

KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#12 NICHOLS 15C-31HZ (346'FSL & 1381'FEL,SEC.6)
Field: WELD COUNTY (KERR MCGEE) Well: NICHOLS 15C-31HZ
Facility: SEC.06-T2N-R65W Wellbore: NICHOLS 15C-31HZ PWB

Plot reference wellpath is NICHOLS 15C-31HZ (PERMIT) PWP

True vertical depths are referenced to XTREME 6 (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to XTREME 6 (RKB)	North Reference: True north
XTREME 6 (RKB) to Mean Sea Level: 4942 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#12 NICHOLS 15C-31HZ (346'FSL & 1381'FEL,SEC.6)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: wilsje02 on 3/6/2012

Location Information

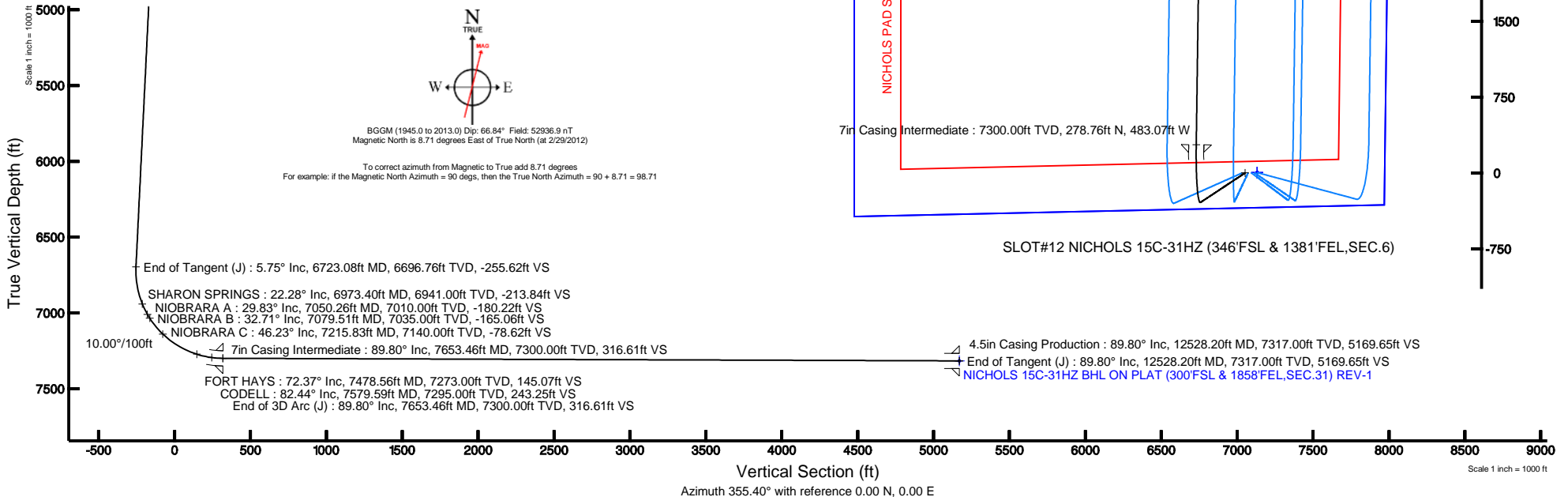
Facility Name				Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.06-T2N-R65W				3222483.590	1306833.950	40°10'22.487"N	104°42'13.759"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
SLOT#12 NICHOLS 15C-31HZ (346'FSL & 1381'FEL,SEC.6)	-4207.31	503.66	3223024.984	1302631.518	40°09'40.910"N	104°42'07.272"W	
XTREME 6 (RKB) to Mud line (At Slot: SLOT#12 NICHOLS 15C-31HZ (346'FSL & 1381'FEL,SEC.6))							4942R
Mean Sea Level to Mud line (At Slot: SLOT#12 NICHOLS 15C-31HZ (346'FSL & 1381'FEL,SEC.6))							0R
XTREME 6 (RKB) to Mean Sea Level							4942R

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	17.00	0.000	236.500	17.00	0.00	0.00	0.00	0.00
End of Tangent	1300.00	0.000	236.500	1300.00	0.00	0.00	0.00	0.00
End of Build (J)	1587.50	5.750	236.500	1587.02	-7.96	-12.02	2.00	-6.97
End of Tangent (J)	6723.08	5.750	236.500	6696.76	-291.94	-441.07	0.00	-255.62
End of 3D Arc (J)	7653.46	89.800	0.804	7300.00	278.76	-483.07	10.00	316.61
End of Tangent (J)	12528.20	89.800	0.804	7317.00	5152.99	-414.67	0.00	5169.65

Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
NICHOLS PAD SECTION 31 LINES		0.00	2.96	119.91	3223144.85	1302635.55	40°09'40.939"N	104°42'06.728"W
NICHOLS PAD SECTION 6 LINES		0.00	2.96	119.91	3223144.85	1302635.55	40°09'40.939"N	104°42'06.728"W
NICHOLS PAD SEC. 31 HARDLINES (460' SETBACKS)	7118.00	2.96	119.91	3223144.85	1302635.55	40°09'40.939"N	104°42'06.728"W	
NICHOLS PAD SEC. 6 HARDLINES (460' SETBACKS)	7118.00	2.96	119.91	3223144.85	1302635.55	40°09'40.939"N	104°42'06.728"W	
NICHOLS 15C-31HZ BHL ON PLAT (300'FSL & 1858'FEL,SEC.31) REV-1	12528.20	7317.00	5152.99	-414.67	3222563.98	1307780.34	40°10'31.832"N	104°42'12.614"W





Planned Wellpath Report

NICHOLS 15C-31HZ (PERMIT) PWP

Page 1 of 5



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#12 NICHOLS 15C-31HZ (346'FSL & 1381'FEL,SEC.6)
Area	COLORADO	Well	NICHOLS 15C-31HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 15C-31HZ PWB
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	3/6/2012 at 12:02:07
Convergence at slot	0.52° East	Database/Source file	WellArchitectDB/NICHOLS_15C-31HZ_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-4207.31	503.66	3223024.98	1302631.52	40°09'40.910"N	104°42'07.272"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 6 (RKB) to Facility Vertical Datum	4942.00ft
Horizontal Reference Pt	Slot	XTREME 6 (RKB) to Mean Sea Level	4942.00ft
Vertical Reference Pt	XTREME 6 (RKB)	XTREME 6 (RKB) to Mud Line at Slot (SLOT#12 NICHOLS 15C-31HZ (346'FSL & 1381'FEL,SEC.6))	4942.00ft
MD Reference Pt	XTREME 6 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	355.40°



Planned Wellpath Report

NICHOLS 15C-31HZ (PERMIT) PWP

Page 2 of 5



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#12 NICHOLS 15C-31HZ (346'FSL & 1381'FEL,SEC.6)
Area	COLORADO	Well	NICHOLS 15C-31HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 15C-31HZ PWB
Facility	SEC.06-T2N-R65W		

WELLPATH DATA (140 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	236.500	0.00	0.00	0.00	0.00	40°09'40.910"N	104°42'07.272"W	0.00	
17.00	0.000	236.500	17.00	0.00	0.00	0.00	40°09'40.910"N	104°42'07.272"W	0.00	Tie On
117.00†	0.000	236.500	117.00	0.00	0.00	0.00	40°09'40.910"N	104°42'07.272"W	0.00	
217.00†	0.000	236.500	217.00	0.00	0.00	0.00	40°09'40.910"N	104°42'07.272"W	0.00	
317.00†	0.000	236.500	317.00	0.00	0.00	0.00	40°09'40.910"N	104°42'07.272"W	0.00	
417.00†	0.000	236.500	417.00	0.00	0.00	0.00	40°09'40.910"N	104°42'07.272"W	0.00	
517.00†	0.000	236.500	517.00	0.00	0.00	0.00	40°09'40.910"N	104°42'07.272"W	0.00	
617.00†	0.000	236.500	617.00	0.00	0.00	0.00	40°09'40.910"N	104°42'07.272"W	0.00	
717.00†	0.000	236.500	717.00	0.00	0.00	0.00	40°09'40.910"N	104°42'07.272"W	0.00	
817.00†	0.000	236.500	817.00	0.00	0.00	0.00	40°09'40.910"N	104°42'07.272"W	0.00	
917.00†	0.000	236.500	917.00	0.00	0.00	0.00	40°09'40.910"N	104°42'07.272"W	0.00	
1017.00†	0.000	236.500	1017.00	0.00	0.00	0.00	40°09'40.910"N	104°42'07.272"W	0.00	
1117.00†	0.000	236.500	1117.00	0.00	0.00	0.00	40°09'40.910"N	104°42'07.272"W	0.00	
1217.00†	0.000	236.500	1217.00	0.00	0.00	0.00	40°09'40.910"N	104°42'07.272"W	0.00	
1300.00	0.000	236.500	1300.00	0.00	0.00	0.00	40°09'40.910"N	104°42'07.272"W	0.00	End of Tangent
1317.00†	0.340	236.500	1317.00	-0.02	-0.03	-0.04	40°09'40.910"N	104°42'07.273"W	2.00	
1417.00†	2.340	236.500	1416.97	-1.15	-1.32	-1.99	40°09'40.897"N	104°42'07.298"W	2.00	
1517.00†	4.340	236.500	1516.79	-3.97	-4.53	-6.85	40°09'40.865"N	104°42'07.360"W	2.00	
1587.50	5.750	236.500	1587.02	-6.97	-7.96	-12.02	40°09'40.831"N	104°42'07.427"W	2.00	End of Build (J)
1617.00†	5.750	236.500	1616.37	-8.39	-9.59	-14.48	40°09'40.815"N	104°42'07.459"W	0.00	
1717.00†	5.750	236.500	1715.87	-13.24	-15.12	-22.84	40°09'40.761"N	104°42'07.566"W	0.00	
1817.00†	5.750	236.500	1815.36	-18.08	-20.65	-31.19	40°09'40.706"N	104°42'07.674"W	0.00	
1917.00†	5.750	236.500	1914.86	-22.92	-26.18	-39.55	40°09'40.651"N	104°42'07.781"W	0.00	
2017.00†	5.750	236.500	2014.36	-27.76	-31.71	-47.90	40°09'40.597"N	104°42'07.889"W	0.00	
2117.00†	5.750	236.500	2113.85	-32.60	-37.24	-56.26	40°09'40.542"N	104°42'07.997"W	0.00	
2217.00†	5.750	236.500	2213.35	-37.45	-42.77	-64.61	40°09'40.487"N	104°42'08.104"W	0.00	
2317.00†	5.750	236.500	2312.85	-42.29	-48.30	-72.97	40°09'40.433"N	104°42'08.212"W	0.00	
2417.00†	5.750	236.500	2412.34	-47.13	-53.82	-81.32	40°09'40.378"N	104°42'08.319"W	0.00	
2517.00†	5.750	236.500	2511.84	-51.97	-59.35	-89.68	40°09'40.323"N	104°42'08.427"W	0.00	
2617.00†	5.750	236.500	2611.34	-56.81	-64.88	-98.03	40°09'40.269"N	104°42'08.535"W	0.00	
2717.00†	5.750	236.500	2710.83	-61.65	-70.41	-106.38	40°09'40.214"N	104°42'08.642"W	0.00	
2817.00†	5.750	236.500	2810.33	-66.50	-75.94	-114.74	40°09'40.160"N	104°42'08.750"W	0.00	
2917.00†	5.750	236.500	2909.83	-71.34	-81.47	-123.09	40°09'40.105"N	104°42'08.857"W	0.00	
3017.00†	5.750	236.500	3009.33	-76.18	-87.00	-131.45	40°09'40.050"N	104°42'08.965"W	0.00	
3117.00†	5.750	236.500	3108.82	-81.02	-92.53	-139.80	40°09'39.996"N	104°42'09.073"W	0.00	
3217.00†	5.750	236.500	3208.32	-85.86	-98.06	-148.16	40°09'39.941"N	104°42'09.180"W	0.00	
3317.00†	5.750	236.500	3307.82	-90.70	-103.59	-156.51	40°09'39.886"N	104°42'09.288"W	0.00	
3417.00†	5.750	236.500	3407.31	-95.55	-109.12	-164.87	40°09'39.832"N	104°42'09.395"W	0.00	
3517.00†	5.750	236.500	3506.81	-100.39	-114.65	-173.22	40°09'39.777"N	104°42'09.503"W	0.00	
3617.00†	5.750	236.500	3606.31	-105.23	-120.18	-181.58	40°09'39.722"N	104°42'09.611"W	0.00	
3717.00†	5.750	236.500	3705.80	-110.07	-125.71	-189.93	40°09'39.668"N	104°42'09.718"W	0.00	
3817.00†	5.750	236.500	3805.30	-114.91	-131.24	-198.28	40°09'39.613"N	104°42'09.826"W	0.00	
3917.00†	5.750	236.500	3904.80	-119.76	-136.77	-206.64	40°09'39.558"N	104°42'09.933"W	0.00	
3968.46†	5.750	236.500	3956.00	-122.25	-139.62	-210.94	40°09'39.530"N	104°42'09.989"W	0.00	PARKMAN
4017.00†	5.750	236.500	4004.29	-124.60	-142.30	-214.99	40°09'39.504"N	104°42'10.041"W	0.00	
4117.00†	5.750	236.500	4103.79	-129.44	-147.83	-223.35	40°09'39.449"N	104°42'10.149"W	0.00	
4217.00†	5.750	236.500	4203.29	-134.28	-153.36	-231.70	40°09'39.394"N	104°42'10.256"W	0.00	
4317.00†	5.750	236.500	4302.78	-139.12	-158.89	-240.06	40°09'39.340"N	104°42'10.364"W	0.00	
4417.00†	5.750	236.500	4402.28	-143.96	-164.42	-248.41	40°09'39.285"N	104°42'10.472"W	0.00	
4461.95†	5.750	236.500	4447.00	-146.14	-166.91	-252.17	40°09'39.261"N	104°42'10.520"W	0.00	SUSSEX
4517.00†	5.750	236.500	4501.78	-148.81	-169.95	-256.77	40°09'39.231"N	104°42'10.579"W	0.00	
4617.00†	5.750	236.500	4601.27	-153.65	-175.48	-265.12	40°09'39.176"N	104°42'10.687"W	0.00	
4717.00†	5.750	236.500	4700.77	-158.49	-181.01	-273.48	40°09'39.121"N	104°42'10.794"W	0.00	
4817.00†	5.750	236.500	4800.27	-163.33	-186.54	-281.83	40°09'39.067"N	104°42'10.902"W	0.00	
4917.00†	5.750	236.500	4899.77	-168.17	-192.07	-290.18	40°09'39.012"N	104°42'11.010"W	0.00	
5017.00†	5.750	236.500	4999.26	-173.02	-197.60	-298.54	40°09'38.957"N	104°42'11.117"W	0.00	
5117.00†	5.750	236.500	5098.76	-177.86	-203.13	-306.89	40°09'38.903"N	104°42'11.225"W	0.00	
5217.00†	5.750	236.500	5198.26	-182.70	-208.66	-315.25	40°09'38.848"N	104°42'11.332"W	0.00	
5317.00†	5.750	236.500	5297.75	-187.54	-214.19	-323.60	40°09'38.793"N	104°42'11.440"W	0.00	
5417.00†	5.750	236.500	5397.25	-192.38	-219.72	-331.96	40°09'38.739"N	104°42'11.548"W	0.00	



Planned Wellpath Report

NICHOLS 15C-31HZ (PERMIT) PWP

Page 3 of 5



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#12 NICHOLS 15C-31HZ (346'FSL & 1381'FEL,SEC.6)
Area	COLORADO	Well	NICHOLS 15C-31HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 15C-31HZ PWB
Facility	SEC.06-T2N-R65W		

WELLPATH DATA (140 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5517.00†	5.750	236.500	5496.75	-197.22	-225.25	-340.31	40°09'38.684"N	104°42'11.655"W	0.00	
5617.00†	5.750	236.500	5596.24	-202.07	-230.78	-348.67	40°09'38.629"N	104°42'11.763"W	0.00	
5717.00†	5.750	236.500	5695.74	-206.91	-236.31	-357.02	40°09'38.575"N	104°42'11.870"W	0.00	
5817.00†	5.750	236.500	5795.24	-211.75	-241.84	-365.38	40°09'38.520"N	104°42'11.978"W	0.00	
5917.00†	5.750	236.500	5894.73	-216.59	-247.37	-373.73	40°09'38.465"N	104°42'12.086"W	0.00	
6017.00†	5.750	236.500	5994.23	-221.43	-252.90	-382.08	40°09'38.411"N	104°42'12.193"W	0.00	
6117.00†	5.750	236.500	6093.73	-226.28	-258.43	-390.44	40°09'38.356"N	104°42'12.301"W	0.00	
6217.00†	5.750	236.500	6193.22	-231.12	-263.96	-398.79	40°09'38.302"N	104°42'12.408"W	0.00	
6317.00†	5.750	236.500	6292.72	-235.96	-269.49	-407.15	40°09'38.247"N	104°42'12.516"W	0.00	
6417.00†	5.750	236.500	6392.22	-240.80	-275.01	-415.50	40°09'38.192"N	104°42'12.624"W	0.00	
6517.00†	5.750	236.500	6491.71	-245.64	-280.54	-423.86	40°09'38.138"N	104°42'12.731"W	0.00	
6617.00†	5.750	236.500	6591.21	-250.48	-286.07	-432.21	40°09'38.083"N	104°42'12.839"W	0.00	
6717.00†	5.750	236.500	6690.71	-255.33	-291.60	-440.57	40°09'38.028"N	104°42'12.946"W	0.00	
6723.08	5.750	236.500	6696.76	-255.62	-291.94	-441.07	40°09'38.025"N	104°42'12.953"W	0.00	End of Tangent (J)
6817.00†	7.771	323.272	6790.22	-252.51	-289.44	-448.81	40°09'38.050"N	104°42'13.053"W	10.00	
6917.00†	16.821	344.853	6887.87	-232.51	-270.01	-456.65	40°09'38.242"N	104°42'13.154"W	10.00	
6973.40†	22.281	349.111	6941.00	-213.84	-251.62	-460.81	40°09'38.423"N	104°42'13.207"W	10.00	SHARON SPRINGS
7017.00†	26.552	351.241	6980.69	-195.90	-233.86	-463.86	40°09'38.599"N	104°42'13.246"W	10.00	
7050.26†	29.826	352.480	7010.00	-180.22	-218.31	-466.07	40°09'38.753"N	104°42'13.275"W	10.00	NIOBRARA A
7079.51†	32.714	353.382	7035.00	-165.06	-203.24	-467.94	40°09'38.901"N	104°42'13.299"W	10.00	NIOBRARA B
7117.00†	36.423	354.349	7065.87	-143.79	-182.10	-470.20	40°09'39.110"N	104°42'13.328"W	10.00	
7215.83†	46.227	356.251	7140.00	-78.62	-117.13	-475.44	40°09'39.752"N	104°42'13.396"W	10.00	NIOBRARA C
7217.00†	46.343	356.269	7140.81	-77.77	-116.29	-475.49	40°09'39.761"N	104°42'13.396"W	10.00	
7317.00†	56.286	357.640	7203.24	0.15	-38.44	-479.57	40°09'40.530"N	104°42'13.449"W	10.00	
7417.00†	66.241	358.723	7251.26	87.62	49.09	-482.31	40°09'41.395"N	104°42'13.484"W	10.00	
7478.56†	72.373	359.307	7273.00	145.07	106.65	-483.29	40°09'41.964"N	104°42'13.497"W	10.00	FORT HAYS
7517.00†	76.202	359.650	7283.41	181.97	143.64	-483.63	40°09'42.329"N	104°42'13.501"W	10.00	
7579.59†	82.439	0.188	7295.00	243.25	205.11	-483.71	40°09'42.937"N	104°42'13.502"W	10.00	CODELL
7617.00†	86.167	0.501	7298.71	280.33	242.33	-483.49	40°09'43.305"N	104°42'13.499"W	10.00	
7653.46	89.800	0.804	7300.00	316.61	278.76	-483.07	40°09'43.665"N	104°42'13.494"W	10.00	End of 3D Arc (J)
7717.00†	89.800	0.804	7300.22	379.87	342.29	-482.18	40°09'44.293"N	104°42'13.483"W	0.00	
7817.00†	89.800	0.804	7300.57	479.42	442.28	-480.78	40°09'45.281"N	104°42'13.465"W	0.00	
7917.00†	89.800	0.804	7300.91	578.98	542.27	-479.37	40°09'46.269"N	104°42'13.446"W	0.00	
8017.00†	89.800	0.804	7301.26	678.53	642.26	-477.97	40°09'47.257"N	104°42'13.428"W	0.00	
8117.00†	89.800	0.804	7301.61	778.09	742.25	-476.57	40°09'48.245"N	104°42'13.410"W	0.00	
8217.00†	89.800	0.804	7301.96	877.64	842.24	-475.16	40°09'49.233"N	104°42'13.392"W	0.00	
8317.00†	89.800	0.804	7302.31	977.20	942.23	-473.76	40°09'50.221"N	104°42'13.374"W	0.00	
8417.00†	89.800	0.804	7302.66	1076.75	1042.22	-472.36	40°09'51.209"N	104°42'13.356"W	0.00	
8517.00†	89.800	0.804	7303.01	1176.31	1142.21	-470.95	40°09'52.197"N	104°42'13.338"W	0.00	
8617.00†	89.800	0.804	7303.36	1275.86	1242.20	-469.55	40°09'53.185"N	104°42'13.320"W	0.00	
8717.00†	89.800	0.804	7303.71	1375.41	1342.19	-468.15	40°09'54.174"N	104°42'13.302"W	0.00	
8817.00†	89.800	0.804	7304.05	1474.97	1442.18	-466.74	40°09'55.162"N	104°42'13.284"W	0.00	
8917.00†	89.800	0.804	7304.40	1574.52	1542.17	-465.34	40°09'56.150"N	104°42'13.266"W	0.00	
9017.00†	89.800	0.804	7304.75	1674.08	1642.16	-463.94	40°09'57.138"N	104°42'13.248"W	0.00	
9117.00†	89.800	0.804	7305.10	1773.63	1742.15	-462.53	40°09'58.126"N	104°42'13.230"W	0.00	
9217.00†	89.800	0.804	7305.45	1873.19	1842.14	-461.13	40°09'59.114"N	104°42'13.212"W	0.00	
9317.00†	89.800	0.804	7305.80	1972.74	1942.13	-459.73	40°10'00.102"N	104°42'13.194"W	0.00	
9417.00†	89.800	0.804	7306.15	2072.30	2042.12	-458.32	40°10'01.090"N	104°42'13.176"W	0.00	
9517.00†	89.800	0.804	7306.50	2171.85	2142.11	-456.92	40°10'02.078"N	104°42'13.158"W	0.00	
9617.00†	89.800	0.804	7306.84	2271.41	2242.09	-455.52	40°10'03.066"N	104°42'13.140"W	0.00	
9717.00†	89.800	0.804	7307.19	2370.96	2342.08	-454.11	40°10'04.055"N	104°42'13.122"W	0.00	
9817.00†	89.800	0.804	7307.54	2470.52	2442.07	-452.71	40°10'05.043"N	104°42'13.103"W	0.00	
9917.00†	89.800	0.804	7307.89	2570.07	2542.06	-451.31	40°10'06.031"N	104°42'13.085"W	0.00	
10017.00†	89.800	0.804	7308.24	2669.63	2642.05	-449.90	40°10'07.019"N	104°42'13.067"W	0.00	
10117.00†	89.800	0.804	7308.59	2769.18	2742.04	-448.50	40°10'08.007"N	104°42'13.049"W	0.00	
10217.00†	89.800	0.804	7308.94	2868.74	2842.03	-447.10	40°10'08.995"N	104°42'13.031"W	0.00	
10317.00†	89.800	0.804	7309.29	2968.29	2942.02	-445.69	40°10'09.983"N	104°42'13.013"W	0.00	
10417.00†	89.800	0.804	7309.64	3067.85	3042.01	-444.29	40°10'10.971"N	104°42'12.995"W	0.00	
10517.00†	89.800	0.804	7309.98	3167.40	3142.00	-442.89	40°10'11.959"N	104°42'12.977"W	0.00	
10617.00†	89.800	0.804	7310.33	3266.96	3241.99	-441.48	40°10'12.947"N	104°42'12.959"W	0.00	



Planned Wellpath Report

NICHOLS 15C-31HZ (PERMIT) PWP

Page 4 of 5



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#12 NICHOLS 15C-31HZ (346'FSL & 1381'FEL,SEC.6)
Area	COLORADO	Well	NICHOLS 15C-31HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 15C-31HZ PWB
Facility	SEC.06-T2N-R65W		

WELLPATH DATA (140 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
10717.00†	89.800	0.804	7310.68	3366.51	3341.98	-440.08	40°10'13.936"N	104°42'12.941"W	0.00	
10817.00†	89.800	0.804	7311.03	3466.07	3441.97	-438.68	40°10'14.924"N	104°42'12.923"W	0.00	
10917.00†	89.800	0.804	7311.38	3565.62	3541.96	-437.27	40°10'15.912"N	104°42'12.905"W	0.00	
11017.00†	89.800	0.804	7311.73	3665.18	3641.95	-435.87	40°10'16.900"N	104°42'12.887"W	0.00	
11117.00†	89.800	0.804	7312.08	3764.73	3741.94	-434.47	40°10'17.888"N	104°42'12.869"W	0.00	
11217.00†	89.800	0.804	7312.43	3864.28	3841.93	-433.06	40°10'18.876"N	104°42'12.851"W	0.00	
11317.00†	89.800	0.804	7312.77	3963.84	3941.92	-431.66	40°10'19.864"N	104°42'12.833"W	0.00	
11417.00†	89.800	0.804	7313.12	4063.39	4041.91	-430.26	40°10'20.852"N	104°42'12.815"W	0.00	
11517.00†	89.800	0.804	7313.47	4162.95	4141.90	-428.86	40°10'21.840"N	104°42'12.797"W	0.00	
11617.00†	89.800	0.804	7313.82	4262.50	4241.89	-427.45	40°10'22.828"N	104°42'12.779"W	0.00	
11717.00†	89.800	0.804	7314.17	4362.06	4341.88	-426.05	40°10'23.817"N	104°42'12.760"W	0.00	
11817.00†	89.800	0.804	7314.52	4461.61	4441.86	-424.65	40°10'24.805"N	104°42'12.742"W	0.00	
11917.00†	89.800	0.804	7314.87	4561.17	4541.85	-423.24	40°10'25.793"N	104°42'12.724"W	0.00	
12017.00†	89.800	0.804	7315.22	4660.72	4641.84	-421.84	40°10'26.781"N	104°42'12.706"W	0.00	
12117.00†	89.800	0.804	7315.57	4760.28	4741.83	-420.44	40°10'27.769"N	104°42'12.688"W	0.00	
12217.00†	89.800	0.804	7315.91	4859.83	4841.82	-419.03	40°10'28.757"N	104°42'12.670"W	0.00	
12317.00†	89.800	0.804	7316.26	4959.39	4941.81	-417.63	40°10'29.745"N	104°42'12.652"W	0.00	
12417.00†	89.800	0.804	7316.61	5058.94	5041.80	-416.23	40°10'30.733"N	104°42'12.634"W	0.00	
12517.00†	89.800	0.804	7316.96	5158.50	5141.79	-414.82	40°10'31.721"N	104°42'12.616"W	0.00	
12528.20	89.800	0.804	7317.00 ¹	5169.65	5152.99	-414.67	40°10'31.832"N	104°42'12.614"W	0.00	End of Tangent (J)

HOLE & CASING SECTIONS - Ref Wellbore: NICHOLS 15C-31HZ PWB Ref Wellpath: NICHOLS 15C-31HZ (PERMIT) PWP

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	17.00	900.00	883.00	17.00	900.00	0.00	0.00	0.00	0.00
9.625in Casing Surface	17.00	900.00	883.00	17.00	900.00	0.00	0.00	0.00	0.00
8.75in Open Hole	900.00	7653.46	6753.46	900.00	7300.00	0.00	0.00	278.76	-483.07
7in Casing Intermediate	17.00	7653.46	7636.46	17.00	7300.00	0.00	0.00	278.76	-483.07
6.125in Open Hole	7653.46	12528.20	4874.74	7300.00	7317.00	278.76	-483.07	5152.99	-414.67
4.5in Casing Production	17.00	12528.20	12511.20	17.00	7317.00	0.00	0.00	5152.99	-414.67

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		0.00	2.96	119.91	3223144.85	1302635.55	40°09'40.939"N	104°42'05.728"W	polygon
NICHOLS PAD SECTION 6 LINES		0.00	2.96	119.91	3223144.85	1302635.55	40°09'40.939"N	104°42'05.728"W	polygon
NICHOLS PAD SEC. 31 HARDLINES (460' SETBACKS)		7118.00	2.96	119.91	3223144.85	1302635.55	40°09'40.939"N	104°42'05.728"W	polygon
NICHOLS PAD SEC. 6 HARDLINES (460' SETBACKS)		7118.00	2.96	119.91	3223144.85	1302635.55	40°09'40.939"N	104°42'05.728"W	polygon
1) NICHOLS 15C-31HZ BHL ON PLAT (300'FSL & 1858'FEL,SEC.31) REV-1	12528.20	7317.00	5152.99	-414.67	3222563.98	1307780.34	40°10'31.832"N	104°42'12.614"W	point

SURVEY PROGRAM - Ref Wellbore: NICHOLS 15C-31HZ PWB Ref Wellpath: NICHOLS 15C-31HZ (PERMIT) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	12528.20	NaviTrak (Standard)		NICHOLS 15C-31HZ PWB



Planned Wellpath Report

NICHOLS 15C-31HZ (PERMIT) PWP

Page 5 of 5



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#12 NICHOLS 15C-31HZ (346'FSL & 1381'FEL,SEC.6)
Area	COLORADO	Well	NICHOLS 15C-31HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 15C-31HZ PWB
Facility	SEC.06-T2N-R65W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
3968.46	5.750	236.500	3956.00	PARKMAN
4461.95	5.750	236.500	4447.00	SUSSEX
6973.40	22.281	349.111	6941.00	SHARON SPRINGS
7050.26	29.826	352.480	7010.00	NIOBRARA A
7079.51	32.714	353.382	7035.00	NIOBRARA B
7215.83	46.227	356.251	7140.00	NIOBRARA C
7478.56	72.373	359.307	7273.00	FORT HAYS
7579.59	82.439	0.188	7295.00	CODELL