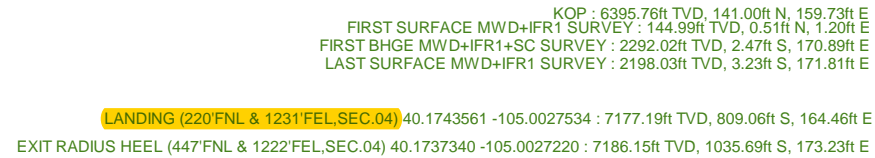
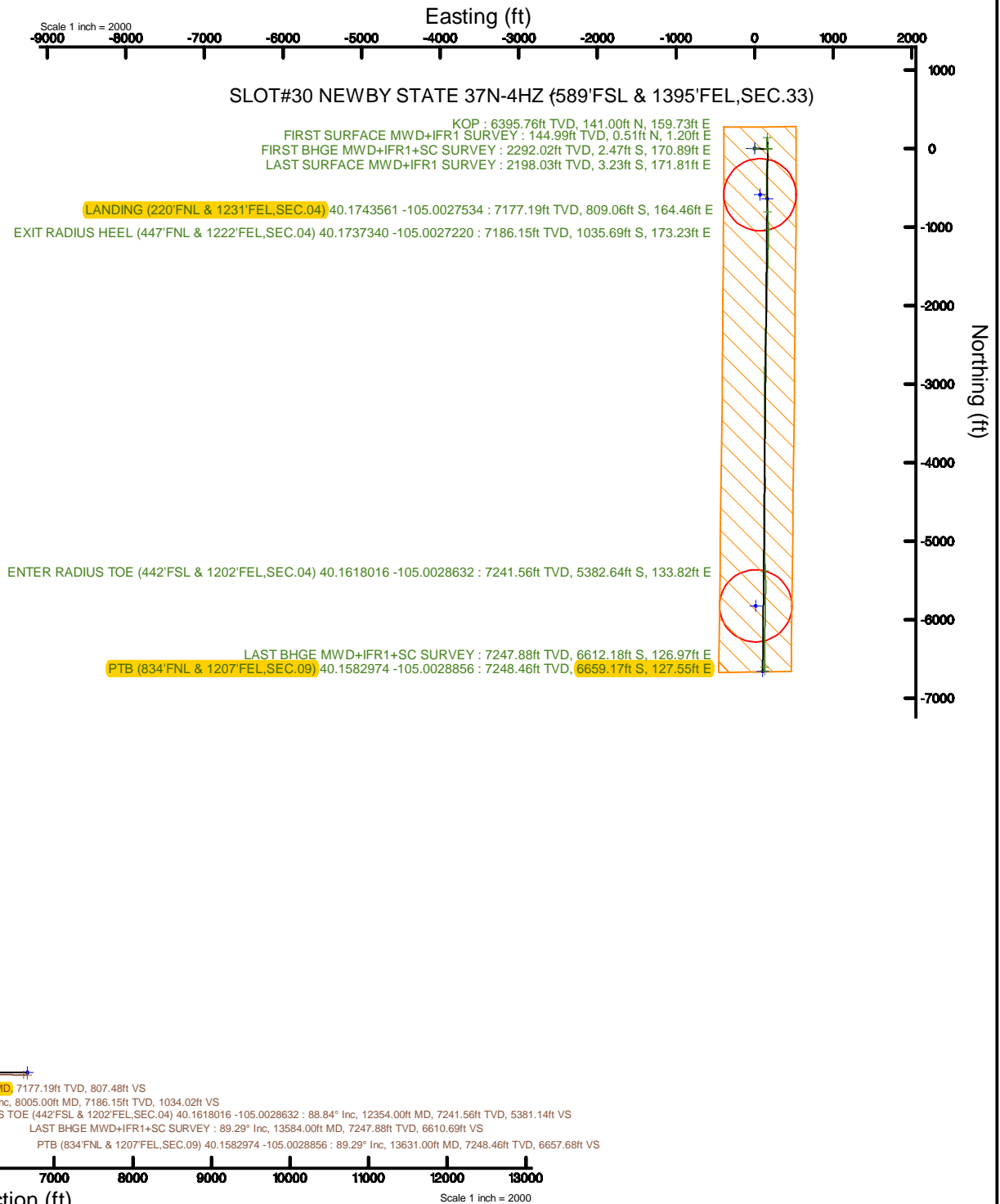


Location:	COLORADO	Spot:	SLOT#390 NEWBY STATE 37N-4HZ (589FSL & 1395FEL SEC.33)
Field:	WELD COUNTY (UTM/TRUE NORTH)	Well:	NEWBY STATE 37N-4HZ
Facility:	SEC.33-13N-R68W	Wellbore:	NEWBY STATE 37N-4HZ PWB
Plot reference wellpath is NEWBY STATE 37N-4HZ PWP Rev.0		Grid System: NAD83 / UTM Zone 13 North, US feet	
True vertical depths are referenced to NABORS X22 (32) (RT)		* = Wellpath was transformed from a different geoidic datum	
Measured depths are referenced to NABORS X22 (32) (RT)		North Reference: True north	
NABORS X22 (32) (RT) to Mean Sea Level: 4927 feet		Scale: True distance	
Mean Sea Level to Mud line (At Slot: SLOT#390 NEWBY STATE 37N-4HZ (589FSL & 1395FEL SEC.33): 0 feet		Depths are in feet	
Coordinates are in feet referenced to Slot		Created by: painsett on 2018-02-06	
		Database: WA_DEN_Anadarko_Denh	



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#30 NEWBY STATE 37N-4HZ (589'FSL & 1395'FEL,SEC.33)
Area	COLORADO	Well	NEWBY STATE 37N-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	NEWBY STATE 37N-4HZ 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	2/6/2018 at 8:26 AM
Convergence at slot	0.00°	Database/Source file	WA_DEN_Anadarko_Defn/NEWBY_STATE_37N-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	-674.93	2609.43	1639483.17	14591033.28	40°10'35.677"N	105°00'12.031"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#30 NEWBY STATE 37N-4HZ (589'FSL & 1395'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	180.54°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#30 NEWBY STATE 37N-4HZ (589°FSL & 1395°FEL, SEC.33)
Area	COLORADO	Well	NEWBY STATE 37N-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	NEWBY STATE 37N-4HZ AWB
Facility	SEC.33-T3N-R68W		

WELLPATH DATA (193 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	67.080	0.00	0.00	0.00	0.00	1639483.17	14591033.28	40°10'35.677"N	105°00'12.031"W	0.00	
32.00	0.000	67.080	32.00	0.00	0.00	0.00	1639483.17	14591033.28	40°10'35.677"N	105°00'12.031"W	0.00	
145.00	1.320	67.080	144.99	-0.52	0.51	1.20	1639484.37	14591033.78	40°10'35.682"N	105°00'12.016"W	1.17	FIRST SURFACE MWD+IFR1 SURVEY
177.00	0.700	55.740	176.98	-0.78	0.76	1.70	1639484.87	14591034.04	40°10'35.685"N	105°00'12.009"W	2.03	
209.00	0.920	61.630	208.98	-1.01	0.99	2.09	1639485.25	14591034.27	40°10'35.687"N	105°00'12.004"W	0.73	
240.00	0.480	33.150	239.98	-1.24	1.22	2.38	1639485.54	14591034.50	40°10'35.689"N	105°00'12.000"W	1.77	
271.00	0.220	163.320	270.98	-1.29	1.27	2.47	1639485.63	14591034.55	40°10'35.690"N	105°00'11.999"W	2.08	
303.00	0.400	267.730	302.98	-1.23	1.21	2.37	1639485.54	14591034.48	40°10'35.689"N	105°00'12.000"W	1.57	
366.00	0.400	288.040	365.98	-1.29	1.27	1.94	1639485.11	14591034.54	40°10'35.690"N	105°00'12.006"W	0.22	
397.00	0.310	319.060	396.98	-1.38	1.36	1.78	1639484.95	14591034.64	40°10'35.690"N	105°00'12.008"W	0.67	
429.00	0.660	95.470	428.98	-1.43	1.41	1.91	1639485.08	14591034.69	40°10'35.691"N	105°00'12.006"W	2.84	
461.00	1.360	82.720	460.97	-1.47	1.44	2.47	1639485.64	14591034.72	40°10'35.691"N	105°00'11.999"W	2.28	
492.00	2.720	92.480	491.95	-1.49	1.46	3.57	1639486.74	14591034.73	40°10'35.691"N	105°00'11.985"W	4.51	
524.00	3.560	89.140	523.90	-1.49	1.44	5.32	1639488.49	14591034.71	40°10'35.691"N	105°00'11.962"W	2.69	
555.00	3.520	95.290	554.84	-1.43	1.37	7.23	1639490.40	14591034.64	40°10'35.691"N	105°00'11.938"W	1.23	
587.00	3.780	97.140	586.78	-1.23	1.14	9.26	1639492.42	14591034.42	40°10'35.688"N	105°00'11.912"W	0.89	
619.00	3.380	98.980	618.72	-0.97	0.87	11.24	1639494.40	14591034.14	40°10'35.686"N	105°00'11.886"W	1.30	
651.00	3.560	94.680	650.66	-0.76	0.64	13.16	1639496.32	14591033.91	40°10'35.683"N	105°00'11.861"W	0.99	
683.00	4.610	92.040	682.58	-0.66	0.51	15.43	1639498.60	14591033.79	40°10'35.682"N	105°00'11.832"W	3.33	
715.00	5.580	90.280	714.45	-0.63	0.46	18.28	1639501.43	14591033.73	40°10'35.682"N	105°00'11.796"W	3.07	
746.00	6.550	88.930	745.27	-0.69	0.48	21.55	1639504.71	14591033.76	40°10'35.682"N	105°00'11.753"W	3.16	
778.00	7.160	89.230	777.05	-0.78	0.54	25.37	1639508.53	14591033.82	40°10'35.682"N	105°00'11.704"W	1.91	
810.00	7.510	90.190	808.78	-0.84	0.56	29.45	1639512.61	14591033.84	40°10'35.683"N	105°00'11.652"W	1.16	
842.00	7.600	92.040	840.51	-0.80	0.48	33.66	1639516.81	14591033.76	40°10'35.682"N	105°00'11.597"W	0.81	
873.00	8.130	92.920	871.21	-0.65	0.30	37.90	1639521.05	14591033.57	40°10'35.680"N	105°00'11.543"W	1.75	
905.00	9.100	93.360	902.85	-0.44	0.03	42.68	1639525.83	14591033.31	40°10'35.677"N	105°00'11.481"W	3.04	
937.00	9.620	94.410	934.43	-0.13	-0.32	47.88	1639531.02	14591032.95	40°10'35.674"N	105°00'11.414"W	1.71	
969.00	9.890	95.640	965.96	0.29	-0.80	53.28	1639536.42	14591032.48	40°10'35.669"N	105°00'11.345"W	1.07	
1000.00	10.200	95.290	996.49	0.76	-1.31	58.66	1639541.80	14591031.96	40°10'35.664"N	105°00'11.275"W	1.02	
1032.00	10.370	95.030	1027.97	1.22	-1.82	64.35	1639547.49	14591031.45	40°10'35.659"N	105°00'11.202"W	0.55	
1064.00	10.770	95.290	1059.43	1.69	-2.35	70.20	1639553.33	14591030.92	40°10'35.654"N	105°00'11.127"W	1.26	
1096.00	10.630	95.640	1090.88	2.20	-2.92	76.11	1639559.25	14591030.36	40°10'35.648"N	105°00'11.050"W	0.48	
1127.00	10.850	95.910	1121.33	2.73	-3.50	81.86	1639564.99	14591029.77	40°10'35.642"N	105°00'10.976"W	0.73	
1159.00	11.430	93.800	1152.73	3.19	-4.02	88.02	1639571.15	14591029.25	40°10'35.637"N	105°00'10.897"W	2.22	
1191.00	11.690	93.710	1184.08	3.55	-4.44	94.42	1639577.55	14591028.83	40°10'35.633"N	105°00'10.815"W	0.81	
1222.00	11.430	91.600	1214.45	3.78	-4.73	100.62	1639583.75	14591028.55	40°10'35.630"N	105°00'10.735"W	1.60	
1254.00	11.510	89.930	1245.81	3.81	-4.81	106.98	1639590.11	14591028.46	40°10'35.629"N	105°00'10.653"W	1.07	
1286.00	10.850	89.050	1277.21	3.69	-4.76	113.19	1639596.31	14591028.51	40°10'35.630"N	105°00'10.573"W	2.13	
1318.00	10.410	85.800	1308.66	3.38	-4.50	119.08	1639602.20	14591028.78	40°10'35.633"N	105°00'10.497"W	2.32	
1350.00	10.240	87.290	1340.14	2.98	-4.15	124.81	1639607.92	14591029.12	40°10'35.636"N	105°00'10.423"W	0.99	
1381.00	9.760	88.260	1370.67	2.72	-3.94	130.18	1639613.30	14591029.33	40°10'35.638"N	105°00'10.354"W	1.64	
1413.00	9.320	88.080	1402.22	2.50	-3.77	135.49	1639618.60	14591029.50	40°10'35.640"N	105°00'10.286"W	1.38	
1445.00	9.670	88.880	1433.79	2.31	-3.63	140.76	1639623.87	14591029.64	40°10'35.641"N	105°00'10.218"W	1.17	
1476.00	8.790	90.720	1464.38	2.24	-3.61	145.73	1639628.84	14591029.66	40°10'35.641"N	105°00'10.154"W	2.99	
1508.00	8.480	89.930	1496.02	2.22	-3.64	150.54	1639633.64	14591029.63	40°10'35.641"N	105°00'10.092"W	1.04	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#30 NEWBY STATE 37N-4HZ (589'FSL & 1395'FEL, SEC.33)
Area	COLORADO	Well	NEWBY STATE 37N-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	NEWBY STATE 37N-4HZ AWB
Facility	SEC.33-T3N-R68W		

WELLPATH DATA (193 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
1539.00	6.990	91.160	1526.74	2.22	-3.68	154.71	1639637.82	14591029.60	40°10'35.641"N	105°00'10.038"W	4.84	
1571.00	6.060	91.510	1558.53	2.27	-3.76	158.35	1639641.45	14591029.51	40°10'35.640"N	105°00'09.991"W	2.91	
1603.00	5.050	92.830	1590.38	2.35	-3.87	161.44	1639644.54	14591029.40	40°10'35.639"N	105°00'09.951"W	3.18	
1635.00	4.750	90.190	1622.26	2.40	-3.95	164.17	1639647.27	14591029.32	40°10'35.638"N	105°00'09.916"W	1.17	
1666.00	3.870	88.520	1653.18	2.36	-3.92	166.50	1639649.60	14591029.35	40°10'35.638"N	105°00'09.886"W	2.87	
1698.00	3.300	84.310	1685.11	2.22	-3.81	168.50	1639651.60	14591029.47	40°10'35.639"N	105°00'09.860"W	1.96	
1730.00	2.370	85.010	1717.07	2.06	-3.66	170.07	1639653.17	14591029.61	40°10'35.641"N	105°00'09.840"W	2.91	
1762.00	1.450	96.170	1749.06	2.03	-3.64	171.14	1639654.23	14591029.63	40°10'35.641"N	105°00'09.826"W	3.09	
1793.00	1.140	101.000	1780.05	2.13	-3.74	171.83	1639654.93	14591029.53	40°10'35.640"N	105°00'09.817"W	1.06	
1825.00	0.660	106.810	1812.04	2.24	-3.86	172.32	1639655.41	14591029.41	40°10'35.639"N	105°00'09.811"W	1.52	
1857.00	0.570	123.500	1844.04	2.37	-4.00	172.63	1639655.72	14591029.27	40°10'35.637"N	105°00'09.807"W	0.62	
1889.00	0.970	123.330	1876.04	2.61	-4.24	172.99	1639656.08	14591029.04	40°10'35.635"N	105°00'09.802"W	1.25	
1920.00	0.130	155.850	1907.04	2.78	-4.41	173.22	1639656.32	14591028.86	40°10'35.633"N	105°00'09.799"W	2.78	
1952.00	0.180	129.740	1939.04	2.85	-4.48	173.27	1639656.37	14591028.79	40°10'35.633"N	105°00'09.799"W	0.27	
1984.00	0.220	339.360	1971.04	2.82	-4.45	173.29	1639656.39	14591028.82	40°10'35.633"N	105°00'09.799"W	1.21	
2015.00	0.440	288.560	2002.04	2.73	-4.36	173.16	1639656.25	14591028.91	40°10'35.634"N	105°00'09.800"W	1.12	
2047.00	0.310	261.050	2034.04	2.71	-4.33	172.95	1639656.05	14591028.94	40°10'35.634"N	105°00'09.803"W	0.68	
2079.00	0.310	350.610	2066.04	2.63	-4.26	172.85	1639655.95	14591029.01	40°10'35.635"N	105°00'09.804"W	1.36	
2111.00	0.620	333.300	2098.03	2.39	-4.02	172.76	1639655.86	14591029.25	40°10'35.637"N	105°00'09.805"W	1.05	
2142.00	0.880	294.450	2129.03	2.15	-3.77	172.47	1639655.57	14591029.50	40°10'35.640"N	105°00'09.809"W	1.79	
2174.00	0.750	327.240	2161.03	1.87	-3.49	172.13	1639655.23	14591029.78	40°10'35.642"N	105°00'09.813"W	1.49	
2205.00	0.620	295.150	2192.03	1.64	-3.25	171.87	1639654.97	14591030.02	40°10'35.645"N	105°00'09.817"W	1.29	
2211.00	0.660	291.820	2198.03	1.61	-3.23	171.81	1639654.91	14591030.05	40°10'35.645"N	105°00'09.818"W	0.91	LAST SURFACE MWD+IFR1 SURVEY
2305.00	0.840	323.090	2292.02	0.87	-2.47	170.89	1639653.99	14591030.80	40°10'35.653"N	105°00'09.829"W	0.47	FIRST BHGE MWD+IFR1+SC SURVEY
2399.00	4.010	345.130	2385.92	-2.85	1.26	169.64	1639652.73	14591034.52	40°10'35.689"N	105°00'09.846"W	3.45	
2493.00	6.140	344.290	2479.55	-10.85	9.27	167.43	1639650.53	14591042.54	40°10'35.769"N	105°00'09.874"W	2.27	
2587.00	7.620	347.340	2572.87	-21.74	20.19	164.70	1639647.81	14591053.45	40°10'35.877"N	105°00'09.909"W	1.62	
2681.00	8.280	356.430	2665.97	-34.56	33.03	162.92	1639646.02	14591066.29	40°10'36.003"N	105°00'09.932"W	1.51	
2775.00	9.090	359.400	2758.89	-48.74	47.21	162.42	1639645.52	14591080.46	40°10'36.144"N	105°00'09.939"W	0.98	
2869.00	8.500	357.550	2851.79	-63.10	61.58	162.04	1639645.15	14591094.82	40°10'36.285"N	105°00'09.943"W	0.70	
2963.00	7.830	350.470	2944.84	-76.34	74.83	160.68	1639643.79	14591108.07	40°10'36.416"N	105°00'09.961"W	1.28	
3057.00	6.050	352.420	3038.14	-87.55	86.06	158.97	1639642.08	14591119.29	40°10'36.527"N	105°00'09.983"W	1.91	
3151.00	3.900	5.030	3131.79	-95.64	94.15	158.60	1639641.71	14591127.39	40°10'36.607"N	105°00'09.988"W	2.55	
3245.00	3.840	355.620	3225.57	-101.96	100.48	158.64	1639641.75	14591133.71	40°10'36.670"N	105°00'09.987"W	0.68	
3338.00	3.610	351.500	3318.38	-107.96	106.48	157.97	1639641.08	14591139.70	40°10'36.729"N	105°00'09.996"W	0.38	
3433.00	2.310	7.680	3413.25	-112.81	111.33	157.78	1639640.89	14591144.56	40°10'36.777"N	105°00'09.998"W	1.61	
3526.00	2.100	354.770	3506.18	-116.37	114.89	157.88	1639640.98	14591148.11	40°10'36.812"N	105°00'09.997"W	0.58	
3620.00	2.330	341.360	3600.11	-119.89	118.41	157.11	1639640.22	14591151.64	40°10'36.847"N	105°00'10.007"W	0.60	
3739.00	0.700	322.870	3719.07	-122.75	121.28	155.90	1639639.01	14591154.51	40°10'36.876"N	105°00'10.023"W	1.41	
3832.00	0.850	320.840	3812.06	-123.73	122.27	155.12	1639638.23	14591155.49	40°10'36.885"N	105°00'10.033"W	0.16	
3926.00	0.250	45.200	3906.05	-124.41	122.96	154.82	1639637.93	14591156.18	40°10'36.892"N	105°00'10.036"W	0.92	
4020.00	0.790	47.850	4000.05	-124.99	123.54	155.45	1639638.56	14591156.76	40°10'36.898"N	105°00'10.028"W	0.57	
4114.00	0.930	19.620	4094.04	-126.15	124.69	156.19	1639639.29	14591157.91	40°10'36.909"N	105°00'10.019"W	0.47	
4208.00	1.300	355.190	4188.02	-127.94	126.47	156.35	1639639.46	14591159.69	40°10'36.927"N	105°00'10.017"W	0.63	
4302.00	0.530	171.320	4282.02	-128.57	127.10	156.33	1639639.44	14591160.32	40°10'36.933"N	105°00'10.017"W	1.95	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#30 NEWBY STATE 37N-4HZ (589°FSL & 1395°FEL, SEC.33)
Area	COLORADO	Well	NEWBY STATE 37N-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	NEWBY STATE 37N-4HZ AWB
Facility	SEC.33-T3N-R68W		

WELLPATH DATA (193 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
4395.00	0.240	208.440	4375.01	-127.97	126.51	156.30	1639639.41	14591159.73	40°10'36.927"N	105°00'10.017"W	0.40	
4489.00	0.440	267.750	4469.01	-127.78	126.32	155.85	1639638.96	14591159.54	40°10'36.925"N	105°00'10.023"W	0.40	
4583.00	0.600	314.520	4563.01	-128.11	126.65	155.13	1639638.24	14591159.87	40°10'36.929"N	105°00'10.032"W	0.47	
4676.00	0.280	198.190	4656.01	-128.23	126.78	154.72	1639637.83	14591160.00	40°10'36.930"N	105°00'10.038"W	0.82	
4771.00	0.250	253.150	4751.01	-127.94	126.50	154.45	1639637.56	14591159.72	40°10'36.927"N	105°00'10.041"W	0.26	
4865.00	1.160	154.660	4845.00	-127.03	125.58	154.66	1639637.77	14591158.80	40°10'36.918"N	105°00'10.039"W	1.30	
4959.00	0.680	104.360	4938.99	-126.04	124.58	155.60	1639638.71	14591157.80	40°10'36.908"N	105°00'10.026"W	0.95	
5054.00	0.550	43.900	5033.98	-126.23	124.77	156.47	1639639.58	14591157.99	40°10'36.910"N	105°00'10.015"W	0.66	
5148.00	0.710	17.090	5127.98	-127.12	125.65	156.95	1639640.06	14591158.87	40°10'36.919"N	105°00'10.009"W	0.35	
5241.00	1.080	350.520	5220.97	-128.54	127.06	156.98	1639640.08	14591160.28	40°10'36.933"N	105°00'10.009"W	0.59	
5335.00	1.380	355.450	5314.95	-130.54	129.07	156.74	1639639.85	14591162.28	40°10'36.952"N	105°00'10.012"W	0.34	
5429.00	1.710	346.450	5408.91	-133.02	131.56	156.32	1639639.43	14591164.78	40°10'36.977"N	105°00'10.017"W	0.43	
5523.00	0.620	55.820	5502.89	-134.67	133.21	156.41	1639639.52	14591166.42	40°10'36.993"N	105°00'10.016"W	1.70	
5617.00	1.160	42.570	5596.88	-135.67	134.19	157.48	1639640.59	14591167.41	40°10'37.003"N	105°00'10.002"W	0.61	
5711.00	1.100	34.600	5690.86	-137.12	135.64	158.63	1639641.74	14591168.85	40°10'37.017"N	105°00'09.987"W	0.18	
5805.00	0.830	32.220	5784.85	-138.45	136.96	159.51	1639642.62	14591170.17	40°10'37.030"N	105°00'09.976"W	0.29	
5899.00	1.030	20.840	5878.84	-139.82	138.32	160.17	1639643.28	14591171.54	40°10'37.044"N	105°00'09.967"W	0.29	
5993.00	1.260	10.310	5972.82	-141.63	140.13	160.66	1639643.77	14591173.34	40°10'37.062"N	105°00'09.961"W	0.33	
6087.00	1.310	0.200	6066.80	-143.73	142.22	160.85	1639643.96	14591175.43	40°10'37.082"N	105°00'09.959"W	0.25	
6181.00	0.520	195.090	6160.79	-144.39	142.88	160.74	1639643.85	14591176.09	40°10'37.089"N	105°00'09.960"W	1.93	
6275.00	0.620	288.820	6254.79	-144.13	142.63	160.15	1639643.26	14591175.85	40°10'37.087"N	105°00'09.968"W	0.89	
6369.00	0.610	178.930	6348.78	-143.79	142.30	159.68	1639642.78	14591175.51	40°10'37.083"N	105°00'09.974"W	1.07	
6416.00†	2.556	177.157	6395.76	-142.50	141.00	159.73	1639642.84	14591174.21	40°10'37.070"N	105°00'09.973"W	4.14	KOP
6462.00	4.460	176.920	6441.68	-139.69	138.19	159.88	1639642.99	14591171.41	40°10'37.043"N	105°00'09.971"W	4.14	
6556.00	12.660	181.710	6534.55	-125.72	124.22	159.77	1639642.88	14591157.44	40°10'36.905"N	105°00'09.973"W	8.75	
6649.00	19.510	178.980	6623.86	-99.97	98.48	159.74	1639642.85	14591131.71	40°10'36.650"N	105°00'09.973"W	7.41	
6743.00	26.520	177.160	6710.32	-63.29	61.78	161.06	1639644.17	14591095.02	40°10'36.287"N	105°00'09.956"W	7.49	
6838.00	34.110	177.340	6792.27	-15.45	13.91	163.35	1639646.45	14591047.18	40°10'35.814"N	105°00'09.927"W	7.99	
6932.00	40.900	179.100	6866.80	41.70	-43.25	165.06	1639648.16	14590990.04	40°10'35.250"N	105°00'09.905"W	7.31	
7026.00	49.800	181.380	6932.80	108.49	-110.05	164.68	1639647.78	14590923.27	40°10'34.590"N	105°00'09.909"W	9.62	
7120.00	57.880	183.520	6988.22	184.27	-185.80	161.36	1639644.46	14590847.55	40°10'33.841"N	105°00'09.952"W	8.79	
7214.00	62.780	182.250	7034.74	265.85	-267.34	157.28	1639640.37	14590766.03	40°10'33.035"N	105°00'10.005"W	5.34	
7308.00	67.220	181.560	7074.46	351.00	-352.47	154.45	1639637.55	14590680.94	40°10'32.194"N	105°00'10.041"W	4.77	
7402.00	71.740	179.700	7107.40	439.01	-440.47	153.51	1639636.60	14590592.98	40°10'31.324"N	105°00'10.053"W	5.15	
7495.00	77.870	179.110	7131.76	528.70	-530.17	154.45	1639637.53	14590503.31	40°10'30.438"N	105°00'10.041"W	6.62	
7589.00	79.370	178.170	7150.31	620.79	-622.29	156.64	1639639.72	14590411.23	40°10'29.527"N	105°00'10.013"W	1.87	
7683.00	80.600	177.370	7166.66	713.25	-714.79	160.24	1639643.31	14590318.77	40°10'28.613"N	105°00'09.967"W	1.55	
7778.00	86.670	177.500	7177.19	807.48	-809.06	164.46	1639647.53	14590224.53	40°10'27.682"N	105°00'09.912"W	6.39	LANDING (220°FNL & 1231°FEL, SEC.04) 40.1743561 -105.0027534
7872.00	88.090	176.810	7181.48	901.22	-902.85	169.12	1639652.19	14590130.79	40°10'26.755"N	105°00'09.852"W	1.68	
7966.00	87.870	178.960	7184.80	995.05	-996.72	172.59	1639655.65	14590036.95	40°10'25.827"N	105°00'09.808"W	2.30	
8005.00†	88.152	179.151	7186.15	1034.02	-1035.69	173.23	1639656.29	14589998.00	40°10'25.442"N	105°00'09.799"W	0.87	EXIT RADIUS HEEL (447°FNL & 1222°FEL, SEC.04) 40.1737340 -105.0027220
8060.00	88.550	179.420	7187.73	1088.98	-1090.66	173.92	1639656.97	14589943.04	40°10'24.899"N	105°00'09.791"W	0.87	
8154.00	88.550	181.070	7190.11	1182.94	-1184.63	173.52	1639656.57	14589849.12	40°10'23.970"N	105°00'09.796"W	1.75	
8248.00	90.340	181.840	7191.02	1276.92	-1278.59	171.13	1639654.18	14589755.19	40°10'23.042"N	105°00'09.826"W	2.07	
8342.00	91.570	181.110	7189.46	1370.90	-1372.54	168.71	1639651.76	14589661.28	40°10'22.113"N	105°00'09.858"W	1.52	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#30 NEWBY STATE 37N-4HZ (589'FSL & 1395'FEL, SEC.33)
Area	COLORADO	Well	NEWBY STATE 37N-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	NEWBY STATE 37N-4HZ AWB
Facility	SEC.33-T3N-R68W		

WELLPATH DATA (193 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
8436.00	90.090	181.830	7188.09	1464.87	-1466.50	166.30	1639649.34	14589567.36	40°10'21.185"N	105°00'09.889"W	1.75	
8528.00	90.990	181.690	7187.23	1556.84	-1558.45	163.47	1639646.52	14589475.45	40°10'20.276"N	105°00'09.925"W	0.99	
8623.00	89.110	181.170	7187.14	1651.83	-1653.42	161.10	1639644.14	14589380.52	40°10'19.338"N	105°00'09.956"W	2.05	
8717.00	90.340	181.820	7187.60	1745.81	-1747.38	158.65	1639641.69	14589286.59	40°10'18.409"N	105°00'09.987"W	1.48	
8811.00	89.940	180.890	7187.37	1839.80	-1841.35	156.43	1639639.46	14589192.66	40°10'17.481"N	105°00'10.016"W	1.08	
8905.00	91.170	180.930	7186.45	1933.79	-1935.34	154.93	1639637.97	14589098.71	40°10'16.552"N	105°00'10.035"W	1.31	
8999.00	89.780	181.560	7185.68	2027.78	-2029.31	152.89	1639635.92	14589004.78	40°10'15.623"N	105°00'10.061"W	1.62	
9094.00	91.140	182.070	7184.91	2122.75	-2124.25	149.88	1639632.91	14588909.87	40°10'14.685"N	105°00'10.100"W	1.53	
9187.00	89.720	180.380	7184.21	2215.73	-2217.22	147.89	1639630.92	14588816.94	40°10'13.766"N	105°00'10.126"W	2.37	
9281.00	88.770	181.880	7185.45	2309.72	-2311.19	146.04	1639629.06	14588723.01	40°10'12.838"N	105°00'10.150"W	1.89	
9376.00	89.660	182.440	7186.76	2404.67	-2406.12	142.46	1639625.48	14588628.12	40°10'11.900"N	105°00'10.196"W	1.11	
9469.00	90.560	182.630	7186.58	2497.61	-2499.02	138.35	1639621.37	14588535.25	40°10'10.982"N	105°00'10.249"W	0.99	
9564.00	89.480	181.220	7186.54	2592.58	-2593.97	135.16	1639618.17	14588440.35	40°10'10.043"N	105°00'10.290"W	1.87	
9657.00	89.230	181.490	7187.59	2685.56	-2686.93	132.96	1639615.97	14588347.42	40°10'09.125"N	105°00'10.318"W	0.40	
9751.00	89.070	181.230	7188.98	2779.54	-2780.90	130.73	1639613.74	14588253.49	40°10'08.196"N	105°00'10.347"W	0.32	
9845.00	90.400	181.510	7189.42	2873.53	-2874.87	128.48	1639611.49	14588159.56	40°10'07.267"N	105°00'10.376"W	1.45	
9939.00	88.950	179.550	7189.95	2967.52	-2968.85	127.61	1639610.61	14588065.61	40°10'06.339"N	105°00'10.387"W	2.59	
10033.00	90.890	179.660	7190.08	3061.51	-3062.85	128.26	1639611.26	14587971.65	40°10'05.410"N	105°00'10.379"W	2.07	
10127.00	89.170	180.880	7190.03	3155.50	-3156.84	127.82	1639610.81	14587877.70	40°10'04.481"N	105°00'10.385"W	2.24	
10220.00	87.070	180.190	7193.09	3248.44	-3249.78	126.95	1639609.94	14587784.80	40°10'03.563"N	105°00'10.396"W	2.38	
10314.00	87.810	179.660	7197.28	3342.34	-3343.69	127.07	1639610.06	14587690.93	40°10'02.635"N	105°00'10.394"W	0.97	
10408.00	86.640	179.970	7201.84	3436.22	-3437.57	127.37	1639610.36	14587597.08	40°10'01.707"N	105°00'10.390"W	1.29	
10502.00	86.980	179.700	7207.07	3530.07	-3531.43	127.64	1639610.63	14587503.26	40°10'00.779"N	105°00'10.387"W	0.46	
10596.00	87.170	179.320	7211.86	3623.93	-3625.30	128.45	1639611.43	14587409.43	40°09'59.852"N	105°00'10.376"W	0.45	
10690.00	87.750	178.880	7216.03	3717.81	-3719.20	129.92	1639612.90	14587315.57	40°09'58.924"N	105°00'10.357"W	0.77	
10784.00	87.630	180.120	7219.82	3811.72	-3813.12	130.74	1639613.71	14587221.69	40°09'57.996"N	105°00'10.347"W	1.32	
10878.00	88.150	179.960	7223.28	3905.65	-3907.05	130.68	1639613.64	14587127.79	40°09'57.067"N	105°00'10.348"W	0.58	
10972.00	88.090	180.180	7226.36	3999.60	-4001.00	130.56	1639613.53	14587033.88	40°09'56.139"N	105°00'10.349"W	0.24	
11066.00	88.740	179.990	7228.96	4093.56	-4094.96	130.42	1639613.38	14586939.95	40°09'55.210"N	105°00'10.351"W	0.72	
11160.00	89.690	179.350	7230.25	4187.54	-4188.95	130.96	1639613.92	14586846.00	40°09'54.282"N	105°00'10.344"W	1.22	
11254.00	90.430	179.390	7230.15	4281.51	-4282.95	132.00	1639614.95	14586752.05	40°09'53.353"N	105°00'10.331"W	0.79	
11348.00	89.200	181.770	7230.46	4375.51	-4376.93	131.05	1639614.00	14586658.10	40°09'52.424"N	105°00'10.343"W	2.85	
11442.00	89.140	181.260	7231.82	4469.48	-4470.89	128.56	1639611.51	14586564.18	40°09'51.496"N	105°00'10.375"W	0.55	
11536.00	89.350	180.010	7233.06	4563.47	-4564.87	127.52	1639610.46	14586470.23	40°09'50.567"N	105°00'10.388"W	1.35	
11630.00	89.510	179.360	7233.99	4657.46	-4658.87	128.04	1639610.98	14586376.28	40°09'49.638"N	105°00'10.382"W	0.71	
11724.00	89.940	179.280	7234.44	4751.43	-4752.86	129.15	1639612.09	14586282.32	40°09'48.709"N	105°00'10.367"W	0.47	
11819.00	90.400	179.000	7234.16	4846.40	-4847.85	130.58	1639613.51	14586187.37	40°09'47.770"N	105°00'10.349"W	0.57	
11913.00	89.510	180.920	7234.23	4940.39	-4941.84	130.64	1639613.57	14586093.42	40°09'46.842"N	105°00'10.348"W	2.25	
12007.00	90.680	181.350	7234.08	5034.39	-5035.82	128.78	1639611.71	14585999.47	40°09'45.913"N	105°00'10.372"W	1.33	
12100.00	88.060	179.760	7235.10	5127.37	-5128.80	127.88	1639610.80	14585906.53	40°09'44.994"N	105°00'10.384"W	3.30	
12194.00	88.460	178.320	7237.95	5221.29	-5222.74	129.45	1639612.37	14585812.63	40°09'44.066"N	105°00'10.364"W	1.59	
12289.00	88.800	178.770	7240.23	5316.21	-5317.68	131.87	1639614.78	14585717.73	40°09'43.127"N	105°00'10.333"W	0.59	
12354.00†	88.842	177.778	7241.56	5381.14	-5382.64	133.82	1639616.73	14585652.80	40°09'42.486"N	105°00'10.307"W	1.53	ENTER RADIUS TOE (442'FSL & 1202'FEL, SEC.04) 40.1618016 -105.0028632
12382.00	88.860	177.350	7242.13	5409.10	-5410.61	135.01	1639617.92	14585624.84	40°09'42.209"N	105°00'10.292"W	1.53	
12476.00	88.890	178.700	7243.97	5502.99	-5504.53	138.25	1639621.16	14585530.95	40°09'41.281"N	105°00'10.250"W	1.44	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#30 NEWBY STATE 37N-4HZ (589'FSL & 1395'FEL,SEC.33)
Area	COLORADO	Well	NEWBY STATE 37N-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	NEWBY STATE 37N-4HZ AWB
Facility	SEC.33-T3N-R68W		

WELLPATH DATA (193 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
12569.00	89.510	180.680	7245.27	5595.96	-5597.52	138.75	1639621.66	14585438.00	40°09'40.362"N	105°00'10.244"W	2.23	
12663.00	89.480	181.050	7246.10	5689.96	-5691.50	137.34	1639620.23	14585344.06	40°09'39.433"N	105°00'10.262"W	0.39	
12757.00	91.050	180.590	7245.66	5783.95	-5785.49	135.99	1639618.89	14585250.11	40°09'38.505"N	105°00'10.279"W	1.74	
12852.00	92.160	180.710	7243.00	5878.91	-5880.44	134.91	1639617.81	14585155.19	40°09'37.566"N	105°00'10.293"W	1.18	
12945.00	91.260	181.110	7240.23	5971.87	-5973.39	133.44	1639616.33	14585062.28	40°09'36.648"N	105°00'10.312"W	1.06	
13040.00	90.150	181.310	7239.06	6066.85	-6068.36	131.43	1639614.32	14584967.35	40°09'35.709"N	105°00'10.338"W	1.19	
13134.00	90.310	181.360	7238.68	6160.84	-6162.33	129.24	1639612.12	14584873.42	40°09'34.781"N	105°00'10.366"W	0.18	
13228.00	88.580	181.080	7239.59	6254.83	-6256.30	127.24	1639610.12	14584779.48	40°09'33.852"N	105°00'10.392"W	1.86	
13323.00	88.520	180.830	7242.00	6349.80	-6351.26	125.66	1639608.53	14584684.57	40°09'32.914"N	105°00'10.413"W	0.27	
13417.00	88.550	179.470	7244.40	6443.76	-6445.23	125.41	1639608.29	14584590.64	40°09'31.985"N	105°00'10.416"W	1.45	
13511.00	88.740	179.540	7246.62	6537.72	-6539.20	126.22	1639609.09	14584496.70	40°09'31.056"N	105°00'10.405"W	0.22	
13584.00	89.290	179.290	7247.88	6610.69	-6612.18	126.97	1639609.84	14584423.75	40°09'30.335"N	105°00'10.396"W	0.83	LAST BHGE MWD+IFR1+SC SURVEY
13631.00	89.290	179.290	7248.46	6657.68	-6659.17	127.55	1639610.42	14584376.77	40°09'29.871"N	105°00'10.388"W	0.00	PTB (834'FNL & 1207'FEL,SEC.09) 40.1582974 -105.0028856

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
NEWBY STATE 37N-4HZ HEEL REV-1(51'FNL & 1235'FEL,SEC.04)	7181.00	-638.23	159.83	1639642.91	14590395.30	40°10'29.370"N	105°00'09.972"W	point
NEWBY STATE 37N-4HZ BHL REV-1(836'FNL & 1231'FEL,SEC.09)	7215.00	-6660.79	103.13	1639586.00	14584375.16	40°09'29.855"N	105°00'10.703"W	point
NEWBY STATE 37N-4HZ LANDBOX	7215.00	0.00	0.00	1639483.17	14591033.28	40°10'35.677"N	105°00'12.031"W	polygon
NEWBY STATE 37N-4HZ RADIUS 1	7215.00	-5826.72	13.26	1639496.20	14585208.90	40°09'38.097"N	105°00'11.860"W	polygon
NEWBY STATE 37N-4HZ RADIUS 2	7215.00	-588.31	68.58	1639551.70	14590445.20	40°10'29.863"N	105°00'11.147"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: NEWBY STATE 37N-4HZ AWB Ref Wellpath: NEWBY STATE 37N-4HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
32.00	2211.00	Custom APC_ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC ISCWSA Rev-2 MWD+IFR1 <145 - 2211>	NEWBY STATE 37N-4HZ AWB
2211.00	13584.00	Custom APC_ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+SC <2142 - 13584>	NEWBY STATE 37N-4HZ AWB
13584.00	13631.00	Blind Drilling (std)	Projection to bit	NEWBY STATE 37N-4HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#30 NEWBY STATE 37N-4HZ (589'FSL & 1395'FEL,SEC.33)
Area	COLORADO	Well	NEWBY STATE 37N-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	NEWBY STATE 37N-4HZ AWB
Facility	SEC.33-T3N-R68W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
145.00	1.320	67.080	144.99	FIRST SURFACE MWD+IFR1 SURVEY
2211.00	0.660	291.820	2198.03	LAST SURFACE MWD+IFR1 SURVEY
2305.00	0.840	323.090	2292.02	FIRST BHGE MWD+IFR1+SC SURVEY
6416.00	2.556	177.157	6395.76	KOP
7778.00	86.670	177.500	7177.19	LANDING (220'FNL & 1231'FEL,SEC.04) 40.1743561 -105.0027534
8005.00	88.152	179.151	7186.15	EXIT RADIUS HEEL (447'FNL & 1222'FEL,SEC.04) 40.1737340 -105.0027220
12354.00	88.842	177.778	7241.56	ENTER RADIUS TOE (442'FSL & 1202'FEL,SEC.04) 40.1618016 -105.0028632
13584.00	89.290	179.290	7247.88	LAST BHGE MWD+IFR1+SC SURVEY
13631.00	89.290	179.290	7248.46	PTB (834'FNL & 1207'FEL,SEC.09) 40.1582974 -105.0028856