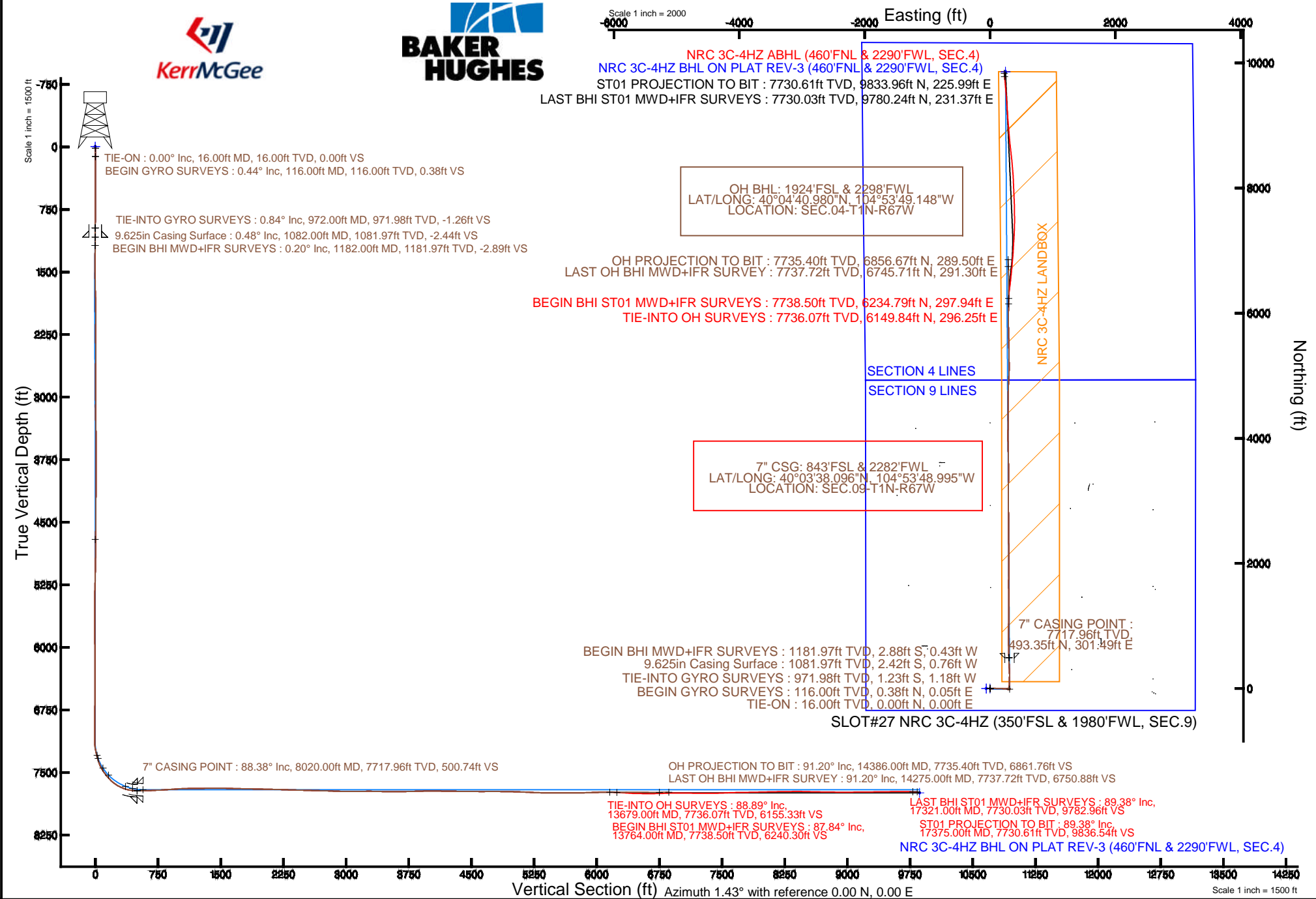


# KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#27 NRC 3C-4HZ (350'FSL & 1980'FWL, SEC.9)  
 Field: WELD COUNTY (KERR MCGEE) Well: NRC 3C-4HZX  
 Facility: SEC.09-T1N-R67W Wellbore: NRC 3C-4HZX PWB

Plot reference wellpath is NRC 3C-4HZX (REV-A.0) PWB

True vertical depths are referenced to XTREME 24 (16' RKB) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to XTREME 24 (16' RKB) (RKB)	North Reference: True north
XTREME 24 (16' RKB) (RKB) to Mean Sea Level: 5067 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#27 NRC 3C-4HZ (350'FSL & 1980'FWL, SEC.9)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot.	Created by: wilsjef02 on 4/4/2014





# Actual Wellpath Report

NRC 3C-4HZ AWP

Page 1 of 6



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#27 NRC 3C-4HZ (350'FSL & 1980'FWL, SEC.9)
Area	COLORADO	Well	NRC 3C-4HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 3C-4HZ AWB
Facility	SEC.09-T1N-R67W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 4.0.0
North Reference	True	User	Wilsjef02
Scale	0.999962	Report Generated	4/4/2014 at 10:00:21 AM
Convergence at slot	n/a	Database/Source file	WellArchitectDB/NRC_3C-4HZ_AWB.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-3266.93	-1589.64	3168499.10	1264994.07	40°03'33.221"N	104°53'52.872"W
Facility Reference Pt			3170066.25	1268271.69	40°04'05.506"N	104°53'32.428"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 24 (16' RKB) (RKB) to Facility Vertical Datum	5067.00ft
Horizontal Reference Pt	Slot	XTREME 24 (16' RKB) (RKB) to Mean Sea Level	5067.00ft
Vertical Reference Pt	XTREME 24 (16' RKB) (RKB)	XTREME 24 (16' RKB) (RKB) to Mud Line at Slot (SLOT#27 NRC 3C-4HZ (350'FSL & 1980'FWL, SEC.9))	5067.00ft
MD Reference Pt	XTREME 24 (16' RKB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	2.42°



# Actual Wellpath Report

NRC 3C-4HZ AWP

Page 2 of 6



## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#27 NRC 3C-4HZ (350'FSL & 1980'FWL, SEC.9)
Area	COLORADO	Well	NRC 3C-4HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 3C-4HZ AWB
Facility	SEC.09-T1N-R67W		

## WELLPATH DATA (135 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	7.110	0.00	0.00	0.00	0.00	40°03'33.221"N	104°53'52.872"W	0.00	
16.00	0.000	7.110	16.00	0.00	0.00	0.00	40°03'33.221"N	104°53'52.872"W	0.00	TIE-ON
116.00	0.440	7.110	116.00	0.38	0.38	0.05	40°03'33.225"N	104°53'52.871"W	0.44	BEGIN GYRO SURVEYS
216.00	0.680	154.990	216.00	0.24	0.22	0.35	40°03'33.223"N	104°53'52.868"W	1.08	
316.00	0.570	280.870	315.99	-0.21	-0.22	0.11	40°03'33.219"N	104°53'52.871"W	1.11	
416.00	0.350	53.400	415.99	0.05	0.06	-0.13	40°03'33.222"N	104°53'52.874"W	0.85	
516.00	0.880	242.620	515.99	-0.14	-0.11	-0.57	40°03'33.220"N	104°53'52.879"W	1.23	
616.00	0.450	348.980	615.99	-0.14	-0.08	-1.33	40°03'33.220"N	104°53'52.889"W	1.10	
716.00	0.640	171.630	715.98	-0.31	-0.25	-1.32	40°03'33.219"N	104°53'52.889"W	1.09	
816.00	0.500	285.130	815.98	-0.76	-0.69	-1.66	40°03'33.214"N	104°53'52.893"W	0.96	
916.00	0.610	108.360	915.98	-0.81	-0.74	-1.58	40°03'33.214"N	104°53'52.892"W	1.11	
972.00	0.840	163.860	971.98	-1.28	-1.23	-1.18	40°03'33.209"N	104°53'52.887"W	1.26	TIE-INTO GYRO SURVEYS
1182.00	0.200	118.550	1181.97	-2.90	-2.88	-0.43	40°03'33.192"N	104°53'52.878"W	0.34	BEGIN BHI MWD+IFR SURVEYS
1276.00	0.790	118.430	1275.96	-3.26	-3.27	0.28	40°03'33.189"N	104°53'52.868"W	0.63	
1371.00	1.570	82.060	1370.94	-3.31	-3.40	2.15	40°03'33.187"N	104°53'52.844"W	1.10	
1465.00	2.720	97.540	1464.88	-3.28	-3.52	5.63	40°03'33.186"N	104°53'52.800"W	1.36	
1559.00	4.320	89.080	1558.70	-3.27	-3.75	11.39	40°03'33.184"N	104°53'52.726"W	1.79	
1653.00	5.300	80.010	1652.37	-2.13	-2.94	19.20	40°03'33.192"N	104°53'52.625"W	1.32	
1748.00	7.240	75.840	1746.79	0.52	-0.72	29.33	40°03'33.214"N	104°53'52.495"W	2.10	
1844.00	7.190	84.960	1842.04	3.03	1.29	41.18	40°03'33.234"N	104°53'52.342"W	1.19	
1937.00	9.200	85.770	1934.08	4.64	2.35	54.39	40°03'33.244"N	104°53'52.172"W	2.16	
2030.00	9.740	91.780	2025.82	5.59	2.65	69.67	40°03'33.247"N	104°53'51.976"W	1.21	
2216.00	11.540	92.260	2208.61	5.82	1.43	103.99	40°03'33.235"N	104°53'51.535"W	0.97	
2402.00	9.600	88.760	2391.45	6.86	1.03	138.09	40°03'33.231"N	104°53'51.096"W	1.10	
2588.00	10.130	94.170	2574.70	7.35	0.18	169.91	40°03'33.223"N	104°53'50.687"W	0.57	
2775.00	10.340	91.040	2758.73	7.25	-1.32	203.09	40°03'33.208"N	104°53'50.260"W	0.32	
2959.00	9.970	90.920	2939.84	8.06	-1.88	235.53	40°03'33.202"N	104°53'49.843"W	0.20	
3050.00	9.510	90.580	3029.53	8.51	-2.08	250.92	40°03'33.200"N	104°53'49.645"W	0.51	
3142.00	8.790	92.780	3120.36	8.71	-2.50	265.54	40°03'33.196"N	104°53'49.457"W	0.87	
3234.00	8.290	92.440	3211.34	8.66	-3.12	279.19	40°03'33.190"N	104°53'49.281"W	0.55	
3326.00	7.750	82.150	3302.45	9.76	-2.56	291.96	40°03'33.196"N	104°53'49.117"W	1.66	
3418.00	6.770	82.300	3393.71	11.82	-0.98	303.48	40°03'33.211"N	104°53'48.969"W	1.07	
3510.00	1.790	83.750	3485.42	12.99	-0.10	310.29	40°03'33.220"N	104°53'48.881"W	5.41	
3602.00	1.460	80.860	3577.38	13.44	0.24	312.87	40°03'33.223"N	104°53'48.848"W	0.37	
3694.00	0.870	85.150	3669.36	13.77	0.49	314.72	40°03'33.226"N	104°53'48.824"W	0.65	
3878.00	0.890	100.210	3853.34	13.75	0.35	317.52	40°03'33.224"N	104°53'48.788"W	0.13	
4245.00	0.430	157.740	4220.32	12.11	-1.43	320.85	40°03'33.207"N	104°53'48.746"W	0.21	
4606.00	0.340	200.240	4581.31	9.86	-3.68	320.99	40°03'33.185"N	104°53'48.744"W	0.08	
4947.00	0.780	228.080	4922.30	7.27	-6.18	318.92	40°03'33.160"N	104°53'48.771"W	0.15	
5287.00	1.870	220.470	5262.20	1.29	-11.95	313.59	40°03'33.103"N	104°53'48.839"W	0.32	
5373.00	1.830	222.740	5348.16	-0.86	-14.03	311.75	40°03'33.082"N	104°53'48.863"W	0.10	
5458.00	0.210	225.660	5433.14	-2.01	-15.13	310.72	40°03'33.071"N	104°53'48.876"W	1.91	
5799.00	0.560	314.230	5774.13	-1.36	-14.41	309.08	40°03'33.079"N	104°53'48.897"W	0.17	
6140.00	0.640	276.330	6115.12	-0.11	-13.03	305.99	40°03'33.092"N	104°53'48.937"W	0.12	
6480.00	1.040	272.330	6455.08	0.01	-12.70	301.02	40°03'33.095"N	104°53'49.001"W	0.12	



# Actual Wellpath Report

NRC 3C-4HZ AWP

Page 3 of 6



## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#27 NRC 3C-4HZ (350'FSL & 1980'FWL, SEC.9)
Area	COLORADO	Well	NRC 3C-4HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 3C-4HZ AWB
Facility	SEC.09-T1N-R67W		

## WELLPATH DATA (135 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
6821.00	1.620	256.260	6795.99	-1.34	-13.72	293.24	40°03'33.085"N	104°53'49.101"W	0.20	
7077.00	0.460	97.670	7051.96	-2.44	-14.72	290.75	40°03'33.076"N	104°53'49.133"W	0.80	
7162.00	0.460	54.810	7136.96	-2.26	-14.56	291.36	40°03'33.077"N	104°53'49.125"W	0.40	
7205.00	5.650	18.350	7179.88	-0.12	-12.45	292.17	40°03'33.098"N	104°53'49.114"W	12.30	
7247.00	10.000	14.910	7221.48	5.43	-6.97	293.76	40°03'33.152"N	104°53'49.094"W	10.41	
7333.00	15.980	19.000	7305.24	24.09	11.46	299.54	40°03'33.334"N	104°53'49.020"W	7.03	
7418.00	20.390	10.340	7385.99	49.98	37.11	306.01	40°03'33.588"N	104°53'48.936"W	6.07	
7503.00	29.360	3.070	7463.05	85.57	72.56	309.80	40°03'33.938"N	104°53'48.888"W	11.13	
7546.00	36.240	358.800	7499.17	108.82	95.83	310.10	40°03'34.168"N	104°53'48.884"W	16.87	
7588.00	38.170	1.320	7532.63	134.19	121.22	310.14	40°03'34.419"N	104°53'48.883"W	5.85	
7631.00	42.590	0.040	7565.37	162.03	149.07	310.45	40°03'34.694"N	104°53'48.879"W	10.46	
7673.00	46.360	0.830	7595.34	191.43	178.48	310.68	40°03'34.985"N	104°53'48.876"W	9.07	
7716.00	51.480	0.190	7623.59	223.81	210.88	310.96	40°03'35.305"N	104°53'48.873"W	11.96	
7758.00	57.030	358.510	7648.11	257.84	244.96	310.56	40°03'35.642"N	104°53'48.878"W	13.61	
7801.00	62.580	357.780	7669.73	294.88	282.09	309.35	40°03'36.009"N	104°53'48.893"W	12.99	
7844.00	68.470	357.230	7687.54	333.86	321.17	307.64	40°03'36.395"N	104°53'48.915"W	13.75	
7886.00	74.340	357.290	7700.93	373.49	360.91	305.74	40°03'36.788"N	104°53'48.940"W	13.98	
7929.00	79.940	358.060	7710.49	415.25	402.78	304.04	40°03'37.201"N	104°53'48.962"W	13.14	
7976.00	86.550	358.450	7716.02	461.77	449.41	302.62	40°03'37.662"N	104°53'48.980"W	14.09	
8020.00†	88.382	358.591	7717.96	505.63	493.35	301.49	40°03'38.096"N	104°53'48.995"W	4.18	7" CASING POINT
8098.00	91.630	358.840	7717.95	583.45	571.32	299.74	40°03'38.867"N	104°53'49.017"W	4.18	
8183.00	92.220	358.770	7715.10	668.24	656.25	297.97	40°03'39.706"N	104°53'49.040"W	0.70	
8268.00	92.730	359.000	7711.43	753.00	741.16	296.32	40°03'40.545"N	104°53'49.061"W	0.66	
8353.00	93.220	359.270	7707.02	837.74	826.03	295.04	40°03'41.384"N	104°53'49.077"W	0.66	
8438.00	93.900	0.490	7701.74	922.49	910.87	294.86	40°03'42.222"N	104°53'49.080"W	1.64	
8524.00	93.380	1.600	7696.28	1008.29	996.68	296.42	40°03'43.070"N	104°53'49.060"W	1.42	
8609.00	91.310	0.690	7692.80	1093.20	1081.58	298.12	40°03'43.909"N	104°53'49.038"W	2.66	
8694.00	90.610	0.140	7691.38	1178.13	1166.57	298.73	40°03'44.749"N	104°53'49.030"W	1.05	
8779.00	90.550	359.920	7690.52	1263.05	1251.56	298.78	40°03'45.589"N	104°53'49.029"W	0.27	
8865.00	90.920	359.610	7689.41	1348.95	1337.55	298.43	40°03'46.439"N	104°53'49.034"W	0.56	
8950.00	90.000	0.020	7688.73	1433.86	1422.55	298.15	40°03'47.279"N	104°53'49.037"W	1.18	
9035.00	89.410	0.060	7689.17	1518.79	1507.55	298.21	40°03'48.119"N	104°53'49.037"W	0.70	
9120.00	88.050	359.210	7691.05	1603.66	1592.52	297.67	40°03'48.959"N	104°53'49.043"W	1.89	
9205.00	88.670	0.240	7693.48	1688.53	1677.49	297.26	40°03'49.798"N	104°53'49.049"W	1.41	
9291.00	88.920	0.290	7695.29	1774.45	1763.47	297.66	40°03'50.648"N	104°53'49.044"W	0.30	
9376.00	88.890	0.680	7696.92	1859.39	1848.45	298.38	40°03'51.488"N	104°53'49.034"W	0.46	
9461.00	88.820	0.540	7698.62	1944.33	1933.43	299.28	40°03'52.328"N	104°53'49.023"W	0.18	
9546.00	88.980	0.740	7700.25	2029.27	2018.40	300.23	40°03'53.167"N	104°53'49.010"W	0.30	
9631.00	88.700	359.700	7701.97	2114.19	2103.39	300.56	40°03'54.007"N	104°53'49.006"W	1.27	
9724.00	88.210	359.250	7704.48	2207.03	2196.35	299.71	40°03'54.926"N	104°53'49.017"W	0.72	
9817.00	88.460	358.900	7707.18	2299.84	2289.30	298.21	40°03'55.844"N	104°53'49.036"W	0.46	
9910.00	88.800	359.160	7709.40	2392.65	2382.26	296.63	40°03'56.763"N	104°53'49.057"W	0.46	
10003.00	87.890	359.480	7712.09	2485.47	2475.21	295.53	40°03'57.682"N	104°53'49.071"W	1.04	
10096.00	88.670	1.080	7714.88	2578.36	2568.16	295.98	40°03'58.600"N	104°53'49.065"W	1.91	
10190.00	88.820	359.500	7716.94	2672.27	2662.14	296.46	40°03'59.529"N	104°53'49.059"W	1.69	



# Actual Wellpath Report

NRC 3C-4HZ AWP

Page 4 of 6



## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#27 NRC 3C-4HZ (350'FSL & 1980'FWL, SEC.9)
Area	COLORADO	Well	NRC 3C-4HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 3C-4HZ AWB
Facility	SEC.09-T1N-R67W		

## WELLPATH DATA (135 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
10282.00	88.370	358.880	7719.19	2764.10	2754.10	295.16	40°04'00.438"N	104°53'49.076"W	0.83	
10375.00	87.480	359.580	7722.56	2856.89	2847.03	293.91	40°04'01.356"N	104°53'49.092"W	1.22	
10468.00	88.550	0.270	7725.78	2949.75	2939.97	293.79	40°04'02.274"N	104°53'49.093"W	1.37	
10561.00	90.210	359.520	7726.79	3042.65	3032.96	293.62	40°04'03.193"N	104°53'49.095"W	1.96	
10655.00	90.640	359.980	7726.09	3136.54	3126.96	293.21	40°04'04.122"N	104°53'49.101"W	0.67	
10747.00	90.670	0.260	7725.04	3228.46	3218.95	293.40	40°04'05.031"N	104°53'49.098"W	0.31	
10839.00	89.160	1.170	7725.18	3320.42	3310.94	294.55	40°04'05.940"N	104°53'49.083"W	1.92	
10930.00	88.390	359.740	7727.12	3411.34	3401.91	295.27	40°04'06.839"N	104°53'49.074"W	1.78	
11022.00	89.810	359.860	7728.57	3503.23	3493.90	294.95	40°04'07.748"N	104°53'49.078"W	1.55	
11114.00	90.210	359.470	7728.55	3595.12	3585.90	294.41	40°04'08.658"N	104°53'49.085"W	0.61	
11206.00	90.580	358.660	7727.92	3686.96	3677.88	292.91	40°04'09.567"N	104°53'49.104"W	0.97	
11298.00	91.530	359.140	7726.22	3778.77	3769.85	291.15	40°04'10.475"N	104°53'49.127"W	1.16	
11390.00	91.410	358.850	7723.86	3870.58	3861.80	289.53	40°04'11.384"N	104°53'49.148"W	0.34	
11482.00	91.140	358.640	7721.82	3962.37	3953.76	287.52	40°04'12.293"N	104°53'49.174"W	0.37	
11574.00	89.620	0.270	7721.21	4054.24	4045.74	286.64	40°04'13.202"N	104°53'49.185"W	2.42	
11666.00	88.580	0.900	7722.65	4146.18	4137.73	287.58	40°04'14.111"N	104°53'49.173"W	1.32	
11758.00	89.720	0.410	7724.02	4238.12	4229.71	288.63	40°04'15.020"N	104°53'49.159"W	1.35	
11849.00	89.070	359.370	7724.98	4329.02	4320.70	288.46	40°04'15.919"N	104°53'49.162"W	1.35	
11941.00	89.530	0.820	7726.10	4420.94	4412.69	288.61	40°04'16.828"N	104°53'49.160"W	1.65	
12033.00	89.500	0.390	7726.88	4512.89	4504.68	289.58	40°04'17.737"N	104°53'49.147"W	0.47	
12125.00	89.690	359.310	7727.53	4604.79	4596.68	289.34	40°04'18.646"N	104°53'49.150"W	1.19	
12217.00	90.730	0.550	7727.19	4696.70	4688.68	289.23	40°04'19.555"N	104°53'49.152"W	1.76	
12309.00	89.560	2.150	7726.96	4788.68	4780.65	291.40	40°04'20.464"N	104°53'49.124"W	2.15	
12401.00	89.190	2.480	7727.96	4880.68	4872.56	295.11	40°04'21.373"N	104°53'49.076"W	0.54	
12486.00	89.130	2.590	7729.21	4965.67	4957.47	298.87	40°04'22.212"N	104°53'49.027"W	0.15	
12571.00	88.330	2.580	7731.09	5050.65	5042.36	302.71	40°04'23.051"N	104°53'48.978"W	0.94	
12656.00	87.520	0.330	7734.17	5135.57	5127.27	304.86	40°04'23.890"N	104°53'48.950"W	2.81	
12741.00	86.790	358.920	7738.39	5220.36	5212.17	304.31	40°04'24.729"N	104°53'48.958"W	1.87	
12827.00	88.510	359.440	7741.92	5306.15	5298.08	303.08	40°04'25.578"N	104°53'48.973"W	2.09	
12912.00	90.210	358.910	7742.87	5391.01	5383.06	301.85	40°04'26.418"N	104°53'48.989"W	2.09	
12997.00	89.750	358.970	7742.90	5475.85	5468.05	300.28	40°04'27.257"N	104°53'49.009"W	0.55	
13082.00	89.350	358.790	7743.56	5560.68	5553.03	298.62	40°04'28.097"N	104°53'49.031"W	0.52	
13253.00	90.240	358.900	7744.17	5731.35	5723.99	295.17	40°04'29.787"N	104°53'49.075"W	0.52	
13423.00	91.630	359.750	7741.40	5901.07	5893.95	293.17	40°04'31.466"N	104°53'49.101"W	0.96	
13508.00	91.840	0.680	7738.83	5985.97	5978.91	293.49	40°04'32.306"N	104°53'49.097"W	1.12	
13593.00	91.490	0.960	7736.36	6070.90	6063.87	294.71	40°04'33.145"N	104°53'49.081"W	0.53	
13679.00	88.890	1.100	7736.07	6156.87	6149.84	296.25	40°04'33.995"N	104°53'49.061"W	3.03	
13764.00	88.950	0.210	7737.67	6241.81	6234.82	297.22	40°04'34.835"N	104°53'49.049"W	1.05	
13849.00	90.980	359.710	7737.73	6326.73	6319.82	297.16	40°04'35.675"N	104°53'49.049"W	2.46	
13935.00	91.350	359.540	7735.98	6412.61	6405.80	296.60	40°04'36.524"N	104°53'49.057"W	0.47	
14020.00	90.030	359.130	7734.95	6497.48	6490.78	295.61	40°04'37.364"N	104°53'49.069"W	1.63	
14105.00	88.270	359.470	7736.22	6582.34	6575.77	294.58	40°04'38.204"N	104°53'49.083"W	2.11	
14190.00	89.250	358.520	7738.05	6667.17	6660.73	293.09	40°04'39.044"N	104°53'49.102"W	1.61	
14275.00	91.200	359.070	7737.72	6751.99	6745.71	291.30	40°04'39.883"N	104°53'49.125"W	2.38	LAST OH BHI MWD+IFR SURVEY
14386.00	91.200	359.070	7735.40	6862.78	6856.67	289.50	40°04'40.980"N	104°53'49.148"W	0.00	OH PROJECTION TO BIT



# Actual Wellpath Report

NRC 3C-4HZ AWP

Page 5 of 6



## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#27 NRC 3C-4HZ (350'FSL & 1980'FWL, SEC.9)
Area	COLORADO	Well	NRC 3C-4HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 3C-4HZ AWB
Facility	SEC.09-T1N-R67W		

## HOLE & CASING SECTIONS - Ref Wellbore: NRC 3C-4HZ AWB Ref Wellpath: NRC 3C-4HZ 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	1082.00	1066.00	16.00	1081.97	0.00	0.00	-2.42	-0.76
9.625in Casing Surface	16.00	1082.00	1066.00	16.00	1081.97	0.00	0.00	-2.42	-0.76
8.75in Open Hole	1082.00	8030.00	6948.00	1081.97	7718.21	-2.42	-0.76	503.34	301.25
7in Casing Intermediate	16.00	8020.00	8004.00	16.00	7717.96	0.00	0.00	493.35	301.49
6.125in Open Hole	8020.00	14275.00	6255.00	7717.96	7737.72	493.35	301.49	6745.71	291.30

## TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
NRC SECTION 4 LINES		-4.00	0.00	-59.87	3168439.23	1264993.66	40°03'33.221"N	104°53'53.642"W	polygon
NRC SECTION 9 LINES		-4.00	0.00	-59.87	3168439.23	1264993.66	40°03'33.221"N	104°53'53.642"W	polygon
NRC 3C-4HZ BHL ON PLAT REV-1 (460'FNL & 2290'FWL, SEC.4)		7700.00	9859.52	246.79	3168678.95	1274854.65	40°05'10.655"N	104°53'49.697"W	point
NRC 3C-4HZ LANDBOX		7700.00	0.00	0.00	3168499.10	1264994.07	40°03'33.221"N	104°53'52.872"W	polygon
NRC 3C-4HZ BHL ON PLAT REV-2 (460'FNL & 2290'FWL, SEC.4)		7706.00	9859.52	246.79	3168678.94	1274854.65	40°05'10.655"N	104°53'49.697"W	point

## WELLPATH COMPOSITION - Ref Wellbore: NRC 3C-4HZ AWB Ref Wellpath: NRC 3C-4HZ AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	972.00	Generic gyro - continuous (Standard)	MS ENERGY GYRODATA SURVEYS <116-972>	NRC 3C-4HZ AWB
972.00	7976.00	NaviTrak (MAGCORR,IFR)	BHI MWD+IFR SURVEYS 8 3/4" HOLE <1182-7976>	NRC 3C-4HZ AWB
7976.00	14275.00	NaviTrak (MAGCORR,IFR)	BHI MWD+IFR SURVEYS 6 1/8" HOLE <8098-14275>	NRC 3C-4HZ AWB
14275.00	14386.00	Blind Drilling (std)	Projection to bit	NRC 3C-4HZ AWB



# Actual Wellpath Report

NRC 3C-4HZ AWP

Page 6 of 6



## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#27 NRC 3C-4HZ (350'FSL & 1980'FWL, SEC.9)
Area	COLORADO	Well	NRC 3C-4HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 3C-4HZ AWB
Facility	SEC.09-T1N-R67W		

## WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
16.00	0.000	7.110	16.00	TIE-ON
116.00	0.440	7.110	116.00	BEGIN GYRO SURVEYS
972.00	0.840	163.860	971.98	TIE-INTO GYRO SURVEYS
1182.00	0.200	118.550	1181.97	BEGIN BHI MWD+IFR SURVEYS
8020.00	88.382	358.591	7717.96	7" CASING POINT
14275.00	91.200	359.070	7737.72	LAST OH BHI MWD+IFR SURVEY
14386.00	91.200	359.070	7735.40	OH PROJECTION TO BIT



# Actual Wellpath Report

NRC 3C-4HZX AWP

Page 1 of 4



## REFERENCE WELLPATH IDENTIFICATION

Operator	<b>KERR-MCGEE OIL &amp; GAS ONSHORE LP</b>	Slot	<b>SLOT#27 NRC 3C-4HZ (350'FSL &amp; 1980'FWL, SEC.9)</b>
Area	<b>COLORADO</b>	Well	<b>NRC 3C-4HZX</b>
Field	<b>WELD COUNTY (KERR MCGEE)</b>	Wellbore	<b>NRC 3C-4HZX AWB</b>
Facility	<b>SEC.09-T1N-R67W</b>	Sidetrack from	<b>NRC 3C-4HZ AWB at 13679.00 MD</b>

## REPORT SETUP INFORMATION

Projection System	<b>NAD83 / Lambert Colorado SP, Northern Zone (501), US feet</b>	Software System	<b>WellArchitect® 4.0.0</b>
North Reference	<b>True</b>	User	<b>Wilsjef02</b>
Scale	<b>0.999962</b>	Report Generated	<b>4/4/2014 at 11:20:38 AM</b>
Convergence at slot	<b>n/a</b>	Database/Source file	<b>WellArchitectDB/NRC_3C-4HZX_AWB.xml</b>

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-3266.93	-1589.64	3168499.10	1264994.07	<b>40°03'33.221"N</b>	<b>104°53'52.872"W</b>
Facility Reference Pt			3170066.25	1268271.69	<b>40°04'05.506"N</b>	<b>104°53'32.428"W</b>
Field Reference Pt			<b>3197771.84</b>	<b>1268891.29</b>	40°04'09.600"N	104°47'36.000"W

## WELLPATH DATUM

Calculation method	<b>Minimum curvature</b>	XTREME 24 (16' RKB) (RKB) to Facility Vertical Datum	<b>5067.00ft</b>
Horizontal Reference Pt	<b>Slot</b>	XTREME 24 (16' RKB) (RKB) to Mean Sea Level	<b>5067.00ft</b>
Vertical Reference Pt	<b>XTREME 24 (16' RKB) (RKB)</b>	XTREME 24 (16' RKB) (RKB) to Mud Line at Slot (SLOT#27 NRC 3C-4HZ (350'FSL & 1980'FWL, SEC.9))	<b>5067.00ft</b>
MD Reference Pt	<b>XTREME 24 (16' RKB) (RKB)</b>	Section Origin	<b>N 0.00, E 0.00 ft</b>
Field Vertical Reference	<b>Mean Sea Level</b>	Section Azimuth	<b>1.43°</b>



# Actual Wellpath Report

NRC 3C-4HZX AWP

Page 2 of 4



## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#27 NRC 3C-4HZ (350'FSL & 1980'FWL, SEC.9)
Area	COLORADO	Well	NRC 3C-4HZX
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 3C-4HZX AWB
Facility	SEC.09-T1N-R67W	Sidetrack from	NRC 3C-4HZ AWB at 13679.00 MD

## WELLPATH DATA (31 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
13679.00	88.890	1.100	7736.07	6155.33	6149.84	296.25	40°04'33.995"N	104°53'49.061"W	3.03	TIE-INTO OH SURVEYS
13764.00	87.840	1.180	7738.50	6240.30	6234.79	297.94	40°04'34.835"N	104°53'49.039"W	1.24	BEGIN BHI ST01 MWD+IFR SURVEYS
13849.00	85.120	6.190	7743.72	6325.03	6319.42	303.39	40°04'35.671"N	104°53'48.969"W	6.70	
13935.00	87.390	7.710	7749.34	6410.45	6404.60	313.77	40°04'36.513"N	104°53'48.836"W	3.17	
14020.00	89.320	5.890	7751.78	6495.03	6488.96	323.83	40°04'37.346"N	104°53'48.706"W	3.12	
14105.00	89.290	6.200	7752.81	6579.75	6573.48	332.78	40°04'38.181"N	104°53'48.591"W	0.37	
14190.00	90.550	5.380	7752.93	6664.50	6658.04	341.36	40°04'39.017"N	104°53'48.481"W	1.77	
14361.00	92.590	5.310	7748.24	6835.03	6828.23	357.28	40°04'40.699"N	104°53'48.276"W	1.19	
14446.00	90.180	4.350	7746.19	6919.85	6912.89	364.43	40°04'41.536"N	104°53'48.184"W	3.05	
14531.00	89.690	3.120	7746.28	7004.78	6997.71	369.97	40°04'42.374"N	104°53'48.113"W	1.56	
14701.00	89.200	3.840	7747.93	7174.66	7167.39	380.29	40°04'44.051"N	104°53'47.980"W	0.51	
14786.00	89.780	2.390	7748.69	7259.62	7252.26	384.91	40°04'44.889"N	104°53'47.920"W	1.84	
14872.00	89.500	1.920	7749.23	7345.61	7338.19	388.14	40°04'45.739"N	104°53'47.879"W	0.64	
14957.00	91.600	1.430	7748.41	7430.60	7423.15	390.62	40°04'46.578"N	104°53'47.847"W	2.54	
15042.00	92.830	359.370	7745.13	7515.51	7508.08	391.22	40°04'47.417"N	104°53'47.839"W	2.82	
15127.00	92.050	359.270	7741.51	7600.38	7592.99	390.21	40°04'48.257"N	104°53'47.852"W	0.93	
15213.00	90.830	359.130	7739.35	7686.29	7678.96	389.01	40°04'49.106"N	104°53'47.868"W	1.43	
15298.00	90.770	358.160	7738.16	7771.18	7763.92	387.00	40°04'49.946"N	104°53'47.893"W	1.14	
15383.00	91.160	357.420	7736.73	7855.99	7848.85	383.72	40°04'50.785"N	104°53'47.935"W	0.98	
15468.00	91.440	357.340	7734.80	7940.76	7933.74	379.84	40°04'51.624"N	104°53'47.985"W	0.34	
15639.00	91.130	357.840	7730.96	8111.33	8104.54	372.65	40°04'53.312"N	104°53'48.078"W	0.34	
15724.00	90.980	356.440	7729.40	8196.07	8189.42	368.41	40°04'54.151"N	104°53'48.132"W	1.66	
15894.00	90.490	354.940	7727.22	8365.20	8358.92	355.63	40°04'55.826"N	104°53'48.297"W	0.93	
16064.00	88.270	353.170	7729.06	8533.77	8527.98	338.03	40°04'57.496"N	104°53'48.523"W	1.67	
16234.00	89.040	354.230	7733.05	8702.17	8696.90	319.38	40°04'59.166"N	104°53'48.763"W	0.77	
16404.00	89.620	355.260	7735.04	8871.00	8866.17	303.81	40°05'00.838"N	104°53'48.963"W	0.70	
16659.00	90.610	355.740	7734.52	9124.63	9120.38	283.81	40°05'03.350"N	104°53'49.221"W	0.43	
16829.00	90.640	356.150	7732.67	9293.84	9289.94	271.78	40°05'05.026"N	104°53'49.375"W	0.24	
16999.00	90.800	355.650	7730.53	9463.03	9459.50	259.63	40°05'06.702"N	104°53'49.532"W	0.31	
17321.00	89.380	354.280	7730.03	9782.96	9780.24	231.37	40°05'09.871"N	104°53'49.895"W	0.61	LAST BHI ST01 MWD+IFR SURVEYS
17375.00	89.380	354.280	7730.61	9836.54	9833.96	225.99	40°05'10.402"N	104°53'49.964"W	0.00	ST01 PROJECTION TO BIT



# Actual Wellpath Report

NRC 3C-4HZX AWP

Page 3 of 4



## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#27 NRC 3C-4HZ (350'FSL & 1980'FWL, SEC.9)
Area	COLORADO	Well	NRC 3C-4HZX
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 3C-4HZX AWB
Facility	SEC.09-T1N-R67W	Sidetrack from	NRC 3C-4HZ AWB at 13679.00 MD

## HOLE & CASING SECTIONS - Ref Wellbore: NRC 3C-4HZX AWB Ref Wellpath: NRC 3C-4HZX 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	1082.00	1066.00	16.00	1081.97	0.00	0.00	-2.42	-0.76
9.625in Casing Surface	16.00	1082.00	1066.00	16.00	1081.97	0.00	0.00	-2.42	-0.76
8.75in Open Hole	1082.00	8030.00	6948.00	1081.97	7718.21	-2.42	-0.76	503.34	301.25
7in Casing Intermediate	16.00	8020.00	8004.00	16.00	7717.96	0.00	0.00	493.35	301.49
6.125in Open Hole	8020.00	13679.00	5659.00	7717.96	7736.07	493.35	301.49	6149.84	296.25
6.125in Open Hole	13679.00	17375.00	3696.00	7736.07	7730.61	6149.84	296.25	9833.96	225.99

## TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
NRC SECTION 4 LINES		-4.00	0.00	-59.87	3168439.23	1264993.66	40°03'33.221"N	104°53'53.642"W	polygon
NRC SECTION 9 LINES		-4.00	0.00	-59.87	3168439.23	1264993.66	40°03'33.221"N	104°53'53.642"W	polygon
NRC 3C-4HZ BHL ON PLAT REV-1 (460'FNL & 2290'FWL, SEC.4)		7700.00	9859.52	246.79	3168678.95	1274854.65	40°05'10.655"N	104°53'49.697"W	point
NRC 3C-4HZ LANDBOX		7700.00	0.00	0.00	3168499.10	1264994.07	40°03'33.221"N	104°53'52.872"W	polygon
NRC 3C-4HZ BHL ON PLAT REV-2 (460'FNL & 2290'FWL, SEC.4)		7706.00	9859.52	246.79	3168678.94	1274854.65	40°05'10.655"N	104°53'49.697"W	point
NRC 3C-4HZ BHL ON PLAT REV-3 (460'FNL & 2290'FWL, SEC.4)		7744.00	9859.52	246.79	3168678.94	1274854.65	40°05'10.655"N	104°53'49.697"W	point

## WELLPATH COMPOSITION - Ref Wellbore: NRC 3C-4HZX AWB Ref Wellpath: NRC 3C-4HZX AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	972.00	Generic gyro - continuous (Standard)	MS ENERGY GYRODATA SURVEYS <116-972>	NRC 3C-4HZ AWB
972.00	7976.00	NaviTrak (MAGCORR,IFR)	BHI MWD+IFR SURVEYS 8 3/4" HOLE <1182-7976>	NRC 3C-4HZ AWB
7976.00	13679.00	NaviTrak (MAGCORR,IFR)	BHI MWD+IFR SURVEYS 6 1/8" HOLE <8098-14275>	NRC 3C-4HZ AWB
13679.00	17321.00	NaviTrak (MAGCORR,IFR)	BHI ST01 MWD+IFR SURVEYS 6 1/8" HOLE <13764-17321>	NRC 3C-4HZX AWB
17321.00	17375.00	Blind Drilling (std)	Projection to bit	NRC 3C-4HZX AWB



# Actual Wellpath Report

NRC 3C-4HZX AWP  
Page 4 of 4



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#27 NRC 3C-4HZ (350'FSL & 1980'FWL, SEC.9)
Area	COLORADO	Well	NRC 3C-4HZX
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 3C-4HZX AWB
Facility	SEC.09-T1N-R67W	Sidetrack from	NRC 3C-4HZ AWB at 13679.00 MD

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
16.00	0.000	7.110	16.00	TIE-ON
116.00	0.440	7.110	116.00	BEGIN GYRO SURVEYS
972.00	0.840	163.860	971.98	TIE-INTO GYRO SURVEYS
1182.00	0.200	118.550	1181.97	BEGIN BHI MWD+IFR SURVEYS
8020.00	88.382	358.591	7717.96	7" CASING POINT
13679.00	88.890	1.100	7736.07	TIE-INTO OH SURVEYS
13764.00	87.840	1.180	7738.50	BEGIN BHI ST01 MWD+IFR SURVEYS
17321.00	89.380	354.280	7730.03	LAST BHI ST01 MWD+IFR SURVEYS
17375.00	89.380	354.280	7730.61	ST01 PROJECTION TO BIT