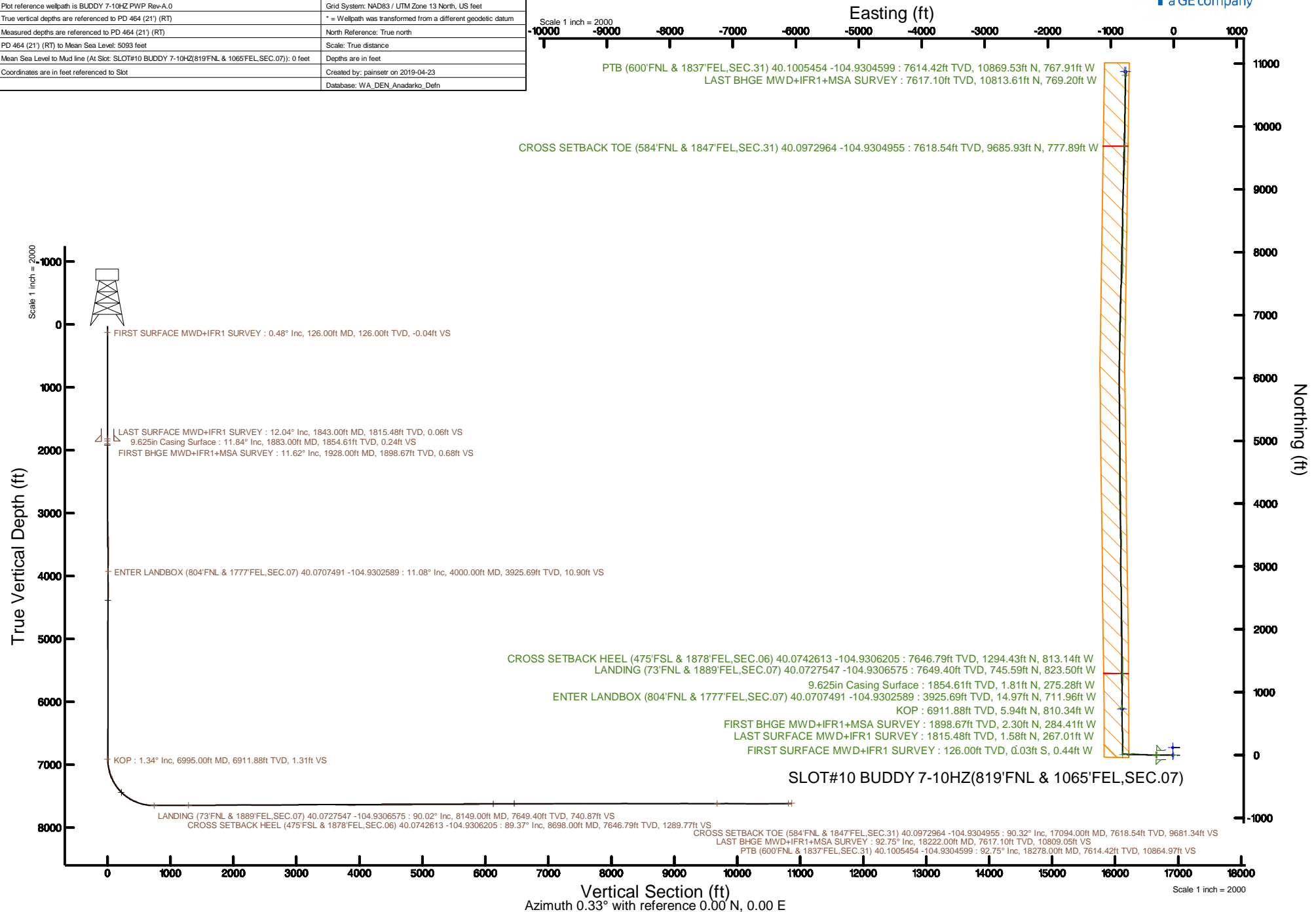


KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#10 BUDDY 7-10HZ(819'FNL & 1065'FEL,SEC.07)
 Field: WELD COUNTY (UTM/TRUE NORTH) Well: BUDDY 7-10HZ
 Facility: SEC.07-T1N-R67W Wellbore: BUDDY 7-10HZ PWB

Plot reference wellpath is BUDDY 7-10HZ PWP Rev-A.0	Grid System: NAD83 / UTM Zone 13 North, US feet
True vertical depths are referenced to PD 464 (21) (RT)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to PD 464 (21) (RT)	North Reference: True north
PD 464 (21) (RT) to Mean Sea Level: 5093 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#10 BUDDY 7-10HZ(819'FNL & 1065'FEL,SEC.07)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: painsetr on 2019-04-23
	Database: WA, DEN, Anadarko, Dfn



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#10 BUDDY 7-10HZ(819'FNL & 1065'FEL,SEC.07)
Area	COLORADO	Well	BUDDY 7-10HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUDDY 7-10HZ AWB
Facility	SEC.07-T1N-R67W		

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	4/23/2019 at 1:06 PM
Convergence at slot	0.05° East	Database/Source file	WA_DEN_Anadarko_Defn/BUDDY_7-10HZ_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	14.15	1660639.26	14552489.50	40°04'14.549"N	104°55'39.774"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#10 BUDDY 7-10HZ (819'FNL & 1065'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	0.33°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#10 BUDDY 7-10HZ(819'FNL & 1065'FEL,SEC.07)
Area	COLORADO	Well	BUDDY 7-10HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUDDY 7-10HZ AWB
Facility	SEC.07-T1N-R67W		

WELLPATH DATA (207 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	265.630	0.00	0.00	0.00	0.00	1660639.25	14552489.50	40°04'14.549"N	104°55'39.774"W	0.00	
21.00	0.000	265.630	21.00	0.00	0.00	0.00	1660639.25	14552489.50	40°04'14.549"N	104°55'39.774"W	0.00	
126.00	0.480	265.630	126.00	-0.04	-0.03	-0.44	1660638.82	14552489.47	40°04'14.549"N	104°55'39.780"W	0.46	FIRST SURFACE MWD+IFR1 SURVEY
221.00	0.440	242.950	221.00	-0.24	-0.23	-1.16	1660638.10	14552489.27	40°04'14.547"N	104°55'39.789"W	0.19	
316.00	0.790	264.840	315.99	-0.47	-0.45	-2.14	1660637.12	14552489.05	40°04'14.545"N	104°55'39.801"W	0.44	
411.00	1.270	279.340	410.97	-0.36	-0.34	-3.83	1660635.43	14552489.16	40°04'14.546"N	104°55'39.823"W	0.57	
506.00	3.560	283.830	505.88	0.47	0.51	-7.74	1660631.52	14552490.01	40°04'14.554"N	104°55'39.874"W	2.42	
601.00	5.670	276.350	600.57	1.63	1.71	-15.27	1660623.99	14552491.20	40°04'14.566"N	104°55'39.970"W	2.30	
696.00	6.680	271.430	695.02	2.22	2.37	-25.46	1660613.80	14552491.85	40°04'14.572"N	104°55'40.101"W	1.20	
790.00	8.350	266.860	788.21	1.92	2.13	-37.74	1660601.53	14552491.61	40°04'14.570"N	104°55'40.259"W	1.89	
886.00	9.270	271.080	883.08	1.60	1.90	-52.43	1660586.84	14552491.36	40°04'14.568"N	104°55'40.448"W	1.17	
981.00	11.430	271.870	976.53	1.95	2.35	-69.49	1660569.79	14552491.79	40°04'14.572"N	104°55'40.668"W	2.28	
1076.00	13.010	271.080	1069.37	2.34	2.86	-89.59	1660549.69	14552492.29	40°04'14.577"N	104°55'40.926"W	1.67	
1171.00	13.750	271.080	1161.79	2.63	3.27	-111.57	1660527.72	14552492.68	40°04'14.581"N	104°55'41.209"W	0.78	
1267.00	14.500	268.710	1254.89	2.44	3.22	-135.00	1660504.31	14552492.61	40°04'14.581"N	104°55'41.510"W	0.99	
1362.00	13.750	268.270	1347.02	1.70	2.61	-158.17	1660481.14	14552491.98	40°04'14.575"N	104°55'41.809"W	0.80	
1457.00	14.190	268.790	1439.21	0.99	2.02	-181.10	1660458.23	14552491.38	40°04'14.569"N	104°55'42.103"W	0.48	
1551.00	13.890	271.170	1530.40	0.84	2.01	-203.90	1660435.44	14552491.34	40°04'14.569"N	104°55'42.397"W	0.69	
1647.00	12.700	269.060	1623.82	0.78	2.07	-225.97	1660413.37	14552491.39	40°04'14.569"N	104°55'42.681"W	1.34	
1741.00	11.820	268.620	1715.68	0.26	1.67	-245.93	1660393.43	14552490.97	40°04'14.565"N	104°55'42.937"W	0.94	
1843.00	12.040	270.900	1815.48	0.06	1.58	-267.01	1660372.35	14552490.87	40°04'14.565"N	104°55'43.208"W	0.51	LAST SURFACE MWD+IFR1 SURVEY
1928.00	11.620	273.900	1898.67	0.68	2.30	-284.41	1660354.95	14552491.58	40°04'14.572"N	104°55'43.432"W	0.88	FIRST BHGE MWD+IFR1+MSA SURVEY
2017.00	11.440	271.280	1985.88	1.39	3.11	-302.18	1660337.19	14552492.37	40°04'14.580"N	104°55'43.661"W	0.62	
2107.00	11.320	270.730	2074.11	1.60	3.42	-319.93	1660319.45	14552492.67	40°04'14.583"N	104°55'43.889"W	0.18	
2197.00	10.890	269.720	2162.42	1.57	3.49	-337.27	1660302.12	14552492.72	40°04'14.584"N	104°55'44.112"W	0.52	
2287.00	11.660	270.330	2250.68	1.48	3.51	-354.86	1660284.53	14552492.72	40°04'14.584"N	104°55'44.339"W	0.87	
2376.00	12.830	268.590	2337.66	1.18	3.31	-373.74	1660265.67	14552492.51	40°04'14.582"N	104°55'44.581"W	1.38	
2466.00	12.640	267.790	2425.44	0.44	2.69	-393.57	1660245.84	14552491.87	40°04'14.576"N	104°55'44.836"W	0.29	
2556.00	12.250	274.120	2513.33	0.64	2.99	-412.93	1660226.49	14552492.16	40°04'14.579"N	104°55'45.085"W	1.58	
2645.00	11.620	272.610	2600.41	1.62	4.08	-431.30	1660208.12	14552493.23	40°04'14.589"N	104°55'45.322"W	0.79	
2735.00	10.670	270.790	2688.71	2.05	4.61	-448.69	1660190.74	14552493.75	40°04'14.595"N	104°55'45.545"W	1.13	
2824.00	11.590	270.420	2776.04	2.13	4.79	-465.87	1660173.57	14552493.91	40°04'14.596"N	104°55'45.766"W	1.04	
2914.00	10.660	270.300	2864.34	2.14	4.90	-483.23	1660156.21	14552494.01	40°04'14.597"N	104°55'45.990"W	1.03	
3004.00	11.150	271.640	2952.72	2.34	5.19	-500.25	1660139.20	14552494.29	40°04'14.600"N	104°55'46.209"W	0.61	
3093.00	12.030	273.360	3039.90	3.02	5.98	-518.12	1660121.34	14552495.06	40°04'14.608"N	104°55'46.438"W	1.06	
3183.00	12.170	279.120	3127.91	4.97	8.03	-536.85	1660102.62	14552497.10	40°04'14.628"N	104°55'46.679"W	1.35	
3273.00	12.980	278.120	3215.75	7.79	10.96	-556.22	1660083.25	14552500.01	40°04'14.657"N	104°55'46.929"W	0.93	
3363.00	13.810	276.390	3303.30	10.30	13.59	-576.90	1660062.57	14552502.62	40°04'14.683"N	104°55'47.195"W	1.02	
3470.00	12.090	275.870	3407.57	12.73	16.16	-600.74	1660038.74	14552505.17	40°04'14.709"N	104°55'47.501"W	1.61	
3559.00	12.860	275.790	3494.47	14.57	18.11	-619.87	1660019.62	14552507.10	40°04'14.728"N	104°55'47.747"W	0.87	
3649.00	12.010	269.150	3582.36	15.33	18.98	-639.19	1660000.30	14552507.96	40°04'14.736"N	104°55'47.996"W	1.85	
3739.00	12.350	266.510	3670.34	14.50	18.25	-658.16	1659981.34	14552507.22	40°04'14.729"N	104°55'48.240"W	0.72	
3828.00	12.970	266.990	3757.18	13.28	17.15	-677.64	1659961.87	14552506.10	40°04'14.718"N	104°55'48.490"W	0.71	
3918.00	11.000	265.950	3845.21	12.04	16.01	-696.29	1659943.23	14552504.95	40°04'14.707"N	104°55'48.730"W	2.20	
4000.00†	11.082	266.397	3925.69	10.90	14.97	-711.96	1659927.57	14552503.89	40°04'14.697"N	104°55'48.932"W	0.14	ENTER LANDBOX (804'FNL & 1777'FEL,SEC.07) 40.0707491 -104.9302589

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#10 BUDDY 7-10HZ(819'FNL & 1065'FEL,SEC.07)
Area	COLORADO	Well	BUDDY 7-10HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUDDY 7-10HZ AWB
Facility	SEC.07-T1N-R67W		

WELLPATH DATA (207 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
4008.00	11.090	266.440	3933.54	10.80	14.87	-713.50	1659926.03	14552503.79	40°04'14.696"N	104°55'48.952"W	0.14	
4097.00	11.300	273.430	4020.85	10.69	14.86	-730.74	1659908.79	14552503.77	40°04'14.696"N	104°55'49.173"W	1.54	
4187.00	11.370	279.650	4109.10	12.60	16.88	-748.29	1659891.25	14552505.77	40°04'14.716"N	104°55'49.399"W	1.36	
4277.00	10.910	274.620	4197.41	14.68	19.05	-765.53	1659874.02	14552507.92	40°04'14.737"N	104°55'49.621"W	1.19	
4367.00	9.530	262.490	4285.99	14.30	18.76	-781.41	1659858.15	14552507.62	40°04'14.734"N	104°55'49.825"W	2.83	
4456.00	7.520	252.500	4374.00	11.51	16.05	-794.27	1659845.29	14552504.90	40°04'14.707"N	104°55'49.991"W	2.80	
4546.00	5.120	259.420	4463.45	8.95	13.54	-803.83	1659835.73	14552502.38	40°04'14.683"N	104°55'50.114"W	2.79	
4635.00	3.550	250.320	4552.20	7.26	11.88	-810.33	1659829.24	14552500.72	40°04'14.666"N	104°55'50.197"W	1.92	
4725.00	1.740	256.420	4642.10	5.97	10.62	-814.28	1659825.29	14552499.46	40°04'14.654"N	104°55'50.248"W	2.03	
4814.00	0.850	226.600	4731.07	5.19	9.85	-816.08	1659823.50	14552498.69	40°04'14.646"N	104°55'50.271"W	1.22	
4904.00	0.870	254.970	4821.06	4.55	9.21	-817.22	1659822.35	14552498.05	40°04'14.640"N	104°55'50.286"W	0.47	
4994.00	0.770	254.000	4911.05	4.20	8.87	-818.46	1659821.11	14552497.71	40°04'14.637"N	104°55'50.302"W	0.11	
5083.00	0.910	276.900	5000.04	4.11	8.79	-819.74	1659819.84	14552497.63	40°04'14.636"N	104°55'50.318"W	0.41	
5173.00	0.820	50.320	5090.04	4.61	9.29	-819.95	1659819.62	14552498.12	40°04'14.641"N	104°55'50.321"W	1.77	
5262.00	0.780	36.280	5179.03	5.51	10.18	-819.10	1659820.47	14552499.02	40°04'14.649"N	104°55'50.310"W	0.22	
5352.00	1.070	46.020	5269.02	6.59	11.26	-818.14	1659821.44	14552500.10	40°04'14.660"N	104°55'50.298"W	0.37	
5441.00	1.060	38.650	5358.00	7.82	12.48	-817.03	1659822.55	14552501.32	40°04'14.672"N	104°55'50.283"W	0.15	
5531.00	0.890	30.470	5447.99	9.07	13.73	-816.15	1659823.42	14552502.57	40°04'14.685"N	104°55'50.272"W	0.24	
5621.00	0.420	75.080	5537.99	9.77	14.42	-815.48	1659824.09	14552503.26	40°04'14.691"N	104°55'50.263"W	0.73	
5710.00	0.360	97.390	5626.98	9.82	14.47	-814.89	1659824.69	14552503.30	40°04'14.692"N	104°55'50.256"W	0.18	
5800.00	0.380	41.120	5716.98	10.01	14.66	-814.41	1659825.16	14552503.49	40°04'14.694"N	104°55'50.250"W	0.39	
5889.00	0.550	35.470	5805.98	10.58	15.23	-813.97	1659825.60	14552504.06	40°04'14.699"N	104°55'50.244"W	0.20	
5979.00	0.620	158.050	5895.98	10.48	15.13	-813.53	1659826.04	14552503.96	40°04'14.698"N	104°55'50.238"W	1.14	
6068.00	0.520	142.720	5984.97	9.72	14.36	-813.11	1659826.46	14552503.20	40°04'14.691"N	104°55'50.233"W	0.20	
6158.00	0.040	218.280	6074.97	9.37	14.01	-812.88	1659826.69	14552502.85	40°04'14.687"N	104°55'50.230"W	0.57	
6247.00	0.290	37.750	6163.97	9.52	14.16	-812.76	1659826.81	14552503.00	40°04'14.689"N	104°55'50.229"W	0.37	
6337.00	0.970	192.520	6253.97	8.96	13.60	-812.79	1659826.78	14552502.44	40°04'14.683"N	104°55'50.229"W	1.38	
6427.00	1.300	163.160	6343.95	7.24	11.88	-812.66	1659826.91	14552500.72	40°04'14.666"N	104°55'50.227"W	0.73	
6534.00	1.110	170.620	6450.93	5.06	9.69	-812.14	1659827.44	14552498.54	40°04'14.645"N	104°55'50.220"W	0.23	
6623.00	0.870	144.260	6539.91	3.66	8.29	-811.60	1659827.97	14552497.14	40°04'14.631"N	104°55'50.214"W	0.57	
6713.00	0.740	128.300	6629.91	2.75	7.38	-810.75	1659828.83	14552496.22	40°04'14.622"N	104°55'50.203"W	0.29	
6803.00	0.890	90.100	6719.90	2.40	7.02	-809.59	1659829.98	14552495.86	40°04'14.618"N	104°55'50.188"W	0.61	
6893.00	0.910	214.250	6809.89	1.81	6.43	-809.30	1659830.28	14552495.27	40°04'14.612"N	104°55'50.184"W	1.77	
6983.00	0.670	267.220	6899.88	1.19	5.81	-810.22	1659829.35	14552494.65	40°04'14.606"N	104°55'50.196"W	0.82	
6995.00†	1.341	339.161	6911.88	1.31	5.94	-810.34	1659829.23	14552494.78	40°04'14.608"N	104°55'50.197"W	10.83	KOP
7072.00	9.530	4.590	6988.48	8.52	13.15	-810.15	1659829.42	14552501.99	40°04'14.679"N	104°55'50.195"W	10.83	
7162.00	15.410	358.270	7076.32	27.92	32.54	-809.92	1659829.64	14552521.38	40°04'14.870"N	104°55'50.192"W	6.70	
7252.00	19.950	354.680	7162.05	55.16	59.80	-811.70	1659827.83	14552548.62	40°04'15.140"N	104°55'50.215"W	5.19	
7342.00	25.220	359.650	7245.12	89.64	94.29	-813.24	1659826.26	14552583.09	40°04'15.481"N	104°55'50.235"W	6.22	
7431.00	33.390	4.270	7322.68	133.12	137.75	-811.53	1659827.93	14552626.54	40°04'15.910"N	104°55'50.213"W	9.52	
7521.00	40.390	1.820	7394.62	187.04	191.66	-808.76	1659830.66	14552680.43	40°04'16.443"N	104°55'50.177"W	7.95	
7610.00	47.840	358.630	7458.48	248.93	253.55	-808.63	1659830.74	14552742.30	40°04'17.055"N	104°55'50.175"W	8.73	
7700.00	56.050	356.960	7513.91	319.67	324.30	-811.42	1659827.90	14552813.02	40°04'17.754"N	104°55'50.211"W	9.24	
7789.00	62.130	356.570	7559.61	395.84	400.50	-815.73	1659823.53	14552889.18	40°04'18.507"N	104°55'50.267"W	6.84	
7879.00	68.200	358.100	7597.39	477.37	482.05	-819.50	1659819.69	14552970.70	40°04'19.313"N	104°55'50.315"W	6.92	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#10 BUDDY 7-10HZ(819'FNL & 1065'FEL,SEC.07)
Area	COLORADO	Well	BUDDY 7-10HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUDDY 7-10HZ AWB
Facility	SEC.07-T1N-R67W		

WELLPATH DATA (207 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
7969.00	76.680	359.350	7624.52	563.06	567.76	-821.39	1659817.74	14553056.37	40°04'20.160"N	104°55'50.340"W	9.51	
8059.00	80.730	358.790	7642.15	651.28	655.98	-822.82	1659816.23	14553144.56	40°04'21.031"N	104°55'50.358"W	4.54	
8149.00	90.020	0.330	7649.40	740.87	745.59	-823.50	1659815.48	14553234.12	40°04'21.917"N	104°55'50.367"W	10.46	LANDING (73'FNL & 1889'FEL,SEC.07) 40.0727547 -104.9306575
8238.00	89.960	0.450	7649.41	829.87	834.58	-822.89	1659816.01	14553323.09	40°04'22.796"N	104°55'50.359"W	0.15	
8418.00	90.220	2.440	7649.13	1009.83	1014.52	-818.36	1659820.40	14553502.95	40°04'24.575"N	104°55'50.301"W	1.11	
8507.00	90.840	1.040	7648.31	1098.80	1103.47	-815.65	1659823.03	14553591.87	40°04'25.454"N	104°55'50.266"W	1.72	
8597.00	91.070	0.990	7646.81	1188.78	1193.44	-814.06	1659824.55	14553681.81	40°04'26.343"N	104°55'50.246"W	0.26	
8687.00	89.130	0.150	7646.65	1278.77	1283.43	-813.16	1659825.38	14553771.76	40°04'27.232"N	104°55'50.234"W	2.35	
8698.00†	89.366	0.149	7646.79	1289.77	1294.43	-813.14	1659825.39	14553782.76	40°04'27.341"N	104°55'50.234"W	2.15	CROSS SETBACK HEEL (475'FSL & 1878'FEL,SEC.06) 40.0742613 -104.9306205
8776.00	91.040	0.140	7646.52	1367.77	1372.43	-812.94	1659825.53	14553860.72	40°04'28.111"N	104°55'50.231"W	2.15	
8866.00	89.440	359.140	7646.14	1457.76	1462.42	-813.50	1659824.89	14553950.68	40°04'29.001"N	104°55'50.239"W	2.10	
8956.00	89.040	358.870	7647.33	1547.72	1552.40	-815.07	1659823.25	14554040.62	40°04'29.890"N	104°55'50.259"W	0.54	
9045.00	89.610	358.860	7648.38	1636.69	1641.38	-816.83	1659821.42	14554129.56	40°04'30.769"N	104°55'50.282"W	0.64	
9135.00	89.930	359.260	7648.74	1726.67	1731.36	-818.31	1659819.87	14554219.51	40°04'31.659"N	104°55'50.301"W	0.57	
9224.00	89.550	0.170	7649.15	1815.66	1820.36	-818.75	1659819.36	14554308.47	40°04'32.538"N	104°55'50.306"W	1.11	
9314.00	92.010	0.280	7647.92	1905.64	1910.34	-818.40	1659819.64	14554398.42	40°04'33.427"N	104°55'50.302"W	2.74	
9404.00	91.240	359.310	7645.37	1995.60	2000.31	-818.72	1659819.24	14554488.34	40°04'34.316"N	104°55'50.306"W	1.38	
9493.00	91.100	357.970	7643.55	2084.54	2089.26	-820.83	1659817.06	14554577.26	40°04'35.195"N	104°55'50.333"W	1.51	
9583.00	90.270	358.860	7642.48	2174.48	2179.22	-823.32	1659814.50	14554667.18	40°04'36.084"N	104°55'50.365"W	1.35	
9673.00	88.340	358.420	7643.57	2264.43	2269.18	-825.45	1659812.29	14554757.10	40°04'36.973"N	104°55'50.393"W	2.20	
9762.00	89.100	358.310	7645.56	2353.36	2358.12	-827.99	1659809.68	14554846.01	40°04'37.852"N	104°55'50.425"W	0.86	
9852.00	90.810	358.600	7645.63	2443.31	2448.09	-830.42	1659807.18	14554935.93	40°04'38.741"N	104°55'50.457"W	1.93	
9941.00	90.100	358.850	7644.92	2532.27	2537.06	-832.40	1659805.13	14555024.87	40°04'39.621"N	104°55'50.482"W	0.85	
10031.00	90.180	358.760	7644.70	2622.24	2627.04	-834.28	1659803.18	14555114.81	40°04'40.510"N	104°55'50.506"W	0.13	
10210.00	90.440	359.170	7643.73	2801.18	2806.01	-837.51	1659799.80	14555293.71	40°04'42.278"N	104°55'50.548"W	0.27	
10300.00	90.270	356.620	7643.17	2891.09	2895.94	-840.82	1659796.43	14555383.60	40°04'43.167"N	104°55'50.591"W	2.84	
10389.00	89.810	358.320	7643.11	2979.98	2984.85	-844.74	1659792.43	14555472.47	40°04'44.046"N	104°55'50.641"W	1.98	
10479.00	90.410	1.650	7642.94	3069.96	3074.84	-844.77	1659792.33	14555562.42	40°04'44.935"N	104°55'50.642"W	3.76	
10569.00	91.690	3.310	7641.29	3159.88	3164.73	-840.87	1659796.15	14555652.28	40°04'45.823"N	104°55'50.591"W	2.33	
10658.00	91.160	1.980	7639.08	3248.78	3253.61	-836.77	1659800.18	14555741.12	40°04'46.702"N	104°55'50.539"W	1.61	
10748.00	91.220	0.990	7637.21	3338.74	3343.56	-834.44	1659802.44	14555831.04	40°04'47.591"N	104°55'50.509"W	1.10	
10838.00	90.670	0.530	7635.72	3428.72	3433.53	-833.24	1659803.56	14555920.98	40°04'48.480"N	104°55'50.493"W	0.80	
10927.00	90.220	358.290	7635.03	3517.70	3522.52	-834.16	1659802.57	14556009.93	40°04'49.359"N	104°55'50.505"W	2.57	
11017.00	87.410	354.800	7636.89	3607.47	3612.32	-839.58	1659797.08	14556099.69	40°04'50.246"N	104°55'50.575"W	4.98	
11107.00	87.820	356.740	7640.64	3697.10	3701.99	-846.21	1659790.38	14556189.32	40°04'51.133"N	104°55'50.660"W	2.20	
11196.00	88.560	358.360	7643.45	3785.95	3790.86	-850.01	1659786.50	14556278.15	40°04'52.011"N	104°55'50.709"W	2.00	
11286.00	89.980	358.160	7644.60	3875.88	3880.81	-852.75	1659783.70	14556368.06	40°04'52.900"N	104°55'50.745"W	1.59	
11376.00	91.410	358.700	7643.50	3965.82	3970.76	-855.21	1659781.16	14556457.98	40°04'53.789"N	104°55'50.776"W	1.70	
11465.00	89.520	358.870	7642.78	4054.78	4059.74	-857.10	1659779.20	14556546.91	40°04'54.668"N	104°55'50.801"W	2.13	
11555.00	90.270	358.870	7642.95	4144.75	4149.72	-858.87	1659777.36	14556636.86	40°04'55.557"N	104°55'50.823"W	0.83	
11645.00	91.020	0.610	7641.93	4234.74	4239.71	-859.28	1659776.88	14556726.81	40°04'56.446"N	104°55'50.829"W	2.11	
11734.00	90.050	0.830	7641.10	4323.73	4328.70	-858.16	1659777.92	14556815.76	40°04'57.326"N	104°55'50.814"W	1.12	
11824.00	89.990	359.510	7641.07	4413.73	4418.69	-857.90	1659778.11	14556905.73	40°04'58.215"N	104°55'50.811"W	1.47	
11914.00	90.520	358.560	7640.67	4503.70	4508.68	-859.41	1659776.53	14556995.67	40°04'59.104"N	104°55'50.831"W	1.21	
12003.00	89.640	359.030	7640.55	4592.67	4597.66	-861.28	1659774.58	14557084.62	40°04'59.984"N	104°55'50.855"W	1.12	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#10 BUDDY 7-10HZ(819'FNL & 1065'FEL,SEC.07)
Area	COLORADO	Well	BUDDY 7-10HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUDDY 7-10HZ AWB
Facility	SEC.07-T1N-R67W		

WELLPATH DATA (207 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
12093.00	90.610	1.180	7640.35	4682.66	4687.65	-861.12	1659774.68	14557174.57	40°05'00.873"N	104°55'50.853"W	2.62	
12182.00	91.700	0.930	7638.56	4771.63	4776.62	-859.48	1659776.24	14557263.50	40°05'01.752"N	104°55'50.832"W	1.26	
12272.00	90.040	0.440	7637.19	4861.62	4866.60	-858.41	1659777.24	14557353.45	40°05'02.641"N	104°55'50.818"W	1.92	
12361.00	90.180	0.260	7637.02	4950.62	4955.59	-857.86	1659777.71	14557442.41	40°05'03.521"N	104°55'50.811"W	0.26	
12451.00	90.180	359.820	7636.74	5040.62	5045.59	-857.80	1659777.70	14557532.37	40°05'04.410"N	104°55'50.810"W	0.49	
12541.00	89.790	359.310	7636.76	5130.61	5135.59	-858.48	1659776.95	14557622.33	40°05'05.300"N	104°55'50.819"W	0.71	
12630.00	90.470	359.940	7636.56	5219.60	5224.59	-859.07	1659776.29	14557711.30	40°05'06.179"N	104°55'50.826"W	1.04	
12720.00	89.560	358.810	7636.53	5309.59	5314.58	-860.05	1659775.24	14557801.25	40°05'07.069"N	104°55'50.839"W	1.61	
12809.00	90.270	359.050	7636.67	5398.56	5403.56	-861.71	1659773.51	14557890.20	40°05'07.948"N	104°55'50.860"W	0.84	
12899.00	90.680	359.210	7635.92	5488.54	5493.55	-863.08	1659772.07	14557980.15	40°05'08.837"N	104°55'50.878"W	0.49	
12988.00	89.870	358.080	7635.49	5577.49	5582.52	-865.18	1659769.89	14558069.08	40°05'09.716"N	104°55'50.905"W	1.56	
13078.00	91.720	0.320	7634.24	5667.46	5672.50	-866.44	1659768.56	14558159.02	40°05'10.606"N	104°55'50.921"W	3.23	
13168.00	90.530	1.370	7632.48	5757.43	5762.47	-865.11	1659769.81	14558248.95	40°05'11.495"N	104°55'50.904"W	1.76	
13257.00	90.850	0.840	7631.41	5846.42	5851.44	-863.39	1659771.46	14558337.89	40°05'12.374"N	104°55'50.882"W	0.70	
13347.00	90.500	360.000	7630.34	5936.41	5941.43	-862.73	1659772.04	14558427.85	40°05'13.263"N	104°55'50.874"W	1.01	
13436.00	91.560	359.940	7628.75	6025.39	6030.42	-862.78	1659771.93	14558516.80	40°05'14.143"N	104°55'50.875"W	1.19	
13526.00	90.560	0.950	7627.08	6115.38	6120.40	-862.08	1659772.55	14558606.74	40°05'15.032"N	104°55'50.866"W	1.58	
13615.00	90.560	359.820	7626.21	6204.37	6209.39	-861.48	1659773.08	14558695.70	40°05'15.911"N	104°55'50.858"W	1.27	
13705.00	90.420	0.800	7625.44	6294.37	6299.38	-861.00	1659773.49	14558785.66	40°05'16.801"N	104°55'50.852"W	1.10	
13795.00	90.350	359.970	7624.84	6384.36	6389.38	-860.39	1659774.02	14558875.62	40°05'17.690"N	104°55'50.844"W	0.93	
13884.00	90.270	1.220	7624.35	6473.36	6478.37	-859.47	1659774.87	14558964.57	40°05'18.569"N	104°55'50.832"W	1.41	
13974.00	89.810	0.220	7624.29	6563.36	6568.36	-858.34	1659775.93	14559054.53	40°05'19.459"N	104°55'50.818"W	1.22	
14063.00	89.990	359.320	7624.45	6652.35	6657.36	-858.69	1659775.50	14559143.49	40°05'20.338"N	104°55'50.822"W	1.03	
14153.00	88.930	1.100	7625.29	6742.34	6747.35	-858.36	1659775.76	14559233.45	40°05'21.227"N	104°55'50.818"W	2.30	
14242.00	90.180	1.270	7625.99	6831.33	6836.33	-856.52	1659777.53	14559322.39	40°05'22.107"N	104°55'50.794"W	1.42	
14332.00	90.520	0.760	7625.44	6921.32	6926.31	-854.93	1659779.05	14559412.34	40°05'22.996"N	104°55'50.774"W	0.68	
14421.00	90.350	0.220	7624.76	7010.31	7015.30	-854.17	1659779.73	14559501.30	40°05'23.875"N	104°55'50.764"W	0.64	
14511.00	90.930	1.840	7623.76	7100.30	7105.28	-852.55	1659781.28	14559591.24	40°05'24.765"N	104°55'50.743"W	1.91	
14600.00	91.020	2.550	7622.24	7189.24	7194.20	-849.14	1659784.61	14559680.13	40°05'25.643"N	104°55'50.700"W	0.80	
14690.00	90.270	3.690	7621.23	7279.12	7284.06	-844.24	1659789.44	14559769.95	40°05'26.531"N	104°55'50.637"W	1.52	
14780.00	90.920	3.350	7620.29	7368.98	7373.89	-838.72	1659794.89	14559859.75	40°05'27.419"N	104°55'50.566"W	0.82	
14870.00	90.900	4.970	7618.86	7458.76	7463.63	-832.19	1659801.34	14559949.46	40°05'28.306"N	104°55'50.482"W	1.80	
14959.00	89.280	4.350	7618.72	7547.51	7552.34	-824.96	1659808.49	14560038.14	40°05'29.182"N	104°55'50.389"W	1.95	
15049.00	90.790	5.110	7618.67	7637.24	7642.03	-817.54	1659815.84	14560127.80	40°05'30.069"N	104°55'50.293"W	1.88	
15139.00	88.980	2.900	7618.85	7727.04	7731.80	-811.25	1659822.05	14560217.54	40°05'30.956"N	104°55'50.212"W	3.17	
15228.00	89.580	0.060	7619.97	7816.01	7820.75	-808.96	1659824.27	14560306.46	40°05'31.835"N	104°55'50.183"W	3.26	
15318.00	89.730	359.580	7620.51	7906.00	7910.75	-809.24	1659823.92	14560396.42	40°05'32.724"N	104°55'50.186"W	0.56	
15407.00	90.020	359.760	7620.70	7995.00	7999.75	-809.75	1659823.33	14560485.38	40°05'33.604"N	104°55'50.193"W	0.38	
15497.00	91.670	0.050	7619.38	8084.98	8089.73	-809.90	1659823.11	14560575.33	40°05'34.493"N	104°55'50.195"W	1.86	
15587.00	91.100	0.670	7617.20	8174.95	8179.70	-809.34	1659823.60	14560665.27	40°05'35.382"N	104°55'50.188"W	0.94	
15676.00	88.310	0.380	7617.66	8263.94	8268.69	-808.52	1659824.35	14560754.22	40°05'36.262"N	104°55'50.177"W	3.15	
15766.00	88.900	0.210	7619.85	8353.91	8358.66	-808.06	1659824.74	14560844.15	40°05'37.151"N	104°55'50.171"W	0.68	
15855.00	89.120	359.700	7621.39	8442.90	8447.65	-808.13	1659824.59	14560933.10	40°05'38.030"N	104°55'50.172"W	0.62	
15945.00	89.330	359.400	7622.61	8532.88	8537.64	-808.83	1659823.82	14561023.05	40°05'38.919"N	104°55'50.182"W	0.41	
16034.00	90.070	359.400	7623.07	8621.87	8626.63	-809.77	1659822.81	14561112.01	40°05'39.799"N	104°55'50.194"W	0.83	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#10 BUDDY 7-10HZ(819'FNL & 1065'FEL,SEC.07)
Area	COLORADO	Well	BUDDY 7-10HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUDDY 7-10HZ AWB
Facility	SEC.07-T1N-R67W		

WELLPATH DATA (207 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
16124.00	91.110	1.230	7622.15	8711.86	8716.62	-809.27	1659823.23	14561201.96	40°05'40.688"N	104°55'50.187"W	2.34	
16214.00	89.850	1.920	7621.39	8801.83	8806.58	-806.80	1659825.63	14561291.89	40°05'41.577"N	104°55'50.155"W	1.60	
16303.00	91.240	2.240	7620.54	8890.78	8895.52	-803.57	1659828.79	14561380.79	40°05'42.456"N	104°55'50.114"W	1.60	
16393.00	90.160	2.720	7619.45	8980.71	8985.42	-799.67	1659832.61	14561470.67	40°05'43.344"N	104°55'50.064"W	1.31	
16483.00	91.580	2.610	7618.08	9070.63	9075.31	-795.49	1659836.72	14561560.52	40°05'44.233"N	104°55'50.010"W	1.58	
16572.00	89.930	2.650	7616.91	9159.54	9164.21	-791.41	1659840.73	14561649.39	40°05'45.111"N	104°55'49.958"W	1.85	
16662.00	88.500	2.770	7618.14	9249.45	9254.10	-787.15	1659844.91	14561739.24	40°05'46.000"N	104°55'49.903"W	1.59	
16751.00	89.380	1.980	7619.79	9338.38	9343.00	-783.46	1659848.52	14561828.12	40°05'46.878"N	104°55'49.855"W	1.33	
16841.00	90.220	1.420	7620.10	9428.35	9432.96	-780.79	1659851.12	14561918.04	40°05'47.767"N	104°55'49.821"W	1.12	
16930.00	89.850	0.430	7620.05	9517.35	9521.95	-779.36	1659852.48	14562006.99	40°05'48.646"N	104°55'49.803"W	1.19	
17020.00	90.990	0.400	7619.39	9607.34	9611.94	-778.71	1659853.06	14562096.95	40°05'49.536"N	104°55'49.794"W	1.27	
17094.00†	90.317	0.857	7618.54	9681.34	9685.93	-777.89	1659853.81	14562170.91	40°05'50.267"N	104°55'49.784"W	1.10	CROSS SETBACK TOE (584'FNL & 1847'FEL,SEC.31) 40.0972964 -104.9304955
17109.00	90.180	0.950	7618.48	9696.34	9700.93	-777.66	1659854.04	14562185.91	40°05'50.415"N	104°55'49.781"W	1.10	
17199.00	90.980	1.700	7617.57	9786.32	9790.90	-775.58	1659856.04	14562275.84	40°05'51.304"N	104°55'49.754"W	1.22	
17289.00	88.880	0.730	7617.68	9876.30	9880.87	-773.67	1659857.88	14562365.78	40°05'52.193"N	104°55'49.730"W	2.57	
17378.00	88.240	0.620	7619.91	9965.27	9969.84	-772.62	1659858.85	14562454.71	40°05'53.073"N	104°55'49.716"W	0.73	
17468.00	88.620	0.540	7622.38	10055.23	10059.80	-771.71	1659859.69	14562544.64	40°05'53.962"N	104°55'49.704"W	0.43	
17557.00	88.950	359.960	7624.27	10144.21	10148.78	-771.32	1659860.01	14562633.58	40°05'54.841"N	104°55'49.699"W	0.75	
17647.00	89.440	0.010	7625.53	10234.20	10238.77	-771.34	1659859.91	14562723.53	40°05'55.730"N	104°55'49.700"W	0.55	
17737.00	89.980	359.590	7625.99	10324.20	10328.77	-771.66	1659859.52	14562813.50	40°05'56.620"N	104°55'49.704"W	0.76	
17826.00	90.580	359.510	7625.55	10413.19	10417.76	-772.36	1659858.75	14562902.46	40°05'57.499"N	104°55'49.713"W	0.68	
17916.00	91.580	359.420	7623.85	10503.16	10507.74	-773.20	1659857.84	14562992.40	40°05'58.388"N	104°55'49.724"W	1.12	
18005.00	90.330	0.800	7622.37	10592.14	10596.73	-773.03	1659857.94	14563081.35	40°05'59.268"N	104°55'49.722"W	2.09	
18095.00	91.100	0.950	7621.25	10682.13	10686.71	-771.65	1659859.24	14563171.29	40°06'00.157"N	104°55'49.704"W	0.87	
18185.00	92.160	1.160	7618.69	10772.09	10776.66	-770.00	1659860.82	14563261.20	40°06'01.046"N	104°55'49.683"W	1.20	
18222.00	92.750	1.320	7617.10	10809.05	10813.61	-769.20	1659861.59	14563298.15	40°06'01.411"N	104°55'49.672"W	1.65	LAST BHGE MWD+IFR1+MSA SURVEY
18278.00	92.750	1.320	7614.42	10864.97	10869.53	-767.91	1659862.83	14563354.05	40°06'01.964"N	104°55'49.656"W	0.00	PTB (600'FNL & 1837'FEL,SEC.31) 40.1005454 -104.9304599

HOLE & CASING SECTIONS - Ref Wellbore: BUDDY 7-10HZ AWB Ref Wellpath: BUDDY 7-10HZ 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	1883.00	1862.00	21.00	1854.61	0.00	0.00	1.81	-275.28

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#10 BUDDY 7-10HZ(819'FNL & 1065'FEL,SEC.07)
Area	COLORADO	Well	BUDDY 7-10HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUDDY 7-10HZ 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	-14.30	1660624.86	14552609.66	40°04'15.737"N	104°55'39.958"W	polygon
SEC.31-T2N-R67W	0.00	0.30	-14.85	1660624.41	14552489.80	40°04'14.552"N	104°55'39.965"W	polygon
BUDDY 7-9HZ LANDBOX	7563.00	0.30	-14.85	1660624.41	14552489.80	40°04'14.552"N	104°55'39.965"W	polygon
BUDDY 7-9HZ SETBACK 1	7563.00	0.30	-14.85	1660624.41	14552489.80	40°04'14.552"N	104°55'39.965"W	polygon
BUDDY 7-9HZ SETBACK 2	7563.00	0.30	-14.85	1660624.41	14552489.80	40°04'14.552"N	104°55'39.965"W	polygon
BUDDY 7-10HZ BHL REV-1(600'FNL & 1845'FEL,SEC.31)	7620.00	10870.47	-775.76	1659854.99	14563354.98	40°06'01.973"N	104°55'49.757"W	point
BUDDY 7-10HZ BHL REV-2(600'FNL & 1830'FEL,SEC.31)	7620.00	10870.47	-760.76	1659869.98	14563354.99	40°06'01.973"N	104°55'49.564"W	point
BUDDY 7-10HZ HEEL REV-1(101'FNL & 1885'FEL,SEC.07)	7649.00	732.58	-818.61	1659820.38	14553221.13	40°04'21.788"N	104°55'50.304"W	point

WELLPATH COMPOSITION - Ref Wellbore: BUDDY 7-10HZ AWB Ref Wellpath: BUDDY 7-10HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
21.00	1843.00	Custom APC ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC ISCWSA Rev-2 MWD+IFR1 <126 - 1843>	BUDDY 7-10HZ AWB
1843.00	18222.00	Custom APC ISCWSA REV 2 MWD+IFR1+MSA (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+MSA <1928 - 18222>	BUDDY 7-10HZ AWB
18222.00	18278.00	Blind Drilling (std)	Projection to bit	BUDDY 7-10HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#10 BUDDY 7-10HZ(819'FNL & 1065'FEL,SEC.07)
Area	COLORADO	Well	BUDDY 7-10HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	BUDDY 7-10HZ AWB
Facility	SEC.07-T1N-R67W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
126.00	0.480	265.630	126.00	FIRST SURFACE MWD+IFR1 SURVEY
1843.00	12.040	270.900	1815.48	LAST SURFACE MWD+IFR1 SURVEY
1928.00	11.620	273.900	1898.67	FIRST BHGE MWD+IFR1+MSA SURVEY
4000.00	11.082	266.397	3925.69	ENTER LANDBOX (804'FNL & 1777'FEL,SEC.07) 40.0707491 -104.9302589
6995.00	1.341	339.161	6911.88	KOP
8149.00	90.020	0.330	7649.40	LANDING (73'FNL & 1889'FEL,SEC.07) 40.0727547 -104.9306575
8698.00	89.366	0.149	7646.79	CROSS SETBACK HEEL (475'FSL & 1878'FEL,SEC.06) 40.0742613 -104.9306205
17094.00	90.317	0.857	7618.54	CROSS SETBACK TOE (584'FNL & 1847'FEL,SEC.31) 40.0972964 -104.9304955
18222.00	92.750	1.320	7617.10	LAST BHGE MWD+IFR1+MSA SURVEY
18278.00	92.750	1.320	7614.42	PTB (600'FNL & 1837'FEL,SEC.31) 40.1005454 -104.9304599