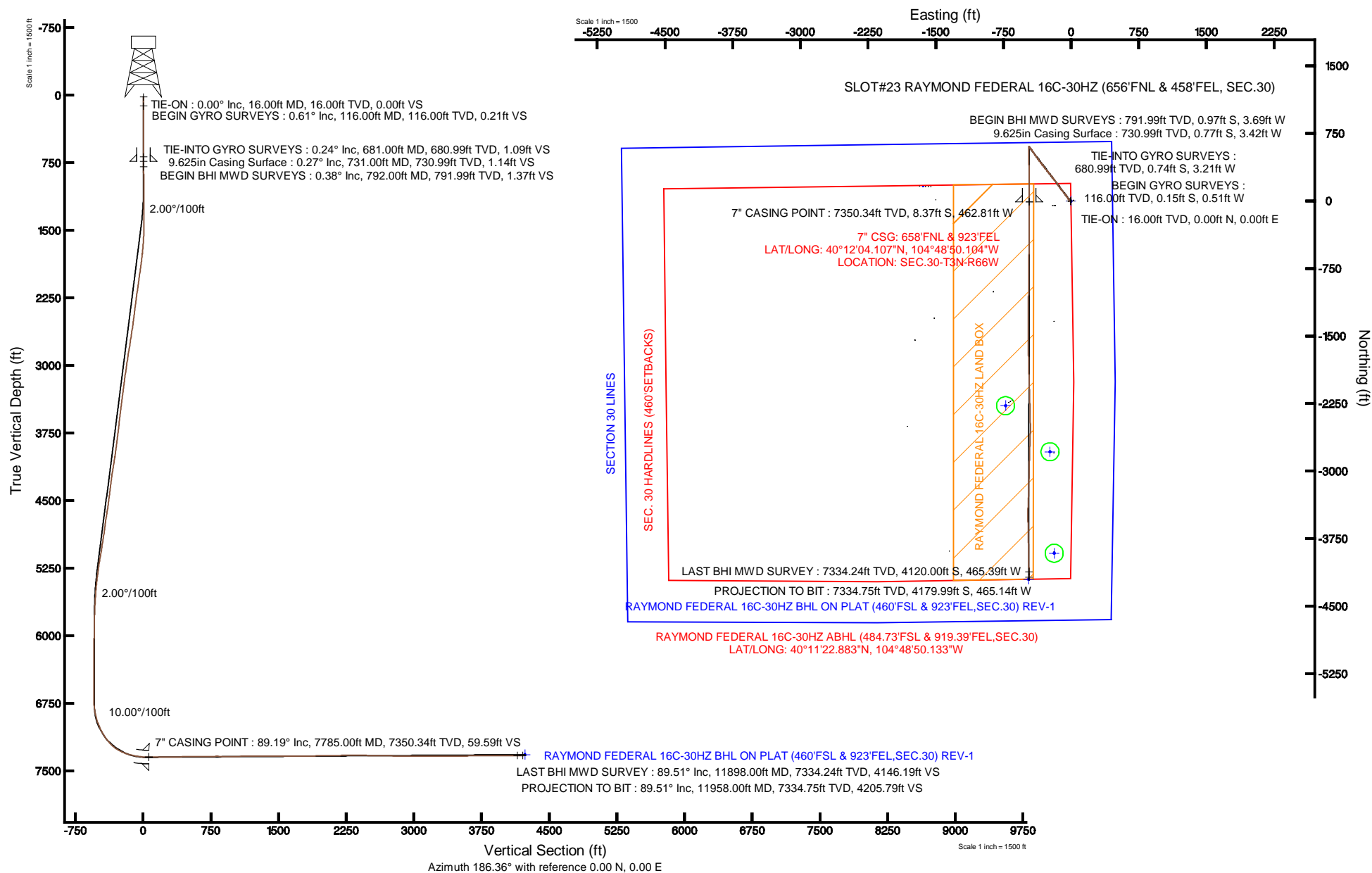


Location:	COLORADO	Slot:	SLOT#23 RAYMOND FEDERAL 16C-30HZ (656'FNL & 458'FEL, SEC.30)
Field:	WELD COUNTY (KERR MCGEE)	Well:	RAYMOND FEDERAL 16C-30HZ
Facility:	SEC.30-T3N-R66W	Wellbore:	RAYMOND FEDERAL 16C-30HZ PWB

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#23 RAYMOND FEDERAL 16C-30HZ (656FNL & 458FEL, SEC.30)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: wilsje02 on 3/6/2013





# Actual Wellpath Report

RAYMOND FEDERAL 16C-30HZ AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#23 RAYMOND FEDERAL 16C-30HZ (656'FNL & 458'FEL, SEC.30)
Area	COLORADO	Well	RAYMOND FEDERAL 16C-30HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	RAYMOND FEDERAL 16C-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 15:09:35
Convergence at slot	0.44° East	Database/Source file	WellArchitectDB/RAYMOND_FEDERAL_16C-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	-162.06	1553.67	3192102.26	1316871.40	40°12'04.190"N	104°48'44.140"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#23 RAYMOND FEDERAL 16C-30HZ (656'FNL & 458'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	186.35°



# Actual Wellpath Report

RAYMOND FEDERAL 16C-30HZ AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#23 RAYMOND FEDERAL 16C-30HZ (656'FNL & 458'FEL, SEC.30)
Area	COLORADO	Well	RAYMOND FEDERAL 16C-30HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	RAYMOND FEDERAL 16C-30HZ AWB
Facility	SEC.30-T3N-R66W		

## WELLPATH DATA (153 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	253.240	0.00	0.00	0.00	0.00	40°12'04.190"N	104°48'44.140"W	0.00	
16.00	0.000	253.240	16.00	0.00	0.00	0.00	40°12'04.190"N	104°48'44.140"W	0.00	TIE-ON
116.00	0.610	253.240	116.00	0.21	-0.15	-0.51	40°12'04.188"N	104°48'44.147"W	0.61	BEGIN GYRO SURVEYS
216.00	0.520	248.590	215.99	0.63	-0.47	-1.44	40°12'04.185"N	104°48'44.159"W	0.10	
316.00	0.360	240.330	315.99	1.03	-0.79	-2.14	40°12'04.182"N	104°48'44.168"W	0.17	
416.00	0.150	238.530	415.99	1.29	-1.02	-2.52	40°12'04.180"N	104°48'44.173"W	0.21	
516.00	0.130	309.740	515.99	1.31	-1.01	-2.72	40°12'04.180"N	104°48'44.175"W	0.16	
616.00	0.220	302.980	615.99	1.16	-0.84	-2.97	40°12'04.182"N	104°48'44.178"W	0.09	
681.00	0.240	280.410	680.99	1.09	-0.74	-3.21	40°12'04.183"N	104°48'44.181"W	0.14	TIE-INTO GYRO SURVEYS
792.00	0.380	223.730	791.99	1.37	-0.97	-3.69	40°12'04.180"N	104°48'44.188"W	0.29	BEGIN BHI MWD SURVEYS
884.00	0.530	210.240	883.98	2.00	-1.56	-4.12	40°12'04.175"N	104°48'44.193"W	0.20	
976.00	0.490	209.600	975.98	2.75	-2.27	-4.52	40°12'04.168"N	104°48'44.198"W	0.04	
1068.00	0.610	206.240	1067.98	3.57	-3.05	-4.94	40°12'04.160"N	104°48'44.204"W	0.14	
1160.00	0.620	216.570	1159.97	4.46	-3.89	-5.45	40°12'04.152"N	104°48'44.210"W	0.12	
1247.00	0.730	222.630	1246.96	5.32	-4.67	-6.10	40°12'04.144"N	104°48'44.219"W	0.15	
1332.00	0.840	227.430	1331.96	6.22	-5.49	-6.93	40°12'04.136"N	104°48'44.229"W	0.15	
1417.00	1.260	299.260	1416.95	6.33	-5.46	-8.20	40°12'04.136"N	104°48'44.246"W	1.50	
1503.00	3.120	322.380	1502.88	4.28	-3.14	-10.46	40°12'04.159"N	104°48'44.275"W	2.35	
1588.00	4.390	321.450	1587.70	0.31	1.24	-13.90	40°12'04.202"N	104°48'44.319"W	1.50	
1673.00	6.180	326.550	1672.33	-5.51	7.60	-18.45	40°12'04.265"N	104°48'44.378"W	2.18	
1758.00	7.500	326.420	1756.72	-13.28	16.04	-24.04	40°12'04.348"N	104°48'44.450"W	1.55	
1843.00	9.070	329.150	1840.84	-22.87	26.41	-30.54	40°12'04.451"N	104°48'44.534"W	1.90	
1929.00	9.990	327.320	1925.65	-34.07	38.51	-38.05	40°12'04.571"N	104°48'44.630"W	1.13	
2014.00	11.120	322.510	2009.21	-45.71	51.22	-47.02	40°12'04.696"N	104°48'44.746"W	1.68	
2099.00	10.410	322.300	2092.71	-57.14	63.80	-56.70	40°12'04.820"N	104°48'44.871"W	0.84	
2184.00	11.170	323.350	2176.21	-68.68	76.48	-66.31	40°12'04.946"N	104°48'44.995"W	0.92	
2269.00	10.770	322.970	2259.66	-80.47	89.43	-76.01	40°12'05.074"N	104°48'45.120"W	0.48	
2355.00	10.340	320.790	2344.20	-91.72	101.82	-85.73	40°12'05.196"N	104°48'45.245"W	0.68	
2440.00	10.400	320.620	2427.81	-102.41	113.66	-95.42	40°12'05.313"N	104°48'45.370"W	0.08	
2525.00	10.890	320.220	2511.35	-113.33	125.76	-105.42	40°12'05.433"N	104°48'45.499"W	0.58	
2610.00	10.590	323.470	2594.86	-124.62	138.21	-115.21	40°12'05.556"N	104°48'45.625"W	0.80	
2695.00	11.720	324.920	2678.25	-136.82	151.55	-124.82	40°12'05.688"N	104°48'45.749"W	1.37	
2780.00	12.330	325.990	2761.39	-150.21	166.14	-134.86	40°12'05.832"N	104°48'45.878"W	0.76	
2865.00	11.730	326.050	2844.52	-163.71	180.83	-144.76	40°12'05.977"N	104°48'46.006"W	0.71	
2950.00	10.990	326.750	2927.86	-176.55	194.77	-154.03	40°12'06.115"N	104°48'46.125"W	0.89	
3035.00	10.700	323.990	3011.34	-188.62	207.93	-163.11	40°12'06.245"N	104°48'46.242"W	0.70	
3121.00	11.910	322.260	3095.67	-200.89	221.41	-173.24	40°12'06.378"N	104°48'46.373"W	1.46	
3206.00	10.430	321.700	3179.06	-212.67	234.38	-183.37	40°12'06.506"N	104°48'46.503"W	1.75	
3291.00	10.170	321.000	3262.69	-223.41	246.25	-192.86	40°12'06.623"N	104°48'46.626"W	0.34	
3376.00	9.930	322.840	3346.38	-234.00	257.93	-202.01	40°12'06.739"N	104°48'46.743"W	0.47	
3461.00	9.920	322.080	3430.11	-244.56	269.54	-210.94	40°12'06.854"N	104°48'46.859"W	0.15	
3547.00	9.670	322.980	3514.86	-255.12	281.15	-219.84	40°12'06.968"N	104°48'46.973"W	0.34	
3632.00	9.480	321.260	3598.67	-265.25	292.31	-228.52	40°12'07.079"N	104°48'47.085"W	0.40	
3717.00	9.620	320.330	3682.49	-275.12	303.24	-237.43	40°12'07.187"N	104°48'47.200"W	0.25	
3803.00	9.980	319.130	3767.24	-285.17	314.41	-246.90	40°12'07.297"N	104°48'47.322"W	0.48	



# Actual Wellpath Report

RAYMOND FEDERAL 16C-30HZ AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#23 RAYMOND FEDERAL 16C-30HZ (656'FNL & 458'FEL, SEC.30)
Area	COLORADO	Well	RAYMOND FEDERAL 16C-30HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	RAYMOND FEDERAL 16C-30HZ AWB
Facility	SEC.30-T3N-R66W		

## WELLPATH DATA (153 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3888.00	10.380	318.830	3850.90	-295.35	325.74	-256.76	40°12'07.409"N	104°48'47.449"W	0.47	
3973.00	11.080	320.800	3934.42	-306.24	337.84	-266.96	40°12'07.528"N	104°48'47.581"W	0.93	
4058.00	11.480	322.080	4017.77	-318.02	350.84	-277.32	40°12'07.657"N	104°48'47.714"W	0.56	
4143.00	12.310	325.120	4100.95	-330.89	364.94	-287.70	40°12'07.796"N	104°48'47.848"W	1.22	
4228.00	11.750	323.800	4184.08	-344.08	379.36	-298.00	40°12'07.939"N	104°48'47.980"W	0.73	
4314.00	9.610	320.570	4268.59	-355.54	391.97	-307.73	40°12'08.063"N	104°48'48.106"W	2.58	
4399.00	10.350	321.610	4352.30	-365.91	403.44	-316.98	40°12'08.177"N	104°48'48.225"W	0.90	
4484.00	10.440	321.300	4435.91	-376.77	415.43	-326.53	40°12'08.295"N	104°48'48.348"W	0.12	
4569.00	10.820	323.090	4519.45	-388.02	427.82	-336.14	40°12'08.418"N	104°48'48.472"W	0.59	
4655.00	11.880	323.060	4603.76	-400.35	441.35	-346.31	40°12'08.551"N	104°48'48.603"W	1.23	
4740.00	11.400	324.080	4687.02	-412.93	455.15	-356.49	40°12'08.688"N	104°48'48.734"W	0.61	
4825.00	10.780	323.840	4770.43	-425.01	468.37	-366.11	40°12'08.818"N	104°48'48.858"W	0.73	
4910.00	10.990	321.850	4853.90	-436.65	481.16	-375.81	40°12'08.945"N	104°48'48.983"W	0.51	
4996.00	11.670	323.730	4938.22	-448.89	494.62	-386.02	40°12'09.078"N	104°48'49.115"W	0.90	
5081.00	12.040	327.770	5021.41	-462.15	509.05	-395.83	40°12'09.220"N	104°48'49.241"W	1.07	
5166.00	12.260	327.070	5104.51	-476.07	524.12	-405.47	40°12'09.369"N	104°48'49.366"W	0.31	
5251.00	11.800	324.970	5187.64	-489.57	538.82	-415.36	40°12'09.515"N	104°48'49.493"W	0.75	
5337.00	10.750	324.260	5271.98	-502.12	552.53	-425.09	40°12'09.650"N	104°48'49.619"W	1.23	
5422.00	9.100	325.790	5355.70	-513.11	564.52	-433.50	40°12'09.769"N	104°48'49.727"W	1.97	
5507.00	7.210	323.940	5439.84	-522.16	574.39	-440.42	40°12'09.866"N	104°48'49.816"W	2.24	
5592.00	5.780	324.020	5524.29	-529.26	582.17	-446.08	40°12'09.943"N	104°48'49.889"W	1.68	
5678.00	4.580	322.880	5609.94	-534.96	588.41	-450.69	40°12'10.005"N	104°48'49.948"W	1.40	
5763.00	3.860	322.150	5694.71	-539.47	593.38	-454.50	40°12'10.054"N	104°48'49.997"W	0.85	
5848.00	3.300	317.410	5779.54	-543.13	597.44	-457.91	40°12'10.094"N	104°48'50.041"W	0.74	
5933.00	2.040	320.830	5864.45	-545.80	600.41	-460.52	40°12'10.123"N	104°48'50.075"W	1.49	
6018.00	0.920	305.900	5949.42	-547.19	601.98	-462.03	40°12'10.139"N	104°48'50.095"W	1.38	
6104.00	0.480	345.170	6035.41	-547.87	602.74	-462.68	40°12'10.146"N	104°48'50.103"W	0.73	
6189.00	0.500	333.620	6120.41	-548.51	603.41	-462.94	40°12'10.153"N	104°48'50.106"W	0.12	
6274.00	0.570	312.150	6205.41	-549.07	604.03	-463.41	40°12'10.159"N	104°48'50.112"W	0.25	
6360.00	0.400	18.510	6291.41	-549.62	604.60	-463.64	40°12'10.165"N	104°48'50.115"W	0.64	
6445.00	0.160	315.890	6376.40	-549.98	604.97	-463.62	40°12'10.168"N	104°48'50.115"W	0.42	
6530.00	0.320	291.790	6461.40	-550.12	605.14	-463.93	40°12'10.170"N	104°48'50.119"W	0.22	
6615.00	0.550	270.460	6546.40	-550.14	605.23	-464.56	40°12'10.171"N	104°48'50.127"W	0.33	
6700.00	0.880	261.540	6631.39	-549.93	605.14	-465.61	40°12'10.170"N	104°48'50.141"W	0.41	
6768.00	0.950	261.410	6699.39	-549.65	604.98	-466.68	40°12'10.168"N	104°48'50.155"W	0.10	
6786.00	1.240	266.440	6717.38	-549.58	604.94	-467.02	40°12'10.168"N	104°48'50.159"W	1.70	
6872.00	5.740	189.020	6803.22	-545.12	600.63	-468.63	40°12'10.125"N	104°48'50.180"W	6.51	
6914.00	9.650	182.100	6844.84	-539.51	595.04	-469.09	40°12'10.070"N	104°48'50.186"W	9.55	
6957.00	13.600	176.810	6886.95	-530.93	586.39	-468.94	40°12'09.985"N	104°48'50.184"W	9.51	
6999.00	16.590	175.950	6927.50	-520.16	575.47	-468.24	40°12'09.877"N	104°48'50.175"W	7.14	
7042.00	20.140	176.440	6968.30	-506.82	561.96	-467.35	40°12'09.743"N	104°48'50.163"W	8.26	
7084.00	23.070	178.330	7007.35	-491.55	546.51	-466.66	40°12'09.591"N	104°48'50.154"W	7.17	
7127.00	25.730	179.120	7046.50	-473.94	528.75	-466.27	40°12'09.415"N	104°48'50.149"W	6.23	
7169.00	29.220	180.800	7083.76	-454.69	509.38	-466.27	40°12'09.224"N	104°48'50.149"W	8.51	
7212.00	32.230	180.490	7120.72	-432.83	487.42	-466.52	40°12'09.007"N	104°48'50.152"W	7.01	



# Actual Wellpath Report

RAYMOND FEDERAL 16C-30HZ AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#23 RAYMOND FEDERAL 16C-30HZ (656'FNL & 458'FEL, SEC.30)
Area	COLORADO	Well	RAYMOND FEDERAL 16C-30HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	RAYMOND FEDERAL 16C-30HZ AWB
Facility	SEC.30-T3N-R66W		

## WELLPATH DATA (153 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7254.00	37.440	179.170	7155.18	-409.01	463.44	-466.43	40°12'08.770"N	104°48'50.151"W	12.53	
7298.00	42.120	179.920	7188.99	-381.06	435.29	-466.21	40°12'08.491"N	104°48'50.148"W	10.69	
7340.00	47.530	178.420	7218.77	-351.70	405.70	-465.77	40°12'08.199"N	104°48'50.143"W	13.12	
7383.00	52.860	178.530	7246.28	-318.99	372.69	-464.89	40°12'07.873"N	104°48'50.131"W	12.40	
7425.00	58.710	178.140	7269.89	-284.61	337.99	-463.87	40°12'07.530"N	104°48'50.118"W	13.95	
7468.00	64.040	178.330	7290.48	-247.26	300.28	-462.71	40°12'07.157"N	104°48'50.103"W	12.40	
7510.00	69.580	179.320	7307.01	-209.00	261.69	-461.93	40°12'06.776"N	104°48'50.093"W	13.37	
7553.00	74.070	180.430	7320.42	-168.42	220.85	-461.85	40°12'06.372"N	104°48'50.092"W	10.73	
7595.00	77.200	180.590	7330.84	-127.95	180.17	-462.21	40°12'05.970"N	104°48'50.097"W	7.46	
7639.00	80.080	180.960	7339.51	-85.02	137.04	-462.79	40°12'05.544"N	104°48'50.104"W	6.60	
7681.00	83.620	180.450	7345.46	-43.65	95.47	-463.30	40°12'05.133"N	104°48'50.111"W	8.51	
7729.00	88.000	179.430	7348.97	3.91	47.61	-463.25	40°12'04.660"N	104°48'50.110"W	9.37	
7785.00†	89.189	179.658	7350.34	59.50	-8.37	-462.81	40°12'04.107"N	104°48'50.104"W	2.16	7" CASING POINT
7842.00	90.400	179.890	7350.55	116.12	-65.36	-462.58	40°12'03.544"N	104°48'50.102"W	2.16	
7928.00	89.530	179.270	7350.60	201.52	-151.36	-461.95	40°12'02.694"N	104°48'50.093"W	1.24	
8013.00	90.400	180.630	7350.65	285.99	-236.36	-461.88	40°12'01.854"N	104°48'50.092"W	1.90	
8098.00	91.570	180.690	7349.19	370.56	-321.34	-462.86	40°12'01.014"N	104°48'50.105"W	1.38	
8183.00	90.800	180.310	7347.43	455.09	-406.32	-463.60	40°12'00.175"N	104°48'50.115"W	1.01	
8269.00	91.720	180.910	7345.54	540.64	-492.29	-464.51	40°11'59.325"N	104°48'50.126"W	1.28	
8354.00	90.650	180.510	7343.78	625.21	-577.26	-465.57	40°11'58.485"N	104°48'50.140"W	1.34	
8439.00	89.880	180.410	7343.39	709.76	-662.26	-466.25	40°11'57.646"N	104°48'50.149"W	0.91	
8524.00	90.520	181.020	7343.09	794.35	-747.25	-467.31	40°11'56.806"N	104°48'50.162"W	1.04	
8610.00	88.800	180.380	7343.60	879.93	-833.24	-468.36	40°11'55.956"N	104°48'50.176"W	2.13	
8695.00	89.820	180.410	7344.63	964.46	-918.23	-468.95	40°11'55.116"N	104°48'50.183"W	1.20	
8780.00	91.320	180.860	7343.78	1049.03	-1003.22	-469.89	40°11'54.276"N	104°48'50.195"W	1.84	
8865.00	90.920	180.930	7342.12	1133.63	-1088.19	-471.21	40°11'53.436"N	104°48'50.213"W	0.48	
8951.00	90.950	180.060	7340.72	1219.17	-1174.18	-471.96	40°11'52.587"N	104°48'50.222"W	1.01	
9036.00	90.310	180.560	7339.78	1303.69	-1259.17	-472.42	40°11'51.747"N	104°48'50.228"W	0.96	
9122.00	89.910	180.200	7339.62	1389.22	-1345.17	-472.99	40°11'50.897"N	104°48'50.235"W	0.63	
9207.00	89.200	180.380	7340.28	1473.75	-1430.16	-473.42	40°11'50.057"N	104°48'50.241"W	0.86	
9292.00	89.750	180.280	7341.06	1558.27	-1515.16	-473.91	40°11'49.217"N	104°48'50.247"W	0.66	
9377.00	89.660	179.230	7341.49	1642.71	-1600.15	-473.54	40°11'48.377"N	104°48'50.242"W	1.24	
9462.00	91.200	178.410	7340.86	1726.97	-1685.13	-471.79	40°11'47.538"N	104°48'50.220"W	2.05	
9548.00	91.020	178.790	7339.19	1812.17	-1771.09	-469.69	40°11'46.688"N	104°48'50.193"W	0.49	
9633.00	90.340	178.860	7338.18	1896.43	-1856.06	-467.95	40°11'45.848"N	104°48'50.170"W	0.80	
9718.00	91.750	178.040	7336.63	1980.61	-1941.02	-465.65	40°11'45.009"N	104°48'50.141"W	1.92	
9804.00	91.140	178.180	7334.46	2065.69	-2026.94	-462.82	40°11'44.160"N	104°48'50.104"W	0.73	
9889.00	90.370	177.820	7333.34	2149.78	-2111.88	-459.85	40°11'43.320"N	104°48'50.066"W	1.00	
9974.00	91.010	178.340	7332.32	2233.89	-2196.83	-457.00	40°11'42.481"N	104°48'50.029"W	0.97	
10059.00	91.500	179.260	7330.46	2318.13	-2281.79	-455.22	40°11'41.641"N	104°48'50.006"W	1.23	
10145.00	88.120	178.080	7330.74	2403.35	-2367.75	-453.23	40°11'40.792"N	104°48'49.980"W	4.16	
10230.00	88.610	178.750	7333.17	2487.50	-2452.68	-450.88	40°11'39.953"N	104°48'49.950"W	0.98	
10315.00	89.010	180.110	7334.93	2571.86	-2537.66	-450.03	40°11'39.113"N	104°48'49.939"W	1.67	
10400.00	89.440	182.630	7336.08	2656.52	-2622.62	-452.06	40°11'38.273"N	104°48'49.965"W	3.01	
10486.00	88.680	181.440	7337.49	2742.27	-2708.55	-455.12	40°11'37.424"N	104°48'50.005"W	1.64	



# Actual Wellpath Report

RAYMOND FEDERAL 16C-30HZ AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#23 RAYMOND FEDERAL 16C-30HZ (656'FNL & 458'FEL, SEC.30)
Area	COLORADO	Well	RAYMOND FEDERAL 16C-30HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	RAYMOND FEDERAL 16C-30HZ AWB
Facility	SEC.30-T3N-R66W		

## WELLPATH DATA (153 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
10571.00	89.940	181.830	7338.52	2826.97	-2793.51	-457.54	40°11'36.585"N	104°48'50.036"W	1.55	
10656.00	88.920	181.730	7339.36	2911.70	-2878.46	-460.18	40°11'35.745"N	104°48'50.070"W	1.21	
10741.00	89.260	182.120	7340.71	2996.43	-2963.40	-463.04	40°11'34.906"N	104°48'50.107"W	0.61	
10827.00	89.260	180.710	7341.82	3082.10	-3049.36	-465.16	40°11'34.056"N	104°48'50.134"W	1.64	
10912.00	91.080	181.290	7341.57	3166.73	-3134.35	-466.64	40°11'33.216"N	104°48'50.153"W	2.25	
10997.00	90.890	181.580	7340.11	3251.40	-3219.31	-468.77	40°11'32.377"N	104°48'50.181"W	0.41	
11082.00	90.650	182.180	7338.97	3336.14	-3304.25	-471.56	40°11'31.537"N	104°48'50.216"W	0.76	
11167.00	90.060	182.600	7338.44	3420.93	-3389.18	-475.10	40°11'30.698"N	104°48'50.262"W	0.85	
11252.00	89.850	180.180	7338.51	3505.61	-3474.15	-477.17	40°11'29.858"N	104°48'50.289"W	2.86	
11338.00	90.740	178.360	7338.06	3590.95	-3560.13	-476.07	40°11'29.009"N	104°48'50.274"W	2.36	
11423.00	90.030	179.060	7337.49	3675.19	-3645.11	-474.16	40°11'28.169"N	104°48'50.250"W	1.17	
11508.00	91.110	178.700	7336.65	3759.46	-3730.09	-472.50	40°11'27.329"N	104°48'50.228"W	1.34	
11593.00	90.740	178.400	7335.28	3843.66	-3815.05	-470.35	40°11'26.490"N	104°48'50.201"W	0.56	
11679.00	90.550	179.010	7334.31	3928.89	-3901.02	-468.40	40°11'25.640"N	104°48'50.176"W	0.74	
11763.00	90.090	179.010	7333.84	4012.20	-3985.01	-466.95	40°11'24.810"N	104°48'50.157"W	0.55	
11849.00	89.780	179.390	7333.94	4097.54	-4071.00	-465.75	40°11'23.960"N	104°48'50.141"W	0.57	
11898.00	89.510	179.760	7334.24	4146.19	-4120.00	-465.39	40°11'23.476"N	104°48'50.137"W	0.93	LAST BHI MWD SURVEY
11958.00	89.510	179.760	7334.75	4205.79	-4179.99	-465.14	40°11'22.883"N	104°48'50.133"W	0.00	PROJECTION TO BIT

## HOLE & CASING SECTIONS - Ref Wellbore: RAYMOND FEDERAL 16C-30HZ AWB Ref Wellpath: RAYMOND FEDERAL 16C-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	731.00	715.00	16.00	730.99	0.00	0.00	-0.77	-3.42
9.625in Casing Surface	16.00	731.00	715.00	16.00	730.99	0.00	0.00	-0.77	-3.42
8.75in Open Hole	731.00	7785.00	7054.00	730.99	7350.34	-0.77	-3.42	-8.37	-462.81
7in Casing Intermediate	16.00	7785.00	7769.00	16.00	7350.34	0.00	0.00	-8.37	-462.81
6.125in Open Hole	7785.00	11958.00	4173.00	7350.34	7334.75	-8.37	-462.81	-4179.99	-465.14



# Actual Wellpath Report

RAYMOND FEDERAL 16C-30HZ AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#23 RAYMOND FEDERAL 16C-30HZ (656'FNL & 458'FEL, SEC.30)
Area	COLORADO	Well	RAYMOND FEDERAL 16C-30HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	RAYMOND FEDERAL 16C-30HZ AWB
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	162.57	-1643.59	3190457.53	1317021.21	40°12'05.796"N	104°49'05.322"W	polygon
MILLER 30-16K (NOBLE) 100' CIRCLE		7130.00	-3915.10	-185.64	3191947.00	1312955.15	40°11'25.501"N	104°48'46.532"W	circle
MEEKS L 30-22 (NOBLE) 100' CIRCLE		7139.00	-2274.13	-725.57	3191394.37	1314591.81	40°11'41.717"N	104°48'53.490"W	circle
MILLER 30-9K (NOBLE) 100' CIRCLE		7139.00	-2786.79	-232.58	3191891.31	1314083.01	40°11'36.651"N	104°48'47.137"W	circle
RAYMOND FEDERAL 16C-30HZ BHL ON PLAT (460'FSL & 923'FEL,SEC.30) REV-1		7324.00	-4204.72	-468.75	3191666.15	1312663.36	40°11'22.639"N	104°48'50.180"W	point
MILLENSIFER FED 4 PAD HARDLINES (460'SETBACKS)		7331.00	162.57	-1643.59	3190457.53	1317021.21	40°12'05.796"N	104°49'05.322"W	polygon
RAYMOND FEDERAL 16C-30HZ LAND BOX		7400.00	0.04	0.03	3192102.29	1316871.44	40°12'04.190"N	104°48'44.140"W	polygon

## WELLPATH COMPOSITION - Ref Wellbore: RAYMOND FEDERAL 16C-30HZ AWB Ref Wellpath: RAYMOND FEDERAL 16C-30HZ AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	681.00	Generic gyro - continuous (Standard)	GYRODATA SURVEYS <116-681>	RAYMOND FEDERAL 16C-30HZ AWB
681.00	7729.00	NaviTrak (MagCorr)	BHI MWD SURVEYS 8 3/4" HOLE <792-7729>	RAYMOND FEDERAL 16C-30HZ AWB
7729.00	11898.00	OnTrak (MagCorr)	BHI MWD SURVEYS 6 1/8" HOLE <7842-11898>	RAYMOND FEDERAL 16C-30HZ AWB
11898.00	11958.00	Blind Drilling (std)	Projection to bit	RAYMOND FEDERAL 16C-30HZ AWB



# Actual Wellpath Report

RAYMOND FEDERAL 16C-30HZ AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#23 RAYMOND FEDERAL 16C-30HZ (656'FNL & 458'FEL, SEC.30)
Area	COLORADO	Well	RAYMOND FEDERAL 16C-30HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	RAYMOND FEDERAL 16C-30HZ AWB
Facility	SEC.30-T3N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
16.00	0.000	253.240	16.00	TIE-ON
116.00	0.610	253.240	116.00	BEGIN GYRO SURVEYS
681.00	0.240	280.410	680.99	TIE-INTO GYRO SURVEYS
792.00	0.380	223.730	791.99	BEGIN BHI MWD SURVEYS
7785.00	89.189	179.658	7350.34	7" CASING POINT
11898.00	89.510	179.760	7334.24	LAST BHI MWD SURVEY
11958.00	89.510	179.760	7334.75	PROJECTION TO BIT