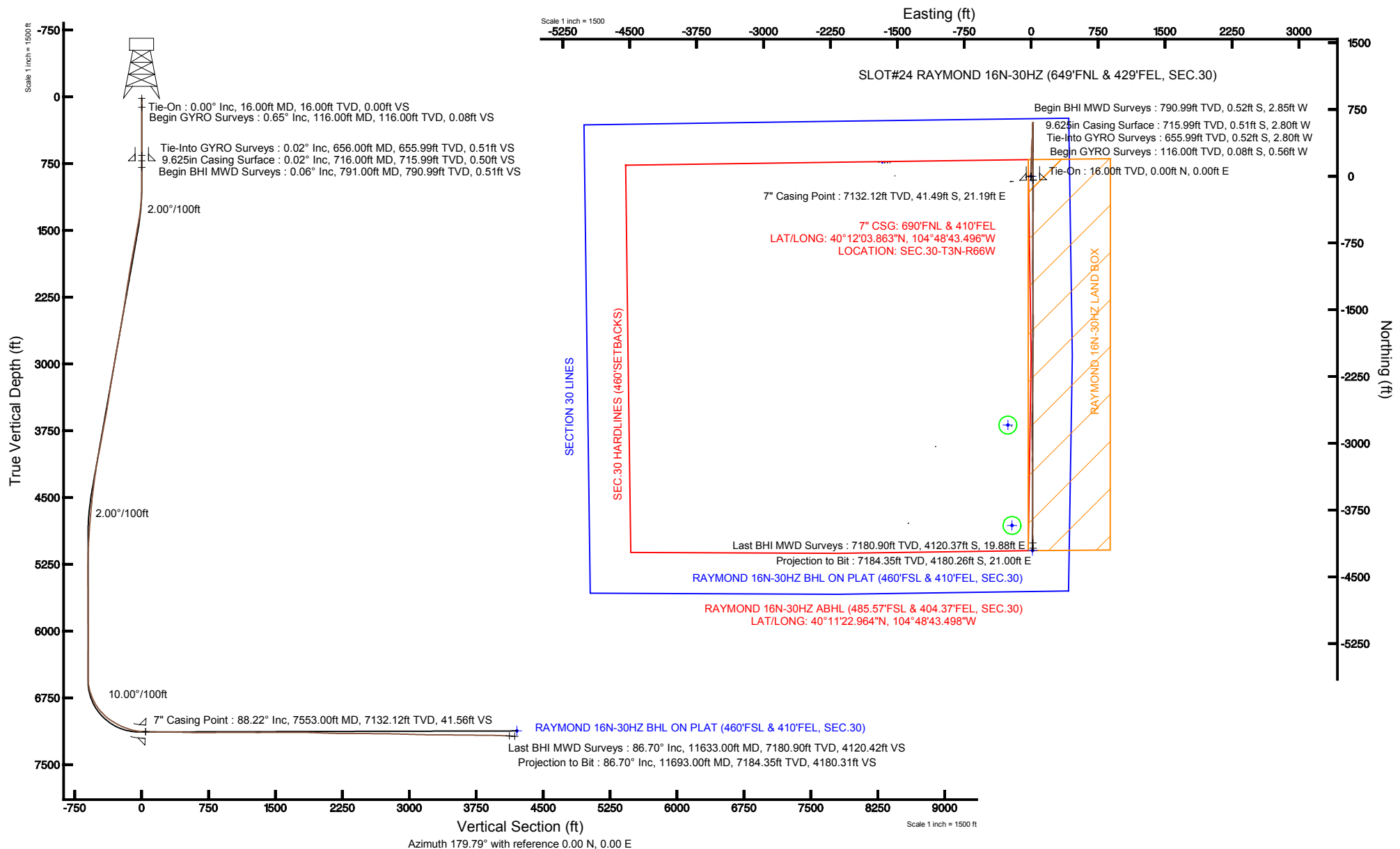


Location:	COLORADO	Slot:	SLOT#24 RAYMOND 16N-30HZ (649'FNL & 429'FEL, SEC.30)
Field:	WELD COUNTY (KERR MCGEE)	Well:	RAYMOND 16N-30HZ
Facility:	SEC.30-T3N-R66W	Wellbore:	RAYMOND 16N-30HZ PWB

Plot reference wellpath is RAYMOND 16N-30HZ (REV-B.0) PWP	
True vertical depths are referenced to XTREME 20 (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to XTREME 20 (RKB)	North Reference: True north
XTREME 20 (RKB) to Mean Sea Level: 4874 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#24 RAYMOND 16N-30HZ (649FNL & 429FEL SEC.30)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: wiljef02 on 3/6/2013





Actual Wellpath Report

RAYMOND 16N-30HZ AWP

Page 1 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#24 RAYMOND 16N-30HZ (649'FNL & 429'FEL, SEC.30)
Area	COLORADO	Well	RAYMOND 16N-30HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	RAYMOND 16N-30HZ AWP
Facility	SEC.30-T3N-R66W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 3.0.2
North Reference	True	User	Wilsjef02
Scale	0.999957	Report Generated	3/6/2013 at 15:32:01
Convergence at slot	0.44° East	Database/Source file	WellArchitectDB/RAYMOND_16N-30HZ_AWP.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-153.66	1582.46	3192130.98	1316880.02	40°12'04.273"N	104°48'43.769"W
Facility Reference Pt			3190547.45	1317021.50	40°12'05.792"N	104°49'04.163"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 (RKB) to Facility Vertical Datum	4874.00ft
Horizontal Reference Pt	Slot	XTREME 20 (RKB) to Mean Sea Level	4874.00ft
Vertical Reference Pt	XTREME 20 (RKB)	XTREME 20 (RKB) to Mud Line at Slot (SLOT#24 RAYMOND 16N-30HZ (649'FNL & 429'FEL, SEC.30))	4874.00ft
MD Reference Pt	XTREME 20 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	179.71°



Actual Wellpath Report

RAYMOND 16N-30HZ AWP

Page 2 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#24 RAYMOND 16N-30HZ (649'FNL & 429'FEL, SEC.30)
Area	COLORADO	Well	RAYMOND 16N-30HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	RAYMOND 16N-30HZ AWP
Facility	SEC.30-T3N-R66W		

WELLPATH DATA (150 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	262.070	0.00	0.00	0.00	0.00	40°12'04.273"N	104°48'43.769"W	0.00	
16.00	0.000	262.070	16.00	0.00	0.00	0.00	40°12'04.273"N	104°48'43.769"W	0.00	Tie-On
116.00	0.650	262.070	116.00	0.08	-0.08	-0.56	40°12'04.272"N	104°48'43.776"W	0.65	Begin GYRO Surveys
216.00	0.380	250.850	215.99	0.26	-0.27	-1.44	40°12'04.270"N	104°48'43.788"W	0.29	
316.00	0.440	247.920	315.99	0.51	-0.52	-2.11	40°12'04.268"N	104°48'43.796"W	0.06	
416.00	0.040	334.280	415.99	0.62	-0.63	-2.48	40°12'04.267"N	104°48'43.801"W	0.44	
516.00	0.090	266.470	515.99	0.59	-0.60	-2.57	40°12'04.267"N	104°48'43.802"W	0.08	
616.00	0.150	299.190	615.99	0.53	-0.55	-2.76	40°12'04.268"N	104°48'43.805"W	0.09	
656.00	0.020	56.840	655.99	0.50	-0.52	-2.80	40°12'04.268"N	104°48'43.805"W	0.40	Tie-Into GYRO Surveys
791.00	0.060	258.970	790.99	0.50	-0.52	-2.85	40°12'04.268"N	104°48'43.806"W	0.06	Begin BHI MWD Surveys
883.00	0.220	257.510	882.99	0.55	-0.56	-3.07	40°12'04.267"N	104°48'43.809"W	0.17	
975.00	0.410	295.020	974.99	0.45	-0.46	-3.54	40°12'04.268"N	104°48'43.815"W	0.29	
1067.00	2.050	10.680	1066.97	-1.31	1.29	-3.54	40°12'04.286"N	104°48'43.815"W	2.16	
1158.00	4.240	2.610	1157.82	-6.27	6.25	-3.08	40°12'04.335"N	104°48'43.809"W	2.45	
1249.00	6.160	1.500	1248.45	-14.51	14.50	-2.80	40°12'04.416"N	104°48'43.805"W	2.11	
1337.00	8.110	2.970	1335.76	-25.43	25.42	-2.36	40°12'04.524"N	104°48'43.799"W	2.23	
1422.00	10.360	3.470	1419.65	-39.04	39.03	-1.58	40°12'04.659"N	104°48'43.789"W	2.65	
1508.00	10.060	2.360	1504.29	-54.26	54.26	-0.80	40°12'04.809"N	104°48'43.779"W	0.42	
1593.00	9.620	0.650	1588.04	-68.78	68.78	-0.42	40°12'04.953"N	104°48'43.774"W	0.62	
1678.00	10.390	358.550	1671.75	-83.54	83.54	-0.53	40°12'05.099"N	104°48'43.776"W	1.00	
1764.00	10.480	357.590	1756.33	-99.11	99.11	-1.06	40°12'05.252"N	104°48'43.783"W	0.23	
1849.00	9.930	1.840	1839.98	-114.16	114.16	-1.15	40°12'05.401"N	104°48'43.784"W	1.10	
1934.00	9.490	1.310	1923.76	-128.49	128.49	-0.75	40°12'05.543"N	104°48'43.779"W	0.53	
2019.00	8.930	357.990	2007.67	-142.09	142.09	-0.82	40°12'05.677"N	104°48'43.780"W	0.91	
2105.00	9.610	3.030	2092.55	-155.93	155.93	-0.68	40°12'05.814"N	104°48'43.778"W	1.23	
2190.00	9.200	4.940	2176.40	-169.78	169.78	0.28	40°12'05.951"N	104°48'43.765"W	0.61	
2275.00	8.240	3.860	2260.42	-182.62	182.63	1.28	40°12'06.078"N	104°48'43.753"W	1.15	
2360.00	8.910	4.940	2344.47	-195.25	195.26	2.26	40°12'06.203"N	104°48'43.740"W	0.81	
2445.00	9.050	2.220	2428.43	-208.48	208.50	3.08	40°12'06.333"N	104°48'43.729"W	0.53	
2530.00	9.980	359.950	2512.26	-222.53	222.55	3.33	40°12'06.472"N	104°48'43.726"W	1.18	
2616.00	9.470	0.970	2597.02	-237.05	237.07	3.45	40°12'06.616"N	104°48'43.725"W	0.63	
2701.00	10.590	1.570	2680.72	-251.85	251.87	3.78	40°12'06.762"N	104°48'43.720"W	1.32	
2786.00	10.280	0.970	2764.32	-267.24	267.26	4.12	40°12'06.914"N	104°48'43.716"W	0.39	
2871.00	9.990	0.670	2847.99	-282.19	282.22	4.34	40°12'07.062"N	104°48'43.713"W	0.35	
2956.00	9.380	358.920	2931.78	-296.49	296.52	4.29	40°12'07.203"N	104°48'43.714"W	0.80	
3041.00	9.310	1.570	3015.65	-310.29	310.32	4.35	40°12'07.340"N	104°48'43.713"W	0.51	
3127.00	10.180	5.580	3100.41	-324.80	324.83	5.28	40°12'07.483"N	104°48'43.701"W	1.28	
3212.00	9.330	4.430	3184.18	-339.14	339.18	6.54	40°12'07.625"N	104°48'43.685"W	1.03	
3297.00	9.680	4.990	3268.01	-353.13	353.17	7.70	40°12'07.763"N	104°48'43.670"W	0.43	
3382.00	8.100	3.520	3351.99	-366.22	366.27	8.69	40°12'07.892"N	104°48'43.657"W	1.88	
3468.00	8.990	2.280	3437.03	-378.98	379.03	9.32	40°12'08.019"N	104°48'43.649"W	1.06	
3553.00	9.810	1.460	3520.89	-392.85	392.90	9.77	40°12'08.156"N	104°48'43.643"W	0.98	
3638.00	10.260	2.570	3604.59	-407.65	407.70	10.30	40°12'08.302"N	104°48'43.636"W	0.58	
3724.00	11.070	6.320	3689.11	-423.50	423.56	11.55	40°12'08.459"N	104°48'43.620"W	1.24	
3809.00	9.780	7.700	3772.70	-438.75	438.83	13.42	40°12'08.609"N	104°48'43.596"W	1.55	



Actual Wellpath Report

RAYMOND 16N-30HZ AWP

Page 3 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#24 RAYMOND 16N-30HZ (649'FNL & 429'FEL, SEC.30)
Area	COLORADO	Well	RAYMOND 16N-30HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	RAYMOND 16N-30HZ AWP
Facility	SEC.30-T3N-R66W		

WELLPATH DATA (150 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3894.00	10.220	5.140	3856.41	-453.41	453.49	15.06	40°12'08.754"N	104°48'43.575"W	0.74	
3980.00	11.360	1.470	3940.89	-469.47	469.56	15.96	40°12'08.913"N	104°48'43.563"W	1.55	
4064.00	11.060	0.790	4023.29	-485.80	485.88	16.28	40°12'09.075"N	104°48'43.559"W	0.39	
4150.00	9.570	0.930	4107.89	-501.19	501.28	16.51	40°12'09.227"N	104°48'43.556"W	1.73	
4235.00	8.470	2.590	4191.84	-514.51	514.60	16.91	40°12'09.358"N	104°48'43.551"W	1.33	
4320.00	8.150	5.620	4275.95	-526.75	526.85	17.78	40°12'09.479"N	104°48'43.540"W	0.64	
4405.00	7.670	5.560	4360.14	-538.39	538.49	18.92	40°12'09.594"N	104°48'43.525"W	0.56	
4490.00	6.520	3.230	4444.49	-548.85	548.96	19.74	40°12'09.698"N	104°48'43.515"W	1.39	
4575.00	5.980	0.600	4528.98	-558.09	558.20	20.06	40°12'09.789"N	104°48'43.510"W	0.72	
4661.00	5.620	1.210	4614.54	-566.78	566.89	20.20	40°12'09.875"N	104°48'43.509"W	0.42	
4746.00	4.990	359.680	4699.18	-574.64	574.75	20.26	40°12'09.953"N	104°48'43.508"W	0.76	
4831.00	4.440	0.950	4783.89	-581.63	581.74	20.30	40°12'10.022"N	104°48'43.507"W	0.66	
4916.00	3.640	357.280	4868.68	-587.61	587.72	20.23	40°12'10.081"N	104°48'43.508"W	0.99	
5001.00	3.450	354.990	4953.52	-592.86	592.96	19.87	40°12'10.133"N	104°48'43.513"W	0.28	
5086.00	2.750	358.690	5038.39	-597.44	597.55	19.60	40°12'10.178"N	104°48'43.516"W	0.86	
5172.00	1.960	8.770	5124.32	-600.96	601.07	19.78	40°12'10.213"N	104°48'43.514"W	1.03	
5257.00	1.150	52.410	5209.29	-602.91	603.02	20.68	40°12'10.232"N	104°48'43.502"W	1.62	
5342.00	1.380	74.840	5294.27	-603.69	603.81	22.34	40°12'10.240"N	104°48'43.481"W	0.64	
5427.00	0.520	92.200	5379.26	-603.94	604.06	23.72	40°12'10.242"N	104°48'43.463"W	1.06	
5512.00	0.720	150.690	5464.25	-603.45	603.58	24.36	40°12'10.238"N	104°48'43.455"W	0.74	
5598.00	0.970	170.270	5550.24	-602.26	602.40	24.75	40°12'10.226"N	104°48'43.450"W	0.44	
5683.00	0.120	169.710	5635.24	-601.47	601.60	24.89	40°12'10.218"N	104°48'43.448"W	1.00	
5768.00	0.270	212.180	5720.24	-601.21	601.34	24.80	40°12'10.215"N	104°48'43.449"W	0.23	
5854.00	0.440	249.270	5806.24	-600.92	601.05	24.38	40°12'10.213"N	104°48'43.455"W	0.32	
5939.00	0.640	241.860	5891.23	-600.59	600.71	23.66	40°12'10.209"N	104°48'43.464"W	0.25	
6024.00	0.820	249.510	5976.23	-600.16	600.28	22.67	40°12'10.205"N	104°48'43.477"W	0.24	
6109.00	0.930	258.630	6061.22	-599.81	599.93	21.42	40°12'10.201"N	104°48'43.493"W	0.21	
6195.00	0.520	319.530	6147.21	-599.98	600.09	20.48	40°12'10.203"N	104°48'43.505"W	0.95	
6280.00	0.730	301.770	6232.20	-600.56	600.67	19.77	40°12'10.209"N	104°48'43.514"W	0.33	
6365.00	0.990	275.810	6317.19	-600.92	601.03	18.58	40°12'10.212"N	104°48'43.530"W	0.54	
6450.00	0.300	330.020	6402.19	-601.20	601.29	17.74	40°12'10.215"N	104°48'43.540"W	1.00	
6535.00	0.540	293.190	6487.19	-601.55	601.64	17.26	40°12'10.218"N	104°48'43.547"W	0.41	
6615.00	2.760	187.520	6567.16	-599.79	599.88	16.66	40°12'10.201"N	104°48'43.554"W	3.69	
6657.00	8.200	187.020	6608.95	-595.81	595.90	16.16	40°12'10.162"N	104°48'43.561"W	12.95	
6700.00	12.920	180.350	6651.21	-587.96	588.05	15.76	40°12'10.084"N	104°48'43.566"W	11.32	
6742.00	18.070	181.080	6691.67	-576.75	576.83	15.61	40°12'09.973"N	104°48'43.568"W	12.27	
6785.00	21.350	182.020	6732.15	-562.25	562.34	15.21	40°12'09.830"N	104°48'43.573"W	7.66	
6827.00	25.210	180.080	6770.72	-545.66	545.75	14.92	40°12'09.666"N	104°48'43.577"W	9.37	
6871.00	28.140	176.270	6810.04	-525.93	526.02	15.59	40°12'09.471"N	104°48'43.568"W	7.71	
6913.00	33.340	176.920	6846.12	-504.50	504.59	16.85	40°12'09.259"N	104°48'43.552"W	12.41	
6956.00	37.580	178.050	6881.14	-479.58	479.68	17.93	40°12'09.013"N	104°48'43.538"W	9.98	
6998.00	42.780	179.660	6913.22	-452.50	452.60	18.45	40°12'08.746"N	104°48'43.531"W	12.62	
7041.00	46.340	180.030	6943.85	-422.33	422.43	18.53	40°12'08.447"N	104°48'43.530"W	8.30	
7083.00	49.940	180.260	6971.87	-391.06	391.15	18.45	40°12'08.138"N	104°48'43.531"W	8.58	
7127.00	55.350	180.340	6998.56	-356.10	356.19	18.27	40°12'07.793"N	104°48'43.534"W	12.30	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#24 RAYMOND 16N-30HZ (649'FNL & 429'FEL, SEC.30)
Area	COLORADO	Well	RAYMOND 16N-30HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	RAYMOND 16N-30HZ AWP
Facility	SEC.30-T3N-R66W		

WELLPATH DATA (150 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7169.00	59.520	179.820	7021.16	-320.71	320.80	18.22	40°12'07.443"N	104°48'43.534"W	9.98	
7212.00	60.510	181.070	7042.65	-283.47	283.56	17.93	40°12'07.075"N	104°48'43.538"W	3.41	
7254.00	63.670	181.240	7062.31	-246.37	246.46	17.18	40°12'06.709"N	104°48'43.548"W	7.53	
7297.00	68.000	180.430	7079.91	-207.15	207.24	16.62	40°12'06.321"N	104°48'43.555"W	10.22	
7339.00	69.420	178.870	7095.16	-168.02	168.11	16.86	40°12'05.934"N	104°48'43.552"W	4.84	
7382.00	74.020	178.530	7108.64	-127.21	127.30	17.78	40°12'05.531"N	104°48'43.540"W	10.72	
7424.00	77.740	178.650	7118.89	-86.50	86.59	18.79	40°12'05.129"N	104°48'43.527"W	8.86	
7467.00	82.250	178.970	7126.36	-44.17	44.26	19.66	40°12'04.710"N	104°48'43.516"W	10.51	
7507.00	86.860	179.200	7130.15	-4.36	4.46	20.30	40°12'04.317"N	104°48'43.507"W	11.54	
7553.00†	88.222	178.577	7132.12	41.59	-41.49	21.19	40°12'03.863"N	104°48'43.496"W	3.26	7" Casing Point
7586.00	89.200	178.130	7132.87	74.57	-74.46	22.14	40°12'03.537"N	104°48'43.484"W	3.26	
7671.00	89.040	179.360	7134.17	159.55	-159.43	24.00	40°12'02.697"N	104°48'43.460"W	1.46	
7756.00	89.070	180.000	7135.57	244.54	-244.42	24.48	40°12'01.858"N	104°48'43.454"W	0.75	
7842.00	88.860	180.470	7137.13	330.52	-330.40	24.12	40°12'01.008"N	104°48'43.458"W	0.60	
7927.00	89.110	181.210	7138.63	415.49	-415.38	22.88	40°12'00.168"N	104°48'43.474"W	0.92	
8012.00	88.490	181.770	7140.41	500.43	-500.33	20.67	40°11'59.329"N	104°48'43.503"W	0.98	
8097.00	89.350	180.710	7142.01	585.38	-585.30	18.83	40°11'58.489"N	104°48'43.526"W	1.61	
8182.00	89.930	179.150	7142.55	670.38	-670.29	18.93	40°11'57.649"N	104°48'43.525"W	1.96	
8267.00	90.300	180.520	7142.38	755.38	-755.29	19.18	40°11'56.809"N	104°48'43.522"W	1.67	
8353.00	90.730	181.050	7141.60	841.36	-841.28	18.00	40°11'55.960"N	104°48'43.537"W	0.79	
8438.00	90.060	182.090	7141.02	926.31	-926.24	15.67	40°11'55.120"N	104°48'43.567"W	1.46	
8523.00	89.780	179.570	7141.14	1011.28	-1011.22	14.44	40°11'54.280"N	104°48'43.583"W	2.98	
8608.00	89.900	178.960	7141.37	1096.28	-1096.22	15.53	40°11'53.440"N	104°48'43.569"W	0.73	
8694.00	90.000	178.360	7141.45	1182.27	-1182.19	17.54	40°11'52.591"N	104°48'43.543"W	0.71	
8779.00	89.690	178.550	7141.68	1267.25	-1267.16	19.83	40°11'51.751"N	104°48'43.513"W	0.43	
8864.00	90.360	179.180	7141.64	1352.24	-1352.14	21.52	40°11'50.911"N	104°48'43.492"W	1.08	
8950.00	90.270	179.920	7141.17	1438.23	-1438.14	22.19	40°11'50.061"N	104°48'43.483"W	0.87	
9035.00	89.660	179.150	7141.22	1523.23	-1523.14	22.88	40°11'49.221"N	104°48'43.474"W	1.16	
9120.00	90.180	180.090	7141.34	1608.23	-1608.13	23.45	40°11'48.381"N	104°48'43.467"W	1.26	
9205.00	89.840	179.820	7141.33	1693.23	-1693.13	23.51	40°11'47.541"N	104°48'43.466"W	0.51	
9290.00	91.010	180.380	7140.70	1778.22	-1778.13	23.36	40°11'46.702"N	104°48'43.468"W	1.53	
9376.00	88.300	180.460	7141.21	1864.21	-1864.12	22.73	40°11'45.852"N	104°48'43.476"W	3.15	
9461.00	87.560	180.760	7144.28	1949.14	-1949.06	21.83	40°11'45.012"N	104°48'43.488"W	0.94	
9546.00	88.150	180.240	7147.46	2034.07	-2033.99	21.09	40°11'44.173"N	104°48'43.497"W	0.92	
9631.00	88.140	180.510	7150.22	2119.02	-2118.95	20.53	40°11'43.334"N	104°48'43.504"W	0.32	
9716.00	89.070	180.380	7152.29	2203.99	-2203.92	19.87	40°11'42.494"N	104°48'43.513"W	1.10	
9801.00	90.270	181.300	7152.78	2288.97	-2288.90	18.63	40°11'41.654"N	104°48'43.529"W	1.78	
9886.00	90.060	181.620	7152.53	2373.93	-2373.88	16.46	40°11'40.814"N	104°48'43.557"W	0.45	
9972.00	89.500	180.870	7152.86	2459.90	-2459.85	14.59	40°11'39.965"N	104°48'43.581"W	1.09	
10057.00	89.260	180.850	7153.78	2544.87	-2544.84	13.32	40°11'39.125"N	104°48'43.597"W	0.28	
10142.00	89.440	181.700	7154.74	2629.84	-2629.81	11.42	40°11'38.285"N	104°48'43.622"W	1.02	
10227.00	89.440	179.870	7155.58	2714.81	-2714.80	10.26	40°11'37.445"N	104°48'43.637"W	2.15	
10312.00	88.890	179.940	7156.81	2799.80	-2799.79	10.40	40°11'36.606"N	104°48'43.635"W	0.65	
10397.00	88.340	180.160	7158.87	2884.78	-2884.76	10.33	40°11'35.766"N	104°48'43.636"W	0.70	
10483.00	88.790	178.950	7161.02	2970.75	-2970.73	10.99	40°11'34.916"N	104°48'43.627"W	1.50	



Actual Wellpath Report

RAYMOND 16N-30HZ AWP

Page 5 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#24 RAYMOND 16N-30HZ (649'FNL & 429'FEL, SEC.30)
Area	COLORADO	Well	RAYMOND 16N-30HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	RAYMOND 16N-30HZ AWP
Facility	SEC.30-T3N-R66W		

WELLPATH DATA (150 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
10568.00	87.840	178.790	7163.52	3055.70	-3055.68	12.67	40°11'34.077"N	104°48'43.606"W	1.13	
10653.00	88.820	180.470	7166.00	3140.66	-3140.63	13.22	40°11'33.237"N	104°48'43.599"W	2.29	
10738.00	89.350	179.340	7167.36	3225.65	-3225.62	13.36	40°11'32.397"N	104°48'43.597"W	1.47	
10824.00	89.480	179.700	7168.23	3311.64	-3311.61	14.08	40°11'31.548"N	104°48'43.588"W	0.45	
10909.00	89.960	179.590	7168.65	3396.64	-3396.61	14.61	40°11'30.708"N	104°48'43.581"W	0.58	
10994.00	89.440	179.350	7169.09	3481.64	-3481.61	15.39	40°11'29.868"N	104°48'43.571"W	0.67	
11080.00	89.070	180.480	7170.21	3567.63	-3567.60	15.52	40°11'29.018"N	104°48'43.569"W	1.38	
11165.00	89.900	180.460	7170.98	3652.62	-3652.59	14.82	40°11'28.178"N	104°48'43.578"W	0.98	
11250.00	89.070	180.550	7171.74	3737.61	-3737.58	14.07	40°11'27.338"N	104°48'43.588"W	0.98	
11335.00	89.570	178.890	7172.75	3822.60	-3822.57	14.49	40°11'26.498"N	104°48'43.582"W	2.04	
11420.00	89.350	179.110	7173.55	3907.59	-3907.55	15.97	40°11'25.659"N	104°48'43.563"W	0.37	
11506.00	88.300	178.830	7175.31	3993.56	-3993.52	17.52	40°11'24.809"N	104°48'43.543"W	1.26	
11591.00	87.190	179.000	7178.66	4078.48	-4078.44	19.13	40°11'23.970"N	104°48'43.523"W	1.32	
11633.00	86.700	178.930	7180.90	4120.42	-4120.37	19.88	40°11'23.556"N	104°48'43.513"W	1.18	Last BHI MWD Surveys
11693.00	86.700	178.930	7184.35	4180.32	-4180.26	21.00	40°11'22.964"N	104°48'43.498"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: RAYMOND 16N-30HZ AWP Ref Wellpath: RAYMOND 16N-30HZ 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	716.00	700.00	16.00	715.99	0.00	0.00	-0.51	-2.80
9.625in Casing Surface	16.00	716.00	700.00	16.00	715.99	0.00	0.00	-0.51	-2.80
8.75in Open Hole	716.00	7563.00	6847.00	715.99	7132.41	-0.51	-2.80	-51.48	21.45
7in Casing Intermediate	16.00	7553.00	7537.00	16.00	7132.12	0.00	0.00	-41.49	21.19
6.125in Open Hole	7553.00	11693.00	4140.00	7132.12	7184.35	-41.49	21.19	-4180.26	21.00



Actual Wellpath Report

RAYMOND 16N-30HZ AWP

Page 6 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#24 RAYMOND 16N-30HZ (649'FNL & 429'FEL, SEC.30)
Area	COLORADO	Well	RAYMOND 16N-30HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	RAYMOND 16N-30HZ AWP
Facility	SEC.30-T3N-R66W		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
MILLENSIFER FED 4 PAD SECTION LINES		31.00	154.18	-1672.38	3190457.53	1317021.21	40°12'05.796"N	104°49'05.322"W	polygon
RAYMOND 16N-30HZ BHL ON PLAT (460'FSL & 410'FEL, SEC.30)		7124.00	-4205.83	15.37	3192178.96	1312674.62	40°11'22.711"N	104°48'43.571"W	point
MILLER 30-16K (NOBLE) 100' CIRCLE		7130.00	-3923.50	-214.43	3191947.00	1312955.15	40°11'25.501"N	104°48'46.532"W	circle
RAYMOND 16N-30HZ LAND BOX		7130.00	0.00	0.00	3192130.98	1316880.02	40°12'04.273"N	104°48'43.769"W	polygon
MEEKS L 30-22 (NOBLE) 100' CIRCLE		7139.00	-2282.53	-754.36	3191394.37	1314591.81	40°11'41.717"N	104°48'53.490"W	circle
MILLER 30-9K (NOBLE) 100' CIRCLE		7139.00	-2795.19	-261.37	3191891.31	1314083.01	40°11'36.651"N	104°48'47.137"W	circle
MILLENSIFER FED 4 PAD HARDLINES (460'SETBACKS)		7331.00	154.18	-1672.38	3190457.53	1317021.21	40°12'05.796"N	104°49'05.322"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: RAYMOND 16N-30HZ AWP Ref Wellpath: RAYMOND 16N-30HZ AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	656.00	Generic gyro - continuous (Standard)	GYRODATA SURVEYS <116-656>	RAYMOND 16N-30HZ AWP
656.00	7507.00	NaviTrak (MagCorr)	BHI MWD SURVEYS 8 3/4" HOLE <791-7507>	RAYMOND 16N-30HZ AWP
7507.00	11633.00	OnTrak (MagCorr)	BHI MWD SURVEYS 6 1/8" HOLE <7586-11633>	RAYMOND 16N-30HZ AWP
11633.00	11693.00	Blind Drilling (std)	Projection to bit	RAYMOND 16N-30HZ AWP



Actual Wellpath Report

RAYMOND 16N-30HZ AWP

Page 7 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#24 RAYMOND 16N-30HZ (649'FNL & 429'FEL, SEC.30)
Area	COLORADO	Well	RAYMOND 16N-30HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	RAYMOND 16N-30HZ AWP
Facility	SEC.30-T3N-R66W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
16.00	0.000	262.070	16.00	Tie-On
116.00	0.650	262.070	116.00	Begin GYRO Surveys
656.00	0.020	56.840	655.99	Tie-Into GYRO Surveys
791.00	0.060	258.970	790.99	Begin BHI MWD Surveys
7553.00	88.222	178.577	7132.12	7" Casing Point
11633.00	86.700	178.930	7180.90	Last BHI MWD Surveys
11693.00	86.700	178.930	7184.35	Projection to Bit