

KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#08 NICHOLS 4N-5HZ (2399'FNL & 280'FWL, SEC.08)
 Field: WELD COUNTY (KERR MCGEE) Well: NICHOLS 4N-5HZ
 Facility: SEC.08-T2N-R65W Wellbore: NICHOLS 4N-5HZ PWB

Plot reference wellpath is NICHOLS 4N-5HZ (PERMIT) PWP

True vertical depths are referenced to Rig on SLOT#08 NICHOLS 4N-5HZ (2399'FNL & 280'FWL, SEC.08) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to Rig on SLOT#08 NICHOLS 4N-5HZ (2399'FNL & 280'FWL, SEC.08) (RKB)	North Reference: True north
Rig on SLOT#08 NICHOLS 4N-5HZ (2399'FNL & 280'FWL, SEC.08) (RKB) to Mean Sea Level: 4963 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#08 NICHOLS 4N-5HZ (2399'FNL & 280'FWL, SEC.08)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: wlsje02 on 6/5/2012

Location Information

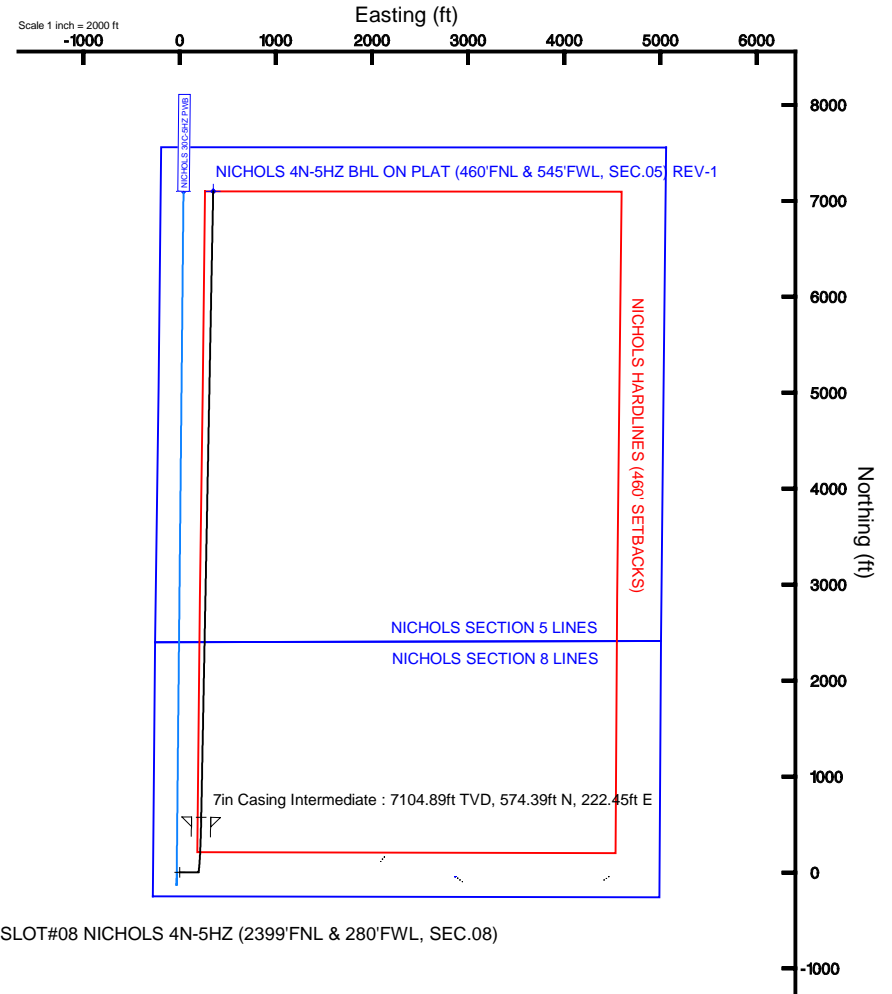
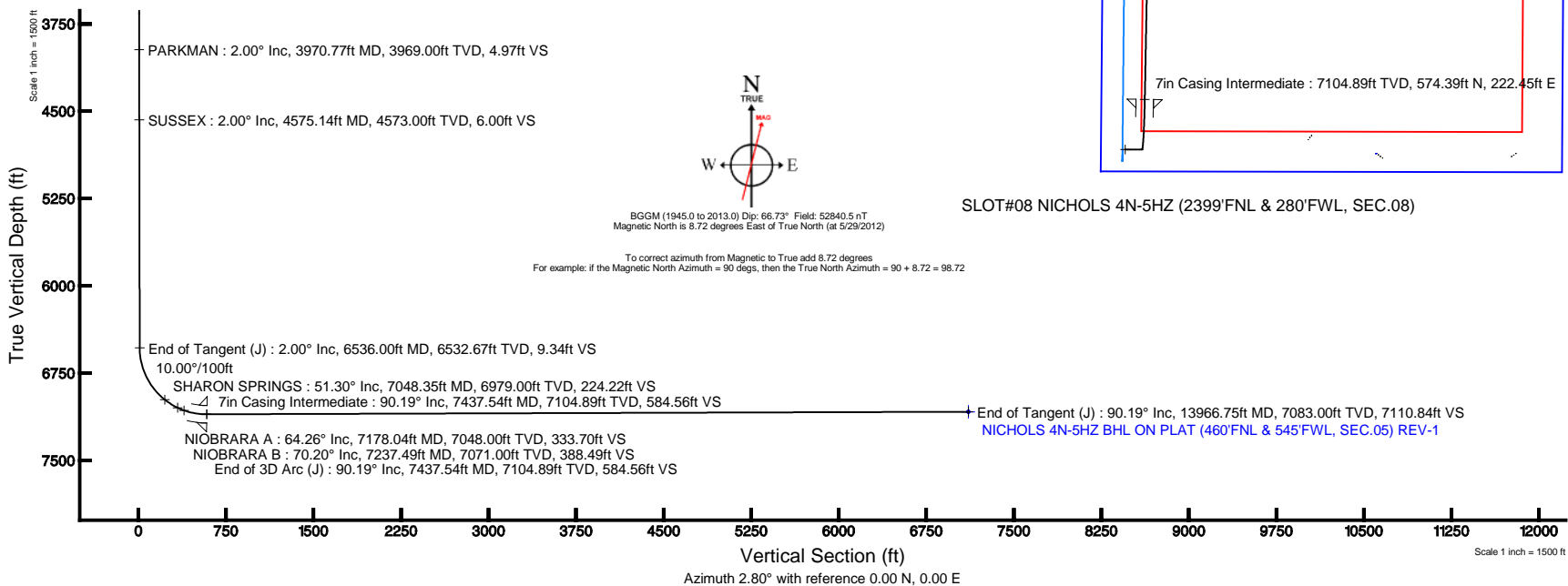
Facility Name	Grid East (US ft)	Latitude	Longitude
SEC.08-T2N-R65W	319771.840	126891.290	40°09'40.600"N
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)
SLOT#08 NICHOLS 4N-5HZ (2399'FNL & 280'FWL, SEC.08)	30827.00	27159.99	322484.228

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	90.000	17.00	0.00	0.00	0.00	0.00
End of Tangent	1000.00	0.000	90.000	1000.00	0.00	0.00	0.00	0.00
End of Build (J)	1100.00	2.000	90.000	1099.98	0.00	1.75	2.00	0.09
End of Tangent (J)	6536.00	2.000	90.000	6532.67	0.00	191.46	0.00	9.34
End of 3D Arc (J)	7437.54	90.192	1.092	7104.89	574.39	222.45	10.00	584.56
End of Tangent (J)	13966.75	90.192	1.092	7083.00	7102.38	346.83	0.00	7110.84

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	-44.97	2865.53	3227549.93	1299913.51	40°09'13.644"N	104°41'09.312"W
NICHOLS SECTION 8 LINES		35.00	-44.97	2865.53	3227549.93	1299913.51	40°09'13.644"N	104°41'09.312"W
NICHOLS 4N-5HZ BHL ON PLAT (460'FNL & 545'FWL, SEC.05) REV-1	13966.75	7083.00	7102.38	346.83	3224866.65	1307037.42	40°10'24.276"N	104°41'41.748"W
NICHOLS HARDLINES (460' SETBACKS)		7235.00	-44.97	2865.53	3227549.93	1299913.51	40°09'13.644"N	104°41'09.312"W





Planned Wellpath Report
 NICHOLS 4N-5HZ (PERMIT) PWP
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**REFERENCE WELLPATH IDENTIFICATION**

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 NICHOLS 4N-5HZ (2399'FNL & 280'FWL, SEC.08)
Area	COLORADO	Well	NICHOLS 4N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 4N-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	6/5/2012 at 15:17:13
Convergence at slot	0.52° East	Database/Source file	WellArchitectDB/NICHOLS_4N-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	30827.00	27159.99	3224684.23	1299932.50	40°09'14.090"N	104°41'46.216"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#08 NICHOLS 4N-5HZ (2399'FNL & 280'FWL, SEC.08) (RKB) to Facility Vertical Datum
Horizontal Reference Pt	Slot	Rig on SLOT#08 NICHOLS 4N-5HZ (2399'FNL & 280'FWL, SEC.08) (RKB) to Mean Sea Level
Vertical Reference Pt	Rig on SLOT#08 NICHOLS 4N-5HZ (2399'FNL & 280'FWL, SEC.08) (RKB)	Rig on SLOT#08 NICHOLS 4N-5HZ (2399'FNL & 280'FWL, SEC.08) (RKB) to Mud Line at Slot (SLOT#08 NICHOLS 4N-5H)
MD Reference Pt	Rig on SLOT#08 NICHOLS 4N-5HZ (2399'FNL & 280'FWL, SEC.08) (RKB)	Section Origin
Field Vertical Reference	Mean Sea Level	Section Azimuth



Planned Wellpath Report

NICHOLS 4N-5HZ (PERMIT) PWP
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Area	COLORADO	Well	NICHOLS 4N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 4N-5HZ PWB
Facility	SEC.08-T2N-R65W		

WELLPATH DATA (151 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	90.000	0.00	0.00	0.00	0.00	40°09'14.090°N	104°41'46.216°W	0.00	
17.00	0.000	90.000	17.00	0.00	0.00	0.00	40°09'14.090°N	104°41'46.216°W	0.00	Tie On
117.00†	0.000	90.000	117.00	0.00	0.00	0.00	40°09'14.090°N	104°41'46.216°W	0.00	
217.00†	0.000	90.000	217.00	0.00	0.00	0.00	40°09'14.090°N	104°41'46.216°W	0.00	
317.00†	0.000	90.000	317.00	0.00	0.00	0.00	40°09'14.090°N	104°41'46.216°W	0.00	
417.00†	0.000	90.000	417.00	0.00	0.00	0.00	40°09'14.090°N	104°41'46.216°W	0.00	
517.00†	0.000	90.000	517.00	0.00	0.00	0.00	40°09'14.090°N	104°41'46.216°W	0.00	
617.00†	0.000	90.000	617.00	0.00	0.00	0.00	40°09'14.090°N	104°41'46.216°W	0.00	
717.00†	0.000	90.000	717.00	0.00	0.00	0.00	40°09'14.090°N	104°41'46.216°W	0.00	
817.00†	0.000	90.000	817.00	0.00	0.00	0.00	40°09'14.090°N	104°41'46.216°W	0.00	
917.00†	0.000	90.000	917.00	0.00	0.00	0.00	40°09'14.090°N	104°41'46.216°W	0.00	
1000.00	0.000	90.000	1000.00	0.00	0.00	0.00	40°09'14.090°N	104°41'46.216°W	0.00	End of Tangent
1017.00†	0.340	90.000	1017.00	0.00	0.00	0.05	40°09'14.090°N	104°41'46.215°W	2.00	
1100.00	2.000	90.000	1099.98	0.09	0.00	1.75	40°09'14.090°N	104°41'46.194°W	2.00	End of Build (J)
1117.00†	2.000	90.000	1116.97	0.11	0.00	2.34	40°09'14.090°N	104°41'46.186°W	0.00	
1217.00†	2.000	90.000	1216.91	0.28	0.00	5.83	40°09'14.090°N	104°41'46.141°W	0.00	
1317.00†	2.000	90.000	1316.85	0.45	0.00	9.32	40°09'14.090°N	104°41'46.096°W	0.00	
1417.00†	2.000	90.000	1416.79	0.62	0.00	12.81	40°09'14.090°N	104°41'46.051°W	0.00	
1517.00†	2.000	90.000	1516.73	0.79	0.00	16.30	40°09'14.090°N	104°41'46.006°W	0.00	
1617.00†	2.000	90.000	1616.66	0.97	0.00	19.79	40°09'14.090°N	104°41'45.961°W	0.00	
1717.00†	2.000	90.000	1716.60	1.14	0.00	23.28	40°09'14.090°N	104°41'45.916°W	0.00	
1817.00†	2.000	90.000	1816.54	1.31	0.00	26.77	40°09'14.090°N	104°41'45.871°W	0.00	
1917.00†	2.000	90.000	1916.48	1.48	0.00	30.26	40°09'14.090°N	104°41'45.826°W	0.00	
2017.00†	2.000	90.000	2016.42	1.65	0.00	33.75	40°09'14.090°N	104°41'45.781°W	0.00	
2117.00†	2.000	90.000	2116.36	1.82	0.00	37.24	40°09'14.090°N	104°41'45.736°W	0.00	
2217.00†	2.000	90.000	2216.30	1.99	0.00	40.73	40°09'14.090°N	104°41'45.691°W	0.00	
2317.00†	2.000	90.000	2316.24	2.16	0.00	44.22	40°09'14.090°N	104°41'45.647°W	0.00	
2417.00†	2.000	90.000	2416.18	2.33	0.00	47.71	40°09'14.090°N	104°41'45.602°W	0.00	
2517.00†	2.000	90.000	2516.12	2.50	0.00	51.20	40°09'14.090°N	104°41'45.557°W	0.00	
2617.00†	2.000	90.000	2616.06	2.67	0.00	54.69	40°09'14.090°N	104°41'45.512°W	0.00	
2717.00†	2.000	90.000	2715.99	2.84	0.00	58.18	40°09'14.090°N	104°41'45.467°W	0.00	
2817.00†	2.000	90.000	2815.93	3.01	0.00	61.67	40°09'14.090°N	104°41'45.422°W	0.00	
2917.00†	2.000	90.000	2915.87	3.18	0.00	65.16	40°09'14.090°N	104°41'45.377°W	0.00	
3017.00†	2.000	90.000	3015.81	3.35	0.00	68.65	40°09'14.090°N	104°41'45.332°W	0.00	
3117.00†	2.000	90.000	3115.75	3.52	0.00	72.14	40°09'14.090°N	104°41'45.287°W	0.00	
3217.00†	2.000	90.000	3215.69	3.69	0.00	75.63	40°09'14.090°N	104°41'45.242°W	0.00	
3317.00†	2.000	90.000	3315.63	3.86	0.00	79.12	40°09'14.090°N	104°41'45.197°W	0.00	
3417.00†	2.000	90.000	3415.57	4.03	0.00	82.61	40°09'14.090°N	104°41'45.152°W	0.00	
3517.00†	2.000	90.000	3515.51	4.20	0.00	86.10	40°09'14.090°N	104°41'45.107°W	0.00	
3617.00†	2.000	90.000	3615.45	4.37	0.00	89.59	40°09'14.090°N	104°41'45.062°W	0.00	
3717.00†	2.000	90.000	3715.39	4.54	0.00	93.08	40°09'14.090°N	104°41'45.017°W	0.00	
3817.00†	2.000	90.000	3815.32	4.71	0.00	96.57	40°09'14.090°N	104°41'44.972°W	0.00	
3917.00†	2.000	90.000	3915.26	4.88	0.00	100.06	40°09'14.090°N	104°41'44.927°W	0.00	
3970.77†	2.000	90.000	3969.00	4.97	0.00	101.93	40°09'14.090°N	104°41'44.903°W	0.00	PARKMAN
4017.00†	2.000	90.000	4015.20	5.05	0.00	103.55	40°09'14.090°N	104°41'44.882°W	0.00	



Planned Wellpath Report

NICHOLS 4N-5HZ (PERMIT) PWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 NICHOLS 4N-5HZ (2399'FNL & 280'FWL, SEC.08)
Area	COLORADO	Well	NICHOLS 4N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 4N-5HZ PWB
Facility	SEC.08-T2N-R65W		

WELLPATH DATA (151 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4117.00†	2.000	90.000	4115.14	5.22	0.00	107.04	40°09'14.090"N	104°41'44.838"W	0.00	
4217.00†	2.000	90.000	4215.08	5.39	0.00	110.53	40°09'14.090"N	104°41'44.793"W	0.00	
4317.00†	2.000	90.000	4315.02	5.56	0.00	114.02	40°09'14.090"N	104°41'44.748"W	0.00	
4417.00†	2.000	90.000	4414.96	5.73	0.00	117.51	40°09'14.090"N	104°41'44.703"W	0.00	
4517.00†	2.000	90.000	4514.90	5.90	0.00	121.00	40°09'14.090"N	104°41'44.658"W	0.00	
4575.14†	2.000	90.000	4573.00	6.00	0.00	123.03	40°09'14.090"N	104°41'44.632"W	0.00	SUSSEX
4617.00†	2.000	90.000	4614.84	6.07	0.00	124.49	40°09'14.090"N	104°41'44.613"W	0.00	
4717.00†	2.000	90.000	4714.78	6.24	0.00	127.98	40°09'14.090"N	104°41'44.568"W	0.00	
4817.00†	2.000	90.000	4814.72	6.41	0.00	131.47	40°09'14.090"N	104°41'44.523"W	0.00	
4917.00†	2.000	90.000	4914.65	6.58	0.00	134.96	40°09'14.090"N	104°41'44.478"W	0.00	
5017.00†	2.000	90.000	5014.59	6.75	0.00	138.45	40°09'14.090"N	104°41'44.433"W	0.00	
5117.00†	2.000	90.000	5114.53	6.92	0.00	141.94	40°09'14.090"N	104°41'44.388"W	0.00	
5217.00†	2.000	90.000	5214.47	7.09	0.00	145.43	40°09'14.090"N	104°41'44.343"W	0.00	
5317.00†	2.000	90.000	5314.41	7.26	0.00	148.92	40°09'14.090"N	104°41'44.298"W	0.00	
5417.00†	2.000	90.000	5414.35	7.43	0.00	152.41	40°09'14.090"N	104°41'44.253"W	0.00	
5517.00†	2.000	90.000	5514.29	7.60	0.00	155.90	40°09'14.090"N	104°41'44.208"W	0.00	
5617.00†	2.000	90.000	5614.23	7.77	0.00	159.39	40°09'14.090"N	104°41'44.163"W	0.00	
5717.00†	2.000	90.000	5714.17	7.94	0.00	162.88	40°09'14.090"N	104°41'44.118"W	0.00	
5817.00†	2.000	90.000	5814.11	8.11	0.00	166.37	40°09'14.090"N	104°41'44.073"W	0.00	
5917.00†	2.000	90.000	5914.05	8.28	0.00	169.86	40°09'14.090"N	104°41'44.028"W	0.00	
6017.00†	2.000	90.000	6013.98	8.45	0.00	173.35	40°09'14.090"N	104°41'43.984"W	0.00	
6117.00†	2.000	90.000	6113.92	8.63	0.00	176.84	40°09'14.090"N	104°41'43.939"W	0.00	
6217.00†	2.000	90.000	6213.86	8.80	0.00	180.33	40°09'14.090"N	104°41'43.894"W	0.00	
6317.00†	2.000	90.000	6313.80	8.97	0.00	183.82	40°09'14.090"N	104°41'43.849"W	0.00	
6417.00†	2.000	90.000	6413.74	9.14	0.00	187.31	40°09'14.090"N	104°41'43.804"W	0.00	
6517.00†	2.000	90.000	6513.68	9.31	0.00	190.80	40°09'14.090"N	104°41'43.759"W	0.00	
6536.00	2.000	90.000	6532.67	9.34	0.00	191.46	40°09'14.090"N	104°41'43.750"W	0.00	End of Tangent (J)
6617.00†	8.379	14.811	6613.35	15.19	5.71	194.39	40°09'14.146"N	104°41'43.713"W	10.00	
6717.00†	18.245	7.178	6710.55	37.98	28.35	198.21	40°09'14.370"N	104°41'43.663"W	10.00	
6817.00†	28.203	4.831	6802.33	77.30	67.52	202.17	40°09'14.757"N	104°41'43.612"W	10.00	
6917.00†	38.183	3.643	6885.91	131.96	122.05	206.13	40°09'15.296"N	104°41'43.561"W	10.00	
7017.00†	48.170	2.889	6958.74	200.30	190.28	209.99	40°09'15.970"N	104°41'43.512"W	10.00	
7048.35†	51.301	2.701	6979.00	224.22	214.17	211.15	40°09'16.206"N	104°41'43.497"W	10.00	SHARON SPRINGS
7117.00†	58.160	2.341	7018.62	280.23	270.14	213.61	40°09'16.759"N	104°41'43.465"W	10.00	
7178.04†	64.259	2.063	7048.00	333.70	323.57	215.66	40°09'17.287"N	104°41'43.439"W	10.00	NIOBRARA A
7217.00†	68.152	1.900	7063.72	369.34	359.19	216.89	40°09'17.639"N	104°41'43.423"W	10.00	
7237.49†	70.200	1.818	7071.00	388.49	378.33	217.51	40°09'17.829"N	104°41'43.415"W	10.00	NIOBRARA B
7317.00†	78.146	1.518	7092.67	464.90	454.73	219.73	40°09'18.584"N	104°41'43.386"W	10.00	
7417.00†	88.139	1.163	7104.59	564.03	553.86	222.05	40°09'19.563"N	104°41'43.356"W	10.00	
7437.54	90.192	1.092	7104.89	584.56	574.39	222.45	40°09'19.766"N	104°41'43.351"W	10.00	End of 3D Arc (J)
7517.00†	90.192	1.092	7104.62	663.98	653.84	223.97	40°09'20.551"N	104°41'43.332"W	0.00	
7617.00†	90.192	1.092	7104.29	763.94	753.82	225.87	40°09'21.539"N	104°41'43.307"W	0.00	
7717.00†	90.192	1.092	7103.95	863.89	853.80	227.78	40°09'22.527"N	104°41'43.282"W	0.00	
7817.00†	90.192	1.092	7103.62	963.85	953.78	229.68	40°09'23.515"N	104°41'43.258"W	0.00	
7917.00†	90.192	1.092	7103.28	1063.80	1053.76	231.59	40°09'24.503"N	104°41'43.233"W	0.00	



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8017.00†	90.192	1.092	7102.95	1163.76	1153.74	233.49	40°09'25.491"N	104°41'43.209"W	0.00	
8117.00†	90.192	1.092	7102.61	1263.71	1253.73	235.40	40°09'26.479"N	104°41'43.184"W	0.00	
8217.00†	90.192	1.092	7102.28	1363.67	1353.71	237.30	40°09'27.467"N	104°41'43.160"W	0.00	
8317.00†	90.192	1.092	7101.94	1463.62	1453.69	239.21	40°09'28.455"N	104°41'43.135"W	0.00	
8417.00†	90.192	1.092	7101.61	1563.58	1553.67	241.11	40°09'29.443"N	104°41'43.111"W	0.00	
8517.00†	90.192	1.092	7101.27	1663.54	1653.65	243.02	40°09'30.431"N	104°41'43.086"W	0.00	
8617.00†	90.192	1.092	7100.94	1763.49	1753.63	244.92	40°09'31.419"N	104°41'43.062"W	0.00	
8717.00†	90.192	1.092	7100.60	1863.45	1853.61	246.83	40°09'32.407"N	104°41'43.037"W	0.00	
8817.00†	90.192	1.092	7100.27	1963.40	1953.59	248.73	40°09'33.396"N	104°41'43.012"W	0.00	
8917.00†	90.192	1.092	7099.93	2063.36	2053.58	250.64	40°09'34.384"N	104°41'42.988"W	0.00	
9017.00†	90.192	1.092	7099.60	2163.31	2153.56	252.54	40°09'35.372"N	104°41'42.963"W	0.00	
9117.00†	90.192	1.092	7099.26	2263.27	2253.54	254.45	40°09'36.360"N	104°41'42.939"W	0.00	
9217.00†	90.192	1.092	7098.92	2363.22	2353.52	256.35	40°09'37.348"N	104°41'42.914"W	0.00	
9317.00†	90.192	1.092	7098.59	2463.18	2453.50	258.26	40°09'38.336"N	104°41'42.890"W	0.00	
9417.00†	90.192	1.092	7098.25	2563.13	2553.48	260.16	40°09'39.324"N	104°41'42.865"W	0.00	
9517.00†	90.192	1.092	7097.92	2663.09	2653.46	262.07	40°09'40.312"N	104°41'42.841"W	0.00	
9617.00†	90.192	1.092	7097.58	2763.04	2753.44	263.97	40°09'41.300"N	104°41'42.816"W	0.00	
9717.00†	90.192	1.092	7097.25	2863.00	2853.43	265.88	40°09'42.288"N	104°41'42.791"W	0.00	
9817.00†	90.192	1.092	7096.91	2962.95	2953.41	267.78	40°09'43.276"N	104°41'42.767"W	0.00	
9917.00†	90.192	1.092	7096.58	3062.91	3053.39	269.69	40°09'44.264"N	104°41'42.742"W	0.00	
10017.00†	90.192	1.092	7096.24	3162.86	3153.37	271.59	40°09'45.252"N	104°41'42.718"W	0.00	
10117.00†	90.192	1.092	7095.91	3262.82	3253.35	273.50	40°09'46.240"N	104°41'42.693"W	0.00	
10217.00†	90.192	1.092	7095.57	3362.77	3353.33	275.40	40°09'47.228"N	104°41'42.669"W	0.00	
10317.00†	90.192	1.092	7095.24	3462.73	3453.31	277.31	40°09'48.216"N	104°41'42.644"W	0.00	
10417.00†	90.192	1.092	7094.90	3562.68	3553.29	279.21	40°09'49.204"N	104°41'42.620"W	0.00	
10517.00†	90.192	1.092	7094.57	3662.64	3653.28	281.12	40°09'50.192"N	104°41'42.595"W	0.00	
10617.00†	90.192	1.092	7094.23	3762.59	3753.26	283.02	40°09'51.180"N	104°41'42.571"W	0.00	
10717.00†	90.192	1.092	7093.90	3862.55	3853.24	284.93	40°09'52.168"N	104°41'42.546"W	0.00	
10817.00†	90.192	1.092	7093.56	3962.51	3953.22	286.83	40°09'53.156"N	104°41'42.521"W	0.00	
10917.00†	90.192	1.092	7093.23	4062.46	4053.20	288.74	40°09'54.144"N	104°41'42.497"W	0.00	
11017.00†	90.192	1.092	7092.89	4162.42	4153.18	290.64	40°09'55.132"N	104°41'42.472"W	0.00	
11117.00†	90.192	1.092	7092.55	4262.37	4253.16	292.55	40°09'56.120"N	104°41'42.448"W	0.00	
11217.00†	90.192	1.092	7092.22	4362.33	4353.15	294.45	40°09'57.108"N	104°41'42.423"W	0.00	
11317.00†	90.192	1.092	7091.88	4462.28	4453.13	296.36	40°09'58.096"N	104°41'42.399"W	0.00	
11417.00†	90.192	1.092	7091.55	4562.24	4553.11	298.26	40°09'59.084"N	104°41'42.374"W	0.00	
11517.00†	90.192	1.092	7091.21	4662.19	4653.09	300.17	40°10'00.072"N	104°41'42.350"W	0.00	
11617.00†	90.192	1.092	7090.88	4762.15	4753.07	302.07	40°10'01.060"N	104°41'42.325"W	0.00	
11717.00†	90.192	1.092	7090.54	4862.10	4853.05	303.98	40°10'02.048"N	104°41'42.300"W	0.00	
11817.00†	90.192	1.092	7090.21	4962.06	4953.03	305.88	40°10'03.036"N	104°41'42.276"W	0.00	
11917.00†	90.192	1.092	7089.87	5062.01	5053.01	307.79	40°10'04.024"N	104°41'42.251"W	0.00	
12017.00†	90.192	1.092	7089.54	5161.97	5153.00	309.69	40°10'05.012"N	104°41'42.227"W	0.00	
12117.00†	90.192	1.092	7089.20	5261.92	5252.98	311.60	40°10'06.000"N	104°41'42.202"W	0.00	
12217.00†	90.192	1.092	7088.87	5361.88	5352.96	313.50	40°10'06.988"N	104°41'42.178"W	0.00	
12317.00†	90.192	1.092	7088.53	5461.83	5452.94	315.41	40°10'07.976"N	104°41'42.153"W	0.00	
12417.00†	90.192	1.092	7088.20	5561.79	5552.92	317.31	40°10'08.964"N	104°41'42.129"W	0.00	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 NICHOLS 4N-5HZ (2399'FNL & 280'FWL, SEC.08)
Area	COLORADO	Well	NICHOLS 4N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 4N-5HZ PWB
Facility	SEC.08-T2N-R65W		

WELLPATH DATA (151 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12517.00†	90.192	1.092	7087.86	5661.74	5652.90	319.22	40°10'09.952"N	104°41'42.104"W	0.00	
12617.00†	90.192	1.092	7087.53	5761.70	5752.88	321.12	40°10'10.940"N	104°41'42.079"W	0.00	
12717.00†	90.192	1.092	7087.19	5861.65	5852.86	323.03	40°10'11.928"N	104°41'42.055"W	0.00	
12817.00†	90.192	1.092	7086.85	5961.61	5952.85	324.93	40°10'12.916"N	104°41'42.030"W	0.00	
12917.00†	90.192	1.092	7086.52	6061.56	6052.83	326.84	40°10'13.904"N	104°41'42.006"W	0.00	
13017.00†	90.192	1.092	7086.18	6161.52	6152.81	328.74	40°10'14.892"N	104°41'41.981"W	0.00	
13117.00†	90.192	1.092	7085.85	6261.47	6252.79	330.65	40°10'15.880"N	104°41'41.957"W	0.00	
13217.00†	90.192	1.092	7085.51	6361.43	6352.77	332.55	40°10'16.868"N	104°41'41.932"W	0.00	
13317.00†	90.192	1.092	7085.18	6461.39	6452.75	334.46	40°10'17.856"N	104°41'41.908"W	0.00	
13417.00†	90.192	1.092	7084.84	6561.34	6552.73	336.36	40°10'18.844"N	104°41'41.883"W	0.00	
13517.00†	90.192	1.092	7084.51	6661.30	6652.72	338.27	40°10'19.832"N	104°41'41.858"W	0.00	
13617.00†	90.192	1.092	7084.17	6761.25	6752.70	340.17	40°10'20.820"N	104°41'41.834"W	0.00	
13717.00†	90.192	1.092	7083.84	6861.21	6852.68	342.08	40°10'21.808"N	104°41'41.809"W	0.00	
13817.00†	90.192	1.092	7083.50	6961.16	6952.66	343.98	40°10'22.796"N	104°41'41.785"W	0.00	
13917.00†	90.192	1.092	7083.17	7061.12	7052.64	345.89	40°10'23.784"N	104°41'41.760"W	0.00	
13966.75	90.192	1.092	7083.00†	7110.84	7102.38	346.83	40°10'24.276"N	104°41'41.748"W	0.00	End of Tangent (J)

HOLE & CASING SECTIONS - Ref Wellbore: NICHOLS 4N-5HZ PWB Ref Wellpath: NICHOLS 4N-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	7437.54	6612.54	825.00	7104.89	0.00	0.00	574.39	222.45
7in Casing Intermediate	17.00	7437.54	7420.54	17.00	7104.89	0.00	0.00	574.39	222.45
6.125in Open Hole	7437.54	13966.75	6529.21	7104.89	NA	574.39	222.45	NA	NA
4.5in Casing Production	17.00	13966.75	13949.75	17.00	NA	0.00	0.00	NA	NA



Planned Wellpath Report

NICHOLS 4N-5HZ (PERMIT) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 NICHOLS 4N-5HZ (2399'FNL & 280'FWL, SEC.08)
Area	COLORADO	Well	NICHOLS 4N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 4N-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	-44.97	2865.53	3227549.93	1299913.51	40°09'13.644"N	104°41'09.312"W	polygon
NICHOLS SECTION 8 LINES		35.00	-44.97	2865.53	3227549.93	1299913.51	40°09'13.644"N	104°41'09.312"W	polygon
1) NICHOLS 4N-5HZ BHL ON PLAT (460'FNL & 545'FWL, SEC.05) REV-1	13966.75	7083.00	7102.38	346.83	3224966.65	1307037.42	40°10'24.276"N	104°41'41.748"W	point
NICHOLS HARDLINES (460' SETBACKS)		7235.00	-44.97	2865.53	3227549.93	1299913.51	40°09'13.644"N	104°41'09.312"W	polygon

SURVEY PROGRAM - Ref Wellbore: NICHOLS 4N-5HZ PWB Ref Wellpath: NICHOLS 4N-5HZ (PERMIT) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	13966.75	NaviTrak (Standard)		NICHOLS 4N-5HZ PWB



Planned Wellpath Report
 NICHOLS 4N-5HZ (PERMIT) PWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 NICHOLS 4N-5HZ (2399'FNL & 280'FWL, SEC.08)
Area	COLORADO	Well	NICHOLS 4N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 4N-5HZ PWB
Facility	SEC.08-T2N-R65W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
3970.77	2.000	90.000	3969.00	PARKMAN
4575.14	2.000	90.000	4573.00	SUSSEX
7048.35	51.301	2.701	6979.00	SHARON SPRINGS
7178.04	64.259	2.063	7048.00	NIOBRARA A
7237.49	70.200	1.818	7071.00	NIOBRARA B