16	-480.12	1691840.46	14569688.27	40°07'04.134"N	104°48'57.818"W	4.89	
7594.00	74.480	358.360	7247.18	138.24	133.35	-483.89	1691836.52	14569772.43	40°07'04.966"N	104°48'57.866"W	7.30	
7683.00	81.190	1.130	7265.93	225.18	220.30	-484.25	1691835.98	14569859.34	40°07'05.825"N	104°48'57.871"W	8.13	
7773.00	89.780	3.190	7273.01	314.71	309.86	-480.86	1691839.18	14569948.88	40°07'06.710"N	104°48'57.828"W	9.81	LANDING (794'FSL & 1529'FEL,SEC.19) 40.1185306 -104.8160632
7862.00	90.710	3.450	7272.63	403.50	398.71	-475.70	1691844.14	14570037.70	40°07'07.588"N	104°48'57.761"W	1.09	
7951.00	90.550	3.350	7271.65	492.28	487.55	-470.43	1691849.23	14570126.51	40°07'08.466"N	104°48'57.693"W	0.21	
8040.00	90.740	2.380	7270.65	581.11	576.43	-465.98	1691853.49	14570215.37	40°07'09.344"N	104°48'57.636"W	1.11	
8130.00	90.580	1.160	7269.61	671.03	666.38	-463.20	1691856.08	14570305.29	40°07'10.233"N	104°48'57.600"W	1.37	
8219.00	90.490	358.970	7268.78	760.01	755.37	-463.10	1691856.00	14570394.24	40°07'11.113"N	104°48'57.599"W	2.46	
8308.00	90.550	357.830	7267.97	848.99	844.33	-465.58	1691853.33	14570483.16	40°07'11.992"N	104°48'57.631"W	1.28	
8397.00	90.610	356.400	7267.07	937.92	933.21	-470.06	1691848.67	14570572.00	40°07'12.870"N	104°48'57.689"W	1.61	
8486.00	90.640	356.680	7266.10	1026.80	1022.05	-475.43	1691843.11	14570660.78	40°07'13.748"N	104°48'57.758"W	0.32	
8575.00	90.730	357.310	7265.03	1115.71	1110.92	-480.10	1691838.26	14570749.61	40°07'14.626"N	104°48'57.818"W	0.72	
8665.00	90.050	356.450	7264.42	1205.62	1200.78	-485.00	1691833.18	14570839.43	40°07'15.514"N	104°48'57.881"W	1.22	
8703.00†	90.131	356.629	7264.36	1243.57	1238.71	-487.29	1691830.81	14570877.34	40°07'15.889"N	104°48'57.911"W	0.52	EXIT RADIUS HEEL (1723'FSL & 1535'FEL,SEC.19) 40.1210803 -104.8160863
8754.00	90.240	356.870	7264.20	1294.52	1289.63	-490.18	1691827.81	14570928.23	40°07'16.392"N	104°48'57.948"W	0.52	
8843.00	90.150	357.440	7263.89	1383.44	1378.52	-494.60	1691823.21	14571017.07	40°07'17.271"N	104°48'58.005"W	0.65	
8932.00	90.090	358.840	7263.71	1472.42	1467.47	-497.49	1691820.14	14571105.98	40°07'18.150"N	104°48'58.042"W	1.57	
9022.00	90.120	0.060	7263.54	1562.42	1557.46	-498.35	1691819.09	14571195.94	40°07'19.039"N	104°48'58.053"W	1.36	
9111.00	90.240	0.080	7263.26	1651.41	1646.46	-498.24	1691819.01	14571284.90	40°07'19.918"N	104°48'58.052"W	0.14	
9200.00	90.020	359.160	7263.06	1740.41	1735.46	-498.83	1691818.23	14571373.86	40°07'20.798"N	104°48'58.059"W	1.06	
9289.00	90.050	357.540	7263.01	1829.39	1824.42	-501.40	1691815.49	14571462.78	40°07'21.677"N	104°48'58.092"W	1.82	
9378.00	90.020	358.790	7262.95	1918.37	1913.37	-504.25	1691812.45	14571551.69	40°07'22.556"N	104°48'58.129"W	1.40	
9468.00	90.020	358.910	7262.92	2008.36	2003.35	-506.05	1691810.46	14571641.63	40°07'23.445"N	104°48'58.152"W	0.13	
9557.00	89.930	359.570	7262.96	2097.36	2092.34	-507.23	1691809.09	14571730.59	40°07'24.325"N	104°48'58.168"W	0.75	
9646.00	90.150	0.050	7262.90	2186.36	2181.34	-507.53	1691808.61	14571819.55	40°07'25.204"N	104°48'58.171"W	0.59	
9736.00	89.870	1.160	7262.88	2276.34	2271.34	-506.58	1691809.37	14571909.51	40°07'26.094"N	104°48'58.159"W	1.27	
9825.00	90.020	0.930	7262.97	2365.30	2360.32	-504.95	1691810.81	14571998.46	40°07'26.973"N	104°48'58.138"W	0.31	
9914.00	89.990	0.400	7262.96	2454.28	2449.32	-503.92	1691811.66	14572087.42	40°07'27.852"N	104°48'58.125"W	0.60	
10004.00	90.050	359.890	7262.93	2544.28	2539.32	-503.69	1691811.70	14572177.39	40°07'28.742"N	104°48'58.122"W	0.57	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#07 CASTLE PINES 19-7HZ(484'FSL & 1048'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-7HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-7HZ AWP
Facility	SEC.19-T2N-R66W		

WELLPATH DATA (235 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
10093.00	89.990	359.710	7262.90	2633.27	2628.31	-504.00	1691811.20	14572266.35	40°07'29.621"N	104°48'58.126"W	0.21	
10182.00	90.120	359.850	7262.81	2722.27	2717.31	-504.35	1691810.67	14572355.31	40°07'30.501"N	104°48'58.131"W	0.21	
10272.00	89.870	0.070	7262.82	2812.27	2807.31	-504.41	1691810.42	14572445.28	40°07'31.390"N	104°48'58.131"W	0.37	
10361.00	90.050	359.470	7262.88	2901.27	2896.31	-504.77	1691809.88	14572534.24	40°07'32.270"N	104°48'58.136"W	0.70	
10450.00	90.120	357.920	7262.75	2990.26	2985.29	-506.79	1691807.67	14572623.17	40°07'33.149"N	104°48'58.162"W	1.74	
10540.00	89.960	357.710	7262.69	3080.22	3075.22	-510.22	1691804.05	14572713.06	40°07'34.038"N	104°48'58.206"W	0.29	
10629.00	89.930	358.850	7262.77	3169.20	3164.18	-512.90	1691801.19	14572801.98	40°07'34.917"N	104°48'58.241"W	1.28	
10719.00	89.870	359.580	7262.93	3259.20	3254.17	-514.13	1691799.77	14572891.93	40°07'35.806"N	104°48'58.257"W	0.81	
10808.00	89.870	0.080	7263.13	3348.20	3343.17	-514.39	1691799.32	14572980.90	40°07'36.686"N	104°48'58.260"W	0.56	
10897.00	89.990	1.100	7263.24	3437.18	3432.16	-513.48	1691800.05	14573069.86	40°07'37.565"N	104°48'58.248"W	1.15	
10987.00	90.020	1.970	7263.23	3527.11	3522.13	-511.07	1691802.28	14573159.79	40°07'38.454"N	104°48'58.217"W	0.97	
11076.00	90.090	1.320	7263.15	3616.05	3611.09	-508.51	1691804.65	14573248.72	40°07'39.333"N	104°48'58.184"W	0.73	
11165.00	90.120	359.710	7262.98	3705.03	3700.09	-507.71	1691805.26	14573337.68	40°07'40.213"N	104°48'58.174"W	1.81	
11255.00	89.960	359.910	7262.92	3795.03	3790.09	-508.01	1691804.77	14573427.65	40°07'41.102"N	104°48'58.178"W	0.28	
11344.00	90.180	359.490	7262.81	3884.02	3879.08	-508.47	1691804.12	14573516.61	40°07'41.981"N	104°48'58.184"W	0.53	
11434.00	89.960	0.080	7262.70	3974.02	3969.08	-508.81	1691803.60	14573606.57	40°07'42.871"N	104°48'58.188"W	0.70	
11523.00	89.990	359.990	7262.74	4063.02	4058.08	-508.76	1691803.46	14573695.53	40°07'43.750"N	104°48'58.188"W	0.11	
11613.00	90.020	1.510	7262.73	4152.99	4148.07	-507.58	1691804.45	14573785.49	40°07'44.640"N	104°48'58.173"W	1.69	
11702.00	90.020	3.590	7262.70	4241.85	4236.98	-503.62	1691808.23	14573874.37	40°07'45.518"N	104°48'58.122"W	2.34	
11792.00	90.150	5.270	7262.57	4331.51	4326.71	-496.67	1691814.99	14573964.08	40°07'46.405"N	104°48'58.032"W	1.87	
11881.00	90.020	5.130	7262.44	4420.05	4415.34	-488.60	1691822.87	14574052.69	40°07'47.281"N	104°48'57.928"W	0.21	
11971.00	89.930	4.200	7262.48	4509.68	4505.04	-481.28	1691830.00	14574142.37	40°07'48.167"N	104°48'57.834"W	1.04	
12060.00	89.990	4.190	7262.54	4598.37	4593.80	-474.77	1691836.32	14574231.11	40°07'49.044"N	104°48'57.750"W	0.07	
12150.00	89.990	3.960	7262.55	4688.07	4683.58	-468.38	1691842.52	14574320.86	40°07'49.932"N	104°48'57.668"W	0.26	
12239.00	89.960	1.320	7262.59	4776.92	4772.47	-464.28	1691846.44	14574409.73	40°07'50.810"N	104°48'57.615"W	2.97	
12329.00	89.780	358.600	7262.80	4866.91	4862.46	-464.34	1691846.19	14574499.69	40°07'51.699"N	104°48'57.616"W	3.03	
12418.00	89.990	358.600	7262.98	4955.90	4951.44	-466.52	1691843.83	14574588.62	40°07'52.579"N	104°48'57.644"W	0.24	
12508.00	89.930	359.880	7263.04	5045.90	5041.43	-467.71	1691842.44	14574678.57	40°07'53.468"N	104°48'57.659"W	1.42	
12597.00	89.960	358.930	7263.12	5134.90	5130.42	-468.63	1691841.34	14574767.53	40°07'54.347"N	104°48'57.671"W	1.07	
12687.00	90.020	358.420	7263.14	5224.89	5220.40	-470.71	1691839.07	14574857.46	40°07'55.236"N	104°48'57.698"W	0.57	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#07 CASTLE PINES 19-7HZ(484'FSL & 1048'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-7HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-7HZ AWP
Facility	SEC.19-T2N-R66W		

WELLPATH DATA (235 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
12776.00	89.990	358.620	7263.13	5313.88	5309.37	-473.01	1691836.58	14574946.39	40°07'56.116"N	104°48'57.728"W	0.23	
12866.00	89.960	358.010	7263.17	5403.86	5399.33	-475.66	1691833.75	14575036.31	40°07'57.005"N	104°48'57.762"W	0.68	
12955.00	89.930	357.740	7263.26	5492.83	5488.27	-478.96	1691830.27	14575125.21	40°07'57.884"N	104°48'57.804"W	0.31	
13045.00	89.750	359.380	7263.51	5582.81	5578.24	-481.22	1691827.82	14575215.13	40°07'58.773"N	104°48'57.834"W	1.83	
13134.00	89.960	357.220	7263.73	5671.79	5667.19	-483.86	1691824.99	14575304.05	40°07'59.652"N	104°48'57.868"W	2.44	
13224.00	89.960	355.610	7263.80	5761.66	5757.01	-489.49	1691819.18	14575393.82	40°08'00.539"N	104°48'57.940"W	1.79	
13313.00	90.090	355.130	7263.76	5850.44	5845.72	-496.67	1691811.81	14575482.48	40°08'01.416"N	104°48'58.033"W	0.56	
13402.00	90.020	356.440	7263.67	5939.26	5934.48	-503.21	1691805.09	14575571.19	40°08'02.293"N	104°48'58.117"W	1.47	
13492.00	89.840	356.820	7263.78	6029.15	6024.32	-508.50	1691799.61	14575660.99	40°08'03.181"N	104°48'58.185"W	0.47	
13581.00	90.050	357.760	7263.87	6118.09	6113.22	-512.71	1691795.22	14575749.84	40°08'04.059"N	104°48'58.239"W	1.08	
13671.00	90.090	357.640	7263.76	6208.05	6203.15	-516.32	1691791.42	14575839.72	40°08'04.948"N	104°48'58.286"W	0.14	
13760.00	90.020	357.520	7263.67	6297.00	6292.07	-520.08	1691787.48	14575928.60	40°08'05.827"N	104°48'58.334"W	0.16	
13850.00	90.050	357.080	7263.62	6386.94	6381.97	-524.32	1691783.06	14576018.46	40°08'06.715"N	104°48'58.389"W	0.49	
13939.00	89.840	357.090	7263.70	6475.87	6470.85	-528.85	1691778.35	14576107.30	40°08'07.594"N	104°48'58.447"W	0.24	
14028.00	89.870	356.710	7263.93	6564.78	6559.72	-533.66	1691773.35	14576196.12	40°08'08.472"N	104°48'58.509"W	0.43	
14118.00	90.300	357.790	7263.79	6654.72	6649.62	-537.98	1691768.85	14576285.97	40°08'09.360"N	104°48'58.565"W	1.29	
14207.00	90.270	358.610	7263.35	6743.69	6738.57	-540.77	1691765.87	14576374.88	40°08'10.239"N	104°48'58.601"W	0.92	
14296.00	90.120	359.030	7263.05	6832.69	6827.55	-542.61	1691763.85	14576463.82	40°08'11.119"N	104°48'58.624"W	0.50	
14386.00	90.150	358.570	7262.84	6922.68	6917.53	-544.49	1691761.78	14576553.76	40°08'12.008"N	104°48'58.648"W	0.51	
14475.00	90.150	359.950	7262.60	7011.68	7006.52	-545.64	1691760.44	14576642.71	40°08'12.887"N	104°48'58.663"W	1.55	
14564.00	90.050	0.340	7262.45	7100.67	7095.52	-545.42	1691760.48	14576731.68	40°08'13.767"N	104°48'58.660"W	0.45	
14654.00	90.090	0.630	7262.34	7190.66	7185.52	-544.65	1691761.06	14576821.64	40°08'14.656"N	104°48'58.651"W	0.33	
14744.00	89.930	1.710	7262.32	7280.61	7275.50	-542.82	1691762.70	14576911.59	40°08'15.545"N	104°48'58.627"W	1.21	
14833.00	90.020	1.040	7262.36	7369.56	7364.47	-540.68	1691764.65	14577000.53	40°08'16.424"N	104°48'58.600"W	0.76	
14922.00	89.840	0.030	7262.47	7458.54	7453.47	-539.85	1691765.30	14577089.49	40°08'17.304"N	104°48'58.589"W	1.15	
15012.00	89.930	359.380	7262.65	7548.54	7543.47	-540.31	1691764.65	14577179.45	40°08'18.193"N	104°48'58.595"W	0.73	
15101.00	89.960	359.230	7262.74	7637.54	7632.46	-541.39	1691763.38	14577268.41	40°08'19.073"N	104°48'58.609"W	0.17	
15191.00	89.840	357.300	7262.89	7727.52	7722.41	-544.12	1691760.47	14577358.32	40°08'19.962"N	104°48'58.644"W	2.15	
15281.00	89.780	357.150	7263.19	7817.45	7812.31	-548.48	1691755.93	14577448.17	40°08'20.850"N	104°48'58.700"W	0.18	
15371.00	89.960	358.320	7263.40	7907.41	7902.24	-552.03	1691752.18	14577538.05	40°08'21.739"N	104°48'58.746"W	1.32	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#07 CASTLE PINES 19-7HZ(484'FSL & 1048'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-7HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-7HZ AWB
Facility	SEC.19-T2N-R66W		

WELLPATH DATA (235 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
15460.00	89.900	0.600	7263.50	7996.40	7991.23	-552.87	1691751.16	14577627.01	40°08'22.618"N	104°48'58.757"W	2.56	
15549.00	90.210	2.840	7263.42	8085.33	8080.18	-550.20	1691753.65	14577715.93	40°08'23.497"N	104°48'58.722"W	2.54	
15639.00	89.930	1.760	7263.31	8175.21	8170.11	-546.59	1691757.07	14577805.83	40°08'24.386"N	104°48'58.676"W	1.24	
15728.00	90.090	359.170	7263.29	8264.19	8259.09	-545.87	1691757.60	14577894.78	40°08'25.265"N	104°48'58.667"W	2.92	
15818.00	89.810	357.910	7263.37	8354.18	8349.06	-548.16	1691755.12	14577984.71	40°08'26.154"N	104°48'58.696"W	1.43	
15907.00	90.210	357.540	7263.36	8443.14	8437.99	-551.69	1691751.41	14578073.60	40°08'27.033"N	104°48'58.742"W	0.61	
15996.00	89.990	357.330	7263.20	8532.08	8526.90	-555.67	1691747.24	14578162.46	40°08'27.912"N	104°48'58.793"W	0.34	
16086.00	89.990	357.920	7263.22	8622.04	8616.83	-559.40	1691743.32	14578252.34	40°08'28.800"N	104°48'58.841"W	0.66	
16175.00	90.020	358.740	7263.21	8711.02	8705.79	-562.00	1691740.55	14578341.26	40°08'29.679"N	104°48'58.874"W	0.92	
16265.00	90.120	359.900	7263.10	8801.02	8795.78	-563.07	1691739.29	14578431.22	40°08'30.569"N	104°48'58.888"W	1.29	
16354.00	90.050	1.580	7262.97	8889.99	8884.77	-561.92	1691740.25	14578520.17	40°08'31.448"N	104°48'58.873"W	1.89	
16444.00	89.960	1.050	7262.96	8979.94	8974.74	-559.85	1691742.13	14578610.12	40°08'32.337"N	104°48'58.847"W	0.60	
16533.00	90.120	1.170	7262.90	9068.91	9063.73	-558.13	1691743.67	14578699.07	40°08'33.217"N	104°48'58.825"W	0.22	
16623.00	90.090	0.780	7262.73	9158.87	9153.71	-556.60	1691745.01	14578789.02	40°08'34.106"N	104°48'58.805"W	0.43	
16713.00	89.930	0.700	7262.72	9248.85	9243.71	-555.43	1691745.99	14578878.98	40°08'34.995"N	104°48'58.790"W	0.20	
16802.00	90.050	0.590	7262.73	9337.83	9332.70	-554.43	1691746.80	14578967.94	40°08'35.875"N	104°48'58.777"W	0.18	
16891.00	90.050	359.740	7262.65	9426.82	9421.70	-554.18	1691746.87	14579056.90	40°08'36.754"N	104°48'58.774"W	0.96	
16981.00	90.050	359.400	7262.58	9516.82	9511.70	-554.85	1691746.01	14579146.86	40°08'37.643"N	104°48'58.783"W	0.38	
17071.00	89.810	358.790	7262.69	9606.82	9601.69	-556.27	1691744.40	14579236.81	40°08'38.533"N	104°48'58.801"W	0.73	
17148.00†	89.914	357.397	7262.87	9683.79	9678.64	-558.83	1691741.68	14579313.73	40°08'39.293"N	104°48'58.834"W	1.81	ENTER RADIUS TOE (338'FNL & 1617'FEL, SEC.18) 40.1442481 -104.8163428
17160.00	89.930	357.180	7262.89	9695.79	9690.63	-559.40	1691741.09	14579325.71	40°08'39.412"N	104°48'58.841"W	1.81	
17250.00	90.150	354.040	7262.82	9785.58	9780.35	-566.29	1691734.01	14579415.39	40°08'40.298"N	104°48'58.930"W	3.50	
17339.00	90.120	354.460	7262.61	9874.21	9868.90	-575.21	1691724.92	14579503.89	40°08'41.173"N	104°48'59.045"W	0.47	
17411.00	89.680	356.040	7262.74	9946.02	9940.65	-581.17	1691718.81	14579575.59	40°08'41.882"N	104°48'59.122"W	2.28	LAST BHGE MWD+IFR1+MSA SURVEY
17435.00	89.680	356.040	7262.87	9969.98	9964.60	-582.83	1691717.10	14579599.52	40°08'42.119"N	104°48'59.143"W	0.00	PTB (52'FNL & 1641'FEL, SEC.18) 40.1450331 -104.8164286

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#07 CASTLE PINES 19-7HZ(484'FSL & 1048'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-7HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-7HZ AWB
Facility	SEC.19-T2N-R66W		

HOLE & CASING SECTIONS - Ref Wellbore: CASTLE PINES 19-7HZ AWB Ref Wellpath: CASTLE PINES 19-7HZ 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	26.00	1885.00	1859.00	26.00	1854.93	0.00	0.00	-150.44	-194.47

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.18-T2N-R66W	2.00	0.71	-90.12	1692230.40	14569640.66	40°07'03.655"N	104°48'52.798"W	polygon
SEC.19-T2N-R66W	2.00	0.71	-90.12	1692230.40	14569640.66	40°07'03.655"N	104°48'52.798"W	polygon
CASTLE PINES 19-7HZ BHL REV-2(50'FNL & 1632'FEL,SEC.18)	7258.00	9967.12	-573.99	1691725.92	14579602.07	40°08'42.144"N	104°48'59.029"W	point
CASTLE PINES 19-7HZ HEEL REV-2(766'FSL & 1524'FEL,SEC.19)	7267.00	282.33	-476.04	1691844.05	14569921.37	40°07'06.438"N	104°48'57.766"W	point
CASTLE PINES 19-7HZ BHL REV-1(50'FNL & 1632'FEL,SEC.18)	7269.00	9967.12	-573.99	1691725.92	14579602.07	40°08'42.144"N	104°48'59.029"W	point
CASTLE PINES 19-7HZ HEEL REV-1(766'FSL & 1524'FEL,SEC.19)	7279.00	282.33	-476.04	1691844.05	14569921.37	40°07'06.438"N	104°48'57.766"W	point
CASTLE PINES 19-7HZ LANDBOX	7279.00	0.00	0.00	1692320.49	14569640.14	40°07'03.648"N	104°48'51.638"W	polygon
CASTLE PINES 19-7HZ RADIUS 1	7279.00	833.66	-270.16	1692048.70	14570472.90	40°07'11.886"N	104°48'55.116"W	polygon
CASTLE PINES 19-7HZ RADIUS 2	7279.00	10029.23	-260.46	1692039.20	14579664.80	40°08'42.758"N	104°48'54.992"W	polygon

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#07 CASTLE PINES 19-7HZ(484'FSL & 1048'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-7HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-7HZ AWB
Facility	SEC.19-T2N-R66W		

WELLPATH COMPOSITION - Ref Wellbore: CASTLE PINES 19-7HZ AWB				Ref Wellpath: CASTLE PINES 19-7HZ AWP	
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment		Wellbore
26.00	1809.00	Custom APC ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC ISCWSA Rev-2 MWD+IFR1 <136 - 1809>		CASTLE PINES 19-7HZ AWB
1809.00	17411.00	Custom APC ISCWSA REV 2 MWD+IFR1+MSA (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+MSA <1878 - 17411>		CASTLE PINES 19-7HZ AWB
17411.00	17435.00	Blind Drilling (std)	Projection to bit		CASTLE PINES 19-7HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#07 CASTLE PINES 19-7HZ(484'FSL & 1048'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-7HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-7HZ AWB
Facility	SEC.19-T2N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
136.00	0.400	164.450	136.00	FIRST SURFACE MWD+IFR1 SURVEY
1809.00	16.960	232.650	1782.14	LAST SURFACE MWD+IFR1 SURVEY
1878.00	16.530	230.780	1848.22	FIRST BHGE MWD+IFR1+MSA SURVEY
6637.00	1.905	4.833	6555.66	KOP
7426.00	64.475	357.479	7187.06	ENTER LANDBOX (461'FSL & 1524'FEL,SEC.19) 40.1176166 -104.8160469
7773.00	89.780	3.190	7273.01	LANDING (794'FSL & 1529'FEL,SEC.19) 40.1185306 -104.8160632
8703.00	90.131	356.629	7264.36	EXIT RADIUS HEEL (1723'FSL & 1535'FEL,SEC.19) 40.1210803 -104.8160863
17148.00	89.914	357.397	7262.87	ENTER RADIUS TOE_ (338'FNL & 1617'FEL,SEC.18) 40.1442481 -104.8163428
17411.00	89.680	356.040	7262.74	LAST BHGE MWD+IFR1+MSA SURVEY
17435.00	89.680	356.040	7262.87	PTB (52'FNL & 1641'FEL,SEC.18) 40.1450331 -104.8164286