

KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#03 NICHOLS 2N-5HZ (2486'FNL & 2077'FEL, SEC.08)
 Field: WELD COUNTY (KERR MCGEE) Well: NICHOLS 2N-5HZ
 Facility: SEC.08-T2N-R65W Wellbore: NICHOLS 2N-5HZ PWB

Plot reference wellpath is NICHOLS 2N-5HZ (PERMIT) PWB

True vertical depths are referenced to Rig on SLOT#03 NICHOLS 2N-5HZ (2486'FNL & 2077'FEL, SEC.08) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to Rig on SLOT#03 NICHOLS 2N-5HZ (2486'FNL & 2077'FEL, SEC.08) (RKB)	North Reference: True north
Rig on SLOT#03 NICHOLS 2N-5HZ (2486'FNL & 2077'FEL, SEC.08) (RKB) to Mean Sea Level: 4928 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#03 NICHOLS 2N-5HZ (2486'FNL & 2077'FEL, SEC.08)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: wjlsj02 on 5/31/2012

Location Information

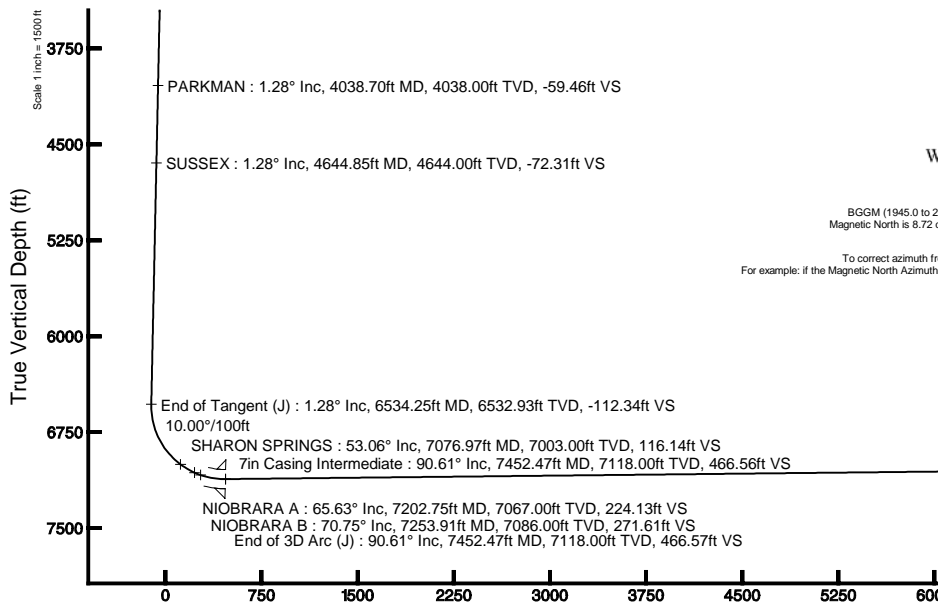
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude		
SEC.08-T2N-R65W	3197771.840	1268891.290	40°04'06.600"N	104°47'36.000"W		
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#03 NICHOLS 2N-5HZ (2486'FNL & 2077'FEL, SEC.08)	30751.03	30075.07	3227569.699	1299879.767	40°09'13.306"N	104°41'08.675"W
Rig on SLOT#03 NICHOLS 2N-5HZ (2486'FNL & 2077'FEL, SEC.08) (RKB) to Mud line (At Slot: SLOT#03 NICHOLS 2N-5HZ (2486'FNL & 2077'FEL, SEC.08))	4928ft					
Mean Sea Level to Mud line (At Slot: SLOT#03 NICHOLS 2N-5HZ (2486'FNL & 2077'FEL, SEC.08))	0ft					
Rig on SLOT#03 NICHOLS 2N-5HZ (2486'FNL & 2077'FEL, SEC.08) (RKB) to Mean Sea Level	4928ft					

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	162.500	17.00	0.00	0.00	0.00	0.00
End of Tangent	1200.00	0.000	162.500	1200.00	0.00	0.00	0.00	0.00
End of Build (J)	1264.00	1.280	162.500	1263.99	-0.68	0.21	2.00	-0.68
End of Tangent (J)	6534.25	1.280	162.500	6532.93	-112.96	35.62	0.00	-112.34
End of 3D Arc (J)	7452.47	90.606	0.654	7118.00	465.84	46.34	10.00	466.57
End of Tangent (J)	14166.63	90.606	0.654	7047.00	7179.18	122.96	0.00	7180.24

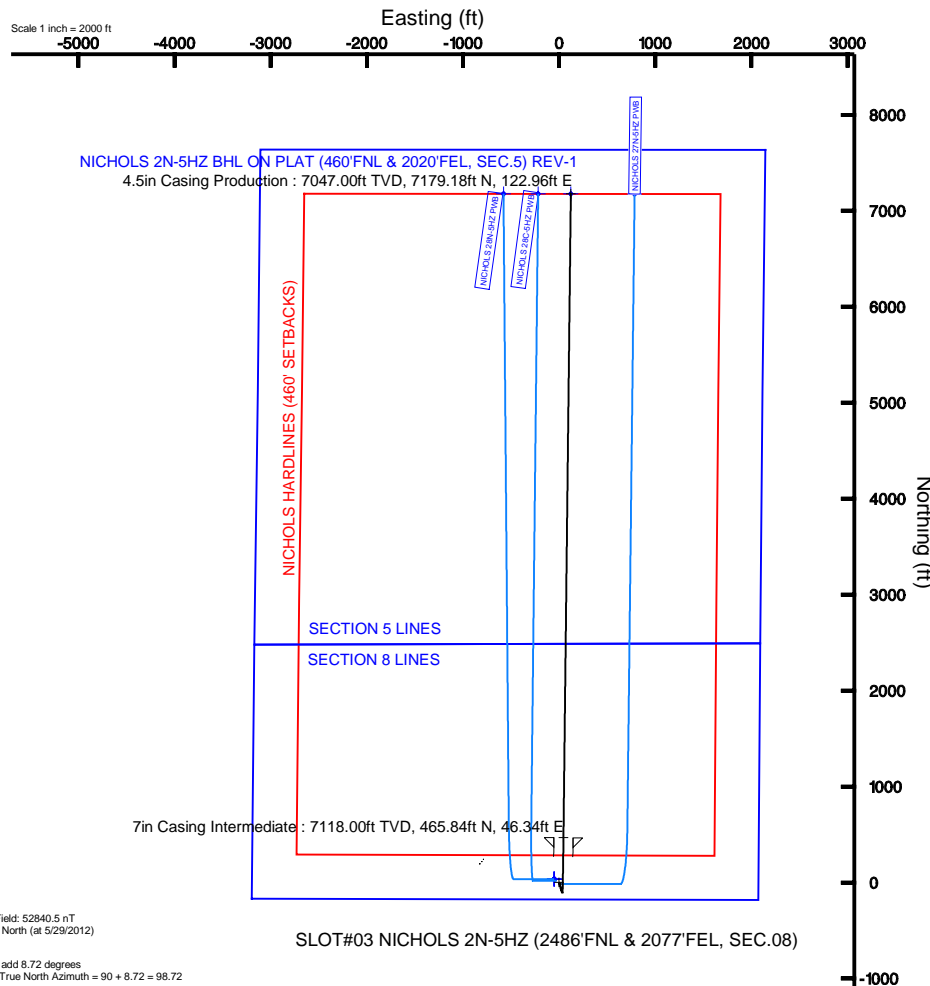
Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
NICHOLS SECTION 5 LINES		0.00	94.20	-49.46	3227549.93	1299913.51	40°09'13.644"N	104°41'09.312"W
NICHOLS SECTION 8 LINES		0.00	34.20	-49.46	3227549.93	1299913.51	40°09'13.644"N	104°41'09.312"W
NICHOLS 2N-5HZ BHL ON PLAT (460'FNL & 2020'FEL, SEC.5) REV-1	14166.63	7047.00	7179.18	122.96	3227656.73	1307059.46	40°10'24.251"N	104°41'07.691"W
NICHOLS HARDLINES (460' SETBACKS)		7200.00	34.20	-49.46	3227549.93	1299913.51	40°09'13.644"N	104°41'09.312"W



BGGM (1945.0 to 2013.0) Dip: 66.73° Field: 52840.5 nT
 Magnetic North is 8.72 degrees East of True North (at 5/29/2012)

To correct azimuth from Magnetic to True add 8.72 degrees
 For example: if the Magnetic North Azimuth = 90 degs, then the True North Azimuth = 90 + 8.72 = 98.72





Planned Wellpath Report
 NICHOLS 2N-5HZ (PERMIT) PWP
 Page 1 of 7

**REFERENCE WELLPATH IDENTIFICATION**

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#03 NICHOLS 2N-5HZ (2486'FNL & 2077'FEL, SEC.08)
Area	COLORADO	Well	NICHOLS 2N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 2N-5HZ PWB
Facility	SEC.08-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	Wilsje02
Scale	0.999958	Report Generated	5/31/2012 at 16:22:22
Convergence at slot	0.53° East	Database/Source file	WellArchitectDB/NICHOLS_2N-5HZ_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	30751.03	30075.07	3227599.70	1299879.77	40°09'13.306"N	104°41'08.675"W
Facility Reference Pt			3197771.84	1268891.29	40°04'09.600"N	104°47'36.000"W
Field Reference Pt			3197771.84	1268891.29	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on SLOT#03 NICHOLS 2N-5HZ (2486'FNL & 2077'FEL, SEC.08) (RKB) to Facility Vertical Datum
Horizontal Reference Pt	Slot	Rig on SLOT#03 NICHOLS 2N-5HZ (2486'FNL & 2077'FEL, SEC.08) (RKB) to Mean Sea Level
Vertical Reference Pt	Rig on SLOT#03 NICHOLS 2N-5HZ (2486'FNL & 2077'FEL, SEC.08) (RKB)	Rig on SLOT#03 NICHOLS 2N-5HZ (2486'FNL & 2077'FEL, SEC.08) (RKB) to Mud Line at Slot (SLOT#03 NICHOLS 2N-5H
MD Reference Pt	Rig on SLOT#03 NICHOLS 2N-5HZ (2486'FNL & 2077'FEL, SEC.08) (RKB)	Section Origin
Field Vertical Reference	Mean Sea Level	Section Azimuth



Planned Wellpath Report

NICHOLS 2N-5HZ (PERMIT) PWP
Page 2 of 7



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#03 NICHOLS 2N-5HZ (2486'FNL & 2077'FEL, SEC.08)
Area	COLORADO	Well	NICHOLS 2N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 2N-5HZ PWB
Facility	SEC.08-T2N-R65W		

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	162.500	0.00	0.00	0.00	0.00	40°09'13.306"N	104°41'08.675"W	0.00	
17.00	0.000	162.500	17.00	0.00	0.00	0.00	40°09'13.306"N	104°41'08.675"W	0.00	Tie On
117.00†	0.000	162.500	117.00	0.00	0.00	0.00	40°09'13.306"N	104°41'08.675"W	0.00	
217.00†	0.000	162.500	217.00	0.00	0.00	0.00	40°09'13.306"N	104°41'08.675"W	0.00	
317.00†	0.000	162.500	317.00	0.00	0.00	0.00	40°09'13.306"N	104°41'08.675"W	0.00	
417.00†	0.000	162.500	417.00	0.00	0.00	0.00	40°09'13.306"N	104°41'08.675"W	0.00	
517.00†	0.000	162.500	517.00	0.00	0.00	0.00	40°09'13.306"N	104°41'08.675"W	0.00	
617.00†	0.000	162.500	617.00	0.00	0.00	0.00	40°09'13.306"N	104°41'08.675"W	0.00	
717.00†	0.000	162.500	717.00	0.00	0.00	0.00	40°09'13.306"N	104°41'08.675"W	0.00	
817.00†	0.000	162.500	817.00	0.00	0.00	0.00	40°09'13.306"N	104°41'08.675"W	0.00	
917.00†	0.000	162.500	917.00	0.00	0.00	0.00	40°09'13.306"N	104°41'08.675"W	0.00	
1017.00†	0.000	162.500	1017.00	0.00	0.00	0.00	40°09'13.306"N	104°41'08.675"W	0.00	
1117.00†	0.000	162.500	1117.00	0.00	0.00	0.00	40°09'13.306"N	104°41'08.675"W	0.00	
1200.00	0.000	162.500	1200.00	0.00	0.00	0.00	40°09'13.306"N	104°41'08.675"W	0.00	End of Tangent
1217.00†	0.340	162.500	1217.00	-0.05	-0.05	0.02	40°09'13.306"N	104°41'08.675"W	2.00	
1264.00	1.280	162.500	1263.99	-0.68	-0.68	0.21	40°09'13.299"N	104°41'08.672"W	2.00	End of Build (J)
1317.00†	1.280	162.500	1316.98	-1.80	-1.81	0.57	40°09'13.288"N	104°41'08.668"W	0.00	
1417.00†	1.280	162.500	1416.96	-3.92	-3.94	1.24	40°09'13.267"N	104°41'08.659"W	0.00	
1517.00†	1.280	162.500	1516.93	-6.04	-6.07	1.91	40°09'13.246"N	104°41'08.650"W	0.00	
1617.00†	1.280	162.500	1616.91	-8.16	-8.20	2.59	40°09'13.225"N	104°41'08.642"W	0.00	
1717.00†	1.280	162.500	1716.88	-10.28	-10.33	3.26	40°09'13.204"N	104°41'08.633"W	0.00	
1817.00†	1.280	162.500	1816.86	-12.39	-12.46	3.93	40°09'13.183"N	104°41'08.624"W	0.00	
1917.00†	1.280	162.500	1916.83	-14.51	-14.59	4.60	40°09'13.162"N	104°41'08.616"W	0.00	
2017.00†	1.280	162.500	2016.81	-16.63	-16.72	5.27	40°09'13.141"N	104°41'08.607"W	0.00	
2117.00†	1.280	162.500	2116.78	-18.75	-18.85	5.94	40°09'13.120"N	104°41'08.598"W	0.00	
2217.00†	1.280	162.500	2216.76	-20.87	-20.98	6.62	40°09'13.099"N	104°41'08.590"W	0.00	
2317.00†	1.280	162.500	2316.73	-22.99	-23.12	7.29	40°09'13.078"N	104°41'08.581"W	0.00	
2417.00†	1.280	162.500	2416.71	-25.11	-25.25	7.96	40°09'13.057"N	104°41'08.572"W	0.00	
2517.00†	1.280	162.500	2516.68	-27.22	-27.38	8.63	40°09'13.035"N	104°41'08.564"W	0.00	
2617.00†	1.280	162.500	2616.66	-29.34	-29.51	9.30	40°09'13.014"N	104°41'08.555"W	0.00	
2717.00†	1.280	162.500	2716.63	-31.46	-31.64	9.98	40°09'12.993"N	104°41'08.547"W	0.00	
2817.00†	1.280	162.500	2816.61	-33.58	-33.77	10.65	40°09'12.972"N	104°41'08.538"W	0.00	
2917.00†	1.280	162.500	2916.58	-35.70	-35.90	11.32	40°09'12.951"N	104°41'08.529"W	0.00	
3017.00†	1.280	162.500	3016.56	-37.82	-38.03	11.99	40°09'12.930"N	104°41'08.521"W	0.00	
3117.00†	1.280	162.500	3116.53	-39.94	-40.16	12.66	40°09'12.909"N	104°41'08.512"W	0.00	
3217.00†	1.280	162.500	3216.51	-42.05	-42.29	13.33	40°09'12.888"N	104°41'08.503"W	0.00	
3317.00†	1.280	162.500	3316.48	-44.17	-44.42	14.01	40°09'12.867"N	104°41'08.495"W	0.00	
3417.00†	1.280	162.500	3416.46	-46.29	-46.55	14.68	40°09'12.846"N	104°41'08.486"W	0.00	
3517.00†	1.280	162.500	3516.43	-48.41	-48.68	15.35	40°09'12.825"N	104°41'08.477"W	0.00	
3617.00†	1.280	162.500	3616.41	-50.53	-50.81	16.02	40°09'12.804"N	104°41'08.469"W	0.00	
3717.00†	1.280	162.500	3716.38	-52.65	-52.94	16.69	40°09'12.783"N	104°41'08.460"W	0.00	
3817.00†	1.280	162.500	3816.36	-54.77	-55.07	17.36	40°09'12.762"N	104°41'08.451"W	0.00	
3917.00†	1.280	162.500	3916.33	-56.89	-57.20	18.04	40°09'12.741"N	104°41'08.443"W	0.00	
4017.00†	1.280	162.500	4016.31	-59.00	-59.33	18.71	40°09'12.720"N	104°41'08.434"W	0.00	
4038.70†	1.280	162.500	4038.00	-59.46	-59.80	18.85	40°09'12.715"N	104°41'08.432"W	0.00	PARKMAN



Planned Wellpath Report

NICHOLS 2N-5HZ (PERMIT) PWP
Page 3 of 7



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#03 NICHOLS 2N-5HZ (2486'FNL & 2077'FEL, SEC.08)
Area	COLORADO	Well	NICHOLS 2N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 2N-5HZ PWB
Facility	SEC.08-T2N-R65W		

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
4117.00†	1.280	162.500	4116.28	-61.12	-61.46	19.38	40°09'12.699"N	104°41'08.425"W	0.00	
4217.00†	1.280	162.500	4216.26	-63.24	-63.59	20.05	40°09'12.678"N	104°41'08.417"W	0.00	
4317.00†	1.280	162.500	4316.23	-65.36	-65.72	20.72	40°09'12.657"N	104°41'08.408"W	0.00	
4417.00†	1.280	162.500	4416.21	-67.48	-67.85	21.39	40°09'12.635"N	104°41'08.399"W	0.00	
4517.00†	1.280	162.500	4516.18	-69.60	-69.99	22.07	40°09'12.614"N	104°41'08.391"W	0.00	
4617.00†	1.280	162.500	4616.16	-71.72	-72.12	22.74	40°09'12.593"N	104°41'08.382"W	0.00	
4644.85†	1.280	162.500	4644.00	-72.31	-72.71	22.93	40°09'12.587"N	104°41'08.380"W	0.00	SUSSEX
4717.00†	1.280	162.500	4716.13	-73.83	-74.25	23.41	40°09'12.572"N	104°41'08.374"W	0.00	
4817.00†	1.280	162.500	4816.11	-75.95	-76.38	24.08	40°09'12.551"N	104°41'08.365"W	0.00	
4917.00†	1.280	162.500	4916.08	-78.07	-78.51	24.75	40°09'12.530"N	104°41'08.356"W	0.00	
5017.00†	1.280	162.500	5016.06	-80.19	-80.64	25.42	40°09'12.509"N	104°41'08.348"W	0.00	
5117.00†	1.280	162.500	5116.03	-82.31	-82.77	26.10	40°09'12.488"N	104°41'08.339"W	0.00	
5217.00†	1.280	162.500	5216.01	-84.43	-84.90	26.77	40°09'12.467"N	104°41'08.330"W	0.00	
5317.00†	1.280	162.500	5315.98	-86.55	-87.03	27.44	40°09'12.446"N	104°41'08.322"W	0.00	
5417.00†	1.280	162.500	5415.96	-88.66	-89.16	28.11	40°09'12.425"N	104°41'08.313"W	0.00	
5517.00†	1.280	162.500	5515.93	-90.78	-91.29	28.78	40°09'12.404"N	104°41'08.304"W	0.00	
5617.00†	1.280	162.500	5615.91	-92.90	-93.42	29.46	40°09'12.383"N	104°41'08.296"W	0.00	
5717.00†	1.280	162.500	5715.88	-95.02	-95.55	30.13	40°09'12.362"N	104°41'08.287"W	0.00	
5817.00†	1.280	162.500	5815.86	-97.14	-97.68	30.80	40°09'12.341"N	104°41'08.278"W	0.00	
5917.00†	1.280	162.500	5915.83	-99.26	-99.81	31.47	40°09'12.320"N	104°41'08.270"W	0.00	
6017.00†	1.280	162.500	6015.81	-101.38	-101.94	32.14	40°09'12.299"N	104°41'08.261"W	0.00	
6117.00†	1.280	162.500	6115.78	-103.50	-104.07	32.81	40°09'12.278"N	104°41'08.252"W	0.00	
6217.00†	1.280	162.500	6215.76	-105.61	-106.20	33.49	40°09'12.256"N	104°41'08.244"W	0.00	
6317.00†	1.280	162.500	6315.73	-107.73	-108.33	34.16	40°09'12.235"N	104°41'08.235"W	0.00	
6417.00†	1.280	162.500	6415.71	-109.85	-110.46	34.83	40°09'12.214"N	104°41'08.226"W	0.00	
6517.00†	1.280	162.500	6515.68	-111.97	-112.59	35.50	40°09'12.193"N	104°41'08.218"W	0.00	
6534.25	1.280	162.500	6532.93	-112.34	-112.96	35.62	40°09'12.190"N	104°41'08.216"W	0.00	End of Tangent (J)
6617.00†	7.070	3.877	6615.50	-108.12	-108.75	36.24	40°09'12.231"N	104°41'08.208"W	10.00	
6717.00†	17.063	1.958	6713.17	-87.25	-87.90	37.16	40°09'12.437"N	104°41'08.196"W	10.00	
6817.00†	27.061	1.439	6805.73	-49.74	-50.40	38.23	40°09'12.808"N	104°41'08.183"W	10.00	
6917.00†	37.061	1.186	6890.37	3.28	2.60	39.43	40°09'13.332"N	104°41'08.167"W	10.00	
7017.00†	47.060	1.029	6964.52	70.18	69.49	40.72	40°09'13.993"N	104°41'08.151"W	10.00	
7076.97†	53.057	0.958	7003.00	116.14	115.45	41.51	40°09'14.447"N	104°41'08.140"W	10.00	SHARON SPRINGS
7117.00†	57.060	0.917	7025.92	148.95	148.25	42.05	40°09'14.771"N	104°41'08.133"W	10.00	
7202.75†	65.634	0.839	7067.00	224.13	223.42	43.20	40°09'15.514"N	104°41'08.119"W	10.00	NIOBARA A
7217.00†	67.059	0.827	7072.72	237.18	236.47	43.39	40°09'15.643"N	104°41'08.116"W	10.00	
7253.91†	70.750	0.797	7086.00	271.61	270.90	43.88	40°09'15.983"N	104°41'08.110"W	10.00	NIOBARA B
7317.00†	77.059	0.750	7103.48	332.19	331.48	44.70	40°09'16.582"N	104°41'08.099"W	10.00	
7417.00†	87.059	0.679	7117.28	431.11	430.38	45.93	40°09'17.559"N	104°41'08.084"W	10.00	
7452.47	90.606	0.654	7118.00	466.57	465.84	46.34	40°09'17.909"N	104°41'08.078"W	10.00	End of 3D Arc (J)
7517.00†	90.606	0.654	7117.32	531.09	530.36	47.08	40°09'18.547"N	104°41'08.069"W	0.00	
7617.00†	90.606	0.654	7116.26	631.08	630.35	48.22	40°09'19.535"N	104°41'08.054"W	0.00	
7717.00†	90.606	0.654	7115.21	731.08	730.34	49.36	40°09'20.523"N	104°41'08.039"W	0.00	
7817.00†	90.606	0.654	7114.15	831.07	830.33	50.50	40°09'21.511"N	104°41'08.025"W	0.00	
7917.00†	90.606	0.654	7113.09	931.06	930.31	51.64	40°09'22.499"N	104°41'08.010"W	0.00	



Planned Wellpath Report

NICHOLS 2N-5HZ (PERMIT) PWP
Page 4 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#03 NICHOLS 2N-5HZ (2486'FNL & 2077'FEL, SEC.08)
Area	COLORADO	Well	NICHOLS 2N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 2N-5HZ PWB
Facility	SEC.08-T2N-R65W		

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
8017.00†	90.606	0.654	7112.03	1031.05	1030.30	52.78	40°09'23.487"N	104°41'07.995"W	0.00	
8117.00†	90.606	0.654	7110.98	1131.05	1130.29	53.92	40°09'24.476"N	104°41'07.981"W	0.00	
8217.00†	90.606	0.654	7109.92	1231.04	1230.28	55.06	40°09'25.464"N	104°41'07.966"W	0.00	
8317.00†	90.606	0.654	7108.86	1331.03	1330.26	56.21	40°09'26.452"N	104°41'07.951"W	0.00	
8417.00†	90.606	0.654	7107.80	1431.03	1430.25	57.35	40°09'27.440"N	104°41'07.936"W	0.00	
8517.00†	90.606	0.654	7106.75	1531.02	1530.24	58.49	40°09'28.428"N	104°41'07.922"W	0.00	
8617.00†	90.606	0.654	7105.69	1631.01	1630.23	59.63	40°09'29.416"N	104°41'07.907"W	0.00	
8717.00†	90.606	0.654	7104.63	1731.00	1730.22	60.77	40°09'30.404"N	104°41'07.892"W	0.00	
8817.00†	90.606	0.654	7103.57	1831.00	1830.20	61.91	40°09'31.392"N	104°41'07.878"W	0.00	
8917.00†	90.606	0.654	7102.52	1930.99	1930.19	63.05	40°09'32.380"N	104°41'07.863"W	0.00	
9017.00†	90.606	0.654	7101.46	2030.98	2030.18	64.19	40°09'33.368"N	104°41'07.848"W	0.00	
9117.00†	90.606	0.654	7100.40	2130.97	2130.17	65.33	40°09'34.356"N	104°41'07.834"W	0.00	
9217.00†	90.606	0.654	7099.34	2230.97	2230.16	66.48	40°09'35.345"N	104°41'07.819"W	0.00	
9317.00†	90.606	0.654	7098.29	2330.96	2330.14	67.62	40°09'36.333"N	104°41'07.804"W	0.00	
9417.00†	90.606	0.654	7097.23	2430.95	2430.13	68.76	40°09'37.321"N	104°41'07.789"W	0.00	
9517.00†	90.606	0.654	7096.17	2530.95	2530.12	69.90	40°09'38.309"N	104°41'07.775"W	0.00	
9617.00†	90.606	0.654	7095.11	2630.94	2630.11	71.04	40°09'39.297"N	104°41'07.760"W	0.00	
9717.00†	90.606	0.654	7094.06	2730.93	2730.10	72.18	40°09'40.285"N	104°41'07.745"W	0.00	
9817.00†	90.606	0.654	7093.00	2830.92	2830.08	73.32	40°09'41.273"N	104°41'07.731"W	0.00	
9917.00†	90.606	0.654	7091.94	2930.92	2930.07	74.46	40°09'42.261"N	104°41'07.716"W	0.00	
10017.00†	90.606	0.654	7090.88	3030.91	3030.06	75.61	40°09'43.249"N	104°41'07.701"W	0.00	
10117.00†	90.606	0.654	7089.83	3130.90	3130.05	76.75	40°09'44.237"N	104°41'07.686"W	0.00	
10217.00†	90.606	0.654	7088.77	3230.90	3230.03	77.89	40°09'45.225"N	104°41'07.672"W	0.00	
10317.00†	90.606	0.654	7087.71	3330.89	3330.02	79.03	40°09'46.213"N	104°41'07.657"W	0.00	
10417.00†	90.606	0.654	7086.65	3430.88	3430.01	80.17	40°09'47.202"N	104°41'07.642"W	0.00	
10517.00†	90.606	0.654	7085.60	3530.87	3530.00	81.31	40°09'48.190"N	104°41'07.628"W	0.00	
10617.00†	90.606	0.654	7084.54	3630.87	3629.99	82.45	40°09'49.178"N	104°41'07.613"W	0.00	
10717.00†	90.606	0.654	7083.48	3730.86	3729.97	83.59	40°09'50.166"N	104°41'07.598"W	0.00	
10817.00†	90.606	0.654	7082.42	3830.85	3829.96	84.73	40°09'51.154"N	104°41'07.584"W	0.00	
10917.00†	90.606	0.654	7081.37	3930.84	3929.95	85.88	40°09'52.142"N	104°41'07.569"W	0.00	
11017.00†	90.606	0.654	7080.31	4030.84	4029.94	87.02	40°09'53.130"N	104°41'07.554"W	0.00	
11117.00†	90.606	0.654	7079.25	4130.83	4129.93	88.16	40°09'54.118"N	104°41'07.539"W	0.00	
11217.00†	90.606	0.654	7078.19	4230.82	4229.91	89.30	40°09'55.106"N	104°41'07.525"W	0.00	
11317.00†	90.606	0.654	7077.14	4330.82	4329.90	90.44	40°09'56.094"N	104°41'07.510"W	0.00	
11417.00†	90.606	0.654	7076.08	4430.81	4429.89	91.58	40°09'57.082"N	104°41'07.495"W	0.00	
11517.00†	90.606	0.654	7075.02	4530.80	4529.88	92.72	40°09'58.070"N	104°41'07.481"W	0.00	
11617.00†	90.606	0.654	7073.96	4630.79	4629.87	93.86	40°09'59.059"N	104°41'07.466"W	0.00	
11717.00†	90.606	0.654	7072.90	4730.79	4729.85	95.01	40°10'00.047"N	104°41'07.451"W	0.00	
11817.00†	90.606	0.654	7071.85	4830.78	4829.84	96.15	40°10'01.035"N	104°41'07.437"W	0.00	
11917.00†	90.606	0.654	7070.79	4930.77	4929.83	97.29	40°10'02.023"N	104°41'07.422"W	0.00	
12017.00†	90.606	0.654	7069.73	5030.77	5029.82	98.43	40°10'03.011"N	104°41'07.407"W	0.00	
12117.00†	90.606	0.654	7068.67	5130.76	5129.80	99.57	40°10'03.999"N	104°41'07.392"W	0.00	
12217.00†	90.606	0.654	7067.62	5230.75	5229.79	100.71	40°10'04.987"N	104°41'07.378"W	0.00	
12317.00†	90.606	0.654	7066.56	5330.74	5329.78	101.85	40°10'05.975"N	104°41'07.363"W	0.00	
12417.00†	90.606	0.654	7065.50	5430.74	5429.77	102.99	40°10'06.963"N	104°41'07.348"W	0.00	



Planned Wellpath Report

NICHOLS 2N-5HZ (PERMIT) PWP
Page 5 of 7



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#03 NICHOLS 2N-5HZ (2486°FNL & 2077°FEL, SEC.08)
Area	COLORADO	Well	NICHOLS 2N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 2N-5HZ PWB
Facility	SEC.08-T2N-R65W		

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
12517.00†	90.606	0.654	7064.44	5530.73	5529.76	104.13	40°10'07.951"N	104°41'07.334"W	0.00	
12617.00†	90.606	0.654	7063.39	5630.72	5629.74	105.28	40°10'08.939"N	104°41'07.319"W	0.00	
12717.00†	90.606	0.654	7062.33	5730.71	5729.73	106.42	40°10'09.927"N	104°41'07.304"W	0.00	
12817.00†	90.606	0.654	7061.27	5830.71	5829.72	107.56	40°10'10.916"N	104°41'07.289"W	0.00	
12917.00†	90.606	0.654	7060.21	5930.70	5929.71	108.70	40°10'11.904"N	104°41'07.275"W	0.00	
13017.00†	90.606	0.654	7059.16	6030.69	6029.70	109.84	40°10'12.892"N	104°41'07.260"W	0.00	
13117.00†	90.606	0.654	7058.10	6130.69	6129.68	110.98	40°10'13.880"N	104°41'07.245"W	0.00	
13217.00†	90.606	0.654	7057.04	6230.68	6229.67	112.12	40°10'14.868"N	104°41'07.231"W	0.00	
13317.00†	90.606	0.654	7055.98	6330.67	6329.66	113.26	40°10'15.856"N	104°41'07.216"W	0.00	
13417.00†	90.606	0.654	7054.93	6430.66	6429.65	114.41	40°10'16.844"N	104°41'07.201"W	0.00	
13517.00†	90.606	0.654	7053.87	6530.66	6529.64	115.55	40°10'17.832"N	104°41'07.187"W	0.00	
13617.00†	90.606	0.654	7052.81	6630.65	6629.62	116.69	40°10'18.820"N	104°41'07.172"W	0.00	
13717.00†	90.606	0.654	7051.75	6730.64	6729.61	117.83	40°10'19.808"N	104°41'07.157"W	0.00	
13817.00†	90.606	0.654	7050.70	6830.63	6829.60	118.97	40°10'20.796"N	104°41'07.142"W	0.00	
13917.00†	90.606	0.654	7049.64	6930.63	6929.59	120.11	40°10'21.784"N	104°41'07.128"W	0.00	
14017.00†	90.606	0.654	7048.58	7030.62	7029.57	121.25	40°10'22.773"N	104°41'07.113"W	0.00	
14117.00†	90.606	0.654	7047.52	7130.61	7129.56	122.39	40°10'23.761"N	104°41'07.098"W	0.00	
14166.63	90.606	0.654	7047.00 [†]	7180.24	7179.18	122.96	40°10'24.251"N	104°41'07.091"W	0.00	End of Tangent (J)

HOLE & CASING SECTIONS - Ref Wellbore: NICHOLS 2N-5HZ PWB Ref Wellpath: NICHOLS 2N-5HZ (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	825.00	808.00	17.00	825.00	0.00	0.00	0.00	0.00
9.625in Casing Surface	17.00	825.00	808.00	17.00	825.00	0.00	0.00	0.00	0.00
8.75in Open Hole	825.00	7452.47	6627.47	825.00	7118.00	0.00	0.00	465.84	46.34
7in Casing Intermediate	17.00	7452.47	7435.47	17.00	7118.00	0.00	0.00	465.84	46.34
6.125in Open Hole	7452.47	14166.63	6714.16	7118.00	7047.00	465.84	46.34	7179.18	122.96
4.5in Casing Production	17.00	14166.63	14149.63	17.00	7047.00	0.00	0.00	7179.18	122.96



Planned Wellpath Report

NICHOLS 2N-5HZ (PERMIT) PWP

Page 6 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#03 NICHOLS 2N-5HZ (2486'FNL & 2077'FEL, SEC.08)
Area	COLORADO	Well	NICHOLS 2N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 2N-5HZ PWB
Facility	SEC.08-T2N-R65W		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
NICHOLS SECTION 5 LINES		0.00	34.20	-49.46	3227549.93	1299913.51	40°09'13.644"N	104°41'09.312"W	polygon
NICHOLS SECTION 8 LINES		0.00	34.20	-49.46	3227549.93	1299913.51	40°09'13.644"N	104°41'09.312"W	polygon
1) NICHOLS 2N-5HZ BHL ON PLAT (460'FNL & 2020'FEL, SEC.5) REV-1	14166.63	7047.00	7179.18	122.96	3227656.73	1307059.46	40°10'24.251"N	104°41'07.091"W	point
NICHOLS HARDLINES (460' SETBACKS)		7200.00	34.20	-49.46	3227549.93	1299913.51	40°09'13.644"N	104°41'09.312"W	polygon

SURVEY PROGRAM - Ref Wellbore: NICHOLS 2N-5HZ PWB Ref Wellpath: NICHOLS 2N-5HZ (PERMIT) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	14166.63	NaviTrak (Standard)		NICHOLS 2N-5HZ PWB



Planned Wellpath Report
 NICHOLS 2N-5HZ (PERMIT) PWP
 Page 7 of 7



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#03 NICHOLS 2N-5HZ (2486'FNL & 2077'FEL, SEC.08)
Area	COLORADO	Well	NICHOLS 2N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 2N-5HZ PWB
Facility	SEC.08-T2N-R65W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
4038.70	1.280	162.500	4038.00	PARKMAN
4644.85	1.280	162.500	4644.00	SUSSEX
7076.97	53.057	0.958	7003.00	SHARON SPRINGS
7202.75	65.634	0.839	7067.00	NIOBRARA A
7253.91	70.750	0.797	7086.00	NIOBRARA B