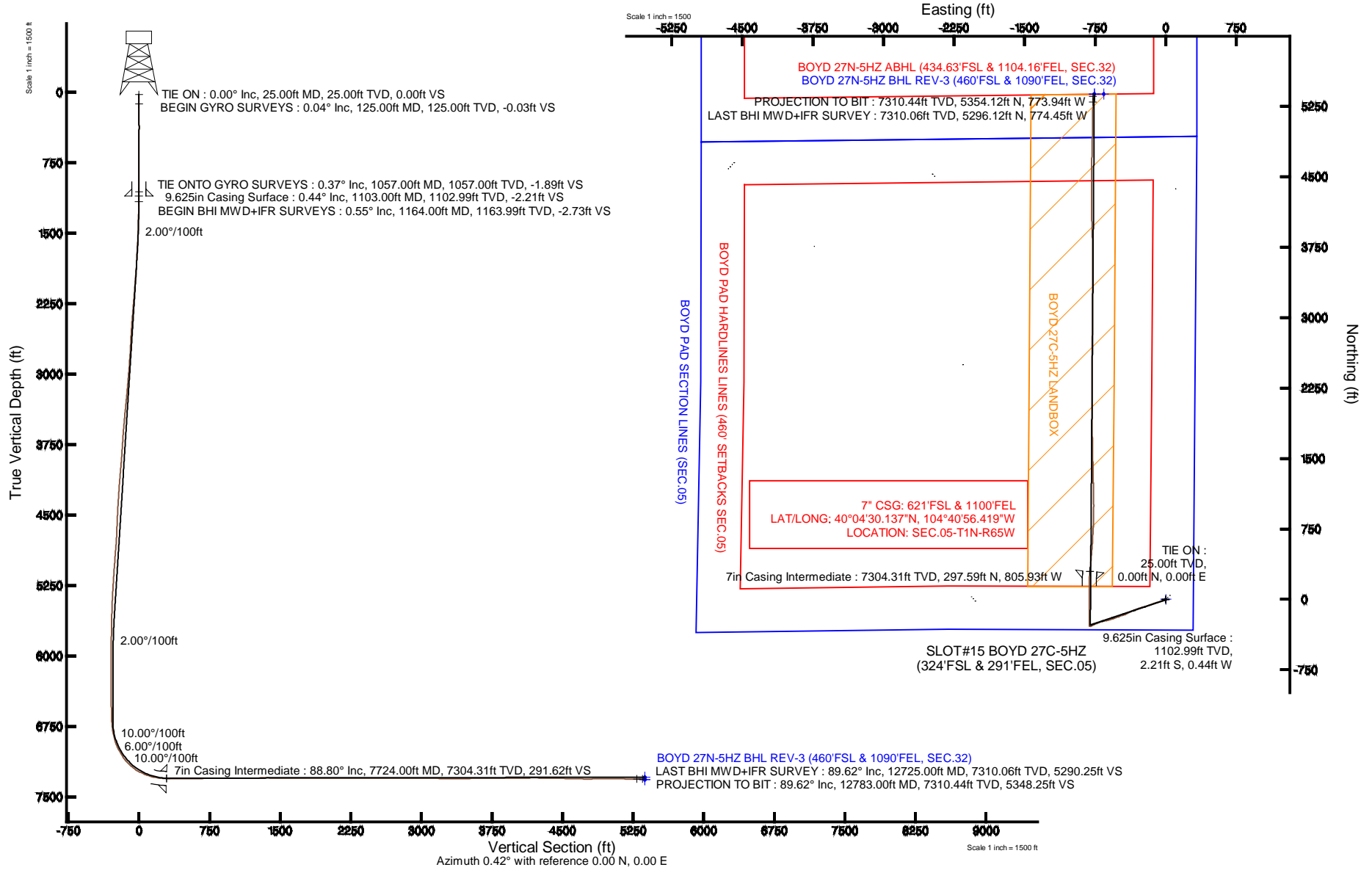


KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#15 BOYD 27C-5HZ (324'FSL & 291'FEL, SEC.05)
 Field: WELD COUNTY (KERR MCGEE) Well: BOYD 27C-5HZ
 Facility: SEC.05-T1N-R65W Wellbore: BOYD 27C-5HZ PWB

Plot reference wellpath is BOYD 27C-5HZ (REV-B.0) PWP

True vertical depths are referenced to H&P 307 (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to H&P 307 (RKB)	North Reference: True north
H&P 307 (RKB) to Mean Sea Level: 4956 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#15 BOYD 27C-5HZ (324'FSL & 291'FEL, SEC.05)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: rbiale01 on 05/Dec/2013





Actual Wellpath Report

BOYD 27C-5HZ AWP

Page 1 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#15 BOYD 27C-5HZ (324'FSL & 291'FEL, SEC.05)
Area	COLORADO	Well	BOYD 27C-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	BOYD 27C-5HZ AWB
Facility	SEC.05-T1N-R65W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 4.0.0
North Reference	True	User	Robiale01
Scale	0.999962	Report Generated	05/Dec/2013 at 11:32
Convergence at slot	n/a	Database/Source file	WellArchitectDB/BOYD_27C-5HZ_AWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-2312.86	2326.88	3229624.08	1270946.15	40°04'27.196"N	104°40'46.052"W
Facility Reference Pt			3227276.21	1273237.51	40°04'50.053"N	104°41'15.984"W
Field Reference Pt			3197771.84	1268891.29	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM

Calculation method	Minimum curvature	H&P 307 (RKB) to Facility Vertical Datum	4956.00ft
Horizontal Reference Pt	Slot	H&P 307 (RKB) to Mean Sea Level	4956.00ft
Vertical Reference Pt	H&P 307 (RKB)	H&P 307 (RKB) to Mud Line at Slot (SLOT#15 BOYD 27C-5HZ (324'FSL & 291'FEL, SEC.05))	4956.00ft
MD Reference Pt	H&P 307 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	0.42°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#15 BOYD 27C-5HZ (324'FSL & 291'FEL, SEC.05)
Area	COLORADO	Well	BOYD 27C-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	BOYD 27C-5HZ AWB
Facility	SEC.05-T1N-R65W		

WELLPATH DATA (149 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	156.230	0.00	0.00	0.00	0.00	40°04'27.196"N	104°40'46.052"W	0.00	
25.00	0.000	156.230	25.00	0.00	0.00	0.00	40°04'27.196"N	104°40'46.052"W	0.00	TIE ON
125.00	0.040	156.230	125.00	-0.03	-0.03	0.01	40°04'27.196"N	104°40'46.052"W	0.04	BEGIN GYRO SURVEYS
225.00	0.160	90.230	225.00	-0.06	-0.06	0.17	40°04'27.195"N	104°40'46.050"W	0.15	
325.00	0.080	18.980	325.00	0.00	0.00	0.33	40°04'27.196"N	104°40'46.048"W	0.15	
425.00	0.080	159.860	425.00	0.00	0.00	0.38	40°04'27.196"N	104°40'46.047"W	0.15	
525.00	0.150	251.770	525.00	-0.10	-0.11	0.28	40°04'27.195"N	104°40'46.048"W	0.17	
625.00	0.290	193.300	625.00	-0.39	-0.39	0.09	40°04'27.192"N	104°40'46.051"W	0.25	
725.00	0.300	214.020	725.00	-0.86	-0.86	-0.11	40°04'27.188"N	104°40'46.053"W	0.11	
825.00	0.230	202.870	825.00	-1.26	-1.26	-0.34	40°04'27.184"N	104°40'46.056"W	0.09	
925.00	0.130	214.980	925.00	-1.54	-1.54	-0.48	40°04'27.181"N	104°40'46.058"W	0.11	
1025.00	0.140	173.130	1025.00	-1.75	-1.75	-0.53	40°04'27.179"N	104°40'46.059"W	0.10	
1057.00	0.370	163.740	1057.00	-1.89	-1.89	-0.50	40°04'27.177"N	104°40'46.058"W	0.73	TIE ON TO GYRO SURVEYS
1164.00	0.550	188.370	1163.99	-2.73	-2.73	-0.47	40°04'27.169"N	104°40'46.058"W	0.25	BEGIN BHI MWD+IFR SURVEYS
1257.00	2.660	244.510	1256.95	-4.12	-4.10	-2.49	40°04'27.156"N	104°40'46.084"W	2.58	
1350.00	3.960	244.950	1349.80	-6.44	-6.39	-7.34	40°04'27.133"N	104°40'46.146"W	1.40	
1444.00	5.500	252.060	1443.47	-9.26	-9.15	-14.57	40°04'27.106"N	104°40'46.239"W	1.75	
1536.00	7.070	253.560	1534.92	-12.29	-12.11	-24.20	40°04'27.076"N	104°40'46.363"W	1.72	
1630.00	9.040	251.820	1627.99	-16.32	-16.05	-36.76	40°04'27.037"N	104°40'46.525"W	2.11	
1723.00	11.030	252.890	1719.56	-21.33	-20.95	-52.21	40°04'26.989"N	104°40'46.724"W	2.15	
1817.00	12.830	255.250	1811.53	-26.78	-26.25	-70.90	40°04'26.937"N	104°40'46.964"W	1.98	
1910.00	13.030	254.000	1902.17	-32.44	-31.77	-90.96	40°04'26.882"N	104°40'47.222"W	0.37	
2002.00	12.880	251.120	1991.83	-38.76	-37.95	-110.63	40°04'26.821"N	104°40'47.475"W	0.72	
2095.00	12.590	249.870	2082.54	-45.75	-44.79	-129.96	40°04'26.753"N	104°40'47.724"W	0.43	
2189.00	12.230	247.700	2174.34	-53.19	-52.09	-148.79	40°04'26.681"N	104°40'47.966"W	0.63	
2282.00	13.660	250.970	2264.98	-60.66	-59.41	-168.28	40°04'26.609"N	104°40'48.217"W	1.73	
2376.00	12.940	250.650	2356.46	-67.91	-66.52	-188.71	40°04'26.539"N	104°40'48.479"W	0.77	
2468.00	12.270	248.620	2446.24	-75.03	-73.50	-207.53	40°04'26.470"N	104°40'48.722"W	0.87	
2560.00	13.310	256.100	2535.96	-81.28	-79.60	-226.91	40°04'26.409"N	104°40'48.971"W	2.12	
2654.00	12.500	255.990	2627.59	-86.49	-84.67	-247.29	40°04'26.359"N	104°40'49.233"W	0.86	
2747.00	11.380	255.610	2718.57	-91.35	-89.38	-265.94	40°04'26.313"N	104°40'49.473"W	1.21	
2841.00	11.220	250.180	2810.75	-96.88	-94.79	-283.53	40°04'26.259"N	104°40'49.699"W	1.14	
2935.00	11.660	246.930	2902.89	-103.84	-101.61	-300.87	40°04'26.192"N	104°40'49.922"W	0.83	
3029.00	13.080	248.950	2994.70	-111.52	-109.15	-319.54	40°04'26.117"N	104°40'50.162"W	1.58	
3124.00	12.510	247.420	3087.34	-119.47	-116.97	-339.07	40°04'26.040"N	104°40'50.414"W	0.70	
3218.00	11.880	248.720	3179.22	-127.03	-124.39	-357.49	40°04'25.967"N	104°40'50.651"W	0.73	
3313.00	12.740	245.120	3272.04	-135.12	-132.34	-376.10	40°04'25.888"N	104°40'50.890"W	1.21	
3407.00	11.790	241.560	3363.89	-144.19	-141.28	-393.95	40°04'25.800"N	104°40'51.120"W	1.29	
3501.00	12.280	244.490	3455.83	-153.20	-150.16	-411.42	40°04'25.712"N	104°40'51.344"W	0.83	
3595.00	11.950	246.380	3547.73	-161.53	-158.36	-429.35	40°04'25.631"N	104°40'51.575"W	0.55	
3689.00	12.290	249.810	3639.64	-169.02	-165.71	-447.66	40°04'25.558"N	104°40'51.810"W	0.85	
3784.00	11.750	256.440	3732.56	-174.92	-171.47	-466.55	40°04'25.501"N	104°40'52.054"W	1.56	
3878.00	11.980	249.320	3824.56	-180.74	-177.16	-484.99	40°04'25.445"N	104°40'52.291"W	1.58	
3972.00	11.980	248.360	3916.51	-187.92	-184.20	-503.18	40°04'25.376"N	104°40'52.525"W	0.21	
4067.00	12.200	248.050	4009.40	-195.45	-191.59	-521.66	40°04'25.303"N	104°40'52.762"W	0.24	

REFERENCE WELLPATH IDENTIFICATION				
Operator	KERR-MCGEE OIL & GAS ONSHORE LP		Slot	SLOT#15 BOYD 27C-5HZ (324'FSL & 291'FEL, SEC.05)
Area	COLORADO		Well	BOYD 27C-5HZ
Field	WELD COUNTY (KERR MCGEE)		Wellbore	BOYD 27C-5HZ AWB
Facility	SEC.05-T1N-R65W			

WELLPATH DATA (149 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4161.00	13.290	250.170	4101.09	-202.97	-198.97	-541.03	40°04'25.230"N	104°40'53.012"W	1.26	
4256.00	13.360	249.920	4193.53	-210.59	-206.44	-561.61	40°04'25.156"N	104°40'53.276"W	0.10	
4350.00	12.760	254.140	4285.10	-217.31	-213.01	-581.80	40°04'25.091"N	104°40'53.536"W	1.20	
4445.00	11.320	252.080	4378.01	-223.18	-218.74	-600.77	40°04'25.034"N	104°40'53.780"W	1.58	
4539.00	12.390	258.010	4470.00	-228.26	-223.68	-619.41	40°04'24.985"N	104°40'54.020"W	1.72	
4633.00	13.340	260.630	4561.64	-232.27	-227.54	-639.97	40°04'24.947"N	104°40'54.284"W	1.19	
4727.00	11.880	259.820	4653.37	-235.89	-231.01	-660.20	40°04'24.913"N	104°40'54.544"W	1.56	
4822.00	11.760	255.490	4746.36	-240.19	-235.17	-679.19	40°04'24.872"N	104°40'54.789"W	0.94	
4916.00	13.570	249.460	4838.08	-246.60	-241.44	-698.80	40°04'24.810"N	104°40'55.041"W	2.38	
5010.00	11.870	249.280	4929.77	-254.04	-248.73	-718.17	40°04'24.738"N	104°40'55.290"W	1.81	
5104.00	10.540	247.390	5021.97	-260.89	-255.45	-735.15	40°04'24.671"N	104°40'55.509"W	1.47	
5199.00	8.430	244.030	5115.67	-267.38	-261.85	-749.43	40°04'24.608"N	104°40'55.692"W	2.30	
5293.00	7.630	241.540	5208.75	-273.46	-267.84	-761.11	40°04'24.549"N	104°40'55.843"W	0.93	
5387.00	6.890	242.170	5301.99	-279.15	-273.44	-771.58	40°04'24.494"N	104°40'55.977"W	0.79	
5482.00	5.650	242.740	5396.42	-284.02	-278.25	-780.78	40°04'24.446"N	104°40'56.096"W	1.31	
5576.00	4.410	244.030	5490.06	-287.77	-281.95	-788.14	40°04'24.410"N	104°40'56.190"W	1.32	
5671.00	3.670	248.520	5584.82	-290.53	-284.66	-794.26	40°04'24.383"N	104°40'56.269"W	0.85	
5765.00	3.320	253.360	5678.65	-292.45	-286.54	-799.66	40°04'24.364"N	104°40'56.338"W	0.49	
5859.00	2.660	241.230	5772.52	-294.31	-288.37	-804.18	40°04'24.346"N	104°40'56.397"W	0.97	
5954.00	0.890	229.200	5867.47	-295.88	-289.91	-806.68	40°04'24.331"N	104°40'56.429"W	1.89	
6048.00	0.380	198.050	5961.46	-296.65	-290.69	-807.32	40°04'24.323"N	104°40'56.437"W	0.64	
6142.00	0.900	192.130	6055.46	-297.67	-291.71	-807.58	40°04'24.313"N	104°40'56.440"W	0.56	
6237.00	1.000	75.780	6150.45	-298.19	-292.23	-806.93	40°04'24.308"N	104°40'56.432"W	1.70	
6331.00	0.550	45.250	6244.44	-297.67	-291.71	-805.81	40°04'24.313"N	104°40'56.418"W	0.63	
6426.00	0.490	356.180	6339.44	-296.94	-290.99	-805.52	40°04'24.320"N	104°40'56.414"W	0.46	
6521.00	0.680	330.490	6434.43	-296.05	-290.09	-805.82	40°04'24.329"N	104°40'56.418"W	0.34	
6615.00	0.920	325.220	6528.43	-294.94	-288.98	-806.53	40°04'24.340"N	104°40'56.427"W	0.27	
6710.00	2.060	318.630	6623.39	-293.05	-287.08	-808.09	40°04'24.359"N	104°40'56.447"W	1.21	
6804.00	4.350	352.170	6717.25	-288.26	-282.28	-809.69	40°04'24.406"N	104°40'56.467"W	3.05	
6851.00	5.000	348.830	6764.09	-284.49	-278.50	-810.33	40°04'24.444"N	104°40'56.476"W	1.50	
6898.00	9.840	347.770	6810.68	-278.56	-272.56	-811.58	40°04'24.502"N	104°40'56.492"W	10.30	
6945.00	14.280	349.920	6856.63	-268.94	-262.93	-813.45	40°04'24.598"N	104°40'56.516"W	9.49	
6993.00	17.850	359.720	6902.76	-255.76	-249.73	-814.52	40°04'24.728"N	104°40'56.530"W	9.32	
7040.00	21.740	1.540	6946.97	-239.84	-233.82	-814.32	40°04'24.885"N	104°40'56.527"W	8.38	
7087.00	26.210	0.730	6989.91	-220.75	-214.73	-813.95	40°04'25.074"N	104°40'56.522"W	9.54	
7134.00	29.720	0.160	7031.41	-198.72	-192.70	-813.79	40°04'25.292"N	104°40'56.520"W	7.49	
7182.00	33.730	359.190	7072.23	-173.48	-167.47	-813.95	40°04'25.541"N	104°40'56.522"W	8.42	
7229.00	38.980	0.610	7110.07	-145.64	-139.62	-813.97	40°04'25.816"N	104°40'56.523"W	11.31	
7276.00	44.040	1.290	7145.26	-114.50	-108.48	-813.45	40°04'26.124"N	104°40'56.516"W	10.81	
7323.00	49.940	1.710	7177.30	-80.15	-74.14	-812.54	40°04'26.463"N	104°40'56.504"W	12.57	
7370.00	55.480	1.160	7205.77	-42.78	-36.77	-811.61	40°04'26.832"N	104°40'56.492"W	11.82	
7417.00	61.340	358.900	7230.38	-2.77	3.24	-811.62	40°04'27.228"N	104°40'56.492"W	13.12	
7465.00	65.890	358.100	7251.71	40.20	46.21	-812.75	40°04'27.653"N	104°40'56.507"W	9.60	
7512.00	70.420	359.060	7269.19	83.79	89.81	-813.82	40°04'28.083"N	104°40'56.521"W	9.82	
7559.00	75.170	0.150	7283.09	128.67	134.69	-814.13	40°04'28.527"N	104°40'56.525"W	10.35	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#15 BOYD 27C-5HZ (324'FSL & 291'FEL, SEC.05)
Area	COLORADO	Well	BOYD 27C-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	BOYD 27C-5HZ AWB
Facility	SEC.05-T1N-R65W		

WELLPATH DATA (149 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7606.00	79.680	0.870	7293.32	174.53	180.55	-813.72	40°04'28.980"N	104°40'56.519"W	9.71	
7654.00	83.520	3.370	7300.33	221.98	227.99	-811.95	40°04'29.449"N	104°40'56.497"W	9.52	
7691.00	87.470	5.520	7303.24	258.76	264.76	-809.09	40°04'29.812"N	104°40'56.460"W	12.15	
7724.00†	88.798	5.503	7304.31	291.62	297.59	-805.93	40°04'30.137"N	104°40'56.419"W	4.03	7" CASING POINT
7730.00	89.040	5.500	7304.42	297.59	303.56	-805.35	40°04'30.196"N	104°40'56.412"W	4.03	
7823.00	89.440	5.700	7305.66	390.20	396.11	-796.28	40°04'31.110"N	104°40'56.295"W	0.48	
7916.00	89.900	4.610	7306.19	482.88	488.73	-787.92	40°04'32.026"N	104°40'56.188"W	1.27	
8011.00	90.730	3.640	7305.67	577.68	583.48	-781.09	40°04'32.962"N	104°40'56.100"W	1.34	
8105.00	91.010	3.250	7304.24	671.54	677.30	-775.44	40°04'33.889"N	104°40'56.027"W	0.51	
8200.00	91.350	2.920	7302.29	766.42	772.14	-770.33	40°04'34.826"N	104°40'56.911"W	0.50	
8294.00	90.460	1.040	7300.80	860.37	866.07	-767.08	40°04'35.755"N	104°40'55.920"W	2.21	
8388.00	89.960	0.720	7300.46	954.36	960.05	-765.64	40°04'36.683"N	104°40'55.901"W	0.63	
8483.00	89.840	358.960	7300.62	1049.35	1055.05	-765.90	40°04'37.622"N	104°40'55.905"W	1.86	
8574.00	90.370	358.450	7300.46	1140.31	1146.02	-767.96	40°04'38.521"N	104°40'55.931"W	0.81	
8668.00	90.860	358.530	7299.45	1234.25	1239.99	-770.44	40°04'39.450"N	104°40'55.963"W	0.53	
8763.00	90.030	358.730	7298.71	1329.20	1334.96	-772.71	40°04'40.388"N	104°40'55.992"W	0.90	
8857.00	88.610	358.960	7299.83	1423.16	1428.93	-774.60	40°04'41.317"N	104°40'56.017"W	1.53	
8951.00	89.380	358.730	7301.47	1517.11	1522.89	-776.50	40°04'42.245"N	104°40'56.041"W	0.85	
9045.00	89.810	358.990	7302.14	1611.07	1616.87	-778.37	40°04'43.174"N	104°40'56.065"W	0.53	
9139.00	90.210	358.950	7302.12	1705.04	1710.86	-780.06	40°04'44.103"N	104°40'56.087"W	0.43	
9234.00	90.090	358.880	7301.87	1800.00	1805.84	-781.86	40°04'45.042"N	104°40'56.110"W	0.15	
9328.00	90.730	358.840	7301.20	1893.97	1899.82	-783.73	40°04'45.970"N	104°40'56.134"W	0.68	
9423.00	89.590	359.530	7300.94	1988.94	1994.81	-785.08	40°04'46.909"N	104°40'56.152"W	1.40	
9517.00	89.930	0.270	7301.33	2082.94	2088.80	-785.24	40°04'47.838"N	104°40'56.154"W	0.87	
9611.00	90.710	359.840	7300.80	2176.93	2182.80	-785.15	40°04'48.767"N	104°40'56.153"W	0.95	
9706.00	89.130	0.420	7300.94	2271.93	2277.80	-784.94	40°04'49.706"N	104°40'56.150"W	1.77	
9800.00	89.260	0.470	7302.26	2365.92	2371.79	-784.21	40°04'50.634"N	104°40'56.141"W	0.15	
9894.00	90.120	0.490	7302.77	2459.91	2465.78	-783.42	40°04'51.563"N	104°40'56.131"W	0.92	
9989.00	89.870	0.140	7302.77	2554.91	2560.78	-782.90	40°04'52.502"N	104°40'56.124"W	0.45	
10083.00	90.240	0.630	7302.68	2648.91	2654.78	-782.26	40°04'53.431"N	104°40'56.116"W	0.65	
10178.00	90.770	0.840	7301.85	2743.91	2749.76	-781.05	40°04'54.370"N	104°40'56.100"W	0.60	
10273.00	91.350	0.510	7300.09	2838.89	2844.74	-779.93	40°04'55.308"N	104°40'56.086"W	0.70	
10367.00	89.410	0.550	7299.47	2932.88	2938.73	-779.06	40°04'56.237"N	104°40'56.075"W	2.06	
10462.00	89.960	359.770	7299.99	3027.88	3033.73	-778.79	40°04'57.176"N	104°40'56.071"W	1.00	
10556.00	87.850	359.120	7301.78	3121.84	3127.70	-779.70	40°04'58.104"N	104°40'56.083"W	2.35	
10650.00	88.760	0.280	7304.56	3215.79	3221.65	-780.19	40°04'59.033"N	104°40'56.089"W	1.57	
10745.00	90.210	0.200	7305.42	3310.79	3316.65	-779.80	40°04'59.972"N	104°40'56.084"W	1.53	
10840.00	89.900	359.820	7305.33	3405.78	3411.65	-779.78	40°05'00.910"N	104°40'56.084"W	0.52	
10934.00	91.200	0.750	7304.43	3499.78	3505.64	-779.31	40°05'01.839"N	104°40'56.078"W	1.70	
11028.00	91.570	359.800	7302.15	3593.75	3599.61	-778.86	40°05'02.768"N	104°40'56.072"W	1.08	
11122.00	90.270	0.000	7300.64	3687.73	3693.59	-779.02	40°05'03.697"N	104°40'56.075"W	1.40	
11217.00	90.830	359.610	7299.73	3782.72	3788.59	-779.35	40°05'04.635"N	104°40'56.079"W	0.72	
11312.00	89.590	358.210	7299.38	3877.68	3883.57	-781.15	40°05'05.574"N	104°40'56.102"W	1.97	
11406.00	89.690	358.270	7299.97	3971.61	3977.52	-784.04	40°05'06.502"N	104°40'56.139"W	0.12	
11500.00	90.580	359.290	7299.75	4065.57	4071.50	-786.04	40°05'07.431"N	104°40'56.165"W	1.44	



Actual Wellpath Report

BOYD 27C-5HZ AWP

Page 5 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#15 BOYD 27C-5HZ (324'FSL & 291'FEL, SEC.05)
Area	COLORADO	Well	BOYD 27C-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	BOYD 27C-5HZ AWB
Facility	SEC.05-T1N-R65W		

WELLPATH DATA (149 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11595.00	90.490	358.170	7298.87	4160.52	4166.47	-788.15	40°05'08.370"N	104°40'56.192"W	1.18	
11689.00	89.320	359.530	7299.02	4254.48	4260.44	-790.03	40°05'09.298"N	104°40'56.216"W	1.91	
11783.00	89.200	0.180	7300.24	4348.47	4354.44	-790.27	40°05'10.227"N	104°40'56.220"W	0.70	
11878.00	88.890	0.820	7301.82	4443.45	4449.42	-789.44	40°05'11.166"N	104°40'56.209"W	0.75	
11973.00	87.410	0.020	7304.89	4538.40	4544.36	-788.75	40°05'12.104"N	104°40'56.200"W	1.77	
12067.00	88.940	1.760	7307.88	4632.34	4638.30	-787.29	40°05'13.032"N	104°40'56.181"W	2.46	
12162.00	89.720	1.440	7308.99	4727.32	4733.25	-784.64	40°05'13.971"N	104°40'56.147"W	0.89	
12256.00	90.370	1.220	7308.92	4821.31	4827.23	-782.45	40°05'14.899"N	104°40'56.119"W	0.73	
12350.00	91.260	1.420	7307.58	4915.28	4921.19	-780.29	40°05'15.828"N	104°40'56.091"W	0.97	
12445.00	89.320	0.630	7307.10	5010.27	5016.17	-778.59	40°05'16.767"N	104°40'56.069"W	2.20	
12540.00	89.280	0.830	7308.26	5105.26	5111.16	-777.38	40°05'17.705"N	104°40'56.054"W	0.21	
12634.00	89.440	1.140	7309.31	5199.25	5205.14	-775.76	40°05'18.634"N	104°40'56.033"W	0.37	
12725.00	89.620	0.510	7310.06	5290.25	5296.12	-774.45	40°05'19.533"N	104°40'56.016"W	0.72	LAST BHI MWD+IFR SURVEY
12783.00	89.620	0.510	7310.44	5348.25	5354.12	-773.94	40°05'20.106"N	104°40'56.010"W	0.00	PROJECTION TO BIT

HOLE & CASING SECTIONS - Ref Wellbore: BOYD 27C-5HZ AWB Ref Wellpath: BOYD 27C-5HZ 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	25.00	1103.00	1078.00	25.00	1102.99	0.00	0.00	-2.21	-0.44
9.625in Casing Surface	25.00	1103.00	1078.00	25.00	1102.99	0.00	0.00	-2.21	-0.44
8.75in Open Hole	1103.00	7740.00	6637.00	1102.99	7304.59	-2.21	-0.44	313.51	-804.39
7in Casing Intermediate	25.00	7724.00	7699.00	25.00	7304.31	0.00	0.00	297.59	-805.93
6.125in Open Hole	7740.00	12783.00	5043.00	7304.59	7310.44	313.51	-804.39	5354.12	-773.94



Actual Wellpath Report

BOYD 27C-5HZ AWP

Page 6 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#15 BOYD 27C-5HZ (324'FSL & 291'FEL, SEC.05)
Area	COLORADO	Well	BOYD 27C-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	BOYD 27C-5HZ AWB
Facility	SEC.05-T1N-R65W		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
BOYD PAD HARDLINES LINES (460' SETBACKS SEC.05)		7000.00	27.71	-2064.82	3227559.17	1270954.76	40°04'27.469"N	104°41'12.613"W	polygon
BOYD PAD HARDLINES LINES (460' SETBACKS SEC.32)		7000.00	27.71	-2064.82	3227559.17	1270954.76	40°04'27.469"N	104°41'12.613"W	polygon
BOYD PAD SECTION LINES (SEC.05)		7000.00	27.71	-2064.82	3227559.17	1270954.76	40°04'27.469"N	104°41'12.613"W	polygon
BOYD PAD SECTION LINES (SEC.32)		7000.00	27.71	-2064.82	3227559.17	1270954.76	40°04'27.469"N	104°41'12.613"W	polygon
BOYD 27N-5HZ BHL REV-3 (460'FSL & 1090'FEL, SEC.32)		7291.00	5379.49	-759.78	3228814.59	1276318.16	40°05'20.357"N	104°40'55.828"W	point
BOYD 27C-5HZ LANDBOX		7316.00	0.00	0.00	3229624.08	1270946.15	40°04'27.196"N	104°40'46.052"W	polygon
BOYD 27N-5HZ BHL ON PLAT REV-1 (460'FSL & 990'FEL, SEC.32)		7316.00	5379.49	-659.78	3228914.58	1276319.09	40°05'20.357"N	104°40'54.541"W	point
BOYD 27N-5HZ BHL REV-2 (460'FSL & 1090'FEL, SEC.32)		7316.00	5379.49	-759.78	3228814.59	1276318.16	40°05'20.357"N	104°40'55.828"W	point

WELLPATH COMPOSITION - Ref Wellbore: BOYD 27C-5HZ AWB Ref Wellpath: BOYD 27C-5HZ AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
25.00	1057.00	Generic gyro - continuous (Standard)	LIGHTNING WIRELINE <125-1057>	BOYD 27C-5HZ AWB
1057.00	7691.00	NaviTrak (MAGCORR,IFR)	BHI NAVITRAK MWD+IFR 8 3/4" HOLE <1164-7691>	BOYD 27C-5HZ AWB
7691.00	12725.00	NaviTrak (MAGCORR,IFR)	BHI NAVITRAK MWD+IFR 6 1/8" HOLE <7730-12725>	BOYD 27C-5HZ AWB
12725.00	12783.00	Blind Drilling (std)	Projection to bit	BOYD 27C-5HZ AWB



Actual Wellpath Report

BOYD 27C-5HZ AWP

Page 7 of 7



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#15 BOYD 27C-5HZ (324'FSL & 291'FEL, SEC.05)
Area	COLORADO	Well	BOYD 27C-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	BOYD 27C-5HZ AWB
Facility	SEC.05-T1N-R65W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
25.00	0.000	156.230	25.00	TIE ON
125.00	0.040	156.230	125.00	BEGIN GYRO SURVEYS
1057.00	0.370	163.740	1057.00	TIE ONTO GYRO SURVEYS
1164.00	0.550	188.370	1163.99	BEGIN BHI MWD+IFR SURVEYS
7724.00	88.798	5.503	7304.31	7" CASING POINT
12725.00	89.620	0.510	7310.06	LAST BHI MWD+IFR SURVEY
12783.00	89.620	0.510	7310.44	PROJECTION TO BIT