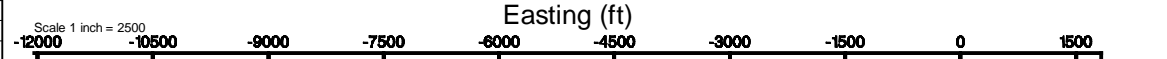


KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#14 CASTLE PINES 19-14HZ(483'FSL & 943'FEL,SEC.19)
 Field: WELD COUNTY (UTM/TRUE NORTH) Well: CASTLE PINES 19-14HZ
 Facility: SEC.19-T2N-R66W Wellbore: CASTLE PINES 19-14HZ PWB

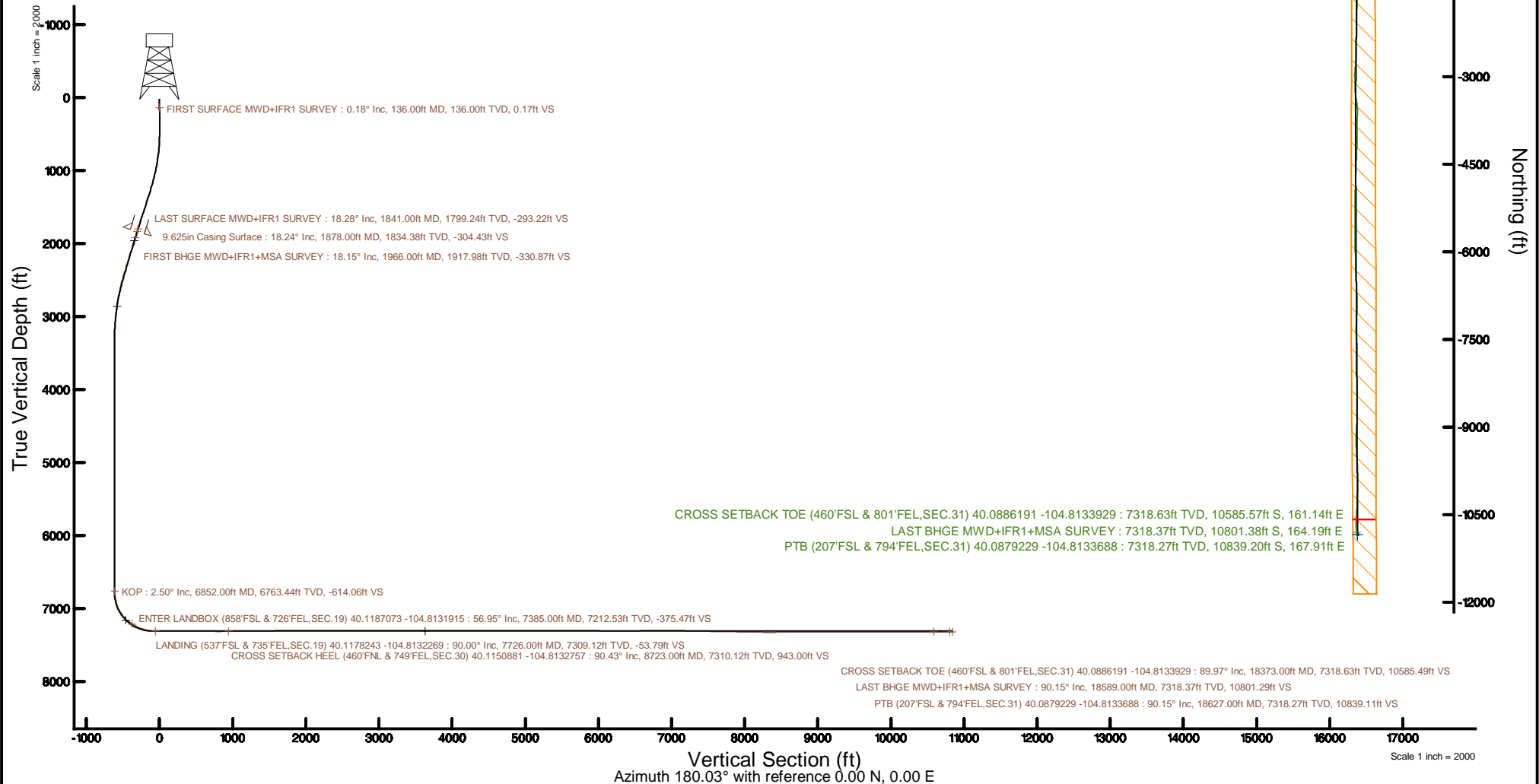


Plot reference wellpath is CASTLE PINES 19-14HZ PWP Rev-A.0	Grid System: NAD83 / UTM Zone 13 North, US feet
True vertical depths are referenced to PD 564 (26) (RT)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to PD 564 (26) (RT)	North Reference: True north
PD 564 (26) (RT) to Mean Sea Level: 4902 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#14 CASTLE PINES 19-14HZ(483'FSL & 943'FEL,SEC.19)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: painsetr on 2019-01-08
	Database: WA_DEN_Anadarko_Defn



SLOT#14 CASTLE PINES 19-14HZ(483'FSL & 943'FEL,SEC.19)

KOP : 6763.44ft TVD, 613.96ft N, 188.25ft E
 ENTER LANDBOX (858'FSL & 726'FEL,SEC.19) 40.1187073 -104.8131915 : 7212.53ft TVD, 375.36ft N, 217.43ft E
 FIRST BHGE MWD+IFR1+MSA SURVEY : 1917.98ft TVD, 330.83ft N, 86.63ft E
 9.625in Casing Surface : 1834.38ft TVD, 304.39ft N, 79.16ft E
 LAST SURFACE MWD+IFR1 SURVEY : 1799.24ft TVD, 293.18ft N, 76.20ft E
 LANDING (537'FSL & 735'FEL,SEC.19) 40.1178243 -104.8132269 : 7309.12ft TVD, 53.68ft N, 207.53ft E
 FIRST SURFACE MWD+IFR1 SURVEY : 136.00ft TVD, 0.17ft S, 0.01ft W
 CROSS SETBACK HEEL (460'FNL & 749'FEL,SEC.30) 40.1150881 -104.8132757 : 7310.12ft TVD, 943.10ft S, 193.89ft E



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#14 CASTLE PINES 19-14HZ(483'FSL & 943'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-14HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-14HZ AWP
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	1/8/2019 at 10:11 AM
Convergence at slot	0.12° East	Database/Source file	WA_DEN_Anadarko_Defn/CASTLE_PINES_19-14HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-1.82	195.00	1692425.33	14569639.25	40°07'03.637"N	104°48'50.288"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#14 CASTLE PINES 19-14HZ(483'FSL & 943'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	180.03°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#14 CASTLE PINES 19-14HZ(483'FSL & 943'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-14HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-14HZ AWB
Facility	SEC.19-T2N-R66W		

WELLPATH DATA (212 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	183.780	0.00	0.00	0.00	0.00	1692425.33	14569639.25	40°07'03.637"N	104°48'50.288"W	0.00	
26.00	0.000	183.780	26.00	0.00	0.00	0.00	1692425.33	14569639.25	40°07'03.637"N	104°48'50.288"W	0.00	
136.00	0.180	183.780	136.00	0.17	-0.17	-0.01	1692425.32	14569639.07	40°07'03.635"N	104°48'50.288"W	0.16	FIRST SURFACE MWD+IFR1 SURVEY
231.00	0.260	197.850	231.00	0.53	-0.53	-0.09	1692425.24	14569638.72	40°07'03.632"N	104°48'50.289"W	0.10	
326.00	0.440	193.010	326.00	1.09	-1.09	-0.24	1692425.10	14569638.16	40°07'03.626"N	104°48'50.291"W	0.19	
422.00	0.180	52.120	422.00	1.35	-1.35	-0.20	1692425.13	14569637.89	40°07'03.624"N	104°48'50.291"W	0.62	
517.00	0.790	34.020	516.99	0.72	-0.72	0.28	1692425.62	14569638.53	40°07'03.630"N	104°48'50.284"W	0.65	
612.00	2.770	26.460	611.94	-1.88	1.88	1.67	1692427.00	14569641.13	40°07'03.656"N	104°48'50.266"W	2.09	
707.00	5.580	11.610	706.68	-8.46	8.46	3.63	1692428.94	14569647.71	40°07'03.721"N	104°48'50.241"W	3.15	
802.00	8.660	16.000	800.94	-19.87	19.86	6.53	1692431.81	14569659.11	40°07'03.833"N	104°48'50.204"W	3.29	
898.00	9.900	16.500	895.68	-34.73	34.72	10.86	1692436.12	14569673.98	40°07'03.980"N	104°48'50.148"W	1.29	
993.00	12.170	12.310	988.92	-52.35	52.34	15.32	1692440.53	14569691.60	40°07'04.154"N	104°48'50.091"W	2.53	
1088.00	13.930	13.010	1081.46	-73.28	73.27	20.03	1692445.20	14569712.52	40°07'04.361"N	104°48'50.030"W	1.86	
1183.00	15.780	12.750	1173.28	-97.02	97.01	25.45	1692450.57	14569736.27	40°07'04.596"N	104°48'49.960"W	1.95	
1279.00	17.230	14.330	1265.33	-123.53	123.52	31.86	1692456.91	14569762.78	40°07'04.858"N	104°48'49.878"W	1.58	
1373.00	18.460	13.980	1354.80	-151.47	151.45	38.90	1692463.89	14569790.71	40°07'05.134"N	104°48'49.787"W	1.31	
1468.00	18.240	16.970	1444.97	-180.29	180.26	46.87	1692471.80	14569819.54	40°07'05.418"N	104°48'49.685"W	1.02	
1562.00	19.120	14.300	1534.02	-209.28	209.25	54.97	1692479.84	14569848.53	40°07'05.705"N	104°48'49.580"W	1.31	
1658.00	18.150	13.630	1624.99	-239.05	239.02	62.37	1692487.18	14569878.30	40°07'05.999"N	104°48'49.485"W	1.03	
1753.00	17.360	14.590	1715.46	-267.15	267.12	69.43	1692494.17	14569906.40	40°07'06.277"N	104°48'49.394"W	0.89	
1841.00	18.280	14.510	1799.24	-293.22	293.18	76.20	1692500.88	14569932.47	40°07'06.534"N	104°48'49.307"W	1.05	LAST SURFACE MWD+IFR1 SURVEY
1966.00	18.150	16.490	1917.98	-330.87	330.83	86.63	1692511.24	14569970.12	40°07'06.906"N	104°48'49.173"W	0.51	FIRST BHGE MWD+IFR1+MSA SURVEY
2055.00	17.080	18.330	2002.80	-356.58	356.53	94.68	1692519.22	14569995.83	40°07'07.160"N	104°48'49.069"W	1.36	
2145.00	17.940	20.180	2088.63	-382.14	382.09	103.62	1692528.11	14570021.40	40°07'07.413"N	104°48'48.954"W	1.14	
2234.00	17.900	23.490	2173.32	-407.55	407.50	113.80	1692538.23	14570046.82	40°07'07.684"N	104°48'48.823"W	1.15	
2324.00	17.050	30.230	2259.17	-431.65	431.58	125.95	1692550.33	14570070.92	40°07'07.902"N	104°48'48.667"W	2.44	
2413.00	18.020	28.900	2344.04	-454.98	454.91	139.18	1692563.50	14570094.26	40°07'08.132"N	104°48'48.497"W	1.18	
2503.00	17.990	24.630	2429.63	-479.81	479.73	151.70	1692575.96	14570119.10	40°07'08.378"N	104°48'48.335"W	1.47	
2592.00	16.360	17.020	2514.67	-504.30	504.22	161.10	1692585.31	14570143.60	40°07'08.620"N	104°48'48.214"W	3.12	
2681.00	14.760	12.790	2600.41	-527.34	527.26	167.28	1692591.44	14570166.64	40°07'08.847"N	104°48'48.135"W	2.20	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#14 CASTLE PINES 19-14HZ(483'FSL & 943'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-14HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-14HZ AWB
Facility	SEC.19-T2N-R66W		

WELLPATH DATA (212 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
2770.00	12.950	12.870	2686.82	-548.13	548.04	172.01	1692596.12	14570187.43	40°07'09.053"N	104°48'48.074"W	2.03	
2860.00	10.850	12.050	2774.88	-566.24	566.16	176.02	1692600.10	14570205.54	40°07'09.232"N	104°48'48.022"W	2.34	
2949.00	8.970	18.700	2862.55	-581.01	580.92	180.00	1692604.04	14570220.31	40°07'09.378"N	104°48'47.971"W	2.47	
3038.00	7.400	25.280	2950.64	-592.77	592.68	184.67	1692608.68	14570232.07	40°07'09.494"N	104°48'47.911"W	2.05	
3128.00	6.410	22.520	3039.99	-602.65	602.56	189.07	1692613.06	14570241.96	40°07'09.592"N	104°48'47.854"W	1.16	
3217.00	3.780	6.650	3128.63	-610.16	610.06	191.31	1692615.29	14570249.47	40°07'09.666"N	104°48'47.825"W	3.33	
3306.00	2.210	347.340	3217.51	-614.75	614.65	191.27	1692615.24	14570254.05	40°07'09.711"N	104°48'47.826"W	2.07	
3396.00	0.860	304.940	3307.48	-616.83	616.73	190.34	1692614.30	14570256.13	40°07'09.732"N	104°48'47.838"W	1.86	
3485.00	0.110	179.000	3396.48	-617.13	617.03	189.79	1692613.76	14570256.43	40°07'09.735"N	104°48'47.845"W	1.04	
3574.00	0.040	144.380	3485.48	-617.02	616.92	189.81	1692613.78	14570256.32	40°07'09.733"N	104°48'47.845"W	0.09	
3664.00	0.120	132.770	3575.48	-616.93	616.83	189.90	1692613.86	14570256.23	40°07'09.733"N	104°48'47.844"W	0.09	
3753.00	0.040	267.580	3664.48	-616.86	616.76	189.94	1692613.90	14570256.16	40°07'09.732"N	104°48'47.843"W	0.17	
3843.00	0.130	165.840	3754.48	-616.76	616.66	189.93	1692613.90	14570256.06	40°07'09.731"N	104°48'47.843"W	0.16	
3932.00	0.290	253.370	3843.47	-616.60	616.50	189.74	1692613.71	14570255.90	40°07'09.729"N	104°48'47.846"W	0.35	
4022.00	0.260	314.060	3933.47	-616.67	616.58	189.38	1692613.34	14570255.97	40°07'09.730"N	104°48'47.850"W	0.31	
4111.00	0.310	192.360	4022.47	-616.58	616.48	189.18	1692613.14	14570255.88	40°07'09.729"N	104°48'47.853"W	0.56	
4200.00	0.310	204.250	4111.47	-616.13	616.03	189.03	1692612.99	14570255.42	40°07'09.725"N	104°48'47.855"W	0.07	
4289.00	0.520	210.010	4200.47	-615.56	615.46	188.73	1692612.69	14570254.85	40°07'09.719"N	104°48'47.859"W	0.24	
4379.00	0.540	176.480	4290.47	-614.78	614.68	188.55	1692612.52	14570254.08	40°07'09.711"N	104°48'47.861"W	0.34	
4468.00	0.280	97.370	4379.46	-614.33	614.24	188.79	1692612.76	14570253.63	40°07'09.707"N	104°48'47.858"W	0.63	
4557.00	0.110	321.400	4468.46	-614.37	614.28	188.95	1692612.92	14570253.67	40°07'09.707"N	104°48'47.856"W	0.41	
4647.00	0.030	12.660	4558.46	-614.46	614.37	188.90	1692612.87	14570253.76	40°07'09.708"N	104°48'47.856"W	0.10	
4736.00	0.090	251.300	4647.46	-614.46	614.37	188.84	1692612.81	14570253.76	40°07'09.708"N	104°48'47.857"W	0.12	
4826.00	0.070	318.850	4737.46	-614.48	614.39	188.74	1692612.71	14570253.78	40°07'09.708"N	104°48'47.859"W	0.10	
4915.00	0.170	352.810	4826.46	-614.65	614.56	188.69	1692612.66	14570253.95	40°07'09.710"N	104°48'47.859"W	0.13	
5004.00	0.150	238.480	4915.46	-614.72	614.63	188.57	1692612.54	14570254.02	40°07'09.711"N	104°48'47.861"W	0.30	
5094.00	0.030	303.880	5005.46	-614.67	614.58	188.45	1692612.42	14570253.97	40°07'09.710"N	104°48'47.862"W	0.16	
5183.00	0.100	296.900	5094.46	-614.72	614.63	188.36	1692612.33	14570254.02	40°07'09.711"N	104°48'47.863"W	0.08	
5272.00	0.070	6.210	5183.46	-614.81	614.72	188.30	1692612.27	14570254.11	40°07'09.712"N	104°48'47.864"W	0.11	
5361.00	0.070	318.010	5272.46	-614.91	614.81	188.27	1692612.24	14570254.20	40°07'09.713"N	104°48'47.865"W	0.06	

REFERENCE WELLPATH IDENTIFICATION				
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)		Slot	SLOT#14 CASTLE PINES 19-14HZ(483'FSL & 943'FEL,SEC.19)
Area	COLORADO		Well	CASTLE PINES 19-14HZ
Field	WELD COUNTY (UTM/TRUE NORTH)		Wellbore	CASTLE PINES 19-14HZ AWP
Facility	SEC.19-T2N-R66W			

WELLPATH DATA (212 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
5450.00	0.070	24.470	5361.46	-615.00	614.90	188.26	1692612.22	14570254.29	40°07'09.714"N	104°48'47.865"W	0.09	
5540.00	0.040	157.410	5451.46	-615.02	614.92	188.29	1692612.26	14570254.32	40°07'09.714"N	104°48'47.864"W	0.11	
5629.00	0.130	314.060	5540.46	-615.06	614.96	188.23	1692612.20	14570254.36	40°07'09.714"N	104°48'47.865"W	0.19	
5718.00	0.000	8.170	5629.46	-615.13	615.03	188.16	1692612.13	14570254.43	40°07'09.715"N	104°48'47.866"W	0.15	
5807.00	0.070	281.530	5718.46	-615.14	615.04	188.10	1692612.07	14570254.44	40°07'09.715"N	104°48'47.867"W	0.08	
5897.00	0.090	330.790	5808.46	-615.21	615.12	188.02	1692611.98	14570254.51	40°07'09.716"N	104°48'47.868"W	0.08	
5986.00	0.040	81.220	5897.46	-615.28	615.18	188.01	1692611.98	14570254.58	40°07'09.716"N	104°48'47.868"W	0.12	
6075.00	0.060	226.930	5986.46	-615.25	615.16	188.01	1692611.98	14570254.55	40°07'09.716"N	104°48'47.868"W	0.11	
6165.00	0.030	342.580	6076.46	-615.24	615.15	187.97	1692611.94	14570254.54	40°07'09.716"N	104°48'47.868"W	0.09	
6254.00	0.030	318.770	6165.46	-615.28	615.19	187.95	1692611.91	14570254.58	40°07'09.716"N	104°48'47.869"W	0.01	
6343.00	0.110	230.860	6254.46	-615.24	615.15	187.86	1692611.83	14570254.54	40°07'09.716"N	104°48'47.870"W	0.13	
6522.00	0.070	324.430	6433.46	-615.22	615.13	187.67	1692611.63	14570254.52	40°07'09.716"N	104°48'47.872"W	0.07	
6611.00	0.060	230.630	6522.46	-615.24	615.14	187.60	1692611.57	14570254.54	40°07'09.716"N	104°48'47.873"W	0.11	
6700.00	0.030	231.750	6611.46	-615.20	615.10	187.55	1692611.51	14570254.49	40°07'09.715"N	104°48'47.874"W	0.03	
6789.00	0.060	263.020	6700.46	-615.18	615.08	187.48	1692611.45	14570254.47	40°07'09.715"N	104°48'47.875"W	0.04	
6852.00†	2.497	144.161	6763.44	-614.06	613.96	188.25	1692612.22	14570253.36	40°07'09.704"N	104°48'47.865"W	4.01	KOP
6879.00	3.580	143.800	6790.40	-612.90	612.81	189.09	1692613.07	14570252.20	40°07'09.693"N	104°48'47.854"W	4.01	
6968.00	13.440	142.570	6878.32	-602.42	602.32	197.04	1692621.03	14570241.74	40°07'09.589"N	104°48'47.752"W	11.08	
7057.00	22.320	155.850	6962.97	-578.74	578.63	210.27	1692634.31	14570218.09	40°07'09.355"N	104°48'47.581"W	10.92	
7146.00	31.770	172.440	7042.26	-539.96	539.84	220.31	1692644.42	14570179.34	40°07'08.972"N	104°48'47.452"W	13.50	
7236.00	40.550	179.280	7114.88	-487.09	486.98	223.80	1692648.02	14570126.50	40°07'08.449"N	104°48'47.407"W	10.72	
7325.00	50.620	184.280	7177.10	-423.68	423.57	221.59	1692645.95	14570063.11	40°07'07.823"N	104°48'47.436"W	12.00	
7385.00†	56.954	185.530	7212.53	-375.47	375.36	217.43	1692641.89	14570014.91	40°07'07.346"N	104°48'47.489"W	10.69	ENTER LANDBOX (858'FSL & 726'FEL,SEC.19) 40.1187073 -104.8131915
7414.00	60.020	186.070	7227.69	-350.88	350.77	214.93	1692639.44	14569990.33	40°07'07.103"N	104°48'47.521"W	10.69	
7503.00	68.130	183.560	7266.57	-271.18	271.08	208.28	1692632.96	14569910.65	40°07'06.316"N	104°48'47.607"W	9.46	
7592.00	76.290	179.730	7293.75	-186.56	186.46	205.91	1692630.77	14569826.06	40°07'05.480"N	104°48'47.638"W	10.04	
7681.00	85.900	178.910	7307.51	-98.75	98.64	206.96	1692632.01	14569738.28	40°07'04.612"N	104°48'47.624"W	10.84	
7726.00	90.000	179.640	7309.12	-53.79	53.68	207.53	1692632.67	14569693.34	40°07'04.167"N	104°48'47.617"W	9.25	LANDING (537'FSL & 735'FEL,SEC.19) 40.1178243 -104.8132269
7770.00	89.880	180.210	7309.17	-9.79	9.68	207.59	1692632.82	14569649.36	40°07'03.733"N	104°48'47.616"W	1.32	
7860.00	89.850	181.170	7309.38	80.20	-80.31	206.51	1692631.92	14569559.40	40°07'02.843"N	104°48'47.630"W	1.07	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#14 CASTLE PINES 19-14HZ(483'FSL & 943'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-14HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-14HZ AWB
Facility	SEC.19-T2N-R66W		

WELLPATH DATA (212 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
7949.00	90.030	182.010	7309.47	169.17	-169.27	204.04	1692629.64	14569470.47	40°07'01.964"N	104°48'47.662"W	0.97	
8038.00	89.910	182.020	7309.52	258.12	-258.22	200.91	1692626.70	14569381.55	40°07'01.085"N	104°48'47.702"W	0.14	
8127.00	89.780	181.550	7309.76	347.07	-347.17	198.14	1692624.11	14569292.63	40°07'00.206"N	104°48'47.738"W	0.55	
8216.00	89.910	181.760	7310.00	436.04	-436.14	195.57	1692621.73	14569203.69	40°06'59.327"N	104°48'47.771"W	0.28	
8306.00	89.880	181.010	7310.17	526.01	-526.11	193.39	1692619.74	14569113.75	40°06'58.438"N	104°48'47.799"W	0.83	
8395.00	89.910	179.700	7310.33	615.01	-615.11	192.84	1692619.38	14569024.79	40°06'57.558"N	104°48'47.806"W	1.47	
8484.00	89.820	179.670	7310.54	704.01	-704.10	193.33	1692620.05	14568935.83	40°06'56.679"N	104°48'47.800"W	0.11	
8573.00	89.850	179.660	7310.80	793.00	-793.10	193.85	1692620.76	14568846.87	40°06'55.799"N	104°48'47.793"W	0.04	
8662.00	90.430	179.980	7310.58	882.00	-882.10	194.13	1692621.22	14568757.91	40°06'54.920"N	104°48'47.789"W	0.74	
8723.00†	90.430	180.475	7310.12	943.00	-943.10	193.89	1692621.11	14568696.93	40°06'54.317"N	104°48'47.792"W	0.81	CROSS SETBACK HEEL (460'FNL & 749'FEL,SEC.30) 40.1150881 -104.8132757
8752.00	90.430	180.710	7309.90	972.00	-972.10	193.59	1692620.87	14568667.94	40°06'54.031"N	104°48'47.796"W	0.81	
8841.00	90.580	181.700	7309.12	1060.98	-1061.07	191.71	1692619.19	14568579.00	40°06'53.151"N	104°48'47.820"W	1.13	
8930.00	90.250	182.440	7308.47	1149.92	-1150.01	188.50	1692616.16	14568490.09	40°06'52.272"N	104°48'47.862"W	0.91	
9019.00	90.520	181.480	7307.88	1238.86	-1238.96	185.46	1692613.30	14568401.18	40°06'51.393"N	104°48'47.901"W	1.12	
9108.00	90.590	180.920	7307.01	1327.84	-1327.93	183.59	1692611.63	14568312.23	40°06'50.514"N	104°48'47.925"W	0.63	
9198.00	90.680	181.220	7306.02	1417.82	-1417.91	181.91	1692610.13	14568222.29	40°06'49.625"N	104°48'47.947"W	0.35	
9287.00	90.680	181.410	7304.96	1506.79	-1506.88	179.87	1692608.28	14568133.35	40°06'48.746"N	104°48'47.973"W	0.21	
9376.00	90.710	182.080	7303.88	1595.74	-1595.83	177.16	1692605.76	14568044.42	40°06'47.867"N	104°48'48.008"W	0.75	
9465.00	90.680	182.250	7302.80	1684.67	-1684.76	173.80	1692602.58	14567955.52	40°06'46.988"N	104°48'48.051"W	0.19	
9555.00	90.120	182.040	7302.17	1774.61	-1774.70	170.43	1692599.40	14567865.62	40°06'46.099"N	104°48'48.094"W	0.66	
9644.00	90.120	181.540	7301.99	1863.57	-1863.65	167.65	1692596.81	14567776.69	40°06'45.220"N	104°48'48.130"W	0.56	
9734.00	90.090	181.450	7301.82	1953.54	-1953.62	165.30	1692594.65	14567686.75	40°06'44.331"N	104°48'48.160"W	0.11	
9823.00	90.030	180.610	7301.73	2042.52	-2042.61	163.70	1692593.24	14567597.80	40°06'43.452"N	104°48'48.181"W	0.95	
9912.00	90.220	180.830	7301.53	2131.52	-2131.60	162.58	1692592.31	14567508.84	40°06'42.572"N	104°48'48.195"W	0.33	
10001.00	90.220	180.760	7301.19	2220.51	-2220.59	161.35	1692591.26	14567419.88	40°06'41.693"N	104°48'48.211"W	0.08	
10091.00	90.220	180.700	7300.85	2310.50	-2310.58	160.20	1692590.30	14567329.93	40°06'40.804"N	104°48'48.226"W	0.07	
10180.00	90.090	180.620	7300.61	2399.50	-2399.58	159.18	1692589.46	14567240.97	40°06'39.924"N	104°48'48.239"W	0.17	
10269.00	90.310	181.190	7300.29	2488.48	-2488.56	157.77	1692588.24	14567152.01	40°06'39.045"N	104°48'48.257"W	0.69	
10359.00	90.590	182.110	7299.59	2578.44	-2578.52	155.18	1692585.84	14567062.08	40°06'38.156"N	104°48'48.291"W	1.07	
10448.00	89.320	180.580	7299.66	2667.42	-2667.49	153.09	1692583.94	14566973.14	40°06'37.276"N	104°48'48.318"W	2.23	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#14 CASTLE PINES 19-14HZ(483'FSL & 943'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-14HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-14HZ AWB
Facility	SEC.19-T2N-R66W		

WELLPATH DATA (212 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
10538.00	90.650	183.510	7299.68	2757.35	-2757.42	149.88	1692580.92	14566883.24	40°06'36.388"N	104°48'48.359"W	3.58	
10627.00	89.850	186.580	7299.29	2846.00	-2846.07	142.05	1692573.28	14566794.62	40°06'35.512"N	104°48'48.460"W	3.56	
10716.00	89.940	182.140	7299.46	2934.72	-2934.79	135.29	1692566.70	14566705.92	40°06'34.635"N	104°48'48.547"W	4.99	
10806.00	89.780	177.800	7299.68	3024.70	-3024.77	135.34	1692566.94	14566615.98	40°06'33.746"N	104°48'48.546"W	4.83	
10895.00	89.880	176.920	7299.94	3113.60	-3113.67	139.44	1692571.22	14566527.12	40°06'32.867"N	104°48'48.493"W	1.00	
10984.00	89.880	180.280	7300.13	3202.56	-3202.63	141.61	1692573.58	14566438.20	40°06'31.988"N	104°48'48.465"W	3.78	
11163.00	89.660	169.770	7300.85	3380.63	-3380.71	157.11	1692589.45	14566260.23	40°06'30.228"N	104°48'48.266"W	5.87	
11253.00	89.970	172.170	7301.14	3469.50	-3469.58	171.24	1692603.75	14566171.41	40°06'29.350"N	104°48'48.084"W	2.69	
11342.00	90.220	179.950	7300.99	3558.21	-3558.30	177.35	1692610.05	14566082.74	40°06'28.473"N	104°48'48.006"W	8.75	
11432.00	89.940	180.510	7300.86	3648.21	-3648.30	176.98	1692609.87	14565992.78	40°06'27.584"N	104°48'48.010"W	0.70	
11521.00	90.000	180.090	7300.91	3737.21	-3737.30	176.52	1692609.59	14565903.81	40°06'26.705"N	104°48'48.016"W	0.48	
11611.00	89.940	179.830	7300.96	3827.21	-3827.30	176.58	1692609.84	14565813.85	40°06'25.815"N	104°48'48.015"W	0.30	
11700.00	90.000	180.770	7301.00	3916.21	-3916.30	176.12	1692609.56	14565724.89	40°06'24.936"N	104°48'48.021"W	1.06	
11790.00	90.220	180.980	7300.83	4006.20	-4006.29	174.74	1692608.38	14565634.93	40°06'24.046"N	104°48'48.039"W	0.34	
11879.00	90.150	181.490	7300.54	4095.18	-4095.27	172.82	1692606.65	14565545.98	40°06'23.167"N	104°48'48.064"W	0.58	
11969.00	90.280	182.200	7300.21	4185.13	-4185.22	169.93	1692603.94	14565456.06	40°06'22.278"N	104°48'48.101"W	0.80	
12058.00	90.030	182.520	7299.97	4274.06	-4274.14	166.26	1692600.46	14565367.17	40°06'21.399"N	104°48'48.148"W	0.46	
12148.00	90.120	182.070	7299.85	4363.99	-4364.07	162.66	1692597.05	14565277.27	40°06'20.511"N	104°48'48.195"W	0.51	
12237.00	90.310	182.300	7299.51	4452.92	-4453.00	159.26	1692593.84	14565188.36	40°06'19.632"N	104°48'48.238"W	0.34	
12327.00	90.650	182.030	7298.76	4542.86	-4542.94	155.86	1692590.63	14565098.46	40°06'18.743"N	104°48'48.282"W	0.48	
12416.00	89.480	182.080	7298.66	4631.80	-4631.88	152.67	1692587.63	14565009.55	40°06'17.864"N	104°48'48.323"W	1.32	
12506.00	89.420	181.870	7299.52	4721.74	-4721.82	149.57	1692584.71	14564919.63	40°06'16.975"N	104°48'48.363"W	0.24	
12595.00	89.630	181.710	7300.26	4810.70	-4810.77	146.79	1692582.12	14564830.71	40°06'16.096"N	104°48'48.399"W	0.30	
12685.00	89.510	181.500	7300.94	4900.66	-4900.74	144.27	1692579.79	14564740.78	40°06'15.207"N	104°48'48.431"W	0.27	
12774.00	89.290	180.660	7301.87	4989.64	-4989.71	142.59	1692578.30	14564651.83	40°06'14.328"N	104°48'48.453"W	0.98	
12863.00	89.420	180.620	7302.87	5078.63	-5078.70	141.60	1692577.49	14564562.88	40°06'13.449"N	104°48'48.466"W	0.15	
12953.00	90.030	181.320	7303.30	5168.62	-5168.69	140.08	1692576.16	14564472.92	40°06'12.559"N	104°48'48.485"W	1.03	
13043.00	90.280	180.630	7303.06	5258.60	-5258.67	138.54	1692574.81	14564382.97	40°06'11.670"N	104°48'48.505"W	0.82	
13132.00	90.250	180.230	7302.65	5347.60	-5347.67	137.88	1692574.33	14564294.01	40°06'10.791"N	104°48'48.514"W	0.45	
13222.00	90.090	180.140	7302.38	5437.60	-5437.67	137.59	1692574.23	14564204.05	40°06'09.901"N	104°48'48.517"W	0.20	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#14 CASTLE PINES 19-14HZ(483'FSL & 943'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-14HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-14HZ AWB
Facility	SEC.19-T2N-R66W		

WELLPATH DATA (212 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
13311.00	90.120	179.910	7302.22	5526.60	-5526.67	137.55	1692574.38	14564115.08	40°06'09.022"N	104°48'48.518"W	0.26	
13400.00	90.340	179.670	7301.86	5615.60	-5615.67	137.87	1692574.89	14564026.12	40°06'08.142"N	104°48'48.514"W	0.37	
13490.00	90.370	179.300	7301.30	5705.59	-5705.66	138.68	1692575.89	14563936.16	40°06'07.253"N	104°48'48.503"W	0.41	
13579.00	90.250	179.190	7300.82	5794.58	-5794.65	139.85	1692577.25	14563847.21	40°06'06.373"N	104°48'48.488"W	0.18	
13669.00	88.800	178.790	7301.57	5884.56	-5884.63	141.44	1692579.02	14563757.27	40°06'05.484"N	104°48'48.468"W	1.67	
13758.00	88.920	179.410	7303.34	5973.53	-5973.61	142.84	1692580.60	14563668.34	40°06'04.605"N	104°48'48.450"W	0.71	
13848.00	88.920	178.770	7305.03	6063.50	-6063.58	144.27	1692582.22	14563578.40	40°06'03.716"N	104°48'48.431"W	0.71	
13936.00	88.860	178.540	7306.74	6151.46	-6151.54	146.33	1692584.47	14563490.48	40°06'02.847"N	104°48'48.405"W	0.27	
14026.00	88.950	178.460	7308.46	6241.41	-6241.49	148.69	1692587.01	14563400.57	40°06'01.958"N	104°48'48.375"W	0.13	
14115.00	90.950	177.870	7308.54	6330.36	-6330.44	151.54	1692590.05	14563311.66	40°06'01.079"N	104°48'48.338"W	2.34	
14205.00	91.050	177.130	7306.97	6420.26	-6420.34	155.46	1692594.16	14563221.81	40°06'00.190"N	104°48'48.287"W	0.83	
14294.00	91.020	177.080	7305.36	6509.13	-6509.21	159.96	1692598.83	14563132.98	40°05'59.312"N	104°48'48.230"W	0.07	
14384.00	91.080	177.740	7303.71	6599.02	-6599.10	164.02	1692603.09	14563043.13	40°05'58.424"N	104°48'48.177"W	0.74	
14473.00	91.110	177.960	7302.01	6687.94	-6688.02	167.36	1692606.61	14562954.26	40°05'57.545"N	104°48'48.134"W	0.25	
14562.00	90.860	178.070	7300.48	6776.87	-6776.96	170.44	1692609.88	14562865.36	40°05'56.666"N	104°48'48.095"W	0.31	
14652.00	90.800	178.900	7299.17	6866.83	-6866.92	172.82	1692612.44	14562775.45	40°05'55.777"N	104°48'48.064"W	0.92	
14741.00	88.710	181.040	7299.55	6955.82	-6955.90	172.87	1692612.68	14562686.49	40°05'54.898"N	104°48'48.063"W	3.36	
14831.00	88.860	182.750	7301.46	7045.74	-7045.83	169.89	1692609.89	14562596.60	40°05'54.009"N	104°48'48.102"W	1.91	
14920.00	89.080	183.780	7303.06	7134.59	-7134.67	164.83	1692605.01	14562507.78	40°05'53.131"N	104°48'48.167"W	1.18	
15010.00	88.860	181.450	7304.68	7224.48	-7224.56	160.72	1692601.09	14562417.92	40°05'52.243"N	104°48'48.220"W	2.60	
15099.00	88.950	180.770	7306.38	7313.44	-7313.52	159.00	1692599.56	14562328.99	40°05'51.364"N	104°48'48.242"W	0.77	
15189.00	89.020	177.930	7307.98	7403.41	-7403.49	160.02	1692600.77	14562239.06	40°05'50.475"N	104°48'48.229"W	3.16	
15279.00	88.710	175.990	7309.76	7493.26	-7493.35	164.79	1692605.72	14562149.25	40°05'49.587"N	104°48'48.167"W	2.18	
15368.00	88.860	177.540	7311.65	7582.09	-7582.18	169.81	1692610.93	14562060.46	40°05'48.709"N	104°48'48.103"W	1.75	
15458.00	89.050	179.800	7313.29	7672.05	-7672.14	171.90	1692613.20	14561970.55	40°05'47.820"N	104°48'48.076"W	2.52	
15547.00	89.010	179.690	7314.80	7761.03	-7761.12	172.30	1692613.79	14561881.60	40°05'46.941"N	104°48'48.071"W	0.13	
15636.00	88.830	178.420	7316.47	7850.00	-7850.09	173.76	1692615.44	14561792.67	40°05'46.061"N	104°48'48.052"W	1.44	
15726.00	89.050	179.670	7318.14	7939.97	-7940.06	175.26	1692617.13	14561702.73	40°05'45.172"N	104°48'48.033"W	1.41	
15815.00	88.740	180.090	7319.85	8028.96	-8029.05	175.45	1692617.50	14561613.79	40°05'44.293"N	104°48'48.030"W	0.59	
15905.00	88.860	180.920	7321.74	8118.93	-8119.02	174.66	1692616.89	14561523.85	40°05'43.404"N	104°48'48.041"W	0.93	

REFERENCE WELLPATH IDENTIFICATION				
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)		Slot	SLOT#14 CASTLE PINES 19-14HZ(483'FSL & 943'FEL,SEC.19)
Area	COLORADO		Well	CASTLE PINES 19-14HZ
Field	WELD COUNTY (UTM/TRUE NORTH)		Wellbore	CASTLE PINES 19-14HZ AWP
Facility	SEC.19-T2N-R66W			

WELLPATH DATA (212 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
15994.00	88.920	181.180	7323.46	8207.90	-8207.99	173.03	1692615.45	14561434.91	40°05'42.524"N	104°48'48.062"W	0.30	
16084.00	89.940	181.070	7324.36	8297.88	-8297.97	171.26	1692613.87	14561344.97	40°05'41.635"N	104°48'48.084"W	1.14	
16173.00	90.180	178.760	7324.27	8386.87	-8386.96	171.39	1692614.19	14561256.01	40°05'40.756"N	104°48'48.083"W	2.61	
16263.00	90.340	179.430	7323.86	8476.86	-8476.95	172.81	1692615.80	14561166.06	40°05'39.867"N	104°48'48.064"W	0.77	
16352.00	90.150	180.000	7323.48	8565.86	-8565.95	173.25	1692616.43	14561077.10	40°05'38.987"N	104°48'48.059"W	0.68	
16442.00	90.000	180.130	7323.36	8655.86	-8655.95	173.15	1692616.51	14560987.13	40°05'38.098"N	104°48'48.060"W	0.22	
16531.00	90.310	179.640	7323.12	8744.86	-8744.95	173.33	1692616.88	14560898.17	40°05'37.218"N	104°48'48.058"W	0.65	
16621.00	90.250	180.020	7322.68	8834.85	-8834.94	173.60	1692617.33	14560808.21	40°05'36.329"N	104°48'48.054"W	0.43	
16710.00	90.310	183.260	7322.24	8923.81	-8923.89	171.05	1692614.97	14560719.29	40°05'35.450"N	104°48'48.087"W	3.64	
16800.00	89.940	183.900	7322.05	9013.63	-9013.72	165.43	1692609.55	14560629.49	40°05'34.562"N	104°48'48.159"W	0.82	
16889.00	89.850	182.900	7322.21	9102.48	-9102.56	160.15	1692604.45	14560540.67	40°05'33.684"N	104°48'48.227"W	1.13	
16979.00	90.000	180.320	7322.33	9192.44	-9192.52	157.62	1692602.12	14560450.75	40°05'32.795"N	104°48'48.260"W	2.87	
17069.00	90.090	178.860	7322.26	9282.43	-9282.51	158.27	1692602.95	14560360.79	40°05'31.906"N	104°48'48.251"W	1.63	
17158.00	90.060	177.050	7322.14	9371.37	-9371.45	161.44	1692606.31	14560271.89	40°05'31.027"N	104°48'48.211"W	2.03	
17248.00	90.150	177.070	7321.98	9461.25	-9461.33	166.06	1692611.11	14560182.06	40°05'30.139"N	104°48'48.151"W	0.10	
17337.00	90.150	177.270	7321.74	9550.14	-9550.22	170.45	1692615.69	14560093.21	40°05'29.260"N	104°48'48.095"W	0.22	
17427.00	90.340	176.060	7321.36	9639.98	-9640.07	175.69	1692621.11	14560003.41	40°05'28.372"N	104°48'48.027"W	1.36	
17516.00	90.220	177.980	7320.92	9728.85	-9728.94	180.32	1692625.92	14559914.58	40°05'27.494"N	104°48'47.968"W	2.16	
17606.00	90.120	179.620	7320.66	9818.83	-9818.92	182.20	1692627.99	14559824.65	40°05'26.605"N	104°48'47.944"W	1.83	
17695.00	90.310	180.510	7320.32	9907.82	-9907.92	182.10	1692628.08	14559735.68	40°05'25.726"N	104°48'47.945"W	1.02	
17784.00	90.400	181.750	7319.77	9996.80	-9996.90	180.35	1692626.51	14559646.74	40°05'24.846"N	104°48'47.967"W	1.40	
17874.00	90.030	181.650	7319.43	10086.77	-10086.86	177.68	1692624.03	14559556.81	40°05'23.957"N	104°48'48.002"W	0.43	
17963.00	90.030	181.510	7319.39	10175.73	-10175.82	175.22	1692621.76	14559467.87	40°05'23.078"N	104°48'48.033"W	0.16	
18053.00	89.940	181.660	7319.41	10265.70	-10265.79	172.73	1692619.46	14559377.94	40°05'22.189"N	104°48'48.065"W	0.19	
18142.00	90.310	181.890	7319.21	10354.66	-10354.75	169.98	1692616.89	14559289.01	40°05'21.310"N	104°48'48.101"W	0.49	
18231.00	90.250	182.370	7318.78	10443.60	-10443.68	166.67	1692613.77	14559200.10	40°05'20.431"N	104°48'48.144"W	0.54	
18321.00	89.970	182.240	7318.61	10533.53	-10533.61	163.05	1692610.34	14559110.20	40°05'19.542"N	104°48'48.190"W	0.34	
18373.00†	89.970	181.960	7318.63	10585.49	-10585.57	161.14	1692608.55	14559058.25	40°05'19.029"N	104°48'48.215"W	0.54	CROSS SETBACK TOE (460'FSL & 801'FEL,SEC.31) 40.0886191 -104.8133929
18410.00	89.970	181.760	7318.65	10622.47	-10622.56	159.94	1692607.42	14559021.29	40°05'18.663"N	104°48'48.230"W	0.54	
18500.00	90.120	179.180	7318.58	10712.46	-10712.54	159.20	1692606.87	14558931.33	40°05'17.774"N	104°48'48.240"W	2.87	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#14 CASTLE PINES 19-14HZ(483'FSL & 943'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-14HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-14HZ AWB
Facility	SEC.19-T2N-R66W		

WELLPATH DATA (212 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
18589.00	90.150	174.390	7318.37	10801.29	-10801.38	164.19	1692612.05	14558842.54	40°05'16.896"N	104°48'48.175"W	5.38	LAST BHGE MWD+IFR1+MSA SURVEY
18627.00	90.150	174.390	7318.27	10839.11	-10839.20	167.91	1692615.84	14558804.75	40°05'16.522"N	104°48'48.128"W	0.00	PTB (207'FSL & 794'FEL,SEC.31) 40.0879229 -104.8133688

HOLE & CASING SECTIONS - Ref Wellbore: CASTLE PINES 19-14HZ AWB Ref Wellpath: CASTLE PINES 19-14HZ 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	1878.00	1852.00	26.00	1834.38	0.00	0.00	304.39	79.16

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#14 CASTLE PINES 19-14HZ(483'FSL & 943'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-14HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-14HZ 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.30-T2N-R66W	2.00	1.82	-195.00	1692230.40	14569640.66	40°07'03.655"N	104°48'52.798"W	polygon
SEC.31-T2N-R66W	2.00	1.82	-195.00	1692230.40	14569640.66	40°07'03.655"N	104°48'52.798"W	polygon
CASTLE PINES 19-14HZ BHL REV-1(202'FSL & 780'FEL,SEC.31)	7310.00	-10843.90	182.11	1692630.05	14558800.08	40°05'16.476"N	104°48'47.945"W	point
CASTLE PINES 19-14HZ HEEL REV-1(578'FSL & 755'FEL,SEC.19)	7310.00	94.37	187.63	1692612.69	14569733.97	40°07'04.570"N	104°48'47.873"W	point
CASTLE PINES 19-14HZ LANDBOX	7310.00	0.00	0.00	1692425.33	14569639.25	40°07'03.637"N	104°48'50.288"W	polygon
CASTLE PINES 19-14HZ SETBACK 1	7310.00	0.00	0.00	1692425.33	14569639.25	40°07'03.637"N	104°48'50.288"W	polygon
CASTLE PINES 19-14HZ SETBACK 2	7310.00	0.00	0.00	1692425.33	14569639.25	40°07'03.637"N	104°48'50.288"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: CASTLE PINES 19-14HZ AWB Ref Wellpath: CASTLE PINES 19-14HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	1841.00	Custom APC_ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC_ISCWSA Rev-2 MWD+IFR1 <136 - 1841>	CASTLE PINES 19-14HZ AWB
1841.00	18589.00	Custom APC_ISCWSA REV 2 MWD+IFR1+MSA (approximation)	BHGE Custom APC_ISCWSA Rev-2 MWD+IFR1+MSA <1966 - 18589>	CASTLE PINES 19-14HZ AWB
18589.00	18627.00	Blind Drilling (std)	Projection to bit	CASTLE PINES 19-14HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#14 CASTLE PINES 19-14HZ(483'FSL & 943'FEL,SEC.19)
Area	COLORADO	Well	CASTLE PINES 19-14HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CASTLE PINES 19-14HZ AWB
Facility	SEC.19-T2N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
136.00	0.180	183.780	136.00	FIRST SURFACE MWD+IFR1 SURVEY
1841.00	18.280	14.510	1799.24	LAST SURFACE MWD+IFR1 SURVEY
1966.00	18.150	16.490	1917.98	FIRST BHGE MWD+IFR1+MSA SURVEY
6852.00	2.497	144.161	6763.44	KOP
7385.00	56.954	185.530	7212.53	ENTER LANDBOX (858'FSL & 726'FEL,SEC.19) 40.1187073 -104.8131915
7726.00	90.000	179.640	7309.12	LANDING (537'FSL & 735'FEL,SEC.19) 40.1178243 -104.8132269
8723.00	90.430	180.475	7310.12	CROSS SETBACK HEEL (460'FNL & 749'FEL,SEC.30) 40.1150881 -104.8132757
18373.00	89.970	181.960	7318.63	CROSS SETBACK TOE (460'FSL & 801'FEL,SEC.31) 40.0886191 -104.8133929
18589.00	90.150	174.390	7318.37	LAST BHGE MWD+IFR1+MSA SURVEY
18627.00	90.150	174.390	7318.27	PTB (207'FSL & 794'FEL,SEC.31) 40.0879229 -104.8133688