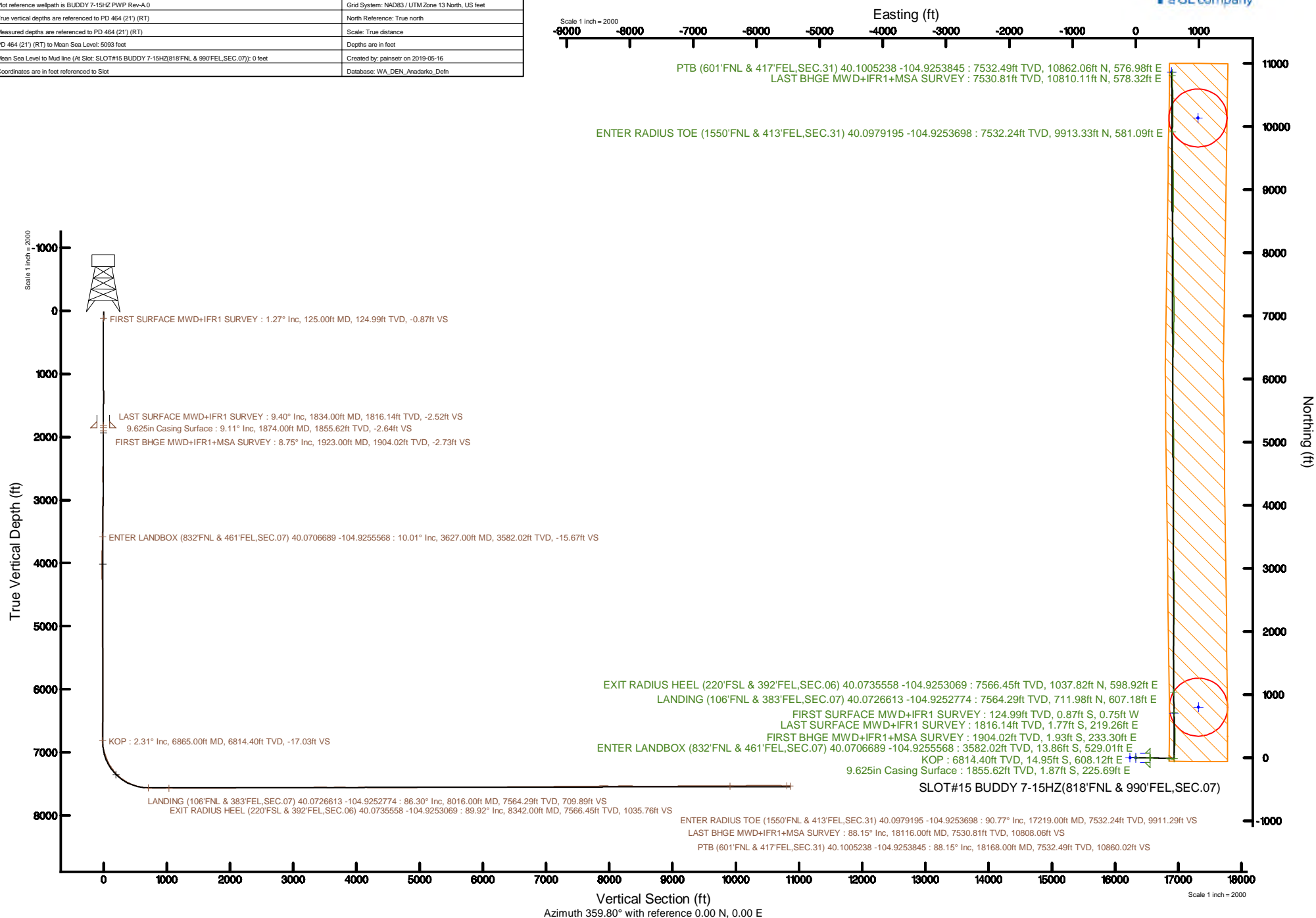


Location:	COLORADO	Slot:	SLOT#15 BUDDY 7-15HZ(818'FNL & 990'FEL,SEC.07)
Field:	WELD COUNTY (UTM/TRUE NORTH)	Well:	BUDDY 7-15HZ
Facility:	SEC.07-T1N-R67W	Wellbore:	BUDDY 7-15HZ PWB

Plot reference wellpath is BUDDY 7-15H2 PWP Rev-A.0	Grid System: NAD83 / UTM Zone 13 North, US feet
True vertical depths are referenced to PD 464 (21') (RT)	North Reference: True north
Measured depths are referenced to PD 464 (21') (RT)	Scale: True distance
PD 464 (21') (RT) to Mean Sea Level: 5093 feet	Depths are in feet
Mean Sea Level to Mud line (At Slot: SLOT#15 BUDDY 7-15H2(818FNL & 990FEL,SEC.07) : 0 feet	Created by: painsetr on 2019-05-16
Coordinates are in feet referenced to Slot	Database: WA_Den_Anadarko_Defn



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#15 BUDDY 7-15HZ(818'FNL & 990'FEL,SEC.07)
Area	COLORADO	Well	BUDDY 7-15HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUDDY 7-15HZ AWB
Facility	SEC.07-T1N-R67W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / UTM Zone 13 North, US feet	Software System	WellArchitect® 5.1
North Reference	True	User	Painsetr
Scale	0.999600	Report Generated	5/16/2019 at 12:18:05 PM
Convergence at slot	0.05° East	Database/Source file	WA_DEN_Anadarko_Defn/BUDDY_7-15HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-120.62	89.17	1660714.25	14552489.16	40°04'14.545"N	104°55'38.809"W
Facility Reference Pt			1660625.01	14552609.66	40°04'15.737"N	104°55'39.956"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 464 (21') (RT) to Facility Vertical Datum	5093.00ft
Horizontal Reference Pt	Slot	PD 464 (21') (RT) to Mean Sea Level	5093.00ft
Vertical Reference Pt	PD 464 (21') (RT)	PD 464 (21') (RT) to Mud Line at Slot (SLOT#15 BUDDY 7-15HZ (818'FNL & 990'FEL,SEC.07))	5093.00ft
MD Reference Pt	PD 464 (21') (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	359.80°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#15 BUDDY 7-15HZ(818'FNL & 990'FEL,SEC.07)
Area	COLORADO	Well	BUDDY 7-15HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUDDY 7-15HZ AWB
Facility	SEC.07-T1N-R67W		

WELLPATH DATA (209 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	220.630	0.00	0.00	0.00	0.00	1660714.25	14552489.16	40°04'14.545°N	104°55'38.809°W	0.00	
21.00	0.000	220.630	21.00	0.00	0.00	0.00	1660714.25	14552489.16	40°04'14.545°N	104°55'38.809°W	0.00	
125.00	1.270	220.630	124.99	-0.87	-0.87	-0.75	1660713.50	14552488.29	40°04'14.536°N	104°55'38.819°W	1.22	FIRST SURFACE MWD+IFR1 SURVEY
220.00	0.750	167.190	219.98	-2.28	-2.28	-1.30	1660712.95	14552486.88	40°04'14.522°N	104°55'38.826°W	1.07	
315.00	1.490	114.280	314.96	-3.39	-3.39	-0.03	1660714.22	14552485.77	40°04'14.511°N	104°55'38.809°W	1.26	
410.00	3.160	96.180	409.88	-4.20	-4.18	3.69	1660717.94	14552484.98	40°04'14.504°N	104°55'38.761°W	1.90	
505.00	4.310	82.030	504.68	-4.00	-3.97	9.83	1660724.08	14552485.20	40°04'14.506°N	104°55'38.683°W	1.54	
600.00	5.320	87.390	599.34	-3.34	-3.28	17.77	1660732.01	14552485.90	40°04'14.513°N	104°55'38.580°W	1.16	
695.00	6.240	90.810	693.86	-3.24	-3.15	27.33	1660741.57	14552486.04	40°04'14.514°N	104°55'38.457°W	1.03	
790.00	6.680	87.740	788.26	-3.13	-3.00	38.01	1660752.25	14552486.19	40°04'14.515°N	104°55'38.320°W	0.59	
885.00	7.780	86.510	882.50	-2.56	-2.39	49.95	1660764.18	14552486.81	40°04'14.521°N	104°55'38.166°W	1.17	
980.00	9.010	88.350	976.48	-2.01	-1.79	63.81	1660778.03	14552487.43	40°04'14.527°N	104°55'37.988°W	1.33	
1075.00	10.630	90.640	1070.09	-1.95	-1.67	80.01	1660794.22	14552487.56	40°04'14.528°N	104°55'37.780°W	1.75	
1171.00	10.280	89.320	1164.49	-2.00	-1.67	97.43	1660811.64	14552487.57	40°04'14.529°N	104°55'37.556°W	0.44	
1266.00	9.890	86.510	1258.02	-1.46	-1.07	114.05	1660828.25	14552488.18	40°04'14.534°N	104°55'37.342°W	0.66	
1361.00	10.630	87.910	1351.51	-0.70	-0.26	130.95	1660845.14	14552489.01	40°04'14.542°N	104°55'37.125°W	0.82	
1457.00	11.430	93.450	1445.73	-1.02	-0.50	149.29	1660863.48	14552488.78	40°04'14.540°N	104°55'36.889°W	1.38	
1551.00	11.780	91.430	1537.81	-1.88	-1.30	168.18	1660882.36	14552487.99	40°04'14.532°N	104°55'36.646°W	0.57	
1646.00	10.810	88.090	1630.97	-1.89	-1.25	186.78	1660900.95	14552488.06	40°04'14.533°N	104°55'36.406°W	1.23	
1741.00	9.800	92.400	1724.44	-1.99	-1.29	203.76	1660917.93	14552488.04	40°04'14.532°N	104°55'36.188°W	1.34	
1834.00	9.400	91.080	1816.14	-2.52	-1.77	219.26	1660933.42	14552487.57	40°04'14.528°N	104°55'35.989°W	0.49	LAST SURFACE MWD+IFR1 SURVEY
1923.00	8.750	90.210	1904.02	-2.73	-1.93	233.30	1660947.45	14552487.42	40°04'14.526°N	104°55'35.808°W	0.75	FIRST BHGE MWD+IFR1+MSA SURVEY
2013.00	10.560	93.580	1992.75	-3.32	-2.47	248.38	1660962.53	14552486.90	40°04'14.521°N	104°55'35.614°W	2.11	
2103.00	9.750	94.990	2081.33	-4.55	-3.65	264.20	1660978.34	14552485.73	40°04'14.509°N	104°55'35.411°W	0.94	
2192.00	9.710	92.390	2169.05	-5.57	-4.61	279.21	1660993.34	14552484.78	40°04'14.499°N	104°55'35.218°W	0.50	
2282.00	9.070	90.930	2257.85	-6.05	-5.05	293.88	1661008.01	14552484.36	40°04'14.495°N	104°55'35.029°W	0.76	
2372.00	10.170	93.100	2346.58	-6.65	-5.59	308.91	1661023.04	14552483.82	40°04'14.490°N	104°55'34.836°W	1.29	
2461.00	11.290	93.400	2434.02	-7.65	-6.53	325.45	1661039.57	14552482.90	40°04'14.480°N	104°55'34.623°W	1.26	
2551.00	10.750	90.560	2522.37	-8.31	-7.14	342.64	1661056.76	14552482.31	40°04'14.474°N	104°55'34.402°W	0.85	
2641.00	10.750	89.470	2610.79	-8.37	-7.14	359.43	1661073.53	14552482.32	40°04'14.474°N	104°55'34.186°W	0.23	
2730.00	9.860	88.650	2698.35	-8.17	-6.89	375.34	1661089.45	14552482.58	40°04'14.477°N	104°55'33.981°W	1.01	
2820.00	9.490	86.560	2787.07	-7.59	-6.26	390.45	1661104.55	14552483.22	40°04'14.483°N	104°55'33.787°W	0.57	
2909.00	9.860	91.630	2874.81	-7.42	-6.03	405.40	1661119.48	14552483.46	40°04'14.485°N	104°55'33.594°W	1.04	
2999.00	9.370	92.720	2963.54	-8.04	-6.60	420.42	1661134.50	14552482.90	40°04'14.480°N	104°55'33.401°W	0.58	
3089.00	9.960	95.060	3052.26	-9.13	-7.64	435.49	1661149.57	14552481.88	40°04'14.470°N	104°55'33.207°W	0.79	
3178.00	8.980	93.270	3140.05	-10.25	-8.71	450.09	1661164.16	14552480.82	40°04'14.459°N	104°55'33.020°W	1.15	
3268.00	10.110	93.970	3228.80	-11.25	-9.66	464.98	1661179.05	14552479.88	40°04'14.450°N	104°55'32.828°W	1.26	
3358.00	9.960	92.700	3317.43	-12.22	-10.57	480.64	1661194.70	14552478.98	40°04'14.440°N	104°55'32.627°W	0.30	
3465.00	10.380	94.480	3422.74	-13.47	-11.76	499.49	1661213.55	14552477.81	40°04'14.429°N	104°55'32.384°W	0.49	
3554.00	10.840	93.910	3510.22	-14.72	-12.96	515.83	1661229.88	14552476.63	40°04'14.417°N	104°55'32.174°W	0.53	
3627.00†	10.013	93.918	3582.02	-15.67	-13.86	529.01	1661243.06	14552475.74	40°04'14.408°N	104°55'32.004°W	1.13	ENTER LANDBOX (832'FNL & 461'FEL, SEC.07) 40.0706689 -104.9255568
3644.00	9.820	93.920	3598.76	-15.88	-14.06	531.94	1661245.98	14552475.54	40°04'14.406°N	104°55'31.967°W	1.13	
3734.00	10.740	98.800	3687.32	-17.74	-15.87	547.88	1661261.92	14552473.75	40°04'14.388°N	104°55'31.762°W	1.41	
3824.00	9.570	101.020	3775.91	-20.51	-18.58	563.51	1661277.55	14552471.05	40°04'14.361°N	104°55'31.561°W	1.37	
3913.00	8.180	96.110	3863.84	-22.64	-20.67	577.07	1661291.10	14552468.97	40°04'14.341°N	104°55'31.386°W	1.78	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#15 BUDDY 7-15HZ(818'FNL & 990'FEL,SEC.07)
Area	COLORADO	Well	BUDDY 7-15HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUDDY 7-15HZ AWB
Facility	SEC.07-T1N-R67W		

WELLPATH DATA (209 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
4003.00	6.120	91.800	3953.14	-23.51	-21.50	588.23	1661302.26	14552468.15	40°04'14.332°N	104°55'31.243°W	2.36	
4093.00	4.020	84.900	4042.78	-23.41	-21.37	596.17	1661310.20	14552468.28	40°04'14.334°N	104°55'31.141°W	2.43	
4182.00	2.190	77.840	4131.65	-22.79	-20.74	600.94	1661314.96	14552468.92	40°04'14.340°N	104°55'31.079°W	2.10	
4272.00	1.680	62.670	4221.60	-21.83	-19.77	603.79	1661317.81	14552469.89	40°04'14.350°N	104°55'31.042°W	0.80	
4362.00	0.720	46.760	4311.57	-20.85	-18.77	605.38	1661319.40	14552470.89	40°04'14.359°N	104°55'31.022°W	1.12	
4451.00	0.860	36.040	4400.57	-19.93	-17.85	606.18	1661320.20	14552471.81	40°04'14.369°N	104°55'31.012°W	0.23	
4541.00	0.730	32.420	4490.56	-18.90	-16.82	606.88	1661320.90	14552472.84	40°04'14.379°N	104°55'31.003°W	0.15	
4631.00	0.530	19.850	4580.55	-18.02	-15.95	607.33	1661321.35	14552473.72	40°04'14.387°N	104°55'30.997°W	0.27	
4720.00	0.240	50.580	4669.55	-17.52	-15.44	607.62	1661321.63	14552474.22	40°04'14.392°N	104°55'30.993°W	0.39	
4809.00	0.250	12.770	4758.55	-17.21	-15.13	607.80	1661321.82	14552474.53	40°04'14.395°N	104°55'30.991°W	0.18	
4899.00	0.660	25.330	4848.55	-16.55	-14.47	608.07	1661322.08	14552475.19	40°04'14.402°N	104°55'30.987°W	0.47	
4989.00	0.450	330.450	4938.54	-15.78	-13.70	608.11	1661322.13	14552475.97	40°04'14.410°N	104°55'30.987°W	0.60	
5079.00	0.180	302.780	5028.54	-15.39	-13.31	607.82	1661321.84	14552476.35	40°04'14.413°N	104°55'30.991°W	0.34	
5168.00	0.100	334.250	5117.54	-15.25	-13.17	607.67	1661321.68	14552476.49	40°04'14.415°N	104°55'30.993°W	0.12	
5257.00	0.160	69.880	5206.54	-15.13	-13.05	607.75	1661321.77	14552476.61	40°04'14.416°N	104°55'30.992°W	0.22	
5347.00	0.310	333.070	5296.54	-14.87	-12.79	607.76	1661321.77	14552476.87	40°04'14.418°N	104°55'30.991°W	0.41	
5437.00	0.250	17.000	5386.54	-14.47	-12.39	607.71	1661321.72	14552477.27	40°04'14.422°N	104°55'30.992°W	0.24	
5526.00	0.560	335.450	5475.54	-13.89	-11.81	607.58	1661321.60	14552477.85	40°04'14.428°N	104°55'30.994°W	0.46	
5616.00	0.720	326.600	5565.53	-13.01	-10.94	607.09	1661321.10	14552478.72	40°04'14.437°N	104°55'31.000°W	0.21	
5705.00	0.430	338.500	5654.53	-12.23	-10.16	606.66	1661320.67	14552479.50	40°04'14.445°N	104°55'31.006°W	0.35	
5795.00	0.790	348.490	5744.52	-11.31	-9.24	606.41	1661320.42	14552480.42	40°04'14.454°N	104°55'31.009°W	0.42	
5884.00	0.490	346.240	5833.52	-10.34	-8.27	606.20	1661320.21	14552481.39	40°04'14.463°N	104°55'31.012°W	0.34	
5974.00	0.930	239.740	5923.51	-10.33	-8.26	605.48	1661319.49	14552481.40	40°04'14.463°N	104°55'31.021°W	1.30	
6063.00	0.510	259.450	6012.50	-10.76	-8.70	604.46	1661318.47	14552480.96	40°04'14.459°N	104°55'31.034°W	0.54	
6153.00	0.560	300.610	6102.50	-10.61	-8.55	603.69	1661317.70	14552481.11	40°04'14.460°N	104°55'31.044°W	0.42	
6243.00	1.020	229.400	6192.49	-10.90	-8.84	602.70	1661316.72	14552480.81	40°04'14.458°N	104°55'31.056°W	1.10	
6333.00	0.920	175.400	6282.48	-12.14	-10.08	602.15	1661316.17	14552479.57	40°04'14.445°N	104°55'31.064°W	0.98	
6422.00	0.990	125.920	6371.47	-13.31	-11.25	602.83	1661316.85	14552478.41	40°04'14.434°N	104°55'31.055°W	0.90	
6529.00	0.900	120.410	6478.46	-14.28	-12.22	604.31	1661318.32	14552477.44	40°04'14.424°N	104°55'31.036°W	0.12	
6619.00	0.820	157.990	6568.45	-15.24	-13.17	605.16	1661319.17	14552476.49	40°04'14.415°N	104°55'31.025°W	0.62	
6709.00	1.080	146.130	6658.44	-16.54	-14.47	605.87	1661319.89	14552475.19	40°04'14.402°N	104°55'31.016°W	0.36	
6798.00	0.970	131.640	6747.42	-17.74	-15.67	606.90	1661320.92	14552473.99	40°04'14.390°N	104°55'31.002°W	0.32	
6865.00†	2.315	35.883	6814.40	-17.03	-14.95	608.12	1661322.13	14552474.71	40°04'14.397°N	104°55'30.987°W	3.88	KOP
6888.00	3.160	29.860	6837.37	-16.10	-14.02	608.71	1661322.72	14552475.64	40°04'14.406°N	104°55'30.979°W	3.88	
6978.00	10.620	9.340	6926.67	-5.76	-3.67	611.29	1661325.30	14552485.99	40°04'14.509°N	104°55'30.946°W	8.60	
7068.00	17.740	356.010	7013.89	16.13	18.22	611.69	1661325.67	14552507.87	40°04'14.725°N	104°55'30.941°W	8.65	
7157.00	22.190	356.630	7097.52	46.46	48.54	609.75	1661323.72	14552538.18	40°04'15.025°N	104°55'30.966°W	5.01	
7247.00	28.080	2.290	7178.98	84.63	86.71	609.60	1661323.53	14552576.33	40°04'15.402°N	104°55'30.968°W	7.06	
7337.00	35.530	4.380	7255.41	131.92	134.02	612.45	1661326.34	14552623.63	40°04'15.869°N	104°55'30.931°W	8.37	
7426.00	41.910	3.610	7324.82	187.42	189.53	616.30	1661330.14	14552679.11	40°04'16.418°N	104°55'30.882°W	7.19	
7516.00	49.300	0.890	7387.74	251.61	253.73	618.72	1661332.52	14552743.30	40°04'17.052°N	104°55'30.850°W	8.49	
7605.00	56.590	358.860	7441.34	322.59	324.71	618.51	1661332.24	14552814.24	40°04'17.754°N	104°55'30.853°W	8.39	
7695.00	64.550	359.170	7485.53	400.90	403.02	617.17	1661330.84	14552892.52	40°04'18.528°N	104°55'30.870°W	8.85	
7785.00	70.820	359.010	7519.68	484.12	486.22	615.85	1661329.45	14552975.69	40°04'19.350°N	104°55'30.887°W	6.97	
7875.00	77.240	357.330	7544.43	570.56	572.66	613.06	1661326.60	14553062.09	40°04'20.204°N	104°55'30.923°W	7.36	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#15 BUDDY 7-15HZ(818'FNL & 990'FEL,SEC.07)
Area	COLORADO	Well	BUDDY 7-15HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUDDY 7-15HZ AWB
Facility	SEC.07-T1N-R67W		

WELLPATH DATA (209 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
7964.00	83.210	357.480	7559.54	658.15	660.24	609.10	1661322.56	14553149.63	40°04'21.070°N	104°55'30.974°W	6.71	
8016.00†	86.301	358.268	7564.29	709.89	711.98	607.18	1661320.60	14553201.35	40°04'21.581°N	104°55'30.999°W	6.13	LANDING (106'FNL & 383'FEL,SEC.07) 40.0726613 -104.9252774
8054.00	88.560	358.840	7565.99	747.84	749.92	606.22	1661319.61	14553239.28	40°04'21.956°N	104°55'31.011°W	6.13	
8144.00	90.640	358.450	7566.62	837.82	839.89	604.09	1661317.41	14553329.21	40°04'22.845°N	104°55'31.038°W	2.35	
8234.00	89.840	359.050	7566.24	927.80	929.87	602.13	1661315.37	14553419.15	40°04'23.734°N	104°55'31.064°W	1.11	
8323.00	89.930	357.700	7566.42	1016.77	1018.83	599.60	1661312.78	14553508.07	40°04'24.613°N	104°55'31.096°W	1.52	
8342.00†	89.924	358.202	7566.45	1035.76	1037.82	598.92	1661312.09	14553527.05	40°04'24.801°N	104°55'31.105°W	2.64	EXIT RADIUS HEEL (220'FSL & 392'FEL,SEC.06) 40.0735558 -104.9253069
8413.00	89.900	0.080	7566.56	1106.75	1108.81	597.86	1661310.96	14553598.01	40°04'25.502°N	104°55'31.118°W	2.64	
8503.00	89.820	359.510	7566.78	1196.75	1198.80	597.54	1661310.57	14553687.97	40°04'26.392°N	104°55'31.123°W	0.64	
8592.00	90.180	359.910	7566.78	1285.75	1287.80	597.09	1661310.05	14553776.93	40°04'27.271°N	104°55'31.128°W	0.60	
8682.00	90.210	0.180	7566.47	1375.75	1377.80	597.16	1661310.04	14553866.90	40°04'28.161°N	104°55'31.127°W	0.30	
8772.00	89.380	359.420	7566.79	1465.75	1467.80	596.84	1661309.66	14553956.86	40°04'29.050°N	104°55'31.131°W	1.25	
8861.00	90.670	359.570	7566.75	1554.75	1556.79	596.06	1661308.80	14554045.82	40°04'29.929°N	104°55'31.141°W	1.46	
8951.00	90.610	359.190	7565.75	1644.74	1646.78	595.09	1661307.75	14554135.77	40°04'30.819°N	104°55'31.154°W	0.43	
9040.00	90.240	1.270	7565.09	1733.73	1735.78	595.44	1661308.04	14554224.72	40°04'31.698°N	104°55'31.149°W	2.37	
9130.00	89.700	0.960	7565.14	1823.70	1825.76	597.19	1661309.71	14554314.67	40°04'32.587°N	104°55'31.127°W	0.69	
9220.00	91.010	1.800	7564.58	1913.67	1915.73	599.36	1661311.81	14554404.61	40°04'33.477°N	104°55'31.099°W	1.73	
9309.00	90.930	1.080	7563.07	2002.62	2004.69	601.60	1661313.97	14554493.53	40°04'34.356°N	104°55'31.070°W	0.81	
9399.00	90.920	0.440	7561.62	2092.59	2094.67	602.79	1661315.09	14554583.48	40°04'35.245°N	104°55'31.055°W	0.71	
9489.00	90.670	0.170	7560.37	2182.58	2184.66	603.27	1661315.50	14554673.43	40°04'36.134°N	104°55'31.048°W	0.41	
9578.00	90.670	0.320	7559.33	2271.57	2273.65	603.65	1661315.80	14554762.39	40°04'37.014°N	104°55'31.044°W	0.17	
9668.00	89.700	359.940	7559.04	2361.57	2363.65	603.86	1661315.93	14554852.35	40°04'37.903°N	104°55'31.041°W	1.16	
9757.00	89.210	359.450	7559.88	2450.56	2452.64	603.38	1661315.39	14554941.31	40°04'38.782°N	104°55'31.047°W	0.78	
9847.00	90.920	0.530	7559.78	2540.56	2542.64	603.37	1661315.30	14555031.27	40°04'39.672°N	104°55'31.047°W	2.25	
9937.00	90.020	0.140	7559.04	2630.55	2632.63	603.89	1661315.75	14555121.23	40°04'40.561°N	104°55'31.040°W	1.09	
10026.00	90.520	0.110	7558.62	2719.55	2721.63	604.09	1661315.87	14555210.19	40°04'41.441°N	104°55'31.038°W	0.56	
10116.00	89.720	359.750	7558.44	2809.55	2811.63	603.98	1661315.69	14555300.15	40°04'42.330°N	104°55'31.039°W	0.97	
10206.00	89.450	359.420	7559.09	2899.54	2901.62	603.32	1661314.97	14555390.11	40°04'43.219°N	104°55'31.048°W	0.47	
10295.00	90.980	358.700	7558.75	2988.53	2990.61	601.86	1661313.43	14555479.06	40°04'44.099°N	104°55'31.066°W	1.90	
10385.00	91.180	358.910	7557.06	3078.50	3080.57	599.99	1661311.48	14555568.98	40°04'44.988°N	104°55'31.090°W	0.32	
10474.00	90.790	359.110	7555.53	3167.48	3169.54	598.45	1661309.87	14555657.92	40°04'45.867°N	104°55'31.110°W	0.49	
10564.00	89.870	358.610	7555.01	3257.46	3259.52	596.66	1661308.01	14555747.86	40°04'46.756°N	104°55'31.133°W	1.16	
10654.00	90.420	0.630	7554.78	3347.46	3349.52	596.06	1661307.34	14555837.82	40°04'47.646°N	104°55'31.141°W	2.33	
10743.00	90.120	1.050	7554.36	3436.44	3438.51	597.37	1661308.57	14555926.77	40°04'48.525°N	104°55'31.124°W	0.58	
10833.00	89.240	1.100	7554.87	3526.42	3528.49	599.06	1661310.19	14556016.72	40°04'49.414°N	104°55'31.102°W	0.98	
10923.00	90.410	0.400	7555.14	3616.40	3618.48	600.23	1661311.29	14556106.67	40°04'50.303°N	104°55'31.087°W	1.51	
11013.00	90.730	0.270	7554.24	3706.39	3708.47	600.76	1661311.74	14556196.63	40°04'51.193°N	104°55'31.080°W	0.38	
11102.00	89.040	359.420	7554.42	3795.39	3797.47	600.52	1661311.43	14556285.59	40°04'52.072°N	104°55'31.083°W	2.13	
11192.00	89.720	0.220	7555.40	3885.38	3887.46	600.24	1661311.08	14556375.55	40°04'52.962°N	104°55'31.087°W	1.17	
11281.00	90.480	359.810	7555.24	3974.38	3976.46	600.26	1661311.03	14556464.51	40°04'53.841°N	104°55'31.087°W	0.97	
11371.00	90.220	359.650	7554.69	4064.38	4066.46	599.84	1661310.53	14556554.47	40°04'54.730°N	104°55'31.092°W	0.34	
11461.00	89.580	359.250	7554.85	4154.38	4156.45	598.97	1661309.59	14556644.43	40°04'55.620°N	104°55'31.103°W	0.84	
11550.00	89.990	0.480	7555.18	4243.38	4245.45	598.76	1661309.31	14556733.39	40°04'56.499°N	104°55'31.106°W	1.46	
11640.00	89.810	0.680	7555.34	4333.37	4335.44	599.67	1661310.15	14556823.35	40°04'57.389°N	104°55'31.094°W	0.30	
11730.00	90.020	0.640	7555.47	4423.36	4425.44	600.71	1661311.11	14556913.31	40°04'58.278°N	104°55'31.081°W	0.24	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#15 BUDDY 7-15HZ(818'FNL & 990'FEL,SEC.07)
Area	COLORADO	Well	BUDDY 7-15HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUDDY 7-15HZ AWB
Facility	SEC.07-T1N-R67W		

WELLPATH DATA (209 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
11819.00	89.470	359.970	7555.87	4512.35	4514.43	601.18	1661311.51	14557002.27		40°04'59.157"N	104°55'31.075"W	0.97	
11909.00	90.390	359.950	7555.98	4602.35	4604.43	601.12	1661311.38	14557092.23		40°05'00.047"N	104°55'31.075"W	1.02	
11999.00	90.100	359.200	7555.59	4692.35	4694.43	600.45	1661310.63	14557182.19		40°05'00.936"N	104°55'31.084"W	0.89	
12088.00	90.520	0.570	7555.11	4781.34	4783.43	600.28	1661310.38	14557271.15		40°05'01.816"N	104°55'31.086"W	1.61	
12178.00	89.410	359.640	7555.17	4871.34	4873.42	600.44	1661310.47	14557361.11		40°05'02.705"N	104°55'31.084"W	1.61	
12267.00	90.990	359.030	7554.86	4960.33	4962.41	599.41	1661309.37	14557450.07		40°05'03.584"N	104°55'31.097"W	1.90	
12357.00	90.670	359.430	7553.55	5050.32	5052.40	598.20	1661308.09	14557540.01		40°05'04.474"N	104°55'31.113"W	0.57	
12446.00	89.440	359.160	7553.47	5139.31	5141.39	597.10	1661306.92	14557628.97		40°05'05.353"N	104°55'31.127"W	1.41	
12536.00	90.900	359.480	7553.20	5229.31	5231.38	596.03	1661305.78	14557718.92		40°05'06.242"N	104°55'31.141"W	1.66	
12626.00	90.590	359.450	7552.03	5319.30	5321.37	595.19	1661304.87	14557808.87		40°05'07.132"N	104°55'31.151"W	0.35	
12715.00	89.730	358.800	7551.78	5408.29	5410.35	593.84	1661303.44	14557897.82		40°05'08.011"N	104°55'31.169"W	1.21	
12805.00	90.840	358.890	7551.34	5498.28	5500.33	592.02	1661301.55	14557987.77		40°05'08.900"N	104°55'31.192"W	1.24	
12894.00	90.010	358.650	7550.67	5587.26	5589.31	590.11	1661299.57	14558076.70		40°05'09.780"N	104°55'31.217"W	0.97	
12984.00	90.810	359.390	7550.03	5677.25	5679.29	588.57	1661297.95	14558166.65		40°05'10.669"N	104°55'31.237"W	1.21	
13073.00	90.220	359.490	7549.23	5766.24	5768.28	587.70	1661297.01	14558255.61		40°05'11.548"N	104°55'31.248"W	0.67	
13163.00	89.580	359.410	7549.39	5856.24	5858.28	586.84	1661296.08	14558345.56		40°05'12.438"N	104°55'31.259"W	0.72	
13253.00	89.160	0.070	7550.38	5946.23	5948.27	586.43	1661295.59	14558435.52		40°05'13.327"N	104°55'31.264"W	0.87	
13342.00	90.180	359.560	7550.89	6035.23	6037.27	586.14	1661295.23	14558524.48		40°05'14.206"N	104°55'31.268"W	1.28	
13432.00	88.990	358.870	7551.54	6125.22	6127.26	584.91	1661293.93	14558614.43		40°05'15.096"N	104°55'31.283"W	1.53	
13521.00	90.450	1.050	7551.98	6214.21	6216.25	584.85	1661293.79	14558703.39		40°05'15.975"N	104°55'31.284"W	2.95	
13611.00	91.720	2.470	7550.27	6304.14	6306.18	587.61	1661296.48	14558793.29		40°05'16.864"N	104°55'31.249"W	2.12	
13700.00	91.270	2.450	7547.95	6393.01	6395.07	591.43	1661300.23	14558882.14		40°05'17.742"N	104°55'31.200"W	0.51	
13790.00	90.730	1.740	7546.38	6482.92	6485.00	594.72	1661303.44	14558972.04		40°05'18.631"N	104°55'31.157"W	0.99	
13879.00	89.850	0.960	7545.93	6571.89	6573.97	596.82	1661305.47	14559060.98		40°05'19.510"N	104°55'31.130"W	1.32	
13969.00	89.760	0.830	7546.24	6661.87	6663.96	598.22	1661306.80	14559150.93		40°05'20.399"N	104°55'31.112"W	0.18	
14058.00	91.100	1.320	7545.57	6750.85	6752.94	599.89	1661308.39	14559239.87		40°05'21.279"N	104°55'31.091"W	1.60	
14148.00	90.900	1.020	7544.00	6840.81	6842.91	601.73	1661310.16	14559329.81		40°05'22.168"N	104°55'31.067"W	0.40	
14238.00	90.560	0.850	7542.85	6930.78	6932.89	603.20	1661311.55	14559419.75		40°05'23.057"N	104°55'31.048"W	0.42	
14327.00	89.900	0.600	7542.49	7019.77	7021.88	604.32	1661312.61	14559508.71		40°05'23.936"N	104°55'31.033"W	0.79	
14416.00	91.090	359.750	7541.72	7108.76	7110.87	604.59	1661312.80	14559597.67		40°05'24.816"N	104°55'31.030"W	1.64	
14506.00	90.900	359.600	7540.16	7198.75	7200.86	604.08	1661312.22	14559687.62		40°05'25.705"N	104°55'31.036"W	0.27	
14596.00	90.840	359.270	7538.80	7288.74	7290.84	603.20	1661311.26	14559777.56		40°05'26.594"N	104°55'31.048"W	0.37	
14686.00	90.670	358.690	7537.61	7378.72	7380.82	601.60	1661309.59	14559867.50		40°05'27.484"N	104°55'31.068"W	0.67	
14775.00	90.120	358.300	7537.00	7467.69	7469.79	599.26	1661307.18	14559956.43		40°05'28.363"N	104°55'31.098"W	0.76	
14865.00	89.620	358.420	7537.20	7557.66	7559.75	596.68	1661304.53	14560046.36		40°05'29.252"N	104°55'31.132"W	0.57	
14955.00	89.270	359.330	7538.07	7647.65	7649.73	594.92	1661302.69	14560136.30		40°05'30.141"N	104°55'31.154"W	1.08	
15044.00	91.450	359.330	7537.51	7736.64	7738.71	593.87	1661301.58	14560225.25		40°05'31.020"N	104°55'31.168"W	2.45	
15134.00	91.550	358.770	7535.16	7826.60	7828.67	592.38	1661300.01	14560315.17		40°05'31.909"N	104°55'31.187"W	0.63	
15224.00	89.580	359.500	7534.27	7916.58	7918.65	591.02	1661298.58	14560405.11		40°05'32.798"N	104°55'31.204"W	2.33	
15313.00	89.360	359.290	7535.09	8005.57	8007.64	590.08	1661297.57	14560494.06		40°05'33.678"N	104°55'31.216"W	0.34	
15403.00	90.470	0.110	7535.23	8095.57	8097.64	589.61	1661297.03	14560584.02		40°05'34.567"N	104°55'31.222"W	1.53	
15493.00	90.130	0.010	7534.75	8185.57	8187.64	589.71	1661297.05	14560673.99		40°05'35.457"N	104°55'31.221"W	0.39	
15582.00	90.070	359.470	7534.60	8274.57	8276.63	589.30	1661296.57	14560762.95		40°05'36.336"N	104°55'31.226"W	0.61	
15671.00	89.550	359.840	7534.89	8363.57	8365.63	588.77	1661295.96	14560851.91		40°05'37.216"N	104°55'31.233"W	0.72	
15761.00	89.610	0.110	7535.55	8453.57	8455.63	588.73	1661295.85	14560941.87		40°05'38.105"N	104°55'31.234"W	0.31	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#15 BUDDY 7-15HZ(818'FNL & 990'FEL,SEC.07)
Area	COLORADO	Well	BUDDY 7-15HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUDDY 7-15HZ AWB
Facility	SEC.07-T1N-R67W		

WELLPATH DATA (209 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]
15851.00	89.040	359.850	7536.61	8543.56	8545.62	588.70	1661295.74	14561031.83	40°05'38.994"N	104°55'31.234"W	0.70
15940.00	90.390	0.960	7537.06	8632.55	8634.62	589.33	1661296.30	14561120.79	40°05'39.874"N	104°55'31.226"W	1.96
16030.00	90.050	1.290	7536.71	8722.52	8724.60	591.09	1661297.99	14561210.73	40°05'40.763"N	104°55'31.203"W	0.53
16120.00	90.560	359.850	7536.23	8812.51	8814.59	591.99	1661298.82	14561300.69	40°05'41.652"N	104°55'31.192"W	1.70
16209.00	89.580	358.890	7536.12	8901.51	8903.58	591.01	1661297.76	14561389.65	40°05'42.532"N	104°55'31.204"W	1.54
16299.00	90.470	0.170	7536.08	8991.50	8993.58	590.27	1661296.95	14561479.60	40°05'43.421"N	104°55'31.214"W	1.73
16388.00	90.950	0.170	7534.98	9080.49	9082.57	590.54	1661297.14	14561568.56	40°05'44.300"N	104°55'31.210"W	0.54
16478.00	91.270	0.130	7533.24	9170.48	9172.55	590.77	1661297.31	14561658.51	40°05'45.190"N	104°55'31.207"W	0.36
16567.00	90.210	359.200	7532.09	9259.47	9261.54	590.25	1661296.71	14561747.46	40°05'46.069"N	104°55'31.214"W	1.58
16657.00	89.670	358.780	7532.18	9349.46	9351.52	588.66	1661295.06	14561837.41	40°05'46.958"N	104°55'31.234"W	0.76
16746.00	88.840	358.560	7533.34	9438.43	9440.49	586.60	1661292.92	14561926.34	40°05'47.838"N	104°55'31.261"W	0.96
16836.00	90.270	358.160	7534.04	9528.40	9530.45	584.02	1661290.27	14562016.26	40°05'48.727"N	104°55'31.294"W	1.65
16926.00	89.610	358.110	7534.13	9618.36	9620.40	581.09	1661287.27	14562106.17	40°05'49.615"N	104°55'31.332"W	0.74
17015.00	89.550	359.330	7534.79	9707.34	9709.38	579.11	1661285.21	14562195.11	40°05'50.495"N	104°55'31.357"W	1.37
17105.00	91.160	0.670	7534.23	9797.33	9799.37	579.11	1661285.14	14562285.06	40°05'51.384"N	104°55'31.357"W	2.33
17195.00	90.920	1.210	7532.59	9887.30	9889.34	580.58	1661286.54	14562375.00	40°05'52.273"N	104°55'31.338"W	0.66
17219.00†	90.769	1.234	7532.24	9911.29	9913.33	581.09	1661287.03	14562398.98	40°05'52.510"N	104°55'31.331"W	0.64
17284.00	90.360	1.300	7531.60	9976.26	9978.31	582.53	1661288.41	14562463.94	40°05'53.152"N	104°55'31.313"W	0.64
17374.00	91.350	0.150	7530.26	10066.24	10068.29	583.67	1661289.48	14562553.88	40°05'54.042"N	104°55'31.298"W	1.69
17463.00	91.120	359.340	7528.34	10155.22	10157.27	583.27	1661289.01	14562642.83	40°05'54.921"N	104°55'31.303"W	0.95
17553.00	90.980	0.190	7526.69	10245.20	10247.26	582.91	1661288.57	14562732.77	40°05'55.810"N	104°55'31.308"W	0.96
17642.00	90.820	0.780	7525.29	10334.18	10336.24	583.66	1661289.25	14562821.72	40°05'56.689"N	104°55'31.298"W	0.69
17732.00	90.080	0.210	7524.59	10424.17	10426.23	584.44	1661289.95	14562911.68	40°05'57.579"N	104°55'31.288"W	1.04
17822.00	89.640	359.260	7524.80	10514.17	10516.23	584.02	1661289.46	14563001.64	40°05'58.468"N	104°55'31.294"W	1.16
17911.00	89.050	358.960	7525.82	10603.16	10605.21	582.64	1661288.01	14563090.59	40°05'59.348"N	104°55'31.311"W	0.74
18001.00	88.700	358.760	7527.59	10693.13	10695.18	580.85	1661286.15	14563180.51	40°06'00.237"N	104°55'31.334"W	0.45
18090.00	88.210	358.770	7529.99	10782.08	10784.13	578.93	1661284.16	14563269.42	40°06'01.116"N	104°55'31.359"W	0.55
18116.00	88.150	358.530	7530.81	10808.06	10810.11	578.32	1661283.52	14563295.39	40°06'01.372"N	104°55'31.367"W	0.95
18168.00	88.150	358.530	7532.49	10860.02	10862.06	576.98	1661282.15	14563347.33	40°06'01.886"N	104°55'31.384"W	0.00

HOLE & CASING SECTIONS - Ref Wellbore: BUDDY 7-15HZ AWB Ref Wellpath: BUDDY 7-15HZ AWP									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.625in Casing Surface	21.00	1874.00	1853.00	21.00	1855.62	0.00	0.00	-1.87	225.69

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#15 BUDDY 7-15HZ(818'FNL & 990'FEL,SEC.07)
Area	COLORADO	Well	BUDDY 7-15HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUDDY 7-15HZ AWB
Facility	SEC.07-T1N-R67W		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.06-T1N-R67W	0.00	120.62	-89.33	1660624.86	14552609.66	40°04'15.737"N	104°55'39.958"W	polygon
SEC.31-T2N-R67W	0.00	0.71	-89.87	1660624.41	14552489.80	40°04'14.552"N	104°55'39.965"W	polygon
BUDDY 7-15HZ BHL REV-1(600'FNL & 425'FEL,SEC.31)	7543.00	10862.86	568.72	1661273.89	14563348.12	40°06'01.894"N	104°55'31.490"W	point
BUDDY 17-7HZ SU 3 LANDBOX	7561.00	0.00	0.00	1660714.25	14552489.16	40°04'14.545"N	104°55'38.809"W	polygon
BUDDY 17-7HZ SU 3 RADIUS 1	7561.00	10137.61	983.31	1661688.90	14562623.50	40°05'54.726"N	104°55'26.156"W	polygon
BUDDY 17-7HZ SU 3 RADIUS 2	7561.00	800.75	991.50	1661704.70	14553290.40	40°04'22.458"N	104°55'26.055"W	polygon
BUDDY 7-15HZ HEEL REV-1(100'FNL & 388'FEL,SEC.07)	7561.00	707.48	603.38	1661316.80	14553196.85	40°04'21.536"N	104°55'31.048"W	point

WELLPATH COMPOSITION - Ref Wellbore: BUDDY 7-15HZ AWB Ref Wellpath: BUDDY 7-15HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
21.00	1834.00	Custom APC_ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC ISCWSA Rev-2 MWD+IFR1 <125 - 1834>	BUDDY 7-15HZ AWB
1834.00	18116.00	Custom APC_ISCWSA REV 2 MWD+IFR1+MSA (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+MSA <1923 - 18116>	BUDDY 7-15HZ AWB
18116.00	18168.00	Blind Drilling (std)	Projection to bit	BUDDY 7-15HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#15 BUDDY 7-15HZ(818'FNL & 990'FEL,SEC.07)
Area	COLORADO	Well	BUDDY 7-15HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUDDY 7-15HZ AWB
Facility	SEC.07-T1N-R67W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
125.00	1.270	220.630	124.99	FIRST SURFACE MWD+IFR1 SURVEY
1834.00	9.400	91.080	1816.14	LAST SURFACE MWD+IFR1 SURVEY
1923.00	8.750	90.210	1904.02	FIRST BHGE MWD+IFR1+MSA SURVEY
3627.00	10.013	93.918	3582.02	ENTER LANDBOX (832'FNL & 461'FEL,SEC.07) 40.0706689 -104.9255568
6865.00	2.315	35.883	6814.40	KOP
8016.00	86.301	358.268	7564.29	LANDING (106'FNL & 383'FEL,SEC.07) 40.0726613 -104.9252774
8342.00	89.924	358.202	7566.45	EXIT RADIUS HEEL (220'FSL & 392'FEL,SEC.06) 40.0735558 -104.9253069
17219.00	90.769	1.234	7532.24	ENTER RADIUS TOE (1550'FNL & 413'FEL,SEC.31) 40.0979195 -104.9253698
18116.00	88.150	358.530	7530.81	LAST BHGE MWD+IFR1+MSA SURVEY
18168.00	88.150	358.530	7532.49	PTB (601'FNL & 417'FEL,SEC.31) 40.1005238 -104.9253845