

KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#07 NICHOLS 29N-5HZ (2291'FNL & 2369'FWL, SEC.08)
Field: WELD COUNTY (KERR MCGEE) Well: NICHOLS 29N-5HZ
Facility: SEC.08-T2N-R65W Wellbore: NICHOLS 29N-5HZ PWB

Plot reference wellpath is NICHOLS 29N-5HZ (PERMIT) PWB

True vertical depths are referenced to Rig on SLOT#07 NICHOLS 29N-5HZ (2291'FNL & 2369'FWL, SEC.08) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to Rig on SLOT#07 NICHOLS 29N-5HZ (2291'FNL & 2369'FWL, SEC.08) (RKB)	North Reference: True north
Rig on SLOT#07 NICHOLS 29N-5HZ (2291'FNL & 2369'FWL, SEC.08) (RKB) to Mean Sea Level: 4929 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#07 NICHOLS 29N-5HZ (2291'FNL & 2369'FWL, SEC.08)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: welljet02 on 5/30/2012

Location Information

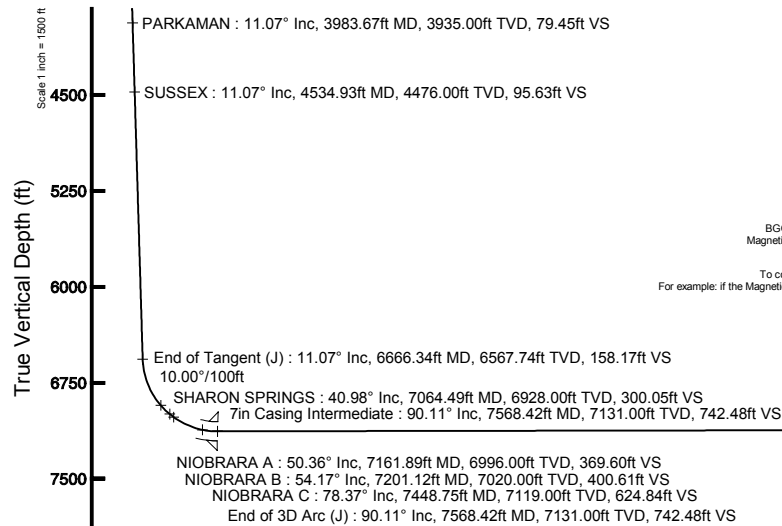
Facility Name				Grid East (US R)	Grid North (US R)	Latitude	Longitude
SEC.08-T2N-R65W				3197771.840	1268891.290	40°04'09.6007N	104°47'36.0007W
Slot	Local N (R)	Local E (R)	Grid East (US R)	Grid North (US R)	Latitude	Longitude	
SLOT#07 NICHOLS 29N-5HZ (2291'FNL & 2369'FWL, SEC.08)	30943.12	20240.68	3228772.833	1300085.285	40°09'15.214"N	104°41'19.302"W	
Rig on SLOT#07 NICHOLS 29N-5HZ (2291'FNL & 2369'FWL, SEC.08) (RKB) to Mud line (At Slot: SLOT#07 NICHOLS 29N-5HZ (2291'FNL & 2369'FWL, SEC.08))						4929R	
Mean Sea Level to Mud line (At Slot: SLOT#07 NICHOLS 29N-5HZ (2291'FNL & 2369'FWL, SEC.08))						0R	
Rig on SLOT#07 NICHOLS 29N-5HZ (2291'FNL & 2369'FWL, SEC.08) (RKB) to Mean Sea Level						4929R	

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	270.000	17.00	0.00	0.00	0.00	0.00
End of Tangent	1000.00	0.000	270.000	1000.00	0.00	0.00	0.00	0.00
End of Build (J)	1553.60	11.072	270.000	1550.16	0.00	-53.32	2.00	8.15
End of Tangent (J)	6666.34	11.072	270.000	6567.74	0.00	-1035.19	0.00	158.17
End of 3D Arc (J)	7568.42	90.107	0.535	7131.00	575.01	-1140.25	10.00	742.48
End of Tangent (J)	13981.63	90.107	0.535	7119.00	6987.93	-1080.37	0.00	7070.95

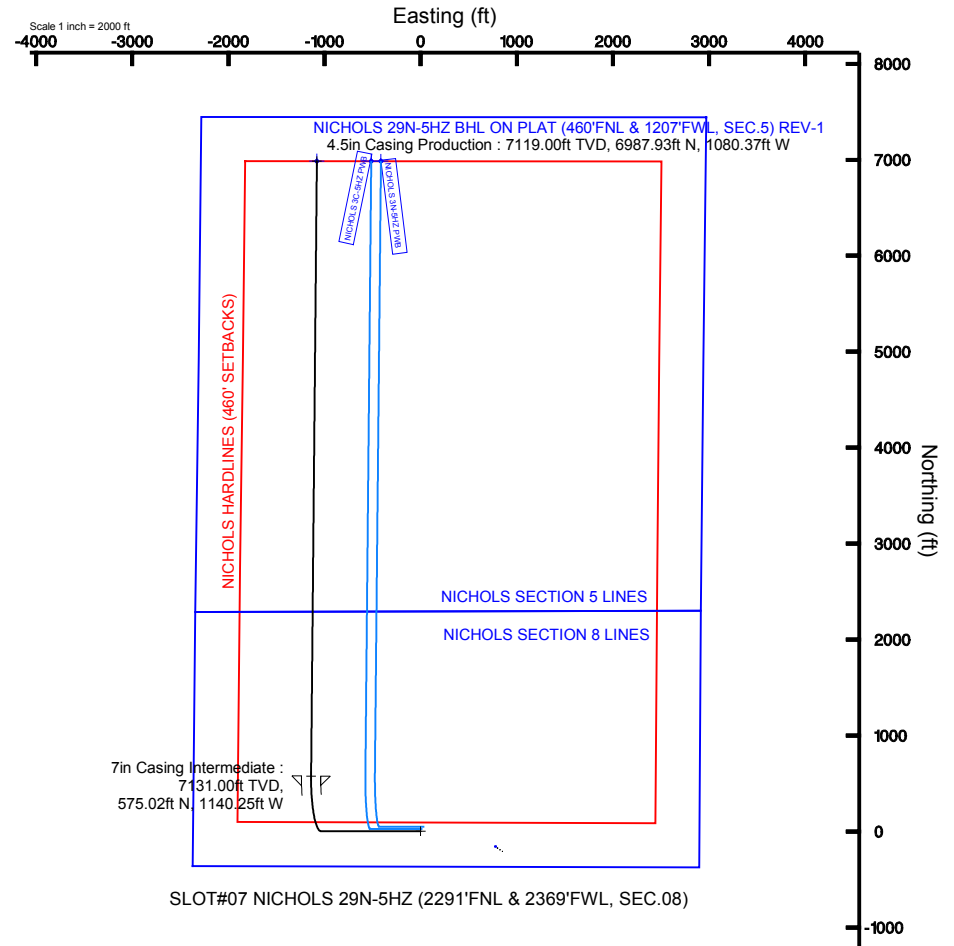
Targets

Name	MD (R)	TVD (R)	Local N (R)	Local E (R)	Grid East (US R)	Grid North (US R)	Latitude	Longitude
NICHOLS SECTION 5 LINES		1.00	-158.86	775.71	3227549.93	1299913.51	40°09'13.644"N	104°41'09.312"W
NICHOLS SECTION 8 LINES		1.00	-158.86	775.71	3227549.93	1299913.51	40°09'13.644"N	104°41'09.312"W
NICHOLS 29N-5HZ BHL ON PLAT (460'FNL & 1207'FWL, SEC.5) REV-1	13981.63	7119.00	6987.93	-1080.37	3225628.63	1307042.71	40°10'24.269"N	104°41'33.220"W
NICHOLS HARDLINES (460' SETBACKS)		7201.00	-158.86	775.71	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 29N-5HZ (PERMIT) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#07 NICHOLS 29N-5HZ (2291'FNL & 2369'FWL, SEC.08)
Area	COLORADO	Well	NICHOLS 29N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 29N-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	5/30/2012 at 15:41:48
Convergence at slot	0.52° East	Database/Source file	WellArchitectDB/NICHOLS_29N-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	30943.12	29249.68	3226772.83	1300065.27	40°09'15.214"N	104°41'19.302"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#07 NICHOLS 29N-5HZ (2291'FNL & 2369'FWL, SEC.08) (RKB) to Facility Vertical Datum
Horizontal Reference Pt	Slot	Rig on SLOT#07 NICHOLS 29N-5HZ (2291'FNL & 2369'FWL, SEC.08) (RKB) to Mean Sea Level
Vertical Reference Pt	Rig on SLOT#07 NICHOLS 29N-5HZ (2291'FNL & 2369'FWL, SEC.08) (RKB)	Rig on SLOT#07 NICHOLS 29N-5HZ (2291'FNL & 2369'FWL, SEC.08) (RKB) to Mud Line at Slot (SLOT#07 NICHOLS 29N-5HZ) (RKB) to Mean Sea Level
MD Reference Pt	Rig on SLOT#07 NICHOLS 29N-5HZ (2291'FNL & 2369'FWL, SEC.08) (RKB)	Section Origin
Field Vertical Reference	Mean Sea Level	Section Azimuth



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NICHOLS 29N-5HZ (PERMIT) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#07 NICHOLS 29N-5HZ (2291'FNL & 2369'FWL, SEC.08)
Area	COLORADO	Well	NICHOLS 29N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 29N-5HZ PWB
Facility	SEC.08-T2N-R65W		

WELLPATH DATA (152 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	270.000	0.00	0.00	0.00	0.00	40°09'15.214"N	104°41'19.302"W	0.00	
17.00	0.000	270.000	17.00	0.00	0.00	0.00	40°09'15.214"N	104°41'19.302"W	0.00	Tie On
117.00†	0.000	270.000	117.00	0.00	0.00	0.00	40°09'15.214"N	104°41'19.302"W	0.00	
217.00†	0.000	270.000	217.00	0.00	0.00	0.00	40°09'15.214"N	104°41'19.302"W	0.00	
317.00†	0.000	270.000	317.00	0.00	0.00	0.00	40°09'15.214"N	104°41'19.302"W	0.00	
417.00†	0.000	270.000	417.00	0.00	0.00	0.00	40°09'15.214"N	104°41'19.302"W	0.00	
517.00†	0.000	270.000	517.00	0.00	0.00	0.00	40°09'15.214"N	104°41'19.302"W	0.00	
617.00†	0.000	270.000	617.00	0.00	0.00	0.00	40°09'15.214"N	104°41'19.302"W	0.00	
717.00†	0.000	270.000	717.00	0.00	0.00	0.00	40°09'15.214"N	104°41'19.302"W	0.00	
817.00†	0.000	270.000	817.00	0.00	0.00	0.00	40°09'15.214"N	104°41'19.302"W	0.00	
917.00†	0.000	270.000	917.00	0.00	0.00	0.00	40°09'15.214"N	104°41'19.302"W	0.00	
1000.00	0.000	270.000	1000.00	0.00	0.00	0.00	40°09'15.214"N	104°41'19.302"W	0.00	End of Tangent
1017.00†	0.340	270.000	1017.00	0.01	0.00	-0.05	40°09'15.214"N	104°41'19.303"W	2.00	
1117.00†	2.340	270.000	1116.97	0.36	0.00	-2.39	40°09'15.214"N	104°41'19.333"W	2.00	
1217.00†	4.340	270.000	1216.79	1.26	0.00	-8.21	40°09'15.214"N	104°41'19.408"W	2.00	
1317.00†	6.340	270.000	1316.35	2.68	0.00	-17.52	40°09'15.214"N	104°41'19.528"W	2.00	
1417.00†	8.340	270.000	1415.53	4.63	0.00	-30.30	40°09'15.214"N	104°41'19.692"W	2.00	
1517.00†	10.340	270.000	1514.20	7.11	0.00	-46.52	40°09'15.214"N	104°41'19.901"W	2.00	
1553.60	11.072	270.000	1550.16	8.15	0.00	-53.32	40°09'15.214"N	104°41'19.989"W	2.00	End of Build (J)
1617.00†	11.072	270.000	1612.38	10.01	0.00	-65.50	40°09'15.214"N	104°41'20.146"W	0.00	
1717.00†	11.072	270.000	1710.52	12.94	0.00	-84.70	40°09'15.214"N	104°41'20.393"W	0.00	
1817.00†	11.072	270.000	1808.66	15.88	0.00	-103.91	40°09'15.214"N	104°41'20.640"W	0.00	
1917.00†	11.072	270.000	1906.80	18.81	0.00	-123.11	40°09'15.214"N	104°41'20.888"W	0.00	
2017.00†	11.072	270.000	2004.94	21.74	0.00	-142.32	40°09'15.214"N	104°41'21.135"W	0.00	
2117.00†	11.072	270.000	2103.07	24.68	0.00	-161.52	40°09'15.214"N	104°41'21.382"W	0.00	
2217.00†	11.072	270.000	2201.21	27.61	0.00	-180.72	40°09'15.214"N	104°41'21.629"W	0.00	
2317.00†	11.072	270.000	2299.35	30.55	0.00	-199.93	40°09'15.214"N	104°41'21.877"W	0.00	
2417.00†	11.072	270.000	2397.49	33.48	0.00	-219.13	40°09'15.214"N	104°41'22.124"W	0.00	
2517.00†	11.072	270.000	2495.63	36.42	0.00	-238.34	40°09'15.214"N	104°41'22.371"W	0.00	
2617.00†	11.072	270.000	2593.77	39.35	0.00	-257.54	40°09'15.214"N	104°41'22.619"W	0.00	
2717.00†	11.072	270.000	2691.91	42.28	0.00	-276.75	40°09'15.214"N	104°41'22.866"W	0.00	
2817.00†	11.072	270.000	2790.04	45.22	0.00	-295.95	40°09'15.214"N	104°41'23.113"W	0.00	
2917.00†	11.072	270.000	2888.18	48.15	0.00	-315.15	40°09'15.214"N	104°41'23.361"W	0.00	
3017.00†	11.072	270.000	2986.32	51.09	0.00	-334.36	40°09'15.214"N	104°41'23.608"W	0.00	
3117.00†	11.072	270.000	3084.46	54.02	0.00	-353.56	40°09'15.214"N	104°41'23.855"W	0.00	
3217.00†	11.072	270.000	3182.60	56.95	0.00	-372.77	40°09'15.214"N	104°41'24.103"W	0.00	
3317.00†	11.072	270.000	3280.74	59.89	0.00	-391.97	40°09'15.214"N	104°41'24.350"W	0.00	
3417.00†	11.072	270.000	3378.88	62.82	0.00	-411.18	40°09'15.214"N	104°41'24.597"W	0.00	
3517.00†	11.072	270.000	3477.02	65.76	0.00	-430.38	40°09'15.214"N	104°41'24.845"W	0.00	
3617.00†	11.072	270.000	3575.15	68.69	0.00	-449.58	40°09'15.214"N	104°41'25.092"W	0.00	
3717.00†	11.072	270.000	3673.29	71.63	0.00	-468.79	40°09'15.214"N	104°41'25.339"W	0.00	
3817.00†	11.072	270.000	3771.43	74.56	0.00	-487.99	40°09'15.214"N	104°41'25.587"W	0.00	
3917.00†	11.072	270.000	3869.57	77.49	0.00	-507.20	40°09'15.214"N	104°41'25.834"W	0.00	
3983.67†	11.072	270.000	3935.00	79.45	0.00	-520.00	40°09'15.214"N	104°41'25.999"W	0.00	PARKAMAN
4017.00†	11.072	270.000	3967.71	80.43	0.00	-526.40	40°09'15.214"N	104°41'26.081"W	0.00	



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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#07 NICHOLS 29N-5HZ (2291'FNL & 2369'FWL, SEC.08)
Area	COLORADO	Well	NICHOLS 29N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 29N-5HZ PWB
Facility	SEC.08-T2N-R65W		

WELLPATH DATA (152 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4117.00†	11.072	270.000	4065.85	83.36	0.00	-545.60	40°09'15.214"N	104°41'26.329"W	0.00	
4217.00†	11.072	270.000	4163.99	86.30	0.00	-564.81	40°09'15.214"N	104°41'26.576"W	0.00	
4317.00†	11.072	270.000	4262.12	89.23	0.00	-584.01	40°09'15.214"N	104°41'26.823"W	0.00	
4417.00†	11.072	270.000	4360.26	92.17	0.00	-603.22	40°09'15.214"N	104°41'27.071"W	0.00	
4517.00†	11.072	270.000	4458.40	95.10	0.00	-622.42	40°09'15.214"N	104°41'27.318"W	0.00	
4534.93†	11.072	270.000	4476.00	95.63	0.00	-625.87	40°09'15.214"N	104°41'27.362"W	0.00	SUSSEX
4617.00†	11.072	270.000	4556.54	98.03	0.00	-641.63	40°09'15.214"N	104°41'27.565"W	0.00	
4717.00†	11.072	270.000	4654.68	100.97	0.00	-660.83	40°09'15.214"N	104°41'27.813"W	0.00	
4817.00†	11.072	270.000	4752.82	103.90	0.00	-680.03	40°09'15.214"N	104°41'28.060"W	0.00	
4917.00†	11.072	270.000	4850.96	106.84	0.00	-699.24	40°09'15.214"N	104°41'28.307"W	0.00	
5017.00†	11.072	270.000	4949.10	109.77	0.00	-718.44	40°09'15.214"N	104°41'28.555"W	0.00	
5117.00†	11.072	270.000	5047.23	112.70	0.00	-737.65	40°09'15.214"N	104°41'28.802"W	0.00	
5217.00†	11.072	270.000	5145.37	115.64	0.00	-756.85	40°09'15.214"N	104°41'29.049"W	0.00	
5317.00†	11.072	270.000	5243.51	118.57	0.00	-776.06	40°09'15.214"N	104°41'29.297"W	0.00	
5417.00†	11.072	270.000	5341.65	121.51	0.00	-795.26	40°09'15.214"N	104°41'29.544"W	0.00	
5517.00†	11.072	270.000	5439.79	124.44	0.00	-814.46	40°09'15.214"N	104°41'29.791"W	0.00	
5617.00†	11.072	270.000	5537.93	127.38	0.00	-833.67	40°09'15.214"N	104°41'30.039"W	0.00	
5717.00†	11.072	270.000	5636.07	130.31	0.00	-852.87	40°09'15.214"N	104°41'30.286"W	0.00	
5817.00†	11.072	270.000	5734.20	133.24	0.00	-872.08	40°09'15.214"N	104°41'30.533"W	0.00	
5917.00†	11.072	270.000	5832.34	136.18	0.00	-891.28	40°09'15.214"N	104°41'30.781"W	0.00	
6017.00†	11.072	270.000	5930.48	139.11	0.00	-910.49	40°09'15.214"N	104°41'31.028"W	0.00	
6117.00†	11.072	270.000	6028.62	142.05	0.00	-929.69	40°09'15.214"N	104°41'31.275"W	0.00	
6217.00†	11.072	270.000	6126.76	144.98	0.00	-948.89	40°09'15.214"N	104°41'31.522"W	0.00	
6317.00†	11.072	270.000	6224.90	147.92	0.00	-968.10	40°09'15.214"N	104°41'31.770"W	0.00	
6417.00†	11.072	270.000	6323.04	150.85	0.00	-987.30	40°09'15.214"N	104°41'32.017"W	0.00	
6517.00†	11.072	270.000	6421.18	153.78	0.00	-1006.51	40°09'15.214"N	104°41'32.264"W	0.00	
6617.00†	11.072	270.000	6519.31	156.72	0.00	-1025.71	40°09'15.214"N	104°41'32.512"W	0.00	
6666.34	11.072	270.000	6567.74	158.17	0.00	-1035.19	40°09'15.214"N	104°41'32.634"W	0.00	End of Tangent (J)
6717.00†	12.122	294.865	6617.39	161.86	2.24	-1044.88	40°09'15.236"N	104°41'32.759"W	10.00	
6817.00†	18.542	324.823	6713.93	181.97	19.69	-1063.62	40°09'15.408"N	104°41'33.000"W	10.00	
6917.00†	27.167	338.101	6806.05	218.54	53.96	-1081.34	40°09'15.747"N	104°41'33.228"W	10.00	
7017.00†	36.464	345.160	6890.96	270.46	103.99	-1097.50	40°09'16.241"N	104°41'33.436"W	10.00	
7064.49†	40.983	347.497	6928.00	300.05	132.85	-1104.49	40°09'16.527"N	104°41'33.526"W	10.00	SHARON SPRINGS
7117.00†	46.025	349.631	6966.08	336.14	168.28	-1111.63	40°09'16.877"N	104°41'33.618"W	10.00	
7161.89†	50.363	351.186	6996.00	369.60	201.27	-1117.19	40°09'17.203"N	104°41'33.690"W	10.00	NIOBRARA A
7201.12†	54.167	352.391	7020.00	400.61	231.96	-1121.61	40°09'17.506"N	104°41'33.747"W	10.00	NIOBRARA B
7217.00†	55.712	352.847	7029.12	413.60	244.85	-1123.28	40°09'17.633"N	104°41'33.768"W	10.00	
7317.00†	65.464	355.389	7078.18	500.48	331.40	-1132.10	40°09'18.489"N	104°41'33.882"W	10.00	
7417.00†	75.253	357.562	7111.76	594.14	425.29	-1137.83	40°09'19.416"N	104°41'33.956"W	10.00	
7448.75†	78.366	358.205	7119.00	624.84	456.17	-1138.97	40°09'19.722"N	104°41'33.971"W	10.00	NIOBRARA C
7517.00†	85.061	359.545	7128.83	691.73	523.66	-1140.29	40°09'20.389"N	104°41'33.988"W	10.00	
7568.42	90.107	0.535	7131.00	742.48	575.01	-1140.25	40°09'20.896"N	104°41'33.987"W	10.00	End of 3D Arc (J)
7617.00†	90.107	0.535	7130.91	790.42	623.59	-1139.80	40°09'21.376"N	104°41'33.981"W	0.00	
7717.00†	90.107	0.535	7130.72	889.10	723.59	-1138.86	40°09'22.364"N	104°41'33.969"W	0.00	
7817.00†	90.107	0.535	7130.53	987.78	823.58	-1137.93	40°09'23.352"N	104°41'33.957"W	0.00	



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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#07 NICHOLS 29N-5HZ (2291'FNL & 2369'FWL, SEC.08)
Area	COLORADO	Well	NICHOLS 29N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 29N-5HZ PWB
Facility	SEC.08-T2N-R65W		

WELLPATH DATA (152 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7917.00†	90.107	0.535	7130.35	1086.46	923.58	-1136.99	40°09'24.341"N	104°41'33.946"W	0.00	
8017.00†	90.107	0.535	7130.16	1185.14	1023.58	-1136.06	40°09'25.329"N	104°41'33.934"W	0.00	
8117.00†	90.107	0.535	7129.97	1283.81	1123.57	-1135.13	40°09'26.317"N	104°41'33.922"W	0.00	
8217.00†	90.107	0.535	7129.78	1382.49	1223.57	-1134.19	40°09'27.305"N	104°41'33.910"W	0.00	
8317.00†	90.107	0.535	7129.60	1481.17	1323.56	-1133.26	40°09'28.293"N	104°41'33.898"W	0.00	
8417.00†	90.107	0.535	7129.41	1579.85	1423.56	-1132.33	40°09'29.281"N	104°41'33.886"W	0.00	
8517.00†	90.107	0.535	7129.22	1678.53	1523.55	-1131.39	40°09'30.270"N	104°41'33.874"W	0.00	
8617.00†	90.107	0.535	7129.04	1777.21	1623.55	-1130.46	40°09'31.258"N	104°41'33.862"W	0.00	
8717.00†	90.107	0.535	7128.85	1875.89	1723.54	-1129.52	40°09'32.246"N	104°41'33.850"W	0.00	
8817.00†	90.107	0.535	7128.66	1974.57	1823.54	-1128.59	40°09'33.234"N	104°41'33.838"W	0.00	
8917.00†	90.107	0.535	7128.47	2073.24	1923.53	-1127.66	40°09'34.222"N	104°41'33.826"W	0.00	
9017.00†	90.107	0.535	7128.29	2171.92	2023.53	-1126.72	40°09'35.210"N	104°41'33.814"W	0.00	
9117.00†	90.107	0.535	7128.10	2270.60	2123.53	-1125.79	40°09'36.199"N	104°41'33.802"W	0.00	
9217.00†	90.107	0.535	7127.91	2369.28	2223.52	-1124.86	40°09'37.187"N	104°41'33.790"W	0.00	
9317.00†	90.107	0.535	7127.73	2467.96	2323.52	-1123.92	40°09'38.175"N	104°41'33.778"W	0.00	
9417.00†	90.107	0.535	7127.54	2566.64	2423.51	-1122.99	40°09'39.163"N	104°41'33.766"W	0.00	
9517.00†	90.107	0.535	7127.35	2665.32	2523.51	-1122.05	40°09'40.151"N	104°41'33.754"W	0.00	
9617.00†	90.107	0.535	7127.16	2763.99	2623.50	-1121.12	40°09'41.139"N	104°41'33.742"W	0.00	
9717.00†	90.107	0.535	7126.98	2862.67	2723.50	-1120.19	40°09'42.128"N	104°41'33.730"W	0.00	
9817.00†	90.107	0.535	7126.79	2961.35	2823.49	-1119.25	40°09'43.116"N	104°41'33.718"W	0.00	
9917.00†	90.107	0.535	7126.60	3060.03	2923.49	-1118.32	40°09'44.104"N	104°41'33.706"W	0.00	
10017.00†	90.107	0.535	7126.42	3158.71	3023.48	-1117.39	40°09'45.092"N	104°41'33.694"W	0.00	
10117.00†	90.107	0.535	7126.23	3257.39	3123.48	-1116.45	40°09'46.080"N	104°41'33.682"W	0.00	
10217.00†	90.107	0.535	7126.04	3356.07	3223.48	-1115.52	40°09'47.068"N	104°41'33.670"W	0.00	
10317.00†	90.107	0.535	7125.86	3454.75	3323.47	-1114.58	40°09'48.056"N	104°41'33.658"W	0.00	
10417.00†	90.107	0.535	7125.67	3553.42	3423.47	-1113.65	40°09'49.045"N	104°41'33.646"W	0.00	
10517.00†	90.107	0.535	7125.48	3652.10	3523.46	-1112.72	40°09'50.033"N	104°41'33.634"W	0.00	
10617.00†	90.107	0.535	7125.29	3750.78	3623.46	-1111.78	40°09'51.021"N	104°41'33.622"W	0.00	
10717.00†	90.107	0.535	7125.11	3849.46	3723.45	-1110.85	40°09'52.009"N	104°41'33.610"W	0.00	
10817.00†	90.107	0.535	7124.92	3948.14	3823.45	-1109.92	40°09'52.997"N	104°41'33.598"W	0.00	
10917.00†	90.107	0.535	7124.73	4046.82	3923.44	-1108.98	40°09'53.985"N	104°41'33.586"W	0.00	
11017.00†	90.107	0.535	7124.55	4145.50	4023.44	-1108.05	40°09'54.974"N	104°41'33.574"W	0.00	
11117.00†	90.107	0.535	7124.36	4244.18	4123.43	-1107.11	40°09'55.962"N	104°41'33.563"W	0.00	
11217.00†	90.107	0.535	7124.17	4342.85	4223.43	-1106.18	40°09'56.950"N	104°41'33.551"W	0.00	
11317.00†	90.107	0.535	7123.98	4441.53	4323.43	-1105.25	40°09'57.938"N	104°41'33.539"W	0.00	
11417.00†	90.107	0.535	7123.80	4540.21	4423.42	-1104.31	40°09'58.926"N	104°41'33.527"W	0.00	
11517.00†	90.107	0.535	7123.61	4638.89	4523.42	-1103.38	40°09'59.914"N	104°41'33.515"W	0.00	
11617.00†	90.107	0.535	7123.42	4737.57	4623.41	-1102.45	40°10'00.903"N	104°41'33.503"W	0.00	
11717.00†	90.107	0.535	7123.24	4836.25	4723.41	-1101.51	40°10'01.891"N	104°41'33.491"W	0.00	
11817.00†	90.107	0.535	7123.05	4934.93	4823.40	-1100.58	40°10'02.879"N	104°41'33.479"W	0.00	
11917.00†	90.107	0.535	7122.86	5033.61	4923.40	-1099.65	40°10'03.867"N	104°41'33.467"W	0.00	
12017.00†	90.107	0.535	7122.68	5132.28	5023.39	-1098.71	40°10'04.855"N	104°41'33.455"W	0.00	
12117.00†	90.107	0.535	7122.49	5230.96	5123.39	-1097.78	40°10'05.843"N	104°41'33.443"W	0.00	
12217.00†	90.107	0.535	7122.30	5329.64	5223.38	-1096.84	40°10'06.831"N	104°41'33.431"W	0.00	
12317.00†	90.107	0.535	7122.11	5428.32	5323.38	-1095.91	40°10'07.820"N	104°41'33.419"W	0.00	



Planned Wellpath Report

NICHOLS 29N-5HZ (PERMIT) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#07 NICHOLS 29N-5HZ (2291'FNL & 2369'FWL, SEC.08)
Area	COLORADO	Well	NICHOLS 29N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 29N-5HZ PWB
Facility	SEC.08-T2N-R65W		

WELLPATH DATA (152 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12417.00†	90.107	0.535	7121.93	5527.00	5423.38	-1094.98	40°10'08.808"N	104°41'33.407"W	0.00	
12517.00†	90.107	0.535	7121.74	5625.68	5523.37	-1094.04	40°10'09.796"N	104°41'33.395"W	0.00	
12617.00†	90.107	0.535	7121.55	5724.36	5623.37	-1093.11	40°10'10.784"N	104°41'33.383"W	0.00	
12717.00†	90.107	0.535	7121.37	5823.04	5723.36	-1092.18	40°10'11.772"N	104°41'33.371"W	0.00	
12817.00†	90.107	0.535	7121.18	5921.71	5823.36	-1091.24	40°10'12.760"N	104°41'33.359"W	0.00	
12917.00†	90.107	0.535	7120.99	6020.39	5923.35	-1090.31	40°10'13.749"N	104°41'33.347"W	0.00	
13017.00†	90.107	0.535	7120.80	6119.07	6023.35	-1089.37	40°10'14.737"N	104°41'33.335"W	0.00	
13117.00†	90.107	0.535	7120.62	6217.75	6123.34	-1088.44	40°10'15.725"N	104°41'33.323"W	0.00	
13217.00†	90.107	0.535	7120.43	6316.43	6223.34	-1087.51	40°10'16.713"N	104°41'33.311"W	0.00	
13317.00†	90.107	0.535	7120.24	6415.11	6323.33	-1086.57	40°10'17.701"N	104°41'33.299"W	0.00	
13417.00†	90.107	0.535	7120.06	6513.79	6423.33	-1085.64	40°10'18.689"N	104°41'33.287"W	0.00	
13517.00†	90.107	0.535	7119.87	6612.47	6523.33	-1084.71	40°10'19.678"N	104°41'33.275"W	0.00	
13617.00†	90.107	0.535	7119.68	6711.14	6623.32	-1083.77	40°10'20.666"N	104°41'33.263"W	0.00	
13717.00†	90.107	0.535	7119.50	6809.82	6723.32	-1082.84	40°10'21.654"N	104°41'33.251"W	0.00	
13817.00†	90.107	0.535	7119.31	6908.50	6823.31	-1081.90	40°10'22.642"N	104°41'33.239"W	0.00	
13917.00†	90.107	0.535	7119.12	7007.18	6923.31	-1080.97	40°10'23.630"N	104°41'33.227"W	0.00	
13981.63	90.107	0.535	7119.00†	7070.95	6987.93	-1080.37	40°10'24.269"N	104°41'33.220"W	0.00	End of Tangent (J)

HOLE & CASING SECTIONS - Ref Wellbore: NICHOLS 29N-5HZ PWB Ref Wellpath: NICHOLS 29N-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	7568.42	6743.42	825.00	7131.00	0.00	0.00	575.02	-1140.25
7in Casing Intermediate	17.00	7568.42	7551.42	17.00	7131.00	0.00	0.00	575.02	-1140.25
6.125in Open Hole	7568.42	13981.63	6413.21	7131.00	7119.00	575.02	-1140.25	6987.93	-1080.37
4.5in Casing Production	17.00	13981.63	13964.63	17.00	7119.00	0.00	0.00	6987.93	-1080.37



Planned Wellpath Report

NICHOLS 29N-5HZ (PERMIT) PWP

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**REFERENCE WELLPATH IDENTIFICATION**

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#07 NICHOLS 29N-5HZ (2291'FNL & 2369'FWL, SEC.08)
Area	COLORADO	Well	NICHOLS 29N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 29N-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		1.00	-158.86	775.71	3227549.93	1299913.51	40°09'13.644"N	104°41'09.312"W	polygon
NICHOLS SECTION 8 LINES		1.00	-158.86	775.71	3227549.93	1299913.51	40°09'13.644"N	104°41'09.312"W	polygon
1) NICHOLS 29N-5HZ BHL ON PLAT (460'FNL & 1207'FWL, SEC.5) REV-1	13981.63	7119.00	6987.93	-1080.37	3225628.63	1307042.71	40°10'24.269"N	104°41'33.220"W	point
NICHOLS HARDLINES (460' SETBACKS)		7201.00	-158.86	775.71	3227549.93	1299913.51	40°09'13.644"N	104°41'09.312"W	polygon

SURVEY PROGRAM - Ref Wellbore: NICHOLS 29N-5HZ PWB Ref Wellpath: NICHOLS 29N-5HZ (PERMIT) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	13981.63	NaviTrak (Standard)		NICHOLS 29N-5HZ PWB



Planned Wellpath Report
NICHOLS 29N-5HZ (PERMIT) PWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#07 NICHOLS 29N-5HZ (2291'FNL & 2369'FWL, SEC.08)
Area	COLORADO	Well	NICHOLS 29N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 29N-5HZ PWB
Facility	SEC.08-T2N-R65W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
3983.67	11.072	270.000	3935.00	PARKAMAN
4534.93	11.072	270.000	4476.00	SUSSEX
7064.49	40.983	347.497	6928.00	SHARON SPRINGS
7161.89	50.363	351.186	6996.00	NIOBRARA A
7201.12	54.167	352.391	7020.00	NIOBRARA B
7448.75	78.366	358.205	7119.00	NIOBRARA C