

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#07 CANNON 4N-4HZ (370'FNL & 1034'FWL,SEC.33)
Area	COLORADO	Well	CANNON 4N-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CANNON 4N-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	9/5/2017 at 1:30 PM
Convergence at slot	0.22° East	Database/Source file	WA_DEN_Anadarko_Defn/CANNON_4N-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	1588.03	-2101.58	1731400.31	14595414.12	40°11'17.336"N	104°40'27.199"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#07 CANNON 4N-4HZ (370'FNL & 1034'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	179.21°

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WELLPATH DATA (187 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	79.590	0.00	0.00	0.00	0.00	1731400.31	14595414.12	40°11'17.336"N	104°40'27.199"W	0.00	
26.00	0.000	79.590	26.00	0.00	0.00	0.00	1731400.31	14595414.12	40°11'17.336"N	104°40'27.199"W	0.00	
128.00	0.400	79.590	128.00	-0.06	0.06	0.35	1731400.66	14595414.19	40°11'17.337"N	104°40'27.194"W	0.39	FIRST TOTAL MWD+IFR1 SURVEY
160.00	0.440	98.110	160.00	-0.06	0.07	0.58	1731400.89	14595414.19	40°11'17.337"N	104°40'27.192"W	0.44	
191.00	0.750	60.870	191.00	-0.14	0.15	0.88	1731401.18	14595414.27	40°11'17.337"N	104°40'27.188"W	1.55	
223.00	1.010	56.660	222.99	-0.39	0.41	1.30	1731401.60	14595414.53	40°11'17.340"N	104°40'27.182"W	0.84	
255.00	1.270	33.280	254.99	-0.83	0.86	1.73	1731402.03	14595414.98	40°11'17.344"N	104°40'27.177"W	1.65	
287.00	1.580	22.200	286.98	-1.53	1.56	2.09	1731402.39	14595415.69	40°11'17.351"N	104°40'27.172"W	1.29	
318.00	1.670	29.060	317.96	-2.32	2.35	2.47	1731402.77	14595416.48	40°11'17.359"N	104°40'27.167"W	0.69	
350.00	2.150	32.310	349.95	-3.23	3.27	3.02	1731403.31	14595417.40	40°11'17.368"N	104°40'27.160"W	1.54	
382.00	2.370	22.200	381.92	-4.34	4.39	3.59	1731403.88	14595418.52	40°11'17.379"N	104°40'27.153"W	1.42	
413.00	2.810	21.940	412.89	-5.63	5.69	4.11	1731404.40	14595419.82	40°11'17.392"N	104°40'27.146"W	1.42	
445.00	3.120	15.520	444.85	-7.19	7.25	4.64	1731404.92	14595421.39	40°11'17.408"N	104°40'27.139"W	1.42	
477.00	3.560	359.970	476.79	-9.02	9.09	4.87	1731405.14	14595423.22	40°11'17.426"N	104°40'27.136"W	3.13	
509.00	3.780	355.840	508.73	-11.06	11.13	4.79	1731405.06	14595425.26	40°11'17.446"N	104°40'27.137"W	1.07	
541.00	4.570	354.960	540.64	-13.39	13.45	4.60	1731404.86	14595427.58	40°11'17.469"N	104°40'27.140"W	2.48	
571.00	5.010	356.630	570.54	-15.89	15.95	4.42	1731404.67	14595430.08	40°11'17.494"N	104°40'27.142"W	1.54	
603.00	5.540	350.560	602.40	-18.81	18.87	4.09	1731404.32	14595433.00	40°11'17.522"N	104°40'27.146"W	2.40	
635.00	6.200	352.500	634.23	-22.06	22.11	3.61	1731403.83	14595436.23	40°11'17.554"N	104°40'27.153"W	2.15	
667.00	6.940	352.760	666.02	-25.69	25.74	3.14	1731403.35	14595439.86	40°11'17.590"N	104°40'27.159"W	2.31	
698.00	7.120	349.420	696.79	-29.45	29.48	2.55	1731402.75	14595443.60	40°11'17.627"N	104°40'27.166"W	1.44	
730.00	7.730	349.510	728.52	-33.52	33.55	1.79	1731401.98	14595447.66	40°11'17.668"N	104°40'27.176"W	1.91	
762.00	8.350	345.290	760.21	-37.90	37.91	0.81	1731400.98	14595452.02	40°11'17.711"N	104°40'27.189"W	2.67	
793.00	8.790	344.060	790.86	-42.37	42.37	-0.41	1731399.74	14595456.47	40°11'17.755"N	104°40'27.204"W	1.54	
825.00	9.540	344.850	822.45	-47.30	47.28	-1.77	1731398.36	14595461.37	40°11'17.803"N	104°40'27.222"W	2.38	
857.00	9.800	344.230	854.00	-52.50	52.46	-3.21	1731396.91	14595466.55	40°11'17.854"N	104°40'27.240"W	0.88	
888.00	10.500	346.690	884.51	-57.80	57.75	-4.57	1731395.52	14595471.83	40°11'17.907"N	104°40'27.258"W	2.66	
920.00	10.770	345.820	915.96	-63.56	63.48	-5.98	1731394.10	14595477.56	40°11'17.963"N	104°40'27.276"W	0.98	
983.00	11.600	347.930	977.77	-75.50	75.38	-8.74	1731391.29	14595489.44	40°11'18.081"N	104°40'27.312"W	1.47	
1015.00	12.300	348.890	1009.07	-82.01	81.88	-10.07	1731389.94	14595495.93	40°11'18.145"N	104°40'27.329"W	2.27	
1046.00	12.350	347.840	1039.36	-88.50	88.36	-11.41	1731388.58	14595502.40	40°11'18.209"N	104°40'27.346"W	0.74	
1078.00	12.300	345.110	1070.62	-95.17	95.00	-13.01	1731386.96	14595509.03	40°11'18.275"N	104°40'27.367"W	1.83	
1109.00	12.480	344.320	1100.90	-101.60	101.41	-14.76	1731385.18	14595515.44	40°11'18.338"N	104°40'27.389"W	0.80	
1141.00	12.220	347.930	1132.16	-108.27	108.05	-16.40	1731383.52	14595522.07	40°11'18.404"N	104°40'27.410"W	2.55	
1173.00	12.480	348.980	1163.42	-114.99	114.76	-17.77	1731382.12	14595528.77	40°11'18.470"N	104°40'27.428"W	1.07	
1204.00	12.880	347.340	1193.66	-121.67	121.42	-19.17	1731380.70	14595535.42	40°11'18.536"N	104°40'27.446"W	1.74	
1236.00	13.270	346.340	1224.83	-128.74	128.47	-20.82	1731379.03	14595542.46	40°11'18.605"N	104°40'27.467"W	1.41	
1268.00	13.180	349.240	1255.99	-135.91	135.62	-22.37	1731377.45	14595549.60	40°11'18.676"N	104°40'27.487"W	2.09	
1300.00	12.960	349.860	1287.16	-143.05	142.73	-23.68	1731376.11	14595556.71	40°11'18.747"N	104°40'27.504"W	0.82	
1331.00	13.750	350.910	1317.32	-150.12	149.79	-24.87	1731374.90	14595563.76	40°11'18.816"N	104°40'27.519"W	2.67	
1363.00	13.400	353.290	1348.42	-157.57	157.23	-25.91	1731373.83	14595571.19	40°11'18.890"N	104°40'27.533"W	2.06	
1414.00	13.840	354.610	1397.99	-169.53	169.17	-27.17	1731372.53	14595583.13	40°11'19.008"N	104°40'27.549"W	1.06	
1426.00	14.060	353.370	1409.64	-172.41	172.05	-27.47	1731372.21	14595586.00	40°11'19.036"N	104°40'27.553"W	3.09	
1458.00	14.240	353.200	1440.66	-180.19	179.82	-28.39	1731371.27	14595593.76	40°11'19.113"N	104°40'27.565"W	0.58	
1489.00	13.140	352.320	1470.78	-187.48	187.10	-29.31	1731370.32	14595601.04	40°11'19.185"N	104°40'27.577"W	3.61	

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WELLPATH DATA (187 stations)												
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1521.00	12.740	351.970	1501.97	-194.60	194.20	-30.29	1731369.32	14595608.13	40°11'19.255"N	104°40'27.589"W	1.27	
1553.00	12.390	351.970	1533.20	-201.50	201.09	-31.26	1731368.32	14595615.02	40°11'19.323"N	104°40'27.602"W	1.09	
1585.00	13.360	351.620	1564.40	-208.57	208.15	-32.28	1731367.28	14595622.07	40°11'19.393"N	104°40'27.615"W	3.04	
1616.00	12.920	352.230	1594.59	-215.56	215.13	-33.27	1731366.26	14595629.04	40°11'19.462"N	104°40'27.628"W	1.49	
1647.00	13.180	353.290	1624.79	-222.52	222.07	-34.15	1731365.35	14595635.97	40°11'19.530"N	104°40'27.639"W	1.14	
1679.00	13.100	351.440	1655.95	-229.74	229.28	-35.12	1731364.36	14595643.18	40°11'19.602"N	104°40'27.652"W	1.34	
1710.00	13.970	350.030	1686.09	-236.91	236.44	-36.29	1731363.17	14595650.33	40°11'19.672"N	104°40'27.667"W	3.00	
1742.00	13.230	350.470	1717.19	-244.35	243.85	-37.56	1731361.86	14595657.74	40°11'19.746"N	104°40'27.683"W	2.33	
1774.00	12.520	350.830	1748.39	-251.40	250.89	-38.72	1731360.68	14595664.77	40°11'19.815"N	104°40'27.698"W	2.23	
1806.00	12.260	350.120	1779.64	-258.18	257.66	-39.86	1731359.52	14595671.53	40°11'19.882"N	104°40'27.713"W	0.94	
1837.00	11.910	352.410	1809.95	-264.61	264.07	-40.85	1731358.51	14595677.94	40°11'19.946"N	104°40'27.725"W	1.91	
1852.00	11.870	354.430	1824.63	-267.68	267.14	-41.20	1731358.14	14595681.01	40°11'19.976"N	104°40'27.730"W	2.79	LAST TOTAL MWD+IFR1 SURVEY
1930.00	11.750	354.230	1900.98	-283.59	283.03	-42.78	1731356.51	14595696.88	40°11'20.133"N	104°40'27.750"W	0.16	FIRST BHGE MWD+IFR1+MSA SURVEY
2020.00	12.370	354.340	1988.99	-302.32	301.74	-44.65	1731354.57	14595715.58	40°11'20.318"N	104°40'27.774"W	0.69	
2110.00	13.780	353.340	2076.66	-322.59	321.98	-46.84	1731352.30	14595735.80	40°11'20.518"N	104°40'27.803"W	1.59	
2199.00	15.670	352.960	2162.73	-345.09	344.44	-49.55	1731349.52	14595758.24	40°11'20.740"N	104°40'27.837"W	2.13	
2288.00	16.560	356.810	2248.24	-369.71	369.03	-51.73	1731347.25	14595782.82	40°11'20.983"N	104°40'27.865"W	1.56	
2378.00	17.650	0.520	2334.26	-396.17	395.48	-52.32	1731346.56	14595809.25	40°11'21.244"N	104°40'27.873"W	1.71	
2467.00	18.740	1.890	2418.81	-423.94	423.27	-51.72	1731347.05	14595837.03	40°11'21.519"N	104°40'27.865"W	1.32	
2557.00	18.520	357.410	2504.09	-452.67	452.00	-51.89	1731346.78	14595865.74	40°11'21.803"N	104°40'27.868"W	1.61	
2647.00	16.890	356.700	2589.83	-480.02	479.33	-53.29	1731345.28	14595893.06	40°11'22.073"N	104°40'27.886"W	1.83	
2736.00	16.640	0.720	2675.05	-505.67	504.98	-53.87	1731344.60	14595918.70	40°11'22.326"N	104°40'27.893"W	1.33	
2826.00	18.720	0.090	2760.79	-533.00	532.31	-53.69	1731344.69	14595946.02	40°11'22.596"N	104°40'27.891"W	2.32	
2915.00	20.080	355.580	2844.74	-562.53	561.83	-54.84	1731343.43	14595975.52	40°11'22.888"N	104°40'27.906"W	2.27	
3005.00	19.350	355.200	2929.47	-592.82	592.09	-57.28	1731340.88	14596005.76	40°11'23.187"N	104°40'27.937"W	0.82	
3095.00	18.620	354.430	3014.57	-622.01	621.25	-59.92	1731338.13	14596034.90	40°11'23.475"N	104°40'27.971"W	0.86	
3184.00	17.550	353.970	3099.17	-649.53	648.73	-62.71	1731335.24	14596062.37	40°11'23.747"N	104°40'28.007"W	1.21	
3274.00	17.630	354.730	3184.96	-676.63	675.80	-65.39	1731332.46	14596089.41	40°11'24.014"N	104°40'28.042"W	0.27	
3363.00	17.960	352.780	3269.71	-703.71	702.83	-68.35	1731329.40	14596116.42	40°11'24.281"N	104°40'28.080"W	0.77	
3453.00	15.880	352.040	3355.81	-729.71	728.80	-71.80	1731325.86	14596142.36	40°11'24.538"N	104°40'28.124"W	2.32	
3542.00	15.020	354.590	3441.59	-753.29	752.34	-74.58	1731323.00	14596165.88	40°11'24.771"N	104°40'28.160"W	1.23	
3632.00	15.490	355.180	3528.42	-776.90	775.92	-76.69	1731320.81	14596189.45	40°11'25.004"N	104°40'28.187"W	0.55	
3722.00	16.790	351.340	3614.87	-801.77	800.75	-79.65	1731317.75	14596214.26	40°11'25.249"N	104°40'28.225"W	1.87	
3811.00	16.910	354.600	3700.05	-827.41	826.35	-82.81	1731314.50	14596239.83	40°11'25.502"N	104°40'28.266"W	1.07	
3900.00	15.960	354.990	3785.42	-852.51	851.42	-85.09	1731312.13	14596264.89	40°11'25.750"N	104°40'28.295"W	1.07	
3990.00	15.130	356.380	3872.12	-876.58	875.47	-86.92	1731310.22	14596288.92	40°11'25.987"N	104°40'28.319"W	1.01	
4079.00	14.150	354.170	3958.23	-899.02	897.89	-88.75	1731308.30	14596311.32	40°11'26.209"N	104°40'28.343"W	1.27	
4169.00	13.920	353.500	4045.55	-920.75	919.59	-91.10	1731305.87	14596333.00	40°11'26.423"N	104°40'28.373"W	0.31	
4259.00	12.560	356.640	4133.15	-941.30	940.11	-92.90	1731304.00	14596353.52	40°11'26.626"N	104°40'28.396"W	1.71	
4348.00	9.480	1.140	4220.50	-958.30	957.11	-93.32	1731303.52	14596370.50	40°11'26.794"N	104°40'28.401"W	3.59	
4438.00	7.200	0.910	4309.55	-971.34	970.16	-93.08	1731303.71	14596383.55	40°11'26.923"N	104°40'28.398"W	2.53	
4527.00	6.280	0.540	4397.93	-981.78	980.60	-92.95	1731303.80	14596393.99	40°11'27.026"N	104°40'28.397"W	1.03	
4617.00	4.400	2.990	4487.54	-990.15	988.97	-92.72	1731304.00	14596402.36	40°11'27.109"N	104°40'28.394"W	2.10	
4706.00	2.560	352.390	4576.37	-995.53	994.35	-92.80	1731303.89	14596407.73	40°11'27.162"N	104°40'28.395"W	2.18	
4821.00	1.240	263.670	4691.32	-997.96	996.76	-94.38	1731302.31	14596410.14	40°11'27.186"N	104°40'28.415"W	2.45	

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4911.00	0.710	198.370	4781.31	-997.34	996.12	-95.52	1731301.17	14596409.50	40°11'27.180"N	104°40'28.430"W	1.27	
5000.00	0.910	229.360	4870.30	-996.37	995.14	-96.23	1731300.46	14596408.51	40°11'27.170"N	104°40'28.439"W	0.53	
5090.00	0.710	250.870	4960.29	-995.73	994.49	-97.30	1731299.39	14596407.86	40°11'27.164"N	104°40'28.453"W	0.40	
5180.00	1.290	231.460	5050.28	-994.94	993.68	-98.62	1731298.08	14596407.04	40°11'27.156"N	104°40'28.470"W	0.74	
5269.00	0.410	51.780	5139.27	-994.52	993.25	-99.16	1731297.55	14596406.61	40°11'27.151"N	104°40'28.477"W	1.91	
5359.00	0.280	295.240	5229.27	-994.81	993.54	-99.10	1731297.60	14596406.90	40°11'27.154"N	104°40'28.476"W	0.66	
5448.00	0.650	278.040	5318.27	-994.98	993.71	-99.80	1731296.90	14596407.06	40°11'27.156"N	104°40'28.485"W	0.44	
5537.00	0.880	17.360	5407.26	-995.71	994.43	-100.10	1731296.60	14596407.79	40°11'27.163"N	104°40'28.489"W	1.32	
5627.00	0.820	358.300	5497.25	-997.01	995.73	-99.91	1731296.79	14596409.09	40°11'27.176"N	104°40'28.486"W	0.32	
5717.00	1.050	357.470	5587.24	-998.48	997.20	-99.96	1731296.73	14596410.56	40°11'27.190"N	104°40'28.487"W	0.26	
5806.00	1.330	351.280	5676.22	-1000.32	999.04	-100.16	1731296.53	14596412.39	40°11'27.208"N	104°40'28.490"W	0.35	
5896.00	1.240	333.640	5766.20	-1002.23	1000.94	-100.75	1731295.93	14596414.29	40°11'27.227"N	104°40'28.497"W	0.45	
5985.00	1.630	209.670	5855.19	-1002.01	1000.70	-101.80	1731294.88	14596414.05	40°11'27.225"N	104°40'28.511"W	2.85	
6075.00	1.690	204.080	5945.15	-999.70	998.38	-102.98	1731293.71	14596411.72	40°11'27.202"N	104°40'28.526"W	0.19	
6165.00	1.640	204.520	6035.11	-997.33	996.00	-104.05	1731292.64	14596409.34	40°11'27.178"N	104°40'28.540"W	0.06	
6254.00	1.740	198.590	6124.07	-994.91	993.56	-105.01	1731291.69	14596406.90	40°11'27.154"N	104°40'28.552"W	0.23	
6344.00	1.200	185.610	6214.04	-992.68	991.32	-105.54	1731291.17	14596404.66	40°11'27.132"N	104°40'28.559"W	0.70	
6414.00†	2.946	182.497	6283.99	-990.16	988.80	-105.69	1731291.03	14596402.14	40°11'27.107"N	104°40'28.561"W	2.50	KOP
6433.00	3.420	182.200	6302.96	-989.10	987.74	-105.73	1731290.99	14596401.08	40°11'27.097"N	104°40'28.561"W	2.50	
6523.00	12.120	178.380	6392.05	-976.95	975.59	-105.57	1731291.20	14596388.94	40°11'26.977"N	104°40'28.559"W	9.68	
6613.00	16.960	178.620	6479.14	-954.37	953.01	-104.98	1731291.87	14596366.37	40°11'26.754"N	104°40'28.552"W	5.38	
6702.00	22.900	178.950	6562.78	-924.04	922.70	-104.35	1731292.61	14596336.06	40°11'26.454"N	104°40'28.544"W	6.68	
6792.00	28.530	181.770	6643.83	-885.03	883.67	-104.70	1731292.41	14596297.06	40°11'26.068"N	104°40'28.548"W	6.40	
6881.00	34.990	183.540	6719.47	-838.30	836.91	-106.93	1731290.35	14596250.30	40°11'25.606"N	104°40'28.577"W	7.33	
6971.00	41.110	177.340	6790.33	-782.92	781.52	-107.15	1731290.33	14596194.94	40°11'25.059"N	104°40'28.580"W	8.01	
7060.00	47.720	182.420	6853.89	-720.72	719.31	-107.18	1731290.53	14596132.75	40°11'24.444"N	104°40'28.580"W	8.43	
7150.00	53.550	178.500	6910.96	-651.21	649.79	-107.64	1731290.32	14596063.25	40°11'23.757"N	104°40'28.586"W	7.30	
7239.00	60.740	175.310	6959.22	-576.57	575.20	-103.53	1731294.71	14595988.71	40°11'23.020"N	104°40'28.533"W	8.62	
7329.00	69.470	179.190	6997.09	-495.08	493.75	-99.71	1731298.82	14595907.31	40°11'22.215"N	104°40'28.484"W	10.46	
7418.00	72.500	180.090	7026.08	-410.95	409.62	-99.19	1731299.66	14595823.22	40°11'21.384"N	104°40'28.477"W	3.54	
7508.00	74.480	179.880	7051.66	-324.67	323.34	-99.17	1731300.00	14595736.97	40°11'20.531"N	104°40'28.477"W	2.21	
7597.00	81.110	179.550	7070.46	-237.73	236.40	-98.73	1731300.75	14595650.06	40°11'19.672"N	104°40'28.471"W	7.46	
7675.00†	89.057	180.904	7077.14	-160.10	158.75	-99.04	1731300.72	14595572.44	40°11'18.905"N	104°40'28.475"W	10.33	LANDING (211'FNL & 935'FWL, SEC.33) 40.1885847 -104.6745764
7687.00	90.280	181.110	7077.21	-148.10	146.75	-99.25	1731300.56	14595560.45	40°11'18.786"N	104°40'28.478"W	10.33	
7730.00†	90.381	180.970	7076.96	-105.13	103.76	-100.03	1731299.93	14595517.47	40°11'18.361"N	104°40'28.488"W	0.40	EXIT RADIUS HEEL (266'FNL & 935'FWL, SEC.33) 40.1884337 -104.6745800
7776.00	90.490	180.820	7076.61	-59.15	57.77	-100.75	1731299.38	14595471.50	40°11'17.907"N	104°40'28.497"W	0.40	
7866.00	91.260	180.780	7075.24	30.81	-32.21	-102.01	1731298.46	14595381.55	40°11'17.018"N	104°40'28.513"W	0.86	
7955.00	92.160	180.330	7072.58	119.74	-121.17	-102.87	1731297.92	14595292.62	40°11'16.139"N	104°40'28.524"W	1.13	
8045.00	90.550	178.500	7070.45	209.71	-211.13	-101.95	1731299.17	14595202.70	40°11'15.250"N	104°40'28.513"W	2.71	
8134.00	91.600	178.390	7068.78	298.68	-300.08	-99.54	1731301.91	14595113.79	40°11'14.371"N	104°40'28.482"W	1.19	
8224.00	90.620	178.960	7067.04	388.66	-390.04	-97.46	1731304.32	14595023.88	40°11'13.482"N	104°40'28.455"W	1.26	
8314.00	87.780	177.660	7068.30	478.63	-479.98	-94.80	1731307.30	14594933.98	40°11'12.593"N	104°40'28.421"W	3.47	
8403.00	87.930	177.560	7071.63	567.53	-568.84	-91.09	1731311.34	14594845.17	40°11'11.715"N	104°40'28.373"W	0.20	
8493.00	88.400	177.670	7074.51	657.45	-658.71	-87.35	1731315.41	14594755.35	40°11'10.827"N	104°40'28.324"W	0.54	
8582.00	88.520	177.920	7076.90	746.39	-747.62	-83.93	1731319.15	14594666.49	40°11'09.948"N	104°40'28.280"W	0.31	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#07 CANNON 4N-4HZ (370'FNL & 1034'FWL, SEC.33)
Area	COLORADO	Well	CANNON 4N-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CANNON 4N-4HZ AWB
Facility	SEC.33-T3N-R65W		

WELLPATH DATA (187 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
8672.00	88.950	177.140	7078.89	836.33	-837.51	80.05	1731323.36	14594576.65	40°11'09.060"N	104°40'28.230"W	0.99	
8762.00	89.850	177.020	7079.83	926.26	-927.39	75.47	1731328.27	14594486.83	40°11'08.172"N	104°40'28.171"W	1.01	
8851.00	90.520	177.110	7079.54	1015.20	-1016.27	70.91	1731333.15	14594398.00	40°11'07.293"N	104°40'28.113"W	0.76	
8941.00	91.390	177.200	7078.04	1105.13	-1106.15	66.44	1731337.95	14594308.17	40°11'06.405"N	104°40'28.055"W	0.97	
9030.00	92.120	176.340	7075.32	1194.00	-1194.96	61.43	1731343.28	14594219.41	40°11'05.527"N	104°40'27.990"W	1.27	
9120.00	91.200	177.560	7072.71	1283.89	-1284.79	56.64	1731348.40	14594129.63	40°11'04.640"N	104°40'27.929"W	1.70	
9210.00	89.970	177.210	7071.79	1373.84	-1374.69	52.54	1731352.83	14594039.78	40°11'03.751"N	104°40'27.876"W	1.42	
9299.00	89.690	177.950	7072.06	1462.80	-1463.61	48.78	1731356.91	14593950.91	40°11'02.873"N	104°40'27.827"W	0.89	
9389.00	90.800	177.800	7071.67	1552.78	-1553.55	45.44	1731360.58	14593861.03	40°11'01.984"N	104°40'27.784"W	1.24	
9478.00	89.450	178.910	7071.48	1641.76	-1642.51	42.89	1731363.46	14593772.11	40°11'01.105"N	104°40'27.752"W	1.96	
9568.00	89.440	181.080	7072.35	1731.75	-1732.50	42.88	1731363.80	14593682.16	40°11'00.215"N	104°40'27.751"W	2.41	
9658.00	90.430	181.250	7072.45	1821.69	-1822.48	44.71	1731362.30	14593592.21	40°10'59.326"N	104°40'27.775"W	1.12	
9747.00	91.260	180.770	7071.14	1910.64	-1911.45	46.28	1731361.06	14593503.26	40°10'58.447"N	104°40'27.795"W	1.08	
9837.00	89.690	179.910	7070.39	2000.61	-2001.45	46.81	1731360.85	14593413.30	40°10'57.558"N	104°40'27.802"W	1.99	
9926.00	87.970	179.470	7072.21	2089.59	-2090.42	46.33	1731361.66	14593324.36	40°10'56.678"N	104°40'27.796"W	1.99	
10016.00	88.490	178.760	7074.99	2179.54	-2180.37	44.94	1731363.38	14593234.46	40°10'55.790"N	104°40'27.778"W	0.98	
10106.00	88.680	178.830	7077.21	2269.51	-2270.32	43.05	1731365.60	14593144.55	40°10'54.901"N	104°40'27.754"W	0.22	
10195.00	88.950	178.110	7079.05	2358.49	-2359.27	40.67	1731368.30	14593055.64	40°10'54.022"N	104°40'27.723"W	0.86	
10285.00	90.220	178.100	7079.70	2448.47	-2449.22	37.70	1731371.61	14592965.74	40°10'53.133"N	104°40'27.685"W	1.41	
10374.00	90.990	178.340	7078.76	2537.45	-2538.17	34.93	1731374.70	14592876.84	40°10'52.254"N	104°40'27.649"W	0.91	
10464.00	91.480	178.100	7076.82	2627.41	-2628.10	32.14	1731377.82	14592786.95	40°10'51.365"N	104°40'27.613"W	0.61	
10554.00	90.860	179.000	7074.99	2717.39	-2718.05	29.86	1731380.43	14592697.04	40°10'50.476"N	104°40'27.584"W	1.21	
10643.00	88.980	179.130	7075.11	2806.38	-2807.04	28.41	1731382.20	14592608.10	40°10'49.597"N	104°40'27.565"W	2.12	
10733.00	89.410	178.790	7076.37	2896.37	-2897.01	26.78	1731384.17	14592518.17	40°10'48.708"N	104°40'27.544"W	0.61	
10822.00	90.120	178.040	7076.74	2985.36	-2985.98	24.31	1731386.95	14592429.25	40°10'47.829"N	104°40'27.512"W	1.16	
10912.00	90.180	177.580	7076.50	3075.33	-3075.91	20.88	1731390.72	14592339.36	40°10'46.940"N	104°40'27.468"W	0.52	
11001.00	89.260	179.420	7076.94	3164.32	-3164.87	18.55	1731393.38	14592250.44	40°10'46.061"N	104°40'27.438"W	2.31	
11091.00	90.400	180.490	7077.21	3254.31	-3254.87	18.48	1731393.78	14592160.48	40°10'45.171"N	104°40'27.437"W	1.74	
11180.00	90.860	179.990	7076.23	3343.29	-3343.86	18.85	1731393.73	14592071.52	40°10'44.292"N	104°40'27.442"W	0.76	
11270.00	90.830	179.260	7074.90	3433.28	-3433.85	18.26	1731394.65	14591981.57	40°10'43.403"N	104°40'27.434"W	0.81	
11359.00	90.920	179.140	7073.54	3522.27	-3522.83	17.02	1731396.22	14591892.63	40°10'42.523"N	104°40'27.418"W	0.17	
11449.00	89.480	178.150	7073.23	3612.26	-3612.80	14.89	1731398.68	14591802.70	40°10'41.634"N	104°40'27.391"W	1.94	
11538.00	90.310	177.580	7073.39	3701.23	-3701.74	11.57	1731402.32	14591713.81	40°10'40.755"N	104°40'27.348"W	1.13	
11628.00	91.480	177.340	7071.98	3791.18	-3791.64	-7.58	1731406.63	14591623.97	40°10'39.867"N	104°40'27.297"W	1.33	
11718.00	90.890	179.120	7070.12	3881.14	-3881.57	-4.81	1731409.74	14591534.08	40°10'38.978"N	104°40'27.261"W	2.08	
11807.00	88.370	179.850	7070.70	3970.13	-3970.56	-4.01	1731410.87	14591445.13	40°10'38.099"N	104°40'27.251"W	2.95	
11897.00	88.980	180.180	7072.78	4060.10	-4060.54	-4.03	1731411.17	14591355.19	40°10'37.210"N	104°40'27.251"W	0.77	
11986.00	89.850	179.530	7073.69	4149.09	-4149.53	-3.80	1731411.72	14591266.23	40°10'36.330"N	104°40'27.248"W	1.22	
12076.00	89.880	178.970	7073.90	4239.08	-4239.52	-2.63	1731413.23	14591176.28	40°10'35.441"N	104°40'27.233"W	0.62	
12165.00	91.170	178.950	7073.08	4328.08	-4328.50	-1.01	1731415.17	14591087.34	40°10'34.562"N	104°40'27.212"W	1.45	
12255.00	88.300	180.050	7073.50	4418.07	-4418.49	-0.23	1731416.29	14590997.40	40°10'33.672"N	104°40'27.202"W	3.42	
12344.00	89.230	178.150	7075.42	4507.04	-4507.45	1.17	1731418.01	14590908.47	40°10'32.793"N	104°40'27.184"W	2.38	
12371.00†	88.962	179.623	7075.84	4534.04	-4534.44	1.70	1731418.63	14590881.50	40°10'32.527"N	104°40'27.177"W	5.54	ENTER RADIUS TOE (381'FSL & 1076'FWL, SEC.33) 40.1757018 -104.6742159
12434.00	88.340	183.060	7077.33	4596.96	-4597.40	0.22	1731417.39	14590818.56	40°10'31.904"N	104°40'27.196"W	5.54	
12523.00	89.260	183.590	7079.19	4685.71	-4686.22	-4.94	1731412.56	14590729.75	40°10'31.027"N	104°40'27.263"W	1.19	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#07 CANNON 4N-4HZ (370'FNL & 1034'FWL, SEC.33)
Area	COLORADO	Well	CANNON 4N-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CANNON 4N-4HZ AWB
Facility	SEC.33-T3N-R65W		

WELLPATH DATA (187 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
12613.00	90.340	182.930	7079.51	4775.49	-4776.08	-10.06	1731407.77	14590639.91	40°10'30.139"N	104°40'27.329"W	1.41	
12703.00	91.290	182.650	7078.23	4865.30	-4865.96	-14.44	1731403.72	14590550.05	40°10'29.251"N	104°40'27.385"W	1.10	
12792.00	91.940	181.770	7075.72	4954.14	-4954.86	-17.87	1731400.62	14590461.18	40°10'28.372"N	104°40'27.429"W	1.23	
12881.00	90.340	182.540	7073.95	5043.01	-5043.77	-21.21	1731397.60	14590372.28	40°10'27.493"N	104°40'27.472"W	2.00	
12971.00	90.740	182.460	7073.10	5132.85	-5133.68	-25.14	1731394.01	14590282.39	40°10'26.605"N	104°40'27.523"W	0.45	
13060.00	91.480	182.030	7071.37	5221.71	-5222.60	-28.62	1731390.85	14590193.50	40°10'25.726"N	104°40'27.568"W	0.96	LAST BHGE MWD+IFR1+MSA SURVEY
13113.00	91.480	182.030	7070.01	5274.63	-5275.55	-30.50	1731389.17	14590140.57	40°10'25.203"N	104°40'27.592"W	0.00	PTB (361'FNL & 1044'FWL, SEC.04) 40.1736675 -104.6743311

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	0.40	-45.01	1731355.31	14595414.36	40°11'17.340"N	104°40'27.779"W	polygon
SEC.28-T3N-R65W	0.00	0.40	-45.01	1731355.31	14595414.36	40°11'17.340"N	104°40'27.779"W	polygon
SEC.33-T3N-R65W	0.00	0.40	-45.01	1731355.31	14595414.36	40°11'17.340"N	104°40'27.779"W	polygon
CANNON 4N-4HZ BHL REV-1 (362'FNL & 1025'FWL, SEC.04)	7073.00	-5276.82	-50.04	1731369.64	14590139.22	40°10'25.190"N	104°40'27.844"W	point
CANNON 4N-4HZ BHL REV-2 (362'FNL & 1070'FWL, SEC.04)	7073.00	-5276.82	-5.04	1731414.62	14590139.39	40°10'25.190"N	104°40'27.264"W	point
CANNON 4N-4HZ HEEL REV-1 (150'FNL & 926'FWL, SEC.33)	7075.00	219.71	-106.18	1731293.36	14595633.36	40°11'19.507"N	104°40'28.567"W	point
CANNON 4N-4HZ HEEL REV-2 (150'FNL & 951'FWL, SEC.33)	7075.00	219.71	-81.18	1731318.35	14595633.45	40°11'19.507"N	104°40'28.245"W	point
CANNON 4N-4HZ HEEL REV-3 (100'FNL & 951'FWL, SEC.33)	7075.00	269.71	-81.18	1731318.17	14595683.43	40°11'20.001"N	104°40'28.245"W	point
CANNON 4N-4HZ LANDBOX	7075.00	0.00	0.00	1731400.31	14595414.12	40°11'17.336"N	104°40'27.199"W	polygon
CANNON 4N-4HZ RADIUS 1	7075.00	-4916.71	252.66	1731670.90	14590500.30	40°10'28.749"N	104°40'23.944"W	polygon
CANNON 4N-4HZ RADIUS 2	7075.00	367.70	279.75	1731678.60	14595782.70	40°11'20.970"N	104°40'23.594"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: CANNON 4N-4HZ AWB Ref Wellpath: CANNON 4N-4HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	1852.00	Custom APC ISCWSA REV 2 MWD+IFR1 (approximation)	TOTAL Custom APC ISCWSA Rev-2 MWD+IFR1 <128 - 1852>	CANNON 4N-4HZ AWB
1852.00	13060.00	Custom APC ISCWSA REV 2 MWD+IFR1+MSA (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+MSA <1930 - 13060>	CANNON 4N-4HZ AWB
13060.00	13113.00	Blind Drilling (std)	Projection to bit	CANNON 4N-4HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#07 CANNON 4N-4HZ (370'FNL & 1034'FWL,SEC.33)
Area	COLORADO	Well	CANNON 4N-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CANNON 4N-4HZ AWB
Facility	SEC.33-T3N-R65W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
128.00	0.400	79.590	128.00	FIRST TOTAL MWD+IFR1 SURVEY
1852.00	11.870	354.430	1824.63	LAST TOTAL MWD+IFR1 SURVEY
1930.00	11.750	354.230	1900.98	FIRST BHGE MWD+IFR1+MSA SURVEY
6414.00	2.946	182.497	6283.99	KOP
7675.00	89.057	180.904	7077.14	LANDING (211'FNL & 935'FWL,SEC.33) 40.1885847 -104.6745764
7730.00	90.381	180.970	7076.96	EXIT RADIUS HEEL (266'FNL & 935'FWL,SEC.33) 40.1884337 -104.6745800
12371.00	88.962	179.623	7075.84	ENTER RADIUS TOE (381'FSL & 1076'FWL,SEC.33) 40.1757018 -104.6742159
13060.00	91.480	182.030	7071.37	LAST BHGE MWD+IFR1+MSA SURVEY
13113.00	91.480	182.030	7070.01	PTB (361'FNL & 1044'FWL,SEC.04) 40.1736675 -104.6743311