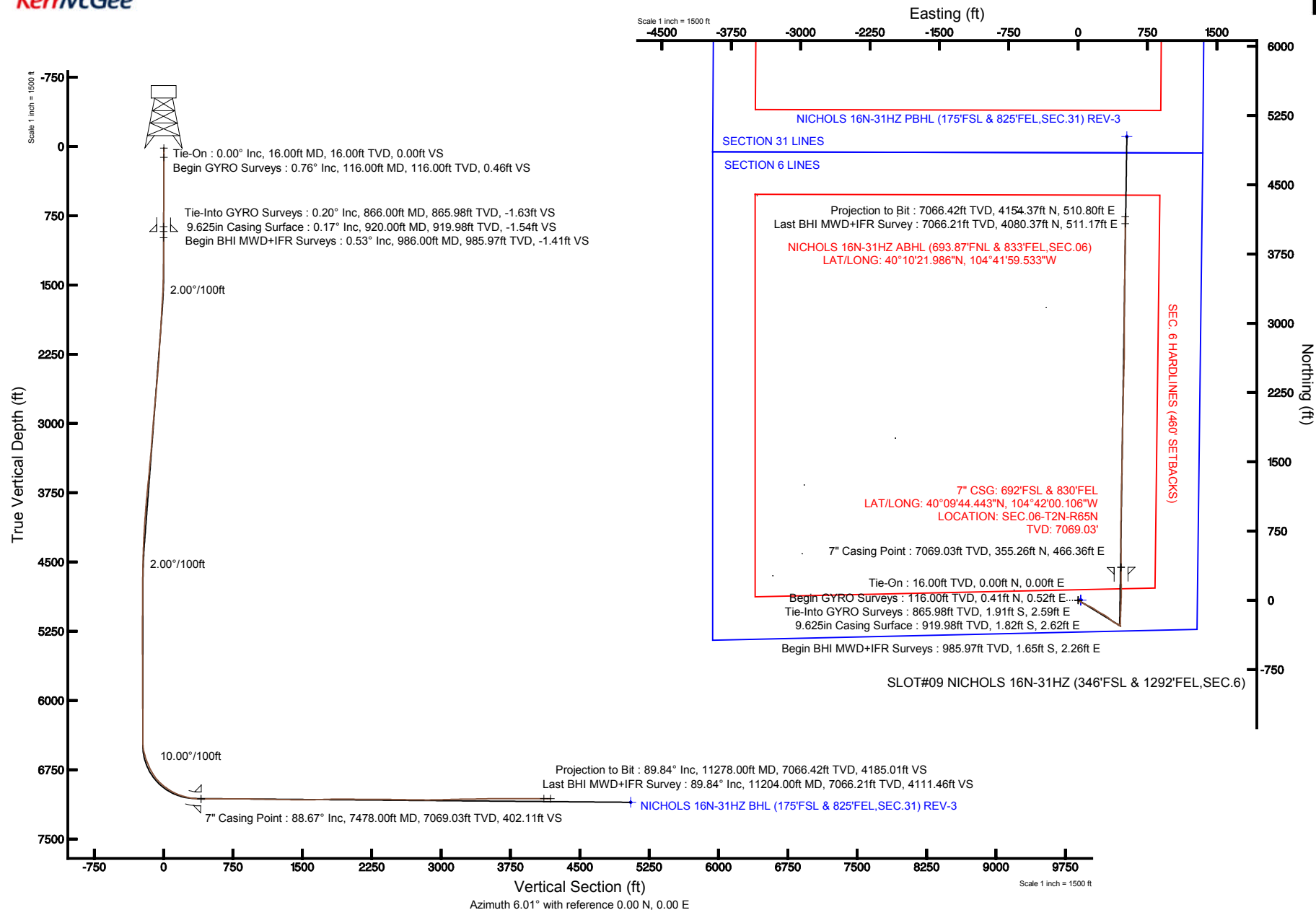


# KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#09 NICHOLS 16N-31HZ (346°FSL & 1292°FEL,SEC.6)  
 Field: WELD COUNTY (KERR MCGEE) Well: NICHOLS 16N-31HZ  
 Facility: SEC.06-T2N-R65W Wellbore: NICHOLS 16N-31HZ PWB

Plot reference wellpath is NICHOLS 16N-31HZ (REV-B.0) PWP

True vertical depths are referenced to XTREME 24 (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to XTREME 24 (RKB)	North Reference: True north
XTREME 24 (RKB) to Mean Sea Level: 4941 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#09 NICHOLS 16N-31HZ (346°FSL & 1292°FEL,SEC.6)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: wilself02 on 2/13/2013





# Actual Wellpath Report

NICHOLS 16N-31HZ AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 NICHOLS 16N-31HZ (346'FSL & 1292'FEL,SEC.6)
Area	COLORADO	Well	NICHOLS 16N-31HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 16N-31HZ AWB
Facility	SEC.06-T2N-R65W		

## 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	0.999958	Report Generated	2/13/2013 at 09:14:59
Convergence at slot	0.52° East	Database/Source file	WellArchitectDB/NICHOLS_16N-31HZ_AWB.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-4205.08	593.65	3223114.94	1302634.55	40°09'40.932"N	104°42'06.113"W
Facility Reference Pt			3222483.59	1306833.95	40°10'22.487"N	104°42'13.759"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 (RKB) to Facility Vertical Datum	4941.00ft
Horizontal Reference Pt	Slot	XTREME 24 (RKB) to Mean Sea Level	4941.00ft
Vertical Reference Pt	XTREME 24 (RKB)	XTREME 24 (RKB) to Mud Line at Slot (SLOT#09 NICHOLS 16N-31HZ (346'FSL & 1292'FEL,SEC.6))	4941.00ft
MD Reference Pt	XTREME 24 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	6.01°



# Actual Wellpath Report

NICHOLS 16N-31HZ AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 NICHOLS 16N-31HZ (346'FSL & 1292'FEL,SEC.6)
Area	COLORADO	Well	NICHOLS 16N-31HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 16N-31HZ AWB
Facility	SEC.06-T2N-R65W		

WELLPATH DATA (145 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	52.270	0.00	0.00	0.00	0.00	40°09'40.932"N	104°42'06.113"W	0.00	
16.00	0.000	52.270	16.00	0.00	0.00	0.00	40°09'40.932"N	104°42'06.113"W	0.00	Tie-On
116.00	0.760	52.270	116.00	0.46	0.41	0.52	40°09'40.936"N	104°42'06.106"W	0.76	Begin GYRO Surveys
216.00	0.730	100.270	215.99	0.87	0.70	1.68	40°09'40.939"N	104°42'06.091"W	0.61	
316.00	0.210	168.610	315.99	0.65	0.40	2.34	40°09'40.936"N	104°42'06.083"W	0.68	
416.00	0.300	220.300	415.99	0.26	0.03	2.21	40°09'40.932"N	104°42'06.085"W	0.24	
516.00	0.320	193.670	515.98	-0.24	-0.45	1.97	40°09'40.928"N	104°42'06.088"W	0.14	
616.00	0.240	295.170	615.98	-0.44	-0.63	1.71	40°09'40.926"N	104°42'06.091"W	0.44	
716.00	0.710	157.880	715.98	-0.92	-1.11	1.76	40°09'40.921"N	104°42'06.090"W	0.90	
816.00	0.440	116.510	815.98	-1.60	-1.86	2.34	40°09'40.914"N	104°42'06.083"W	0.48	
866.00	0.200	68.000	865.98	-1.63	-1.91	2.59	40°09'40.913"N	104°42'06.080"W	0.68	Tie-Into GYRO Surveys
986.00	0.530	288.820	985.97	-1.41	-1.65	2.26	40°09'40.916"N	104°42'06.084"W	0.58	Begin BHI MWD+IFR Surveys
1079.00	0.620	182.690	1078.97	-1.82	-2.02	1.83	40°09'40.912"N	104°42'06.089"W	0.99	
1173.00	1.350	116.840	1172.96	-2.72	-3.03	2.79	40°09'40.902"N	104°42'06.077"W	1.31	
1266.00	2.110	103.960	1265.92	-3.34	-3.93	5.43	40°09'40.893"N	104°42'06.043"W	0.91	
1360.00	2.990	112.910	1359.82	-4.30	-5.30	9.37	40°09'40.880"N	104°42'05.992"W	1.02	
1453.00	4.360	110.290	1452.63	-5.87	-7.48	14.92	40°09'40.858"N	104°42'05.921"W	1.48	
1539.00	5.040	127.230	1538.34	-8.64	-10.89	20.99	40°09'40.824"N	104°42'05.843"W	1.79	
1624.00	5.960	131.300	1622.95	-13.12	-16.07	27.28	40°09'40.773"N	104°42'05.762"W	1.17	
1709.00	7.070	127.560	1707.40	-18.41	-22.17	34.74	40°09'40.713"N	104°42'05.666"W	1.40	
1794.00	7.570	119.740	1791.71	-23.40	-28.13	43.75	40°09'40.654"N	104°42'05.549"W	1.31	
1880.00	8.450	118.940	1876.87	-28.14	-34.00	54.20	40°09'40.596"N	104°42'05.415"W	1.03	
1965.00	9.710	112.680	1960.81	-32.64	-39.79	66.28	40°09'40.539"N	104°42'05.259"W	1.88	
2050.00	10.900	118.140	2044.44	-37.72	-46.34	79.98	40°09'40.474"N	104°42'05.083"W	1.81	
2135.00	10.640	118.430	2127.94	-43.74	-53.87	93.97	40°09'40.400"N	104°42'04.903"W	0.31	
2221.00	10.600	111.940	2212.47	-48.94	-60.60	108.29	40°09'40.333"N	104°42'04.718"W	1.39	
2306.00	10.880	115.040	2295.98	-53.70	-66.92	122.81	40°09'40.271"N	104°42'04.531"W	0.76	
2391.00	11.840	117.100	2379.31	-59.46	-74.29	137.84	40°09'40.198"N	104°42'04.338"W	1.23	
2477.00	11.730	120.080	2463.50	-66.20	-82.69	153.26	40°09'40.115"N	104°42'04.139"W	0.72	
2562.00	11.450	122.920	2546.77	-73.54	-91.61	167.82	40°09'40.027"N	104°42'03.952"W	0.75	
2647.00	10.720	124.450	2630.18	-81.13	-100.66	181.42	40°09'39.937"N	104°42'03.776"W	0.93	
2732.00	11.790	122.490	2713.55	-88.77	-109.80	195.26	40°09'39.847"N	104°42'03.598"W	1.34	
2817.00	10.870	124.740	2796.89	-96.49	-119.03	209.17	40°09'39.756"N	104°42'03.419"W	1.20	
2903.00	11.440	121.410	2881.27	-104.05	-128.10	223.12	40°09'39.666"N	104°42'03.239"W	1.00	
2988.00	12.160	119.620	2964.47	-111.25	-136.91	238.09	40°09'39.579"N	104°42'03.046"W	0.95	
3073.00	11.660	119.240	3047.64	-118.23	-145.54	253.37	40°09'39.494"N	104°42'02.850"W	0.60	
3158.00	11.620	116.400	3130.89	-124.60	-153.54	268.53	40°09'39.415"N	104°42'02.654"W	0.68	
3244.00	11.210	119.860	3215.19	-131.00	-161.55	283.54	40°09'39.336"N	104°42'02.461"W	0.93	
3329.00	9.720	123.460	3298.78	-137.65	-169.62	296.69	40°09'39.256"N	104°42'02.292"W	1.91	
3414.00	11.120	128.800	3382.38	-145.40	-178.71	309.07	40°09'39.166"N	104°42'02.132"W	2.00	
3499.00	10.280	122.780	3465.90	-153.25	-187.96	321.83	40°09'39.075"N	104°42'01.968"W	1.64	
3584.00	9.540	129.880	3549.63	-160.60	-196.58	333.62	40°09'38.989"N	104°42'01.816"W	1.68	
3670.00	9.700	132.980	3634.43	-168.93	-206.09	344.38	40°09'38.895"N	104°42'01.677"W	0.63	
3755.00	9.410	131.090	3718.25	-177.23	-215.54	354.86	40°09'38.802"N	104°42'01.542"W	0.50	
3840.00	10.000	127.560	3802.03	-185.08	-224.60	365.95	40°09'38.712"N	104°42'01.400"W	0.99	



# Actual Wellpath Report

NICHOLS 16N-31HZ AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 NICHOLS 16N-31HZ (346'FSL & 1292'FEL,SEC.6)
Area	COLORADO	Well	NICHOLS 16N-31HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 16N-31HZ AWB
Facility	SEC.06-T2N-R65W		

## WELLPATH DATA (145 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3926.00	10.180	125.170	3886.70	-192.69	-233.53	378.08	40°09'38.624"N	104°42'01.243"W	0.53	
4011.00	9.540	118.110	3970.45	-199.01	-241.18	390.43	40°09'38.549"N	104°42'01.084"W	1.61	
4096.00	10.820	116.810	4054.11	-204.49	-248.10	403.77	40°09'38.480"N	104°42'00.913"W	1.53	
4181.00	10.340	118.850	4137.66	-210.29	-255.38	417.57	40°09'38.408"N	104°42'00.735"W	0.72	
4267.00	8.670	116.450	4222.48	-215.55	-261.99	430.13	40°09'38.343"N	104°42'00.573"W	2.00	
4352.00	6.080	119.440	4306.77	-219.57	-267.05	439.79	40°09'38.293"N	104°42'00.449"W	3.08	
4437.00	4.290	117.270	4391.42	-222.52	-270.72	446.54	40°09'38.257"N	104°42'00.362"W	2.12	
4522.00	3.400	117.660	4476.23	-224.60	-273.35	451.60	40°09'38.231"N	104°42'00.296"W	1.05	
4607.00	2.050	123.290	4561.13	-226.23	-275.36	455.10	40°09'38.211"N	104°42'00.251"W	1.62	
4693.00	1.600	139.680	4647.08	-227.76	-277.11	457.16	40°09'38.193"N	104°42'00.225"W	0.80	
4778.00	0.470	176.760	4732.07	-228.93	-278.37	457.95	40°09'38.181"N	104°42'00.215"W	1.48	
4863.00	0.400	96.840	4817.07	-229.27	-278.75	458.27	40°09'38.177"N	104°42'00.211"W	0.66	
4948.00	0.550	168.990	4902.07	-229.67	-279.19	458.64	40°09'38.173"N	104°42'00.206"W	0.67	
5033.00	0.090	200.990	4987.06	-230.12	-279.65	458.69	40°09'38.168"N	104°42'00.205"W	0.56	
5119.00	0.480	213.390	5073.06	-230.51	-280.01	458.47	40°09'38.165"N	104°42'00.208"W	0.46	
5204.00	0.370	145.730	5158.06	-231.03	-280.54	458.43	40°09'38.160"N	104°42'00.209"W	0.57	
5289.00	0.370	93.830	5243.06	-231.23	-280.78	458.86	40°09'38.157"N	104°42'00.203"W	0.38	
5374.00	0.600	92.370	5328.06	-231.19	-280.82	459.58	40°09'38.157"N	104°42'00.194"W	0.27	
5460.00	0.150	3.020	5414.05	-231.05	-280.73	460.03	40°09'38.158"N	104°42'00.188"W	0.72	
5545.00	0.490	49.840	5499.05	-230.68	-280.38	460.31	40°09'38.161"N	104°42'00.184"W	0.47	
5630.00	1.150	65.180	5584.04	-229.98	-279.79	461.37	40°09'38.167"N	104°42'00.171"W	0.81	
5715.00	0.370	94.740	5669.04	-229.54	-279.45	462.41	40°09'38.170"N	104°42'00.157"W	1.00	
5800.00	0.550	283.370	5754.04	-229.48	-279.38	462.29	40°09'38.171"N	104°42'00.159"W	1.08	
5886.00	0.800	288.600	5840.03	-229.30	-279.09	461.32	40°09'38.174"N	104°42'00.171"W	0.30	
5971.00	0.870	282.710	5925.02	-229.09	-278.76	460.13	40°09'38.177"N	104°42'00.187"W	0.13	
6056.00	0.750	312.300	6010.01	-228.69	-278.25	459.09	40°09'38.182"N	104°42'00.200"W	0.51	
6141.00	0.540	314.660	6095.01	-228.11	-277.59	458.39	40°09'38.189"N	104°42'00.209"W	0.25	
6227.00	0.760	289.210	6181.00	-227.72	-277.12	457.56	40°09'38.193"N	104°42'00.220"W	0.42	
6312.00	0.450	304.350	6266.00	-227.44	-276.74	456.76	40°09'38.197"N	104°42'00.230"W	0.41	
6397.00	0.300	286.750	6350.99	-227.24	-276.49	456.27	40°09'38.200"N	104°42'00.236"W	0.22	
6459.00	0.330	326.710	6412.99	-227.07	-276.30	456.01	40°09'38.202"N	104°42'00.240"W	0.35	
6482.00	0.230	313.160	6435.99	-226.99	-276.21	455.94	40°09'38.202"N	104°42'00.241"W	0.52	
6524.00	2.580	359.820	6477.98	-226.00	-275.21	455.88	40°09'38.212"N	104°42'00.241"W	5.78	
6567.00	7.800	3.150	6520.79	-222.12	-271.32	456.04	40°09'38.251"N	104°42'00.239"W	12.15	
6609.00	13.140	3.870	6562.07	-214.50	-263.71	456.52	40°09'38.326"N	104°42'00.233"W	12.72	
6652.00	17.530	2.960	6603.53	-203.14	-252.36	457.18	40°09'38.438"N	104°42'00.225"W	10.22	
6695.00	19.400	359.820	6644.32	-189.57	-238.75	457.49	40°09'38.573"N	104°42'00.221"W	4.92	
6737.00	21.680	0.240	6683.65	-174.92	-224.01	457.50	40°09'38.718"N	104°42'00.220"W	5.44	
6780.00	24.310	3.940	6723.23	-158.16	-207.24	458.15	40°09'38.884"N	104°42'00.212"W	6.98	
6822.00	28.700	4.300	6760.80	-139.44	-188.55	459.50	40°09'39.069"N	104°42'00.195"W	10.46	
6865.00	32.220	2.960	6797.86	-117.66	-166.79	460.86	40°09'39.284"N	104°42'00.177"W	8.34	
6908.00	37.080	1.580	6833.23	-93.28	-142.37	461.81	40°09'39.525"N	104°42'00.165"W	11.45	
6950.00	41.010	0.870	6865.84	-66.92	-115.93	462.37	40°09'39.786"N	104°42'00.158"W	9.42	
6993.00	46.790	1.330	6896.81	-37.22	-86.13	462.95	40°09'40.081"N	104°42'00.150"W	13.46	
7035.00	51.630	2.840	6924.24	-5.51	-54.36	464.12	40°09'40.395"N	104°42'00.135"W	11.84	



# Actual Wellpath Report

NICHOLS 16N-31HZ AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 NICHOLS 16N-31HZ (346'FSL & 1292'FEL,SEC.6)
Area	COLORADO	Well	NICHOLS 16N-31HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 16N-31HZ AWB
Facility	SEC.06-T2N-R65W		

## WELLPATH DATA (145 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7078.00	54.570	2.460	6950.06	28.82	-20.02	465.71	40°09'40.734"N	104°42'00.115"W	6.87	
7121.00	57.630	2.010	6974.04	64.42	15.64	467.10	40°09'41.087"N	104°42'00.097"W	7.17	
7163.00	62.280	0.640	6995.06	100.65	51.98	467.93	40°09'41.446"N	104°42'00.086"W	11.43	
7206.00	66.730	0.390	7013.56	139.27	90.78	468.28	40°09'41.829"N	104°42'00.082"W	10.36	
7248.00	70.930	358.900	7028.73	178.19	129.93	468.03	40°09'42.216"N	104°42'00.085"W	10.53	
7291.00	74.560	358.900	7041.48	218.93	170.98	467.24	40°09'42.622"N	104°42'00.095"W	8.44	
7334.00	76.070	359.480	7052.38	260.23	212.57	466.65	40°09'43.033"N	104°42'00.102"W	3.75	
7376.00	80.390	0.320	7060.95	301.10	253.68	466.58	40°09'43.439"N	104°42'00.103"W	10.47	
7429.00	86.530	359.720	7066.98	353.45	306.31	466.60	40°09'43.959"N	104°42'00.103"W	11.64	
7478.00†	88.672	359.729	7069.03	402.11	355.26	466.36	40°09'44.443"N	104°42'00.106"W	4.37	7" Casing Point
7542.00	91.470	359.740	7068.95	465.72	419.26	466.07	40°09'45.075"N	104°42'00.110"W	4.37	
7628.00	89.900	359.390	7067.93	551.16	505.24	465.41	40°09'45.925"N	104°42'00.118"W	1.87	
7713.00	89.810	359.450	7068.14	635.60	590.24	464.55	40°09'46.765"N	104°42'00.129"W	0.13	
7798.00	90.670	359.390	7067.78	720.04	675.23	463.69	40°09'47.605"N	104°42'00.140"W	1.01	
7883.00	89.930	0.150	7067.34	804.54	760.23	463.35	40°09'48.445"N	104°42'00.145"W	1.25	
7968.00	89.260	1.090	7067.94	889.16	845.22	464.27	40°09'49.284"N	104°42'00.133"W	1.36	
8054.00	88.790	1.010	7069.40	974.82	931.19	465.85	40°09'50.134"N	104°42'00.113"W	0.55	
8139.00	88.920	1.150	7071.10	1059.49	1016.16	467.45	40°09'50.974"N	104°42'00.092"W	0.22	
8224.00	89.010	1.060	7072.64	1144.17	1101.13	469.09	40°09'51.813"N	104°42'00.071"W	0.15	
8309.00	88.860	1.100	7074.22	1228.84	1186.10	470.69	40°09'52.653"N	104°42'00.050"W	0.18	
8395.00	88.980	1.340	7075.84	1314.52	1272.07	472.52	40°09'53.503"N	104°42'00.027"W	0.31	
8480.00	89.530	1.070	7076.94	1399.22	1357.04	474.31	40°09'54.342"N	104°42'00.004"W	0.72	
8565.00	89.260	1.170	7077.84	1483.90	1442.02	475.97	40°09'55.182"N	104°41'59.982"W	0.34	
8650.00	90.610	0.730	7077.94	1568.57	1527.01	477.38	40°09'56.022"N	104°41'59.964"W	1.67	
8735.00	91.780	0.650	7076.16	1653.19	1611.98	478.40	40°09'56.862"N	104°41'59.951"W	1.38	
8820.00	91.970	0.700	7073.38	1737.77	1696.93	479.40	40°09'57.701"N	104°41'59.938"W	0.23	
8906.00	90.700	0.610	7071.38	1823.37	1782.90	480.38	40°09'58.551"N	104°41'59.925"W	1.48	
8991.00	89.780	1.270	7071.02	1908.04	1867.88	481.78	40°09'59.390"N	104°41'59.907"W	1.33	
9076.00	89.780	1.260	7071.35	1992.75	1952.86	483.65	40°10'00.230"N	104°41'59.883"W	0.01	
9161.00	89.840	1.170	7071.63	2077.45	2037.84	485.46	40°10'01.070"N	104°41'59.860"W	0.13	
9247.00	89.690	1.430	7071.98	2163.16	2123.82	487.41	40°10'01.920"N	104°41'59.835"W	0.35	
9332.00	89.780	1.540	7072.38	2247.89	2208.79	489.61	40°10'02.759"N	104°41'59.806"W	0.17	
9417.00	89.690	1.380	7072.77	2332.63	2293.76	491.78	40°10'03.599"N	104°41'59.778"W	0.22	
9502.00	89.200	1.310	7073.59	2417.34	2378.74	493.77	40°10'04.439"N	104°41'59.753"W	0.58	
9587.00	89.070	1.570	7074.88	2502.06	2463.70	495.91	40°10'05.278"N	104°41'59.725"W	0.34	
9672.00	89.100	1.620	7076.24	2586.80	2548.65	498.27	40°10'06.118"N	104°41'59.695"W	0.07	
9757.00	89.100	1.550	7077.57	2671.54	2633.61	500.62	40°10'06.957"N	104°41'59.664"W	0.08	
9842.00	89.440	359.980	7078.65	2756.17	2718.59	501.76	40°10'07.797"N	104°41'59.650"W	1.89	
9927.00	89.810	0.320	7079.21	2840.73	2803.59	501.98	40°10'08.637"N	104°41'59.647"W	0.59	
10012.00	91.010	359.720	7078.60	2925.26	2888.59	502.01	40°10'09.477"N	104°41'59.646"W	1.58	
10097.00	91.320	359.980	7076.87	3009.75	2973.57	501.79	40°10'10.317"N	104°41'59.649"W	0.48	
10183.00	91.880	0.230	7074.47	3095.26	3059.54	501.95	40°10'11.166"N	104°41'59.647"W	0.71	
10268.00	91.290	359.830	7072.12	3179.77	3144.50	501.99	40°10'12.006"N	104°41'59.647"W	0.84	
10353.00	90.550	0.730	7070.76	3264.33	3229.49	502.41	40°10'12.846"N	104°41'59.641"W	1.37	
10438.00	91.100	0.670	7069.53	3348.96	3314.47	503.44	40°10'13.686"N	104°41'59.628"W	0.65	



# Actual Wellpath Report

NICHOLS 16N-31HZ AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 NICHOLS 16N-31HZ (346'FSL & 1292'FEL,SEC.6)
Area	COLORADO	Well	NICHOLS 16N-31HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 16N-31HZ AWB
Facility	SEC.06-T2N-R65W		

## WELLPATH DATA (145 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
10523.00	91.160	0.060	7067.86	3433.53	3399.46	503.99	40°10'14.525"N	104°41'59.621"W	0.72	
10608.00	91.290	0.940	7066.04	3518.12	3484.43	504.73	40°10'15.365"N	104°41'59.611"W	1.05	
10693.00	90.430	1.200	7064.76	3602.79	3569.41	506.31	40°10'16.205"N	104°41'59.591"W	1.06	
10779.00	89.560	0.600	7064.77	3688.45	3655.39	507.66	40°10'17.055"N	104°41'59.573"W	1.23	
10864.00	89.590	0.510	7065.40	3773.06	3740.39	508.49	40°10'17.895"N	104°41'59.563"W	0.11	
10949.00	89.660	0.750	7065.96	3857.69	3825.38	509.42	40°10'18.735"N	104°41'59.551"W	0.29	
11034.00	90.150	0.220	7066.10	3942.29	3910.38	510.14	40°10'19.574"N	104°41'59.541"W	0.85	
11119.00	89.930	0.720	7066.04	4026.89	3995.37	510.84	40°10'20.414"N	104°41'59.532"W	0.64	
11204.00	89.840	359.720	7066.21	4111.46	4080.37	511.17	40°10'21.254"N	104°41'59.528"W	1.18	Last BHI MWD+IFR Survey
11278.00	89.840	359.720	7066.42	4185.01	4154.37	510.80	40°10'21.986"N	104°41'59.533"W	0.00	Projection to Bit

## HOLE & CASING SECTIONS - Ref Wellbore: NICHOLS 16N-31HZ AWB Ref Wellpath: NICHOLS 16N-31HZ 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	920.00	904.00	16.00	919.98	0.00	0.00	-1.82	2.62
9.625in Casing Surface	16.00	920.00	904.00	16.00	919.98	0.00	0.00	-1.82	2.62
8.75in Open Hole	920.00	7485.00	6565.00	919.98	7069.18	-1.82	2.62	362.26	466.33
7in Casing Intermediate	16.00	7478.00	7462.00	16.00	7069.03	0.00	0.00	355.26	466.36
6.125in Open Hole	7478.00	11278.00	3800.00	7069.03	7066.42	355.26	466.36	4154.37	510.80



# Actual Wellpath Report

NICHOLS 16N-31HZ AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 NICHOLS 16N-31HZ (346'FSL & 1292'FEL,SEC.6)
Area	COLORADO	Well	NICHOLS 16N-31HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 16N-31HZ AWB
Facility	SEC.06-T2N-R65W		

## TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
NICHOLS PAD SECTION 31 LINES		-1.00	0.73	29.92	3223144.85	1302635.55	40°09'40.939"N	104°42'05.728"W	polygon
NICHOLS PAD SECTION 6 LINES		-1.00	0.73	29.92	3223144.85	1302635.55	40°09'40.939"N	104°42'05.728"W	polygon
NICHOLS 16N-31HZ BHL ON PLAT (300'FSL & 825'FEL,SEC.31) REV-1		7073.00	5148.24	528.46	3223597.01	1307787.11	40°10'31.807"N	104°41'59.305"W	point
NICHOLS 16N-31HZ BHL (175'FSL & 825'FEL,SEC.31) REV-3		7105.00	5023.24	528.46	3223598.14	1307662.13	40°10'30.572"N	104°41'59.305"W	point
NICHOLS 16N-31HZ BHL ON PLAT (300'FSL & 825'FEL,SEC.31) REV-2		7105.00	5148.24	528.46	3223597.01	1307787.12	40°10'31.807"N	104°41'59.305"W	point
NICHOLS PAD SEC. 31 HARDLINES (460' SETBACKS)		7117.00	0.73	29.92	3223144.85	1302635.55	40°09'40.939"N	104°42'05.728"W	polygon
NICHOLS PAD SEC. 6 HARDLINES (460' SETBACKS)		7117.00	0.73	29.92	3223144.85	1302635.55	40°09'40.939"N	104°42'05.728"W	polygon

## WELLPATH COMPOSITION - Ref Wellbore: NICHOLS 16N-31HZ AWB Ref Wellpath: NICHOLS 16N-31HZ AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	866.00	Generic gyro - continuous (Standard)	MS ENERGY SURVEYS <116-866>	NICHOLS 16N-31HZ AWB
866.00	7429.00	NaviTrak (MAGCORR,IFR)	BHI MWD+IFR SURVEYS 8 3/4" HOLE <986-7429>	NICHOLS 16N-31HZ AWB
7429.00	11204.00	OnTrak (MAGCORR,IFR)	BHI MWD+IFR SURVEYS 6 1/8" HOLE <7542-11204>	NICHOLS 16N-31HZ AWB
11204.00	11278.00	Blind Drilling (std)	Projection to bit	NICHOLS 16N-31HZ AWB



# Actual Wellpath Report

NICHOLS 16N-31HZ AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 NICHOLS 16N-31HZ (346'FSL & 1292'FEL,SEC.6)
Area	COLORADO	Well	NICHOLS 16N-31HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 16N-31HZ AWB
Facility	SEC.06-T2N-R65W		

## WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
16.00	0.000	52.270	16.00	Tie-On
116.00	0.760	52.270	116.00	Begin GYRO Surveys
866.00	0.200	68.000	865.98	Tie-Into GYRO Surveys
986.00	0.530	288.820	985.97	Begin BHI MWD+IFR Surveys
7478.00	88.672	359.729	7069.03	7" Casing Point
11204.00	89.840	359.720	7066.21	Last BHI MWD+IFR Survey
11278.00	89.840	359.720	7066.42	Projection to Bit