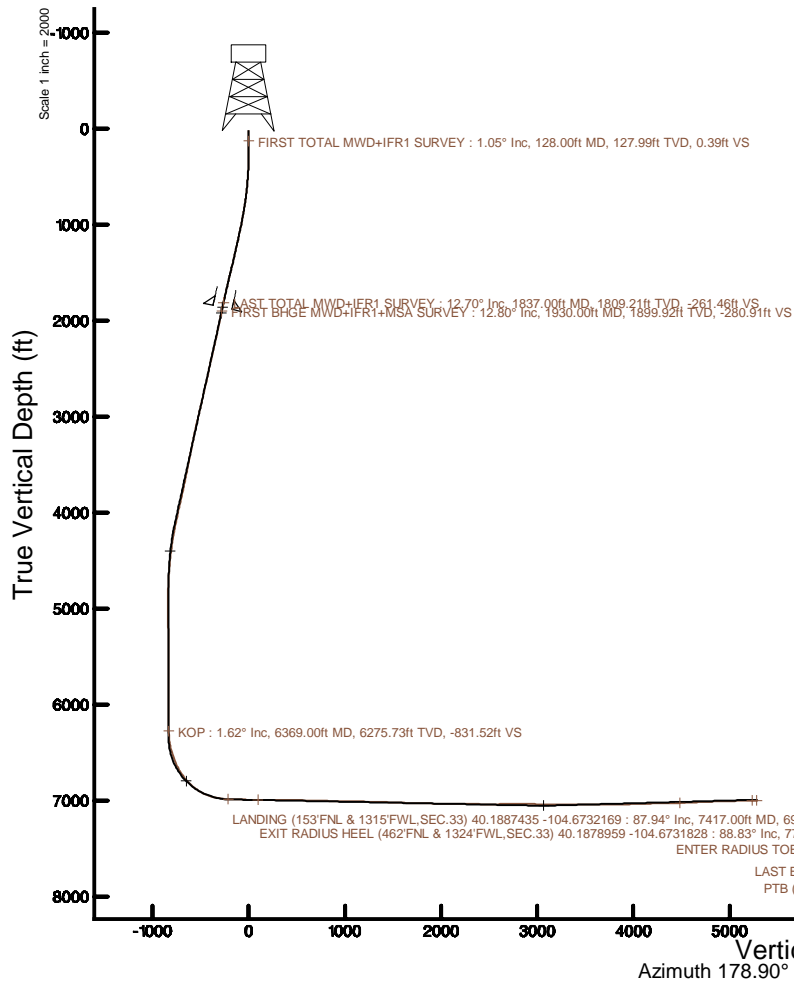
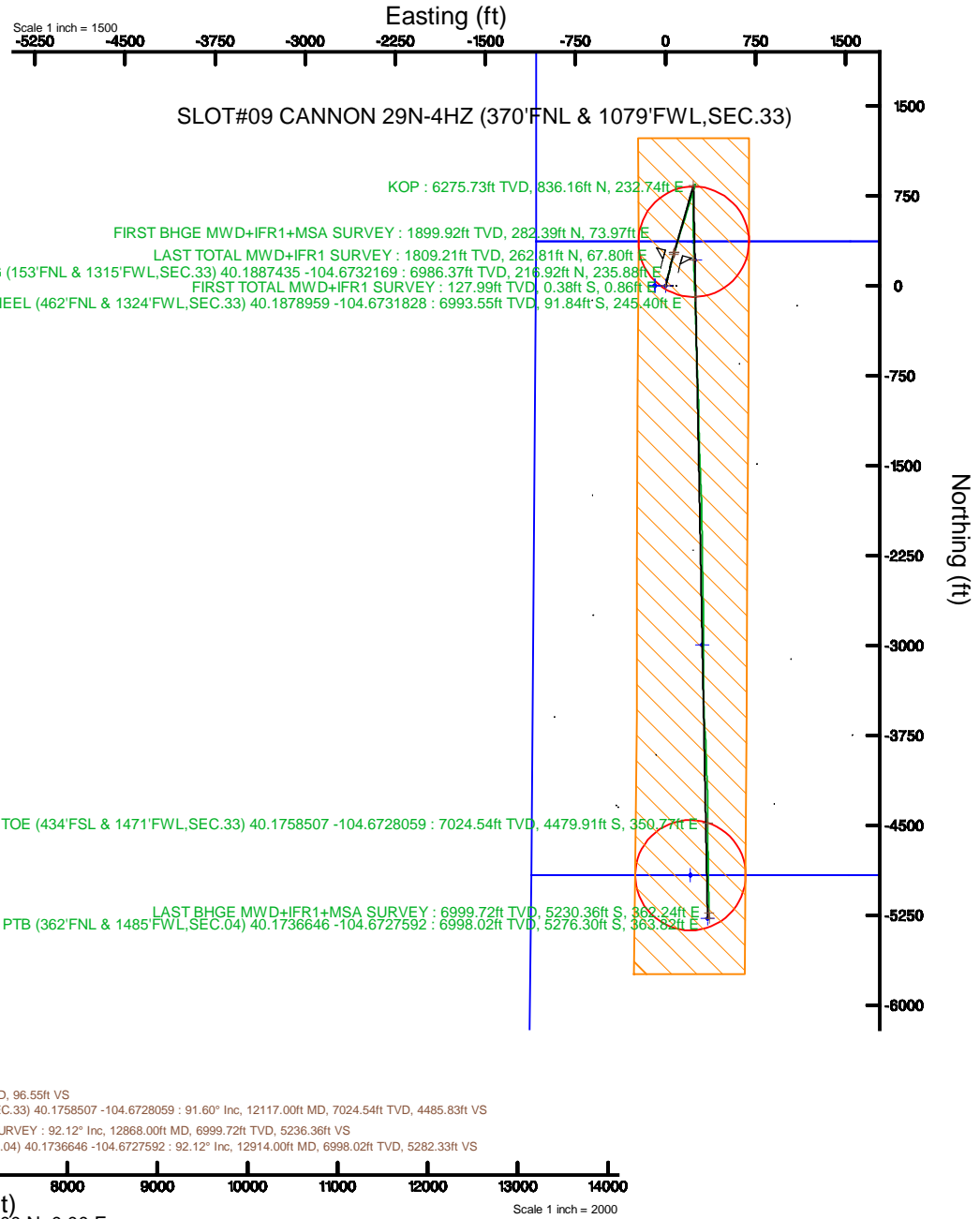


KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#09 CANNON 29N-4HZ (370'FNL & 1079'FWL,SEC.33)
 Field: WELD COUNTY (UTM/TRUE NORTH) Well: CANNON 29N-4HZ
 Facility: SEC.33-T3N-R65W Wellbore: CANNON 29N-4HZ PWB

Plot reference wellpath is CANNON 29N-4HZ PWP Rev-B.0	Grid System: NAD83 / UTM Zone 13 North, US feet
True vertical depths are referenced to PD 564 (26') (RT)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to PD 564 (26') (RT)	North Reference: True north
PD 564 (26') (RT) to Mean Sea Level: 4888 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#09 CANNON 29N-4HZ (370'FNL & 1079'FWL,SEC.33)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: painsetr on 2017-08-25
	Database: WA_DEN_Anadarko_Defn



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#09 CANNON 29N-4HZ (370'FNL & 1079'FWL,SEC.33)
Area	COLORADO	Well	CANNON 29N-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CANNON 29N-4HZ AWB
Facility	SEC.33-T3N-R65W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / UTM Zone 13 North, US feet	Software System	WellArchitect® 5.0
North Reference	True	User	Painsetr
Scale	0.999609	Report Generated	8/25/2017 at 10:45 AM
Convergence at slot	0.22° East	Database/Source file	WA_DEN_Anadarko_Defn/CANNON_29N-4HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	1587.72	-2056.64	1731445.23	14595413.98	40°11'17.333"N	104°40'26.620"W
Facility Reference Pt			1733507.01	14593834.61	40°11'01.644"N	104°40'00.120"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	4888.00ft
Horizontal Reference Pt	Slot	PD 564 (26') (RT) to Mean Sea Level	4888.00ft
Vertical Reference Pt	PD 564 (26') (RT)	PD 564 (26') (RT) to Mud Line at Slot (SLOT#09 CANNON 29N-4HZ (370'FNL & 1079'FWL,SEC.33))	4888.00ft
MD Reference Pt	PD 564 (26') (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	178.90°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#09 CANNON 29N-4HZ (370'FNL & 1079'FWL, SEC.33)
Area	COLORADO	Well	CANNON 29N-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CANNON 29N-4HZ AWB
Facility	SEC.33-T3N-R65W		

WELLPATH DATA (177 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	113.700	0.00	0.00	0.00	0.00	1731445.23	14595413.98	40°11'17.333"N	104°40'26.620"W	0.00	
26.00	0.000	113.700	26.00	0.00	0.00	0.00	1731445.23	14595413.98	40°11'17.333"N	104°40'26.620"W	0.00	
128.00	1.050	113.700	127.99	0.39	-0.38	0.86	1731446.08	14595413.61	40°11'17.329"N	104°40'26.609"W	1.03	FIRST TOTAL MWD+IFR1 SURVEY
160.00	0.880	106.840	159.99	0.59	-0.56	1.36	1731446.59	14595413.42	40°11'17.327"N	104°40'26.602"W	0.64	
191.00	0.620	77.840	190.99	0.63	-0.60	1.75	1731446.98	14595413.39	40°11'17.327"N	104°40'26.597"W	1.46	
223.00	0.530	51.470	222.99	0.51	-0.47	2.04	1731447.26	14595413.52	40°11'17.328"N	104°40'26.594"W	0.86	
255.00	0.830	47.250	254.98	0.26	-0.22	2.32	1731447.55	14595413.77	40°11'17.331"N	104°40'26.590"W	0.95	
287.00	1.100	29.320	286.98	-0.15	0.20	2.64	1731447.87	14595414.20	40°11'17.335"N	104°40'26.586"W	1.26	
318.00	1.360	19.040	317.97	-0.76	0.81	2.91	1731448.13	14595414.80	40°11'17.341"N	104°40'26.583"W	1.10	
350.00	1.980	21.500	349.96	-1.62	1.69	3.24	1731448.45	14595415.68	40°11'17.350"N	104°40'26.578"W	1.95	
413.00	2.990	10.600	412.90	-4.24	4.31	3.94	1731449.15	14595418.31	40°11'17.376"N	104°40'26.569"W	1.76	
445.00	3.470	8.050	444.85	-6.01	6.09	4.23	1731449.43	14595420.09	40°11'17.393"N	104°40'26.566"W	1.57	
477.00	3.470	6.120	476.79	-7.93	8.01	4.46	1731449.66	14595422.01	40°11'17.412"N	104°40'26.562"W	0.37	
509.00	4.130	5.240	508.72	-10.03	10.12	4.67	1731449.86	14595424.12	40°11'17.433"N	104°40'26.560"W	2.07	
541.00	4.790	8.670	540.62	-12.49	12.59	4.98	1731450.16	14595426.59	40°11'17.457"N	104°40'26.556"W	2.22	
571.00	5.540	10.600	570.50	-15.15	15.25	5.43	1731450.60	14595429.25	40°11'17.484"N	104°40'26.550"W	2.57	
603.00	5.980	8.140	602.34	-18.31	18.42	5.95	1731451.11	14595432.42	40°11'17.515"N	104°40'26.543"W	1.58	
635.00	6.280	10.070	634.15	-21.67	21.80	6.50	1731451.64	14595435.79	40°11'17.548"N	104°40'26.536"W	1.14	
667.00	6.680	13.590	665.95	-25.18	25.33	7.24	1731452.37	14595439.33	40°11'17.583"N	104°40'26.527"W	1.76	
698.00	7.030	14.730	696.73	-28.75	28.92	8.15	1731453.26	14595442.92	40°11'17.619"N	104°40'26.515"W	1.21	
730.00	7.210	14.730	728.48	-32.57	32.75	9.15	1731454.26	14595446.75	40°11'17.657"N	104°40'26.502"W	0.56	
762.00	8.000	14.640	760.20	-36.64	36.85	10.23	1731455.32	14595450.85	40°11'17.697"N	104°40'26.488"W	2.47	
825.00	9.180	15.170	822.49	-45.69	45.94	12.65	1731457.70	14595459.95	40°11'17.787"N	104°40'26.457"W	1.88	
857.00	9.890	14.560	854.05	-50.79	51.06	14.01	1731459.04	14595465.08	40°11'17.838"N	104°40'26.439"W	2.24	
920.00	11.560	16.400	915.95	-62.02	62.36	17.15	1731462.14	14595476.38	40°11'17.949"N	104°40'26.399"W	2.71	
951.00	11.650	14.380	946.31	-67.99	68.37	18.81	1731463.78	14595482.39	40°11'18.009"N	104°40'26.378"W	1.34	
983.00	11.470	12.360	977.66	-74.20	74.61	20.29	1731465.23	14595488.63	40°11'18.070"N	104°40'26.359"W	1.38	
1046.00	12.000	12.180	1039.35	-86.67	87.13	23.01	1731467.91	14595501.16	40°11'18.194"N	104°40'26.323"W	0.84	
1078.00	12.440	12.710	1070.62	-93.25	93.74	24.47	1731469.35	14595507.77	40°11'18.259"N	104°40'26.305"W	1.42	
1141.00	12.390	15.430	1132.15	-106.32	106.88	27.76	1731472.59	14595520.92	40°11'18.389"N	104°40'26.262"W	0.93	
1173.00	12.440	17.810	1163.40	-112.87	113.47	29.73	1731474.53	14595527.51	40°11'18.454"N	104°40'26.237"W	1.61	
1204.00	12.520	15.960	1193.67	-119.24	119.88	31.68	1731476.45	14595533.93	40°11'18.518"N	104°40'26.212"W	1.32	
1236.00	12.920	13.940	1224.88	-126.02	126.68	33.49	1731478.24	14595540.74	40°11'18.585"N	104°40'26.188"W	1.87	
1300.00	13.270	9.110	1287.22	-140.15	140.88	36.38	1731481.07	14595554.94	40°11'18.725"N	104°40'26.151"W	1.79	
1363.00	14.240	9.990	1348.41	-154.87	155.65	38.87	1731483.51	14595569.71	40°11'18.871"N	104°40'26.119"W	1.58	
1394.00	14.370	12.010	1378.45	-162.36	163.17	40.33	1731484.94	14595577.23	40°11'18.945"N	104°40'26.100"W	1.66	
1426.00	13.750	14.030	1409.49	-169.90	170.74	42.08	1731486.66	14595584.81	40°11'19.020"N	104°40'26.078"W	2.47	
1458.00	13.490	14.640	1440.59	-177.16	178.04	43.94	1731488.50	14595592.11	40°11'19.092"N	104°40'26.054"W	0.93	
1489.00	13.670	14.380	1470.73	-184.17	185.09	45.77	1731490.30	14595599.17	40°11'19.162"N	104°40'26.030"W	0.61	
1521.00	14.150	14.730	1501.79	-191.58	192.54	47.70	1731492.20	14595606.61	40°11'19.236"N	104°40'26.005"W	1.52	
1553.00	13.670	16.400	1532.85	-198.95	199.95	49.76	1731494.24	14595614.03	40°11'19.309"N	104°40'25.979"W	1.96	
1585.00	13.450	17.180	1563.96	-206.09	207.13	51.93	1731496.38	14595621.22	40°11'19.380"N	104°40'25.951"W	0.89	
1616.00	13.670	15.960	1594.10	-213.02	214.10	54.00	1731498.42	14595628.19	40°11'19.449"N	104°40'25.924"W	1.16	
1647.00	14.110	15.960	1624.19	-220.13	221.25	56.05	1731500.44	14595635.35	40°11'19.519"N	104°40'25.898"W	1.42	
1679.00	13.320	16.930	1655.28	-227.36	228.53	58.19	1731502.56	14595642.63	40°11'19.591"N	104°40'25.870"W	2.57	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#09 CANNON 29N-4HZ (370'FNL & 1079'FWL,SEC.33)
Area	COLORADO	Well	CANNON 29N-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CANNON 29N-4HZ AWB
Facility	SEC.33-T3N-R65W		

WELLPATH DATA (177 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
1710.00	13.010	16.670	1685.46	-234.08	235.29	60.24	1731504.57	14595649.39	40°11'19.658"N	104°40'25.844"W	1.02	
1742.00	13.010	14.730	1716.64	-240.98	242.22	62.18	1731506.50	14595656.33	40°11'19.727"N	104°40'25.819"W	1.36	
1774.00	12.960	15.170	1747.82	-247.89	249.17	64.04	1731508.33	14595663.28	40°11'19.795"N	104°40'25.795"W	0.35	
1806.00	13.140	15.000	1779.00	-254.83	256.14	65.92	1731510.18	14595670.26	40°11'19.864"N	104°40'25.771"W	0.58	
1837.00	12.700	16.490	1809.21	-261.46	262.81	67.80	1731512.03	14595676.94	40°11'19.930"N	104°40'25.746"W	1.78	LAST TOTAL MWD+IFR1 SURVEY
1930.00	12.800	18.520	1899.92	-280.91	282.39	73.97	1731518.13	14595696.53	40°11'20.124"N	104°40'25.667"W	0.49	FIRST BHGE MWD+IFR1+MSA SURVEY
2020.00	11.990	19.350	1987.82	-299.06	300.66	80.24	1731524.33	14595714.82	40°11'20.304"N	104°40'25.586"W	0.92	
2109.00	13.070	17.880	2074.70	-317.24	318.96	86.39	1731530.41	14595733.13	40°11'20.485"N	104°40'25.507"W	1.27	
2199.00	12.570	18.070	2162.45	-336.11	337.96	92.55	1731536.50	14595752.14	40°11'20.673"N	104°40'25.427"W	0.56	
2288.00	13.900	15.370	2249.09	-355.51	357.47	98.39	1731542.27	14595771.67	40°11'20.866"N	104°40'25.352"W	1.65	
2377.00	13.030	15.130	2335.64	-375.40	377.46	103.84	1731547.64	14595791.68	40°11'21.063"N	104°40'25.282"W	0.98	
2467.00	13.180	15.460	2423.30	-394.97	397.15	109.23	1731552.95	14595811.37	40°11'21.258"N	104°40'25.213"W	0.19	
2557.00	12.250	15.100	2511.09	-413.98	416.26	114.45	1731558.10	14595830.49	40°11'21.446"N	104°40'25.145"W	1.04	
2646.00	12.850	15.690	2597.96	-432.52	434.90	119.58	1731563.17	14595849.15	40°11'21.631"N	104°40'25.079"W	0.69	
2736.00	13.740	18.600	2685.55	-452.16	454.67	125.70	1731569.21	14595868.93	40°11'21.826"N	104°40'25.000"W	1.24	
2826.00	13.100	18.420	2773.09	-471.84	474.47	132.33	1731575.76	14595888.75	40°11'22.022"N	104°40'24.915"W	0.71	
2915.00	14.540	19.310	2859.52	-491.81	494.59	139.21	1731582.57	14595908.88	40°11'22.220"N	104°40'24.826"W	1.64	
3005.00	14.100	17.730	2946.72	-512.78	515.69	146.29	1731589.56	14595930.00	40°11'22.429"N	104°40'24.735"W	0.65	
3094.00	13.910	18.480	3033.07	-533.12	536.16	152.98	1731596.18	14595950.49	40°11'22.631"N	104°40'24.649"W	0.30	
3184.00	13.210	19.040	3120.56	-552.97	556.14	159.76	1731602.89	14595970.49	40°11'22.829"N	104°40'24.561"W	0.79	
3273.00	11.720	16.770	3207.46	-571.12	574.41	165.69	1731608.74	14595988.77	40°11'23.009"N	104°40'24.485"W	1.76	
3363.00	12.060	10.140	3295.54	-589.04	592.42	169.98	1731612.97	14596006.79	40°11'23.187"N	104°40'24.430"W	1.56	
3452.00	11.370	15.750	3382.69	-606.55	610.02	174.00	1731616.92	14596024.39	40°11'23.361"N	104°40'24.378"W	1.50	
3542.00	11.290	16.330	3470.93	-623.45	627.01	178.89	1731621.74	14596041.40	40°11'23.529"N	104°40'24.315"W	0.15	
3632.00	11.890	17.810	3559.10	-640.63	644.29	184.20	1731626.99	14596058.69	40°11'23.700"N	104°40'24.247"W	0.74	
3721.00	13.010	22.320	3646.00	-658.49	662.29	190.81	1731633.53	14596076.71	40°11'23.878"N	104°40'24.161"W	1.67	
3811.00	12.320	16.100	3733.82	-676.96	680.89	197.32	1731639.97	14596095.32	40°11'24.062"N	104°40'24.077"W	1.70	
3900.00	13.060	16.120	3820.64	-695.64	699.67	202.74	1731645.32	14596114.12	40°11'24.247"N	104°40'24.008"W	0.83	
3990.00	13.330	18.200	3908.27	-715.14	719.30	208.81	1731651.31	14596133.76	40°11'24.441"N	104°40'23.929"W	0.61	
4079.00	12.970	19.300	3994.93	-734.19	738.47	215.31	1731657.74	14596152.94	40°11'24.631"N	104°40'23.846"W	0.49	
4169.00	12.650	17.920	4082.69	-752.97	757.38	221.68	1731664.04	14596171.87	40°11'24.817"N	104°40'23.763"W	0.49	
4258.00	11.580	19.800	4169.71	-770.53	775.06	227.71	1731670.00	14596189.56	40°11'24.992"N	104°40'23.686"W	1.28	
4348.00	9.560	14.870	4258.18	-786.15	790.78	232.69	1731674.92	14596205.30	40°11'25.147"N	104°40'23.622"W	2.46	
4438.00	8.670	17.810	4347.04	-799.76	804.46	236.68	1731678.86	14596218.99	40°11'25.283"N	104°40'23.570"W	1.12	
4527.00	7.180	15.590	4435.19	-811.43	816.21	240.23	1731682.36	14596230.74	40°11'25.399"N	104°40'23.525"W	1.71	
4617.00	5.820	10.790	4524.61	-821.28	826.11	242.59	1731684.69	14596240.65	40°11'25.497"N	104°40'23.494"W	1.63	
4706.00	4.000	4.010	4613.28	-828.79	833.64	243.65	1731685.72	14596248.18	40°11'25.571"N	104°40'23.480"W	2.14	
4820.00	2.690	5.860	4727.09	-835.41	840.26	244.21	1731686.25	14596254.81	40°11'25.636"N	104°40'23.473"W	1.15	
4909.00	2.120	5.490	4816.01	-839.12	843.98	244.58	1731686.61	14596258.52	40°11'25.673"N	104°40'23.469"W	0.64	
4999.00	0.630	38.740	4905.98	-841.15	846.02	245.05	1731687.07	14596260.57	40°11'25.693"N	104°40'23.462"W	1.81	
5089.00	0.650	116.730	4995.98	-841.29	846.18	245.81	1731687.83	14596260.73	40°11'25.695"N	104°40'23.453"W	0.90	
5178.00	1.060	154.770	5084.97	-840.30	845.21	246.61	1731688.64	14596259.76	40°11'25.685"N	104°40'23.442"W	0.76	
5268.00	1.560	170.420	5174.94	-838.33	843.25	247.17	1731689.21	14596257.80	40°11'25.666"N	104°40'23.435"W	0.68	
5357.00	1.580	160.830	5263.91	-835.97	840.89	247.78	1731689.82	14596255.45	40°11'25.643"N	104°40'23.427"W	0.30	
5446.00	0.710	242.080	5352.89	-834.55	839.48	247.69	1731689.74	14596254.03	40°11'25.629"N	104°40'23.428"W	1.83	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#09 CANNON 29N-4HZ (370'FNL & 1079'FWL, SEC.33)
Area	COLORADO	Well	CANNON 29N-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CANNON 29N-4HZ AWB
Facility	SEC.33-T3N-R65W		

WELLPATH DATA (177 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
5536.00	0.620	263.060	5442.89	-834.25	839.16	246.72	1731688.76	14596253.71	40°11'25.626"N	104°40'23.441"W	0.29	
5625.00	0.870	286.240	5531.88	-834.40	839.29	245.59	1731687.64	14596253.83	40°11'25.627"N	104°40'23.455"W	0.43	
5715.00	1.020	279.360	5621.87	-834.75	839.61	244.14	1731686.19	14596254.15	40°11'25.630"N	104°40'23.474"W	0.21	
5805.00	1.440	274.050	5711.85	-835.00	839.82	242.22	1731684.27	14596254.35	40°11'25.632"N	104°40'23.499"W	0.48	
5894.00	1.680	260.300	5800.82	-834.91	839.68	239.82	1731681.87	14596254.20	40°11'25.631"N	104°40'23.530"W	0.50	
5984.00	1.780	248.170	5890.77	-834.21	838.94	237.22	1731679.28	14596253.45	40°11'25.623"N	104°40'23.563"W	0.42	
6073.00	0.760	249.170	5979.75	-833.53	838.21	235.39	1731677.45	14596252.72	40°11'25.616"N	104°40'23.587"W	1.15	
6163.00	0.710	231.540	6069.74	-832.99	837.65	234.40	1731676.45	14596252.16	40°11'25.611"N	104°40'23.600"W	0.26	
6253.00	0.550	235.160	6159.74	-832.41	837.06	233.60	1731675.67	14596251.56	40°11'25.605"N	104°40'23.610"W	0.18	
6342.00	0.500	235.730	6248.74	-831.96	836.60	232.93	1731675.00	14596251.10	40°11'25.600"N	104°40'23.619"W	0.06	
6369.00†	1.620	193.762	6275.73	-831.52	836.16	232.74	1731674.81	14596250.66	40°11'25.596"N	104°40'23.621"W	4.79	KOP
6432.00	4.600	183.990	6338.63	-828.15	832.77	232.36	1731674.43	14596247.27	40°11'25.562"N	104°40'23.626"W	4.79	
6521.00	10.440	186.520	6426.83	-816.59	821.19	231.19	1731673.31	14596235.69	40°11'25.448"N	104°40'23.641"W	6.57	
6611.00	17.260	182.760	6514.16	-795.16	799.73	229.62	1731671.82	14596214.23	40°11'25.236"N	104°40'23.661"W	7.64	
6701.00	23.180	180.040	6598.58	-764.10	768.65	228.97	1731671.28	14596183.16	40°11'24.929"N	104°40'23.670"W	6.66	
6790.00	29.620	179.620	6678.26	-724.55	729.10	229.10	1731671.56	14596143.63	40°11'24.538"N	104°40'23.668"W	7.24	
6880.00	36.940	179.430	6753.44	-675.20	679.75	229.52	1731672.16	14596094.30	40°11'24.050"N	104°40'23.663"W	8.13	
6969.00	45.320	178.470	6820.42	-616.72	621.27	230.63	1731673.48	14596035.85	40°11'23.472"N	104°40'23.648"W	9.44	
7059.00	54.140	179.380	6878.54	-548.12	552.68	231.88	1731674.99	14595967.29	40°11'22.795"N	104°40'23.632"W	9.83	
7148.00	63.450	179.140	6924.60	-472.08	476.65	232.87	1731676.25	14595891.29	40°11'22.043"N	104°40'23.619"W	10.46	
7238.00	73.230	179.670	6957.78	-388.54	393.11	233.72	1731677.42	14595807.79	40°11'21.218"N	104°40'23.608"W	10.88	
7327.00	80.940	179.280	6977.66	-301.86	306.43	234.52	1731678.53	14595721.15	40°11'20.361"N	104°40'23.598"W	8.67	
7417.00	87.940	178.990	6986.37	-212.34	216.92	235.88	1731680.21	14595631.68	40°11'19.477"N	104°40'23.581"W	7.78	LANDING (153'FNL & 1315'FWL, SEC.33) 40.1887435 -104.6732169
7506.00	88.680	178.090	6989.00	-123.38	127.99	238.14	1731682.80	14595542.79	40°11'18.598"N	104°40'23.551"W	1.31	
7596.00	88.890	178.370	6990.90	-33.41	38.05	240.92	1731685.91	14595452.90	40°11'17.709"N	104°40'23.516"W	0.39	
7685.00	88.800	177.820	6992.70	55.57	-50.88	243.88	1731689.20	14595364.02	40°11'16.830"N	104°40'23.478"W	0.63	
7726.00†	88.827	177.943	6993.55	96.55	-91.84	245.40	1731690.86	14595323.07	40°11'16.425"N	104°40'23.458"W	0.31	EXIT RADIUS HEEL (462'FNL & 1324'FWL, SEC.33) 40.1878959 -104.6731828
7775.00	88.860	178.090	6994.54	145.53	-140.80	247.09	1731692.74	14595274.14	40°11'15.942"N	104°40'23.436"W	0.31	
7864.00	89.630	178.040	6995.71	234.52	-229.74	250.10	1731696.07	14595185.25	40°11'15.063"N	104°40'23.398"W	0.87	
7954.00	90.310	177.950	6995.76	324.50	-319.69	253.25	1731699.54	14595095.35	40°11'14.174"N	104°40'23.357"W	0.76	
8043.00	89.690	179.070	6995.76	413.50	-408.66	255.56	1731702.18	14595006.42	40°11'13.295"N	104°40'23.327"W	1.44	
8133.00	89.010	178.420	6996.78	503.49	-498.63	257.53	1731704.48	14594916.50	40°11'12.406"N	104°40'23.302"W	1.05	
8223.00	89.200	178.490	6998.18	593.48	-588.59	259.96	1731707.24	14594826.58	40°11'11.517"N	104°40'23.271"W	0.22	
8312.00	87.660	177.740	7000.62	682.44	-677.50	262.88	1731710.49	14594737.72	40°11'10.638"N	104°40'23.233"W	1.92	
8402.00	88.830	177.990	7003.38	772.38	-767.39	266.23	1731714.17	14594647.87	40°11'09.750"N	104°40'23.190"W	1.33	
8491.00	88.490	177.230	7005.46	861.33	-856.29	269.94	1731718.20	14594559.02	40°11'08.871"N	104°40'23.142"W	0.94	
8581.00	90.580	178.180	7006.19	951.30	-946.21	273.55	1731722.14	14594469.15	40°11'07.983"N	104°40'23.095"W	2.55	
8670.00	89.020	178.990	7006.50	1040.30	-1035.18	275.75	1731724.66	14594380.23	40°11'07.103"N	104°40'23.067"W	1.97	
8760.00	88.210	179.240	7008.67	1130.27	-1125.14	277.14	1731726.38	14594290.31	40°11'06.214"N	104°40'23.049"W	0.94	
8850.00	88.610	178.940	7011.17	1220.23	-1215.09	278.56	1731728.14	14594200.39	40°11'05.325"N	104°40'23.031"W	0.56	
8939.00	89.350	178.380	7012.76	1309.22	-1304.06	280.64	1731730.54	14594111.48	40°11'04.446"N	104°40'23.004"W	1.04	
9029.00	87.290	177.890	7015.39	1399.16	-1393.96	283.57	1731733.80	14594021.61	40°11'03.558"N	104°40'22.966"W	2.35	
9118.00	87.540	177.840	7019.41	1488.06	-1482.81	286.88	1731737.44	14593932.81	40°11'02.680"N	104°40'22.924"W	0.29	
9208.00	87.910	177.830	7022.98	1577.97	-1572.68	290.28	1731741.16	14593843.00	40°11'01.792"N	104°40'22.880"W	0.41	
9298.00	88.520	177.280	7025.78	1667.90	-1662.55	294.12	1731745.33	14593753.17	40°11'00.904"N	104°40'22.831"W	0.91	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#09 CANNON 29N-4HZ (370'FNL & 1079'FWL, SEC.33)
Area	COLORADO	Well	CANNON 29N-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CANNON 29N-4HZ AWB
Facility	SEC.33-T3N-R65W		

WELLPATH DATA (177 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
9387.00	88.830	177.760	7027.84	1756.85	-1751.44	297.97	1731749.50	14593664.33	40°11'00.025"N	104°40'22.781"W	0.64	
9477.00	88.640	179.390	7029.83	1846.83	-1841.39	300.21	1731752.07	14593574.43	40°10'59.136"N	104°40'22.752"W	1.82	
9567.00	89.050	179.080	7031.64	1936.81	-1931.36	301.41	1731753.60	14593484.49	40°10'58.247"N	104°40'22.737"W	0.57	
9656.00	89.660	178.750	7032.65	2025.80	-2020.34	303.09	1731755.61	14593395.56	40°10'57.368"N	104°40'22.715"W	0.78	
9746.00	90.220	178.760	7032.74	2115.80	-2110.32	305.05	1731757.90	14593305.62	40°10'56.479"N	104°40'22.690"W	0.62	
9835.00	88.650	179.360	7033.62	2204.79	-2199.30	306.51	1731759.68	14593216.68	40°10'55.599"N	104°40'22.671"W	1.89	
9925.00	88.640	179.570	7035.75	2294.76	-2289.27	307.35	1731760.85	14593126.75	40°10'54.710"N	104°40'22.660"W	0.23	
10015.00	89.110	179.040	7037.51	2384.74	-2379.25	308.44	1731762.27	14593036.82	40°10'53.821"N	104°40'22.646"W	0.79	
10104.00	89.510	178.460	7038.58	2473.74	-2468.22	310.38	1731764.54	14592947.89	40°10'52.942"N	104°40'22.621"W	0.79	
10194.00	90.490	178.910	7038.58	2563.73	-2558.19	312.45	1731766.94	14592857.96	40°10'52.053"N	104°40'22.594"W	1.20	
10284.00	92.090	178.530	7036.56	2653.71	-2648.14	314.46	1731769.28	14592768.05	40°10'51.164"N	104°40'22.569"W	1.83	
10373.00	90.650	179.910	7034.43	2742.68	-2737.11	315.67	1731770.81	14592679.13	40°10'50.285"N	104°40'22.553"W	2.24	
10463.00	89.140	180.870	7034.60	2832.64	-2827.10	315.06	1731770.53	14592589.17	40°10'49.396"N	104°40'22.561"W	1.99	
10552.00	89.040	180.320	7036.01	2921.59	-2916.08	314.13	1731769.93	14592500.21	40°10'48.516"N	104°40'22.573"W	0.63	
10642.00	88.090	180.150	7038.26	3011.54	-3006.05	313.76	1731769.89	14592410.28	40°10'47.627"N	104°40'22.578"W	1.07	
10731.00	89.600	179.820	7040.06	3100.50	-3095.03	313.79	1731770.24	14592321.33	40°10'46.748"N	104°40'22.577"W	1.74	
10821.00	90.800	179.250	7039.74	3190.49	-3185.03	314.52	1731771.30	14592231.38	40°10'45.859"N	104°40'22.568"W	1.48	
10910.00	88.710	179.570	7040.12	3279.48	-3274.02	315.43	1731772.55	14592142.43	40°10'44.979"N	104°40'22.556"W	2.38	
11000.00	89.200	179.280	7041.76	3369.46	-3364.00	316.34	1731773.78	14592052.49	40°10'44.090"N	104°40'22.545"W	0.63	
11089.00	90.220	178.990	7042.22	3458.46	-3452.98	317.68	1731775.45	14591963.54	40°10'43.211"N	104°40'22.527"W	1.19	
11179.00	91.510	178.570	7040.86	3548.45	-3542.95	319.60	1731777.69	14591873.62	40°10'42.321"N	104°40'22.503"W	1.51	
11268.00	89.170	176.570	7040.33	3637.41	-3631.86	323.37	1731781.79	14591784.76	40°10'41.443"N	104°40'22.454"W	3.46	
11358.00	89.350	175.910	7041.49	3727.31	-3721.66	329.27	1731788.02	14591695.02	40°10'40.556"N	104°40'22.378"W	0.76	
11448.00	90.030	177.070	7041.98	3817.22	-3811.49	334.78	1731793.86	14591605.25	40°10'39.668"N	104°40'22.307"W	1.49	
11537.00	91.940	178.650	7040.45	3906.19	-3900.40	338.10	1731797.51	14591516.38	40°10'38.789"N	104°40'22.264"W	2.78	
11627.00	92.900	178.260	7036.65	3996.11	-3990.29	340.53	1731800.26	14591426.53	40°10'37.901"N	104°40'22.233"W	1.15	
11716.00	91.260	178.230	7033.42	4085.04	-4079.19	343.25	1731803.31	14591337.68	40°10'37.022"N	104°40'22.198"W	1.84	
11806.00	91.570	176.930	7031.19	4174.98	-4169.08	347.05	1731807.44	14591247.84	40°10'36.134"N	104°40'22.149"W	1.48	
11895.00	91.390	178.370	7028.90	4263.93	-4257.97	350.70	1731811.41	14591159.00	40°10'35.256"N	104°40'22.102"W	1.63	
11985.00	90.710	180.680	7027.25	4353.90	-4347.94	351.44	1731812.48	14591069.06	40°10'34.367"N	104°40'22.092"W	2.68	
12074.00	91.350	180.150	7025.65	4442.86	-4436.93	350.80	1731812.17	14590980.11	40°10'33.487"N	104°40'22.101"W	0.93	
12117.00†	91.603	179.935	7024.54	4485.83	-4479.91	350.77	1731812.29	14590937.14	40°10'33.062"N	104°40'22.101"W	0.77	ENTER RADIUS TOE (434'FSL & 1471'FWL, SEC.33) 40.1758507 -104.6728059
12164.00	91.880	179.700	7023.11	4532.81	-4526.89	350.92	1731812.61	14590890.19	40°10'32.598"N	104°40'22.099"W	0.77	
12253.00	92.190	179.250	7019.95	4621.75	-4615.83	351.73	1731813.75	14590801.28	40°10'31.719"N	104°40'22.089"W	0.61	
12342.00	93.140	178.750	7015.81	4710.65	-4704.72	353.28	1731815.63	14590712.44	40°10'30.841"N	104°40'22.069"W	1.21	
12432.00	92.000	179.200	7011.78	4800.56	-4794.61	354.89	1731817.57	14590622.58	40°10'29.953"N	104°40'22.048"W	1.36	
12522.00	92.220	178.660	7008.46	4890.49	-4884.54	356.57	1731819.58	14590532.70	40°10'29.064"N	104°40'22.026"W	0.65	
12612.00	90.980	179.720	7005.95	4980.46	-4974.49	357.84	1731821.18	14590442.79	40°10'28.175"N	104°40'22.010"W	1.81	
12701.00	91.260	179.420	7004.21	5069.43	-5063.47	358.51	1731822.17	14590353.85	40°10'27.296"N	104°40'22.001"W	0.46	
12790.00	91.420	178.670	7002.13	5158.41	-5152.43	359.99	1731823.98	14590264.93	40°10'26.417"N	104°40'21.982"W	0.86	
12868.00	92.120	178.030	6999.72	5236.36	-5230.36	362.24	1731826.51	14590187.04	40°10'25.646"N	104°40'21.953"W	1.22	LAST BHGE MWD+IFR1+MSA SURVEY
12914.00	92.120	178.030	6998.02	5282.33	-5276.30	363.82	1731828.26	14590141.12	40°10'25.192"N	104°40'21.933"W	0.00	PTB (362'FNL & 1485'FWL, SEC.04) 40.1736646 -104.6727592

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#09 CANNON 29N-4HZ (370'FNL & 1079'FWL,SEC.33)
Area	COLORADO	Well	CANNON 29N-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CANNON 29N-4HZ AWB
Facility	SEC.33-T3N-R65W		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.04-T2N-R65W	0.00	0.71	-89.95	1731355.31	14595414.36	40°11'17.340"N	104°40'27.779"W	polygon
SEC.28-T3N-R65W	0.00	0.71	-89.95	1731355.31	14595414.36	40°11'17.340"N	104°40'27.779"W	polygon
SEC.33-T3N-R65W	0.00	0.71	-89.95	1731355.31	14595414.36	40°11'17.340"N	104°40'27.779"W	polygon
CANNON 29N-4HZ HEEL REV-1 (157'FNL & 1322'FWL,SEC.33)	6988.00	213.46	244.78	1731689.12	14595628.25	40°11'19.442"N	104°40'23.466"W	point
CANNON 29N-4HZ BHL REV-1 (363'FNL & 1471'FWL,SEC.04)	6992.00	-5277.24	350.46	1731814.91	14590140.13	40°10'25.183"N	104°40'22.105"W	point
CANNON 29N-4HZ INT. TARGET@3000'VS	7053.00	-2994.65	306.52	1731762.61	14592421.65	40°10'47.740"N	104°40'22.671"W	point
CANNON 29N-4HZ LANDBOX	7053.00	0.00	0.00	1731445.23	14595413.98	40°11'17.333"N	104°40'26.620"W	polygon
CANNON 29N-4HZ RADIUS 1	7053.00	-4916.41	207.72	1731670.90	14590500.30	40°10'28.749"N	104°40'23.944"W	polygon
CANNON 29N-4HZ RADIUS 2	7053.00	368.00	234.82	1731678.60	14595782.70	40°11'20.970"N	104°40'23.594"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: CANNON 29N-4HZ AWB Ref Wellpath: CANNON 29N-4HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	1837.00	Custom APC ISCWSA REV 2 MWD+IFR1 (approximation)	TOTAL Custom APC ISCWSA Rev-2 MWD+IFR1 <128 - 1837>	CANNON 29N-4HZ AWB
1837.00	12868.00	Custom APC ISCWSA REV 2 MWD+IFR1+MSA (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+MSA <1930 - 12868>	CANNON 29N-4HZ AWB
12868.00	12914.00	Blind Drilling (std)	Projection to bit	CANNON 29N-4HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#09 CANNON 29N-4HZ (370'FNL & 1079'FWL,SEC.33)
Area	COLORADO	Well	CANNON 29N-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CANNON 29N-4HZ AWB
Facility	SEC.33-T3N-R65W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
128.00	1.050	113.700	127.99	FIRST TOTAL MWD+IFR1 SURVEY
1837.00	12.700	16.490	1809.21	LAST TOTAL MWD+IFR1 SURVEY
1930.00	12.800	18.520	1899.92	FIRST BHGE MWD+IFR1+MSA SURVEY
6369.00	1.620	193.762	6275.73	KOP
7417.00	87.940	178.990	6986.37	LANDING (153'FNL & 1315'FWL,SEC.33) 40.1887435 -104.6732169
7726.00	88.827	177.943	6993.55	EXIT RADIUS HEEL (462'FNL & 1324'FWL,SEC.33) 40.1878959 -104.6731828
12117.00	91.603	179.935	7024.54	ENTER RADIUS TOE (434'FSL & 1471'FWL,SEC.33) 40.1758507 -104.6728059
12868.00	92.120	178.030	6999.72	LAST BHGE MWD+IFR1+MSA SURVEY
12914.00	92.120	178.030	6998.02	PTB (362'FNL & 1485'FWL,SEC.04) 40.1736646 -104.6727592