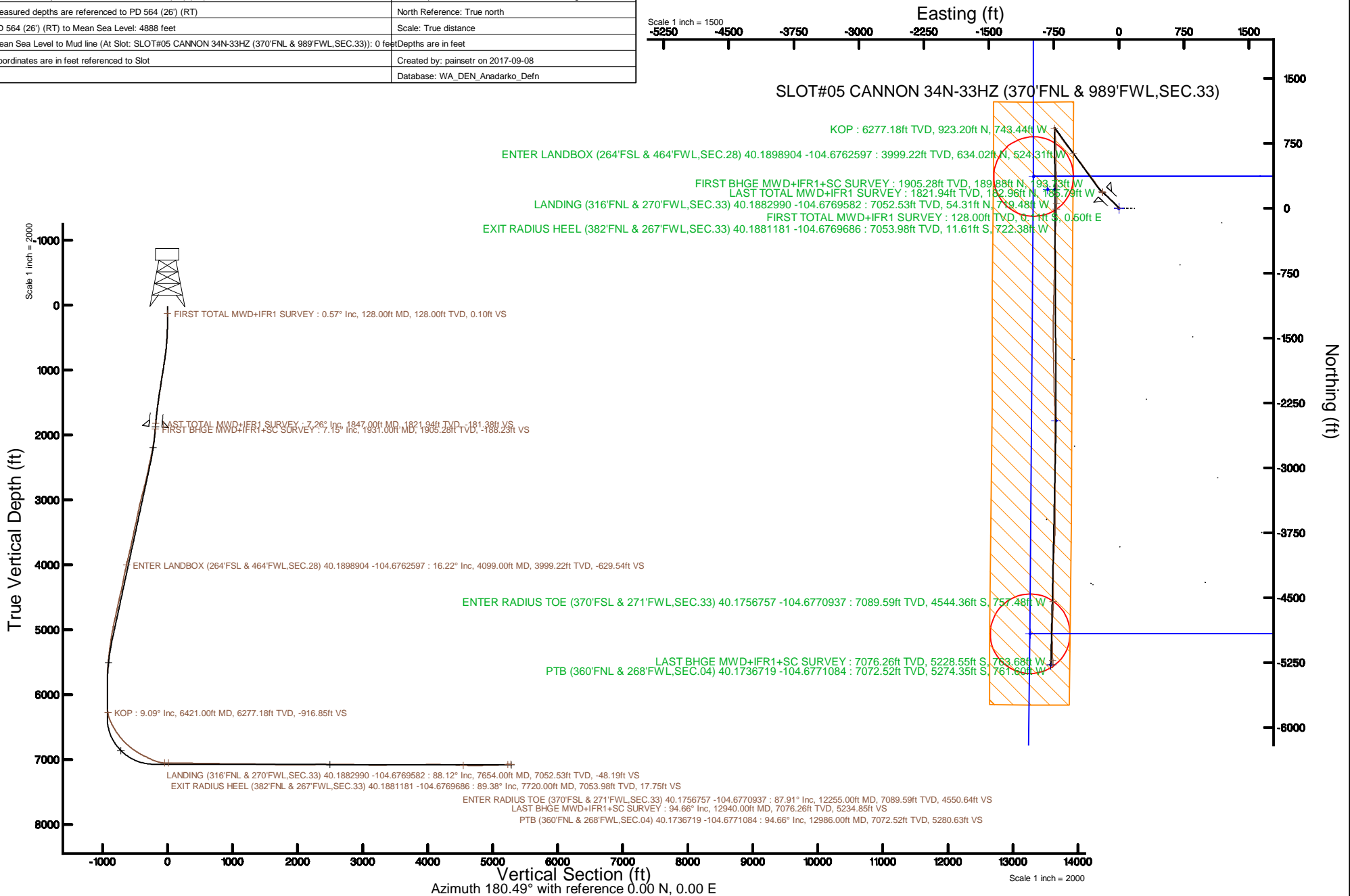


# KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#05 CANNON 34N-33HZ (370'FNL & 989'FWL, SEC.33)  
 Field: WELD COUNTY (UTM/TRUE NORTH) Well: CANNON 34N-33HZ  
 Facility: SEC.33-T3N-R65W Wellbore: CANNON 34N-33HZ PWB

Plot reference wellpath is CANNON 34N-33HZ 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#05 CANNON 34N-33HZ (370'FNL & 989'FWL, SEC.33)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: painsetr on 2017-09-08
	Database: WA_DEN_Anadarko_Defn



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#05 CANNON 34N-33HZ (370'FNL & 989'FWL,SEC.33)
Area	COLORADO	Well	CANNON 34N-33HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CANNON 34N-33HZ 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	9/8/2017 at 1:11 PM
Convergence at slot	0.22° East	Database/Source file	WA_DEN_Anadarko_Defn/CANNON_34N-33HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	1588.43	-2146.59	1731355.31	14595414.36	40°11'17.340"N	104°40'27.779"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#05 CANNON 34N-33HZ (370'FNL & 989'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	180.49°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#05 CANNON 34N-33HZ (370'FNL & 989'FWL, SEC.33)
Area	COLORADO	Well	CANNON 34N-33HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CANNON 34N-33HZ AWB
Facility	SEC.33-T3N-R65W		

WELLPATH DATA (182 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	102.100	0.00	0.00	0.00	0.00	1731355.31	14595414.36	40°11'17.340"N	104°40'27.779"W	0.00	
26.00	0.000	102.100	26.00	0.00	0.00	0.00	1731355.31	14595414.36	40°11'17.340"N	104°40'27.779"W	0.00	
128.00	0.570	102.100	128.00	0.10	-0.11	0.50	1731355.81	14595414.25	40°11'17.339"N	104°40'27.773"W	0.56	FIRST TOTAL MWD+IFR1 SURVEY
160.00	0.350	56.920	160.00	0.08	-0.09	0.73	1731356.04	14595414.28	40°11'17.339"N	104°40'27.770"W	1.27	
191.00	0.260	65.530	191.00	0.00	-0.01	0.88	1731356.19	14595414.36	40°11'17.340"N	104°40'27.768"W	0.33	
223.00	0.310	27.740	223.00	-0.11	0.10	0.98	1731356.29	14595414.46	40°11'17.341"N	104°40'27.766"W	0.60	
255.00	0.260	354.600	255.00	-0.26	0.25	1.02	1731356.33	14595414.61	40°11'17.342"N	104°40'27.766"W	0.53	
286.00	0.830	326.570	285.99	-0.51	0.51	0.89	1731356.19	14595414.87	40°11'17.345"N	104°40'27.768"W	1.98	
318.00	1.630	318.570	317.99	-1.05	1.04	0.46	1731355.76	14595415.40	40°11'17.350"N	104°40'27.773"W	2.55	
350.00	1.890	310.660	349.97	-1.73	1.73	-0.24	1731355.06	14595416.08	40°11'17.357"N	104°40'27.782"W	1.11	
382.00	2.460	312.770	381.95	-2.53	2.54	-1.15	1731354.15	14595416.89	40°11'17.365"N	104°40'27.794"W	1.80	
413.00	3.210	319.010	412.91	-3.63	3.64	-2.21	1731353.09	14595417.99	40°11'17.376"N	104°40'27.807"W	2.61	
445.00	3.740	317.600	444.85	-5.06	5.09	-3.50	1731351.80	14595419.44	40°11'17.390"N	104°40'27.824"W	1.68	
477.00	4.390	319.890	476.77	-6.76	6.80	-4.99	1731350.30	14595421.14	40°11'17.407"N	104°40'27.843"W	2.09	
509.00	4.970	317.340	508.66	-8.70	8.75	-6.72	1731348.56	14595423.09	40°11'17.427"N	104°40'27.866"W	1.93	
541.00	5.450	320.150	540.53	-10.87	10.94	-8.63	1731346.64	14595425.26	40°11'17.448"N	104°40'27.890"W	1.70	
571.00	5.710	319.450	570.39	-13.08	13.17	-10.51	1731344.75	14595427.48	40°11'17.470"N	104°40'27.914"W	0.90	
603.00	6.550	319.360	602.21	-15.65	15.76	-12.74	1731342.52	14595430.07	40°11'17.496"N	104°40'27.943"W	2.63	
635.00	7.380	319.270	633.97	-18.57	18.71	-15.27	1731339.98	14595433.00	40°11'17.525"N	104°40'27.976"W	2.59	
667.00	7.600	318.390	665.70	-21.69	21.85	-18.01	1731337.22	14595436.13	40°11'17.556"N	104°40'28.011"W	0.78	
698.00	8.530	319.270	696.39	-24.94	25.12	-20.88	1731334.35	14595439.39	40°11'17.588"N	104°40'28.048"W	3.03	
730.00	9.270	317.600	728.00	-28.62	28.82	-24.16	1731331.05	14595443.08	40°11'17.625"N	104°40'28.090"W	2.45	
762.00	9.800	316.460	759.56	-32.46	32.70	-27.78	1731327.43	14595446.94	40°11'17.663"N	104°40'28.137"W	1.76	
793.00	10.240	315.140	790.09	-36.30	36.56	-31.54	1731323.65	14595450.79	40°11'17.701"N	104°40'28.185"W	1.60	
825.00	11.250	315.230	821.53	-40.49	40.80	-35.74	1731319.43	14595455.01	40°11'17.743"N	104°40'28.240"W	3.16	
857.00	11.910	315.930	852.88	-45.04	45.39	-40.24	1731314.92	14595459.58	40°11'17.789"N	104°40'28.297"W	2.11	
888.00	12.220	315.580	883.19	-49.65	50.03	-44.76	1731310.39	14595464.20	40°11'17.834"N	104°40'28.356"W	1.03	
920.00	12.660	316.370	914.44	-54.56	54.98	-49.55	1731305.58	14595469.14	40°11'17.883"N	104°40'28.417"W	1.47	
951.00	13.180	315.410	944.66	-59.50	59.96	-54.37	1731300.74	14595474.10	40°11'17.933"N	104°40'28.480"W	1.81	
983.00	13.010	315.320	975.82	-64.61	65.12	-59.47	1731295.63	14595479.23	40°11'17.984"N	104°40'28.545"W	0.54	
1014.00	13.840	315.050	1005.98	-69.67	70.22	-64.54	1731290.54	14595484.32	40°11'18.034"N	104°40'28.611"W	2.69	
1046.00	14.460	314.090	1037.01	-75.11	75.71	-70.11	1731284.95	14595489.79	40°11'18.088"N	104°40'28.682"W	2.07	
1078.00	13.800	312.420	1068.04	-80.42	81.07	-75.80	1731279.24	14595495.12	40°11'18.141"N	104°40'28.756"W	2.42	
1109.00	13.490	311.360	1098.16	-85.26	85.95	-81.24	1731273.78	14595499.98	40°11'18.189"N	104°40'28.826"W	1.28	
1141.00	13.320	311.100	1129.29	-90.10	90.84	-86.82	1731268.19	14595504.85	40°11'18.238"N	104°40'28.898"W	0.56	
1173.00	12.170	312.680	1160.50	-94.76	95.55	-92.08	1731262.92	14595509.53	40°11'18.284"N	104°40'28.965"W	3.75	
1204.00	11.730	310.920	1190.83	-99.00	99.83	-96.86	1731258.12	14595513.79	40°11'18.327"N	104°40'29.027"W	1.84	
1236.00	12.000	311.100	1222.15	-103.28	104.15	-101.83	1731253.14	14595518.09	40°11'18.369"N	104°40'29.091"W	0.85	
1268.00	11.910	314.530	1253.45	-107.74	108.65	-106.69	1731248.26	14595522.57	40°11'18.414"N	104°40'29.154"W	2.24	
1299.00	11.950	317.080	1283.78	-112.29	113.24	-111.16	1731243.78	14595527.15	40°11'18.459"N	104°40'29.211"W	1.71	
1331.00	12.350	317.510	1315.07	-117.20	118.19	-115.72	1731239.20	14595532.08	40°11'18.508"N	104°40'29.270"W	1.28	
1363.00	12.830	317.510	1346.30	-122.31	123.34	-120.44	1731234.47	14595537.20	40°11'18.559"N	104°40'29.331"W	1.50	
1394.00	12.440	316.460	1376.55	-127.23	128.29	-125.06	1731229.83	14595542.14	40°11'18.608"N	104°40'29.390"W	1.46	
1426.00	12.520	314.790	1407.79	-132.13	133.24	-129.90	1731224.98	14595547.07	40°11'18.657"N	104°40'29.453"W	1.16	
1458.00	11.730	311.980	1439.08	-136.71	137.86	-134.78	1731220.08	14595551.67	40°11'18.702"N	104°40'29.516"W	3.08	

REFERENCE WELLPATH IDENTIFICATION			
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Area	COLORADO	Well	CANNON 34N-33HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CANNON 34N-33HZ AWB
Facility	SEC.33-T3N-R65W		

WELLPATH DATA (182 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
1489.00	11.380	311.450	1469.45	-140.80	141.99	-139.41	1731215.44	14595555.78	40°11'18.743"N	104°40'29.575"W	1.18	
1553.00	11.780	312.070	1532.14	-149.27	150.55	-148.99	1731205.83	14595564.30	40°11'18.828"N	104°40'29.699"W	0.65	
1585.00	10.850	313.820	1563.52	-153.51	154.82	-153.59	1731201.21	14595568.55	40°11'18.870"N	104°40'29.758"W	3.10	
1616.00	10.900	312.940	1593.97	-157.49	158.84	-157.84	1731196.95	14595572.55	40°11'18.910"N	104°40'29.813"W	0.56	
1647.00	10.720	312.070	1624.42	-161.38	162.76	-162.13	1731192.65	14595576.46	40°11'18.948"N	104°40'29.868"W	0.78	
1679.00	10.370	311.890	1655.88	-165.26	166.68	-166.48	1731188.29	14595580.36	40°11'18.987"N	104°40'29.924"W	1.10	
1774.00	8.260	309.080	1749.62	-175.17	176.69	-178.14	1731176.59	14595590.33	40°11'19.086"N	104°40'30.074"W	2.27	
1806.00	7.870	309.340	1781.30	-177.98	179.53	-181.62	1731173.10	14595593.15	40°11'19.114"N	104°40'30.119"W	1.22	
1847.00	7.260	309.600	1821.94	-181.38	182.96	-185.79	1731168.92	14595596.57	40°11'19.148"N	104°40'30.173"W	1.49	LAST TOTAL MWD+IFR1 SURVEY
1931.00	7.150	312.560	1905.28	-188.23	189.88	-193.73	1731160.96	14595603.46	40°11'19.216"N	104°40'30.275"W	0.46	FIRST BHGE MWD+IFR1+SC SURVEY
2020.00	8.740	317.350	1993.42	-196.87	198.60	-202.39	1731152.27	14595612.14	40°11'19.303"N	104°40'30.387"W	1.93	
2110.00	10.510	319.820	2082.15	-208.09	209.90	-212.32	1731142.30	14595623.40	40°11'19.414"N	104°40'30.515"W	2.02	
2199.00	12.090	323.130	2169.43	-221.66	223.56	-223.15	1731131.43	14595637.01	40°11'19.549"N	104°40'30.654"W	1.92	
2288.00	14.000	320.420	2256.13	-237.31	239.32	-235.60	1731118.92	14595652.72	40°11'19.705"N	104°40'30.815"W	2.25	
2378.00	15.140	327.640	2343.24	-255.51	257.64	-248.83	1731105.63	14595670.98	40°11'19.886"N	104°40'30.985"W	2.38	
2468.00	13.820	326.380	2430.38	-274.29	276.52	-261.08	1731093.33	14595689.81	40°11'20.073"N	104°40'31.143"W	1.51	
2557.00	13.580	325.790	2516.85	-291.68	294.01	-272.84	1731081.51	14595707.25	40°11'20.245"N	104°40'31.295"W	0.31	
2647.00	15.260	326.180	2604.01	-310.15	312.59	-285.37	1731068.91	14595725.78	40°11'20.429"N	104°40'31.456"W	1.87	
2737.00	15.900	321.740	2690.70	-329.55	332.11	-299.60	1731054.62	14595745.24	40°11'20.622"N	104°40'31.639"W	1.50	
2826.00	18.980	323.030	2775.60	-350.55	353.25	-315.85	1731038.29	14595766.31	40°11'20.831"N	104°40'31.849"W	3.49	
2916.00	18.640	323.180	2860.80	-373.61	376.46	-333.28	1731020.79	14595789.45	40°11'21.060"N	104°40'32.073"W	0.38	
3005.00	17.640	323.290	2945.37	-395.67	398.66	-349.86	1731004.13	14595811.57	40°11'21.279"N	104°40'32.287"W	1.12	
3095.00	16.760	323.040	3031.35	-416.83	419.96	-365.81	1730988.10	14595832.81	40°11'21.490"N	104°40'32.493"W	0.98	
3184.00	15.510	321.510	3116.84	-436.27	439.53	-380.94	1730972.91	14595852.31	40°11'21.683"N	104°40'32.687"W	1.48	
3274.00	13.860	322.420	3203.90	-454.12	457.49	-395.00	1730958.79	14595870.22	40°11'21.861"N	104°40'32.869"W	1.85	
3363.00	14.490	327.340	3290.19	-471.83	475.31	-407.51	1730946.22	14595887.99	40°11'22.037"N	104°40'33.030"W	1.53	
3453.00	16.430	324.710	3376.93	-491.59	495.18	-420.94	1730932.72	14595907.80	40°11'22.233"N	104°40'33.203"W	2.29	
3543.00	13.780	322.940	3463.81	-510.41	514.13	-434.76	1730918.84	14595926.69	40°11'22.421"N	104°40'33.381"W	2.99	
3632.00	14.680	323.770	3550.08	-527.86	531.68	-447.81	1730905.73	14595944.19	40°11'22.594"N	104°40'33.549"W	1.04	
3722.00	16.800	322.590	3636.70	-547.27	551.22	-462.45	1730891.02	14595963.66	40°11'22.787"N	104°40'33.738"W	2.38	
3811.00	14.940	320.650	3722.31	-566.23	570.31	-477.54	1730875.87	14595982.69	40°11'22.976"N	104°40'33.932"W	2.17	
3901.00	15.100	325.850	3809.24	-584.78	588.98	-491.48	1730861.87	14596001.30	40°11'23.160"N	104°40'34.112"W	1.51	
3990.00	17.020	323.760	3894.76	-604.76	609.08	-505.69	1730847.59	14596021.34	40°11'23.359"N	104°40'34.295"W	2.25	
4080.00	16.300	322.880	3980.98	-625.32	629.78	-521.10	1730832.11	14596041.97	40°11'23.563"N	104°40'34.494"W	0.85	
4099.00†	16.221	322.872	3999.22	-629.54	634.02	-524.31	1730828.89	14596046.20	40°11'23.605"N	104°40'34.535"W	0.42	ENTER LANDBOX (264'FSL & 464'FWL, SEC.28) 40.1898904 -104.6762597
4169.00	15.930	322.840	4066.48	-644.89	649.47	-536.01	1730817.13	14596061.60	40°11'23.758"N	104°40'34.686"W	0.42	
4259.00	15.040	320.650	4153.22	-663.64	668.34	-550.88	1730802.20	14596080.41	40°11'23.944"N	104°40'34.877"W	1.18	
4349.00	13.590	317.730	4240.42	-680.37	685.20	-565.40	1730787.63	14596097.21	40°11'24.111"N	104°40'35.064"W	1.80	
4438.00	14.380	317.160	4326.78	-696.08	701.04	-579.94	1730773.03	14596112.99	40°11'24.268"N	104°40'35.252"W	0.90	
4528.00	16.500	323.750	4413.54	-714.46	719.54	-595.10	1730757.81	14596131.43	40°11'24.450"N	104°40'35.447"W	3.05	
4617.00	16.360	324.400	4498.90	-734.72	739.93	-609.87	1730742.97	14596151.76	40°11'24.652"N	104°40'35.638"W	0.26	
4707.00	15.630	322.250	4585.42	-754.48	759.82	-624.68	1730728.10	14596171.59	40°11'24.848"N	104°40'35.828"W	1.04	
4822.00	14.660	324.010	4696.42	-778.35	783.85	-642.71	1730709.98	14596195.54	40°11'25.086"N	104°40'36.061"W	0.93	
4911.00	15.290	329.110	4782.40	-797.43	803.03	-655.36	1730697.27	14596214.67	40°11'25.275"N	104°40'36.224"W	1.64	
5001.00	14.600	326.310	4869.36	-816.95	822.65	-667.74	1730684.82	14596234.23	40°11'25.469"N	104°40'36.383"W	1.11	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#05 CANNON 34N-33HZ (370'FNL & 989'FWL, SEC.33)
Area	COLORADO	Well	CANNON 34N-33HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CANNON 34N-33HZ AWB
Facility	SEC.33-T3N-R65W		

WELLPATH DATA (182 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
5090.00	13.070	322.610	4955.78	-834.17	839.98	-680.07	1730672.43	14596251.51	40°11'25.641"N	104°40'36.542"W	1.99	
5180.00	12.350	326.220	5043.57	-850.16	856.07	-691.60	1730660.84	14596267.55	40°11'25.800"N	104°40'36.691"W	1.19	
5270.00	11.460	323.810	5131.64	-865.28	871.28	-702.24	1730650.16	14596282.72	40°11'25.950"N	104°40'36.828"W	1.13	
5359.00	10.260	322.030	5219.04	-878.58	884.67	-712.33	1730640.02	14596296.06	40°11'26.082"N	104°40'36.958"W	1.40	
5448.00	8.990	326.090	5306.79	-890.53	896.69	-721.09	1730631.22	14596308.05	40°11'26.201"N	104°40'37.071"W	1.62	
5538.00	7.470	330.870	5395.86	-901.42	907.63	-727.86	1730624.41	14596318.96	40°11'26.309"N	104°40'37.158"W	1.85	
5627.00	6.040	329.190	5484.24	-910.45	916.71	-733.08	1730619.17	14596328.02	40°11'26.399"N	104°40'37.225"W	1.62	
5717.00	4.600	343.320	5573.85	-917.94	924.23	-736.54	1730615.68	14596335.52	40°11'26.473"N	104°40'37.270"W	2.15	
5806.00	2.700	341.870	5662.67	-923.34	929.65	-738.21	1730613.98	14596340.93	40°11'26.527"N	104°40'37.291"W	2.14	
5896.00	1.450	278.070	5752.62	-925.50	931.82	-740.00	1730612.19	14596343.10	40°11'26.548"N	104°40'37.314"W	2.71	
5986.00	0.790	291.490	5842.60	-925.87	932.21	-741.71	1730610.48	14596343.48	40°11'26.552"N	104°40'37.336"W	0.78	
6075.00	0.650	246.800	5931.59	-925.89	932.23	-742.74	1730609.45	14596343.50	40°11'26.552"N	104°40'37.350"W	0.63	
6165.00	0.750	242.440	6021.59	-925.41	931.76	-743.73	1730608.46	14596343.02	40°11'26.548"N	104°40'37.362"W	0.13	
6255.00	0.560	256.080	6111.58	-925.02	931.38	-744.68	1730607.51	14596342.64	40°11'26.544"N	104°40'37.375"W	0.27	
6344.00	1.490	169.960	6200.57	-923.77	930.14	-744.90	1730607.30	14596341.39	40°11'26.532"N	104°40'37.377"W	1.75	
6421.00†	9.087	167.842	6277.18	-916.85	923.20	-743.44	1730608.78	14596334.46	40°11'26.463"N	104°40'37.359"W	9.87	KOP
6434.00	10.370	167.790	6290.00	-914.70	921.05	-742.98	1730609.25	14596332.32	40°11'26.442"N	104°40'37.353"W	9.87	
6523.00	20.740	176.420	6375.63	-891.10	897.43	-740.30	1730612.02	14596308.71	40°11'26.208"N	104°40'37.318"W	11.91	
6613.00	26.410	174.630	6458.09	-855.27	861.56	-737.42	1730615.02	14596272.88	40°11'25.854"N	104°40'37.281"W	6.35	
6703.00	31.820	175.930	6536.69	-811.67	817.94	-733.86	1730618.74	14596229.28	40°11'25.423"N	104°40'37.235"W	6.05	
6792.00	36.430	176.810	6610.34	-761.88	768.12	-730.73	1730622.06	14596179.49	40°11'24.930"N	104°40'37.195"W	5.21	
6882.00	39.910	175.700	6681.09	-706.43	712.63	-727.07	1730625.91	14596124.04	40°11'24.382"N	104°40'37.148"W	3.94	
6971.00	44.430	179.190	6747.04	-646.79	652.97	-724.49	1730628.71	14596064.42	40°11'23.793"N	104°40'37.114"W	5.72	
7061.00	51.710	181.700	6807.15	-579.89	586.08	-725.09	1730628.36	14595997.54	40°11'23.131"N	104°40'37.122"W	8.35	
7150.00	56.590	180.070	6859.26	-507.78	513.97	-726.18	1730627.54	14595925.46	40°11'22.419"N	104°40'37.136"W	5.68	
7240.00	59.130	178.230	6907.14	-431.60	437.78	-725.03	1730628.97	14595849.31	40°11'21.666"N	104°40'37.121"W	3.31	
7329.00	64.680	178.380	6949.03	-353.18	359.33	-722.71	1730631.57	14595770.90	40°11'20.891"N	104°40'37.091"W	6.24	
7419.00	64.620	177.450	6987.57	-271.93	278.06	-719.75	1730634.83	14595689.67	40°11'20.088"N	104°40'37.053"W	0.94	
7508.00	68.350	178.690	7023.07	-190.41	196.51	-717.02	1730637.86	14595608.16	40°11'19.282"N	104°40'37.018"W	4.38	
7598.00	80.670	181.620	7047.07	-103.86	109.96	-717.32	1730637.88	14595521.64	40°11'18.426"N	104°40'37.022"W	14.04	
7654.00	88.120	182.820	7052.53	-48.19	54.31	-719.48	1730635.92	14595466.01	40°11'17.877"N	104°40'37.050"W	13.47	LANDING (316'FNL & 270'FWL, SEC.33) 40.1882990 -104.6769582
7720.00†	89.376	182.224	7053.98	17.75	-11.61	-722.38	1730633.26	14595400.10	40°11'17.225"N	104°40'37.087"W	2.11	EXIT RADIUS HEEL (382'FNL & 267'FWL, SEC.33) 40.1881181 -104.6769686
7777.00	90.460	181.710	7054.06	74.73	-68.58	-724.34	1730631.51	14595343.15	40°11'16.662"N	104°40'37.112"W	2.11	
7866.00	89.780	182.290	7053.87	163.70	-157.52	-727.44	1730628.73	14595254.23	40°11'15.783"N	104°40'37.152"W	1.00	
7956.00	88.580	182.800	7055.16	253.63	-247.42	-731.44	1730625.07	14595164.35	40°11'14.895"N	104°40'37.204"W	1.45	
8045.00	89.040	183.260	7057.01	342.52	-336.28	-736.14	1730620.69	14595075.52	40°11'14.017"N	104°40'37.264"W	0.73	
8135.00	88.150	181.220	7059.21	432.45	-426.18	-739.66	1730617.51	14594985.64	40°11'13.128"N	104°40'37.309"W	2.47	
8225.00	88.860	180.490	7061.56	522.41	-516.13	-741.00	1730616.50	14594895.71	40°11'12.239"N	104°40'37.327"W	1.13	
8314.00	89.170	180.470	7063.09	611.40	-605.12	-741.75	1730616.08	14594806.76	40°11'11.360"N	104°40'37.336"W	0.35	
8404.00	90.680	180.130	7063.21	701.40	-695.11	-742.22	1730615.94	14594716.80	40°11'10.471"N	104°40'37.342"W	1.72	
8493.00	87.480	181.840	7064.64	790.37	-784.07	-743.75	1730614.73	14594627.87	40°11'09.592"N	104°40'37.362"W	4.08	
8583.00	88.060	181.530	7068.14	880.28	-873.97	-746.39	1730612.42	14594538.00	40°11'08.703"N	104°40'37.396"W	0.73	
8672.00	90.060	181.470	7069.60	969.25	-962.92	-748.72	1730610.42	14594449.08	40°11'07.824"N	104°40'37.426"W	2.25	
8762.00	91.200	181.220	7068.61	1059.23	-1052.89	-750.83	1730608.64	14594359.14	40°11'06.935"N	104°40'37.453"W	1.30	
8852.00	90.000	181.110	7067.67	1149.22	-1142.86	-752.66	1730607.14	14594269.19	40°11'06.046"N	104°40'37.477"W	1.34	

REFERENCE WELLPATH IDENTIFICATION				
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)		Slot	SLOT#05 CANNON 34N-33HZ (370'FNL & 989'FWL, SEC.33)
Area	COLORADO		Well	CANNON 34N-33HZ
Field	WELD COUNTY (UTM/TRUE NORTH)		Wellbore	CANNON 34N-33HZ AWB
Facility	SEC.33-T3N-R65W			

WELLPATH DATA (182 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
8941.00	88.280	181.460	7069.01	1238.20	-1231.83	-754.66	1730605.47	14594180.26	40°11'05.167"N	104°40'37.502"W	1.97	
9031.00	89.110	180.680	7071.05	1328.17	-1321.79	-756.34	1730604.12	14594090.33	40°11'04.278"N	104°40'37.524"W	1.27	
9120.00	88.250	179.880	7073.11	1417.14	-1410.76	-756.77	1730604.01	14594001.39	40°11'03.399"N	104°40'37.530"W	1.32	
9210.00	88.430	179.840	7075.71	1507.10	-1500.72	-756.55	1730604.56	14593911.46	40°11'02.510"N	104°40'37.527"W	0.20	
9300.00	89.110	179.290	7077.64	1597.07	-1590.70	-755.87	1730605.57	14593821.52	40°11'01.621"N	104°40'37.518"W	0.97	
9389.00	89.570	178.910	7078.67	1686.03	-1679.68	-754.47	1730607.30	14593732.58	40°11'00.741"N	104°40'37.500"W	0.67	
9479.00	90.150	178.460	7078.89	1775.99	-1769.66	-752.41	1730609.69	14593642.65	40°10'59.852"N	104°40'37.473"W	0.82	
9568.00	88.610	179.210	7079.85	1864.94	-1858.63	-750.60	1730611.83	14593553.72	40°10'58.973"N	104°40'37.450"W	1.92	
9658.00	89.260	179.060	7081.53	1954.90	-1948.60	-749.24	1730613.51	14593463.79	40°10'58.084"N	104°40'37.432"W	0.74	
9748.00	90.120	178.580	7082.01	2044.86	-2038.58	-747.39	1730615.70	14593373.85	40°10'57.195"N	104°40'37.408"W	1.09	
9837.00	91.020	178.200	7081.13	2133.80	-2127.54	-744.89	1730618.52	14593284.94	40°10'56.316"N	104°40'37.376"W	1.10	
9927.00	91.330	177.930	7079.28	2223.70	-2217.47	-741.85	1730621.89	14593195.05	40°10'55.427"N	104°40'37.337"W	0.46	
10017.00	90.460	178.900	7077.88	2313.62	-2307.42	-739.36	1730624.71	14593105.15	40°10'54.538"N	104°40'37.305"W	1.45	
10106.00	91.170	178.480	7076.61	2402.57	-2396.39	-737.32	1730627.07	14593016.22	40°10'53.659"N	104°40'37.279"W	0.93	
10196.00	90.590	179.140	7075.23	2492.52	-2486.36	-735.46	1730629.26	14592926.30	40°10'52.770"N	104°40'37.254"W	0.98	
10285.00	91.110	180.480	7073.91	2581.50	-2575.35	-735.16	1730629.88	14592837.35	40°10'51.890"N	104°40'37.251"W	1.61	
10375.00	90.000	180.520	7073.03	2671.50	-2665.34	-735.95	1730629.43	14592747.39	40°10'51.001"N	104°40'37.261"W	1.23	
10464.00	87.840	180.740	7074.71	2760.48	-2754.31	-736.92	1730628.78	14592658.45	40°10'50.122"N	104°40'37.273"W	2.44	
10554.00	88.400	180.160	7077.66	2850.43	-2844.26	-737.63	1730628.40	14592568.53	40°10'49.233"N	104°40'37.282"W	0.90	
10644.00	88.430	179.460	7080.15	2940.38	-2934.22	-737.33	1730629.03	14592478.60	40°10'48.344"N	104°40'37.278"W	0.78	
10733.00	87.970	179.370	7082.95	3029.33	-3023.18	-736.42	1730630.26	14592389.69	40°10'47.465"N	104°40'37.267"W	0.53	
10823.00	88.920	180.550	7085.39	3119.29	-3113.14	-736.36	1730630.66	14592299.76	40°10'46.576"N	104°40'37.266"W	1.68	
10912.00	89.720	180.640	7086.45	3208.28	-3202.13	-737.29	1730630.06	14592210.81	40°10'45.696"N	104°40'37.278"W	0.90	
11002.00	90.590	180.690	7086.21	3298.28	-3292.12	-738.33	1730629.34	14592120.85	40°10'44.807"N	104°40'37.291"W	0.97	
11091.00	91.140	180.140	7084.86	3387.27	-3381.11	-738.97	1730629.03	14592031.89	40°10'43.928"N	104°40'37.299"W	0.87	
11181.00	91.290	179.540	7082.95	3477.24	-3471.09	-738.72	1730629.61	14591941.95	40°10'43.039"N	104°40'37.296"W	0.69	
11270.00	90.000	179.950	7081.95	3566.22	-3560.08	-738.33	1730630.33	14591853.00	40°10'42.159"N	104°40'37.291"W	1.52	
11360.00	89.750	180.720	7082.15	3656.22	-3650.07	-738.85	1730630.13	14591763.03	40°10'41.270"N	104°40'37.298"W	0.90	
11449.00	91.260	179.930	7081.36	3745.22	-3739.07	-739.36	1730629.95	14591674.07	40°10'40.390"N	104°40'37.304"W	1.91	
11539.00	90.710	182.680	7079.82	3835.18	-3829.02	-741.41	1730628.24	14591584.15	40°10'39.501"N	104°40'37.331"W	3.12	
11629.00	90.520	183.450	7078.85	3925.09	-3918.89	-746.22	1730623.75	14591494.30	40°10'38.613"N	104°40'37.393"W	0.88	
11718.00	91.260	183.530	7077.47	4013.95	-4007.71	-751.64	1730618.67	14591405.49	40°10'37.736"N	104°40'37.462"W	0.84	
11808.00	90.150	181.560	7076.36	4103.88	-4097.61	-755.63	1730615.00	14591315.62	40°10'36.847"N	104°40'37.514"W	2.51	
11897.00	87.540	180.760	7078.15	4192.85	-4186.56	-757.43	1730613.53	14591226.69	40°10'35.968"N	104°40'37.537"W	3.07	
11987.00	88.250	180.200	7081.46	4282.79	-4276.50	-758.19	1730613.10	14591136.79	40°10'35.079"N	104°40'37.547"W	1.00	
12076.00	89.020	179.520	7083.58	4371.76	-4365.47	-757.97	1730613.65	14591047.85	40°10'34.200"N	104°40'37.544"W	1.15	
12165.00	87.690	180.470	7086.13	4460.71	-4454.43	-757.96	1730613.98	14590958.93	40°10'33.321"N	104°40'37.544"W	1.84	
12255.00	87.910	178.910	7089.59	4550.64	-4544.36	-757.48	1730614.80	14590869.03	40°10'32.432"N	104°40'37.537"W	1.75	ENTER RADIUS TOE (370'FSL & 271'FWL, SEC.33) 40.1756757 -104.6770937
12344.00	88.980	183.730	7092.01	4639.57	-4633.28	-759.53	1730613.07	14590780.15	40°10'31.554"N	104°40'37.564"W	5.55	
12434.00	89.750	182.690	7093.00	4729.46	-4723.13	-764.56	1730608.37	14590690.31	40°10'30.666"N	104°40'37.629"W	1.44	
12524.00	90.920	181.650	7092.48	4819.41	-4813.06	-767.97	1730605.29	14590600.40	40°10'29.777"N	104°40'37.672"W	1.74	
12613.00	91.940	181.260	7090.26	4908.37	-4902.00	-770.23	1730603.36	14590511.49	40°10'28.898"N	104°40'37.701"W	1.23	
12703.00	91.160	178.530	7087.82	4998.33	-4991.96	-770.07	1730603.85	14590421.57	40°10'28.009"N	104°40'37.699"W	3.15	
12792.00	92.160	178.770	7085.24	5087.24	-5080.90	-767.97	1730606.27	14590332.67	40°10'27.130"N	104°40'37.672"W	1.16	
12882.00	93.820	178.430	7080.55	5177.07	-5170.74	-765.77	1730608.80	14590242.87	40°10'26.243"N	104°40'37.644"W	1.88	

REFERENCE WELLPATH IDENTIFICATION				
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)		Slot	SLOT#05 CANNON 34N-33HZ (370'FNL & 989'FWL, SEC.33)
Area	COLORADO		Well	CANNON 34N-33HZ
Field	WELD COUNTY (UTM/TRUE NORTH)		Wellbore	CANNON 34N-33HZ AWB
Facility	SEC.33-T3N-R65W			

WELLPATH DATA (182 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
12940.00	94.660	177.410	7076.26	5234.85	-5228.55	-763.68	1730611.11	14590185.10	40°10'25.671"N	104°40'37.617"W	2.27	LAST BHGE MWD+IFR1+SC SURVEY
12986.00	94.660	177.410	7072.52	5280.63	-5274.35	-761.60	1730613.35	14590139.33	40°10'25.219"N	104°40'37.590"W	0.00	PTB (360'FNL & 268'FWL, SEC.04) 40.1736719 -104.6771084

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	0.00	0.00	1731355.31	14595414.36	40°11'17.340"N	104°40'27.779"W	polygon
SEC.28-T3N-R65W	0.00	0.00	0.00	1731355.31	14595414.36	40°11'17.340"N	104°40'27.779"W	polygon
SEC.33-T3N-R65W	0.00	0.00	0.00	1731355.31	14595414.36	40°11'17.340"N	104°40'27.779"W	polygon
CANNON 34N-33HZ HEEL REV-1 (151'FNL & 167'FWL, SEC.33)	7073.00	218.23	-820.28	1730534.56	14595629.49	40°11'19.496"N	104°40'38.348"W	point
CANNON 34N-33HZ HEEL REV-2 (151'FNL & 249'FWL, SEC.33)	7073.00	218.23	-738.27	1730616.53	14595629.79	40°11'19.496"N	104°40'37.292"W	point
CANNON 34N-33HZ LAT. TARGET 1	7078.35	-2455.24	-725.00	1730639.60	14592957.44	40°10'53.077"N	104°40'37.120"W	point
CANNON 34N-33HZ BHL REV-1 (362'FNL & 245'FWL, SEC.04)	7084.00	-5276.48	-784.97	1730590.00	14590137.11	40°10'25.198"N	104°40'37.891"W	point
CANNON 34N-33HZ LANDBOX	7084.00	0.00	0.00	1731355.31	14595414.36	40°11'17.340"N	104°40'27.779"W	polygon
CANNON 34N-33HZ RADIUS 1	7084.00	366.69	-983.46	1730370.90	14595777.30	40°11'20.963"N	104°40'40.451"W	polygon
CANNON 34N-33HZ RADIUS 2	7084.00	-4916.97	-1023.24	1730350.50	14590495.60	40°10'28.750"N	104°40'40.961"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: CANNON 34N-33HZ AWB Ref Wellpath: CANNON 34N-33HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	1847.00	Custom APC ISCWSA REV 2 MWD+IFR1 (approximation)	TOTAL Custom APC ISCWSA Rev-2 MWD+IFR1 <128 - 1847>	CANNON 34N-33HZ AWB
1847.00	12940.00	Custom APC ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+SC <1931 - 12940>	CANNON 34N-33HZ AWB
12940.00	12986.00	Blind Drilling (std)	Projection to bit	CANNON 34N-33HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#05 CANNON 34N-33HZ (370'FNL & 989'FWL,SEC.33)
Area	COLORADO	Well	CANNON 34N-33HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CANNON 34N-33HZ AWB
Facility	SEC.33-T3N-R65W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
128.00	0.570	102.100	128.00	FIRST TOTAL MWD+IFR1 SURVEY
1847.00	7.260	309.600	1821.94	LAST TOTAL MWD+IFR1 SURVEY
1931.00	7.150	312.560	1905.28	FIRST BHGE MWD+IFR1+SC SURVEY
4099.00	16.221	322.872	3999.22	ENTER LANDBOX (264'FSL & 464'FWL,SEC.28) 40.1898904 -104.6762597
6421.00	9.087	167.842	6277.18	KOP
7654.00	88.120	182.820	7052.53	LANDING (316'FNL & 270'FWL,SEC.33) 40.1882990 -104.6769582
7720.00	89.376	182.224	7053.98	EXIT RADIUS HEEL (382'FNL & 267'FWL,SEC.33) 40.1881181 -104.6769686
12255.00	87.910	178.910	7089.59	ENTER RADIUS TOE (370'FSL & 271'FWL,SEC.33) 40.1756757 -104.6770937
12940.00	94.660	177.410	7076.26	LAST BHGE MWD+IFR1+SC SURVEY
12986.00	94.660	177.410	7072.52	PTB (360'FNL & 268'FWL,SEC.04) 40.1736719 -104.6771084