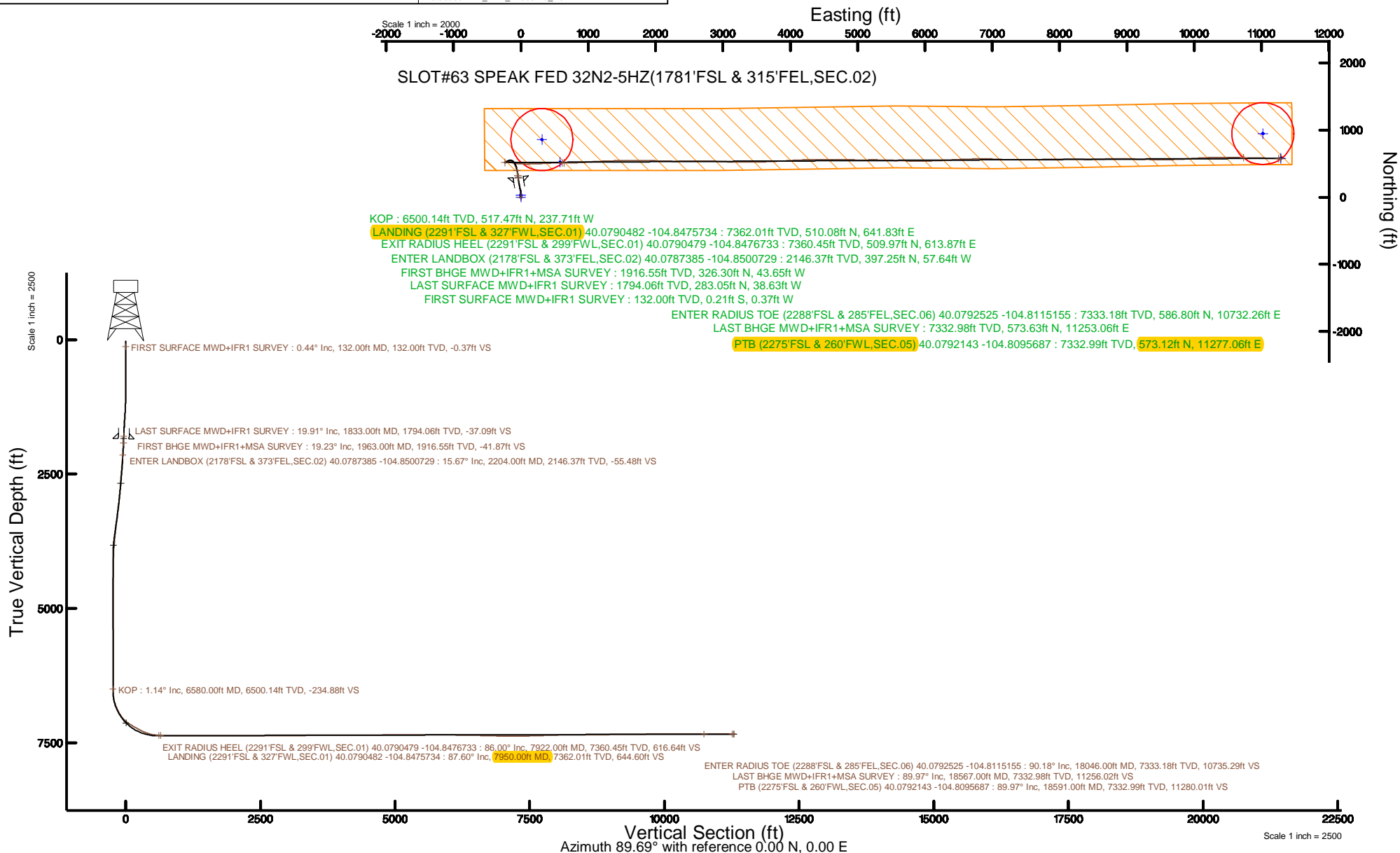


Location:	COLORADO	Slot:	SLOT#63 SPEAK FED 32N2-5HZ(1781'FSL & 315'FEL,SEC.02)
Field:	WELD COUNTY (UTM/TRUE NORTH)	Well:	SPEAK FED 32N2-5HZ
Facility:	SEC.02-T1N-R67W	Wellbore:	SPEAK FED 32N2-5HZ PWB
Plot reference wellpath is SPEAK FED 32N2-5HZ PWP Rev-A.0		Grid System: NAD83 / UTM Zone 13 North, US 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: 4976 feet		Scale: True distance	
Mean Sea Level to Mud line (At Slot: SLOT#63 SPEAK FED 32N2-5HZ(1781'FSL & 315'FEL,SEC.02): 0		Depths are in feet	
Coordinates are in feet referenced to Slot		Created by: painsetr on 2018-02-22	
		Database: WA_DEN_Anadarko_Defn	



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#63 SPEAK FED 32N2-5HZ(1781'FSL & 315'FEL,SEC.02)
Area	COLORADO	Well	SPEAK FED 32N2-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	SPEAK FED 32N2-5HZ AWB
Facility	SEC.02-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	0.999602	Report Generated	2/22/2018 at 2:07 PM
Convergence at slot	0.10° East	Database/Source file	WA_DEN_Anadarko_Defn/SPEAK_FED_32N2-5HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-2246.67	3887.06	1682413.92	14555043.89	40°04'39.533"N	104°50'59.521"W
Facility Reference Pt			1678524.98	14557283.70	40°05'01.738"N	104°51'49.525"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	4976.00ft
Horizontal Reference Pt	Slot	PD 464 (21') (RT) to Mean Sea Level	4976.00ft
Vertical Reference Pt	PD 464 (21') (RT)	PD 464 (21') (RT) to Mud Line at Slot (SLOT#63 SPEAK FED 32N2-5HZ(1781'FSL & 315'FEL,SEC.02))	4976.00ft
MD Reference Pt	PD 464 (21') (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	89.69°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#63 SPEAK FED 32N2-5HZ(1781'FSL & 315'FEL,SEC.02)
Area	COLORADO	Well	SPEAK FED 32N2-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	SPEAK FED 32N2-5HZ AWB
Facility	SEC.02-T1N-R67W		

WELLPATH DATA (245 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	0.00	240.120	0.00	0.00	0.00	0.00	1682413.92	14555043.88	40°04'39.533"N	104°50'59.521"W	0.00	
21.00	0.000	240.120	21.00	0.00	0.00	0.00	1682413.92	14555043.88	40°04'39.533"N	104°50'59.521"W	0.00	
132.00	0.440	240.120	132.00	-0.37	-0.21	-0.37	1682413.55	14555043.67	40°04'39.531"N	104°50'59.526"W	0.40	FIRST SURFACE MWD+IFR1 SURVEY
164.00	0.480	268.860	164.00	-0.61	-0.28	-0.61	1682413.31	14555043.61	40°04'39.530"N	104°50'59.529"W	0.72	
195.00	0.480	233.950	195.00	-0.85	-0.36	-0.84	1682413.07	14555043.53	40°04'39.529"N	104°50'59.532"W	0.93	
227.00	0.480	217.270	227.00	-1.04	-0.54	-1.03	1682412.88	14555043.34	40°04'39.528"N	104°50'59.534"W	0.44	
258.00	0.660	220.880	257.99	-1.23	-0.78	-1.23	1682412.69	14555043.10	40°04'39.525"N	104°50'59.537"W	0.59	
290.00	0.700	211.560	289.99	-1.46	-1.08	-1.45	1682412.47	14555042.80	40°04'39.522"N	104°50'59.540"W	0.37	
321.00	0.400	245.310	320.99	-1.66	-1.29	-1.65	1682412.27	14555042.59	40°04'39.520"N	104°50'59.542"W	1.39	
353.00	0.700	346.730	352.99	-1.80	-1.15	-1.80	1682412.12	14555042.73	40°04'39.522"N	104°50'59.544"W	2.73	
416.00	1.710	351.040	415.97	-2.03	0.16	-2.03	1682411.89	14555044.04	40°04'39.535"N	104°50'59.547"W	1.61	
448.00	1.980	6.160	447.96	-2.04	1.18	-2.05	1682411.87	14555045.06	40°04'39.545"N	104°50'59.547"W	1.73	
479.00	1.800	4.750	478.94	-1.94	2.19	-1.95	1682411.97	14555046.07	40°04'39.555"N	104°50'59.546"W	0.60	
511.00	1.980	1.240	510.92	-1.88	3.25	-1.90	1682412.02	14555047.13	40°04'39.565"N	104°50'59.545"W	0.67	
542.00	1.980	359.830	541.91	-1.86	4.32	-1.89	1682412.03	14555048.20	40°04'39.576"N	104°50'59.545"W	0.16	
574.00	2.150	0.890	573.88	-1.85	5.47	-1.88	1682412.03	14555049.35	40°04'39.587"N	104°50'59.545"W	0.54	
606.00	2.200	1.940	605.86	-1.81	6.69	-1.85	1682412.06	14555050.56	40°04'39.599"N	104°50'59.545"W	0.20	
638.00	2.680	5.540	637.83	-1.71	8.04	-1.75	1682412.15	14555051.92	40°04'39.612"N	104°50'59.544"W	1.57	
688.00	3.780	2.030	687.75	-1.52	10.85	-1.58	1682412.32	14555054.73	40°04'39.640"N	104°50'59.541"W	2.23	
702.00	4.660	357.190	701.71	-1.53	11.88	-1.59	1682412.30	14555055.76	40°04'39.650"N	104°50'59.542"W	6.78	
733.00	5.050	358.160	732.60	-1.62	14.51	-1.70	1682412.19	14555058.38	40°04'39.676"N	104°50'59.543"W	1.29	
765.00	5.450	1.410	764.47	-1.61	17.43	-1.71	1682412.18	14555061.31	40°04'39.705"N	104°50'59.543"W	1.56	
797.00	6.020	1.240	796.31	-1.52	20.63	-1.63	1682412.25	14555064.50	40°04'39.737"N	104°50'59.542"W	1.78	
860.00	7.910	356.490	858.84	-1.67	28.26	-1.83	1682412.04	14555072.13	40°04'39.812"N	104°50'59.545"W	3.13	
892.00	8.130	358.420	890.53	-1.85	32.72	-2.03	1682411.84	14555076.59	40°04'39.856"N	104°50'59.547"W	1.09	
924.00	7.780	0.800	922.22	-1.86	37.15	-2.06	1682411.80	14555081.01	40°04'39.900"N	104°50'59.547"W	1.50	
956.00	8.170	0.010	953.91	-1.80	41.59	-2.03	1682411.82	14555085.45	40°04'39.944"N	104°50'59.547"W	1.27	
987.00	9.580	355.520	984.54	-1.98	46.36	-2.23	1682411.61	14555090.22	40°04'39.991"N	104°50'59.550"W	5.06	
1019.00	10.990	355.880	1016.02	-2.37	52.06	-2.66	1682411.18	14555095.92	40°04'40.047"N	104°50'59.555"W	4.41	
1051.00	10.770	355.170	1047.45	-2.81	58.08	-3.13	1682410.69	14555101.94	40°04'40.107"N	104°50'59.561"W	0.81	
1083.00	10.810	355.960	1078.88	-3.24	64.05	-3.59	1682410.22	14555107.91	40°04'40.166"N	104°50'59.567"W	0.48	
1114.00	11.250	357.810	1109.31	-3.53	69.97	-3.91	1682409.89	14555113.82	40°04'40.224"N	104°50'59.571"W	1.82	
1146.00	12.480	354.640	1140.63	-3.94	76.54	-4.35	1682409.44	14555120.38	40°04'40.289"N	104°50'59.577"W	4.35	
1178.00	13.180	356.140	1171.83	-4.47	83.62	-4.92	1682408.86	14555127.46	40°04'40.359"N	104°50'59.584"W	2.42	
1209.00	12.520	352.720	1202.05	-5.09	90.48	-5.58	1682408.18	14555134.32	40°04'40.427"N	104°50'59.593"W	3.25	
1241.00	14.020	350.070	1233.20	-6.16	97.74	-6.69	1682407.06	14555141.57	40°04'40.499"N	104°50'59.607"W	5.06	
1273.00	14.110	348.490	1264.24	-7.56	105.38	-8.14	1682405.60	14555149.21	40°04'40.574"N	104°50'59.626"W	1.23	
1305.00	14.500	347.530	1295.25	-9.17	113.11	-9.78	1682403.95	14555156.93	40°04'40.651"N	104°50'59.647"W	1.43	
1337.00	16.000	347.790	1326.12	-10.92	121.33	-11.58	1682402.14	14555165.15	40°04'40.732"N	104°50'59.670"W	4.69	
1368.00	16.700	347.000	1355.86	-12.78	129.85	-13.49	1682400.22	14555173.66	40°04'40.816"N	104°50'59.694"W	2.37	
1400.00	17.140	347.350	1386.48	-14.80	138.93	-15.55	1682398.14	14555182.73	40°04'40.906"N	104°50'59.721"W	1.41	
1432.00	18.500	349.020	1416.94	-16.74	148.52	-17.55	1682396.12	14555192.31	40°04'41.001"N	104°50'59.747"W	4.54	
1463.00	19.470	350.250	1446.26	-18.50	158.44	-19.36	1682394.29	14555202.22	40°04'41.099"N	104°50'59.770"W	3.38	
1495.00	19.910	350.600	1476.39	-20.24	169.07	-21.16	1682392.48	14555212.85	40°04'41.204"N	104°50'59.793"W	1.42	
1526.00	19.510	350.510	1505.57	-21.90	179.38	-22.87	1682390.75	14555223.15	40°04'41.306"N	104°50'59.815"W	1.29	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#63 SPEAK FED 32N2-5HZ(1781'FSL & 315'FEL,SEC.02)
Area	COLORADO	Well	SPEAK FED 32N2-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	SPEAK FED 32N2-5HZ AWP
Facility	SEC.02-T1N-R67W		

WELLPATH DATA (245 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
1558.00	19.030	348.580	1535.78	-23.75	189.76	-24.79	1682388.82	14555233.53	40°04'41.408"N	104°50'59.840"W	2.49	
1590.00	19.340	348.400	1566.00	-25.80	200.07	-26.89	1682386.71	14555243.83	40°04'41.510"N	104°50'59.867"W	0.99	
1622.00	20.040	349.550	1596.13	-27.80	210.65	-28.95	1682384.63	14555254.40	40°04'41.615"N	104°50'59.893"W	2.50	
1653.00	20.260	351.310	1625.23	-29.51	221.18	-30.72	1682382.84	14555264.92	40°04'41.719"N	104°50'59.916"W	2.08	
1685.00	20.390	350.950	1655.24	-31.17	232.16	-32.43	1682381.11	14555275.90	40°04'41.827"N	104°50'59.938"W	0.56	
1717.00	20.350	351.480	1685.24	-32.81	243.17	-34.13	1682379.39	14555286.90	40°04'41.936"N	104°50'59.960"W	0.59	
1749.00	20.260	359.550	1715.25	-33.62	254.22	-35.00	1682378.50	14555297.94	40°04'42.045"N	104°50'59.971"W	8.75	
1780.00	20.570	349.990	1744.32	-34.55	264.95	-35.99	1682377.49	14555308.67	40°04'42.151"N	104°50'59.984"W	10.79	
1812.00	20.080	352.010	1774.32	-36.23	275.93	-37.73	1682375.73	14555319.64	40°04'42.260"N	104°51'00.006"W	2.67	
1833.00	19.910	353.590	1794.06	-37.09	283.05	-38.63	1682374.82	14555326.75	40°04'42.330"N	104°51'00.018"W	2.70	LAST SURFACE MWD+IFR1 SURVEY
1963.00	19.230	353.170	1916.55	-41.87	326.30	-43.65	1682369.73	14555369.98	40°04'42.758"N	104°51'00.083"W	0.53	FIRST BHGE MWD+IFR1+MSA SURVEY
2052.00	17.860	350.950	2000.93	-45.61	354.33	-47.54	1682365.80	14555398.00	40°04'43.035"N	104°51'00.133"W	1.73	
2142.00	16.800	345.150	2086.85	-50.97	380.54	-53.04	1682360.25	14555424.18	40°04'43.294"N	104°51'00.203"W	2.25	
2204.00†	15.669	344.069	2146.37	-55.48	397.25	-57.64	1682355.63	14555440.88	40°04'43.459"N	104°51'00.262"W	1.89	ENTER LANDBOX (2178'FSL & 373'FEL,SEC.02) 40.0787385 -104.8500729
2232.00	15.160	343.530	2173.36	-57.51	404.40	-59.72	1682353.54	14555448.02	40°04'43.529"N	104°51'00.289"W	1.89	
2321.00	14.700	342.280	2259.36	-64.13	426.31	-66.45	1682346.77	14555469.92	40°04'43.746"N	104°51'00.376"W	0.63	
2411.00	13.890	340.800	2346.57	-71.04	447.39	-73.48	1682339.71	14555490.98	40°04'43.954"N	104°51'00.466"W	0.99	
2501.00	12.650	336.850	2434.17	-78.36	466.66	-80.91	1682332.26	14555510.22	40°04'44.145"N	104°51'00.562"W	1.71	
2590.00	10.350	333.370	2521.38	-85.69	482.77	-88.32	1682324.82	14555526.31	40°04'44.304"N	104°51'00.657"W	2.70	
2680.00	8.410	330.760	2610.17	-92.46	495.74	-95.16	1682317.96	14555539.26	40°04'44.432"N	104°51'00.745"W	2.21	
2770.00	7.370	328.780	2699.32	-98.61	506.42	-101.37	1682311.73	14555549.93	40°04'44.538"N	104°51'00.825"W	1.19	
2859.00	7.090	320.240	2787.61	-105.03	515.52	-107.84	1682305.25	14555559.02	40°04'44.627"N	104°51'00.908"W	1.25	
2949.00	6.700	317.480	2876.96	-112.09	523.66	-114.94	1682298.14	14555567.14	40°04'44.708"N	104°51'01.000"W	0.57	
3039.00	7.120	308.670	2966.31	-119.95	531.02	-122.85	1682290.23	14555574.48	40°04'44.781"N	104°51'01.101"W	1.27	
3128.00	6.690	296.560	3054.67	-128.86	536.78	-131.79	1682281.28	14555580.23	40°04'44.838"N	104°51'01.216"W	1.70	
3218.00	6.870	280.290	3144.05	-138.83	540.09	-141.78	1682271.29	14555583.52	40°04'44.870"N	104°51'01.345"W	2.14	
3308.00	7.350	270.060	3233.36	-149.88	541.06	-152.83	1682260.24	14555584.47	40°04'44.880"N	104°51'01.487"W	1.50	
3397.00	7.730	259.340	3321.59	-161.46	539.95	-164.41	1682248.67	14555583.35	40°04'44.869"N	104°51'01.636"W	1.63	
3487.00	7.780	254.010	3410.77	-173.28	537.16	-176.21	1682236.87	14555580.53	40°04'44.841"N	104°51'01.788"W	0.80	
3576.00	7.150	242.710	3499.02	-184.02	532.96	-186.92	1682226.17	14555576.31	40°04'44.800"N	104°51'01.926"W	1.79	
3666.00	6.760	237.390	3588.36	-193.49	527.53	-196.36	1682216.74	14555570.88	40°04'44.746"N	104°51'02.047"W	0.84	
3755.00	6.180	246.410	3676.80	-202.32	522.79	-205.17	1682207.95	14555566.12	40°04'44.699"N	104°51'02.160"W	1.31	
3845.00	5.940	245.000	3766.29	-211.00	518.89	-213.83	1682199.30	14555562.20	40°04'44.661"N	104°51'02.272"W	0.31	
3935.00	5.320	242.630	3855.86	-218.94	515.00	-221.75	1682191.39	14555558.31	40°04'44.622"N	104°51'02.374"W	0.74	
4024.00	3.560	245.280	3944.59	-225.14	511.95	-227.93	1682185.22	14555555.24	40°04'44.592"N	104°51'02.453"W	1.99	
4114.00	1.720	256.400	4034.49	-228.99	510.46	-231.78	1682181.37	14555553.75	40°04'44.577"N	104°51'02.503"W	2.11	
4204.00	1.050	264.030	4124.46	-231.13	510.06	-233.91	1682179.24	14555553.34	40°04'44.573"N	104°51'02.530"W	0.77	
4294.00	1.160	259.510	4214.45	-232.85	509.81	-235.63	1682177.53	14555553.09	40°04'44.571"N	104°51'02.552"W	0.16	
4383.00	1.190	265.550	4303.43	-234.66	509.57	-237.43	1682175.72	14555552.85	40°04'44.569"N	104°51'02.575"W	0.14	
4473.00	1.290	270.640	4393.41	-236.60	509.51	-239.38	1682173.78	14555552.79	40°04'44.568"N	104°51'02.600"W	0.17	
4563.00	0.960	317.420	4483.39	-238.12	510.08	-240.90	1682172.25	14555553.35	40°04'44.574"N	104°51'02.620"W	1.05	
4652.00	0.950	322.210	4572.38	-239.07	511.21	-241.86	1682171.29	14555554.48	40°04'44.585"N	104°51'02.632"W	0.09	
4742.00	1.200	315.620	4662.36	-240.18	512.47	-242.97	1682170.18	14555555.74	40°04'44.597"N	104°51'02.647"W	0.31	
4832.00	1.350	316.220	4752.34	-241.57	513.91	-244.37	1682168.78	14555557.18	40°04'44.612"N	104°51'02.665"W	0.17	
4921.00	1.250	355.010	4841.32	-242.37	515.64	-245.18	1682167.97	14555558.90	40°04'44.629"N	104°51'02.675"W	0.98	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#63 SPEAK FED 32N2-5HZ(1781'FSL & 315'FEL,SEC.02)
Area	COLORADO	Well	SPEAK FED 32N2-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	SPEAK FED 32N2-5HZ AWP
Facility	SEC.02-T1N-R67W		

WELLPATH DATA (245 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
5011.00	1.400	13.940	4931.30	-242.18	517.68	-245.00	1682168.14	14555560.94	40°04'44.649"N	104°51'02.673"W	0.51	
5101.00	1.250	26.080	5021.27	-241.47	519.63	-244.30	1682168.84	14555562.89	40°04'44.668"N	104°51'02.664"W	0.35	
5190.00	1.290	18.230	5110.25	-240.72	521.45	-243.56	1682169.57	14555564.72	40°04'44.686"N	104°51'02.654"W	0.20	
5280.00	0.990	45.670	5200.23	-239.84	522.96	-242.69	1682170.44	14555566.22	40°04'44.701"N	104°51'02.643"W	0.68	
5370.00	0.860	49.670	5290.22	-238.76	523.94	-241.62	1682171.51	14555567.21	40°04'44.711"N	104°51'02.629"W	0.16	
5459.00	0.870	54.270	5379.21	-237.70	524.77	-240.56	1682172.57	14555568.03	40°04'44.719"N	104°51'02.616"W	0.08	
5549.00	0.820	48.610	5469.20	-236.66	525.59	-239.52	1682173.61	14555568.86	40°04'44.727"N	104°51'02.602"W	0.11	
5639.00	0.520	97.230	5559.20	-235.77	525.96	-238.63	1682174.49	14555569.24	40°04'44.731"N	104°51'02.591"W	0.68	
5728.00	0.470	153.570	5648.19	-235.20	525.59	-238.07	1682175.06	14555568.86	40°04'44.727"N	104°51'02.584"W	0.53	
5818.00	0.480	151.810	5738.19	-234.87	524.92	-237.73	1682175.40	14555568.20	40°04'44.720"N	104°51'02.579"W	0.02	
5908.00	0.360	147.180	5828.19	-234.54	524.35	-237.40	1682175.73	14555567.63	40°04'44.715"N	104°51'02.575"W	0.14	
5997.00	0.360	151.110	5917.19	-234.23	523.87	-237.11	1682176.02	14555567.15	40°04'44.710"N	104°51'02.571"W	0.03	
6087.00	0.500	159.620	6007.18	-233.98	523.26	-236.84	1682176.29	14555566.53	40°04'44.704"N	104°51'02.568"W	0.17	
6176.00	0.440	186.900	6096.18	-233.89	522.56	-236.74	1682176.39	14555565.83	40°04'44.697"N	104°51'02.567"W	0.26	
6266.00	0.700	205.540	6186.18	-234.18	521.72	-237.02	1682176.11	14555564.99	40°04'44.689"N	104°51'02.570"W	0.35	
6356.00	0.810	200.490	6276.17	-234.64	520.62	-237.48	1682175.65	14555563.90	40°04'44.678"N	104°51'02.576"W	0.14	
6445.00	0.790	196.000	6365.16	-235.04	519.45	-237.87	1682175.27	14555562.72	40°04'44.666"N	104°51'02.581"W	0.07	
6535.00	0.900	178.730	6455.15	-235.20	518.14	-238.03	1682175.11	14555561.42	40°04'44.653"N	104°51'02.583"W	0.31	
6580.00†	1.143	136.126	6500.14	-234.88	517.47	-237.71	1682175.43	14555560.74	40°04'44.647"N	104°51'02.579"W	1.72	KOP
6624.00	1.720	115.860	6544.13	-233.99	516.86	-236.81	1682176.33	14555560.14	40°04'44.641"N	104°51'02.567"W	1.72	
6725.00	6.730	82.420	6644.83	-226.75	516.98	-229.57	1682183.57	14555560.27	40°04'44.642"N	104°51'02.474"W	5.33	
6815.00	16.020	81.300	6732.97	-209.20	519.56	-212.03	1682201.10	14555562.88	40°04'44.667"N	104°51'02.249"W	10.32	
6905.00	20.860	90.760	6818.34	-180.87	521.23	-183.71	1682229.40	14555564.59	40°04'44.684"N	104°51'01.884"W	6.31	
6994.00	26.290	100.960	6899.92	-145.65	517.27	-148.47	1682264.63	14555560.69	40°04'44.645"N	104°51'01.431"W	7.61	
7084.00	33.460	102.210	6977.91	-101.83	508.22	-104.60	1682308.50	14555551.72	40°04'44.555"N	104°51'00.867"W	8.00	
7173.00	41.920	96.130	7048.29	-48.22	499.83	-50.94	1682362.15	14555543.43	40°04'44.472"N	104°51'00.176"W	10.37	
7263.00	50.690	92.280	7110.42	16.58	495.23	13.88	1682426.96	14555538.94	40°04'44.427"N	104°50'59.342"W	10.22	
7353.00	58.660	90.290	7162.42	89.91	493.65	87.23	1682500.28	14555537.48	40°04'44.411"N	104°50'58.399"W	9.04	
7442.00	60.870	88.130	7207.24	166.79	494.72	164.10	1682577.12	14555538.69	40°04'44.422"N	104°50'57.410"W	3.25	
7532.00	63.090	87.720	7249.52	246.20	497.60	243.49	1682656.48	14555541.70	40°04'44.450"N	104°50'56.389"W	2.50	
7622.00	66.200	86.990	7288.05	327.45	501.36	324.73	1682737.67	14555545.59	40°04'44.488"N	104°50'55.344"W	3.53	
7711.00	70.580	86.950	7320.82	410.08	505.74	407.34	1682820.24	14555550.10	40°04'44.531"N	104°50'54.281"W	4.92	
7801.00	78.820	88.840	7344.55	496.77	508.89	494.01	1682906.87	14555553.41	40°04'44.562"N	104°50'53.166"W	9.38	
7891.00	84.230	89.880	7357.81	585.75	509.88	582.99	1682995.81	14555554.54	40°04'44.572"N	104°50'52.021"W	6.12	
7922.00†	86.003	89.803	7360.45	616.64	509.97	613.87	1683026.68	14555554.68	40°04'44.573"N	104°50'51.624"W	5.72	EXIT RADIUS HEEL (2291'FSL & 299'FWL,SEC.01) 40.0790479 -104.8476733
7950.00†	87.604	89.734	7362.01	644.60	510.08	641.83	1683054.63	14555554.84	40°04'44.574"N	104°50'51.264"W	5.72	LANDING (2291'FSL & 327'FWL,SEC.01) 40.0790482 -104.8475734
7980.00	89.320	89.660	7362.82	674.58	510.24	671.82	1683084.60	14555555.05	40°04'44.575"N	104°50'50.878"W	5.72	
8070.00	90.120	88.960	7363.26	764.58	511.32	761.81	1683174.56	14555556.29	40°04'44.586"N	104°50'49.721"W	1.18	
8160.00	90.150	87.360	7363.04	854.54	514.21	851.76	1683264.47	14555559.33	40°04'44.614"N	104°50'48.564"W	1.78	
8250.00	90.150	86.000	7362.81	944.42	519.42	941.60	1683354.27	14555564.69	40°04'44.666"N	104°50'47.408"W	1.51	
8339.00	90.060	86.070	7362.64	1033.24	525.58	1030.39	1683443.01	14555570.99	40°04'44.727"N	104°50'46.266"W	0.13	
8429.00	90.030	87.650	7362.57	1123.13	530.51	1120.25	1683532.83	14555576.07	40°04'44.775"N	104°50'45.110"W	1.76	
8518.00	90.180	87.380	7362.41	1212.06	534.37	1209.17	1683621.70	14555580.08	40°04'44.813"N	104°50'43.966"W	0.35	
8608.00	89.970	88.030	7362.29	1302.01	537.97	1299.10	1683711.58	14555583.83	40°04'44.849"N	104°50'42.809"W	0.76	
8698.00	90.180	88.220	7362.18	1391.97	540.92	1389.05	1683801.50	14555586.93	40°04'44.878"N	104°50'41.652"W	0.31	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#63 SPEAK FED 32N2-5HZ(1781'FSL & 315'FEL,SEC.02)
Area	COLORADO	Well	SPEAK FED 32N2-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	SPEAK FED 32N2-5HZ AWB
Facility	SEC.02-T1N-R67W		

WELLPATH DATA (245 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
8787.00	90.220	88.230	7361.86	1480.94	543.67	1478.00	1683890.41	14555589.83	40°04'44.905"N	104°50'40.507"W	0.05	
8877.00	89.690	89.620	7361.94	1570.93	545.36	1567.99	1683980.35	14555591.67	40°04'44.922"N	104°50'39.350"W	1.65	
8967.00	89.750	90.260	7362.38	1660.93	545.45	1657.98	1684070.32	14555591.92	40°04'44.923"N	104°50'38.192"W	0.71	
9057.00	89.570	89.730	7362.91	1750.93	545.46	1747.98	1684160.28	14555592.08	40°04'44.923"N	104°50'37.034"W	0.62	
9146.00	89.660	90.560	7363.51	1839.92	545.24	1836.98	1684249.24	14555592.00	40°04'44.920"N	104°50'35.889"W	0.94	
9236.00	89.690	91.820	7364.02	1929.89	543.37	1926.96	1684339.18	14555590.28	40°04'44.902"N	104°50'34.732"W	1.40	
9325.00	89.880	92.820	7364.35	2018.79	539.77	2015.88	1684428.08	14555586.83	40°04'44.866"N	104°50'33.588"W	1.14	
9415.00	89.750	91.690	7364.64	2108.70	536.22	2105.81	1684517.98	14555583.44	40°04'44.831"N	104°50'32.431"W	1.26	
9505.00	89.720	90.810	7365.06	2198.66	534.26	2195.79	1684607.92	14555581.63	40°04'44.812"N	104°50'31.273"W	0.98	
9595.00	89.720	90.030	7365.50	2288.65	533.60	2285.78	1684697.88	14555581.13	40°04'44.805"N	104°50'30.116"W	0.87	
9684.00	89.630	89.440	7366.00	2377.65	534.01	2374.78	1684786.84	14555581.69	40°04'44.809"N	104°50'28.971"W	0.67	
9774.00	89.660	89.380	7366.56	2467.65	534.94	2464.77	1684876.80	14555582.77	40°04'44.818"N	104°50'27.813"W	0.07	
9863.00	89.750	88.970	7367.02	2556.65	536.22	2553.76	1684965.75	14555584.20	40°04'44.831"N	104°50'26.668"W	0.47	
9953.00	89.850	89.860	7367.33	2646.64	537.14	2643.76	1685055.71	14555585.27	40°04'44.840"N	104°50'25.510"W	1.00	
10043.00	89.820	90.260	7367.59	2736.64	537.05	2733.76	1685145.67	14555585.32	40°04'44.839"N	104°50'24.353"W	0.45	
10132.00	90.680	90.950	7367.20	2825.63	536.11	2822.75	1685234.63	14555584.54	40°04'44.829"N	104°50'23.208"W	1.24	
10222.00	90.580	92.180	7366.21	2915.57	533.65	2912.71	1685324.56	14555582.23	40°04'44.805"N	104°50'22.050"W	1.37	
10312.00	90.770	92.460	7365.15	3005.47	530.01	3002.63	1685414.45	14555578.74	40°04'44.769"N	104°50'20.894"W	0.38	
10401.00	90.620	92.350	7364.07	3094.36	526.27	3091.54	1685503.33	14555575.16	40°04'44.732"N	104°50'19.750"W	0.21	
10491.00	90.580	91.450	7363.13	3184.29	523.29	3181.49	1685593.25	14555572.33	40°04'44.702"N	104°50'18.593"W	1.00	
10581.00	91.110	90.400	7361.81	3274.26	521.83	3271.46	1685683.19	14555571.03	40°04'44.688"N	104°50'17.435"W	1.31	
10671.00	91.350	89.580	7359.87	3364.24	521.85	3361.44	1685773.13	14555571.19	40°04'44.688"N	104°50'16.278"W	0.95	
10761.00	91.290	89.400	7357.80	3454.21	522.65	3451.42	1685863.07	14555572.15	40°04'44.696"N	104°50'15.120"W	0.21	
10850.00	91.320	88.630	7355.77	3543.18	524.18	3540.38	1685951.99	14555573.82	40°04'44.711"N	104°50'13.976"W	0.87	
10940.00	90.980	87.820	7353.97	3633.13	526.97	3630.32	1686041.89	14555576.76	40°04'44.738"N	104°50'12.819"W	0.98	
11030.00	90.060	87.750	7353.15	3723.08	530.45	3720.24	1686131.77	14555580.39	40°04'44.772"N	104°50'11.662"W	1.03	
11120.00	89.910	87.530	7353.17	3813.02	534.15	3810.17	1686221.66	14555584.25	40°04'44.809"N	104°50'10.505"W	0.30	
11209.00	90.000	86.770	7353.24	3901.93	538.58	3899.06	1686310.50	14555588.82	40°04'44.852"N	104°50'09.362"W	0.86	
11299.00	90.150	85.890	7353.13	3991.78	544.34	3988.87	1686400.27	14555594.73	40°04'44.909"N	104°50'08.206"W	0.99	
11388.00	90.030	87.070	7352.99	4080.64	549.80	4077.70	1686489.06	14555600.34	40°04'44.963"N	104°50'07.063"W	1.33	
11478.00	90.030	88.040	7352.94	4170.57	553.64	4167.62	1686578.93	14555604.33	40°04'45.001"N	104°50'05.907"W	1.08	
11568.00	89.910	88.630	7352.99	4260.55	556.26	4257.58	1686668.85	14555607.10	40°04'45.026"N	104°50'04.749"W	0.67	
11657.00	89.850	89.490	7353.17	4349.54	557.72	4346.57	1686757.80	14555608.71	40°04'45.041"N	104°50'03.605"W	0.97	
11747.00	89.970	89.990	7353.31	4439.54	558.12	4436.57	1686847.76	14555609.27	40°04'45.045"N	104°50'02.447"W	0.57	
11836.00	90.310	91.250	7353.10	4528.53	557.16	4525.56	1686936.72	14555608.45	40°04'45.035"N	104°50'01.302"W	1.47	
11926.00	90.180	91.070	7352.71	4618.50	555.34	4615.54	1687026.67	14555606.79	40°04'45.017"N	104°50'00.144"W	0.25	
12016.00	90.250	90.200	7352.37	4708.48	554.34	4705.53	1687116.63	14555605.94	40°04'45.007"N	104°49'58.987"W	0.97	
12105.00	90.340	89.340	7351.92	4797.48	554.70	4794.53	1687205.59	14555606.45	40°04'45.010"N	104°49'57.842"W	0.97	
12195.00	90.310	90.360	7351.40	4887.48	554.94	4884.53	1687295.55	14555606.83	40°04'45.012"N	104°49'56.684"W	1.13	
12285.00	90.370	91.180	7350.87	4977.46	553.73	4974.52	1687385.50	14555605.78	40°04'45.000"N	104°49'55.526"W	0.91	
12374.00	90.180	90.330	7350.44	5066.44	552.55	5063.51	1687474.46	14555604.75	40°04'44.988"N	104°49'54.382"W	0.98	
12464.00	90.310	88.460	7350.06	5156.43	553.50	5153.50	1687564.41	14555605.86	40°04'44.998"N	104°49'53.224"W	2.08	
12554.00	90.340	90.370	7349.55	5246.43	554.42	5243.49	1687654.36	14555606.93	40°04'45.006"N	104°49'52.066"W	2.12	
12643.00	90.120	91.110	7349.19	5335.41	553.27	5332.48	1687743.32	14555605.93	40°04'44.995"N	104°49'50.921"W	0.87	
12733.00	90.340	91.950	7348.83	5425.36	550.87	5422.44	1687833.26	14555603.68	40°04'44.971"N	104°49'49.764"W	0.96	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#63 SPEAK FED 32N2-5HZ(1781'FSL & 315'FEL,SEC.02)
Area	COLORADO	Well	SPEAK FED 32N2-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	SPEAK FED 32N2-5HZ AWP
Facility	SEC.02-T1N-R67W		

WELLPATH DATA (245 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
12823.00	90.340	91.940	7348.30	5515.29	547.82	5512.39	1687923.17	14555600.78	40°04'44.941"N	104°49'48.607"W	0.01	
12912.00	90.310	91.650	7347.79	5604.23	545.03	5601.35	1688012.10	14555598.14	40°04'44.913"N	104°49'47.463"W	0.33	
13002.00	90.400	92.520	7347.23	5694.15	541.75	5691.28	1688102.00	14555595.02	40°04'44.880"N	104°49'46.306"W	0.97	
13092.00	90.060	92.090	7346.87	5784.05	538.13	5781.21	1688191.90	14555591.55	40°04'44.844"N	104°49'45.149"W	0.61	
13181.00	89.170	90.200	7347.47	5873.02	536.36	5870.19	1688280.84	14555589.92	40°04'44.827"N	104°49'44.004"W	2.35	
13271.00	88.980	88.750	7348.92	5963.00	537.18	5960.17	1688370.79	14555590.90	40°04'44.834"N	104°49'42.846"W	1.62	
13361.00	88.860	88.690	7350.62	6052.98	539.19	6050.13	1688460.71	14555593.06	40°04'44.854"N	104°49'41.689"W	0.15	
13451.00	88.950	88.110	7352.34	6142.94	541.70	6140.08	1688550.62	14555595.72	40°04'44.879"N	104°49'40.532"W	0.65	
13540.00	88.980	87.360	7353.95	6231.87	545.22	6228.99	1688639.49	14555599.39	40°04'44.913"N	104°49'39.388"W	0.84	
13630.00	89.050	87.070	7355.49	6321.77	549.59	6318.87	1688729.33	14555603.91	40°04'44.956"N	104°49'38.232"W	0.33	
13719.00	88.920	86.870	7357.07	6410.66	554.29	6407.73	1688818.14	14555608.76	40°04'45.002"N	104°49'37.089"W	0.27	
13809.00	89.020	87.060	7358.69	6500.54	559.06	6497.59	1688907.96	14555613.68	40°04'45.049"N	104°49'35.933"W	0.24	
13899.00	88.460	87.570	7360.67	6590.44	563.27	6587.47	1688997.80	14555618.04	40°04'45.091"N	104°49'34.776"W	0.84	
13988.00	88.550	88.480	7362.99	6679.37	566.34	6676.39	1689086.67	14555621.26	40°04'45.121"N	104°49'33.633"W	1.03	
14078.00	88.370	89.060	7365.41	6769.33	568.27	6766.33	1689176.58	14555623.34	40°04'45.140"N	104°49'32.475"W	0.67	
14167.00	88.430	89.870	7367.89	6858.29	569.10	6855.29	1689265.50	14555624.32	40°04'45.148"N	104°49'31.331"W	0.91	
14257.00	88.890	91.010	7370.00	6948.26	568.41	6945.27	1689355.44	14555623.78	40°04'45.141"N	104°49'30.174"W	1.37	
14347.00	89.910	92.450	7370.94	7038.19	565.69	7035.22	1689445.36	14555621.22	40°04'45.113"N	104°49'29.016"W	1.96	
14436.00	89.970	92.930	7371.03	7127.07	561.52	7124.12	1689534.23	14555617.19	40°04'45.072"N	104°49'27.873"W	0.54	
14526.00	90.150	92.190	7370.94	7216.96	557.50	7214.03	1689624.11	14555613.32	40°04'45.032"N	104°49'26.716"W	0.85	
14616.00	90.090	90.450	7370.75	7306.92	555.42	7304.00	1689714.05	14555611.40	40°04'45.011"N	104°49'25.559"W	1.93	
14705.00	90.220	89.510	7370.51	7395.91	555.46	7393.00	1689803.01	14555611.58	40°04'45.011"N	104°49'24.414"W	1.07	
14795.00	91.880	88.770	7368.86	7485.89	556.81	7482.97	1689892.94	14555613.09	40°04'45.024"N	104°49'23.256"W	2.02	
14885.00	91.790	89.430	7365.98	7575.84	558.22	7572.91	1689982.85	14555614.65	40°04'45.038"N	104°49'22.099"W	0.74	
14974.00	91.820	89.030	7363.18	7664.79	559.41	7661.86	1690071.76	14555616.00	40°04'45.050"N	104°49'20.955"W	0.45	
15064.00	91.790	89.430	7360.34	7754.74	560.62	7751.81	1690161.67	14555617.36	40°04'45.061"N	104°49'19.798"W	0.45	
15154.00	91.750	89.480	7357.56	7844.70	561.48	7841.76	1690251.58	14555618.36	40°04'45.069"N	104°49'18.641"W	0.07	
15243.00	91.690	89.490	7354.89	7933.66	562.28	7930.72	1690340.50	14555619.31	40°04'45.077"N	104°49'17.496"W	0.07	
15333.00	91.750	89.710	7352.19	8023.62	562.91	8020.67	1690430.42	14555620.09	40°04'45.083"N	104°49'16.339"W	0.25	
15423.00	91.790	90.190	7349.41	8113.58	562.98	8110.63	1690520.34	14555620.32	40°04'45.083"N	104°49'15.182"W	0.53	
15513.00	90.890	90.530	7347.30	8203.54	562.42	8200.60	1690610.28	14555619.91	40°04'45.078"N	104°49'14.024"W	1.07	
15602.00	90.220	90.600	7346.44	8292.53	561.54	8289.59	1690699.24	14555619.18	40°04'45.069"N	104°49'12.880"W	0.76	
15692.00	90.280	91.100	7346.05	8382.51	560.21	8379.58	1690789.19	14555618.00	40°04'45.055"N	104°49'11.722"W	0.56	
15782.00	90.150	88.600	7345.71	8472.50	560.44	8469.57	1690879.15	14555618.39	40°04'45.057"N	104°49'10.564"W	2.78	
15871.00	90.220	87.840	7345.42	8561.47	563.21	8558.53	1690968.06	14555621.30	40°04'45.084"N	104°49'09.420"W	0.86	
15961.00	90.220	88.080	7345.08	8651.43	566.41	8648.47	1691057.96	14555624.65	40°04'45.116"N	104°49'08.263"W	0.27	
16050.00	90.310	88.280	7344.67	8740.40	569.24	8737.43	1691146.88	14555627.63	40°04'45.143"N	104°49'07.118"W	0.25	
16140.00	90.150	89.820	7344.30	8830.39	570.73	8827.41	1691236.82	14555629.27	40°04'45.158"N	104°49'05.961"W	1.72	
16230.00	90.280	89.760	7343.97	8920.39	571.06	8917.41	1691326.78	14555629.75	40°04'45.161"N	104°49'04.803"W	0.16	
16319.00	90.250	90.940	7343.56	9009.38	570.52	9006.41	1691415.74	14555629.36	40°04'45.155"N	104°49'03.658"W	1.33	
16409.00	90.220	92.050	7343.19	9099.33	568.17	9096.37	1691505.68	14555627.16	40°04'45.131"N	104°49'02.501"W	1.23	
16499.00	90.220	92.270	7342.84	9189.25	564.78	9186.31	1691595.58	14555623.92	40°04'45.097"N	104°49'01.344"W	0.24	
16588.00	90.120	91.540	7342.58	9278.18	561.82	9275.26	1691684.50	14555621.12	40°04'45.068"N	104°49'00.199"W	0.83	
16678.00	90.280	90.780	7342.26	9368.15	559.99	9365.24	1691774.45	14555619.45	40°04'45.050"N	104°48'59.042"W	0.86	
16768.00	91.510	90.700	7340.86	9458.12	558.83	9455.22	1691864.40	14555618.44	40°04'45.038"N	104°48'57.884"W	1.37	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#63 SPEAK FED 32N2-5HZ(1781'FSL & 315'FEL,SEC.02)
Area	COLORADO	Well	SPEAK FED 32N2-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	SPEAK FED 32N2-5HZ AWB
Facility	SEC.02-T1N-R67W		

WELLPATH DATA (245 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
16858.00	91.450	90.050	7338.53	9548.08	558.24	9545.19	1691954.33	14555618.00	40°04'45.032"N	104°48'56.727"W	0.73	
16947.00	91.480	88.960	7336.26	9637.05	559.01	9634.15	1692043.26	14555618.92	40°04'45.039"N	104°48'55.582"W	1.22	
17037.00	91.480	88.230	7333.93	9727.01	561.22	9724.09	1692133.16	14555621.28	40°04'45.060"N	104°48'54.425"W	0.81	
17127.00	91.450	86.790	7331.63	9816.91	565.13	9813.98	1692223.00	14555625.34	40°04'45.099"N	104°48'53.269"W	1.60	
17216.00	90.370	86.050	7330.22	9905.75	570.68	9902.79	1692311.77	14555631.04	40°04'45.153"N	104°48'52.126"W	1.47	
17306.00	90.030	86.620	7329.90	9995.60	576.44	9992.60	1692401.54	14555636.94	40°04'45.210"N	104°48'50.971"W	0.74	
17396.00	90.030	86.860	7329.86	10085.48	581.55	10082.46	1692491.35	14555642.21	40°04'45.260"N	104°48'49.815"W	0.27	
17486.00	90.030	87.570	7329.81	10175.39	585.93	10172.35	1692581.20	14555646.73	40°04'45.303"N	104°48'48.659"W	0.79	
17575.00	90.030	88.750	7329.76	10264.36	588.79	10261.30	1692670.11	14555649.74	40°04'45.331"N	104°48'47.514"W	1.33	
17665.00	89.260	89.680	7330.32	10354.35	590.02	10351.29	1692760.06	14555651.12	40°04'45.342"N	104°48'46.357"W	1.34	
17754.00	89.290	90.310	7331.45	10443.34	590.03	10440.29	1692849.02	14555651.28	40°04'45.342"N	104°48'45.212"W	0.71	
17844.00	89.320	90.880	7332.54	10533.33	589.09	10530.27	1692938.97	14555650.50	40°04'45.333"N	104°48'44.054"W	0.63	
18024.00	90.220	90.460	7333.26	10713.30	586.99	10710.26	1693118.89	14555648.70	40°04'45.311"N	104°48'41.739"W	0.55	
18046.00†	90.180	90.509	7333.18	10735.29	586.80	10732.26	1693140.88	14555648.55	40°04'45.309"N	104°48'41.456"W	0.29	ENTER RADIUS TOE (2288'FSL & 285'FEL, SEC.06) 40.0792525 -104.8115155
18113.00	90.060	90.660	7333.04	10802.28	586.12	10799.25	1693207.85	14555647.98	40°04'45.302"N	104°48'40.594"W	0.29	
18207.00	90.060	91.070	7332.94	10896.26	584.70	10893.24	1693301.80	14555646.72	40°04'45.288"N	104°48'39.385"W	0.44	
18301.00	90.060	91.540	7332.85	10990.23	582.56	10987.22	1693395.74	14555644.74	40°04'45.266"N	104°48'38.176"W	0.50	
18395.00	89.940	92.520	7332.85	11084.15	579.23	11081.16	1693489.65	14555641.57	40°04'45.233"N	104°48'36.967"W	1.05	
18567.00	89.970	91.210	7332.98	11256.02	573.63	11253.06	1693661.50	14555636.26	40°04'45.177"N	104°48'34.756"W	0.76	LAST BHGE MWD+IFR1+MSA SURVEY
18591.00	89.970	91.210	7332.99	11280.01	573.12	11277.06	1693685.48	14555635.79	40°04'45.171"N	104°48'34.447"W	0.00	PTB (2275'FSL & 260'FWL, SEC.05) 40.0792143 -104.8095687

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.01-T1N-R67W	0.00	30.26	-0.31	1682413.56	14555074.13	40°04'39.832"N	104°50'59.525"W	polygon
SEC.06-T1N-R66W	0.00	30.26	-0.31	1682413.56	14555074.13	40°04'39.832"N	104°50'59.525"W	polygon
SPEAK FED 32N2-5HZ BHL REV-1(2280'FSL & 268'FWL,SEC.05)	7336.00	578.12	11284.80	1693693.21	14555640.80	40°04'45.221"N	104°48'34.348"W	point
SPEAK FED 32N2-5HZ HEEL REV-1(2302'FSL & 270'FWL,SEC.01)	7366.00	519.83	582.33	1682995.14	14555564.49	40°04'44.670"N	104°50'52.030"W	point
SPEAK FED 32N2-5HZ LANDBOX	7366.00	0.00	0.00	1682413.92	14555043.88	40°04'39.533"N	104°50'59.521"W	polygon
SPEAK FED 32N2-5HZ RADIUS 1	7366.00	856.23	313.15	1682725.50	14555900.30	40°04'47.994"N	104°50'55.492"W	polygon
SPEAK FED 32N2-5HZ RADIUS 2	7366.00	945.41	11019.10	1693427.00	14556007.50	40°04'48.852"N	104°48'37.764"W	polygon

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#63 SPEAK FED 32N2-5HZ(1781'FSL & 315'FEL,SEC.02)
Area	COLORADO	Well	SPEAK FED 32N2-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	SPEAK FED 32N2-5HZ AWB
Facility	SEC.02-T1N-R67W		

WELLPATH COMPOSITION - Ref Wellbore: SPEAK FED 32N2-5HZ AWB				Ref Wellpath: SPEAK FED 32N2-5HZ AWP	
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment		Wellbore
21.00	1833.00	Custom APC ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC ISCWSA Rev-2 MWD+IFR1 <132 - 1833>		SPEAK FED 32N2-5HZ AWB
1833.00	18567.00	Custom APC ISCWSA REV 2 MWD+IFR1+MSA (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+MSA <1963 - 18567>		SPEAK FED 32N2-5HZ AWB
18567.00	18591.00	Blind Drilling (std)	Projection to bit		SPEAK FED 32N2-5HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#63 SPEAK FED 32N2-5HZ(1781'FSL & 315'FEL,SEC.02)
Area	COLORADO	Well	SPEAK FED 32N2-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	SPEAK FED 32N2-5HZ AWB
Facility	SEC.02-T1N-R67W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
132.00	0.440	240.120	132.00	FIRST SURFACE MWD+IFR1 SURVEY
1833.00	19.910	353.590	1794.06	LAST SURFACE MWD+IFR1 SURVEY
1963.00	19.230	353.170	1916.55	FIRST BHGE MWD+IFR1+MSA SURVEY
2204.00	15.669	344.069	2146.37	ENTER LANDBOX (2178'FSL & 373'FEL,SEC.02) 40.0787385 -104.8500729
6580.00	1.143	136.126	6500.14	KOP
7922.00	86.003	89.803	7360.45	EXIT RADIUS HEEL (2291'FSL & 299'FWL,SEC.01) 40.0790479 -104.8476733
7950.00	87.604	89.734	7362.01	LANDING (2291'FSL & 327'FWL,SEC.01) 40.0790482 -104.8475734
18046.00	90.180	90.509	7333.18	ENTER RADIUS TOE (2288'FSL & 285'FEL,SEC.06) 40.0792525 -104.8115155
18567.00	89.970	91.210	7332.98	LAST BHGE MWD+IFR1+MSA SURVEY
18591.00	89.970	91.210	7332.99	PTB (2275'FSL & 260'FWL,SEC.05) 40.0792143 -104.8095687