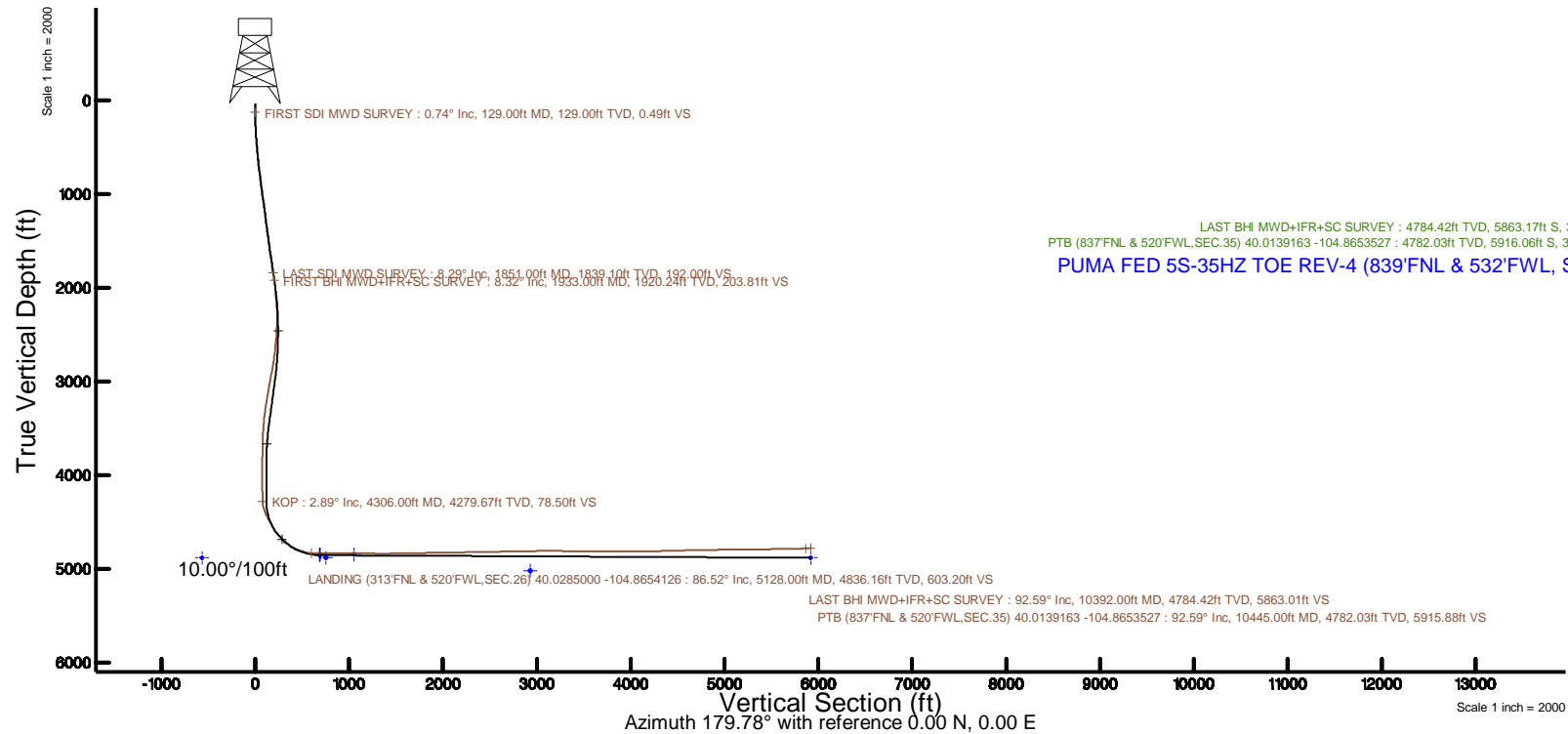
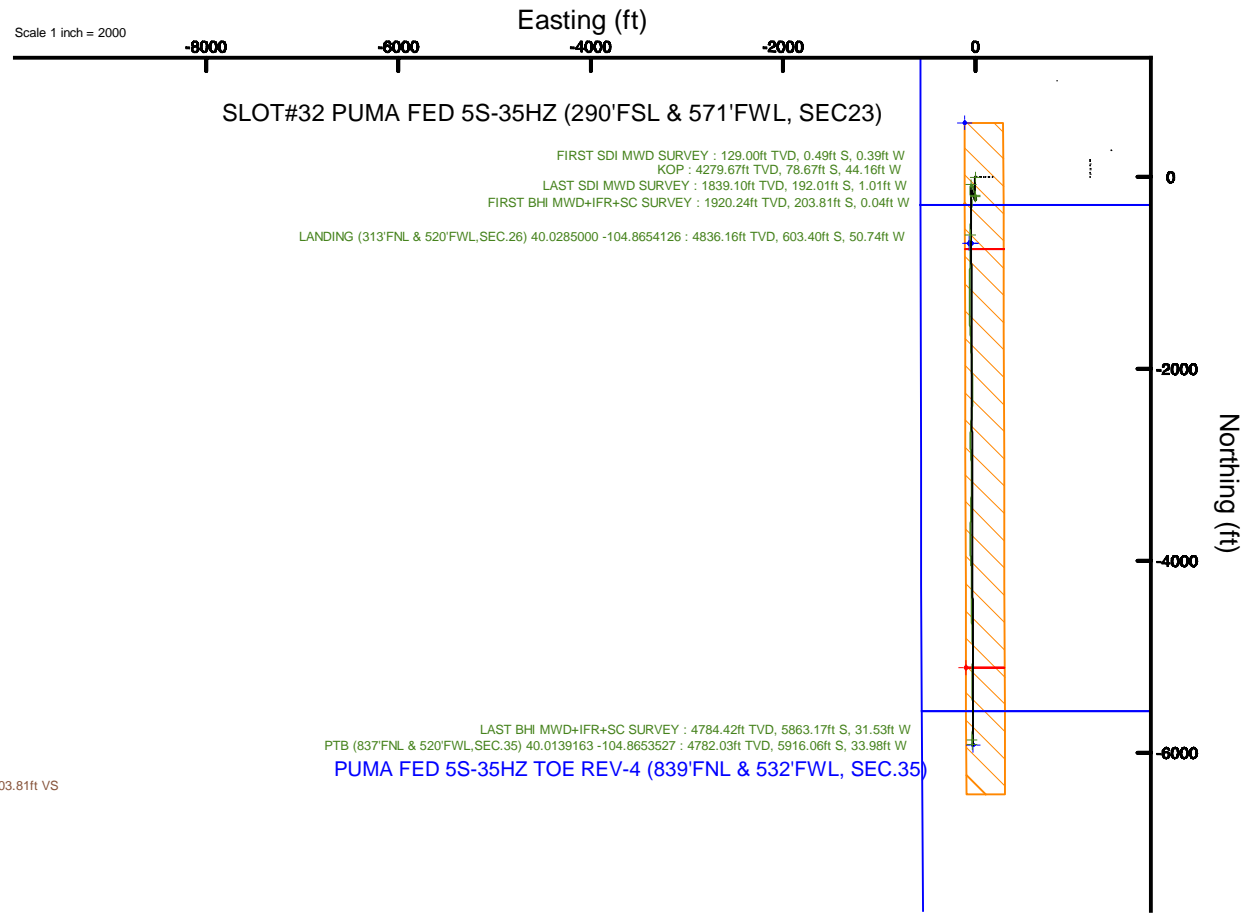


# KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#32 PUMA FED 5S-35HZ (290'FSL & 571'FWL, SEC23)  
 Field: WELD COUNTY (UTM/TRUE NORTH) Well: PUMA FED 5S-35HZ  
 Facility: SEC.23-T1N-R67W Wellbore: PUMA FED 5S-35HZ PWB

Plot reference wellpath is PUMA FED 5S-35HZ Rev-E.0	Grid System: NAD83 / UTM Zone 13 North, US feet
True vertical depths are referenced to NABORS X22 (RKB 32) (RKB)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to NABORS X22 (RKB 32) (RKB)	North Reference: True north
NABORS X22 (RKB 32) (RKB) to Mean Sea Level: 5023 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#32 PUMA FED 5S-35HZ (290'FSL & 571'FWL, SEC23)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: painsetr on 2017-04-11
	Database: WA_DEN_Anadarko_Defn



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#32 PUMA FED 5S-35HZ (290'FSL & 571'FWL, SEC23)
Area	COLORADO	Well	PUMA FED 5S-35HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	PUMA FED 5S-35HZ AWB
Facility	SEC.23-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	4/11/2017 at 9:04 AM
Convergence at slot	0.09° East	Database/Source file	WA_DEN_Anadarko_Defn/PUMA_FED_5S-35HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-2.09	-3973.32	1678142.14	14537743.20	40°01'48.563"N	104°51'54.833"W
Facility Reference Pt			1682113.86	14537751.93	40°01'48.587"N	104°51'03.755"W
Field Reference Pt			1698235.31	14552047.82	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM			
Calculation method	Minimum curvature	NABORS X22 (RKB 32') (RKB) to Facility Vertical Datum	5023.00ft
Horizontal Reference Pt	Slot	NABORS X22 (RKB 32') (RKB) to Mean Sea Level	5023.00ft
Vertical Reference Pt	NABORS X22 (RKB 32') (RKB)	NABORS X22 (RKB 32') (RKB) to Mud Line at Slot (SLOT#32 PUMA FED 5S-35HZ (290'FSL & 571'FWL, SEC23))	5023.00ft
MD Reference Pt	NABORS X22 (RKB 32') (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	179.78°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#32 PUMA FED 5S-35HZ (290'FSL & 571'FWL, SEC23)
Area	COLORADO	Well	PUMA FED 5S-35HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	PUMA FED 5S-35HZ AWB
Facility	SEC.23-T1N-R67W		

WELLPATH DATA (130 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	218.470	0.00	0.00	0.00	0.00	1678142.14	14537743.20	40°01'48.563"N	104°51'54.833"W	0.00	
32.00	0.000	218.470	32.00	0.00	0.00	0.00	1678142.14	14537743.20	40°01'48.563"N	104°51'54.833"W	0.00	
129.00	0.740	218.470	129.00	0.49	-0.49	-0.39	1678141.75	14537742.71	40°01'48.558"N	104°51'54.838"W	0.76	FIRST SDI MWD SURVEY
211.00	1.720	200.250	210.98	2.06	-2.06	-1.15	1678141.00	14537741.14	40°01'48.543"N	104°51'54.848"W	1.27	
284.00	2.560	189.580	283.93	4.69	-4.70	-1.80	1678140.35	14537738.50	40°01'48.517"N	104°51'54.856"W	1.27	
372.00	3.290	180.170	371.81	9.15	-9.16	-2.13	1678140.03	14537734.04	40°01'48.472"N	104°51'54.860"W	0.99	
461.00	4.680	185.820	460.59	15.31	-15.32	-2.51	1678139.66	14537727.88	40°01'48.412"N	104°51'54.865"W	1.62	
550.00	5.330	181.250	549.26	23.06	-23.07	-2.96	1678139.21	14537720.14	40°01'48.335"N	104°51'54.871"W	0.86	
637.00	5.840	183.200	635.84	31.52	-31.53	-3.30	1678138.89	14537711.68	40°01'48.251"N	104°51'54.875"W	0.63	
721.00	6.280	180.730	719.37	40.38	-40.39	-3.60	1678138.61	14537702.82	40°01'48.164"N	104°51'54.879"W	0.61	
810.00	7.520	174.500	807.73	51.04	-51.05	-3.10	1678139.12	14537692.16	40°01'48.058"N	104°51'54.873"W	1.63	
897.00	7.350	176.730	894.00	62.27	-62.28	-2.24	1678140.00	14537680.95	40°01'47.948"N	104°51'54.862"W	0.38	
986.00	7.330	177.000	982.27	73.62	-73.63	-1.62	1678140.64	14537669.60	40°01'47.835"N	104°51'54.854"W	0.04	
1072.00	8.300	178.870	1067.47	85.31	-85.32	-1.21	1678141.07	14537657.92	40°01'47.720"N	104°51'54.849"W	1.17	
1161.00	7.700	179.560	1155.60	97.70	-97.70	-1.03	1678141.26	14537645.54	40°01'47.598"N	104°51'54.846"W	0.68	
1250.00	7.190	182.170	1243.85	109.22	-109.23	-1.20	1678141.11	14537634.01	40°01'47.484"N	104°51'54.848"W	0.69	
1336.00	7.790	181.440	1329.12	120.43	-120.43	-1.55	1678140.78	14537622.81	40°01'47.373"N	104°51'54.853"W	0.71	
1421.00	7.390	182.820	1413.37	131.64	-131.65	-1.96	1678140.38	14537611.60	40°01'47.262"N	104°51'54.858"W	0.52	
1510.00	7.760	179.720	1501.59	143.37	-143.38	-2.21	1678140.14	14537599.88	40°01'47.146"N	104°51'54.861"W	0.62	
1598.00	8.010	179.240	1588.76	155.44	-155.45	-2.10	1678140.27	14537587.81	40°01'47.027"N	104°51'54.860"W	0.29	
1685.00	8.500	179.490	1674.86	167.93	-167.94	-1.97	1678140.43	14537575.33	40°01'46.903"N	104°51'54.858"W	0.56	
1774.00	8.290	178.020	1762.91	180.92	-180.93	-1.69	1678140.73	14537562.34	40°01'46.775"N	104°51'54.855"W	0.34	
1851.00	8.290	174.940	1839.10	192.00	-192.01	-1.01	1678141.43	14537551.27	40°01'46.666"N	104°51'54.846"W	0.58	LAST SDI MWD SURVEY
1933.00	8.320	175.690	1920.24	203.81	-203.81	-0.04	1678142.41	14537539.47	40°01'46.549"N	104°51'54.833"W	0.14	FIRST BHI MWD+IFR+SC SURVEY
2027.00	6.610	161.520	2013.45	215.73	-215.73	2.19	1678144.66	14537527.57	40°01'46.431"N	104°51'54.805"W	2.66	
2121.00	4.820	137.670	2106.99	223.80	-223.78	6.56	1678149.04	14537519.52	40°01'46.352"N	104°51'54.749"W	3.12	
2214.00	3.970	168.660	2199.73	229.86	-229.82	9.83	1678152.31	14537513.48	40°01'46.292"N	104°51'54.707"W	2.67	
2309.00	1.200	237.760	2294.64	233.62	-233.58	9.63	1678152.12	14537509.73	40°01'46.255"N	104°51'54.709"W	3.91	
2402.00	2.800	316.340	2387.59	232.48	-232.46	7.24	1678149.73	14537510.85	40°01'46.266"N	104°51'54.740"W	3.03	
2496.00	3.580	340.820	2481.45	228.04	-228.02	4.69	1678147.18	14537515.28	40°01'46.310"N	104°51'54.773"W	1.65	
2590.00	5.500	335.910	2575.15	221.14	-221.14	1.89	1678144.36	14537522.15	40°01'46.378"N	104°51'54.809"W	2.08	
2684.00	6.380	355.720	2668.66	211.81	-211.82	-0.34	1678142.12	14537531.47	40°01'46.470"N	104°51'54.837"W	2.36	
2778.00	7.670	5.460	2761.95	200.36	-200.36	-0.13	1678142.31	14537542.92	40°01'46.583"N	104°51'54.835"W	1.86	
2872.00	10.740	353.200	2854.74	185.41	-185.42	-0.57	1678141.85	14537557.86	40°01'46.731"N	104°51'54.840"W	3.86	
2965.00	11.170	347.780	2946.05	167.99	-168.01	-3.51	1678138.89	14537575.26	40°01'46.903"N	104°51'54.878"W	1.20	
3060.00	10.490	345.230	3039.35	150.62	-150.65	-7.66	1678134.71	14537592.60	40°01'47.074"N	104°51'54.931"W	0.88	
3153.00	9.810	343.870	3130.90	134.81	-134.85	-12.02	1678130.33	14537608.38	40°01'47.230"N	104°51'54.987"W	0.78	
3247.00	9.150	340.610	3223.62	120.05	-120.11	-16.72	1678125.61	14537623.11	40°01'47.376"N	104°51'55.048"W	0.90	
3342.00	8.610	338.850	3317.48	106.27	-106.35	-21.80	1678120.51	14537636.86	40°01'47.512"N	104°51'55.113"W	0.64	
3435.00	6.420	334.200	3409.67	95.08	-95.18	-26.57	1678115.72	14537648.02	40°01'47.622"N	104°51'55.175"W	2.44	
3530.00	5.420	324.010	3504.17	86.64	-86.77	-31.52	1678110.76	14537656.42	40°01'47.706"N	104°51'55.238"W	1.52	
3623.00	3.550	293.520	3596.89	81.92	-82.06	-36.74	1678105.54	14537661.12	40°01'47.752"N	104°51'55.305"W	3.19	
3717.00	1.730	314.810	3690.79	79.74	-79.90	-40.42	1678101.86	14537663.27	40°01'47.773"N	104°51'55.353"W	2.17	
3810.00	1.590	306.830	3783.75	77.97	-78.14	-42.45	1678099.83	14537665.03	40°01'47.791"N	104°51'55.379"W	0.29	
3904.00	1.900	302.850	3877.71	76.34	-76.51	-44.80	1678097.47	14537666.65	40°01'47.807"N	104°51'55.409"W	0.35	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#32 PUMA FED 5S-35HZ (290'FSL & 571'FWL, SEC23)
Area	COLORADO	Well	PUMA FED 5S-35HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	PUMA FED 5S-35HZ AWB
Facility	SEC.23-T1N-R67W		

WELLPATH DATA (130 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
3998.00	1.050	133.500	3971.69	76.08	-76.26	-45.49	1678096.79	14537666.90	40°01'47.809"N	104°51'55.418"W	3.13	
4093.00	0.770	128.780	4066.68	77.09	-77.26	-44.36	1678097.92	14537665.91	40°01'47.800"N	104°51'55.403"W	0.30	
4187.00	0.160	179.810	4160.68	77.62	-77.78	-43.86	1678098.41	14537665.38	40°01'47.794"N	104°51'55.397"W	0.72	
4281.00	0.230	235.790	4254.68	77.85	-78.02	-44.02	1678098.26	14537665.14	40°01'47.792"N	104°51'55.399"W	0.21	
4306.00†	2.892	189.299	4279.67	78.50	-78.67	-44.16	1678098.12	14537664.49	40°01'47.786"N	104°51'55.401"W	10.95	KOP
4327.00	5.190	187.750	4300.61	79.97	-80.14	-44.38	1678097.90	14537663.03	40°01'47.771"N	104°51'55.403"W	10.95	
4375.00	14.160	189.370	4347.88	87.92	-88.10	-45.63	1678096.67	14537655.07	40°01'47.692"N	104°51'55.420"W	18.69	
4422.00	25.300	191.540	4392.05	103.47	-103.66	-48.58	1678093.74	14537639.51	40°01'47.539"N	104°51'55.458"W	23.75	
4469.00	26.640	190.710	4434.31	123.65	-123.85	-52.55	1678089.80	14537619.32	40°01'47.339"N	104°51'55.509"W	2.95	
4516.00	27.620	174.110	4476.20	144.87	-145.07	-53.39	1678088.99	14537598.10	40°01'47.129"N	104°51'55.519"W	16.19	
4563.00	28.300	169.540	4517.71	166.68	-166.87	-50.25	1678092.16	14537576.32	40°01'46.914"N	104°51'55.479"W	4.78	
4610.00	28.750	169.290	4559.01	188.75	-188.93	-46.13	1678096.32	14537554.27	40°01'46.696"N	104°51'55.426"W	0.99	
4658.00	36.280	171.970	4599.46	214.21	-214.38	-41.99	1678100.49	14537528.85	40°01'46.444"N	104°51'55.373"W	15.97	
4705.00	38.720	175.960	4636.75	242.66	-242.82	-39.01	1678103.51	14537500.42	40°01'46.163"N	104°51'55.335"W	7.32	
4752.00	46.860	182.480	4671.23	274.53	-274.68	-38.72	1678103.85	14537468.57	40°01'45.849"N	104°51'55.331"W	19.70	
4799.00	49.760	183.050	4702.48	309.58	-309.73	-40.41	1678102.21	14537433.53	40°01'45.502"N	104°51'55.353"W	6.24	
4846.00	50.460	182.480	4732.63	345.59	-345.75	-42.15	1678100.53	14537397.52	40°01'45.146"N	104°51'55.375"W	1.76	
4893.00	57.670	182.960	4760.19	383.57	-383.74	-43.97	1678098.77	14537359.55	40°01'44.771"N	104°51'55.398"W	15.36	
4939.00	60.040	182.480	4783.98	422.88	-423.06	-45.83	1678096.97	14537320.24	40°01'44.382"N	104°51'55.422"W	5.23	
4971.00	66.500	181.140	4798.37	451.43	-451.61	-46.72	1678096.12	14537291.70	40°01'44.100"N	104°51'55.434"W	20.53	
5002.00	72.520	181.260	4809.21	480.45	-480.63	-47.33	1678095.56	14537262.69	40°01'43.813"N	104°51'55.441"W	19.42	
5034.00	75.270	182.090	4818.09	511.17	-511.36	-48.23	1678094.70	14537231.97	40°01'43.510"N	104°51'55.453"W	8.95	
5065.00	76.120	182.330	4825.75	541.18	-541.37	-49.39	1678093.59	14537201.97	40°01'43.213"N	104°51'55.468"W	2.84	
5097.00	79.720	181.410	4832.44	572.45	-572.64	-50.41	1678092.62	14537170.71	40°01'42.904"N	104°51'55.481"W	11.60	
5128.00	86.520	179.840	4836.16	603.20	-603.40	-50.74	1678092.33	14537139.97	40°01'42.600"N	104°51'55.485"W	22.50	LANDING (313'FNL & 520'FWL, SEC.26) 40.0285000 -104.8654126
5159.00	89.140	179.550	4837.33	634.18	-634.37	-50.58	1678092.54	14537109.00	40°01'42.294"N	104°51'55.483"W	8.50	
5222.00	90.830	179.180	4837.35	697.17	-697.37	-49.88	1678093.34	14537046.04	40°01'41.671"N	104°51'55.474"W	2.75	
5316.00	91.880	179.820	4835.12	791.14	-791.34	-49.06	1678094.30	14536952.11	40°01'40.743"N	104°51'55.464"W	1.31	
5348.00	89.940	182.100	4834.61	823.13	-823.32	-49.60	1678093.81	14536920.13	40°01'40.427"N	104°51'55.471"W	9.35	
5410.00	88.710	182.090	4835.35	885.07	-885.28	-51.86	1678091.64	14536858.20	40°01'39.814"N	104°51'55.500"W	1.98	
5455.00	89.630	181.940	4836.00	930.03	-930.24	-53.44	1678090.13	14536813.25	40°01'39.370"N	104°51'55.520"W	2.07	
5504.00	90.220	181.680	4836.06	979.00	-979.22	-54.99	1678088.65	14536764.29	40°01'38.886"N	104°51'55.540"W	1.32	
5598.00	89.940	181.640	4835.93	1072.95	-1073.18	-57.71	1678086.07	14536670.36	40°01'37.958"N	104°51'55.575"W	0.30	
5692.00	89.410	180.190	4836.46	1166.93	-1167.16	-59.22	1678084.71	14536576.42	40°01'37.029"N	104°51'55.594"W	1.64	
5786.00	88.150	179.760	4838.46	1260.90	-1261.14	-59.18	1678084.90	14536482.48	40°01'36.100"N	104°51'55.594"W	1.42	
5880.00	89.970	179.960	4840.01	1354.89	-1355.12	-58.95	1678085.27	14536388.53	40°01'35.171"N	104°51'55.591"W	1.95	
5975.00	91.660	179.500	4838.66	1449.87	-1450.11	-58.50	1678085.86	14536293.59	40°01'34.233"N	104°51'55.585"W	1.84	
6069.00	91.570	175.650	4836.01	1543.75	-1543.97	-54.52	1678089.98	14536199.77	40°01'33.305"N	104°51'55.534"W	4.10	
6160.00	89.600	176.770	4835.08	1634.56	-1634.76	-48.51	1678096.12	14536109.02	40°01'32.408"N	104°51'55.457"W	2.49	
6252.00	90.520	178.010	4834.98	1726.48	-1726.66	-44.32	1678100.45	14536017.16	40°01'31.500"N	104°51'55.403"W	1.68	
6344.00	92.470	178.150	4832.58	1818.40	-1818.57	-41.24	1678103.67	14535925.29	40°01'30.591"N	104°51'55.363"W	2.13	
6436.00	91.170	177.370	4829.66	1910.30	-1910.46	-37.64	1678107.40	14535833.46	40°01'29.683"N	104°51'55.317"W	1.65	
6528.00	90.120	179.220	4828.62	2002.25	-2002.40	-34.91	1678110.28	14535741.55	40°01'28.775"N	104°51'55.282"W	2.31	
6619.00	90.000	179.280	4828.53	2093.25	-2093.40	-33.72	1678111.61	14535650.59	40°01'27.875"N	104°51'55.266"W	0.15	
6711.00	91.660	178.700	4827.19	2185.23	-2185.37	-32.09	1678113.37	14535558.66	40°01'26.967"N	104°51'55.246"W	1.91	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#32 PUMA FED 5S-35HZ (290'FSL & 571'FWL, SEC23)
Area	COLORADO	Well	PUMA FED 5S-35HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	PUMA FED 5S-35HZ AWB
Facility	SEC.23-T1N-R67W		

WELLPATH DATA (130 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
6803.00	91.020	181.010	4825.04	2277.20	-2277.34	-31.86	1678113.74	14535466.73	40°01'26.058"N	104°51'55.243"W	2.60	
6895.00	92.740	181.210	4822.02	2369.12	-2369.27	-33.64	1678112.10	14535374.84	40°01'25.149"N	104°51'55.265"W	1.88	
6987.00	89.170	183.000	4820.49	2461.01	-2461.17	-37.02	1678108.86	14535282.96	40°01'24.241"N	104°51'55.309"W	4.34	
7080.00	90.710	183.200	4820.59	2553.85	-2554.03	-42.05	1678103.97	14535190.13	40°01'23.323"N	104°51'55.374"W	1.67	
7172.00	92.680	183.360	4817.87	2645.64	-2645.84	-47.31	1678098.85	14535098.35	40°01'22.416"N	104°51'55.441"W	2.15	
7265.00	90.950	179.890	4814.92	2738.52	-2738.74	-49.95	1678096.36	14535005.49	40°01'21.498"N	104°51'55.475"W	4.17	
7356.00	89.350	177.060	4814.68	2829.49	-2829.69	-47.53	1678098.92	14534914.57	40°01'20.599"N	104°51'55.444"W	3.57	
7448.00	90.860	176.770	4814.51	2921.37	-2921.55	-42.57	1678104.00	14534822.75	40°01'19.691"N	104°51'55.380"W	1.67	
7542.00	92.770	176.880	4811.54	3015.19	-3015.36	-37.37	1678109.35	14534729.00	40°01'18.764"N	104°51'55.313"W	2.04	
7636.00	90.770	179.850	4808.63	3109.10	-3109.26	-34.69	1678112.17	14534635.14	40°01'17.836"N	104°51'55.279"W	3.81	
7730.00	87.440	181.760	4810.10	3203.06	-3203.22	-36.01	1678110.99	14534541.21	40°01'16.908"N	104°51'55.296"W	4.08	
7825.00	88.950	182.080	4813.09	3297.94	-3298.12	-39.19	1678107.95	14534446.35	40°01'15.970"N	104°51'55.337"W	1.62	
7919.00	90.770	181.770	4813.32	3391.87	-3392.06	-42.35	1678104.94	14534352.44	40°01'15.042"N	104°51'55.377"W	1.96	
8012.00	87.630	181.300	4814.62	3484.81	-3485.01	-44.84	1678102.59	14534259.52	40°01'14.123"N	104°51'55.409"W	3.41	
8106.00	89.230	181.170	4817.20	3578.74	-3578.95	-46.87	1678100.71	14534165.62	40°01'13.195"N	104°51'55.435"W	1.71	
8200.00	91.320	181.960	4816.75	3672.69	-3672.90	-49.43	1678098.28	14534071.70	40°01'12.266"N	104°51'55.468"W	2.38	
8294.00	89.970	181.580	4815.69	3766.62	-3766.85	-52.34	1678095.52	14533977.78	40°01'11.338"N	104°51'55.506"W	1.49	
8388.00	91.050	178.070	4814.85	3860.60	-3860.83	-52.05	1678095.95	14533883.84	40°01'10.409"N	104°51'55.502"W	3.91	
8482.00	87.880	176.200	4815.73	3954.48	-3954.69	-47.35	1678100.79	14533790.02	40°01'09.482"N	104°51'55.442"W	3.92	
8576.00	88.740	175.410	4818.50	4048.21	-4048.40	-40.48	1678107.80	14533696.37	40°01'08.556"N	104°51'55.353"W	1.24	
8670.00	92.060	179.370	4817.84	4142.10	-4142.27	-36.20	1678112.22	14533602.54	40°01'07.628"N	104°51'55.298"W	5.50	
8764.00	91.200	181.090	4815.17	4236.05	-4236.22	-36.58	1678111.99	14533508.62	40°01'06.699"N	104°51'55.303"W	2.05	
8858.00	92.530	180.830	4812.11	4329.98	-4330.16	-38.15	1678110.55	14533414.72	40°01'05.771"N	104°51'55.323"W	1.44	
8953.00	90.550	180.390	4809.56	4424.93	-4425.11	-39.16	1678109.69	14533319.80	40°01'04.833"N	104°51'55.336"W	2.14	
9046.00	92.130	179.520	4807.38	4517.90	-4518.09	-39.09	1678109.90	14533226.87	40°01'03.914"N	104°51'55.335"W	1.94	
9139.00	90.740	176.850	4805.05	4610.83	-4611.00	-36.14	1678112.99	14533134.00	40°01'02.996"N	104°51'55.298"W	3.24	
9233.00	90.250	177.960	4804.24	4704.74	-4704.90	-31.89	1678117.38	14533040.14	40°01'02.068"N	104°51'55.243"W	1.29	
9327.00	91.880	178.160	4802.49	4798.68	-4798.82	-28.71	1678120.70	14532946.26	40°01'01.140"N	104°51'55.202"W	1.75	
9421.00	91.540	179.470	4799.69	4892.62	-4892.76	-26.76	1678122.79	14532852.36	40°01'00.211"N	104°51'55.177"W	1.44	
9515.00	89.780	180.540	4798.61	4986.61	-4986.75	-26.77	1678122.92	14532758.41	40°00'59.283"N	104°51'55.177"W	2.19	
9609.00	91.660	180.340	4797.43	5080.59	-5080.73	-27.49	1678122.34	14532664.46	40°00'58.354"N	104°51'55.186"W	2.01	
9703.00	90.340	181.280	4795.79	5174.56	-5174.71	-28.82	1678121.16	14532570.53	40°00'57.425"N	104°51'55.203"W	1.72	
9797.00	91.660	181.730	4794.14	5268.50	-5268.66	-31.29	1678118.83	14532476.61	40°00'56.497"N	104°51'55.235"W	1.48	
9891.00	89.350	177.900	4793.32	5362.47	-5362.63	-30.99	1678119.28	14532382.68	40°00'55.568"N	104°51'55.231"W	4.76	
9986.00	90.890	177.830	4793.12	5457.42	-5457.56	-27.45	1678122.96	14532287.79	40°00'54.630"N	104°51'55.186"W	1.62	
10079.00	92.990	177.840	4789.97	5550.30	-5550.44	-23.94	1678126.61	14532194.96	40°00'53.712"N	104°51'55.141"W	2.26	
10173.00	90.060	181.280	4787.47	5644.25	-5644.38	-23.22	1678127.47	14532101.06	40°00'52.784"N	104°51'55.131"W	4.81	
10267.00	90.090	182.290	4787.34	5738.19	-5738.33	-26.15	1678124.69	14532007.14	40°00'51.855"N	104°51'55.169"W	1.07	
10392.00	92.590	182.650	4784.42	5863.00	-5863.17	-31.53	1678119.49	14531882.34	40°00'50.621"N	104°51'55.238"W	2.02	LAST BHI MWD+IFR+SC SURVEY
10445.00	92.590	182.650	4782.03	5915.88	-5916.06	-33.98	1678117.12	14531829.47	40°00'50.099"N	104°51'55.270"W	0.00	PTB (837'FNL & 520'FWL, SEC.35) 40.0139163 -104.8653527

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#32 PUMA FED 5S-35HZ (290'FSL & 571'FWL, SEC23)
Area	COLORADO	Well	PUMA FED 5S-35HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	PUMA FED 5S-35HZ AWB
Facility	SEC.23-T1N-R67W		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
PUMA FED 5S-35HZ HEEL REV-1 (1' FNL & 809' FWL, SEC.35)	4847.00	-1054.00	246.76	1678390.40	14536690.00	40°01'38.147"N	104°51'51.661"W	point
PUMA FED 5S-35HZ HEEL REV-2 (1' FNL & 809' FWL, SEC.35)	4847.00	-690.01	246.76	1678389.85	14537053.84	40°01'41.744"N	104°51'51.661"W	point
PUMA FED 5S-35HZ HEEL REV-3 (400'FNL & 49'FWL, SEC.35)	4847.00	-690.01	-61.61	1678081.60	14537053.38	40°01'41.744"N	104°51'55.625"W	point
PUMA FED 5S-35HZ HEEL REV-4 (400'FNL & 530'FWL, SEC.35)	4847.00	-690.01	-41.61	1678101.59	14537053.41	40°01'41.744"N	104°51'55.368"W	point
PUMA FED 5S-35HZ HEEL REV-5 (400'FNL & 530'FWL, SEC.35)	4857.00	-690.01	-41.61	1678101.59	14537053.41	40°01'41.744"N	104°51'55.368"W	point
PUMA FED 5S-35HZ 460'SETBACK-1	4885.00	-751.55	294.64	1678437.80	14536992.40	40°01'41.136"N	104°51'51.045"W	polygon
PUMA FED 5S-35HZ 460'SETBACK-2	4885.00	-5112.01	-95.91	1678054.00	14532633.10	40°00'58.045"N	104°51'56.066"W	polygon
PUMA FED 5S-35HZ LANDBOX	4885.00	565.99	-109.23	1678032.10	14538308.80	40°01'54.156"N	104°51'56.237"W	polygon
PUMA FED 5S-35HZ TOE REV-1 (118' FNL & 665' FWL, SEC.26)	4885.00	-6217.26	238.95	1678390.40	14531528.80	40°00'47.122"N	104°51'51.762"W	point
PUMA FED 5S-35HZ TOE REV-2 (118' FNL & 665' FWL, SEC.26)	4885.00	-6217.26	238.95	1678390.40	14531528.80	40°00'47.122"N	104°51'51.762"W	point
PUMA FED 5S-35HZ TOE REV-3 (839'FNL & 532'FWL, SEC.26)	4885.00	-6406.80	-21.61	1678130.23	14531338.94	40°00'45.249"N	104°51'55.111"W	point
PUMA FED 5S-35HZ TOE REV-4 (839'FNL & 532'FWL, SEC.26)	4885.00	-5917.80	-21.61	1678129.49	14531827.75	40°00'50.082"N	104°51'55.111"W	point
SEC.23-T1N-R67W LINES	5023.00	2331.21	2064.89	1680202.68	14540076.60	40°02'11.600"N	104°51'28.286"W	polygon
SEC.26-T1N-R67W LINES	5023.00	-2922.28	2080.73	1680226.46	14534825.24	40°01'19.683"N	104°51'28.088"W	polygon
SEC.35-T1N-R67W LINES	5023.00	-8209.15	2097.56	1680251.27	14529540.52	40°00'27.437"N	104°51'27.877"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: PUMA FED 5S-35HZ AWB Ref Wellpath: PUMA FED 5S-35HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
32.00	1851.00	Custom APC ISCWSA REV 2 MWD	SDI MWD <129 - 1851>	PUMA FED 5S-35HZ AWB
1851.00	10392.00	Custom APC ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHI APC ISCWSA REV 2 MWD+IFR+SC <1933 - 10392>	PUMA FED 5S-35HZ AWB
10392.00	10445.00	Blind Drilling (std)	Projection to bit	PUMA FED 5S-35HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#32 PUMA FED 5S-35HZ (290'FSL & 571'FWL, SEC23)
Area	COLORADO	Well	PUMA FED 5S-35HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	PUMA FED 5S-35HZ AWB
Facility	SEC.23-T1N-R67W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
129.00	0.740	218.470	129.00	FIRST SDI MWD SURVEY
1851.00	8.290	174.940	1839.10	LAST SDI MWD SURVEY
1933.00	8.320	175.690	1920.24	FIRST BHI MWD+IFR+SC SURVEY
4306.00	2.892	189.299	4279.67	KOP
5128.00	86.520	179.840	4836.16	LANDING (313'FNL & 520'FWL,SEC.26) 40.0285000 -104.8654126
10392.00	92.590	182.650	4784.42	LAST BHI MWD+IFR+SC SURVEY
10445.00	92.590	182.650	4782.03	PTB (837'FNL & 520'FWL,SEC.35) 40.0139163 -104.8653527