

KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#41 RW 13N-32HZ(441'FSL & 1704'FWL,SEC.29)
Field: WELD COUNTY (UTM/TRUE NORTH) Well: RW 13N-32HZ
Facility: SEC.29-T3N-R65W Wellbore: RW 13N-32HZ PWB

Plot reference wellpath is RW 13N-32HZ PWP Rev-D.0	Grid System: NAD83 / UTM Zone 13 North, US feet
True vertical depths are referenced to Xireme 22 (17) (RT)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to Xireme 22 (17) (RT)	North Reference: True north
Xireme 22 (17) (RT) to Mean Sea Level: 4903 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#41 RW 13N-32HZ(441'FSL & 1704'FWL,SEC.29)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: painsetr on 2017-08-22
	Database: WA_DEN_Anadarko_Defn



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#41 RW 13N-32HZ(441'FSL & 1704'FWL,SEC.29)
Area	COLORADO	Well	RW 13N-32HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 13N-32HZ AWB
Facility	SEC.29-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	8/22/2017 at 2:26 PM
Convergence at slot	0.20° East	Database/Source file	WA_DEN_Anadarko_Defn/RW_13N-32HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-78.31	883.94	1726816.39	14596214.25	40°11'25.408"N	104°41'26.250"W
Facility Reference Pt			1725932.54	14596289.48	40°11'26.182"N	104°41'37.640"W
Field Reference Pt			1698235.31	14552047.82	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Xtreme 22 (17') (RT) to Facility Vertical Datum	4903.00ft
Horizontal Reference Pt	Slot	Xtreme 22 (17') (RT) to Mean Sea Level	4903.00ft
Vertical Reference Pt	Xtreme 22 (17') (RT)	Xtreme 22 (17') (RT) to Mud Line at Slot (SLOT#41 RW 13N-32HZ(441'FSL & 1704'FWL,SEC.29))	4903.00ft
MD Reference Pt	Xtreme 22 (17') (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	179.78°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#41 RW 13N-32HZ(441'FSL & 1704'FWL,SEC.29)
Area	COLORADO	Well	RW 13N-32HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 13N-32HZ AWP
Facility	SEC.29-T3N-R65W		

WELLPATH DATA (161 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	300.120	0.00	0.00	0.00	0.00	1726816.39	14596214.25	40°11'25.408"N	104°41'26.250"W	0.00	
17.00	0.000	300.120	17.00	0.00	0.00	0.00	1726816.39	14596214.25	40°11'25.408"N	104°41'26.250"W	0.00	
116.00	0.030	300.120	116.00	-0.01	0.01	-0.02	1726816.37	14596214.26	40°11'25.408"N	104°41'26.250"W	0.03	FIRST BHGE SURFACE MWD+IFR1+SC SURVEY
211.00	0.930	303.090	211.00	-0.45	0.45	-0.69	1726815.70	14596214.69	40°11'25.412"N	104°41'26.259"W	0.95	
301.00	1.610	335.390	300.97	-2.00	1.99	-1.83	1726814.56	14596216.23	40°11'25.428"N	104°41'26.274"W	1.07	
392.00	2.920	333.120	391.90	-5.24	5.22	-3.41	1726812.97	14596219.46	40°11'25.460"N	104°41'26.294"W	1.44	
483.00	4.120	328.850	482.73	-10.11	10.09	-6.15	1726810.21	14596224.31	40°11'25.508"N	104°41'26.329"W	1.35	
574.00	5.320	326.670	573.42	-16.45	16.41	-10.16	1726806.18	14596230.62	40°11'25.570"N	104°41'26.381"W	1.33	
665.00	6.960	323.810	663.89	-24.45	24.39	-15.73	1726800.58	14596238.57	40°11'25.649"N	104°41'26.453"W	1.83	
752.00	7.810	323.650	750.17	-33.49	33.40	-22.35	1726793.94	14596247.56	40°11'25.738"N	104°41'26.538"W	0.98	
839.00	8.780	325.680	836.26	-43.76	43.65	-29.59	1726786.66	14596257.77	40°11'25.839"N	104°41'26.631"W	1.16	
927.00	10.250	322.760	923.05	-55.58	55.43	-38.12	1726778.09	14596269.52	40°11'25.956"N	104°41'26.741"W	1.76	
1015.00	11.400	323.420	1009.48	-68.83	68.65	-48.04	1726768.13	14596282.70	40°11'26.086"N	104°41'26.869"W	1.31	
1102.00	12.540	325.510	1094.59	-83.56	83.34	-58.51	1726757.61	14596297.35	40°11'26.232"N	104°41'27.004"W	1.40	
1189.00	13.910	327.560	1179.28	-100.21	99.95	-69.47	1726746.60	14596313.91	40°11'26.396"N	104°41'27.145"W	1.66	
1277.00	14.860	326.640	1264.52	-118.61	118.30	-81.35	1726734.66	14596332.21	40°11'26.577"N	104°41'27.298"W	1.11	
1364.00	15.710	325.880	1348.44	-137.73	137.37	-94.09	1726721.86	14596351.23	40°11'26.765"N	104°41'27.462"W	1.00	
1452.00	15.610	325.250	1433.17	-157.37	156.96	-107.52	1726708.36	14596370.77	40°11'26.959"N	104°41'27.636"W	0.22	
1539.00	15.070	325.310	1517.07	-176.34	175.88	-120.63	1726695.19	14596389.63	40°11'27.146"N	104°41'27.804"W	0.62	
1627.00	15.630	326.320	1601.93	-195.66	195.15	-133.72	1726682.05	14596408.85	40°11'27.336"N	104°41'27.973"W	0.71	
1714.00	14.570	325.930	1685.93	-214.53	213.97	-146.35	1726669.36	14596427.62	40°11'27.522"N	104°41'28.136"W	1.22	
1800.00	14.470	326.330	1769.18	-232.48	231.87	-158.37	1726657.28	14596445.47	40°11'27.699"N	104°41'28.291"W	0.16	LAST BHGE SURFACE MWD+IFR1+SC SURVEY
1890.00	14.880	327.070	1856.25	-251.58	250.93	-170.88	1726644.70	14596464.48	40°11'27.888"N	104°41'28.452"W	0.50	FIRST BHGE PRODUCTION MWD+IFR1+SC SURVEY
1978.00	15.570	324.810	1941.16	-270.77	270.06	-183.83	1726631.69	14596483.56	40°11'28.077"N	104°41'28.619"W	1.03	
2065.00	15.170	324.290	2025.05	-289.61	288.85	-197.20	1726618.26	14596502.29	40°11'28.262"N	104°41'28.791"W	0.49	
2153.00	15.940	320.440	2109.82	-308.33	307.51	-211.62	1726603.79	14596520.90	40°11'28.447"N	104°41'28.977"W	1.46	
2240.00	15.480	319.410	2193.57	-326.41	325.54	-226.78	1726588.57	14596538.87	40°11'28.625"N	104°41'29.172"W	0.62	
2328.00	15.190	319.520	2278.44	-344.16	343.23	-241.91	1726573.38	14596556.49	40°11'28.800"N	104°41'29.367"W	0.33	
2416.00	14.840	317.970	2363.44	-361.36	360.37	-256.94	1726558.30	14596573.58	40°11'28.969"N	104°41'29.561"W	0.61	
2503.00	13.980	315.680	2447.70	-377.21	376.16	-271.74	1726543.45	14596589.31	40°11'29.125"N	104°41'29.752"W	1.19	
2591.00	14.030	322.490	2533.09	-393.33	392.23	-285.66	1726529.48	14596605.32	40°11'29.284"N	104°41'29.931"W	1.87	
2678.00	14.610	322.160	2617.39	-410.41	409.26	-298.81	1726516.27	14596622.30	40°11'29.452"N	104°41'30.100"W	0.67	
2766.00	14.560	315.420	2702.56	-427.11	425.91	-313.39	1726501.65	14596638.89	40°11'29.617"N	104°41'30.288"W	1.93	
2853.00	15.900	320.700	2786.50	-444.18	442.92	-328.61	1726486.37	14596655.84	40°11'29.785"N	104°41'30.484"W	2.22	
2940.00	15.610	320.010	2870.24	-462.43	461.11	-343.68	1726471.24	14596673.97	40°11'29.965"N	104°41'30.679"W	0.40	
3027.00	15.130	319.460	2954.12	-480.08	478.70	-358.59	1726456.28	14596691.51	40°11'30.139"N	104°41'30.871"W	0.58	
3115.00	14.580	318.470	3039.18	-497.16	495.72	-373.39	1726441.42	14596708.47	40°11'30.307"N	104°41'31.061"W	0.69	
3202.00	15.010	314.130	3123.30	-513.26	511.77	-388.74	1726426.02	14596724.45	40°11'30.465"N	104°41'31.259"W	1.37	
3228.00	14.890	313.900	3148.42	-517.94	516.43	-393.57	1726421.18	14596729.10	40°11'30.511"N	104°41'31.321"W	0.51	
3316.00	15.130	318.790	3233.42	-534.48	532.91	-409.28	1726405.42	14596745.52	40°11'30.674"N	104°41'31.524"W	1.46	
3403.00	15.240	318.060	3317.38	-551.59	549.95	-424.40	1726390.24	14596762.50	40°11'30.843"N	104°41'31.719"W	0.25	
3491.00	15.080	320.220	3402.32	-569.05	567.36	-439.46	1726375.13	14596779.84	40°11'31.015"N	104°41'31.913"W	0.67	
3579.00	15.450	319.290	3487.22	-586.79	585.04	-454.43	1726360.11	14596797.47	40°11'31.189"N	104°41'32.106"W	0.50	
3666.00	13.850	317.280	3571.39	-603.28	601.47	-469.05	1726345.43	14596813.85	40°11'31.352"N	104°41'32.294"W	1.93	
3755.00	14.050	317.290	3657.76	-619.10	617.24	-483.60	1726330.83	14596829.55	40°11'31.507"N	104°41'32.482"W	0.22	

REFERENCE WELLPATH IDENTIFICATION				
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)		Slot	SLOT#41 RW 13N-32HZ(441'FSL & 1704'FWL,SEC.29)
Area	COLORADO		Well	RW 13N-32HZ
Field	WELD COUNTY (UTM/TRUE NORTH)		Wellbore	RW 13N-32HZ AWB
Facility	SEC.29-T3N-R65W			

WELLPATH DATA (161 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
3842.00	14.330	320.680	3742.11	-635.24	633.33	-497.59	1726316.79	14596845.59	40°11'31.666"N	104°41'32.662"W	1.01	
3930.00	15.480	323.820	3827.15	-653.20	651.23	-511.42	1726302.90	14596863.44	40°11'31.843"N	104°41'32.840"W	1.60	
4018.00	16.180	324.310	3911.81	-672.69	670.67	-525.51	1726288.76	14596882.82	40°11'32.035"N	104°41'33.022"W	0.81	
4104.00	15.990	323.960	3994.44	-692.06	689.98	-539.47	1726274.73	14596902.07	40°11'32.226"N	104°41'33.202"W	0.25	
4191.00	15.470	322.730	4078.18	-711.03	708.90	-553.55	1726260.60	14596920.94	40°11'32.413"N	104°41'33.383"W	0.71	
4279.00	15.560	320.270	4162.98	-729.51	727.32	-568.20	1726245.89	14596939.30	40°11'32.595"N	104°41'33.572"W	0.75	
4366.00	15.070	317.690	4246.89	-746.90	744.66	-583.27	1726230.76	14596956.58	40°11'32.767"N	104°41'33.766"W	0.96	
4454.00	15.900	318.950	4331.69	-764.51	762.21	-598.89	1726215.09	14596974.06	40°11'32.940"N	104°41'33.967"W	1.02	
4541.00	15.080	318.080	4415.53	-781.98	779.62	-614.27	1726199.65	14596991.41	40°11'33.112"N	104°41'34.165"W	0.98	
4629.00	13.730	315.940	4500.77	-798.06	795.64	-629.18	1726184.69	14597007.38	40°11'33.270"N	104°41'34.358"W	1.65	
4716.00	12.990	314.550	4585.41	-812.40	809.92	-643.33	1726170.49	14597021.60	40°11'33.412"N	104°41'34.540"W	0.93	
4804.00	12.070	315.260	4671.31	-825.92	823.39	-656.86	1726156.93	14597035.02	40°11'33.545"N	104°41'34.714"W	1.06	
4891.00	10.230	317.740	4756.67	-838.15	835.57	-668.46	1726145.29	14597047.16	40°11'33.665"N	104°41'34.864"W	2.19	
4979.00	9.260	316.780	4843.40	-849.13	846.52	-678.56	1726135.15	14597058.06	40°11'33.773"N	104°41'34.994"W	1.12	
5066.00	8.230	316.500	4929.39	-858.78	856.13	-687.64	1726126.04	14597067.64	40°11'33.868"N	104°41'35.111"W	1.18	
5154.00	6.780	321.270	5016.63	-867.43	864.76	-695.23	1726118.43	14597076.24	40°11'33.953"N	104°41'35.209"W	1.79	
5241.00	5.440	322.450	5103.13	-874.73	872.03	-700.95	1726112.68	14597083.49	40°11'34.025"N	104°41'35.282"W	1.55	
5329.00	3.730	319.290	5190.85	-880.22	877.51	-705.36	1726108.25	14597088.95	40°11'34.079"N	104°41'35.339"W	1.96	
5416.00	1.940	314.080	5277.74	-883.41	880.68	-708.27	1726105.34	14597092.11	40°11'34.111"N	104°41'35.377"W	2.08	
5504.00	0.190	211.200	5365.72	-884.32	881.59	-709.41	1726104.19	14597093.01	40°11'34.120"N	104°41'35.391"W	2.26	
5591.00	0.500	260.580	5452.72	-884.14	881.41	-709.86	1726103.74	14597092.83	40°11'34.118"N	104°41'35.397"W	0.46	
5679.00	0.480	244.370	5540.72	-883.92	881.18	-710.57	1726103.03	14597092.60	40°11'34.116"N	104°41'35.406"W	0.16	
5766.00	0.560	251.840	5627.71	-883.63	880.89	-711.31	1726102.30	14597092.31	40°11'34.113"N	104°41'35.416"W	0.12	
5853.00	0.840	272.230	5714.71	-883.53	880.79	-712.35	1726101.26	14597092.20	40°11'34.112"N	104°41'35.429"W	0.43	
5940.00	0.370	73.060	5801.71	-883.63	880.89	-712.72	1726100.89	14597092.30	40°11'34.113"N	104°41'35.434"W	1.37	
6028.00	0.440	91.850	5889.70	-883.70	880.96	-712.11	1726101.50	14597092.38	40°11'34.114"N	104°41'35.426"W	0.17	
6116.00	0.190	138.110	5977.70	-883.58	880.84	-711.67	1726101.94	14597092.26	40°11'34.112"N	104°41'35.421"W	0.38	
6203.00	0.210	224.900	6064.70	-883.36	880.62	-711.69	1726101.92	14597092.04	40°11'34.110"N	104°41'35.421"W	0.32	
6291.00	0.460	267.870	6152.70	-883.24	880.50	-712.15	1726101.46	14597091.91	40°11'34.109"N	104°41'35.427"W	0.38	
6378.00	0.700	276.080	6239.70	-883.28	880.54	-713.03	1726100.58	14597091.95	40°11'34.109"N	104°41'35.438"W	0.29	
6466.00	0.830	274.320	6327.69	-883.39	880.65	-714.20	1726099.41	14597092.05	40°11'34.110"N	104°41'35.453"W	0.15	
6478.00†	1.056	232.252	6339.69	-883.33	880.58	-714.38	1726099.23	14597091.99	40°11'34.110"N	104°41'35.455"W	5.91	KOP
6554.00	5.210	189.700	6415.56	-879.51	876.75	-715.51	1726098.11	14597088.16	40°11'34.072"N	104°41'35.470"W	5.91	
6641.00	13.240	185.010	6501.37	-865.67	862.91	-717.05	1726096.62	14597074.32	40°11'33.935"N	104°41'35.490"W	9.26	
6729.00	18.740	181.070	6585.93	-841.48	838.72	-718.19	1726095.56	14597050.13	40°11'33.696"N	104°41'35.505"W	6.37	
6816.00	25.290	177.440	6666.55	-808.91	806.14	-717.62	1726096.25	14597017.57	40°11'33.374"N	104°41'35.497"W	7.69	
6903.00	32.480	180.170	6742.68	-766.92	764.16	-716.86	1726097.15	14596975.61	40°11'32.959"N	104°41'35.487"W	8.40	
6991.00	36.480	182.880	6815.21	-717.15	714.39	-718.25	1726095.94	14596925.84	40°11'32.467"N	104°41'35.505"W	4.87	
7078.00	43.800	182.970	6881.67	-661.19	658.41	-721.11	1726093.28	14596869.88	40°11'31.914"N	104°41'35.542"W	8.41	
7166.00	52.790	176.100	6940.20	-595.63	592.86	-720.30	1726094.31	14596804.36	40°11'31.267"N	104°41'35.532"W	11.75	
7253.00	58.740	174.390	6989.12	-523.97	521.22	-714.31	1726100.56	14596732.77	40°11'30.559"N	104°41'35.454"W	7.03	
7341.00	63.840	176.860	7031.39	-447.02	444.29	-708.46	1726106.67	14596655.90	40°11'29.798"N	104°41'35.379"W	6.30	
7373.00†	66.231	177.370	7044.89	-418.05	415.32	-707.00	1726108.22	14596626.94	40°11'29.512"N	104°41'35.360"W	7.61	ENTER LANDBOX (856'FSL & 996'FWL,SEC.29) 40.1915311 -104.6931556
7429.00	70.420	178.220	7065.57	-366.05	363.33	-705.01	1726110.40	14596574.98	40°11'28.998"N	104°41'35.334"W	7.61	
7517.00	76.930	178.240	7090.29	-281.67	278.97	-702.40	1726113.30	14596490.65	40°11'28.165"N	104°41'35.301"W	7.40	

REFERENCE WELLPATH IDENTIFICATION				
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)			Slot
Area	COLORADO			Well
Field	WELD COUNTY (UTM/TRUE NORTH)			Wellbore
Facility	SEC.29-T3N-R65W			RW 13N-32HZ AWP

WELLPATH DATA (161 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
7604.00	84.420	178.830	7104.38	-195.90	193.21	-700.21	1726115.79	14596404.94	40°11'27.317"N	104°41'35.273"W	8.64	
7692.00	88.710	179.110	7109.65	-108.09	105.40	-698.63	1726117.67	14596317.17	40°11'26.449"N	104°41'35.252"W	4.89	LANDING (546'FSL & 1005'FWL, SEC.29) 40.1906804 -104.6931256
7779.00	89.350	178.340	7111.12	-21.12	18.43	-696.70	1726119.91	14596230.25	40°11'25.590"N	104°41'35.227"W	1.15	
7867.00	88.740	176.770	7112.59	66.80	-69.47	-692.94	1726123.97	14596142.39	40°11'24.721"N	104°41'35.179"W	1.91	
7954.00	89.880	178.250	7113.64	153.72	-156.38	-689.17	1726128.05	14596055.53	40°11'23.863"N	104°41'35.130"W	2.15	
8042.00	90.980	178.390	7112.98	241.69	-244.34	-686.59	1726130.93	14595967.62	40°11'22.993"N	104°41'35.097"W	1.26	
8129.00	90.090	179.070	7112.17	328.67	-331.31	-684.66	1726133.16	14595880.68	40°11'22.134"N	104°41'35.072"W	1.29	
8217.00	90.650	178.260	7111.60	416.65	-419.28	-682.61	1726135.52	14595792.75	40°11'21.265"N	104°41'35.046"W	1.12	
8304.00	89.570	178.780	7111.43	503.63	-506.25	-680.36	1726138.07	14595705.83	40°11'20.405"N	104°41'35.017"W	1.38	
8392.00	89.910	180.450	7111.83	591.62	-594.25	-679.77	1726138.96	14595617.87	40°11'19.536"N	104°41'35.009"W	1.94	
8479.00	90.590	180.360	7111.45	678.61	-681.24	-680.38	1726138.65	14595530.91	40°11'18.676"N	104°41'35.017"W	0.79	
8567.00	89.970	180.760	7111.02	766.60	-769.24	-681.24	1726138.10	14595442.94	40°11'17.806"N	104°41'35.028"W	0.84	
8595.00†	90.208	180.680	7110.98	794.60	-797.24	-681.60	1726137.85	14595414.96	40°11'17.530"N	104°41'35.032"W	0.90	EXIT RADIUS HEEL (356'FNL & 1022'FWL, SEC.32) 40.1882027 -104.6930646
8654.00	90.710	180.510	7110.50	853.59	-856.23	-682.21	1726137.44	14595355.98	40°11'16.947"N	104°41'35.040"W	0.90	
8742.00	89.230	181.010	7110.55	941.58	-944.22	-683.38	1726136.58	14595268.02	40°11'16.077"N	104°41'35.055"W	1.78	
8829.00	89.290	180.170	7111.67	1028.56	-1031.21	-684.27	1726135.99	14595181.07	40°11'15.218"N	104°41'35.067"W	0.97	
8917.00	89.850	179.900	7112.33	1116.56	-1119.20	-684.32	1726136.24	14595093.11	40°11'14.348"N	104°41'35.067"W	0.71	
9004.00	90.310	180.120	7112.21	1203.56	-1206.20	-684.34	1726136.53	14595006.14	40°11'13.488"N	104°41'35.068"W	0.59	
9092.00	89.200	178.240	7112.59	1291.54	-1294.19	-683.08	1726138.09	14594918.20	40°11'12.619"N	104°41'35.051"W	2.48	
9179.00	89.200	178.200	7113.80	1378.50	-1381.14	-680.38	1726141.10	14594831.29	40°11'11.759"N	104°41'35.017"W	0.05	
9267.00	89.380	177.370	7114.89	1466.44	-1469.06	-676.98	1726144.80	14594743.41	40°11'10.891"N	104°41'34.973"W	0.97	
9354.00	90.920	179.780	7114.67	1553.41	-1556.03	-674.81	1726147.27	14594656.49	40°11'10.031"N	104°41'34.945"W	3.29	
9441.00	90.250	180.370	7113.78	1640.41	-1643.02	-674.93	1726147.46	14594569.53	40°11'09.172"N	104°41'34.946"W	1.03	
9529.00	89.510	178.640	7113.96	1728.40	-1731.02	-674.17	1726148.52	14594481.57	40°11'08.302"N	104°41'34.936"W	2.14	
9616.00	89.660	178.110	7114.59	1815.37	-1817.98	-671.70	1726151.29	14594394.66	40°11'07.443"N	104°41'34.905"W	0.63	
9704.00	89.660	179.520	7115.11	1903.36	-1905.96	-669.88	1726153.42	14594306.72	40°11'06.573"N	104°41'34.881"W	1.60	
9791.00	89.720	179.420	7115.59	1990.35	-1992.95	-669.08	1726154.52	14594219.76	40°11'05.714"N	104°41'34.871"W	0.13	
9879.00	90.090	179.820	7115.73	2078.35	-2080.95	-668.49	1726155.41	14594131.80	40°11'04.844"N	104°41'34.863"W	0.62	
9967.00	90.860	179.440	7115.00	2166.35	-2168.94	-667.92	1726156.29	14594043.84	40°11'03.974"N	104°41'34.856"W	0.98	
10054.00	89.110	179.930	7115.02	2253.35	-2255.94	-667.45	1726157.07	14593956.89	40°11'03.115"N	104°41'34.850"W	2.09	
10142.00	89.290	179.940	7116.25	2341.34	-2343.93	-667.35	1726157.48	14593868.93	40°11'02.245"N	104°41'34.848"W	0.20	
10229.00	89.260	178.810	7117.35	2428.33	-2430.92	-666.40	1726158.73	14593781.98	40°11'01.386"N	104°41'34.836"W	1.30	
10317.00	90.800	180.380	7117.31	2516.32	-2518.91	-665.78	1726159.66	14593694.03	40°11'00.516"N	104°41'34.828"W	2.50	
10404.00	91.730	180.050	7115.39	2603.30	-2605.88	-666.10	1726159.63	14593607.08	40°10'59.657"N	104°41'34.832"W	1.13	
10492.00	91.010	180.410	7113.28	2691.27	-2693.86	-666.46	1726159.59	14593519.14	40°10'58.787"N	104°41'34.837"W	0.91	
10579.00	89.970	181.120	7112.54	2778.25	-2780.85	-667.62	1726158.73	14593432.19	40°10'57.928"N	104°41'34.852"W	1.45	
10667.00	90.520	180.800	7112.16	2866.23	-2868.83	-669.09	1726157.56	14593344.23	40°10'57.058"N	104°41'34.871"W	0.72	
10754.00	89.320	180.240	7112.28	2953.22	-2955.83	-669.88	1726157.07	14593257.27	40°10'56.198"N	104°41'34.881"W	1.52	
10842.00	88.920	179.480	7113.64	3041.21	-3043.81	-669.67	1726157.60	14593169.32	40°10'55.329"N	104°41'34.878"W	0.98	
10930.00	88.770	179.050	7115.41	3129.19	-3131.79	-668.54	1726159.03	14593081.38	40°10'54.460"N	104°41'34.863"W	0.52	
11017.00	91.140	180.010	7115.48	3216.18	-3218.78	-667.82	1726160.05	14592994.43	40°10'53.600"N	104°41'34.854"W	2.94	
11104.00	91.970	179.750	7113.12	3303.15	-3305.75	-667.64	1726160.53	14592907.50	40°10'52.741"N	104°41'34.852"W	1.00	
11192.00	91.600	180.660	7110.38	3391.10	-3393.70	-667.96	1726160.52	14592819.57	40°10'51.871"N	104°41'34.856"W	1.12	
11279.00	90.400	180.330	7108.86	3478.08	-3480.68	-668.71	1726160.08	14592732.62	40°10'51.012"N	104°41'34.865"W	1.43	
11367.00	90.680	179.800	7108.03	3566.07	-3568.68	-668.81	1726160.28	14592644.66	40°10'50.142"N	104°41'34.867"W	0.68	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#41 RW 13N-32HZ(441'FSL & 1704'FWL,SEC.29)
Area	COLORADO	Well	RW 13N-32HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 13N-32HZ AWB
Facility	SEC.29-T3N-R65W		

WELLPATH DATA (161 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
11454.00	90.860	181.220	7106.86	3653.06	-3655.67	-669.58	1726159.81	14592557.71	40°10'49.283"N	104°41'34.877"W	1.65	
11542.00	89.080	179.950	7106.91	3741.04	-3743.66	-670.48	1726159.22	14592469.75	40°10'48.413"N	104°41'34.888"W	2.48	
11629.00	89.600	179.970	7107.91	3828.04	-3830.65	-670.42	1726159.58	14592382.79	40°10'47.553"N	104°41'34.887"W	0.60	
11716.00	89.080	179.430	7108.91	3915.03	-3917.64	-669.96	1726160.34	14592295.84	40°10'46.694"N	104°41'34.881"W	0.86	
11804.00	88.950	178.460	7110.42	4003.01	-4005.61	-668.34	1726162.27	14592207.91	40°10'45.824"N	104°41'34.861"W	1.11	
11892.00	89.350	177.950	7111.73	4090.96	-4093.56	-665.59	1726165.33	14592120.00	40°10'44.955"N	104°41'34.825"W	0.74	
11979.00	89.630	179.390	7112.50	4177.94	-4180.53	-663.57	1726167.65	14592033.08	40°10'44.096"N	104°41'34.799"W	1.69	
12067.00	90.280	179.530	7112.57	4265.94	-4268.53	-662.74	1726168.79	14591945.12	40°10'43.226"N	104°41'34.788"W	0.76	
12155.00	90.650	179.140	7111.86	4353.93	-4356.52	-661.72	1726170.11	14591857.17	40°10'42.357"N	104°41'34.775"W	0.61	
12242.00	89.910	179.640	7111.43	4440.93	-4443.51	-660.79	1726171.34	14591770.21	40°10'41.497"N	104°41'34.763"W	1.03	
12330.00	90.430	179.450	7111.17	4528.93	-4531.51	-660.09	1726172.35	14591682.25	40°10'40.628"N	104°41'34.754"W	0.63	
12417.00	89.380	180.250	7111.32	4615.92	-4618.50	-659.87	1726172.88	14591595.29	40°10'39.768"N	104°41'34.751"W	1.52	
12504.00	89.940	179.730	7111.83	4702.92	-4705.50	-659.85	1726173.20	14591508.33	40°10'38.908"N	104°41'34.751"W	0.88	
12591.00	91.200	179.790	7110.97	4789.92	-4792.50	-659.49	1726173.86	14591421.37	40°10'38.048"N	104°41'34.746"W	1.45	
12678.00	89.910	179.920	7110.12	4876.91	-4879.49	-659.27	1726174.39	14591334.41	40°10'37.189"N	104°41'34.743"W	1.49	
12766.00	89.880	180.930	7110.28	4964.90	-4967.49	-659.92	1726174.04	14591246.45	40°10'36.319"N	104°41'34.752"W	1.15	
12853.00	90.490	180.630	7110.00	5051.89	-5054.48	-661.10	1726173.16	14591159.49	40°10'35.460"N	104°41'34.767"W	0.78	
12940.00	88.270	180.440	7110.95	5138.87	-5141.46	-661.91	1726172.65	14591072.53	40°10'34.600"N	104°41'34.777"W	2.56	
13028.00	88.460	180.130	7113.46	5226.83	-5229.42	-662.35	1726172.52	14590984.60	40°10'33.731"N	104°41'34.783"W	0.41	
13115.00	89.290	180.000	7115.16	5313.81	-5316.41	-662.45	1726172.72	14590897.66	40°10'32.871"N	104°41'34.784"W	0.97	
13131.00†	89.380	179.910	7115.35	5329.81	-5332.41	-662.44	1726172.79	14590881.66	40°10'32.713"N	104°41'34.784"W	0.80	ENTER RADIUS TOE (395'FSL & 1078'FWL,SEC.32) 40.1757536 -104.6929955
13202.00	89.780	179.510	7115.87	5400.81	-5403.40	-662.08	1726173.40	14590810.70	40°10'32.011"N	104°41'34.779"W	0.80	
13290.00	90.120	179.000	7115.95	5488.80	-5491.40	-660.93	1726174.85	14590722.74	40°10'31.142"N	104°41'34.765"W	0.70	
13377.00	90.460	178.390	7115.51	5575.79	-5578.37	-658.95	1726177.13	14590635.81	40°10'30.282"N	104°41'34.739"W	0.80	
13414.00	90.890	178.320	7115.07	5612.77	-5615.35	-657.89	1726178.32	14590598.85	40°10'29.917"N	104°41'34.725"W	1.18	LAST BHGE PRODUCTION MWD+IFR1+SC SURVEY
13460.00	90.890	178.320	7114.36	5658.75	-5661.33	-656.54	1726179.83	14590552.89	40°10'29.463"N	104°41'34.708"W	0.00	PTB (66'FSL & 1085'FWL,SEC.32) 40.1748507 -104.6929744

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#41 RW 13N-32HZ(441'FSL & 1704'FWL,SEC.29)
Area	COLORADO	Well	RW 13N-32HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 13N-32HZ AWB
Facility	SEC.29-T3N-R65W		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.29-T3N-R65W	1.00	0.71	-90.26	1726726.17	14596214.64	40°11'25.415"N	104°41'27.413"W	polygon
SEC.32-T3N-R65W	1.00	0.71	-90.26	1726726.17	14596214.64	40°11'25.415"N	104°41'27.413"W	polygon
13N-32HZ HEEL REV-1(756'FSL & 1012'FWL,SEC.29)	7107.00	315.84	-692.86	1726122.71	14596527.54	40°11'28.529"N	104°41'35.178"W	point
13N-32HZ HEEL REV-2(606'FSL & 1012'FWL,SEC.29)	7107.00	165.84	-692.86	1726123.23	14596377.60	40°11'27.047"N	104°41'35.178"W	point
13N-32HZ HEEL REV-3(606'FSL & 1005'FWL,SEC.29)	7107.00	165.84	-699.86	1726116.23	14596377.58	40°11'27.047"N	104°41'35.268"W	point
13N-32HZ LAT. TARGET	7110.60	-1582.59	-686.12	1726136.06	14594629.90	40°11'09.769"N	104°41'35.090"W	point
13N-32HZ BHL REV-1(59'FSL & 1072'FWL,SEC.32)	7119.00	-5667.76	-670.37	1726166.03	14590546.41	40°10'29.399"N	104°41'34.886"W	point
13N-32HZ LANDBOX	7122.00	0.00	0.00	1726816.39	14596214.25	40°11'25.408"N	104°41'26.250"W	polygon
13N-32HZ RADIUS 1	7122.00	-440.67	-388.88	1726429.20	14595772.40	40°11'21.053"N	104°41'31.261"W	polygon
13N-32HZ RADIUS 2	7122.00	-5726.94	-429.21	1726407.30	14590488.10	40°10'28.814"N	104°41'31.779"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: RW 13N-32HZ AWB Ref Wellpath: RW 13N-32HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1800.00	Custom APC ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+SC <116 - 1800>	RW 13N-32HZ AWB
1800.00	13414.00	Custom APC ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+SC <1890 - 13414>	RW 13N-32HZ AWB
13414.00	13460.00	Blind Drilling (std)	Projection to bit	RW 13N-32HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#41 RW 13N-32HZ(441'FSL & 1704'FWL,SEC.29)
Area	COLORADO	Well	RW 13N-32HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	RW 13N-32HZ AWB
Facility	SEC.29-T3N-R65W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
116.00	0.030	300.120	116.00	FIRST BHGE SURFACE MWD+IFR1+SC SURVEY
1800.00	14.470	326.330	1769.18	LAST BHGE SURFACE MWD+IFR1+SC SURVEY
1890.00	14.880	327.070	1856.25	FIRST BHGE PRODUCTION MWD+IFR1+SC SURVEY
6478.00	1.056	232.252	6339.69	KOP
7373.00	66.231	177.370	7044.89	ENTER LANDBOX (856'FSL & 996'FWL,SEC.29) 40.1915311 -104.6931556
7692.00	88.710	179.110	7109.65	LANDING (546'FSL & 1005'FWL,SEC.29) 40.1906804 -104.6931256
8595.00	90.208	180.680	7110.98	EXIT RADIUS HEEL (356'FNL & 1022'FWL,SEC.32) 40.1882027 -104.6930646
13131.00	89.380	179.910	7115.35	ENTER RADIUS TOE (395'FSL & 1078'FWL,SEC.32) 40.1757536 -104.6929955
13414.00	90.890	178.320	7115.07	LAST BHGE PRODUCTION MWD+IFR1+SC SURVEY
13460.00	90.890	178.320	7114.36	PTB (66'FSL & 1085'FWL,SEC.32) 40.1748507 -104.6929744