

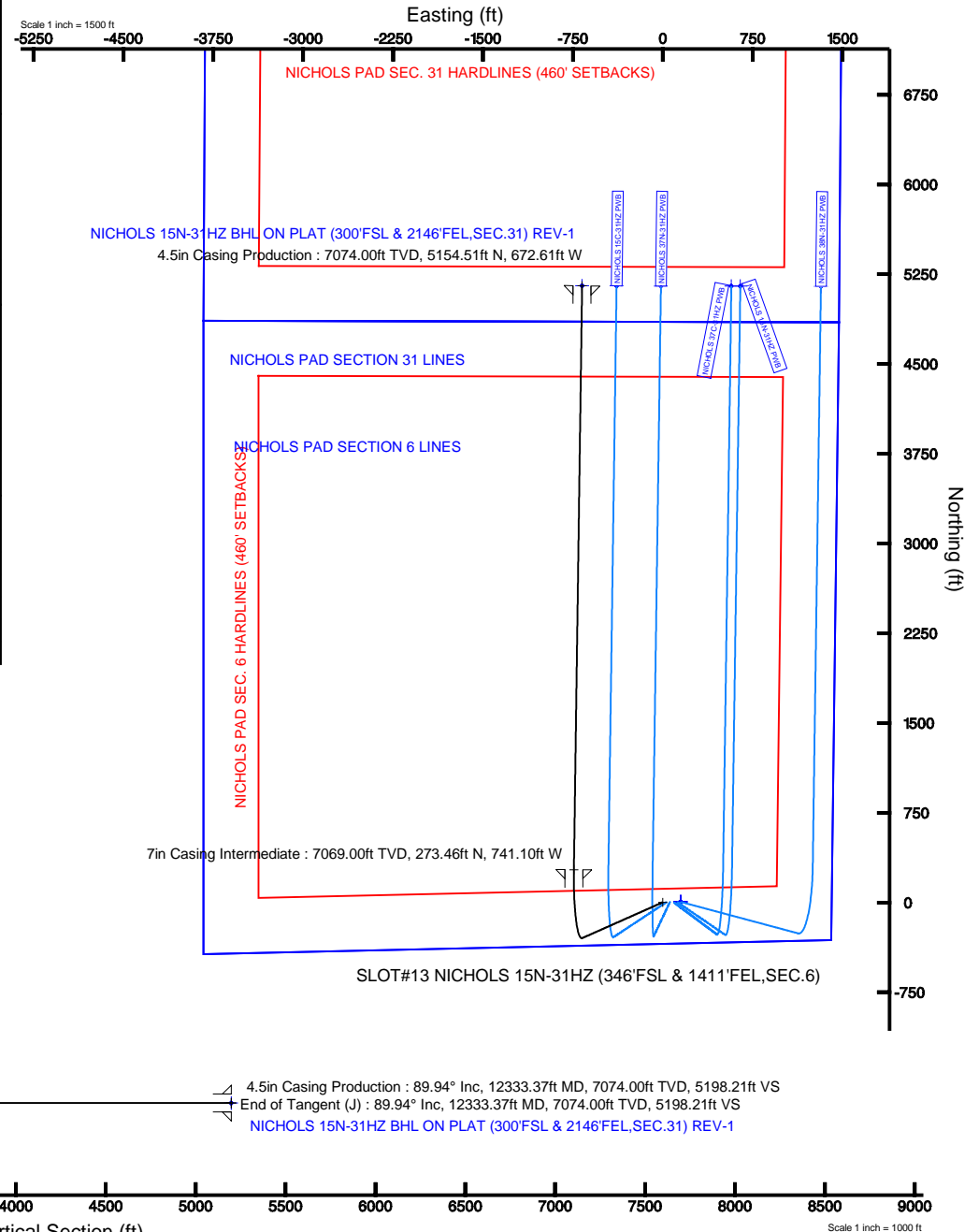
Location:	COLORADO	Slot:	SLOT#13 NICHOLS 15N-31HZ (346'FSL & 1411'FEL,SEC.6)
Field:	WELD COUNTY (KERR MCGEE)	Well:	NICHOLS 15N-31HZ
Facility:	SEC.06-T2N-R65W	Wellbore:	NICHOLS 15N-31HZ PWB

Plot reference wellpath is NICHOLS 15N-31HZ (PERMIT) PWP	
True vertical depths are referenced to XTREME 6 (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to XTREME 6 (RKB)	North Reference: True north
XTREME 6 (RKB) to Mean Sea Level: 4942 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#13 NICHOLS 15N-31HZ (346'FSL & 1411'FEL,SEC.6)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: wiljae02 on 3/6/2012

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.06-T2N-R65W			3222483.590	1306833.950	40°10'22.487"N	104°42'13.759"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#13 NICHOLS 15N-31HZ (346FSL & 1411'FEL,SEC.6)	-4208.02	473.77	3222995.101	1302630.541	40°09'40.903"N	104°42'07.657"W
XTREME 6 (RKB) to Mud line (At Slot: SLOT#13 NICHOLS 15N-31HZ (346FSL & 1411'FEL,SEC.6))					4942ft	
Mean Sea Level to Mud line (At Slot: SLOT#13 NICHOLS 15N-31HZ (346FSL & 1411'FEL,SEC.6))					0ft	
XTREME 6 (RKB) to Mean Sea Level					4942ft	

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	17.00	0.000	246.000	17.00	0.00	0.00	0.00	0.00
End of Tangent	1100.00	0.000	246.000	1100.00	0.00	0.00	0.00	0.00
End of Build (J)	1505.00	8.100	246.000	1503.65	-11.62	-26.11	2.00	-8.15
End of Tangent (J)	6518.53	8.100	246.000	6467.17	-298.95	-671.45	0.00	-209.56
End of 3D Arc (J)	7451.84	89.941	0.804	7069.00	273.46	-741.10	10.00	367.05
End of Tangent (J)	12333.37	89.941	0.804	7074.00	5154.51	-672.61	0.00	5198.21

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
NICHOLS PAD SECTION 31 LINES		0.00	3.66	149.80	32231.44.85	1302635.55	40°09'40.939"N	104°42'05.728"W
NICHOLS PAD SECTION 6 LINES		0.00	3.66	149.80	32231.44.85	1302635.55	40°09'40.939"N	104°42'05.728"W
NICHOLS 15N31HZ BML ON PLAT (300'FSL & 2146'FSL,SEC.31) REV-1	12333.37	7074.00	5154.51	-672.61	3222276.17	1307778.57	40°10'31.840"N	104°42'16.352"W
NICHOLS PAD SEC. 31 HARDLINES (460' SETBACKS)		7118.00	3.66	149.80	32231.44.85	1302635.55	40°09'40.939"N	104°42'05.728"W
NICHOLS PAD SEC. 6 HARDLINES (460' SETBACKS)		7118.00	3.66	149.80	32231.44.85	1302635.55	40°09'40.939"N	104°42'05.728"W





Planned Wellpath Report

NICHOLS 15N-31HZ (PERMIT) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#13 NICHOLS 15N-31HZ (346'FSL & 1411'FEL,SEC.6)
Area	COLORADO	Well	NICHOLS 15N-31HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 15N-31HZ PWB
Facility	SEC.06-T2N-R65W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 3.0.2
North Reference	True	User	Wilsjef02
Scale	0.999958	Report Generated	3/6/2012 at 12:13:23
Convergence at slot	0.52° East	Database/Source file	WellArchitectDB/NICHOLS_15N-31HZ_PWB.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-4208.02	473.77	3222995.10	1302630.54	40°09'40.903"N	104°42'07.657"W
Facility Reference Pt			3222483.59	1306833.95	40°10'22.487"N	104°42'13.759"W
Field Reference Pt			3197771.84	1268891.29	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM			
Calculation method	Minimum curvature	XTREME 6 (RKB) to Facility Vertical Datum	4942.00ft
Horizontal Reference Pt	Slot	XTREME 6 (RKB) to Mean Sea Level	4942.00ft
Vertical Reference Pt	XTREME 6 (RKB)	XTREME 6 (RKB) to Mud Line at Slot (SLOT#13 NICHOLS 15N-31HZ (346'FSL & 1411'FEL,SEC.6))	4942.00ft
MD Reference Pt	XTREME 6 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	352.57°



Planned Wellpath Report

NICHOLS 15N-31HZ (PERMIT) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#13 NICHOLS 15N-31HZ (346'FSL & 1411'FEL,SEC.6)
Area	COLORADO	Well	NICHOLS 15N-31HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 15N-31HZ PWB
Facility	SEC.06-T2N-R65W		

WELLPATH DATA (135 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	246.000	0.00	0.00	0.00	0.00	40°09'40.903"N	104°42'07.657"W	0.00	
17.00	0.000	246.000	17.00	0.00	0.00	0.00	40°09'40.903"N	104°42'07.657"W	0.00	Tie On
117.00†	0.000	246.000	117.00	0.00	0.00	0.00	40°09'40.903"N	104°42'07.657"W	0.00	
217.00†	0.000	246.000	217.00	0.00	0.00	0.00	40°09'40.903"N	104°42'07.657"W	0.00	
317.00†	0.000	246.000	317.00	0.00	0.00	0.00	40°09'40.903"N	104°42'07.657"W	0.00	
417.00†	0.000	246.000	417.00	0.00	0.00	0.00	40°09'40.903"N	104°42'07.657"W	0.00	
517.00†	0.000	246.000	517.00	0.00	0.00	0.00	40°09'40.903"N	104°42'07.657"W	0.00	
617.00†	0.000	246.000	617.00	0.00	0.00	0.00	40°09'40.903"N	104°42'07.657"W	0.00	
717.00†	0.000	246.000	717.00	0.00	0.00	0.00	40°09'40.903"N	104°42'07.657"W	0.00	
817.00†	0.000	246.000	817.00	0.00	0.00	0.00	40°09'40.903"N	104°42'07.657"W	0.00	
917.00†	0.000	246.000	917.00	0.00	0.00	0.00	40°09'40.903"N	104°42'07.657"W	0.00	
1017.00†	0.000	246.000	1017.00	0.00	0.00	0.00	40°09'40.903"N	104°42'07.657"W	0.00	
1100.00	0.000	246.000	1100.00	0.00	0.00	0.00	40°09'40.903"N	104°42'07.657"W	0.00	End of Tangent
1117.00†	0.340	246.000	1117.00	-0.01	-0.02	-0.05	40°09'40.903"N	104°42'07.658"W	2.00	
1217.00†	2.340	246.000	1216.97	-0.68	-0.97	-2.18	40°09'40.893"N	104°42'07.685"W	2.00	
1317.00†	4.340	246.000	1316.79	-2.34	-3.34	-7.50	40°09'40.870"N	104°42'07.754"W	2.00	
1417.00†	6.340	246.000	1416.35	-5.00	-7.13	-16.01	40°09'40.833"N	104°42'07.863"W	2.00	
1505.00	8.100	246.000	1503.65	-8.15	-11.62	-26.11	40°09'40.788"N	104°42'07.993"W	2.00	End of Build (J)
1517.00†	8.100	246.000	1515.53	-8.63	-12.31	-27.65	40°09'40.781"N	104°42'08.013"W	0.00	
1617.00†	8.100	246.000	1614.53	-12.65	-18.04	-40.53	40°09'40.725"N	104°42'08.179"W	0.00	
1717.00†	8.100	246.000	1713.54	-16.67	-23.77	-53.40	40°09'40.668"N	104°42'08.345"W	0.00	
1817.00†	8.100	246.000	1812.54	-20.68	-29.51	-66.27	40°09'40.611"N	104°42'08.511"W	0.00	
1917.00†	8.100	246.000	1911.54	-24.70	-35.24	-79.14	40°09'40.555"N	104°42'08.676"W	0.00	
2017.00†	8.100	246.000	2010.54	-28.72	-40.97	-92.01	40°09'40.498"N	104°42'08.842"W	0.00	
2117.00†	8.100	246.000	2109.55	-32.73	-46.70	-104.89	40°09'40.442"N	104°42'09.008"W	0.00	
2217.00†	8.100	246.000	2208.55	-36.75	-52.43	-117.76	40°09'40.385"N	104°42'09.174"W	0.00	
2317.00†	8.100	246.000	2307.55	-40.77	-58.16	-130.63	40°09'40.328"N	104°42'09.340"W	0.00	
2417.00†	8.100	246.000	2406.55	-44.79	-63.89	-143.50	40°09'40.272"N	104°42'09.505"W	0.00	
2517.00†	8.100	246.000	2505.56	-48.80	-69.62	-156.37	40°09'40.215"N	104°42'09.671"W	0.00	
2617.00†	8.100	246.000	2604.56	-52.82	-75.35	-169.25	40°09'40.158"N	104°42'09.837"W	0.00	
2717.00†	8.100	246.000	2703.56	-56.84	-81.08	-182.12	40°09'40.102"N	104°42'10.003"W	0.00	
2817.00†	8.100	246.000	2802.56	-60.85	-86.81	-194.99	40°09'40.045"N	104°42'10.168"W	0.00	
2917.00†	8.100	246.000	2901.57	-64.87	-92.55	-207.86	40°09'39.988"N	104°42'10.334"W	0.00	
3017.00†	8.100	246.000	3000.57	-68.89	-98.28	-220.73	40°09'39.932"N	104°42'10.500"W	0.00	
3117.00†	8.100	246.000	3099.57	-72.91	-104.01	-233.61	40°09'39.875"N	104°42'10.666"W	0.00	
3217.00†	8.100	246.000	3198.57	-76.92	-109.74	-246.48	40°09'39.819"N	104°42'10.832"W	0.00	
3317.00†	8.100	246.000	3297.58	-80.94	-115.47	-259.35	40°09'39.762"N	104°42'10.997"W	0.00	
3417.00†	8.100	246.000	3396.58	-84.96	-121.20	-272.22	40°09'39.705"N	104°42'11.163"W	0.00	
3517.00†	8.100	246.000	3495.58	-88.98	-126.93	-285.09	40°09'39.649"N	104°42'11.329"W	0.00	
3617.00†	8.100	246.000	3594.58	-92.99	-132.66	-297.97	40°09'39.592"N	104°42'11.495"W	0.00	
3717.00†	8.100	246.000	3693.58	-97.01	-138.39	-310.84	40°09'39.535"N	104°42'11.661"W	0.00	
3817.00†	8.100	246.000	3792.59	-101.03	-144.12	-323.71	40°09'39.479"N	104°42'11.826"W	0.00	
3917.00†	8.100	246.000	3891.59	-105.04	-149.86	-336.58	40°09'39.422"N	104°42'11.992"W	0.00	
4017.00†	8.100	246.000	3990.59	-109.06	-155.59	-349.45	40°09'39.365"N	104°42'12.158"W	0.00	
4031.55†	8.100	246.000	4005.00	-109.65	-156.42	-351.33	40°09'39.357"N	104°42'12.182"W	0.00	PARKMAN
4117.00†	8.100	246.000	4089.59	-113.08	-161.32	-362.33	40°09'39.309"N	104°42'12.324"W	0.00	
4217.00†	8.100	246.000	4188.60	-117.10	-167.05	-375.20	40°09'39.252"N	104°42'12.490"W	0.00	
4317.00†	8.100	246.000	4287.60	-121.11	-172.78	-388.07	40°09'39.196"N	104°42'12.655"W	0.00	
4417.00†	8.100	246.000	4386.60	-125.13	-178.51	-400.94	40°09'39.139"N	104°42'12.821"W	0.00	
4517.00†	8.100	246.000	4485.60	-129.15	-184.24	-413.81	40°09'39.082"N	104°42'12.987"W	0.00	
4533.56†	8.100	246.000	4502.00	-129.81	-185.19	-415.94	40°09'39.073"N	104°42'13.014"W	0.00	SUSSEX
4617.00†	8.100	246.000	4584.61	-133.17	-189.97	-426.68	40°09'39.026"N	104°42'13.153"W	0.00	
4717.00†	8.100	246.000	4683.61	-137.18	-195.70	-439.56	40°09'38.969"N	104°42'13.318"W	0.00	
4817.00†	8.100	246.000	4782.61	-141.20	-201.43	-452.43	40°09'38.912"N	104°42'13.484"W	0.00	
4917.00†	8.100	246.000	4881.61	-145.22	-207.17	-465.30	40°09'38.856"N	104°42'13.650"W	0.00	
5017.00†	8.100	246.000	4980.62	-149.23	-212.90	-478.17	40°09'38.799"N	104°42'13.816"W	0.00	
5117.00†	8.100	246.000	5079.62	-153.25	-218.63	-491.04	40°09'38.742"N	104°42'13.982"W	0.00	
5217.00†	8.100	246.000	5178.62	-157.27	-224.36	-503.92	40°09'38.686"N	104°42'14.147"W	0.00	
5317.00†	8.100	246.000	5277.62	-161.29	-230.09	-516.79	40°09'38.629"N	104°42'14.313"W	0.00	
5417.00†	8.100	246.000	5376.62	-165.30	-235.82	-529.66	40°09'38.573"N	104°42'14.479"W	0.00	



Planned Wellpath Report

NICHOLS 15N-31HZ (PERMIT) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#13 NICHOLS 15N-31HZ (346'FSL & 1411'FEL,SEC.6)
Area	COLORADO	Well	NICHOLS 15N-31HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 15N-31HZ PWB
Facility	SEC.06-T2N-R65W		

WELLPATH DATA (135 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5517.00†	8.100	246.000	5475.63	-169.32	-241.55	-542.53	40°09'38.516"N	104°42'14.645"W	0.00	
5617.00†	8.100	246.000	5574.63	-173.34	-247.28	-555.40	40°09'38.459"N	104°42'14.811"W	0.00	
5717.00†	8.100	246.000	5673.63	-177.36	-253.01	-568.28	40°09'38.403"N	104°42'14.976"W	0.00	
5817.00†	8.100	246.000	5772.63	-181.37	-258.74	-581.15	40°09'38.346"N	104°42'15.142"W	0.00	
5917.00†	8.100	246.000	5871.64	-185.39	-264.47	-594.02	40°09'38.289"N	104°42'15.308"W	0.00	
6017.00†	8.100	246.000	5970.64	-189.41	-270.21	-606.89	40°09'38.233"N	104°42'15.474"W	0.00	
6117.00†	8.100	246.000	6069.64	-193.42	-275.94	-619.76	40°09'38.176"N	104°42'15.639"W	0.00	
6217.00†	8.100	246.000	6168.64	-197.44	-281.67	-632.64	40°09'38.119"N	104°42'15.805"W	0.00	
6317.00†	8.100	246.000	6267.65	-201.46	-287.40	-645.51	40°09'38.063"N	104°42'15.971"W	0.00	
6417.00†	8.100	246.000	6366.65	-205.48	-293.13	-658.38	40°09'38.006"N	104°42'16.137"W	0.00	
6517.00†	8.100	246.000	6465.65	-209.49	-298.86	-671.25	40°09'37.950"N	104°42'16.303"W	0.00	
6518.53	8.100	246.000	6467.17	-209.56	-298.95	-671.45	40°09'37.949"N	104°42'16.305"W	0.00	End of Tangent (J)
6617.00†	9.780	312.269	6564.67	-205.14	-296.14	-684.01	40°09'37.976"N	104°42'16.467"W	10.00	
6717.00†	17.987	337.365	6661.75	-183.71	-276.12	-696.27	40°09'38.174"N	104°42'16.625"W	10.00	
6817.00†	27.391	346.374	6753.93	-145.85	-239.42	-707.66	40°09'38.537"N	104°42'16.772"W	10.00	
6917.00†	37.092	350.973	6838.42	-92.70	-187.15	-717.83	40°09'39.053"N	104°42'16.903"W	10.00	
7017.00†	46.904	353.869	6912.66	-25.89	-120.90	-726.48	40°09'39.708"N	104°42'17.014"W	10.00	
7071.54†	52.281	355.077	6948.00	15.61	-79.58	-730.46	40°09'40.116"N	104°42'17.065"W	10.00	SHARRON SPRINGS
7117.00†	56.770	355.957	6974.37	52.57	-42.68	-733.35	40°09'40.481"N	104°42'17.103"W	10.00	
7198.26†	64.807	357.328	7014.00	123.25	28.06	-737.47	40°09'41.180"N	104°42'17.156"W	10.00	NIOBRARA A
7217.00†	66.663	357.616	7021.70	140.27	45.13	-738.22	40°09'41.349"N	104°42'17.165"W	10.00	
7259.23†	70.846	358.240	7037.00	179.45	84.45	-739.64	40°09'41.737"N	104°42'17.184"W	10.00	NIOBRARA B
7317.00†	76.571	359.044	7053.20	234.56	139.87	-740.95	40°09'42.285"N	104°42'17.200"W	10.00	
7417.00†	86.487	0.357	7067.91	332.58	238.65	-741.45	40°09'43.261"N	104°42'17.207"W	10.00	
7451.84	89.941	0.804	7069.00	367.05	273.46	-741.10	40°09'43.605"N	104°42'17.202"W	10.00	End of 3D Arc (J)
7517.00†	89.941	0.804	7069.07	431.54	338.62	-740.18	40°09'44.249"N	104°42'17.191"W	0.00	
7617.00†	89.941	0.804	7069.17	530.51	438.61	-738.78	40°09'45.237"N	104°42'17.173"W	0.00	
7717.00†	89.941	0.804	7069.27	629.48	538.60	-737.38	40°09'46.225"N	104°42'17.155"W	0.00	
7817.00†	89.941	0.804	7069.37	728.45	638.59	-735.97	40°09'47.213"N	104°42'17.137"W	0.00	
7917.00†	89.941	0.804	7069.48	827.42	738.58	-734.57	40°09'48.202"N	104°42'17.119"W	0.00	
8017.00†	89.941	0.804	7069.58	926.38	838.57	-733.17	40°09'49.190"N	104°42'17.101"W	0.00	
8117.00†	89.941	0.804	7069.68	1025.35	938.56	-731.76	40°09'50.178"N	104°42'17.082"W	0.00	
8217.00†	89.941	0.804	7069.78	1124.32	1038.55	-730.36	40°09'51.166"N	104°42'17.064"W	0.00	
8317.00†	89.941	0.804	7069.89	1223.29	1138.54	-728.96	40°09'52.154"N	104°42'17.046"W	0.00	
8417.00†	89.941	0.804	7069.99	1322.26	1238.53	-727.56	40°09'53.142"N	104°42'17.028"W	0.00	
8517.00†	89.941	0.804	7070.09	1421.22	1338.52	-726.15	40°09'54.130"N	104°42'17.010"W	0.00	
8617.00†	89.941	0.804	7070.19	1520.19	1438.51	-724.75	40°09'55.118"N	104°42'16.992"W	0.00	
8717.00†	89.941	0.804	7070.30	1619.16	1538.50	-723.35	40°09'56.106"N	104°42'16.974"W	0.00	
8817.00†	89.941	0.804	7070.40	1718.13	1638.49	-721.94	40°09'57.095"N	104°42'16.956"W	0.00	
8917.00†	89.941	0.804	7070.50	1817.10	1738.48	-720.54	40°09'58.083"N	104°42'16.938"W	0.00	
9017.00†	89.941	0.804	7070.60	1916.06	1838.47	-719.14	40°09'59.071"N	104°42'16.920"W	0.00	
9117.00†	89.941	0.804	7070.71	2015.03	1938.46	-717.73	40°10'00.059"N	104°42'16.902"W	0.00	
9217.00†	89.941	0.804	7070.81	2114.00	2038.45	-716.33	40°10'01.047"N	104°42'16.884"W	0.00	
9317.00†	89.941	0.804	7070.91	2212.97	2138.44	-714.93	40°10'02.035"N	104°42'16.866"W	0.00	
9417.00†	89.941	0.804	7071.01	2311.94	2238.43	-713.53	40°10'03.023"N	104°42'16.848"W	0.00	
9517.00†	89.941	0.804	7071.11	2410.90	2338.42	-712.12	40°10'04.011"N	104°42'16.830"W	0.00	
9617.00†	89.941	0.804	7071.22	2509.87	2438.41	-710.72	40°10'04.999"N	104°42'16.812"W	0.00	
9717.00†	89.941	0.804	7071.32	2608.84	2538.40	-709.32	40°10'05.987"N	104°42'16.794"W	0.00	
9817.00†	89.941	0.804	7071.42	2707.81	2638.39	-707.91	40°10'06.976"N	104°42'16.776"W	0.00	
9917.00†	89.941	0.804	7071.52	2806.78	2738.38	-706.51	40°10'07.964"N	104°42'16.758"W	0.00	
10017.00†	89.941	0.804	7071.63	2905.74	2838.37	-705.11	40°10'08.952"N	104°42'16.740"W	0.00	
10117.00†	89.941	0.804	7071.73	3004.71	2938.36	-703.70	40°10'09.940"N	104°42'16.722"W	0.00	
10217.00†	89.941	0.804	7071.83	3103.68	3038.35	-702.30	40°10'10.928"N	104°42'16.704"W	0.00	
10317.00†	89.941	0.804	7071.93	3202.65	3138.34	-700.90	40°10'11.916"N	104°42'16.686"W	0.00	
10417.00†	89.941	0.804	7072.04	3301.62	3238.33	-699.50	40°10'12.904"N	104°42'16.668"W	0.00	
10517.00†	89.941	0.804	7072.14	3400.58	3338.32	-698.09	40°10'13.892"N	104°42'16.650"W	0.00	
10617.00†	89.941	0.804	7072.24	3499.55	3438.31	-696.69	40°10'14.880"N	104°42'16.632"W	0.00	
10717.00†	89.941	0.804	7072.34	3598.52	3538.30	-695.29	40°10'15.869"N	104°42'16.614"W	0.00	
10817.00†	89.941	0.804	7072.45	3697.49	3638.29	-693.88	40°10'16.857"N	104°42'16.596"W	0.00	
10917.00†	89.941	0.804	7072.55	3796.46	3738.28	-692.48	40°10'17.845"N	104°42'16.577"W	0.00	



Planned Wellpath Report

NICHOLS 15N-31HZ (PERMIT) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#13 NICHOLS 15N-31HZ (346'FSL & 1411'FEL,SEC.6)
Area	COLORADO	Well	NICHOLS 15N-31HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 15N-31HZ PWB
Facility	SEC.06-T2N-R65W		

WELLPATH DATA (135 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11017.00†	89.941	0.804	7072.65	3895.42	3838.27	-691.08	40°10'18.833"N	104°42'16.559"W	0.00	
11117.00†	89.941	0.804	7072.75	3994.39	3938.26	-689.67	40°10'19.821"N	104°42'16.541"W	0.00	
11217.00†	89.941	0.804	7072.86	4093.36	4038.25	-688.27	40°10'20.809"N	104°42'16.523"W	0.00	
11317.00†	89.941	0.804	7072.96	4192.33	4138.24	-686.87	40°10'21.797"N	104°42'16.505"W	0.00	
11417.00†	89.941	0.804	7073.06	4291.30	4238.23	-685.47	40°10'22.785"N	104°42'16.487"W	0.00	
11517.00†	89.941	0.804	7073.16	4390.26	4338.22	-684.06	40°10'23.773"N	104°42'16.469"W	0.00	
11617.00†	89.941	0.804	7073.27	4489.23	4438.21	-682.66	40°10'24.761"N	104°42'16.451"W	0.00	
11717.00†	89.941	0.804	7073.37	4588.20	4538.20	-681.26	40°10'25.750"N	104°42'16.433"W	0.00	
11817.00†	89.941	0.804	7073.47	4687.17	4638.19	-679.85	40°10'26.738"N	104°42'16.415"W	0.00	
11917.00†	89.941	0.804	7073.57	4786.14	4738.18	-678.45	40°10'27.726"N	104°42'16.397"W	0.00	
12017.00†	89.941	0.804	7073.68	4885.10	4838.17	-677.05	40°10'28.714"N	104°42'16.379"W	0.00	
12117.00†	89.941	0.804	7073.78	4984.07	4938.16	-675.64	40°10'29.702"N	104°42'16.361"W	0.00	
12217.00†	89.941	0.804	7073.88	5083.04	5038.15	-674.24	40°10'30.690"N	104°42'16.343"W	0.00	
12317.00†	89.941	0.804	7073.98	5182.01	5138.14	-672.84	40°10'31.678"N	104°42'16.325"W	0.00	
12333.37	89.941	0.804	7074.00 ¹	5198.21	5154.51	-672.61	40°10'31.840"N	104°42'16.322"W	0.00	End of Tangent (J)

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

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
13.5in Open Hole	17.00	900.00	883.00	17.00	900.00	0.00	0.00	0.00	0.00
9.625in Casing Surface	17.00	900.00	883.00	17.00	900.00	0.00	0.00	0.00	0.00
8.75in Open Hole	900.00	7451.84	6551.84	900.00	7069.00	0.00	0.00	273.46	-741.10
7in Casing Intermediate	17.00	7451.84	7434.84	17.00	7069.00	0.00	0.00	273.46	-741.10
6.125in Open Hole	7451.84	12333.37	4881.53	7069.00	7074.00	273.46	-741.10	5154.51	-672.61
4.5in Casing Production	17.00	12333.37	12316.37	17.00	7074.00	0.00	0.00	5154.51	-672.61

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
NICHOLS PAD SECTION 31 LINES		0.00	3.66	149.80	3223144.85	1302635.55	40°09'40.939"N	104°42'05.728"W	polygon
NICHOLS PAD SECTION 6 LINES		0.00	3.66	149.80	3223144.85	1302635.55	40°09'40.939"N	104°42'05.728"W	polygon
1) NICHOLS 15N-31HZ BHL ON PLAT (300'FSL & 2146'FEL,SEC.31) REV-1	12333.37	7074.00	5154.51	-672.61	3222276.17	1307778.57	40°10'31.840"N	104°42'16.322"W	point
NICHOLS PAD SEC. 31 HARDLINES (460' SETBACKS)		7118.00	3.66	149.80	3223144.85	1302635.55	40°09'40.939"N	104°42'05.728"W	polygon
NICHOLS PAD SEC. 6 HARDLINES (460' SETBACKS)		7118.00	3.66	149.80	3223144.85	1302635.55	40°09'40.939"N	104°42'05.728"W	polygon

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

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	12333.37	NaviTrak (Standard)		NICHOLS 15N-31HZ PWB



Planned Wellpath Report

NICHOLS 15N-31HZ (PERMIT) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#13 NICHOLS 15N-31HZ (346'FSL & 1411'FEL,SEC.6)
Area	COLORADO	Well	NICHOLS 15N-31HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NICHOLS 15N-31HZ PWB
Facility	SEC.06-T2N-R65W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
4031.55	8.100	246.000	4005.00	PARKMAN
4533.56	8.100	246.000	4502.00	SUSSEX
7071.54	52.281	355.077	6948.00	SHARRON SPRINGS
7198.26	64.807	357.328	7014.00	NIOBRARA A
7259.23	70.846	358.240	7037.00	NIOBRARA B