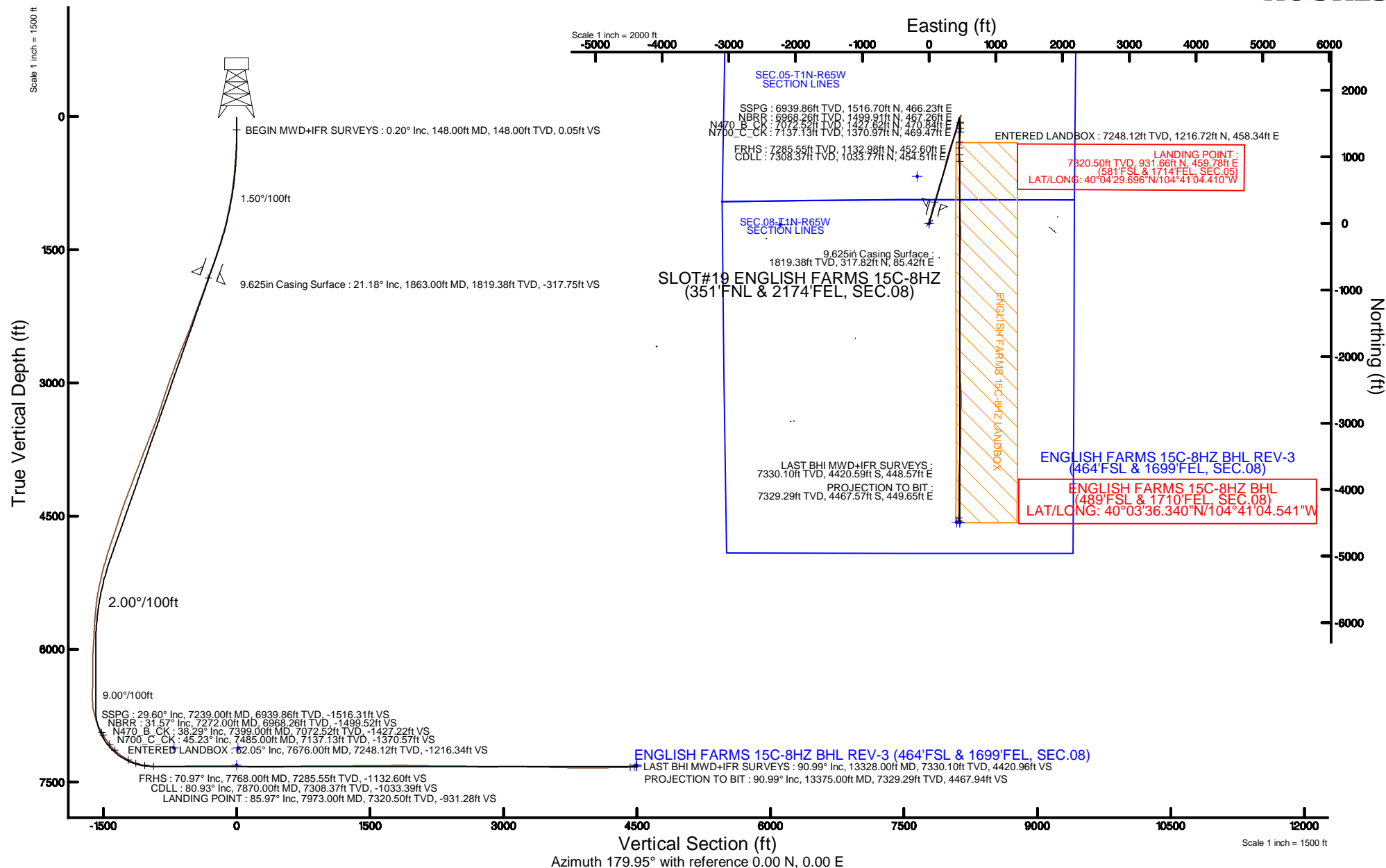


Location:	COLORADO	Slot:	SLOT#19 ENGLISH FARMS 15C-8HZ (351°FNL & 2174°FEL, SEC.08)
Field:	WELD COUNTY (UTM/TRUE NORTH)	Well:	ENGLISH FARMS 15C-8HZ
Facility:	SEC.08-T1N-R65W	Wellbore:	ENGLISH FARMS 15C-8HZ PWB

Plot reference wellpath is ENGLISH FARMS 15C-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: 4964 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#19 ENGLISH FARMS 15C-8HZ (351'FNL & 2174'FEL, SEC.08)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: amarcos on 10/Jul/2015



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#19 ENGLISH FARMS 15C-8HZ (351'FNL & 2174'FEL, SEC.08)
Area	COLORADO	Well	ENGLISH FARMS 15C-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	ENGLISH FARMS 15C-8HZ AWB <13375>
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	10/Jul/2015 at 08:49
Convergence at slot	0.20° East	Database/Source file	KERR MCGEE UTM/_ENGLISH_FARMS_15C-8HZ_AWB__13375_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	403.70	-1517.19	1728203.59	14553236.89	40°04'20.489"N	104°41'10.324"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	4964.00ft
Horizontal Reference Pt	Slot	XTREME 24 (16'KB) (RKB) to Mean Sea Level	4964.00ft
Vertical Reference Pt	XTREME 24 (16'KB) (RKB)	XTREME 24 (16'KB) (RKB) to Mud Line at Slot (SLOT#19 ENGLISH FARMS 15C-8HZ (351'FNL & 2174'FEL, SEC.08))	4964.00ft
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	179.95°

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#19 ENGLISH FARMS 15C-8HZ (351°FNL & 2174°FEL, SEC.08)
Area	COLORADO	Well	ENGLISH FARMS 15C-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	ENGLISH FARMS 15C-8HZ AWB <13375>
Facility	SEC.08-T1N-R65W		

WELLPATH DATA (151 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	257.380	0.00	0.00	0.00	0.00	40°04'20.489"N	104°41'10.324"W	0.00	
16.00	0.000	257.380	16.00	0.00	0.00	0.00	40°04'20.489"N	104°41'10.324"W	0.00	
148.00	0.200	257.380	148.00	0.05	-0.05	-0.22	40°04'20.489"N	104°41'10.327"W	0.15	BEGIN MWD+IFR SURVEYS
239.00	0.920	356.260	239.00	-0.64	0.64	-0.43	40°04'20.495"N	104°41'10.329"W	1.07	
337.00	2.700	10.760	336.94	-3.70	3.70	-0.05	40°04'20.526"N	104°41'10.325"W	1.86	
432.00	3.550	12.740	431.80	-8.76	8.76	1.02	40°04'20.576"N	104°41'10.311"W	0.90	
527.00	4.540	10.080	526.56	-15.33	15.33	2.33	40°04'20.641"N	104°41'10.294"W	1.06	
622.00	5.280	13.520	621.21	-23.28	23.29	4.01	40°04'20.719"N	104°41'10.272"W	0.84	
716.00	6.970	19.750	714.68	-32.85	32.86	6.94	40°04'20.814"N	104°41'10.235"W	1.93	
811.00	8.800	20.650	808.77	-45.08	45.09	11.45	40°04'20.935"N	104°41'10.177"W	1.93	
906.00	9.850	18.580	902.52	-59.58	59.59	16.61	40°04'21.078"N	104°41'10.110"W	1.16	
1000.00	11.480	15.310	994.89	-76.22	76.23	21.64	40°04'21.242"N	104°41'10.046"W	1.85	
1095.00	11.410	12.520	1088.00	-94.50	94.53	26.17	40°04'21.423"N	104°41'09.987"W	0.59	
1190.00	13.500	9.670	1180.76	-114.61	114.63	30.07	40°04'21.622"N	104°41'09.937"W	2.29	
1285.00	15.530	10.980	1272.73	-138.02	138.05	34.36	40°04'21.853"N	104°41'09.882"W	2.16	
1379.00	17.420	14.180	1362.86	-164.02	164.05	40.20	40°04'22.110"N	104°41'09.807"W	2.23	
1474.00	17.600	12.560	1453.46	-191.82	191.86	46.81	40°04'22.385"N	104°41'09.722"W	0.55	
1569.00	19.000	14.980	1543.66	-220.77	220.82	53.93	40°04'22.671"N	104°41'09.630"W	1.68	
1664.00	20.240	18.400	1633.14	-251.30	251.35	63.11	40°04'22.973"N	104°41'09.512"W	1.78	
1759.00	20.410	18.650	1722.23	-282.58	282.64	73.60	40°04'23.282"N	104°41'09.377"W	0.20	
1811.00	21.010	18.700	1770.87	-299.99	300.06	79.49	40°04'23.454"N	104°41'09.302"W	1.15	
1859.00	21.200	18.270	1815.65	-316.38	316.45	84.97	40°04'23.616"N	104°41'09.231"W	0.51	
1953.00	20.800	16.830	1903.40	-348.49	348.56	95.13	40°04'23.934"N	104°41'09.100"W	0.69	
2048.00	20.420	15.860	1992.32	-380.56	380.65	104.54	40°04'24.251"N	104°41'08.979"W	0.54	
2143.00	20.680	16.160	2081.28	-412.61	412.71	113.74	40°04'24.567"N	104°41'08.861"W	0.30	
2238.00	20.720	15.450	2170.15	-444.91	445.02	122.88	40°04'24.887"N	104°41'08.743"W	0.27	
2333.00	20.580	14.460	2259.04	-477.27	477.38	131.53	40°04'25.207"N	104°41'08.632"W	0.40	
2428.00	20.870	16.890	2347.90	-509.62	509.74	140.62	40°04'25.526"N	104°41'08.515"W	0.96	
2523.00	21.640	13.430	2436.44	-542.85	542.97	149.60	40°04'25.855"N	104°41'08.400"W	1.55	
2618.00	23.020	16.080	2524.31	-577.73	577.86	158.82	40°04'26.200"N	104°41'08.281"W	1.80	
2713.00	23.620	19.620	2611.56	-613.50	613.64	170.35	40°04'26.553"N	104°41'08.133"W	1.60	
2808.00	22.670	19.720	2698.91	-648.65	648.80	182.92	40°04'26.901"N	104°41'07.971"W	1.00	
2902.00	21.710	18.490	2785.95	-682.18	682.34	194.55	40°04'27.232"N	104°41'07.821"W	1.13	
2997.00	20.690	16.950	2874.52	-714.89	715.06	205.01	40°04'27.555"N	104°41'07.687"W	1.22	
3092.00	20.470	16.080	2963.46	-746.90	747.08	214.51	40°04'27.872"N	104°41'07.565"W	0.40	
3187.00	19.920	15.650	3052.62	-778.43	778.62	223.47	40°04'28.183"N	104°41'07.449"W	0.60	
3281.00	19.070	15.240	3141.23	-808.66	808.86	231.83	40°04'28.482"N	104°41'07.342"W	0.92	
3376.00	17.800	13.020	3231.35	-837.78	837.98	239.18	40°04'28.770"N	104°41'07.247"W	1.53	
3471.00	18.450	10.890	3321.64	-866.68	866.89	245.29	40°04'29.056"N	104°41'07.169"W	0.98	
3566.00	20.690	10.320	3411.14	-897.96	898.17	251.14	40°04'29.365"N	104°41'07.093"W	2.37	
3661.00	22.310	12.270	3499.53	-932.08	932.30	257.98	40°04'29.702"N	104°41'07.005"W	1.86	
3755.00	21.970	15.350	3586.60	-966.47	966.69	266.42	40°04'30.042"N	104°41'06.897"W	1.29	
3850.00	22.790	17.770	3674.45	-1001.12	1001.35	276.74	40°04'30.385"N	104°41'06.764"W	1.30	
3945.00	21.290	14.510	3762.51	-1035.33	1035.57	286.68	40°04'30.723"N	104°41'06.636"W	2.04	
4040.00	21.590	16.970	3850.93	-1068.74	1068.99	296.10	40°04'31.053"N	104°41'06.515"W	1.00	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#19 ENGLISH FARMS 15C-8HZ (351°FNL & 2174°FEL, SEC.08)
Area	COLORADO	Well	ENGLISH FARMS 15C-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	ENGLISH FARMS 15C-8HZ AWB <13375>
Facility	SEC.08-T1N-R65W		

WELLPATH DATA (151 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4135.00	22.790	19.190	3938.90	-1102.83	1103.08	307.25	40°04'31.390"N	104°41'06.372"W	1.54	
4230.00	21.590	17.050	4026.86	-1136.91	1137.17	318.43	40°04'31.727"N	104°41'06.228"W	1.52	
4325.00	20.530	15.900	4115.52	-1169.63	1169.90	328.12	40°04'32.050"N	104°41'06.103"W	1.20	
4420.00	23.210	22.400	4203.68	-1202.96	1203.24	339.82	40°04'32.380"N	104°41'05.953"W	3.80	
4514.00	22.500	21.740	4290.30	-1236.78	1237.08	353.54	40°04'32.714"N	104°41'05.776"W	0.80	
4609.00	21.030	21.990	4378.53	-1269.46	1269.77	366.65	40°04'33.037"N	104°41'05.607"W	1.55	
4704.00	19.560	21.020	4467.63	-1300.10	1300.42	378.74	40°04'33.340"N	104°41'05.452"W	1.59	
4799.00	18.660	19.460	4557.39	-1329.27	1329.60	389.51	40°04'33.628"N	104°41'05.313"W	1.09	
4894.00	18.570	16.120	4647.43	-1358.12	1358.46	398.77	40°04'33.914"N	104°41'05.194"W	1.13	
4989.00	19.690	15.140	4737.18	-1388.10	1388.44	407.15	40°04'34.210"N	104°41'05.086"W	1.23	
5084.00	19.210	14.340	4826.76	-1418.68	1419.03	415.20	40°04'34.512"N	104°41'04.983"W	0.58	
5178.00	17.460	13.300	4915.98	-1447.39	1447.74	422.28	40°04'34.796"N	104°41'04.892"W	1.89	
5273.00	15.910	10.240	5006.98	-1474.07	1474.42	427.87	40°04'35.060"N	104°41'04.820"W	1.87	
5368.00	15.040	12.920	5098.54	-1498.89	1499.25	432.94	40°04'35.305"N	104°41'04.755"W	1.19	
5462.00	13.320	10.810	5189.67	-1521.41	1521.78	437.70	40°04'35.527"N	104°41'04.693"W	1.91	
5557.00	12.340	8.350	5282.30	-1542.20	1542.57	441.23	40°04'35.733"N	104°41'04.648"W	1.18	
5652.00	10.460	14.450	5375.42	-1560.60	1560.97	444.86	40°04'35.915"N	104°41'04.601"W	2.35	
5747.00	7.510	28.180	5469.26	-1574.42	1574.80	449.94	40°04'36.051"N	104°41'04.536"W	3.82	
5842.00	6.680	30.060	5563.53	-1584.67	1585.05	455.64	40°04'36.153"N	104°41'04.463"W	0.91	
5936.00	6.180	44.370	5656.94	-1593.01	1593.40	461.92	40°04'36.235"N	104°41'04.382"W	1.78	
6031.00	2.500	359.690	5751.68	-1598.74	1599.13	465.48	40°04'36.292"N	104°41'04.336"W	4.99	
6126.00	2.840	33.480	5846.58	-1602.77	1603.17	466.77	40°04'36.332"N	104°41'04.319"W	1.67	
6221.00	6.480	43.820	5941.25	-1608.60	1609.00	471.78	40°04'36.389"N	104°41'04.255"W	3.92	
6315.00	2.670	20.230	6034.94	-1614.48	1614.88	476.21	40°04'36.448"N	104°41'04.198"W	4.44	
6410.00	0.740	335.740	6129.90	-1617.12	1617.52	476.73	40°04'36.474"N	104°41'04.191"W	2.32	
6505.00	0.590	353.430	6224.89	-1618.16	1618.56	476.42	40°04'36.484"N	104°41'04.195"W	0.27	
6599.00	0.560	349.620	6318.89	-1619.10	1619.50	476.28	40°04'36.493"N	104°41'04.197"W	0.05	
6694.00	0.400	358.030	6413.88	-1619.89	1620.29	476.19	40°04'36.501"N	104°41'04.198"W	0.18	
6789.00	0.460	20.230	6508.88	-1620.57	1620.97	476.31	40°04'36.508"N	104°41'04.197"W	0.18	
6884.00	1.540	216.730	6603.87	-1619.91	1620.31	475.68	40°04'36.501"N	104°41'04.205"W	2.09	
6979.00	13.120	190.770	6697.94	-1608.26	1608.65	472.89	40°04'36.386"N	104°41'04.241"W	12.37	
7073.00	17.960	190.640	6788.48	-1583.52	1583.91	468.22	40°04'36.142"N	104°41'04.301"W	5.15	
7168.00	25.120	180.280	6876.82	-1548.91	1549.30	465.41	40°04'35.799"N	104°41'04.337"W	8.51	
7239.00†	29.601	177.063	6939.86	-1516.31	1516.70	466.23	40°04'35.477"N	104°41'04.326"W	6.64	SSPG
7263.00	31.130	176.170	6960.57	-1504.19	1504.59	466.95	40°04'35.358"N	104°41'04.317"W	6.64	
7272.00†	31.573	176.256	6968.26	-1499.52	1499.91	467.26	40°04'35.311"N	104°41'04.313"W	4.95	NBRR
7358.00	35.810	176.980	7039.80	-1451.91	1452.30	470.06	40°04'34.841"N	104°41'04.277"W	4.95	
7399.00†	38.291	179.340	7072.52	-1427.22	1427.62	470.84	40°04'34.597"N	104°41'04.267"W	6.97	N470_B_CK
7452.00	41.560	182.030	7113.16	-1393.22	1393.62	470.40	40°04'34.261"N	104°41'04.273"W	6.97	
7485.00†	45.232	182.659	7137.13	-1370.57	1370.97	469.47	40°04'34.037"N	104°41'04.285"W	11.21	N700_C_CK
7547.00	52.140	183.650	7178.04	-1324.11	1324.50	466.89	40°04'33.578"N	104°41'04.318"W	11.21	
7642.00	59.350	185.080	7231.48	-1245.88	1246.26	460.87	40°04'32.805"N	104°41'04.395"W	7.69	
7676.00†	62.048	184.718	7248.12	-1216.34	1216.72	458.34	40°04'32.513"N	104°41'04.428"W	7.99	ENTERED LANDBOX
7737.00	66.890	184.110	7274.40	-1161.48	1161.86	454.11	40°04'31.971"N	104°41'04.482"W	7.99	
7768.00†	70.970	181.925	7285.55	-1132.60	1132.98	452.60	40°04'31.685"N	104°41'04.502"W	14.71	FRHS

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#19 ENGLISH FARMS 15C-8HZ (351°FNL & 2174°FEL, SEC.08)
Area	COLORADO	Well	ENGLISH FARMS 15C-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	ENGLISH FARMS 15C-8HZ AWB <13375>
Facility	SEC.08-T1N-R65W		

WELLPATH DATA (151 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7831.00	79.330	177.780	7301.69	-1071.78	1072.15	452.80	40°04'31.084"N	104°41'04.499"W	14.71	
7870.00†	80.934	177.127	7308.37	-1033.39	1033.77	454.51	40°04'30.705"N	104°41'04.477"W	4.43	CDLL
7926.00	83.240	176.200	7316.08	-978.02	978.40	457.74	40°04'30.158"N	104°41'04.436"W	4.43	
7973.00†	85.971	178.784	7320.50	-931.28	931.66	459.78	40°04'29.696"N	104°41'04.410"W	7.98	LANDING POINT
8020.00	88.710	181.350	7322.68	-884.34	884.72	459.72	40°04'29.232"N	104°41'04.410"W	7.98	
8115.00	90.550	180.910	7323.29	-789.36	789.75	457.85	40°04'28.293"N	104°41'04.434"W	1.99	
8210.00	90.860	181.400	7322.12	-694.39	694.77	455.94	40°04'27.355"N	104°41'04.459"W	0.61	
8305.00	90.830	179.900	7320.72	-599.41	599.79	454.86	40°04'26.416"N	104°41'04.473"W	1.58	
8400.00	90.680	179.340	7319.47	-504.42	504.80	455.49	40°04'25.478"N	104°41'04.465"W	0.61	
8495.00	90.710	179.060	7318.32	-409.44	409.82	456.82	40°04'24.539"N	104°41'04.448"W	0.30	
8589.00	90.650	178.680	7317.20	-315.46	315.85	458.67	40°04'23.610"N	104°41'04.424"W	0.41	
8684.00	90.460	178.580	7316.28	-220.49	220.88	460.94	40°04'22.672"N	104°41'04.395"W	0.23	
8779.00	89.660	177.340	7316.18	-125.55	125.94	464.32	40°04'21.734"N	104°41'04.351"W	1.55	
8874.00	87.440	178.470	7318.59	-30.65	31.04	467.79	40°04'20.796"N	104°41'04.307"W	2.62	
8969.00	87.440	177.740	7322.83	64.21	-63.81	470.93	40°04'19.858"N	104°41'04.266"W	0.77	
9063.00	87.010	181.340	7327.38	158.08	-157.68	471.69	40°04'18.931"N	104°41'04.257"W	3.85	
9158.00	90.430	181.530	7329.50	253.01	-252.61	469.31	40°04'17.993"N	104°41'04.287"W	3.61	
9253.00	90.830	181.800	7328.46	347.96	-347.57	466.55	40°04'17.054"N	104°41'04.323"W	0.51	
9347.00	90.990	181.610	7326.97	441.90	-441.51	463.75	40°04'16.126"N	104°41'04.359"W	0.26	
9442.00	91.110	180.910	7325.23	536.86	-536.47	461.66	40°04'15.187"N	104°41'04.386"W	0.75	
9537.00	91.420	180.810	7323.13	631.83	-631.44	460.24	40°04'14.249"N	104°41'04.404"W	0.34	
9632.00	91.850	180.360	7320.42	726.78	-726.40	459.27	40°04'13.311"N	104°41'04.417"W	0.66	
9726.00	89.750	178.960	7319.10	820.76	-820.38	459.83	40°04'12.382"N	104°41'04.409"W	2.68	
9821.00	89.910	178.490	7319.39	915.74	-915.35	461.94	40°04'11.443"N	104°41'04.382"W	0.52	
9916.00	91.390	179.970	7318.31	1010.72	-1010.33	463.22	40°04'10.505"N	104°41'04.366"W	2.20	
10011.00	89.820	180.240	7317.31	1105.71	-1105.33	463.04	40°04'09.566"N	104°41'04.368"W	1.68	
10106.00	90.000	180.320	7317.46	1200.71	-1200.32	462.58	40°04'08.627"N	104°41'04.374"W	0.21	
10200.00	92.500	180.420	7315.40	1294.68	-1294.29	461.97	40°04'07.699"N	104°41'04.382"W	2.66	
10295.00	91.140	180.680	7312.39	1389.62	-1389.24	461.06	40°04'06.760"N	104°41'04.394"W	1.46	
10389.00	90.000	179.970	7311.45	1483.61	-1483.23	460.53	40°04'05.831"N	104°41'04.400"W	1.43	
10484.00	90.280	180.000	7311.22	1578.61	-1578.23	460.55	40°04'04.893"N	104°41'04.400"W	0.30	
10579.00	90.340	180.090	7310.71	1673.61	-1673.23	460.48	40°04'03.954"N	104°41'04.401"W	0.11	
10674.00	90.370	180.310	7310.12	1768.61	-1768.23	460.15	40°04'03.015"N	104°41'04.405"W	0.23	
10768.00	89.880	180.740	7309.91	1862.60	-1862.22	459.28	40°04'02.086"N	104°41'04.417"W	0.69	
10863.00	88.860	180.060	7310.96	1957.59	-1957.21	458.62	40°04'01.147"N	104°41'04.425"W	1.29	
10958.00	88.740	179.430	7312.95	2052.57	-2052.19	459.04	40°04'00.209"N	104°41'04.420"W	0.67	
11052.00	88.700	179.030	7315.05	2146.54	-2146.16	460.31	40°03'59.280"N	104°41'04.403"W	0.43	
11147.00	89.110	178.060	7316.86	2241.49	-2241.11	462.72	40°03'58.342"N	104°41'04.372"W	1.11	
11242.00	89.780	177.240	7317.78	2336.41	-2336.02	466.61	40°03'57.404"N	104°41'04.322"W	1.11	
11337.00	90.220	176.970	7317.78	2431.29	-2430.90	471.41	40°03'56.466"N	104°41'04.261"W	0.54	
11431.00	88.740	177.040	7318.64	2525.16	-2524.76	476.32	40°03'55.539"N	104°41'04.198"W	1.58	
11526.00	87.100	179.480	7322.08	2620.05	-2619.65	479.21	40°03'54.601"N	104°41'04.161"W	3.09	
11621.00	88.520	181.370	7325.71	2714.97	-2714.57	478.50	40°03'53.663"N	104°41'04.170"W	2.49	
11716.00	90.180	182.280	7326.79	2809.91	-2809.51	475.48	40°03'52.725"N	104°41'04.209"W	1.99	
11811.00	90.860	181.350	7325.93	2904.85	-2904.46	472.47	40°03'51.787"N	104°41'04.247"W	1.21	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#19 ENGLISH FARMS 15C-8HZ (351°FNL & 2174°FEL, SEC.08)
Area	COLORADO	Well	ENGLISH FARMS 15C-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	ENGLISH FARMS 15C-8HZ AWP <13375>
Facility	SEC.08-T1N-R65W		

WELLPATH DATA (151 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11906.00	91.050	180.630	7324.35	2999.82	-2999.43	470.83	40°03'50.848"N	104°41'04.268"W	0.78	
12000.00	89.880	180.000	7323.58	3093.82	-3093.42	470.31	40°03'49.919"N	104°41'04.275"W	1.41	
12095.00	89.080	178.670	7324.45	3188.80	-3188.41	471.41	40°03'48.980"N	104°41'04.261"W	1.63	
12190.00	89.480	181.200	7325.64	3283.79	-3283.39	471.52	40°03'48.042"N	104°41'04.260"W	2.70	
12285.00	89.750	182.340	7326.28	3378.74	-3378.34	468.58	40°03'47.103"N	104°41'04.297"W	1.23	
12380.00	87.630	183.450	7328.45	3473.58	-3473.19	463.79	40°03'46.166"N	104°41'04.359"W	2.52	
12475.00	88.240	182.900	7331.87	3568.37	-3567.98	458.53	40°03'45.229"N	104°41'04.427"W	0.86	
12569.00	88.920	182.940	7334.20	3662.21	-3661.83	453.74	40°03'44.302"N	104°41'04.488"W	0.72	
12664.00	89.200	181.690	7335.76	3757.12	-3756.74	449.91	40°03'43.364"N	104°41'04.538"W	1.35	
12759.00	89.480	181.140	7336.86	3852.08	-3851.70	447.56	40°03'42.426"N	104°41'04.568"W	0.65	
12854.00	89.510	180.600	7337.69	3947.06	-3946.69	446.12	40°03'41.487"N	104°41'04.586"W	0.57	
12949.00	90.620	180.210	7337.58	4042.06	-4041.69	445.45	40°03'40.548"N	104°41'04.595"W	1.24	
13044.00	91.140	179.850	7336.13	4137.05	-4136.67	445.40	40°03'39.609"N	104°41'04.596"W	0.67	
13139.00	91.390	179.640	7334.03	4232.02	-4231.65	445.82	40°03'38.671"N	104°41'04.590"W	0.34	
13328.00	90.990	178.690	7330.10	4420.96	-4420.59	448.57	40°03'36.804"N	104°41'04.555"W	0.55	LAST BHI MWD+IFR SURVEYS
13375.00	90.990	178.690	7329.29	4467.94	-4467.57	449.65	40°03'36.340"N	104°41'04.541"W	0.00	PROJECTION TO BIT

HOLE & CASING SECTIONS - Ref Wellbore: ENGLISH FARMS 15C-8HZ AWP <13375> Ref Wellpath: ENGLISH FARMS 15C-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	1864.00	1848.00	16.00	1820.31	0.00	0.00	318.17	85.53
9.625in Casing Surface	16.00	1863.00	1847.00	16.00	1819.38	0.00	0.00	317.82	85.42
7.875in Open Hole	1864.00	13375.00	11511.00	1820.31	7329.29	318.17	85.53	-4467.57	449.65

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	7114.00	706.32	-177.95	1728023.23	14553942.30	40°04'27.469"N	104°41'12.613"W	polygon
SEC.08-T1N-R65W SECTION LINES	7114.00	-18.82	-2233.03	1725971.51	14553210.20	40°04'20.302"N	104°41'39.048"W	polygon
ENGLISH FARMS 15C-8HZ BHL ON PLAT REV-1 (464°FSL & 1749°FEL, SEC.08)	7307.00	-4492.82	410.95	1728630.21	14548747.31	40°03'36.090"N	104°41'05.039"W	point
ENGLISH FARMS 15C-8HZ BHL REV-2 (464°FSL & 1699°FEL, SEC.08)	7307.00	-4492.82	460.93	1728680.17	14548747.49	40°03'36.090"N	104°41'04.396"W	point
ENGLISH FARMS 15C-8HZ LANDBOX	7307.00	0.00	0.00	1728203.59	14553236.89	40°04'20.489"N	104°41'10.324"W	polygon
ENGLISH FARMS 15C-8HZ BHL REV-3 (464°FSL & 1699°FEL, SEC.08)	7321.00	-4492.82	460.93	1728680.17	14548747.49	40°03'36.090"N	104°41'04.396"W	point



Actual Wellpath Report

ENGLISH FARMS 15C-8HZ AWP

Page 6 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#19 ENGLISH FARMS 15C-8HZ (351'FNL & 2174'FEL, SEC.08)
Area	COLORADO	Well	ENGLISH FARMS 15C-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	ENGLISH FARMS 15C-8HZ AWB <13375>
Facility	SEC.08-T1N-R65W		

WELLPATH COMPOSITION - Ref Wellbore: ENGLISH FARMS 15C-8HZ AWB <13375>

Ref Wellpath: ENGLISH FARMS 15C-8HZ AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	1811.00	Custom APC_ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHI MWD+IFR SURVEYS 13.5" <148-1811>	ENGLISH FARMS 15C-8HZ AWB <13375>
1811.00	13328.00	Custom APC_ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHI MWD+IFR SURVEYS 7.875" <1859-13328>	ENGLISH FARMS 15C-8HZ AWB <13375>
13328.00	13375.00	Blind Drilling (std)	Projection to bit	ENGLISH FARMS 15C-8HZ AWB <13375>

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#19 ENGLISH FARMS 15C-8HZ (351'FNL & 2174'FEL, SEC.08)
Area	COLORADO	Well	ENGLISH FARMS 15C-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	ENGLISH FARMS 15C-8HZ AWB <13375>
Facility	SEC.08-T1N-R65W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
148.00	0.200	257.380	148.00	BEGIN MWD+IFR SURVEYS
7239.00	29.601	177.063	6939.86	SSPG
7272.00	31.573	176.256	6968.26	NBRR
7399.00	38.291	179.340	7072.52	N470_B_CK
7485.00	45.232	182.659	7137.13	N700_C_CK
7676.00	62.048	184.718	7248.12	ENTERED LANDBOX
7768.00	70.970	181.925	7285.55	FRHS
7870.00	80.934	177.127	7308.37	CDLL
7973.00	85.971	178.784	7320.50	LANDING POINT
13328.00	90.990	178.690	7330.10	LAST BHI MWD+IFR SURVEYS
13375.00	90.990	178.690	7329.29	PROJECTION TO BIT