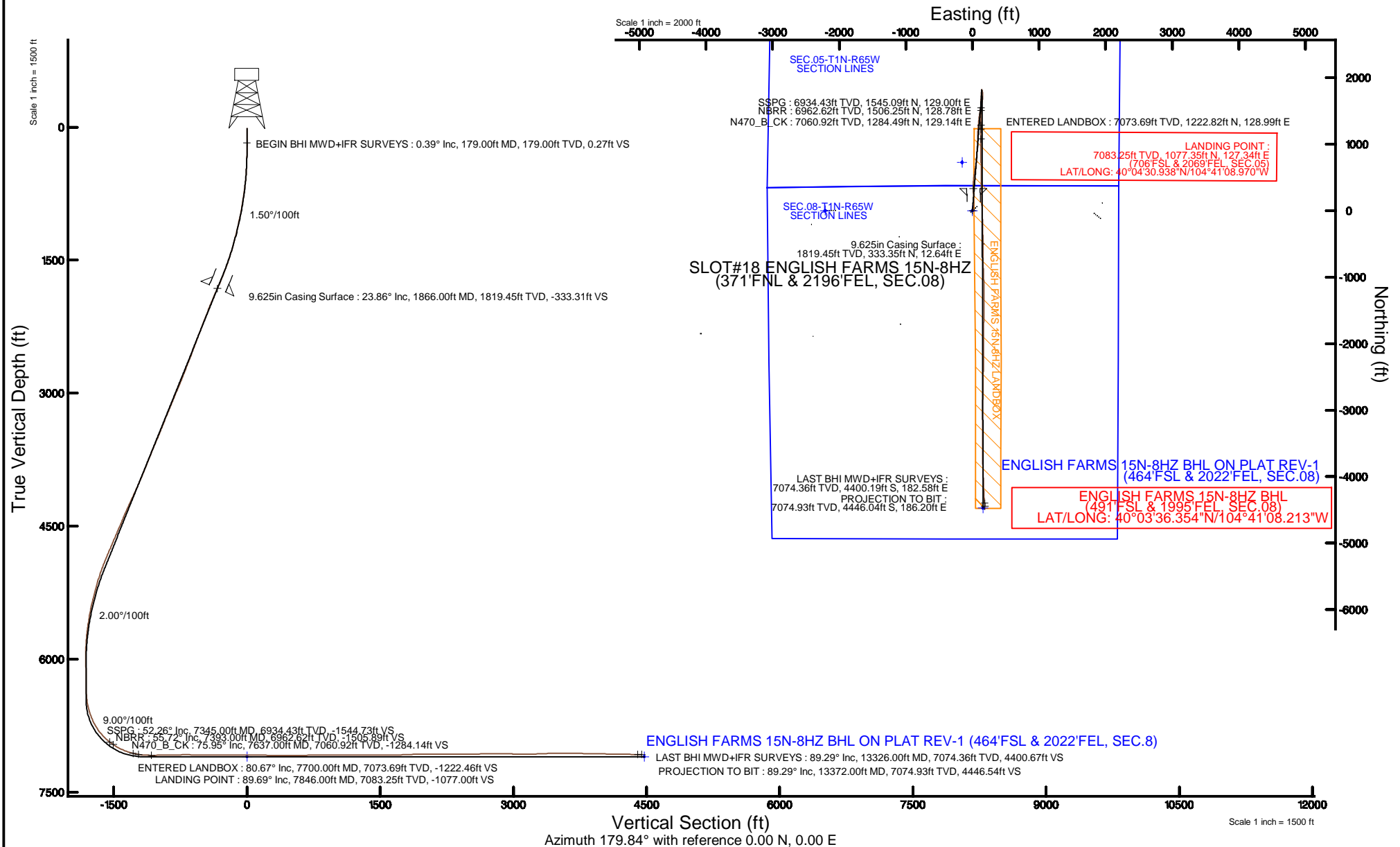


KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#18 ENGLISH FARMS 15N-8HZ (371'FNL & 2196'FEL, SEC.08)
Field: WELD COUNTY (UTM/TRUE NORTH) Well: ENGLISH FARMS 15N-8HZ
Facility: SEC.08-T1N-R65W Wellbore: ENGLISH FARMS 15N-8HZ PWB

Plot reference wellpath is ENGLISH FARMS 15N-8HZ (REV-A.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#18 ENGLISH FARMS 15N-8HZ (371'FNL & 2196'FEL, SEC.08)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: amarcar on 10/Jul/2015



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#18 ENGLISH FARMS 15N-8HZ (371'FNL & 2196'FEL, SEC.08)
Area	COLORADO	Well	ENGLISH FARMS 15N-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	ENGLISH FARMS 15N-8HZ AWB <13372>
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 10:45
Convergence at slot	0.20° East	Database/Source file	KERR MCGEE UTM/_ENGLISH_FARMS_15N-8HZ_AWB__13372_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	383.67	-1539.27	1728181.59	14553216.78	40°04'20.291"N	104°41'10.608"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#18 ENGLISH FARMS 15N-8HZ (371'FNL & 2196'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	179.84°

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#18 ENGLISH FARMS 15N-8HZ (371°FNL & 2196°FEL, SEC.08)
Area	COLORADO	Well	ENGLISH FARMS 15N-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	ENGLISH FARMS 15N-8HZ AWP <13372>
Facility	SEC.08-T1N-R65W		

WELLPATH DATA (147 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	119.290	0.00	0.00	0.00	0.00	40°04'20.291"N	104°41'10.608"W	0.00	
16.00	0.000	119.290	16.00	0.00	0.00	0.00	40°04'20.291"N	104°41'10.608"W	0.00	
179.00	0.390	119.290	179.00	0.27	-0.27	0.48	40°04'20.288"N	104°41'10.602"W	0.24	BEGIN BHI MWD+IFR SURVEYS
239.00	0.880	68.930	239.00	0.21	-0.21	1.09	40°04'20.289"N	104°41'10.594"W	1.16	
337.00	2.150	41.510	336.96	-1.43	1.44	3.01	40°04'20.305"N	104°41'10.569"W	1.46	
431.00	3.030	27.110	430.86	-4.96	4.97	5.31	40°04'20.340"N	104°41'10.540"W	1.16	
526.00	4.030	10.400	525.69	-10.47	10.49	7.06	40°04'20.395"N	104°41'10.517"W	1.50	
621.00	5.990	9.120	620.32	-18.65	18.67	8.45	40°04'20.476"N	104°41'10.499"W	2.07	
716.00	7.130	7.860	714.69	-29.38	29.41	10.04	40°04'20.582"N	104°41'10.479"W	1.21	
810.00	9.140	10.930	807.74	-42.48	42.52	12.25	40°04'20.711"N	104°41'10.450"W	2.19	
905.00	10.000	10.700	901.42	-57.99	58.03	15.22	40°04'20.864"N	104°41'10.412"W	0.91	
1000.00	11.810	3.310	994.71	-75.79	75.84	17.31	40°04'21.040"N	104°41'10.385"W	2.40	
1095.00	12.690	3.280	1087.54	-95.92	95.97	18.47	40°04'21.239"N	104°41'10.370"W	0.93	
1190.00	13.020	3.650	1180.16	-117.01	117.06	19.75	40°04'21.448"N	104°41'10.354"W	0.36	
1284.00	15.090	2.180	1271.34	-139.80	139.86	20.89	40°04'21.673"N	104°41'10.339"W	2.23	
1379.00	16.050	1.110	1362.86	-165.29	165.35	21.61	40°04'21.925"N	104°41'10.330"W	1.05	
1474.00	17.590	357.130	1453.79	-192.76	192.82	21.15	40°04'22.196"N	104°41'10.336"W	2.02	
1569.00	19.950	355.940	1543.73	-223.27	223.32	19.28	40°04'22.498"N	104°41'10.360"W	2.52	
1664.00	21.220	355.200	1632.67	-256.58	256.62	16.69	40°04'22.827"N	104°41'10.393"W	1.36	
1758.00	21.970	355.910	1720.07	-291.08	291.12	14.02	40°04'23.168"N	104°41'10.428"W	0.84	
1823.00	23.360	358.710	1780.05	-316.09	316.13	12.86	40°04'23.415"N	104°41'10.443"W	2.71	
1887.00	24.110	0.380	1838.63	-341.85	341.89	12.66	40°04'23.670"N	104°41'10.445"W	1.57	
1950.00	23.630	0.720	1896.25	-367.34	367.38	12.90	40°04'23.922"N	104°41'10.442"W	0.79	
2045.00	22.310	1.240	1983.71	-404.41	404.45	13.53	40°04'24.288"N	104°41'10.434"W	1.41	
2140.00	21.480	6.820	2071.87	-439.70	439.75	15.99	40°04'24.637"N	104°41'10.402"W	2.36	
2235.00	21.100	6.550	2160.38	-473.95	474.01	20.00	40°04'24.975"N	104°41'10.351"W	0.41	
2330.00	20.900	5.790	2249.07	-507.79	507.85	23.66	40°04'25.310"N	104°41'10.304"W	0.36	
2425.00	21.630	9.470	2337.61	-541.91	541.98	28.26	40°04'25.647"N	104°41'10.245"W	1.60	
2520.00	20.070	9.020	2426.39	-575.26	575.36	33.69	40°04'25.977"N	104°41'10.175"W	1.65	
2615.00	21.110	8.360	2515.32	-608.27	608.38	38.74	40°04'26.303"N	104°41'10.110"W	1.12	
2709.00	21.440	10.440	2602.91	-641.90	642.03	44.31	40°04'26.636"N	104°41'10.038"W	0.88	
2804.00	21.550	8.070	2691.31	-676.24	676.38	49.91	40°04'26.975"N	104°41'09.966"W	0.92	
2899.00	21.770	8.700	2779.60	-710.91	711.06	55.02	40°04'27.318"N	104°41'09.900"W	0.34	
2994.00	21.870	7.730	2867.79	-745.85	746.01	60.06	40°04'27.663"N	104°41'09.835"W	0.39	
3088.00	23.270	2.620	2954.60	-781.74	781.91	63.27	40°04'28.018"N	104°41'09.794"W	2.56	
3183.00	22.390	1.820	3042.16	-818.57	818.74	64.70	40°04'28.382"N	104°41'09.776"W	0.98	
3278.00	22.130	4.150	3130.08	-854.49	854.68	66.57	40°04'28.737"N	104°41'09.752"W	0.97	
3373.00	23.260	7.030	3217.72	-890.95	891.14	70.16	40°04'29.097"N	104°41'09.705"W	1.67	
3468.00	21.740	6.120	3305.49	-927.05	927.26	74.33	40°04'29.454"N	104°41'09.652"W	1.64	
3563.00	22.270	5.780	3393.57	-962.44	962.66	78.02	40°04'29.804"N	104°41'09.604"W	0.57	
3657.00	22.120	4.120	3480.60	-997.81	998.03	81.09	40°04'30.154"N	104°41'09.565"W	0.69	
3752.00	22.750	0.500	3568.42	-1034.01	1034.24	82.53	40°04'30.512"N	104°41'09.546"W	1.60	
3847.00	22.130	358.300	3656.23	-1070.27	1070.50	82.16	40°04'30.870"N	104°41'09.551"W	1.10	
3942.00	22.550	358.390	3744.10	-1106.37	1106.59	81.12	40°04'31.227"N	104°41'09.565"W	0.44	
4037.00	21.050	359.550	3832.30	-1141.64	1141.86	80.47	40°04'31.575"N	104°41'09.573"W	1.64	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#18 ENGLISH FARMS 15N-8HZ (371°FNL & 2196°FEL, SEC.08)
Area	COLORADO	Well	ENGLISH FARMS 15N-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	ENGLISH FARMS 15N-8HZ AWB <13372>
Facility	SEC.08-T1N-R65W		

WELLPATH DATA (147 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4132.00	22.580	3.350	3920.50	-1176.91	1177.14	81.40	40°04'31.924"N	104°41'09.561"W	2.19	
4227.00	24.190	3.330	4007.69	-1214.54	1214.78	83.60	40°04'32.296"N	104°41'09.533"W	1.69	
4322.00	23.630	4.360	4094.54	-1252.95	1253.19	86.18	40°04'32.675"N	104°41'09.499"W	0.74	
4416.00	25.270	6.030	4180.11	-1291.68	1291.93	89.72	40°04'33.058"N	104°41'09.454"W	1.89	
4511.00	24.800	5.140	4266.18	-1331.68	1331.94	93.63	40°04'33.453"N	104°41'09.403"W	0.63	
4606.00	24.380	6.760	4352.57	-1370.99	1371.26	97.73	40°04'33.842"N	104°41'09.351"W	0.84	
4701.00	22.340	6.130	4439.78	-1408.40	1408.68	101.96	40°04'34.212"N	104°41'09.296"W	2.16	
4796.00	23.250	11.160	4527.36	-1444.74	1445.03	107.52	40°04'34.571"N	104°41'09.225"W	2.26	
4891.00	23.280	8.860	4614.64	-1481.66	1481.98	114.04	40°04'34.936"N	104°41'09.141"W	0.96	
4986.00	24.140	11.940	4701.63	-1519.20	1519.54	120.95	40°04'35.307"N	104°41'09.052"W	1.59	
5080.00	23.240	11.580	4787.70	-1556.16	1556.51	128.65	40°04'35.673"N	104°41'08.953"W	0.97	
5175.00	22.600	10.940	4875.20	-1592.42	1592.80	135.88	40°04'36.031"N	104°41'08.860"W	0.72	
5270.00	21.140	10.220	4963.36	-1627.19	1627.58	142.38	40°04'36.375"N	104°41'08.776"W	1.56	
5365.00	18.410	8.540	5052.75	-1658.87	1659.28	147.65	40°04'36.688"N	104°41'08.709"W	2.94	
5459.00	16.230	6.590	5142.49	-1686.59	1687.01	151.36	40°04'36.962"N	104°41'08.661"W	2.40	
5554.00	14.750	5.700	5234.03	-1711.81	1712.23	154.09	40°04'37.212"N	104°41'08.626"W	1.58	
5649.00	14.260	355.890	5326.02	-1735.51	1735.94	154.45	40°04'37.446"N	104°41'08.621"W	2.63	
5744.00	11.620	353.030	5418.60	-1756.69	1757.11	152.45	40°04'37.655"N	104°41'08.647"W	2.86	
5838.00	10.180	350.120	5510.90	-1774.28	1774.69	149.88	40°04'37.829"N	104°41'08.680"W	1.64	
5933.00	8.380	347.380	5604.65	-1789.31	1789.72	146.92	40°04'37.977"N	104°41'08.718"W	1.95	
6028.00	6.750	341.090	5698.83	-1801.36	1801.76	143.60	40°04'38.096"N	104°41'08.761"W	1.92	
6122.00	4.320	348.010	5792.38	-1810.06	1810.45	141.08	40°04'38.182"N	104°41'08.793"W	2.68	
6217.00	1.960	350.010	5887.23	-1815.16	1815.55	140.05	40°04'38.233"N	104°41'08.806"W	2.49	
6312.00	1.170	206.890	5982.22	-1815.90	1816.29	139.33	40°04'38.240"N	104°41'08.816"W	3.14	
6691.00	1.200	135.030	6361.15	-1809.64	1810.03	140.38	40°04'38.178"N	104°41'08.802"W	0.37	
6786.00	6.770	177.730	6455.90	-1803.33	1803.72	141.31	40°04'38.116"N	104°41'08.790"W	6.26	
6881.00	14.780	196.270	6549.17	-1786.08	1786.46	138.13	40°04'37.945"N	104°41'08.831"W	9.08	
6976.00	20.590	186.480	6639.66	-1757.83	1758.20	132.85	40°04'37.666"N	104°41'08.899"W	6.85	
7071.00	27.240	181.750	6726.47	-1719.46	1719.83	130.29	40°04'37.287"N	104°41'08.932"W	7.28	
7166.00	35.650	181.680	6807.44	-1669.98	1670.33	128.82	40°04'36.798"N	104°41'08.951"W	8.85	
7260.00	45.680	178.940	6878.66	-1608.81	1609.17	128.63	40°04'36.193"N	104°41'08.953"W	10.84	
7345.00†	52.264	180.342	6934.43	-1544.73	1545.09	129.00	40°04'35.560"N	104°41'08.949"W	7.85	SSPG
7355.00	53.040	180.490	6940.49	-1536.78	1537.14	128.94	40°04'35.481"N	104°41'08.949"W	7.85	
7393.00†	55.719	180.109	6962.62	-1505.89	1506.25	128.78	40°04'35.176"N	104°41'08.951"W	7.10	NBRR
7450.00	59.740	179.580	6993.05	-1457.71	1458.06	128.91	40°04'34.700"N	104°41'08.950"W	7.10	
7544.00	69.480	179.940	7033.31	-1372.89	1373.25	129.26	40°04'33.862"N	104°41'08.945"W	10.37	
7637.00†	75.951	180.214	7060.92	-1284.14	1284.49	129.14	40°04'32.985"N	104°41'08.947"W	6.96	N470_B_CK
7639.00	76.090	180.220	7061.41	-1282.20	1282.55	129.13	40°04'32.965"N	104°41'08.947"W	6.96	
7700.00†	80.668	180.052	7073.69	-1222.46	1222.82	128.99	40°04'32.375"N	104°41'08.949"W	7.51	ENTERED LANDBOX
7734.00	83.220	179.960	7078.45	-1188.80	1189.16	128.98	40°04'32.042"N	104°41'08.949"W	7.51	
7797.00	89.040	181.470	7082.70	-1125.98	1126.34	128.20	40°04'31.422"N	104°41'08.959"W	9.54	
7829.00	89.450	180.760	7083.13	-1093.99	1094.34	127.57	40°04'31.106"N	104°41'08.967"W	2.56	
7846.00†	89.689	180.843	7083.25	-1077.00	1077.35	127.34	40°04'30.938"N	104°41'08.970"W	1.49	LANDING POINT
7923.00	90.770	181.220	7082.95	-1000.01	1000.36	125.95	40°04'30.177"N	104°41'08.988"W	1.49	
8018.00	90.550	179.180	7081.85	-905.03	905.37	125.62	40°04'29.238"N	104°41'08.992"W	2.16	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#18 ENGLISH FARMS 15N-8HZ (371°FNL & 2196°FEL, SEC.08)
Area	COLORADO	Well	ENGLISH FARMS 15N-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	ENGLISH FARMS 15N-8HZ AWP <13372>
Facility	SEC.08-T1N-R65W		

WELLPATH DATA (147 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8113.00	91.820	178.450	7079.89	-810.07	810.42	127.58	40°04'28.300"N	104°41'08.967"W	1.54	
8208.00	90.590	179.350	7077.89	-715.10	715.46	129.41	40°04'27.361"N	104°41'08.943"W	1.60	
8302.00	88.950	179.000	7078.27	-621.11	621.47	130.76	40°04'26.433"N	104°41'08.926"W	1.78	
8397.00	89.720	178.810	7079.37	-526.13	526.50	132.57	40°04'25.494"N	104°41'08.903"W	0.83	
8492.00	90.950	179.130	7078.81	-431.15	431.52	134.28	40°04'24.555"N	104°41'08.881"W	1.34	
8587.00	88.980	179.150	7078.87	-336.16	336.53	135.71	40°04'23.617"N	104°41'08.862"W	2.07	
8681.00	89.570	178.860	7080.06	-242.18	242.55	137.34	40°04'22.688"N	104°41'08.841"W	0.70	
8776.00	90.280	178.200	7080.19	-147.20	147.59	139.78	40°04'21.749"N	104°41'08.810"W	1.02	
8871.00	90.680	177.290	7079.39	-52.27	52.66	143.52	40°04'20.811"N	104°41'08.762"W	1.05	
8966.00	88.800	178.510	7079.82	42.67	-42.27	147.00	40°04'19.873"N	104°41'08.717"W	2.36	
9061.00	88.920	178.510	7081.71	137.62	-137.22	149.47	40°04'18.935"N	104°41'08.685"W	0.13	
9155.00	89.230	177.910	7083.23	231.57	-231.16	152.40	40°04'18.007"N	104°41'08.648"W	0.72	
9250.00	89.660	178.700	7084.15	326.53	-326.11	155.21	40°04'17.068"N	104°41'08.612"W	0.95	
9345.00	89.850	177.530	7084.55	421.48	-421.06	158.34	40°04'16.130"N	104°41'08.571"W	1.25	
9440.00	90.150	180.090	7084.55	516.46	-516.03	160.31	40°04'15.192"N	104°41'08.546"W	2.71	
9534.00	90.520	180.160	7084.00	610.46	-610.02	160.10	40°04'14.263"N	104°41'08.549"W	0.40	
9629.00	91.140	179.780	7082.63	705.45	-705.01	160.15	40°04'13.324"N	104°41'08.548"W	0.77	
9724.00	91.350	179.120	7080.56	800.42	-799.99	161.07	40°04'12.385"N	104°41'08.536"W	0.73	
9818.00	89.350	177.880	7079.99	894.39	-893.95	163.53	40°04'11.457"N	104°41'08.505"W	2.50	
9920.00	89.290	177.530	7081.20	996.31	-995.86	167.61	40°04'10.450"N	104°41'08.452"W	0.35	
10014.00	90.400	179.160	7081.46	1090.27	-1089.81	170.32	40°04'09.521"N	104°41'08.417"W	2.10	
10109.00	90.220	178.210	7080.94	1185.25	-1184.79	172.50	40°04'08.583"N	104°41'08.389"W	1.02	
10204.00	89.570	179.990	7081.12	1280.24	-1279.77	174.00	40°04'07.644"N	104°41'08.370"W	1.99	
10298.00	89.450	179.980	7081.92	1374.23	-1373.77	174.02	40°04'06.715"N	104°41'08.370"W	0.13	
10393.00	90.460	181.400	7081.99	1469.22	-1468.76	172.88	40°04'05.776"N	104°41'08.384"W	1.83	
10488.00	90.490	180.910	7081.21	1564.19	-1563.73	170.96	40°04'04.838"N	104°41'08.409"W	0.52	
10583.00	90.980	180.740	7079.99	1659.17	-1658.71	169.60	40°04'03.899"N	104°41'08.427"W	0.55	
10677.00	91.970	180.250	7077.57	1753.13	-1752.68	168.78	40°04'02.971"N	104°41'08.437"W	1.18	
10772.00	92.400	180.320	7073.95	1848.06	-1847.61	168.31	40°04'02.033"N	104°41'08.443"W	0.46	
10867.00	91.140	180.000	7071.01	1943.01	-1942.56	168.05	40°04'01.094"N	104°41'08.447"W	1.37	
10961.00	90.370	180.760	7069.77	2037.00	-2036.55	167.42	40°04'00.165"N	104°41'08.455"W	1.15	
11056.00	88.800	180.360	7070.46	2131.98	-2131.54	166.49	40°03'59.227"N	104°41'08.467"W	1.71	
11151.00	89.230	180.300	7072.09	2226.97	-2226.52	165.95	40°03'58.288"N	104°41'08.474"W	0.46	
11246.00	89.940	181.100	7072.78	2321.95	-2321.51	164.79	40°03'57.349"N	104°41'08.489"W	1.13	
11340.00	90.520	181.400	7072.41	2415.92	-2415.49	162.74	40°03'56.421"N	104°41'08.515"W	0.69	
11435.00	91.380	181.550	7070.83	2510.87	-2510.44	160.29	40°03'55.482"N	104°41'08.546"W	0.92	
11530.00	91.300	180.990	7068.61	2605.81	-2605.39	158.19	40°03'54.544"N	104°41'08.573"W	0.60	
11625.00	90.890	180.420	7066.79	2700.79	-2700.37	157.02	40°03'53.605"N	104°41'08.588"W	0.74	
11720.00	89.660	180.500	7066.34	2795.78	-2795.36	156.25	40°03'52.667"N	104°41'08.598"W	1.30	
11815.00	89.170	180.340	7067.31	2890.77	-2890.35	155.56	40°03'51.728"N	104°41'08.607"W	0.54	
11909.00	89.910	180.830	7068.06	2984.75	-2984.34	154.60	40°03'50.799"N	104°41'08.620"W	0.94	
12004.00	89.410	179.600	7068.63	3079.75	-3079.34	154.24	40°03'49.860"N	104°41'08.624"W	1.40	
12099.00	89.940	179.670	7069.16	3174.75	-3174.34	154.85	40°03'48.922"N	104°41'08.616"W	0.56	
12194.00	91.540	179.740	7067.94	3269.74	-3269.32	155.34	40°03'47.983"N	104°41'08.610"W	1.69	
12286.00	92.930	180.100	7064.35	3361.66	-3361.25	155.46	40°03'47.074"N	104°41'08.608"W	1.56	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#18 ENGLISH FARMS 15N-8HZ (371°FNL & 2196°FEL, SEC.08)
Area	COLORADO	Well	ENGLISH FARMS 15N-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	ENGLISH FARMS 15N-8HZ AWB <13372>
Facility	SEC.08-T1N-R65W		

WELLPATH DATA (147 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12380.00	91.690	181.700	7060.56	3455.57	-3455.16	153.99	40°03'46.146"N	104°41'08.627"W	2.15	
12475.00	90.830	181.140	7058.47	3550.51	-3550.11	151.64	40°03'45.208"N	104°41'08.658"W	1.08	
12570.00	88.330	179.030	7059.17	3645.49	-3645.09	151.49	40°03'44.269"N	104°41'08.660"W	3.44	
12665.00	88.490	178.450	7061.80	3740.43	-3740.03	153.58	40°03'43.331"N	104°41'08.633"W	0.63	
12760.00	88.770	178.590	7064.08	3835.38	-3834.97	156.04	40°03'42.393"N	104°41'08.601"W	0.33	
12855.00	88.950	177.830	7065.97	3930.32	-3929.91	159.00	40°03'41.455"N	104°41'08.563"W	0.82	
12950.00	88.890	177.730	7067.76	4025.24	-4024.82	162.68	40°03'40.517"N	104°41'08.516"W	0.12	
13044.00	88.950	177.850	7069.53	4119.17	-4118.73	166.31	40°03'39.589"N	104°41'08.469"W	0.14	
13139.00	89.020	177.370	7071.21	4214.08	-4213.63	170.27	40°03'38.651"N	104°41'08.418"W	0.51	
13234.00	88.920	176.010	7072.92	4308.92	-4308.46	175.75	40°03'37.714"N	104°41'08.348"W	1.44	
13326.00	89.290	175.480	7074.36	4400.67	-4400.19	182.58	40°03'36.807"N	104°41'08.260"W	0.70	LAST BHI MWD+IFR SURVEYS
13372.00	89.290	175.480	7074.93	4446.54	-4446.04	186.20	40°03'36.354"N	104°41'08.213"W	0.00	PROJECTION TO BIT

HOLE & CASING SECTIONS - Ref Wellbore: ENGLISH FARMS 15N-8HZ AWB <13372> Ref Wellpath: ENGLISH FARMS 15N-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	1876.00	1860.00	16.00	1828.59	0.00	0.00	337.40	12.64
9.625in Casing Surface	16.00	1866.00	1850.00	16.00	1819.45	0.00	0.00	333.35	12.64
7.875in Open Hole	1876.00	13372.00	11496.00	1828.59	7074.93	337.40	12.64	-4446.04	186.20

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
ENGLISH FARMS 15N-8HZ BHL ON PLAT REV-1 (464°FSL & 2022°FEL, SEC.8)	7099.00	-4472.79	159.55	1728356.84	14548746.35	40°03'36.090"N	104°41'08.556"W	point
ENGLISH FARMS 15N-8HZ LANDBOX	7099.00	0.00	0.00	1728181.59	14553216.78	40°04'20.291"N	104°41'10.608"W	polygon
SEC.05-T1N-R65W SECTION LINES	7114.00	726.36	-155.87	1728023.23	14553942.30	40°04'27.469"N	104°41'12.613"W	polygon
SEC.08-T1N-R65W SECTION LINES	7114.00	1.21	-2210.96	1725971.51	14553210.20	40°04'20.302"N	104°41'39.048"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: ENGLISH FARMS 15N-8HZ AWB <13372> Ref Wellpath: ENGLISH FARMS 15N-8HZ AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	1823.00	Custom APC_ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHI MWD+IFR SURVEYS 13.5" <179-1823>	ENGLISH FARMS 15N-8HZ AWB <13372>
1823.00	13326.00	Custom APC_ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHI MWD+IFR SURVEYS 7.875" <1887-13326>	ENGLISH FARMS 15N-8HZ AWB <13372>
13326.00	13372.00	Blind Drilling (std)	Projection to bit	ENGLISH FARMS 15N-8HZ AWB <13372>

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#18 ENGLISH FARMS 15N-8HZ (371'FNL & 2196'FEL, SEC.08)
Area	COLORADO	Well	ENGLISH FARMS 15N-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	ENGLISH FARMS 15N-8HZ AWB <13372>
Facility	SEC.08-T1N-R65W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
179.00	0.390	119.290	179.00	BEGIN BHI MWD+IFR SURVEYS
7345.00	52.264	180.342	6934.43	SSPG
7393.00	55.719	180.109	6962.62	NBRR
7637.00	75.951	180.214	7060.92	N470_B_CK
7700.00	80.668	180.052	7073.69	ENTERED LANDBOX
7846.00	89.689	180.843	7083.25	LANDING POINT
13326.00	89.290	175.480	7074.36	LAST BHI MWD+IFR SURVEYS
13372.00	89.290	175.480	7074.93	PROJECTION TO BIT