

KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#04 BARCLAY 2N-11HZ (577'FSL & 2133'FEL, SEC.14)
Field: WELD COUNTY (KERR MCGEE) Well: BARCLAY 2N-11HZ
Facility: SEC.14-T2N-R67W Wellbore: BARCLAY 2N-11HZ PWB

Plot reference wellpath is BARCLAY 2N-11HZ (PERMIT REV-1) PWP

True vertical depths are referenced to PERMIT (17 KB) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to PERMIT (17 KB) (RKB)	North Reference: True north
PERMIT (17 KB) (RKB) to Mean Sea Level: 4949 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#04 BARCLAY 2N-11HZ (577'FSL & 2133'FEL, SEC.14): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: rbbale01 on 21/Aug/2013

Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.14-T2N-R67W	3179914.426	1291732.032	40°07'56.662"N	104°51'23.565"W
Slot	Local N (ft)	Local E (ft)	Grid North (US ft)	Latitude
SLOT#04 BARCLAY 2N-11HZ (577'FSL & 2133'FEL, SEC.14)	-0.61	90.02	3180004.446	1291732.078
PERMIT (17 KB) (RKB) to Mud line (At Slot: SLOT#04 BARCLAY 2N-11HZ (577'FSL & 2133'FEL, SEC.14))				4949ft
Mean Sea Level to Mud line (At Slot: SLOT#04 BARCLAY 2N-11HZ (577'FSL & 2133'FEL, SEC.14))				0ft
PERMIT (17 KB) (RKB) to Mean Sea Level				4949ft

Survey Program

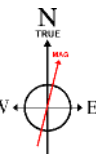
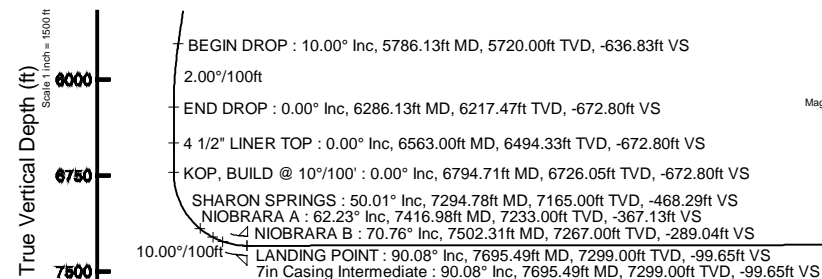
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	7695.49	NaviTrak	NaviTrak (Standard)		BARCLAY 2N-11HZ PWB
7695.49	17322.73	OnTrak	OnTrak (Standard)		BARCLAY 2N-11HZ PWB

Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.11-T2N-R67W SECTION LINES		0.00	0.20	-29.98	3179974.47	1291732.06	40°07'56.658"N	104°51'22.792"W
SEC.14-T2N-R67W SECTION LINES		0.00	0.61	-90.02	3179914.43	1291732.03	40°07'56.662"N	104°51'23.565"W
BARCLAY 2N-11HZ BHL ON PLAT(460'FNL & 1705'FEL, SEC.11)	17322.73	7286.00	9506.51	465.08	3180400.48	1301241.30	40°09'30.600"N	104°51'16.416"W
BARCLAY 2N-11HZ LAMDBOX		7353.00	0.00	0.00	3180004.45	1291732.08	40°07'56.656"N	104°51'22.406"W
SEC.11-T2N-R67W HARDLINES (460' SETBACK)		7353.00	0.20	-29.98	3179974.47	1291732.06	40°07'56.658"N	104°51'22.792"W
SEC.14-T2N-R67W HARDLINES (460' SETBACK)		7353.00	0.61	-90.02	3179914.43	1291732.03	40°07'56.662"N	104°51'23.565"W

Well Profile Data

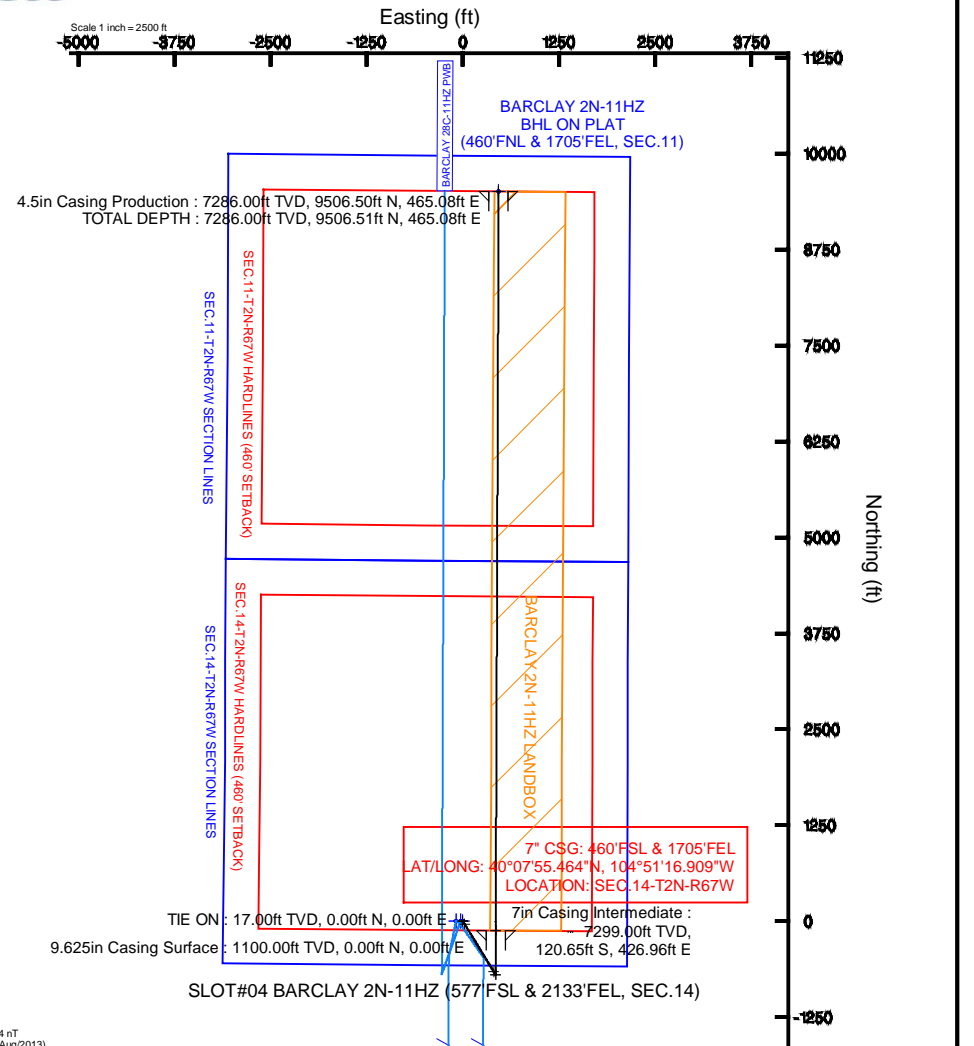
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
TIE ON	17.00	0.000	148.550	17.00	0.00	0.00	0.00	0.00
BEGIN NUDGE	1100.00	0.000	148.550	1100.00	0.00	0.00	0.00	0.00
END NUDGE	1600.00	10.000	148.550	1597.47	-37.13	22.71	2.00	-35.97
BEGIN DROP	5786.13	10.000	148.550	5720.00	-657.26	401.98	0.00	-636.83
END DROP	6286.13	0.000	0.227	6217.47	-694.39	424.69	2.00	-672.80
KOP, BUILD @ 10°/100'	6794.71	0.000	0.227	6726.05	-694.39	424.69	0.00	-672.80
LANDING POINT	7695.49	90.077	0.227	7299.00	-120.66	426.96	10.00	-99.65
TOTAL DEPTH	17322.73	90.077	0.227	7286.00	9506.51	465.08	0.00	9517.88



BGGM (1945.0 to 2014.0) Dip: 66.71° Field: 52644 nT
Magnetic North is 8.65 degrees East of True North (at 16/Aug/2013)

To correct azimuth from Magnetic to True add 8.65 degrees

Azimuth 2.80° with reference 0.00 N, 0.00 E



BARCLAY 2N-11HZ BHL ON PLAT(460'FNL & 1705'FEL, SEC.11)
TOTAL DEPTH : 90.08° Inc, 17322.73ft MD, 7286.00ft TVD, 9517.88ft VS
4.5in Casing Production : 90.08° Inc, 17322.73ft MD, 7286.00ft TVD, 9517.87ft VS

Scale 1 inch = 1500 ft



Planned Wellpath Report

BARCLAY 2N-11HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#04 BARCLAY 2N-11HZ (577'FSL & 2133'FEL, SEC.14)
Area	COLORADO	Well	BARCLAY 2N-11HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	BARCLAY 2N-11HZ PWB
Facility	SEC.14-T2N-R67W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 4.0.0
North Reference	True	User	Robiale01
Scale	0.999959	Report Generated	20/Aug/2013 at 15:39
Convergence at slot	n/a	Database/Source file	WA_ANADARKO/BARCLAY_2N-11HZ_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-0.61	90.02	3180004.45	1291732.08	40°07'56.656"N	104°51'22.406"W
Facility Reference Pt			3179914.43	1291732.03	40°07'56.662"N	104°51'23.565"W
Field Reference Pt			3197771.84	1268891.29	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM

Calculation method	Minimum curvature	PERMIT (17' KB) (RKB) to Facility Vertical Datum	4949.00ft
Horizontal Reference Pt	Slot	PERMIT (17' KB) (RKB) to Mean Sea Level	4949.00ft
Vertical Reference Pt	PERMIT (17' KB) (RKB)	PERMIT (17' KB) (RKB) to Mud Line at Slot (SLOT#04 BARCLAY 2N-11HZ (577'FSL & 2133'FEL, SEC.14))	4949.00ft
MD Reference Pt	PERMIT (17' KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	2.80°



Planned Wellpath Report

BARCLAY 2N-11HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#04 BARCLAY 2N-11HZ (577'FSL & 2133'FEL, SEC.14)
Area	COLORADO	Well	BARCLAY 2N-11HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	BARCLAY 2N-11HZ PWB
Facility	SEC.14-T2N-R67W		

WELLPATH DATA (189 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	148.550	0.00	0.00	0.00	0.00	40°07'56.656"N	104°51'22.406"W	0.00	
17.00	0.000	148.550	17.00	0.00	0.00	0.00	40°07'56.656"N	104°51'22.406"W	0.00	TIE ON
117.00†	0.000	148.550	117.00	0.00	0.00	0.00	40°07'56.656"N	104°51'22.406"W	0.00	
217.00†	0.000	148.550	217.00	0.00	0.00	0.00	40°07'56.656"N	104°51'22.406"W	0.00	
317.00†	0.000	148.550	317.00	0.00	0.00	0.00	40°07'56.656"N	104°51'22.406"W	0.00	
417.00†	0.000	148.550	417.00	0.00	0.00	0.00	40°07'56.656"N	104°51'22.406"W	0.00	
517.00†	0.000	148.550	517.00	0.00	0.00	0.00	40°07'56.656"N	104°51'22.406"W	0.00	
617.00†	0.000	148.550	617.00	0.00	0.00	0.00	40°07'56.656"N	104°51'22.406"W	0.00	
717.00†	0.000	148.550	717.00	0.00	0.00	0.00	40°07'56.656"N	104°51'22.406"W	0.00	
817.00†	0.000	148.550	817.00	0.00	0.00	0.00	40°07'56.656"N	104°51'22.406"W	0.00	
917.00†	0.000	148.550	917.00	0.00	0.00	0.00	40°07'56.656"N	104°51'22.406"W	0.00	
991.00†	0.000	148.550	991.00	0.00	0.00	0.00	40°07'56.656"N	104°51'22.406"W	0.00	FOX BASE HILLS
1017.00†	0.000	148.550	1017.00	0.00	0.00	0.00	40°07'56.656"N	104°51'22.406"W	0.00	
1100.00	0.000	148.550	1100.00	0.00	0.00	0.00	40°07'56.656"N	104°51'22.406"W	0.00	BEGIN NUDGE
1117.00†	0.340	148.550	1117.00	-0.04	-0.04	0.03	40°07'56.656"N	104°51'22.406"W	2.00	
1217.00†	2.340	148.550	1216.97	-1.97	-2.04	1.25	40°07'56.636"N	104°51'22.390"W	2.00	
1317.00†	4.340	148.550	1316.79	-6.79	-7.01	4.29	40°07'56.587"N	104°51'22.351"W	2.00	
1417.00†	6.340	148.550	1416.35	-14.48	-14.95	9.14	40°07'56.508"N	104°51'22.288"W	2.00	
1517.00†	8.340	148.550	1515.53	-25.04	-25.85	15.81	40°07'56.401"N	104°51'22.202"W	2.00	
1600.00	10.000	148.550	1597.47	-35.97	-37.13	22.71	40°07'56.289"N	104°51'22.114"W	2.00	END NUDGE
1617.00†	10.000	148.550	1614.21	-38.42	-39.65	24.25	40°07'56.264"N	104°51'22.094"W	0.00	
1717.00†	10.000	148.550	1712.69	-52.77	-54.46	33.31	40°07'56.118"N	104°51'21.977"W	0.00	
1817.00†	10.000	148.550	1811.17	-67.12	-69.27	42.37	40°07'55.971"N	104°51'21.861"W	0.00	
1917.00†	10.000	148.550	1909.65	-81.48	-84.09	51.43	40°07'55.825"N	104°51'21.744"W	0.00	
2017.00†	10.000	148.550	2008.13	-95.83	-98.90	60.49	40°07'55.679"N	104°51'21.627"W	0.00	
2117.00†	10.000	148.550	2106.61	-110.18	-113.72	69.55	40°07'55.532"N	104°51'21.511"W	0.00	
2217.00†	10.000	148.550	2205.09	-124.54	-128.53	78.61	40°07'55.386"N	104°51'21.394"W	0.00	
2317.00†	10.000	148.550	2303.57	-138.89	-143.34	87.67	40°07'55.239"N	104°51'21.277"W	0.00	
2417.00†	10.000	148.550	2402.05	-153.24	-158.16	96.73	40°07'55.093"N	104°51'21.161"W	0.00	
2517.00†	10.000	148.550	2500.53	-167.60	-172.97	105.79	40°07'54.947"N	104°51'21.044"W	0.00	
2617.00†	10.000	148.550	2599.01	-181.95	-187.79	114.85	40°07'54.800"N	104°51'20.927"W	0.00	
2717.00†	10.000	148.550	2697.50	-196.30	-202.60	123.91	40°07'54.654"N	104°51'20.811"W	0.00	
2817.00†	10.000	148.550	2795.98	-210.66	-217.41	132.97	40°07'54.507"N	104°51'20.694"W	0.00	
2917.00†	10.000	148.550	2894.46	-225.01	-232.23	142.03	40°07'54.361"N	104°51'20.577"W	0.00	
3017.00†	10.000	148.550	2992.94	-239.36	-247.04	151.09	40°07'54.215"N	104°51'20.461"W	0.00	
3117.00†	10.000	148.550	3091.42	-253.72	-261.86	160.15	40°07'54.068"N	104°51'20.344"W	0.00	
3217.00†	10.000	148.550	3189.90	-268.07	-276.67	169.21	40°07'53.922"N	104°51'20.228"W	0.00	
3317.00†	10.000	148.550	3288.38	-282.42	-291.48	178.27	40°07'53.776"N	104°51'20.111"W	0.00	
3417.00†	10.000	148.550	3386.86	-296.78	-306.30	187.33	40°07'53.629"N	104°51'19.994"W	0.00	
3517.00†	10.000	148.550	3485.34	-311.13	-321.11	196.39	40°07'53.483"N	104°51'19.878"W	0.00	
3617.00†	10.000	148.550	3583.82	-325.48	-335.92	205.45	40°07'53.336"N	104°51'19.761"W	0.00	
3717.00†	10.000	148.550	3682.30	-339.84	-350.74	214.51	40°07'53.190"N	104°51'19.644"W	0.00	
3817.00†	10.000	148.550	3780.78	-354.19	-365.55	223.57	40°07'53.044"N	104°51'19.528"W	0.00	
3917.00†	10.000	148.550	3879.26	-368.54	-380.37	232.63	40°07'52.897"N	104°51'19.411"W	0.00	
4017.00†	10.000	148.550	3977.75	-382.90	-395.18	241.69	40°07'52.751"N	104°51'19.294"W	0.00	



Planned Wellpath Report

BARCLAY 2N-11HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION				
Operator	KERR-MCGEE OIL & GAS ONSHORE LP		Slot	SLOT#04 BARCLAY 2N-11HZ (577'FSL & 2133'FEL, SEC.14)
Area	COLORADO		Well	BARCLAY 2N-11HZ
Field	WELD COUNTY (KERR MCGEE)		Wellbore	BARCLAY 2N-11HZ PWB
Facility	SEC.14-T2N-R67W			

WELLPATH DATA (189 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4060.92†	10.000	148.550	4021.00	-389.20	-401.69	245.67	40°07'52.686"N	104°51'19.243"W	0.00	PARKMAN
4117.00†	10.000	148.550	4076.23	-397.25	-409.99	250.75	40°07'52.604"N	104°51'19.178"W	0.00	
4217.00†	10.000	148.550	4174.71	-411.60	-424.81	259.81	40°07'52.458"N	104°51'19.061"W	0.00	
4317.00†	10.000	148.550	4273.19	-425.96	-439.62	268.87	40°07'52.312"N	104°51'18.944"W	0.00	
4417.00†	10.000	148.550	4371.67	-440.31	-454.44	277.93	40°07'52.165"N	104°51'18.828"W	0.00	
4484.35†	10.000	148.550	4438.00	-449.98	-464.41	284.04	40°07'52.067"N	104°51'18.749"W	0.00	SUSSEX
4517.00†	10.000	148.550	4470.15	-454.66	-469.25	286.99	40°07'52.019"N	104°51'18.711"W	0.00	
4617.00†	10.000	148.550	4568.63	-469.02	-484.06	296.05	40°07'51.872"N	104°51'18.595"W	0.00	
4717.00†	10.000	148.550	4667.11	-483.37	-498.88	305.11	40°07'51.726"N	104°51'18.478"W	0.00	
4817.00†	10.000	148.550	4765.59	-497.73	-513.69	314.17	40°07'51.580"N	104°51'18.361"W	0.00	
4917.00†	10.000	148.550	4864.07	-512.08	-528.50	323.23	40°07'51.433"N	104°51'18.245"W	0.00	
5017.00†	10.000	148.550	4962.55	-526.43	-543.32	332.29	40°07'51.287"N	104°51'18.128"W	0.00	
5117.00†	10.000	148.550	5061.03	-540.79	-558.13	341.35	40°07'51.140"N	104°51'18.011"W	0.00	
5217.00†	10.000	148.550	5159.52	-555.14	-572.95	350.41	40°07'50.994"N	104°51'17.895"W	0.00	
5317.00†	10.000	148.550	5258.00	-569.49	-587.76	359.47	40°07'50.848"N	104°51'17.778"W	0.00	
5417.00†	10.000	148.550	5356.48	-583.85	-602.57	368.53	40°07'50.701"N	104°51'17.661"W	0.00	
5517.00†	10.000	148.550	5454.96	-598.20	-617.39	377.59	40°07'50.555"N	104°51'17.545"W	0.00	
5617.00†	10.000	148.550	5553.44	-612.55	-632.20	386.66	40°07'50.408"N	104°51'17.428"W	0.00	
5717.00†	10.000	148.550	5651.92	-626.91	-647.02	395.72	40°07'50.262"N	104°51'17.311"W	0.00	
5786.13	10.000	148.550	5720.00	-636.83	-657.26	401.98	40°07'50.161"N	104°51'17.231"W	0.00	BEGIN DROP
5817.00†	9.383	148.550	5750.43	-641.12	-661.69	404.69	40°07'50.117"N	104°51'17.196"W	2.00	
5917.00†	7.383	148.550	5849.35	-653.17	-674.13	412.30	40°07'49.994"N	104°51'17.098"W	2.00	
6017.00†	5.383	148.550	5948.73	-662.36	-683.61	418.10	40°07'49.900"N	104°51'17.023"W	2.00	
6117.00†	3.383	148.550	6048.43	-668.68	-690.13	422.08	40°07'49.836"N	104°51'16.972"W	2.00	
6217.00†	1.383	148.550	6148.34	-672.11	-693.67	424.25	40°07'49.801"N	104°51'16.944"W	2.00	
6286.13	0.000	0.227	6217.47	-672.80	-694.39	424.69	40°07'49.794"N	104°51'16.939"W	2.00	END DROP
6317.00†	0.000	0.227	6248.33	-672.80	-694.39	424.69	40°07'49.794"N	104°51'16.939"W	0.00	
6417.00†	0.000	0.227	6348.33	-672.80	-694.39	424.69	40°07'49.794"N	104°51'16.939"W	0.00	
6517.00†	0.000	0.227	6448.33	-672.80	-694.39	424.69	40°07'49.794"N	104°51'16.939"W	0.00	
6563.00†	0.000	0.227	6494.33	-672.80	-694.39	424.69	40°07'49.794"N	104°51'16.939"W	0.00	4 1/2" LINER TOP
6617.00†	0.000	0.227	6548.33	-672.80	-694.39	424.69	40°07'49.794"N	104°51'16.939"W	0.00	
6717.00†	0.000	0.227	6648.33	-672.80	-694.39	424.69	40°07'49.794"N	104°51'16.939"W	0.00	
6794.71	0.000	0.227	6726.05	-672.80	-694.39	424.69	40°07'49.794"N	104°51'16.939"W	0.00	KOP, BUILD @ 10°/100'
6817.00†	2.229	0.227	6748.33	-672.37	-693.95	424.69	40°07'49.798"N	104°51'16.938"W	10.00	
6917.00†	12.229	0.227	6847.41	-659.82	-681.38	424.74	40°07'49.922"N	104°51'16.938"W	10.00	
7017.00†	22.229	0.227	6942.80	-630.26	-651.80	424.86	40°07'50.215"N	104°51'16.936"W	10.00	
7117.00†	32.229	0.227	7031.61	-584.61	-606.11	425.04	40°07'50.666"N	104°51'16.934"W	10.00	
7217.00†	42.229	0.227	7111.13	-524.25	-545.68	425.28	40°07'51.263"N	104°51'16.931"W	10.00	
7294.78†	50.007	0.227	7165.00	-468.29	-489.67	425.50	40°07'51.817"N	104°51'16.928"W	10.00	SHARON SPRINGS
7317.00†	52.229	0.227	7178.95	-451.01	-472.37	425.57	40°07'51.988"N	104°51'16.927"W	10.00	
7416.98†	62.227	0.227	7233.00	-367.13	-388.41	425.90	40°07'52.818"N	104°51'16.923"W	10.00	NIOBRARA A
7417.00†	62.229	0.227	7233.01	-367.12	-388.39	425.90	40°07'52.818"N	104°51'16.923"W	10.00	
7502.31†	70.760	0.227	7267.00	-289.04	-310.24	426.21	40°07'53.590"N	104°51'16.919"W	10.00	NIOBRARA B
7517.00†	72.229	0.227	7271.66	-275.12	-296.31	426.26	40°07'53.728"N	104°51'16.918"W	10.00	
7617.00†	82.229	0.227	7293.74	-177.82	-198.90	426.65	40°07'54.690"N	104°51'16.913"W	10.00	



Planned Wellpath Report

BARCLAY 2N-11HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#04 BARCLAY 2N-11HZ (577'FSL & 2133'FEL, SEC.14)
Area	COLORADO	Well	BARCLAY 2N-11HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	BARCLAY 2N-11HZ PWB
Facility	SEC.14-T2N-R67W		

WELLPATH DATA (189 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7695.49	90.077	0.227	7299.00	-99.65	-120.66	426.96	40°07'55.464"N	104°51'16.909"W	10.00	LANDING POINT
7717.00†	90.077	0.227	7298.97	-78.16	-99.14	427.04	40°07'55.676"N	104°51'16.908"W	0.00	
7817.00†	90.077	0.227	7298.84	21.74	0.86	427.44	40°07'56.664"N	104°51'16.903"W	0.00	
7917.00†	90.077	0.227	7298.70	121.64	100.85	427.84	40°07'57.653"N	104°51'16.898"W	0.00	
8017.00†	90.077	0.227	7298.57	221.54	200.85	428.23	40°07'58.641"N	104°51'16.893"W	0.00	
8117.00†	90.077	0.227	7298.43	321.44	300.85	428.63	40°07'59.629"N	104°51'16.888"W	0.00	
8217.00†	90.077	0.227	7298.30	421.34	400.85	429.02	40°08'00.617"N	104°51'16.882"W	0.00	
8317.00†	90.077	0.227	7298.16	521.24	500.85	429.42	40°08'01.605"N	104°51'16.877"W	0.00	
8417.00†	90.077	0.227	7298.03	621.14	600.85	429.82	40°08'02.594"N	104°51'16.872"W	0.00	
8517.00†	90.077	0.227	7297.89	721.03	700.85	430.21	40°08'03.582"N	104°51'16.867"W	0.00	
8617.00†	90.077	0.227	7297.76	820.93	800.85	430.61	40°08'04.570"N	104°51'16.862"W	0.00	
8717.00†	90.077	0.227	7297.62	920.83	900.85	431.00	40°08'05.558"N	104°51'16.857"W	0.00	
8817.00†	90.077	0.227	7297.49	1020.73	1000.85	431.40	40°08'06.546"N	104°51'16.852"W	0.00	
8917.00†	90.077	0.227	7297.35	1120.63	1100.85	431.80	40°08'07.535"N	104°51'16.847"W	0.00	
9017.00†	90.077	0.227	7297.22	1220.53	1200.85	432.19	40°08'08.523"N	104°51'16.841"W	0.00	
9117.00†	90.077	0.227	7297.08	1320.43	1300.84	432.59	40°08'09.511"N	104°51'16.836"W	0.00	
9217.00†	90.077	0.227	7296.95	1420.33	1400.84	432.98	40°08'10.499"N	104°51'16.831"W	0.00	
9317.00†	90.077	0.227	7296.81	1520.23	1500.84	433.38	40°08'11.487"N	104°51'16.826"W	0.00	
9417.00†	90.077	0.227	7296.68	1620.13	1600.84	433.78	40°08'12.476"N	104°51'16.821"W	0.00	
9517.00†	90.077	0.227	7296.54	1720.02	1700.84	434.17	40°08'13.464"N	104°51'16.816"W	0.00	
9617.00†	90.077	0.227	7296.41	1819.92	1800.84	434.57	40°08'14.452"N	104°51'16.811"W	0.00	
9717.00†	90.077	0.227	7296.27	1919.82	1900.84	434.96	40°08'15.440"N	104°51'16.806"W	0.00	
9817.00†	90.077	0.227	7296.14	2019.72	2000.84	435.36	40°08'16.428"N	104°51'16.800"W	0.00	
9917.00†	90.077	0.227	7296.00	2119.62	2100.84	435.76	40°08'17.417"N	104°51'16.795"W	0.00	
10017.00†	90.077	0.227	7295.87	2219.52	2200.84	436.15	40°08'18.405"N	104°51'16.790"W	0.00	
10117.00†	90.077	0.227	7295.73	2319.42	2300.84	436.55	40°08'19.393"N	104°51'16.785"W	0.00	
10217.00†	90.077	0.227	7295.60	2419.32	2400.83	436.94	40°08'20.381"N	104°51'16.780"W	0.00	
10317.00†	90.077	0.227	7295.46	2519.22	2500.83	437.34	40°08'21.369"N	104°51'16.775"W	0.00	
10417.00†	90.077	0.227	7295.33	2619.12	2600.83	437.74	40°08'22.358"N	104°51'16.770"W	0.00	
10517.00†	90.077	0.227	7295.19	2719.01	2700.83	438.13	40°08'23.346"N	104°51'16.765"W	0.00	
10617.00†	90.077	0.227	7295.06	2818.91	2800.83	438.53	40°08'24.334"N	104°51'16.760"W	0.00	
10717.00†	90.077	0.227	7294.92	2918.81	2900.83	438.92	40°08'25.322"N	104°51'16.754"W	0.00	
10817.00†	90.077	0.227	7294.79	3018.71	3000.83	439.32	40°08'26.310"N	104°51'16.749"W	0.00	
10917.00†	90.077	0.227	7294.65	3118.61	3100.83	439.72	40°08'27.299"N	104°51'16.744"W	0.00	
11017.00†	90.077	0.227	7294.52	3218.51	3200.83	440.11	40°08'28.287"N	104°51'16.739"W	0.00	
11117.00†	90.077	0.227	7294.38	3318.41	3300.83	440.51	40°08'29.275"N	104°51'16.734"W	0.00	
11217.00†	90.077	0.227	7294.25	3418.31	3400.83	440.90	40°08'30.263"N	104°51'16.729"W	0.00	
11317.00†	90.077	0.227	7294.11	3518.21	3500.83	441.30	40°08'31.251"N	104°51'16.724"W	0.00	
11417.00†	90.077	0.227	7293.98	3618.11	3600.82	441.70	40°08'32.240"N	104°51'16.719"W	0.00	
11517.00†	90.077	0.227	7293.84	3718.00	3700.82	442.09	40°08'33.228"N	104°51'16.713"W	0.00	
11617.00†	90.077	0.227	7293.71	3817.90	3800.82	442.49	40°08'34.216"N	104°51'16.708"W	0.00	
11717.00†	90.077	0.227	7293.57	3917.80	3900.82	442.88	40°08'35.204"N	104°51'16.703"W	0.00	
11817.00†	90.077	0.227	7293.44	4017.70	4000.82	443.28	40°08'36.192"N	104°51'16.698"W	0.00	
11917.00†	90.077	0.227	7293.30	4117.60	4100.82	443.68	40°08'37.181"N	104°51'16.693"W	0.00	
12017.00†	90.077	0.227	7293.17	4217.50	4200.82	444.07	40°08'38.169"N	104°51'16.688"W	0.00	



Planned Wellpath Report

BARCLAY 2N-11HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#04 BARCLAY 2N-11HZ (577'FSL & 2133'FEL, SEC.14)
Area	COLORADO	Well	BARCLAY 2N-11HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	BARCLAY 2N-11HZ PWB
Facility	SEC.14-T2N-R67W		

WELLPATH DATA (189 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12117.00†	90.077	0.227	7293.03	4317.40	4300.82	444.47	40°08'39.157"N	104°51'16.683"W	0.00	
12217.00†	90.077	0.227	7292.90	4417.30	4400.82	444.86	40°08'40.145"N	104°51'16.678"W	0.00	
12317.00†	90.077	0.227	7292.76	4517.20	4500.82	445.26	40°08'41.133"N	104°51'16.672"W	0.00	
12417.00†	90.077	0.227	7292.63	4617.10	4600.82	445.66	40°08'42.122"N	104°51'16.667"W	0.00	
12517.00†	90.077	0.227	7292.49	4716.99	4700.81	446.05	40°08'43.110"N	104°51'16.662"W	0.00	
12617.00†	90.077	0.227	7292.36	4816.89	4800.81	446.45	40°08'44.098"N	104°51'16.657"W	0.00	
12717.00†	90.077	0.227	7292.22	4916.79	4900.81	446.84	40°08'45.086"N	104°51'16.652"W	0.00	
12817.00†	90.077	0.227	7292.09	5016.69	5000.81	447.24	40°08'46.074"N	104°51'16.647"W	0.00	
12917.00†	90.077	0.227	7291.95	5116.59	5100.81	447.64	40°08'47.063"N	104°51'16.642"W	0.00	
13017.00†	90.077	0.227	7291.82	5216.49	5200.81	448.03	40°08'48.051"N	104°51'16.637"W	0.00	
13117.00†	90.077	0.227	7291.68	5316.39	5300.81	448.43	40°08'49.039"N	104°51'16.631"W	0.00	
13217.00†	90.077	0.227	7291.55	5416.29	5400.81	448.82	40°08'50.027"N	104°51'16.626"W	0.00	
13317.00†	90.077	0.227	7291.41	5516.19	5500.81	449.22	40°08'51.015"N	104°51'16.621"W	0.00	
13417.00†	90.077	0.227	7291.28	5616.09	5600.81	449.61	40°08'52.004"N	104°51'16.616"W	0.00	
13517.00†	90.077	0.227	7291.14	5715.99	5700.81	450.01	40°08'52.992"N	104°51'16.611"W	0.00	
13617.00†	90.077	0.227	7291.01	5815.88	5800.80	450.41	40°08'53.980"N	104°51'16.606"W	0.00	
13717.00†	90.077	0.227	7290.87	5915.78	5900.80	450.80	40°08'54.968"N	104°51'16.601"W	0.00	
13817.00†	90.077	0.227	7290.73	6015.68	6000.80	451.20	40°08'55.956"N	104°51'16.596"W	0.00	
13917.00†	90.077	0.227	7290.60	6115.58	6100.80	451.59	40°08'56.945"N	104°51'16.590"W	0.00	
14017.00†	90.077	0.227	7290.46	6215.48	6200.80	451.99	40°08'57.933"N	104°51'16.585"W	0.00	
14117.00†	90.077	0.227	7290.33	6315.38	6300.80	452.39	40°08'58.921"N	104°51'16.580"W	0.00	
14217.00†	90.077	0.227	7290.19	6415.28	6400.80	452.78	40°08'59.909"N	104°51'16.575"W	0.00	
14317.00†	90.077	0.227	7290.06	6515.18	6500.80	453.18	40°09'00.897"N	104°51'16.570"W	0.00	
14417.00†	90.077	0.227	7289.92	6615.08	6600.80	453.57	40°09'01.886"N	104°51'16.565"W	0.00	
14517.00†	90.077	0.227	7289.79	6714.98	6700.80	453.97	40°09'02.874"N	104°51'16.560"W	0.00	
14617.00†	90.077	0.227	7289.65	6814.87	6800.80	454.37	40°09'03.862"N	104°51'16.555"W	0.00	
14717.00†	90.077	0.227	7289.52	6914.77	6900.80	454.76	40°09'04.850"N	104°51'16.550"W	0.00	
14817.00†	90.077	0.227	7289.38	7014.67	7000.79	455.16	40°09'05.838"N	104°51'16.544"W	0.00	
14917.00†	90.077	0.227	7289.25	7114.57	7100.79	455.55	40°09'06.827"N	104°51'16.539"W	0.00	
15017.00†	90.077	0.227	7289.11	7214.47	7200.79	455.95	40°09'07.815"N	104°51'16.534"W	0.00	
15117.00†	90.077	0.227	7288.98	7314.37	7300.79	456.35	40°09'08.803"N	104°51'16.529"W	0.00	
15217.00†	90.077	0.227	7288.84	7414.27	7400.79	456.74	40°09'09.791"N	104°51'16.524"W	0.00	
15317.00†	90.077	0.227	7288.71	7514.17	7500.79	457.14	40°09'10.779"N	104°51'16.519"W	0.00	
15417.00†	90.077	0.227	7288.57	7614.07	7600.79	457.53	40°09'11.768"N	104°51'16.514"W	0.00	
15517.00†	90.077	0.227	7288.44	7713.97	7700.79	457.93	40°09'12.756"N	104°51'16.509"W	0.00	
15617.00†	90.077	0.227	7288.30	7813.86	7800.79	458.33	40°09'13.744"N	104°51'16.503"W	0.00	
15717.00†	90.077	0.227	7288.17	7913.76	7900.79	458.72	40°09'14.732"N	104°51'16.498"W	0.00	
15817.00†	90.077	0.227	7288.03	8013.66	8000.79	459.12	40°09'15.720"N	104°51'16.493"W	0.00	
15917.00†	90.077	0.227	7287.90	8113.56	8100.78	459.51	40°09'16.709"N	104°51'16.488"W	0.00	
16017.00†	90.077	0.227	7287.76	8213.46	8200.78	459.91	40°09'17.697"N	104°51'16.483"W	0.00	
16117.00†	90.077	0.227	7287.63	8313.36	8300.78	460.31	40°09'18.685"N	104°51'16.478"W	0.00	
16217.00†	90.077	0.227	7287.49	8413.26	8400.78	460.70	40°09'19.673"N	104°51'16.473"W	0.00	
16317.00†	90.077	0.227	7287.36	8513.16	8500.78	461.10	40°09'20.661"N	104°51'16.468"W	0.00	
16417.00†	90.077	0.227	7287.22	8613.06	8600.78	461.49	40°09'21.650"N	104°51'16.462"W	0.00	
16517.00†	90.077	0.227	7287.09	8712.96	8700.78	461.89	40°09'22.638"N	104°51'16.457"W	0.00	



Planned Wellpath Report

BARCLAY 2N-11HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#04 BARCLAY 2N-11HZ (577'FSL & 2133'FEL, SEC.14)
Area	COLORADO	Well	BARCLAY 2N-11HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	BARCLAY 2N-11HZ PWB
Facility	SEC.14-T2N-R67W		

WELLPATH DATA (189 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
16617.00†	90.077	0.227	7286.95	8812.85	8800.78	462.29	40°09'23.626"N	104°51'16.452"W	0.00	
16717.00†	90.077	0.227	7286.82	8912.75	8900.78	462.68	40°09'24.614"N	104°51'16.447"W	0.00	
16817.00†	90.077	0.227	7286.68	9012.65	9000.78	463.08	40°09'25.602"N	104°51'16.442"W	0.00	
16917.00†	90.077	0.227	7286.55	9112.55	9100.78	463.47	40°09'26.591"N	104°51'16.437"W	0.00	
17017.00†	90.077	0.227	7286.41	9212.45	9200.78	463.87	40°09'27.579"N	104°51'16.432"W	0.00	
17117.00†	90.077	0.227	7286.28	9312.35	9300.77	464.27	40°09'28.567"N	104°51'16.427"W	0.00	
17217.00†	90.077	0.227	7286.14	9412.25	9400.77	464.66	40°09'29.555"N	104°51'16.421"W	0.00	
17317.00†	90.077	0.227	7286.01	9512.15	9500.77	465.06	40°09'30.543"N	104°51'16.416"W	0.00	
17322.73	90.077	0.227	7286.00 ¹	9517.88	9506.51	465.08	40°09'30.600"N	104°51'16.416"W	0.00	TOTAL DEPTH

HOLE & CASING SECTIONS - Ref Wellbore: BARCLAY 2N-11HZ PWB Ref Wellpath: BARCLAY 2N-11HZ (PERMIT REV-1) 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	1100.00	1083.00	17.00	1100.00	0.00	0.00	0.00	0.00
9.625in Casing Surface	17.00	1100.00	1083.00	17.00	1100.00	0.00	0.00	0.00	0.00
8.75in Open Hole	1100.00	7695.49	6595.49	1100.00	7299.00	0.00	0.00	-120.65	426.96
7in Casing Intermediate	17.00	7695.49	7678.49	17.00	7299.00	0.00	0.00	-120.65	426.96
6.125in Open Hole	7695.49	17322.73	9627.24	7299.00	7286.00	-120.65	426.96	9506.50	465.08
4.5in Casing Production	17.00	17322.73	17305.73	17.00	7286.00	0.00	0.00	9506.50	465.08



Planned Wellpath Report

BARCLAY 2N-11HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#04 BARCLAY 2N-11HZ (577'FSL & 2133'FEL, SEC.14)
Area	COLORADO	Well	BARCLAY 2N-11HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	BARCLAY 2N-11HZ PWB
Facility	SEC.14-T2N-R67W		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.11-T2N-R67W SECTION LINES		0.00	0.20	-29.98	3179974.47	1291732.06	40°07'56.658"N	104°51'22.792"W	polygon
SEC.14-T2N-R67W SECTION LINES		0.00	-2.93	424.02	3180428.45	1291732.23	40°07'56.627"N	104°51'16.947"W	polygon
1) BARCLAY 2N-11HZ BHL ON PLAT(460'FNL & 1705'FEL, SEC.11)	17322.73	7286.00	9506.51	465.08	3180400.48	1301241.30	40°09'30.600"N	104°51'16.416"W	point
BARCLAY 2N-11HZ LANDBOX		7353.00	0.00	0.00	3180004.45	1291732.08	40°07'56.656"N	104°51'22.406"W	polygon
SEC.11-T2N-R67W HARDLINES (460' SETBACK)		7353.00	0.20	-29.98	3179974.47	1291732.06	40°07'56.658"N	104°51'22.792"W	polygon
SEC.14-T2N-R67W HARDLINES (460' SETBACK)		7353.00	-2.93	424.02	3180428.45	1291732.23	40°07'56.627"N	104°51'16.947"W	polygon

SURVEY PROGRAM - Ref Wellbore: BARCLAY 2N-11HZ PWB Ref Wellpath: BARCLAY 2N-11HZ (PERMIT REV-1) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	7695.49	NaviTrak (Standard)		BARCLAY 2N-11HZ PWB
7695.49	17322.73	OnTrak (Standard)		BARCLAY 2N-11HZ PWB



Planned Wellpath Report

BARCLAY 2N-11HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#04 BARCLAY 2N-11HZ (577'FSL & 2133'FEL, SEC.14)
Area	COLORADO	Well	BARCLAY 2N-11HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	BARCLAY 2N-11HZ PWB
Facility	SEC.14-T2N-R67W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
991.00	0.000	148.550	991.00	FOX BASE HILLS
4060.92	10.000	148.550	4021.00	PARKMAN
4484.35	10.000	148.550	4438.00	SUSSEX
6563.00	0.000	0.227	6494.33	4 1/2" LINER TOP
7294.78	50.007	0.227	7165.00	SHARON SPRINGS
7416.98	62.227	0.227	7233.00	NIOBRARA A
7502.31	70.760	0.227	7267.00	NIOBRARA B

DESIGN COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	148.550	17.00	TIE ON
1100.00	0.000	148.550	1100.00	BEGIN NUDGE
1600.00	10.000	148.550	1597.47	END NUDGE
5786.13	10.000	148.550	5720.00	BEGIN DROP
6286.13	0.000	0.227	6217.47	END DROP
6794.71	0.000	0.227	6726.05	KOP, BUILD @ 10°/100'
7695.49	90.077	0.227	7299.00	LANDING POINT
17322.73	90.077	0.227	7286.00	TOTAL DEPTH