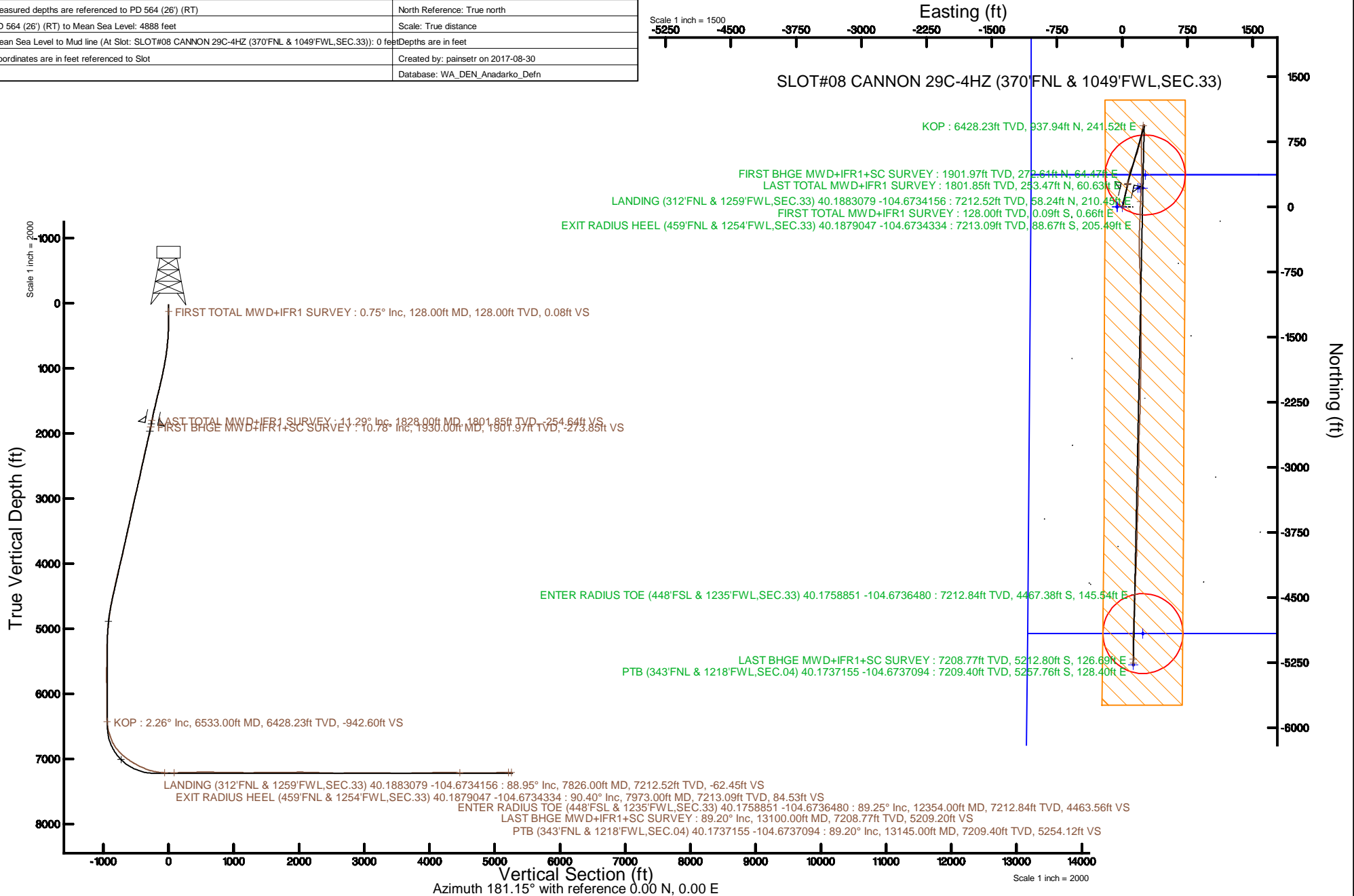


KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#08 CANNON 29C-4HZ (370'FNL & 1049'FWL,SEC.33)
 Field: WELD COUNTY (UTM/TRUE NORTH) Well: CANNON 29C-4HZ
 Facility: SEC.33-T3N-R65W Wellbore: CANNON 29C-4HZ PWB

Plot reference wellpath is CANNON 29C-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#08 CANNON 29C-4HZ (370'FNL & 1049'FWL,SEC.33)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: painsetr on 2017-08-30
	Database: WA_DEN_Anadarko_Defn



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#08 CANNON 29C-4HZ (370'FNL & 1049'FWL,SEC.33)
Area	COLORADO	Well	CANNON 29C-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CANNON 29C-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	8/30/2017 at 1:53 PM
Convergence at slot	0.22° East	Database/Source file	WA_DEN_Anadarko_Defn/CANNON_29C-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	-2086.76	1731415.13	14595413.87	40°11'17.333"N	104°40'27.008"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#08 CANNON 29C-4HZ (370'FNL & 1049'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	181.15°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#08 CANNON 29C-4HZ (370'FNL & 1049'FWL, SEC.33)
Area	COLORADO	Well	CANNON 29C-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CANNON 29C-4HZ AWB
Facility	SEC.33-T3N-R65W		

WELLPATH DATA (184 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 (ft/100ft)	Comments
0.00†	0.000	98.140	0.00	0.00	0.00	0.00	1731415.13	14595413.87	40°11'17.333"N	104°40'27.008"W	0.00	
26.00	0.000	98.140	26.00	0.00	0.00	0.00	1731415.13	14595413.87	40°11'17.333"N	104°40'27.008"W	0.00	
128.00	0.750	98.140	128.00	0.08	-0.09	0.66	1731415.79	14595413.78	40°11'17.332"N	104°40'26.999"W	0.74	FIRST TOTAL MWD+IFR1 SURVEY
160.00	0.700	120.640	159.99	0.20	-0.22	1.04	1731416.16	14595413.65	40°11'17.331"N	104°40'26.995"W	0.90	
191.00	0.700	86.890	190.99	0.28	-0.31	1.39	1731416.51	14595413.57	40°11'17.330"N	104°40'26.990"W	1.31	
223.00	0.880	69.050	222.99	0.18	-0.21	1.81	1731416.94	14595413.67	40°11'17.331"N	104°40'26.985"W	0.95	
255.00	0.830	37.850	254.99	-0.10	0.06	2.18	1731417.31	14595413.94	40°11'17.334"N	104°40'26.980"W	1.44	
287.00	0.970	45.050	286.98	-0.48	0.43	2.52	1731417.64	14595414.31	40°11'17.337"N	104°40'26.976"W	0.56	
318.00	1.450	34.160	317.98	-1.00	0.94	2.92	1731418.05	14595414.82	40°11'17.342"N	104°40'26.970"W	1.71	
350.00	1.760	32.400	349.96	-1.76	1.69	3.42	1731418.53	14595415.58	40°11'17.350"N	104°40'26.964"W	0.98	
382.00	2.020	37.230	381.95	-2.64	2.56	4.02	1731419.13	14595416.44	40°11'17.358"N	104°40'26.956"W	0.95	
413.00	2.110	33.010	412.92	-3.56	3.47	4.66	1731419.77	14595417.36	40°11'17.367"N	104°40'26.948"W	0.57	
445.00	2.860	15.260	444.90	-4.84	4.74	5.19	1731420.30	14595418.62	40°11'17.380"N	104°40'26.941"W	3.33	
477.00	3.160	13.940	476.85	-6.47	6.36	5.61	1731420.72	14595420.25	40°11'17.396"N	104°40'26.936"W	0.96	
509.00	3.300	13.680	508.80	-8.23	8.11	6.05	1731421.14	14595422.00	40°11'17.413"N	104°40'26.930"W	0.44	
541.00	4.310	11.740	540.73	-10.31	10.18	6.51	1731421.59	14595424.07	40°11'17.434"N	104°40'26.924"W	3.18	
571.00	5.010	13.060	570.63	-12.70	12.56	7.03	1731422.11	14595426.46	40°11'17.457"N	104°40'26.917"W	2.36	
603.00	5.630	11.660	602.49	-15.61	15.46	7.67	1731422.73	14595429.36	40°11'17.486"N	104°40'26.909"W	1.98	
635.00	6.330	10.510	634.32	-18.90	18.73	8.31	1731423.36	14595432.63	40°11'17.518"N	104°40'26.901"W	2.22	
667.00	6.280	11.390	666.12	-22.36	22.18	8.97	1731424.01	14595436.08	40°11'17.552"N	104°40'26.892"W	0.34	
730.00	7.650	15.610	728.66	-29.81	29.60	10.78	1731425.79	14595443.50	40°11'17.626"N	104°40'26.869"W	2.32	
762.00	8.000	16.050	760.36	-34.03	33.79	11.97	1731426.97	14595447.69	40°11'17.667"N	104°40'26.854"W	1.11	
825.00	8.790	13.240	822.68	-42.97	42.69	14.28	1731429.25	14595456.60	40°11'17.755"N	104°40'26.824"W	1.41	
857.00	9.100	11.390	854.30	-47.85	47.55	15.34	1731430.29	14595461.46	40°11'17.803"N	104°40'26.810"W	1.32	
920.00	10.370	9.110	916.39	-58.37	58.04	17.23	1731432.13	14595471.95	40°11'17.907"N	104°40'26.786"W	2.11	
951.00	10.810	8.760	946.86	-64.01	63.66	18.11	1731433.00	14595477.58	40°11'17.962"N	104°40'26.775"W	1.43	
983.00	10.850	6.730	978.29	-69.99	69.62	18.92	1731433.78	14595483.53	40°11'18.021"N	104°40'26.764"W	1.20	
1015.00	11.120	9.630	1009.70	-76.04	75.65	19.79	1731434.63	14595489.57	40°11'18.081"N	104°40'26.753"W	1.92	
1046.00	11.380	11.830	1040.11	-82.00	81.59	20.92	1731435.74	14595495.51	40°11'18.139"N	104°40'26.738"W	1.62	
1078.00	11.820	16.230	1071.45	-88.27	87.83	22.48	1731437.28	14595501.75	40°11'18.201"N	104°40'26.718"W	3.09	
1109.00	12.300	15.700	1101.77	-94.53	94.06	24.26	1731439.03	14595507.98	40°11'18.262"N	104°40'26.695"W	1.59	
1141.00	12.920	14.120	1133.00	-101.31	100.81	26.06	1731440.80	14595514.74	40°11'18.329"N	104°40'26.672"W	2.22	
1173.00	13.050	12.800	1164.18	-108.34	107.80	27.73	1731442.45	14595521.73	40°11'18.398"N	104°40'26.651"W	1.01	
1204.00	13.320	11.570	1194.36	-115.28	114.71	29.22	1731443.91	14595528.65	40°11'18.467"N	104°40'26.631"W	1.26	
1236.00	13.050	13.240	1225.52	-122.44	121.84	30.79	1731445.45	14595535.78	40°11'18.537"N	104°40'26.611"W	1.46	
1268.00	12.960	13.060	1256.70	-129.48	128.85	32.43	1731447.07	14595542.79	40°11'18.606"N	104°40'26.590"W	0.31	
1300.00	13.620	11.300	1287.84	-136.70	136.04	33.98	1731448.59	14595549.99	40°11'18.677"N	104°40'26.570"W	2.42	
1331.00	13.890	14.030	1317.95	-143.92	143.23	35.59	1731450.18	14595557.18	40°11'18.748"N	104°40'26.549"W	2.27	
1363.00	14.110	13.770	1349.00	-151.47	150.75	37.45	1731452.01	14595564.70	40°11'18.823"N	104°40'26.525"W	0.72	
1394.00	14.550	13.410	1379.04	-158.96	158.21	39.25	1731453.78	14595572.16	40°11'18.896"N	104°40'26.502"W	1.45	
1426.00	13.840	12.710	1410.06	-166.64	165.85	41.03	1731455.53	14595579.80	40°11'18.972"N	104°40'26.479"W	2.28	
1489.00	13.750	12.360	1471.24	-181.37	180.51	44.29	1731458.74	14595594.48	40°11'19.117"N	104°40'26.437"W	0.19	
1521.00	13.360	13.680	1502.35	-188.71	187.82	45.98	1731460.40	14595601.79	40°11'19.189"N	104°40'26.416"W	1.56	
1553.00	13.320	14.380	1533.49	-195.90	194.98	47.77	1731462.16	14595608.95	40°11'19.260"N	104°40'26.393"W	0.52	
1585.00	13.890	13.060	1564.59	-203.25	202.30	49.55	1731463.92	14595616.27	40°11'19.332"N	104°40'26.370"W	2.03	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#08 CANNON 29C-4HZ (370'FNL & 1049'FWL, SEC.33)
Area	COLORADO	Well	CANNON 29C-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CANNON 29C-4HZ AWB
Facility	SEC.33-T3N-R65W		

WELLPATH DATA (184 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
1616.00	14.020	12.530	1594.68	-210.57	209.59	51.21	1731465.54	14595623.56	40°11'19.404"N	104°40'26.348"W	0.59	
1647.00	13.010	11.300	1624.82	-217.69	216.67	52.71	1731467.02	14595630.65	40°11'19.474"N	104°40'26.329"W	3.39	
1679.00	12.300	12.010	1656.04	-224.58	223.54	54.12	1731468.40	14595637.52	40°11'19.542"N	104°40'26.311"W	2.27	
1710.00	12.390	11.660	1686.32	-231.09	230.03	55.48	1731469.74	14595644.01	40°11'19.606"N	104°40'26.293"W	0.38	
1742.00	11.910	12.620	1717.61	-237.71	236.61	56.89	1731471.13	14595650.60	40°11'19.671"N	104°40'26.275"W	1.63	
1774.00	11.650	13.330	1748.93	-244.10	242.98	58.36	1731472.57	14595656.97	40°11'19.734"N	104°40'26.256"W	0.93	
1828.00	11.290	11.040	1801.85	-254.64	253.47	60.63	1731474.80	14595667.46	40°11'19.838"N	104°40'26.227"W	1.07	LAST TOTAL MWD+IFR1 SURVEY
1930.00	10.780	11.650	1901.97	-273.85	272.61	64.47	1731478.57	14595686.61	40°11'20.027"N	104°40'26.177"W	0.51	FIRST BHGE MWD+IFR1+SC SURVEY
2020.00	11.960	9.290	1990.20	-291.36	290.06	67.67	1731481.71	14595704.06	40°11'20.199"N	104°40'26.136"W	1.41	
2110.00	14.410	12.130	2077.82	-311.59	310.22	71.53	1731485.49	14595724.22	40°11'20.399"N	104°40'26.086"W	2.81	
2199.00	13.750	11.160	2164.15	-332.88	331.42	75.91	1731489.79	14595745.44	40°11'20.608"N	104°40'26.030"W	0.79	
2288.00	13.200	9.910	2250.70	-353.34	351.81	79.70	1731493.51	14595765.83	40°11'20.810"N	104°40'25.981"W	0.70	
2378.00	12.660	9.470	2338.42	-373.25	371.66	83.09	1731496.82	14595785.68	40°11'21.006"N	104°40'25.937"W	0.61	
2468.00	12.020	6.440	2426.34	-392.34	390.70	85.77	1731499.43	14595804.73	40°11'21.194"N	104°40'25.903"W	1.01	
2557.00	12.510	13.450	2513.31	-410.99	409.28	89.05	1731502.64	14595823.32	40°11'21.378"N	104°40'25.861"W	1.76	
2647.00	12.820	28.750	2601.14	-429.37	427.52	96.12	1731509.64	14595841.58	40°11'21.558"N	104°40'25.769"W	3.73	
2736.00	14.010	26.390	2687.72	-447.86	445.83	105.66	1731519.11	14595859.91	40°11'21.739"N	104°40'25.647"W	1.47	
2826.00	13.210	26.290	2775.19	-467.03	464.81	115.06	1731528.43	14595878.92	40°11'21.926"N	104°40'25.525"W	0.89	
2915.00	14.940	20.390	2861.52	-487.07	484.68	123.56	1731536.86	14595898.81	40°11'22.123"N	104°40'25.416"W	2.52	
3005.00	14.510	19.720	2948.56	-508.71	506.17	131.41	1731544.62	14595920.32	40°11'22.335"N	104°40'25.315"W	0.51	
3095.00	13.990	17.010	3035.79	-529.86	527.19	138.39	1731551.53	14595941.36	40°11'22.543"N	104°40'25.225"W	0.94	
3184.00	12.870	16.200	3122.36	-549.78	546.99	144.31	1731557.37	14595961.18	40°11'22.738"N	104°40'25.149"W	1.28	
3274.00	11.310	15.250	3210.36	-568.02	565.14	149.42	1731562.42	14595979.33	40°11'22.918"N	104°40'25.083"W	1.75	
3363.00	11.750	21.110	3297.56	-585.00	582.01	154.98	1731567.91	14595996.22	40°11'23.084"N	104°40'25.011"W	1.41	
3453.00	12.020	20.560	3385.64	-602.46	599.33	161.57	1731574.44	14596013.56	40°11'23.256"N	104°40'24.926"W	0.33	
3542.00	13.010	23.730	3472.52	-620.45	617.18	168.86	1731581.66	14596031.43	40°11'23.432"N	104°40'24.832"W	1.35	
3632.00	13.570	14.280	3560.12	-640.09	636.69	175.54	1731588.26	14596050.95	40°11'23.625"N	104°40'24.746"W	2.49	
3722.00	13.460	13.190	3647.63	-660.61	657.12	180.54	1731593.18	14596071.39	40°11'23.827"N	104°40'24.682"W	0.31	
3811.00	11.470	12.660	3734.53	-679.42	675.84	184.84	1731597.41	14596090.12	40°11'24.012"N	104°40'24.626"W	2.24	
3900.00	12.670	13.590	3821.56	-697.62	693.96	189.07	1731601.58	14596108.25	40°11'24.191"N	104°40'24.572"W	1.37	
3990.00	14.310	12.810	3909.07	-718.15	714.40	193.86	1731606.29	14596128.70	40°11'24.393"N	104°40'24.510"W	1.83	
4079.00	13.720	11.740	3995.42	-739.30	735.46	198.45	1731610.79	14596149.77	40°11'24.601"N	104°40'24.451"W	0.72	
4169.00	15.250	13.670	4082.56	-761.35	757.42	203.41	1731615.68	14596171.73	40°11'24.818"N	104°40'24.387"W	1.78	
4259.00	14.090	13.180	4169.62	-783.62	779.58	208.71	1731620.89	14596193.91	40°11'25.037"N	104°40'24.319"W	1.30	
4348.00	11.980	13.030	4256.33	-803.25	799.13	213.26	1731625.37	14596213.47	40°11'25.230"N	104°40'24.260"W	2.37	
4438.00	12.650	15.280	4344.25	-821.95	817.74	217.97	1731630.01	14596232.08	40°11'25.414"N	104°40'24.199"W	0.92	
4527.00	12.930	18.820	4431.05	-840.89	836.57	223.75	1731635.71	14596250.92	40°11'25.600"N	104°40'24.125"W	0.93	
4617.00	12.280	19.370	4518.88	-859.57	855.13	230.17	1731642.07	14596269.50	40°11'25.783"N	104°40'24.042"W	0.73	
4706.00	10.930	19.480	4606.06	-876.57	872.01	236.12	1731647.96	14596286.40	40°11'25.950"N	104°40'23.965"W	1.52	
4820.00	9.600	20.260	4718.23	-895.82	891.12	243.02	1731654.78	14596305.52	40°11'26.139"N	104°40'23.877"W	1.17	
4910.00	8.030	19.550	4807.16	-908.87	904.08	247.72	1731659.43	14596318.50	40°11'26.267"N	104°40'23.816"W	1.75	
4999.00	6.600	18.050	4895.44	-919.67	914.80	251.39	1731663.06	14596329.23	40°11'26.373"N	104°40'23.769"W	1.62	
5089.00	4.970	16.360	4984.98	-928.38	923.46	254.09	1731665.72	14596337.90	40°11'26.459"N	104°40'23.734"W	1.82	
5178.00	3.550	11.370	5073.73	-934.81	929.86	255.72	1731667.33	14596344.30	40°11'26.522"N	104°40'23.713"W	1.65	
5268.00	3.030	9.580	5163.58	-939.90	934.94	256.66	1731668.26	14596349.38	40°11'26.572"N	104°40'23.701"W	0.59	

REFERENCE WELLPATH IDENTIFICATION				
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)		Slot	SLOT#08 CANNON 29C-4HZ (370'FNL & 1049'FWL, SEC.33)
Area	COLORADO		Well	CANNON 29C-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)		Wellbore	CANNON 29C-4HZ AWB
Facility	SEC.33-T3N-R65W			

WELLPATH DATA (184 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
5357.00	2.510	353.510	5252.48	-944.16	939.20	256.83	1731668.41	14596353.64	40°11'26.614"N	104°40'23.699"W	1.04	
5447.00	1.970	347.510	5342.41	-947.62	942.67	256.28	1731667.84	14596357.10	40°11'26.648"N	104°40'23.706"W	0.65	
5536.00	0.950	278.140	5431.38	-949.20	944.26	255.21	1731666.77	14596358.69	40°11'26.664"N	104°40'23.719"W	2.09	
5626.00	1.140	279.310	5521.37	-949.41	944.51	253.59	1731665.15	14596358.94	40°11'26.667"N	104°40'23.740"W	0.21	
5715.00	1.320	282.340	5610.35	-949.74	944.88	251.72	1731663.28	14596359.29	40°11'26.670"N	104°40'23.764"W	0.21	
5805.00	0.810	273.720	5700.33	-949.97	945.14	250.07	1731661.63	14596359.55	40°11'26.673"N	104°40'23.786"W	0.59	
5894.00	0.760	254.490	5789.32	-949.83	945.02	248.87	1731660.43	14596359.43	40°11'26.672"N	104°40'23.801"W	0.30	
5984.00	0.790	259.220	5879.31	-949.53	944.75	247.69	1731659.25	14596359.15	40°11'26.669"N	104°40'23.816"W	0.08	
6074.00	0.660	232.160	5969.31	-949.07	944.31	246.67	1731658.23	14596358.71	40°11'26.665"N	104°40'23.830"W	0.40	
6163.00	0.940	228.510	6058.30	-948.26	943.51	245.72	1731657.28	14596357.91	40°11'26.657"N	104°40'23.842"W	0.32	
6253.00	0.950	224.670	6148.29	-947.22	942.50	244.64	1731656.21	14596356.89	40°11'26.647"N	104°40'23.856"W	0.07	
6343.00	1.090	221.270	6238.27	-946.02	941.32	243.55	1731655.13	14596355.71	40°11'26.635"N	104°40'23.870"W	0.17	
6432.00	1.100	211.740	6327.26	-944.64	939.96	242.54	1731654.12	14596354.34	40°11'26.622"N	104°40'23.883"W	0.20	
6522.00	1.350	204.600	6417.24	-942.92	938.26	241.65	1731653.24	14596352.64	40°11'26.605"N	104°40'23.894"W	0.32	
6533.00†	2.258	200.013	6428.23	-942.60	937.94	241.52	1731653.11	14596352.32	40°11'26.602"N	104°40'23.896"W	8.35	KOP
6611.00	8.760	194.990	6505.83	-935.37	930.75	239.46	1731651.07	14596345.13	40°11'26.531"N	104°40'23.922"W	8.35	
6701.00	16.390	191.080	6593.61	-916.18	911.64	235.24	1731646.92	14596326.01	40°11'26.342"N	104°40'23.977"W	8.53	
6791.00	21.880	191.850	6678.60	-887.17	882.74	229.35	1731641.14	14596297.10	40°11'26.056"N	104°40'24.053"W	6.11	
6880.00	27.330	182.630	6759.52	-850.41	846.06	225.00	1731636.93	14596260.42	40°11'25.694"N	104°40'24.109"W	7.47	
6970.00	35.630	181.290	6836.21	-803.46	799.13	223.46	1731635.56	14596213.51	40°11'25.230"N	104°40'24.129"W	9.25	
7059.00	44.830	182.050	6904.08	-746.04	741.74	221.75	1731634.07	14596156.13	40°11'24.663"N	104°40'24.151"W	10.35	
7149.00	51.010	179.920	6964.37	-679.28	674.99	220.66	1731633.22	14596089.40	40°11'24.003"N	104°40'24.165"W	7.09	
7238.00	55.690	180.150	7017.48	-607.91	603.61	220.61	1731633.44	14596018.04	40°11'23.298"N	104°40'24.165"W	5.26	
7328.00	59.190	177.550	7065.92	-532.14	527.79	222.17	1731635.27	14595942.26	40°11'22.549"N	104°40'24.145"W	4.59	
7417.00	63.610	178.480	7108.51	-454.14	449.72	224.86	1731638.25	14595864.23	40°11'21.777"N	104°40'24.111"W	5.05	
7506.00	67.660	182.100	7145.23	-373.11	368.68	224.41	1731638.10	14595783.23	40°11'20.976"N	104°40'24.116"W	5.87	
7596.00	72.030	182.090	7176.23	-288.65	284.27	221.32	1731635.32	14595698.84	40°11'20.142"N	104°40'24.156"W	4.86	
7685.00	79.480	182.450	7198.12	-202.47	198.13	217.90	1731632.22	14595612.72	40°11'19.291"N	104°40'24.200"W	8.38	
7775.00	85.230	183.850	7210.09	-113.36	109.11	213.00	1731627.64	14595523.72	40°11'18.411"N	104°40'24.263"W	6.57	
7820.00	88.860	182.090	7212.41	-68.45	64.24	210.67	1731625.48	14595478.85	40°11'17.968"N	104°40'24.293"W	8.96	
7826.00†	88.955	182.081	7212.52	-62.45	58.24	210.45	1731625.28	14595472.86	40°11'17.909"N	104°40'24.296"W	1.59	LANDING (312'FNL & 1259'FWL, SEC.33) 40.1883079 -104.6734156
7865.00	89.570	182.020	7213.02	-23.46	19.27	209.06	1731624.03	14595433.90	40°11'17.523"N	104°40'24.314"W	1.59	
7954.00	90.220	181.800	7213.19	65.53	-69.68	206.09	1731621.39	14595344.97	40°11'16.644"N	104°40'24.353"W	0.77	
7973.00†	90.395	181.808	7213.09	84.53	-88.67	205.49	1731620.86	14595325.99	40°11'16.457"N	104°40'24.360"W	0.92	EXIT RADIUS HEEL (459'FNL & 1254'FWL, SEC.33) 40.1879047 -104.6734334
8044.00	91.050	181.840	7212.19	155.52	-159.63	203.23	1731618.86	14595255.05	40°11'15.756"N	104°40'24.389"W	0.92	
8133.00	91.970	182.440	7209.84	244.47	-248.53	199.91	1731615.87	14595166.17	40°11'14.877"N	104°40'24.432"W	1.23	
8223.00	90.890	180.640	7207.60	334.44	-338.47	197.49	1731613.78	14595076.26	40°11'13.988"N	104°40'24.463"W	2.33	
8313.00	91.600	180.200	7205.64	424.41	-428.44	196.83	1731613.45	14594986.32	40°11'13.099"N	104°40'24.472"W	0.93	
8402.00	90.120	179.300	7204.31	513.37	-517.43	197.22	1731614.17	14594897.37	40°11'12.220"N	104°40'24.467"W	1.95	
8492.00	90.000	177.640	7204.21	603.27	-607.39	199.63	1731616.90	14594807.45	40°11'11.331"N	104°40'24.436"W	1.85	
8581.00	88.270	177.800	7205.56	692.09	-696.31	203.17	1731620.76	14594718.58	40°11'10.452"N	104°40'24.390"W	1.95	
8671.00	88.950	177.920	7207.74	781.92	-786.22	206.53	1731624.45	14594628.72	40°11'09.564"N	104°40'24.347"W	0.77	
8760.00	88.920	179.430	7209.39	870.82	-875.18	208.58	1731626.84	14594539.81	40°11'08.684"N	104°40'24.320"W	1.70	
8850.00	89.350	178.930	7210.75	960.75	-965.16	209.87	1731628.45	14594449.87	40°11'07.795"N	104°40'24.304"W	0.73	
8939.00	89.630	177.310	7211.54	1049.62	-1054.10	212.79	1731631.70	14594360.97	40°11'06.916"N	104°40'24.266"W	1.85	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#08 CANNON 29C-4HZ (370'FNL & 1049'FWL, SEC.33)
Area	COLORADO	Well	CANNON 29C-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CANNON 29C-4HZ AWB
Facility	SEC.33-T3N-R65W		

WELLPATH DATA (184 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
9029.00	89.380	179.500	7212.32	1139.51	-1144.06	215.29	1731634.53	14594271.06	40°11'06.027"N	104°40'24.234"W	2.45	
9119.00	89.910	179.700	7212.88	1229.47	-1234.06	215.92	1731635.49	14594181.10	40°11'05.138"N	104°40'24.226"W	0.63	
9208.00	90.920	179.970	7212.24	1318.45	-1323.05	216.18	1731636.07	14594092.14	40°11'04.259"N	104°40'24.223"W	1.17	
9298.00	90.740	179.930	7210.93	1408.42	-1413.04	216.26	1731636.48	14594002.19	40°11'03.369"N	104°40'24.222"W	0.20	
9388.00	90.710	179.050	7209.79	1498.37	-1503.03	217.06	1731637.61	14593912.24	40°11'02.480"N	104°40'24.211"W	0.98	
9477.00	90.150	180.410	7209.12	1587.34	-1592.02	217.48	1731638.36	14593823.28	40°11'01.601"N	104°40'24.206"W	1.65	
9567.00	90.180	180.030	7208.87	1677.33	-1682.02	217.13	1731638.34	14593733.31	40°11'00.711"N	104°40'24.210"W	0.42	
9656.00	90.150	181.390	7208.61	1766.32	-1771.01	216.03	1731637.57	14593644.36	40°10'59.832"N	104°40'24.225"W	1.53	
9746.00	90.920	181.400	7207.77	1856.32	-1860.98	213.84	1731635.71	14593554.41	40°10'58.943"N	104°40'24.253"W	0.86	
9836.00	91.230	181.100	7206.08	1946.30	-1950.95	211.88	1731634.07	14593464.48	40°10'58.054"N	104°40'24.278"W	0.48	
9925.00	89.630	181.680	7205.41	2035.29	-2039.91	209.72	1731632.24	14593375.54	40°10'57.175"N	104°40'24.306"W	1.91	
10015.00	89.010	179.960	7206.48	2125.28	-2129.89	208.43	1731631.29	14593285.59	40°10'56.285"N	104°40'24.323"W	2.03	
10105.00	88.060	179.810	7208.78	2215.23	-2219.86	208.61	1731631.80	14593195.66	40°10'55.396"N	104°40'24.320"W	1.07	
10194.00	87.510	182.210	7212.22	2304.16	-2308.78	207.04	1731630.56	14593106.78	40°10'54.518"N	104°40'24.340"W	2.76	
10284.00	88.030	182.460	7215.72	2394.07	-2398.63	203.38	1731627.22	14593016.94	40°10'53.630"N	104°40'24.388"W	0.64	
10373.00	88.800	182.450	7218.19	2483.01	-2487.52	199.57	1731623.74	14592928.08	40°10'52.751"N	104°40'24.437"W	0.87	
10463.00	89.750	182.330	7219.32	2572.98	-2577.43	195.82	1731620.32	14592838.19	40°10'51.863"N	104°40'24.485"W	1.06	
10553.00	90.460	181.940	7219.16	2662.97	-2667.37	192.46	1731617.30	14592748.27	40°10'50.974"N	104°40'24.528"W	0.90	
10642.00	90.340	180.890	7218.54	2751.96	-2756.34	190.26	1731615.43	14592659.33	40°10'50.095"N	104°40'24.557"W	1.19	
10731.00	91.170	179.960	7217.37	2840.95	-2845.32	189.60	1731615.09	14592570.38	40°10'49.215"N	104°40'24.565"W	1.40	
10821.00	90.220	180.380	7216.27	2930.93	-2935.32	189.34	1731615.16	14592480.42	40°10'48.326"N	104°40'24.569"W	1.15	
10911.00	89.380	180.550	7216.59	3020.92	-3025.31	188.61	1731614.76	14592390.46	40°10'47.437"N	104°40'24.578"W	0.95	
11000.00	90.060	179.710	7217.02	3109.90	-3114.31	188.41	1731614.88	14592301.50	40°10'46.557"N	104°40'24.581"W	1.21	
11090.00	89.450	182.410	7217.41	3199.89	-3204.28	186.74	1731613.55	14592211.55	40°10'45.668"N	104°40'24.602"W	3.08	
11179.00	89.750	182.240	7218.03	3288.87	-3293.21	183.13	1731610.26	14592122.65	40°10'44.789"N	104°40'24.649"W	0.39	
11269.00	89.450	181.570	7218.66	3378.86	-3383.16	180.14	1731607.60	14592032.73	40°10'43.901"N	104°40'24.687"W	0.82	
11358.00	88.890	180.840	7219.95	3467.85	-3472.13	178.27	1731606.06	14591943.78	40°10'43.021"N	104°40'24.711"W	1.03	
11448.00	90.060	181.860	7220.77	3557.84	-3562.09	176.15	1731604.27	14591853.84	40°10'42.132"N	104°40'24.739"W	1.72	
11537.00	90.310	181.940	7220.48	3646.83	-3651.05	173.20	1731601.65	14591764.92	40°10'41.253"N	104°40'24.777"W	0.29	
11627.00	92.280	181.650	7218.45	3736.80	-3740.97	170.38	1731599.16	14591675.02	40°10'40.365"N	104°40'24.813"W	2.21	
11717.00	91.360	180.380	7215.59	3826.75	-3830.91	168.78	1731597.90	14591585.11	40°10'39.476"N	104°40'24.834"W	1.74	
11806.00	91.080	180.850	7213.70	3915.73	-3919.89	167.83	1731597.27	14591496.17	40°10'38.597"N	104°40'24.846"W	0.61	
11896.00	90.340	182.630	7212.58	4005.71	-4009.83	165.10	1731594.87	14591406.24	40°10'37.708"N	104°40'24.881"W	2.14	
11985.00	90.950	182.290	7211.58	4094.68	-4098.74	161.28	1731591.37	14591317.35	40°10'36.829"N	104°40'24.930"W	0.78	
12074.00	89.940	183.060	7210.89	4183.65	-4187.64	157.12	1731587.55	14591228.48	40°10'35.951"N	104°40'24.984"W	1.43	
12164.00	90.250	182.390	7210.74	4273.61	-4277.54	152.84	1731583.60	14591138.60	40°10'35.062"N	104°40'25.039"W	0.82	
12254.00	88.920	182.400	7211.39	4363.59	-4367.46	149.08	1731580.17	14591048.70	40°10'34.174"N	104°40'25.087"W	1.48	
12343.00	89.380	181.730	7212.71	4452.56	-4456.39	145.88	1731577.29	14590959.80	40°10'33.295"N	104°40'25.129"W	0.91	
12354.00†	89.253	181.746	7212.84	4463.56	-4467.38	145.54	1731577.00	14590948.80	40°10'33.186"N	104°40'25.133"W	1.16	ENTER RADIUS TOE (448'FSL & 1235'FWL, SEC.33) 40.1758851 -104.6736480
12433.00	88.340	181.860	7214.50	4542.54	-4546.33	143.06	1731574.80	14590869.88	40°10'32.406"N	104°40'25.165"W	1.16	
12522.00	88.950	183.070	7216.61	4631.49	-4635.22	139.23	1731571.31	14590781.01	40°10'31.528"N	104°40'25.214"W	1.52	
12612.00	89.910	182.800	7217.50	4721.44	-4725.09	134.62	1731567.03	14590691.16	40°10'30.640"N	104°40'25.274"W	1.11	
12701.00	90.000	181.830	7217.57	4810.42	-4814.02	131.03	1731563.76	14590602.25	40°10'29.761"N	104°40'25.320"W	1.09	
12791.00	92.030	181.180	7215.98	4900.40	-4903.97	128.67	1731561.73	14590512.33	40°10'28.872"N	104°40'25.350"W	2.37	
12880.00	91.510	181.140	7213.23	4989.36	-4992.91	126.86	1731560.26	14590423.42	40°10'27.993"N	104°40'25.374"W	0.59	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#08 CANNON 29C-4HZ (370'FNL & 1049'FWL,SEC.33)
Area	COLORADO	Well	CANNON 29C-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CANNON 29C-4HZ AWB
Facility	SEC.33-T3N-R65W		

WELLPATH DATA (184 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
12970.00	92.460	180.710	7210.11	5079.30	-5082.84	125.41	1731559.13	14590333.52	40°10'27.104"N	104°40'25.392"W	1.16	
13059.00	89.750	179.070	7208.39	5168.25	-5171.81	125.58	1731559.63	14590244.58	40°10'26.225"N	104°40'25.390"W	3.56	
13100.00	89.200	177.830	7208.77	5209.20	-5212.80	126.69	1731560.89	14590203.62	40°10'25.820"N	104°40'25.376"W	3.31	LAST BHGE MWD+IFR1+SC SURVEY
13145.00	89.200	177.830	7209.40	5254.12	-5257.76	128.40	1731562.76	14590158.68	40°10'25.376"N	104°40'25.354"W	0.00	PTB (343'FNL & 1218'FWL,SEC.04) 40.1737155 -104.6737094

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	-59.84	1731355.31	14595414.36	40°11'17.340"N	104°40'27.779"W	polygon
SEC.28-T3N-R65W	0.00	0.71	-59.84	1731355.31	14595414.36	40°11'17.340"N	104°40'27.779"W	polygon
SEC.33-T3N-R65W	0.00	0.71	-59.84	1731355.31	14595414.36	40°11'17.340"N	104°40'27.779"W	polygon
CANNON 29C-4HZ BHL REV-1 (362'FNL & 1218'FWL,SEC.04)	7221.00	-5276.52	127.68	1731562.11	14590139.93	40°10'25.190"N	104°40'25.363"W	point
CANNON 29C-4HZ HEEL REV-1 (153'FNL & 1230'FWL,SEC.33)	7221.00	217.47	182.97	1731597.23	14595631.92	40°11'19.482"N	104°40'24.650"W	point
CANNON 29C-4HZ HEEL REV-2 (153'FNL & 1255'FWL,SEC.33)	7221.00	217.47	207.97	1731622.22	14595632.01	40°11'19.482"N	104°40'24.328"W	point
CANNON 29C-4HZ HEEL REV-3 (153'FNL & 1285'FWL,SEC.33)	7221.00	217.47	237.97	1731652.20	14595632.12	40°11'19.482"N	104°40'23.942"W	point
CANNON 29C-4HZ LANDBOX	7221.00	0.00	0.00	1731415.13	14595413.87	40°11'17.333"N	104°40'27.008"W	polygon
CANNON 29C-4HZ RADIUS 1	7221.00	-4916.41	237.83	1731670.90	14590500.30	40°10'28.749"N	104°40'23.944"W	polygon
CANNON 29C-4HZ RADIUS 2	7221.00	368.00	264.93	1731678.60	14595782.70	40°11'20.970"N	104°40'23.594"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: CANNON 29C-4HZ AWB					Ref Wellpath: CANNON 29C-4HZ AWP		
Start MD [ft]	End MD [ft]	Positional Uncertainty Model		Log Name/Comment		Wellbore	
26.00	1828.00	Custom APC	ISCWSA REV 2 MWD+IFR1 (approximation)	TOTAL	Custom APC ISCWSA Rev-2 MWD+IFR1 <128 - 1828>	CANNON 29C-4HZ AWB	
1828.00	13100.00	Custom APC	ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE	Custom APC ISCWSA Rev-2 MWD+IFR1+SC <1930 - 13100>	CANNON 29C-4HZ AWB	
13100.00	13145.00	Blind Drilling	(std)	Projection	to bit	CANNON 29C-4HZ AWB	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#08 CANNON 29C-4HZ (370'FNL & 1049'FWL,SEC.33)
Area	COLORADO	Well	CANNON 29C-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CANNON 29C-4HZ AWB
Facility	SEC.33-T3N-R65W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
128.00	0.750	98.140	128.00	FIRST TOTAL MWD+IFR1 SURVEY
1828.00	11.290	11.040	1801.85	LAST TOTAL MWD+IFR1 SURVEY
1930.00	10.780	11.650	1901.97	FIRST BHGE MWD+IFR1+SC SURVEY
6533.00	2.258	200.013	6428.23	KOP
7826.00	88.955	182.081	7212.52	LANDING (312'FNL & 1259'FWL,SEC.33) 40.1883079 -104.6734156
7973.00	90.395	181.808	7213.09	EXIT RADIUS HEEL (459'FNL & 1254'FWL,SEC.33) 40.1879047 -104.6734334
12354.00	89.253	181.746	7212.84	ENTER RADIUS TOE (448'FSL & 1235'FWL,SEC.33) 40.1758851 -104.6736480
13100.00	89.200	177.830	7208.77	LAST BHGE MWD+IFR1+SC SURVEY
13145.00	89.200	177.830	7209.40	PTB (343'FNL & 1218'FWL,SEC.04) 40.1737155 -104.6737094