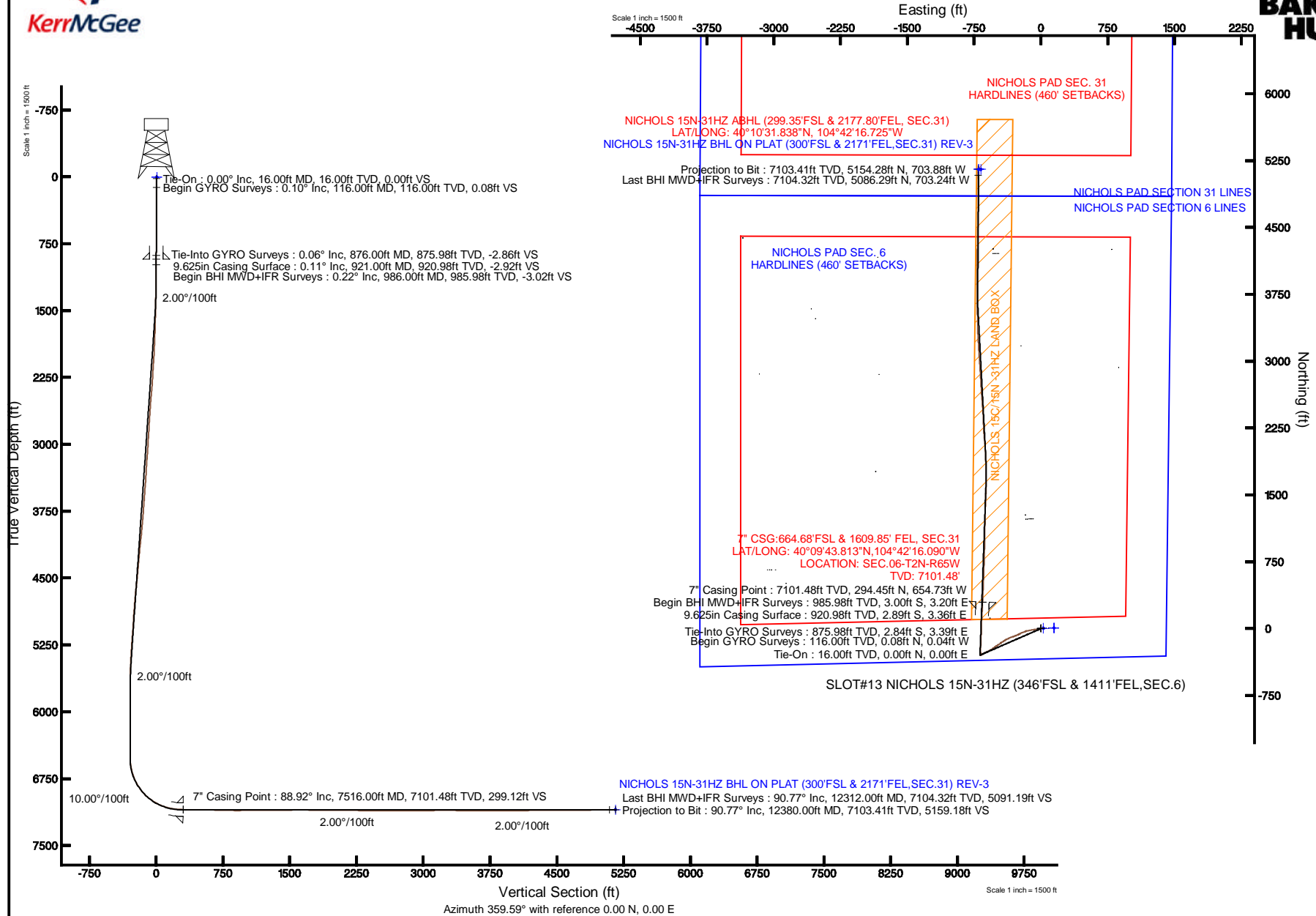


KERR-MCGEE OIL & GAS ONSHORE LP

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 (REV-D.0) PWP

True vertical depths are referenced to XTREME 24 (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to XTREME 24 (RKB)	North Reference: True north
XTREME 24 (RKB) to Mean Sea Level: 4941 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: preccain on 3/19/2013





Actual Wellpath Report

NICHOLS 15N-31HZ AWP

Page 1 of 7



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 AWB
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	Precain
Scale	0.999958	Report Generated	3/19/2013 at 7:47:36 AM
Convergence at slot	0.52° East	Database/Source file	WellArchitectDB/NICHOLS_15N-31HZ_AWB.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 24 (RKB) to Facility Vertical Datum	4941.00ft
Horizontal Reference Pt	Slot	XTREME 24 (RKB) to Mean Sea Level	4941.00ft
Vertical Reference Pt	XTREME 24 (RKB)	XTREME 24 (RKB) to Mud Line at Slot (SLOT#13 NICHOLS 15N-31HZ (346'FSL & 1411'FEL,SEC.6))	4941.00ft
MD Reference Pt	XTREME 24 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	359.59°



Actual Wellpath Report

NICHOLS 15N-31HZ AWP

Page 2 of 7



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 AWB
Facility	SEC.06-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	331.660	0.00	0.00	0.00	0.00	40°09'40.903"N	104°42'07.657"W	0.00	
16.00	0.000	331.660	16.00	0.00	0.00	0.00	40°09'40.903"N	104°42'07.657"W	0.00	Tie-On
116.00	0.100	331.660	116.00	0.08	0.08	-0.04	40°09'40.904"N	104°42'07.658"W	0.10	Begin GYRO Surveys
216.00	0.290	159.320	216.00	-0.08	-0.08	0.01	40°09'40.902"N	104°42'07.657"W	0.39	
316.00	0.570	137.220	316.00	-0.69	-0.69	0.43	40°09'40.896"N	104°42'07.651"W	0.32	
416.00	0.590	129.110	415.99	-1.38	-1.37	1.17	40°09'40.889"N	104°42'07.642"W	0.08	
516.00	0.560	125.440	515.99	-2.00	-1.98	1.97	40°09'40.883"N	104°42'07.632"W	0.05	
616.00	0.420	123.670	615.98	-2.49	-2.47	2.67	40°09'40.879"N	104°42'07.623"W	0.14	
716.00	0.080	79.960	715.98	-2.68	-2.66	3.05	40°09'40.877"N	104°42'07.618"W	0.37	
816.00	0.230	119.820	815.98	-2.77	-2.75	3.29	40°09'40.876"N	104°42'07.615"W	0.18	
876.00	0.060	182.580	875.98	-2.86	-2.84	3.39	40°09'40.875"N	104°42'07.613"W	0.35	Tie-Into GYRO Surveys
986.00	0.220	240.850	985.98	-3.02	-3.00	3.20	40°09'40.873"N	104°42'07.616"W	0.18	Begin BHI MWD+IFR Surveys
1080.00	2.500	264.800	1079.95	-3.28	-3.27	1.00	40°09'40.871"N	104°42'07.644"W	2.45	
1173.00	4.570	254.600	1172.77	-4.41	-4.44	-4.59	40°09'40.859"N	104°42'07.716"W	2.32	
1267.00	6.880	261.730	1266.29	-6.15	-6.25	-13.77	40°09'40.841"N	104°42'07.834"W	2.57	
1360.00	8.650	258.910	1358.44	-8.21	-8.39	-26.15	40°09'40.820"N	104°42'07.994"W	1.95	
1454.00	10.460	263.020	1451.13	-10.49	-10.79	-41.55	40°09'40.796"N	104°42'08.192"W	2.06	
1539.00	11.470	263.120	1534.58	-12.33	-12.74	-57.60	40°09'40.777"N	104°42'08.399"W	1.19	
1625.00	11.100	261.610	1618.91	-14.44	-14.97	-74.28	40°09'40.755"N	104°42'08.614"W	0.55	
1710.00	12.700	261.130	1702.09	-16.95	-17.61	-91.61	40°09'40.729"N	104°42'08.837"W	1.89	
1795.00	12.540	259.220	1785.03	-19.99	-20.77	-109.91	40°09'40.698"N	104°42'09.073"W	0.53	
1880.00	12.110	259.380	1868.07	-23.23	-24.14	-127.74	40°09'40.664"N	104°42'09.302"W	0.51	
1965.00	11.710	260.590	1951.24	-26.16	-27.20	-145.01	40°09'40.634"N	104°42'09.525"W	0.55	
2050.00	11.570	249.440	2034.51	-30.44	-31.60	-161.50	40°09'40.591"N	104°42'09.737"W	2.65	
2136.00	10.710	248.900	2118.88	-36.24	-37.51	-177.03	40°09'40.532"N	104°42'09.937"W	1.01	
2221.00	10.450	249.840	2202.44	-41.63	-43.01	-191.64	40°09'40.478"N	104°42'10.125"W	0.37	
2306.00	9.660	248.990	2286.13	-46.75	-48.22	-205.53	40°09'40.426"N	104°42'10.304"W	0.95	
2391.00	11.530	245.170	2369.68	-52.77	-54.34	-219.90	40°09'40.366"N	104°42'10.489"W	2.35	
2477.00	10.400	242.390	2454.11	-59.87	-61.55	-234.58	40°09'40.295"N	104°42'10.678"W	1.45	
2562.00	9.400	241.860	2537.84	-66.61	-68.38	-247.50	40°09'40.227"N	104°42'10.845"W	1.18	
2647.00	9.870	245.760	2621.65	-72.78	-74.65	-260.26	40°09'40.165"N	104°42'11.009"W	0.95	
2732.00	10.600	249.370	2705.29	-78.43	-80.39	-274.22	40°09'40.109"N	104°42'11.189"W	1.14	
2818.00	9.260	248.540	2790.00	-83.65	-85.71	-288.07	40°09'40.056"N	104°42'11.367"W	1.57	
2903.00	10.840	251.360	2873.70	-88.60	-90.77	-302.00	40°09'40.006"N	104°42'11.547"W	1.95	
2988.00	10.920	252.300	2957.17	-93.50	-95.77	-317.25	40°09'39.957"N	104°42'11.743"W	0.23	
3073.00	9.950	252.780	3040.76	-98.01	-100.39	-331.93	40°09'39.911"N	104°42'11.932"W	1.15	
3158.00	10.370	242.210	3124.44	-103.66	-106.13	-345.72	40°09'39.854"N	104°42'12.110"W	2.25	
3243.00	9.740	244.080	3208.13	-110.27	-112.84	-358.95	40°09'39.788"N	104°42'12.280"W	0.83	
3329.00	8.130	250.200	3293.09	-115.42	-118.08	-371.22	40°09'39.736"N	104°42'12.438"W	2.17	
3414.00	9.210	242.060	3377.12	-120.56	-123.31	-382.88	40°09'39.684"N	104°42'12.588"W	1.92	
3499.00	8.740	236.400	3461.08	-127.24	-130.07	-394.27	40°09'39.618"N	104°42'12.735"W	1.18	
3585.00	7.150	238.650	3546.25	-133.57	-136.47	-404.28	40°09'39.554"N	104°42'12.864"W	1.88	
3670.00	8.220	238.250	3630.48	-139.45	-142.42	-413.97	40°09'39.496"N	104°42'12.989"W	1.26	
3755.00	8.160	238.690	3714.62	-145.71	-148.75	-424.29	40°09'39.433"N	104°42'13.122"W	0.10	
3840.00	8.390	237.220	3798.73	-152.13	-155.24	-434.66	40°09'39.369"N	104°42'13.255"W	0.37	



Actual Wellpath Report

NICHOLS 15N-31HZ AWP

Page 3 of 7



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 AWB
Facility	SEC.06-T2N-R65W		

WELLPATH DATA (152 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3925.00	8.940	232.670	3882.76	-159.42	-162.60	-445.12	40°09'39.296"N	104°42'13.390"W	1.03	
4011.00	8.390	233.580	3967.78	-167.12	-170.38	-455.48	40°09'39.219"N	104°42'13.524"W	0.66	
4096.00	10.010	236.560	4051.69	-174.79	-178.13	-466.64	40°09'39.143"N	104°42'13.667"W	1.99	
4181.00	11.320	235.380	4135.22	-183.51	-186.95	-479.67	40°09'39.056"N	104°42'13.835"W	1.56	
4266.00	9.900	238.780	4218.76	-191.94	-195.47	-492.79	40°09'38.971"N	104°42'14.004"W	1.83	
4351.00	8.850	235.870	4302.63	-199.31	-202.93	-504.45	40°09'38.898"N	104°42'14.154"W	1.35	
4437.00	9.700	235.070	4387.50	-207.09	-210.79	-515.86	40°09'38.820"N	104°42'14.301"W	1.00	
4522.00	9.700	234.150	4471.29	-215.30	-219.08	-527.54	40°09'38.738"N	104°42'14.452"W	0.18	
4607.00	9.760	233.410	4555.06	-223.71	-227.57	-539.13	40°09'38.654"N	104°42'14.601"W	0.16	
4692.00	10.150	234.840	4638.78	-232.23	-236.18	-551.03	40°09'38.569"N	104°42'14.754"W	0.54	
4777.00	10.340	238.320	4722.43	-240.46	-244.50	-563.65	40°09'38.487"N	104°42'14.917"W	0.76	
4862.00	9.700	242.060	4806.13	-247.73	-251.86	-576.47	40°09'38.414"N	104°42'15.082"W	1.07	
4948.00	9.280	245.570	4890.96	-253.90	-258.12	-589.18	40°09'38.352"N	104°42'15.246"W	0.83	
5033.00	9.230	246.570	4974.85	-259.36	-263.67	-601.68	40°09'38.297"N	104°42'15.407"W	0.20	
5118.00	8.640	244.850	5058.82	-264.69	-269.09	-613.71	40°09'38.244"N	104°42'15.562"W	0.76	
5203.00	9.240	242.080	5142.78	-270.52	-275.00	-625.52	40°09'38.185"N	104°42'15.714"W	0.87	
5288.00	9.770	243.870	5226.62	-276.80	-281.37	-638.03	40°09'38.122"N	104°42'15.875"W	0.71	
5374.00	7.860	244.780	5311.60	-282.43	-287.09	-649.90	40°09'38.066"N	104°42'16.028"W	2.23	
5459.00	6.960	241.770	5395.89	-287.28	-292.00	-659.69	40°09'38.017"N	104°42'16.154"W	1.15	
5544.00	5.750	245.540	5480.36	-291.42	-296.20	-668.11	40°09'37.976"N	104°42'16.262"W	1.51	
5629.00	4.090	245.050	5565.05	-294.41	-299.25	-674.73	40°09'37.946"N	104°42'16.347"W	1.95	
5715.00	2.440	244.350	5650.91	-296.46	-301.33	-679.16	40°09'37.925"N	104°42'16.405"W	1.92	
5800.00	0.390	268.490	5735.88	-297.24	-302.12	-681.08	40°09'37.917"N	104°42'16.429"W	2.46	
5885.00	0.300	320.330	5820.87	-297.07	-301.96	-681.51	40°09'37.919"N	104°42'16.435"W	0.37	
6227.00	0.240	83.850	6162.87	-296.31	-301.19	-681.37	40°09'37.926"N	104°42'16.433"W	0.14	
6532.00	1.700	101.540	6467.82	-297.18	-302.03	-676.31	40°09'37.918"N	104°42'16.368"W	0.48	
6574.00	2.150	91.900	6509.80	-297.34	-302.18	-674.91	40°09'37.917"N	104°42'16.350"W	1.32	
6617.00	3.760	19.970	6552.75	-296.05	-300.88	-673.62	40°09'37.930"N	104°42'16.333"W	8.62	
6659.00	8.170	356.840	6594.52	-291.78	-296.61	-673.31	40°09'37.972"N	104°42'16.329"W	11.75	
6702.00	11.320	354.080	6636.89	-284.53	-289.36	-673.92	40°09'38.043"N	104°42'16.337"W	7.40	
6745.00	14.850	355.510	6678.77	-274.83	-279.66	-674.78	40°09'38.139"N	104°42'16.348"W	8.24	
6787.00	18.830	358.270	6718.96	-262.68	-267.52	-675.41	40°09'38.259"N	104°42'16.356"W	9.66	
6830.00	23.140	358.420	6759.10	-247.28	-252.13	-675.85	40°09'38.411"N	104°42'16.362"W	10.02	
6873.00	26.740	359.710	6798.08	-229.16	-234.00	-676.14	40°09'38.591"N	104°42'16.366"W	8.47	
6915.00	31.640	2.140	6834.74	-208.69	-213.53	-675.77	40°09'38.793"N	104°42'16.361"W	12.00	
6957.00	36.130	2.310	6869.60	-185.30	-190.14	-674.86	40°09'39.024"N	104°42'16.349"W	10.69	
7000.00	40.690	2.220	6903.28	-158.62	-163.45	-673.81	40°09'39.288"N	104°42'16.336"W	10.61	
7043.00	44.930	1.610	6934.82	-129.43	-134.25	-672.84	40°09'39.576"N	104°42'16.323"W	9.91	
7085.00	49.630	2.690	6963.31	-98.62	-103.43	-671.67	40°09'39.881"N	104°42'16.308"W	11.35	
7128.00	54.020	3.790	6989.88	-64.89	-69.69	-669.75	40°09'40.214"N	104°42'16.283"W	10.41	
7170.00	57.890	3.010	7013.39	-30.18	-34.95	-667.69	40°09'40.557"N	104°42'16.257"W	9.34	
7213.00	62.340	1.120	7034.81	7.06	2.29	-666.36	40°09'40.926"N	104°42'16.240"W	11.03	
7256.00	66.680	0.440	7053.31	45.86	41.09	-665.84	40°09'41.309"N	104°42'16.233"W	10.19	
7299.00	71.470	1.600	7068.66	86.00	81.24	-665.12	40°09'41.706"N	104°42'16.224"W	11.42	
7341.00	75.040	3.340	7080.76	126.16	121.41	-663.38	40°09'42.103"N	104°42'16.201"W	9.38	



Actual Wellpath Report

NICHOLS 15N-31HZ AWP

Page 4 of 7



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 AWB
Facility	SEC.06-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
7384.00	79.220	3.580	7090.34	167.97	163.25	-660.85	40°09'42.516"N	104°42'16.169"W	9.74	
7426.00	83.450	2.880	7096.66	209.40	204.69	-658.51	40°09'42.926"N	104°42'16.139"W	10.21	
7470.00	87.620	2.130	7100.09	253.20	248.51	-656.59	40°09'43.359"N	104°42'16.114"W	9.63	
7516.00†	88.922	2.512	7101.48	299.12	294.45	-654.73	40°09'43.813"N	104°42'16.090"W	2.95	7" Casing Point
7541.00	89.630	2.720	7101.79	324.09	319.42	-653.59	40°09'44.059"N	104°42'16.075"W	2.95	
7626.00	89.630	2.470	7102.34	408.97	404.33	-649.74	40°09'44.899"N	104°42'16.026"W	0.29	
7711.00	89.230	2.350	7103.19	493.86	489.25	-646.17	40°09'45.738"N	104°42'15.980"W	0.49	
7796.00	88.830	2.270	7104.63	578.75	574.17	-642.74	40°09'46.577"N	104°42'15.936"W	0.48	
7881.00	88.430	1.720	7106.66	663.65	659.09	-639.78	40°09'47.416"N	104°42'15.898"W	0.80	
7966.00	88.210	1.530	7109.15	748.56	744.02	-637.37	40°09'48.255"N	104°42'15.867"W	0.34	
8052.00	89.080	1.720	7111.18	834.48	829.96	-634.94	40°09'49.105"N	104°42'15.835"W	1.04	
8137.00	90.120	2.100	7111.78	919.41	914.91	-632.10	40°09'49.944"N	104°42'15.799"W	1.30	
8222.00	91.020	0.710	7110.93	1004.36	999.88	-630.02	40°09'50.784"N	104°42'15.772"W	1.95	
8307.00	89.970	0.630	7110.20	1089.34	1084.87	-629.03	40°09'51.624"N	104°42'15.759"W	1.24	
8393.00	89.820	1.050	7110.35	1175.32	1170.86	-627.76	40°09'52.473"N	104°42'15.743"W	0.52	
8478.00	89.690	0.980	7110.72	1260.29	1255.84	-626.26	40°09'53.313"N	104°42'15.724"W	0.17	
8563.00	91.380	2.420	7109.92	1345.23	1340.80	-623.74	40°09'54.153"N	104°42'15.691"W	2.61	
8648.00	90.950	2.190	7108.20	1430.11	1425.71	-620.32	40°09'54.992"N	104°42'15.647"W	0.57	
8734.00	91.290	1.850	7106.52	1516.02	1511.64	-617.29	40°09'55.841"N	104°42'15.608"W	0.56	
8819.00	89.960	0.710	7105.59	1600.97	1596.61	-615.39	40°09'56.681"N	104°42'15.584"W	2.06	
8904.00	89.290	0.360	7106.14	1685.96	1681.60	-614.60	40°09'57.521"N	104°42'15.574"W	0.89	
8989.00	89.350	358.930	7107.15	1770.95	1766.59	-615.12	40°09'58.360"N	104°42'15.580"W	1.68	
9074.00	90.210	358.820	7107.48	1855.94	1851.58	-616.79	40°09'59.200"N	104°42'15.602"W	1.02	
9160.00	89.930	356.830	7107.37	1941.90	1937.51	-620.06	40°10'00.049"N	104°42'15.644"W	2.34	
9245.00	89.470	356.300	7107.82	2026.78	2022.36	-625.15	40°10'00.888"N	104°42'15.710"W	0.83	
9330.00	88.730	354.890	7109.16	2111.56	2107.09	-631.68	40°10'01.725"N	104°42'15.794"W	1.87	
9415.00	89.140	356.200	7110.73	2196.33	2191.82	-638.28	40°10'02.563"N	104°42'15.879"W	1.61	
9500.00	89.500	356.990	7111.74	2281.21	2276.66	-643.33	40°10'03.401"N	104°42'15.944"W	1.02	
9585.00	89.570	357.870	7112.43	2366.14	2361.57	-647.14	40°10'04.240"N	104°42'15.993"W	1.04	
9671.00	89.700	356.070	7112.98	2452.05	2447.45	-651.68	40°10'05.089"N	104°42'16.051"W	2.10	
9756.00	89.170	355.900	7113.82	2536.87	2532.23	-657.63	40°10'05.927"N	104°42'16.128"W	0.65	
9841.00	89.260	355.520	7114.98	2621.67	2616.99	-663.99	40°10'06.764"N	104°42'16.210"W	0.46	
9926.00	90.090	356.710	7115.47	2706.51	2701.79	-669.75	40°10'07.602"N	104°42'16.284"W	1.71	
10011.00	90.520	356.360	7115.01	2791.39	2786.63	-674.89	40°10'08.441"N	104°42'16.351"W	0.65	
10096.00	89.690	356.680	7114.86	2876.27	2871.47	-680.05	40°10'09.279"N	104°42'16.417"W	1.05	
10182.00	91.260	356.550	7114.15	2962.15	2957.32	-685.12	40°10'10.127"N	104°42'16.482"W	1.83	
10267.00	91.010	355.760	7112.46	3046.98	3042.11	-690.82	40°10'10.965"N	104°42'16.556"W	0.97	
10352.00	90.180	356.740	7111.58	3131.82	3126.92	-696.38	40°10'11.803"N	104°42'16.628"W	1.51	
10437.00	90.310	356.170	7111.22	3216.70	3211.76	-701.64	40°10'12.642"N	104°42'16.695"W	0.69	
10523.00	89.820	357.450	7111.12	3302.59	3297.62	-706.42	40°10'13.490"N	104°42'16.757"W	1.59	
10608.00	89.230	358.020	7111.82	3387.54	3382.55	-709.78	40°10'14.329"N	104°42'16.800"W	0.97	
10693.00	89.230	359.440	7112.96	3472.53	3467.52	-711.67	40°10'15.169"N	104°42'16.825"W	1.67	
10779.00	89.510	359.650	7113.91	3558.52	3553.51	-712.35	40°10'16.019"N	104°42'16.833"W	0.41	
10864.00	89.240	359.230	7114.84	3643.51	3638.50	-713.18	40°10'16.859"N	104°42'16.844"W	0.59	
10950.00	90.030	359.760	7115.39	3729.51	3724.50	-713.94	40°10'17.709"N	104°42'16.854"W	1.11	



Actual Wellpath Report

NICHOLS 15N-31HZ AWP

Page 5 of 7



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 AWB
Facility	SEC.06-T2N-R65W		

WELLPATH DATA (152 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11035.00	89.470	359.420	7115.76	3814.51	3809.49	-714.55	40°10'18.548"N	104°42'16.862"W	0.77	
11120.00	90.240	359.730	7115.97	3899.51	3894.49	-715.18	40°10'19.388"N	104°42'16.870"W	0.98	
11205.00	91.010	0.570	7115.04	3984.50	3979.48	-714.95	40°10'20.228"N	104°42'16.867"W	1.34	
11290.00	90.950	359.460	7113.59	4069.48	4064.47	-714.93	40°10'21.068"N	104°42'16.867"W	1.31	
11375.00	91.040	0.510	7112.11	4154.47	4149.46	-714.95	40°10'21.908"N	104°42'16.867"W	1.24	
11460.00	90.580	1.890	7110.91	4239.42	4234.43	-713.17	40°10'22.748"N	104°42'16.844"W	1.71	
11545.00	90.640	1.710	7110.01	4324.35	4319.38	-710.50	40°10'23.587"N	104°42'16.810"W	0.22	
11631.00	90.430	0.890	7109.20	4410.31	4405.35	-708.55	40°10'24.437"N	104°42'16.785"W	0.98	
11716.00	90.520	1.180	7108.50	4495.28	4490.34	-707.02	40°10'25.277"N	104°42'16.765"W	0.36	
11801.00	90.490	0.870	7107.75	4580.25	4575.32	-705.50	40°10'26.116"N	104°42'16.745"W	0.37	
11886.00	90.120	359.270	7107.30	4665.24	4660.32	-705.39	40°10'26.956"N	104°42'16.744"W	1.93	
11972.00	90.150	0.450	7107.10	4751.24	4746.31	-705.60	40°10'27.806"N	104°42'16.747"W	1.37	
12057.00	90.310	0.150	7106.75	4836.23	4831.31	-705.16	40°10'28.646"N	104°42'16.741"W	0.40	
12142.00	90.550	0.220	7106.12	4921.23	4916.31	-704.88	40°10'29.486"N	104°42'16.738"W	0.29	
12227.00	90.550	1.270	7105.30	5006.20	5001.30	-703.78	40°10'30.326"N	104°42'16.724"W	1.24	
12312.00	90.770	359.460	7104.32	5091.19	5086.29	-703.24	40°10'31.166"N	104°42'16.717"W	2.14	Last BHI MWD+IFR Surveys
12380.00	90.770	359.460	7103.41	5159.18	5154.28	-703.88	40°10'31.838"N	104°42'16.725"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: NICHOLS 15N-31HZ AWB Ref Wellpath: NICHOLS 15N-31HZ AWP

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	16.00	921.00	905.00	16.00	920.98	0.00	0.00	-2.89	3.36
9.625in Casing Surface	16.00	921.00	905.00	16.00	920.98	0.00	0.00	-2.89	3.36
8.75in Open Hole	921.00	7525.00	6604.00	920.98	7101.63	-2.89	3.36	303.44	-654.33
7in Casing Intermediate	16.00	7516.00	7500.00	16.00	7101.48	0.00	0.00	294.45	-654.73
6.125in Open Hole	7516.00	12380.00	4864.00	7101.48	7103.41	294.45	-654.73	5154.28	-703.88



Actual Wellpath Report

NICHOLS 15N-31HZ AWP

Page 6 of 7



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 AWB
Facility	SEC.06-T2N-R65W		

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		-1.00	3.66	149.80	3223144.85	1302635.55	40°09'40.939"N	104°42'05.728"W	polygon
NICHOLS PAD SECTION 6 LINES		-1.00	3.66	149.80	3223144.85	1302635.55	40°09'40.939"N	104°42'05.728"W	polygon
NICHOLS 15N-31HZ BHL ON PLAT (300'FSL & 2146'FEL,SEC.31) REV-1		7073.00	5154.51	-672.61	3222276.17	1307778.57	40°10'31.840"N	104°42'16.322"W	point
NICHOLS 15N-31HZ BHL ON PLAT (300'FSL & 2171'FEL,SEC.31) REV-2		7091.00	5154.51	-697.61	3222251.17	1307778.34	40°10'31.840"N	104°42'16.644"W	point
NICHOLS PAD SEC. 31 HARDLINES (460' SETBACKS)		7117.00	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)		7117.00	3.66	149.80	3223144.85	1302635.55	40°09'40.939"N	104°42'05.728"W	polygon
NICHOLS 15C/15N -31HZ LAND BOX		7400.00	0.71	29.89	3223024.98	1302631.52	40°09'40.910"N	104°42'07.272"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: NICHOLS 15N-31HZ AWB Ref Wellpath: NICHOLS 15N-31HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	876.00	Generic gyro - continuous (Standard)	MS ENERGY SURVEYS <116-876>	NICHOLS 15N-31HZ AWB
876.00	7470.00	NaviTrak (MAGCORR,IFR)	BHI MWD+IFR SURVEYS 8 3/4" HOLE <986-7470>	NICHOLS 15N-31HZ AWB
7470.00	12312.00	OnTrak (MAGCORR,IFR)	BHI MWD+IFR SURVEYS 6 1/8" HOLE <7541-12312>	NICHOLS 15N-31HZ AWB
12312.00	12380.00	Blind Drilling (std)	Projection to bit	NICHOLS 15N-31HZ AWB



Actual Wellpath Report

NICHOLS 15N-31HZ AWP

Page 7 of 7



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 AWB
Facility	SEC.06-T2N-R65W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
16.00	0.000	331.660	16.00	Tie-On
116.00	0.100	331.660	116.00	Begin GYRO Surveys
876.00	0.060	182.580	875.98	Tie-Into GYRO Surveys
986.00	0.220	240.850	985.98	Begin BHI MWD+IFR Surveys
7516.00	88.922	2.512	7101.48	7" Casing Point
12312.00	90.770	359.460	7104.32	Last BHI MWD+IFR Surveys
12380.00	90.770	359.460	7103.41	Projection to Bit