

KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#09 NICHOLS 30C-5HZ (2399'FNL & 250'FWL, SEC.08)
Field: WELD COUNTY (KERR MCGEE) Well: NICHOLS 30C-5HZ
Facility: SEC.08-T2N-R65W Wellbore: NICHOLS 30C-5HZ PWB

Plot reference wellpath is NICHOLS 30C-5HZ (PERMIT) PWB

True vertical depths are referenced to Rig on SLOT#09 NICHOLS 30C-5HZ (2399'FNL & 250'FWL, SEC.08) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to Rig on SLOT#09 NICHOLS 30C-5HZ (2399'FNL & 250'FWL, SEC.08) (RKB)	North Reference: True north
Rig on SLOT#09 NICHOLS 30C-5HZ (2399'FNL & 250'FWL, SEC.08) (RKB) to Mean Sea Level: 4963 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#09 NICHOLS 30C-5HZ (2399'FNL & 250'FWL, SEC.08)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: wlsjef02 on 6/5/2012

Location Information

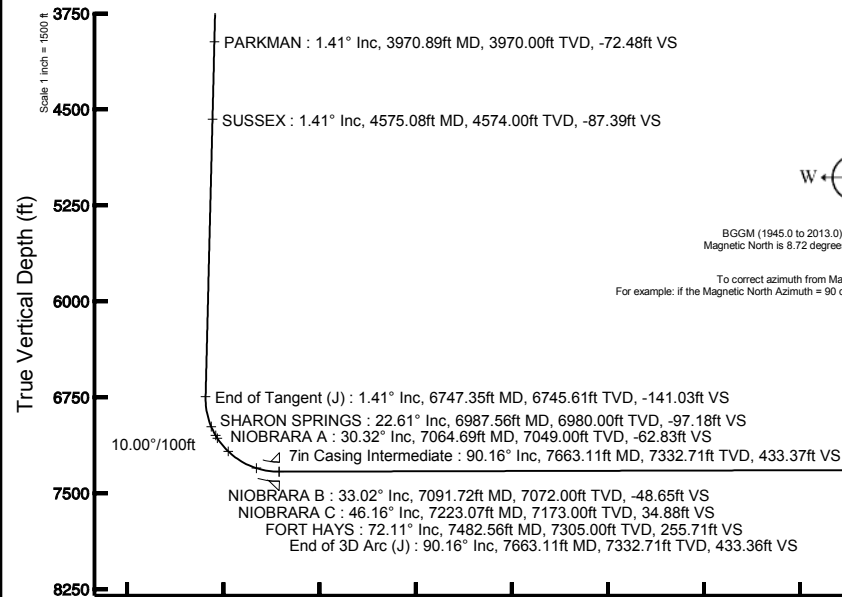
Facility Name	Grid East (US ft)	Latitude	Longitude
SEC.08-T2N-R65W	3197771.840	1268891.290	40°04'09.600"N 104°47'36.000"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)
SLOT#09 NICHOLS 30C-5HZ (2399'FNL & 250'FWL, SEC.08)	30826.96	27130.10	3224654.336
Rig on SLOT#09 NICHOLS 30C-5HZ (2399'FNL & 250'FWL, SEC.08) (RKB) to Mud line (At Slot: SLOT#09 NICHOLS 30C-5HZ (2399'FNL & 250'FWL, SEC.08))	4963ft		
Mean Sea Level to Mud line (At Slot: SLOT#09 NICHOLS 30C-5HZ (2399'FNL & 250'FWL, SEC.08))	0ft		
Rig on SLOT#09 NICHOLS 30C-5HZ (2399'FNL & 250'FWL, SEC.08) (RKB) to Mean Sea Level	4963ft		

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	181.600	17.00	0.00	0.00	0.00	0.00
End of Tangent	1000.00	0.000	181.600	1000.00	0.00	0.00	0.00	0.00
End of Build (J)	1070.75	1.415	181.600	1070.74	-0.87	-0.02	2.00	-0.87
End of Tangent (J)	6747.35	1.415	181.600	6745.61	-141.00	-3.94	0.00	-141.03
End of 3D Arc (J)	7663.11	90.161	0.568	7332.71	433.37	1.49	10.00	433.36
End of Tangent (J)	14332.47	90.161	0.568	7314.00	7102.38	67.61	0.00	7102.70

Targets

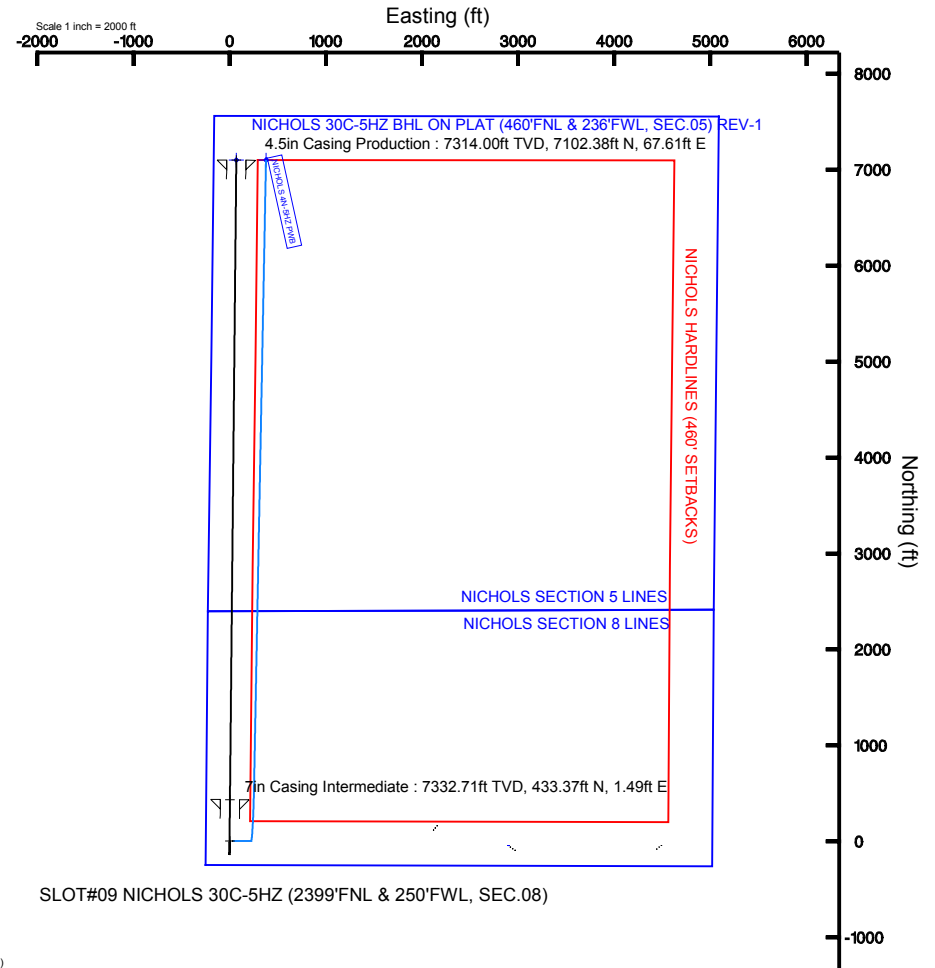
Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
NICHOLS SECTION 5 LINES		35.00	-44.96	2895.43	3227549.93	1299913.51	40°09'13.644"N	104°41'09.312"W
NICHOLS SECTION 8 LINES		35.00	-44.96	2895.43	3227549.93	1299913.51	40°09'13.644"N	104°41'09.312"W
NICHOLS HARDLINES (460' SETBACKS)		7235.00	-44.96	2895.43	3227549.93	1299913.51	40°09'13.644"N	104°41'09.312"W
NICHOLS 30C-5HZ BHL ON PLAT (460'FNL & 236'FWL, SEC.05) REV-1	14332.47	7314.00	7102.38	67.61	3224657.57	1307034.62	40°10'24.276"N	104°41'45.730"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

Vertical Section (ft)
Azimuth 0.55° with reference 0.00 N, 0.00 E



SLOT#09 NICHOLS 30C-5HZ (2399'FNL & 250'FWL, SEC.08)

4.5in Casing Production : 90.16° Inc, 14332.47ft MD, 7314.00ft TVD, 7102.70ft VS
End of Tangent (J) : 90.16° Inc, 14332.47ft MD, 7314.00ft TVD, 7102.70ft VS
NICHOLS 30C-5HZ BHL ON PLAT (460'FNL & 236'FWL, SEC.05) REV-1

Scale 1 inch = 1500 ft



Planned Wellpath Report

NICHOLS 30C-5HZ (PERMIT) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 NICHOLS 30C-5HZ (2399'FNL & 250'FWL, SEC.08)
Area	COLORADO	Well	NICHOLS 30C-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 30C-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	Wilsjef02
Scale	0.999958	Report Generated	6/5/2012 at 16:50:23
Convergence at slot	0.52° East	Database/Source file	WellArchitectDB/NICHOLS_30C-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	30826.96	27130.10	3224654.34	1299932.23	40°09'14.090"N	104°41'46.601"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#09 NICHOLS 30C-5HZ (2399'FNL & 250'FWL, SEC.08) (RKB) to Facility Vertical Datum
Horizontal Reference Pt	Slot	Rig on SLOT#09 NICHOLS 30C-5HZ (2399'FNL & 250'FWL, SEC.08) (RKB) to Mean Sea Level
Vertical Reference Pt	Rig on SLOT#09 NICHOLS 30C-5HZ (2399'FNL & 250'FWL, SEC.08) (RKB)	Rig on SLOT#09 NICHOLS 30C-5HZ (2399'FNL & 250'FWL, SEC.08) (RKB) to Mud Line at Slot (SLOT#09 NICHOLS 30C-
MD Reference Pt	Rig on SLOT#09 NICHOLS 30C-5HZ (2399'FNL & 250'FWL, SEC.08) (RKB)	Section Origin
Field Vertical Reference	Mean Sea Level	Section Azimuth



Planned Wellpath Report

NICHOLS 30C-5HZ (PERMIT) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 NICHOLS 30C-5HZ (2399'FNL & 250'FWL, SEC.08)
Area	COLORADO	Well	NICHOLS 30C-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 30C-5HZ PWB
Facility	SEC.08-T2N-R6SW		

WELLPATH DATA (157 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	181.600	0.00	0.00	0.00	0.00	40°09'14.090"N	104°41'46.601"W	0.00	
17.00	0.000	181.600	17.00	0.00	0.00	0.00	40°09'14.090"N	104°41'46.601"W	0.00	Tie On
117.00†	0.000	181.600	117.00	0.00	0.00	0.00	40°09'14.090"N	104°41'46.601"W	0.00	
217.00†	0.000	181.600	217.00	0.00	0.00	0.00	40°09'14.090"N	104°41'46.601"W	0.00	
317.00†	0.000	181.600	317.00	0.00	0.00	0.00	40°09'14.090"N	104°41'46.601"W	0.00	
417.00†	0.000	181.600	417.00	0.00	0.00	0.00	40°09'14.090"N	104°41'46.601"W	0.00	
517.00†	0.000	181.600	517.00	0.00	0.00	0.00	40°09'14.090"N	104°41'46.601"W	0.00	
617.00†	0.000	181.600	617.00	0.00	0.00	0.00	40°09'14.090"N	104°41'46.601"W	0.00	
717.00†	0.000	181.600	717.00	0.00	0.00	0.00	40°09'14.090"N	104°41'46.601"W	0.00	
817.00†	0.000	181.600	817.00	0.00	0.00	0.00	40°09'14.090"N	104°41'46.601"W	0.00	
917.00†	0.000	181.600	917.00	0.00	0.00	0.00	40°09'14.090"N	104°41'46.601"W	0.00	
1000.00	0.000	181.600	1000.00	0.00	0.00	0.00	40°09'14.090"N	104°41'46.601"W	0.00	End of Tangent
1017.00†	0.340	181.600	1017.00	-0.05	-0.05	0.00	40°09'14.090"N	104°41'46.601"W	2.00	
1070.75	1.415	181.600	1070.74	-0.87	-0.87	-0.02	40°09'14.081"N	104°41'46.601"W	2.00	End of Build (J)
1117.00†	1.415	181.600	1116.98	-2.02	-2.01	-0.06	40°09'14.070"N	104°41'46.602"W	0.00	
1217.00†	1.415	181.600	1216.95	-4.48	-4.48	-0.13	40°09'14.046"N	104°41'46.603"W	0.00	
1317.00†	1.415	181.600	1316.92	-6.95	-6.95	-0.19	40°09'14.021"N	104°41'46.604"W	0.00	
1417.00†	1.415	181.600	1416.89	-9.42	-9.42	-0.26	40°09'13.997"N	104°41'46.604"W	0.00	
1517.00†	1.415	181.600	1516.86	-11.89	-11.89	-0.33	40°09'13.973"N	104°41'46.605"W	0.00	
1617.00†	1.415	181.600	1616.83	-14.36	-14.36	-0.40	40°09'13.948"N	104°41'46.606"W	0.00	
1717.00†	1.415	181.600	1716.80	-16.83	-16.83	-0.47	40°09'13.924"N	104°41'46.607"W	0.00	
1817.00†	1.415	181.600	1816.77	-19.30	-19.29	-0.54	40°09'13.899"N	104°41'46.608"W	0.00	
1917.00†	1.415	181.600	1916.73	-21.77	-21.76	-0.61	40°09'13.875"N	104°41'46.609"W	0.00	
2017.00†	1.415	181.600	2016.70	-24.24	-24.23	-0.68	40°09'13.851"N	104°41'46.610"W	0.00	
2117.00†	1.415	181.600	2116.67	-26.71	-26.70	-0.75	40°09'13.826"N	104°41'46.611"W	0.00	
2217.00†	1.415	181.600	2216.64	-29.17	-29.17	-0.81	40°09'13.802"N	104°41'46.611"W	0.00	
2317.00†	1.415	181.600	2316.61	-31.64	-31.64	-0.88	40°09'13.777"N	104°41'46.612"W	0.00	
2417.00†	1.415	181.600	2416.58	-34.11	-34.10	-0.95	40°09'13.753"N	104°41'46.613"W	0.00	
2517.00†	1.415	181.600	2516.55	-36.58	-36.57	-1.02	40°09'13.729"N	104°41'46.614"W	0.00	
2617.00†	1.415	181.600	2616.52	-39.05	-39.04	-1.09	40°09'13.704"N	104°41'46.615"W	0.00	
2717.00†	1.415	181.600	2716.49	-41.52	-41.51	-1.16	40°09'13.680"N	104°41'46.616"W	0.00	
2817.00†	1.415	181.600	2816.46	-43.99	-43.98	-1.23	40°09'13.655"N	104°41'46.617"W	0.00	
2917.00†	1.415	181.600	2916.43	-46.46	-46.45	-1.30	40°09'13.631"N	104°41'46.618"W	0.00	
3017.00†	1.415	181.600	3016.40	-48.93	-48.92	-1.37	40°09'13.607"N	104°41'46.619"W	0.00	
3117.00†	1.415	181.600	3116.37	-51.39	-51.38	-1.44	40°09'13.582"N	104°41'46.619"W	0.00	
3217.00†	1.415	181.600	3216.34	-53.86	-53.85	-1.50	40°09'13.558"N	104°41'46.620"W	0.00	
3317.00†	1.415	181.600	3316.31	-56.33	-56.32	-1.57	40°09'13.533"N	104°41'46.621"W	0.00	
3417.00†	1.415	181.600	3416.28	-58.80	-58.79	-1.64	40°09'13.509"N	104°41'46.622"W	0.00	
3517.00†	1.415	181.600	3516.25	-61.27	-61.26	-1.71	40°09'13.485"N	104°41'46.623"W	0.00	
3617.00†	1.415	181.600	3616.22	-63.74	-63.73	-1.78	40°09'13.460"N	104°41'46.624"W	0.00	
3717.00†	1.415	181.600	3716.19	-66.21	-66.19	-1.85	40°09'13.436"N	104°41'46.625"W	0.00	
3817.00†	1.415	181.600	3816.16	-68.68	-68.66	-1.92	40°09'13.411"N	104°41'46.626"W	0.00	
3917.00†	1.415	181.600	3916.12	-71.15	-71.13	-1.99	40°09'13.387"N	104°41'46.627"W	0.00	
3970.89†	1.415	181.600	3970.00	-72.48	-72.46	-2.02	40°09'13.374"N	104°41'46.627"W	0.00	PARKMAN
4017.00†	1.415	181.600	4016.09	-73.62	-73.60	-2.06	40°09'13.363"N	104°41'46.627"W	0.00	



Planned Wellpath Report

NICHOLS 30C-5HZ (PERMIT) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 NICHOLS 30C-5HZ (2399'FNL & 250'FWL, SEC.08)
Area	COLORADO	Well	NICHOLS 30C-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 30C-5HZ PWB
Facility	SEC.08-T2N-R65W		

WELLPATH DATA (157 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4117.00†	1.415	181.600	4116.06	-76.08	-76.07	-2.12	40°09'13.338"N	104°41'46.628"W	0.00	
4217.00†	1.415	181.600	4216.03	-78.55	-78.54	-2.19	40°09'13.314"N	104°41'46.629"W	0.00	
4317.00†	1.415	181.600	4316.00	-81.02	-81.00	-2.26	40°09'13.290"N	104°41'46.630"W	0.00	
4417.00†	1.415	181.600	4415.97	-83.49	-83.47	-2.33	40°09'13.265"N	104°41'46.631"W	0.00	
4517.00†	1.415	181.600	4515.94	-85.96	-85.94	-2.40	40°09'13.241"N	104°41'46.632"W	0.00	
4575.08†	1.415	181.600	4574.00	-87.39	-87.37	-2.44	40°09'13.227"N	104°41'46.632"W	0.00	SUSSEX
4617.00†	1.415	181.600	4615.91	-88.43	-88.41	-2.47	40°09'13.216"N	104°41'46.633"W	0.00	
4717.00†	1.415	181.600	4715.88	-90.90	-90.88	-2.54	40°09'13.192"N	104°41'46.634"W	0.00	
4817.00†	1.415	181.600	4815.85	-93.37	-93.35	-2.61	40°09'13.168"N	104°41'46.635"W	0.00	
4917.00†	1.415	181.600	4915.82	-95.84	-95.82	-2.68	40°09'13.143"N	104°41'46.635"W	0.00	
5017.00†	1.415	181.600	5015.79	-98.31	-98.28	-2.75	40°09'13.119"N	104°41'46.636"W	0.00	
5117.00†	1.415	181.600	5115.76	-100.77	-100.75	-2.81	40°09'13.094"N	104°41'46.637"W	0.00	
5217.00†	1.415	181.600	5215.73	-103.24	-103.22	-2.88	40°09'13.070"N	104°41'46.638"W	0.00	
5317.00†	1.415	181.600	5315.70	-105.71	-105.69	-2.95	40°09'13.046"N	104°41'46.639"W	0.00	
5417.00†	1.415	181.600	5415.67	-108.18	-108.16	-3.02	40°09'13.021"N	104°41'46.640"W	0.00	
5517.00†	1.415	181.600	5515.64	-110.65	-110.63	-3.09	40°09'12.997"N	104°41'46.641"W	0.00	
5617.00†	1.415	181.600	5615.61	-113.12	-113.09	-3.16	40°09'12.972"N	104°41'46.642"W	0.00	
5717.00†	1.415	181.600	5715.58	-115.59	-115.56	-3.23	40°09'12.948"N	104°41'46.643"W	0.00	
5817.00†	1.415	181.600	5815.55	-118.06	-118.03	-3.30	40°09'12.924"N	104°41'46.643"W	0.00	
5917.00†	1.415	181.600	5915.51	-120.53	-120.50	-3.37	40°09'12.899"N	104°41'46.644"W	0.00	
6017.00†	1.415	181.600	6015.48	-122.99	-122.97	-3.43	40°09'12.875"N	104°41'46.645"W	0.00	
6117.00†	1.415	181.600	6115.45	-125.46	-125.44	-3.50	40°09'12.850"N	104°41'46.646"W	0.00	
6217.00†	1.415	181.600	6215.42	-127.93	-127.90	-3.57	40°09'12.826"N	104°41'46.647"W	0.00	
6317.00†	1.415	181.600	6315.39	-130.40	-130.37	-3.64	40°09'12.802"N	104°41'46.648"W	0.00	
6417.00†	1.415	181.600	6415.36	-132.87	-132.84	-3.71	40°09'12.777"N	104°41'46.649"W	0.00	
6517.00†	1.415	181.600	6515.33	-135.34	-135.31	-3.78	40°09'12.753"N	104°41'46.650"W	0.00	
6617.00†	1.415	181.600	6615.30	-137.81	-137.78	-3.85	40°09'12.728"N	104°41'46.651"W	0.00	
6717.00†	1.415	181.600	6715.27	-140.28	-140.25	-3.92	40°09'12.704"N	104°41'46.651"W	0.00	
6747.35	1.415	181.600	6745.61	-141.03	-141.00	-3.94	40°09'12.697"N	104°41'46.652"W	0.00	End of Tangent (J)
6817.00†	5.550	0.306	6815.17	-138.52	-138.48	-3.94	40°09'12.721"N	104°41'46.652"W	10.00	
6917.00†	15.550	0.476	6913.36	-120.23	-120.20	-3.81	40°09'12.902"N	104°41'46.650"W	10.00	
6987.56†	22.606	0.507	6980.00	-97.18	-97.15	-3.61	40°09'13.130"N	104°41'46.647"W	10.00	SHARON SPRINGS
7017.00†	25.550	0.515	7006.88	-85.17	-85.14	-3.50	40°09'13.249"N	104°41'46.646"W	10.00	
7064.69†	30.320	0.524	7049.00	-62.83	-62.81	-3.30	40°09'13.469"N	104°41'46.643"W	10.00	NIOBRARA A
7091.72†	33.022	0.529	7072.00	-48.65	-48.62	-3.17	40°09'13.610"N	104°41'46.642"W	10.00	NIOBRARA B
7117.00†	35.550	0.532	7092.89	-34.41	-34.38	-3.04	40°09'13.750"N	104°41'46.640"W	10.00	
7217.00†	45.550	0.543	7168.77	30.52	30.55	-2.43	40°09'14.392"N	104°41'46.632"W	10.00	
7223.07†	46.157	0.543	7173.00	34.88	34.90	-2.38	40°09'14.435"N	104°41'46.632"W	10.00	NIOBRARA C
7317.00†	55.550	0.550	7232.23	107.64	107.66	-1.69	40°09'15.154"N	104°41'46.623"W	10.00	
7417.00†	65.550	0.556	7281.34	194.61	194.63	-0.85	40°09'16.013"N	104°41'46.612"W	10.00	
7482.56†	72.106	0.560	7305.00	255.71	255.73	-0.25	40°09'16.617"N	104°41'46.604"W	10.00	FORT HAYS
7517.00†	75.550	0.561	7314.59	288.79	288.80	0.07	40°09'16.944"N	104°41'46.600"W	10.00	
7617.00†	85.550	0.566	7330.99	387.30	387.31	1.04	40°09'17.917"N	104°41'46.588"W	10.00	
7663.11	90.161	0.568	7332.71	433.36	433.37	1.49	40°09'18.373"N	104°41'46.582"W	10.00	End of 3D Arc (J)
7717.00†	90.161	0.568	7332.56	487.26	487.26	2.03	40°09'18.905"N	104°41'46.575"W	0.00	



Planned Wellpath Report

NICHOLS 30C-5HZ (PERMIT) PWP
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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 NICHOLS 30C-5HZ (2399'FNL & 250'FWL, SEC.08)
Area	COLORADO	Well	NICHOLS 30C-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 30C-5HZ PWB
Facility	SEC.08-T2N-R65W		

WELLPATH DATA (157 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7817.00†	90.161	0.568	7332.28	587.26	587.26	3.02	40°09'19.893"N	104°41'46.562"W	0.00	
7917.00†	90.161	0.568	7332.00	687.26	687.25	4.01	40°09'20.881"N	104°41'46.549"W	0.00	
8017.00†	90.161	0.568	7331.72	787.26	787.25	5.00	40°09'21.870"N	104°41'46.537"W	0.00	
8117.00†	90.161	0.568	7331.44	887.26	887.24	5.99	40°09'22.858"N	104°41'46.524"W	0.00	
8217.00†	90.161	0.568	7331.16	987.26	987.23	6.99	40°09'23.846"N	104°41'46.511"W	0.00	
8317.00†	90.161	0.568	7330.88	1087.26	1087.23	7.98	40°09'24.834"N	104°41'46.498"W	0.00	
8417.00†	90.161	0.568	7330.60	1187.26	1187.22	8.97	40°09'25.822"N	104°41'46.485"W	0.00	
8517.00†	90.161	0.568	7330.32	1287.25	1287.22	9.96	40°09'26.810"N	104°41'46.473"W	0.00	
8617.00†	90.161	0.568	7330.04	1387.25	1387.21	10.95	40°09'27.799"N	104°41'46.460"W	0.00	
8717.00†	90.161	0.568	7329.76	1487.25	1487.21	11.94	40°09'28.787"N	104°41'46.447"W	0.00	
8817.00†	90.161	0.568	7329.48	1587.25	1587.20	12.93	40°09'29.775"N	104°41'46.434"W	0.00	
8917.00†	90.161	0.568	7329.20	1687.25	1687.20	13.92	40°09'30.763"N	104°41'46.422"W	0.00	
9017.00†	90.161	0.568	7328.91	1787.25	1787.19	14.92	40°09'31.751"N	104°41'46.409"W	0.00	
9117.00†	90.161	0.568	7328.63	1887.25	1887.19	15.91	40°09'32.739"N	104°41'46.396"W	0.00	
9217.00†	90.161	0.568	7328.35	1987.25	1987.18	16.90	40°09'33.727"N	104°41'46.383"W	0.00	
9317.00†	90.161	0.568	7328.07	2087.25	2087.18	17.89	40°09'34.716"N	104°41'46.371"W	0.00	
9417.00†	90.161	0.568	7327.79	2187.25	2187.17	18.88	40°09'35.704"N	104°41'46.358"W	0.00	
9517.00†	90.161	0.568	7327.51	2287.25	2287.17	19.87	40°09'36.692"N	104°41'46.345"W	0.00	
9617.00†	90.161	0.568	7327.23	2387.25	2387.16	20.86	40°09'37.680"N	104°41'46.332"W	0.00	
9717.00†	90.161	0.568	7326.95	2487.25	2487.15	21.86	40°09'38.668"N	104°41'46.319"W	0.00	
9817.00†	90.161	0.568	7326.67	2587.25	2587.15	22.85	40°09'39.656"N	104°41'46.307"W	0.00	
9917.00†	90.161	0.568	7326.39	2687.25	2687.14	23.84	40°09'40.645"N	104°41'46.294"W	0.00	
10017.00†	90.161	0.568	7326.11	2787.25	2787.14	24.83	40°09'41.633"N	104°41'46.281"W	0.00	
10117.00†	90.161	0.568	7325.83	2887.25	2887.13	25.82	40°09'42.621"N	104°41'46.268"W	0.00	
10217.00†	90.161	0.568	7325.55	2987.25	2987.13	26.81	40°09'43.609"N	104°41'46.256"W	0.00	
10317.00†	90.161	0.568	7325.27	3087.25	3087.12	27.80	40°09'44.597"N	104°41'46.243"W	0.00	
10417.00†	90.161	0.568	7324.99	3187.25	3187.12	28.80	40°09'45.585"N	104°41'46.230"W	0.00	
10517.00†	90.161	0.568	7324.71	3287.25	3287.11	29.79	40°09'46.573"N	104°41'46.217"W	0.00	
10617.00†	90.161	0.568	7324.43	3387.25	3387.11	30.78	40°09'47.562"N	104°41'46.205"W	0.00	
10717.00†	90.161	0.568	7324.14	3487.25	3487.10	31.77	40°09'48.550"N	104°41'46.192"W	0.00	
10817.00†	90.161	0.568	7323.86	3587.25	3587.10	32.76	40°09'49.538"N	104°41'46.179"W	0.00	
10917.00†	90.161	0.568	7323.58	3687.25	3687.09	33.75	40°09'50.526"N	104°41'46.166"W	0.00	
11017.00†	90.161	0.568	7323.30	3787.24	3787.09	34.74	40°09'51.514"N	104°41'46.153"W	0.00	
11117.00†	90.161	0.568	7323.02	3887.24	3887.08	35.73	40°09'52.502"N	104°41'46.141"W	0.00	
11217.00†	90.161	0.568	7322.74	3987.24	3987.08	36.73	40°09'53.490"N	104°41'46.128"W	0.00	
11317.00†	90.161	0.568	7322.46	4087.24	4087.07	37.72	40°09'54.479"N	104°41'46.115"W	0.00	
11417.00†	90.161	0.568	7322.18	4187.24	4187.06	38.71	40°09'55.467"N	104°41'46.102"W	0.00	
11517.00†	90.161	0.568	7321.90	4287.24	4287.06	39.70	40°09'56.455"N	104°41'46.090"W	0.00	
11617.00†	90.161	0.568	7321.62	4387.24	4387.05	40.69	40°09'57.443"N	104°41'46.077"W	0.00	
11717.00†	90.161	0.568	7321.34	4487.24	4487.05	41.68	40°09'58.431"N	104°41'46.064"W	0.00	
11817.00†	90.161	0.568	7321.06	4587.24	4587.04	42.67	40°09'59.419"N	104°41'46.051"W	0.00	
11917.00†	90.161	0.568	7320.78	4687.24	4687.04	43.67	40°10'00.408"N	104°41'46.039"W	0.00	
12017.00†	90.161	0.568	7320.50	4787.24	4787.03	44.66	40°10'01.396"N	104°41'46.026"W	0.00	
12117.00†	90.161	0.568	7320.22	4887.24	4887.03	45.65	40°10'02.384"N	104°41'46.013"W	0.00	
12217.00†	90.161	0.568	7319.94	4987.24	4987.02	46.64	40°10'03.372"N	104°41'46.000"W	0.00	



Planned Wellpath Report

NICHOLS 30C-5HZ (PERMIT) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 NICHOLS 30C-5HZ (2399'FNL & 250'FWL, SEC.08)
Area	COLORADO	Well	NICHOLS 30C-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 30C-5HZ PWB
Facility	SEC.08-T2N-R65W		

WELLPATH DATA (157 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12317.00†	90.161	0.568	7319.66	5087.24	5087.02	47.63	40°10'04.360"N	104°41'45.987"W	0.00	
12417.00†	90.161	0.568	7319.37	5187.24	5187.01	48.62	40°10'05.348"N	104°41'45.975"W	0.00	
12517.00†	90.161	0.568	7319.09	5287.24	5287.01	49.61	40°10'06.336"N	104°41'45.962"W	0.00	
12617.00†	90.161	0.568	7318.81	5387.24	5387.00	50.61	40°10'07.325"N	104°41'45.949"W	0.00	
12717.00†	90.161	0.568	7318.53	5487.24	5487.00	51.60	40°10'08.313"N	104°41'45.936"W	0.00	
12817.00†	90.161	0.568	7318.25	5587.24	5586.99	52.59	40°10'09.301"N	104°41'45.924"W	0.00	
12917.00†	90.161	0.568	7317.97	5687.24	5686.98	53.58	40°10'10.289"N	104°41'45.911"W	0.00	
13017.00†	90.161	0.568	7317.69	5787.24	5786.98	54.57	40°10'11.277"N	104°41'45.898"W	0.00	
13117.00†	90.161	0.568	7317.41	5887.24	5886.97	55.56	40°10'12.265"N	104°41'45.885"W	0.00	
13217.00†	90.161	0.568	7317.13	5987.24	5986.97	56.55	40°10'13.254"N	104°41'45.872"W	0.00	
13317.00†	90.161	0.568	7316.85	6087.24	6086.96	57.55	40°10'14.242"N	104°41'45.860"W	0.00	
13417.00†	90.161	0.568	7316.57	6187.24	6186.96	58.54	40°10'15.230"N	104°41'45.847"W	0.00	
13517.00†	90.161	0.568	7316.29	6287.23	6286.95	59.53	40°10'16.218"N	104°41'45.834"W	0.00	
13617.00†	90.161	0.568	7316.01	6387.23	6386.95	60.52	40°10'17.206"N	104°41'45.821"W	0.00	
13717.00†	90.161	0.568	7315.73	6487.23	6486.94	61.51	40°10'18.194"N	104°41'45.809"W	0.00	
13817.00†	90.161	0.568	7315.45	6587.23	6586.94	62.50	40°10'19.182"N	104°41'45.796"W	0.00	
13917.00†	90.161	0.568	7315.17	6687.23	6686.93	63.49	40°10'20.171"N	104°41'45.783"W	0.00	
14017.00†	90.161	0.568	7314.89	6787.23	6786.93	64.48	40°10'21.159"N	104°41'45.770"W	0.00	
14117.00†	90.161	0.568	7314.60	6887.23	6886.92	65.48	40°10'22.147"N	104°41'45.758"W	0.00	
14217.00†	90.161	0.568	7314.32	6987.23	6986.92	66.47	40°10'23.135"N	104°41'45.745"W	0.00	
14317.00†	90.161	0.568	7314.04	7087.23	7086.91	67.46	40°10'24.123"N	104°41'45.732"W	0.00	
14332.47	90.161	0.568	7314.00 ¹	7102.70	7102.38	67.61	40°10'24.276"N	104°41'45.730"W	0.00	End of Tangent (J)

HOLE & CASING SECTIONS - Ref Wellbore: NICHOLS 30C-5HZ PWB Ref Wellpath: NICHOLS 30C-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	7663.11	6838.11	825.00	7332.71	0.00	0.00	433.37	1.49
7in Casing Intermediate	17.00	7663.11	7646.11	17.00	7332.71	0.00	0.00	433.37	1.49
6.125in Open Hole	7663.11	14332.47	6669.36	7332.71	7314.00	433.37	1.49	7102.38	67.61
4.5in Casing Production	17.00	14332.47	14315.47	17.00	7314.00	0.00	0.00	7102.38	67.61

**Planned Wellpath Report**

NICHOLS 30C-5HZ (PERMIT) PWP

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**REFERENCE WELLPATH IDENTIFICATION**

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 NICHOLS 30C-5HZ (2399'FNL & 250'FWL, SEC.08)
Area	COLORADO	Well	NICHOLS 30C-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 30C-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		35.00	-44.96	2895.43	3227549.93	1299913.51	40°09'13.644"N	104°41'09.312"W	polygon
NICHOLS SECTION 8 LINES		35.00	-44.96	2895.43	3227549.93	1299913.51	40°09'13.644"N	104°41'09.312"W	polygon
NICHOLS HARDLINES (460' SETBACKS)		7235.00	-44.96	2895.43	3227549.93	1299913.51	40°09'13.644"N	104°41'09.312"W	polygon
1) NICHOLS 30C-5HZ BHL ON PLAT (460'FNL & 236'FWL, SEC.05) REV-1	14332.47	7314.00	7102.38	67.61	3224657.57	1307034.62	40°10'24.276"N	104°41'45.730"W	point

SURVEY PROGRAM - Ref Wellbore: NICHOLS 30C-5HZ PWB Ref Wellpath: NICHOLS 30C-5HZ (PERMIT) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	14332.47	NaviTrak (Standard)		NICHOLS 30C-5HZ PWB



Planned Wellpath Report
NICHOLS 30C-5HZ (PERMIT) PWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 NICHOLS 30C-5HZ (2399'FNL & 250'FWL, SEC.08)
Area	COLORADO	Well	NICHOLS 30C-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 30C-5HZ PWB
Facility	SEC.08-T2N-R65W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
3970.89	1.415	181.600	3970.00	PARKMAN
4575.08	1.415	181.600	4574.00	SUSSEX
6987.56	22.606	0.507	6980.00	SHARON SPRINGS
7064.69	30.320	0.524	7049.00	NIOBRARA A
7091.72	33.022	0.529	7072.00	NIOBRARA B
7223.07	46.157	0.543	7173.00	NIOBRARA C
7482.56	72.106	0.560	7305.00	FORT HAYS