

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#36 NEWBY STATE 34N-3HZ (589'FSL & 1260'FEL,SEC.33)
Area	COLORADO	Well	NEWBY STATE 34N-3HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	NEWBY STATE 34N-3HZ AWB
Facility	SEC.33-T3N-R68W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / UTM Zone 13 North, US feet	Software System	WellArchitect® 5.0
North Reference	True	User	Painsetr
Scale	0.999600	Report Generated	1/26/2018 at 10:22 AM
Convergence at slot	0.00°	Database/Source file	WA_DEN_Anadarko_Defn/NEWBY_STATE_34N-3HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-673.80	2744.42	1639618.10	14591034.38	40°10'35.688"N	105°00'10.292"W
Facility Reference Pt			1636874.88	14591708.30	40°10'42.348"N	105°00'45.648"W
Field Reference Pt			1698235.31	14552047.82	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM			
Calculation method	Minimum curvature	NABORS X22 (32') (RT) to Facility Vertical Datum	4927.00ft
Horizontal Reference Pt	Slot	NABORS X22 (32') (RT) to Mean Sea Level	4927.00ft
Vertical Reference Pt	NABORS X22 (32') (RT)	NABORS X22 (32') (RT) to Mud Line at Slot (SLOT#36 NEWBY STATE 34N-3HZ (589'FSL & 1260'FEL,SEC.33))	4927.00ft
MD Reference Pt	NABORS X22 (32') (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	179.85°

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WELLPATH DATA (200 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	180.020	0.00	0.00	0.00	0.00	1639618.10	14591034.38	40°10'35.688"N	105°00'10.292"W	0.00	
32.00	0.000	180.020	32.00	0.00	0.00	0.00	1639618.10	14591034.38	40°10'35.688"N	105°00'10.292"W	0.00	
145.00	0.830	180.020	145.00	0.82	-0.82	0.00	1639618.10	14591033.57	40°10'35.680"N	105°00'10.292"W	0.73	FIRST SURFACE MWD+IFR1 SURVEY
177.00	0.830	148.200	176.99	1.25	-1.25	0.12	1639618.22	14591033.14	40°10'35.676"N	105°00'10.290"W	1.42	
209.00	1.190	109.000	208.99	1.55	-1.55	0.56	1639618.66	14591032.83	40°10'35.673"N	105°00'10.285"W	2.37	
240.00	1.490	96.350	239.98	1.71	-1.70	1.26	1639619.36	14591032.68	40°10'35.671"N	105°00'10.276"W	1.35	
271.00	2.020	90.460	270.97	1.76	-1.75	2.21	1639620.31	14591032.63	40°10'35.671"N	105°00'10.264"W	1.80	
303.00	2.330	88.700	302.94	1.75	-1.74	3.42	1639621.52	14591032.64	40°10'35.671"N	105°00'10.248"W	0.99	
334.00	2.720	87.730	333.91	1.71	-1.70	4.79	1639622.89	14591032.69	40°10'35.671"N	105°00'10.230"W	1.27	
366.00	2.810	87.030	365.87	1.64	-1.63	6.33	1639624.43	14591032.76	40°10'35.672"N	105°00'10.210"W	0.30	
397.00	2.940	90.980	396.84	1.62	-1.60	7.88	1639625.98	14591032.78	40°10'35.672"N	105°00'10.190"W	0.76	
429.00	3.250	87.650	428.79	1.60	-1.58	9.61	1639627.71	14591032.81	40°10'35.672"N	105°00'10.168"W	1.12	
461.00	3.300	89.930	460.74	1.57	-1.54	11.44	1639629.53	14591032.85	40°10'35.673"N	105°00'10.145"W	0.44	
492.00	3.600	87.470	491.68	1.53	-1.50	13.30	1639631.40	14591032.89	40°10'35.673"N	105°00'10.121"W	1.08	
524.00	4.700	86.500	523.60	1.41	-1.37	15.62	1639633.71	14591033.01	40°10'35.674"N	105°00'10.091"W	3.44	
555.00	5.450	85.450	554.47	1.22	-1.18	18.35	1639636.44	14591033.21	40°10'35.676"N	105°00'10.056"W	2.44	
587.00	5.710	84.310	586.32	0.95	-0.90	21.45	1639639.54	14591033.49	40°10'35.679"N	105°00'10.016"W	0.88	
619.00	7.030	85.100	618.12	0.64	-0.57	24.99	1639643.07	14591033.81	40°10'35.682"N	105°00'09.970"W	4.13	
651.00	8.310	85.360	649.84	0.30	-0.22	29.24	1639647.33	14591034.16	40°10'35.686"N	105°00'09.915"W	4.00	
683.00	8.960	88.350	681.47	0.05	0.04	34.04	1639652.12	14591034.42	40°10'35.688"N	105°00'09.854"W	2.47	
714.00	9.540	91.420	712.07	0.06	0.05	39.02	1639657.10	14591034.43	40°10'35.688"N	105°00'09.789"W	2.46	
746.00	9.980	93.450	743.61	0.30	-0.19	44.44	1639662.52	14591034.20	40°10'35.686"N	105°00'09.720"W	1.75	
778.00	10.460	95.290	775.10	0.75	-0.62	50.10	1639668.18	14591033.76	40°10'35.682"N	105°00'09.647"W	1.81	
810.00	10.940	96.260	806.54	1.37	-1.22	56.01	1639674.08	14591033.16	40°10'35.676"N	105°00'09.570"W	1.60	
842.00	11.560	93.970	837.93	1.94	-1.77	62.23	1639680.30	14591032.61	40°10'35.670"N	105°00'09.490"W	2.39	
873.00	12.220	94.320	868.26	2.42	-2.24	68.60	1639686.67	14591032.15	40°10'35.666"N	105°00'09.408"W	2.14	
905.00	12.880	93.530	899.50	2.91	-2.71	75.53	1639693.60	14591031.67	40°10'35.661"N	105°00'09.319"W	2.13	
937.00	13.670	91.510	930.64	3.25	-3.03	82.87	1639700.94	14591031.35	40°10'35.658"N	105°00'09.224"W	2.86	
968.00	14.500	90.720	960.71	3.41	-3.17	90.42	1639708.48	14591031.21	40°10'35.657"N	105°00'09.127"W	2.75	
1000.00	14.810	91.340	991.67	3.58	-3.32	98.51	1639716.57	14591031.06	40°10'35.655"N	105°00'09.023"W	1.09	
1032.00	15.210	92.300	1022.58	3.87	-3.58	106.79	1639724.85	14591030.80	40°10'35.653"N	105°00'08.916"W	1.47	
1064.00	14.990	93.530	1053.47	4.31	-4.01	115.12	1639733.17	14591030.37	40°10'35.648"N	105°00'08.809"W	1.21	
1096.00	15.380	93.530	1084.36	4.85	-4.52	123.48	1639741.53	14591029.86	40°10'35.643"N	105°00'08.701"W	1.22	
1127.00	16.130	93.090	1114.19	5.36	-5.01	131.89	1639749.93	14591029.37	40°10'35.638"N	105°00'08.593"W	2.45	
1159.00	16.660	91.780	1144.89	5.76	-5.39	140.91	1639758.95	14591028.99	40°10'35.635"N	105°00'08.477"W	2.02	
1191.00	17.620	89.580	1175.47	5.89	-5.50	150.34	1639768.38	14591028.88	40°10'35.634"N	105°00'08.355"W	3.62	
1222.00	18.370	88.440	1204.95	5.75	-5.33	159.91	1639777.95	14591029.05	40°10'35.635"N	105°00'08.232"W	2.67	
1254.00	19.340	88.880	1235.24	5.54	-5.09	170.25	1639788.28	14591029.29	40°10'35.638"N	105°00'08.099"W	3.06	
1286.00	19.510	88.000	1265.41	5.28	-4.80	180.89	1639798.92	14591029.58	40°10'35.641"N	105°00'07.962"W	1.06	
1318.00	19.950	86.590	1295.54	4.79	-4.29	191.68	1639809.70	14591030.09	40°10'35.646"N	105°00'07.823"W	2.03	
1350.00	20.260	86.150	1325.59	4.13	-3.59	202.66	1639820.67	14591030.79	40°10'35.652"N	105°00'07.681"W	1.08	
1381.00	20.350	85.890	1354.66	3.41	-2.85	213.39	1639831.40	14591031.53	40°10'35.660"N	105°00'07.543"W	0.41	
1413.00	20.350	83.600	1384.66	2.42	-1.83	224.47	1639842.48	14591032.55	40°10'35.670"N	105°00'07.400"W	2.49	
1445.00	20.480	84.480	1414.65	1.29	-0.67	235.57	1639853.57	14591033.71	40°10'35.681"N	105°00'07.257"W	1.04	
1476.00	20.650	86.940	1443.68	0.50	0.15	246.43	1639864.43	14591034.52	40°10'35.689"N	105°00'07.117"W	2.84	

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1508.00	20.480	88.960	1473.64	0.13	0.55	257.66	1639875.65	14591034.92	40°10'35.693"N	105°00'06.973"W	2.28	
1539.00	20.570	88.350	1502.67	-0.10	0.80	268.52	1639886.52	14591035.18	40°10'35.696"N	105°00'06.833"W	0.75	
1571.00	20.520	87.470	1532.84	-0.48	1.21	279.75	1639897.73	14591035.59	40°10'35.700"N	105°00'06.688"W	0.98	
1603.00	20.610	87.730	1562.60	-0.92	1.68	290.98	1639908.96	14591036.06	40°10'35.705"N	105°00'06.543"W	0.40	
1635.00	20.650	88.960	1592.54	-1.21	2.01	302.25	1639920.22	14591036.38	40°10'35.708"N	105°00'06.398"W	1.36	
1666.00	20.210	89.930	1621.60	-1.29	2.12	313.07	1639931.04	14591036.49	40°10'35.709"N	105°00'06.259"W	1.79	
1698.00	20.170	89.490	1651.63	-1.32	2.17	324.11	1639942.08	14591036.54	40°10'35.709"N	105°00'06.117"W	0.49	
1730.00	20.430	88.960	1681.64	-1.44	2.32	335.21	1639953.18	14591036.69	40°10'35.711"N	105°00'05.974"W	1.00	
1762.00	20.430	88.350	1711.63	-1.67	2.58	346.38	1639964.34	14591036.96	40°10'35.714"N	105°00'05.830"W	0.67	
1793.00	20.260	87.650	1740.69	-2.02	2.96	357.15	1639975.10	14591037.33	40°10'35.717"N	105°00'05.691"W	0.96	
1825.00	20.480	86.940	1770.69	-2.52	3.49	368.28	1639986.23	14591037.86	40°10'35.722"N	105°00'05.548"W	1.03	
1857.00	20.870	86.650	1800.63	-3.12	4.12	379.56	1639997.50	14591038.49	40°10'35.729"N	105°00'05.402"W	1.26	
1889.00	21.180	87.470	1830.50	-3.68	4.71	391.02	1640008.96	14591039.08	40°10'35.734"N	105°00'05.255"W	1.34	
1920.00	21.360	89.670	1859.39	-3.93	4.99	402.26	1640020.20	14591039.35	40°10'35.737"N	105°00'05.110"W	2.64	
1952.00	21.010	91.070	1889.23	-3.82	4.91	413.83	1640031.76	14591039.28	40°10'35.737"N	105°00'04.961"W	1.92	
1984.00	21.230	90.110	1919.08	-3.67	4.79	425.35	1640043.28	14591039.16	40°10'35.735"N	105°00'04.812"W	1.28	
2015.00	21.090	90.020	1947.99	-3.63	4.78	436.54	1640054.47	14591039.15	40°10'35.735"N	105°00'04.668"W	0.46	
2047.00	20.480	92.220	1977.91	-3.38	4.56	447.90	1640065.81	14591038.93	40°10'35.733"N	105°00'04.522"W	3.10	
2079.00	20.170	92.830	2007.91	-2.86	4.07	459.00	1640076.91	14591038.44	40°10'35.728"N	105°00'04.379"W	1.17	
2111.00	20.570	92.130	2037.91	-2.35	3.59	470.13	1640088.04	14591037.96	40°10'35.723"N	105°00'04.235"W	1.46	
2174.00	20.960	92.390	2096.82	-1.41	2.71	492.45	1640110.35	14591037.08	40°10'35.715"N	105°00'03.948"W	0.64	
2205.00	20.570	91.250	2125.81	-1.03	2.36	503.43	1640121.33	14591036.73	40°10'35.711"N	105°00'03.806"W	1.81	
2237.00	20.260	90.720	2155.80	-0.81	2.17	514.59	1640132.48	14591036.53	40°10'35.709"N	105°00'03.663"W	1.13	
2269.00	20.520	90.110	2185.79	-0.70	2.09	525.74	1640143.63	14591036.45	40°10'35.709"N	105°00'03.519"W	1.05	
2296.00	20.830	91.160	2211.05	-0.57	1.98	535.27	1640153.16	14591036.35	40°10'35.708"N	105°00'03.396"W	1.79	LAST SURFACE MWD+IFR1 SURVEY
2398.00	20.990	87.920	2306.34	-0.77	2.28	571.66	1640189.53	14591036.64	40°10'35.710"N	105°00'02.927"W	1.14	FIRST BHGE MWD+IFR1+SC SURVEY
2492.00	21.890	89.940	2393.83	-1.31	2.91	606.01	1640223.86	14591037.27	40°10'35.717"N	105°00'02.485"W	1.24	
2586.00	21.150	88.720	2481.28	-1.62	3.30	640.49	1640258.33	14591037.67	40°10'35.721"N	105°00'02.041"W	0.92	
2680.00	20.450	87.300	2569.16	-2.68	4.46	673.84	1640291.67	14591038.82	40°10'35.732"N	105°00'01.611"W	0.92	
2774.00	21.970	84.980	2656.79	-4.90	6.77	707.77	1640325.58	14591041.13	40°10'35.755"N	105°00'01.174"W	1.85	
2868.00	24.080	82.990	2743.29	-8.69	10.65	744.32	1640362.12	14591045.00	40°10'35.793"N	105°00'00.703"W	2.39	
2962.00	23.100	81.540	2829.44	-13.64	15.70	781.59	1640399.38	14591050.05	40°10'35.843"N	105°00'00.223"W	1.21	
3008.00†	22.550	80.714	2871.84	-16.35	18.45	799.22	1640417.00	14591052.80	40°10'35.870"N	104°59'59.996"W	1.38	ENTER LANDBOX (607'FSL & 460'FEL,SEC.33) 40.1766306 -104.9999988
3056.00	21.980	79.810	2916.26	-19.37	21.53	817.15	1640434.92	14591055.88	40°10'35.901"N	104°59'59.765"W	1.38	
3149.00	22.280	75.890	3002.41	-26.66	28.90	851.38	1640469.14	14591063.25	40°10'35.973"N	104°59'59.324"W	1.62	
3244.00	21.140	74.480	3090.67	-35.55	37.88	885.35	1640503.10	14591072.22	40°10'36.062"N	104°59'58.886"W	1.32	
3337.00	22.050	73.090	3177.14	-45.02	47.44	918.21	1640535.94	14591081.78	40°10'36.157"N	104°59'58.463"W	1.12	
3431.00	21.020	71.860	3264.58	-55.32	57.83	951.12	1640568.83	14591092.16	40°10'36.259"N	104°59'58.039"W	1.20	
3525.00	22.390	69.300	3351.92	-66.81	69.40	983.89	1640601.59	14591103.73	40°10'36.374"N	104°59'57.617"W	1.77	
3644.00	20.720	68.120	3462.59	-82.56	85.26	1024.63	1640642.31	14591119.58	40°10'36.530"N	104°59'57.092"W	1.45	
3738.00	19.300	66.890	3550.91	-94.78	97.55	1054.35	1640672.02	14591131.87	40°10'36.652"N	104°59'56.709"W	1.58	
3832.00	18.290	65.670	3639.90	-106.88	109.73	1082.07	1640699.74	14591144.03	40°10'36.772"N	104°59'56.352"W	1.15	
3926.00	19.810	65.710	3728.75	-119.43	122.36	1110.03	1640727.69	14591156.66	40°10'36.897"N	104°59'55.991"W	1.62	
4020.00	19.550	65.120	3817.26	-132.53	135.53	1138.82	1640756.46	14591169.82	40°10'37.027"N	104°59'55.621"W	0.35	
4114.00	18.690	64.330	3906.07	-145.59	148.67	1166.66	1640784.30	14591182.96	40°10'37.157"N	104°59'55.262"W	0.96	

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4208.00	17.280	63.160	3995.48	-158.35	161.50	1192.70	1640810.32	14591195.78	40°10'37.284"N	104°59'54.927"W	1.55	
4301.00	15.880	60.210	4084.61	-170.85	174.06	1216.06	1640833.68	14591208.33	40°10'37.408"N	104°59'54.625"W	1.76	
4395.00	15.150	57.980	4175.19	-183.70	186.96	1237.64	1640855.25	14591221.23	40°10'37.535"N	104°59'54.348"W	1.00	
4489.00	12.530	61.240	4266.45	-195.07	198.38	1257.00	1640874.60	14591232.64	40°10'37.648"N	104°59'54.098"W	2.91	
4582.00	11.940	59.760	4357.34	-204.72	208.08	1274.15	1640891.74	14591242.34	40°10'37.744"N	104°59'53.877"W	0.72	
4676.00	7.820	69.300	4449.93	-211.84	215.24	1288.54	1640906.13	14591249.50	40°10'37.815"N	104°59'53.692"W	4.70	
4770.00	5.860	77.860	4543.26	-215.08	218.51	1299.22	1640916.80	14591252.76	40°10'37.847"N	104°59'53.554"W	2.34	
4865.00	4.410	85.760	4637.88	-216.35	219.80	1307.60	1640925.18	14591254.05	40°10'37.860"N	104°59'53.446"W	1.69	
4959.00	3.030	71.100	4731.68	-217.41	220.87	1313.56	1640931.13	14591255.12	40°10'37.870"N	104°59'53.369"W	1.77	
5053.00	0.400	36.860	4825.63	-218.47	221.94	1316.10	1640933.68	14591256.19	40°10'37.881"N	104°59'53.337"W	2.88	
5147.00	0.560	0.470	4919.63	-219.19	222.66	1316.30	1640933.88	14591256.91	40°10'37.888"N	104°59'53.334"W	0.36	
5241.00	0.770	334.600	5013.62	-220.22	223.69	1316.04	1640933.61	14591257.94	40°10'37.898"N	104°59'53.337"W	0.38	
5334.00	1.070	341.040	5106.61	-221.61	225.08	1315.49	1640933.06	14591259.33	40°10'37.912"N	104°59'53.345"W	0.34	
5428.00	1.180	338.770	5200.59	-223.34	226.81	1314.85	1640932.43	14591261.06	40°10'37.929"N	104°59'53.353"W	0.13	
5522.00	1.400	349.130	5294.57	-225.37	228.84	1314.28	1640931.86	14591263.09	40°10'37.949"N	104°59'53.360"W	0.34	
5616.00	1.180	210.430	5388.56	-225.67	229.13	1313.58	1640931.15	14591263.38	40°10'37.952"N	104°59'53.369"W	2.57	
5710.00	1.420	207.130	5482.53	-223.80	227.26	1312.56	1640930.13	14591261.51	40°10'37.933"N	104°59'53.382"W	0.27	
5805.00	1.100	218.840	5577.51	-222.05	225.50	1311.45	1640929.03	14591259.75	40°10'37.916"N	104°59'53.397"W	0.43	
5898.00	0.520	260.330	5670.50	-221.28	224.74	1310.47	1640928.05	14591258.99	40°10'37.909"N	104°59'53.409"W	0.85	
5992.00	0.410	318.010	5764.50	-221.46	224.92	1309.83	1640927.40	14591259.17	40°10'37.910"N	104°59'53.418"W	0.49	
6086.00	0.860	315.030	5858.49	-222.21	225.66	1309.10	1640926.68	14591259.92	40°10'37.918"N	104°59'53.427"W	0.48	
6181.00	1.850	244.720	5953.47	-222.07	225.51	1307.21	1640924.79	14591259.77	40°10'37.916"N	104°59'53.451"W	1.85	
6275.00	1.930	260.270	6047.42	-221.16	224.60	1304.28	1640921.86	14591258.85	40°10'37.907"N	104°59'53.489"W	0.55	
6368.00	1.810	272.450	6140.37	-220.97	224.40	1301.27	1640918.85	14591258.65	40°10'37.905"N	104°59'53.528"W	0.45	
6462.00	1.550	269.550	6234.33	-221.03	224.45	1298.51	1640916.10	14591258.70	40°10'37.906"N	104°59'53.563"W	0.29	
6556.00	1.820	288.860	6328.29	-221.51	224.92	1295.83	1640913.41	14591259.17	40°10'37.910"N	104°59'53.598"W	0.66	
6649.00	1.450	216.440	6421.26	-221.04	224.45	1293.73	1640911.32	14591258.71	40°10'37.906"N	104°59'53.625"W	2.10	
6699.00†	4.292	187.403	6471.19	-218.68	222.09	1293.12	1640910.70	14591256.34	40°10'37.882"N	104°59'53.633"W	6.21	KOP
6743.00	6.980	182.300	6514.98	-214.38	217.78	1292.80	1640910.38	14591252.04	40°10'37.840"N	104°59'53.637"W	6.21	
6837.00	17.750	177.020	6606.66	-194.30	197.71	1293.31	1640910.90	14591231.97	40°10'37.641"N	104°59'53.630"W	11.51	
6931.00	21.560	178.590	6695.17	-162.71	166.12	1294.48	1640912.07	14591200.40	40°10'37.329"N	104°59'53.615"W	4.09	
7026.00	24.730	179.490	6782.51	-125.38	128.79	1295.09	1640912.67	14591163.08	40°10'36.960"N	104°59'53.607"W	3.36	
7119.00	30.540	184.930	6864.88	-82.35	85.75	1293.23	1640910.81	14591120.06	40°10'36.535"N	104°59'53.631"W	6.81	
7214.00	37.800	182.220	6943.43	-29.14	32.54	1290.03	1640907.61	14591066.87	40°10'36.009"N	104°59'53.673"W	7.81	
7308.00	43.970	177.760	7014.48	32.32	-28.92	1290.19	1640907.76	14591005.43	40°10'35.402"N	104°59'53.671"W	7.26	
7401.00	43.760	177.480	7081.53	96.72	-93.31	1292.86	1640910.44	14590941.07	40°10'34.766"N	104°59'53.636"W	0.31	
7495.00	49.310	179.530	7146.17	164.89	-161.48	1294.58	1640912.16	14590872.93	40°10'34.092"N	104°59'53.614"W	6.11	
7589.00	53.680	180.300	7204.68	238.43	-235.02	1294.68	1640912.25	14590799.41	40°10'33.365"N	104°59'53.613"W	4.69	
7683.00	59.120	180.210	7256.68	316.70	-313.29	1294.33	1640911.90	14590721.18	40°10'32.592"N	104°59'53.617"W	5.79	
7777.00	64.350	181.690	7301.18	399.44	-396.04	1292.93	1640910.50	14590638.47	40°10'31.774"N	104°59'53.636"W	5.73	
7871.00	69.150	180.480	7338.28	485.76	-482.36	1291.31	1640908.88	14590552.18	40°10'30.921"N	104°59'53.656"W	5.24	
7965.00	81.370	179.570	7362.15	576.49	-573.09	1291.30	1640908.86	14590461.48	40°10'30.024"N	104°59'53.657"W	13.03	
8059.00	84.800	181.200	7373.47	669.79	-666.39	1290.66	1640908.22	14590368.22	40°10'29.102"N	104°59'53.665"W	4.03	
8154.00	88.210	181.570	7379.26	764.56	-761.17	1288.37	1640905.93	14590273.48	40°10'28.166"N	104°59'53.695"W	3.61	
8203.00†	88.616	181.596	7380.62	813.52	-810.13	1287.02	1640904.57	14590224.53	40°10'27.682"N	104°59'53.712"W	0.83	LANDING (221'FNL & 27'FWL,SEC.03) 40.1743561 -104.9982533

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#36 NEWBY STATE 34N-3HZ (589'FSL & 1260'FEL,SEC.33)
Area	COLORADO	Well	NEWBY STATE 34N-3HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	NEWBY STATE 34N-3HZ AWB
Facility	SEC.33-T3N-R68W		

WELLPATH DATA (200 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
8247.00	88.980	181.620	7381.54	857.49	-854.11	1285.78	1640903.34	14590180.58	40°10'27.247"N	104°59'53.728"W	0.83	
8341.00	89.850	180.870	7382.50	951.46	-948.08	1283.74	1640901.29	14590086.65	40°10'26.319"N	104°59'53.754"W	1.22	
8430.00†	90.958	181.021	7381.87	1040.44	-1037.06	1282.27	1640899.82	14589997.70	40°10'25.439"N	104°59'53.773"W	1.26	EXIT RADIUS HEEL (448'FNL & 22'FWL,SEC.03) 40.1737332 -104.9982704
8435.00	91.020	181.030	7381.78	1045.44	-1042.06	1282.18	1640899.73	14589992.70	40°10'25.390"N	104°59'53.774"W	1.26	
8528.00	88.740	180.050	7381.98	1138.42	-1135.05	1281.31	1640898.85	14589899.75	40°10'24.471"N	104°59'53.786"W	2.67	
8622.00	89.380	179.260	7383.52	1232.41	-1229.03	1281.87	1640899.42	14589805.80	40°10'23.542"N	104°59'53.779"W	1.08	
8716.00	90.120	179.610	7383.93	1326.40	-1323.03	1282.80	1640900.34	14589711.85	40°10'22.613"N	104°59'53.767"W	0.87	
8810.00	89.200	178.410	7384.49	1420.39	-1417.01	1284.42	1640901.96	14589617.90	40°10'21.685"N	104°59'53.746"W	1.61	
8905.00	90.150	178.390	7385.03	1515.36	-1511.97	1287.08	1640904.61	14589522.98	40°10'20.746"N	104°59'53.712"W	1.00	
8999.00	90.550	178.560	7384.45	1609.33	-1605.93	1289.58	1640907.11	14589429.05	40°10'19.818"N	104°59'53.680"W	0.46	
9093.00	89.420	179.780	7384.48	1703.32	-1699.92	1290.94	1640908.46	14589335.11	40°10'18.889"N	104°59'53.662"W	1.77	
9187.00	89.970	180.460	7384.98	1797.31	-1793.92	1290.74	1640908.26	14589241.15	40°10'17.960"N	104°59'53.665"W	0.93	
9281.00	88.460	181.700	7386.27	1891.28	-1887.89	1288.97	1640906.49	14589147.21	40°10'17.032"N	104°59'53.688"W	2.08	
9375.00	88.890	181.750	7388.44	1985.20	-1981.82	1286.14	1640903.66	14589053.32	40°10'16.103"N	104°59'53.724"W	0.46	
9469.00	89.510	181.530	7389.75	2079.15	-2075.77	1283.45	1640900.97	14588959.41	40°10'15.175"N	104°59'53.759"W	0.70	
9563.00	90.150	181.650	7390.03	2173.10	-2169.73	1280.84	1640898.36	14588865.48	40°10'14.246"N	104°59'53.792"W	0.69	
9656.00	89.050	182.350	7390.68	2266.03	-2262.67	1277.60	1640895.11	14588772.58	40°10'13.328"N	104°59'53.834"W	1.40	
9750.00	88.740	181.690	7392.49	2359.95	-2356.60	1274.29	1640891.80	14588678.69	40°10'12.400"N	104°59'53.877"W	0.78	
9844.00	89.080	181.630	7394.28	2453.88	-2450.54	1271.56	1640889.07	14588584.79	40°10'11.471"N	104°59'53.912"W	0.37	
9938.00	89.260	181.000	7395.64	2547.84	-2544.51	1269.41	1640886.91	14588490.86	40°10'10.543"N	104°59'53.940"W	0.70	
10032.00	89.570	180.260	7396.60	2641.83	-2638.49	1268.37	1640885.88	14588396.91	40°10'09.614"N	104°59'53.953"W	0.85	
10126.00	90.370	180.610	7396.65	2735.82	-2732.49	1267.66	1640885.16	14588302.95	40°10'08.685"N	104°59'53.963"W	0.93	
10219.00	91.390	180.730	7395.22	2828.80	-2825.47	1266.57	1640884.07	14588210.01	40°10'07.766"N	104°59'53.977"W	1.10	
10314.00	91.200	180.610	7393.08	2923.77	-2920.44	1265.46	1640882.96	14588115.08	40°10'06.828"N	104°59'53.991"W	0.24	
10407.00	89.540	180.610	7392.48	3016.75	-3013.43	1264.47	1640881.96	14588022.12	40°10'05.909"N	104°59'54.004"W	1.78	
10501.00	88.770	180.290	7393.86	3110.74	-3107.42	1263.73	1640881.22	14587928.18	40°10'04.980"N	104°59'54.014"W	0.89	
10595.00	89.450	179.710	7395.32	3204.72	-3201.40	1263.73	1640881.22	14587834.23	40°10'04.051"N	104°59'54.014"W	0.95	
10689.00	90.280	179.300	7395.54	3298.72	-3295.40	1264.55	1640882.03	14587740.27	40°10'03.122"N	104°59'54.003"W	0.98	
10783.00	89.200	179.740	7395.97	3392.72	-3389.39	1265.33	1640882.81	14587646.31	40°10'02.194"N	104°59'53.993"W	1.24	
10878.00	89.940	180.330	7396.68	3487.71	-3484.39	1265.27	1640882.75	14587551.35	40°10'01.255"N	104°59'53.994"W	1.00	
10972.00	88.340	179.520	7398.10	3581.70	-3578.38	1265.40	1640882.87	14587457.41	40°10'00.326"N	104°59'53.992"W	1.91	
11066.00	88.920	179.900	7400.34	3675.67	-3672.35	1265.87	1640883.34	14587363.47	40°09'59.397"N	104°59'53.986"W	0.74	
11159.00	88.890	178.680	7402.12	3768.65	-3765.32	1267.03	1640884.49	14587270.54	40°09'58.479"N	104°59'53.972"W	1.31	
11254.00	90.090	179.310	7402.97	3863.63	-3860.30	1268.69	1640886.16	14587175.59	40°09'57.540"N	104°59'53.950"W	1.43	
11348.00	91.110	178.790	7401.98	3957.61	-3954.28	1270.25	1640887.71	14587081.65	40°09'56.611"N	104°59'53.930"W	1.22	
11442.00	92.190	179.200	7399.27	4051.56	-4048.23	1271.90	1640889.35	14586987.74	40°09'55.683"N	104°59'53.909"W	1.23	
11536.00	90.030	179.540	7397.45	4145.54	-4142.20	1272.93	1640890.38	14586893.81	40°09'54.754"N	104°59'53.896"W	2.33	
11630.00	90.550	179.240	7396.98	4239.53	-4236.19	1273.93	1640891.38	14586799.86	40°09'53.826"N	104°59'53.883"W	0.64	
11724.00	90.920	178.810	7395.77	4333.51	-4330.17	1275.53	1640892.98	14586705.92	40°09'52.897"N	104°59'53.862"W	0.60	
11818.00	91.630	178.450	7393.68	4427.47	-4424.12	1277.78	1640895.22	14586612.00	40°09'51.968"N	104°59'53.833"W	0.85	
11912.00	88.890	178.420	7393.25	4521.43	-4518.07	1280.35	1640897.78	14586518.09	40°09'51.040"N	104°59'53.800"W	2.92	
12006.00	86.950	179.660	7396.67	4615.35	-4611.99	1281.92	1640899.35	14586424.21	40°09'50.112"N	104°59'53.780"W	2.45	
12100.00	87.690	179.510	7401.06	4709.25	-4705.88	1282.60	1640900.03	14586330.35	40°09'49.184"N	104°59'53.772"W	0.80	
12194.00	88.800	179.760	7403.94	4803.20	-4799.84	1283.20	1640900.63	14586236.43	40°09'48.256"N	104°59'53.764"W	1.21	
12288.00	89.720	179.530	7405.15	4897.19	-4893.83	1283.78	1640901.21	14586142.48	40°09'47.327"N	104°59'53.756"W	1.01	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#36 NEWBY STATE 34N-3HZ (589'FSL & 1260'FEL,SEC.33)
Area	COLORADO	Well	NEWBY STATE 34N-3HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	NEWBY STATE 34N-3HZ AWB
Facility	SEC.33-T3N-R68W		

WELLPATH DATA (200 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
12382.00	91.540	179.530	7404.12	4991.18	-4987.81	1284.55	1640901.97	14586048.53	40°09'46.398"N	104°59'53.747"W	1.94	
12476.00	92.060	180.490	7401.17	5085.13	-5081.77	1284.54	1640901.95	14585954.62	40°09'45.469"N	104°59'53.747"W	1.16	
12569.00	91.080	181.780	7398.62	5178.07	-5174.71	1282.69	1640900.11	14585861.71	40°09'44.551"N	104°59'53.771"W	1.74	
12663.00	91.050	181.260	7396.87	5272.02	-5268.66	1280.20	1640897.61	14585767.80	40°09'43.623"N	104°59'53.803"W	0.55	
12740.00†	90.190	180.711	7396.04	5349.00	-5345.64	1278.88	1640896.29	14585690.85	40°09'42.862"N	104°59'53.820"W	1.33	ENTER RADIUS TOE (454'FSL & 80'FWL,SEC.03) 40.1619061 -104.9982833
12757.00	90.000	180.590	7396.01	5365.99	-5362.64	1278.68	1640896.09	14585673.86	40°09'42.694"N	104°59'53.822"W	1.33	
12852.00	89.080	179.440	7396.77	5460.99	-5457.64	1278.66	1640896.07	14585578.90	40°09'41.755"N	104°59'53.823"W	1.55	
12945.00	87.930	178.490	7399.20	5553.94	-5550.59	1280.34	1640897.74	14585485.99	40°09'40.837"N	104°59'53.801"W	1.60	
13039.00	88.670	178.260	7401.99	5647.87	-5644.51	1283.00	1640900.40	14585392.10	40°09'39.908"N	104°59'53.767"W	0.82	
13133.00	89.080	178.490	7403.83	5741.82	-5738.45	1285.67	1640903.06	14585298.20	40°09'38.980"N	104°59'53.733"W	0.50	
13228.00	89.320	178.950	7405.16	5836.79	-5833.42	1287.79	1640905.18	14585203.27	40°09'38.042"N	104°59'53.705"W	0.55	
13322.00	89.570	178.890	7406.07	5930.77	-5927.40	1289.56	1640906.95	14585109.33	40°09'37.113"N	104°59'53.683"W	0.27	
13416.00	90.650	179.090	7405.89	6024.76	-6021.38	1291.22	1640908.60	14585015.38	40°09'36.184"N	104°59'53.661"W	1.17	
13510.00	91.390	180.140	7404.22	6118.74	-6115.36	1291.85	1640909.23	14584921.44	40°09'35.255"N	104°59'53.653"W	1.37	
13604.00	90.430	179.940	7402.72	6212.73	-6209.35	1291.78	1640909.16	14584827.49	40°09'34.327"N	104°59'53.654"W	1.04	
13697.00	90.920	180.430	7401.63	6305.72	-6302.34	1291.48	1640908.86	14584734.54	40°09'33.408"N	104°59'53.658"W	0.75	
13791.00	91.020	180.230	7400.04	6399.71	-6396.33	1290.94	1640908.32	14584640.59	40°09'32.479"N	104°59'53.665"W	0.24	
13885.00	90.460	179.680	7398.82	6493.70	-6490.32	1291.02	1640908.39	14584546.63	40°09'31.550"N	104°59'53.664"W	0.83	
13982.00	90.310	178.050	7398.17	6590.68	-6587.29	1292.94	1640910.30	14584449.70	40°09'30.592"N	104°59'53.640"W	1.69	LAST BHGE MWD+IFR1+SC SURVEY
14035.00	90.310	178.050	7397.88	6643.65	-6640.26	1294.74	1640912.10	14584396.75	40°09'30.068"N	104°59'53.616"W	0.00	PTB (840'NL & 96'FWL,SEC.10) 40.1583523 -104.9982268

TARGETS									
Name	TVD (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Shape	
SEC.04-T2N-R68W	2.00	-1.82	-240.09	1639378.11	14591032.57	40°10'35.670"N	105°00'13.385"W	polygon	
SEC.33-T3N-R68W	2.00	-1.82	-240.09	1639378.11	14591032.57	40°10'35.670"N	105°00'13.385"W	polygon	
NEWBY STATE 34N-3HZ HEEL REV-1(52'FNL & 54'FWL,SEC.03)	7385.00	-630.20	1313.93	1640931.48	14590404.39	40°10'29.460"N	104°59'53.365"W	point	
NEWBY STATE 34N-3HZ HEEL REV-2(52'FNL & 34'FWL,SEC.03)	7385.00	-630.20	1293.93	1640911.49	14590404.40	40°10'29.460"N	104°59'53.623"W	point	
NEWBY STATE 34N-3HZ BHL REV-1(853'FNL & 111'FWL,SEC.10)	7426.00	-6653.13	1309.78	1640927.14	14584383.89	40°09'29.941"N	104°59'53.423"W	point	
NEWBY STATE 34N-3HZ LANDBOX	7426.00	0.00	0.00	1639618.10	14591034.38	40°10'35.688"N	105°00'10.292"W	polygon	
NEWBY STATE 34N-3HZ RADIUS 1	7426.00	-5800.28	1207.17	1640824.60	14585236.40	40°09'38.369"N	104°59'54.744"W	polygon	
NEWBY STATE 34N-3HZ RADIUS 2	7426.00	-578.08	1260.23	1640877.80	14590456.50	40°10'29.975"N	104°59'54.057"W	polygon	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#36 NEWBY STATE 34N-3HZ (589'FSL & 1260'FEL,SEC.33)
Area	COLORADO	Well	NEWBY STATE 34N-3HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	NEWBY STATE 34N-3HZ AWB
Facility	SEC.33-T3N-R68W		

WELLPATH COMPOSITION - Ref Wellbore: NEWBY STATE 34N-3HZ AWB Ref Wellpath: NEWBY STATE 34N-3HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
32.00	2296.00	Custom APC_ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC_ISCWSA Rev-2 MWD+IFR1 <145 - 2296>	NEWBY STATE 34N-3HZ AWB
2296.00	13982.00	Custom APC_ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC_ISCWSA Rev-2 MWD+IFR1+SC <2398 - 13982>	NEWBY STATE 34N-3HZ AWB
13982.00	14035.00	Blind Drilling (std)	Projection to bit	NEWBY STATE 34N-3HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#36 NEWBY STATE 34N-3HZ (589'FSL & 1260'FEL,SEC.33)
Area	COLORADO	Well	NEWBY STATE 34N-3HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	NEWBY STATE 34N-3HZ AWB
Facility	SEC.33-T3N-R68W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
145.00	0.830	180.020	145.00	FIRST SURFACE MWD+IFR1 SURVEY
2296.00	20.830	91.160	2211.05	LAST SURFACE MWD+IFR1 SURVEY
2398.00	20.990	87.920	2306.34	FIRST BHGE MWD+IFR1+SC SURVEY
3008.00	22.550	80.714	2871.84	ENTER LANDBOX (607'FSL & 460'FEL,SEC.33) 40.1766306 -104.9999988
6699.00	4.292	187.403	6471.19	KOP
8203.00	88.616	181.596	7380.62	LANDING (221'FNL & 27'FWL,SEC.03) 40.1743561 -104.9982533
8430.00	90.958	181.021	7381.87	EXIT RADIUS HEEL (448'FNL & 22'FWL,SEC.03) 40.1737332 -104.9982704
12740.00	90.190	180.711	7396.04	ENTER RADIUS TOE (454'FSL & 80'FWL,SEC.03) 40.1619061 -104.9982833
13982.00	90.310	178.050	7398.17	LAST BHGE MWD+IFR1+SC SURVEY
14035.00	90.310	178.050	7397.88	PTB (840'NL & 96'FWL,SEC.10) 40.1583523 -104.9982268