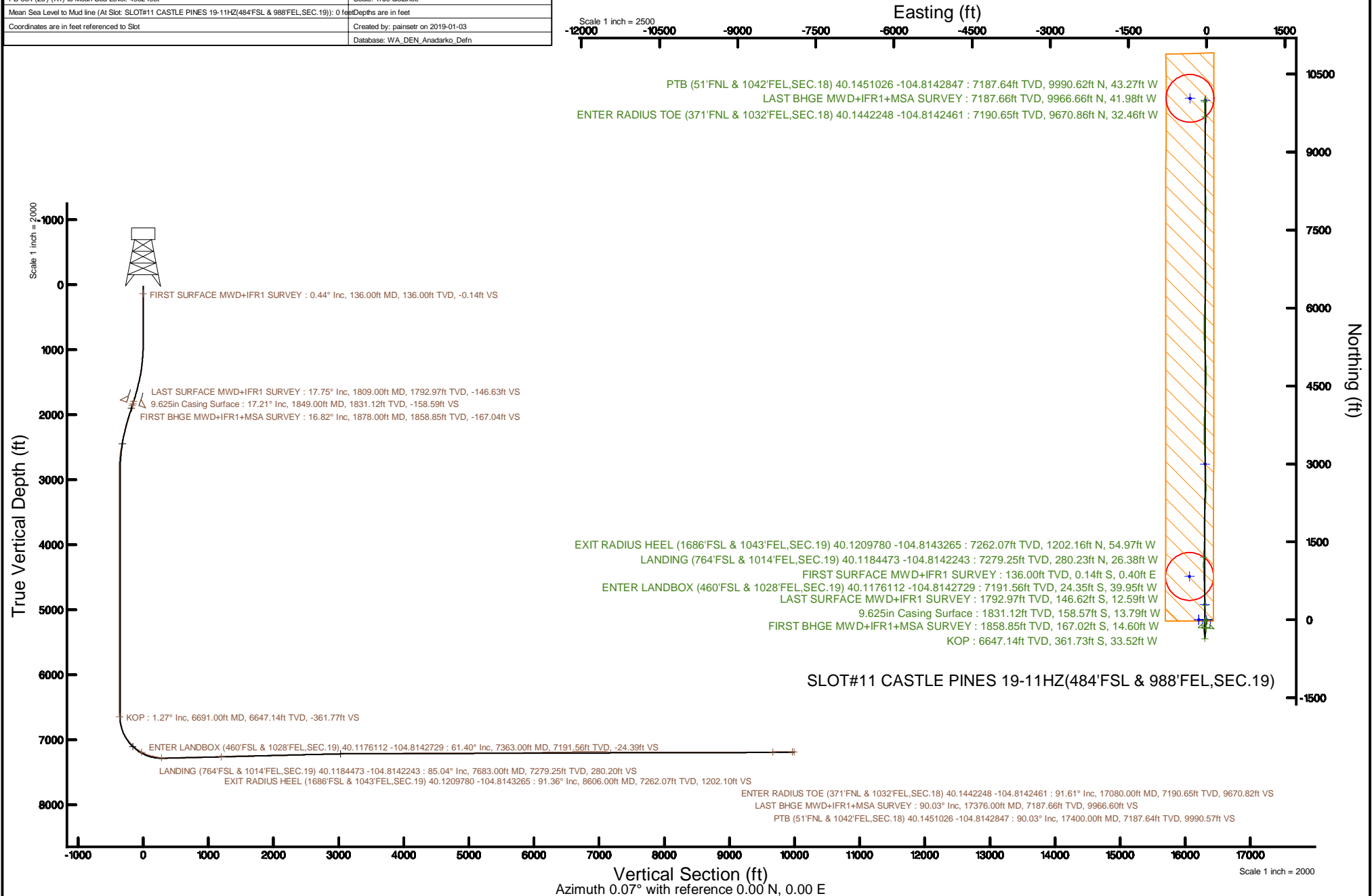


KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#11 CASTLE PINES 19-11HZ(484'FSL & 988'FEL,SEC.19)
 Field: WELD COUNTY (UTM/TRUE NORTH) Well: CASTLE PINES 19-11HZ
 Facility: SEC.19-T2N-R66W Wellbore: CASTLE PINES 19-11HZ PWB

Plot reference wellpath is CASTLE PINES 19-11HZ PWP Rev-A.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#11 CASTLE PINES 19-11HZ(484'FSL & 988'FEL,SEC.19)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: painsetr on 2019-01-03
	Database: WA_DEN_Anadarko_Defn



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#11 CASTLE PINES 19-11HZ(484'FSL & 988'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-11HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-11HZ 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	1/3/2019 at 7:50 AM
Convergence at slot	0.12° East	Database/Source file	WA_DEN_Anadarko_Defn/CASTLE_PINES_19-11HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-1.42	149.94	1692380.29	14569639.56	40°07'03.641"N	104°48'50.868"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#11 CASTLE PINES 19-11HZ(484'FSL & 988'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	0.07°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#11 CASTLE PINES 19-11HZ(484'FSL & 988'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-11HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-11HZ AWP
Facility	SEC.19-T2N-R66W		

WELLPATH DATA (226 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	109.520	0.00	0.00	0.00	0.00	1692380.29	14569639.56	40°07'03.641°N	104°48'50.868°W	0.00	
26.00	0.000	109.520	26.00	0.00	0.00	0.00	1692380.29	14569639.56	40°07'03.641°N	104°48'50.868°W	0.00	
136.00	0.440	109.520	136.00	-0.14	-0.14	0.40	1692380.68	14569639.42	40°07'03.640°N	104°48'50.863°W	0.40	FIRST SURFACE MWD+IFR1 SURVEY
168.00	0.750	98.090	168.00	-0.21	-0.21	0.72	1692381.01	14569639.35	40°07'03.639°N	104°48'50.859°W	1.03	
199.00	0.830	92.640	198.99	-0.25	-0.25	1.15	1692381.43	14569639.31	40°07'03.639°N	104°48'50.853°W	0.35	
231.00	0.620	98.090	230.99	-0.28	-0.29	1.55	1692381.84	14569639.28	40°07'03.638°N	104°48'50.848°W	0.69	
263.00	0.310	129.730	262.99	-0.36	-0.37	1.79	1692382.07	14569639.20	40°07'03.637°N	104°48'50.845°W	1.22	
295.00	0.130	278.090	294.99	-0.41	-0.42	1.82	1692382.10	14569639.15	40°07'03.637°N	104°48'50.845°W	1.33	
326.00	0.310	222.630	325.99	-0.47	-0.47	1.73	1692382.01	14569639.09	40°07'03.636°N	104°48'50.846°W	0.84	
358.00	0.260	215.780	357.99	-0.59	-0.59	1.63	1692381.91	14569638.97	40°07'03.635°N	104°48'50.847°W	0.19	
390.00	0.260	229.750	389.99	-0.70	-0.70	1.53	1692381.82	14569638.86	40°07'03.634°N	104°48'50.848°W	0.20	
422.00	0.260	278.090	421.99	-0.74	-0.74	1.40	1692381.69	14569638.82	40°07'03.634°N	104°48'50.850°W	0.67	
454.00	0.400	278.090	453.99	-0.71	-0.71	1.22	1692381.51	14569638.85	40°07'03.634°N	104°48'50.852°W	0.44	
486.00	0.830	278.090	485.99	-0.66	-0.66	0.88	1692381.17	14569638.90	40°07'03.634°N	104°48'50.857°W	1.34	
517.00	0.350	295.050	516.99	-0.59	-0.59	0.57	1692380.86	14569638.97	40°07'03.635°N	104°48'50.861°W	1.63	
549.00	0.570	274.050	548.98	-0.54	-0.54	0.32	1692380.61	14569639.02	40°07'03.636°N	104°48'50.864°W	0.86	
581.00	0.220	301.120	580.98	-0.50	-0.50	0.11	1692380.40	14569639.06	40°07'03.636°N	104°48'50.867°W	1.21	
612.00	0.220	303.140	611.98	-0.43	-0.43	0.01	1692380.30	14569639.12	40°07'03.637°N	104°48'50.868°W	0.03	
644.00	0.310	345.240	643.98	-0.32	-0.32	-0.06	1692380.22	14569639.24	40°07'03.638°N	104°48'50.869°W	0.65	
675.00	0.400	347.350	674.98	-0.13	-0.13	-0.11	1692380.18	14569639.43	40°07'03.640°N	104°48'50.869°W	0.29	
707.00	0.480	332.410	706.98	0.10	0.10	-0.20	1692380.09	14569639.66	40°07'03.642°N	104°48'50.871°W	0.44	
739.00	0.920	346.030	738.98	0.47	0.47	-0.32	1692379.97	14569640.02	40°07'03.646°N	104°48'50.872°W	1.46	
770.00	0.620	6.070	769.98	0.88	0.88	-0.36	1692379.92	14569640.43	40°07'03.650°N	104°48'50.873°W	1.29	
834.00	0.260	98.090	833.97	1.20	1.20	-0.18	1692380.10	14569640.76	40°07'03.653°N	104°48'50.870°W	1.06	
866.00	0.350	160.050	865.97	1.10	1.10	-0.08	1692380.21	14569640.65	40°07'03.652°N	104°48'50.869°W	1.01	
898.00	0.700	172.620	897.97	0.81	0.81	-0.02	1692380.27	14569640.37	40°07'03.649°N	104°48'50.868°W	1.14	
929.00	1.410	170.950	928.97	0.25	0.25	0.07	1692380.35	14569639.80	40°07'03.643°N	104°48'50.867°W	2.29	
961.00	1.360	164.890	960.96	-0.51	-0.51	0.23	1692380.52	14569639.05	40°07'03.636°N	104°48'50.865°W	0.48	
993.00	1.800	172.970	992.95	-1.37	-1.37	0.39	1692380.68	14569638.19	40°07'03.627°N	104°48'50.863°W	1.54	
1025.00	2.590	179.830	1024.92	-2.59	-2.60	0.45	1692380.74	14569636.96	40°07'03.615°N	104°48'50.862°W	2.60	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#11 CASTLE PINES 19-11HZ(484'FSL & 988'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-11HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-11HZ AWB
Facility	SEC.19-T2N-R66W		

WELLPATH DATA (226 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
1057.00	3.300	187.740	1056.88	-4.23	-4.23	0.33	1692380.63	14569635.33	40°07'03.599"N	104°48'50.864"W	2.55	
1088.00	4.170	186.950	1087.81	-6.23	-6.23	0.07	1692380.37	14569633.33	40°07'03.579"N	104°48'50.867"W	2.81	
1120.00	4.920	188.270	1119.71	-8.75	-8.75	-0.26	1692380.04	14569630.81	40°07'03.555"N	104°48'50.871"W	2.37	
1152.00	4.970	188.970	1151.59	-11.47	-11.47	-0.68	1692379.63	14569628.09	40°07'03.528"N	104°48'50.877"W	0.24	
1183.00	5.670	188.880	1182.46	-14.31	-14.31	-1.12	1692379.19	14569625.25	40°07'03.500"N	104°48'50.882"W	2.26	
1215.00	6.500	188.970	1214.28	-17.67	-17.66	-1.65	1692378.67	14569621.90	40°07'03.466"N	104°48'50.889"W	2.59	
1247.00	6.900	186.770	1246.06	-21.36	-21.36	-2.16	1692378.17	14569618.20	40°07'03.430"N	104°48'50.896"W	1.49	
1279.00	7.250	188.710	1277.82	-25.27	-25.27	-2.69	1692377.65	14569614.29	40°07'03.391"N	104°48'50.903"W	1.32	
1310.00	8.350	189.670	1308.53	-29.42	-29.42	-3.37	1692376.98	14569610.14	40°07'03.350"N	104°48'50.911"W	3.57	
1342.00	9.230	188.880	1340.15	-34.25	-34.25	-4.15	1692376.21	14569605.32	40°07'03.303"N	104°48'50.921"W	2.78	
1373.00	10.280	186.330	1370.71	-39.46	-39.45	-4.84	1692375.53	14569600.11	40°07'03.251"N	104°48'50.930"W	3.66	
1405.00	11.120	185.630	1402.15	-45.37	-45.36	-5.46	1692374.92	14569594.20	40°07'03.193"N	104°48'50.938"W	2.66	
1437.00	11.820	183.960	1433.51	-51.71	-51.70	-5.99	1692374.41	14569587.86	40°07'03.130"N	104°48'50.945"W	2.42	
1468.00	12.480	184.220	1463.81	-58.22	-58.21	-6.45	1692373.96	14569581.36	40°07'03.066"N	104°48'50.951"W	2.14	
1500.00	13.100	182.110	1495.02	-65.29	-65.28	-6.84	1692373.58	14569574.29	40°07'02.996"N	104°48'50.956"W	2.43	
1562.00	13.970	183.700	1555.30	-79.78	-79.77	-7.58	1692372.87	14569559.80	40°07'02.853"N	104°48'50.966"W	1.53	
1594.00	14.370	183.340	1586.32	-87.60	-87.59	-8.06	1692372.41	14569551.99	40°07'02.775"N	104°48'50.972"W	1.28	
1626.00	14.460	181.940	1617.32	-95.56	-95.55	-8.43	1692372.06	14569544.03	40°07'02.697"N	104°48'50.977"W	1.12	
1658.00	15.160	183.260	1648.25	-103.73	-103.72	-8.80	1692371.70	14569535.86	40°07'02.616"N	104°48'50.981"W	2.43	
1689.00	15.910	184.310	1678.12	-112.01	-112.00	-9.35	1692371.17	14569527.58	40°07'02.534"N	104°48'50.988"W	2.58	
1721.00	16.350	185.280	1708.86	-120.87	-120.86	-10.10	1692370.45	14569518.72	40°07'02.447"N	104°48'50.998"W	1.61	
1753.00	16.960	185.450	1739.52	-130.00	-129.99	-10.96	1692369.61	14569509.59	40°07'02.356"N	104°48'51.009"W	1.91	
1809.00	17.750	185.800	1792.97	-146.63	-146.62	-12.59	1692368.00	14569492.97	40°07'02.192"N	104°48'51.030"W	1.42	LAST SURFACE MWD+IFR1 SURVEY
1878.00	16.820	185.420	1858.85	-167.04	-167.02	-14.60	1692366.04	14569472.58	40°07'01.991"N	104°48'51.056"W	1.36	FIRST BHGE MWD+IFR1+MSA SURVEY
1968.00	17.530	190.470	1944.84	-193.33	-193.31	-18.29	1692362.40	14569446.28	40°07'01.731"N	104°48'51.103"W	1.83	
2057.00	17.060	195.880	2029.82	-219.08	-219.05	-24.30	1692356.45	14569420.54	40°07'01.476"N	104°48'51.181"W	1.88	
2147.00	16.590	192.570	2115.97	-244.33	-244.29	-30.71	1692350.10	14569395.30	40°07'01.227"N	104°48'51.263"W	1.19	
2236.00	15.020	182.540	2201.62	-268.26	-268.22	-33.99	1692346.87	14569371.38	40°07'00.990"N	104°48'51.305"W	3.53	
2326.00	13.880	177.520	2288.78	-290.69	-290.66	-34.04	1692346.87	14569348.95	40°07'00.769"N	104°48'51.306"W	1.88	
2415.00	12.110	171.460	2375.50	-310.59	-310.56	-32.19	1692348.76	14569329.06	40°07'00.572"N	104°48'51.282"W	2.51	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#11 CASTLE PINES 19-11HZ(484'FSL & 988'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-11HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-11HZ AWP
Facility	SEC.19-T2N-R66W		

WELLPATH DATA (226 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
2504.00	10.530	170.590	2462.77	-327.85	-327.81	-29.47	1692351.51	14569311.82	40°07'00.402"N	104°48'51.247"W	1.79	
2594.00	8.570	171.440	2551.51	-342.59	-342.56	-27.13	1692353.88	14569297.08	40°07'00.256"N	104°48'51.217"W	2.18	
2683.00	6.850	172.530	2639.71	-354.41	-354.38	-25.45	1692355.59	14569285.27	40°07'00.139"N	104°48'51.196"W	1.94	
2772.00	3.530	175.570	2728.33	-362.40	-362.37	-24.55	1692356.50	14569277.28	40°07'00.060"N	104°48'51.184"W	3.74	
2861.00	2.570	255.620	2817.24	-365.63	-365.60	-26.27	1692354.79	14569274.05	40°07'00.028"N	104°48'51.206"W	4.48	
2951.00	2.000	315.770	2907.18	-365.01	-364.98	-29.32	1692351.74	14569274.66	40°07'00.034"N	104°48'51.245"W	2.60	
3040.00	0.150	167.650	2996.16	-364.01	-363.98	-30.38	1692350.68	14569275.66	40°07'00.044"N	104°48'51.259"W	2.39	
3129.00	0.060	264.850	3085.16	-364.13	-364.10	-30.40	1692350.66	14569275.54	40°07'00.043"N	104°48'51.259"W	0.19	
3219.00	0.110	202.100	3175.16	-364.22	-364.18	-30.48	1692350.58	14569275.46	40°07'00.042"N	104°48'51.260"W	0.11	
3308.00	0.030	181.100	3264.16	-364.32	-364.28	-30.51	1692350.55	14569275.36	40°07'00.041"N	104°48'51.261"W	0.09	
3397.00	0.040	181.470	3353.16	-364.37	-364.34	-30.52	1692350.54	14569275.30	40°07'00.041"N	104°48'51.261"W	0.01	
3487.00	0.110	243.200	3443.16	-364.44	-364.41	-30.59	1692350.47	14569275.23	40°07'00.040"N	104°48'51.262"W	0.11	
3576.00	0.070	176.010	3532.16	-364.54	-364.50	-30.67	1692350.39	14569275.14	40°07'00.039"N	104°48'51.263"W	0.12	
3666.00	0.190	147.030	3622.16	-364.72	-364.68	-30.58	1692350.48	14569274.96	40°07'00.037"N	104°48'51.262"W	0.15	
3755.00	0.250	250.030	3711.16	-364.91	-364.87	-30.68	1692350.38	14569274.77	40°07'00.035"N	104°48'51.263"W	0.39	
3845.00	0.180	123.450	3801.16	-365.05	-365.02	-30.75	1692350.31	14569274.62	40°07'00.034"N	104°48'51.264"W	0.43	
3934.00	0.260	340.430	3890.16	-364.94	-364.90	-30.70	1692350.36	14569274.74	40°07'00.035"N	104°48'51.263"W	0.47	
4023.00	0.090	352.430	3979.16	-364.68	-364.64	-30.78	1692350.28	14569274.99	40°07'00.038"N	104°48'51.264"W	0.19	
4113.00	0.070	300.180	4069.16	-364.58	-364.55	-30.83	1692350.23	14569275.09	40°07'00.039"N	104°48'51.265"W	0.08	
4202.00	0.060	253.390	4158.16	-364.57	-364.53	-30.93	1692350.13	14569275.11	40°07'00.039"N	104°48'51.266"W	0.06	
4291.00	0.150	165.450	4247.16	-364.69	-364.66	-30.94	1692350.12	14569274.98	40°07'00.037"N	104°48'51.266"W	0.18	
4381.00	0.150	121.620	4337.16	-364.87	-364.83	-30.81	1692350.25	14569274.80	40°07'00.036"N	104°48'51.265"W	0.12	
4470.00	0.040	55.320	4426.16	-364.91	-364.88	-30.69	1692350.37	14569274.76	40°07'00.035"N	104°48'51.263"W	0.16	
4559.00	0.040	288.180	4515.16	-364.89	-364.85	-30.69	1692350.37	14569274.79	40°07'00.036"N	104°48'51.263"W	0.08	
4649.00	0.160	312.670	4605.16	-364.79	-364.76	-30.81	1692350.25	14569274.88	40°07'00.036"N	104°48'51.265"W	0.14	
4738.00	0.030	237.030	4694.16	-364.72	-364.68	-30.92	1692350.14	14569274.95	40°07'00.037"N	104°48'51.266"W	0.17	
4827.00	0.170	296.410	4783.15	-364.67	-364.64	-31.06	1692350.00	14569275.00	40°07'00.038"N	104°48'51.268"W	0.18	
4917.00	0.100	349.480	4873.15	-364.54	-364.50	-31.20	1692349.86	14569275.14	40°07'00.039"N	104°48'51.270"W	0.15	
5006.00	0.060	293.720	4962.15	-364.44	-364.41	-31.25	1692349.81	14569275.23	40°07'00.040"N	104°48'51.270"W	0.09	
5096.00	0.030	133.980	5052.15	-364.44	-364.40	-31.28	1692349.78	14569275.23	40°07'00.040"N	104°48'51.271"W	0.10	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#11 CASTLE PINES 19-11HZ(484'FSL & 988'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-11HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-11HZ AWP
Facility	SEC.19-T2N-R66W		

WELLPATH DATA (226 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
5185.00	0.100	4.170	5141.15	-364.38	-364.34	-31.26	1692349.80	14569275.30	40°07'00.041"N	104°48'51.270"W	0.14	
5274.00	0.160	247.710	5230.15	-364.35	-364.31	-31.37	1692349.69	14569275.33	40°07'00.041"N	104°48'51.272"W	0.25	
5363.00	0.070	221.680	5319.15	-364.44	-364.40	-31.52	1692349.54	14569275.24	40°07'00.040"N	104°48'51.274"W	0.11	
5452.00	0.040	320.530	5408.15	-364.45	-364.42	-31.57	1692349.49	14569275.22	40°07'00.040"N	104°48'51.274"W	0.10	
5541.00	0.150	355.410	5497.15	-364.31	-364.28	-31.60	1692349.46	14569275.36	40°07'00.041"N	104°48'51.275"W	0.13	
5631.00	0.140	317.490	5587.15	-364.11	-364.08	-31.69	1692349.37	14569275.56	40°07'00.043"N	104°48'51.276"W	0.11	
5720.00	0.190	322.600	5676.15	-363.92	-363.88	-31.85	1692349.21	14569275.76	40°07'00.045"N	104°48'51.278"W	0.06	
5809.00	0.090	11.150	5765.15	-363.73	-363.69	-31.92	1692349.13	14569275.94	40°07'00.047"N	104°48'51.279"W	0.16	
5898.00	0.030	326.090	5854.15	-363.64	-363.61	-31.92	1692349.13	14569276.03	40°07'00.048"N	104°48'51.279"W	0.08	
5988.00	0.070	9.090	5944.15	-363.57	-363.53	-31.93	1692349.13	14569276.10	40°07'00.049"N	104°48'51.279"W	0.06	
6077.00	0.070	231.680	6033.15	-363.55	-363.51	-31.96	1692349.10	14569276.12	40°07'00.049"N	104°48'51.279"W	0.15	
6167.00	0.470	348.060	6123.15	-363.22	-363.19	-32.08	1692348.98	14569276.45	40°07'00.052"N	104°48'51.281"W	0.56	
6256.00	0.250	257.720	6212.15	-362.91	-362.87	-32.35	1692348.71	14569276.77	40°07'00.055"N	104°48'51.284"W	0.60	
6345.00	0.140	261.870	6301.15	-362.96	-362.93	-32.65	1692348.41	14569276.71	40°07'00.055"N	104°48'51.288"W	0.12	
6434.00	0.170	305.960	6390.15	-362.90	-362.86	-32.86	1692348.20	14569276.77	40°07'00.055"N	104°48'51.291"W	0.13	
6613.00	0.150	291.050	6569.15	-362.66	-362.62	-33.29	1692347.76	14569277.01	40°07'00.058"N	104°48'51.297"W	0.03	
6691.00†	1.271	351.160	6647.14	-361.77	-361.73	-33.52	1692347.53	14569277.90	40°07'00.066"N	104°48'51.299"W	1.54	KOP
6702.00	1.440	351.890	6658.14	-361.51	-361.48	-33.56	1692347.50	14569278.16	40°07'00.069"N	104°48'51.300"W	1.54	
6791.00	11.410	355.880	6746.47	-351.60	-351.56	-34.35	1692346.68	14569288.06	40°07'00.167"N	104°48'51.310"W	11.21	
6881.00	19.100	354.530	6833.23	-328.03	-327.99	-36.40	1692344.59	14569311.62	40°07'00.400"N	104°48'51.337"W	8.55	
6970.00	26.840	351.880	6915.12	-293.60	-293.55	-40.63	1692340.29	14569346.04	40°07'00.740"N	104°48'51.391"W	8.77	
7059.00	34.880	350.100	6991.45	-248.57	-248.52	-47.86	1692332.97	14569391.04	40°07'01.185"N	104°48'51.484"W	9.09	
7148.00	42.900	358.040	7060.71	-193.11	-193.05	-53.28	1692327.43	14569446.47	40°07'01.733"N	104°48'51.554"W	10.60	
7237.00	51.040	4.150	7121.43	-128.18	-128.12	-51.81	1692328.77	14569511.38	40°07'02.375"N	104°48'51.535"W	10.42	
7326.00	58.180	7.680	7172.95	-56.08	-56.03	-44.24	1692336.18	14569583.46	40°07'03.087"N	104°48'51.437"W	8.65	
7363.00†	61.403	7.723	7191.56	-24.39	-24.35	-39.95	1692340.40	14569615.14	40°07'03.400"N	104°48'51.382"W	8.71	ENTER LANDBOX (460'FSL & 1028'FEL,SEC.19) 40.1176112 -104.8142729
7416.00	66.020	7.780	7215.03	22.69	22.73	-33.55	1692346.71	14569662.20	40°07'03.866"N	104°48'51.300"W	8.71	
7505.00	73.340	2.770	7245.93	105.72	105.75	-25.97	1692354.11	14569745.21	40°07'04.686"N	104°48'51.202"W	9.77	
7594.00	79.200	359.530	7267.05	192.11	192.14	-24.26	1692355.63	14569831.57	40°07'05.540"N	104°48'51.180"W	7.47	
7683.00	85.040	357.730	7279.25	280.20	280.23	-26.38	1692353.33	14569919.62	40°07'06.410"N	104°48'51.208"W	6.86	LANDING (764'FSL & 1014'FEL,SEC.19) 40.1184473 -104.8142243

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#11 CASTLE PINES 19-11HZ(484'FSL & 988'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-11HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-11HZ AWP
Facility	SEC.19-T2N-R66W		

WELLPATH DATA (226 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
7772.00	91.380	356.490	7282.03	369.00	369.03	-30.87	1692348.66	14570008.38	40°07'07.288"N	104°48'51.265"W	7.26	
7861.00	91.290	356.680	7279.95	457.81	457.85	-36.17	1692343.18	14570097.15	40°07'08.166"N	104°48'51.334"W	0.24	
7951.00	91.420	357.620	7277.82	547.66	547.71	-40.64	1692338.52	14570186.96	40°07'09.054"N	104°48'51.391"W	1.05	
8040.00	91.390	357.620	7275.64	636.56	636.61	-44.33	1692334.64	14570275.82	40°07'09.932"N	104°48'51.439"W	0.03	
8129.00	91.290	357.650	7273.56	725.45	725.51	-48.01	1692330.78	14570364.67	40°07'10.811"N	104°48'51.486"W	0.12	
8218.00	91.570	357.990	7271.34	814.36	814.42	-51.39	1692327.22	14570453.54	40°07'11.689"N	104°48'51.529"W	0.49	
8307.00	91.260	357.790	7269.14	903.26	903.33	-54.67	1692323.76	14570542.41	40°07'12.568"N	104°48'51.572"W	0.41	
8397.00	91.420	358.870	7267.04	993.20	993.26	-57.29	1692320.95	14570632.30	40°07'13.457"N	104°48'51.605"W	1.21	
8486.00	91.320	0.520	7264.91	1082.17	1082.23	-57.76	1692320.29	14570721.24	40°07'14.336"N	104°48'51.612"W	1.86	
8575.00	91.380	1.710	7262.81	1171.13	1171.19	-56.03	1692321.83	14570810.16	40°07'15.215"N	104°48'51.589"W	1.34	
8606.00†	91.359	2.226	7262.07	1202.10	1202.16	-54.97	1692322.83	14570841.12	40°07'15.521"N	104°48'51.576"W	1.66	EXIT RADIUS HEEL (1686'FSL & 1043'FEL,SEC.19) 40.1209780 -104.8143265
8664.00	91.320	3.190	7260.72	1260.02	1260.08	-52.23	1692325.45	14570899.02	40°07'16.093"N	104°48'51.540"W	1.66	
8753.00	92.060	2.670	7258.09	1348.87	1348.93	-47.68	1692329.81	14570987.84	40°07'16.971"N	104°48'51.482"W	1.02	
8843.00	91.450	2.760	7255.33	1438.73	1438.78	-43.42	1692333.88	14571077.67	40°07'17.859"N	104°48'51.427"W	0.69	
8932.00	91.690	1.020	7252.90	1527.65	1527.70	-40.48	1692336.63	14571166.56	40°07'18.738"N	104°48'51.389"W	1.97	
9021.00	91.450	357.760	7250.46	1616.60	1616.65	-41.43	1692335.49	14571255.47	40°07'19.617"N	104°48'51.401"W	3.67	
9110.00	91.170	358.190	7248.42	1705.52	1705.57	-44.58	1692332.17	14571344.35	40°07'20.496"N	104°48'51.442"W	0.58	
9199.00	91.290	359.440	7246.51	1794.47	1794.53	-46.42	1692330.14	14571433.27	40°07'21.375"N	104°48'51.465"W	1.41	
9289.00	91.230	2.160	7244.53	1884.43	1884.49	-45.16	1692331.21	14571523.19	40°07'22.264"N	104°48'51.449"W	3.02	
9378.00	91.450	3.150	7242.45	1973.32	1973.37	-41.04	1692335.14	14571612.05	40°07'23.142"N	104°48'51.396"W	1.14	
9467.00	91.350	3.130	7240.28	2062.16	2062.21	-36.16	1692339.83	14571700.86	40°07'24.020"N	104°48'51.334"W	0.11	
9557.00	91.260	3.870	7238.23	2151.98	2152.01	-30.67	1692345.13	14571790.64	40°07'24.907"N	104°48'51.263"W	0.83	
9646.00	91.380	3.660	7236.18	2240.77	2240.80	-24.83	1692350.79	14571879.41	40°07'25.785"N	104°48'51.188"W	0.27	
9735.00	91.480	2.680	7233.96	2329.61	2329.63	-19.91	1692355.52	14571968.21	40°07'26.663"N	104°48'51.124"W	1.11	
9825.00	91.450	1.390	7231.65	2419.52	2419.55	-16.71	1692358.52	14572058.10	40°07'27.551"N	104°48'51.083"W	1.43	
9914.00	91.290	0.290	7229.53	2508.49	2508.51	-15.41	1692359.64	14572147.03	40°07'28.430"N	104°48'51.066"W	1.25	
10003.00	91.420	359.100	7227.42	2597.46	2597.48	-15.88	1692358.98	14572235.96	40°07'29.310"N	104°48'51.072"W	1.34	
10093.00	91.380	358.550	7225.22	2687.41	2687.44	-17.73	1692356.95	14572325.88	40°07'30.199"N	104°48'51.096"W	0.61	
10182.00	91.350	358.460	7223.10	2776.35	2776.38	-20.05	1692354.44	14572414.78	40°07'31.078"N	104°48'51.126"W	0.11	
10271.00	91.450	358.630	7220.93	2865.30	2865.32	-22.31	1692352.00	14572503.69	40°07'31.956"N	104°48'51.155"W	0.22	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#11 CASTLE PINES 19-11HZ(484'FSL & 988'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-11HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-11HZ AWB
Facility	SEC.19-T2N-R66W		

WELLPATH DATA (226 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
10361.00	91.480	358.150	7218.63	2955.23	2955.26	-24.84	1692349.29	14572593.58	40°07'32.845"N	104°48'51.188"W	0.53	
10450.00	90.400	357.740	7217.17	3044.15	3044.19	-28.03	1692345.91	14572682.47	40°07'33.724"N	104°48'51.229"W	1.30	
10539.00	90.430	357.420	7216.52	3133.07	3133.11	-31.79	1692341.97	14572771.34	40°07'34.603"N	104°48'51.277"W	0.36	
10629.00	90.460	357.690	7215.82	3222.98	3223.02	-35.62	1692337.94	14572861.21	40°07'35.491"N	104°48'51.327"W	0.30	
10718.00	90.280	357.900	7215.25	3311.91	3311.95	-39.05	1692334.33	14572950.10	40°07'36.370"N	104°48'51.371"W	0.31	
10808.00	90.370	358.810	7214.74	3401.86	3401.91	-41.63	1692331.56	14573040.02	40°07'37.259"N	104°48'51.404"W	1.02	
10897.00	90.370	358.860	7214.16	3490.84	3490.89	-43.44	1692329.57	14573128.96	40°07'38.138"N	104°48'51.427"W	0.06	
10986.00	90.400	359.040	7213.57	3579.82	3579.88	-45.07	1692327.75	14573217.90	40°07'39.018"N	104°48'51.448"W	0.21	
11075.00	90.370	359.770	7212.97	3668.81	3668.87	-46.00	1692326.64	14573306.86	40°07'39.897"N	104°48'51.460"W	0.82	
11165.00	90.490	1.250	7212.29	3758.81	3758.86	-45.20	1692327.25	14573396.82	40°07'40.786"N	104°48'51.450"W	1.65	
11254.00	90.460	1.070	7211.55	3847.79	3847.84	-43.39	1692328.87	14573485.76	40°07'41.666"N	104°48'51.427"W	0.21	
11344.00	90.340	4.040	7210.93	3937.69	3937.74	-39.38	1692332.69	14573575.63	40°07'42.554"N	104°48'51.375"W	3.30	
11433.00	90.310	3.610	7210.42	4026.50	4026.54	-33.45	1692338.44	14573664.41	40°07'43.432"N	104°48'51.299"W	0.48	
11523.00	90.460	3.100	7209.82	4116.35	4116.38	-28.18	1692343.52	14573754.23	40°07'44.320"N	104°48'51.231"W	0.59	
11612.00	90.400	2.600	7209.15	4205.24	4205.27	-23.75	1692347.76	14573843.09	40°07'45.198"N	104°48'51.174"W	0.57	
11702.00	90.430	0.710	7208.50	4295.20	4295.22	-21.15	1692350.17	14573933.02	40°07'46.087"N	104°48'51.140"W	2.10	
11791.00	90.310	0.840	7207.92	4384.19	4384.21	-19.95	1692351.18	14574021.97	40°07'46.966"N	104°48'51.125"W	0.20	
11881.00	90.400	2.810	7207.36	4474.14	4474.16	-17.08	1692353.86	14574111.89	40°07'47.855"N	104°48'51.088"W	2.19	
11970.00	90.430	2.240	7206.72	4563.06	4563.07	-13.16	1692357.59	14574200.77	40°07'48.734"N	104°48'51.037"W	0.64	
12060.00	90.460	0.880	7206.02	4653.02	4653.04	-10.71	1692359.85	14574290.70	40°07'49.623"N	104°48'51.006"W	1.51	
12239.00	90.220	357.820	7204.96	4831.98	4832.00	-12.74	1692357.45	14574469.59	40°07'51.391"N	104°48'51.032"W	1.71	
12328.00	90.310	355.790	7204.55	4920.83	4920.86	-17.70	1692352.31	14574558.40	40°07'52.269"N	104°48'51.096"W	2.28	
12418.00	89.940	355.170	7204.35	5010.54	5010.57	-24.80	1692345.03	14574648.07	40°07'53.156"N	104°48'51.187"W	0.80	
12507.00	89.850	357.170	7204.51	5099.33	5099.37	-30.74	1692338.90	14574736.82	40°07'54.034"N	104°48'51.264"W	2.25	
12597.00	90.090	358.020	7204.56	5189.25	5189.29	-34.52	1692334.94	14574826.70	40°07'54.922"N	104°48'51.312"W	0.98	
12686.00	90.000	358.020	7204.49	5278.19	5278.24	-37.59	1692331.68	14574915.60	40°07'55.801"N	104°48'51.352"W	0.10	
12776.00	89.970	358.100	7204.51	5368.14	5368.19	-40.64	1692328.45	14575005.51	40°07'56.690"N	104°48'51.391"W	0.09	
12865.00	89.600	359.210	7204.85	5457.11	5457.16	-42.73	1692326.17	14575094.44	40°07'57.569"N	104°48'51.418"W	1.31	
12955.00	89.510	359.320	7205.55	5547.10	5547.15	-43.88	1692324.83	14575184.39	40°07'58.459"N	104°48'51.433"W	0.16	
13044.00	89.380	359.420	7206.41	5636.08	5636.14	-44.86	1692323.67	14575273.34	40°07'59.338"N	104°48'51.446"W	0.18	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#11 CASTLE PINES 19-11HZ(484'FSL & 988'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-11HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-11HZ AWP
Facility	SEC.19-T2N-R66W		

WELLPATH DATA (226 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
13134.00	91.140	1.170	7206.00	5726.08	5726.13	-44.40	1692323.94	14575363.30	40°08'00.227"N	104°48'51.440"W	2.76	
13223.00	91.290	1.590	7204.11	5815.03	5815.08	-42.26	1692325.90	14575452.22	40°08'01.106"N	104°48'51.412"W	0.50	
13313.00	91.050	1.970	7202.28	5904.97	5905.02	-39.46	1692328.50	14575542.13	40°08'01.995"N	104°48'51.376"W	0.50	
13402.00	91.260	2.960	7200.48	5993.88	5993.92	-35.63	1692332.14	14575631.00	40°08'02.874"N	104°48'51.327"W	1.14	
13491.00	91.260	2.930	7198.52	6082.74	6082.78	-31.06	1692336.53	14575719.83	40°08'03.752"N	104°48'51.268"W	0.03	
13581.00	91.320	1.450	7196.50	6172.65	6172.69	-27.62	1692339.78	14575809.71	40°08'04.640"N	104°48'51.224"W	1.65	
13670.00	90.710	1.360	7194.92	6261.62	6261.65	-25.44	1692341.77	14575898.64	40°08'05.519"N	104°48'51.196"W	0.69	
13849.00	90.740	0.850	7192.66	6440.57	6440.60	-21.99	1692344.85	14576077.53	40°08'07.288"N	104°48'51.151"W	0.29	
13938.00	90.890	0.780	7191.39	6529.56	6529.58	-20.72	1692345.93	14576166.48	40°08'08.167"N	104°48'51.135"W	0.19	
14028.00	90.710	359.630	7190.13	6619.54	6619.57	-20.40	1692346.06	14576256.43	40°08'09.056"N	104°48'51.131"W	1.29	
14117.00	90.550	358.940	7189.16	6708.53	6708.56	-21.51	1692344.76	14576345.38	40°08'09.936"N	104°48'51.145"W	0.80	
14206.00	90.770	359.180	7188.13	6797.51	6797.54	-22.97	1692343.12	14576434.32	40°08'10.815"N	104°48'51.164"W	0.37	
14296.00	89.630	358.860	7187.82	6887.49	6887.53	-24.51	1692341.39	14576524.27	40°08'11.704"N	104°48'51.184"W	1.32	
14385.00	89.290	358.930	7188.66	6976.47	6976.51	-26.23	1692339.49	14576613.21	40°08'12.584"N	104°48'51.206"W	0.39	
14475.00	89.170	359.950	7189.86	7066.46	7066.49	-27.11	1692338.42	14576703.16	40°08'13.473"N	104°48'51.217"W	1.14	
14564.00	89.350	0.010	7191.01	7155.45	7155.48	-27.14	1692338.21	14576792.12	40°08'14.352"N	104°48'51.217"W	0.21	
14654.00	89.140	359.940	7192.20	7245.44	7245.48	-27.18	1692337.98	14576882.07	40°08'15.242"N	104°48'51.218"W	0.25	
14743.00	89.110	0.080	7193.56	7334.43	7334.47	-27.16	1692337.81	14576971.03	40°08'16.121"N	104°48'51.218"W	0.16	
14832.00	89.140	0.390	7194.92	7423.42	7423.46	-26.80	1692337.99	14577059.98	40°08'17.000"N	104°48'51.213"W	0.35	
15012.00	90.000	2.290	7196.27	7603.36	7603.39	-22.59	1692341.82	14577239.85	40°08'18.778"N	104°48'51.159"W	1.16	
15101.00	90.000	1.930	7196.27	7692.30	7692.33	-19.31	1692344.91	14577328.76	40°08'19.657"N	104°48'51.117"W	0.40	
15191.00	90.000	0.950	7196.27	7782.28	7782.30	-17.05	1692346.98	14577418.70	40°08'20.546"N	104°48'51.087"W	1.09	
15280.00	90.060	0.880	7196.22	7871.27	7871.29	-15.63	1692348.22	14577507.66	40°08'21.426"N	104°48'51.069"W	0.10	
15370.00	91.080	358.670	7195.33	7961.25	7961.28	-15.98	1692347.68	14577597.61	40°08'22.315"N	104°48'51.074"W	2.70	
15459.00	90.120	357.620	7194.40	8050.20	8050.22	-18.86	1692344.61	14577686.51	40°08'23.194"N	104°48'51.111"W	1.60	
15549.00	90.090	357.280	7194.23	8140.10	8140.13	-22.87	1692340.42	14577776.38	40°08'24.083"N	104°48'51.162"W	0.38	
15638.00	90.030	356.770	7194.14	8228.98	8229.01	-27.49	1692335.62	14577865.21	40°08'24.961"N	104°48'51.222"W	0.58	
15728.00	90.060	359.120	7194.07	8318.91	8318.95	-30.71	1692332.20	14577955.11	40°08'25.850"N	104°48'51.263"W	2.61	
15907.00	90.030	0.310	7193.93	8497.90	8497.94	-31.60	1692330.94	14578134.03	40°08'27.619"N	104°48'51.275"W	0.67	
15996.00	90.000	0.310	7193.90	8586.90	8586.94	-31.12	1692331.23	14578222.99	40°08'28.498"N	104°48'51.269"W	0.03	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#11 CASTLE PINES 19-11HZ(484'FSL & 988'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-11HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-11HZ AWB
Facility	SEC.19-T2N-R66W		

WELLPATH DATA (226 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
16085.00	90.030	359.630	7193.88	8675.90	8675.94	-31.17	1692331.00	14578311.95	40°08'29.378"N	104°48'51.269"W	0.76	
16175.00	90.090	359.540	7193.78	8765.90	8765.94	-31.82	1692330.16	14578401.91	40°08'30.267"N	104°48'51.278"W	0.12	
16265.00	89.880	359.630	7193.81	8855.89	8855.94	-32.47	1692329.32	14578491.88	40°08'31.156"N	104°48'51.286"W	0.25	
16354.00	89.910	0.860	7193.97	8944.89	8944.94	-32.09	1692329.52	14578580.84	40°08'32.036"N	104°48'51.281"W	1.38	
16444.00	89.850	0.780	7194.16	9034.88	9034.93	-30.80	1692330.62	14578670.79	40°08'32.925"N	104°48'51.265"W	0.11	
16533.00	90.030	0.370	7194.25	9123.88	9123.92	-29.91	1692331.32	14578759.76	40°08'33.804"N	104°48'51.253"W	0.50	
16623.00	90.030	0.210	7194.21	9213.88	9213.92	-29.46	1692331.59	14578849.72	40°08'34.694"N	104°48'51.247"W	0.18	
16712.00	89.720	359.700	7194.40	9302.88	9302.92	-29.53	1692331.33	14578938.68	40°08'35.573"N	104°48'51.248"W	0.67	
16802.00	90.430	0.070	7194.28	9392.88	9392.92	-29.71	1692330.97	14579028.65	40°08'36.463"N	104°48'51.250"W	0.89	
16891.00	90.180	359.690	7193.81	9481.88	9481.92	-29.89	1692330.59	14579117.61	40°08'37.342"N	104°48'51.253"W	0.51	
17070.00	91.660	358.800	7190.93	9660.83	9660.87	-32.25	1692327.86	14579296.49	40°08'39.111"N	104°48'51.283"W	0.96	
17080.00†	91.609	358.829	7190.65	9670.82	9670.86	-32.46	1692327.64	14579306.48	40°08'39.209"N	104°48'51.286"W	0.59	ENTER RADIUS TOE (371'FNL & 1032'FEL, SEC.18) 40.1442248 -104.8142461
17160.00	91.200	359.060	7188.69	9750.78	9750.83	-33.93	1692326.00	14579386.40	40°08'40.000"N	104°48'51.305"W	0.59	
17250.00	90.030	357.910	7187.72	9840.74	9840.79	-36.31	1692323.43	14579476.32	40°08'40.889"N	104°48'51.335"W	1.82	
17376.00	90.030	356.930	7187.66	9966.60	9966.66	-41.98	1692317.50	14579602.13	40°08'42.132"N	104°48'51.409"W	0.78	LAST BHGE MWD+IFR1+MSA SURVEY
17400.00	90.030	356.930	7187.64	9990.57	9990.62	-43.27	1692316.16	14579626.08	40°08'42.369"N	104°48'51.425"W	0.00	PTB (51'FNL & 1042'FEL, SEC.18) 40.1451026 -104.8142847

HOLE & CASING SECTIONS - Ref Wellbore: CASTLE PINES 19-11HZ AWB Ref Wellpath: CASTLE PINES 19-11HZ 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	1849.00	1823.00	26.00	1831.12	0.00	0.00	-158.57	-13.79

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#11 CASTLE PINES 19-11HZ(484'FSL & 988'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-11HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-11HZ AWB
Facility	SEC.19-T2N-R66W		

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	1.42	-149.94	1692230.40	14569640.66	40°07'03.655"N	104°48'52.798"W	polygon
SEC.19-T2N-R66W	2.00	1.42	-149.94	1692230.40	14569640.66	40°07'03.655"N	104°48'52.798"W	polygon
CASTLE PINES 19-11HZ BHL REV-1(50'FNL & 1022'FEL,SEC.18)	7195.00	9991.50	-23.49	1692335.93	14579627.00	40°08'42.378"N	104°48'51.170"W	point
CASTLE PINES 19-11HZ INT. TARGET@3000'VS	7218.00	3000.04	-31.56	1692342.47	14572638.33	40°07'33.288"N	104°48'51.274"W	point
CASTLE PINES 19-11HZ HEEL REV-1(782'FSL & 1023'FEL,SEC.19)	7286.00	298.70	-34.68	1692345.00	14569938.07	40°07'06.593"N	104°48'51.314"W	point
CASTLE PINES 19-11HZ LANDBOX	7286.00	0.00	0.00	1692380.29	14569639.56	40°07'03.641"N	104°48'50.868"W	polygon
CASTLE PINES 19-11HZ RADIUS 1	7286.00	834.37	-329.98	1692048.70	14570472.90	40°07'11.886"N	104°48'55.116"W	polygon
CASTLE PINES 19-11HZ RADIUS 2	7286.00	10029.93	-320.26	1692039.20	14579664.80	40°08'42.758"N	104°48'54.992"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: CASTLE PINES 19-11HZ AWB				Ref Wellpath: CASTLE PINES 19-11HZ 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 19-11HZ AWB
1809.00	17376.00	Custom APC ISCWSA REV 2 MWD+IFR1+MSA (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+MSA <1878 - 17376>		CASTLE PINES 19-11HZ AWB
17376.00	17400.00	Blind Drilling (std)	Projection to bit		CASTLE PINES 19-11HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#11 CASTLE PINES 19-11HZ(484'FSL & 988'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-11HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-11HZ AWB
Facility	SEC.19-T2N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
136.00	0.440	109.520	136.00	FIRST SURFACE MWD+IFR1 SURVEY
1809.00	17.750	185.800	1792.97	LAST SURFACE MWD+IFR1 SURVEY
1878.00	16.820	185.420	1858.85	FIRST BHGE MWD+IFR1+MSA SURVEY
6691.00	1.271	351.160	6647.14	KOP
7363.00	61.403	7.723	7191.56	ENTER LANDBOX (460'FSL & 1028'FEL,SEC.19) 40.1176112 -104.8142729
7683.00	85.040	357.730	7279.25	LANDING (764'FSL & 1014'FEL,SEC.19) 40.1184473 -104.8142243
8606.00	91.359	2.226	7262.07	EXIT RADIUS HEEL (1686'FSL & 1043'FEL,SEC.19) 40.1209780 -104.8143265
17080.00	91.609	358.829	7190.65	ENTER RADIUS TOE (371'FNL & 1032'FEL,SEC.18) 40.1442248 -104.8142461
17376.00	90.030	356.930	7187.66	LAST BHGE MWD+IFR1+MSA SURVEY
17400.00	90.030	356.930	7187.64	PTB (51'FNL & 1042'FEL,SEC.18) 40.1451026 -104.8142847