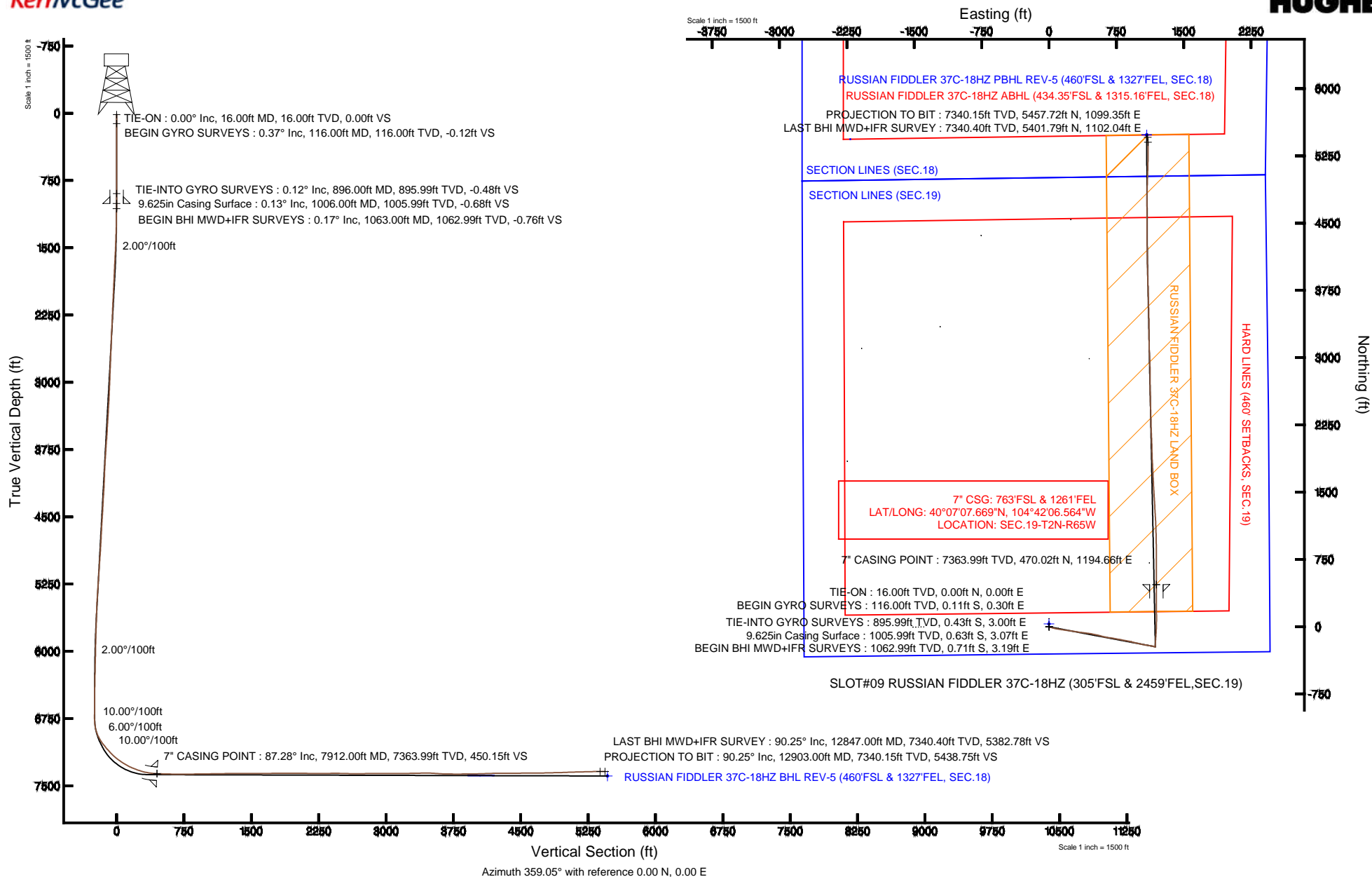


KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#09 RUSSIAN FIDDLER 37C-18HZ (305'FSL & 2459'FEL, SEC.19)
 Field: WELD COUNTY (KERR MCGEE) Well: RUSSIAN FIDDLER 37C-18HZ
 Facility: SEC.19-T2N-R65W Wellbore: RUSSIAN FIDDLER 37C-18HZ PWB

Plot reference wellpath is RUSSIAN FIDDLER 37C-18HZ (REV-B.0) PWP

True vertical depths are referenced to XTREME 6 (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to XTREME 6 (RKB)	North Reference: True north
XTREME 6 (RKB) to Mean Sea Level: 5005 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#09 RUSSIAN FIDDLER 37C-18HZ (305'FSL & 2459'FEL, SEC.19)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: wiljef02 on 6/6/2013





Actual Wellpath Report

RUSSIAN FIDDLER 37C-18HZ AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 RUSSIAN FIDDLER 37C-18HZ (305'FSL & 2459'FEL,SEC.19)
Area	COLORADO	Well	RUSSIAN FIDDLER 37C-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	RUSSIAN FIDDLER 37C-18HZ AWB
Facility	SEC.19-T2N-R65W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 4.0.0
North Reference	True	User	Wilsjef02
Scale	0.99996	Report Generated	6/6/2013 at 08:59:03
Convergence at slot	n/a	Database/Source file	WellArchitectDB/RUSSIAN_FIDDLER_37C-18HZ_AWB.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-5004.65	229.89	3222029.14	1286645.73	40°07'03.025"N	104°42'21.942"W
Facility Reference Pt			3221754.51	1291647.91	40°07'52.481"N	104°42'24.901"W
Field Reference Pt			3197771.84	1268891.29	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM			
Calculation method	Minimum curvature	XTREME 6 (RKB) to Facility Vertical Datum	5005.00ft
Horizontal Reference Pt	Slot	XTREME 6 (RKB) to Mean Sea Level	5005.00ft
Vertical Reference Pt	XTREME 6 (RKB)	XTREME 6 (RKB) to Mud Line at Slot (SLOT#09 RUSSIAN FIDDLER 37C-18HZ (305'FSL & 2459'FEL,SEC.19))	5005.00ft
MD Reference Pt	XTREME 6 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	11.39°



Actual Wellpath Report

RUSSIAN FIDDLER 37C-18HZ AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 RUSSIAN FIDDLER 37C-18HZ (305'FSL & 2459'FEL,SEC.19)
Area	COLORADO	Well	RUSSIAN FIDDLER 37C-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	RUSSIAN FIDDLER 37C-18HZ AWB
Facility	SEC.19-T2N-R65W		

WELLPATH DATA (166 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	110.260	0.00	0.00	0.00	0.00	40°07'03.025"N	104°42'21.942"W	0.00	
16.00	0.000	110.260	16.00	0.00	0.00	0.00	40°07'03.025"N	104°42'21.942"W	0.00	TIE-ON
116.00	0.370	110.260	116.00	-0.05	-0.11	0.30	40°07'03.024"N	104°42'21.938"W	0.37	BEGIN GYRO SURVEYS
216.00	0.330	106.910	216.00	-0.13	-0.31	0.88	40°07'03.022"N	104°42'21.931"W	0.04	
316.00	0.190	124.310	316.00	-0.22	-0.48	1.29	40°07'03.020"N	104°42'21.925"W	0.16	
416.00	0.110	86.040	416.00	-0.26	-0.57	1.53	40°07'03.019"N	104°42'21.922"W	0.12	
516.00	0.270	75.180	516.00	-0.13	-0.50	1.85	40°07'03.020"N	104°42'21.918"W	0.16	
616.00	0.240	48.760	615.99	0.14	-0.31	2.24	40°07'03.022"N	104°42'21.913"W	0.12	
716.00	0.320	125.410	715.99	0.19	-0.33	2.62	40°07'03.022"N	104°42'21.908"W	0.35	
816.00	0.140	48.940	815.99	0.18	-0.41	2.94	40°07'03.021"N	104°42'21.904"W	0.32	
896.00	0.120	189.260	895.99	0.17	-0.43	3.00	40°07'03.021"N	104°42'21.903"W	0.31	TIE-INTO GYRO SURVEYS
1063.00	0.170	115.990	1062.99	-0.07	-0.71	3.19	40°07'03.018"N	104°42'21.901"W	0.11	BEGIN BHI MWD+IFR SURVEYS
1154.00	1.820	107.720	1153.98	-0.26	-1.21	4.69	40°07'03.013"N	104°42'21.882"W	1.82	
1245.00	3.450	114.070	1244.88	-1.02	-2.77	8.57	40°07'02.998"N	104°42'21.832"W	1.82	
1336.00	5.270	110.830	1335.61	-2.31	-5.37	14.98	40°07'02.972"N	104°42'21.749"W	2.02	
1427.00	7.090	103.700	1426.08	-3.22	-8.19	24.34	40°07'02.944"N	104°42'21.629"W	2.17	
1518.00	8.580	107.720	1516.23	-4.19	-11.58	36.26	40°07'02.911"N	104°42'21.475"W	1.74	
1610.00	10.410	105.880	1606.96	-5.60	-15.95	50.80	40°07'02.867"N	104°42'21.288"W	2.02	
1701.00	12.110	102.540	1696.21	-6.44	-20.27	68.02	40°07'02.825"N	104°42'21.066"W	2.00	
1792.00	14.050	99.010	1784.84	-6.17	-24.07	88.25	40°07'02.787"N	104°42'20.806"W	2.30	
1883.00	14.990	99.240	1872.94	-5.27	-27.69	110.78	40°07'02.751"N	104°42'20.516"W	1.03	
1968.00	14.930	99.230	1955.06	-4.45	-31.21	132.44	40°07'02.717"N	104°42'20.237"W	0.07	
2053.00	14.910	99.120	2037.19	-3.60	-34.70	154.04	40°07'02.682"N	104°42'19.959"W	0.04	
2139.00	14.830	98.450	2120.31	-2.60	-38.07	175.85	40°07'02.649"N	104°42'19.678"W	0.22	
2224.00	15.780	97.540	2202.30	-1.27	-41.19	198.07	40°07'02.618"N	104°42'19.393"W	1.15	
2309.00	15.390	96.630	2284.17	0.45	-44.01	220.73	40°07'02.590"N	104°42'19.101"W	0.54	
2394.00	15.070	99.700	2366.19	1.71	-47.17	242.83	40°07'02.559"N	104°42'18.816"W	1.02	
2479.00	14.640	98.870	2448.35	2.51	-50.69	264.33	40°07'02.524"N	104°42'18.540"W	0.56	
2564.00	14.430	97.900	2530.62	3.62	-53.80	285.44	40°07'02.493"N	104°42'18.268"W	0.38	
2649.00	14.510	98.860	2612.93	4.74	-56.90	306.45	40°07'02.463"N	104°42'17.998"W	0.30	
2734.00	14.090	100.060	2695.29	5.45	-60.34	327.16	40°07'02.429"N	104°42'17.731"W	0.60	
2819.00	13.780	95.940	2777.80	6.65	-63.20	347.41	40°07'02.400"N	104°42'17.470"W	1.22	
2904.00	14.880	96.730	2860.15	8.49	-65.53	368.32	40°07'02.377"N	104°42'17.201"W	1.31	
2989.00	14.910	96.580	2942.29	10.30	-68.06	390.02	40°07'02.352"N	104°42'16.922"W	0.06	
3074.00	15.690	98.340	3024.28	11.83	-70.98	412.26	40°07'02.324"N	104°42'16.636"W	1.07	
3160.00	15.450	96.800	3107.12	13.36	-74.02	435.14	40°07'02.293"N	104°42'16.341"W	0.56	
3244.00	15.540	99.900	3188.07	14.55	-77.28	457.33	40°07'02.261"N	104°42'16.055"W	0.99	
3329.00	14.820	101.470	3270.11	14.83	-81.40	479.20	40°07'02.221"N	104°42'15.774"W	0.98	
3414.00	15.120	102.820	3352.22	14.54	-86.02	500.67	40°07'02.175"N	104°42'15.498"W	0.54	
3500.00	14.700	101.030	3435.33	14.32	-90.60	522.31	40°07'02.130"N	104°42'15.219"W	0.72	
3584.00	14.320	101.500	3516.65	14.37	-94.71	542.96	40°07'02.089"N	104°42'14.953"W	0.47	
3669.00	14.220	104.560	3599.03	13.77	-99.43	563.36	40°07'02.042"N	104°42'14.691"W	0.90	
3755.00	14.440	105.500	3682.35	12.42	-104.95	583.92	40°07'01.988"N	104°42'14.426"W	0.37	
3840.00	14.850	103.550	3764.59	11.25	-110.33	604.72	40°07'01.935"N	104°42'14.158"W	0.75	
3924.00	15.280	101.680	3845.70	10.79	-115.10	626.02	40°07'01.888"N	104°42'13.884"W	0.77	



Actual Wellpath Report

RUSSIAN FIDDLER 37C-18HZ AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 RUSSIAN FIDDLER 37C-18HZ (305'FSL & 2459'FEL,SEC.19)
Area	COLORADO	Well	RUSSIAN FIDDLER 37C-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	RUSSIAN FIDDLER 37C-18HZ AWB
Facility	SEC.19-T2N-R65W		

WELLPATH DATA (166 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4009.00	15.890	101.680	3927.58	10.67	-119.72	648.39	40°07'01.842"N	104°42'13.596"W	0.72	
4094.00	14.690	95.880	4009.57	11.65	-123.18	670.51	40°07'01.808"N	104°42'13.311"W	2.29	
4179.00	14.200	96.960	4091.88	13.49	-125.55	691.58	40°07'01.784"N	104°42'13.040"W	0.66	
4264.00	15.120	100.220	4174.12	14.52	-128.78	712.83	40°07'01.752"N	104°42'12.767"W	1.45	
4349.00	16.470	101.490	4255.91	14.72	-133.15	735.55	40°07'01.709"N	104°42'12.474"W	1.64	
4434.00	16.550	100.940	4337.40	14.80	-137.84	759.25	40°07'01.663"N	104°42'12.169"W	0.21	
4519.00	16.090	98.480	4418.98	15.49	-141.88	782.78	40°07'01.623"N	104°42'11.866"W	0.98	
4604.00	15.720	102.170	4500.73	15.93	-146.04	805.69	40°07'01.582"N	104°42'11.571"W	1.27	
4690.00	15.030	101.040	4583.65	15.84	-150.63	828.02	40°07'01.536"N	104°42'11.284"W	0.87	
4775.00	14.280	100.090	4665.88	16.14	-154.58	849.16	40°07'01.497"N	104°42'11.012"W	0.93	
4858.00	15.130	101.420	4746.16	16.37	-158.52	869.86	40°07'01.458"N	104°42'10.745"W	1.10	
4943.00	14.960	100.720	4828.25	16.49	-162.76	891.51	40°07'01.416"N	104°42'10.467"W	0.29	
5028.00	14.600	104.190	4910.44	16.09	-167.42	912.68	40°07'01.370"N	104°42'10.194"W	1.12	
5111.00	14.920	104.270	4990.70	15.05	-172.62	933.18	40°07'01.319"N	104°42'09.931"W	0.39	
5197.00	15.390	103.690	5073.71	14.03	-178.05	954.99	40°07'01.265"N	104°42'09.650"W	0.57	
5282.00	14.260	102.050	5155.88	13.46	-182.91	976.19	40°07'01.217"N	104°42'09.377"W	1.42	
5367.00	15.090	103.610	5238.10	12.91	-187.69	997.18	40°07'01.170"N	104°42'09.107"W	1.08	
5452.00	15.850	103.190	5320.02	12.11	-192.95	1019.24	40°07'01.118"N	104°42'08.823"W	0.90	
5537.00	14.460	102.110	5402.07	11.62	-197.82	1040.92	40°07'01.070"N	104°42'08.544"W	1.67	
5621.00	13.260	100.680	5483.62	11.60	-201.81	1060.64	40°07'01.030"N	104°42'08.290"W	1.49	
5706.00	12.380	98.530	5566.50	12.18	-204.97	1079.23	40°07'00.999"N	104°42'08.051"W	1.18	
5791.00	11.040	96.250	5649.73	13.36	-207.20	1096.33	40°07'00.977"N	104°42'07.830"W	1.67	
5875.00	9.530	102.310	5732.38	13.97	-209.56	1111.12	40°07'00.954"N	104°42'07.640"W	2.21	
5960.00	8.250	99.580	5816.36	14.05	-212.08	1124.01	40°07'00.929"N	104°42'07.474"W	1.59	
6045.00	7.180	99.120	5900.59	14.45	-213.93	1135.27	40°07'00.911"N	104°42'07.329"W	1.26	
6130.00	6.460	95.090	5984.99	15.19	-215.20	1145.28	40°07'00.898"N	104°42'07.200"W	1.02	
6215.00	5.360	106.690	6069.54	15.35	-216.77	1153.84	40°07'00.883"N	104°42'07.090"W	1.90	
6299.00	4.700	107.210	6153.21	14.63	-218.91	1160.89	40°07'00.861"N	104°42'07.000"W	0.79	
6384.00	3.860	107.590	6237.97	13.97	-220.81	1166.94	40°07'00.843"N	104°42'06.922"W	0.99	
6470.00	3.070	108.810	6323.82	13.36	-222.42	1171.88	40°07'00.827"N	104°42'06.858"W	0.92	
6555.00	2.230	107.260	6408.72	12.90	-223.65	1175.61	40°07'00.815"N	104°42'06.810"W	0.99	
6640.00	1.610	109.840	6493.68	12.55	-224.54	1178.32	40°07'00.806"N	104°42'06.775"W	0.74	
6725.00	1.070	111.420	6578.65	12.24	-225.24	1180.18	40°07'00.799"N	104°42'06.751"W	0.64	
6810.00	0.700	115.350	6663.64	11.98	-225.75	1181.39	40°07'00.794"N	104°42'06.736"W	0.44	
6859.00	0.520	117.280	6712.64	11.84	-225.98	1181.85	40°07'00.792"N	104°42'06.730"W	0.37	
6895.00	0.220	78.540	6748.64	11.83	-226.04	1182.07	40°07'00.791"N	104°42'06.727"W	1.04	
6938.00	3.640	0.690	6791.61	13.20	-224.66	1182.17	40°07'00.805"N	104°42'06.726"W	8.37	
6980.00	8.870	2.100	6833.35	17.71	-220.09	1182.30	40°07'00.850"N	104°42'06.724"W	12.46	
7023.00	15.150	4.580	6875.38	26.57	-211.16	1182.87	40°07'00.938"N	104°42'06.717"W	14.65	
7065.00	20.960	4.220	6915.30	39.48	-198.19	1183.86	40°07'01.066"N	104°42'06.704"W	13.84	
7108.00	26.730	3.420	6954.61	56.70	-180.85	1185.01	40°07'01.238"N	104°42'06.689"W	13.44	
7151.00	31.760	2.940	6992.12	77.49	-159.88	1186.16	40°07'01.445"N	104°42'06.674"W	11.71	
7193.00	36.490	5.150	7026.88	100.85	-136.39	1187.85	40°07'01.677"N	104°42'06.652"W	11.64	
7236.00	39.530	4.690	7060.75	127.16	-110.01	1190.12	40°07'01.938"N	104°42'06.623"W	7.10	
7278.00	41.310	2.680	7092.73	154.14	-82.84	1191.86	40°07'02.206"N	104°42'06.601"W	5.25	



Actual Wellpath Report

RUSSIAN FIDDLER 37C-18HZ AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 RUSSIAN FIDDLER 37C-18HZ (305'FSL & 2459'FEL,SEC.19)
Area	COLORADO	Well	RUSSIAN FIDDLER 37C-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	RUSSIAN FIDDLER 37C-18HZ AWB
Facility	SEC.19-T2N-R65W		

WELLPATH DATA (166 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7321.00	42.590	2.490	7124.71	182.54	-54.13	1193.16	40°07'02.490"N	104°42'06.584"W	2.99	
7363.00	45.490	2.350	7154.90	211.38	-24.96	1194.39	40°07'02.778"N	104°42'06.568"W	6.91	
7406.00	50.170	1.800	7183.76	242.82	6.88	1195.54	40°07'03.093"N	104°42'06.553"W	10.92	
7449.00	53.970	1.270	7210.18	276.23	40.78	1196.44	40°07'03.428"N	104°42'06.542"W	8.89	
7491.00	56.160	0.900	7234.23	310.10	75.20	1197.09	40°07'03.768"N	104°42'06.533"W	5.26	
7534.00	59.350	359.480	7257.17	345.77	111.56	1197.20	40°07'04.127"N	104°42'06.532"W	7.93	
7576.00	62.290	358.980	7277.65	381.61	148.23	1196.71	40°07'04.490"N	104°42'06.538"W	7.08	
7619.00	66.000	359.310	7296.40	419.42	186.91	1196.13	40°07'04.872"N	104°42'06.546"W	8.66	
7634.00	66.810	359.340	7302.40	432.87	200.66	1195.97	40°07'05.008"N	104°42'06.548"W	5.40	
7662.00	68.440	359.650	7313.06	458.20	226.55	1195.74	40°07'05.263"N	104°42'06.551"W	5.91	
7705.00	71.770	358.870	7327.69	497.73	266.97	1195.22	40°07'05.663"N	104°42'06.557"W	7.93	
7747.00	75.010	359.480	7339.70	537.06	307.21	1194.64	40°07'06.061"N	104°42'06.565"W	7.84	
7790.00	78.010	1.050	7349.73	578.08	349.01	1194.84	40°07'06.474"N	104°42'06.562"W	7.83	
7833.00	81.810	359.680	7357.26	619.62	391.34	1195.11	40°07'06.892"N	104°42'06.559"W	9.38	
7878.00	86.060	359.480	7362.01	663.42	436.08	1194.78	40°07'07.334"N	104°42'06.563"W	9.45	
7912.00†	87.284	0.115	7363.99	696.67	470.02	1194.66	40°07'07.669"N	104°42'06.564"W	4.05	7" CASING POINT
7923.00	87.680	0.320	7364.47	707.45	481.01	1194.70	40°07'07.778"N	104°42'06.564"W	4.05	
8012.00	88.300	0.640	7367.59	794.78	569.95	1195.44	40°07'08.657"N	104°42'06.554"W	0.78	
8097.00	89.350	0.000	7369.33	878.18	654.93	1195.92	40°07'09.497"N	104°42'06.548"W	1.45	
8182.00	89.840	0.600	7369.93	961.59	739.92	1196.36	40°07'10.337"N	104°42'06.542"W	0.91	
8267.00	90.610	359.370	7369.60	1044.91	824.92	1196.34	40°07'11.177"N	104°42'06.543"W	1.71	
8352.00	91.140	358.490	7368.30	1127.90	909.90	1194.75	40°07'12.016"N	104°42'06.563"W	1.21	
8437.00	90.580	358.950	7367.03	1210.82	994.86	1192.86	40°07'12.856"N	104°42'06.587"W	0.85	
8522.00	90.700	358.070	7366.08	1293.68	1079.83	1190.65	40°07'13.696"N	104°42'06.616"W	1.04	
8607.00	91.080	357.550	7364.76	1376.29	1164.76	1187.40	40°07'14.535"N	104°42'06.657"W	0.76	
8692.00	90.550	356.460	7363.55	1458.62	1249.63	1182.96	40°07'15.374"N	104°42'06.715"W	1.43	
8777.00	90.210	357.150	7362.98	1540.88	1334.50	1178.22	40°07'16.212"N	104°42'06.775"W	0.90	
8862.00	90.120	356.230	7362.74	1623.09	1419.35	1173.31	40°07'17.051"N	104°42'06.839"W	1.09	
8947.00	90.030	356.950	7362.63	1705.27	1504.20	1168.26	40°07'17.889"N	104°42'06.904"W	0.85	
9032.00	90.190	356.570	7362.46	1787.52	1589.07	1163.45	40°07'18.728"N	104°42'06.965"W	0.49	
9118.00	90.430	357.410	7362.00	1870.81	1674.94	1158.94	40°07'19.577"N	104°42'07.023"W	1.02	
9203.00	90.860	356.930	7361.04	1953.20	1759.83	1154.74	40°07'20.416"N	104°42'07.077"W	0.76	
9288.00	89.350	357.380	7360.89	2035.59	1844.73	1150.52	40°07'21.255"N	104°42'07.132"W	1.85	
9373.00	90.770	358.360	7360.80	2118.23	1929.67	1147.36	40°07'22.094"N	104°42'07.172"W	2.03	
9458.00	90.620	358.540	7359.77	2201.07	2014.63	1145.06	40°07'22.934"N	104°42'07.202"W	0.28	
9543.00	88.700	357.270	7360.27	2283.72	2099.56	1141.96	40°07'23.773"N	104°42'07.242"W	2.71	
9629.00	88.740	357.850	7362.19	2367.21	2185.46	1138.30	40°07'24.622"N	104°42'07.289"W	0.68	
9714.00	90.030	358.620	7363.10	2449.97	2270.42	1135.68	40°07'25.461"N	104°42'07.323"W	1.77	
9799.00	91.330	358.770	7362.10	2532.88	2355.39	1133.74	40°07'26.301"N	104°42'07.347"W	1.54	
9884.00	90.640	358.230	7360.63	2615.73	2440.34	1131.52	40°07'27.141"N	104°42'07.376"W	1.03	
9969.00	87.960	358.520	7361.67	2698.53	2525.30	1129.11	40°07'27.980"N	104°42'07.407"W	3.17	
10054.00	88.910	358.970	7363.99	2781.44	2610.24	1127.25	40°07'28.819"N	104°42'07.431"W	1.24	
10139.00	90.210	359.960	7364.65	2864.60	2695.23	1126.45	40°07'29.659"N	104°42'07.441"W	1.92	
10222.00	90.920	0.290	7363.83	2946.00	2778.23	1126.63	40°07'30.480"N	104°42'07.439"W	0.94	
10307.00	91.500	358.670	7362.03	3029.14	2863.20	1125.86	40°07'31.319"N	104°42'07.449"W	2.02	



Actual Wellpath Report

RUSSIAN FIDDLER 37C-18HZ AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 RUSSIAN FIDDLER 37C-18HZ (305'FSL & 2459'FEL,SEC.19)
Area	COLORADO	Well	RUSSIAN FIDDLER 37C-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	RUSSIAN FIDDLER 37C-18HZ AWB
Facility	SEC.19-T2N-R65W		

WELLPATH DATA (166 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
10392.00	88.510	357.590	7362.03	3111.87	2948.15	1123.09	40°07'32.159"N	104°42'07.484"W	3.74	
10478.00	89.560	357.270	7363.47	3195.32	3034.05	1119.23	40°07'33.008"N	104°42'07.534"W	1.28	
10563.00	90.580	358.450	7363.37	3277.95	3118.98	1116.06	40°07'33.847"N	104°42'07.575"W	1.83	
10648.00	90.680	359.060	7362.44	3360.89	3203.96	1114.21	40°07'34.687"N	104°42'07.598"W	0.73	
10733.00	91.250	359.030	7361.00	3443.91	3288.93	1112.80	40°07'35.526"N	104°42'07.616"W	0.67	
10818.00	91.170	0.250	7359.21	3527.11	3373.91	1112.26	40°07'36.366"N	104°42'07.623"W	1.44	
10903.00	90.550	359.080	7357.93	3610.33	3458.90	1111.77	40°07'37.206"N	104°42'07.630"W	1.56	
10988.00	86.460	358.630	7360.15	3693.26	3543.84	1110.07	40°07'38.045"N	104°42'07.651"W	4.84	
11074.00	86.810	358.140	7365.20	3776.91	3629.65	1107.65	40°07'38.893"N	104°42'07.683"W	0.70	
11159.00	89.100	357.930	7368.23	3859.55	3714.54	1104.74	40°07'39.732"N	104°42'07.720"W	2.71	
11244.00	89.910	358.410	7368.97	3942.29	3799.50	1102.02	40°07'40.572"N	104°42'07.755"W	1.11	
11329.00	91.010	358.590	7368.28	4025.15	3884.46	1099.80	40°07'41.411"N	104°42'07.783"W	1.31	
11414.00	90.330	358.410	7367.29	4108.00	3969.43	1097.57	40°07'42.251"N	104°42'07.812"W	0.83	
11500.00	91.350	359.230	7366.03	4191.93	4055.40	1095.80	40°07'43.101"N	104°42'07.835"W	1.52	
11585.00	92.310	358.960	7363.31	4274.94	4140.34	1094.46	40°07'43.940"N	104°42'07.852"W	1.17	
11670.00	91.210	358.530	7360.70	4357.83	4225.28	1092.60	40°07'44.779"N	104°42'07.876"W	1.39	
11755.00	90.680	359.310	7359.30	4440.82	4310.25	1091.00	40°07'45.619"N	104°42'07.897"W	1.11	
11840.00	89.900	359.400	7358.87	4523.95	4395.25	1090.04	40°07'46.459"N	104°42'07.909"W	0.92	
11925.00	90.030	0.140	7358.92	4607.21	4480.24	1089.70	40°07'47.299"N	104°42'07.913"W	0.88	
12011.00	90.900	0.480	7358.23	4691.60	4566.24	1090.16	40°07'48.149"N	104°42'07.907"W	1.09	
12096.00	90.340	0.680	7357.31	4775.09	4651.23	1091.03	40°07'48.989"N	104°42'07.896"W	0.70	
12181.00	90.150	359.640	7356.94	4858.46	4736.23	1091.26	40°07'49.829"N	104°42'07.893"W	1.24	
12267.00	92.110	1.550	7355.25	4942.91	4822.20	1092.15	40°07'50.678"N	104°42'07.881"W	3.18	
12352.00	91.010	1.470	7352.93	5026.62	4907.14	1094.39	40°07'51.518"N	104°42'07.852"W	1.30	
12437.00	92.320	1.600	7350.46	5110.33	4992.07	1096.67	40°07'52.357"N	104°42'07.823"W	1.55	
12522.00	91.510	1.820	7347.62	5194.07	5076.98	1099.20	40°07'53.196"N	104°42'07.790"W	0.99	
12607.00	91.570	1.560	7345.34	5277.82	5161.91	1101.71	40°07'54.035"N	104°42'07.758"W	0.31	
12692.00	91.630	1.230	7342.96	5361.50	5246.85	1103.78	40°07'54.875"N	104°42'07.731"W	0.39	
12777.00	90.890	359.280	7341.10	5444.88	5331.83	1104.16	40°07'55.714"N	104°42'07.727"W	2.45	
12847.00	90.250	357.250	7340.40	5513.04	5401.79	1102.04	40°07'56.406"N	104°42'07.754"W	3.04	LAST BHI MWD+IFR SURVEY
12903.00	90.250	357.250	7340.15	5567.34	5457.72	1099.35	40°07'56.959"N	104°42'07.788"W	0.00	PROJECTION TO BIT



Actual Wellpath Report

RUSSIAN FIDDLER 37C-18HZ AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 RUSSIAN FIDDLER 37C-18HZ (305'FSL & 2459'FEL,SEC.19)
Area	COLORADO	Well	RUSSIAN FIDDLER 37C-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	RUSSIAN FIDDLER 37C-18HZ AWB
Facility	SEC.19-T2N-R65W		

HOLE & CASING SECTIONS - Ref Wellbore: RUSSIAN FIDDLER 37C-18HZ AWB Ref Wellpath: RUSSIAN FIDDLER 37C-18HZ 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]
13.5in Open Hole	16.00	1006.00	990.00	16.00	1005.99	0.00	0.00	-0.63	3.07
9.625in Casing Surface	16.00	1006.00	990.00	16.00	1005.99	0.00	0.00	-0.63	3.07
8.75in Open Hole	1006.00	7923.00	6917.00	1005.99	7364.47	-0.63	3.07	481.01	1194.70
7in Casing Intermediate	16.00	7912.00	7896.00	16.00	7363.99	0.00	0.00	470.02	1194.66
6.125in Open Hole	7912.00	12903.00	4991.00	7363.99	7340.15	470.02	1194.66	5457.72	1099.35

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
RUSSIAN FIDDLER 5 PAD SECTION LINES (SEC.18)		-8.00	5435.76	-2214.29	3219766.37	1292061.22	40°07'56.741"N	104°42'50.450"W	polygon
RUSSIAN FIDDLER 5 PAD SECTION LINES (SEC.19)		-8.00	5435.78	-2214.29	3219766.37	1292061.24	40°07'56.741"N	104°42'50.450"W	polygon
RUSSIAN FIDDLER 37C-18HZ BHL REV-4 (460'FSL & 1327'FEL, SEC.18)		7378.00	5483.37	1087.51	3223067.47	1292138.39	40°07'57.212"N	104°42'07.941"W	point
DECHANT USX X 19-1 150' RADIUS		7384.00	4079.63	1271.80	3223264.31	1290736.41	40°07'43.340"N	104°42'05.569"W	circle
RUSSIAN FIDDLER 37C-18HZ BHL ON PLAT REV-1 (460'FSL & 1195'FEL, SEC.18)		7384.00	5484.49	1219.46	3223199.39	1292140.68	40°07'57.223"N	104°42'06.242"W	point
RUSSIAN FIDDLER 37C-18HZ BHL ON PLAT REV-2 (460'FSL & 1277'FEL, SEC.18)		7384.00	5483.37	1137.51	3223117.47	1292138.83	40°07'57.212"N	104°42'07.297"W	point
RUSSIAN FIDDLER 37C-18HZ BHL REV-3 (460'FSL & 1327'FEL, SEC.18)		7384.00	5483.37	1087.51	3223067.47	1292138.39	40°07'57.212"N	104°42'07.941"W	point
RUSSIAN FIDDLER 37C-18HZ BHL REV-5 (460'FSL & 1327'FEL, SEC.18)		7390.00	5483.37	1087.51	3223067.47	1292138.39	40°07'57.212"N	104°42'07.941"W	point
RUSSIAN FIDDLER 37N-18HZ/37C-18HZ LAND BOX		7400.00	30.26	0.00	3222028.87	1286675.99	40°07'03.324"N	104°42'21.942"W	polygon
RUSSIAN FIDDLER 5 PAD HARD LINES (460' SETBACKS, SEC.18)		7400.00	5435.78	-2214.29	3219766.37	1292061.24	40°07'56.741"N	104°42'50.450"W	polygon
RUSSIAN FIDDLER 5 PAD HARD LINES (460' SETBACKS, SEC.19)		7400.00	5435.78	-2214.29	3219766.37	1292061.24	40°07'56.741"N	104°42'50.450"W	polygon



Actual Wellpath Report

RUSSIAN FIDDLER 37C-18HZ AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 RUSSIAN FIDDLER 37C-18HZ (305'FSL & 2459'FEL,SEC.19)
Area	COLORADO	Well	RUSSIAN FIDDLER 37C-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	RUSSIAN FIDDLER 37C-18HZ AWB
Facility	SEC.19-T2N-R65W		

WELLPATH COMPOSITION - Ref Wellbore: RUSSIAN FIDDLER 37C-18HZ AWB Ref Wellpath: RUSSIAN FIDDLER 37C-18HZ AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	896.00	Generic gyro - continuous (Standard)	MS ENERGY GYRO SURVEYS <116-896>	RUSSIAN FIDDLER 37C-18HZ AWB
896.00	7923.00	NaviTrak (MAGCORR,IFR)	BHI MWD+IFR SURVEYS 8 3/4" HOLE <1063-7923>	RUSSIAN FIDDLER 37C-18HZ AWB
7923.00	12847.00	OnTrak (MAGCORR,IFR)	BHI MWD+IFR SURVEYS 6 1/8" HOLE <8012-12847>	RUSSIAN FIDDLER 37C-18HZ AWB
12847.00	12903.00	Blind Drilling (std)	Projection to bit	RUSSIAN FIDDLER 37C-18HZ AWB



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RUSSIAN FIDDLER 37C-18HZ AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 RUSSIAN FIDDLER 37C-18HZ (305'FSL & 2459'FEL,SEC.19)
Area	COLORADO	Well	RUSSIAN FIDDLER 37C-18HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	RUSSIAN FIDDLER 37C-18HZ AWB
Facility	SEC.19-T2N-R65W		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
16.00	0.000	110.260	16.00	TIE-ON	
116.00	0.370	110.260	116.00	BEGIN GYRO SURVEYS	
896.00	0.120	189.260	895.99	TIE-INTO GYRO SURVEYS	
1063.00	0.170	115.990	1062.99	BEGIN BHI MWD+IFR SURVEYS	
7912.00	87.284	0.115	7363.99	7" CASING POINT	
12847.00	90.250	357.250	7340.40	LAST BHI MWD+IFR SURVEY	
12903.00	90.250	357.250	7340.15	PROJECTION TO BIT	