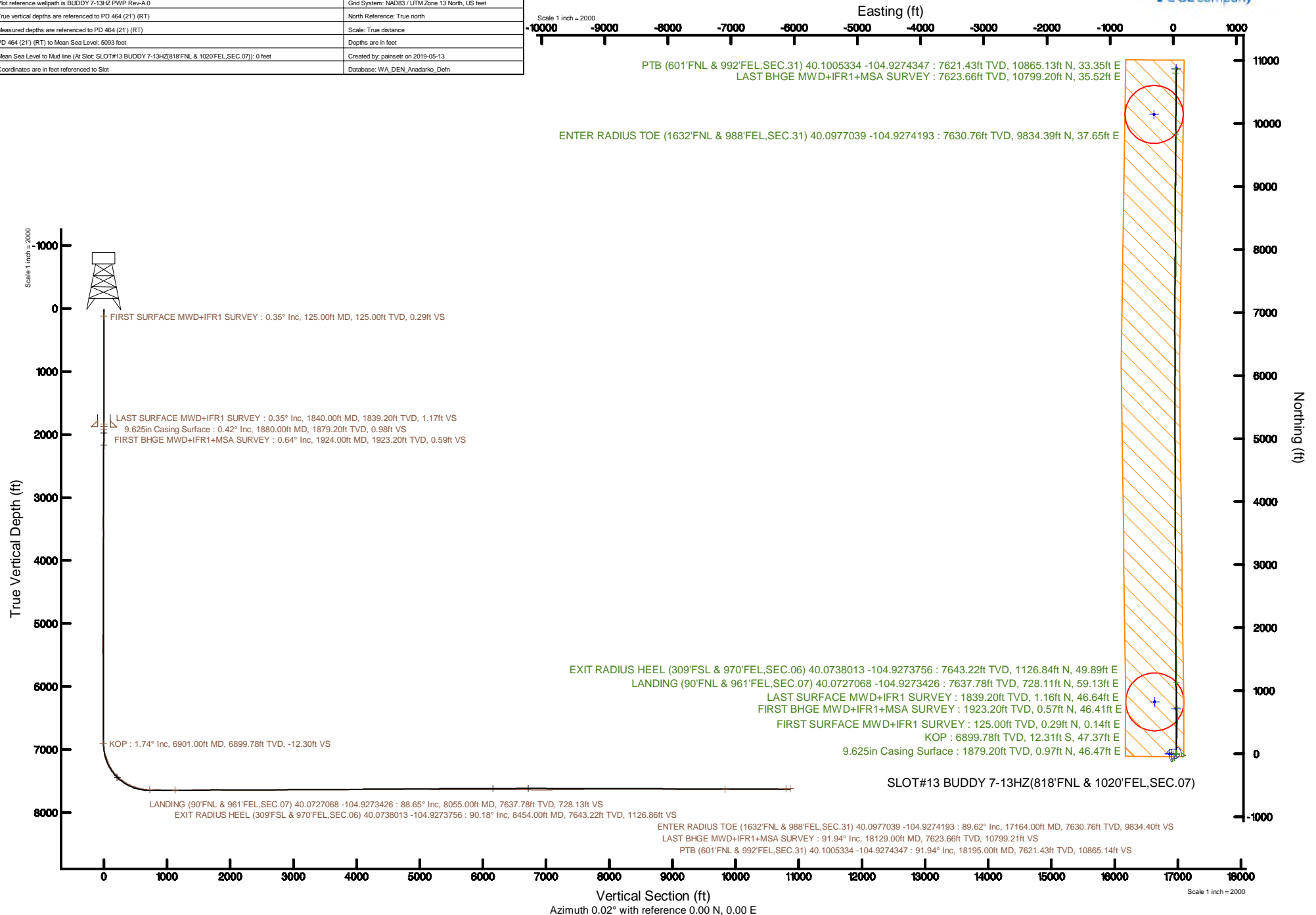


KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#13 BUDDY 7-13HZ(818'FNL & 1020'FEL,SEC.07)
 Field: WELD COUNTY (UTM/TRUE NORTH) Well: BUDDY 7-13HZ
 Facility: SEC.07-T1N-R67W Wellbore: BUDDY 7-13HZ PWB

Plot reference wellpath is BUDDY 7-13HZ PWB 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#13 BUDDY 7-13HZ(818'FNL & 1020'FEL,SEC.07)): 0 feet	Created by: painsetr on 2019-05-13
Coordinates are in feet referenced to Slot	Database: WA_DEN_Anadarko_Defn



Actual Wellpath Report

BUDDY 7-13HZ AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#13 BUDDY 7-13HZ(818'FNL & 1020'FEL,SEC.07)
Area	COLORADO	Well	BUDDY 7-13HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUDDY 7-13HZ 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	5/13/2019 at 12:56:54 PM
Convergence at slot	0.05° East	Database/Source file	WA_DEN_Anadarko_Defn/BUDDY_7-13HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-120.22	59.24	1660684.33	14552489.54	40°04'14.549"N	104°55'39.194"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#13 BUDDY 7-13HZ (818'FNL & 1020'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	0.02°

Actual Wellpath Report

BUDDY 7-13HZ AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#13 BUDDY 7-13HZ(818'FNL & 1020'FEL,SEC.07)
Area	COLORADO	Well	BUDDY 7-13HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUDDY 7-13HZ AWB
Facility	SEC.07-T1N-R67W		

WELLPATH DATA (206 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	25.340	0.00	0.00	0.00	0.00	1660684.33	14552489.54	40°04'14.549"N	104°55'39.194"W	0.00	
21.00	0.000	25.340	21.00	0.00	0.00	0.00	1660684.33	14552489.54	40°04'14.549"N	104°55'39.194"W	0.00	
125.00	0.350	25.340	125.00	0.29	0.29	0.14	1660684.46	14552489.83	40°04'14.552"N	104°55'39.192"W	0.34	FIRST SURFACE MWD+IFR1 SURVEY
220.00	0.090	300.170	220.00	0.59	0.59	0.20	1660684.52	14552490.13	40°04'14.555"N	104°55'39.191"W	0.37	
315.00	0.790	72.530	315.00	0.82	0.82	0.76	1660685.08	14552490.36	40°04'14.557"N	104°55'39.184"W	0.90	
410.00	2.550	91.520	409.95	0.96	0.96	3.49	1660687.82	14552490.51	40°04'14.559"N	104°55'39.149"W	1.92	
505.00	2.640	93.280	504.85	0.78	0.78	7.79	1660692.11	14552490.33	40°04'14.557"N	104°55'39.094"W	0.13	
600.00	2.640	97.410	599.75	0.38	0.37	12.14	1660696.47	14552489.92	40°04'14.553"N	104°55'39.038"W	0.20	
695.00	1.540	96.260	694.69	-0.04	-0.05	15.58	1660699.90	14552489.51	40°04'14.549"N	104°55'38.994"W	1.16	
790.00	1.630	95.820	789.65	-0.32	-0.32	18.20	1660702.52	14552489.23	40°04'14.546"N	104°55'38.960"W	0.10	
885.00	1.630	81.230	884.62	-0.25	-0.26	20.88	1660705.19	14552489.30	40°04'14.546"N	104°55'38.925"W	0.44	
980.00	1.760	79.480	979.57	0.22	0.22	23.65	1660707.96	14552489.78	40°04'14.551"N	104°55'38.890"W	0.15	
1075.00	1.800	80.180	1074.53	0.75	0.74	26.55	1660710.87	14552490.30	40°04'14.556"N	104°55'38.852"W	0.05	
1171.00	1.630	90.110	1170.48	1.00	0.99	29.40	1660713.72	14552490.56	40°04'14.559"N	104°55'38.816"W	0.36	
1266.00	1.710	95.560	1265.44	0.86	0.85	32.16	1660716.48	14552490.42	40°04'14.557"N	104°55'38.780"W	0.19	
1361.00	1.850	87.910	1360.40	0.78	0.77	35.11	1660719.42	14552490.34	40°04'14.557"N	104°55'38.742"W	0.29	
1457.00	1.850	83.520	1456.35	1.01	1.00	38.19	1660722.51	14552490.57	40°04'14.559"N	104°55'38.703"W	0.15	
1551.00	2.500	89.670	1550.28	1.20	1.19	41.75	1660726.06	14552490.76	40°04'14.561"N	104°55'38.657"W	0.73	
1646.00	1.670	91.870	1645.22	1.17	1.15	45.21	1660729.52	14552490.73	40°04'14.560"N	104°55'38.613"W	0.88	
1741.00	0.220	59.090	1740.20	1.21	1.20	46.75	1660731.06	14552490.78	40°04'14.561"N	104°55'38.593"W	1.57	
1840.00	0.350	242.870	1839.20	1.17	1.16	46.64	1660730.95	14552490.74	40°04'14.560"N	104°55'38.594"W	0.58	LAST SURFACE MWD+IFR1 SURVEY
1924.00	0.640	180.360	1923.20	0.59	0.57	46.41	1660730.72	14552490.15	40°04'14.555"N	104°55'38.597"W	0.68	FIRST BHGE MWD+IFR1+MSA SURVEY
2013.00	0.520	180.940	2012.19	-0.31	-0.33	46.40	1660730.71	14552489.25	40°04'14.546"N	104°55'38.597"W	0.13	
2103.00	0.420	154.500	2102.19	-1.02	-1.03	46.54	1660730.85	14552488.55	40°04'14.539"N	104°55'38.595"W	0.26	
2193.00	0.540	149.690	2192.19	-1.68	-1.70	46.89	1660731.20	14552487.88	40°04'14.532"N	104°55'38.591"W	0.14	
2282.00	0.490	163.740	2281.18	-2.41	-2.42	47.21	1660731.52	14552487.16	40°04'14.525"N	104°55'38.587"W	0.15	
2372.00	0.590	154.300	2371.18	-3.20	-3.21	47.52	1660731.83	14552486.37	40°04'14.517"N	104°55'38.583"W	0.15	
2461.00	0.750	154.380	2460.17	-4.14	-4.15	47.97	1660732.28	14552485.43	40°04'14.508"N	104°55'38.577"W	0.18	
2551.00	0.900	165.300	2550.17	-5.35	-5.36	48.40	1660732.72	14552484.22	40°04'14.496"N	104°55'38.571"W	0.24	
2641.00	0.670	140.840	2640.16	-6.44	-6.46	48.91	1660733.23	14552483.13	40°04'14.485"N	104°55'38.565"W	0.45	
2730.00	0.690	110.180	2729.15	-7.03	-7.04	49.75	1660734.06	14552482.54	40°04'14.479"N	104°55'38.554"W	0.40	
2820.00	0.750	109.840	2819.14	-7.42	-7.43	50.81	1660735.12	14552482.15	40°04'14.476"N	104°55'38.540"W	0.07	
2909.00	0.610	90.910	2908.14	-7.62	-7.64	51.83	1660736.14	14552481.95	40°04'14.474"N	104°55'38.527"W	0.30	
2999.00	0.600	99.770	2998.13	-7.71	-7.72	52.77	1660737.09	14552481.86	40°04'14.473"N	104°55'38.515"W	0.10	
3089.00	0.310	100.850	3088.13	-7.83	-7.85	53.48	1660737.79	14552481.74	40°04'14.471"N	104°55'38.506"W	0.32	
3179.00	0.750	248.070	3178.13	-8.10	-8.12	53.17	1660737.48	14552481.47	40°04'14.469"N	104°55'38.510"W	1.14	
3268.00	0.750	248.860	3267.12	-8.53	-8.54	52.09	1660736.40	14552481.04	40°04'14.465"N	104°55'38.524"W	0.01	
3358.00	0.690	268.950	3357.11	-8.75	-8.77	51.00	1660735.31	14552480.82	40°04'14.462"N	104°55'38.538"W	0.29	
3465.00	0.470	278.810	3464.11	-8.70	-8.71	49.92	1660734.23	14552480.88	40°04'14.463"N	104°55'38.552"W	0.23	
3555.00	0.490	305.480	3554.10	-8.42	-8.43	49.24	1660733.55	14552481.15	40°04'14.466"N	104°55'38.561"W	0.25	
3644.00	1.360	238.660	3643.09	-8.74	-8.76	48.03	1660732.34	14552480.83	40°04'14.462"N	104°55'38.576"W	1.41	
3734.00	1.380	252.740	3733.07	-9.62	-9.64	46.08	1660730.40	14552479.95	40°04'14.454"N	104°55'38.601"W	0.37	
3824.00	0.490	231.970	3823.06	-10.18	-10.19	44.74	1660729.06	14552479.39	40°04'14.448"N	104°55'38.618"W	1.04	
3913.00	0.610	258.590	3912.05	-10.51	-10.52	43.98	1660728.30	14552479.06	40°04'14.445"N	104°55'38.628"W	0.31	
4003.00	0.740	262.090	4002.05	-10.68	-10.70	42.93	1660727.25	14552478.88	40°04'14.443"N	104°55'38.642"W	0.15	

Actual Wellpath Report

BUDDY 7-13HZ AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#13 BUDDY 7-13HZ(818'FNL & 1020'FEL,SEC.07)
Area	COLORADO	Well	BUDDY 7-13HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUDDY 7-13HZ AWP
Facility	SEC.07-T1N-R67W		

WELLPATH DATA (206 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
4093.00	0.650	200.290	4092.04	-11.24	-11.26	42.18	1660726.50	14552478.32	40°04'14.438"N	104°55'38.651"W	0.80	
4183.00	0.770	221.660	4182.03	-12.17	-12.19	41.60	1660725.92	14552477.39	40°04'14.429"N	104°55'38.659"W	0.32	
4272.00	0.720	238.740	4271.03	-12.91	-12.92	40.73	1660725.05	14552476.66	40°04'14.421"N	104°55'38.670"W	0.25	
4362.00	0.580	145.010	4361.02	-13.58	-13.59	40.50	1660724.83	14552475.99	40°04'14.415"N	104°55'38.673"W	1.06	
4452.00	0.390	151.500	4451.02	-14.22	-14.23	40.91	1660725.23	14552475.35	40°04'14.408"N	104°55'38.668"W	0.22	
4541.00	0.670	104.240	4540.02	-14.61	-14.63	41.56	1660725.88	14552474.95	40°04'14.404"N	104°55'38.659"W	0.56	
4631.00	0.520	102.280	4630.01	-14.83	-14.84	42.47	1660726.79	14552474.74	40°04'14.402"N	104°55'38.648"W	0.17	
4720.00	0.380	100.090	4719.01	-14.97	-14.98	43.15	1660727.48	14552474.60	40°04'14.401"N	104°55'38.639"W	0.16	
4810.00	0.220	50.550	4809.01	-14.91	-14.92	43.58	1660727.90	14552474.66	40°04'14.402"N	104°55'38.633"W	0.32	
4899.00	0.700	103.120	4898.00	-14.92	-14.94	44.24	1660728.56	14552474.65	40°04'14.401"N	104°55'38.625"W	0.67	
4989.00	0.610	75.810	4988.00	-14.93	-14.95	45.24	1660729.56	14552474.64	40°04'14.401"N	104°55'38.612"W	0.36	
5079.00	0.790	101.460	5077.99	-14.94	-14.95	46.32	1660730.64	14552474.63	40°04'14.401"N	104°55'38.598"W	0.40	
5168.00	1.060	99.620	5166.98	-15.20	-15.21	47.73	1660732.05	14552474.38	40°04'14.399"N	104°55'38.580"W	0.31	
5258.00	1.270	98.110	5256.96	-15.48	-15.49	49.54	1660733.86	14552474.10	40°04'14.396"N	104°55'38.557"W	0.24	
5347.00	1.190	92.290	5345.94	-15.65	-15.67	51.44	1660735.76	14552473.92	40°04'14.394"N	104°55'38.532"W	0.17	
5438.00	1.270	89.170	5436.92	-15.67	-15.69	53.39	1660737.71	14552473.90	40°04'14.394"N	104°55'38.507"W	0.11	
5528.00	1.140	0.460	5526.91	-14.76	-14.78	54.39	1660738.71	14552474.81	40°04'14.403"N	104°55'38.494"W	1.87	
5617.00	1.130	358.190	5615.89	-13.00	-13.02	54.37	1660738.69	14552476.57	40°04'14.420"N	104°55'38.495"W	0.05	
5707.00	1.080	3.430	5705.87	-11.27	-11.28	54.40	1660738.71	14552478.31	40°04'14.437"N	104°55'38.494"W	0.13	
5796.00	1.520	247.370	5794.86	-10.88	-10.90	53.36	1660737.67	14552478.69	40°04'14.441"N	104°55'38.508"W	2.49	
5886.00	1.000	244.940	5884.84	-11.68	-11.69	51.54	1660735.86	14552477.90	40°04'14.433"N	104°55'38.531"W	0.58	
5975.00	0.750	226.520	5973.83	-12.41	-12.42	50.42	1660734.73	14552477.16	40°04'14.426"N	104°55'38.545"W	0.42	
6065.00	0.780	204.610	6063.82	-13.37	-13.38	49.73	1660734.05	14552476.20	40°04'14.417"N	104°55'38.554"W	0.32	
6154.00	0.470	101.570	6152.82	-13.99	-14.01	49.84	1660734.16	14552475.58	40°04'14.411"N	104°55'38.553"W	1.12	
6244.00	0.950	81.600	6242.81	-13.96	-13.97	50.94	1660735.26	14552475.61	40°04'14.411"N	104°55'38.539"W	0.59	
6334.00	0.720	263.370	6332.81	-13.91	-13.93	51.12	1660735.43	14552475.66	40°04'14.411"N	104°55'38.537"W	1.86	
6423.00	0.560	263.100	6421.80	-14.03	-14.05	50.13	1660734.45	14552475.54	40°04'14.410"N	104°55'38.549"W	0.18	
6513.00	0.450	272.330	6511.80	-14.07	-14.09	49.34	1660733.66	14552475.50	40°04'14.410"N	104°55'38.559"W	0.15	
6620.00	0.490	276.550	6618.79	-14.00	-14.02	48.46	1660732.78	14552475.57	40°04'14.410"N	104°55'38.571"W	0.05	
6710.00	0.410	312.580	6708.79	-13.74	-13.75	47.84	1660732.16	14552475.83	40°04'14.413"N	104°55'38.579"W	0.32	
6800.00	0.390	354.550	6798.79	-13.22	-13.23	47.58	1660731.90	14552476.35	40°04'14.418"N	104°55'38.582"W	0.32	
6890.00	0.550	337.790	6888.79	-12.51	-12.53	47.39	1660731.70	14552477.06	40°04'14.425"N	104°55'38.584"W	0.23	
6901.00†	1.740	1.955	6899.78	-12.30	-12.31	47.37	1660731.69	14552477.27	40°04'14.427"N	104°55'38.585"W	11.44	KOP
6979.00	10.640	10.600	6977.25	-4.02	-4.03	48.74	1660733.05	14552485.55	40°04'14.509"N	104°55'38.567"W	11.44	
7069.00	15.830	9.080	7064.83	16.29	16.27	52.21	1660736.50	14552505.85	40°04'14.710"N	104°55'38.522"W	5.78	
7159.00	20.600	359.540	7150.32	44.26	44.25	54.02	1660738.29	14552533.81	40°04'14.986"N	104°55'38.499"W	6.23	
7248.00	24.080	0.540	7232.62	78.08	78.07	54.06	1660738.31	14552567.62	40°04'15.320"N	104°55'38.499"W	3.93	
7338.00	32.760	358.860	7311.70	120.87	120.86	53.75	1660737.96	14552610.39	40°04'15.743"N	104°55'38.503"W	9.68	
7428.00	41.320	0.880	7383.48	175.03	175.01	53.72	1660737.89	14552664.53	40°04'16.279"N	104°55'38.503"W	9.61	
7517.00	48.240	3.580	7446.62	237.62	237.60	56.25	1660740.36	14552727.09	40°04'16.897"N	104°55'38.470"W	8.06	
7607.00	55.080	2.680	7502.42	308.06	308.05	60.08	1660744.13	14552797.51	40°04'17.593"N	104°55'38.421"W	7.64	
7696.00	61.840	0.920	7548.95	383.83	383.81	62.42	1660746.41	14552873.25	40°04'18.342"N	104°55'38.391"W	7.78	
7786.00	68.710	0.110	7586.57	465.53	465.51	63.13	1660747.06	14552954.92	40°04'19.149"N	104°55'38.382"W	7.68	
7876.00	75.890	0.660	7613.91	551.21	551.19	63.72	1660747.57	14553040.56	40°04'19.996"N	104°55'38.374"W	8.00	
7965.00	82.340	358.760	7630.71	638.56	638.54	63.26	1660747.04	14553127.88	40°04'20.859"N	104°55'38.380"W	7.54	

REFERENCE WELLPATH IDENTIFICATION				
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)		Slot	SLOT#13 BUDDY 7-13HZ(818'FNL & 1020'FEL,SEC.07)
Area	COLORADO		Well	BUDDY 7-13HZ
Field	WELD COUNTY (UTM/TRUE NORTH)		Wellbore	BUDDY 7-13HZ AWB
Facility	SEC.07-T1N-R67W			

WELLPATH DATA (206 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
8055.00	88.650	355.970	7637.78	728.13	728.11	59.13	1660742.84	14553217.41	40°04'21.744"N	104°55'38.433"W	7.66	LANDING (90'FNL & 961'FEL,SEC.07) 40.0727068 -104.9273426
8145.00	88.710	357.170	7639.85	817.94	817.92	53.75	1660737.39	14553307.18	40°04'22.632"N	104°55'38.503"W	1.33	
8235.00	88.700	359.770	7641.89	907.88	907.86	51.34	1660734.91	14553397.08	40°04'23.521"N	104°55'38.534"W	2.89	
8324.00	89.330	359.490	7643.42	996.86	996.85	50.77	1660734.27	14553486.03	40°04'24.400"N	104°55'38.541"W	0.77	
8414.00	90.580	359.650	7643.49	1086.86	1086.84	50.09	1660733.52	14553575.99	40°04'25.289"N	104°55'38.550"W	1.40	
8454.00†	90.180	359.766	7643.22	1126.86	1126.84	49.89	1660733.28	14553615.97	40°04'25.685"N	104°55'38.552"W	1.04	EXIT RADIUS HEEL (309'FSL & 970'FEL,SEC.06) 40.0738013 -104.9273756
8504.00	89.680	359.910	7643.28	1176.85	1176.84	49.75	1660733.10	14553665.95	40°04'26.179"N	104°55'38.554"W	1.04	
8593.00	90.730	0.930	7642.97	1265.85	1265.83	50.40	1660733.68	14553754.91	40°04'27.058"N	104°55'38.546"W	1.64	
8683.00	90.550	359.540	7641.96	1355.84	1355.83	50.77	1660733.97	14553844.86	40°04'27.948"N	104°55'38.541"W	1.56	
8773.00	90.270	359.840	7641.32	1445.84	1445.82	50.28	1660733.41	14553934.82	40°04'28.837"N	104°55'38.547"W	0.46	
8862.00	89.920	358.010	7641.17	1534.82	1534.80	48.61	1660731.67	14554023.77	40°04'29.716"N	104°55'38.569"W	2.09	
8952.00	89.900	357.780	7641.31	1624.76	1624.74	45.31	1660728.29	14554113.67	40°04'30.605"N	104°55'38.611"W	0.26	
9041.00	90.050	359.040	7641.35	1713.72	1713.71	42.84	1660725.75	14554202.59	40°04'31.484"N	104°55'38.643"W	1.43	
9131.00	89.900	357.220	7641.39	1803.67	1803.65	39.90	1660722.74	14554292.50	40°04'32.373"N	104°55'38.681"W	2.03	
9221.00	89.330	357.970	7641.99	1893.58	1893.57	36.12	1660718.90	14554382.38	40°04'33.262"N	104°55'38.729"W	1.05	
9310.00	89.780	1.720	7642.68	1982.56	1982.55	35.88	1660718.58	14554471.33	40°04'34.141"N	104°55'38.732"W	4.24	
9400.00	90.050	2.840	7642.82	2072.49	2072.48	39.46	1660722.09	14554561.22	40°04'35.030"N	104°55'38.686"W	1.28	
9490.00	89.620	0.290	7643.08	2162.45	2162.44	41.92	1660724.47	14554651.14	40°04'35.919"N	104°55'38.655"W	2.87	
9579.00	90.270	1.550	7643.16	2251.44	2251.42	43.35	1660725.83	14554740.10	40°04'36.798"N	104°55'38.636"W	1.59	
9669.00	89.990	0.500	7642.96	2341.42	2341.41	44.96	1660727.37	14554830.05	40°04'37.687"N	104°55'38.616"W	1.21	
9759.00	89.950	357.610	7643.00	2431.40	2431.39	43.48	1660725.81	14554919.99	40°04'38.576"N	104°55'38.635"W	3.21	
9848.00	89.520	358.300	7643.42	2520.34	2520.33	40.30	1660722.56	14555008.89	40°04'39.455"N	104°55'38.676"W	0.91	
9938.00	90.790	358.060	7643.17	2610.29	2610.28	37.44	1660719.63	14555098.80	40°04'40.344"N	104°55'38.712"W	1.44	
10027.00	90.980	359.300	7641.80	2699.25	2699.24	35.39	1660717.51	14555187.73	40°04'41.223"N	104°55'38.739"W	1.41	
10117.00	90.020	359.260	7641.01	2789.24	2789.23	34.26	1660716.31	14555277.68	40°04'42.113"N	104°55'38.753"W	1.07	
10207.00	90.640	358.580	7640.49	2879.22	2879.21	32.57	1660714.54	14555367.62	40°04'43.002"N	104°55'38.775"W	1.02	
10296.00	90.250	0.420	7639.80	2968.21	2968.20	31.79	1660713.69	14555456.58	40°04'43.881"N	104°55'38.785"W	2.11	
10386.00	90.520	0.340	7639.20	3058.21	3058.20	32.39	1660714.21	14555546.54	40°04'44.771"N	104°55'38.777"W	0.31	
10475.00	90.620	359.720	7638.31	3147.20	3147.20	32.43	1660714.19	14555635.50	40°04'45.650"N	104°55'38.777"W	0.71	
10565.00	89.920	0.030	7637.89	3237.20	3237.19	32.24	1660713.92	14555725.46	40°04'46.540"N	104°55'38.779"W	0.85	
10655.00	90.130	358.750	7637.85	3327.20	3327.19	31.28	1660712.89	14555815.42	40°04'47.429"N	104°55'38.792"W	1.44	
10744.00	90.620	359.300	7637.27	3416.18	3416.17	29.76	1660711.30	14555904.36	40°04'48.308"N	104°55'38.811"W	0.83	
10834.00	90.020	358.620	7636.76	3506.16	3506.15	28.13	1660709.59	14555994.31	40°04'49.197"N	104°55'38.832"W	1.01	
10924.00	89.920	0.560	7636.81	3596.16	3596.15	27.49	1660708.88	14556084.27	40°04'50.087"N	104°55'38.840"W	2.16	
11014.00	90.420	359.800	7636.54	3686.15	3686.15	27.77	1660709.09	14556174.23	40°04'50.976"N	104°55'38.837"W	1.01	
11103.00	90.390	358.630	7635.92	3775.14	3775.13	26.55	1660707.79	14556263.18	40°04'51.856"N	104°55'38.852"W	1.32	
11193.00	90.520	0.360	7635.20	3865.13	3865.12	25.76	1660706.93	14556353.13	40°04'52.745"N	104°55'38.863"W	1.93	
11319.00	90.330	0.090	7634.27	3991.13	3991.12	26.25	1660707.32	14556479.08	40°04'53.990"N	104°55'38.856"W	0.26	
11409.00	90.500	359.400	7633.61	4081.12	4081.12	25.85	1660706.85	14556569.04	40°04'54.879"N	104°55'38.861"W	0.79	
11499.00	89.240	0.280	7633.82	4171.12	4171.11	25.60	1660706.52	14556659.00	40°04'55.769"N	104°55'38.865"W	1.71	
11588.00	90.190	1.290	7634.26	4260.11	4260.10	26.82	1660707.67	14556747.95	40°04'56.648"N	104°55'38.849"W	1.56	
11678.00	90.640	0.340	7633.61	4350.10	4350.09	28.10	1660708.88	14556837.90	40°04'57.537"N	104°55'38.833"W	1.17	
11768.00	90.850	359.750	7632.44	4440.09	4440.08	28.17	1660708.87	14556927.86	40°04'58.427"N	104°55'38.832"W	0.70	
11857.00	90.900	0.270	7631.08	4529.08	4529.07	28.18	1660708.82	14557016.81	40°04'59.306"N	104°55'38.831"W	0.59	
11947.00	91.290	359.900	7629.36	4619.06	4619.05	28.32	1660708.88	14557106.76	40°05'00.195"N	104°55'38.830"W	0.60	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#13 BUDDY 7-13HZ(818'FNL & 1020'FEL,SEC.07)
Area	COLORADO	Well	BUDDY 7-13HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUDDY 7-13HZ AWB
Facility	SEC.07-T1N-R67W		

WELLPATH DATA (206 stations)												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12037.00	89.990	0.780	7628.35	4709.05	4709.04	28.85	1660709.34	14557196.71	40°05'01.085°N	104°55'38.823°W	1.74	
12126.00	90.360	0.490	7628.08	4798.04	4798.04	29.84	1660710.25	14557285.67	40°05'01.964°N	104°55'38.810°W	0.53	
12216.00	89.720	359.910	7628.02	4888.04	4888.03	30.15	1660710.49	14557375.64	40°05'02.853°N	104°55'38.806°W	0.96	
12305.00	90.440	359.360	7627.90	4977.04	4977.03	29.59	1660709.85	14557464.60	40°05'03.733°N	104°55'38.813°W	1.02	
12395.00	89.730	359.520	7627.76	5067.03	5067.03	28.71	1660708.90	14557554.55	40°05'04.622°N	104°55'38.825°W	0.81	
12484.00	89.720	359.030	7628.19	5156.03	5156.02	27.58	1660707.70	14557643.51	40°05'05.502°N	104°55'38.839°W	0.55	
12574.00	89.880	357.840	7628.50	5245.99	5245.98	25.12	1660705.17	14557733.44	40°05'06.391°N	104°55'38.871°W	1.33	
12664.00	89.530	0.370	7628.97	5335.97	5335.96	23.72	1660703.69	14557823.38	40°05'07.280°N	104°55'38.889°W	2.84	
12753.00	89.500	0.140	7629.72	5424.97	5424.96	24.11	1660704.02	14557912.34	40°05'08.159°N	104°55'38.884°W	0.26	
12843.00	90.020	359.340	7630.10	5514.96	5514.96	23.70	1660703.54	14558002.30	40°05'09.049°N	104°55'38.889°W	1.06	
12932.00	89.070	0.860	7630.80	5603.96	5603.95	23.86	1660703.62	14558091.26	40°05'09.928°N	104°55'38.887°W	2.01	
13022.00	89.120	0.260	7632.23	5693.94	5693.93	24.74	1660704.42	14558181.21	40°05'10.818°N	104°55'38.876°W	0.67	
13111.00	89.350	359.410	7633.41	5782.93	5782.92	24.48	1660704.10	14558270.16	40°05'11.697°N	104°55'38.879°W	0.99	
13201.00	90.650	0.970	7633.41	5872.93	5872.92	24.78	1660704.32	14558360.12	40°05'12.586°N	104°55'38.875°W	2.26	
13291.00	90.450	3.240	7632.55	5962.86	5962.85	28.09	1660707.55	14558450.02	40°05'13.475°N	104°55'38.833°W	2.53	
13380.00	89.920	2.460	7632.26	6051.75	6051.74	32.51	1660711.90	14558538.87	40°05'14.353°N	104°55'38.776°W	1.06	
13470.00	90.650	1.140	7631.82	6141.70	6141.69	35.34	1660714.65	14558628.79	40°05'15.242°N	104°55'38.739°W	1.68	
13559.00	89.680	358.850	7631.56	6230.69	6230.68	35.33	1660714.57	14558717.75	40°05'16.122°N	104°55'38.739°W	2.79	
13649.00	90.500	357.750	7631.42	6320.65	6320.64	32.66	1660711.83	14558807.67	40°05'17.011°N	104°55'38.774°W	1.52	
13738.00	90.930	359.050	7630.31	6409.60	6409.60	30.18	1660709.28	14558896.59	40°05'17.890°N	104°55'38.806°W	1.54	
13828.00	89.730	359.490	7629.79	6499.59	6499.58	29.03	1660708.06	14558986.54	40°05'18.779°N	104°55'38.820°W	1.42	
13918.00	88.510	359.060	7631.17	6589.57	6589.57	27.89	1660706.85	14559076.48	40°05'19.668°N	104°55'38.835°W	1.44	
14007.00	88.900	358.460	7633.18	6678.53	6678.52	25.97	1660704.85	14559165.40	40°05'20.547°N	104°55'38.860°W	0.80	
14097.00	88.790	357.960	7635.00	6768.46	6768.46	23.15	1660701.97	14559255.30	40°05'21.436°N	104°55'38.896°W	0.57	
14186.00	89.680	359.550	7636.18	6857.43	6857.43	21.22	1660699.96	14559344.23	40°05'22.315°N	104°55'38.921°W	2.05	
14276.00	90.320	358.970	7636.18	6947.42	6947.42	20.06	1660698.73	14559434.18	40°05'23.205°N	104°55'38.936°W	0.96	
14365.00	90.480	1.030	7635.56	7036.42	7036.41	20.06	1660698.65	14559523.14	40°05'24.084°N	104°55'38.936°W	2.32	
14454.00	90.480	1.140	7634.82	7125.40	7125.39	21.74	1660700.27	14559612.09	40°05'24.963°N	104°55'38.914°W	0.12	
14544.00	90.450	359.680	7634.09	7215.39	7215.38	22.39	1660700.84	14559702.04	40°05'25.853°N	104°55'38.906°W	1.62	
14634.00	90.550	2.030	7633.30	7305.37	7305.36	23.73	1660702.11	14559791.99	40°05'26.742°N	104°55'38.889°W	2.61	
14724.00	90.750	2.850	7632.28	7395.28	7395.28	27.56	1660705.86	14559881.87	40°05'27.630°N	104°55'38.839°W	0.94	
14813.00	91.100	3.310	7630.84	7484.14	7484.14	32.34	1660710.57	14559970.69	40°05'28.509°N	104°55'38.778°W	0.65	
14903.00	91.530	2.400	7628.78	7574.01	7574.00	36.83	1660714.98	14560060.53	40°05'29.397°N	104°55'38.720°W	1.12	
14993.00	91.110	1.460	7626.70	7663.93	7663.92	39.86	1660717.93	14560150.42	40°05'30.285°N	104°55'38.681°W	1.14	
15082.00	89.730	0.140	7626.05	7752.92	7752.91	41.10	1660719.10	14560239.37	40°05'31.165°N	104°55'38.665°W	2.15	
15172.00	90.550	0.100	7625.83	7842.92	7842.91	41.29	1660719.22	14560329.33	40°05'32.054°N	104°55'38.663°W	0.91	
15262.00	90.900	358.980	7624.69	7932.91	7932.89	40.56	1660718.42	14560419.28	40°05'32.943°N	104°55'38.672°W	1.30	
15351.00	89.220	358.420	7624.60	8021.88	8021.87	38.54	1660716.33	14560508.22	40°05'33.823°N	104°55'38.698°W	1.99	
15441.00	90.560	359.360	7624.77	8111.86	8111.85	36.80	1660714.51	14560598.16	40°05'34.712°N	104°55'38.720°W	1.82	
15531.00	90.010	356.470	7624.33	8201.79	8201.78	33.53	1660711.17	14560688.05	40°05'35.600°N	104°55'38.763°W	3.27	
15620.00	90.450	358.030	7623.97	8290.68	8290.67	29.26	1660706.83	14560776.90	40°05'36.479°N	104°55'38.818°W	1.82	
15709.00	89.650	359.200	7623.89	8379.65	8379.64	27.11	1660704.61	14560865.84	40°05'37.358°N	104°55'38.845°W	1.59	
15799.00	91.210	0.640	7623.22	8469.64	8469.63	26.98	1660704.41	14560955.79	40°05'38.247°N	104°55'38.847°W	2.36	
15889.00	90.450	359.630	7621.91	8559.63	8559.62	27.19	1660704.54	14561045.75	40°05'39.137°N	104°55'38.844°W	1.40	
15978.00	88.590	358.460	7622.66	8648.61	8648.60	25.71	1660702.99	14561134.69	40°05'40.016°N	104°55'38.863°W	2.47	

Actual Wellpath Report

BUDDY 7-13HZ AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#13 BUDDY 7-13HZ(818'FNL & 1020'FEL,SEC.07)
Area	COLORADO	Well	BUDDY 7-13HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUDDY 7-13HZ AWP
Facility	SEC.07-T1N-R67W		

WELLPATH DATA (206 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
16068.00	88.760	359.710	7624.74	8738.57	8738.57	24.27	1660701.48	14561224.61	40°05'40.905"N	104°55'38.882"W	1.40	
16158.00	88.480	0.830	7626.91	8828.54	8828.54	24.70	1660701.83	14561314.55	40°05'41.794"N	104°55'38.876"W	1.28	
16247.00	90.350	1.460	7627.81	8917.52	8917.51	26.47	1660703.54	14561403.49	40°05'42.673"N	104°55'38.853"W	2.22	
16337.00	89.420	1.540	7628.00	9007.49	9007.48	28.83	1660705.82	14561493.42	40°05'43.563"N	104°55'38.823"W	1.04	
16427.00	89.330	0.770	7628.98	9097.46	9097.45	30.64	1660707.56	14561583.36	40°05'44.452"N	104°55'38.800"W	0.86	
16516.00	89.560	0.700	7629.84	9186.45	9186.44	31.79	1660708.63	14561672.32	40°05'45.331"N	104°55'38.785"W	0.27	
16605.00	89.790	359.860	7630.34	9275.45	9275.44	32.22	1660708.99	14561761.28	40°05'46.211"N	104°55'38.779"W	0.98	
16695.00	89.990	1.420	7630.52	9365.44	9365.43	33.23	1660709.92	14561851.23	40°05'47.100"N	104°55'38.766"W	1.75	
16784.00	90.450	0.760	7630.17	9454.42	9454.41	34.92	1660711.54	14561940.18	40°05'47.979"N	104°55'38.745"W	0.90	
16874.00	89.790	1.190	7629.99	9544.41	9544.40	36.45	1660713.00	14562030.13	40°05'48.868"N	104°55'38.725"W	0.88	
16964.00	89.900	0.400	7630.23	9634.40	9634.39	37.70	1660714.17	14562120.09	40°05'49.758"N	104°55'38.709"W	0.89	
17053.00	90.050	359.610	7630.27	9723.40	9723.39	37.71	1660714.11	14562209.05	40°05'50.637"N	104°55'38.709"W	0.90	
17143.00	89.520	0.240	7630.61	9813.40	9813.39	37.59	1660713.92	14562299.01	40°05'51.527"N	104°55'38.710"W	0.91	
17164.00†	89.616	0.088	7630.76	9834.40	9834.39	37.65	1660713.96	14562320.01	40°05'51.734"N	104°55'38.709"W	0.85	ENTER RADIUS TOE (1632'FNL & 988'FEL,SEC.31) 40.0977039 -104.9274193
17233.00	89.930	359.590	7631.04	9903.40	9903.38	37.46	1660713.71	14562388.98	40°05'52.416"N	104°55'38.712"W	0.85	
17322.00	89.190	0.730	7631.72	9992.39	9992.38	37.70	1660713.89	14562477.94	40°05'53.295"N	104°55'38.709"W	1.53	
17412.00	89.670	0.550	7632.62	10082.38	10082.37	38.71	1660714.82	14562567.89	40°05'54.185"N	104°55'38.696"W	0.57	
17501.00	89.790	359.680	7633.04	10171.38	10171.37	38.89	1660714.92	14562656.85	40°05'55.064"N	104°55'38.694"W	0.99	
17591.00	90.130	359.480	7633.10	10261.38	10261.36	38.23	1660714.19	14562746.81	40°05'55.954"N	104°55'38.702"W	0.44	
17680.00	90.560	0.940	7632.56	10350.37	10350.36	38.55	1660714.45	14562835.77	40°05'56.833"N	104°55'38.698"W	1.71	
17770.00	90.650	0.430	7631.61	10440.36	10440.35	39.63	1660715.45	14562925.73	40°05'57.722"N	104°55'38.684"W	0.58	
17860.00	90.870	359.950	7630.42	10530.35	10530.34	39.93	1660715.67	14563015.68	40°05'58.612"N	104°55'38.680"W	0.59	
17949.00	91.330	359.400	7628.71	10619.33	10619.32	39.42	1660715.10	14563104.63	40°05'59.491"N	104°55'38.687"W	0.81	
18039.00	91.580	358.760	7626.43	10709.29	10709.28	37.98	1660713.58	14563194.55	40°06'00.380"N	104°55'38.705"W	0.76	
18129.00	91.940	358.110	7623.66	10799.21	10799.20	35.52	1660711.05	14563284.43	40°06'01.269"N	104°55'38.737"W	0.83	LAST BHGE MWD+IFR1+MSA SURVEY
18195.00	91.940	358.110	7621.43	10865.14	10865.13	33.35	1660708.82	14563350.33	40°06'01.920"N	104°55'38.765"W	0.00	PTB (601'FNL & 992'FEL,SEC.31) 40.1005334 -104.9274347

HOLE & CASING SECTIONS - Ref Wellbore: BUDDY 7-13HZ AWP Ref Wellpath: BUDDY 7-13HZ 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	1880.00	1859.00	21.00	1879.20	0.00	0.00	0.97	46.47

Actual Wellpath Report

BUDDY 7-13HZ AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#13 BUDDY 7-13HZ(818'FNL & 1020'FEL,SEC.07)
Area	COLORADO	Well	BUDDY 7-13HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUDDY 7-13HZ 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	120.22	-59.40	1660624.86	14552609.66	40°04'15.737"N	104°55'39.958"W	polygon
SEC.31-T2N-R67W	0.00	0.30	-59.94	1660624.41	14552489.80	40°04'14.552"N	104°55'39.965"W	polygon
BUDDY 7-13HZ BHL REV-1(600'FNL & 977'FEL,SEC.31)	7629.00	10865.72	47.52	1660722.99	14563350.94	40°06'01.926"N	104°55'38.582"W	point
BUDDY 7-13HZ HEEL REV-1(100'FNL & 977'FEL,SEC.07)	7647.00	717.63	44.47	1660728.19	14553206.92	40°04'21.641"N	104°55'38.622"W	point
BUDDY 17-7HZ SU 2 LANDBOX	7777.00	0.00	-30.01	1660654.33	14552489.52	40°04'14.549"N	104°55'39.580"W	polygon
BUDDY 17-7HZ SU 2 RADIUS 1	7777.00	10143.38	-303.20	1660373.00	14562628.60	40°05'54.788"N	104°55'43.096"W	polygon
BUDDY 17-7HZ SU 2 RADIUS 2	7777.00	823.53	-294.78	1660389.00	14553312.50	40°04'22.687"N	104°55'42.986"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: BUDDY 7-13HZ AWB Ref Wellpath: BUDDY 7-13HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
21.00	1840.00	Custom APC_ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC ISCWSA Rev-2 MWD+IFR1 <125 - 1840>	BUDDY 7-13HZ AWB
1840.00	18129.00	Custom APC_ISCWSA REV 2 MWD+IFR1+MSA (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+MSA <1924 - 18129 >	BUDDY 7-13HZ AWB
18129.00	18195.00	Blind Drilling (std)	Projection to bit	BUDDY 7-13HZ AWB

Actual Wellpath Report

BUDDY 7-13HZ AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#13 BUDDY 7-13HZ(818'FNL & 1020'FEL,SEC.07)
Area	COLORADO	Well	BUDDY 7-13HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUDDY 7-13HZ AWB
Facility	SEC.07-T1N-R67W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
125.00	0.350	25.340	125.00	FIRST SURFACE MWD+IFR1 SURVEY
1840.00	0.350	242.870	1839.20	LAST SURFACE MWD+IFR1 SURVEY
1924.00	0.640	180.360	1923.20	FIRST BHGE MWD+IFR1+MSA SURVEY
6901.00	1.740	1.955	6899.78	KOP
8055.00	88.650	355.970	7637.78	LANDING (90'FNL & 961'FEL,SEC.07) 40.0727068 -104.9273426
8454.00	90.180	359.766	7643.22	EXIT RADIUS HEEL (309'FSL & 970'FEL,SEC.06) 40.0738013 -104.9273756
17164.00	89.616	0.088	7630.76	ENTER RADIUS TOE (1632'FNL & 988'FEL,SEC.31) 40.0977039 -104.9274193
18129.00	91.940	358.110	7623.66	LAST BHGE MWD+IFR1+MSA SURVEY
18195.00	91.940	358.110	7621.43	PTB (601'FNL & 992'FEL,SEC.31) 40.1005334 -104.9274347