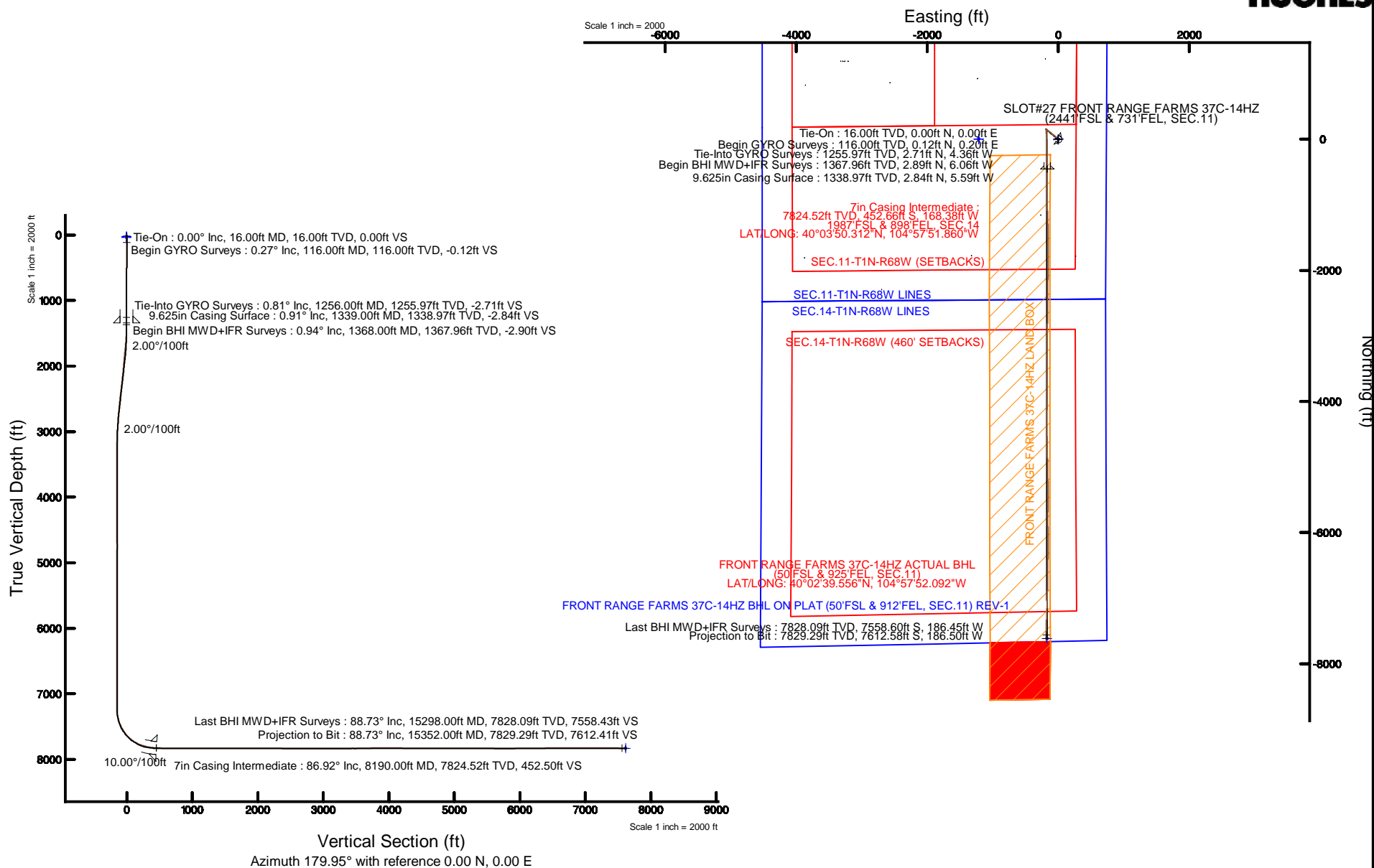


Location:	COLORADO	Slot:	SLOT#27 FRONT RANGE FARMS 37C-14HZ (2441'FSL & 731'FEL, SEC.11)
Field:	WELD COUNTY (KERR MCGEE)	Well:	FRONT RANGE FARMS 37C-14HZ
Facility:	SEC.11-T1N-R68W	Wellbore:	FRONT RANGE FARMS 37C-14HZ PWP

Plot reference wellpath is FRONT RANGE FARMS 37C-14HZ (REV-D.0) PWP



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#27 FRONT RANGE FARMS 37C-14HZ (2441'FSL & 731'FEL, SEC.11)
Area	COLORADO	Well	FRONT RANGE FARMS 37C-14HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	FRONT RANGE FARMS 37C-14HZ AWB <116-9949>
Facility	SEC.11-T1N-R68W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 4.1.1
North Reference	True	User	Precain
Scale	0.999962	Report Generated	2/26/2015 at 9:42:15 AM
Convergence at slot	0.35° East	Database/Source file	WellArchitectDB/FRONT_RANGE_FARMS_37C-14HZ_AWB_116-9949_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-2336.95	3735.85	3150072.70	1267057.87	40°03'54.785"N	104°57'49.694"W
Facility Reference Pt			3146323.29	1269372.66	40°04'17.882"N	104°58'37.744"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 20 (16'KB) (RKB) to Facility Vertical Datum	5083.00ft
Horizontal Reference Pt	Slot	XTREME 20 (16'KB) (RKB) to Mean Sea Level	5083.00ft
Vertical Reference Pt	XTREME 20 (16'KB) (RKB)	XTREME 20 (16'KB) (RKB) to Mud Line at Slot (SLOT#27 FRONT RANGE FARMS 37C-14HZ (2441'FSL & 731'FEL, SEC.11))	5083.00ft
MD Reference Pt	XTREME 20 (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	Slot	SLOT#27 FRONT RANGE FARMS 37C-14HZ (2441'FSL & 731'FEL, SEC.11)
Area	COLORADO	Well	FRONT RANGE FARMS 37C-14HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	FRONT RANGE FARMS 37C-14HZ AWP <116-9949>
Facility	SEC.11-T1N-R68W		

WELLPATH DATA (163 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	60.000	0.00	0.00	0.00	0.00	40°03'54.785"N	104°57'49.694"W	0.00	
16.00	0.000	60.000	16.00	0.00	0.00	0.00	40°03'54.785"N	104°57'49.694"W	0.00	Tie-On
116.00	0.270	60.000	116.00	-0.12	0.12	0.20	40°03'54.786"N	104°57'49.691"W	0.27	Begin GYRO Surveys
216.00	0.150	39.540	216.00	-0.34	0.34	0.49	40°03'54.788"N	104°57'49.688"W	0.14	
316.00	0.180	122.760	316.00	-0.35	0.35	0.71	40°03'54.788"N	104°57'49.685"W	0.22	
416.00	0.090	345.780	416.00	-0.34	0.34	0.82	40°03'54.788"N	104°57'49.683"W	0.25	
516.00	0.270	354.900	516.00	-0.65	0.65	0.78	40°03'54.791"N	104°57'49.684"W	0.18	
616.00	0.370	314.310	616.00	-1.11	1.11	0.53	40°03'54.796"N	104°57'49.687"W	0.24	
716.00	0.360	293.200	715.99	-1.46	1.46	0.01	40°03'54.799"N	104°57'49.694"W	0.13	
816.00	0.340	285.370	815.99	-1.67	1.67	-0.57	40°03'54.801"N	104°57'49.701"W	0.05	
916.00	0.470	283.370	915.99	-1.84	1.84	-1.25	40°03'54.803"N	104°57'49.710"W	0.13	
1016.00	0.480	289.300	1015.99	-2.08	2.07	-2.05	40°03'54.805"N	104°57'49.720"W	0.05	
1116.00	0.540	288.000	1115.98	-2.36	2.36	-2.89	40°03'54.808"N	104°57'49.731"W	0.06	
1216.00	0.620	283.200	1215.98	-2.63	2.63	-3.87	40°03'54.811"N	104°57'49.744"W	0.09	
1256.00	0.810	276.060	1255.97	-2.71	2.71	-4.36	40°03'54.812"N	104°57'49.750"W	0.52	Tie-Into GYRO Surveys
1368.00	0.940	276.380	1367.96	-2.90	2.89	-6.06	40°03'54.814"N	104°57'49.772"W	0.12	Begin BHI MWD+IFR Surveys
1462.00	2.550	312.370	1461.92	-4.39	4.39	-8.37	40°03'54.828"N	104°57'49.802"W	1.99	
1556.00	4.680	320.970	1555.73	-8.79	8.78	-12.33	40°03'54.872"N	104°57'49.853"W	2.33	
1650.00	6.190	319.230	1649.30	-15.61	15.59	-18.05	40°03'54.939"N	104°57'49.926"W	1.62	
1745.00	7.560	318.660	1743.61	-24.19	24.16	-25.53	40°03'55.024"N	104°57'50.022"W	1.44	
1838.00	8.250	313.800	1835.73	-33.41	33.38	-34.38	40°03'55.115"N	104°57'50.136"W	1.03	
1931.00	8.330	302.820	1927.77	-41.69	41.65	-44.86	40°03'55.197"N	104°57'50.271"W	1.70	
2026.00	9.730	301.690	2021.59	-49.64	49.59	-57.48	40°03'55.275"N	104°57'50.433"W	1.49	
2121.00	9.990	305.100	2115.18	-58.61	58.55	-71.05	40°03'55.364"N	104°57'50.608"W	0.67	
2215.00	10.080	308.700	2207.75	-68.46	68.38	-84.14	40°03'55.461"N	104°57'50.776"W	0.67	
2309.00	8.610	308.950	2300.50	-78.03	77.95	-96.03	40°03'55.555"N	104°57'50.929"W	1.56	
2403.00	10.470	315.020	2393.19	-88.51	88.41	-107.54	40°03'55.659"N	104°57'51.077"W	2.25	
2590.00	9.270	304.720	2577.44	-109.13	109.01	-131.94	40°03'55.862"N	104°57'51.391"W	1.14	
2685.00	8.920	303.990	2671.24	-117.62	117.49	-144.33	40°03'55.946"N	104°57'51.550"W	0.39	
2778.00	8.010	301.010	2763.23	-125.00	124.86	-155.86	40°03'56.019"N	104°57'51.699"W	1.09	
2873.00	6.300	308.890	2857.49	-131.69	131.54	-165.59	40°03'56.085"N	104°57'51.824"W	2.07	
2961.00	4.710	326.270	2945.09	-137.73	137.58	-171.36	40°03'56.145"N	104°57'51.898"W	2.60	
3046.00	2.990	336.180	3029.89	-142.67	142.51	-174.19	40°03'56.193"N	104°57'51.934"W	2.16	
3131.00	2.830	334.240	3114.78	-146.59	146.43	-176.00	40°03'56.232"N	104°57'51.958"W	0.22	
3216.00	1.130	317.590	3199.73	-149.10	148.93	-177.48	40°03'56.257"N	104°57'51.977"W	2.09	
3301.00	1.110	283.240	3284.71	-149.90	149.74	-178.84	40°03'56.265"N	104°57'51.994"W	0.78	
3387.00	0.820	283.260	3370.70	-150.24	150.07	-180.25	40°03'56.268"N	104°57'52.012"W	0.34	
3556.00	0.550	266.230	3539.69	-150.46	150.30	-182.24	40°03'56.270"N	104°57'52.038"W	0.20	
3811.00	0.670	328.960	3794.68	-151.66	151.49	-184.23	40°03'56.282"N	104°57'52.064"W	0.25	
4068.00	0.240	305.580	4051.67	-153.26	153.10	-185.44	40°03'56.298"N	104°57'52.079"W	0.18	
4238.00	0.850	171.810	4221.66	-152.22	152.05	-185.55	40°03'56.288"N	104°57'52.081"W	0.61	
4410.00	0.440	201.710	4393.65	-150.35	150.18	-185.62	40°03'56.269"N	104°57'52.081"W	0.30	
4580.00	0.580	197.450	4563.65	-148.92	148.75	-186.11	40°03'56.255"N	104°57'52.088"W	0.09	
4750.00	0.490	250.230	4733.64	-147.85	147.68	-187.06	40°03'56.244"N	104°57'52.100"W	0.28	
4835.00	0.610	22.840	4818.64	-148.15	147.98	-187.22	40°03'56.247"N	104°57'52.102"W	1.19	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#27 FRONT RANGE FARMS 37C-14HZ (2441'FSL & 731'FEL, SEC.11)
Area	COLORADO	Well	FRONT RANGE FARMS 37C-14HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	FRONT RANGE FARMS 37C-14HZ AWB <116-9949>
Facility	SEC.11-T1N-R68W		

WELLPATH DATA (163 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5005.00	0.370	356.780	4988.63	-149.53	149.36	-186.90	40°03'56.261"N	104°57'52.098"W	0.19	
5176.00	0.350	305.200	5159.63	-150.38	150.21	-187.36	40°03'56.269"N	104°57'52.104"W	0.18	
5346.00	0.770	293.340	5329.62	-151.14	150.96	-188.83	40°03'56.277"N	104°57'52.123"W	0.25	
5431.00	0.870	355.290	5414.61	-152.01	151.83	-189.41	40°03'56.285"N	104°57'52.130"W	1.00	
5516.00	0.800	97.710	5499.61	-152.57	152.40	-188.88	40°03'56.291"N	104°57'52.123"W	1.53	
5686.00	0.430	146.050	5669.60	-151.88	151.71	-187.34	40°03'56.284"N	104°57'52.104"W	0.36	
5856.00	0.160	292.130	5839.60	-151.44	151.27	-187.21	40°03'56.280"N	104°57'52.102"W	0.34	
6026.00	0.470	298.650	6009.59	-151.86	151.69	-188.04	40°03'56.284"N	104°57'52.113"W	0.18	
6196.00	0.550	258.260	6179.59	-152.03	151.86	-189.45	40°03'56.286"N	104°57'52.131"W	0.21	
6281.00	0.470	85.990	6264.59	-151.97	151.80	-189.50	40°03'56.285"N	104°57'52.131"W	1.20	
6452.00	0.570	92.450	6435.58	-151.99	151.82	-187.95	40°03'56.285"N	104°57'52.111"W	0.07	
6621.00	0.150	253.200	6604.58	-151.89	151.72	-187.32	40°03'56.284"N	104°57'52.103"W	0.42	
6794.00	1.020	253.800	6777.57	-151.39	151.22	-189.02	40°03'56.279"N	104°57'52.125"W	0.50	
6879.00	0.770	289.980	6862.56	-151.38	151.20	-190.28	40°03'56.279"N	104°57'52.141"W	0.71	
6964.00	0.670	18.750	6947.55	-152.04	151.87	-190.66	40°03'56.286"N	104°57'52.146"W	1.19	
7050.00	0.420	10.800	7033.55	-152.83	152.66	-190.44	40°03'56.294"N	104°57'52.143"W	0.30	
7134.00	0.300	8.670	7117.55	-153.35	153.18	-190.35	40°03'56.299"N	104°57'52.142"W	0.14	
7219.00	0.150	231.630	7202.55	-153.50	153.33	-190.40	40°03'56.300"N	104°57'52.143"W	0.50	
7262.00	3.660	166.540	7245.52	-152.13	151.96	-190.13	40°03'56.287"N	104°57'52.139"W	8.37	
7304.00	7.160	167.630	7287.32	-148.27	148.10	-189.25	40°03'56.248"N	104°57'52.128"W	8.34	
7347.00	10.860	170.820	7329.79	-141.65	141.48	-188.03	40°03'56.183"N	104°57'52.112"W	8.68	
7389.00	14.180	172.480	7370.78	-132.64	132.47	-186.73	40°03'56.094"N	104°57'52.096"W	7.95	
7432.00	18.020	173.930	7412.09	-120.80	120.63	-185.33	40°03'55.977"N	104°57'52.078"W	8.98	
7474.00	21.520	174.610	7451.61	-106.66	106.49	-183.92	40°03'55.837"N	104°57'52.060"W	8.35	
7517.00	25.330	175.590	7491.05	-89.63	89.46	-182.47	40°03'55.669"N	104°57'52.041"W	8.91	
7560.00	28.810	173.620	7529.34	-70.15	69.99	-180.62	40°03'55.477"N	104°57'52.017"W	8.36	
7603.00	33.020	174.020	7566.22	-48.19	48.03	-178.24	40°03'55.260"N	104°57'51.987"W	9.80	
7644.00	36.890	175.440	7599.82	-24.81	24.65	-176.10	40°03'55.029"N	104°57'51.959"W	9.64	
7687.00	41.500	177.300	7633.14	2.31	-2.47	-174.40	40°03'54.761"N	104°57'51.937"W	11.06	
7730.00	45.430	178.990	7664.34	31.87	-32.02	-173.46	40°03'54.469"N	104°57'51.925"W	9.53	
7773.00	50.680	179.160	7693.07	63.83	-63.99	-172.95	40°03'54.153"N	104°57'51.918"W	12.21	
7815.00	55.940	178.850	7718.16	97.50	-97.65	-172.36	40°03'53.820"N	104°57'51.911"W	12.54	
7858.00	61.720	178.400	7740.40	134.26	-134.42	-171.47	40°03'53.457"N	104°57'51.899"W	13.47	
7900.00	66.180	179.230	7758.84	171.98	-172.13	-170.70	40°03'53.084"N	104°57'51.889"W	10.77	
7943.00	68.330	179.060	7775.47	211.63	-211.78	-170.10	40°03'52.692"N	104°57'51.882"W	5.01	
7986.00	71.590	180.120	7790.20	252.02	-252.17	-169.82	40°03'52.293"N	104°57'51.878"W	7.93	
8029.00	76.070	179.690	7802.17	293.31	-293.46	-169.75	40°03'51.885"N	104°57'51.877"W	10.46	
8071.00	79.540	179.310	7811.04	334.35	-334.51	-169.39	40°03'51.479"N	104°57'51.873"W	8.31	
8114.00	82.790	179.310	7817.65	376.83	-376.99	-168.88	40°03'51.060"N	104°57'51.866"W	7.56	
8151.00	84.710	179.560	7821.68	413.61	-413.76	-168.52	40°03'50.696"N	104°57'51.861"W	5.23	
8190.00†	86.922	180.053	7824.52	452.50	-452.66	-168.38	40°03'50.312"N	104°57'51.860"W	5.81	7" Casing Point
8212.00	88.170	180.330	7825.46	474.48	-474.64	-168.46	40°03'50.095"N	104°57'51.861"W	5.81	
8303.00	87.680	180.120	7828.76	565.42	-565.57	-168.82	40°03'49.196"N	104°57'51.865"W	0.59	
8394.00	88.860	180.260	7831.51	656.38	-656.53	-169.12	40°03'48.297"N	104°57'51.869"W	1.31	
8486.00	89.810	180.450	7832.57	748.37	-748.52	-169.69	40°03'47.388"N	104°57'51.876"W	1.05	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#27 FRONT RANGE FARMS 37C-14HZ (2441'FSL & 731'FEL, SEC.11)
Area	COLORADO	Well	FRONT RANGE FARMS 37C-14HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	FRONT RANGE FARMS 37C-14HZ AWP <116-9949>
Facility	SEC.11-T1N-R68W		

WELLPATH DATA (163 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8577.00	91.070	180.730	7831.87	839.36	-839.51	-170.62	40°03'46.489"N	104°57'51.888"W	1.42	
8760.00	90.800	178.670	7828.89	1022.32	-1022.48	-169.67	40°03'44.681"N	104°57'51.876"W	1.14	
8845.00	87.960	177.180	7829.81	1107.25	-1107.40	-166.59	40°03'43.841"N	104°57'51.837"W	3.77	
8930.00	88.330	177.850	7832.56	1192.13	-1192.28	-162.91	40°03'43.003"N	104°57'51.789"W	0.90	
9016.00	89.960	178.950	7833.84	1278.09	-1278.23	-160.50	40°03'42.153"N	104°57'51.758"W	2.29	
9101.00	90.610	180.070	7833.42	1363.08	-1363.23	-159.78	40°03'41.313"N	104°57'51.749"W	1.52	
9186.00	90.490	179.860	7832.60	1448.08	-1448.22	-159.73	40°03'40.473"N	104°57'51.748"W	0.28	
9355.00	90.520	179.550	7831.11	1617.07	-1617.21	-158.86	40°03'38.803"N	104°57'51.737"W	0.18	
9440.00	90.400	178.650	7830.43	1702.05	-1702.20	-157.52	40°03'37.964"N	104°57'51.720"W	1.07	
9525.00	89.630	180.690	7830.41	1787.05	-1787.19	-157.03	40°03'37.124"N	104°57'51.714"W	2.57	
9694.00	89.750	179.400	7831.32	1956.04	-1956.19	-157.16	40°03'35.454"N	104°57'51.715"W	0.77	
9779.00	89.470	181.530	7831.90	2041.03	-2041.18	-157.85	40°03'34.614"N	104°57'51.724"W	2.53	
9949.00	89.660	181.390	7833.19	2210.97	-2211.12	-162.18	40°03'32.934"N	104°57'51.780"W	0.14	
10119.00	89.630	180.370	7834.25	2380.94	-2381.09	-164.80	40°03'31.255"N	104°57'51.813"W	0.60	
10290.00	90.060	179.510	7834.71	2551.94	-2552.09	-164.62	40°03'29.565"N	104°57'51.811"W	0.56	
10374.00	89.870	181.050	7834.76	2635.93	-2636.08	-165.03	40°03'28.735"N	104°57'51.816"W	1.85	
10544.00	89.440	180.500	7835.78	2805.91	-2806.06	-167.33	40°03'27.055"N	104°57'51.846"W	0.41	
10629.00	88.980	179.930	7836.96	2890.90	-2891.05	-167.65	40°03'26.215"N	104°57'51.850"W	0.86	
10714.00	89.630	180.640	7837.99	2975.89	-2976.05	-168.07	40°03'25.375"N	104°57'51.855"W	1.13	
10799.00	89.630	179.920	7838.54	3060.89	-3061.04	-168.48	40°03'24.535"N	104°57'51.861"W	0.85	
10884.00	91.170	181.360	7837.94	3145.88	-3146.03	-169.43	40°03'23.695"N	104°57'51.873"W	2.48	
10969.00	91.070	181.380	7836.28	3230.83	-3230.99	-171.46	40°03'22.856"N	104°57'51.899"W	0.12	
11054.00	90.490	180.420	7835.12	3315.81	-3315.97	-172.80	40°03'22.016"N	104°57'51.916"W	1.32	
11141.00	90.490	180.010	7834.38	3402.81	-3402.97	-173.13	40°03'21.156"N	104°57'51.920"W	0.47	
11226.00	89.660	179.720	7834.27	3487.81	-3487.97	-172.93	40°03'20.316"N	104°57'51.918"W	1.03	
11311.00	92.270	179.720	7832.84	3572.79	-3572.95	-172.51	40°03'19.476"N	104°57'51.912"W	3.07	
11395.00	92.120	179.900	7829.62	3656.73	-3656.88	-172.23	40°03'18.647"N	104°57'51.909"W	0.28	
11480.00	92.060	180.110	7826.52	3741.67	-3741.83	-172.24	40°03'17.807"N	104°57'51.909"W	0.26	
11568.00	89.960	179.250	7824.97	3829.65	-3829.81	-171.75	40°03'16.938"N	104°57'51.903"W	2.58	
11652.00	91.130	179.410	7824.17	3913.64	-3913.79	-170.77	40°03'16.108"N	104°57'51.890"W	1.41	
11737.00	90.610	181.330	7822.88	3998.62	-3998.78	-171.31	40°03'15.268"N	104°57'51.897"W	2.34	
11822.00	90.240	181.420	7822.25	4083.59	-4083.75	-173.35	40°03'14.428"N	104°57'51.923"W	0.45	
11907.00	86.270	180.490	7824.84	4168.52	-4168.68	-174.77	40°03'13.589"N	104°57'51.942"W	4.80	
11992.00	86.980	180.070	7829.84	4253.37	-4253.53	-175.19	40°03'12.751"N	104°57'51.947"W	0.97	
12078.00	88.700	179.730	7833.08	4339.31	-4339.47	-175.04	40°03'11.901"N	104°57'51.945"W	2.04	
12163.00	90.330	180.180	7833.80	4424.30	-4424.46	-174.97	40°03'11.061"N	104°57'51.944"W	1.99	
12248.00	90.210	179.320	7833.40	4509.30	-4509.46	-174.60	40°03'10.222"N	104°57'51.939"W	1.02	
12333.00	90.180	179.560	7833.11	4594.30	-4594.46	-173.77	40°03'09.382"N	104°57'51.929"W	0.28	
12419.00	90.460	179.050	7832.63	4680.29	-4680.45	-172.72	40°03'08.532"N	104°57'51.915"W	0.68	
12504.00	90.490	177.740	7831.93	4765.25	-4765.41	-170.34	40°03'07.692"N	104°57'51.885"W	1.54	
12589.00	89.590	178.690	7831.87	4850.21	-4850.37	-167.70	40°03'06.853"N	104°57'51.850"W	1.54	
12674.00	89.810	178.270	7832.31	4935.18	-4935.33	-165.44	40°03'06.013"N	104°57'51.821"W	0.56	
12759.00	90.060	178.080	7832.41	5020.14	-5020.29	-162.73	40°03'05.173"N	104°57'51.787"W	0.37	
12844.00	89.590	179.690	7832.67	5105.12	-5105.27	-161.08	40°03'04.334"N	104°57'51.765"W	1.97	
12929.00	90.180	179.460	7832.84	5190.12	-5190.27	-160.45	40°03'03.494"N	104°57'51.757"W	0.74	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#27 FRONT RANGE FARMS 37C-14HZ (2441'FSL & 731'FEL, SEC.11)
Area	COLORADO	Well	FRONT RANGE FARMS 37C-14HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	FRONT RANGE FARMS 37C-14HZ AWB <116-9949>
Facility	SEC.11-T1N-R68W		

WELLPATH DATA (163 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
13014.00	89.660	178.810	7832.96	5275.11	-5275.26	-159.17	40°03'02.654"N	104°57'51.741"W	0.98	
13099.00	90.980	180.040	7832.48	5360.10	-5360.25	-158.31	40°03'01.814"N	104°57'51.730"W	2.12	
13184.00	89.780	179.500	7831.92	5445.10	-5445.25	-157.97	40°03'00.974"N	104°57'51.725"W	1.55	
13269.00	88.920	180.610	7832.88	5530.09	-5530.24	-158.05	40°03'00.134"N	104°57'51.726"W	1.65	
13354.00	89.160	180.980	7834.31	5615.07	-5615.22	-159.23	40°02'59.294"N	104°57'51.742"W	0.52	
13439.00	89.960	180.860	7834.96	5700.05	-5700.20	-160.60	40°02'58.454"N	104°57'51.759"W	0.95	
13524.00	88.980	179.630	7835.75	5785.05	-5785.20	-160.96	40°02'57.614"N	104°57'51.764"W	1.85	
13609.00	91.230	179.840	7835.59	5870.04	-5870.19	-160.57	40°02'56.774"N	104°57'51.759"W	2.66	
13694.00	91.200	179.290	7833.79	5955.02	-5955.17	-159.92	40°02'55.935"N	104°57'51.750"W	0.65	
13779.00	90.860	179.170	7832.26	6040.00	-6040.15	-158.78	40°02'55.095"N	104°57'51.736"W	0.42	
13864.00	90.800	180.290	7831.03	6124.99	-6125.13	-158.38	40°02'54.255"N	104°57'51.731"W	1.32	
13951.00	89.780	179.630	7830.59	6211.99	-6212.13	-158.32	40°02'53.395"N	104°57'51.730"W	1.40	
14036.00	91.950	180.280	7829.31	6296.97	-6297.12	-158.25	40°02'52.556"N	104°57'51.729"W	2.66	
14122.00	90.800	181.490	7827.24	6382.93	-6383.08	-159.58	40°02'51.706"N	104°57'51.746"W	1.94	
14207.00	90.460	181.370	7826.31	6467.90	-6468.05	-161.70	40°02'50.866"N	104°57'51.773"W	0.42	
14292.00	90.000	180.760	7825.97	6552.88	-6553.03	-163.28	40°02'50.026"N	104°57'51.794"W	0.90	
14377.00	90.830	180.790	7825.35	6637.87	-6638.02	-164.43	40°02'49.187"N	104°57'51.808"W	0.98	
14462.00	90.330	181.000	7824.49	6722.85	-6723.01	-165.76	40°02'48.347"N	104°57'51.825"W	0.64	
14548.00	89.690	179.970	7824.48	6808.85	-6809.00	-166.49	40°02'47.497"N	104°57'51.835"W	1.41	
14633.00	90.180	181.620	7824.57	6893.83	-6893.99	-167.67	40°02'46.657"N	104°57'51.850"W	2.02	
14718.00	90.640	181.110	7823.96	6978.81	-6978.96	-169.69	40°02'45.817"N	104°57'51.876"W	0.81	
14803.00	91.320	181.540	7822.51	7063.77	-7063.93	-171.66	40°02'44.978"N	104°57'51.901"W	0.95	
14888.00	88.790	182.070	7822.43	7148.72	-7148.88	-174.33	40°02'44.138"N	104°57'51.936"W	3.04	
14973.00	88.580	182.400	7824.38	7233.63	-7233.79	-177.65	40°02'43.299"N	104°57'51.978"W	0.46	
15058.00	90.550	182.660	7825.02	7318.53	-7318.70	-181.40	40°02'42.460"N	104°57'52.026"W	2.34	
15143.00	89.160	181.440	7825.24	7403.47	-7403.64	-184.44	40°02'41.621"N	104°57'52.066"W	2.18	
15298.00	88.730	180.050	7828.09	7558.43	-7558.60	-186.45	40°02'40.089"N	104°57'52.091"W	0.94	Last BHI MWD+IFR Surveys
15352.00	88.730	180.050	7829.29	7612.41	-7612.58	-186.50	40°02'39.556"N	104°57'52.092"W	0.00	Projection to Bit

HOLE & CASING SECTIONS -

Ref Wellbore: FRONT RANGE FARMS 37C-14HZ AWB <116-9949> Ref Wellpath: FRONT RANGE FARMS 37C-14HZ 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	1349.00	1333.00	16.00	1348.96	0.00	0.00	2.86	-5.75
9.625in Casing Surface	16.00	1339.00	1323.00	16.00	1338.97	0.00	0.00	2.84	-5.59
8.75in Open Hole	1349.00	8200.00	6851.00	1348.96	7825.01	2.86	-5.75	-462.64	-168.40
7in Casing Intermediate	16.00	8190.00	8174.00	16.00	7824.52	0.00	0.00	-452.66	-168.38
6.125in Open Hole	8200.00	15352.00	7152.00	7825.01	7829.29	-462.64	-168.40	-7612.58	-186.50

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#27 FRONT RANGE FARMS 37C-14HZ (2441'FSL & 731'FEL, SEC.11)
Area	COLORADO	Well	FRONT RANGE FARMS 37C-14HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	FRONT RANGE FARMS 37C-14HZ AWB <116-9949>
Facility	SEC.11-T1N-R68W		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.11-T1N-R68W (460' SETBACKS)	22.00	2.96	-1216.46	3148856.29	1267053.48	40°03'54.814"N	104°58'05.340"W	polygon
SEC.14-T1N-R68W (460' SETBACKS)	22.00	2.96	-1216.46	3148856.29	1267053.48	40°03'54.814"N	104°58'05.340"W	polygon
SEC.11-T1N-R68W LINES	38.00	2.96	-1216.46	3148856.29	1267053.48	40°03'54.814"N	104°58'05.340"W	polygon
SEC.14-T1N-R68W LINES	38.00	2.96	-1216.46	3148856.29	1267053.48	40°03'54.814"N	104°58'05.340"W	polygon
FRONT RANGE FARMS 37C-14HZ BHL ON PLAT (50'FSL & 912'FEL, SEC.11) REV-1	7828.00	-7612.60	-173.90	3149944.84	1259444.67	40°02'39.556"N	104°57'51.930"W	point
FRONT RANGE FARMS 37C-14HZ INTERNAL HARDLINE	7828.00	0.00	0.00	3150072.70	1267057.87	40°03'54.785"N	104°57'49.694"W	polygon
FRONT RANGE FARMS 37C-14HZ LAND BOX	7828.00	0.00	0.00	3150072.70	1267057.87	40°03'54.785"N	104°57'49.694"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: FRONT RANGE FARMS 37C-14HZ AWB <116-9949> Ref Wellpath: FRONT RANGE FARMS 37C-14HZ AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	1256.00	Gyrodata standard - Continuous gyro	IHS GYRO SURVEYS <116-1256>	FRONT RANGE FARMS 37C-14HZ AWB <116-9949>
1256.00	8151.00	NaviTrak (MAGCORR,IFR)	BHI MWD+IFR SURVEYS 8 3/4" HOLE <1368-8151>	FRONT RANGE FARMS 37C-14HZ AWB <116-9949>
8151.00	15298.00	NaviTrak (MAGCORR,IFR)	BHI MWD+IFR SURVEY 6 1/8" HOLE <8212-9949>	FRONT RANGE FARMS 37C-14HZ AWB <116-9949>
15298.00	15352.00	Blind Drilling (std)	Projection to bit	FRONT RANGE FARMS 37C-14HZ AWB <116-9949>

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#27 FRONT RANGE FARMS 37C-14HZ (2441'FSL & 731'FEL, SEC.11)
Area	COLORADO	Well	FRONT RANGE FARMS 37C-14HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	FRONT RANGE FARMS 37C-14HZ AWB <116-9949>
Facility	SEC.11-T1N-R68W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
16.00	0.000	60.000	16.00	Tie-On
116.00	0.270	60.000	116.00	Begin GYRO Surveys
1256.00	0.810	276.060	1255.97	Tie-Into GYRO Surveys
1368.00	0.940	276.380	1367.96	Begin BHI MWD+IFR Surveys
8190.00	86.922	180.053	7824.52	7" Casing Point
15298.00	88.730	180.050	7828.09	Last BHI MWD+IFR Surveys
15352.00	88.730	180.050	7829.29	Projection to Bit