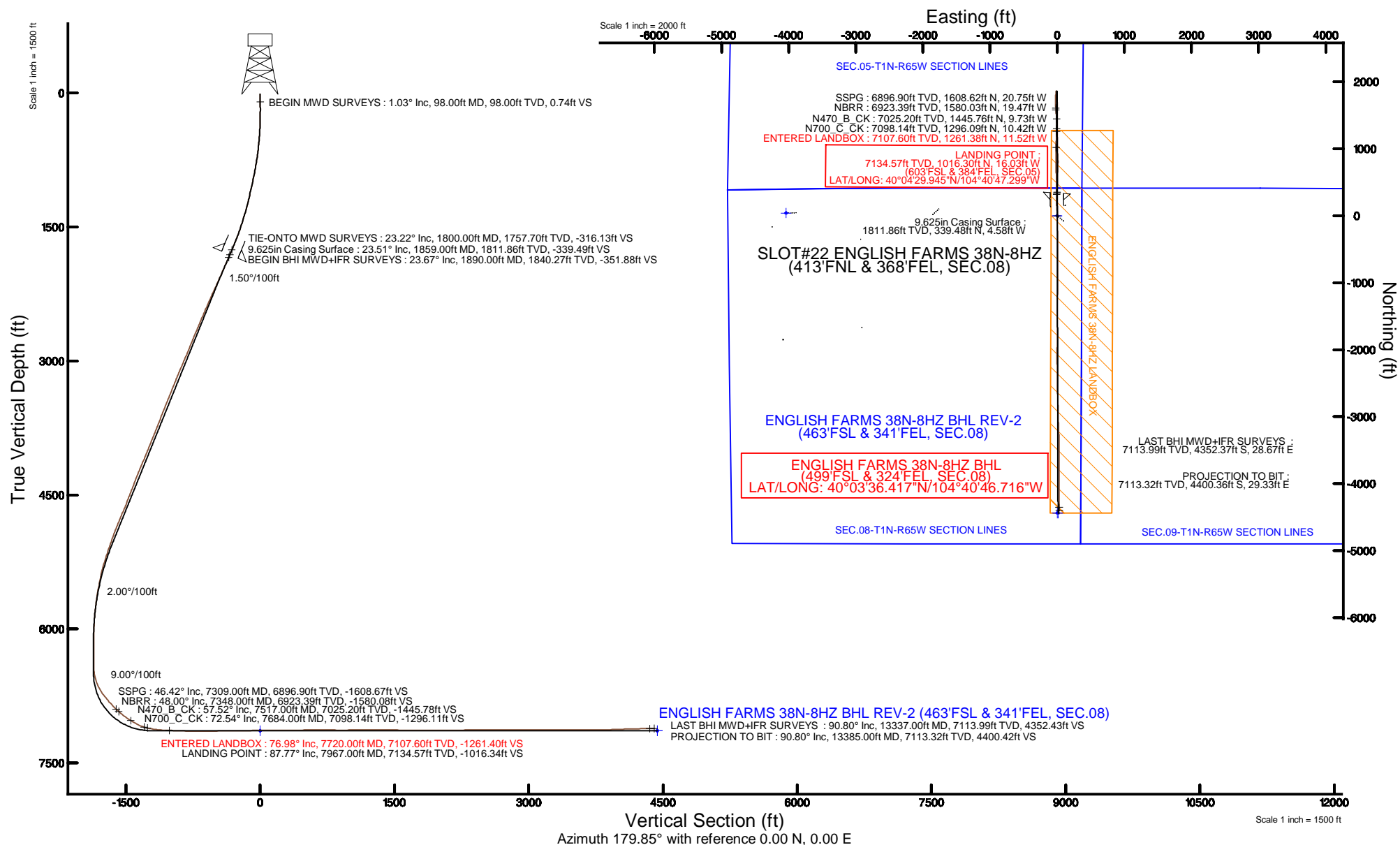


Location:	COLORADO	Slot:	SLOT#22 ENGLISH FARMS 38N-8HZ (413'FNL & 368'FEL, SEC.08)
Field:	WELD COUNTY (UTM/TRUE NORTH)	Well:	ENGLISH FARMS 38N-8HZ
Facility:	SEC.08-T1N-R65W	Wellbore:	ENGLISH FARMS 38N-8HZ PWB

Plot reference wellpath is ENGLISH FARMS 38N-8HZ (REV-B.0) PWP	
True vertical depths are referenced to XTREME 24 (16'KB) (RKB)	Grid System: NAD83 / UTM Zone 13 North, US feet
Measured depths are referenced to XTREME 24 (16'KB) (RKB)	North Reference: True north
XTREME 24 (16'KB) (RKB) to Mean Sea Level: 4948 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#22 ENGLISH FARMS 38N-8HZ (413'FNL & 368'FEL, SEC.08)): 0 feet	Depths are in feet
Coordinates are in feet referenced to SLO	Created by: amarcar on 04/Aug/2015



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#22 ENGLISH FARMS 38N-8HZ (413'FNL & 368'FEL, SEC.08)
Area	COLORADO	Well	ENGLISH FARMS 38N-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	ENGLISH FARMS 38N-8HZ AWB <13385>
Facility	SEC.08-T1N-R65W		

REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 13 North, US feet	Software System	WellArchitect® 4.0.0
North Reference	True	User	Amarcar
Scale	0.999609	Report Generated	04/Aug/2015 at 11:10
Convergence at slot	0.21° East	Database/Source file	KERR MCGEE UTM/ENGLISH_FARMS_38N-8HZ_AWB_13385_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	344.26	288.81	1730009.08	14553183.94	40°04'19.902"N	104°40'47.093"W
Facility Reference Pt			1729721.63	14552838.79	40°04'16.500"N	104°40'50.808"W
Field Reference Pt			1698235.31	14552047.82	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM

Calculation method	Minimum curvature	XTREME 24 (16'KB) (RKB) to Facility Vertical Datum	4948.00ft
Horizontal Reference Pt	Slot	XTREME 24 (16'KB) (RKB) to Mean Sea Level	4948.00ft
Vertical Reference Pt	XTREME 24 (16'KB) (RKB)	XTREME 24 (16'KB) (RKB) to Mud Line at Slot (SLOT#22 ENGLISH FARMS 38N-8HZ (413'FNL & 368'FEL, SEC.08))	4948.00ft
MD Reference Pt	XTREME 24 (16'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	179.85°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#22 ENGLISH FARMS 38N-8HZ (413'FNL & 368'FEL, SEC.08)
Area	COLORADO	Well	ENGLISH FARMS 38N-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	ENGLISH FARMS 38N-8HZ AWB <13385>
Facility	SEC.08-T1N-R65W		

WELLPATH DATA (143 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	183.220	0.00	0.00	0.00	0.00	40°04'19.902"N	104°40'47.093"W	0.00	
16.00	0.000	183.220	16.00	0.00	0.00	0.00	40°04'19.902"N	104°40'47.093"W	0.00	
98.00	1.030	183.220	98.00	0.74	-0.74	-0.04	40°04'19.895"N	104°40'47.094"W	1.26	BEGIN MWD SURVEYS
189.00	0.140	105.360	188.99	1.58	-1.58	0.02	40°04'19.886"N	104°40'47.093"W	1.11	
281.00	1.020	23.010	280.99	0.86	-0.86	0.45	40°04'19.894"N	104°40'47.087"W	1.10	
408.00	3.310	4.960	407.89	-3.83	3.84	1.21	40°04'19.940"N	104°40'47.077"W	1.86	
503.00	4.510	358.180	502.67	-10.30	10.30	1.33	40°04'20.004"N	104°40'47.076"W	1.35	
598.00	6.080	356.920	597.26	-19.06	19.06	0.94	40°04'20.090"N	104°40'47.081"W	1.66	
693.00	7.360	356.100	691.60	-30.15	30.15	0.25	40°04'20.200"N	104°40'47.090"W	1.35	
820.00	9.830	359.470	817.17	-49.11	49.11	-0.40	40°04'20.387"N	104°40'47.098"W	1.98	
915.00	11.070	3.960	910.59	-66.32	66.32	0.15	40°04'20.557"N	104°40'47.091"W	1.56	
1009.00	12.370	3.210	1002.63	-85.37	85.38	1.34	40°04'20.746"N	104°40'47.076"W	1.39	
1104.00	12.910	359.080	1095.33	-106.15	106.15	1.74	40°04'20.951"N	104°40'47.071"W	1.11	
1199.00	14.140	355.850	1187.69	-128.33	128.34	0.73	40°04'21.170"N	104°40'47.084"W	1.52	
1294.00	14.810	353.130	1279.68	-151.97	151.96	-1.56	40°04'21.404"N	104°40'47.113"W	1.00	
1389.00	16.170	354.470	1371.23	-177.20	177.19	-4.29	40°04'21.653"N	104°40'47.148"W	1.48	
1579.00	19.620	358.600	1552.01	-235.45	235.43	-7.62	40°04'22.229"N	104°40'47.191"W	1.93	
1674.00	21.190	1.090	1641.05	-268.56	268.54	-7.68	40°04'22.556"N	104°40'47.192"W	1.89	
1800.00	23.220	3.130	1757.70	-316.13	316.12	-5.89	40°04'23.026"N	104°40'47.169"W	1.72	TIE-ONTO MWD SURVEYS
1890.00	23.670	3.380	1840.27	-351.88	351.87	-3.86	40°04'23.379"N	104°40'47.143"W	0.51	BEGIN BHI MWD+IFR SURVEYS
1954.00	24.000	2.980	1898.81	-377.70	377.69	-2.42	40°04'23.634"N	104°40'47.124"W	0.57	
2048.00	23.640	2.780	1984.81	-415.61	415.61	-0.52	40°04'24.009"N	104°40'47.100"W	0.39	
2143.00	23.240	359.370	2071.97	-453.37	453.37	0.20	40°04'24.382"N	104°40'47.090"W	1.49	
2238.00	25.120	1.350	2158.63	-492.28	492.28	0.47	40°04'24.767"N	104°40'47.087"W	2.15	
2333.00	24.160	0.740	2244.98	-531.87	531.88	1.20	40°04'25.158"N	104°40'47.078"W	1.05	
2427.00	23.230	0.680	2331.06	-569.64	569.65	1.66	40°04'25.531"N	104°40'47.072"W	0.99	
2522.00	24.020	3.120	2418.10	-607.68	607.69	2.94	40°04'25.907"N	104°40'47.055"W	1.32	
2617.00	23.350	3.350	2505.09	-645.78	645.79	5.09	40°04'26.284"N	104°40'47.028"W	0.71	
2711.00	22.470	2.940	2591.68	-682.31	682.33	7.10	40°04'26.645"N	104°40'47.002"W	0.95	
2806.00	22.830	2.520	2679.35	-718.85	718.87	8.84	40°04'27.006"N	104°40'46.979"W	0.42	
2901.00	21.710	2.650	2767.26	-754.81	754.84	10.47	40°04'27.361"N	104°40'46.958"W	1.18	
2995.00	22.310	3.090	2854.41	-789.99	790.02	12.23	40°04'27.709"N	104°40'46.936"W	0.66	
3090.00	23.780	355.810	2941.85	-827.11	827.14	11.80	40°04'28.076"N	104°40'46.941"W	3.37	
3185.00	23.070	356.430	3029.02	-864.79	864.82	9.25	40°04'28.448"N	104°40'46.974"W	0.79	
3280.00	22.150	355.980	3116.71	-901.24	901.26	6.83	40°04'28.808"N	104°40'47.005"W	0.99	
3374.00	22.840	358.110	3203.56	-937.16	937.17	4.99	40°04'29.163"N	104°40'47.029"W	1.14	
3469.00	21.540	357.110	3291.53	-973.01	973.02	3.50	40°04'29.518"N	104°40'47.048"W	1.42	
3564.00	22.010	357.110	3379.75	-1008.21	1008.22	1.72	40°04'29.865"N	104°40'47.071"W	0.49	
3658.00	21.570	359.230	3467.03	-1043.08	1043.09	0.60	40°04'30.210"N	104°40'47.085"W	0.96	
3753.00	22.480	359.970	3555.10	-1078.71	1078.71	0.36	40°04'30.562"N	104°40'47.088"W	1.00	
3848.00	20.760	359.440	3643.41	-1113.71	1113.71	0.18	40°04'30.908"N	104°40'47.091"W	1.82	
3943.00	21.660	359.650	3731.98	-1148.08	1148.08	-0.09	40°04'31.248"N	104°40'47.094"W	0.95	
4038.00	22.210	2.280	3820.10	-1183.55	1183.55	0.52	40°04'31.598"N	104°40'47.086"W	1.19	
4133.00	22.550	0.890	3907.94	-1219.70	1219.71	1.52	40°04'31.955"N	104°40'47.073"W	0.66	
4227.00	22.100	359.780	3994.90	-1255.40	1255.41	1.73	40°04'32.308"N	104°40'47.071"W	0.66	

REFERENCE WELLPATH IDENTIFICATION				
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#22 ENGLISH FARMS 38N-8HZ (413'FNL & 368'FEL, SEC.08)	
Area	COLORADO	Well	ENGLISH FARMS 38N-8HZ	
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	ENGLISH FARMS 38N-8HZ AWB <13385>	
Facility	SEC.08-T1N-R65W			

WELLPATH DATA (143 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4322.00	21.910	359.180	4082.98	-1291.00	1291.01	1.41	40°04'32.660"N	104°40'47.075"W	0.31	
4417.00	23.620	358.550	4170.57	-1327.75	1327.76	0.67	40°04'33.023"N	104°40'47.084"W	1.82	
4511.00	21.830	358.500	4257.27	-1364.05	1364.06	-0.26	40°04'33.382"N	104°40'47.096"W	1.90	
4606.00	20.480	0.360	4345.87	-1398.33	1398.33	-0.62	40°04'33.721"N	104°40'47.101"W	1.59	
4701.00	21.150	359.800	4434.67	-1432.09	1432.09	-0.58	40°04'34.054"N	104°40'47.100"W	0.74	
4796.00	21.500	359.430	4523.17	-1466.64	1466.64	-0.81	40°04'34.396"N	104°40'47.103"W	0.39	
4890.00	21.660	0.280	4610.58	-1501.21	1501.21	-0.90	40°04'34.737"N	104°40'47.105"W	0.37	
4985.00	23.230	0.100	4698.38	-1537.48	1537.48	-0.78	40°04'35.096"N	104°40'47.103"W	1.65	
5079.00	22.550	1.100	4784.97	-1574.04	1574.04	-0.40	40°04'35.457"N	104°40'47.098"W	0.83	
5174.00	21.020	359.230	4873.19	-1609.29	1609.29	-0.28	40°04'35.805"N	104°40'47.097"W	1.77	
5269.00	19.920	359.980	4962.19	-1642.51	1642.51	-0.51	40°04'36.134"N	104°40'47.100"W	1.19	
5364.00	20.170	359.020	5051.43	-1675.07	1675.07	-0.80	40°04'36.455"N	104°40'47.103"W	0.43	
5458.00	17.430	358.290	5140.41	-1705.35	1705.35	-1.50	40°04'36.755"N	104°40'47.112"W	2.93	
5553.00	17.110	359.970	5231.13	-1733.55	1733.55	-1.93	40°04'37.033"N	104°40'47.118"W	0.62	
5648.00	15.080	357.120	5322.40	-1759.87	1759.87	-2.56	40°04'37.293"N	104°40'47.126"W	2.29	
5742.00	12.100	359.570	5413.76	-1781.94	1781.94	-3.24	40°04'37.511"N	104°40'47.135"W	3.23	
5837.00	10.580	358.330	5506.90	-1800.62	1800.62	-3.57	40°04'37.696"N	104°40'47.139"W	1.62	
5931.00	9.800	353.980	5599.42	-1817.20	1817.20	-4.66	40°04'37.860"N	104°40'47.153"W	1.17	
6026.00	7.590	350.090	5693.32	-1831.43	1831.42	-6.59	40°04'38.000"N	104°40'47.178"W	2.41	
6121.00	6.310	348.110	5787.62	-1842.73	1842.71	-8.75	40°04'38.112"N	104°40'47.206"W	1.37	
6215.00	4.320	343.760	5881.22	-1851.19	1851.16	-10.80	40°04'38.196"N	104°40'47.232"W	2.16	
6310.00	2.000	331.990	5976.07	-1856.09	1856.06	-12.58	40°04'38.244"N	104°40'47.255"W	2.52	
6404.00	0.620	326.970	6070.04	-1857.43	1857.40	-13.85	40°04'38.257"N	104°40'47.271"W	2.06	
6499.00	0.550	286.320	6165.04	-1857.44	1857.41	-14.79	40°04'38.257"N	104°40'47.283"W	0.32	
6593.00	0.460	251.990	6259.03	-1857.45	1857.42	-15.58	40°04'38.257"N	104°40'47.293"W	0.33	
6688.00	0.170	259.570	6354.03	-1857.31	1857.28	-16.08	40°04'38.256"N	104°40'47.300"W	0.31	
6731.00	0.430	251.440	6397.03	-1857.25	1857.21	-16.29	40°04'38.255"N	104°40'47.303"W	0.61	
6783.00	1.170	191.510	6449.03	-1856.67	1856.63	-16.59	40°04'38.250"N	104°40'47.306"W	1.97	
6877.00	13.300	180.960	6542.11	-1844.87	1844.84	-16.96	40°04'38.133"N	104°40'47.311"W	12.93	
6972.00	26.300	187.870	6631.31	-1812.97	1812.92	-20.04	40°04'37.818"N	104°40'47.351"W	13.88	
7067.00	33.500	182.340	6713.63	-1765.86	1765.81	-24.00	40°04'37.352"N	104°40'47.402"W	8.11	
7161.00	39.710	177.750	6789.06	-1709.87	1709.82	-23.88	40°04'36.799"N	104°40'47.400"W	7.22	
7256.00	44.280	178.680	6859.65	-1646.36	1646.30	-21.92	40°04'36.171"N	104°40'47.375"W	4.85	
7309.00†	46.420	177.768	6896.90	-1608.67	1608.62	-20.75	40°04'35.799"N	104°40'47.360"W	4.22	SSPG
7348.00†	47.998	177.137	6923.39	-1580.08	1580.03	-19.47	40°04'35.516"N	104°40'47.343"W	4.22	NBRR
7351.00	48.120	177.090	6925.39	-1577.85	1577.80	-19.36	40°04'35.494"N	104°40'47.342"W	4.22	
7445.00	53.800	174.300	6984.58	-1505.08	1505.05	-13.81	40°04'34.775"N	104°40'47.271"W	6.47	
7517.00†	57.522	177.742	7025.20	-1445.78	1445.76	-9.73	40°04'34.189"N	104°40'47.218"W	6.50	N470_B_CK
7540.00	58.730	178.780	7037.34	-1426.26	1426.24	-9.13	40°04'33.996"N	104°40'47.211"W	6.50	
7635.00	66.510	181.270	7081.01	-1341.97	1341.95	-9.24	40°04'33.163"N	104°40'47.212"W	8.51	
7684.00†	72.544	181.674	7098.14	-1296.11	1296.09	-10.42	40°04'32.710"N	104°40'47.227"W	12.34	N700_C_CK
7720.00†	76.978	181.954	7107.60	-1261.40	1261.38	-11.52	40°04'32.367"N	104°40'47.241"W	12.34	ENTERED LANDBOX
7730.00	78.210	182.030	7109.74	-1251.64	1251.62	-11.86	40°04'32.271"N	104°40'47.246"W	12.34	
7824.00	83.170	180.740	7124.95	-1158.95	1158.91	-14.09	40°04'31.355"N	104°40'47.274"W	5.45	
7919.00	87.570	180.830	7132.61	-1064.29	1064.26	-15.39	40°04'30.419"N	104°40'47.291"W	4.63	

REFERENCE WELLPATH IDENTIFICATION				
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#22 ENGLISH FARMS 38N-8HZ (413'FNL & 368'FEL, SEC.08)	
Area	COLORADO	Well	ENGLISH FARMS 38N-8HZ	
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	ENGLISH FARMS 38N-8HZ AWB <13385>	
Facility	SEC.08-T1N-R65W			

WELLPATH DATA (143 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7967.00†	87.767	180.704	7134.57	-1016.34	1016.30	-16.03	40°04'29.945"N	104°40'47.299"W	0.49	LANDING POINT
8014.00	87.960	180.580	7136.32	-969.37	969.34	-16.56	40°04'29.481"N	104°40'47.306"W	0.49	
8108.00	87.870	180.570	7139.74	-875.44	875.40	-17.50	40°04'28.553"N	104°40'47.318"W	0.10	
8203.00	90.030	179.110	7141.48	-780.47	780.43	-17.23	40°04'27.614"N	104°40'47.315"W	2.74	
8298.00	90.030	178.860	7141.43	-685.48	685.44	-15.55	40°04'26.676"N	104°40'47.293"W	0.26	
8393.00	90.150	178.680	7141.28	-590.50	590.46	-13.51	40°04'25.737"N	104°40'47.267"W	0.23	
8488.00	90.340	178.730	7140.87	-495.52	495.49	-11.36	40°04'24.799"N	104°40'47.239"W	0.21	
8582.00	90.520	178.720	7140.17	-401.54	401.52	-9.27	40°04'23.870"N	104°40'47.212"W	0.19	
8677.00	90.520	178.660	7139.31	-306.56	306.54	-7.10	40°04'22.931"N	104°40'47.184"W	0.06	
8772.00	91.050	178.660	7138.01	-211.59	211.58	-4.88	40°04'21.993"N	104°40'47.156"W	0.56	
8867.00	91.080	178.400	7136.24	-116.63	116.63	-2.44	40°04'21.055"N	104°40'47.124"W	0.28	
8962.00	90.650	178.060	7134.81	-21.68	21.68	0.49	40°04'20.116"N	104°40'47.087"W	0.58	
9056.00	89.410	179.120	7134.76	72.29	-72.28	2.80	40°04'19.188"N	104°40'47.057"W	1.74	
9151.00	90.310	178.810	7134.99	167.28	-167.27	4.52	40°04'18.249"N	104°40'47.035"W	1.00	
9246.00	90.430	179.720	7134.37	262.27	-262.26	5.74	40°04'17.310"N	104°40'47.019"W	0.97	
9341.00	90.960	179.730	7133.22	357.26	-357.25	6.19	40°04'16.372"N	104°40'47.013"W	0.56	
9436.00	91.320	179.700	7131.33	452.24	-452.23	6.67	40°04'15.433"N	104°40'47.007"W	0.38	
9531.00	90.280	180.110	7130.01	547.23	-547.22	6.82	40°04'14.494"N	104°40'47.005"W	1.18	
9625.00	89.230	180.130	7130.41	641.23	-641.22	6.63	40°04'13.565"N	104°40'47.008"W	1.12	
9720.00	90.490	180.000	7130.64	736.23	-736.21	6.52	40°04'12.627"N	104°40'47.009"W	1.33	
9815.00	89.390	180.130	7130.74	831.22	-831.21	6.41	40°04'11.688"N	104°40'47.011"W	1.17	
9909.00	90.180	180.060	7131.09	925.22	-925.21	6.26	40°04'10.759"N	104°40'47.013"W	0.84	
10099.00	90.980	180.220	7129.17	1115.21	-1115.20	5.79	40°04'08.881"N	104°40'47.019"W	0.43	
10193.00	90.250	180.540	7128.16	1209.20	-1209.19	5.17	40°04'07.953"N	104°40'47.027"W	0.85	
10288.00	89.880	180.810	7128.05	1304.19	-1304.18	4.05	40°04'07.014"N	104°40'47.041"W	0.48	
10382.00	89.540	180.670	7128.53	1398.18	-1398.17	2.83	40°04'06.085"N	104°40'47.057"W	0.39	
10477.00	89.020	180.480	7129.72	1493.16	-1493.16	1.88	40°04'05.146"N	104°40'47.069"W	0.58	
10571.00	88.280	180.400	7131.94	1587.13	-1587.13	1.16	40°04'04.218"N	104°40'47.078"W	0.79	
10666.00	89.720	180.160	7133.59	1682.11	-1682.11	0.70	40°04'03.279"N	104°40'47.084"W	1.54	
10761.00	89.200	180.160	7134.49	1777.10	-1777.11	0.43	40°04'02.340"N	104°40'47.087"W	0.55	
10855.00	90.800	180.670	7134.49	1871.10	-1871.10	-0.25	40°04'01.411"N	104°40'47.096"W	1.79	
10950.00	89.970	180.490	7133.85	1966.08	-1966.09	-1.21	40°04'00.473"N	104°40'47.109"W	0.89	
11045.00	89.630	179.850	7134.18	2061.08	-2061.09	-1.49	40°03'59.534"N	104°40'47.112"W	0.76	
11139.00	91.320	180.040	7133.40	2155.08	-2155.09	-1.40	40°03'58.605"N	104°40'47.111"W	1.81	
11234.00	91.230	179.450	7131.29	2250.05	-2250.06	-0.98	40°03'57.666"N	104°40'47.106"W	0.63	
11329.00	90.550	179.470	7129.81	2345.04	-2345.04	-0.09	40°03'56.728"N	104°40'47.094"W	0.72	
11424.00	90.650	179.260	7128.82	2440.03	-2440.03	0.97	40°03'55.789"N	104°40'47.081"W	0.24	
11518.00	89.910	178.900	7128.36	2534.02	-2534.02	2.48	40°03'54.860"N	104°40'47.061"W	0.88	
11613.00	90.310	178.370	7128.18	2629.00	-2628.99	4.74	40°03'53.922"N	104°40'47.032"W	0.70	
11708.00	89.750	177.830	7128.13	2723.95	-2723.94	7.89	40°03'52.983"N	104°40'46.992"W	0.82	
11803.00	89.540	177.320	7128.72	2818.87	-2818.85	11.91	40°03'52.046"N	104°40'46.940"W	0.58	
11897.00	89.510	179.220	7129.50	2912.83	-2912.80	14.75	40°03'51.117"N	104°40'46.903"W	2.02	
12087.00	90.060	178.110	7130.21	3102.78	-3102.74	19.17	40°03'49.240"N	104°40'46.846"W	0.65	
12181.00	89.600	177.380	7130.49	3196.72	-3196.67	22.87	40°03'48.312"N	104°40'46.799"W	0.92	
12371.00	90.520	180.360	7130.29	3386.67	-3386.61	26.62	40°03'46.435"N	104°40'46.751"W	1.64	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#22 ENGLISH FARMS 38N-8HZ (413'FNL & 368'FEL, SEC.08)
Area	COLORADO	Well	ENGLISH FARMS 38N-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	ENGLISH FARMS 38N-8HZ AWB <13385>
Facility	SEC.08-T1N-R65W		

WELLPATH DATA (143 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12466.00	89.910	179.370	7129.93	3481.66	-3481.61	26.84	40°03'45.496"N	104°40'46.748"W	1.22	
12561.00	90.430	179.820	7129.65	3576.66	-3576.60	27.51	40°03'44.557"N	104°40'46.739"W	0.72	
12656.00	90.120	179.160	7129.19	3671.66	-3671.60	28.36	40°03'43.618"N	104°40'46.728"W	0.77	
12845.00	90.980	180.640	7127.38	3860.64	-3860.58	28.69	40°03'41.751"N	104°40'46.724"W	0.91	
13035.00	92.740	180.060	7121.21	4050.53	-4050.47	27.53	40°03'39.874"N	104°40'46.739"W	0.98	
13130.00	91.330	180.090	7117.84	4145.46	-4145.41	27.40	40°03'38.936"N	104°40'46.741"W	1.48	
13337.00	90.800	179.210	7113.99	4352.43	-4352.37	28.67	40°03'36.891"N	104°40'46.724"W	0.50	LAST BHI MWD+IFR SURVEYS
13385.00	90.800	179.210	7113.32	4400.42	-4400.36	29.33	40°03'36.417"N	104°40'46.716"W	0.00	PROJECTION TO BIT

HOLE & CASING SECTIONS - Ref Wellbore: ENGLISH FARMS 38N-8HZ AWB <13385>					Ref Wellpath: ENGLISH FARMS 38N-8HZ 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	1869.00	1853.00	16.00	1821.03	0.00	0.00	343.47	-4.35
9.625in Casing Surface	16.00	1859.00	1843.00	16.00	1811.86	0.00	0.00	339.48	-4.58
7.875in Open Hole	1869.00	13385.00	11516.00	1821.03	7113.32	343.47	-4.35	-4400.36	29.33

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.05-T1N-R65W SECTION LINES	7098.00	765.80	-1983.90	1728023.23	14553942.30	40°04'27.469"N	104°41'12.613"W	polygon
SEC.08-T1N-R65W SECTION LINES	7098.00	40.80	-4039.04	1725971.51	14553210.20	40°04'20.302"N	104°41'39.048"W	polygon
SEC.09-T1N-R65W SECTION LINES	7098.00	0.00	0.00	1730009.08	14553183.94	40°04'19.902"N	104°40'47.093"W	polygon
ENGLISH FARMS 38N-8HZ BHL ON PLAT REV-1 (463'FSL & 351'FEL, SEC.08)	7138.00	-4436.34	2.53	1730027.57	14548749.39	40°03'36.061"N	104°40'47.060"W	point
ENGLISH FARMS 38N-8HZ BHL REV-2 (463'FSL & 341'FEL, SEC.08)	7138.00	-4436.34	12.53	1730037.57	14548749.42	40°03'36.061"N	104°40'46.932"W	point
ENGLISH FARMS 38N-8HZ LANDBOX	7138.00	0.00	0.00	1730009.08	14553183.94	40°04'19.902"N	104°40'47.093"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: ENGLISH FARMS 38N-8HZ AWB <13385>					Ref Wellpath: ENGLISH FARMS 38N-8HZ AWP		
Start MD [ft]	End MD [ft]	Positional Uncertainty Model		Log Name/Comment		Wellbore	
16.00	1800.00	Custom APC_ISCWSA REV 2 MWD		SDI MWD SURVEYS 13.5 " <98-1800>		ENGLISH FARMS 38N-8HZ AWB <13385>	
1800.00	13337.00	Custom APC_ISCWSA REV 2 MWD+IFR1+SC (approximation)		BHI MWD+IFR SURVEYS 7.875" <1890-13337>		ENGLISH FARMS 38N-8HZ AWB <13385>	
13337.00	13385.00	Blind Drilling (std)		Projection to bit		ENGLISH FARMS 38N-8HZ AWB <13385>	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#22 ENGLISH FARMS 38N-8HZ (413'FNL & 368'FEL, SEC.08)
Area	COLORADO	Well	ENGLISH FARMS 38N-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	ENGLISH FARMS 38N-8HZ AWB <13385>
Facility	SEC.08-T1N-R65W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
98.00	1.030	183.220	98.00	BEGIN MWD SURVEYS
1800.00	23.220	3.130	1757.70	TIE-ONTO MWD SURVEYS
1890.00	23.670	3.380	1840.27	BEGIN BHI MWD+IFR SURVEYS
7309.00	46.420	177.768	6896.90	SSPG
7348.00	47.998	177.137	6923.39	NBRR
7517.00	57.522	177.742	7025.20	N470_B_CK
7684.00	72.544	181.674	7098.14	N700_C_CK
7720.00	76.978	181.954	7107.60	ENTERED LANDBOX
7967.00	87.767	180.704	7134.57	LANDING POINT
13337.00	90.800	179.210	7113.99	LAST BHI MWD+IFR SURVEYS
13385.00	90.800	179.210	7113.32	PROJECTION TO BIT